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RESEARCH NOTE

# KIWIBUILD: TWYFORD'S TAR BABY

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THE NEW ZEALAND INITIATIVE

## Executive Summary


- Relative to income, dwelling prices in New Zealand are among the highest in the OECD. This is New Zealand's housing affordability problem in a nutshell.
- High population-driven demand growth has collided with inflexible supply-side constraints.
- Land prices have sky-rocketed, but construction costs are also too high.
- This report explains why KiwiBuild – defined as the government's pledge to build or deliver 100,000 homes within a decade – fails against all the objectives set for it:
  - KiwiBuild cannot hope to materially increase home ownership *proportions* – the original 2012 objective. Additional housing, if achieved, will likely lift renting and ownership more or less in tandem.
  - It is not about social housing to help those at the bottom.
  - Nor is it about helping struggling first-home buyers. They cannot afford KiwiBuild homes at current costs. KiwiBuild is for the relatively well-off.
  - It is intended to be subsidy free, since wealth transfers to the well-off are hard to justify. But its inducements to attract private developers are subsidies.
  - Even more paradoxically, if there were no subsidy, there would be no gap for KiwiBuild to fill. Private developers will meet unsubsidised market demand.
  - It cannot hope to increase the housing stock sustainably. Only enduring lower property prices can induce people to own more dwellings than otherwise. KiwiBuild reduces neither land values nor construction costs at the margin.
- The enduring effect of the policy is a changed composition of the housing stock by decree rather than by public demand.
- KiwiBuild is floundering having no clear public interest objective. It constitutes a massive political and bureaucratic distraction from what is really needed – direct action to reduce land values and construction costs.


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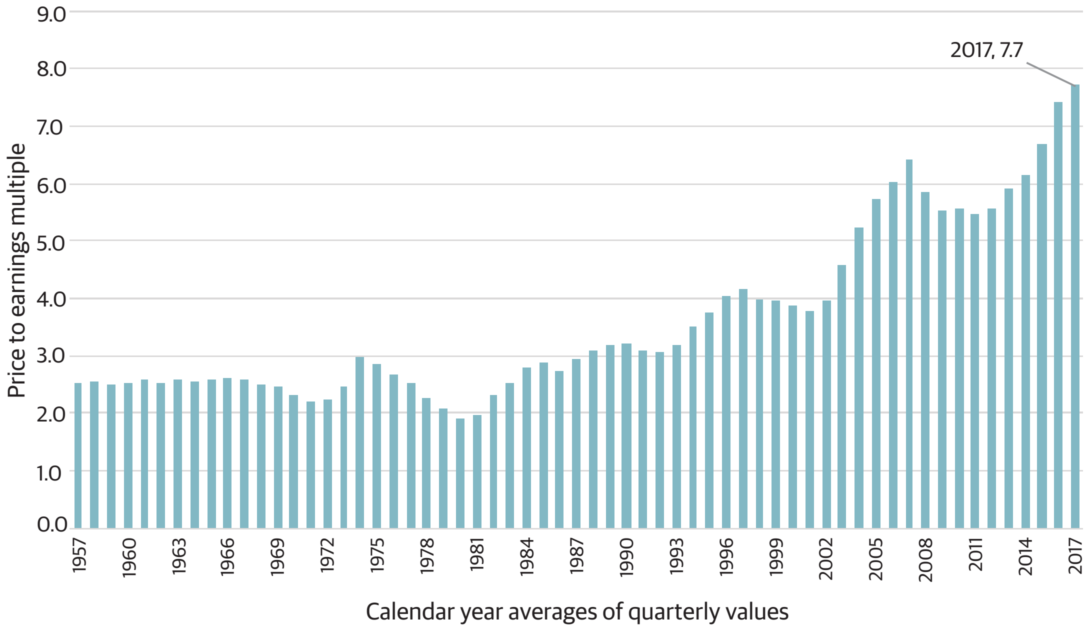
## 1 The affordability problem

New Zealand has a major housing affordability problem, but this report explains why KiwiBuild, defined narrowly as 100,000 government-commissioned dwellings in the next decade, is not the answer. It is a tar baby whose every touch ensnares time and resources.

House prices in New Zealand are extraordinarily high relative to income, particularly in Auckland. Demographia assesses housing markets to be severely unaffordable when the median house price is at least five times the median income.[1] Its 14th Annual Survey put Auckland's multiple at 8.8 in September 2017.[2]

Economists Shamubeel and Selena Eaqub put the average New Zealand multiple at 2–3 for most of the period between 1957 and the early 1990s in their 2015 book, *Generation Rent: Rethinking New Zealand's Priorities*. Chris Parker, then chief economist at Auckland Council, endorsed this range and reproduced Eaqubs' estimates in a 2015 report. Figure 1 reproduces Eaqubs' statistics as updated by them.[3]

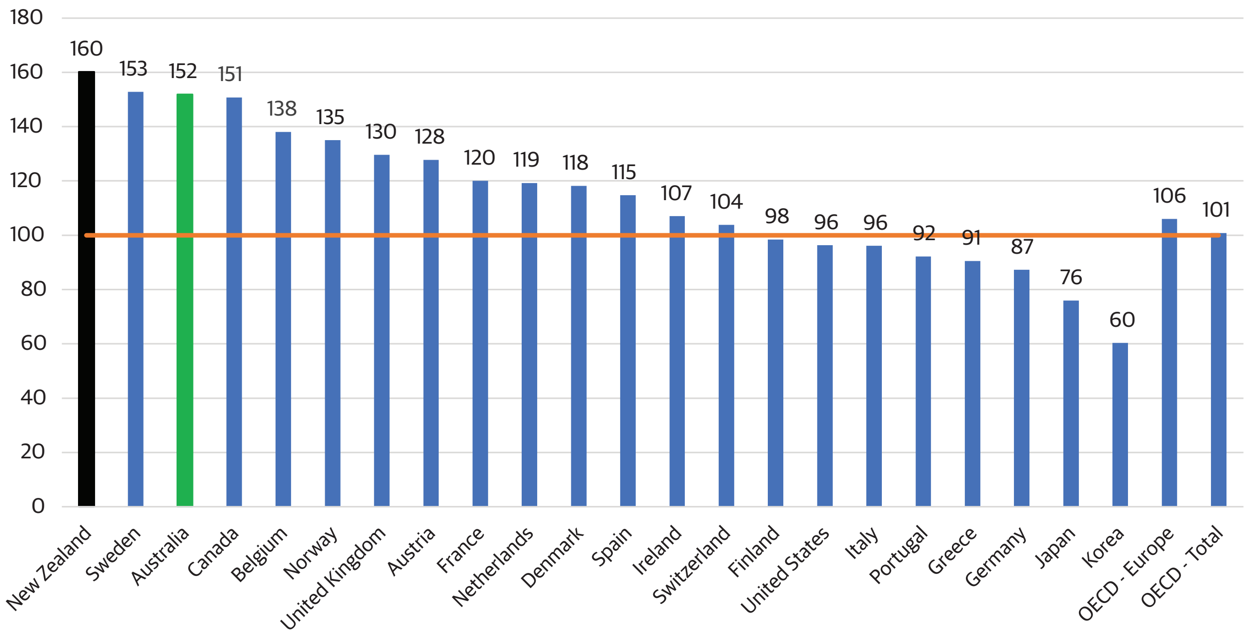
**Figure 1: Average house price to earnings ratios in New Zealand (1957–2014)**




