



UNSW
City Futures
Research Centre

City Futures Research Centre submission to: Productivity Commission Consultation on Housing Supply Regulation - Interim Report response and further information request

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Executive Summary

- Planning and other regulatory reform is important to ensure that the incentive structures that influence urban development reflect the economic and social context of Australia's evolving cities and economies. Several reform directions, if well designed, can work to lift the effective dwelling yield of land, thereby enhancing dwelling supply – at least in the short-term.
- However, the Productivity Commission's Interim Report, and Inquiry terms of reference, somewhat one-sidedly equate increasing new dwelling supply numbers to tackling key societal challenges – population housing need, access to housing (including First Nations Australians), and the affordability of housing. Neither the economics, nor the empirical basis for these assertions are as simple and uncontroversial as presented in the Interim Report.
- Throughout this submission we highlight six areas where the analysis in the Interim Report can be further developed to provide guidance on (necessary) regulatory reforms and their expected societal impacts.
 1. **Distinguishing between short- and long-run price elasticities of housing supply:** Much of the focus is on short-run supply elasticity, ignoring longer-term affordability determinants and reform impacts. We show that even under significant upzoning reforms, the distinction between short and long-run elasticities continue to matter. Moreover, the Interim Report insufficiently distinguishes between the stock of housing/dwellings and the flow of dwellings when developing its supply-to-impact framework.
 2. **Relating Reform Directions to the efficacy and scale of new housing supply required to achieve meaningful housing affordability outcomes:** We show that even very significant increases in new dwelling construction only generate modest affordability improvements, if other demand factors continue to grow (as is the normal condition of Australia's housing market).
 3. **Distinguishing quality and nature (housing services) of what is built from the quantity of building when considering affordability outcomes:** Income-elastic demand for housing services alters the nature of the housing product that is demanded. While this might be expressed in the form of multiple property ownership (several dwelling units) it is also expressed in demand for dwellings that offer a greater bundle of services (quality, size, rooms, internal/external amenities). From an affordability and house price dampening perspective there is thus an inherent tension (risk of tension) between Reform Directions such as 2.6 and demand for housing services.

4. **Consideration of the time-to-make-a-decision and nature of the decisions taken in relation to affordability outcomes:** Our research demonstrates diverse views about the role of the planning system as it relates to housing affordability. When asked if local government planning decision-making was a major cause of poor housing outcomes, most disagreed, although economists were less likely to disagree than non-economists. Nevertheless, local councils were criticised for failing to deliver clear and consistent decisions on development, especially in areas of rapid growth. Local politics – NIMBY-ism – could also be a problem in higher value locations. Other research participants, however, saw planning as only one of several factors, and possibly only a minor one, impacting the supply and price of housing. The role of the development industry itself in determining build-out rates and locations of housing supply was also highlighted.
5. **Consideration of Reform Directions in relation to metropolitan governance more broadly:** Relevant to Reform Direction 4.2 focusing on coordination and infrastructure investment sequencing, our research shows greater agreement that poor quality strategic planning had led to spatial mismatches between housing and employment, especially in the major cities. Tensions between the goals of land use planners who developed strategic city plans on the one hand, and the state agencies who determined major economic and infrastructure decision making, on the other, were also seen to lead to poor policy integration at the city scale. This was attributed to a lack of effective metropolitan scale governance. An effective and best-practice regulatory system must, therefore, address metropolitan governance more broadly.
6. **Relating Reform Directions to the entire developmental process as well as planning-determination within this process:** Our research shows that the process of gaining a planning determination represents only a modest proportion of the total time taken to bring a multi-unit development to completion. In our total sample, this averages 30 weeks out of a total development time of 3.4 years. Halving the time taken between lodgement to determination, if achieved, would only reduce the overall delivery time by an average of 7%: valuable, of course, but not transformative.

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About UNSW City Futures Research Centre

City Futures Research Centre is one of Australia's leading academic centres of expertise on urban policy and analysis:

- Housing
- Compact cities
- Healthy built environments
- Urban analytics
- Urban planning
- Sustainable mobility.

Our partners include:

- UNSW colleagues across several Faculties
- Fellow academics at leading universities in Australia and internationally
- Local, state and federal government agencies
- Industry stakeholders and community groups

Our work advances the understanding of cities focusing on people, places, policies and technologies. We provide ethical, evidence-based inputs to contemporary urban policy debates and the planning of 21st Century cities. With a vision to create a better and more sustainable future, the Centre is committed to the United Nation's New Urban Agenda and Sustainable Development Goals.

Our housing expertise includes:

- Housing market analysis
- Homelessness and housing needs assessment
- Housing law, regulation and taxation
- Housing management, development and renewal.

General feedback on Interim Report

The Productivity Commission's Interim report identifies three broad policy directions for lifting the supply of housing in Australia. The overall thrust of these policies is to simplify / reduce planning and regulatory intervention that might restrict the volume and nature of land use (Reform Direction 2); reduce transaction costs in the form of regulatory approval processes and complexity (Reform Direction 3); and improve coordination between housing and infrastructure planning and provision (Reform Direction 4).

Australian cities and urban economies are constantly evolving. Consequently, dynamically adapting planning and regulatory environments in response to these is necessary. Broadly, reform directions relating to land-use/density (such as 2.1, 2.2, 2.4, 3.1, 4.1 and 4.2) are consistent with the evolving nature of Australia's urban economies and lifestyles and are likely to bring positive effects in terms of housing supply. These reforms, if well-designed, can work to lift the effective dwelling yield of land. This is also consistent with large-scale (broad geographic coverage) up-zoning initiatives, such as in Auckland 2016, that have been associated with subsequent increased production of dwellings in the short-run (Greenaway-McGrevy and Philips 2023). In contrast, smaller-scale spot up-zoning initiatives (e.g. activity centres, transport-oriented-developments) are not shown to have similar planning-based dwelling production yields (Murray and Limb 2023).

The distinction between broad and spot-based upzoning may be particularly relevant in understanding impacts on dwelling production (Cheung et al 2024). However, in both cases the dwelling sales price impacts are again complex and less clear cut, from an *affordability* perspective (Cheung et al 2024, Murphy 2026), but with some evidence that rental prices eased in the case of Auckland's 2016 large-scale up-zoning (Greenaway-McGrevy and So 2024). Similar research from the US, with a mix of geographic coverage, also finds that unit supply numbers increase after land use relaxations, but without a reduction in rental prices (Stacy et al 2023).

Also, relevant when it comes to evaluating the Auckland experience is the reality that the city's celebrated wide-scale rezoning was set within a long-term metropolitan plan that emerged from radical urban governance reform. Thus, large-scale zoning relaxation 'sat within a coherent spatial strategy, backed by governance reform, infrastructure planning and a long-term vision for how Auckland would evolve as a city' (Bennetts 2026). In this view, observed housing market developments during the late 2010s also reflected visionary 'strategic planning to determine where substantial growth could strengthen the city, support productivity, improve accessibility and make better use of existing infrastructure' (Bennetts 2026).

