Builds and Housing Prices: A case study of the impacts of special housing areas and accords in Selwyn District

Dr Michael Rehm, Dr William Cheung (University of Auckland Business School) and Dr Kay Saville-Smith (Centre for Research, Evaluation and Social Assessment (CRESA))

Report for Affordable Housing for Generations

May 2023

Acknowledgements

This research is primarily funded through the Building Better Homes, Towns and Cities National Science Challenge: Affordable Housing for Generations. It is also supported by contributions from a range of others including the Ministry of Housing and Urban Development (HUD), Office for Seniors, and the Selwyn Foundation.

Every effort has been made to ensure the soundness and accuracy of the opinions and information expressed in this report. While we consider statements in the report are correct, no liability is accepted for any incorrect statement or information. Thanks to Dr Bev James for her reviews and suggestions.

Author Contact Details

Dr Michael Rehm
Senior Lecturer, Department of Property
University of Auckland Business School
m.rehm@auckland.ac.nz

Dr William K.S. Cheung
Senior Lecturer, University of Auckland
william.cheung@auckland.ac.nz

Dr Kay Saville-Smith
Director, CRESA
kay@cresa.co.nz

Citation

Rehm, M., Cheung, W., and K. Saville-Smith (2023), *Builds and Housing Prices: A case study of the impacts of special housing areas and accords in Selwyn District*, Report for Building Better Homes, Towns and Cities National Science Challenge, Affordable Housing for Generations, May 2023, Wellington: AFHG, BBHTC.

Contents

Tables

Figures

Executive Summary

In February 2016, central government signed a Housing Accord with the Selwyn District Council which established two Special Housing Areas (SHAs) on the outskirts of Rolleston.

The SHAs at Rolleston agreed under the Housing Accord were Faringdon South 1 and a SHA made up of the Dryden Trust and Dean Geddes Blocks. Faringdon South 1 consisted of 42 hectares. The second SHA on the Dryden Trust and Dean Geddes Blocks consisted of 72 hectares.

The Housing Accord required that 10 percent of new dwellings built in the SHAs would be sold at no more than 75 percent of the median house price in Rolleston township. The median price for Rolleston township for that period was $555,000. The 75 percent of median price was $416,250.

The Dryden Trust and Dean Geddes SHA was expected to deliver around 840 dwellings during the operation of the Housing Accord. Faringdon South 1 was expected to deliver in excess of 511 dwellings through 185 low density allotments, 194 medium density small lots, and 132 medium density comprehensive lots.

This study into the Rolleston SHAs presents both descriptive statistics and the results of hedonic pricing. The data relate to Rolleston's five Statistical Area 2 (SA2) units with the SHA and non-SHA areas. Data include and are presented on sale price, land area, floor area, number of bedrooms and bathrooms for each dwelling sold, characteristics of the lots, and building typology. Time dummies reflected known market conditions during the timeframe. Meshblock dummies were effective in controlling for variations in socioeconomic characteristics and access to amenities such as parks and schools across Rolleston.

Despite one of the intents of Housing Accords being to encourage rapid private developer delivery of new builds onto the market, after six years only 27 percent of expected dwellings were delivered. Similarly, while there was an expectation that the SHAs would provide lower costs to householders and more affordability by way of delivery of multi-units, the 36 sales for multi-units all lay outside the SHA boundaries.

There was minor and limited price suppression in the SHA areas. Some dwellings were built at the 75 percent pf median price, but the numbers were small and less than the expected numbers indicated in the Housing Accord.

These findings are consistent with previous research on the impacts of SHAs, although an Auckland study suggested that SHAs were associated in Auckland with price increases of around 5 percent. This conclusion may reflect the lack of control in the Auckland study around build times and dwelling characteristics. The latter suggests that production of dwellings that meet the needs of modest and low income households requires purposeful attention.

1 Introduction

This study has been undertaken within the Affordable Housing for Generations research programme, which is part of the Building Better Homes Towns and Cities National Science Challenge (BBHTC). It leverages and builds on previous research programmes in BBHTC, in particular, the Architecture of Decision-making and Lower Quartile Value research programmes respectively. Those programmes established that the decline in affordable housing supply was associated with the removal of supply-side targeted investment in affordable housing new-builds.

The research in Affordable Homes for Generations is directed to developing effective and practical approaches to alleviating the crisis of affordable housing and housing affordable to key workers through targeted research-based solutions, which will sustain people in their homes and communities over generations and contribute to thriving regions. One way of doing that is to understand what has and has not worked to generate supply at affordable price points in recent years.

The Housing Accords and their special housing areas (SHAs) were actively promoted from around 2015. Reducing expectations around planning consultation and zoning constraints was expected to unlock alleged blockages in the build pipeline, encourage rapid supply, and through increased supply with minimal constraints on price-points provide a 'natural' suppression of price.

This report looks systematically at the impacts of two SHAs in the Selwyn District which were established in 2016. It follows the trajectory of new-builds for five years and uses hedonic modelling techniques to explore the price impacts of the SHAs relative to non-SHA areas in Rolleston.

Report structure

This report is structured as follows:

- Section 2 provides a brief description of the Housing Accords and Special Housing Areas policy.
- Section 3 focuses on the SHAs in the Selwyn District, their locations and characteristics.
- Section 4 looks at the delivery of new stock inside and outside the SHAs in Rolleston township.
- Section 5 looks at the rapidity and quantum of builds.
- Section 6 presents the results of hedonic modelling to establish the impact on new build prices.
- Section 7 makes a brief comment on the promise and reality of the SHAs in Selwyn District and notes how this research is consistent with or differs from other research into SHAs.

2 Housing Accords & Special Housing Areas

The Housing Accords and Special Housing Areas Act (HASHAA) came into effect in September 2013. It was promoted as a short-term intervention affecting the prevailing rules on land release and housing development, expected to end around 2018. Through a process of central and local government accords, HASHAA provided for Special Housing Areas (SHAs) to be established which would allow residential land development and new builds under more relaxed conditions and processes in district plans and under the Resource Management Act (RMA). Such processes included enabling residential developments within SHAs to be pursued without prevailing notification requirements and reduced rights of appeal by affected parties. It provided for proposed district plan amendments or variations to be implemented without or prior to public submissions being heard or new plan settings decided on. By short-circuiting planning processes, it was argued that housing and land supply would be generated in greater quantities and generated more rapidly.

HASHAA was promoted as a solution to increasing house prices, the proportionately declining production of lower-value housing that could service the needs of modest income households (particularly first home buyers), and deteriorating housing affordability. Its development assumed that those trends arose primarily out of barriers to land release and costs of development arising from the local and regional district planning regimes. It also assumed that resolving housing affordability problems was primarily a matter of increasing aggregate housing supply and that improved aggregate supply (irrespective of the price points of specific dwellings) would act to suppress house price growth.[1]

The power of those assumptions is manifest in two aspects of the HASHAA. Firstly, the legislation was seen as a circuit-breaker, or a 'laxative' in the planning system as the then Minister of Housing put it, for areas in which population or household growth and housing supply were particularly out of alignment.[2] However, the widespread nature of upward house price shifts and worsening housing affordability was largely ignored in the process of identifying possible SHAs.

