

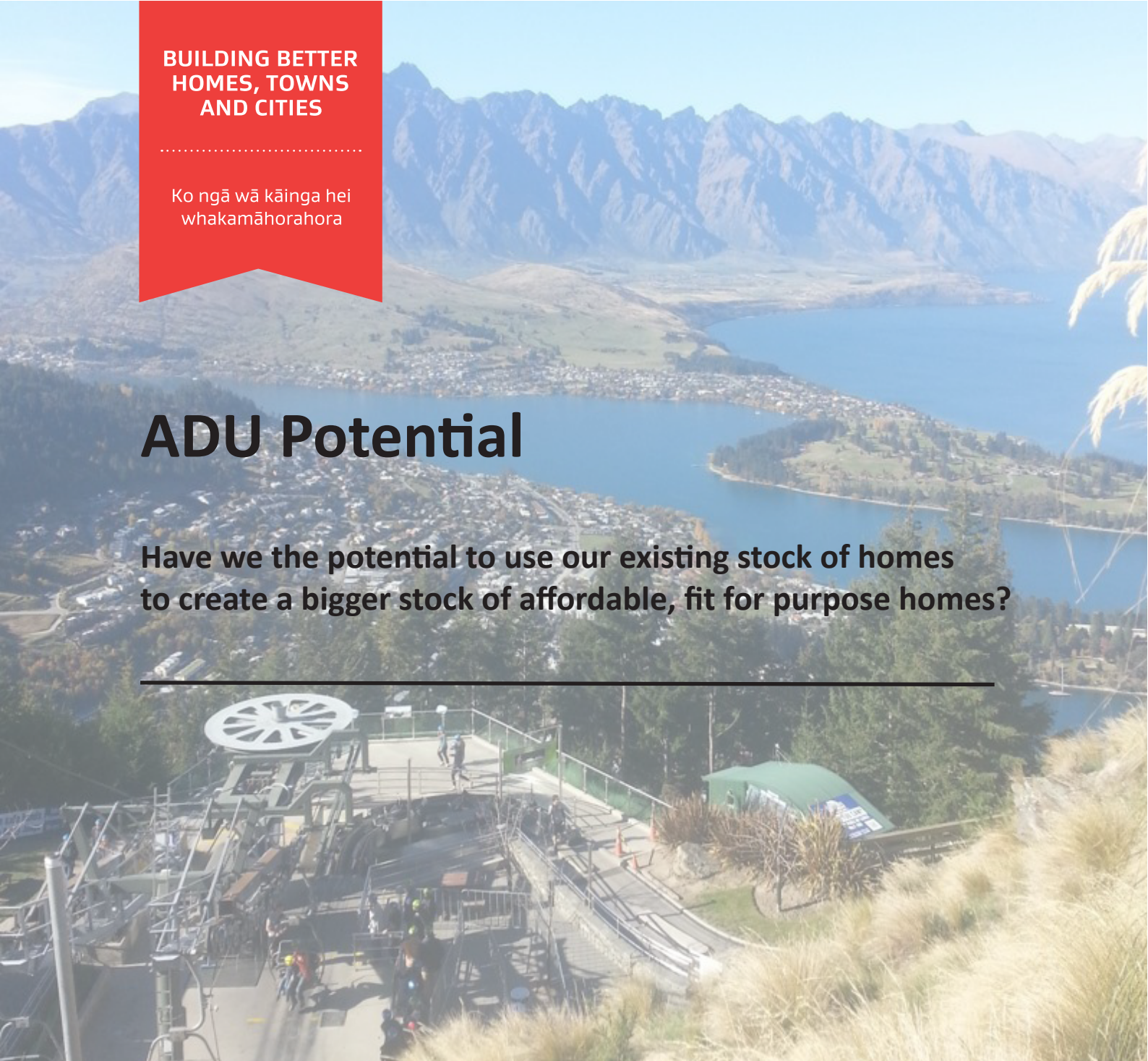
National **Science** Challenges

**BUILDING BETTER
HOMES, TOWNS
AND CITIES**

Ko ngā wā kāinga hei
whakamāhorahora

ADU Potential

Have we the potential to use our existing stock of homes to create a bigger stock of affordable, fit for purpose homes?



ADU Potential:

Have we the potential to use our existing housing stock of homes to create a bigger stock of affordable, fit for purpose homes?

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CRESA**

**Building Better Homes Towns and Cities
SRA – The Architecture of Decision-Making – Resources Component**

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Contents

Executive Summary	i
1. Introduction	1
2. Defining ADUs	2
3. Providing for ADUs in New Zealand	3
4. Potential for Homes through Partitioning in New Zealand	6
<i>Estimate Rationale and Method</i>	6
<i>National Estimate of Dwellings Generated by Partitioning</i>	10
<i>Regional Estimates of Dwellings with Potential for Partitioning</i>	11
5. ADUs – The International Experience	11
<i>An Overview of Research on the Promise and Outcomes of ADU Provision</i>	12
<i>Who builds ADUs?</i>	15
<i>Who uses ADUs?</i>	16
<i>Barriers to ADUs</i>	17
<i>Changing Perceptions and Acceptability of ADUs</i>	19
<i>Illegal ADUs</i>	21
<i>Do ADUs Generate Affordable Housing?</i>	25
<i>Strategies to Increase Fit-for-Purpose Housing through ADUs</i>	27
6. Realising ADU Housing Opportunities	30
Appendix A District Plan Provisions Specific to ADU	32
Appendix B United Kingdom Nationally Described Space Standards (m ²)	59
References	60

Tables

Table 3.1 Councils and Allowed ADU Uses	4
Table 5.1 Examples of Overseas Support for Fit-for-Purpose ADUs	27

Figures

Figure 4.1 Average New Zealand House Size in 2011 by Decade of Production	7
Figure 4.2 New Zealand House Sizes by Number of Bedrooms	8
Figure 4.3 Variation in New Zealand House Sizes by Bedroom Numbers	9
Figure 4.4 Dwellings Realised from Partitioning (4 or less residents 2013 Census)	10
Figure 4.5 Number of Dwellings with Partitionable Stock by Region (2013 Census)	11

Executive Summary

New Zealand requires a significant expansion of its housing stock if it is to meet household growth evident over the last decade. The under-supply of housing is evident in persistently rising house prices and affordability pressures in both the rental and owner occupation markets. The problem of unmet housing demand has been largely framed in terms of access to and constraints on mortgage finance and arguments that land supply and land prices have inhibited dwelling production.

Finance and land, along with the building industry's human resource and access to building materials, have all been recognised as resources critical to the expansion of New Zealand's housing stock. There is one resource, however, that has drawn very little attention from the public, politicians or researchers. That is, the resource to be found in already utilised residential land and residential houses. It is a resource that has potential to expand the housing stock in New Zealand through accessory dwelling units (ADUs).

ADUs are of two kinds: (a) A new build independent residence on land already occupied by a dwelling; and (b) additional dwellings through the partitioning or conversion of existing houses or structures.

This report notes that the conversion of structures not designed for living in has become increasingly common in some New Zealand cities as access to affordable housing has declined. Those unauthorised and unconsented structures are associated with poor living conditions, environmental risks and vulnerable people exposed to still unaffordable rents. Similar problems overseas have seen there a more active consideration of improving access to a stock of affordable, fit for purpose ADUs.

This report:

- reviews research related to international experiences and approaches to ADUs;
- considers New Zealand's current approach to ADUs by reviewing council ADU provisions and rules;
- estimates the number of dwellings that could generate ADUs through partitioning of under-utilised dwellings and the additional stock that would be generated through partitioning.

From partitioning under-utilised dwellings alone, we estimate that around 12 percent of New Zealand's housing stock could be partitioned and deliver over 360,000 dwellings. That is, 180,000 additional dwellings without impinging on greenfield sites or unutilised vacant residential land.

The potential for additional housing through ADUs is unlikely to be realised because of a plethora of local rules around ADUs. There is little consistency between councils and there is fundamental failure to articulate a coherent logic around partitioning and ADU policies. The outcomes sought by councils for allowing (or disallowing ADUs) are unclear. The effects they are trying to control through the rules they impose are poorly articulated and the rules themselves appear arbitrary and are certainly inconsistent across jurisdictions. Those problems mean that opportunities for developing low-cost, high performance ADU solutions through pre-fabrication are largely lost. A profound lack of attention to ADUs has meant that not only does New Zealand continue to under-utilise its current housing infrastructure, the benefits that could accrue to income poor, asset rich households from using their assets more effectively by building ADUs or partitioning are being missed.

1. Introduction

The National Science Challenge, *Building Better Homes, Towns and Cities (BBHTC)*, has been established to provide the robust evidential platform necessary for New Zealand to generate the housing stock needed to address current deficits and meet the needs of the future. In this report we consider whether the existing housing stock and existing, already built on residential land has potential to expand the housing supply. One of the resources frequently ignored in policy and planning in the quest to increase the number of affordable dwellings in the housing stock is the land around and internal space in existing dwellings. Ironically, and in contrast, the conversion of structures not designed for living in has become increasingly common in some New Zealand cities as access to affordable housing has declined.

Unauthorised and unconsented structures are associated with poor living conditions, environmental risks and vulnerable people exposed to still unaffordable rents. In Auckland alone, 700 notices for landlords to fix their properties were issued by in 2015. The vast majority of those notices related to unconsented dwellings being used as rentals. In the six months between February and July 2016, 750 complaints investigated by the Auckland Council found the structures to be unfit for habitation. Two thirds of those dwellings were unconsented structures. In 2016 there was a report that the Auckland Council was investigating the use of a piggery divided into eight dwellings.¹

The New Zealand Property Investors have argued that increasing surveillance of unconsented structures used for human habitation will simply exacerbate homelessness.² The Ministry of Social Development has admitted that they have referred beneficiaries to landlords renting out garages and directly paid the rents of beneficiaries so referred.³ It has been argued that that practice was a method by which waiting lists for public housing could be reduced and statistics indicating the extent of homelessness could be artificially suppressed. The subsequent public outcry at that practice was certainly associated with an increase in waiting list numbers for government social housing assistance.⁴

This report asks whether we can resolve the deep contradiction between the lack of attention given to accessory dwellings and partitioning as a solution to persistent housing under-supply and the exposure of vulnerable families to living in poor conditions in unconsented structures. It focuses on accessory dwelling units (ADUs), including basement conversions and home partitions and asks two key questions:

- What is the potential for ADUs to meet deficits in housing supply, particularly for those struggling to access affordable housing?
- What are the barriers to realising the potential of the housing resource which overseas has been referred to as 'hidden homes'?

The report is structured as follows:

¹ Owen, Lisa, Landlords Renting Out 'Unsafe' Conversions, *Newshub*, 19 July 2016.

² Curtis, Ceinwen, Garage Rental Prosecutions Could 'Spook' Landlords, *RadioNZ News*, 18 March 2017.

³ Ashton, Alex, Work and Income sent families to garages, *RadioNZ News*, 20 July 2016.

⁴ Johnson, A., 2017, *Taking Stock*, Social Policy & Parliamentary Unit, Manukau, p. 13.

- Section 2 briefly defines the scope of ADUs and related terminology used overseas and in New Zealand.
- Section 3 reviews the formal provisions made for ADUs by councils in their district plans.
- Section 4 provides estimates, and the method for those estimations, of the number of dwellings that might be generated through partitioning existing homes which substantially exceed the number of utilised bedrooms.
- Section 5 turns to the international experience of ADUs and evaluation of the inclusion of ADUs as a means of providing fit for purpose affordable housing.
- Section 6 suggests that realising the potential of ADUs in New Zealand to provide affordable, fit-for-purpose housing is contingent on developing a national approach to ADU provisions and standardisation of the rules associated with them.

2. Defining ADUs

What constitutes an ADU is not easy to define. Perhaps the broadest and most universally applicable definition is that it is an independent dwelling but one created subsequent to the primary dwelling with which it is associated. For further elaboration, the following definitions of terms used in this report are set out below. For the purpose of this report, unless otherwise indicated, the term ADU can be read as encompassing all the dwelling types described below:

- **Accessory Dwelling Unit (ADU)** – Accessory dwelling units are small, self-contained living units, including bathroom and kitchen facilities, subordinate to a primary residential dwelling. ADUs can be created by converting the interior of a dwelling such as a basement or attic, internal subdivision or partitioning, extending the existing home to accommodate a separate unit, for instance over an attached garage, or building a separate, smaller dwelling, such as a “granny flat” on the same lot.⁵ The terminology for ADUs varies throughout the literature, but includes:
 - ancillary dwelling/ancillary dwelling unit
 - minor dwelling
 - supplementary dwelling/supplementary unit
 - garden suite
 - garage suite
 - elder cottage
 - cottage dwelling
 - family flat.
- **Granny flat** – A separate, smaller dwelling built on a site with an existing dwelling and specifically directed to providing older people and their families to co-locate in a way that allows mutual support but maintains independence.
- **Hidden Homes** – Dwellings in which the number of household units and separate dwellings can be increased through partitioning within the current envelope, with or without some **minor** additional extension of the dwelling footprint.

⁵ Jarvis, H., 2010. “Housing to manage debt and family care in the USA”, in S.J. Smith and B.A. Searle (eds) *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, Wiley-Blackwell, Oxford.

- **Partitioning** – The subdivision of an existing dwelling to allow the independent accommodation of one or more additional households.
- **Secondary Suites/Dwellings** – Units created from unutilised space within a primary residence. They include basement and loft/attic⁶ conversions.
- **Secondary dwelling** – An independent dwelling built as a residential unit on land on which there is already a dwelling.
- **Laneway Homes** – Small, detached homes, built behind a primary residence and facing a laneway.⁷
- **Carriage Houses** – Much like a laneway house, a carriage house is a detached residence in the backyard of a dwelling with entry off a rear lane.⁸

In New Zealand, the terms used which fall within the ambit of ADUs are various. In undertaking the analysis of council plans the following terms were searched and ADUs were found to be referred to under multiplicity of these:

- detached additional dwelling
- minor dwelling/minor unit
- dependent persons dwelling
- second/subsequent dwelling
- independent dwelling unit/dwelling unit
- ancillary residential unit
- accessory building for habitation/habitable building
- family flat/granny flat
- supplementary unit/supplementary residential building.

3. Providing for ADUs in New Zealand

There has been a significant amount of work undertaken on subdivision opportunities in New Zealand towns and cities, including research into unused, already zoned and subdivided residential land.⁹ There has been little attention, however, given to partitioning or the addition of further, independent dwelling units on an existing residential lot. There are two ways in which additional dwellings might be developed through the production of ADUs: through partitioning existing dwellings or adding a new build to an existing lot. Unlike subdivision, addition of new builds on existing built-on residential sites have no title requirements, although they are required to conform to district planning rules as well as the consenting associated with the Building Act. In some cases, development levies or contributions are required.

⁶ Gratton, M.C., 2011. *An analysis of secondary suites as a policy instrument in the city of Edmonton*, MCP Doctoral dissertation, University of Manitoba, Winnipeg

⁷ McLaughlin, Amara, 2016, Can Laneway Homes be a Housing Solution? Hamilton Takes Stock, *CBC News, Canada*

⁸ Havre, Justin 2016, *Carriage Houses Drive Housing Options and Value in Kelowna*, Kelowna Homes CA

⁹ Memon, A and McFarlane, K., 2014, *Long-term vacant residentially zoned land in Auckland: reasons for prolonged land vacancy and development potential*, Auckland Council technical report, TR2014/022

The addition of another dwelling on a single site is allowed by 51 of New Zealand's 67 local authorities. Some councils also explicitly allow partitioning, in some cases with provision for the striking of a separate title for a partitioned dwelling.

Table 3.1 Councils and Allowed ADU Uses

Allow ADUs for general use	Allow ADUs for the purpose of housing family	Allow ADUs for the purpose of housing workers
Kaipara District Council		
Whangarei District Council		
Auckland Unitary Council		
Thames-Coromandel District Council		
Waikato District Council	Waikato District Council	Waikato District Council
Hamilton City Council		
Otorohanga District Council		
Waipa District Council		
South Waikato District Council		
Tauranga City Council		
Western Bay of Plenty District Council		
Rotorua District Council	Rotorua District Council	
Whakatane District Council		
Opotiki District Council		
Gisborne District Council		
New Plymouth District Council		
South Taranaki District Council		
Whanganui District Council		
Manawatu District Council	Manawatu District Council	
Napier City Council		
Hastings District Council		
Central Hawkes Bay District Council		
Tararua District Council		
Palmerston North City Council	Palmerston North	
Horowhenua District Council	Horowhenua District Council	
	Kapiti Coast District Council ¹⁰	
Masterton District Council		Masterton District Council
Carterton District Council		Carterton District Council
South Wairarapa District Council		South Wairarapa District Council
Porirua City Council		
Upper Hutt City Council	Upper Hutt City Council	
Wellington City Council		
Hutt City Council	Hutt City Council	
Nelson City Council		
Tasman District Council		Tasman District Council
	Marlborough District Council ¹¹	
Buller District Council		
	Grey District Council ¹²	
Hurunui District Council		
Waimakiriri District Council		
	Selwyn District Council ¹³	
Christchurch City Council	Christchurch City Council	
Westland District Council		
Timaru District Council		
Mackenzie District Council		

¹⁰ Kapiti Coast only permits ADUs for the purpose of housing family members.

¹¹ Marlborough District Council only permits ADUs for the purpose of housing family members.

¹² Grey District Council only permits ADUs for the purpose of housing family members.

¹³ Selwyn District Council only permits ADUs for the purpose of housing family members.

Table 3.1 Councils and Allowed ADU Uses (continued)

Allow ADUs for general use	Allow ADUs for the purpose of housing family	Allow ADUs for the purpose of housing workers
	Waitaki District Council ¹⁴	
	Waimate District Council ¹⁵	
Queenstown-Lakes District Council		Queenstown-Lakes District Council
	Central Otago District Council ¹⁶	
	Dunedin City Council ¹⁷	Dunedin City Council
Clutha District Council		Clutha District Council

Appendix A summarises the provisions and requirements made by councils across New Zealand explicitly related to ADUs. These typically are in addition to provisions around the prime or main residential unit. There is considerable variation across New Zealand councils around what new-builds or new residential additions on a single site. Of the 51 councils outlining provisions for ADUs,¹⁸ seven councils permitted ADUs for the sole purpose of housing a family member (a further nine cited housing a family member as one of the uses of ADUs), and eight permitted ADUs for housing employees (Table 1). Compared to the addition of a new dwelling on site, council plans tend to be less explicit around partitioning and conversion. Only four of 67 councils appear to make explicit provision for conversions and partitioning.