Other land-use reform directions (such as 2.3, 2.5, 2.6, 3.2, 3.3, 3.4, 4.3, 4.4) are complex and substantively intersect with the distribution and appropriation of land

related rents. Their impacts on housing markets (quality, sustainability) and society (appropriate housing, (inter-generational) wealth accumulation) require detailed consideration in the design process, with several down-side risks and/or impacts that require specific acknowledgement or consideration. For instance, large-scale (broad geographic coverage) up-zoning initiatives, such as in Auckland 2016, are also associated with a significant decline in the size (floor area) of dwellings (Stats NZ 2025).

Jointly, the three sets of Reform Directions referenced above are intended to enhance the supply of dwelling units. This is consistent with part of the scope of the Inquiry (highlighted in bold below):

‘The inquiry should identify examples of the existing housing regulatory system across jurisdictions that have the greatest impact on **housing supply**, housing affordability and construction productivity.’

Less consideration is, however, given to issues of **housing affordability** (economic benefit) and **construction productivity** (also economic benefit). In this response we focus on housing supply and implications for housing affordability.

We agree with the Productivity Commission’s overarching objective for housing regulation reform but find that principles 1 and 2 are not automatically aligned with this objective, specifically meeting people’s need and balancing economic and social outcomes.¹

Feedback on theoretical and empirical basis of the housing supply dynamics

The issue of housing affordability is chiefly dealt with in Box 1 which somewhat uncritically discusses the relationship between supply dynamics and housing affordability.

Box 1 commences by stating that ‘housing supply, **for a given level of demand**, should reduce housing prices across the relevant market’ (emphasis added). While is theoretically correct with the respect to the *stock* of housing, the opening sentence obfuscates the practical challenges of achieving broad (market prices and rents) and specific (low-income) affordability outcomes by raising the *flow* of housing supply.

Specifically, Box 1 obfuscates three key issues relating housing supply to housing affordability:

¹ “A well-functioning housing and planning regulatory system that enables enough housing to **meet people’s needs**, in the places where it delivers the greatest net benefit to the Australian community. It **balances economic, social, cultural and environmental outcomes**, and gives weight to the interests of both current and future residents.”

- i) The nature of housing supply elasticities – short- and long-run elasticities;
- ii) The amount of new supply required to meaningfully achieve housing affordability improvements;
- iii) The nature of dwelling products supplied (beyond being well-located).

It also obfuscates the role that planning and the regulatory system plays on affordability outcomes. Specifically:

- iv) The impact of local planning on housing supply;
- v) The impact of strategic planning on housing supply;
- vi) The impact of planning on project development time.

The following three sub-sections provide summary feedback on each of these issues. We hope that these will assist the Productivity Commission in finalising its report on this important societal issue and in more rigorously reflecting on housing supply as a lever for public policy goal attainment (economic benefits and housing affordability).

Before going to the three sub-sections, it also both noteworthy and arguably problematic that Box 1 appears to give preference to international studies, rather than Australian studies on the impacts of (re)zoning (Murray and Limb 2023) and on local housing supply effects (Nygaard, Galster and Glackin et al 2022). Similar selective reading is apparent on filtering where key conditions for effective filtering go undiscussed: net housing supply exceeding household formation and demand for second homes (Nygaard, van den Nouwelant et al 2022), elasticity of supply (Rosenthal 2014), or submarkets (Rothenberg et al 1991). These conditions determine the extent of filtering, direction of filtering (up or down), and how far down the income distribution moving chains reach!

1. The nature of housing supply elasticities – short - and long-run price elasticities

The Interim Report sidesteps the issue of short-run versus long-run price elasticities of supply. The key economic benefits of longer-run housing affordability is determined by the long-run price elasticity of supply. Only under a perfectly elastic price elasticity of supply can affordability measures be expected to remain unchanged over time (Galster 2025).

In the housing economics literature typical variables affecting new construction are dwelling prices (levels and changes), construction cost, credit costs, land use regulation, topography and geography. Distinguishing impacts between short-run and long-run elasticities is key to linking impacts of Reform Directions to economic benefits, particularly housing affordability.

In equilibrium – when house prices are unchanging – profitable housing building takes place to cover depreciation of existing dwellings, but not to additionally (over) supply

the market. Market-clearing house prices are a function of total quantity of housing (a stock variable) and total demand for housing services. Since new housing supply (construction) is a small fraction of total housing stock (supply), new dwellings can be sold at market-clearing prices. New housing construction is a *flow* variable. An increase in property prices (resulting from an income, interest rate or population shock/demand shock) temporarily incentivises additional building (*flow*) through profitable development opportunities, before falling back to steady state levels of production (where it again covers depreciation of existing dwellings). Dwelling output (flow) is not permanently increased but may stabilise at higher level than before demand shock, after adjustments / expansion, if depreciation remains constant or increases.

Given that prices for housing outputs are determined by total supply and total demand for housing outputs, and new developments are only a small proportion of the existing stock, new housing outputs can be sold at existing (stock) prices. New construction thus depends on the level of market prices relative to construction cost, turning new construction into a profit maximisation problem. These considerations are illustrated in the developers' profit function:

$$\text{Profit} = \text{House Price} (cc, l) - \text{cost of capital} * (k) - \text{labour} * (w) - \text{fixed costs} - \text{cost of land} * (l) \quad (1)$$

Where k is the amount of capital, w is the wage cost of labour, and l is the amount of land that is combined to produce housing services. Development profit reflects the Fixed costs include land preparation cost and transaction costs (planning and regulation). Capital, labour and fixed input costs jointly constitute combine construction costs (cc). Spatial equilibrium requires that the cost of land increases throughout already developed areas (Mayer and Somerville 2000). Abelson and Joyeux (2025) argue that the broad conformity of house prices across Australia are consistent with spatial equilibrium processes. Thus, the price of land is endogenously determined within a most studies – for instance, under residual valuation land prices are determined by movements in house prices and construction costs (as per the first element in (1)).

Dwelling prices, too, stabilise at a higher level than before demand shock, but profitability has converged back to long-run/normal profitability. Even though prices are higher (level), increased land values (Mayer and Somerville 2000) and construction costs (Ball et al 2010, Galster 2025) are eroding profitability. In the housing economics literature, it is thus the changes in house prices rather than house price levels that enable additional profitable opportunities. Our previous work also finds this for Australia (Ball et al. 2010). Ball et al. (2010) find that construction costs (material inputs and wages) and short-term interest rates are negatively related to dwelling starts in a static estimation framework. In their dynamic estimation the long-run price elasticity

remains low (approx. 0.5), but there is also evidence of much stronger short-term price elasticity of dwelling commencements.