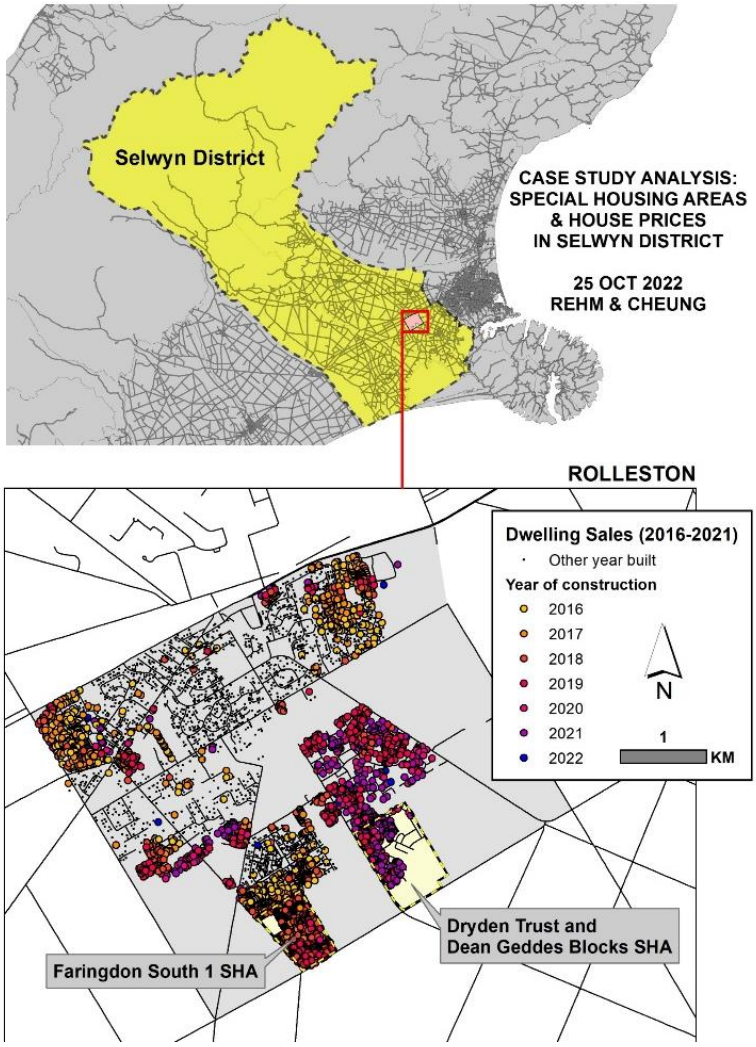
Second, while the HASHAA was presented as focused on improving housing affordability, it stepped away from planning interventions such as inclusionary zoning requiring a proportion of houses to be sold at prices affordable to modest- and low- income households. The legislation enshrined housing built to be affordable for modest- and low-income households as only one of the criteria that would inform decisions around Housing Accords. Moreover, there was no requirement that if dwellings were built at price points affordable to low- or modest income- households, that an affordable housing segment of

[1] The view that aggregate supply 'is enough in itself' to generate affordable housing and restrain house prices was widespread among many economists and policy advisers adopting neo-liberal principles but this has not proved consistent in the context of the global commodification of housing and its financialisation. In New Zealand, the evidence suggests that declines in low-cost housing production were associated with the 1990s shift from Government support for low-cost housing combined with a house price jump associated with money supply (Saville-Smith (ed) 2019; Rehm, 2016). Issues of supply and the impact on housing prices and housing affordability continues to attract attention (see Mulheirn, 2019 and the commentary of his reviewers).

[2] Wells, (2015).

the local housing stock be retained, unlike mandatory inclusion of affordable housing builds in developments associated with inclusionary zoning. Notwithstanding, many Housing Accords did state that housing developments within a particular SHA should have some sort of attempt to deliver lower priced housing. This was frequently couched in terms such as a particular proportion of stock coming to market at or below a median price for the local area.

3 SHAs at Rolleston in Selwyn District



Selwyn District is situated south and west of Christchurch. The regional economy has been dominated by agriculture, but it has also been shaped by the presence of what was Lincoln College, more recently, Lincoln University, research institutes, and the Burnham Military Camp.

In February 2016, central government signed a Housing Accord with the Selwyn District Council which established two SHAs on the outskirts of Rolleston: Faringdon South and the Dryden Trust and Dean Geddes Blocks.

Selwyn District has long been seen as providing for new residential growth around Christchurch.

In 1972 there were plans to establish a master planned new town at Rolleston, then a small service town and railway junction. Sited 25 kilometres south-west of Christchurch, Rolleston was intended to accommodate 50,000 to 80,000 residents over 4,000 hectares. The Rolleston proposal was prompted in part by the need to address the threat to high-quality soils presented by Christchurch's peripheral urban growth, and reduce sprawl and the costly attenuation of infrastructure. Establishing a compact satellite city connected to the airport was expected to provide relief from what was seen as a shortage of residential land in Christchurch and land price increases. The idea was also stimulated by a broader desire to support regional economic growth in the context of the northward drift of population and the growth of Auckland.

The Rolleston new town initiative was discarded in 1974. Nevertheless, population growth in the Selwyn District has exceeded New Zealand as whole, albeit from a low base, since the mid-1990s. In 1996, the population was about 25,500 people. The 2022 population estimate is 79,300. The Canterbury earthquakes had a profound impact and saw a trend of owner occupiers retreating into Selwyn District. Annual population growth since 2011 has varied between 3.5 and 7.7 percent.[3]

The SHAs at Rolleston agreed under the Housing Accord were Faringdon South 1 and a SHA made up of the Dryden Trust and Dean Geddes Blocks. Faringdon South 1 consisted of 42 hectares. The second SHA on the Dryden Trust and Dean Geddes Blocks consisted of 72 hectares. Both were at the time zoned rural inner plains zone under the operative Selwyn District Plan. Farringdon South 1 had an infrastructure boundary with Rolleston and was contiguous with areas already under residential development.

The Housing Accord required that 10 percent of new dwellings built in the SHAs would be sold at no more than 75 percent of the median house price in Rolleston township. In 5(2)(a) of the Housing Accord, there is considerable detail around how the price for this 10 percent is to be calculated. That process is as follows:

1. The Rolleston township median price at the point of sale for the 10 percent of price restrained dwellings refers to the median price for consecutive months of July, August and September prior to 'the date on which the relevant resource consent application or request to vary the Selwyn District Plan is made under the Act, whichever is the earlier.'
2. Price data is supplied by the Real Estate Institute of New Zealand Incorporated.
3. Price data is to be publicly accessible and transparent on the Selwyn District Council website.

