

NSW Productivity and Equality Commission

Review of housing supply challenges and policy options for New South Wales

Final report

August 2024



Acknowledgement of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We pay respect to Elders past and present and commit to respecting the lands we walk on, and the communities we walk with.

We celebrate the deep and enduring connection of Aboriginal and Torres Strait Islander peoples to Country and acknowledge their continuing custodianship of the land, seas and sky.

We acknowledge the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

We reflect on the continuing impact of government policies and practices and recognise our responsibility to work together with and for Aboriginal and Torres Strait Islander peoples, families and communities, towards improved economic, social, and cultural outcomes.

Artwork:

Regeneration by Josie Rose



About the NSW Productivity and Equality Commission

The NSW Productivity and Equality Commission (formerly the NSW Productivity Commission) was established by the NSW Government in 2018 under the leadership of its inaugural Commissioner, Peter Achterstraat AM.

Productivity growth is essential to ensure a sustained growth in living standards for the people of New South Wales, by fully utilising our knowledge and capabilities, technology and research, and physical assets. The Commission is tasked with identifying opportunities to boost productivity growth in both the private and public sectors across the state. The Commission seeks to continuously improve the NSW regulatory policy framework and identify levers that can increase competition to deliver better and more affordable goods and services for NSW residents.

The Commission's priorities include:

- productivity and innovation
- fit-for-purpose regulation
- efficient and competitive NSW industries
- climate resilient and adaptive economic development.

The Commission provides objective, evidence-based advice to the Government.

In 2024, Mr Achterstraat was reappointed for a further two years in the expanded role of Productivity and Equality Commissioner. In performing its functions, the Commission considers equity and how costs and benefits are distributed across the community and over time. For instance, the Commission's research on housing examines the equity and environmental benefits of policies and reforms to improve housing affordability, beyond the overall productivity and economic benefits.

The Commission regularly engages with stakeholders to ensure its research and recommendations are well-informed and to encourage a public conversation on productivity reform.

Disclaimer

The views expressed in this paper are those of the NSW Productivity and Equality Commission alone, and do not necessarily represent the views of NSW Treasury or the NSW Government.

The NSW Productivity and Equality Commission's recommendations only become NSW Government policy if they are explicitly adopted or actioned by the NSW Government. The NSW Government may adopt or implement recommendations wholly, in part, or in a modified form.

Commissioner's foreword

We need more homes, and we need them quickly.

Under the National Housing Accord, our mission in New South Wales is to build 377,000 well-located homes in just five years – a huge ambition, but the right one. A big increase in housing supply is just what our state needs to become a more inclusive, affordable, and prosperous place to live. Every extra home we build makes a difference.

This report is about looking our housing challenge in the face. It is also about practical solutions. Our message is a positive one: as difficult as conditions are right now, there is plenty we can do to build more homes quickly, now and in the future.

A key theme of this report is the need to free up and expand our capacity to build homes – with a practical focus on land, labour, materials, and processes. My previous reports have talked about how to use our land more efficiently through density done well. The NSW Government has taken bold steps in this direction. More can and should be done, and we need to keep the community's trust while we do it. Change can be difficult, but we can all gain from building more homes in the right places.

This report gives practical recommendations to make New South Wales a pro-housing state. Australian governments need to reduce their demands on the construction sector so it can deliver more homes. We need to unplug the development approval process and allow the use of new technologies and ideas. We need to grow our local construction workforce and bolster it with more migrants with construction skills.

We also need to make sure we build housing that's right for people of all incomes, family sizes, and stages of life. We can do this through investments in social housing and smart regulatory changes that make it profitable to build the diverse housing people need.

I apply a productivity and equality lens to the housing challenge. The Government will no doubt have regard to other factors when considering my recommendations.

The Commission could not have delivered a report of this importance and urgency without the time and expertise of dedicated colleagues across NSW Treasury and the NSW public sector. I thank them all. This report was a team effort, but any remaining errors are my own.

Finally and foremost, I thank the numerous industry stakeholders, including many experienced builders, who contributed to this Review. I was inspired by their passion, commitment, open minds, and desire to do more. Their ideas are reflected on the pages of this report, and their dedication makes me optimistic.



A handwritten signature in blue ink that reads "Peter Achterstraat". The signature is written in a cursive, flowing style.