In Table 1 short and long-run price elasticities are re-estimated for Australia for the period 1974-2024. Table 1 summarises the updated dynamic dwelling commencement regressions for houses, other residential and combined private sector dwelling supply.

Table 1 short and long-run price elasticities (1974-2024), Australia

	Short-run price elasticity (starts)	Long-run price elasticity (starts)
Houses	1.01 ⁺	0.10
Other residential	2.59 ^{**}	0.45 [*]
Total private sector	1.76 ^{***}	0.20 ⁺

Note1: $\Delta \ln \text{starts} = l. \ln \text{starts} + l. \ln \text{intrasactions} + \text{shortinterestrate} + l. \ln \left(\frac{\text{houseprice}}{\text{constructioncost}} \right) + \widehat{rhp^e} + \varpi + \varepsilon$, where $\widehat{rhp^e}$ is the expected change in real house prices derived from a disequilibrium calculation ϖ is a vector of quarterly, gst and HomeBuilder dummy variables.

Note2: ⁺/^{*}/^{**}/^{***} is $p < 0.1 / 0.05 / 0.01 / 0.001$. The houseprice/constructioncost variable construction is data validated (equality of coefficients). Newey-West standard errors.

It is also worth noting that construction costs, too, respond to changes in house prices, suggesting imperfectly elastic supply of labour and materials. Eq (3) estimates a simple error correction model for the construction cost variable (weighted average of materials (2/3) and wages (1/3)), showing that construction cost also increase as house prices increases, eroding profitability.

$$\Delta \ln \text{CC} = \Delta \ln (\text{CC})_{-4} * 0.26 + \Delta \ln (\text{CPI}) * 0.48 + \Delta \ln (\text{HP}) * 0.12 - \text{ECM} * 0.09 + \varpi \quad (3)$$

(4.01) (5.99) (3.12) (-3.74)

Adj rsq=0.75

The results illustrate some key points with respect to linking housing supply to economic benefits (housing affordability):

1. Long-run housing supply in Australia is low (in all cases the elasticity is below 1 in column 3). This means that over time, house prices will continue to increase in real terms (unless some other shock reduces demand).
2. While still below unity (<1) the long-run price elasticity of other residential development is some 4x greater than the long-run price elasticity for houses. Price trajectories for apartments and houses are thus expected to diverge over time.
3. Short-run price elasticities are *much* higher than long-run price elasticities. New constructions commencements will thus likely respond strongly to changes in profitable opportunities, such as changes in density opportunities – but these dissipate over time after an initial lift in supply following a demand shock.

4. While short-run elasticities are much higher, the short-run elasticity for houses is approximately 1. Housing output is thus much more consistent (and unchanging) than other residential output.
5. Falling house prices – such as resulting from an over-supply of housing – would incentivise a reduction in new construction (flow), potentially temporarily undershooting long-run trends.
6. Input factors are inelastically supplied. Increased profitable opportunities resulting from house price shocks are thus eroded over time as material and labour input factor cost increase. Inelastically supplied input factors contribute to lower long-term price elasticities of supply.

Overall, in none of the Australian estimates are the price elasticities of supply highly elastic. While output and, potentially, affordability are thus expected to show temporary variation, a low long-term price elasticity of supply suggests that a supply strategy – to tackle housing affordability – may primarily generate temporary impacts, without fundamentally altering the structure of Australia’s housing affordability challenge.

The elasticities in Table 1 are estimated without the presence of large-scale land use reforms. Broad-based upzoning in Auckland (2016) shows that, within the context of well-crafted metropolitan strategic planning, development control reforms can significantly lift the amount of dwelling production. From a theoretical perspective, the change in land use regulation changes the potential dwelling yield of each parcel of land and so constitutes a source of at least temporary lift in profitability and incentives to produce additional dwelling units.

Table 2 summarises short and long-run price elasticities (1990-2025) for New Zealand. **These are preliminary estimations intended to guide the Productivity Commission’s further development of a regulatory framework for housing supply and the expected societal benefits.** Table 2 summarises the dynamic dwelling consents regressions for all dwellings and other residential dwelling supply for New Zealand. Table 2 includes regressions for the period pre-upzoning (1990-2016) and for the period with upzoning (1990-2025).² The latter test of coefficient stability following the introduction of broad-based upzoning in Auckland, and then also other parts of New Zealand in subsequent years. Finally, the third set of results include an interaction effect between the upzoning period (2016->) and the level of dwelling prices relative to construction cost.

² Broad-based upzoning in Auckland’s was followed by similar initiatives in other jurisdictions, as well as national policy developments. E.g. National Policy Statement on Urban Development’ (2020) [raising building height limits within walkable catchments of urban centres and along rapid transit corridors (and abolish minimum car parking requirements)]; and Medium Density Residential Standards (2021) (parts of New Zealand).

Table 2 short and long-run price elasticities (1974-2024), New Zealand

	1990-2016		1990-2025		1990-2025 (with interactions)		
	Short-run price elasticity (starts)	Long-run price elasticity (starts)	Short-run price elasticity (starts)	Long-run price elasticity (starts)	Short-run price elasticity (starts)	Long-run price elasticity (starts)	Long-run price elasticity (starts)* Upzoning
Other residential	4.72***	-0.03	1.80 ⁺	-0.10	4.12 [*]	-0.16	2.11** (0.04)
Total private sector	3.43***	0.19	1.72**	0.18	3.15***	0.14	1.18** (0.09)

Note1: $\Delta \ln \text{consentsnz} = l. \ln \text{consentsnz} + l. \text{cashrate} + ld. \text{cashrate} + l. \ln \left(\frac{\text{houseprice}}{\text{constructioncost}} \right) + \widehat{rhp^e} + \varpi + \varepsilon$, where $\widehat{rhp^e}$ is the expected change in real house prices derived from a disequilibrium calculation ϖ is a vector of quarterly dummy, a dummy variable for the extended GFC period (2008-2011) variables, and a dummy variable for the commencement of broad-based upzoning in Auckland, followed subsequently in other NZ jurisdictions. The interaction terms consist of slope interactions for construction cost adjusted house price levels, and expected house price growth. The extended GFC term captures the initial impact of the GFC and the fallout/collapse of several non-banking finance companies with substantial construction finance (e.g. Bridgecorp, Hanover Finance, South Canterbury Finance). The dummy variable for GFC is always negative and significant, the dummy variable for upzoning is positive and significant in the two regressions without interactions; not significant in the interaction regression. The slope and upzoning interactions are significant and positive ($\text{houseprice}/\text{constructioncost}$) and negative ($\widehat{rhp^e}$). Figures in brackets (last column) show the p-value for the estimated interaction effect/beta coefficient.