The controls councils impose on ADUs are diverse, both within council jurisdictions and across them. Within a council they may vary according to the range of residential zones and the addition of an ADUs may, according to zone, range from permitted, to discretionary to requiring public notification. Auckland Council's unitary plan is such an example. In that plan distinction is also made in some zones between minor dwellings and other dwellings.

Other councils such as Tauranga have rules in some zones that an accessory dwelling be within the envelope of the main residential building or on the second level of a garage for the principal dwelling. Some councils specify the maximum size of an accessory dwelling or building. The Far North District Council, for instance, specifies that a detached accessible dwelling cannot exceed 45m² while Hamilton City Council specifies 60m². Thames-Coromandel District Council allows a maximum floor area for LifeMark or similarly accredited ADUs.

A further set of councils specify function or amenity of ADUs. Franklin allows ADUs with ablutions but not for food preparation or cooking facilities, while Napier requires that an accessory dwelling must consist only of a single bedroomed unit, albeit one of up to 80m². There are also a variety of conditions related to impacts on neighbours. Opotiki District Council, for instance, requires that neighbours provide written consent except where an ADU is beyond 1.5m from the boundary. There are, too, a variety of rules relating to car parking and access to the ADU.

¹⁴ Waitaki District Council only permits ADUs for the purpose of housing family members.

¹⁵ Waimate District Council only permits ADUs for the purpose of housing family members.

¹⁶ Central Otago District Council only permits ADUs for the purpose of housing family members.

¹⁷ Dunedin City Council only permits ADUs for the purpose of housing family members or workers.

¹⁸ Note, this only includes councils permitting an independent unit. Those allowing units with sleeping and bathroom facilities, but no kitchen facilities, have been excluded.

The logics underpinning the diversity of different provisions and rules associated with ADUs are not always clear. For some councils, there is implicitly an aesthetic concern. The Waipa District Council, similar to Tauranga City Council, require ADUs to be largely within the envelope of the principal dwelling. For Waipa this is so “it has the appearance of a single dwelling.” Recognition of LifeMark and the incentives associated with building an ADU to universal design suggests that Thames-Coromandel District is concerned with ADUs primarily as an opportunity to provide for older people or possibly adult dependents with a disability. The Kapiti Coast District Council requirement that ADUs are restricted to ‘family flats’ and must be relocatable both reinforces the notion of the ADU as a form of ‘special’ housing and appears to be a rejection of intensification. Marlborough District Council has similar requirements in both its plans. Christchurch City Council has a similar restriction on what they refer to as family flats, although it does allow partitioning in some zones. The Gisborne District Council’s clear requirement that ADUs must be on the same title as the principal dwelling is clearly designed to prevent subdivision by stealth. The Manawatu District Council also has similar restrictions on the possibility of splitting the ownership of dwellings on a site.

The diversity and opaque logics associated with ADUs evident across councils, suggests that ADU provisions have developed over time and in response to time or locally specific conditions. Some provisions and rules are possibly remnants of previous rules that have been given little attention over various iterations of district planning. If there is some national continuity, or a logic that appears to shape those provisions, it tends to be around the notion of providing for dependents. But this is by no means universal. What is less apparent is the use of ADUs to meet other forms of housing need, address problems of under-supply or housing affordability.

4. Potential for Homes through Partitioning in New Zealand

Despite the very few councils making explicit provision for conversions, New Zealand has a set of dwellings which could lend themselves to partitioning because they have a surplus of bedrooms relative to the numbers of residents. We estimate that around an additional 180,000 dwellings could be generated without impinging on greenfield sites or unutilised vacant residential land. This section is divided into three sub-sections. The first deals with the estimate method. The second provides national estimates and the third regional estimates.

Estimate Rationale and Method

In estimating the number of dwellings that could be partitioned and generate housing opportunities, the approach of the Intergenerational Foundation in the United Kingdom has been adopted. That approach suggests that dwellings with an excess of two bedrooms can be typified as having partitioning potential. It is a conclusion based on estimates of gross internal areas and their relation to bedroom numbers.

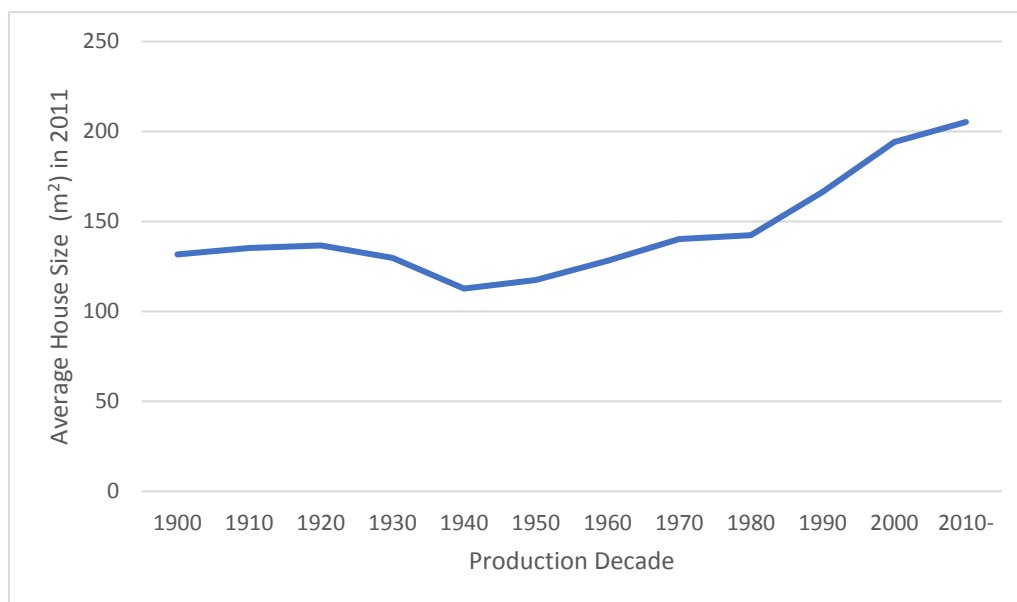
In the English context, over half of owner occupied dwellings exceed 90m² which is also the size of a typical English 3-bedroom dwelling. Using England's Nationally Described Space Standards introduced, albeit controversially, in 2015 (see Appendix B), the Intergenerational Foundation has suggested that a typical 4-bedroom dwelling (around 120m²) could be partitioned to accommodate one of the following configurations:

- Two studio flats; or
- One studio flat and one 1-bed flat; or
- Two 1-bed flats; or
- One 2-bed flat and one 1-bed flat.

Irrespective of configuration, it is suggested that one dwelling can be converted to two.¹⁹

In New Zealand, dwellings have traditionally been larger than those in the United Kingdom, although the higher average size of dwellings built prior to 1940 in Quotable Value's 2011 analysis indicates that these older dwellings have subsequently had some extension (Figure 4.1).²⁰ The size of New Zealand dwellings suggests opportunities for re-configurations of space and generation of new housing units.

Figure 4.1 Average New Zealand House Size in 2011 by Decade of Production



According to Khajehzadeh and Vale's analysis of New Zealand dwellings, the typical 3-bedroom dwelling in New Zealand is around 134.5m². The average New Zealand 3-bedroom home is, consequently, around 40m² larger than an equivalent 3-bedroom dwelling in the United Kingdom. The average 2-bedroom dwelling in New Zealand is almost 94m² and is, consequently, about the size of the typical 3-bedroom home in the United Kingdom. The average size of New Zealand dwellings increases with the number of bedrooms. The average

¹⁹ Kingman, David, 2016, *Unlocking England's "Hidden Homes": How Subdividing Large Homes Could Solve the Housing Crisis*, The Intergenerational Foundation, London

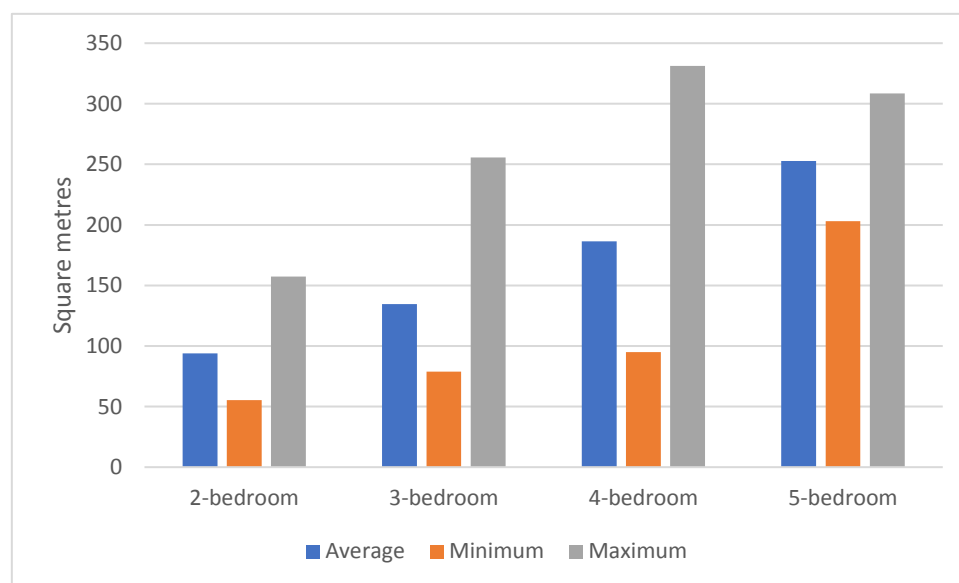
²⁰ <https://www.qv.co.nz/property-insights-blog/average-house-size-by-age/62>

4-bedroom house is around 186 m². The average size of a 5-bedroom house in New Zealand is almost 253 m².

The size increase associated with number of bedrooms is not simply a matter of more rooms. As Khajehzadeh and Vale point out, dwellings with more bedrooms also tend to have larger rooms and a proliferation of specialised rooms. The latter include additional bathrooms, extra living areas and rooms with specialised functions such as dining rooms.

A focus on the number of bedrooms as an indicator for partitioning potential, or lack of potential does need to be treated with caution, however. New Zealand houses show a considerable range in size irrespective of bedroom numbers. The floor size of the smallest 2-bedroom house and the largest 2-bedroom house in New Zealand differs by a little over 100m² (Figure 4.2).

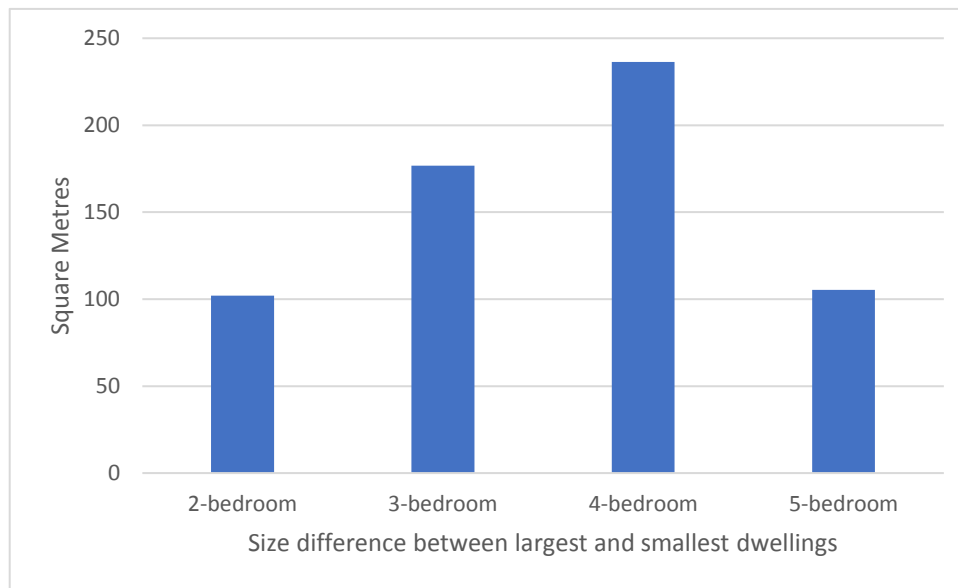
Figure 4.2 New Zealand House Sizes by Number of Bedrooms



As Figure 4.3 shows, the range between the smallest and largest dwellings tends to be most pronounced among 3- and 4- bedroom houses.²¹

²¹ Khajehzadeh, I., and Vale, B., 2016, "Large Housing in New Zealand: Are Bedrooms and Room Standards Still Good Definitions of New Zealand House Size?" *Proceedings 9th Australasian Housing Researchers Conference*, 17-19 February 2016, University of Auckland, Auckland.

Figure 4.3 Variation in New Zealand House Sizes by Bedroom Numbers



Obviously precise and practical partitioning for a specific dwelling, needs to be designed specifically in relation to that dwelling. The association between additional and larger rooms found by Khajehzadeh and Vale in houses with more bedrooms, provides some confidence that multiple partitions may be practical where houses have a multiplicity of bedrooms. Under those conditions some estimate of yields from partitioning under-occupied existing dwellings may be made, although using bedroom numbers and household size as a method for identifying dwellings that could be partitioned may underestimate partitioning potential for 2-bedroom and 4-bedroom dwellings in particular.

Critical to estimating the partitioning potential of the existing dwelling stock is, of course, data indicating the ratio between the number of bedrooms in a dwelling and the number of people living within it. Some would argue that calculating under-utilisation of bedrooms by households requires a finely granulated analysis of household composition similar to that used in calculations of crowding and the allocation of social housing. In the context of 'hidden homes', however, the imperative for finely granulated matching of the household composition including making pronouncements of the age at which male and female children may share a bedroom, is doubtful. One of the key drivers of partitioning is to allow what Dorling refers to 'downsizing-in-situ'.²² Important in that context is ensuring that residents remain comfortable in their remaining space and similarly comfortable with the density of use associated with any new partitioned dwellings within the building envelope.

The estimate presented here is simple. A partitionable dwelling has two or more unutilised bedrooms based on the number of residents. There is no presumption that couples will or should share a bedroom. It has also been assumed that the partitioned dwellings should be a minimum of two-bedrooms. This is consistent with a raft of research which has found that a single bedroom is often isolating of individuals even where they live alone. The single-bedroom formation inherently limits the ability of occupants to provide hospitality to friends and family. In addition, one-bedroom dwellings are less adaptable to the demands

²² See Danny Dorling's preface in Kingman, D., 2016.

of trends towards in-home care for both older adults and for others with care needs. For this New Zealand estimate:

- Every person in the existing dwelling is assumed to require a separate bedroom and there must be two additional bedrooms for a dwelling to be typified as under-utilised; And,
- The potential partitionable dwelling must provide at least two bedrooms in each subsequent dwelling.

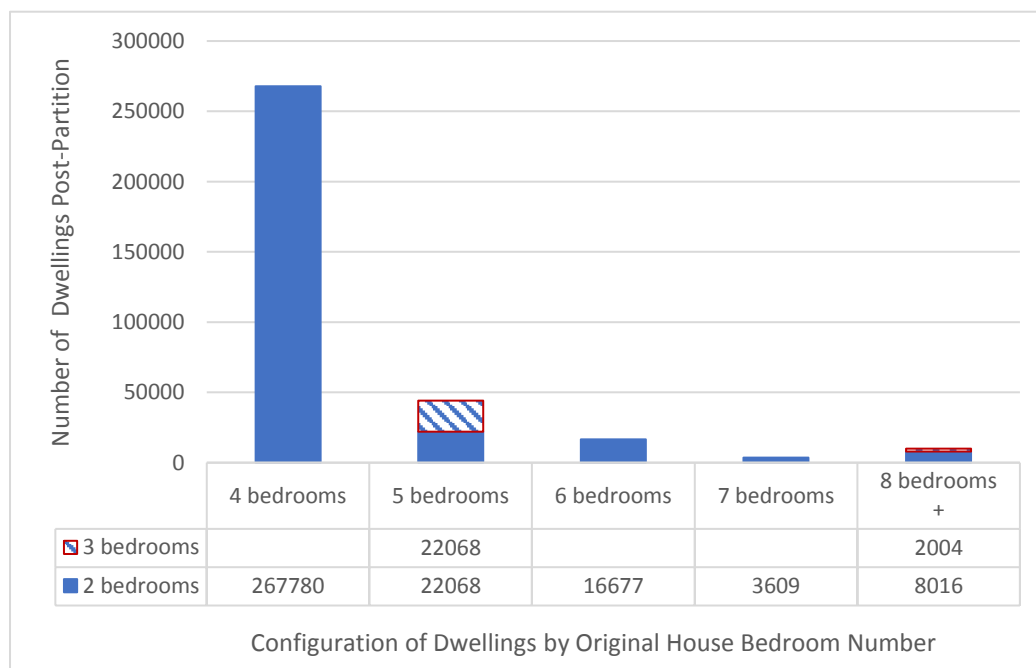
Using a rule of two bedrooms ‘in excess’ of current resident numbers and at least two bedrooms in any subsequent dwelling, is more stringent or conservative than those in the English estimates of ‘hidden homes’. More dwellings are excluded from estimates of partitionable housing in this report than is the case in the English approach. The impact of these stringent rules is most evident on the houses deemed partitionable among one-person households. The requirement of two additional bedrooms would be met by a 3-bedroom house. However, a three-bedroom house would not meet the requirement of a minimum of two-bedrooms in the dwellings generated by the partition. Consequently, only houses with four or more bedrooms are treated as partitionable.

Importantly, the stock units added are generated without impinging on greenfield sites or unutilised vacant residential land.

National Estimate of Dwellings Generated by Partitioning

Using 2013 census data, around 12 percent of New Zealand’s housing stock could be partitioned. That is over 180,000 dwellings. Partitioning those dwellings would deliver in excess of 360,000 dwellings in total, including the original and the additional dwelling. Even when restricting partitionable dwellings to households of 4 residents or less, around 164,000 dwellings are partitionable and with a mix of 2-bedroom and a small number of 3-bedroom dwellings, those could be turned into more than 340,000 homes (Figure 4.4).