Peter Achterstraat AM
NSW Productivity and Equality Commissioner

Abbreviations

Acronym	Term
ABS	Australian Bureau of Statistics
ADG	Apartment Design Guide
AEMO	Australian Energy Market Operator
APRA	Australian Prudential Regulation Authority
CDC	Complying Development Certificate
CIE	Centre for International Economics
CRA	Commonwealth Rent Assistance
CSOL	Core Skills Occupation List
HaPC	Housing and Productivity Contribution
HBCF	Home Building Compensation Fund
DA	Development application
DCP	Development control plan
DSP	Development Servicing Plans
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
IPART	Independent Pricing and Regulatory Tribunal
ISLP	Infrastructure Skills Legacy Program
JSA	Jobs and Skills Australia
LGA	Local Government Area
MMC	Modern methods of construction
NCC	National Construction Code
PDU	Planning Delivery Unit
RAB Act	Residential Apartment Buildings (Compliance and Enforcement Powers) Act 2020 (NSW)
RBA	Reserve Bank of Australia
RIS	Regulatory impact statement
SARA	State Assessment and Referral Agency

Acronym	Term
SBC	Strategic biodiversity component
SEPP	State Environmental Planning Policy
STRA	Short-term rental accommodation
TPC	Transport projects component
TPEW	Trade Pathways for Experienced Workers
TOD	Transport Oriented Development
VET	Vocational Education and Training
WiT	Women in Trades

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Executive summary

New South Wales is not building enough homes right now

The more well-located homes we build, the more New South Wales benefits. Building more homes in the right places makes renting more affordable and puts home ownership within reach. It delivers important social, environmental, and economic benefits, for today's community and for future generations.

Despite the need for more well-located homes, new dwelling completions in New South Wales have fallen in recent years and subdued building approvals point to further challenges ahead.

Under the National Housing Accord, Australia's governments aspire to build 1.2 million homes over the next five years. As part of the Accord, New South Wales aspires to deliver 377,000 new homes by mid-2029. Sydney will need to deliver most of those homes but as of December 2023 is forecast to deliver only 172,900. Much more work is needed to lift housing supply.

This Review is about building more homes, now and into the future

In June 2024, the NSW Premier asked the NSW Productivity and Equality Commission (the Commission) to undertake a Review to identify the housing market, residential, and construction industry barriers currently impacting housing supply in New South Wales and the actions needed to address them (see Appendix A: Terms of Reference).

The Commission was asked to focus on non-planning challenges to housing supply. These include:

- barriers affecting the feasibility of development
- construction industry capacity
- macroeconomic conditions
- finance for development and construction
- building regulation
- construction costs
- skills shortages.

The Commission has undertaken research and stakeholder consultation to inform its findings and recommendations.

Currently, development feasibility is low and holding back supply

Many residential development projects in Sydney are not feasible in the current economic climate – in many places, the sale price of a new home such as an apartment does not cover the costs and risk a developer faces to build that home. As a result, many residential developers are pausing their projects until the numbers stack up. Low feasibility is being driven by high interest rates and high construction costs, which have increased costs relative to the prices developers receive for selling new homes.

Analysis that the Review commissioned from the Centre for International Economics (CIE) shows that the indicative cost of delivering a new apartment in a typical mid-rise apartment block in Sydney has risen from \$666,000 in 2018 to \$905,000 in 2023, an increase of \$239,000 or 36 per cent. Compared with an estimated sale price of \$885,000, the increase in costs suggests that many residential developments are not feasible to deliver in the current environment.