Note2: ⁺/^{*}/^{**}/^{***} is $p < 0.1 / 0.05 / 0.01 / 0.001$. The $\text{houseprice}/\text{constructioncost}$ variable construction is data validated (equality of coefficients). Newey-West standard errors.

The results provide several insights:

1. Outside the upzoning period, and like Australia, short-run price elasticities are highly significant and substantially larger than long-run elasticities.³ Over the full sample (1990-2025), but excluding interactions, the short-run price elasticity declines somewhat (relative to 1990-2016), but remains comparatively large and significant. In the interaction model, the short-run interaction effect is negative and significant. The joint coefficients are statistically zero (not shown in table).
2. The long-run price elasticities across each of the sets of specifications remains largely unchanged, suggesting a reasonable degree of long-run coefficient stability. This relationship is of particular importance for long-run affordability outcomes.
3. The interaction model shows considerable adjustments in the supply dynamics following upzoning. In particular, during the measured period (2016-2025) high house price levels significantly induce additional construction. This is consistent with the upzoning reforms enabling developers to exploit existing latent land price gradients. Notably, the elasticity for all dwelling consents in this period is

³ The short-run elasticities estimated here are broadly in line with price elasticities estimated for New Zealand in Chadwick et al (2022).

approximately one. The beta-coefficient for the interaction is marginally significant ($p=0.09$). For other dwellings (apartments, town houses and units) the elasticity is even higher, approximately 2. The beta coefficient for this intervention is significant at conventional levels ($p=0.04$).

4. The available time frame unfortunately does not enable robust conclusions around fundamental changes to the long-run price elasticity of supply. However, in line with research on broad-based upzoning initiatives, it is evident that the upzoning reform at least temporarily raised the level of dwelling construction, thus offsetting some of the accumulate (and exacerbated by GFC long effects) demand pressure. As noted in the literature, convergence to new steady states can take several decades (Poterba 1984). The error correction term in the 1990-2025 model (without interaction) is 50% smaller than the error correction term in the 1990-2016 model.

The additional supply is likely also reflected in New Zealand's price-income ratio converging on their longer-term average of 7.2 (New Zealand) (Cotality 2026), but like elsewhere, housing markets in New Zealand are impacted by increasing interest rates. Moreover, while there has been a considerable improvement from the affordability spike in 2022, the ratio of 7.2 remains unaffordable to most lower-income households. For comparison, Australia's national price-income ratio sits around 8.0-8.2. In both Australia and New Zealand derived long-run price elasticities suggest that fundamental affordability challenges remain structurally embedded.

To establish best-practice for housing supply regulation, specific consideration must be given to impacts on short- and long-term price elasticities of supply. Moreover, much more detailed consideration is needed on what additional factors (other than planning constraints) might contribute to low long-term price elasticities for supply. Regulations and resulting delays to planning approvals are costly, and so impact dwelling supply. Importantly, however, the responsiveness of housing supply to prices is also influenced by historic patterns of land use (Meen and Nygaard 2011), the interest of current landowners (Evans 2004), availability and cost of construction industry labour and skills (Productivity Commission 2025), as well as the microeconomics of the construction industry itself (Evans 2004, Adams et al 2009, Leishman 2015).

2. The amount of new supply required to achieve housing affordability improvements

Planning for housing affordability outcomes and required supply responses cannot be undertaken based on a given level of demand. Demand changes in response to population growth, as well as income growth, societal trends (households formation trends independent of affordability), tax and monetary policy, and the long-term asset value trajectory of housing.

While the Commission’s Interim report states that ‘Broader policy settings such as taxes (including stamp duty), interest rate setting and finance affect investment decisions for housing development’ are not considered by the Inquiry, conclusions around the efficacy of raising housing supply in affecting affordability improvements, cannot be considered in isolation from such variables.

Our research (Nygaard 2026) clearly demonstrates the conditionality of housing affordability outcomes of different levels of aspirational housing supply on jointly considering movements in supply and *demand* determinants.

Table 3 reproduces the modelling of affordability impacts from alternative housing supply scenarios in Australia from Nygaard 2026. In the analysis, interest rates are held constant. Changes in interest rates and taxation would additionally affect projected price-income ratios.

Table 3 Estimated improvements in house price affordability each 5-year period, and to 2045

	Δryd = 2.5%	Δryd = 6.0%	Δryd = 7.5%	Price-income ratio in 2045 if Δryd = 2.5%	Price-income ratio in 2045 if Δryd = 6.0%
Supply target 1.2m/5 years	-4.1%	-2.3%	-1.6%	6.68	7.25
Supply target 1.5m/5 years	-8.2%	-6.4%	-5.6%	5.39	5.97
Supply target 2.0m/5 years	-14.7%	-12.8%	-12.1%	3.30	3.87

Source: Nygaard (2026).

Note: The estimations in columns 5 and 6 assume a starting price-household income ratio of 8 in 2024. Estimations are also based on *ceteris paribus* assumptions, including the (unrealistic) assumption that achieving alternative supply targets are otherwise economy neutral (impact on wages, materials, labour). Supply targets are gross targets. In the impact calculations these are translated into net supply by assuming that demolitions/removals constitute 12 per cent of new supply (based on the average demolition rate 2016-2022).

As a generalisation, to achieve significant affordability improvements, housing supply needs to meet demand arising from new household formation (which is also endogenous to affordability outcomes) *as well as* additional economic determinants of housing demand. Under Australia’s current housing market conditions (long-run price elasticities, and income/price elasticities of demand), even achieving considerable uplift in dwelling units supplied will likely only generate modest affordability improvements and potentially none for lower-income households.

Importantly, the results in Table 3 are also conditional on constant long-run price elasticity of supply. Therefore, a critical area for the Productivity Commission to develop its evidence base is whether Reform Directions are expected to fundamentally alter long-run (as well as short-run) price elasticities of supply. This relationship is fundamental to the longer-term economic benefit (housing affordability) that reforms may (can) yield.

3. The nature of dwelling products supplied – housing services and housing units

Reform Direction 2, without explicitly stating so, equates housing supply with units of new build. While planning and policy statements often boil down to discussions of simple unit numbers, the relationships between numbers and prices changes and affordability are not straightforward. Households consume housing services, a function of the attributes provided by dwelling units; developers combine land and capital into units of housing services (Baum-Snow and Duranton 2025, also relevant to Equation 1). Income elastic demand for housing services alters the nature of the housing product that is demanded. While this might be expressed in the form of multiple property ownership (several dwelling units) it is more conventionally expressed in demand for dwellings that offer a greater bundle of services (quality, size, rooms, internal/external amenities).