Source: Shamubeel Eaqub, Personal email (24 December 2018), updated statistics to the March quarter 2018. Original chart published in Shamubeel and Selena Eaqub, *Generation Rent: Rethinking New Zealand's Priorities* (2015).

OECD estimates reinforce that picture: house prices in New Zealand were 61% higher relative to incomes in 2017 than a long-term average (Figure 2).[4] This was the highest ratio of any of the 22 countries surveyed, although Sweden, Canada and Australia were close.[5]

**Figure 2: Ratio of house prices to income when the long-term average is 100 in each country (2017)**



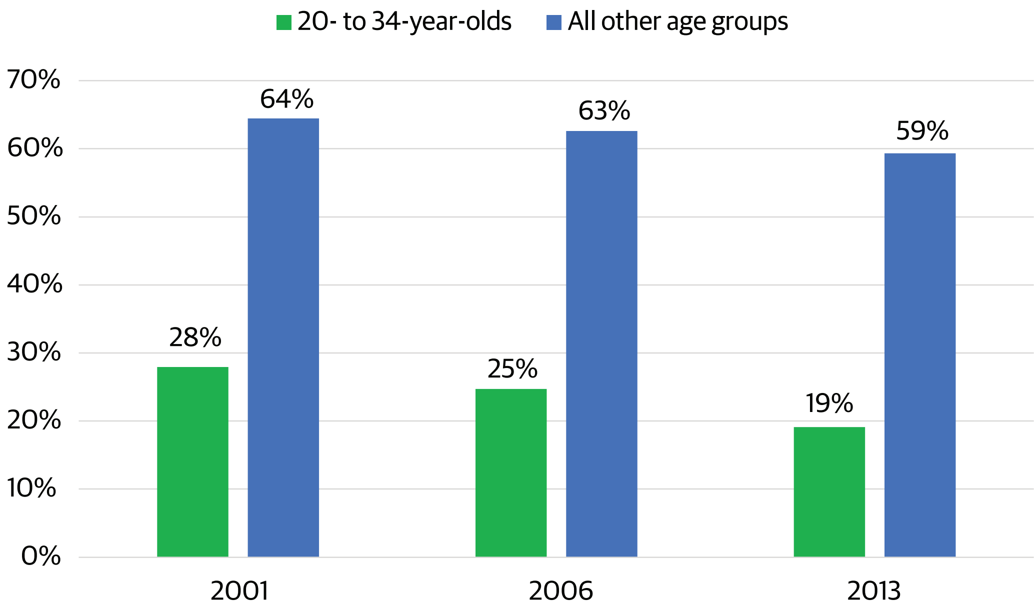

Source: OECD statistical country tables (downloaded November 2018).

How can houses be called unaffordable when buyers continue to pay those prices? After all, if the prices were unaffordable, no homes would be sold at those prices, but they are, week after week, month after month, year after year. If new homes were unaffordable, none would be built. Yet developers are building and selling thousands of new dwellings each year.[6] Nor are rents obviously unaffordable overall. On average, rents seem to have become cheaper relative to incomes since 1998.[7]

The real affordability problem is that people are not getting the housing stock they want because government laws and regulations have artificially driven up prices to ridiculous levels. This has created real difficulties for would-be first-home buyers, and those wanting to live close to their workplace.

Figure 3 compares the falls between 2001, 2006 and 2013 in the proportions of 20- to 34-year-olds and the rest who own in full or in part their usual places of residence. For the younger group, the proportion fell between 2001 and 2013 by 32% (from 28% to 19%). For the other age groups, the fall was only 8% (from 64% to 59%).[8]

**Figure 3: Falling home ownership by age groups**




Source: Statistics New Zealand: Successive population and dwellings censuses.

