Policy and Practice
Working Paper 2: Scoping the Market

Improving the Design, Quality and Affordability of Residential Intensification in New Zealand

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1 Introduction

The goal of this study is to identify those features of intensification that need to be addressed to make higher density housing a relatively more attractive option for more New Zealanders. It is intended that the results of the research will help to:

"*improve the design, quality, and affordability of residential intensification in New Zealand in order to make it a more attractive housing option*."

1.1 Outline of the Study

This goal is pursued by several means. The first is a review of the already extensive literature dealing with this issue in New Zealand and internationally. This is the subject of Working Paper 1. It reveals key areas that might be considered to increase the acceptability of higher density housing. It also helps us to refine the issues on which to focus the balance of the study.

This is the second Working Paper. It takes a closer look at what data about on the operation of the market might tell us about the prospects for residential intensification in New Zealand. It focuses on demand expectations to help to place the wider study's market emphasis in context. Just how big might the market be for the higher density housing?

Working papers 1 and 2 set the context for the market research into demand that forms the core of this study. Working Paper 3 explores the barriers to adoption of residential housing, reporting on the outcome of qualitative research (focus groups) among people who have not taken up more intensive housing. Working Paper 4 reports on the experiences and views of residents from selected medium density housing developments.

1.2 Scope of Working Paper 2

The aim of this paper is to establish the scale of the market for new housing in New Zealand, and how far the market might be amenable to an increase in housing densities. This is done mainly by considering existing projections of housing demand and the expected division between detached housing and multi-unit housing. Comparison with recent market trends indicates that the shift towards higher housing densities projected is currently lagging, and some consideration is given to the reasons for this, including supply issues (Section 2).

Working Paper 1 canvassed the sorts of demand preferences that might help explain an apparent resistance to higher density housing. Section 3 of the paper considers the role of residential mobility in facilitating the move towards smaller homes and more central locations by considering different aspects of the revealed preferences of the Auckland and Christchurch housing markets. Section 4 reviews the underlying demographic components of demand as projected by Statistics New Zealand (SNZ) to see how far the increasing importance of single and two person households in the housing market might promote a shift into smaller dwellings.

By indicating the size and composition of the market over the next 25 years, with some reference to its changing age structure, Working Paper 2 quantifies the potential to influence its movement towards high residential density by interventions in the area of design, quality, and affordability.

2 Housing Market Dynamics

A large number of reports have been published over the past decade dealing with future housing demand and supply in New Zealand. Most rely on Statistics New Zealand national and sub-national demographic projections as the starting point for forecasts. These are derived from cohort projections underpinned by extrapolating birth and death rates and net migration gains or losses.

This section reviews key reports to indicate the potential future market for additional dwellings, emphasising the smaller, more centralised dwellings associated with residential intensification.

2.1 The Nature of the Housing Market

The most useful starting point is the BRANZ report on *Changing Housing Need* which built upon a number of CHRANZ reports dealing with the New Zealand housing market (BRANZ, 2007, 2-5). From these it highlighted the following conclusions regarding market operations:

- Declining levels of home ownership suggest that the assumption of a linear housing "career" associated with life stage is breaking down (DTZ New Zealand, 2004);
- Aspirations of ownership remains strong: almost all renters aspire to home ownership but face problems of affordability;
- Older people believe younger people have higher aspirations for housing quality than they did;
- The aspirations of younger people will make ownership more difficult for them to achieve;
- Families in rental accommodation are prepared to stay renting in preferred suburbs rather than move to owner-occupied housing in "cheaper suburbs";
- Younger family households aspire to villa housing close to good schools;
- Older homeowners have generally acquired the home they want to occupy for the rest of their lives, even if it is larger than they need;
- Mainly economic and political factors underlie the decline in home ownership (DTZ New Zealand, 2005);
- In terms of housing the elderly, the challenges are to upgrade or modify existing housing stock to facilitate ageing in place, to develop options for special needs, and to provide appropriate housing for those who have never owned a home or may otherwise be unable to afford a move into housing more appropriate to their need.

The BRANZ report also reviews studies dealing with shortcomings in housing supply, particularly the impacts of the Metropolitan Urban Limit (MUL) in Auckland, concentrated (greenfield) land ownership, and fragmented (brownfield) ownership (Motu, 2007). These factors are reflected in lower levels of ownership and housing stress noted in the region, and a growing intermediate market of working households that cannot afford to buy even lower quartile priced housing. These trends were expected to boost the need for rental units, calling for an increase in institutional investment in the sector (DTZ New Zealand, 2007).

The international research reviewed by BRANZ generally confirmed the conservatism that influences the housing market, with a preference for home ownership prevailing; an increase in rental tenure despite this; limited support for movement into higher density, multi-unit housing; and an expectation of ageing in place, or at least for people to remain within their established mixed-age communities as they get older (BRANZ, 2007, 5-9).

BRANZ undertook its own survey of housing preferences and aspirations and reported that;

- Affordability is the major factor in choice of location, followed by views and suburb status;
- Double garaging stood out among preferred design features;
- House size stood out among design features that influence purchase, followed by kitchen and bathroom fittings. A garden and low maintenance were also important in choice;
- For renters, house size, quality bathroom and kitchen fittings, and garaging were also important.

For renters (of whom 63% were under 41 years of age) the main lifestyle priorities were work and career, saving for a home, lifestyle purchases, and funding children's education. For owners the priorities were work/career followed by travel, retirement savings, and paying off the mortgage.

2.2 Apartment Dwellers

Statistics New Zealand (2010) examined the nature of people living in apartments in Auckland, Wellington and Christchurch. This was based on returns to the 2006 Census with numbers almost quadrupling between 1996 and 2006. Among other things, the figures illustrate the distinctive nature of apartment dwellers generally, and a further distinction between inner city apartments and others. They confirm the operation of distinctive residential sub-markets.

Looking back five years, 36% of apartment dwellers in inner city areas in 2006 had come from overseas, and 22% of those living in apartments elsewhere in the city. The apartment market was clearly boosted by the high level of net migration gain experienced during that period (3).

Residents of inner city dwellings were marked by their youth: 49% were aged between 20 and 29 in 2006. This compares with 35% ten years previously. It also contrasts with 24% in apartments outside the inner city, which was still a substantial over-representation (20 to 29 year olds accounted for just 13% of New Zealand's total population).

This age structure reflects, in part, the presence of inner city tertiary education establishments, with one third of inner apartment occupants engaged full-time and 7% part-time in study in Auckland. The shares were lower in Christchurch (30% full- or part-time) and Wellington (25%). Interestingly, only 5% of residents of inner city apartments did not already hold a formal qualification, compared with 25% of New Zealanders as a whole and 17% of apartment dwellers elsewhere.

Inner city apartment dwellers have a higher participation rate at 73% than apartment dwellers elsewhere or all of New Zealand, 68% and 69% respectively). They were also more likely to work in the central city (55% compared with 28%). Not surprisingly, this showed up in a high share of inner city apartment dwellers travelling to work by foot 49%), with 9% using public transport. Many more non-inner city dwellers travelled to work by car (57%) or public transport (13%).

With respect to demographics, a very high proportion of inner city apartment dwellers have never been married, and many live in either one person or multi-person households (although 50% still live in single family households). Not surprisingly, 68% have never been married, compared with 48% in apartments outside the inner city and 34% for New Zealand as a whole.

Only 27% of households in inner city apartments owned their dwelling, and 32% in apartments outside the city centres. This compares with 67% nationally in 2006. For those that don't own, rentals tended to be much higher in the inner city than elsewhere.

The profile illustrates distinct inner and outer city apartment populations. It confirms their youthful nature, especially in the inner city, low levels of household formation, and transiency. It suggests that the increase in housing densities over the last decade has been driven by a distinctive cohort or generation. Maintaining this growth using the prevailing model of apartment development in and around the central city will depend on how significant a cohort that turns out to be in the future.

2.3 Future Housing Demand

2.3.1 Expectations

The BRANZ paper reported an estimate of new housing requirements based on SNZ demographic projections and provision for demolitions, with variants of dwelling type derived from extrapolations of household type. It drew on DTZ New Zealand's analysis of Statistics New Zealand estimates of shifts in household composition, which informed a projection of home ownership falling from 67% in 2006 to 58% in 2026 and to as low as 54% in Auckland (DTZ New Zealand, 2007).

The model also assumed a slow decline in the share of detached houses. These assumptions appear to reflect cohort-specific assumptions about household size and an expectation that new households will be dominated by couples and single persons, as family households fall as a share of the total. This would result in growing demand for smaller and potentially multi-unit dwellings.

The result is projected average demand for around 24,000 additional units per year for the ten years to 2016, and additional 3,000 major refurbishments per year. The projection reviewed demand growth by household type and projected multi-unit dwellings to reach 38% of new houses nationally over the ten years to 2026 (Table 1). The projection is dominated by Auckland, where there would be 55% of all New Zealand's multi-unit dwellings projected (10,7120 out of 19,480). Wellington was projected to have 11%.