From an affordability and house price dampening perspective there is thus an inherent tension (risk of tension) between Reform Direction such as 2.6 and demand for housing services. Lower quality dwellings (including smaller) units under conditions of a growing population and/or incomes adds a scarcity value to the existing housing stock that is not satisfied by new supply and/or smaller dwelling units. For instance, Australian research suggests that alterations and additions to the existing housing stock raises housing values by approximately 1% per annum (Abelson and Joyeux 2025).

New dwellings typically are higher quality (greater housing services) compared to older dwellings. For instance, minimum NatHERs standards ensure greater thermal comfort and until 2008-09, the average dwelling size for new houses and other residential dwellings tended to increase. However, the average dwelling size of newly constructed dwellings (houses and other residential) peaked around 2008-09 for new houses and other residential, before declining marginally until 2017-18 (the peak of the apartment construction boom) – 5.4% and 14.9% for new houses and other residential, respectively (ABS Building Activity, Dec 2022). This is also the case in New Zealand where the average dwelling sizes peaked in 2012-13 and where the size of stand-alone houses and other residential dwellings subsequently declined by 14.8% and 9.7% between 2013 and 2025 (Stats NZ 2025).

Two areas that require more detailed treatment and consideration in the proposed Reform Directions are therefore:

1. Ensuring that new construction ‘meet people’s needs’
2. Assessment of the extent to which price and affordability impacts reflect genuine supply effects or reduced housing service provision, and consequently lower price.

4. The impact of local planning on housing supply and affordability

The evidence in this section draws on research undertaken by City Futures Research Centre staff in 2020-21, involving 87 leading Australian professional economists and housing specialists to assess their views on the relationship between housing markets and the wider economy, including affordability and supply (Pawson *et al* 2021). An online survey was followed up by in-depth interviews with 20 of this group (all but one, an economist), chosen to reflect a variety of views as expressed through the survey responses.

This body of work is pertinent to the focus of the Productivity Commission's consultation. It reveals that leading commentators hold diverse opinions on the role of planning in influencing housing supply and affordability. Unlike the impression given in the Interim Report, there is by no means an expert consensus on these issues.

A wide range of propositions pertaining to the housing system and the wider economy were canvassed in the survey and follow-up interviews. These included two statements focusing on prevailing critiques of the planning system⁴.

The first of these, related to local planning, we take to encompass LGA responsibilities in establishing local development control plans that regulate and permit development within their boundaries. Decision making vested at that level is usually undertaken by council members, planning staff or advisory expert Panels, while sometimes decisions are passed to the relevant state/territory Minister.

The second proposition concerned the role of strategic planning in promoting regional development, including the need to align both land use and economic development policies to support broader economic development goals. In Australia strategic land use planning remains a responsibility of state and territory governments, albeit often implemented by local councils. A key function of metropolitan and regional strategic plans is to better coordinate the future location of both housing and economic activity. In this way, strategic planning has a significant influence on the future housing supply process.

Importantly, this aspect of planning also encompasses a major integrative function linking land use outcomes with major investment decisions made by governments on infrastructure provision, both hard (rail, road, etc) and soft (schools, health facilities, etc). Although often not directly linked to housing supply, these major infrastructure investments themselves have a significant impact on housing supply going forward and

⁴ Land use planning is broadly defined here as both planning for determining longer term strategic land uses across a region and more local development control planning regulating development.

are often branded as ‘city shaping’ interventions aimed at guiding future development activity.

Although local and state/territory governments play the dominant role in the planning system itself, including on infrastructure development, the Federal government is also very influential, both at the level of larger scale infrastructure investment decisions, and also in the many other policy areas that play out in both housing and labour markets across the country.

Planning is therefore a multi-scalar and multi-agency process, encompassing local land use controls, strategic regional level decision making, infrastructure coordination and national investment priorities. This adds significant complexity to developing an accurate understanding of the role the planning system plays in housing supply outcomes across Australia.

Not surprisingly, given such a multi-scalar governance context, research interviewees did not necessarily always differentiate between these levels of government, and this is reflected in the discussion below. This latter point highlights that in practice spatial planning is a constitutionally devolved responsibility. Consequently, there are a wide variety of planning frameworks as each state and territory is responsible for determining its own planning system. This adds significant complexity to developing a full understanding of the role the planning system plays in housing supply outcomes across Australia.

Expert insights

Expert interview responses on this topic revealed the complexities of the issue. On the one hand, there was a strong view amongst some, especially economists, that planning indeed obstructed efficient land use outcomes, especially in rapidly growing areas:

The way that planning is inefficient and where the processes are particularly are inefficient then you will exacerbate supply constraints. But the experience there are also highlights that when local governments aren't really on top of the strategic needs or they lack the resources and a number of other considerations, you'll get bottlenecks.
(Government G1)

But there was a recognition that variations in the range of local government responses to development needed to be factored into any argument on supply constraints:

I mean, there's no silver bullet here, but some jurisdictions do it better than others I think the ones that tend to do it very efficiently sort of understood that the population and the business growth was actually really important to the local government, and that the planning system and its efficiency was a result. (Government G1)

In a perceptive comment, one respondent differentiated between two separate issues regarding the impact of the local planning system on supply. This was the

difference between the *efficiency of the system* itself – the time taken to make a decision – and the *outcomes of that decision*, which is often the main source of contestation:

The difficulty of this is that I think economists that see the decision making as being really important are actually conflating two dimensions. One is the efficiency of the decision-making process and clearly these are going to be made [quicker] from more efficient processes..... And the second thing that I think people on that side of the fence are saying is actually that the nature of the decisions should be different. And I think the debate around the second is far more important than the debate around the first. (Government G3)

More generally, there was a wide recognition from respondents that planning was only one of a range of factors, and possibly a relatively minor one, that impacted on housing supply and affordability:

There are bigger macro-issues that are more important. LGAs are getting quicker at turning around DAs, but it's a bigger issue than that. Federal and State government has the main levers on house prices. (Consultancy C3)

I do think planning plays a role both positive and negative. But I just don't think it's credible to argue – as do, say, the Grattan Institute – that the planning system is primarily at fault. I think there are a range of factors, you know, monetary policy, for example, which has helped inflate housing prices. Strong population growth ... growing inequality. So there's a myriad range of factors. (Academic A3)

One reason for planning delays is that developments, especially involving urban renewal infill sites, have become much larger and more complex in the last decade or so, and this will inevitably have an impact on the time taken to review and adjudicate on proposals. We present empirical evidence on this issue in Section 4 below.