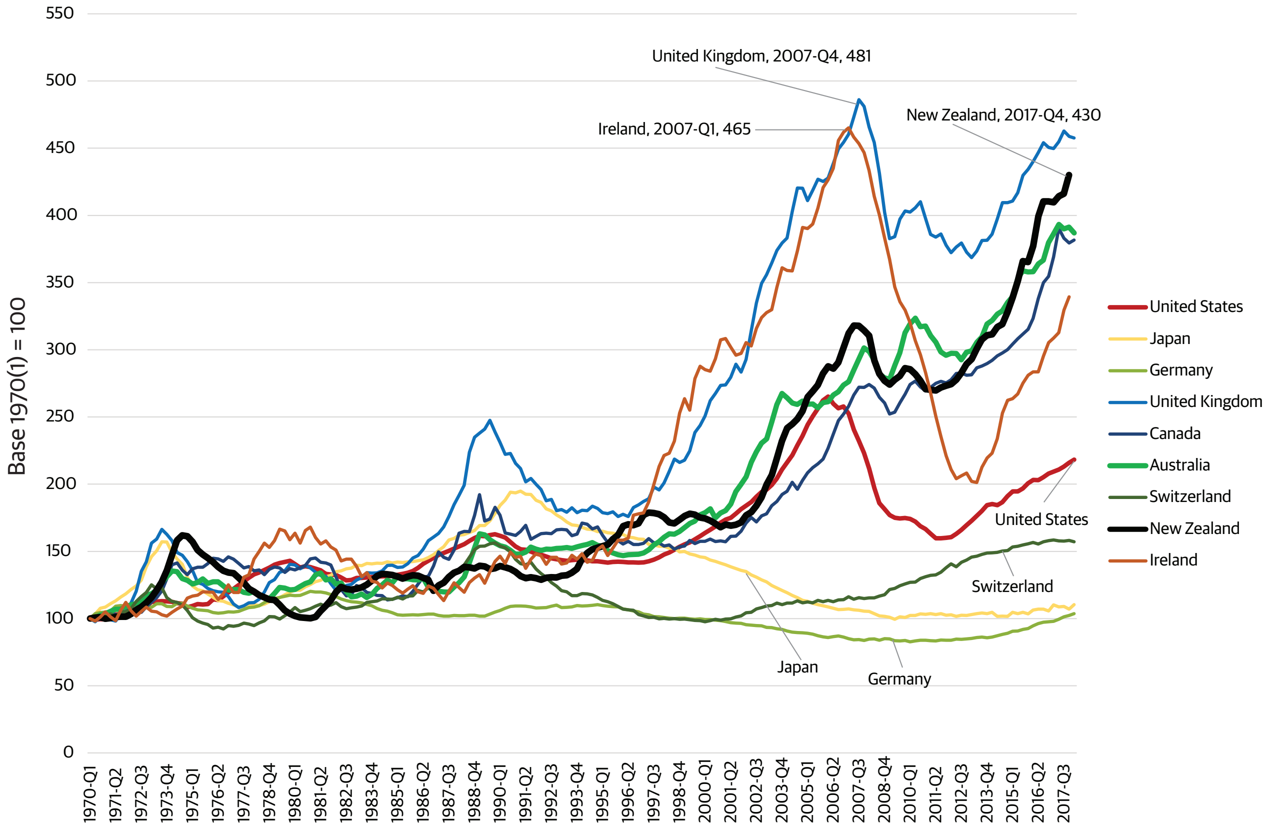
When did real house price inflation in New Zealand take off and how does it compare to other Anglo-Saxon countries? The Bank for International Settlements' database on house prices in many countries since 1970 provides answers to these questions. House prices in New Zealand have risen very sharply relative to the consumer price index since the mid-1990s. There are strong parallels with other Anglo-Saxon countries, in particular with Australia (see Figure 4).

The much lower real property price appreciation in Germany, Japan and Switzerland (Figure 4) indicates that more factors are in play than just lower global real interest rates.

Different rates of population growth are another factor.[9] Population growth has been fastest among Anglo-Saxon countries, excluding the United Kingdom.

Anti-development regulation is another factor. *The Resource Management Act 1991* requires landowners to get a resource consent if they wish to change land use. Councils have used this and their planning powers to choke off the extensive supply of land for housing.[10] A 2007 analysis by economists Arthur Grimes and Jun Liang found that land just inside Auckland's urban boundary was around 10 times more expensive than land just outside the boundary.[11]

**Figure 4: House price rises in nine countries in excess of the rise in each country's CPI (1970–2017)**




Sources: National sources, BIS Residential Property Price database (BIS, "About property price statistics," Website), and OECD for CPIs.

Although higher land values are the major factor, construction cost inflation is also an issue. Rodney Dickens, a strategic risk analysis economist, reports that between January 1993 and October 2018, the Auckland median section price rose 903% while the cost per square metre for a new dwelling rose 212%. The CPI rose by a 'mere' 111%.[12]

In 2015, Arthur Grimes and Ian Mitchell assessed that council regulations in Auckland had added between $65,000 and $110,000 to the cost of an apartment. For a dwelling in a subdivision, the additional cost added between $32,000 and $60,000.[13] A more recent assessment from within the industry is that regulation and compliance now account for about 25% of the cost of building. Regulatory barriers to achieving economies of scale are part of the problem.[14]

## 2 KiwiBuild from 2012 to 2018

### 2.1 KiwiBuild as proposed in 2012

KiwiBuild is a policy that Labour proposed in 2012 when it was in Opposition. The aim was "to build 100,000 high quality, affordable homes over the next 10 years; half of them in Auckland"[15] to increase home ownership:

> Labour will ensure New Zealand is once again a place where Kiwis can realise their dream of owning a home. … The biggest barrier to home ownership is the difficulty of getting on the first rungs of the housing ladder. One of the main reasons housing is unaffordable is the lack of new entry-level houses. In the 1960s and 1970s, when homeownership was on the rise, 30–35% of the new houses built were entry-level homes. Today, that proportion has fallen to just 5%.
>
> The Crown is the only player large enough to make a real difference to the home affordability crisis. That's why Labour will take a bold hands-on approach to fix this hole in New Zealand's housing market.[16]

This reason for focusing on new homes is puzzling. If greater home ownership is the aim, why not help struggling first-time buyers into existing homes too? The 1.8 million existing homes offer them far greater choice.

Labour's 2012 proposal asserted that KiwiBuild "will increase the number of houses being built over time by up to 50%." No reason was given for this expectation.

It envisaged that modest entry-level homes could "be built for less than $300,000," in part through economies of scale.

It proposed that KiwiBuild would be overseen by the state's Housing New Zealand Corporation (HNZ). Private firms would construct the dwellings, with some participation from social housing agencies. HNZ would provide much of the land, in part by buying new land. Labour would also "use public land" and better use existing state housing land.

Only first-home buyers could buy these homes and there would be no income restrictions. Buyers would be expected to live in a KiwiBuild home rather than sell it quickly for a tax-free profit.

KiwiBuild homes would "fully cover the Crown's costs, including land, construction and finance costs."[17]

'Only' $1.5 billion of public funding would be needed, and only as working capital: Build drawing on working capital, sell and replenish working capital, repeat the cycle until 100,000 homes have been built. What could go wrong?

### 2.2 KiwiBuild in 2018

By 2018, KiwiBuild was a bewildered beast. Limbs were carved off and diverse directions set for what remained.