The operable date [1-above refers] for assessing median price was the July, August and September of 2015. The Faringdon 1 SHA received resource consent on 4 July 2016 and the Dryden Trust and Dean Geddes Blocks SHA received resource consent on 22 December 2016. The median price for Rolleston township for that period was $555,000. The 75 percent of median price was $416,250.

Notably, in complying with the transparency requirements set out in 3-above, the Selwyn District Council has made a significant shift. It has calculated median prices for the requisite months every year. This, and Selwyn District Council's commentary around the data, suggest that it calculated median prices annually and appears to confuse the requirements of the Housing Accord with dates around applications for building consents. Selwyn District Council report the median price in Rolleston township over the period of this analysis as:

- $555,000 in September 2015
- $543,000 in September 2016
- $555,000 in September 2020
- $795,000 in September 2021.[4]

[3] Mitchell, (2021).
[4] https://www.selwyn.govt.nz/property-And-building/planning/special-housing-areas

The Dryden Trust and Dean Geddes SHA was expected to deliver around 840 dwellings during the operation of the Housing Accord. Faringdon South 1 was expected to deliver in excess of 511 dwellings through 185 low density allotments, 194 medium density small lots, and 132 medium density comprehensive lots. Despite one of the intents of Housing Accords being the encouragement of rapid private developer delivery of new builds onto the market, after six years only 27 percent of expected housing was delivered.

4 Housing Stock Inside & Outside the SHAs

The first sales within the SHAs commenced in 2016. These sales were part of an existing flurry of new builds and repeat sales evident in Rolleston generally.

As Table 4.1 shows, Rolleston had 666 dwelling sales in 2016. Of those, 369 sales were a second sale and can be assumed to have been built before the Housing Accord. All of those were in the non-SHA parts of Rolleston. Also in the non-SHA areas of Rolleston, there were 259 dwellings recorded as being sold for the first time in 2016.

Table 4.1 Dwellings Delivered in Rolleston SHA and non-SHA Dwelling Areas 2016-2021

Category	2016	2017	2018	2019	2020	2021	Total
2nd Non-SHA	369	349	379	398	524	579	2,598
New Non-SHA	259	146	135	181	268	53	1,042
New SHA	38	106	72	70	79	4	369
2nd SHA	0	0	7	24	39	58	128
Total	666	601	593	673	910	694	4,137

Rolleston's two approved SHAs delivered 38 new dwellings in 2016. By 2021, the two SHAs had delivered 369 new dwellings, while 128 were on-sold in the secondary market between 2018 and 2021. The new dwelling numbers in the SHAs, even when including on-sales, are substantially smaller than those envisaged under the Housing Accord.

Consistent with expectations, the mean and median floor areas of SHA dwellings over the period did tend to be smaller than new builds in the non-SHA areas of Rolleston (Table 4.2). This appears to reflect the smaller lot sizes or site areas in the SHA areas of Rolleston. There may also be a shrinking of lot sizes over time in both SHA and non-SHA areas.

Table 4.2 Floor Areas and Site Areas of Rolleston SHA and non-SHA Dwellings 2016-2021

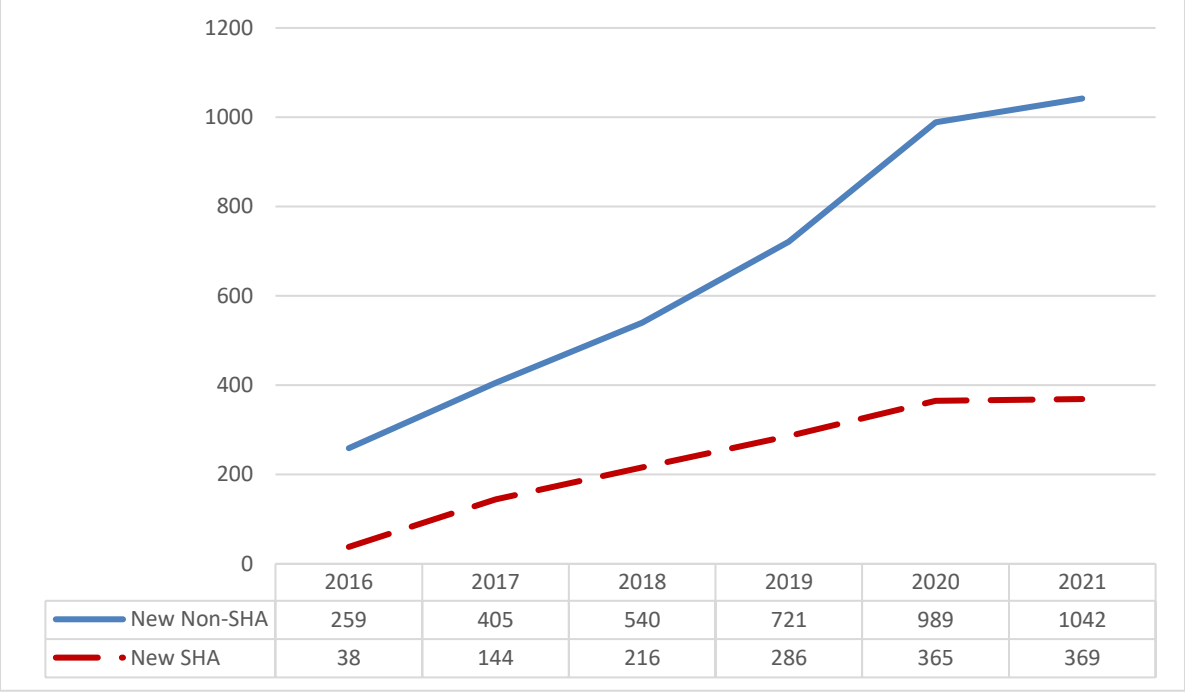
	Category	Mean	Median
Building Floor Area (m^2)	2nd Non-SHA	195	198
	New Non-SHA	181	170
	New SHA	154	153
	2nd SHA	175	167
Site Area (m^2)	2nd Non-SHA	750	750
	New Non-SHA	569	576
	New SHA	459	438
	2nd SHA	538	494

The lot sizes of on-sold dwellings over the period, whether SHA or non-SHA, show larger site areas than new SHA sales and new non-SHA sales. In the case of non-SHA areas, the median lot size of on-sold dwellings is 750m^2 compared to new non-SHA at 576m^2. For new sales in the SHA area the median lot size is 438 m^2 compared to dwellings on-sold in the SHA area with median lot size of 494m^2. Other than site area and floor sizes, there are no significant differences between the new non-SHA stock and new SHA stock. Stock in both non-SHA and SHA areas had a median of three bedrooms and two bathrooms.