Table 1 Projected New Dwellings Per Year, 2006-2026

	Ten years ending	Detached	Terrace	Apartments	All Dwellings	Multi Unit Dwellings Total	Multi Unit Dwellings Share
New Zealand, Actual	2006	18,820	2,170	4,040	25,030	6,210	25%
Projected	2016	18,580	3,610	4,760	26,950	8,380	31%
Projected	2026	17,760	5,190	5,910	28,860	11,100	38%
Twenty Year Projection	2006-2026	36,330	8,800	10,680	55,810	19,480	35%
Auckland, Actual	2006	6,130	790	2,650	9,570	3,440	36%
Projected	2016	4,400	1,630	2,930	8,960	4,560	51%
Projected	2026	3,180	2,630	3,520	9,330	6,140	66%
Twenty Year Projection	2006-2026	7,570	4,260	6,450	18,280	10,710	59%
Wellington, Actual	2006	1,280	300	590	2,170	890	41%
Projected	2016	1,050	310	590	1,950	900	46%
Projected	2026	1,140	410	770	2,320	1,180	51%
Canterbury, Actual	2006	2,700	500	210	3,410	710	21%
Projected	2016	3,000	670	370	4,040	1,040	26%
Projected	2026	3,000	810	530	4,340	1,340	31%
Waikato, Actual	2006	2,400	150	170	2,720	330	12%
Projected	2016	3,030	270	260	3,560	530	15%
Projected	2026	2,930	340	300	3,570	640	18%
Bay of Plenty Actual	2006	1,920	70	120	2,110	190	9%
Projected	2016	1,260	80	100	1,440	180	13%
Projected	2026	1,250	110	120	1,480	230	16%

Source: BRANZ (2007), Table 5, p24

These projections can be assessed relative to past growth. The net increase in private occupied dwellings nationally was between 16,700 and 22,400 a year in the three inter-censal periods to 2006 (Table 2). This does not include demolitions and replacements of between 3,350 and 4,700 new dwellings a year nationally (BRANZ, 2007, Table 4, Note, 23). Adding these to the 22,400 new dwellings from 2001 and 2006 suggests the projected figures correspond with recent experience.

The share of additional detached dwellings identified in this way appears to have been diminishing; although the divergence of figures across the five year periods in Table 2 suggests that there may be issues of changing data definitions affecting the inferred share of multi-unit dwellings.

Table 2 Net Changes in Private Occupied Dwellings, 1991-2006

Excludes Non-Private	Detached	Multi-Unit	Other	Total	Share Detached
1991	950,646	Not Identified	NA	1,177,665	81%
1996	1,050,144	209,163	17,025	1,276,332	82%
2001	1,030,077	210,627	119,139	1,359,843	76%
2006	1,134,369	252,963	84,411	1,471,746	77%
Annual Change					**Share of Base**
1991-1996	19,900	NA	NA	19,733	1.7%
1996-2001	-4,013	293	20,423	16,702	1.3%
2001-2006	20,858	8,467	-6,946	22,381	1.6%

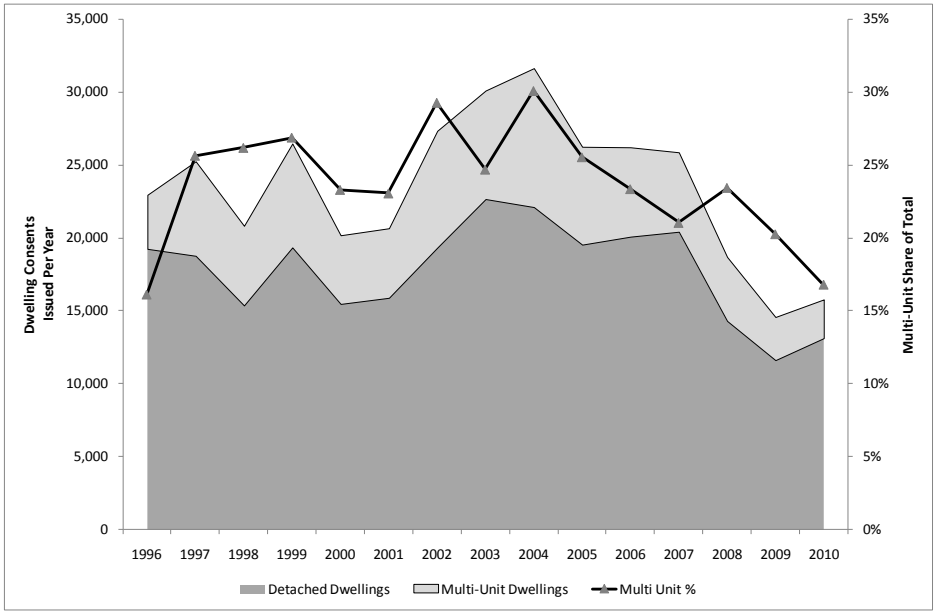
Source: Census of Population and Dwellings

The figures generally support the assumption that multi-unit dwellings account for around 20% of new dwellings (23% in 2006), 8,470 per year from 2001 to 2006. The net increase in dwellings over the five year period has been between 1.3% and 1.7% of the base figure (total dwellings at the beginning of the period). On this basis and at recent rates of expansion and replacement, this will take some time to have significant impact on housing intensification nationally.

2.3.2 Outcomes

Trends in building consents highlight the limited share and variability of multi-unit development (Figure 1), averaging 24% of all consents over the past 15 years. More interesting may be the considerable volatility the sector has experienced over the past fifteen years, with multi-unit development tending to take a greater share during buoyant years, and falling faster than detached housing when housing activity is depressed generally. The implication is multi-unit construction in the recent past, at least, has been at the discretionary end of the house-building spectrum. This means that it does not necessarily substitute for detached housing during periods of low demand, (if at all) raising a question over its possible role in lifting the affordability of housing.

Figure 1 Dwelling Building Consents Issued, New Zealand 1996-2010



Source: Statistics New Zealand, Calendar Years

Over the past five years, multi-unit dwellings have accounted for just 21% of consents issued, although this varies among regions (Table 3). Some 33% of all consents issued in Wellington were for multi-unit dwellings, 28% of Auckland consents, and 14% of Canterbury consents.

Table 3 New Dwelling Consents, 2006-2010

Area	Consents Issued for All New Dwellings							Multi-Unit Dwellings		
	Detached House	Unit, Flat, Townhouse, Studio	Vertical Apartment (>9 units)	Vertical Apartment (<10 Units)	Other *	TOTAL	Annual Average	Annual Average	Shares of Regional Total	Shares of National Total
Northland	4,726	210	210	12	13	5,171	1,034	89	9%	5%
Auckland	18,101	1,705	5,215	248	25	25,294	5,059	1,439	28%	25%
Waikato	9,397	865	539	331	50	11,182	2,236	357	16%	11%
Bay of Plenty	6,036	203	532	84	14	6,869	1,374	167	12%	7%
Gisborne	558	87	26	15	15	701	140	29	20%	1%
Hawke's Bay	2,869	204	344	34	23	3,474	695	121	17%	3%
Taranaki	2,186	183	163	19	4	2,555	511	74	14%	3%
Manawatu-Wanganui	4,839	285	228	47	21	5,420	1,084	116	11%	5%
Wellington	6,050	1,166	1,596	184	55	9,051	1,810	600	33%	9%
Tasman	1,291	53	20	1		1,365	273	15	5%	1%
Nelson	1,187	40	187	26		1,440	288	51	18%	1%
Marlborough	1,605	95	35	10	4	1,749	350	29	8%	2%
West Coast	984	86		4	1	1,075	215	18	8%	1%
Canterbury	13,042	2,683	933	105	46	16,809	3,362	753	22%	17%
Otago	4,913	576	430	118	8	6,045	1,209	226	19%	6%
Southland	1,670	102	45	1	2	1,820	364	30	8%	2%
TOTAL	79,454	8,543	10,503	1,239	281	100,020	20,004	4,113	21%	100%
Average Annual Shares	13,242	1,424	1,751	207	47	16,670				
	79%	9%	11%	1%	0%	100%				

Note: Granny Flat (263) and attached to other building (18)

Source: Statistics New Zealand

There is apparently a significant shortfall in average annual multi-unit consents issued between 2006 and 2010 (4,113, Table 3) relative to those projected by BRANZ for 2006 to 2016 (8,376, Table 1).

2.3.3 Why Have Outcomes Undershot So Far?

To the extent that the BRANZ forecasts incorporated assumptions based on extrapolating past experience across the future population this suggests that the market may have deviated from expectations in two ways.

First, the impact of the financial crisis and consequent economic downturn has been to depress new housing starts generally over the first five years of the forecast period. Hence, total consents are running at around 74% of expectations for new dwellings across New Zealand.

Second, multi-unit dwelling consents are running at less than the share predicted and less than half the numbers. This is particularly evident in Auckland, with 1,440 consents issued each year over the five years to 2010 compared with a projected average of 4,560 over the ten years ending 2016, just 32% of the projected figure. By contrast, the Bay of Plenty is running close to projections, while Wellington's housing market has been relatively active but with fewer multi-unit dwellings as a share of the total.

Table 4 Housing Market Performance Relative to Expectations

	Dwelling Consents Issued 2006-2010		Dwelling Consents Forecast		Actual % Expected	
	Total	Multi Unit	Total	Multi Unit	Total	Multi Unit
New Zealand	20,004	4,113	26,951	8,376	74%	49%
Auckland	5,059	1,439	8,960	4,563	56%	32%
Waikato	2236	357	3,562	533	63%	67%
Bay of Plenty	1374	167	1,436	175	96%	95%
Wellington	1810	600	1,953	899	93%	67%
Canterbury	3362	753	4,041	1,043	83%	72%