Practical realities have forced some of these developments. High land values and construction costs put new homes beyond the reach of most, regardless of who builds them. Limited industry construction capacity is another constraint.[18]

KiwiBuild is now a programme to *deliver, not* build, 100,000 houses to first-home buyers in the next decade.[19] In 2018, to buy a house off a developer's pre-existing plan that meets the KiwiBuild criteria was to deliver a KiwiBuild house. To provide a free back-up Crown purchase guarantee to a developer for the KiwiBuild home component of a development was to deliver a KiwiBuild home.[20]

The 2012 goal of a price of less than $300,000 has been abandoned. In Papakura, 33 km south of Auckland's Queen Street, the first new entry-level KiwiBuild homes were priced at $579,000 – for a 99 m² home with three bedrooms – and $649,000 for a 117 m² home with four bedrooms. New two-bedroom turnkey apartments in Otahuhu (much more central in Auckland) ranging from 64.9 m² to 74.9 m² were priced in November 2018 at $580,000 and $600,000, respectively.[21]

The projected scale of the capital commitment is now $2 billion, up from $1.5 billion in 2012. Even this increase may not be enough. At $500,000 a dwelling, $2 billion might fund a pipeline of 8,000 dwellings at a time. At an average of 26 weeks to completion, that would be short of 10,000 a year.

Pressure on the Crown's working capital could be eased by greater reliance on private funding. A government back-up guarantee in favour of developers would help them attract private funding. Indeed, the Ministry of Business, Innovation and Employment (MBIE) assessed that the government would need to provide such guarantees to a considerable extent. It would also need to hope that the guarantee was seldom triggered.[22]

KiwiBuild is not for the impoverished would-be first-home buyer.

In the event, income caps on eligible buyers have been imposed. The income of applicants must be no more than $120,000 for a single purchaser, or $180,000 for more than one purchaser.[23] Reportedly, over 92% of first-home buyers' incomes would be within those limits.[24] KiwiBuild is not for the impoverished would-be first-home buyer.

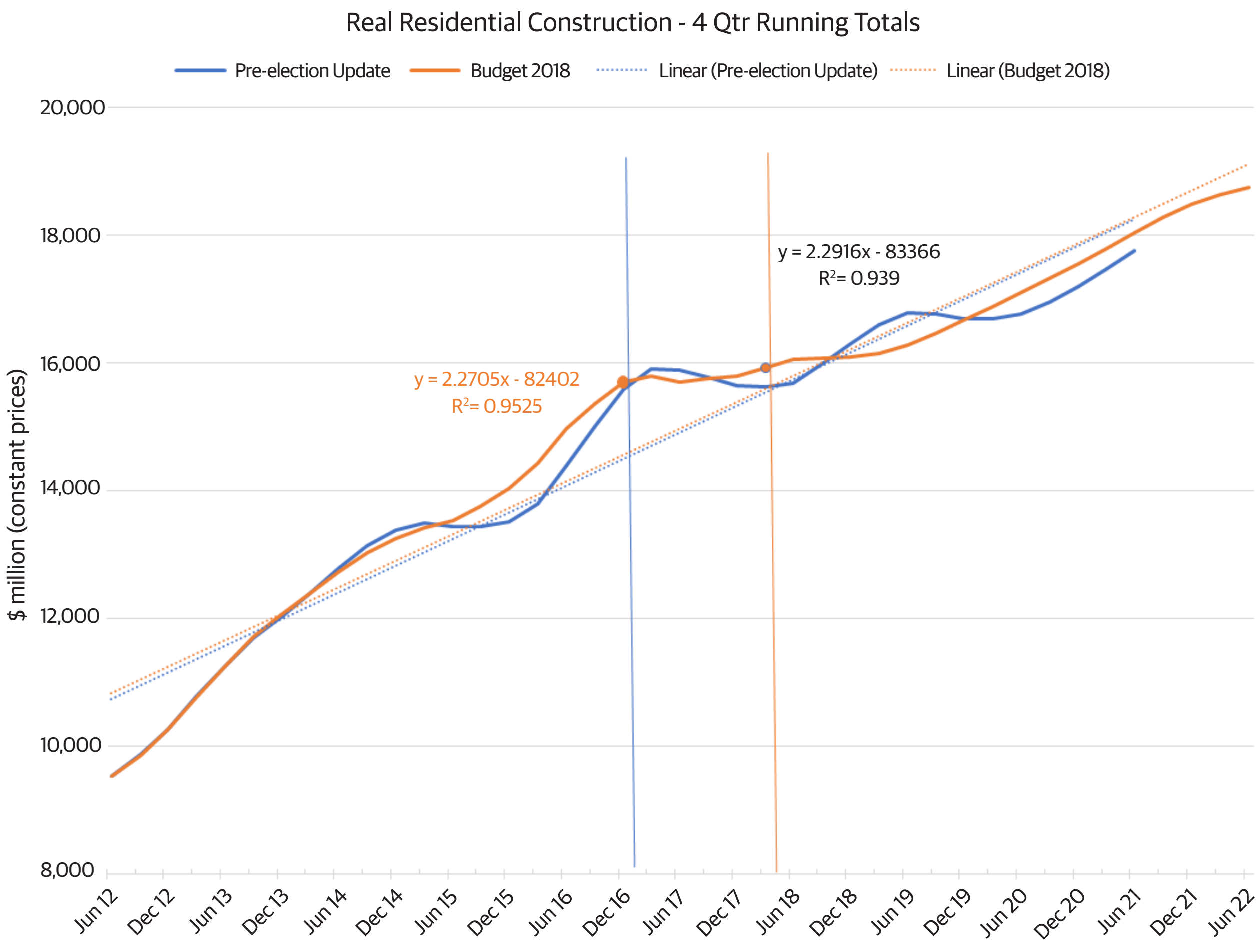
No doubt the government's problem was that the income limits had to be high enough to meet banking criteria for mortgage loans on such expensive properties. Otherwise, there might be an embarrassing lack of buyers.[25]

To what extent is KiwiBuild adding to residential construction activity? The answer is somewhere between 'hardly anything' and 'appreciably'. Which it is can differ as between the short term and the longer term. We focus in this chapter on the short term, for which we have official projections, and on the longer term in the next chapter.