5 Quantum and Rapidity of Builds

One of the purposes of the Housing Accords was to encourage rapid private developer delivery of new builds onto the market, having released land from district plan constraints. The SHAs in Rolleston had modest delivery. After six years, only 27 percent of the expected numbers of housing stock were delivered. The accumulated numbers of new stock in the non-SHA areas show a sharper, expansionary upward trajectory compared to the accumulated numbers of new stock in the SHA areas (Figure 5.1).

Figure 5.1 Accumulated 1st Sales 2016-2021 in Rolleston non-SHA and SHA areas



	2016	2017	2018	2019	2020	2021
New Non-SHA	259	405	540	721	989	1042
New SHA	38	144	216	286	365	369

6 Impacts on Prices

Table 6.1 shows the median sales prices for non-SHA and SHA sales for the period 2016-2021. In both non-SHA and SHA areas, on-sold dwellings show higher median prices than new-build sales. This largely reflects the general upward price movements that occurred within the study timeframe given that secondary sales are concentrated in the later years as indicated in Table 4.1.

Table 6.1 Summary of Sale Prices for Non-SHA and SHA for the Period 2016-2021

	Category	Mean	Median	Min	Max
Gross Sales Price ($)	2nd Non-SHA	$597,448	$570,000	$260,000	$1,600,000
	New Non-SHA	$551,958	$535,000	$143,478	$1,275,000
	New SHA	$499,314	$500,000	$399,000	$780,000
	2nd SHA	$627,561	$610,000	$423,750	$1,107,313

The median price for new dwellings in the SHA areas is around $35,000 less than the median price for new dwellings in non-SHA areas. However, the median price of dwellings which were on-sold within the SHAs is higher than dwellings sold in non-SHA areas. Notably the range of house prices in non-SHA areas is much wider than in the SHAs. This reflects the greater diversity of the housing stock outside of SHAs.

As discussed previously, the Housing Accord required that 10 percent of new dwellings built in the Rolleston SHAs would be sold at no more than 75 percent of the median house price in Rolleston township. Based on when the SHAs' Resource Consent applications were lodged, both were subject to an affordable price point of $416,250. Across all new SHA dwelling sales, 56 of the 369 sales transactions (around 15 percent of all new SHA sales) were sold at prices equal to or below the Housing Accord established affordable price point. The mode new SHA sales price was precisely $416,250 with 28 dwellings selling for this specific amount. All of these sales occurred in the Faringdon South 1 SHA and represent exactly 10 percent of that SHA's 280 new dwelling sales over the study timeframe.

An additional 21 new dwelling sales prices in Faringdon South 1 fell below the Accord-established affordable price point while 5 of the 89 new dwelling sales in the Dryden Trust and Dean Geddes Blocks SHA also fell below the affordable price point. The dwellings selling for those low prices tended to feature smaller floor areas and section sizes.

Hedonic Pricing Analysis

It is important to establish whether the SHAs had an impact on price, as opposed to price variation that might occur across Rolleston township. This was analysed through the application of hedonic pricing models.

Data and Methods

The data relate to Rolleston's five Statistical Area 2 (SA2) units with the SHA and non-SHA areas. Data on sale price, land area, floor area, number of bedrooms and bathrooms for each dwelling sold, characteristics of the lots, and building typology were used. Equation (1) shows the baseline hedonic price model in the semi-log specification, including the structural attributes, location dummy attributes in neighbourhoods and time dummy variables, and so on:

$$ln(P_{itm}) = \alpha_0 + \sum_{k=1}^{K} \gamma_k X_{ki} + \sum_{t=1}^{T} \alpha_t Q_{it} + \sum_{m=1}^{S} \theta_m L_{im} + \varepsilon_{ism} \dots (1)$$

where P_{its} denotes the transaction price of property i at time t at meshblock (neighbourhood) m (i = 1, …, n; t = 1, …, T; m = 1, …, M), γ_k denotes the implicit price for the k^{th} property characteristic X_{jk} (k = 1, …, K); Q_{it} denotes the quarter-of-sale dummy, which is set to 1 if the i^{th} house sold at time t, and otherwise to 0; L_{is} denotes the meshblock (neighbourhood) location dummy, which is set to 1 if the i^{th} house sold is located at meshblock m, and otherwise to 0; and ε_{ist} denotes the error term with the mean zero and the variance σ^2. The coefficients γ_k, β_v, α_t, and θ_s can be estimated by the ordinary least squares method.

Table 6.2 sets out the control variables.

Table 6.2: Independent (control) variables used to estimate the hedonic models

	Variable	Definition
Variables of interest	SHA General	Dummy variable for whether a property was located within either of Rolleston's SHAs and sold at a price point other than $416,250 with the default condition being non-SHA.
	SHA Affordable	Dummy variable for being located within either of Rolleston's SHAs and sold at the Accord-established affordable price ($416,250) with the default being non-SHA.
	Faringdon SHA General	Dummy variable for being located within the Faringdon South 1 SHA and sold at a price point other than $416,250 with the default being non-SHA.
	Dryden SHA General	Dummy variable for being located within the Dryden Trust and Dean Geddes Blocks SHA with the default being non-SHA.
Structural	Floor area and floor area squared	Polynomial featuring the property's floor area in square metres and that figure squared.
	Site area and Site area squared	Polynomial featuring the property's land area in square metres and that figure squared.
	Age and Age squared	Polynomial featuring the property's age at the time of sale in years and that figure squared.
	Arterial road	Dummy variable for whether a property is accessed off an arterial road[5] with the default being access gained from a lower volume road such as a collector.
	Exterior good	Dummy variable for whether a property's exterior wall finishes are coded as 'Good' condition with the default category being all other lower condition grades.
	Interior good	Dummy variable for whether a property's interior finishes and fittings are coded as 'Good' condition with the default category being 'Average' condition.
	Interior poor	Dummy variable for whether a property's interior finishes and fittings are coded as 'Poor' condition with the default category being 'Average' condition.
	Rear lot	Dummy variable for whether a property is sited on a rear lot without street frontage with the default category being another lot type (street fronting inside or corner lot).
	Single bathroom	Dummy variable for whether a property features only a single bathroom with the default category being two or more bathrooms.
	Multi-unit dwelling	Dummy variable for whether a property is categorised as a residential flat (RF) with the default being a residential dwelling (RD).
Suburb	mb2719004, etc	A series of dummy variables indicating the neighbourhood, proxied using 2018 meshblocks, in which a property is located.
t	S2004Q1, etc	A series of dummy variables for each quarterly period sold with the default category being sold in Quarter 1, 2016.

[5] As defined within New Zealand Transport Agency's One network road classification.

Time dummies reflected known market conditions during the timeframe. Meshblock dummies were effective in controlling for variations in socioeconomic characteristics and access to amenities such as parks and schools across Rolleston. In the hedonic modelling that follows, the SHA new sales that transacted at precisely the Housing Accord established affordable price were assumed to be impacted by the Housing Accord's affordability provisions with all other sales prices.

Results

Table 6.3 presents the results of the hedonic pricing model using a dummy variable approach showed a high R-squared value of .889 and were based on 4,137 observations. The independent control variables were in the expected direction and were found to be significant to a 0.05 level.