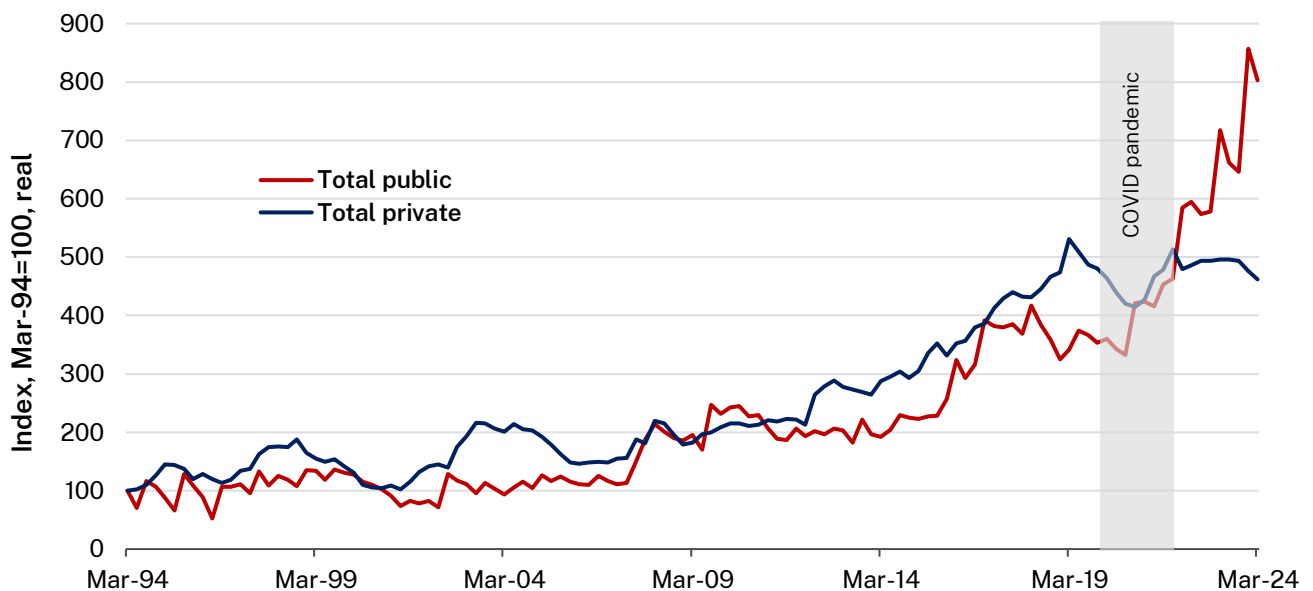
Low feasibility partly reflects a construction sector that is at capacity delivering Australia’s public infrastructure projects

A major reason the construction sector is struggling to deliver homes across Australia is because governments are diverting resources from homebuilding to public infrastructure projects. Australian governments have spent significantly on major infrastructure over the past 10 years. These projects are outbidding developers for labour and materials. This makes many residential projects unfeasible and holds back the supply of new homes.

This ‘crowding out’ effect is national but has been significant in New South Wales where the infrastructure program has been more ambitious than any other state. Since the COVID-19 pandemic, the value of construction work yet to be done in the NSW public sector has increased by close to 40 per cent, while growth in the private sector has remained relatively flat (Figure 1).

Figure 1: Work yet to be done in the public sector has outgrown the private sector in NSW

Construction expenditure, public and private sector



Source: ABS and NSW Productivity and Equality Commission.

To build more homes quickly, governments should work to free up capacity

Housing completions are highly sensitive to the capacity of the construction sector. All governments should work together to reprioritise capital spending based on merit while freeing up capacity in the construction sector and containing cost pressures. Infrastructure should also be sequenced to support delivery of more homes quickly, especially in areas with high feasibility.

Tax breaks and subsidies for developers should be used sparingly. These policy tools generally increase demand, not supply, and are ineffective when the construction sector is operating at capacity. Where financial assistance is being considered, governments should prioritise targeted relief for people experiencing housing stress.

Support housing supply by allowing more density in feasible locations

Large gains to feasibility can be made by allowing greater density where people want to live, especially highly valued inner-ring locations well-connected to transport. Planning constraints, especially zoning restrictions, make developable land scarce in these feasible areas, pushing up the cost of acquiring sites for development. Land acquisition was the second largest cost of developing new mid-rise apartments in Sydney in 2023, after construction costs. The government can support

housing supply by allowing further density in feasible locations – including by expanding the Transport Oriented Development (TOD) Program in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD.

Planning reform can also support feasibility in other ways. Increasing the pipeline of industrial land and using existing industrial land more strategically and efficiently can make more sites available for housing and reduce the input costs of construction.