In Budget 2018, Treasury projected residential capital formation to June 2022. Its 2017 pre-election fiscal and economic update projected it to June 2021. The 2017 estimates assumed no KiwiBuild. (Residential capital formation represents real (and nominal) spending on dwelling construction. The estimates will not include the unimproved value of land.)

Figure 5 compares these projections. The vertical lines mark their different start points. Despite the timing differences, the growth trend lines from 2012 to 2021 are not materially different. One factor is that KiwiBuild is not the only source of uncertainty. Changes in population growth, future price expectations, per capita income growth, capacity constraints, relative prices, and data revisions can all be expected to influence changes in any economic forecaster's projections through time, independently of KiwiBuild. Given the current capacity constraints on the industry, and the degree to which KiwiBuild is piggy-backing on existing property developments (at least initially), it is no surprise if its additional contribution to, say, 2022 is lost in the noise from an aggregate activity viewpoint.

**Figure 5: Treasury's residential construction projections – Prefu 2017 vs Budget 2018**




Source: Author's calculations based on Treasury's published documents.

Treasury's Budget 2018 estimate was that the net addition to *nominal* capital formation to June 2022 (a four-year period) was $2.5 billion (compared with a $21.5 billion spending on residential capital formation in 2018).[26]

Its cumulative $2.5 billion would represent less than 3% of cumulative residential capital formation to June 2022. That lies well within the uncertainty range for such forecasts.[27]

In short, KiwiBuild 2018 is nowhere near achieving the goals of KiwiBuild 2012 and there is no clarity about what the problem is for which KiwiBuild 2018 is a sensible solution.

## 3 The nature of the KiwiBuild tar baby

### 3.1 KiwiBuild is unlikely to increase the housing stock much

Suppose 50% of the government's 100,000 target for KiwiBuild is additional. (This proportion was baldly asserted in 2012, see section 2.1, and apparently taken at face value in November 2017 by the Reserve Bank.[28])

An increase of 50,000 units in a decade represents 25% of the 215,436 resource consents granted for new residential buildings/dwelling units in the decade to March 2018. Alternatively, it represents a 2.7% increase in the private dwelling stock of 1.836 million dwellings at March 2017 – spread over the next decade.

Even this assumed high proportion of additionality would not be a game changer. A great many more dwellings need to be built just to match population growth. Statistics New Zealand projects that the population will increase by 10.8% in the decade to 2028.[29] In the decade to March 2017 the increase in the stock was 180,700 dwellings, or 11%. This was despite the building downturn following the 2008 global financial crisis. Moreover, that increase represents new builds less demolitions.

There are two 'in principle' reasons we can expect the addition to the stock of dwellings to be much less than 50% of KiwiBuild: a short-term reason and a longer-term reason.

The short-term reason is industry capacity constraints, with labour shortage being the most important constraint. That reality is behind the government's buy-off-the-book policy to get KiwiBuild homes into the market initially. A smaller and thereby cheaper house on a section that the developer was going to build on anyway is hardly additional.[30]

The longer-term reason is that private industry will supply the number of new dwellings for which buyers can be found even if government builds none at all. If each government-built house removes one buyer from the market, the private sector will build one dwelling less.

Expressed differently, to increase the demand for new dwellings, the government must reduce the price for the same quality.[31] To do that, it has to lower unit construction costs and/or land values. It can lower land values by increasing the supply of land for residential building without building any of those 100,000 houses. So, none of them can be additional against that alternative.

To increase the demand for new dwellings, the government must reduce the price for the same quality. To do that, it has to lower unit construction costs and/or land values.

That leaves lower unit construction costs as a possible source of additionality. The government could lower unit construction costs in the industry in many ways, as it is well aware. Obvious ones include easing up on red tape and facilitating greater land supply and high-rise construction in order to allow economies of scale in construction and land use. Again, none of these initiatives would require the government itself to be a house builder.

What if taxpayers subsidise KiwiBuild homes? What if, in the extreme, government constructed 100,000 dwellings and gave them away to low-income people? Surely the same number of buyers as before could afford new homes built by private developers at an unchanged market cost? If so, would not those 100,000 homes all be additional?

Certainly, a government could flood the housing market with subsidised new homes in such a manner. Boom and bust would occur. Land values and construction costs would be driven up initially, squeezing the private market. Values for completed dwellings would fall in the glut. In the bust phase, houses would be priced below their replacement cost. It would not pay to build or buy a new home. Private house building would slump until the prices of existing homes rose to make it economic to build and buy a new home. If KiwiBuild makes no difference to the future land-inclusive cost of building a new home beyond year 10, it makes no difference to house prices in the long run.

In short, outside periods of boom and bust, it is the replacement cost of a new home that determines house prices. Government could reduce the cost of a new home in the long run by reducing regulatory constraints permanently. It could do that without KiwiBuild.

These are the 'in essence' reasons for doubting whether 100,000 KiwiBuild homes will add materially to the housing stock, even if the target is achieved.

To what extent would more complex models provide greater hope for the policy's promoters? More complex models do add insights. They can also help quantify effects. In New Zealand, economist Andrew Coleman has published a number of articles modelling the housing market in sophisticated ways. One important additional element is the modelling of rates of household formation. Restrict the supply of housing and fewer households will form. People will 'cram in'. Young adults might live with parents longer and delay child-bearing. These things reduce well-being.

A 2009 Treasury analytical paper Coleman co-authored with Grant Scobie is particularly pertinent. As the following finding illustrates, there should be no forgone conclusion that government house building will add materially to the housing stock in the long run.

> [The paper] shows the effects of the government increasing the total stock of housing by 0.5%, equivalent to about 7,500 additional houses, or 10% of the government stock. In the short run, the increased stock of houses would reduce rents and house prices by an estimated 1.3% and 2.3% respectively … thus improving affordability for both buyers and renters, other things constant. In contrast, in the long run case (with perfectly elastic supply) the government building programme has no effect on prices or quantities as the public investment merely crowds out private investment and the total supply of housing is unchanged …. Only the relative proportions of public and privately constructed housing are altered.