The *SHA General* dummy variable, which indicated whether a property was located inside a Special Housing Area and sold for a market-determined sales price, had a slight negative effect on the price (about -2.5 percent). This is elaborated upon later. The *SHA Affordable* variable captures a more substantial price effect with new SHA houses that sold for the Accord-established affordable price point of $416,250 selling at a discount of approximately 8.5 percent, all else held equal.

Table 6.3 Hedonic pricing model results (All sales 2016-2021)

	B	Std. Error	*t*
(Constant)	12.622	0.023	553.791***
Floor area	2.79E-03	1.87E-04	14.904***
Floor area squared	-9.93E-07	4.33E-07	-2.294**
Site area	1.48E-04	2.11E-05	7.037***
Site area squared	-1.30E-08	1.11E-08	-1.170
Age	-3.81E-03	5.07E-04	-7.513***
Age squared	3.14E-05	6.72E-06	4.674***
Arterial road	-0.026	0.008	-3.063***
Exterior good	0.020	0.012	1.662*
Interior good	0.049	0.051	0.960
Interior poor	-0.082	0.033	-2.501**
Rear lot	-0.012	0.004	-2.915***
Single bathroom	-0.012	0.005	-2.563***
Multi-unit dwelling	-0.042	0.015	-2.830***
SHA General	-0.026	0.007	-3.686***
SHA Affordable	-0.087	0.016	-5.568***

Notes: The dependent variable is the natural log of gross sales price. N = 4,137. R^2 = .889. The model includes time and location (meshblock) dummies, which are not reported above. *, **, *** means the coefficients are at 10%, 5% and 1% significance level respectively.

Table 6.4 presents the results of the hedonic pricing model based solely on new dwelling sales. The model includes the same dummy variable, *SHA General*, indicating whether the property is located inside the SHA and was sold at a market-determined price. The R-squared value for this model is slightly lower at .810. The number of observations is reduced to 1,410 when only new dwelling sales are considered. The *SHA Affordable* variable suggests new SHA houses that sold for precisely $416,250 as set out for an expected 10 percent of

the builds were priced by about 8 percent less than dwellings represented in the *SHA General* variable.

Table 6.4 Hedonic pricing model results (New sales only 2016-2021)

	B	Std. Error	*t*
(Constant)	12.629	0.050	250.234***
Floor area	3.41E-03	5.74E-04	5.941***
Floor area squared	-2.35E-06	1.43E-06	-1.644*
Site area	-5.50E-05	1.06E-04	-0.519
Site area squared	1.62E-07	8.02E-08	2.021**
Arterial road	-0.059	0.022	-2.671***
Rear lot	-0.019	0.011	-1.754*
Single bathroom	-0.024	0.011	-2.081**
Multi-unit dwelling	-0.072	0.035	-2.071**
SHA General	-0.027	0.009	-2.888***
SHA Affordable	-0.084	0.021	-3.986***

Notes: The dependent variable is the natural log of gross sales price. *N* = 1,410. R^2 = .810. The model includes time and location (meshblock) dummies, which are not reported above. *, **, *** means the coefficients are at 10%, 5% and 1% significance level respectively.

In Table 6.5, the hedonic pricing model for new dwelling sales only, employs explicit dummy variables for the two SHAs in Selwyn. The Faringdon prices, unless controlled by the 10 percent of dwellings at 75 percent of median price set out in the Housing Accord, were effectively similar to new housing sold in the non-SHA areas. While the *Faringdon SHA General* variable's coefficient is negative it is near zero and statistically insignificant.

Table 6.5 Hedonic pricing model results (New sales only, explicit SHAs 2016-2021)

	B	Std. Error	*t*
(Constant)	12.618	0.052	242.376***
Floor area	3.42E-03	5.74E-04	5.966***
Floor area squared	-2.41E-06	1.43E-06	-1.681*
Site area	-5.58E-05	1.06E-04	-0.527
Site area squared	1.62E-07	8.02E-08	2.023**
Arterial road	-0.059	0.022	-2.694***
Rear lot	-0.019	0.011	-1.743*
Single bathroom	-0.023	0.011	-2.053**
Multi-unit dwelling	-0.075	0.035	-2.134**
Faringdon SHA General	-0.016	0.016	-0.966
SHA Affordable	-0.075	0.023	-3.199***
Dryden SHA General	-0.033	0.012	-2.870***

Notes: The dependent variable is the natural log of gross sales price. *N* = 1,410. R^2 = .811. The model includes time and location (meshblock) dummies, which are not reported above. *, **, *** means the coefficients are at 10%, 5% and 1% significance level respectively.

Like the previously discussed hedonic models, the *SHA Affordable* variable is consistently negative and statistically significant. In this final model, homes sold at the Accord-established affordable price point were transacted at a discount of around 7 percent. It is important to reiterate that all of these *SHA Affordable* transactions were located in the Faringdon SHA.

The final variable of interest, *Dryden SHA General*, is somewhat challenging to interpret as none of the sales in this SHA were sold at the affordable price point set out in the Housing Accord. Only 5 of 89 sales in this SHA were priced below this threshold. Some of the around 3 percent price discount experienced across the new homes sold in the Dryden SHA may be due to below market pricing set by the developer to satisfy the Accord's affordability provisions. However, 21 new home sales in the Faringdon SHA (nearly 8 percent) also sold for below the affordable price point but were coded as market-based sales. The hedonic model results suggest that these below threshold sales in the Faringdon SHA were not subject to a significant price discount. Another possibility is that the 3 percent discount for new homes sold in the Dryden SHA reflects an unmeasured difference in builder, design or quality.

House Prices

The descriptive data suggest there was some minor price suppression evident in the SHA area. The hedonic pricing models confirm this. New, market-priced homes sold in the SHAs were subject to a slight price discount between around -1.5 and -3 percent. However, new homes sold at the Accord-established affordable price point ($416,250) sold for a larger discount ranging from roughly -7.5 to -8.5 percent. In each model, the dummy variables reflecting the price difference associated with being located within versus outside a SHA is negative. This indicates that, all factors held equal, dwellings sold within SHAs are subject to only a slight price discount.

7 Promise and Reality

The expectation of the Rolleston SHAs was that they would:

- Deliver 1,350 dwellings – Over six years they delivered 369 new dwellings with 130 of those on-sold between 2018 and 2021.
- Encourage rapid building – Building in non-SHA areas was more rapid with higher numbers.
- Supress price – Price suppression was mild in the region of between 2 percent and 3 percent.
- Delivery of 10 percent of new builds at 75 percent of the median house price, a requirement when the Housing Accord was struck has largely eluded the district.
- The SHA area median price over this period was around 93 percent of the median price and about 90 percent of the average price in non-SHA areas.
- A small number of dwellings in the SHAs were sold at 10 percent of the median Rolleston price.
- Lower price through diversifying into multi-units – Sales for multi-units all lay outside the SHA boundaries.