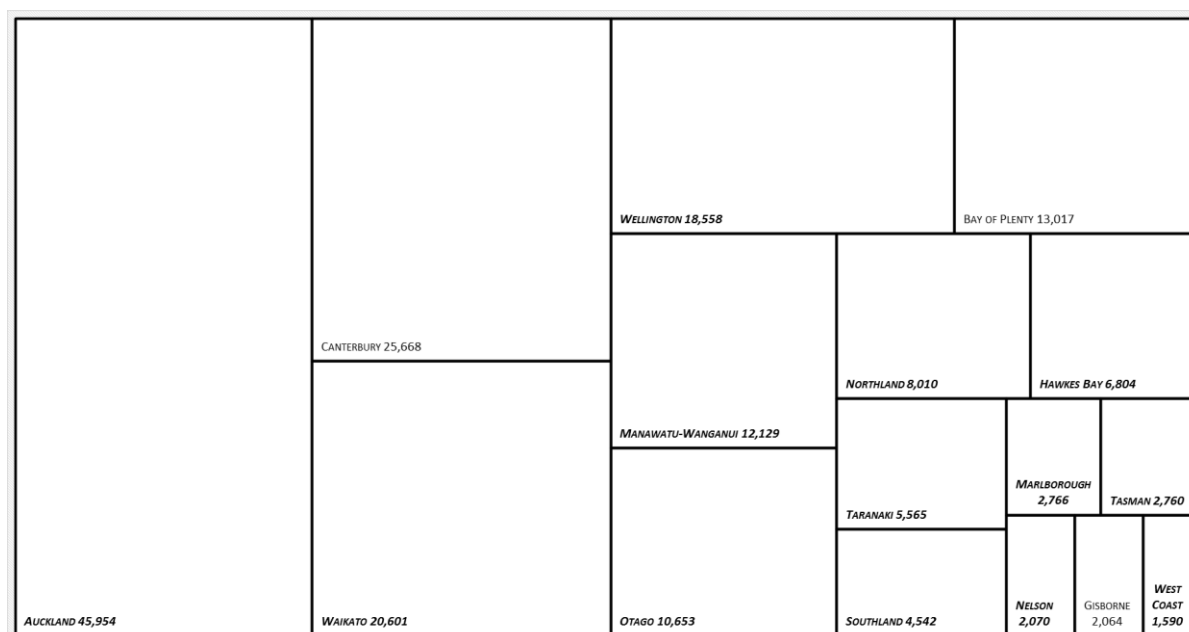
Figure 4.4 Dwellings Realised from Partitioning (4 or less residents 2013 Census)



Regional Estimates of Dwellings with Potential for Partitioning

The numbers of dwellings with potential for partitioning on a regional basis is determined by a combination of factors: the size of the housing stock, the size of resident households and the prevailing size of individual dwellings within the housing stock. Partitionable stock estimates are set out in Figure 4.5.

Figure 4.5 Number of Dwellings with Partitionable Stock by Region (2013 Census)



Inevitably, the Auckland region has the most partitionable dwellings with almost 46,000. Marlborough, on the other hand, with only a little over two thousand dwellings potentially partitionable, has a higher proportion of partitionable stock than Auckland. While across the country as a whole, around 12 percent of the stock is estimated to be partitionable, 9.8 percent of the Auckland region's stock is so, while 12.3 percent of Marlborough's stock is deemed partitionable.

5. ADUs – The International Experience

That New Zealand has potential to expand its stock through ADUs, even by partitioning alone, raises issues around the desirability of promoting ADUs. Partitioning has been cited by the Intergenerational Foundation in the United Kingdom as a cost-effective way of increasing the housing stock. They assert that 4.4 million owner-occupied homes in England have two or more spare bedrooms, and could potentially be partitioned. They estimate that if just 2.5 percent of these homes were partitioned, it would “produce more new homes than the entire private sector currently builds each year.” It has been estimated that in London alone approximately 374,000 homes could be subdivided, and potentially accommodate a forecast growth of 282,000 households between 2015-2020. In addition to increasing the stock of affordable homes, the Intergenerational Foundation also suggests that asset rich but income poor owner occupiers, particularly older people, could benefit

from income derived from the provision of rental opportunities through partitioned dwellings.²³ The benefits claimed for ADUs generated by partitioning could be also claimed for new-build ADUs.

This section focuses on the international experience of ADUs to address key questions around the provision, use and benefits of ADUs. The analysis draws on a review of the limited body of available research around ADUs, much of it embedded in doctoral research and some academic research. Notably much of the interest in ADUs and analytic framing draws from seminal work undertaken in the 1980s and 1990s.²⁴ For the purpose of this review, however, the body of international research considered was restricted to research undertaken in the last decade. The following discussion starts with research findings related to claimed and realised benefits. It then turns to a discussion of who delivers ADUs into the housing market followed by a discussion of the households consuming ADUs. The broader dynamics around ADUs are then discussed with a particular focus on barriers to ADUs and changing perceptions around their acceptability. The final part of the discussion focuses on the extent to which ADUs have generated affordable housing and the logics and mechanisms various jurisdictions overseas have used to promote or formalise ADUs.

An Overview of Research on the Promise and Outcomes of ADU Provision

ADUs, including partitioning dwellings within their existing footprint, have been a traditional feature of housing markets in many countries. Basements were traditionally used to house domestic servants in the UK, and gardeners' or workers' cottages were common.²⁵ In the US, ADUs were part of the traditional housing landscape, and an historic form of affordable housing. The construction of carriage houses for workers and domestic staff was particularly popular among wealthier households after the first World War. However, the acceptability of ADUs changed following the second World War and that change restricted the construction and use of ADUs.²⁶ While removing ADUs from mainstream housing provision,

²³ Kingman, David, 2016, *Unlocking England's "Hidden Homes": How Subdividing Large Homes Could Solve the Housing Crisis*, The Intergenerational Foundation, London, pg. 5

²⁴ See, Rudel, T.K., 1984, Household change, accessory apartments, and low income housing in suburbs, *The Professional Geographer*, 36(2), 174-181; Hare, P. H., 1993, How much can accessory housing units help? *Urban Land*, 52(2), 48; Hare, P.H., 1989, *Accessory Units: The State of the Art, Report I, Summary of Experience with Accessory Units in the US and Canada*, Washington, DC: Patrick H. Hare Planning and Design; Hare, P. H., 1991, The echo housing/granny flat experience in the US, *Journal of Housing for the Elderly*, 7(2), 57-70; Hare, P.H., 1991b, *Accessory Units: The State of the Art, Volumes 3 and 4, Summary of Experience With Accessory Units in the US and Canada*. Washington, DC: Patrick H. Hare Planning and Design; Gellen, M., 1985, *Accessory apartments in single-family housing*, New Brunswick, N.J.: Center for Urban Policy Research; Retsinas, J., and Retsinas, N. P., 1991, Accessory apartment conversion programs, *Journal of Aging and Social Policy*, 3(1-2), 73-89; Ruud, M. E., and Nordvik, V., 1999, From the kitchen floor to the basement - sharing arrangements in two centuries, *Housing, Theory and Society*, 16(4), 192; Varady, D. P., 1988b, Factors affecting middle-income elderly interest in accessory apartment conversion, *Journal of Architectural and Planning Research*, 5(1), 81-88; Varady, D. P., 1990, Which elderly home owners are interested in accessory apartment conversion and home-sharing, *Journal of Housing for the Elderly*, 6(1-2), 87-100; Chapman, N. J., and Howe, D. A., 2001, Accessory apartments: Are they a realistic alternative for ageing in place? *Housing Studies*, 16(5), 637-650.

²⁵ Howard, Laura, 2010, "Tough Times Call for Splitting a Home in Two," *The Independent*, 24 July 2010

²⁶ Tyre, P., 2008, *Accessory Dwelling Units as Accessible Housing as Affordable Housing and SmartGrowth: Case Studies of Winter Park and Orlando, Florida*, A Thesis Presented to the Graduate School of the University of Florida

regulations did not remove ADUs from the housing market altogether. Units continued to be built to house workers, and whether or not regulations permit their development, ADUs continue to be built.

The 1980's and 1990's saw a renewed interest in ADU provision, primarily for the purpose of supporting ageing in place and elder care. ADUs have been proposed as a mechanism for older owners to offset their own living costs, either by renting the unit or moving into the unit and renting the main dwelling, facilitate downsizing to more accessible and manageable accommodation, house a family member or caregiver whilst maintaining their own independence or privacy as well as a method to provide intergenerational care. Studies have indicated that living nearby, but not with children has a positive effect on the longevity, health and cognition of older individuals and reduces stress on caregivers and family relationships.²⁷ According to the American Association of Retired Persons one third of senior surveyed respondents would consider adding an ADU to their property in order to house a caregiver²⁸ and housing an older relative is one of the most common reason owners give for adding an ADU.²⁹

While surveys have suggested that units are often occupied or rented out by older people,³⁰ conversion programmes targeting older homeowners have typically had “lack lustre results in terms of meeting their objectives.”³¹ It appears that many older owners lack the interest, or ability, to navigate bureaucratic barriers, finance and undertake construction or conversion and manage tenants.³² However, supporters have asserted that these programmes failed because they were poorly targeted to older residents and often required them to move away from their communities.³³ Despite the modest achievements of these early programmes proponents maintain that, when properly targeted, regulated, and implemented, ADUs provide a valid form of housing with the potential to improve the circumstances of older householders, their families and carers.

Recent interest in ADUs has focused on ADUs as a potential solution to the shortage of appropriate and affordable housing, and as a mechanism to offset the pressures placed on land and housing supply by rapidly growing populations. In part this has come in response to the recognition that while the composition of households is changing, developers and builders continue to predominantly produce large homes designed for the traditional single family. This has led to a shortage of options for older householders, the growing number of single or childless couple households and low-moderate income tenants, as well as chronic

²⁷ Brinig, Margaret, F., 2015, “Grandparents and Accessory Dwelling Units: Preserving Intimacy and Independence”, *The Elder Law Journal*, Volume 22

²⁸ Mukhija, Vinit, Cuff, Dana and Serrano, Kimberly, 2014, *Backyard Homes and Local Concerns: How Can Local Concerns be Better Addressed?* CityLab, UCLA Department of Architecture & Urban Design, Los Angeles, CA

²⁹ Liu, Edgar, Easthope, Hazel, Burnley, Ian and Judd, Bruce, 2013, “Multigenerational Households in Australian Cities: Evidence from Sydney and Brisbane at the Turn of the 21st Century”, *7th Australasian Housing Researchers' Conference*, Freemantle, Western Australia; City of Boulder, 2012, *Accessory Dwelling Unit Survey*, Report for the Boulder City Council

³⁰ Wegmann, Jake and Nemirow, Alison, 2011, *Secondary Units and Urban Infill: A Literature Review*, Working Paper 2011-02, Berkeley Institute of Urban and Regional Development, University of California

³¹ Gratton, M.C., 2011.

³² Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012; Gratton, M.C., 2011

³³ Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012

under-occupancy of the existing stock. Census data for England and Wales (2011) indicated that over half of owner occupiers aged 50-64 years and 30 percent of owners aged 25-49 years lived in dwellings with two spare bedrooms.³⁴ In England alone it is estimated that 4.4 million owner occupied houses could potentially be divided into flats that comply with the National Space Standards. In New York City, it has been estimated that 10,000-38,000 apartments could be created if basement conversions were permitted as of right.³⁵ Enabling such initiatives on a greater scale could house a larger number of people more appropriately and potentially reduce the demand for 2-4 bedroom dwellings among single households, making them more affordable to low-income families.³⁶

The diversity of stock type associated with ADUs could go some way to meet the steady rise in the number of multi-family households as people struggle to access appropriate housing and rates of homeownership drop. In 2008 17 percent of Americans lived in multi-generational homes, the highest proportion since the 1950's,³⁷ and as of 2011, one fifth of Australians lived in a multigenerational household, an increase of almost one million over a twenty-year period.³⁸ Migrant and ethnic households account for a large number, but by no means all, of these households.³⁹ Young adults are increasingly delaying marriage and parenthood, as they attempt to meet the rising costs of rent and pay off student loans, with many remaining in, or returning to their family homes.⁴⁰ Adult children may be increasingly caring for their older parents within their homes as an alternative to rest homes or retirement village living. Several jurisdictions have recognised the need for extended family living and permit ADUs for the purpose of housing relatives. Provisions for family members are often a first step in legitimising ADU development in the eyes of the wider community and, when allowed, have often proved popular with homeowners.⁴¹

Some jurisdictions have been exploring ADUs as an option for creating more usable, accessible and sustainable cities. Because they are compact, utilise existing infrastructure and the built environment and require less land and resources than traditional builds because their physical footprint is relatively low.⁴² Despite fears around parking and

³⁴ Lloyd, James, 2015, *Open Plan Building, A Strategic Policy Toward Older Owners*, The Strategic Society Centre, London

³⁵ Leitch, Kate and Watson, Sarah, 2016, *Hidden Housing: The Case for a Conversion Programme for Basement Apartments in NYC*, Citizens Housing and Planning Council, New York City

³⁶ Christensen, Pernille, 2016, "Investigating Solutions to the Affordable Housing Supply Challenges in Sydney: Two Alternative Typologies", *22nd Annual Pacific-Rim Real Estate Society Conference*, Sunshine Coast, Queensland, Australia; Been, Vicki, Gross, Benjamin & Infranca, John, 2014, *Responding to Changing Households: Regulatory Challenges for Micro-Units and Accessory Dwellings*, What Works Collaborative White Paper, NYU's Furman Center for Real Estate and Urban Policy

³⁷ Pfeiffer, D., 2015, "Retrofitting Suburbia through Second Units: Lessons from the Phoenix Region", *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 8:3

³⁸ Liu, E., Easthope, H., Burnley, I., and Judd, B., 2013

³⁹ Spivak, Jeffrey, 2012, "Making Room for Mom and Dad", *American Planning Association*, Volume 78, Issue 8

⁴⁰ Christensen, P., 2016

⁴¹ Tyre, P., 2008

⁴² Petersen, A., 2011 *Housing Diversity Guide*, Landcom, Parramatta, New South Wales; Skinner, Travis, 2011, *Accessory Dwellings and Accessory Structures in Olympia, WA*, A Thesis Submitted in partial fulfilment of the requirements for the degree Master of Environmental Studies, The Evergreen State College

congestion, ADUs have been associated with fewer vehicles than traditional dwellings. A Portland analysis indicated that ADUs had an average 0.93 cars per dwelling compared to 1.31 for new rentals, of which 0.46 were parked on the street. Twenty percent of ADUs had no cars associated with them.⁴³ ADUs are also more thermally efficient than larger houses, thus requiring less energy expenditure for heating and cooling.⁴⁴ By increasing density in established communities ADU provision could potentially support commercial development and public transit, reduce vehicle mileage⁴⁵ and facilitate “amenity and sense of place.”⁴⁶ ADU development could also facilitate access to housing for those on medium incomes, such as teachers, nurses and emergency service workers, as well as provide opportunities for people to move to “better” neighbourhoods.⁴⁷

Who builds ADUs?

Surveys of accessory dwelling owners in the US indicate that households tend to build or convert units between the ages of 40 to 60,⁴⁸ although some younger Canadian households are developing secondary suites as a mortgage qualifier. Older Americans were more likely to invest in ADUs if they were unemployed, lived alone, had a long-standing connection to their neighbourhood, were in poor health, uninsured, or at risk of institutionalisation.⁴⁹ The primary incentive for building an ADU is additional income from rent and this factor is consistent across all age groups. Close to a quarter of ADU owners added a unit to provide accommodation for a relative or helper, and a smaller, but notable proportion mentioned the security afforded by having a tenant as a factor.⁵⁰ In 2012, 85 percent of ADU owners in Portland used their unit for the purpose of accommodation. Of these, 49 percent were rented to strangers, and 51 percent were occupied by family or friends at reduced or zero rents.⁵¹ Similarly, 75 percent of owners in Boulder were using their unit as a rental in the same year.⁵²

Where permissive legislation exists, commercial providers have begun to respond. In New South Wales garage top or studio apartment units have become so sought after that some developers offer them as a standard product.⁵³ Several companies in London have sprung up to meet the increasing demand for basement and loft conversions in the UK. Cellarwise offers full basement conversions for £75,000-140,000 and The London Cellar Company quotes an average of £300ft² plus VAT for a fully fitted out structural conversion.⁵⁴ In California, Colorado and Texas, Sidekick Homes offers detached dwellings 33.4m² to

⁴³ Brown, Martin J., and Palmeri, Jordan, 2014, “Accessory Dwelling Units in Portland, Oregon: Evaluation and Interpretation of a Survey of ADU Owners”, *TREC Friday Seminars Series*, Book 41

⁴⁴ Skinner, T., 2011

⁴⁵ Skinner, T., 2011; Tyre, P., 2008

⁴⁶ Pfeiffer, D., 2015

⁴⁷ Tyre, P., 2008; Petersen, A., 2011

⁴⁸ Wegmann, J., and Nemirow, A., 2011; City of Boulder, 2012

⁴⁹ Gratton, M. C., 2011

⁵⁰ Gratton, M. C., 2011; Brown, M. J., and Palmeri, J., 2014

⁵¹ Brown, M. J., and Palmeri, J., 2014

⁵² Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012

⁵³ Petersen, A., 2011

⁵⁴ Plank, Laura, “Basement Extensions: The Pros and Cons”, in *Build It* <http://www.self-build.co.uk/basement-extensions-pros-and-cons>

107.8m² for clients wishing to house their parents at a cost of between US\$50,000-\$150,000. In Irvine, the first phase of Lambert Ranch, a multi-generational development of 42 homes developed by the New Home Co. sold rapidly. The development offered a variety of designs including: a family home with a one-bedroom suite, kitchenette and separate entrance partitioned off from the rest of the dwelling; a detached unit approximately 74m² connected to the main dwelling by a covered patio; and a two-home compound with two fully functional houses sharing a yard. The ADU and partitioned dwelling proved to be the most popular options.⁵⁵ Though these dwellings were far from affordable, with most selling for close to US\$1m,⁵⁶ they attest to the demand for this type of housing.

Who uses ADUs?

ADUs have long been accepted by renters as an alternative housing option and some tenants seem to find them “as attractive as apartments in multi-family buildings.”⁵⁷ Vacancy rates for these dwellings are usually low,⁵⁸ with young adults making up the majority of tenants.⁵⁹ In Portland 44 percent of surveyed ADUs were inhabited by tenants aged 25-34 and 22 percent were occupied by tenants aged 55 or older.⁶⁰ Students, service workers, and retirees are among the groups who typically rent ADUs.⁶¹ A study of ADUs in Boulder suggested professionals made up the highest proportion of tenants (44 percent) in this area.⁶²

Little is known about what factors motivate tenants to choose ADUs over other forms of dwelling. Tenancy has typically been associated with affordability, a pre-existing relationship with the owner of the unit, or a lack of alternative options. However, it is likely that ADUs offer amenities, such as a garden or outdoor environment that cannot be gained, or easily and affordably gained, through traditional rentals. Living in an ADU may well be a desirable option for couples or singles who might otherwise have to choose between living in an apartment, paying for surplus rooms in a single-family dwelling or sharing a house with others in order to cover the costs of rent.