Moreover, the role of local planning in constraining supply was unequivocally dismissed by one urban economist, placing the emphasis on land owners who carefully manage land release:

There are no serious supply constraints through the planning system in our country In central Melbourne there's 40 years supply. 40 years supply! It is not ... that planning constrains the production of multi-unit housing; the constraint rests with the holders of those developable sites. And therein lies a major challenge. How do you get them to release this land? But it's not it's not as if the planning system is rationing. It's not the limiting factor. It definitely is not. There are incentives for landholders to hang on to their land ... windfalls to be gained from that process. And so we need to look outside of the planning system to address that and, in particular,

you know, asserting public ownership of development rights and taxing [them]. (Consultancy C2)

This was echoed by an academic housing economist:

We have had very healthy levels of supply in Australia compared to other countries. Perhaps they're not being built in the right places or perhaps they're not being built in areas where people really need them. But they're being built and I have more concerns about the demand side factors. (Academic A8)

The important role the development industry plays in determining supply was also a key factor which impaired the competitiveness in the market:

We have a system now where basically only really big companies with deep pockets can participate. So the development process was a lot more competitive in the past, lots of small players could be in it. But you know the time it takes to acquire land, get it through the system, get it developed takes a long time and deep pockets? And so it's not very competitive ... particularly with move to pretty much everything being master planned and we obviously pay a price for that. (Academic A7)

Finally, some saw the issue of housing supply as linked to the efficient system of taxing land value increments, rather than planning, which led to perverse incentives to game value uplift outcomes by landowners and developers through land banking:

An appropriate tax on the increase in land values ... [which] could completely change the incentives of the developers and the landholders (Consultancy C6).

Overall, the research demonstrated diverse views about the role of the planning system on housing affordability. When asked if local government planning decision making was a major cause of poor housing outcomes, most disagreed, although economists were less likely to disagree than non-economists. Nevertheless, local councils were criticised for failing to deliver clear and consistent decisions on development, especially in areas of rapid growth. Local politics – NIMBY-ism – could also be a problem in higher value locations. Others, however, saw planning as only one of several factors, and possible only a minor one, impacting the supply and price of housing. The role of the development industry itself in determining rates and locations of housing supply was also highlighted.

5. The impact of strategic planning on housing supply and affordability

The evidence in this section also draws on the research described under Section 4 above, undertaken by City Futures Research Centre staff in 2020-21. This involved 87 leading Australian professional economists and housing specialists to assess their views on the relationship between housing markets and the wider economy, including affordability and supply (Pawson *et al.* 2021).

Expert insights

While the panel of experts broadly supported the indictment of strategic planning voiced in the survey proposition, their testimony also revealed a nuanced understanding of the issue. For example, for one interviewee, it was less a case of strategic planning being inefficient in itself, and more a matter of constraints on appropriate implementation:

I think it's probably that I'm more concerned about the execution or implementation of those plans ... And the dishonouring of those plans by the Parliaments (Academic A1).

Inevitably, the tension between the longer-term objectives of strategic planning and the short-term goals of the market came up. The move to more compact development was recognised, but the market often has other objectives. In discussing the impact of planning in shifting towards more compact city development one interviewee noted:

Strategic planning ... has actually created the change in density in cities that wouldn't have happened had you had not that strategic planning and as much as there may be problems with it, it has actually created a bit of diversity. (Academic A6).

Tensions between government departments themselves were identified as a critical issue, as well as a lack of *integrated* strategic planning at the city level leading to a governance gap in the planning and implementation process.

There is a disconnect between the way we plan for the spatial economy and the way we plan for housing production. [State governments are] prone to silos and they have different drivers And institutionally we're not capable of reconciling that tension ... because we don't have metropolitan governance (Consultancy C2).

At the same time, however, other respondents felt that strategic planning had only a minor role in housing supply and the spatial outcomes it generates, or indeed, if strategic planning was much of a real problem:

Urban development's got very little to do with planning. It's got a lot to do with investment. The quality of planning bears little relationship to urban development in Australia, or elsewhere. The incentives are so strong for the private sector to try to make [large profits from land development] (Academic A2).

Because there's so many macro policies that drive the [market] Certainly, when I talk about this to other economists, I rarely get the notion that the problem is [mainly] obstacles to supply (Academic A5).

Strategic planning is just one of many issues (Consultant C8).

Overall, there was a broad consensus that poor quality strategic planning had led to spatial mismatches between housing and employment, especially in the major cities.

Tensions between the goals of land use planners who developed strategic city plans on the one hand, and the state agencies who determined major economic and infrastructure decision making, on the other, were seen as significantly impairing policy integration at the city scale. This was attributed to a lack of effective metropolitan scale governance. The insights here support Reform Directions intended to enhance infrastructure coordination and sequencing, but also that suggested planning reform require deeper engagement with metropolitan governance more broadly. Notably, as discussed in our ‘general feedback on Interim Report’ (see above), a key pre-cursor to Auckland’s broad-based upzoning, was institutional reform and concentration of decision-making authority within a single body (the Auckland Council) in 2010.

In seeking to address the role that planning system plays in housing supply, care must be taken to explore both the complexity and multi-scaled characteristics of the processes involved, the varying influence the three levels of government play in the process with all levels having hands-on various levers that impact supply outcomes, and the active involvement of the development industry and landowners in managing the process.

6. The impact of planning on project development time

The evidence in this section is based on analysis of 1,897 multi-unit residential development sites across metropolitan Sydney accounting for some 86,000 lots for which a planning application for multi-unit residential development was approved between January 2010 and March 2019. The dataset was limited to schemes with a minimum size of five strata lots. The size distribution of these schemes reflected the overall profile of schemes across Sydney, ranging from five units to 1,485 units in the largest scheme.

Data on four key datasets were matched to cadastral records to conduct the analysis:

- Sales of land which would be used as development sites
- Applications for planning permission to develop sites into multi-unit residential buildings, including the time taken to assess these applications,
- The sale of residential units, including off-the-plan sales, and
- The registration of strata plans, used as an indicator of building completion.

These data sets were obtained from the relevant NSW Government agencies, including the NSW Department Planning, Infrastructure and Environment (development approvals) and the NSW Valuer Generals Department (strata registrations) and NSW Land and Property Information (land and property sales). These were combined to obtain information on the characteristics of the multi-unit residential schemes over the study decade, such as the project’s size and its progression through various stages of

development. The following analysis draws on examination of these 1,897 multi-unit schemes across greater Sydney.

To examine the timelines of each development, we took five key dates to distinguish between different stages of a development, derived from a range of data sources linked at the cadastre (land parcel) level:

- i) The first purchase of land for the development site
- ii) The lodgement of the first successful application for planning permission for the development
- iii) The approval of the same application
- iv) The first sale of a strata unit
- v) The registration date of the last strata plan associated with the project.