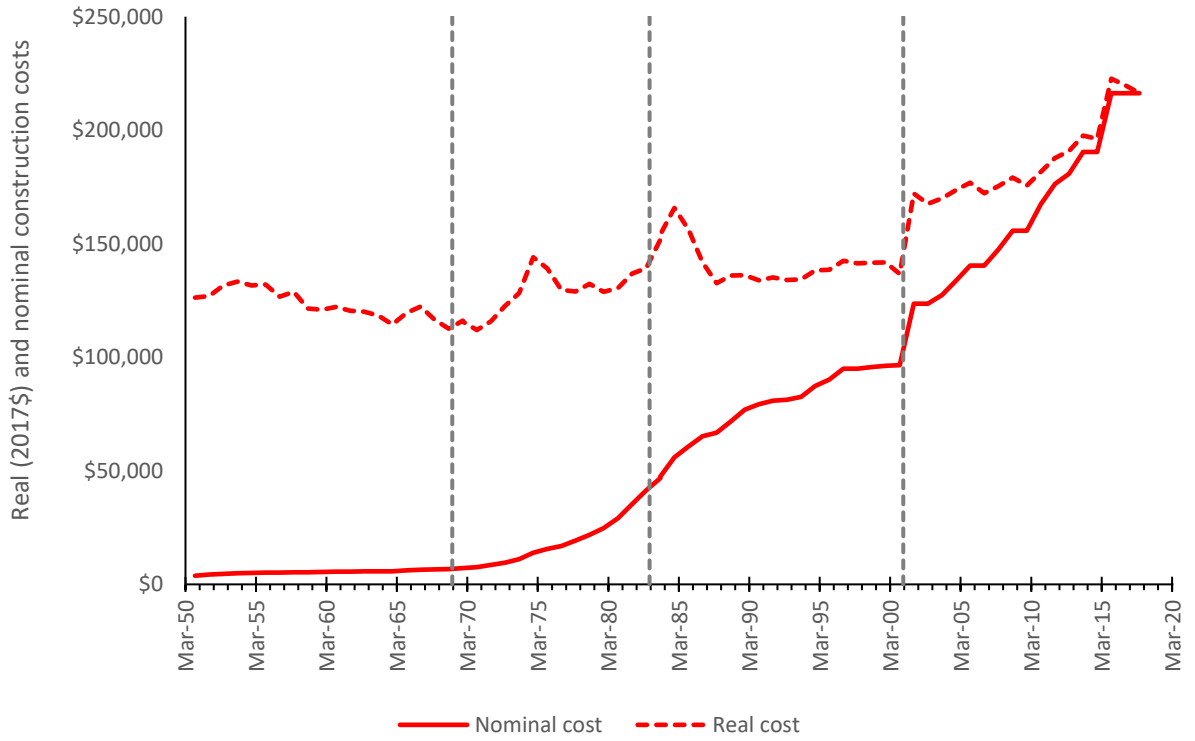
The Housing Accords and the Special Housing Areas were underpinned by two critical assumptions. First, that increasing new builds and aggregate stock supresses prices and

increases housing affordability. The second critical assumption is that there is a direct chain between house prices, build costs, and public planning regimes.

With regard to the dynamic between build numbers, housing prices and restrictions arising from planning regimes, the evidence shows that those assumptions are questionable at best. There is considerable international debate around the impact of supply, the quanta required, and the price points needed, to affect house prices and improve housing affordability for low-and modest- income households. Increasing aggregate numbers of dwellings without addressing price points is not a short-, or even medium- term, pathway to affordable housing access to those struggling in unaffordable and precarious housing.[6]

Similarly, the putative chain between housing prices, build costs and public planning regimes has a mirage-like quality. The disjuncture between build costs and house prices as they come to market is well-established.[7] In the New Zealand context, it has been demonstrated that while housing affordability has declined, real (as opposed to nominal) build costs for a modest house changed relatively little for much of the period (Figure 7.1).[8]

Figure 7.1 Nominal and Real Construction Costs of Low-Cost Dwelling (Excluding Section Price) in New Zealand 1950-2020



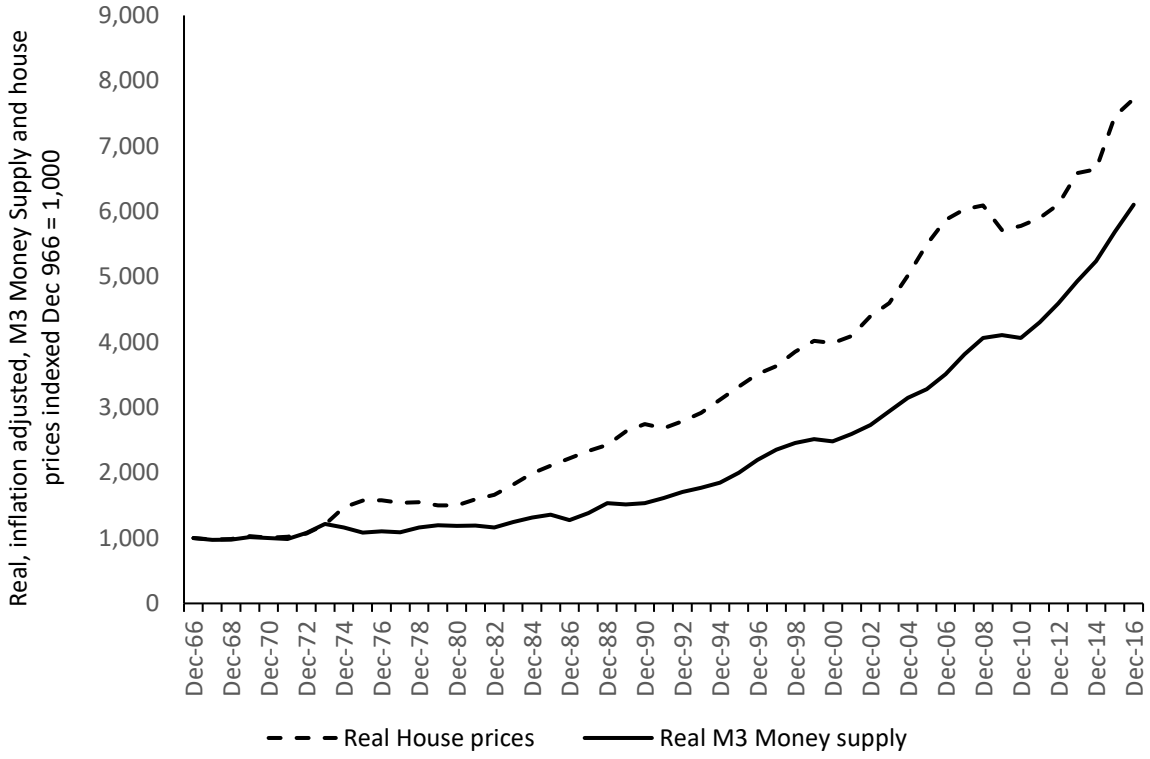
[6] Barker, K. (2018) "The Broken Housing Market" Conference, June 2018, https://www.youtube.com/watch?v=Hl4xcyeFO44

[7] Tookey, (2019).