⁵⁵ Spivak, J., 2012

⁵⁶ Lansner, Jonathan, 2012, Selling Homes in a Downturn, *Orange County Register*

⁵⁷ Brown, M.J., and Palmeri, J., 2014

⁵⁸ Brown, M.J., and Palmeri, J., 2014

⁵⁹ Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012

⁶⁰ Brown, M.J., and Palmeri, J., 2014

⁶¹ City of Boulder, 2012

⁶² City of Boulder, 2012

Barriers to ADUs

In many jurisdictions, local governments have been unwilling to review regulations and implement or enforce measures that support the provision of ADUs. In 2012 only 330 of 7,000-10,000 jurisdictions across the US allowed secondary units.⁶³ Researchers have identified cases in which local governments have actively instituted policies which restrict or prevent the construction of ADUs, while citing neighbourhood opposition as the reason for a lack of progress.⁶⁴ Despite high interest and uptake of secondary dwellings in New South Wales it is not uncommon for local councils to oppose such development,⁶⁵ and only 24 percent of local governments surveyed in Florida supported ADUs⁶⁶ despite statutes explicitly encouraging their use as affordable housing.

In locations that do have ordinances in place to support the development of ADUs, zoning and building code regulations may still limit opportunities for construction, conversions or upgrades. Regulations have often been implemented in a piecemeal fashion with little regard for neighbourhood context and can be complicated and contradictory. In some instances, homeowners may be unaware that ADUs are an option or that permits may be required. Under 2012 regulations it was estimated that only around a fifth of single family residential households in the East Bay, San Francisco Bay Area, would be able to add an ADU to their property.⁶⁷ Parking requirements and minimum lot sizes are among the biggest regulatory challenges for homeowners wishing to construct an ADU.⁶⁸ Setbacks and landscaped area controls also significantly limit opportunities for development on smaller lots, reducing the area of land available for development and increasing construction costs. Minimum floor space ratios can complicate design and delivery, particularly for basement or loft conversions.⁶⁹ Other regulations that commonly impede development include: limits on the shape and bulk of the dwelling; requirements to conform to neighbourhood character and aesthetics; and requiring the owner of the main dwelling to reside on the property.⁷⁰

The time and expense required to navigate the permitting process may further deter homeowners from developing an ADU. A 2008 survey by the American Planning Association found that only 25 percent of respondents lived in communities that allowed accessory dwellings by right and 36 percent by special permit.⁷¹ Difficulty obtaining planning permission may result in reluctance from lenders to back projects⁷² and stress may lead to owners abandoning their plans, particularly if they have limited understanding of the

⁶³ Pfeiffer, D., 2015

⁶⁴ Mukhija, V., Cuff, D., and Serrano, K., 2014

⁶⁵ Davison, Gethin *et al.*, 2012, *Affordable Housing Urban Renewal and Planning: Emerging Practice in Queensland, South Australia and New South Wales*, AHURI Final Report No. 195, Melbourne: Australian Housing and Urban Research Institute

⁶⁶ Pelham, Thomas, 2007, *Accessory Dwelling Units: Report to the Florida Legislature, Submitted by The Florida Department of Community Affairs*

⁶⁷ Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012

⁶⁸ Petersen, A., 2011; Pfeiffer, D., 2015; Gratton, M. C., 2011

⁶⁹ Petersen, A., 2011

⁷⁰ Perine, Jerilyn, *et al.*, 2014, *Steering the New Course: Housing and Land Use Policy for New York City, Citizens Housing and Planning Council*, New York City

⁷¹ Micklow, Amanda, C. & Warner, Mildred, E., 2014, "Not Your Mother's Suburb: Remaking Communities for a More Diverse Population", *Urban Lawyer*, 46 (4)

⁷² Kingman, D., 2016

process and/or limited resources. When permits depend on obtaining consent from neighbours or public hearings approval is even less likely to be granted.⁷³ The process of obtaining the necessary permits and consents can be further complicated by a lack of familiarity with the regulations on the part of planners and officials or contradictions and lack of clarity around the regulations in the codes.⁷⁴

Research from the US has consistently demonstrated that financial constraints are one of the biggest obstacles to ADU production.⁷⁵ For many homeowners the costs associated with consents, permits, utility connections and construction can be prohibitive and may encourage illegal development. Construction costs for an ADU are more expensive per square foot than a typical single-family home, because the costs of kitchen, bathroom and infrastructure are spread over a smaller area.⁷⁶ In 2007 the total cost of 600ft² ADU (55.7m²) in Eugene, Oregon was approximately US\$7,100 compared to US\$9,100 for a 24,000ft² (223m²) single family home, or approximately US\$12 per square foot compared to less than US\$4 per square foot.⁷⁷ For some, ADUs may not represent value for money when compared to larger house and land packages.⁷⁸

Accessing finance can also be a significant barrier for homeowners, as some lenders may be unfamiliar with ADUs and unwilling to provide funding on a model without a proven return of investment. Lack of, or incomplete guidelines around whether rental income can be used to qualify an applicant for lending and the overall contribution of an ADU to the value of a property can lead to huge variations in appraised values and “excessively conservative estimates,”⁷⁹ which do not reflect the true value of these dwellings, let alone investment. Variations in policies, language (sleep-out, granny flat, garden suite etc.) and difficulty fitting ADUs into existing categories can also affect valuation and lending.⁸⁰

The prospect of sharing one’s property, even with family, and the anxiety that arises from the potential issues, such as navigating shared space, may be unappealing for many homeowners. Research indicates that most owners are unwilling to share their home.⁸¹ The responsibilities of being a landlord, selecting a tenant, managing the relationship, setting and asking for rents, covering the costs of maintenance, insurance, utilities and taxes⁸² can be daunting, even for those who see ADUs as a viable option. Furthermore, construction and conversion require a reasonable level of competence and can be highly stressful and problematic, especially for those who are unfamiliar with the process. Physical issues with

⁷³ Gratton, M. C., 2011

⁷⁴ Skinner, T., 2011

⁷⁵ Brown, M. J., and Palmeri, J., 2014

⁷⁶ Been, V., Gross, B., & Infranca, J., 2014

⁷⁷ Lazaro, Christopher Ray, 2013, *From Allowance to Acceptance: Changing the Role of Accessory Dwelling Units in America’s Housing Landscape*, Master’s Paper in Partial Fulfilment of the Requirements for the Degree of Master of Urban Planning, Texas A&M University, Department of Landscape Architecture and Urban Planning

⁷⁸ Petersen, A., 2011

⁷⁹ Brown, M.J., and Watkins, T., 2012. “Understanding and Appraising Properties with Accessory Dwelling Units”, *The Appraisal Journal*, (Fall): 297- 309

⁸⁰ Brown, M.J., and Watkins, T., 2012.

⁸¹ Kingman, D., 2016

⁸² Mendez, Pablo, 2011, *Ambiguities at Home: Unauthorized Biographies of Housing in Vancouver* (T.), University of British Columbia, Vancouver

the property or building can lead to delays, unexpected costs and difficulties meeting code. Inspections can be time consuming and inconvenient, and the process disruptive.⁸³

In many communities, opposition has been a major barrier to provision. Resistance to measures that will increase density and renter populations, as well as potentially alter the “character” of the neighbourhood can feed into local government resistance and inaction and can stymie attempts to enact legislation that would support ADU production. This is especially the case in jurisdictions that require public hearings as part of the approval process. Social and cultural norms, dominated by the ideal of homeownership and traditional notions of home, family and neighbourhood are strongly associated with opposition to accessory dwellings.⁸⁴ Surveys and focus groups with residents frequently reveal deeply held fears about the impact ADUs and their tenants might have on community cohesion, property values and infrastructure, which arise out of negative perceptions of tenants - minority and low-income tenants in particular.⁸⁵ Much of this opposition is likely to stem from preconceived notions of affordable housing.⁸⁶ This is unsurprising, given the prevalence of illegal ADUs, which are commonly associated with neighbourhood decline,⁸⁷ and a lack of understanding of the potential benefits offered by this form of housing. Concerns about the type of tenant ADUs will attract and attendant problems, such as overcrowding, noise, disorder, crime, traffic congestion, parking problems and pressure on services are often expressed by city planners and officials as well as residents.⁸⁸

Changing Perceptions and Acceptability of ADUs

Recent research has focussed on identifying features and conditions that may make communities more amenable to ADU development.⁸⁹ Factors thought to increase the suitability of an area for development include: low household sizes with higher concentrations of older adults, relatively high density, single family neighbourhoods in close proximity to transit, infrastructure, businesses, retail and college/university campuses.⁹⁰

Pfeiffer’s 2015 study of Phoenix communities provides an interesting insight from a planning perspective that may be applicable in the New Zealand context. According to her analysis, “at risk” communities already struggling to pay for services are likely to oppose ADU development due to concerns they will create more need, reduce property values and negatively affect life quality. Opposition is likely to be greatest in areas of ethnic or economic tension, where the prospect of housing minorities could exacerbate existing fears of conflict. In these communities, regulations that limit development to multi-family or caregiver living tend to be most acceptable.

⁸³ Mendez, P., 2011

⁸⁴ Gratton, M.C., 2011.

⁸⁵ Kleiman, Neil *et al.*, 2013, *Innovation in the City*, Center for an Urban Future and NYU Wagner

⁸⁶ Davison, Gethin *et al.*, 2012

⁸⁷ Pfeiffer, D., 2015

⁸⁸ Mukhija, Vinit, Cuff, Dana and Serrano, Kimberly, 2014

⁸⁹ See Krass, Cynthia, 2013, *Factors Associated with Accessory Dwelling Unit Density*, Thesis (Masters), University of Washington; Lazaro, C. R., 2013; and Pfeiffer, Deidre, 2015

⁹⁰ See Lazaro, C. R., 2013

Older affluent communities have the potential to support development, as they possess the resources to build and to purchase any additional services that may be required. However, home owners in these communities are also liable to see ADUs as a means to house family, rather than to support affordability or attract new residents and may object to regulations that permit their use as rentals. New, quickly growing suburbs that are still shaping their identity may hold the most promise for ADU development. These communities “aspire to affluence,” therefore tend to support strategies that increase density, diversity and attract businesses and commercial development. Residents in such communities may be open to more permissive regulations, and to accepting ADUs as an affordable housing measure.⁹¹

Researchers have observed that framing ADUs as a measure to support ageing in place and/or house family members is more likely to garner support than framing them as an affordable housing measure,⁹² and could be a first step to gaining acceptance in more resistant communities. The Accessory Affordable Apartment or Amnesty Programme (2000) established in Barnstable, Massachusetts to meet the housing needs of seniors and increase the supply of affordable, multi-family rentals met with no opposition⁹³ In Santa Cruz, which has effectively implemented an ADU programme and is used as a model in other states,⁹⁴ officials partially attribute success to “putting a face on ADUs,” so that residents could see “they were helping Ted’s grandmother stay in the community.”⁹⁵

Despite resistance in some areas, public perceptions of ADUs are largely favourable. This may be related an increasing recognition that permitted or otherwise ADUs already exist in most communities and have had little noticeable impact on neighbourhood aesthetics, infrastructure, services, cohesion or safety. In fact, neighbourhoods can accommodate one ADU for every 10 dwellings without neighbourhood character being affected.⁹⁶ In Edmonton 51 percent of residents who reported that they would not develop a unit themselves had no objection to a neighbour doing so, providing some conditions were placed on the unit.⁹⁷ Two thirds of residents surveyed in the East Bay, San Francisco were aware of secondary units on their block and felt they had not negatively impacted on their community.⁹⁸ In most areas few formal complaints are lodged about ADUs and often their existence has gone largely unnoticed.⁹⁹ New York, where infrastructure has not kept up with population growth, is an exception to this. In 2005 alone, the City received 24,000 complaints regarding illegal dwelling units.¹⁰⁰

⁹¹ Pfeiffer, Deidre, 2015

⁹² Micklow, A. C., & Warner, M. E., 2014

⁹³ Sage Computing Inc., 2008, *Accessory Dwelling Units Case Study*, Prepared for: U.S. Department of Housing and Urban Development Office of Policy Development and Research

⁹⁴ Sage Computing Inc., 2008

⁹⁵ Tyre, P., 2008:58

⁹⁶ Tyre, P., 2008

⁹⁷ Gratton, M.C., 2011.

⁹⁸ Wegmann, J., and Nemirow, A., 2011

⁹⁹ Hulse, Travis M., 2015, *Use of Accessory Dwelling Units as a Housing Strategy: A Case Study of Lawrence, Kansas*, Community and Regional Planning Program: MCRP Thesis, University of Lincoln, Nebraska; Been, Vicki, Gross, Benjamin & Infranca, John, 2014; and Gratton, M.C., 2011.

¹⁰⁰ Neuwirth, Robert and Sheth, Rachana, 2008, *New York’s Housing Underground: A Refuge and Resource*, Pratt Center for Community Development & Chhaya Community Development Corporation, New York

Public education and participation processes, including discussions, workshops and forums to address concerns and raise awareness of the potential benefits of ADUs have been vital to building support.¹⁰¹ The growing YIMBY (Yes in My Backyard) movement¹⁰² may also have contributed to public awareness and acceptance of the need for more diverse and flexible housing types. YIMBY organisations advocate for high density, sustainable, accessible and affordable housing and highlight the ways in which zoning regulations enforce inequality, placing pressure on governments to respond to housing needs and prompting community reflection.

Illegal ADUs

The proliferation of illegal ADUs across the US and Canada attests to the importance of, and taste for, this type of housing. ADUs are likely to exist in most cities, but many are “created outside official channels of permitting and financing,” whether legislation allows for them or not.¹⁰³ In some areas unpermitted detached or attached dwellings, loft, basement and garage conversions constitute a significant proportion of the housing market. For instance, unpermitted secondary suites made up around 20 percent of the city of Vancouver’s rental housing in 2011.¹⁰⁴ They are so common across Canada that mortgage brokers admit factoring in a percentage of the potential income to be derived from an unpermitted suite when considering an applicant for a loan.¹⁰⁵

Illegal ADUs have also been a longstanding feature of the US housing market, upon which many residents have relied. In 1981, it was estimated that illegal ADUs constituted 8 percent of the housing stock in Renton, Washington and as much as 10 percent to 20 percent of the total housing stock in the town of Babylon, Suffolk County.¹⁰⁶ When ADUs were legalised in Babylon 706 applications were lodged, 700 of which were to legalise existing dwellings.¹⁰⁷ In Los Angeles, illegal garage conversions made up 2.5 percent of the total housing stock in 1987, and accommodated around 20,000 residents.¹⁰⁸

More recent analysis indicates that illegal units, predominantly basement or loft conversions and partitions, account for approximately 4 percent of the total housing stock in New York and house as many as 300,000 to 500,000 residents.¹⁰⁹ In Queens 480,000 illegal dwellings were built between 1990 and 2000, and represented 73 percent of all housing built over the decade. Over the same period 38,000 illegal units, comprising 61 percent of all new housing, were built in Brooklyn.¹¹⁰ The San Francisco Urban Planning and Research Unit estimated that more than 20 percent of residential buildings had an illegal unit¹¹¹ and these

¹⁰¹ Pfeiffer, Deidre, 2015

¹⁰² See The San Francisco YIMBY Party <http://www.sfyimby.org/yimby-platform/>, New York YIMBY <https://newyorkyimby.com/>, Queensland YIMBY <http://yimbyqld.com.au/finding-yimby-australia/> and YIMBY Action <https://www.yimbyaction.org/#> for examples.

¹⁰³ Brown, M.J., and Watkins, T., 2012

¹⁰⁴ Mendez, P., 2011

¹⁰⁵ Mendez, P., 2011

¹⁰⁶ Krass, C., 2013

¹⁰⁷ Krass, C., 2013

¹⁰⁸ Wegmann, J., and Nemirow, A., 2011

¹⁰⁹ Neuwirth, R., and Sheth, R., 2008

¹¹⁰ Neuwirth, R., and Sheth, R., 2008

¹¹¹ Brown, M. J., and Palmeri, J., 2014

dwellings accounted for approximately 8 percent of the total housing stock.¹¹² It is highly probable these figures represent only a fraction of the full picture, as many owners will keep a low profile to avoid the risk of fines or being required to either upgrade their ADU or withdraw it from the market.

Although illegal units are ubiquitous in most areas, they are particularly likely to spring up in communities with restrictive planning and zoning regulations, and in low-density neighbourhoods undergoing rapid growth.¹¹³ As most studies have been conducted with owners and residents of legal units, or made no distinction between legal and illegal dwellings, there is little information as to who lives in unpermitted ADUs. It has been speculated that a large proportion of illegal ADU tenants are immigrants, who face difficulties accessing affordable, legal rentals or “fear providing documentation to qualify for public housing or meet the vetting process required by many larger landlords.”¹¹⁴ The groups who typically utilise legal ADUs, young adults, single and low-income households, students, service workers, friends and family members are also likely to tenant unpermitted ADUs. Not all illegal units will be substandard and in some cases tenants may be quite satisfied with their accommodation, or even unaware the dwelling they inhabit is not legal.¹¹⁵ On the other hand, some units may have significant safety, health or hygiene issues, but nonetheless be inhabited by households unable to find or access other housing options.

Homeowners may side step the consent and permitting process to avoid fees, taxes, institutional barriers, inspections or requirements for upgrades or alterations. In some cases, the physical aspects of the dwelling or property may restrict owners from achieving code compliance, for example roof height or fire safety regulations for basement conversions or setback requirements for detached ADUs. Low income owners may depend upon the rent derived from their ADU to cover their own living costs, but lack the financial resources to make the alterations that would bring it up to code. There will, of course, be some owners who are simply looking to offset their mortgage or make a profit, with little regard for the wellbeing of the tenants they are housing.