Tackling bottlenecks in the development process will support feasibility

Frictions along the development process – such as long approval timeframes, planning constraints and onerous regulation – add to costs and delays and reduce feasibility (**Figure 2**). Options to address bottlenecks in the development process include:

- **Improving processes, including after development consent, to avoid excessive delays.** Builders and developers report a number of bottlenecks after development applications (DAs) have been approved, including the need to meet onerous DA conditions and challenges engaging councils and state agencies. Legislating a mechanism to resolve these bottlenecks and requiring consent authorities to prioritise the impact of DA conditions on housing supply can make for a more efficient process and support feasibility.
- **Creating a pro-housing regulatory environment.** That means ensuring building and planning regulations unrelated to safety – like minimum apartment sizes and requirements for car parks – do not hold feasibility back. Relaxing such requirements and evaluating the impact of other building regulation on feasibility can support more housing supply.
- **Retain and improve infrastructure contributions.** Some stakeholders argue waiving infrastructure contributions will boost feasibility and housing supply, but the evidence shows this is not correct. Past waivers were expensive, raised land prices, and delivered little extra housing. Waivers also shift the costs of housing-related infrastructure onto consumers and taxpayers. Contributions should remain simple, certain, and cost-reflective. There are opportunities to improve certainty further by developing contributions plans before rezoning and allowing payment at the occupation certificate stage.

To build more homes, New South Wales needs to grow the construction workforce

Estimates suggest New South Wales needs about 30,000 more construction workers to deliver on the National Housing Accord. These demands far outstrip our labour supply and the construction workforce cannot grow fast enough.

Governments are adding to these pressures. The current public infrastructure pipeline in New South Wales also demands an extra 96,000 construction workers. This is pricing homebuilders out of labour as many workers are choosing to work in public infrastructure projects, instead of residential development projects. These significant shortages are adding to the cost of building new homes.

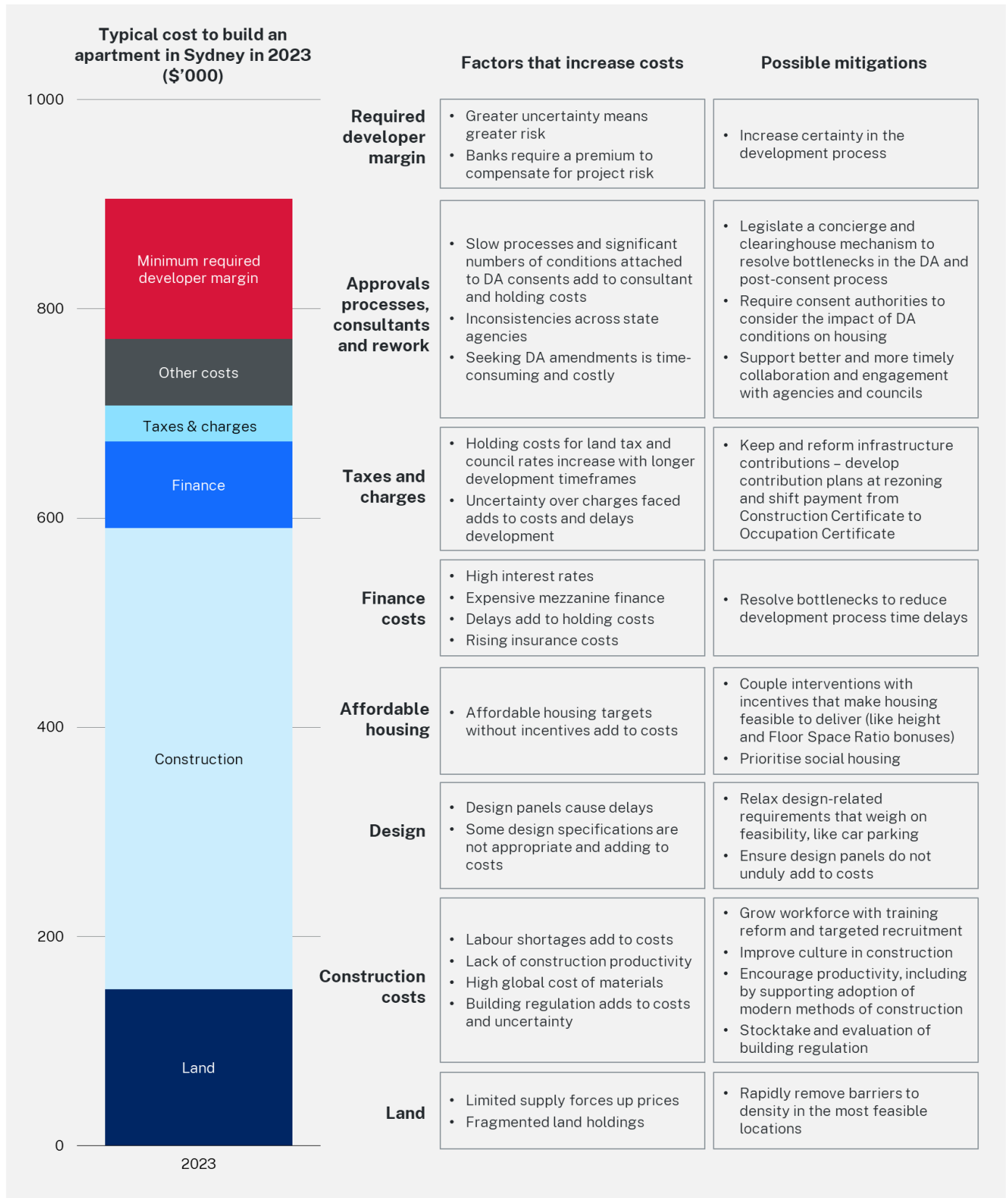
To address these shortages, governments should shift the overseas migration intake to support construction and grow the local construction workforce. Overseas construction qualifications should be better recognised in the visa process, migrants should be able to quickly put their skills to work, and barriers to interstate mobility should be better addressed. Training reform, cultural change, and targeted recruitment can help to grow the local workforce and address structural factors like low female participation and low apprenticeship uptake and completions.