[8] Saville-Smith, (ed) (2019).

'Hot' prices in New Zealand housing have been suggested as a manifestation, in part, of an upward recalibration of house prices experienced cross regionally around 2003 and associated with flushes in the money supply (Figure 7.2).[9]

Figure 7.2 Real money supply and housing prices 1966-2016

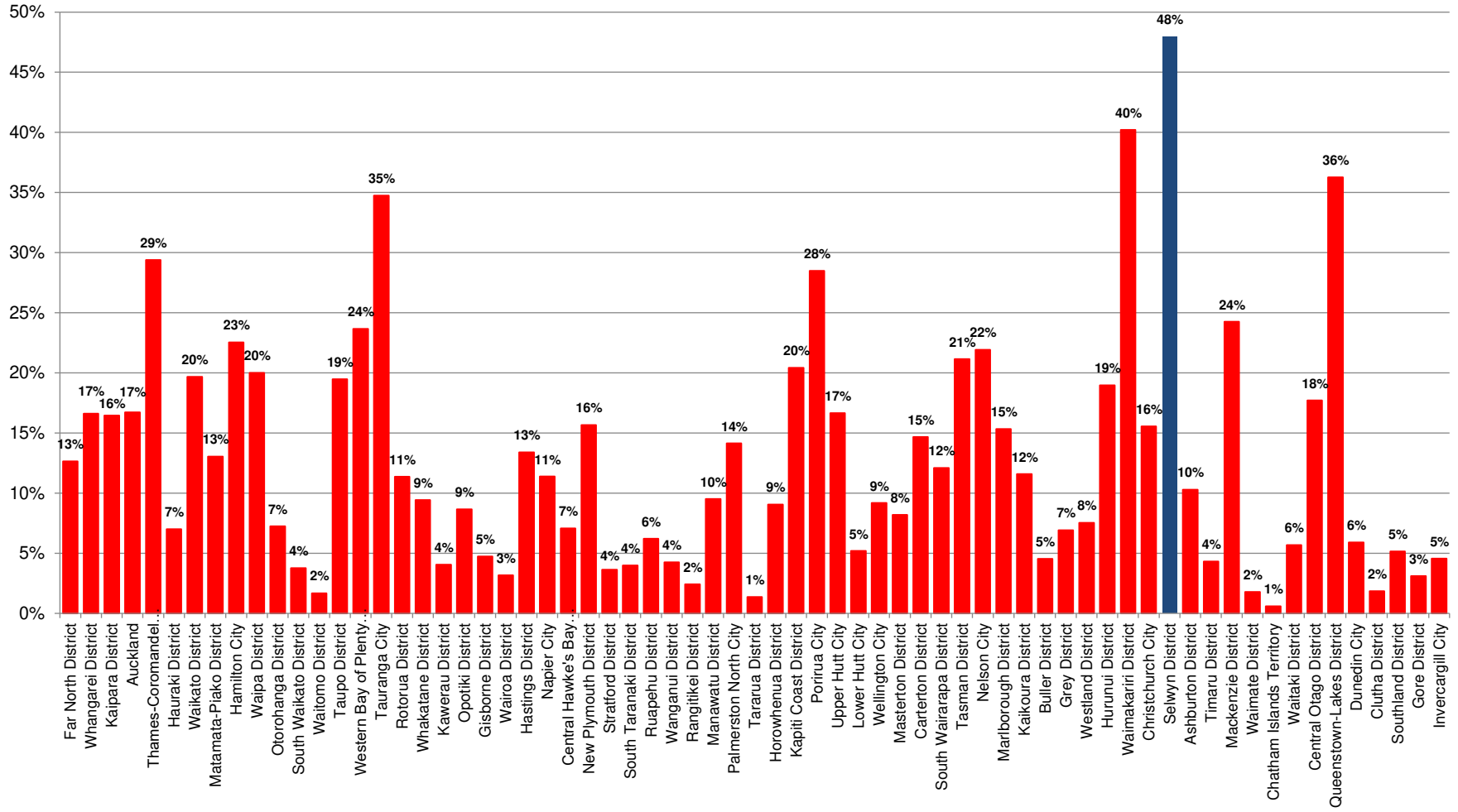


In addition, it has also been noted that there has been a substantial decline in supply-side housing assistance in low-cost new builds, which has seen the building industry redirect its attention to the upper quartile of dwelling values.[10] Moreover, others have noted that development finance has tended to seek assurances of high margins when considering development propositions.[11]

Finally, limited land availability, both here and overseas, has been found to inhibit low-cost builds. This may reflect land use planning decisions or commercial decisions and practices in the market, including land banking. The increasing use by developers of residential covenants, which lie outside the public planning system, to sustain increased house prices in the market suggests that the public planning system is not the only barrier to unaffordable house prices delivered across the aggregate supply of new builds. In 2017, the Selwyn District showed a higher proportion of covenants among its newly struck titles than any other district in New Zealand (Figure 7.3).[12]

[9] Rehm in Saville-Smith, (ed) (2019).
[10] Saville-Smith, (2018).
[11] Murphy, (2019).
[12] Fredrickson, (2018); Fredrickson and Saville-Smith, (2018).

Figure 7.3 Proportion of all titles with land covenant by territorial authority 2017



There has been a raft of research in this country specifically exploring the implementation and impact of SHAs, although this is the first to apply hedonic modelling in a situation that allows direct comparison between non-SHA builds and SHA builds in an immediately contiguous location.

In Auckland, there was some modelling work around impact of house prices, which included both new and existing dwellings. Unlike this research, it did not strongly control for dwelling characteristics. The Auckland research suggested that the SHAs fuelled price increases of around 5 percent.[13] The method probably overstated that impact by not giving attention to issues around development timing and dwelling characteristics.

Nevertheless, those findings are consistent with early research by Murphy focusing on Auckland and the Housing Accord initiative. That research predicted that impacts on both price and quantum of supply were likely to be minimal.[14] Subsequent analysis by Murphy suggested that the outcomes of developments in the SHA programmes were consistent with his earlier analysis.[15] Journalists also questioned whether developers were committing to the fast-track delivery that some had claimed would be unleashed by the reduction in planning requirements.[16]

The findings of Auckland centred research are similar to research by James in Tauranga and the Western Bay of Plenty. SHAs were neither systematically focused on affordable housing, nor did they appear to change significantly the calculative logics of developers, either in relation to rapidity of build nor in relation to changes in intended prices delivered to market.[17]

Overall, then, the Rolleston SHAs showed consistency with research on SHAs in other areas. There was little evidence of accelerated builds. There was minor and limited price suppression in the Rolleston SHA areas compared to the non-SHA areas. Some dwellings were built at the 75 percent pf median price, but the numbers were small and less than the expected numbers indicated in the Housing Accord. The latter suggests that production of dwellings that meet the needs of modest- and lower- income households requires purposeful attention.