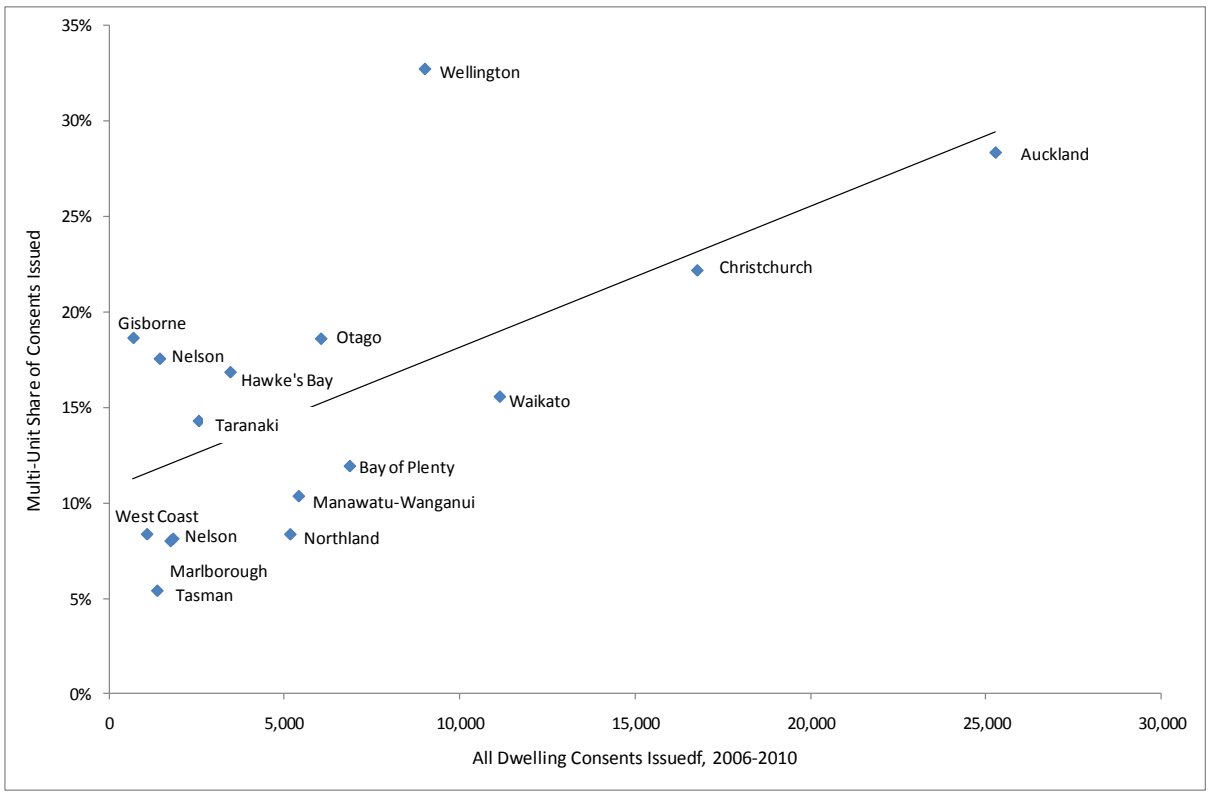
Source: Based on Tables 1 and 3, above

A significant shortfall relative to forecast occurred in Auckland despite a reasonably strong relationship (r^2=0.4) between the size of the centre (measured in terms of total consents issued) and the share of multi-unit dwellings (Figure 2). The implication is that the more active (or simply larger) the housing market, the greater the likely share of multi-unit dwellings, all else being equal.

Regions above the trend line tend to have relatively more multi-unit consents than expected on these grounds, and those below it have fewer. There is a higher share of apartments than might be expected simply from market size in Wellington and Otago, the latter presumably based on the expansion of the condominium market in Queenstown and lower than expected based on total number of consents issued in Waikato and Bay of Plenty. Auckland and Canterbury actually sit reasonably close to expectations.

This cross-section illustrates the likelihood that the larger centres will be the ones which sustain and lift the share of multi-unit dwellings, providing a clear geographical focus for both policy and market research addressing the adoption of higher density housing. Offsetting that, though, is the recent under-performance of the sector in the Auckland market relative to expectations (Table 4).

Figure 2 Relationship Between Consents Issued and Multi-Unit Share, 2006-2010



Source: Statistics New Zealand

2.3.4 Questioning Our Assumptions

While a number of reasons might be advanced for multi-unit housing outcomes undershooting projections, the real issue may be to do with the assumptions underlying the projections and policies based upon them. For a start, any assumptions that suggest a close relationship between changes in household size and changes in dwelling size should be examined carefully in light of actual behaviour. The literature suggests that the long-term response to increasing real incomes is an increase in dwelling size. It also indicates that the family downsizing associated with household ageing does not necessarily lead people to trade-down their dwellings, or at least not for some time.

In addition, any assumptions that assume that particular cohorts will reflect in their behaviour the behaviour of their predecessors needs to be queried. For example, the lifestyles of today's and tomorrow's retirees may be quite different from those of their predecessors, favouring larger houses, for example, to cater for more activities and a greater propensity to cater for extended families.

Finally, the projected numbers implicitly assume that the market will respond to cater for changes in the composition of household and the presumed shift in preferences for housing. Yet constrained land supply, the institutional structure of the new home industry in New Zealand (planning, development, and construction) and financial parameters may not be tune with these shifts, and may take some time to adjust to them. If the macro-economic as well as land use and industry policy settings are not aligned with the structural changes projected – and incorporated into urban

planning – there is likely to be a significant gap between plans and outcomes, and potentially distortions of the market and unexpected outcomes as a result.

2.3.5 The Impact on Densities

Given this shortfall in expectation s (which was noted in the review of the *Auckland Regional Growth Strategy;* Leggatt-Cook, 2007*,* Auckland Regional Council 2007), it is interesting to consider how significant it might be to policy outcomes in any case. To examine the possible contribution of the expected uptake to overall housing densities, the number of occupied private dwellings identified in the 2006 Census is taken as the best estimate of base dwelling stock in each of the three main centres. (This ignores second homes and homes that are empty temporarily). The projections of new dwellings provided by BRANZ have then been cumulated over the two ten year forecast periods. No provision has been made for netting out demolitions on the assumption that they would be replaced in approximately the same ratios between detached and multi-unit houses as applied to all new dwellings.

While the projected splits favours multi-unit housing more heavily than might be justified by the recent record, the impact even if the projections are fulfilled will be a limited shift in the overall composition of housing stock (Table 5). This is most pronounced in Auckland, where the projected split (Table 1) is clearly over-optimistic so far. If, in fact, current rates of growth in detached and multi-unit housing are applied to the Auckland projections, multi-unit housing in the region will increase by just one point, from 24% to 25% of the total by 2016. With declining household sizes, there is no guarantee that the implied gain in dwellings per hectare will be matched by a gain in population per hectare (

Table 5 Projected Changes in Composition of Dwellings

	Detached	Multi Unit	Total
Auckland			
2006-2016	43,970	45,630	89,600
2016-2026	31,750	61,440	93,190
2006 Base	311,106	98,454	409,560
Shares	76%	24%	100%
Total 2016	355,076	144,084	499,160
Shares	71%	29%	100%
Total in 2026	342,856	159,894	502,750
Shares	68%	32%	100%
Wellington			
2006-2016	10,540	8,990	19,530
2016-2026	11,350	11,830	23,180
2006 Base	121,524	39,786	161,310
Shares	75%	25%	100%
Total 2016	132,064	48,776	180,840
Shares	73%	27%	100%
Total 2026	143,414	60,606	204,020
Shares	70%	30%	100%
Canterbury			
2006-2016	29,980	10,430	40,410
2016-2026	30,010	13,370	43,380
2006 Base	157,947	35,562	193,509
Shares	82%	18%	100%
Total 2016	187,927	45,992	233,919
Shares	80%	20%	100%
Total 2026	217,937	59,362	277,299
Shares	79%	21%	100%

Note: Based on BRANZ (20007) projections

2.3.6 Overview

Overall, projected demand for multi-unit dwellings suggests that market size and the potential to change the mix of housing types will rely on lifting progress in the main centres, particularly Auckland. However, the analysis also draws attention to the fact that the housing market is lagging more there than elsewhere, both in terms of total housing starts and in terms of the multi-unit share.

This may be a matter of misreading market structure, failing to account for consumer behaviour, or overestimating the capacity of the housing industry as a whole to respond to the shift required. It may be a combination of these things, or simply matter of mistiming (with the probability of a substantial shift to multi-unit housing increasing over the next ten to twenty years)

Whatever the cause, the benefits sought from intensification of housing are likely to be a long time coming given the marginal impact of such low rates on the composition of housing stock.

Wellington, however, already has a relatively high share of multi-unit dwellings for its size, and although the market for high density housing has also grown behind the forecast rate, this is not as pronounced as in Auckland. The Bay of Plenty housing market, in contrast, has performed much closer to projection both in absolute growth and in the share of higher density housing. The implication is that either population structure or geographical context will influence the uptake of medium density housing. In Wellington a more centralised employment structure and a greater focus generally on the CBD is presumably the key. In Tauranga, a more advanced age structure and the proliferation of high-medium-rise lifestyle apartments (many as holiday rentals) are likely to be the drivers. The implication is that policies promoting residential intensification need to be tuned to local physical and market opportunities rather than applied simply as a matter of course.

2.4 The Private Rental Market

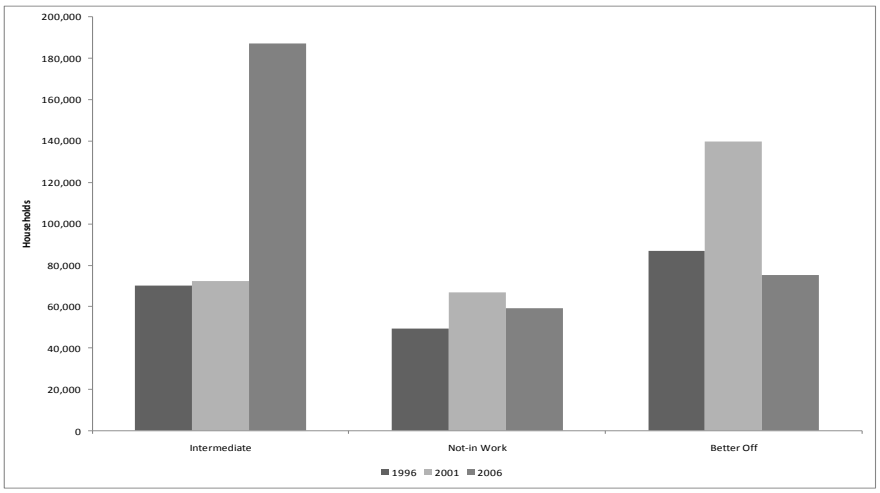
Slowing income growth and higher housing costs may jointly constrain affordability and thereby depress new dwelling numbers. Offsetting this, increased rental rather than ownership by groups other than those dependent on social housing might be expected to increase demand for multi-unit housing. However, increased rental demand has not obviously increased multi-unit dwellings relative to detached homes.