Finally, we need a diverse stock of housing to meet diverse needs

New South Wales does not just need more homes, but a variety of homes that meet the diverse needs of the people who live here. There is a strong role for governments to provide social housing to support equitable housing outcomes, but supply has not kept pace with demand.

Some policy options that aim to diversify housing (such as encouraging larger, family-friendly apartments) have good intentions but can reduce the feasibility of development. Governments can promote diversity in the housing stock by pairing these interventions with planning or regulatory changes that make it feasible to deliver, such as height and Floor Space Ratio bonuses.

Figure 2: Costs to build an apartment in Sydney, drivers and possible mitigations



Source: CIE (2024) and NSW Productivity and Equality Commission.

Recommendations

Under the Terms of Reference, the Review is required to provide prioritised recommendations for the NSW Government and other stakeholders to efficiently address identified challenges in the short-, medium-, and long-terms. The Commission has proposed a series of recommendations to address barriers to housing supply and support homebuilding now and into the future (see Table 1). Some of these recommendations have been identified as being a priority. The Commission proposes that they are progressed immediately to support the development of new homes.

Table 1: Summary of recommendations

1. Free up construction capacity to build more homes quickly
Prioritise capital spending
1.1. As a priority, Australian governments should work together to reprioritise capital spending to free up capacity in the construction sector.
1.2. New South Wales should immediately prioritise and sequence infrastructure spending according to what is essential to delivering homes quickly, especially in high-feasibility areas.
Rapidly remove barriers to density in the most feasible locations
1.3. As a priority, the NSW Government should remove barriers to density in the most feasible locations, prioritising those already well-served by local infrastructure: <ul style="list-style-type: none">• expand Transport Oriented Development (TOD) relaxed planning controls to more train stations where feasibility is highest, especially in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD• significantly lift TOD height limits in areas where feasibility is high• double the radius of relaxed planning controls around TOD stations from 400 metres to 800 metres• extend rezoning beyond train stations in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD• prioritise those highly feasible areas that are well-served by infrastructure or whose infrastructure capacity can be expanded at lowest cost.
1.4. As a priority, allow and fast-track requests to add extra floors to DAs with an existing approval, where appropriate.
1.5. As a priority, rapidly resolve post-consent requirements that are delaying the delivery of feasible projects with an approved DA that will deliver net new dwellings.
1.6. Make all urban industrial land ‘review and manage’ and adopt an evidence-based approach that also enables housing supply.
Be sparing with subsidies for developers
1.7. Be sparing with tax breaks and subsidies for developers, especially while the construction sector is at capacity.
1.8. Where financial assistance is being considered, governments should prioritise targeted relief for people experiencing housing stress.