[13] Fernandez, Sánchez, and Bucaram, (2021).
[14] Murphy, (2016).
[15] Murphy, (2017), (2018) and (2019).
[16] Burrows, (2016); Colins, (2016).
[17] James, (2017), (2018), (2018a), (2019).

Relevant Publications and References

Austin, P. M., Gurran, N., & Whitehead, C. M. (2014). Planning and affordable housing in Australia, New Zealand and England: common culture; different mechanisms. *Journal of Housing and the Built Environment*, *29*, 455-472.

Barker, K. (2004) Delivering stability: securing our future housing needs Barker Review of Housing Supply - Final Report, HM Treasury, London

Barker, K. (2018), Interview, *The Broken Housing Market Conference*, National Institute of Social and Economic Research, https://www.youtube.com/watch?v=Hl4xcyeFO44

Burrows, M. (2016), "No Follow Through on Nick Smith's Land Banking Threat", *NewsHub*, August 27, 2016, http://www.newshub.co.nz/home/politics/2016/08/no-follow-through-on-nick-smiths-landbanking-threat.html

Calavita, N., & Grimes, K. (1998). Inclusionary housing in California: The experience of two decades. *Journal of the American Planning Association*, 64(2), 150-169.

Collins, S. (2016), "Developers walk away from fast-track process as Auckland house prices top $1m", *The New Zealand Herald*, August 28, 2016, http://m.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11701098

Fernandez, M. A., Sánchez, G. E., & Bucaram, S. (2021). Price effects of the special housing areas in Auckland. *New Zealand Economic Papers*, *55*(1), 141-154.

Fredrickson, C., 2018, *Land Covenants in Auckland and Their Effect on Urban Development* Technical Report 2018/013, Auckland Council and Building Better Homes, Towns and Cities.

Fredrickson, C., and K. Saville-Smith, 2018, *Covenants and risks to the supply of land for modest homes and affordable housing*. Research Bulletin, 6pgs. Wellington: BBHTC.

James, B. (2017) *Getting the housing we say we want: Learning from the special housing area experience in Tauranga and the Western Bay of Plenty*. Report for Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC.

James, B. (2018) "Special Housing Areas: A Practical Pathway to Liveable Homes?" pp. 171-180 in E. Tracada and G. Cairns (eds), *Cities, Communities and Homes: Is the Urban Future Liveable?* Architecture MPS Proceedings Series 10, University of Derby, 22-23 June, 2017.

James, B. (2018a) *Spaces in Contention in the Western Bay of Plenty Sub-region: Special Housing Areas and Public Consultation.* Report for Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC.

James, B. (2019) *Developers' decision-making: a case study of development in special housing areas.* Report for Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC.

Kontokosta, C. E. (2014), Mixed-income housing and neighbourhood integration: Evidence from inclusionary zoning programs. *Journal of Urban Affairs*, *36*(4), 716-741.

Mitchell, I. (2021), Housing Demand and Need in Greater Christchurch, A Report Prepared for Environment Canterbury.

Mulheirn, I. (2019), *Tackling the UK Housing Crisis: Is Supply the Answer?* UK Collaborative Centre for Housing Evidence, https://housingevidence.ac.uk/wp-content/uploads/2019/08/20190820b-CaCHE-Housing-Supply-FINAL.pdf

Murphy, L. (2016), "The politics of land supply and affordable housing: Auckland's Housing Accord and Special Housing Areas." *Urban Studies* 53(12):2530-2547.

Murphy, L. (2017), "Housing affordability, urban planning and Auckland's Special Housing Areas". In Howden Chapman, P., Early, L. and Ombler, J (eds) *Cities in New Zealand: Preferences, Patterns and Possibilities*, Wellington, Steele Roberts, pp.66-78.

Murphy, L. (2018) Housing Affordability, Urban Change and the Complex Logics of Special Housing Areas, Poster Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC. https://buildingbetter.nz/wp-content/uploads/2022/12/Murphy-SHA-poster1.pdf

Murphy, L., (2019), Performing calculative practices: residual valuation, the residential development process and affordable housing, *Housing Studies*, DOI: 10.1080/02673037.2019.1594713.

Murphy, L. (2019a), Financiers and Developers: Interviews concerning their interests, relationships, and the residential development process, Working Paper for Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC.

New Zealand Commission of Inquiry, 1971, *Housing in New Zealand - Report of the Commission of Inquiry*, NZ Government Printer, Wellington.

New Zealand Productivity Commission, 2012, *Housing Affordability Inquiry,* New Zealand Productivity Commission, Wellington.

New Zealand Productivity Commission, 2015, Using Land for Housing, New Zealand Productivity Commission, Wellington.

New Zealand Productivity Commission, 2017, *Better Urban Planning*, New Zealand Productivity Commission, Wellington.

Preval, N., Randal, E., Chapman, R., Moores, J., & Howden-Chapman, P. (2016). Streamlining urban housing development: Are there environmental sustainability impacts? *Cities*, *55*, 101-112.

Rehm, M. J. (2016), *Defying gravity: Easy money and house prices*. Paper presented at Property Institute of New Zealand (PINZ) Annual Conference, Auckland, New Zealand. 16 June - 17 June 2016.

Saville-Smith, K. (2018) Following the money: Understanding the building industry's exit from affordable housing production, Research Bulletin: for Building Better Homes, Towns and Cities SRA: The Architecture of Decision-Making, Wellington: BBHTC. https://www.buildingbetter.nz/wp-content/uploads/2022/12/Saville-Smith_2018_following_the_money.pdf

Saville-Smith, K. (ed) (2019) *Revitalising the Production of Affordable Housing for Productive, Engaged & Healthy Lives: Integrated Report*, Report for Building Better Homes Towns and Cities National Science Challenge: Revitalising the Production of Affordable Housing for Productive, Engaged & Healthy Lives, Wellington: BBHTC https://affordablehousing.goodhomes.co.nz/wp-content/uploads/2020/08/Saville-Smith_Nov2019_revitalising_production_affordable_housing.pdf

Schuetz, J., Meltzer, R., & Been, V. (2011). Silver bullet or Trojan horse? The effects of inclusionary zoning on local housing markets in the United States. *Urban Studies*, 48(2), 297-329.

Tookey, J., 2016, Cost is not Price: The impact of Productivity and Design in Housing Affordability, *AUT Briefing Papers 2016*.

Wells, E. (2015), "Outside the RMA comfort zone – Learnings from implementing the Housing Accords and Special Housing Areas Act 2013" Back to the Future 2015, NZ Planning Institute Conference, https://planning.org.nz/Attachment?Action=Download&Attachment_id=3144