Note that the price and rent reductions in the opening sentence in the above quote assume no industry capacity constraint – government building increases the housing stock in the short run.[32]

### 3.2 KiwiBuild is unlikely to raise the home ownership ratio materially

A major focus of the Coleman and Scobie paper is the determinants of home ownership rates – the objective used to market KiwiBuild 2012. Their conclusion was pessimistic:

> Despite the widespread attention owner-occupancy rates have attracted, the paper concludes that they are not a particularly helpful guide to the state of the housing market. Typically they are quite insensitive to policy interventions, a result that follows from the integrated view of both the rental and ownership market, adopted in this study.[33]

The essential point is that an (unexpected) increase in the housing stock is likely to reduce both house prices and rents. That makes both renting and home ownership more attractive. On plausible values for the parameters in their model, they find that the net effect is very small.

> These figures suggest that to increase the owner-occupancy rate by 1% it would be necessary for the government to build houses equal to 25% of the initial stock (375,000 houses) – a clearly fanciful number. If it were to do this, rents would fall by 20%, house prices would fall by 35%, the number of rental units would increase by 5%, and the total stock of houses would increase by 10%. Put another way, a building programme of this size would have enormous effects on the housing market, but very little effect on the owner-occupancy rate. The owner occupancy rate is the wrong way of measuring the impact of this policy, because it misses the extent to which the number of households increases to take advantage of the lower rents and house prices.[34]

In short, even if KiwiBuild did increase the housing stock permanently and substantially, its effect on home ownership rates would likely be minimal. Whatever its real intentions, its substantial effect will be to change the future composition of the housing stock in favour of smaller, cheaper dwellings.

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## 3.3 Is there a house size problem to justify KiwiBuild?

If KiwiBuild cannot be justified on the basis of targets for additionality or private ownership, can it be justified on the grounds that private developers are failing to meet a demand for smaller dwellings?

A *Dominion Post* editorial on 3 December 2018 was unequivocal. Headlined "Size is everything in house shortfall," it asserted that size alone justifies "an even greater leadership role" for KiwiBuild. Construction costs would be lower if new houses were smaller and engineering and design more cost focused. It saw the hard part as the public being wrongheaded about house size and density. People need to learn to want to buy smaller houses and cram in more people per house than the current 'obscene' 2.6-person average. What 'the country' needs is smaller and smarter new homes.

The editorial ignores the land supply aspect. Laudably, it implicitly concedes that private developers would innovate to lower construction costs – but are blocked by 'unnavigable' council bureaucracies. (It overlooks the obvious remedy – unblock them.) Finally, it does not explain why the public's preferences should not be respected.

Rather than blame the public, the editorial could have argued that the public is demanding larger new houses because that is what government policies are favouring. Planning constraints on densification favour larger house sizes.[35] Coleman has made a sophisticated case that changes to the taxation of retirement savings in the late 1980s made investing in owner-occupied housing more attractive, increasing public demand for larger houses.[36]

From this perspective, there is no market failure and developers are doing what they should – giving the public what government policies are inducing it to want. KiwiBuild is a distracting and ineffectual response to that problem.

The remaining rather inchoate idea is that buyers who would buy a new home if it were cheaper, would not be just as happy buying a cheaper *existing* home or apartment. There are plenty of small dwellings in the housing stock. Why focus on new builds? That question seems to have no answer.

## 3.4 If KiwiBuild homes are unsubsidised, why involve government?

The government insists that KiwiBuild homes are to be sold at cost, that is, unsubsidised. But if homes are unsubsidised why was a ballot necessary? Also, if they are unsubsidised why would the developers participate? They could build dwellings independently, with less hassle.[37]

The first KiwiBuild homes were priced below perceived market value.[38] The government's ballot process accepted this reality. Arguably, it is also implicit in its provision to claw back for taxpayers 30% of any realised capital gains within three years.

To sell a state asset below market value is to transfer wealth from taxpayers to the lucky recipient. The subsidy is at the taxpayers' expense.[39] The government has found it hard to justify the wealth transfer. The first recipients were already relatively well off with good prospects. KiwiBuild is no longer about helping those 'locked out' of the housing market.

The developer subsidy is more insidious. To induce private developers to build KiwiBuild homes, government must offer them a profit advantage. Where Crown land is involved, it could under-price it. Independently, it could shift development risks to taxpayers without charging the developers. Guaranteeing purchase at a KiwiBuild price would help developers secure bank finance. It could also lower their required profit margins.[40]

But what this subsidy means is that KiwiBuild is building homes whose market value is worth less than their cost to the community, taking the risks transferred to taxpayers into account. Nor are buyers getting the homes they would have bought if the government had simply given them the cash value of the subsidy implicit in the guarantee. Then they could have bought a more suitable home from the same developer, or somewhere else entirely.

The government is, of course, aware of these difficulties. It intends and expects that in time KiwiBuild houses will be mainly sold at market value, making future ballots unnecessary. This would remove the embarrassment of wealth transfers in favour of the relatively well-off.

Subsidy-free KiwiBuild homes would expose the government to a different source of embarrassment – unsold homes.

Subsidy-free KiwiBuild homes would expose the government to a different source of embarrassment – unsold homes. The less the subsidy, the greater that risk. The risk is considerable because governments lack commercial incentives to meet market demand for location or building type or quality. The government has already run into this problem in Wanaka.[41]

## 3.5 Summing up

KiwiBuild – defined as a programme to deliver 100,000 dwellings in a decade – is a solution looking for a problem.

- It is not about social housing.
- It is not about helping people with low lifetime earnings prospects into new homes. Low-income people cannot afford KiwiBuild homes at current costs.
- It is not usefully about increasing the housing stock on a sustainable basis. That would require action to lower land values and reduce dwelling construction permanently.

If anything, it is about changing the composition of the housing stock by decree rather than by easing existing constraints. This will bequeath to the future an inferior stock of dwellings than what people would wish to buy into if they were simply given more money.

There seems to be an idea that people who could afford to buy smaller, cheaper homes are missing out on buying a new home. But why fixate on a new home? The price of exisiting homes, small or large, is a problem too.