Based on analysis of census data, Morrison (2008) suggested that one driver of falling home ownership was delayed purchase by younger households. He also suggested that there has been a shift in purchasing behaviour to treating housing as an asset rather than simply as a choice made on a preferred lifestyle path. This could support units rather than detached houses to the extent that choice was weighted to investment prospects as much as lifestyle benefits.

A feature of the rental market is recent growth of the intermediate sector comprising traditionally active groups in the market that can no longer afford to purchase. They may be households with moderate incomes which aspire to ownership, but cannot achieve it. The intermediate market is differentiated from wealthier households in the private rental market that rent as a preference.

The growth of the intermediate sector was spectacular over the decade to 2006, growing by 166%, while the other two categories contracted in the second five years (Figure 3).

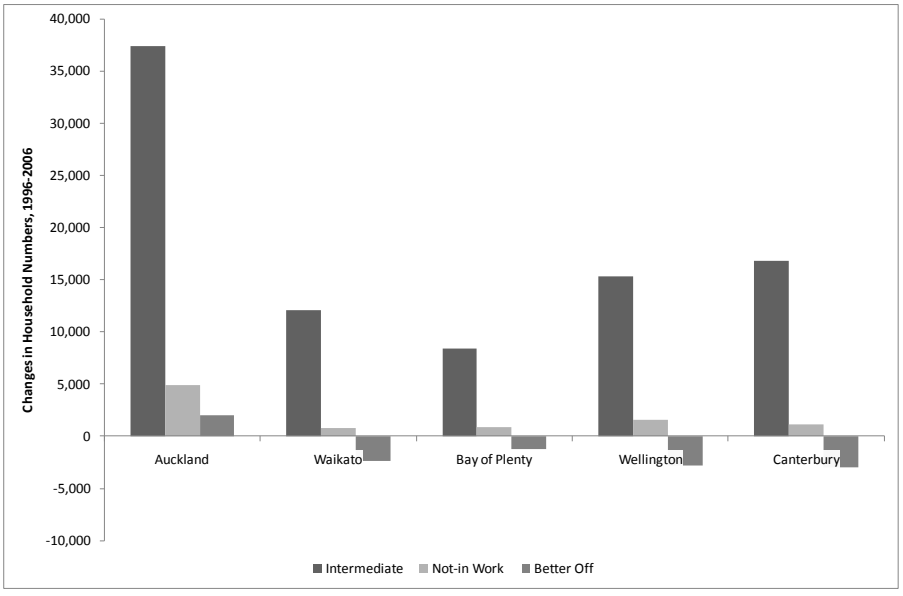
Figure 3 Changing Structure of the New Zealand Rental Market 1996-2006



Source: DTZ New Zealand, 2008

While Auckland dominated absolute private rental growth, including the intermediate component (Figure 4), adding 37,000 households between 1996 and 2006, relative growth was much greater in other regions. It grew by 239% in Wellington (15,300 households), 193% in Christchurch (14,900), and 189% in the Waikato (10,500) and 183% in the Bay of Plenty (8,100).

Figure 4 Changes in the Structure of Regional Rental Market, 1996-2006



Source: DTZ New Zealand, 2008

It might be anticipated that the emergence of a significant rental market, including the growth in a segment with a reasonable capacity to pay, would reinforce any shift towards a greater share of multi-unit dwellings even in a depressed market.

That this is not happening raises a number of issues to do with the capacity to supply:

(1) The strength or otherwise of the private investor sector.

While there has been concern in New Zealand about the diversion of household savings or increased household debt to invest in rental properties, this has made the private rental market over-dependent on an unsophisticated and fragile small investor sector. Recent financial and economic difficulties may have undermined this source of investment. The requirement may be for a stronger institutionally-based private housing rental sector.

(2) *The capacity or willingness to build multi-unit dwellings of the requisite appeal in terms of location and standard.*

The implications of an emerging intermediate private rental sector are that more families will be renting and that the associated housing preferences may be quite different from those of traditional renters. The investment sector has not necessarily responded to the needs of a growing rental segment seeking reasonable quality, well located accommodation.

Indeed, it may be that the main response has been a speculative as developers have sought to on-sell apartments to household and private investors. For various reasons – land availability, price, and financing arrangements among them –the larger scale developments resulting have been of poor quality. Consequently, investors have experienced very low returns or losses, further undermining the sector.

(3) *Limited availability of suitable sites.*

Any large scale movement into quality rental accommodation requires relatively substantial sites that enable reasonable levels of amenity, including quality common space, to be designed into them. Even brownfield sites within inner city areas tend to have been relatively limited, with the result that they are subject to high floor area ratios and small individual apartment sizes, something highlighted by the exceptions of large harbour-side apartments around the Viaduct Basin.

(4) *Limited appeal and constrained economics*

Both the appeal and quality of inner city medium rise apartments may have been constrained by site and cost issues, potentially lowering their appeal to renters. At the same time, the financial vulnerability and failure of some of their promoters, in part compounded by the high cost of assembling and holding land through an often protracted consent process, has reduced their appeal to investors. The capacity to assemble large tracts of suitable land in more favoured suburban locations and to deliver a product that can compete with traditional detached housing has proven difficult.

The implication is that a combination of demand and supply factors is depressing the rate of uptake of higher density housing and thereby undermining expected rates of residential intensification. This is a major issue in Auckland, which is considered in the following sections.

2.5 Institutional Constraints

The question of constraints on supply can be considered with reference to a recent report of 10 case studies (Boffa Miskell, 2009) for the Department of Building and Housing. This investigated the factors which promote or hinder intensive residential urban development among developers.

The report included a commentary on the development industry in New Zealand by Chris Aitken, an experienced Auckland property investor and advisor to local government. His focus was on what we can learn from the recent collapse of the residential development industry.

He concludes that:

> *To deliver the future requirement of a supply of quality, affordable housing a vibrant multi-participant private development sector is required. It requires the best practice from a correctly supervised finance and development sector. The current regulatory, finance sector, urban planning framework and incentives are working against this objective.*

This suggests that, apart from any problems with the design of residential intensification, there are significant institutional barriers to be addressed, and that now is a good time to be addressing them. The issues raised include:

Timeliness: the time required for consenting the sort of complex urban development projects that might bring about significant residential intensification has grown to span more than one property cycle. This adds considerably to the development risks. It is suggested that greater input from senior planners should be available early on so that developers are not met with unexpected opposition when they are some way down the consenting process. It is also suggested that Urban Design Panels should play a role in this statutory consenting process.

Costs: Apart from the costs which time delays produce, the issue of development contributions was raised. Areas identified as suitable for residential intensification are often areas with poor infrastructure and the full costs of catching up is levied on developers, often well before any returns are realised.

Financial sector regulation: The author reflects that any review of the development industry cannot be successful without similar attention to the finance sector. Poor practices by the finance sector contributed to the scale of many recent development company failures. Greater regulation of both the development and finance sector is called for to protect the retail investors in particular and help return some confidence to the market.

Debt stacks: Chris Aitken gave his views on why some sites, apparently suitable for development, remained vacant. In some cases it appears that the sites are associated with substantial debts (debt stacks) and have book values well in excess of their true market value. In some cases, banks resist re-valuation that might make them attractive to development to protect their own balance sheets.

2.6 The Auckland Regional Housing Market

2.6.1 Projecting Demand by Density

Not surprisingly given its scale and a relatively long term policy preoccupation with intensification, Auckland has been the focus of much of the research into the potential growth of the housing market. In 2008 the Department of Building and Housing (DBH) published a report on the adequacy of land supply there, which included an analysis of demand.

The demand analysis drew on a combination of population growth projections and a model of lifecycle-based changes in the nature of housing demand. The latter utilises "*historic dwelling preferences for different types of household by age, size, and income and by adopting a scenario that*

trends household preferences towards those found in the larger Australian cities (Sydney and Melbourne). At the Auckland Region level, households are aging, becoming wealthier, and decreasing in size, and these trends lead to an overall change in preferences for dwelling types"" (Market Economics/Harrison Grierson, 2008, 40). The Australian precedents were used to generate a higher intensification scenario.

Housing was divided among detached houses on sites exceeding 450m^2, and horizontal multi-unit dwellings (medium density) and vertical multi-unit dwellings (high density). For present purposes the second two categories are treated multi-unit dwellings. The projections for new houses (Table 6) are broadly in line with those provided by BRANZ (Table 1), although slightly lower through to 2016.

Table 6 Projected Housing Demand, Auckland 2008-2031

	2008-11	2011-16	2016-21	2021-26	2026-31	2008-31
Base						
Conventional	5,077	5,440	5,212	4,976	5,040	5,155
Medium/High Density	3,379	3,677	4,143	4,409	4,151	4,002
Total	8,456	9,117	9,355	9,385	9,190	9,157
Medium/High Density %	40%	40%	44%	47%	45%	44%
Intensive						
Conventional	4,716	4,777	4,439	4,164	4,195	4,435
Medium/High Density	3,741	4,341	4,916	5,221	4,995	4,721
Total	8,456	9,117	9,355	9,385	9,190	9,157
Medium/High Density %	44%	48%	53%	56%	54%	52%

Source: Market Economics/Harrison Grierson, 200743; for Department of Building and Housing

Where BRANZ projected a rapid increase in multi-unit dwellings (Table 1), the DHB projections were more modest, with between 40% and 48% being multi-unit dwellings through to 2016 (compared with a BRANZ figure of 51%), and then 44% and 56% through to 2031 (compared with 61%).