In most districts, local officials seem to be aware of the existence of unauthorised units and for the most part tolerate their existence unless a complaint is received from a neighbour or tenant. In Vancouver and Calgary government agents make no distinction between legal and illegal dwellings when dealing with owners and residents, due to the time and expense that would be required by more proactive management and the recognition that enforcement could risk precipitating “a housing disaster,” by removing thousands of units from the housing supply.¹¹⁶ In San Francisco between 50 and 100 illegal ADUs are withdrawn from the market every year, resulting in the displacement of low income and elderly tenants.¹¹⁷ Officials are caught between accountability should a life-threatening situation arise and the potential eviction and loss of housing for numerous renter households.¹¹⁸ The decision not to enforce legislation may also be compounded by an unconscious bias that privilege the

¹¹² Wegmann, J., and Nemirow, A., 2011

¹¹³ Skinner, T., 2011; Tyre, P., 2008

¹¹⁴ Neuwirth, R. and Sheth, R., 2008:4

¹¹⁵ Neuwirth, R. and Sheth, R., 2008

¹¹⁶ Mendez, P., 2011:151

¹¹⁷ Tyre, P., 2008

¹¹⁸ Mendez, P., 2011

rights of homeowners over the right of renters. The issue for authorities in jurisdictions where illegal units contribute significantly to the housing stock is how to identify and assess the safety of such dwellings and enable them to be brought up to standard without excessively penalising owners and placing tenants at risk of homelessness.¹¹⁹

While some authorities acknowledge that the problem is bigger than they can handle¹²⁰ and effectively turn a blind eye to the issue, others have implemented, or begun implementing measures to encourage owners to upgrade illegal ADUs and bring them into the mainstream housing stock. Recognition not only that prohibiting and criminalising ADUs is costly, time consuming and ineffective in the long run, but that these dwellings play an important role in the housing market, accommodating extended families, and the increasing number of single households has led to growing acceptance in some jurisdictions.¹²¹ In Seattle, changes to legislation permitting or facilitating ADU development has been a response both to the growth of illegal ADUs and the shortage of affordable housing.¹²²

Amnesty programs have proved a successful mechanism for legalising and integrating illegal ADUs into the mainstream housing market in some areas. The City of Vancouver “relaxed” building code regulations to allow owners to bring illegal basement units up to code without facing prohibitive fines, with the result that 608 illegal suites were legalised between 2010 and 2012.¹²³ Portland and Santa Cruz have developed user manuals to assist homeowners to bring non-complying units up to code.¹²⁴ Barnstable, Massachusetts introduced their Accessory Affordable Apartment or Amnesty Program in 2000 and support owners to bring illegal units into compliance, providing they agree to make them available at affordable rents. They provide staff to help owners navigate the process and a Community Development Block Fund Grant to reimburse owners for the costs associated with rehabilitation or upgrade.¹²⁵ Wellfleet, Massachusetts offers interest free loans to encourage owners to upgrade illegal ADUs.¹²⁶

The response to local government attempts to legalise, regulate and encourage ADU development as an alternative for smaller households, family support or affordable housing option has varied greatly between jurisdictions. Some communities have seized the opportunity, whilst in others uptake has been limited. The A-SEPP initiative (2009) supporting ADUs in New South Wales has demonstrated substantial success in encouraging development with 4,818 new granny flats constructed in 2014 and 2,867 constructed in 2013.¹²⁷ However, A-SEPP does not outline rent provisions, so the extent to which these dwellings provide affordable housing is uncertain. In England, an increase in the number of property investors applying for finance to split a home into two or more dwellings has been

¹¹⁹ Neuwirth, R., and Sheth, R., 2008

¹²⁰ Gratton, M.C., 2011

¹²¹ See Neuwirth, R., and Sheth, R., 2008 and Pfeiffer, D., 2015

¹²² Pfeiffer, D., 2015

¹²³ Kleiman, N., *et al.*, 2013

¹²⁴ Sage Computing Inc., 2008

¹²⁵ Sage Computing Inc., 2008

¹²⁶ Sage Computing Inc., 2008

¹²⁷ Devine, Aidan, 2015, Granny Flat Boom Engulfs Western Sydney as Homeowners Adjust to Soaring House Prices, *The Daily Telegraph*

noted since the global financial crisis.¹²⁸ Of a net addition of 189,650 homes to England's new housing stock between April 2015 and March 2016, 4,760 were created through house to flat conversions.¹²⁹ Again, it is unclear how many of these dwellings were made available for rent, or the levels of rent the owners of converted units might be asking.

The City of Vancouver estimates that, as of 2009, approximately 25,000 properties in single family residential zones and 1,000 properties in mixed family zones had a basement conversion. It is thought almost a quarter of all renters depended on such units for housing.¹³⁰ Between 2010 to 2012 Vancouver issued permits for 778 ADUs and 932 new homes with a secondary suite as well as legalising 608 secondary suites.¹³¹ Vancouver also issued 2,200 permits for laneway housing, between 2009 and 2016.¹³² In Edmonton, 363 permits were granted for new units and 195 permits were granted for upgrades of existing units in the six years following the provisions made for secondary suites in the Affordable Housing Plan (2005). Of these units, 272 were associated with grant funding¹³³ However, a 2007 survey of Edmonton residents revealed that while the majority of respondents (66 percent) saw secondary suites as a source of safe, affordable housing only 9 percent of homeowners were likely to consider developing a suite themselves.¹³⁴

US research suggests that even when permitted conversion and construction of ADUs is limited in most areas. It has been estimated that only one out of twenty households in Seattle will construct an ADU¹³⁵ and Gratton approximated that in locations with favourable zoning and regulations only one unit would be built for every 1,500 dwellings.¹³⁶ Over a period of eight years Lawrence, Kansas saw the construction or conversion of 13 ADUs,¹³⁷ while an average of less than 2 ADUs a year have been permitted in Olympia since the ADU ordinance was enacted in 1995.¹³⁸ Boulder permitted 229 ADUs over a period of 20 years.¹³⁹ In Montgomery County uptake has been somewhat higher with 400 permits issued over 12 years and 288 legal units were added to Daly City Stock over a period of 16 years.¹⁴⁰ Even in Portland, which is used as a model for the ADU movement by other states and sees ADUs as

¹²⁸ Howard, L., 2010

¹²⁹ <http://insights.strawberrystar.com/post/102dtli/englands-housing-stock-increase-driven-by-office-to-home-conversions>

¹³⁰ Mendez, P., 2011

¹³¹ Kleiman, N., *et al.*, 2013

¹³² Baynes, Sandra and Steele, Margaret, 2016, "Laneway Homes", Housing Observer, Article 5, Canada Mortgage and Housing Corporation

¹³³ Gratton M.C., 2011

¹³⁴ Gratton M.C., 2011

¹³⁵ Tyre, P., 2008

¹³⁶ Gratton M.C., 2011

¹³⁷ Hulse, T. M., 2015

¹³⁸ Skinner, T., 2011

¹³⁹ City of Boulder, 2012

¹⁴⁰ Lazaro, C. R., 2013

“integral to meeting its housing goals,”¹⁴¹ only 431 ADUs were permitted between 2000 to 2012 - a market penetration of 0.3 percent.¹⁴²

Do ADUs Generate Affordable Housing?

The United States Department of Housing and Urban Development has estimated that if one out of ten single family homes built prior to 1975 were to add an ADU to their property the stock of affordable housing could be increased by 10 percent.¹⁴³ However, the reality appears to be less straightforward as the provision and uptake of opportunities for the development of ADUs varies greatly between jurisdictions and only a handful of local governments require, or enforce requirements, for rental affordability. While early studies suggested that ADUs typically rented at more affordable rates, around 35 percent less than traditional rental units,¹⁴⁴ many of these studies were carried out using illegal or unpermitted dwellings. Paradoxically, the situation may be changing as ADUs become legalised.

Certainly, many ADUs are rented to family members or friends at little to no charge, providing much needed housing for those who may otherwise require government support. Nordvik asserts that ADUs provide an important source of accommodation for around 6 percent of Norwegian renters, who might otherwise be homeless, or forced to live in substandard housing or other precarious situations.¹⁴⁵ Craigslist advertisements for rental units in the Oakland-Fremont sub-metropolitan area (2012) indicated the average accessory unit is affordable to a household on 62 percent of the area median income. Thirty percent of ADUs were affordable to very-low-income households (30 - 50 percent AMI) and 49 percent were affordable to low-income households (50 – 80 percent AMI).¹⁴⁶ Rents for secondary suites in the Vancouver metropolitan area were 24 percent lower than comparable apartments in the primary rental market. In 2010 a two-bedroom secondary suite in Vancouver metropolitan area could be rented for an average of CA\$995 a month, compared to CA\$1195 for a two-bedroom “dwelling unit.”¹⁴⁷

However, in some areas questions are being raised about the extent to which ADUs contribute to housing affordability. Seattle residents, for example, have pointed out that the average monthly cost of an ADU (US\$500-\$700) is still beyond the reach of some single, low income households.¹⁴⁸ An analysis of permitted ADUs in Portland found that while 18 percent were rented for less than US\$500 a month, 13 percent of which were let for free, 80 percent of ADUs were rented at market rates or “a slight premium” compared with apartments of a similar size and location. Including zero rents, the mean rent of an attached ADU was US\$753 a month, slightly cheaper than the comparable mean market rent of

¹⁴¹ Loudenback, Tanza, 2017, Crazy-high Rent, Record-low Homeownership, and Overcrowding: California has plans to solve the Housing crisis, but not Without a fight, *Business Insider Australia*

¹⁴² Brown, M.J., and Watkins, T., 2012

¹⁴³ Tyre, P., 2008

¹⁴⁴ See Brown, M.J., and Palmeri, J., 2014

¹⁴⁵ See Gratton 2011

¹⁴⁶ Chapple, K., Wegmann, J., Nemirow, A., & Dentel-Post, C., 2012

¹⁴⁷ Mendez, P. 2011

¹⁴⁸ Been, V., Gross, B., & Infranca, J., 2014

US\$778 a month. However, when zero rents were factored out the mean rent of an attached ADU was US\$872 a month, almost one hundred dollars more than the mean market rent for comparable dwellings.¹⁴⁹

Some jurisdictions have attempted to promote the development of ADUs for affordable housing by requiring that applicants agree to rent the unit to low-income tenants, offering subsidies or waiving development fees for owners who agree to do so. Daly City has reduced application fees, and provides low interest loans for low-income owners to add an ADU that will be used as an affordable rental.¹⁵⁰ Alberta provides funding for up to 75 percent of development costs to homeowners who commit to providing units to tenants making less than the median wage.¹⁵¹ Wellfleet introduced the Affordable ADU Bylaw in 2006 to increase the supply of affordable rentals and address the needs of senior and multi-family households.¹⁵² Homeowners wanting to develop an ADU must agree to rent the unit to a low-moderate income household, follow the fair market rental guidelines outlined by HUD, and submit rental information annually. The town offers interest-free loans for affordable units and tax exemptions for the portion of the property rented at an affordable rate. Despite these provisions only 17 affordable units had been approved in the two years following the bylaw.¹⁵³

Although these mechanisms have increased the production of code compliant ADUs to varying extents, a lack of effective record keeping and monitoring in most jurisdictions has meant that in practice rents are often set at the owner's discretion and do not always meet targets for affordability. For instance, under the ADU ordinance (2006) in Florida, ADUs can only be rented to tenants on very low or low to moderate incomes (less than 80 percent AMI)¹⁵⁴ and applicants must sign an affidavit agreeing to rent the unit at affordable rates.¹⁵⁵ However, in practice few of the Florida communities that permit ADUs actively monitor the units or enforce provisions for affordability.¹⁵⁶

Tyre found that the majority of ADUs in Orlando and Winter Park rented for between US\$700-\$900 a month.¹⁵⁷ Although well below the average monthly rents of US\$1,075 in Orlando in 2007 and US\$1,163 in 2008,¹⁵⁸ these dwellings were only affordable to households earning over 80 percent of the area median incomes.¹⁵⁹ It appears that Key West is the only area in Florida that limits the rent of ADUs and has effectively introduced regulations that have increased ADU construction.¹⁶⁰

¹⁴⁹ Brown, M.J., and Palmeri, J. 2014

¹⁵⁰ Lazaro, C. R., 2013

¹⁵¹ Gratton, M.C., 2011

¹⁵² Sage Computing Inc., 2008

¹⁵³ Sage Computing Inc., 2008

¹⁵⁴ Pelham, T., 2007

¹⁵⁵ Ross, Jaimie, 2016, Accessory Dwelling Units: A SmartGrowth Tool for Providing Affordable Housing, *Housing News Network, Volume 32, Issue 2*

¹⁵⁶ Ross, J., 2016

¹⁵⁷ Tyre, P., 2008

¹⁵⁸ <http://www.deptofnumbers.com/rent/florida/orlando/>

¹⁵⁹ Tyre, P., 2008

¹⁶⁰ Pelham, T., 2007, Tyre, P., 2008

Concerns have been raised about placing the onus for the development and management of affordable ADUs for low income and non-traditional households on homeowners. Some commentators have pointed out that not only is it “wrong to view private home equity, or rental income from a secondary dwelling as a welfare safety net,” but that measures based on leveraging private housing assets have the potential to exacerbate economic and generational inequalities.¹⁶¹ Furthermore, when owners are reliant on the income from an ADU to pay their own mortgage, the potential exists for conflicts to arise around affordability for the owner versus affordability for the tenant.¹⁶² Unless authorities implement measures which enable them to consistently keep track of ADU rentals and enforce their own affordability requirements there is a risk that some households will be displaced or priced out of the market, particularly as acceptability and demand for this type of housing grows.¹⁶³

Strategies to Increase Fit-for-Purpose Housing through ADUs

Despite the issues associated with ADUs, including retaining affordable ADUs as affordable housing stock, many jurisdictions have chosen to support ADU provision. This is partly to increase the performance of ADUs and mitigate adverse impacts. It is partly to increase the supply and diversity of the housing stock. Table 5.1 provides examples of the way in which different jurisdictions have attempted to promote fit-for-purpose ADU provision. Those strategies can be broadly divided into those:

- Designed to increase planning and regulatory flexibility around ADUs.
- Encouraging ADU provision by reducing the development and transaction costs of supplying ADUs.
- Promoting ADUs through financial assistance.
- Using tax incentives to generate acceptable ADUs.
- Designed to ensure that ADUs are affordable and secure for tenants.
- Designed to increase public understanding and acceptance of ADUs.

Table 5.1 Examples of Overseas Support for Fit-for-Purpose ADUs

Increasing Planning and Regulatory Flexibility		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
ADUs allowed as of right.	Straightforward applications without hearings result in a higher number of consents and approvals. ¹⁶⁴	California, 2003 Assembly Bill.
Parking requirements for ADUs relaxed or eliminated.	Reduce development costs. Increase the number of households eligible to develop an ADU. Reduce dependence on vehicle use and support public transit.	A-SEPP NSW 2009.
Minimum lot size requirements for ADUs reduced.	Increase opportunities for development. Utilise land more efficiently.	Lexington Massachusetts 2005 amendment to the ADU Bylaw.

¹⁶¹ Jarvis, H., 2010.

¹⁶² Brown, M. J., and Palmeri, J., 2014

¹⁶³ Leitch, K. and Watson, S., 2016

¹⁶⁴ Gratton, M.C. 2011

Floor size requirements for ADUs reduced.	Increase opportunities for development.	San Francisco 2012 Approved reduction in the minimum size of a residential unit to 220ft ² .
Removed requirements for ADUs to comply to neighbourhood character or design of the main house.	Provide flexibility in design to increase options and supply.	Vancouver, Proposed Text Amendments to the Vancouver Zoning Code Standards Regulating Accessory Dwellings March 2017.
Exemptions from zoning bylaws and development regulations where households agree to ensure affordable rents for ADUs.	Incentivise provision of affordable ADUs.	Kelowna, British Columbia, Housing and Homeowner Protection Act.
Amnesty programme for illegal units.	Encourage owners to upgrade their units to acceptable standards without fear of penalty. Reduce the number of ADUs withdrawn from the market for not being up to code.	San Francisco Dwelling Unit Legalisation Programme 2014 Permits one dwelling unit to be legalized per lot in districts that permit residential use provided safety regulations are met. Plan Review Fee waived until January 1 st 2020.
Reducing Development and Transactions Cost		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
Simplified applications and approvals process for ADUs.	Reduces time and cost to homeowners. Discourage construction of illegal units.	A-SEPP NSW 2013-2014 allowed 29% of development approvals to be fast tracked under the complying development pathway. Complying development applications take an average of 18 days to approve compared to 70 days for a development application. ¹⁶⁵
Waive fees for homeowners that agree to rent their ADUs at affordable rates.	Encourage and facilitate development of ADUs for affordable housing.	Santa Cruz, ADU Ordinance 2003 Development fees waived for ADUs rented to very low/low-income households.
Waive fees for owners to bring existing ADUs up to code.	Encourage the provision of code compliant units.	The City of Saskatoon, Saskatchewan, Zoning Bylaw 8770. Offers to waive municipal building and plumbing permit fees for owners to legalise existing units.
Pre-approved design guides and "how-to" manuals developed.	Guidelines assist owners to take advantage of opportunities. Reduce development costs.	Santa Cruz, ADU Ordinance 2003 ADU Plan Sets Book, ADU manual, how-to guide.
Department dedicated to overseeing programmes, assisting homeowners and monitoring units.	Assist homeowners to navigate the process. Ensure information is accurate and up to date. Monitor ADU conditions and rent. Facilitate assessment of interventions. Respond to complaints or concerns.	Edmonton, Canada Plan for Affordable Housing. Team established to handle zoning, permits, inquiries and applications and respond to bylaw enforcement requests.

¹⁶⁵ SJBS Planning, 2015

Financial Assistance Packages		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
Loan scheme established.	Reduce financial barriers and initial outlay for homeowners.	Halton, Ontario Second Unit Pilot Programme (Aug 2016 – Nov 2017) provides fifteen-year, interest free, forgivable loans for homeowners to add an ADU to their property.
Provide financial aid for homeowners. Grants programme established.	Encourage and support development of ADUs. Reduce financial barriers. Increase production, compliance and reduce incentives for illegal conversions. ¹⁶⁶	Edmonton, Canada, Cornerstones II Grant Program.
Subsidies provided to bring an existing ADU up to minimum standard.	Ensure safety and habitability of ADUs. Assist low-income owners with the cost of repairs. Keep stock in the market.	Canada Homeowner Residential Rehabilitation Assistance Programme. ¹⁶⁷
Tax Incentives/Disincentives (Tax Relief)		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
Provide tax exemptions for affordable ADUs.	Encourage provision of affordable ADUs.	Wellfleet, Massachusetts Affordable ADU Bylaw 2006 Tax exemptions for the portion of the property rented as affordable housing
Regulatory Interventions		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
Rental caps.	To ensure rents are kept at rates affordable to very low-income tenants.	Key West has adopted an ordinance, under Section §163.31771 of the Florida Statute, to limit the rent on ADUs. Rents must be affordable to tenants earning less than 80% of the median income.
Include ADUs under the Tenancy Act.	Provide some security for tenants and ensure dwellings are safe, habitable and rented at fair rates.	Lawrence, Kansas ADUs fall under residential rental licensing and inspection programme.
Public Education		
<i>Mechanism/Incentive</i>	<i>Rationale</i>	<i>Regulatory/Legislative Basis</i>
Public outreach such as forums and workshops with residents.	Address fears, increase understanding, and build acceptability.	Toronto Held public consultations, workshops city tours, games and art to educate residents on laneway housing.

¹⁶⁶ Gratton, M.C. 2011

¹⁶⁷ Brinig, M. 2015

6. Realising ADU Housing Opportunities

The international research suggests that facilitating the provision of ADUs has the potential to alleviate some of the pressure for new builds and offer alternatives for affordable housing as well as providing opportunities for mutually beneficial support across related households.¹⁶⁸ There are some provisos, however. Internationally it is recognised that programmes promoting the development of ADUs for affordable housing should include provisions to protect the existing tenants from evictions, and provisions for rent caps as well as regular monitoring and management to ensure affordability is maintained.