2. Streamline the development process

Legislate a mechanism to resolve bottlenecks, including after DAs have been approved

- 2.1. As a priority, develop concierge and clearinghouse functions to rapidly escalate, coordinate, and resolve bottlenecks in the development assessment process that arise both before and after a DA has been approved.
- 2.2. Legislate the concierge and clearinghouse functions in a mechanism similar to Queensland's State Assessment and Referral Agency to ensure whole-of-government coordination and accountability through the development assessment and consent process.
- 2.3. Ensure accountability and transparency by publicly tracking post-DA approval metrics and timeframes.
- 2.4. Require councils and other consent authorities to consider as a priority the impact that DA conditions have on development timeframes and feasibility.

The NSW Government should prepare guidelines that require councils and other consent authorities to demonstrate that increased and sustained housing supply is being prioritised in their planning and decision-making functions.
- 2.5. As a priority, expand exempt and complying development to reduce minor DAs and free up resources to process significant applications more quickly.

Retain and improve infrastructure contributions

- 2.6. Retain infrastructure contributions and support a smooth and certain development process with the following improvements:
 - allow payment of contributions at the occupation certificate stage
 - develop contribution plans upfront as part of the zoning process
 - simplify section 7.11 local contributions plans by implementing benchmark costs and mandating the essential works list
 - refine the use of section 7.4 planning agreements to increase certainty for developers.

Create a pro-housing regulatory environment

- 2.7. As a priority, restrict the use of design panels and competitions.
- 2.8. As a priority, relax design-related requirements in the Apartment Design Guide that weigh on feasibility, such as car parking, solar access, and minimum apartment size requirements.

Expand the use of design guides to support high-quality design while overriding more restrictive local government controls.
- 2.9. Evaluate the impact of recent building reforms on development feasibility.
- 2.10. Pause further building reforms that add to construction costs, unless they can demonstrate an overriding public interest such as addressing building defects or risks to public safety.
- 2.11. Prioritise the recruitment and training of certifiers, as well as regulating and enforcing their responsibilities, to improve building quality.
- 2.12. Streamline and harmonise local government construction-related controls with a focus on feasibility.

3. Help the construction sector to deliver

Shift the migration intake and recognise worker skills

- 3.1. As a priority, work to boost the construction share of migrant workers.
Tailor the Skills in Demand visa program to better align with sector needs and include key construction occupations on the Core Skills Occupation List.
- 3.2. As a priority, ensure migrants can put their construction skills and experience to work through cohort-targeted skills gap training and smoother licensing processes.
- 3.3. Better recognise overseas qualifications in the visa process.
- 3.4. Reduce barriers to interstate mobility, including by expanding Australia's Automatic Mutual Recognition scheme.

Grow the construction workforce and build capability

- 3.5. Deliver training reform that targets experienced workers to get them fully qualified.
- 3.6. Ramp up efforts to diversify the workforce and improve the culture of the construction industry.
- 3.7. Promote construction careers to school leavers and the community.
- 3.8. As a priority, develop a recognised pathway for experienced Class 1 builders to transition to working on Class 2 buildings.

Support innovation and productivity

- 3.9. Remove regulatory barriers to modern methods of construction, including through the Building Commission NSW's work on a new regulatory framework for prefabricated and manufactured buildings.
- 3.10. Use training, migration, regulation, and building contract terms to support and promote innovation in the construction sector.

4. Ensure a diverse and equitable supply of homes

- 4.1. Policy interventions that aim to generate diversity in housing supply, such as requirements for family-sized apartments or affordable housing, should be coupled with planning incentives that support feasibility, such as height and Floor Space Ratio bonuses.
- 4.2. Prioritise sustained public investment in social housing.

1 This Review is about building more homes, now and in the future

The more well-located homes we build, the more New South Wales benefits. Building more homes in the right places makes renting more affordable and puts home ownership within reach for everyone. It delivers important social, environmental, and economic benefits, for today's community as well as future generations.

The National Housing Accord aims to build 1.2 million new, well-located homes across Australia by mid-2029. The Commonwealth and all states and territories have signed up to the Accord.