The Market Economics/Harrison Grierson model sees medium-high density dwellings grow at 3,400 and 4,400 units annually (base scenario), and 3,700 and 5,000 (intensive scenario). Again, these figures are lower than the BRANZ projections of 4,560 through to 2016 and 6,140 through to 2026.

The DBH projections are still well above the recent record. The report suggests that the slow uptake of higher density options around centres reflects the role of local opposition, and that, despite some higher density developments, these do not provide "*a practical, affordable alternative to conventional housing for conventional families*" (65).

2.6.2 Projecting Demand by Tenure

In 2010 Darroch Limited undertook a comprehensive assessment of the regional housing market, working within 14 sub-regional spatial submarkets. The main findings are summarised as follows:

- The region has significant rental affordability issues, with 40% of rental households paying more than 30% of gross incomes on housing (49% in the private renter market);
- The capacity of renters to shift into ownership has fallen over the decade, with the intermediate market increasing from 39,700 households to 77,110 (63% of private renter households);
- Between 2006 and 2026 forecast demand is for close to 170,000 new dwellings; around 74,000 new units for owner occupiers and 96,000 for renters;

- Households aged over 50 years are expected to account for 63% of this growth, couples for 33%, and single person households for 29%, although growth will take place over all age groups and will be stronger among non-European ethnic groups;
- Demand is forecast to be strongest in the Auckland CBBD and in greenfield sites in other housing markets;
- Financially stressed renter households are forecast to increase by around 40,000, with households where the reference person is over 50 years accounting for around half of that increase, suggesting a disproportionate impact on younger age groups;

Darroch's demand forecasts (Table 7) were based on SNZ projections of population by age allocated to household types at the regional level, the distribution of net (international and internal) migration gains across the fourteen subregional housing markets divided between high and low income households (with household income of $50,000 the dividing line). Unlike the DTZ-New Zealand forecasts, the Darroch model included occupants of housing in the public rental sector.

This produces a forecast for 169,500 additional households in 2026, 41% in rental accommodation. At the regional level, 57% of that growth is projected to be in the form of rental demand and 71% in multi-unit dwellings.

The result of this rate of rental growth would be to lift rental households from an estimated 35% of the total in 2006 to 41% in 2026. This aligns with the BRANZ/DTZ New Zealand (2007) estimate of 35% of households in rental accommodation in 2006 and a projection for ownership rates in Auckland to fall from 64% in 2006 to 54% by 2026 (BRANZ, 2007, 25). The expectation that multi-unit dwellings will also dominate growth (71% of the 2006-2026 gain) also aligns with BRANZ/DTZ figures (ibid., 24). Any inference that new housing g will be dominated by rental households, however, cannot be drawn simply because with the exception of the growth of investment apartments in the CBD over the past decade, the tendency has been for rental households generally to occupy existing stock and owner occupiers to account for much of the new stock.

An estimated average annual increase of 8,480, was slightly below the Market Economics/Harrison Grierson figure (Table 6) but still well ahead of recent market performance as indicated by the issue of new housing consents (Table 4).

Table 7 Projected Demand by Housing Market Area, 2006-2026

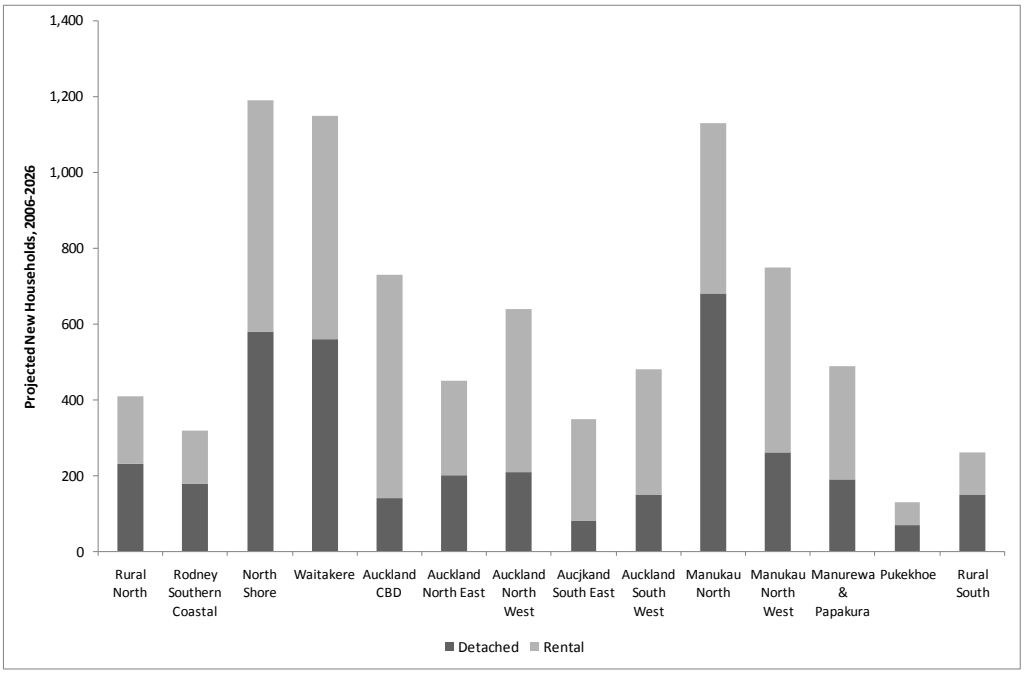
	All Households			Growth 2006-2026			
				Rentals		Multi-Units	
Housing Market Areas	2006	2026	Growth	Number	Share	Number	Share
Rural North	20,920	29,050	8,130	3,590	44%	3,190	39%
Rodney Southern Coastal	14,900	21,380	6,480	2,760	43%	3,670	57%
North Shore	72,110	95,900	23,790	12,140	51%	16,810	71%
Waitakere	58,680	81,760	23,080	11,700	51%	12,660	55%
Auckland CBD	**9,530**	**24,220**	**14,690**	**11,890**	**81%**	**14,640**	**100%**
Auckland North East	31,310	40,220	8,910	4,970	56%	7,980	90%
Auckland North West	43,710	56,530	12,820	8,670	68%	11,970	93%
Aucjkand South East	17,590	24,570	6,980	5,430	78%	7,190	103%
Auckland South West	37,070	46,680	9,610	6,620	69%	8,240	86%
Manukau North	37,470	60,010	22,540	9,000	40%	12,030	53%
Manukau North West	37,460	52,360	14,900	9,770	66%	9,940	67%
Manurewa & Papakura	31,770	41,610	9,840	5,900	60%	6,830	69%
Pukekhoe	5,940	8,520	2,580	1,260	49%	1,480	57%
Rural South	13,430	18,610	5,180	2,260	44%	2,370	46%
Total	431,890	601,420	169,530	95,960	57%	121,030	71%

Source: Darroch Ltd (2010), pp182, 195,200

The Darroch projections provide for a substantial share of growth going to the rental market, 57% across the region, and as much as 81% in the CBD. It estimated 151,180 households in rental accommodation in Auckland in 2006, or 25% of the total market (Darroch, 2010, 195). Rental households are projected to account for 57% of growth through to 2026, some 96,000 out of 169,500 additional households, increasing the rental share of tenure from 35% in 2006 to 41% in 2026. Again, the implication is that the adoption of rental and consequently higher density housing is projected to be far greater in the future than it has been in the recent past across the board.

Despite projecting a substantial shift towards rental housing market in all areas, the model also gives rise to significant differences among submarkets (Figure 5). The Auckland CBD is forecast to have by far the strongest growth rate, especially in the rental market. This reflects both a relatively small share of housing stock to commence with, and a higher presence of renters occupying that stock.

Figure 5 Rental Household Growth, 2006-2026



Source: Darroch (2010)

The share of rental accommodation among all new dwellings is projected to be as high as 81% in the CBD. The second highest share of renters (77% of all new households) is forecast for the south east of the Auckland Isthmus followed by the south west and north west, highlighting the relative concentration of rental housing in the older areas of the Isthmus.

2.6.3 Penetrating the Market – 20 to 40 Year Old Households

Research was commissioned by CHRANZ to examine in more detail the key demographic group driving housing demand in Auckland among 20 to 40 year olds and their households. It was prompted in large part by evidence of the sharp fall in home ownership in this group, underpinning the emergence of an "intermediate" rental market. While delayed purchase may play a part in this, it was seen as part of a much wider structural shift, calling for a better understanding of how

"*housing supply might better be aligned with the needs, aspirations and demands of younger households*" (Beacon Research, 2010, 10).

The approach taken was to analyse the historical pattern of housing in the target age group and to survey a number of movers from within it. The report indicated that the rate of decline of home ownership among younger households has been slightly greater than the average rate of decline (59), although this presumably reflects the simple fact that younger households are less advanced on the career and housing ladders, with less accumulated wealth and assets as a result. This is reflected in the fact that they comprise a significant share of the intermediate rental market.

The nature of housing demand in this group was analysed using a recent mover survey covering 499 respondents in the 20 to 40 year age group in Auckland. As in the population as a whole, the majority of movers moved within their "home sector" according to the 2006 Census enumeration of where people had lived five years previously. Interestingly, the CBD did not feature at all as a destination for the surveyed movers, even among those that targeted it.

Motivators of Relocation

The survey confirmed that searches for new homes were heavily concentrated in the local area. In some instances the motivation for moving was external; i.e., not precipitated by a change in preferences, needs or expectations of the residents. In 15% of cases affordability issues precipitated a move (93). In a small number of cases the opportunity to release equity was a driver. In yet others, the condition of the existing home contributed. In 18% of cases the home people were living in was no longer available (96).

The main motivators for movement that was not brought about by external circumstances were the quality of schooling, distance from family and friends, and issues over security and noise. Retaining a presence in the local community and networks was particularly important for low income households.