The international experience also shows, as our own experience in New Zealand is currently showing, that the conversion of buildings and partitioning occur informally even where there are no provisions to allow those conversions. Unauthorised ADUs tend to be characterised by conditions that are socially unacceptable and antithetical to the health and wellbeing of those who live in them. Moreover, while the most vulnerable of people in the most straitened circumstances are frequently those most likely to seek some solution to their housing needs in unauthorised ADUs, the ADUs themselves may still be unaffordable. Affordability problems are exacerbated by insecurity of tenure.

On the surface, ADUs would appear to be an easy solution for New Zealand. Our dwelling size is relatively large by comparison to many overseas housing stocks. Our lot sizes for existing, older dwellings are comparatively large and our suburbs low density. Our household sizes are falling and there is an unmet demand for smaller dwellings, especially among older people. Indeed, for older people, ADUs can be built or partitioned in ways that meet many of their needs and preferences: lower indoor and outdoor maintenance, remaining independent while staying connected and in proximity to people, have well-designed functional spaces, and staying within their communities.¹⁶⁹ Yet we give, with the recent exception of the Auckland Council's interest in ADUs, little attention to ADUs.

Perhaps more importantly, the diversity and inconsistency of provision and rules around ADUs apparent across councils suggest a degree of rationalisation and standardisation would be needed to promote the provision of ADUs. New Zealand councils show little clarity around the policy logics of ADUs. There are a number of logics which may be pertinent ranging from dealing with informal, poor quality housing solutions to improving supply to intensification to increasing the supply of small dwellings within connected locations. These are rarely articulated.

¹⁶⁸ Kingman, D., 2016; Jarvis, H., 2010.

¹⁶⁹ Saville-Smith, K., and B. James, 2016 The Housing Older People Would Choose A Review of Selected New Zealand Research A Working Paper prepared for the Population Ageing Technical Advisory Group Western Bay of Plenty Sub-region July 2016, Life When Renting Programme, Ageing Well National Science Challenge

There is potential for realising new housing through ADUs and strategies of dwelling partitioning. Even with the very conservative estimates made in this report around what dwellings could be partitionable, we suggest the possibility of realising around 180,000 dwellings through partitioning alone. In Auckland our analysis suggests over 45,000 dwellings could be partitioned. Partitioning and other forms of ADUs can be achieved without recourse to greenfield sites, can keep people where neighbourhood infrastructure and services already exist, and can allow people to stay within existing communities.

That potential, however, is not being effectively used. New Zealand is marked by a plethora of provisions around ADUs. There is little consistency between councils and there is fundamental failure to articulate a coherent logic around partitioning and ADU policies. The outcomes sought by councils for allowing (or disallowing ADUs) are unclear. The effects councils are trying to control through the rules they impose are poorly articulated and the rules themselves appear arbitrary and are certainly inconsistent across jurisdictions.

Those problems mean that opportunities for developing low-cost, high performance ADU solutions through pre-fabrication are largely lost. A profound lack of attention to ADUs has meant that not only does New Zealand continue to under-utilise its current housing infrastructure, the benefits that could accrue to income poor, asset rich households from using their assets more effectively are missed. To date the focus in New Zealand has been on stimulating affordable new-builds or improve the condition of the existing stock. This report suggests that partitioning and other ADUs can provide a complementary pathway to meeting our housing needs. Councils are key to realising the potential of New Zealand's 'hidden homes'. They can work together to rationalise the current glut of differing policies and rules around partitioning and other ADUs. By doing so they can open up new opportunities for the building industry to design, develop and deliver low cost, high performance products that would provide for many individuals and families who struggle to find fit-for-purpose homes.

Appendix A District Plan Provisions Specific to ADU¹⁷⁰

¹⁷⁰ It is important to note that this is not a comprehensive record of all objectives, rules or policies that may impact on ADUs. Refer to council plans for details.

Council	Plan	ADU Provision ¹⁷¹	Rationale for ADU Provision
Far North District Council	Far North District Plan	<p>Any new building or alteration/addition to an existing building is a restricted discretionary activity in the Residential Zone provided the total Building Coverage of a site does not exceed 55% or 550m², whichever is the lesser, of the gross site area.</p> <p>Any new building or alteration/addition to an existing building is a permitted activity in the Rural Living Zone if the total Building Coverage of a site does not exceed 10% or 2400m², whichever is the lesser, of the gross site area.</p> <p>Accessory buildings on a site within the Coopers Beachfront Estate are a permitted activity provided that: there is no more than one accessory building detached from each residential unit on the site; any accessory building which is detached from the residential unit has a total floor area of no more than 45m².</p>	
Kaipara District Council	Proposed Kaipara District Plan Decision Report of the Hearings Panel Chapter 13 – Residential 31 August 2011	<p>Construction of a detached additional dwelling is a permitted activity in residential zones.</p> <p>Minimum net site area associated with each additional dwelling is: 600m² for a serviced site not in an Overlay Area; 1,000m² for a serviced site in an Overlay Area; 3,000m² for an un-serviced site.</p>	
Whangarei District Council	Whangarei District Plan	<p>Construction or alteration of new residential units is a permitted activity in Living 1, 2 & 3 Environments.</p> <p>The net site area associated with each residential unit must be at least: 500m² in the Living 1 Environment; 350m² in the Living 2 Environment; 2000m² in the Living 3 Environment; 2000m² in any Living Environment not connected to a reticulated sewerage system. Maximum GFA 70m².</p>	

¹⁷¹ Note provisions and rules related to ADUs may be the same as for other buildings on the site. These have not been described. The material here is restricted to provisions specific to ADUs.

Auckland Unitary Council	Auckland Unitary Plan	<p>In the Single House Zone conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings is a permitted activity.</p> <p>Mixed Housing Suburban Zone: 2 dwellings per site are permitted. 3 or more dwellings per site are restricted discretionary activities. Conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings is permitted. ADUs are permitted.</p> <p>Mixed Housing Urban Zone: 2 dwellings per site permitted; 3 or more dwellings per site restricted discretionary; Conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings is permitted; Accessory buildings are permitted.</p> <p>Residential Large Lot Zone: Minor dwelling restricted discretionary. More than one dwelling per site (other than a minor dwelling) is discretionary. Accessory buildings permitted.</p> <p>Residential - Rural and Coastal settlement zone: Conversion of a principal dwelling existing as at 30 September 2013 into a maximum of two dwellings restricted discretionary activity. Minor dwellings restricted discretionary activity. More than one dwelling per site except for conversions or minor dwelling non-complying.</p> <p>Residential - Terrace Housing and Apartment Zone: Conversion of principal dwelling permitted activity. Accessory buildings permitted.</p> <p>Future Urban Zone: Minor dwellings restricted discretionary.</p> <p>Any new building project or structural change to an existing building is likely to require both a building and a resource consent.</p>	
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Thames-Coromandel District Council	Thames-Coromandel Proposed District Plan - Appeals Version Annotated 9 August 2017	<p>Minor Units Permitted under Rule 14 providing they meet standards.</p> <p>Permitted Airfield Zone, Extra Density Residential Zone, Low Density Residential Zone, Rural Lifestyle Zone, Village Zone and Waterfront Zone.</p> <p>Controlled activity Coastal Zone.</p> <p>One minor unit per site.</p> <p>Maximum site coverage: 30% Coastal Zone; 35% Residential Zone or 40% if Lifemark or accessible design certified; 45% Extra Density Residential Zone; 15% Low Density Residential Zone; 10% Rural Lifestyle Zone; 35% Village Zone; 50% Waterfront Zone.</p> <p>Maximum gross floor area all zones (excl. garage) 60m² if Lifemark certified or has another certification of functionality for the elderly or disabled. If no certification gross floor area maximum 50m² all zones(excl. garage).</p>	
Hauraki District Council	Hauraki District Plan	No provisions for ADUs specified in District Plan	

Hauraki District Council – Franklin ¹⁷² Area	Franklin District Plan	<p>Accessory buildings permitted in Residential 2 Zone.</p> <p>May include sleeping and ablution facilities, but no facilities for food preparation or cooking.</p> <p>Do not require consent provided they meet development and performance standards.</p>	
Waikato District Council	Waikato District Council Practice Note: Dependent Person's Dwellings (DPDs), Sleepouts and Second/Subsequent Dwellings (Waikato Section) 2017	<p>Permit Dependent Persons Dwelling (DPD).</p> <p>Permit the use of second subsequent dwellings as independent units.</p> <p>Subsidiary dwellings permitted on some sites with resource consent.</p> <p>One DPD permitted per site in the Living Zone. Subsequent dwellings and DPDs are discretionary activities.</p> <p>Coastal Zone one dwelling per certificate of titles as a controlled activity or two if the title contains at least 40 ha.</p> <p>One DPD permitted per site in Country Living Zone. Subsequent secondary dwellings are a discretionary activity.</p> <p>Country Living Zone permits construction or alteration of a building as a permitted activity if total building coverage does not exceed 10% and gross floor area of all accessory buildings (excluding garage) does not exceed 80m².</p> <p>Maximum gross floor area 70m² for a dependent persons dwelling. Must be built for occupation by a dependent relative of the occupiers of the principal dwelling and held in the same certificate of title.</p> <p>Can be attached or detached.</p> <p>Second subsequent dwelling include units exceeding 70m² and can be used to accommodate unrelated individuals.</p>	

¹⁷² Franklin has been split between Auckland, Waikato and Hauraki, however that area now part of the Hauraki District continues to operate under the Franklin District Plan

		<p>Subsidiary dwelling is a self-contained unit that can only be used for housing relatives or seasonal, farming or horticultural workers.</p> <p>Maximum 65m² for a dependent relative; max 120m² for a worker.</p>	
Hamilton City Council	Partly Operative District Plan	<p>Ancillary residential units permitted in the General Residential Zone and Large Lot Residential Zone.</p> <p>Ancillary units discretionary/permitted for change of use in medium density residential zones.</p> <p>General Residential Zone - 600m² total for both dwelling and ancillary residential unit.</p> <p>Large Lot Residential Zone - 3500m² total for both dwelling and ancillary residential unit.</p> <p>One ancillary unit per site with a maximum gross floor area of 60m² (all permitted zones).</p>	
Matamata-Piako District Council	Matamata-Piako District Plan	No provisions for ADUs specified in District Plan	
Otorohanga District Council	Otorohanga District Plan: Operative 30 Oct 2014	<p>Permits small, habitable buildings with plumbing and drainage.</p> <p>Permits additions and alterations.</p> <p>Maximum floor size 30m².</p>	
Waipa District Council	Waipa District Plan 2016	<p>One secondary dwelling per site is a permitted activity in residential zones.</p> <p>Minimum net site area 850m².</p> <p>Must be encompassed within the bulk of the principal dwelling so it has the appearance of a single dwelling.</p> <p>Maximum GFA 70m².</p>	

South Waikato District Council	South Waikato District Plan, Operative 1 July 2015, Volume 1, Parts A-D: Objectives, Policies, Rules	Accessory buildings are a permitted activity in Tokoroa Residential Zone, Putāruru Residential Zone, Tirau Residential Zone and Arapuni Village zone. Maximum two buildings a site.	
Waitomo District Council	Waitomo District Plan (March 2009)	No provisions for ADUs specified in District Plan	
Taupo District Council	Full Taupo District Council Taupo District Plan: Operative 11 October 2007	No provisions for ADUs specified in District Plan	
Tauranga City Council	Tauranga City Plan (8 October 2016)	<p>Development of secondary independent dwelling units permitted on residential sites in the Suburban Residential Zone, the Large Lot Residential Zone, City Living Residential and City Living Mixed Use Zones.</p> <p>Suburban Residential Zone 1 independent dwelling unit per 325m².</p> <p>Large Lot Residential Zone 1 independent dwelling unit per 1,000m².</p> <p>Minimum 200m² site area per independent dwelling unit City Living Residential and City Living Residential Zones.</p> <p>Permitted in Urban Marae Community Zone 1, Ngati Kahu Sub-Zone A and Commercial (Waewae) Sub-Zone.</p> <p>Urban Marae Community Zone 1 independent dwelling unit per 325m² of gross site area.</p> <p>Permitted Restricted discretionary in the Wairakei Residential Zone.</p> <p>Minimum site size 500m² Wairakei Residential Zone.</p> <p>Special Permitted Activity in the Papamoa Medium Rise Plan Area – Inland and Beachside Neighbourhoods.</p> <p>Maximum of 2 bedrooms (or 2 rooms other than the main living area capable of being used as bedrooms).</p>	To provide for a range of dwelling types and densities without negatively impacting on neighbourhood character, amenities and environmental characteristics.

		Subject to compliance with height, noise, light, character and environmental requirements.	
Western Bay of Plenty District Council	Western Bay of Plenty District Plan	<p>One minor dwelling a lot controlled activity in residential areas the Future Urban Zone, Rural Residential Zone and Lifestyle Zone.</p> <p>Minimum net land area: Katikati, Te Puke, Waihi Beach (including Athenree, Bowentown and Pios Beach) 350m² per dwelling; Omokoroa Stage 1 400m² per dwelling with a maximum average of 800m²; Omokoroa Stage 2 350m² per dwelling with a maximum average of 650m²; Omokoroa Existing Village 600m² per dwelling; All other areas 800m² per dwelling.</p> <p>Maximum floor size 60m² all permitted zones.</p>	
Rotorua District Council	Rotorua District Plan 2016-2026	<p>Buildings and alterations accessory to a household unit permitted in Residential Zones 1-5.</p> <p>One additional household unit, net floor area maximum 72m², permitted for sites greater than 600m² in Residential 1 zone.</p> <p>Maximum site coverage: Residential 1 and 4: 40% of the area of the site. Residential 3: 50% of the area of the site. Residential 5: 25% of the area of the site. No maximum site coverage for Residential 2 Zone.</p>	Enable provision of a small household unit on a site, for the accommodation of family members for example.
Kawerau District Council	Kawerau Operative District Plan 1 May 2012	No provisions for ADUs specified in District Plan	

Whakatane District Council	Operative District Plan 2017	<p>One accessory building for habitation per lot is a permitted activity in Deferred Residential, Residential, Urban Living Mixed Use, Commercial, Rural Plains, Rural Foothills and Community and Culture Zones.</p> <p>The maximum density for residential dwellings in the Residential Zone one dwelling per 350m² of lot area or one dwelling per 1,200m² of lot area if an on-site effluent treatment system is required.</p> <p>The maximum density for residential dwellings in the Urban Living Zone: one dwelling per 250m² of lot area if the dwellings are detached; One dwelling per 200m² of lot area if the dwellings are attached.</p> <p>One accessory building for habitation per lot is a restricted discretionary activity in the Rural Coastal Zone.</p> <p>One accessory building for habitation per lot is a permitted, discretionary or restricted discretionary activity in Rural Ōwhiwa depending on location, height/impact on ridgeline and compliance with other rules.</p> <p>Max GFA 65m²all permitted zones.</p>	
Opotiki District Council	Opotiki District Council District Plan (22 September 2005)	<p>Permit accessory dwellings and buildings in some circumstances.</p> <p>That part of the building encroaching on the yard does not exceed either 30% of the length of the nearest boundary to the yard or 10m, whichever is the smaller.</p> <p>Outside pedestrian access is available to the rear of the dwelling.</p> <p>Written consent of the owners and occupiers of any properties adjoining the affected yard is obtained, except for accessory buildings which are located at least 1.5m from the boundary.</p> <p>Vehicle access must be possible for septic tank maintenance</p>	

		Maximum site coverage 40%.	
Gisborne District Council	Gisborne District Council Combined Regional Land & District Plan Operative 31 January 2006	<p>Minor dwelling units are a permitted activity in Residential zones, with the exception of the Residential Lifestyle zone, where they are a discretionary activity.</p> <p>Maximum floor size 60m². Maximum site coverage 35%.</p> <p>Must remain on the same title as the principal dwelling.</p>	
New Plymouth District Council	New Plymouth District Plan (Updated June 2010)	<p>1 habitable building per residential property permitted, dependent on ability to accommodate traffic and noise controls.</p> <p>Maximum permitted coverage in the front yard Residential A&C Environment Areas 35%.</p> <p>Max. permitted coverage front yard Residential B Environment Area 50%.</p>	Allow for flexible living opportunities.
Stratford District Council	Stratford District Plan (2014)	Accessory buildings permitted in residential zones.	To provide flexibility for residents and maximise the diversity of land use.
South Taranaki District Council	Proposed South Taranaki District Plan (2015)	<p>Minor dwellings for independent living permitted activity in residential zones.</p> <p>Restricted Discretionary where a new dwelling unit (including one additional minor dwelling unit) is on a site with a net site area between 1,000m² and 4,000m².</p> <p>Maximum two dwellings per site.</p> <p>Minimum net site area of 400m² per dwelling unit.</p> <p>Maximum site coverage 40%.</p> <p>Maximum GFA 60m².</p>	
Ruapehu District Council	Ruapehu District Plan, Operative: 1 October 2013	No provisions for ADUs specified in District Plan	

Whanganui District Council	Whanganui District Plan, Operative: 15 May 2017	<p>Permit minor dwellings/granny flats.</p> <p>One minor dwelling per lot.</p> <p>Maximum gross floor area 60m².</p> <p>Must share access-way with principal dwelling.</p>	
Rangitikei District Council	Rangitikei District Council Operative District Plan 2013	No provisions for ADUs specified in District Plan	
Manawatu District Council	Manawatu District Plan – Operative December 2002 – Master March 2015 (Updated April 2016)	<p>Family flats are a permitted activity in Residential and Rural Zones.</p> <p>Maximum floor area 70m².</p> <p>Minimum site size 350m² in the Residential Zone. Maximum site coverage 35% Residential Zone.</p> <p>Family flat – Must be in the same ownership as the main dwelling unit.</p> <p>Can be used to accommodate non-paying guests or family members dependent upon the occupiers of the main dwelling unit.</p>	
Wairoa District Council	Wairoa District Plan 2005 - Full Operative Plan	<p>Residential (Mahia) Zone - Household density shall not exceed one dwelling per 800m² of the net site area for serviced lots or one dwelling per 1,000m² for unserviced lots.</p> <p>For areas of land of less than 800m² held in one certificate of title first registered before 19 December 2006, one dwelling unit is permitted.</p>	

Napier City Council	City of Napier District Plan Operative 21 November 2011	<p>Development of a supplementary unit is a permitted activity in the main residential zone. The unit must consist of a single bedroomed dwelling unit.</p> <p>No more than one dwelling and one unit may be located on the same site as one other dwelling. Maximum gross floor area of the unit must not exceed 80m², including a notional garage.</p> <p>Must comply with the relevant conditions for the Main Residential Zone.</p> <p>Maximum site coverage 50%.</p>	
Hastings District Council	Proposed Hastings District Plan (2013)	<p>Supplementary Residential Buildings permitted activity in most Residential Zones.</p> <p>One supplementary residential building permitted per site.</p> <p>Hastings General Residential Zone - One residential building and one supplementary dwelling unit per 350m² net site area.</p> <p>Max gross floor area 80m² in most zones. 100m² in Rural Residential, Nature Preservation and Tuki Tuki Special Character Zones.</p> <p>In most zones supplementary dwelling units exceeding 80m² restricted discretionary.</p> <p>Max building coverage: 45% Hastings General Residential Zone and Hastings City Living Zone; 35% Hastings Character Residential Zone; 20% Tuki Tuki Special Character Zone and Rural Residential Zone.</p>	