Measures to increase land supply and reduce construction costs pursued in conjunction with KiwiBuild can hope to make a longer-term difference to property prices. But those measures can be, and should be, undertaken independently of KiwiBuild.

The government is ensnared by incompatible commitments to help relatively well-off first-home buyers without subsidising them and to deliver homes that people would not want to buy if unsubsidised. Either outcome is politically embarrassing. KiwiBuild has become Housing Minister Phil Twyford's tar baby.

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## 4 Where should policy focus if not on KiwiBuild?

> The high cost of housing and problems of homelessness are partly due to deep seated problems with the operation of our urban land markets and how infrastructure is planned, funded and financed.[42]

### 4.1 Related government initiatives

The near-universal view among analysts is that more houses have not been built in recent decades because property prices are too high for more buyers to afford.[43] They are too high because costs are too high. Land values are too high because of artificial constraints on supply, which are planning and consent related. Construction costs are too high for other reasons. Strong population growth and problems with the adequacy of infrastructure to support new developments have compounded the problems.

The government's wider housing affordability programme is fully informed by these assessments. It is acting across a broad range of fronts, independently of KiwiBuild's "house delivery" and, where appropriate, in conjunction with it.

A new Ministry of Housing and Urban Development has been set up to improve focus on the broader issues of house prices, homelessness and social housing. The government is also creating a Housing and Urban Development Authority with potentially major legislative powers over planning and consenting, land assembly, and infrastructure provision and funding.

The government is also developing an Urban Growth Agenda to "address the fundamentals of land supply, development capacity, and infrastructure provision". The main objective is to "improve housing affordability, underpinned by affordable urban land".[44] The agenda encompasses the pursuit of five pillars:

1. infrastructure funding and financing
2. urban planning
3. spatial planning
4. transport pricing, and
5. legislative reform.[45]

Issues of access to jobs and education fall within the scope of this agenda, as they should.

The agenda rightly puts housing and infrastructure issues in the broader context of facilitating vibrant, thriving and resilient local communities.

## 4.2 Assessment of context

The government's broader initiatives demonstrate that it is alert to the multi-faceted nature of the affordability problem and aims to address it in a comprehensive way. What it will achieve in practice will depend greatly on design, implementation choices, and administrative capability.

No one should doubt the importance of urban design and spatial planning in facilitating vibrant, thriving and resilient communities. Everyone should doubt the competence of governments to get these things right. Why else do we have a major housing affordability problem?

Analysing these initiatives and assessing their likely impact would be a major exercise. It is one that is far beyond the scope of this report.

Depending on its context, 'KiwiBuild' can be shorthand for 'delivering' 100,000 homes in a decade or a wider range of measures associated with achieving that goal. The focus of this report has been the former usage.

However, to the degree that KiwiBuild activities increase the amount of Crown land for development and ease resource consent and planning constraints on development, they can usefully contribute to the Urban Growth Agenda's well-focused objectives.

One defence of government involvement in building new houses for those on relatively high incomes is that the activity confronts the government with some of the regulatory constraints and obstacles that confront private developers. This might make it easier for the government to reduce those barriers, for itself and, more optimistically, for others. This is a lame defence; a competent government inquiry would identify those barriers.

KiwiBuild looks like a classic case of a headline grabbing electioneering pledge promoted in opposition to get media oxygen when the chances of having to deliver look remote. Once in power, the pledge is a tar baby that is bound to ensnare any minister who has to attend to its nappies. The message from its 2012 avatar is no doubt "With Love, Mr Twyford".

RESEARCH NOTE

# ENDNOTES

1 A housing market is severely unaffordable if median income is $50,000 and the median price of houses sold is $250,000 or more.
2 Demographia, "14th Annual Demographia International Housing Affordability Survey: 2018: Rating Middle-Income Housing Affordability" (2018). Revised and higher official estimates for median incomes in New Zealand, rather than lower house prices, have recently reduced the multiple.
3 Chris Parker, "Housing Supply, Choice and Affordability: Trends, Economic Drivers, and Possible Policy Interventions" (Auckland: Auckland Council, 2015), Figure 4, 4.
4 It is not clear what period the OECD is using to represent a long-term average for New Zealand. It might be a relatively recent one as its source is Quotable Value New Zealand's measure, as supplied by the Reserve Bank of New Zealand, which only goes back to 1989 on the latter's website. See Reserve Bank of New Zealand (RBNZ), "QV quarterly house price index," Website.
5 The long-run averages for each country appear to be 35-year averages where available. The methodology is explained in Nathalie Girouardi, Mike Kennedy, Paul van den Noord and Christophe André, "Recent House Price Developments: The Role of Fundamentals," OECD Economics Department Working Papers, No. 475 (Paris: OECD Publishing, 2006). The income measure is per capita disposable income.
6 For assessments of the balance between the housing stock and demographic-based demand, see Statistics New Zealand (SNZ), "Trending Topics – Housing" (Wellington: 2017), Figure 4, and Department of Prime Minister and Cabinet, "Final Report of the House Prices Unit: House Price Increases and Housing in New Zealand" (Wellington: 2011). The rate of housing construction has responded to changes in population growth.
7 OECD statistics show house prices in New Zealand have broadly risen more sharply overall against rents than income during the past 20 years, implying an overall fall in rents relative to average income. However, the picture is more complex when looking at shorter time periods and across income quintiles.
8 Of course, this is primarily suggestive: high house prices will not be the only factor; they may not even be the major one.
9 Three German economists studied house price rises from 1870 for 14 prosperous nations, including Australia. Population growth put less pressure on house prices when rail and other infrastructure expansions were opening up land for residential development. Katharina Knoll, Moritz Schularick and Thomas Steger, "Home prices since 1870: No price like home," *Vox* (1 November 2014).
10 For more details, see Department of Prime Minister and Cabinet, "Final Report of the House Prices Unit: House Price Increases and Housing in New Zealand" (Wellington: 2011), 52ff.
11 Arthur Grimes and Jun Liang, "Spatial determinants of land prices in Auckland: Does the Metropolitan Urban Limit Have an Effect?" Motu Working Paper 0709 (2007).
12 Rodney Dickens, "The government should do the obvious to fix housing affordability," Interest.co.nz (17 November 2018).
13 Arthur Grimes and Ian Mitchell, "Impacts of Planning Rules, Regulations, Uncertainty and Delay on Residential Property Development," Working Paper 15-02 (Motu Economic and Public Policy Research, 2015).
14 See the comments attributed to Mike Greer and Mike Fox in Catherine Harris, "How fab is prefab," *Sunday Star Times* (23 December 2018).
15 Jacinda Ardern, "Speech from the Throne" (Wellington: New Zealand Government, 8 November 2017).
16 New Zealand Labour Party, "New Zealand: A New Direction – KiwiBuild: 100,000 Modern Affordable Homes – Factsheet," Conference Factsheet (2012), https://thestandard.org.nz/wp-content/uploads/2012/11/KiwiBuild_Factsheet.pdf.
17 Alex Tarrant, "Labour promises to build 100,000 homes in ten years at NZ$300,000 each; Will work with private sector, community agencies, local govt," *The New Zealand Herald* (19 November 2012).
18 On the capacity issue, see Annexes 1 and 2 in Treasury, "Background note on the impact of KiwiBuild on the Treasury's residential investment forecast" (Wellington: New Zealand Government, 28 May 2018). (This document was released under the Official Information Act, albeit with Annex 1 redacted.)
19 See Ministry of Housing and Urban Development (HUD), "Follow our progress," Website.
20 Ministry of Business, Innovation and Employment (MBIE), "TSY residential investment forecasts [IN CONFIDENCE]," email to Treasury (9 April 2018), on the government's "Buying Off the Plan Programme." This email was released under the Official Information Act.
21 Ministry of Housing and Urban Development (HUD), "10 new KiwiBuild apartments in Ōtāhuhu," Website (2 November 2018).
22 Ministry of Business, Innovation and Employment (MBIE), "TSY residential investment forecasts [IN CONFIDENCE]," op. cit.
23 Ministry of Housing and Urban Development (HUD), "Who is eligible," Website.
24 Jenna Lynch, "Opinion: KiwiBuild a free-for-all," *Newshub* (4 July 2018).
25 Indeed, this embarrassment occurred anyway for KiwiBuild homes in Wanaka in November 2018. Unsold houses will cut into the $2 billion of allocated capital.