The drivers of housing location preferences for the 20 to 40 year group do not appear significantly different from those for the adult population as a whole. Once they begin to examine alternatives, the selection of locality is influenced by:

- Connectivity (37.5%);
- Range and size of dwelling types (23%);
- House prices or rentals (22%);
- Previous or existing connections (20%).

Accessibility was discussed with reference to family and friends, travel routes and public transport, parks, green spaces and recreational facilities, and education (78).

In terms of dwelling preferences, increasing the size or the number of bedrooms appears to be an important motivator. Parents of children were particularly concerned with the number of bedrooms, tougher with safety and security aspects (90). There was also a tendency to move from multi-unit to detached dwellings; 71% of those previously in multi-unit dwellings had moved into a detached dwelling, while only 14% of those in detached dwellings to start with moved into multi-unit dwellings.

Tenure

The majority of respondents did not own their dwellings. Over 50% were in private rentals, 41% owned their dwellings, and the balance in employer-provided or social housing. Nevertheless, ownership remains an aspiration for most, and 14% had moved specifically from rental to owner occupied housing (85). The majority, however, do not manage to make the transition.

Aspirations and Expectations

The survey suggested that many in the cohort could not achieve their aspirations because of the cost of the housing they desired. This means that staying in rental accommodation was an inferior outcome, with ownership a legitimate aspiration in the face of the poor condition of rental stock, its association with crowding, and the impermanence of tenancies. Under these circumstances, purchasing offers a rational response to the state of the rental market rather than a culturally driven aspiration for home ownership (109).

It is also proving difficult for many movers to buy in their favoured localities, or even enter into secure rentals in these localities. Buyers may be able to meet some of their expectations by purchasing or renting multi-unit dwellings, but this is not a preferred outcome, either. While they may even be willing to risk the loss of value associated with leaky building syndrome, this option may also be ruled out by reluctance on the part of banks to lend on multi-units (110), and certainly more stringent lending conditions compared with detached housing.

One result is that "*movement for some younger households represents churning around the housing market without any clear beneficial housing outcomes*." (111).

The authors go beyond this, concluding that:

> *"The real dislike of multi-units, medium density and rentals arises from a sense of lack of control over their term of residence, problems with inside and outside spaces, and a lack of control over their living conditions".*

Capital gains appeared to play little part in their search criteria. Rather they were seeking dwellings:

- *"located in places to which householders are attached;*
- *"able to accommodate their needs for space, privacy, and warmth;*
- *"connected to the myriad of places that they need to be;*
- *"in safe neighbourhoods with local schools and services; and*
- *"at a price that allows household to manage other living costs" (113)*

The authors sum up their study by concluding that the problems identified reflect persistent failures in the Auckland housing market to meet residents' needs:

> *"Under supply, unaffordable housing prices for rental and owner occupation, insecurity of rental tenure, and problems in house performance are prevalent ... exacerbated by the leaky building syndrome; the inadequacies around the operation of corporate bodies the poor design of multi-unit dwellings; and poorly designed and implemented intensification"* (129).

Overview

To the extent that it has captured the condition of the bulk of the growing intermediate market the report on the location choices of 20 to 40 year old households paints a picture of a highly constrained market in which supply is becoming increasingly out of line with demand. Respondents' experience points to a range of supply issues that go well beyond dissatisfaction with the design of high-density dwellings, and that are unlikely to be easily remedied simply from an enhanced understanding of the motivations and preferences of the market.

It suggests, instead, that in order to respond effectively to market preferences by way of location, dwelling style and design, and housing quality to encourage higher density housing it will be necessary to address a number of structural and institutional issues in the market generally. These include the aftermath of the leaky buildings episode and its ongoing impact on both the stock and reputation of higher density dwellings, and how we design and deliver higher density neighbourhoods and dwellings generally.

More than that, the report makes the case for an urgent approach to the affordability issue. At one level this might be addressed by taking steps to increase the supply of housing land, based presumably on the introduction of additional greenfield land, identification and rehabilitation of well placed brownfield sites, and encouraging site amalgamation around centres and in the suburbs. This suggests a planning and development response on the part of the council, perhaps working closely with the private sector.

This is not sufficient however. Another issue to be addressed is the prospect of a looming construction skills and labour shortage. This follows a significant downturn in building activity, and the prospect of increased competition from large infrastructure projects, on the one hand, and strong demand from Australia and potentially Christchurch, on the other. The building industry needs gearing up. In addition, the failure of a number of developers, construction companies, and housing financiers has eroded the commercial infrastructure capable of managing and implementing the sort of large scale response that required to manage the sort of increase in housing that might begin to rebalance the market.

The wider implication is that increasing residential densities requires a capacity to boost the stock of housing generally, with the added condition that this should be done in a highly innovative manner both to overcome the supply side impediments and facilitate intensification.

2.6.4 Conclusion: a Constrained Market

A range of evidence on the Auckland market points to some immediate issues and distortions that are impeding progress towards higher densities and may even be a consequence of policies pursuing them without close enough regard to the physical, land use, behavioural household, and structural industry conditions and constraints. These are evident in:

- A dramatic and potentially prolonged reduction in new housing as a result of recession, with the fall in the multi-unit housing that underpins high density a significant feature of this;
- The growth of a substantial rental population dominated by the growing intermediate sector of households with one or two incomes who still cannot afford to buy a home even in the lower price quartiles;
- Continuing aspirations for home ownership as an important step in households' residential, economic, and social progress.

The current study is focused primarily on the behavioural issues that might be frustrating movement towards higher density housing and residential intensification. This is the focus of Working Papers 2 and 3.

The remainder of the current paper explores contextual issues in terms of the frequency and direction of households' movement between residences and in terms of the potential demographic drivers of future demand for smaller dwellings.

3 Residential Mobility

While underlying demographic shifts, housing supply, and macro economic conditions influence demand for and construction of additional dwellings, the propensity for households to relocate should be considered separately on two grounds. First, the propensity to move will be influenced by their perceptions of the economic and personal outlook. This may vary systematically with economic conditions generally, and the state of the labour market in particular.

Second, the propensity to move is generally spatially constrained: the majority of households move within a defined sub-market which may be defined by neighbourhoods or by geographical sector (north, west, central or south) in the metropolitan housing environment.

These two attributes of the propensity to move – frequency and distance – are likely to be influenced systematically by the life-style, age, career and employment status of key individuals within the household.

This section briefly reviews aspects of the propensity to move from census sources. It does not distinguish between multi-unit and detached housing, but inferences can be drawn from the directions of movement relative to more central (Auckland City) and less central localities in Auckland.

3.1 Propensity to Move: the Example of Auckland

The Darroch model takes account of both relative shares of international and internal movement in the allocation of housing demand among submarkets. It is also possible to examine the operation of subregional housing markets using the Census tables identifying where respondents lived five years earlier (Table 8). These raise some questions of accuracy of reporting and reconciliation at the Census Area Unit, so the evidence for localised movement is briefly analysed here among Auckland's (former) territorial council areas.

Table 8 Residential Submarkets, Auckland Region, Residential relocation 2001-2006

Movement from:	Usually Resident 2001	Within District	Moved Elsewhere Auckland	Moved outside Auckland	Total Movement	% People Moving	% Local	% Elsewhere in region
Rodney	76,200	18,400	7,800	2,100	28,300	37%	65%	28%
North Shore	184,800	51,300	17,600	13,700	82,600	45%	62%	21%
Waitakere	168,800	41,400	19,100	8,300	68,800	41%	60%	28%
Auckland	367,700	92,200	43,400	29,200	164,800	45%	56%	26%
Manukau	283,200	80,300	25,100	10,900	116,300	41%	69%	22%
Papakura	40,700	8,100	7,100	900	16,100	40%	50%	44%
Franklin	51,700	12,300	4,900	1,100	18,300	35%	67%	27%
TOTAL	**1,173,100**	**304,000**	**125,000**	**66,200**	**495,200**	**42%**	**61%**	**25%**
Movement to:	**Usually Resident 2006**	**Within District**	**From Elsewhere in Region**	**From Outside Region**	**Total Movers**	**% People Moving**	**% Local**	**% Elsewhere in region**
Rodney	89,600	18,400	15,700	11,500	45,600	51%	40%	34%
North Shore	205,600	51,300	15,800	41,500	108,600	53%	47%	15%
Waitakere	186,400	41,400	19,900	25,900	87,200	47%	47%	23%
Auckland	404,700	92,200	30,700	87,400	210,300	52%	44%	15%
Manukau	329,000	80,300	25,800	51,300	157,400	48%	51%	16%
Papakura	45,200	8,100	8,700	5,200	22,000	49%	37%	40%
Franklin	58,900	12,300	8,300	6,400	27,000	46%	46%	31%
TOTAL	**1,319,400**	**304,000**	**124,900**	**229,200**	**658,100**	**50%**	**46%**	**19%**

Source: Statistics New Zealand Residence 5 Years Ago

The analysis is based on the responses of individuals rather than households, given that this is the form in which the data is collected. It confirms a clear propensity to move locally. The data reveals a high propensity to move: between 2001 and 2006; with 42% of the region's residents having moved. (In practice this proportion will be inflated by the number who moved more than once).

Defining the local territorial council area as the submarket for this purpose, it is also clear that people favoured movement within the local area, 61% moving locally; as high as 69% in Manukau and as low as 50% in Papakura. However, given the small size of Papakura and its integration into a south Auckland submarket (Darroch links it with Manurewa), this figure is artificially deflated relative to the others.

3.2 Revealed Location Preferences, Christchurch

Another approach to the operation of localised housing markets considers the changing character of residents and dwellings in different parts of the city between censuses, the differences highlighting any spatial sorting arising from changes in the character of residents as a result of movement within and among submarkets. To illustrate this, an analysis has been done of changes in the composition of the Christchurch housing market using Census data covering the ten years from 1996 to 2006.