These dates were translated into the follow four key stages based on an anticipated sequence of events within a typical development:

Stage 1: Pre-lodgement Phase - Land sale to development proposal lodgement

Stage 2: Development Approval Phase - Lodgement to development approval

Stage 3: Pre-sales Phase – Approval to date of first strata lot sale

Stage 4: Sales to Completion Phase - First sale to final strata registration

Note that data for commencement on site, obviously a key stage, is not available from administrative datasets, and therefore remains unknown.

Analysis insight

Results from this research are instructive in relation to the PC consultation concerns with the speed and complexity of approvals processes in delaying in new housing production and viability.⁵

Across the 1,897 developments examined, the average amount of time spent assessing the planning applications for each of these sites was 208 days,⁶ within an average total time for a development of 1,366 days (3.4 years) from first land acquisition to strata registration. In other words, the data indicate that the planning determination process itself accounts for 15% of the total time taken to bring a typical multi-unit development to completion.

It was clear from the data that multi-unit development is a complex process with a range of approaches to delivering a scheme. For example, while the most common sequence of events followed the timeline outlined above (land acquisition, lodgement,

⁵ This analysis draws extensively on the forthcoming publication Randolph et al. (2026).

⁶ This very close the average time (7 months) assessed as 'reasonable' for a infill (multi-unit) development in Sydney by The Centre for International Economics for the HIA in 2019 (<https://hia.com.au/-/media/HIA-Website/Files/IndustryBusiness/Economic/research/cie-taxation-of-the-housing-sector.ashx?la=en&hash=7FB11328518224A1D60EB14EEEB4CB79D139B29C>).

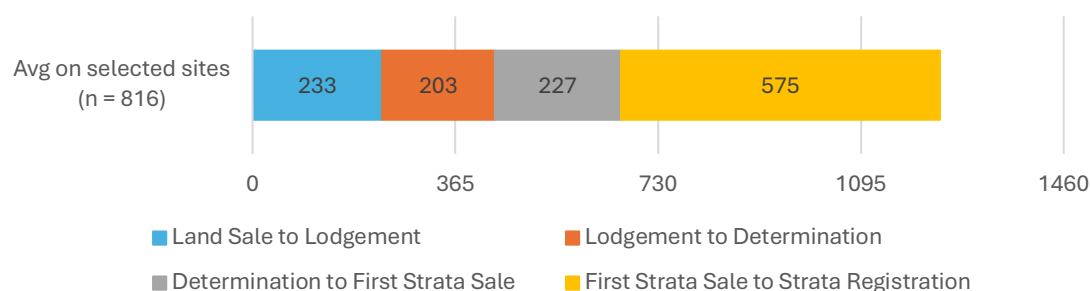
approval, first lot sale and strata registration), this series of processes accounted for just 44% of the all the schemes in the sample. Other common staging strategies included

- completion of land acquisition following lodgement or after development approval
- on-selling of the site with development approval.

For the 43% (816) schemes with the most common sequencing, the breakdown of staging is shown in Figure 1. In this sequence of steps, the first stage (shown in blue) reflects site acquisition (potentially involving multiple parcel purchases), design processes and preparation of a planning application. The median time before DA lodgement was 233 days, although the mean was 839 days, indicating a significant number of schemes where land was held for extended periods before redevelopment, indicating a degree of ‘land banking’. This stage also includes those cases where the development was not initially compliant with existing planning controls (either because of a rezoning proposal or the submission of non-compliant planning applications) which may have caused the proposal to be initially rejected.

The second stage (shown in orange) represents the time taken for the planning application to be assessed and approved by the relevant planning authority. For these schemes this averaged 203 days, very close to the time recorded in the entire sample of 1,897 schemes.

Figure 1: Typical total development timeline, Sydney multi-unit schemes 2010 – 2020 (n=816) (days)



Source: City Futures Research Centre – Developing the Compact City (unpublished)

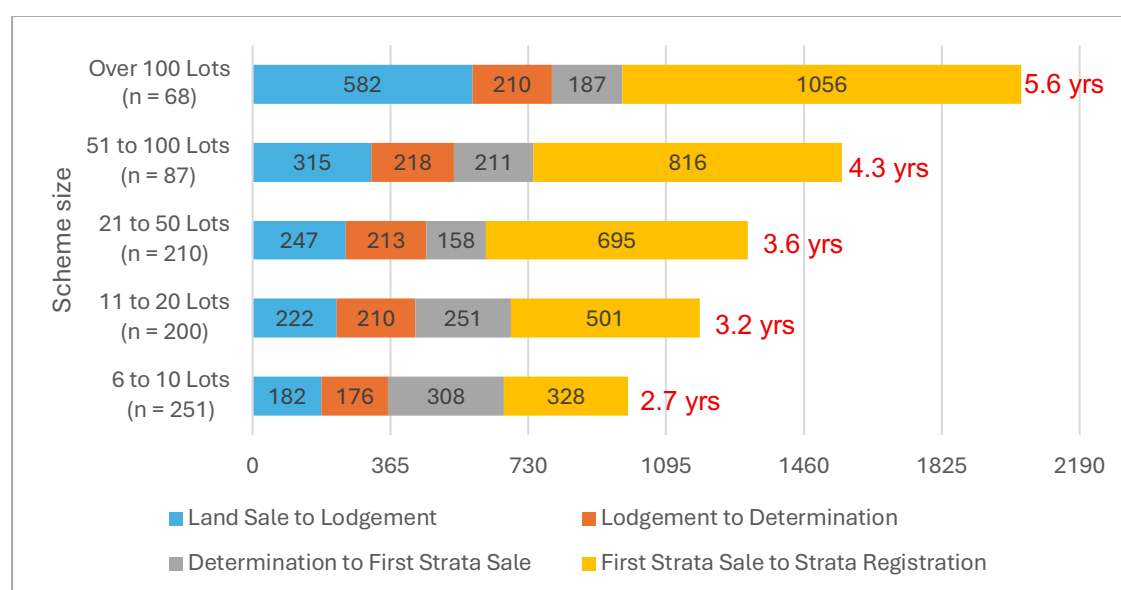
The third stage (shown in grey) represents the time taken between determination and the first ‘off-the-plan’ sale, typically just over eight months. In this period, the developer is typically finalising the design, appointing builders and securing finance. The final stage (shown in yellow) essentially represents the construction and marketing period which might include modification to the original planning approval. The end of the

process is marked when the completed strata scheme is registered with the Valuer General, essentially on practical completion. Overall, the average length of time from planning approval until completion (the grey and yellow colour bands) extends for around 2.4 years.

What is noticeable in the above analysis is that the time taken to determine a planning outcome for these developments constitutes the smallest component of the process. It should be recognised, however, that the pre-submission period may well entail pre-lodgement negotiations with Council as well as preparation of the required supporting documentation. As such, these might be considered as part of the planning process, but there is no recorded data to allow this to be assessed.