26 New Zealand Treasury, "Budget Economic and Fiscal Update" (Wellington: New Zealand Government, May 2018), 14.
27 Figure 5 illustrates the year-to-year volatility in residential construction activity.
28 David Hargreaves, "ANZ economists say the cost of building a new house has become more attractive relative to the cost of buying an existing one," Interest.co.nz (18 April 2018).
29 This is the medium migration and fertility case and uses the time series in Treasury's fiscal strategy model for the 2018 Budget for the year to June 2028.
30 It might also be 'cheaper' in accounting terms because of an unpriced government guarantee, but the full cost to the community is the cost without the guarantee. On the other hand, the government can increase demand for an unchanged construction cost by raising the amenity value of the neighbourhood through better infrastructure provision (roads and other utility services).
31 Building cheaper houses by lowering quality would not add anything because private developers would already be meeting this demand at market costs.
32 Arguably, government support for a developers' projects through KiwiBuild will bring forward developments, altering the timing of increases in the housing stock. Any such effect is marginal and ephemeral in the larger scheme of things.
33 Andrew Coleman and Grant Scobie, "A Simple Model of Housing Rental and Ownership with Policy Simulations," Treasury Working Paper, WP 2009-05 (Wellington: New Zealand Government, 2009), Abstract.
34 Ibid. 16.
35 Chis Parker, "Housing supply, choice and affordability," op. cit. Figure 23, 23.
36 Andrew Coleman, "Housing, the 'Great Income Tax Experiment', and the Intergenerational Consequences of the Lease," Motu Working Paper 17-09 (2017).
37 For an example of the hassle, see Nicholas Boyack, "Twyford acknowledges problems as KiwiBuild is overwhelmed by proposals," *Stuff* (27 September 2018).
38 Developer Frank Newman reports an indicative under-pricing by the buyer of $70,000 on the three 4-bedroom McLennan Park developments sold in November 2018 for $649,00. Frank Newman, "High rise rents and housing costs," NZCPR Blog (11 November 2018). Non-KiwiBuild 4-bedroom homes in the same development were being sold for $749,000. Muriel Newman, "Housing affordability, lottery or reform," NZCPR Blog (11 November 2018). Seven 3-bedroom KiwiBuild homes were sold for $579,000, whereas the non-KiwiBuild 3-bedroom units were priced at $680,000.
39 Oscar Lau, "Opinion: An alternative to KiwiBuild that makes economic sense," *Massey University News* (15 August 2018).
40 Developer Mark Todd is cited making the case that this risk transfer is very valuable commercially in Chris Barton, "Why freeing up more land won't solve Auckland's housing crisis," *Noted* (3 September 2018). (Todd advocates high density housing to reduce land value for 8–12% of the developer's costs.)
41 Susan Edmunds, "Only seven Wanaka KiwiBuild homes sell from ballot," *Stuff* (23 November 2018).
42 New Zealand Government, "Urban Growth Agenda: Proposed Approach," Cabinet Paper (Wellington: 2018), para 11, 2.
43 See, for example, Productivity Commission, "Housing Affordability" (Wellington: New Zealand Government, 2012) and "Using Land for Housing" (Wellington: New Zealand Government, 2015); Organisation for Economic Cooperation and Development (OECD), "Economic Surveys New Zealand: June 2017 Overview" (Paris: OECD Publishing, 2017), 29 and 38; Treasury, "Briefing to the Incoming Minister for Infrastructure" (Wellington: New Zealand Government, 2017) and documents on housing affordability advice released under the Official Information Act on 13 March 2018; Oliver Hartwich, "Housing: Restoring the Great Kiwi Dream," in *Manifesto 2017: What the Next New Zealand Government Should Do*, Chapter 2 (Wellington: The New Zealand Initiative, 2017); Chris Parker, "Housing supply, choice and affordability," op. cit.; and Rodney Dickens, "The government should do the obvious to fix housing affordability," op. cit.
44 New Zealand Government, "Urban Growth Agenda: Proposed Approach," op. cit. 1.
45 Ibid. 4.