The CBD and inner suburbs were differentiated for this purpose from the outer suburbs. Ideally, housing submarkets would be defined at greater levels of disaggregation, reflecting the sort of sectoral breakdown developed by Darroch for Auckland. Nevertheless, the approach adopted here is sufficient to show a significant difference in the nature of the inner and other suburbs.

Over the period, the latter were the main destination for an increase in households (69% of the total, Table 9). More to the point, they experienced by far the bulk of growth in owner occupied housing, followed by rural areas within the city boundaries. The inner suburbs actually experienced a loss in owner occupied homes, but accounted for a significant share of the growth in rented dwellings.

Table 9 Change in Christchurch Household Numbers by Tenure, 1969-2006

Growth 1996-2006	Owned or Partly Owned	Not Owned	NEI	Total
CBD	18	66	15	99
Central City	207	84	195	486
Inner Suburbs	-1,287	2,817	1,059	2,559
Suburban	**3,198**	**5,892**	**1,896**	**10,992**
Banks Peninsula	186	21	27	228
Rural	1,206	171	78	1,464
Total	3,528	9,051	3,270	15,828
Shares of Growth by Area				
CBD	18%	67%	15%	100%
Central City	43%	17%	40%	100%
Inner Suburbs	-50%	110%	41%	100%
Suburban	**29%**	**54%**	**17%**	**100%**
Banks Peninsula	82%	9%	12%	100%
Rural	82%	12%	5%	100%
Shares of Growth by Tenure				
CBD	1%	1%	0%	1%
Central City	6%	1%	6%	3%
Inner Suburbs	-36%	31%	32%	16%
Suburban	**91%**	**65%**	**58%**	**69%**
Banks Peninsula	5%	0%	1%	1%
Rural	34%	2%	2%	9%
Total	100%	100%	100%	100%

Source: Census of Population and Dwellings

Consideration of changes in household size shows associated contrasts between inner and outer destinations (Table 10). Couples and single households dominate overall growth identified (37% and 34% of growth, respectively). By dint of being the main destination for growth, the outer suburbs tend to dominate each household size category. Three and four person households accounted for 27% of growth in number of households, and larger households around just 2%.

Table 10 Changes in Household Size (Usual Residents), Christchurch 1996-2006

	One	Two	Three	Four	Five	Six	Seven	Eight or More	Total
Growth 1996-2006									
CBD	52	28	20	8	-7	0	2	1	98
Central City	126	237	113	46	-29	5	-10	2	484
Inner Suburbs	787	790	466	374	92	-23	5	48	2,563
Suburban	4,189	3,918	1,439	1,355	-4	79	-15	39	10,988
Banks Peninsula	59	137	24	7	0	1	2	-5	225
Rural	187	716	213	262	68	5	-4	14	1,461
TOTAL	5,400	5,826	2,275	2,052	120	67	-20	99	15,819
Shares of Growth by Area									
CBD	53%	29%	20%	8%	-7%	0%	2%	1%	100%
Central City	26%	49%	23%	10%	-6%	1%	-2%	0%	100%
Inner Suburbs	31%	31%	18%	15%	4%	-1%	0%	2%	100%
Suburban	38%	36%	13%	12%	0%	1%	0%	0%	100%
Banks Peninsula	26%	61%	11%	3%	0%	0%	1%	-2%	100%
Rural	13%	49%	15%	18%	5%	0%	0%	1%	100%
Total	34%	37%	14%	13%	1%	0%	0%	1%	100%
Shares of Growth by Household Size									
CBD	1%	0%	1%	0%	-6%	0%	-10%	1%	1%
Central City	2%	4%	5%	2%	-24%	7%	50%	2%	3%
Inner Suburbs	15%	14%	20%	18%	77%	-34%	-25%	48%	16%
Suburban	78%	67%	63%	66%	-3%	118%	75%	39%	69%
Banks Peninsula	1%	2%	1%	0%	0%	1%	-10%	-5%	1%
Rural	3%	12%	9%	13%	57%	7%	20%	14%	9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Census of Population and Dwellings

By dint of being the main destination for growth, the suburbs still tend to dominate each household size category. Interestingly this dominance was evident in single person households with the suburbs taking account for 78% of the city's entire increase, and the CBD and Central City just 3%.

Nevertheless, single or two person households made up 82% and 75% respectively of all new households in the CBD and Central City. The inner city and inner suburbs were interesting, however, because they were also relatively attractive to three and four person households, and larger households.

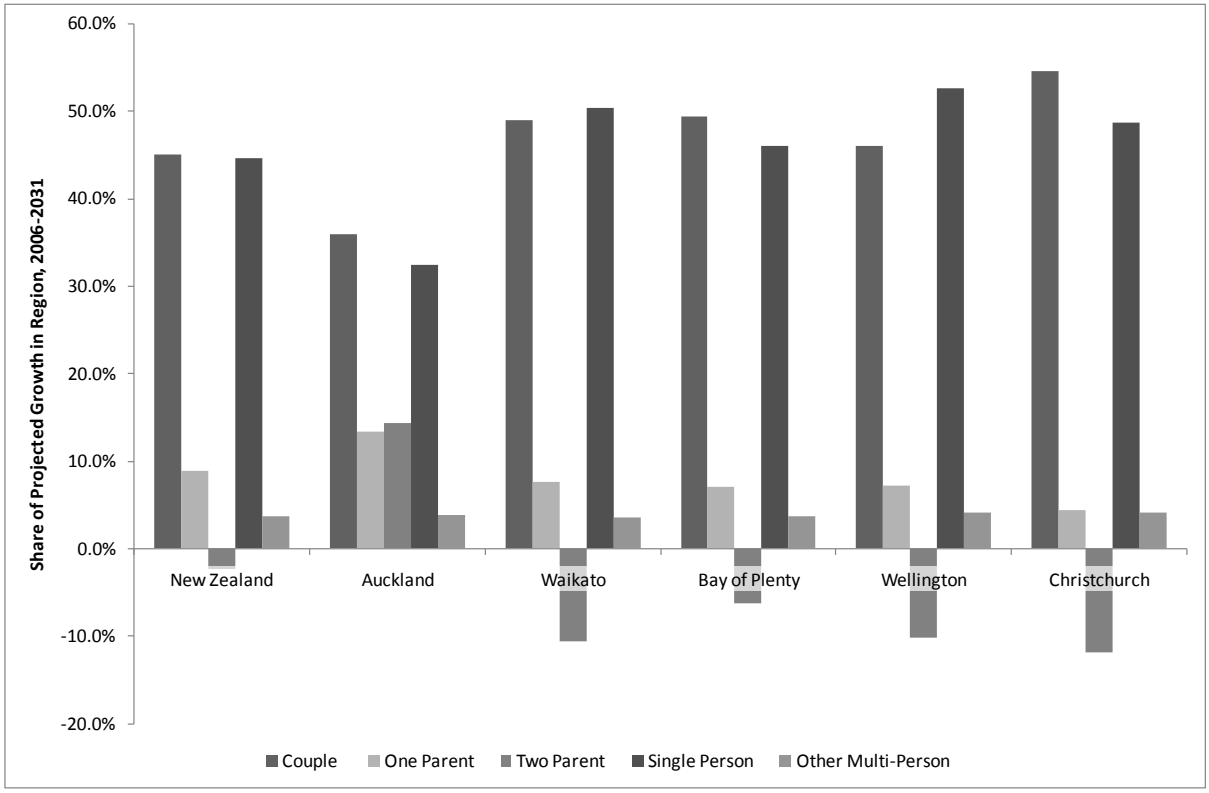
While there is some tendency for smaller households to characterise growth in the CBD and inner city, this has only been a very small part of Christchurch's expansion. Certainly there is no evidence that diminishing household size has in any way favoured central city or even inner city suburbs ahead of suburbs further out.

This example suggests that a shift towards smaller housing is not necessarily accompanied by a shift towards the centre, on the one hand, but that a gain in central city population depends on an increasing number of one or two person households, on the other. It also confirms the proposition that policy should be defined with reference to the relocation behaviour and prospects appropriate to the particular centre under consideration.

4 Composition of Demand

In late 2010 Statistics New Zealand updated projections of household composition and age structure using the 2006 Census as a base. These enable us to consider in more depth possible demographic drivers of the shift towards single person households and smaller households generally. The percentage shifts in different household categories show a sharp increase in couples and single person families over the 25 year projections, modest growth in two parent families, and a likely contraction in single parent families (Figure 6).