Central Hawke's Bay District Council	Operative Central Hawkes Bay District Plan 2003	<p>Residential and Township Zones - There shall be no more than two residential units on any site.</p> <p>Minimum net area for any site shall be 350m² for each residential unit contained within the site provided that it is connected to a reticulated sewerage system, except that for each residential unit with a gross floor area less than 60m² the minimum net area for any site shall be 150m².</p>	
Tararua District Council	Tararua District Council Operative District Plan Review No. 1 Sept. 2012	<p>Accessory buildings to any permitted or otherwise lawfully established activity permitted in all management areas. No minimum lot size specified.</p> <p>The subdivision of different floors or levels of a building, or different parts of a floor or level of a building is exempt from subdivision standards.</p>	
Palmerston North City Council	Palmerston North City Council District Plan (Operative Plan) Section 10 Residential Zone	<p>Permits minor dwellings that comply with performance standards.</p> <p>Maximum one dwelling unit and one minor unit; or one dwelling unit and one sleep-out.</p> <p>Maximum GFA 80m².</p> <p>Maximum site coverage 40% on sites of less than 500m² 200m² on sites 500m² to 572m² 35% on sites over 572m².</p> <p>One dependent dwelling unit per dwelling controlled activity. GFA 100m². A dependent dwelling unit must be removed or integrated into the main building within six months of occupation by the dependent person ceasing.</p> <p>Dependent Dwelling Units may have a condition of consent imposed pertaining to a financial contribution or bond to, for example, ensure that any exterior works are completed to an appropriate standard.</p>	

Horowhenua District Council	Horowhenua Operative Online Plan 2015	<p>Permit family flats in residential zones.</p> <p>Family flat maximum GFA 50m².</p> <p>Max building coverage: sites greater than 500m² 35%; sites 500m² 40%.</p> <p>Detached Residential units- sites greater than 500m² max building coverage of net site area 35%; sites 500m² or smaller max building coverage 40%.</p> <p>Two or more residential dwelling units/family flats per site discretionary activity.</p> <p>Rural Zone: One residential dwelling unit and one family flat per site on sites up to 40 hectares. Two residential dwelling units and one family flat per site on sites between 40 hectares up to 100 hectares. Three residential dwelling units and one family flat per site on sites 100 hectares and over.</p>	
Kapiti Coast District Council	Kapiti Coast District Council District Plan	<p>Family flats permitted activity in the residential zone, and rural zone (with the exception of the Tourist Activity Precinct).</p> <p>One dwelling and one family flat permitted in the residential zone.</p> <p>Maximum 50m² GFA gross floor area. Maximum site coverage 40%.</p> <p>Family Flat - Must be relocatable. Cannot be sold or disposed of except in conjunction with the dwelling. May only be occupied by a socially dependent relative or close family associate of the occupants of the main dwelling.</p>	

Masterton District Council/Carterton District Council/South Wairarapa District Council	Wairarapa Combined District Plan (Last Amended 25 May 2011)	<p>Subdivision is a controlled activity and subject to minimum lot size.</p> <p>Rural Zone one minor dwelling permitted per certificate of title. Maximum of 5m high and under 60m² total gross floor area and. No further than 30m away from the main dwelling at the minor dwelling's most distant point.</p> <p>Dwellings for farm workers controlled activity. One dwelling for farm worker accommodation purposes per 500 hectares.</p>	
Porirua City Council	Porirua City Council Operative Plan Updated 10/16	<p>A second or any subsequent detached dwelling is a permitted activity.</p> <p>Must comply with relevant standards.</p> <p>On sites containing two or more dwellings, the maximum site coverage shall be 35% of the notional net site area for each dwelling.</p> <p>Minimum of one car park per dwelling of up to 75m² GFA and two car parks per dwelling of greater than 75m² GFA.</p> <p>In the Medium Density Residential Policy Area two car parks are required for any dwelling unit.</p>	

Upper Hutt City Council	Upper Hutt City Council District Plan 2004	<p>Permit one family flat in conjunction with a dwelling on any site or two or more dwellings per site when in Residential zones compliant with net size standards.</p> <p>Permit two or more dwellings on a site within a Residential (Centres Overlay) Area except on land identified as Pt Section 618 Hutt District</p> <p>Residential Zones - Minimum net site areas 400m² front and rear lots, 450m² corner lots.</p> <p>Residential A (Centres Overlay) Areas – minimum net site area 300m² front and back lots, 350m² corner lots.</p> <p>Conservation and Hills Area - minimum net site area 750m² front and corner lots 900m² rear lots.</p> <p>Maximum site coverage 30% in the Residential Conservation and Residential Hill Sub-zones.</p> <p>Maximum site coverage 35% in the remainder of the Residential Zone.</p> <p>Maximum floor area for family flats 55m².</p> <p>Must be in the same ownership as the principal dwelling, for the purpose of providing ancillary accommodation.</p> <p>Family flat permitted in Rural Zones in conjunction with a dwelling.</p>	
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Wellington City Council	Wellington City Council District Plan (Operative: 27 July 2000, Revision 11 Aug 2017)	<p>Permit accessory buildings in residential areas.</p> <p>Permit home conversions in residential areas.</p> <p>Construction, alteration of, and addition to residential buildings, accessory buildings and residential structures resulting in 2 household units within the Airnoise Boundary is a discretionary restricted activity.</p> <p>The construction, alteration of, and addition to residential buildings, accessory buildings and residential structure in the Thorndon and Mt Victoria North Residential Character Areas is a discretionary restricted activity.</p> <p>Permit detached dwellings in outer residential areas.</p> <p>Accessory buildings maximum 1 storey.</p> <p>Medium Density Residential Area 1: Permit infill and multi-units; No minimum lot size; No requirement for ground level open space;</p> <p>Medium Density Residential Area 2 requires minimum lot dimensions, front yard and provision of ground level open space.</p> <p>In the Inner & Outer Residential Areas there is no minimum requirement for side and rear yards.</p> <p>Permit accessory buildings in front yards.</p> <p>Waived car parking requirements for conversions of single family dwellings into two units in Inner Residential areas.</p> <p>In the Inner & Outer Residential Areas there is no minimum requirement for side and rear yards. with the exception of Thorndon.</p> <p>Assess less typical development on a case by case basis.</p>	<p>Provide greater housing choice and supply in Residential Areas.</p> <p>Respond to changing housing needs, decreasing household size and an aging population.</p> <p>Enable a wide range of housing options to cater for changes in how people choose to live</p>
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Hutt City Council	City of Lower Hutt District Plan Chapter 4B - Special Residential Activity Area (2016)	<p>Dwelling Houses permitted activity in the Special Residential Area, Hill Residential Activity Area and Landscape Protection Residential Area.</p> <p>Dwelling House: a building or unit within a building providing self-contained residential accommodation, for family, or unrelated individuals.</p> <p>Minimum net site area 700m² Special Residential Activity Area; 1,000m² Hill Residential Area; 2,000m² Landscape Protection Residential Area.</p> <p>Maximum site coverage: 30% Special Residential Activity Area and Hill Residential Activity Area; 15% Landscape Protection Residential Area.</p>	
Nelson City Council	Nelson Resource Management Plan (06/03/07)	<p>Extensions which increase the ground floor area by not more than 20% are provided for as a permitted activity.</p> <p>Allow secondary residential dwellings in some zones.</p> <p>Where an accessory building (such as a garage) is being converted for human occupation, a resource consent is needed to ensure that the building will not be adversely affected by inundation.</p> <p>A change in use of accessory buildings for human habitation is not permitted in certain areas - e.g. in Inundation Overlays.</p> <p>In the standard residential zone 400m² must be allocated to each residential unit. Parking and vehicle manoeuvring requirements must also be met for each unit.</p>	

Tasman District Council	Tasman Resource Management Plan 2017	<p>Minor dwellings permitted and may be undertaken without resource consent in the Residential Zone provided they comply with standards.</p> <p>Minor Dwelling is a self-contained unit with sleeping, cooking and ablution facilities up to 80m² or 120m² including garage.</p> <p>Construction or alteration of a building is a permitted activity in the Residential Zone, that may be undertaken without a resource consent, provided it complies with standards.</p> <p>Subdivision is a controlled activity in the Residential Zone.</p> <p>Building coverage in Richmond, Motueka, Wakefield and Brightwater has been increased, giving greater opportunity to meet the demand for consolidation of these settlements and flexibility for building design provided there is adequate storm water detention as a consequence of the increased building coverage.</p> <p>Construction of a second dwelling is a controlled activity in the Rural 1, 2 & 3 Zones. Small subsidiary units that are dependent on the main dwelling are permitted, whereas consent is required for additional dwellings because of their propensity to contribute to land fragmentation. Cooking facilities are not allowed in these subsidiary units as these can encourage separation and independence from the main dwelling</p> <p>Workers accommodation controlled activity Rural 1, 2 & 3 Zones (minimum area 12ha Rural 1 Zone, 50 ha Rural 2 & 3 Zones), and must be relocatable.</p> <p>Conversion and use of an existing building for a dwelling is a permitted activity in Rural 1, 2, 3 and Rural Residential Zones.</p> <p>Construction/alteration of a dwelling is a controlled activity in Rural 1, 2, 3 and Rural Residential Zones if it contains no more than two self-contained housing units within the same building and: Both are contained in the same building; One unit is clearly subsidiary;</p>	To increase the supply of housing in Tasman District.
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		<p>The connecting rooms/passages have a continuous roof; The walls are enclosed.</p> <p>Co-operative living is a discretionary activity in Rural 1 & 2 and Rural Residential Zones, provided conditions are met.</p>	
Marlborough District Council	Wairau/Awatere Resource Management Plan	<p>Permit accessory dwelling units for the care of a dependent relative.</p> <p>Where a building is intended for the care of a relative and site coverage has already been reached a building of 65m² maximum will be permitted subject to the building being relocatable.</p> <p>The landowner shall enter into a bond with the Council to ensure that the building is removed when no longer required for the dependent relative. The bond will be registered under the Land Transfer Act 1952 against the Certificate of Title to the land and shall be of a covenant running with the land which binds all subsequent owners of the land.</p>	
Marlborough District Council	Marlborough Sounds Resource Management Plan	<p>Permit family flats of up to 80m² GFA in Urban Residential and Sounds Residential Zones for the purpose of housing up to two family members.</p> <p>Where a building is intended for the care of a nominated dependent relative and the maximum site coverage requirement for buildings has already been reached then a building of not more than 65m² will be permitted subject to the building being relocatable.</p> <p>The landowner shall enter into a bond with the Council to ensure that the building is removed when no longer required for the housing of the nominated dependent relative (the bond shall be registered under the Land Transfer Act 1952 against the Certificate of Title to the land and shall be of a covenant running with the land which binds all subsequent owners of the land).</p>	

		<p>Permit alterations, additions and minor extensions to existing dwellings in the Port, Marina and Coastal Marine Zones provided:</p> <p>The extension or alteration is contained within the form of the existing structures, or adds no more than 5% to the plan or cross-sectional area of the structure within any 24 month period;</p> <p>There will be no significant change to the external appearance of the structure;</p> <p>The maintenance or repair does not result in any increase in the area of coastal marine area occupied by the structure;</p> <p>The activity does not result in any discharge or deposition of contaminants into the coastal marine area.</p>	
Kaikoura District Council	Kaikoura District Plan	No provisions for ADUs specified in District Plan	
Buller District Council	Buller District Plan Te Kaupapa Whenua o Kawatiri (Operative 28 January 2000, last amended 21 September 2011)	Permits two habitable dwellings (including granny flats and sleep-outs) on residential sites.	
Grey District Council	Grey District Plan 2005 (Updated 16 July 2015)	<p>Permit family flats on the same site as a residential unit.</p> <p>Maximum 65m².</p> <p>Must be occupied by a dependent relative of the household in the main dwelling.</p>	
Hurunui District Council	Proposed District Plan	Permits internal subdivision and change of use.	Manage density in residential zones.
Waimakiriri District Council	Waimakiriri District Council, Property and Building	<p>Permit one additional physically separated dwelling-house that is no more than 75 square metres in gross floor area and is located within 30 metres of the primary dwelling-house. Only one kitchen facility under any individual roof structure.</p> <p>A building consent is required to build a sleep-out with a floor area exceeding 10m² or containing sanitary fixtures, cooking facilities, or potable water.</p>	

Selwyn District Council	Selwyn District Council, Planning: Frequently Asked Questions	<p>Family flats accessory to the main dwelling are permitted.</p> <p>Maximum floor size 70m².</p> <p>Family flats must comply with bulk, location and relocation requirements.</p> <p>Can only be lived in by someone of the same immediate family as someone residing in the main dwelling.</p>	
Christchurch City Council	Christchurch Replacement District Plan	<p>Minor residential units permitted in Residential Suburban, Residential Suburban Density Transition, Residential New Neighbourhood, Residential Banks Peninsula, Residential Hills, Residential Large Lot, Residential Small Settlement zones.</p> <p>Permitted gross floor area for minor residential units 35-80m².</p> <p>Must be detached from primary dwelling.</p> <p>Minimum site size: 450m² Residential Suburban, Residential Suburban Density Transition, Residential Banks Peninsula and Residential New Neighbourhood zones; 650m² in Residential Hills zone; 1,500 – 2,000m² in the Residential Large Lot zone depending on whether the site is located within an overlay area; 1,000m² in the Residential Small settlement zone.</p> <p>In a Character Area overlay, additional rules apply. A resource consent will be required if the minor residential unit is: visible from the street or located in that part of the site between the road boundary and the main residential unit on the site.</p> <p>Family flats can be constructed in conjunction with a residential unit in all residential zones.</p> <p>No limits to occupation of the minor residential unit - it is not restricted to dependent relatives or older persons.</p> <p>No encumbrance is required to be registered on the title.</p>	

		<p>Family flats must be occupied by family members in some way dependent on a member in the main dwelling.</p> <p>When no longer required by family member a family flat must be removed, have its kitchen removed or comply with requirements for a residential unit</p> <p>Provide for conversion of a residential dwelling into two living units in the Residential Suburban and Residential Suburban Density Transition zones.</p>	
Westland District Council	Westland District Council District Plan, Operative 1 June 2002	<p>Accessory dwellings permitted in Residential and Residential Mixed Zones.</p> <p>Accessory dwellings permitted in Coastal Zone so long as they are relocatable.</p>	
Ashburton District Council	Ashburton District Council, Operative District Plan, August 2014	No provisions for ADUs specified in District Plan	
Timaru District Council	District Plan, Part D, Residential Zones	<p>Residential accessory buildings are permitted in Residential Zones 1, 2, 3, 5 and 6.</p> <p>Accessory buildings permitted or controlled in Residential Zone 4, depending on potential environmental impacts.</p> <p>Alterations, additions and modifications to existing dwellings are restricted discretionary activities in Residential Zone 4.</p>	

Mackenzie District Council	Mackenzie District Plan	<p>Minor units (maximum 50m GFA) permitted Residential 1, 2 & 4 Zones.</p> <p>In the Residential 2 Zone, the minimum net area of a site for each residential unit shall be 250m² exclusive of access</p> <p>Maximum building coverage of the net area in Residential Zones: 40% Residential 1 Zone. 85% Residential 2 Zone. 20% Residential 3 Zone. 10% Residential 4 Zone.</p> <p>Rural Residential Zone – Manuka Terrace one residential and one minor unit per lot. The minimum site area for each residential unit and minor unit shall be: 2ha for lots created or approved by subdivision consent prior to 30 November 2007 and such approval has not lapsed; 4ha for all other lots.</p> <p>Rural-Residential Zone1 & 2 one dwelling and one minor dwelling per lot. The minimum site area for each residential unit and minor unit shall be: Rural-Residential 1 zone: 1ha Rural-Residential 2 zone: 4 ha</p>	
Waitaki District Council	Waitaki District Plan (August 2010)	<p>Permit family flats.</p> <p>Where a family flat does not comply with the Residential Density, Outdoor Living Space, and Parking Standards for residential units it must be relocatable; and the landowner must enter into a bond with the Council to ensure that the family flat is removed when it is no longer required for the housing of a dependent relative.</p> <p>Controls imposed to prevent family flats being used as rental accommodation.</p>	Support a mixture of housing and lifestyles in urban areas by limiting restrictions on various residential types.

Waimate District Council	Waimate District Plan (Operative 2014)	<p>Permit family flats.</p> <p>The Council accepts that in some circumstances the construction and design of family units will be influenced by existing site and building constraints. In such cases, rather than prevent development the Council will require measures be undertaken to ensure the family unit can and will be relocated when no longer required by a dependent relative.</p> <p>Additional parking spaces and outdoor living areas are not required for the family flat as the relative occupying the family flat is considered to be a part of the family on the site.</p>	
Queenstown-Lakes District Council	Queenstown-Lakes District Council – District Plan (July 2016)	<p>Residential flats – self-contained flats ancillary to a principal dwelling permitted in Low Density and High Density Residential Zones provided:</p> <ul style="list-style-type: none"> Maximum GFA 70m² (excluding garage); Contains only one kitchen facility; Limited to one residential flat per residential unit; Is situated on the same site and held in the same ownership as the residential unit, but may be leased to another party. <p>Secondary units permitted Mount Cardrona Station Special Zone provided:</p> <ul style="list-style-type: none"> Consists of no more than one unit in the same ownership as the residential unit; Has a gross floor area of between 35m² and 60m² (excluding accessory buildings); Contains no more than one kitchen and one laundry; Is within the same certificate of title as the residential unit <p>The construction of, alteration to, or addition to any building in the High Density Residential Sub-Zones that exceeds the maximum building footprint sizes specified is a restricted discretionary activity in Residential areas.</p> <p>Maximum building footprint:</p> <ul style="list-style-type: none"> High Density Residential Sub-Zone A 500m²; High Density Residential Sub-Zone B 400m²; High Density Residential Sub-Zone C 300m² 	Residential units provide for the local work force and contribute to the life of the community.