The variation in average time taken by the size of the development scheme is presented in Figure 2. This shows that the average scheme delivery times increases substantially with increasing size of scheme, from 2.7 years for small (6 -10 lot) schemes to 5.6 years for schemes over 100 lots. That larger schemes take significantly more time to deliver is no surprise. However, several points are worth noting. Firstly, the time taken for the assessment process does not vary greatly across the scheme size range. Secondly, the delivery (first sale to registration) stage imparts the greatest variation with larger schemes taken much longer to finalise, not surprisingly. Thirdly, the main difference appears to be the pre-lodgement period which rises significantly as scheme size (and by implication, complexity) increases. These large schemes are often delivered in several stages, each with separate planning determinations, marketing campaigns and strata registrations. Finally, it is noticeable that the assessment period averages 12% of total development process duration for the smallest schemes, but only 8% for the largest schemes.

Figure 2: Typical development timelines by size of scheme, Sydney multi-unit schemes 2010 – 2020 (n=881) (days)



Source: City Futures Research Centre – Developing the Compact City (unpublished)

Several conclusions can be drawn from the above analysis. Crucially, the process of gaining a planning determination represents only a modest proportion of the total time taken to bring a multi-unit development to completion. In our total sample, this averaged 30 weeks out of a total development time of 3.4 years. Clearly, while important – after all, planning approval determines whether or not the scheme proceeds – it is just one component of what is a time consuming, complex and multi-risked activity. Halving the time taken between lodgement to determination, if that were possible, would only reduce the overall delivery time by an average of 7%: important, of course, but not critical. For the largest schemes, halving the determination period would reduce the overall development period by just 4%. It is difficult to conclude from these data that the time taken to undertake a development determination represents a major constraint on scheme delivery.

Additional insights for Information Requests

Information Request 1.1: How can governments improve housing regulatory systems to better meet the housing needs of Aboriginal and Torres Strait Islander people and communities

Framing housing need and affordability challenges largely in terms of dwelling supply numbers indicates a mistaken diagnosis of the problem as resulting entirely from housing shortage. Regulatory reform is timely and welcome in many respects, however, the Interim Report, and its terms of reference, is a one-sided view of the challenge and solutions that ignores the inefficient and inequitable distribution of housing in Australia.

This is particularly pertinent when considering the housing needs of Aboriginal and Torres Strait Islander people and communities. These are challenges that, to a greater extent, require engagement with the distributional outcomes of how housing markets and Australia's economy more broadly work.

Issues affecting housing supply and its distribution in relation to First Nations' Australians should be subject of specific consideration under the C/W's 2025 First Nations Economic Partnership (Economic Partnership) governance mechanism.⁷ This Economic Partnership is specifically intended 'to advance the economic empowerment and lasting economic security for First Nations peoples, communities and organisations... and 'to support increased productivity and economic growth.'

Housing supply and housing upkeep are fertile fields in this regard through their potential to boost employment and business opportunities, and also to improve the housing choices and housing equity of First Nations Australians. The Economic Partnership could be asked to inform necessary reforms to planning and regulatory policy and to consider further ways to address the lack of local infrastructure where this is adversely affecting housing supply on Aboriginal and Torres Strait Islander lands and in town camps and discrete communities, many of which are former missions and reserves.⁸

Information Request 2.1: What features should governments have in mind when evaluating reforms to move housing regulatory systems towards best practice?

As argued in this submission, the Interim Report and analysis is overly focused on dwelling unit supply, and somewhat simplistically ties units supplied to major societal outcomes, including meeting housing needs (housing services versus units supplied) and distributional outcomes (access to housing and housing affordability).

Information Request 2.1: Do design-focused regulations (e.g. tree canopy requirements, apartment layout and storage) directly impact commercially feasible capacity?

The consideration of this IR needs to balance assessment of commercial feasibility of unit/numbers construction against the housing services provided by new developments. The fundamentals of housing economics and housing market adjustments relate to housing services.

⁷ <https://treasury.gov.au/publication/p2026-806026>

⁸ The latter are the communities specifically referenced by Closing the Gap outcome 9b, which in summary aims to ensure all Aboriginal and Torres Strait Islander households in discrete communities or near towns receive essential services that meet or exceed relevant community standards by 2031.

Information Request 2.1: Can you provide information, data, or analysis on development cost stacks across different housing typologies and geographic areas (for example, construction cost information)?

The process of gaining a planning determination represents only a modest proportion of the total time taken to bring a multi-unit development to completion. In our total sample, this averages 33 weeks out of a total development time of 4.7 years. Clearly, while important – after all, planning approval determines whether or not the scheme proceeds – it is just one component of what is a time consuming, complex and multi-risked activity. Halving the time taken between lodgement to determination, if that were possible, would only reduce the overall delivery time by an average of 7%: important, of course, but not critical. For the largest schemes, halving the determination period would reduce the overall development period by just 4%. It is difficult to conclude from these data that the time taken to undertake a development determination represents a major constraint on scheme delivery.

Information Request 2.2: Can you provide information, data or analysis on the degree to which available land is a barrier to new housing supply?

International research on broad-based upzoning, and the timeseries analysis presented above, suggests that the effective dwelling yield of land is related to at least temporary lifts in housing supply. However, a particular area for further development and research by the Productivity Commission is whether the land availability and effective dwelling yields also fundamentally alter the long-run price elasticity of supply. The latter is of particular importance to affordability outcomes. The evidence presented in this submission shows a degree of coefficient stability in the long-run price elasticities before and after broad-based upzoning

Information Request 2.3: What are the expected impacts of reforms on zoned capacity, commercially feasible capacity and/or other measures of supply?

Upzoning of inner and middle ring urban areas area expected to, at the very least, temporarily lift the number of dwellings supplied. At the same time, the additional supply is likely to consist of smaller dwellings in terms of number of rooms and/or smaller dwellings in terms of square meter floor area. Ensuring that new dwellings meet people's needs (as per the overarching objective) requires a regulatory framework that adequately balances developer's commercial / feasibility imperatives with people's housing needs and income elastic demand for housing services.

Information Request 5.1: How can the Australian Government ensure housing regulatory system reform is implemented in a manner that supports all governments' commitments under the National Agreement on Closing the Gap?

The Reform Directions currently do not engage with this issue in a meaningful manner. Any supply effects will affect market averages, rather than specific or lower-end price segments. To achieve commitments under the National Agreement on Closing the Gap specific mechanisms – such as provision of social and affordable housing – are required that directly link new dwelling production to intended population groups. Distributional requirements required to meet Closing the Gap, as well as other population need outcomes, are largely neglected throughout and cursorily assumed to arise through filtering processes. As noted in our submission, the discussion of filtering in Box 1 is far too simplistic to meaningfully address distributional outcomes.

In relation to housing First Nations Australians, also see our response to Information Request 1.1.

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