Figure 6 Changing Household Composition, 2006-2031

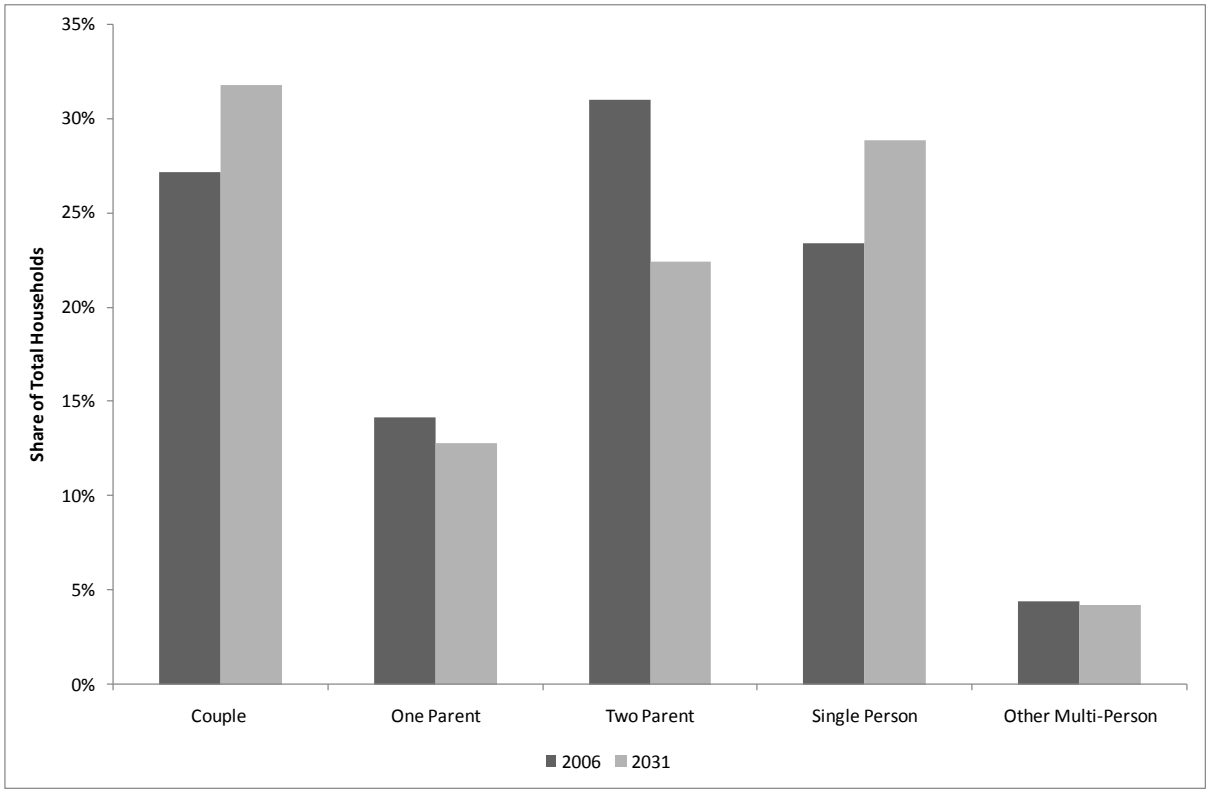


Source: Statistics New Zealand

This pattern underlies expectations of increasing intensification both b y a tendency towards smaller households and as a result of families with children becoming a minority in New Zealand's long-term housing demand profile. Interestingly, this is most pronounced outside Auckland which, with traditionally higher gains from international migration has retained a relatively younger age profile than other parts of the country

The overall picture is not one of radical change, however. In 2006, families with children accounted for 53% of New Zealand households, and couples in a relationship another 23% (Figure 7. In 2031, these shares are expected to decline to 43% families with children and 28% for couples in a relationship. Single person households will increase by 4% to 24% (. In Auckland, for example, single person households are projected to increase by around 3,340 per year, while family households (including couples) will increase by around 6,560 a year. Families with children, however, are projected to increase by only around 2,860 a year.

Figure 7 Projected National Distribution of Household Types, 2026



The key demographic driver of residential intensification lies in the expansion of two groups, single person households, and couples. In essence, these have been treated either explicitly or implicitly as targets for a move to more centralised, more intensive residential development.

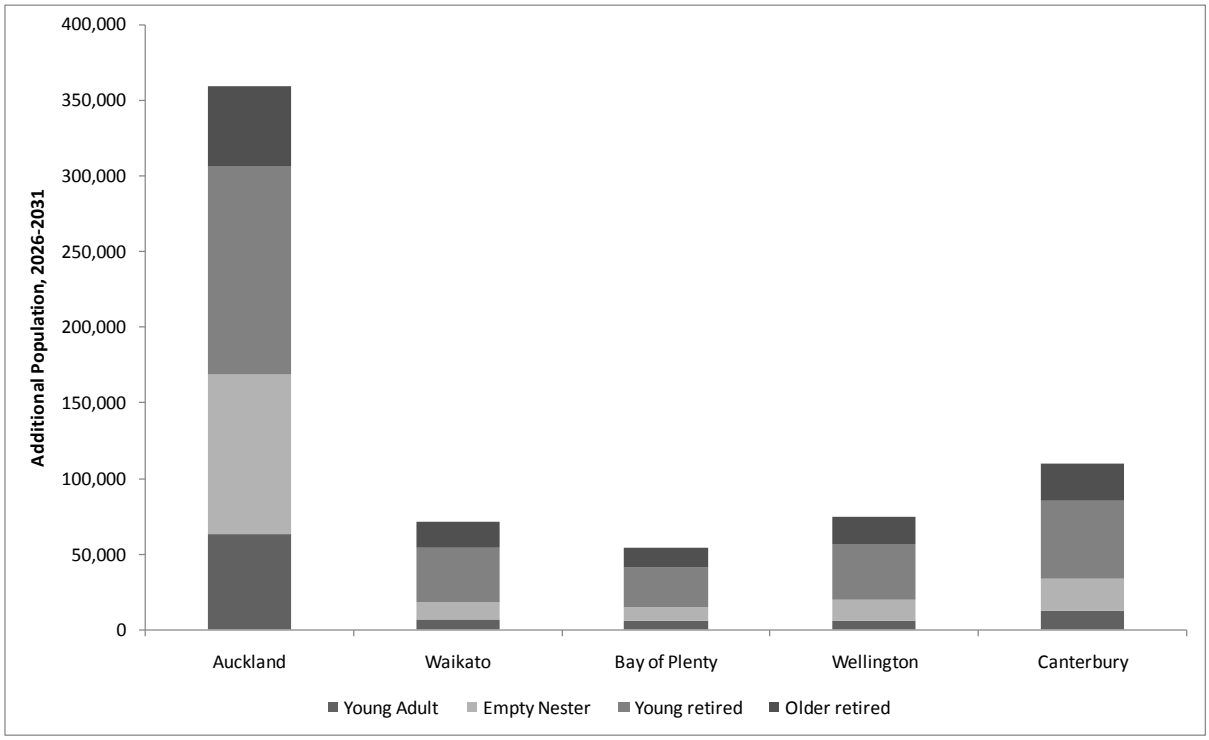
To understand the future contribution of these groups to new housing demand, Statistics New Zealand age-specific (medium) projections have been analysed. Four broad lifecycle groups have been considered and can be described with reference to the segments identified in Working Paper 1:

- **Young adults**: aged from 20 to 29 in housing and career transition or early stages of household formation, with a high proportion in one or two person households; and a relatively high degree of residential mobility, and a greater propensity to rent;
- **Empty nesters**, usually still working, aged 50 to 64, often still in family homes, high levels of home ownership, and limited residential mobility;
- **Early retired**, (possibly working) part-time or full-time, a significant share still largely independent : 65-79, with a high level of home ownership and potentially downsizing, most likely within or close to their current neighbourhood
- **Older retired people**, with diminishing dependence, a growing need to downsize their housing, including movement into retirement villages or care-based institutions., .

The projections enable us to project the relative distribution of people among these categories Figure 8). This indicates that by far the bulk of people driving the increasing into numbers of single person and couples household categories will fall into the Empty Nester and Young Retired categories, categories which are least likely to show a high propensity to move, either from their

current dwellings or from their existing neighbourhoods. Over the 25 years, for example, young adults will form only 18% of the "target" group in Auckland, and as few as 8% in Wellington. By way of contrast, the empty nester and early retired group will account for 68% and 58%, respectively.

Figure 8 Projected Distribution of Younger and Older Adults, 2006-2031



In both cases, empty nesters are more important early in the period, but the weight swings progressively to the early retired later (after 2021 in Auckland's case). The young adult group contracts until the end of the projection period.

The clear implication is that while there will be expansion among young adults who may be attracted to the advantages of centralised, higher density living, they comprise a much smaller segment of demand than older adults. This group will be largely without family at home, transitioning out of work or towards the end of their careers, but nevertheless may value the personal space and stability associated with ownership of their own homes and who seek the continuity of residing in their existing suburb and associated community.

5 Conclusions

This working paper offers the following observations conclusions with respect to the dynamics of the housing market within New Zealand:

(1) The broad size of the market for new dwellings (driven by a combination of new household formation and replacements for demolitions) is around 25,000 a year nationally, with up to 10,000 a year in Auckland, 2,000 or thereabouts in Wellington, 3,500 in Canterbury (prior to the earthquake of February 2011), and close to 23,000 in Waikato and 2,000 in Bay of Plenty.

(2) There is an expectation that a growing share of these will be by way of multi-unit dwellings, climbing from around 20% to 25% of the total to well over a third and potentially more;

(3) A lower than expected uptake of multi-unit dwelling to date confirming the market's preference for detached, largely suburban housing.

(4) The lower uptake of higher density living is contrary to what might be expected from the observed increase in rental tenure. This may be attributable to the short comings of the private rental investors market which to date has been characterised by fragmented ownership among retail investors rather than any significant institutional commitment and (as observed in Working Paper 1) negative connotations associated with apartment dwelling in terms of the integrity of the buildings and their dominance in the past by public social housing.

(5) Confirmation that within Auckland there are distinctive submarkets, within which household movement tends to be concentrated. Consideration of changes in the nature of households and housing stock in Christchurch confirms this given that "the suburbs" remain by far the largest destination for detached and multi-unit housing which would support the notion that people may trade down their housing but remain close to the amenities and communities of the suburbs.

(6) Nevertheless, inner city housing has depended heavily over the past decade on construction of multi-unit dwellings (apartments) which have been directed at the rental market leading to a distinctive inner submarket in and around the CBD.

(7) Consideration of the age structure of those groups most likely to occupy single person and two-person households over the next twenty five years indicates that they will be dominated by empty nesters initially and progressively more so by early and mostly active and independent retirees. These are groups that the literature suggests are likely to favour staying in homes with the space to support their recreational activities and interests and that enable them to maintain some stability in their existing neighbourhoods.

It would be unwise to assume on these grounds that the market for apartment style rentals will grow over the coming decades at a rate similar to that recorded over the middle of the past decade.

Encouraging a large group of ageing baby boomers, with their commitment to active living and leisure beyond retirement, their entrenchment in existing suburbs, and often a commitment to helping out with the housing needs of their adult children into smaller residences in higher density destinations will be a major challenge. It is unlikely that the location, design, and quality parameters that characterised the recent boom in multi-unit housing will be an appropriate model for them.

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