		<p>The addition, alteration or construction of buildings, including Residential Units added to, altered or constructed within Residential Building Platforms is a controlled activity in Rural Zones.</p> <p>In the Rural Lifestyle Zone and Ferry Hill Rural Residential Sub-zone any Residential Unit not contained within a Residential Building Platform is non-complying.</p> <p>Maximum building coverage in Rural Lifestyle and Rural Residential Zones 15%.</p>	
Central Otago District Council	Central Otago District Plan	<p>Creation of a family flat is a discretionary restricted activity in the Residential Resource Area and Rural Settlements Zones.</p> <p>Council shall restrict the exercise of its discretion to the effect that the additional building may have on the amenity values of neighbouring properties and the subject property, and any servicing requirements and measures necessary to ensure that the family flat remains on the site for a temporary duration.</p>	While provision for dependent household members serves a community need, consideration must be given to the effects such development may have on neighbouring property owners and services.
Dunedin City Council	Dunedin City Council Second Generation District Plan	<p>Family flats permitted in all zones except medium density zones. Do not require consent so long as performance standards are met.</p> <p>In rural zones "family flats" can be used to house a person or persons employed by a member of the primary household.</p>	Support the development of more suitable housing for the ageing population and one or two-person households.
Clutha District Council	Clutha District Council District Plan Operative 30 June 1998	<p>Permit detached dwellings.</p> <p>Minimum site area of 100 m² with a minimum dimension of 5.m by 10m.</p> <p>Use is customary in connection with the principle building or permitted use of the land.</p> <p>An additional dwelling for the purposes of accommodating the staff of any property owner is permitted in the Rural Resource Area providing it remains on the same certificate of title and shares the same access road as the main dwelling.</p>	

Southland District Council	Southland District Council Proposed Southland District Plan (Appeal version September 2016)	No provisions for ADUs specified in District Plan	
Gore District Council	Gore District Plan	No provisions for ADUs specified in District Plan	
Invercargill City Council	Proposed Invercargill City District Plan, Appeals Version January 2017	No provisions for ADUs specified in the District Plan	
Chatham Islands Council	Chatham Islands Resource Management Document Operative 2001 Long-Term Plan 2015-2025	No provisions for ADUs specified in the Chatham Islands Resource Management Document or Long-term Plan.	

Appendix B United Kingdom Nationally Described Space Standards (m²)

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) ²			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0
	8p	125	132	138	

References

- Ashton, Alex, Work and Income sent families to garages, *RadioNZ News*, 20 July 2016.
- Baynes, Sandra, and Steele, Margaret, 2016, "Laneway Homes", *Housing Observer*, Article 5, Canada Mortgage and Housing Corporation
<https://www.cmhcschl.gc.ca/en/hoficlincl/observer/upload/observer-laneway-homes.pdf>
- Been, Vicki, Gross, Benjamin & Infranca, John, 2014, *Responding to Changing Households: Regulatory Challenges for Micro-Units and Accessory Dwellings*, What Works Collaborative White Paper, NYU's Furman Center for Real Estate and Urban Policy
http://furmancenter.org/files/NYUFurmanCenter_RespondingtoChangingHouseholds_2014_1.pdf
- Brinig, Margaret, F., 2015, "Grandparents and Accessory Dwelling Units: Preserving Intimacy and Independence", *The Elder Law Journal*, Volume 22
<https://publish.illinois.edu/elderlawjournal/files/2015/03/Brinig.pdf>
- Brown, Martin John and Watkins, Taylor, 2012, "Understanding and Appraising Properties with Accessory Dwelling Units", *The Appraisal Journal*, (Fall): 297- 309
<https://accessorydwellings.files.wordpress.com/2012/12/appraisingpropertieswithadusbrownwatkinsnov2012.pdf>
- Brown, Martin J., and Palmeri, Jordan, 2014, "Accessory Dwelling Units in Portland, Oregon: Evaluation and Interpretation of a Survey of ADU Owners", *TREC Friday Seminars Series*, Book 41
http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1040&context=trec_seminars
- Canada Mortgage and Housing Corporation, 2017, *Permitting Secondary Suites*,
https://www.cmhc-schl.gc.ca/en/inpr/afhoce/afhoce/afhostcast/afhoid/pore/pesesu/pesesu_001.cfm
- Chapman, N. J., and Howe, D. A., 2001, Accessory apartments: Are they a realistic alternative for ageing in place? *Housing Studies*, 16(5), 637-650
- Chapple, Karen, Wegmann, Jake, Nemirow, Alison & Dentel-Post, Colin, 2012, *Yes in My Backyard: Mobilising the Market for Secondary Units*, Berkeley, CA: Center for Community Innovation
<http://communityinnovation.berkeley.edu/reports/secondary-units.pdf>
- Christensen, Pernille, 2016, "Investigating Solutions to the Affordable Housing Supply Challenges in Sydney: Two Alternative Typologies", *Proceedings 22nd Annual Pacific-Rim Real Estate Society Conference*, 2016, Sunshine Coast, Queensland, Australia
<https://opus.lib.uts.edu.au/handle/10453/43900>
- City of Boulder, 2012, *Accessory Dwelling Unit Survey*, Report for the Boulder City Council
https://wwwstatic.bouldercolorado.gov/docs/2012_COB_ADU_Study_with_all_attachments-1-201603301613.pdf

- City of Vancouver, *Vancouver Municipal Code, Chapter 20:810: Accessory Dwelling Units*, http://www.cityofvancouver.us/sites/default/files/fileattachments/vmc/titles_chapters/20.810.pdf
- Curtis, Ceinwen, Garage Rental Prosecutions Could 'Spook' Landlords, *RadioNZ News*, 18 March 2017
- Davison, Gethin *et al.*, 2012, *Affordable Housing Urban Renewal and Planning: Emerging Practice in Queensland, South Australia and New South Wales*, AHURI Final Report No. 195, Melbourne: Australian Housing and Urban Research Institute https://www.ahuri.edu.au/data/assets/pdf_file/0014/2093/AHURI_Final_Report_No195_Affordable_housing_urban_renewal_and_planning.pdf
- Devine, Aidan, 2015, Granny Flat Boom Engulfs Western Sydney as Homeowners Adjust to Soaring House Prices, *The Daily Telegraph* <http://www.dailytelegraph.com.au/realestate/news/sydney-nsw/granny-flat-boom-engulfs-western-sydney-as-homeowners-adjust-to-soaring-house-prices/news-story/a4dad9be7e8ee114992d891b5fd12b19>
- Gellen, M., 1985, *Accessory apartments in single-family housing*, New Brunswick, N.J.: Center for Urban Policy Research
- Gratton, M.C., 2011. *An analysis of secondary suites as a policy instrument in the city of Edmonton*, MCP Doctoral dissertation, University of Manitoba, Winnipeg https://mspace.lib.umanitoba.ca/bitstream/handle/1993/4891/Gratton_MDP_Final_v2_23-Aug-2011.pdf?sequence=1&isAllowed=y
- Hare, P.H., 1989, *Accessory Units: The State of the Art, Report I, Summary of Experience with Accessory Units in the US and Canada*, Washington, DC: Patrick H. Hare Planning and Design
- Hare, P. H., 1991, The echo housing/granny flat experience in the US, *Journal of Housing for the Elderly*, 7(2), 57-70
- Hare, P.H., 1991b, *Accessory Units: The State of the Art, Volumes 3 and 4, Summary of Experience With Accessory Units in the US and Canada*. Washington, DC: Patrick H. Hare Planning and Design
- Hare, P. H., 1993, How much can accessory housing units help? *Urban Land*, 52(2), 48
- Havre, Justin 2016, *Carriage Houses Drive Housing Options and Value in Kelowna*, Kelowna Homes CA, October 31 2016 <http://www.kelownahomes.ca/blog/carriage-houses-drive-housing-options-and-value-in-kelowna.html>
- Howard, Laura, 2010, Tough Times Call for Splitting a Home in Two, *The Independent*, 24 July 2010 <http://www.independent.co.uk/money/mortgages/tough-times-call-for-splitting-a-home-in-two-2034690.html>
- Hulse, Travis M., 2015, *Use of Accessory Dwelling Units as a Housing Strategy: A Case Study of Lawrence, Kansas*, MCRP Thesis. University of Nebraska, Lincoln http://digitalcommons.unl.edu/arch_crp_theses/35

- Jarvis, H., 2010. "Housing to manage debt and family care in the USA", in S.J. Smith and B.A. Searle (eds) *The Blackwell Companion to the Economics of Housing: The Housing Wealth of Nations*, Wiley-Blackwell, Oxford, UK.
http://s3.amazonaws.com/academia.edu.documents/31406749/Housing_to_manage_debt_part_i.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1497999474&Signature=dg4V6g0ss0ieUCbmr%2BV5WoisOdw%3D&response-content-disposition=inline%3B%20filename%3DHousing_to_manage_debt_and_family_care_i.pdf
- Johnson, A., 2017, *Taking Stock*, Social Policy & Parliamentary Unit, Manukau
- Kingman, David, 2016, *Unlocking England's "Hidden Homes": How Subdividing Large Homes Could Solve the Housing Crisis*, The Intergenerational Foundation, London, UK
http://www.if.org.uk/wp-content/uploads/2016/03/Unlocking-Englands-Hidden-Homes_Final.pdf
- Khajehzadeh, Iman, and Vale, Brenda, 2016, "Large Housing in New Zealand: Are Bedroom and Room Standards Still Good Definitions of New Zealand House Size?" *Proceedings 9th Australasian Housing Researchers Conference*, 17-19 February 2016, University of Auckland, Auckland, New Zealand
- Kleiman, Neil *et al.*, 2013, *Innovation in the City*, Center for an Urban Future and NYU Wagner <http://files.eric.ed.gov/fulltext/ED555624.pdf>
- Krass, Cynthia, 2013, *Factors Associated with Accessory Dwelling Unit Density*, Thesis (Masters) University of Washington
https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/23649/Krass_washington_02500_11950.pdf?sequence=1
- Lansner, Johnathan, 2012, *Selling Homes in a Downturn*, *Orange County Register*, Updated 21 September 2012
<https://nwhm.com/sites/default/files/pdfs/9.21.12%20Lansner%20North%20Irvine%2C%20economic%20Twilight%20Zone.pdf>
- Lazaro, Christopher Ray, 2013, *From Allowance to Acceptance: Changing the Role of Accessory Dwelling Units in America's Housing Landscape*, Master's Paper in Partial Fulfilment of the Requirements for the Degree of Master of Urban Planning, Texas A&M University, Department of Landscape Architecture and Urban Planning
<https://accessorydwellings.files.wordpress.com/2015/02/professional-paper-lazaro.pdf>
- Leitch, Kate and Watson, Sarah, 2016, *Hidden Housing: The Case for a Conversion Programme for Basement Apartments in NYC*, Citizens Housing and Planning Council, New York City <http://chpcny.org/assets/Hidden-Housing.pdf>
- Liu, Edgar, Easthope, Hazel, Burnley, Ian and Judd, Bruce, 2013, *Multigenerational Households in Australian Cities: Evidence from Sydney and Brisbane at the Turn of the 21st Century*, *Proceedings 7th Australasian Housing Researchers' Conference*, Freemantle, Western Australia

- Lloyd, James, 2015, *Open Plan Building, A Strategic Policy Toward Older Owners*, The Strategic Society Centre, London <http://strategicsociety.org.uk/wp-content/uploads/2015/10/Open-Plan-Building-a-strategic-policy-toward-older-owners.pdf>
- Loudenback, Tanza, 2017, Crazy-high Rent, Record-low Homeownership, and Overcrowding: California has plans to solve the Housing crisis, but not Without a fight, *Business Insider Australia* <https://www.businessinsider.com.au/granny-flat-law-solution-california-affordable-housing-shortage-2017-3?r=US&IR=T>
- Matt, Kelly, 2017, “Retrofitting the Suburbs: Could Secondary Dwellings Help the Housing Affordability Crisis?” *Landscape Australia*, 2 February 2017 <http://landscapeaustralia.com/articles/retrofitting-the-suburbs-could-secondary-dwellings-help-the-housing-affordability-crisis/>
- McLaughlin, Amara, 2016, Can Laneway Homes be a Housing Solution? Hamilton Takes Stock, *CBC News*, Canada <http://www.cbc.ca/news/canada/hamilton/hamilton-laneway-homes-1.3882596>
- Memon, A and McFarlane, K., 2014, *Long-term vacant residentially zoned land in Auckland: reasons for prolonged land vacancy and development potential*, Auckland Council technical report, TR2014/022
- Mendez, Pablo, 2011, *Ambiguities at Home: Unauthorized Biographies of Housing in Vancouver* (T.), University of British Columbia, Vancouver <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0072450>
- Micklow, Amanda, C. & Warner, Mildred, E., 2014, “Not Your Mother’s Suburb: Remaking Communities for a More Diverse Population”, *Urban Lawyer*, 46 (4) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4564258/pdf/nihms614574.pdf>
- Mukhija, Vinit, Cuff, Dana and Serrano, Kimberly, 2014, *Backyard Homes and Local Concerns: How Can Local Concerns be Better Addressed?* CityLab, UCLA Department of Architecture & Urban Design, Los Angeles, CA http://zeus.aud.ucla.edu/files/publications/2014_BYH%20Report%20cityLAB%20UCLA.pdf
- Neuwirth, Robert and Sheth, Rachana, 2008, *New York’s Housing Underground: A Refuge and Resource*, Pratt Center for Community Development & Chhaya Community Development Corporation, New York http://www.prattcenter.net/sites/default/files/housing_underground_0.pdf
- Owen, Lisa, Landlords Renting Out ‘Unsafe’ Conversions, *Newshub*, 19 July 2016
- Pelham, Thomas, 2007, *Accessory Dwelling Units: Report to the Florida Legislature*, Submitted by The Florida Department of Community Affairs <http://landuselaw.wustl.edu/Articles/ADU.Report.pdf>
- Perine, Jerilyn, et al., 2014, *Steering the New Course: Housing and Land Use Policy for New York City*, Citizens Housing and Planning Council, New York City <http://www.chpcny.org/wp-content/uploads/2014/02/STEERING-THE-NEW-COURSE.pdf>

- Petersen, Anna (ed.), 2011, *Housing Diversity Guide*, Landcom, Parramatta, New South Wales
http://www.landcom.com.au/wp-content/uploads/2015/06/Housing-Diversity-Guidelines-2011-V5_c939.pdf
- Pfeiffer, Deidre, 2015, "Retrofitting Suburbia through Second Units: Lessons from the Phoenix Region", *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 8:3, 279-301 <http://dx.doi.org/10.1080/17549175.2014.908787>
- Plank, Laura, "Basement Extensions: The Pros and Cons", in *Build It*
<http://www.self-build.co.uk/basement-extensions-pros-and-cons>
- Retsinas, J., and Retsinas, N. P., 1991, Accessory apartment conversion programs, *Journal of Aging and Social Policy*, 3(1-2), 73-89
- Ross, Jaimie, 2016, "Accessory Dwelling Units: A SmartGrowth Tool for Providing Affordable Housing", *Housing News Network*, Volume 32, Issue 2 <http://www.flhousing.org/wp-content/uploads/2016/10/Accessory-Dwelling-Units-A-smart-growth-tool-for-providing-affordable-housing.pdf>
- Rudel, T.K., 1984, Household change, accessory apartments, and low income housing in suburbs, *The Professional Geographer*, 36(2), 174-181
- Ruud, M. E., and Nordvik, V., 1999, From the kitchen floor to the basement - sharing arrangements in two centuries, *Housing, Theory and Society*, 16(4), 192
- Sage Computing Inc., 2008, *Accessory Dwelling Units Case Study*, Prepared for: U.S. Department of Housing and Urban Development Office of Policy Development and Research <https://www.huduser.gov/portal/publications/adu.pdf>
- San Francisco Planning Department, *No Waiver ADU: Fact Sheet and FAQ*, San Francisco, CA
http://default.sfplanning.org/plans-and-programs/planning-for-the-city/accessory-dwelling-units/NoWaiver_ADUFactSheet.pdf
- San Francisco Planning Department, *Waiver ADU: Fact Sheet and FAQ*, San Francisco, CA
http://default.sfplanning.org/plans-and-programs/planning-for-the-city/accessory-dwelling-units/Waiver_ADUFactSheet.pdf
- San Francisco Planning Department, *Dwelling Unit Legalization Program: Frequently Asked Questions*, San Francisco, CA http://default.sfplanning.org/plans-and-programs/planning-for-the-city/accessory-dwelling-units/Legalization_FactSheet-091017.pdf
- Saville-Smith, K., and B. James, 2016, *The Housing Older People Would Choose A Review of Selected New Zealand Research A Working Paper prepared for the Population Ageing Technical Advisory Group Western Bay of Plenty Sub-region July 2016, Life When Renting Programme, Ageing Well National Science Challenge*
- Skinner, Travis, 2011, *Accessory Dwellings and Accessory Structures in Olympia, WA*, A Thesis Submitted in partial fulfilment of the requirements for the degree Master of Environmental Studies The Evergreen State College
http://archives.evergreen.edu/masterstheses/Accession8610MES/Skinner_TMESthesis2011.pdf

- Snodgrass, Bryan, 2017, *Proposed Text Amendments to the Vancouver Zoning Code Standards Regulating Accessory Dwellings (ADUs)*, WAC 197-11-960: SEPA Environmental Checklist, City of Vancouver, March 10 2017
<https://fortress.wa.gov/ecy/separ/Main/SEPA/Record.aspx?SEPANumber=201701245>
- Spivak, Jeffrey, 2012, "Making Room for Mom and Dad", *American Planning Association*, Volume 78, Issue 8
<https://nwhm.com/sites/default/files/pdfs/10.1.12%20Making%20Room%20For%20Mom%20And%20Dad.pdf>
- Strawberry Star, 2016, "England's Housing Stock Increase Driven by Office-to-home Conversions", 19 November 2016
<http://insights.strawberrystar.com/post/102dtli/englands-housing-stock-increase-driven-by-office-to-home-conversions>
- Tyre, P., 2008, *Accessory Dwelling Units as Accessible Housing as Affordable Housing and SmartGrowth: Case Studies of Winter Park and Orlando, Florida*, A Thesis Presented to the Graduate School of the University of Florida in Partial Fulfillment of the Requirements for a Degree of Master of Arts in Urban and Regional Planning
http://etd.fcla.edu/UF/UFE0022166/tyre_p.pdf
- Varady, D. P., 1988, Factors affecting middle-income elderly interest in accessory apartment conversion, *Journal of Architectural and Planning Research*, 5(1), 81-88
- Varady, D. P., 1990, Which elderly home owners are interested in accessory apartment conversion and home-sharing, *Journal of Housing for the Elderly*, 6(1-2), 87-100
- Wegmann, Jake and Nemirow, Alison, 2011, *Secondary Units and Urban Infill: A Literature Review*, Working Paper 2011-02, Berkeley Institute of Urban and Regional Development, University of California <https://iurd.berkeley.edu/wp/2011-02.pdf>