New South Wales has committed to delivering around 377,000 homes. Sydney will need to deliver most of those homes, but as of December 2023 is forecast to deliver only 172,900 (NSW Department of Planning, Housing and Infrastructure, 2024). More work needs to be done.

Economic conditions are making building more homes difficult right now. Since the late 2010s, the rate of housing completions has fallen both nationally and in New South Wales. The Commission has published several reports over the past four years on building more homes in New South Wales that touched on some of these challenges (Box 1).

This Review

In June 2024 the NSW Premier, the Hon. Chris Minns MP, asked the NSW Productivity and Equality Commission to undertake a Review of Housing Supply Challenges and Policy Options for New South Wales (the Review) and to deliver a report by end-August 2024.

For the Review, the Commission has been asked to identify the housing market, residential, and construction industry barriers currently impacting housing supply in New South Wales and the actions needed to address them.

Specifically, the Commission has been asked to focus on non-planning challenges to housing supply. These include barriers affecting the feasibility of residential development, construction industry capacity, current economic conditions, development finance, building regulation, construction costs, and skills shortages. The Review's Terms of Reference are provided in Appendix A.

Planning regulations, processes, and timeframes are only discussed to the extent that they significantly impact development feasibility. The following are generally outside the Review's scope:

- **Land use planning and regulations.** This includes strategic planning, Environmental Planning Instruments and councils' Development Control Plans (DCPs).
- **Development assessment against planning regulations.** This includes DA preparation and assessment.

The Commission's other work has more to say about some of these topics (Box 1).

Box 1: The Commission's other recommendations for building more homes

- **Review of Infrastructure Contributions in New South Wales** (November 2020) made recommendations on when and how infrastructure costs should be recovered from developers.
- **Productivity White Paper** (May 2021) made recommendations on how planning and regulatory reform can boost housing supply.
- **Building more homes where people want to live** (May 2023) showed why households will benefit when government regulation lets more of them live in the places that best suit them.
- **Building more homes where infrastructure costs less** (August 2023) showed many Sydney inner-ring suburbs are ideal for more housing as they have lower infrastructure costs.
- **What we gain by building more homes in the right places** (February 2024) outlined the economic, social, and environmental gains from more housing in the highest-amenity locations.

1.1 We undertook research and consultation

The Commission has conducted targeted research and stakeholder consultation to inform its findings and recommendations. This includes:

- consideration of previous government reviews
- feedback from housing industry stakeholders at a series of roundtables conducted by Infrastructure NSW in April and May 2024
- targeted consultation with housing industry stakeholders, including developers, industry associations, community groups, councils, and public sector stakeholders, which have also included site visits to different housing developments in Greater Sydney
- estimates of the cost and feasibility of supplying new housing in Sydney that was commissioned from the Centre for International Economics (CIE).

Appendix B: lists stakeholders involved in the consultation process. Stakeholders told us:

- they are concerned about project feasibility and see it as a key barrier to delivering new housing
- input costs, including materials, labour, and holding costs, have risen and reduced project feasibility
- it is challenging to access finance in the current environment
- competition within the construction industry between the public and private sectors is exacerbating labour and skill shortages
- the regulatory environment has changed considerably in recent years and has been challenging for industry to navigate
- planning and building approval processes are slow, particularly when engaging state agencies and utility providers, and are adding to costs
- land is expensive and development-ready sites are limited.

2 Why New South Wales is not building enough homes right now

Key findings

- Despite the need for more well-located homes, new dwelling completions in New South Wales have fallen in recent years. Subdued building approvals point to further challenges ahead.
- Many new residential projects are not feasible in the current economic environment, and this is holding back new supply. Low feasibility is being driven by elevated interest rates and high construction costs.
- The construction sector is at capacity, and major public infrastructure projects are crowding out housing construction. Governments have spent significantly on major infrastructure over the past 15 years. New South Wales' infrastructure program has been more ambitious than any other state. This is bidding up the cost of labour and materials and contributing to low housing feasibility.

2.1 Home building in New South Wales has slowed recently

Housing affordability is one of the biggest pressures facing the people of New South Wales. In recognition of this, governments across Australia have committed to building 1.2 million new, well-located homes across Australia by mid-2029.

If New South Wales was able to increase dwelling completions from its current level to meet the National Cabinet target over the period to mid-2029, rents and housing prices in New South Wales could be as much as 10 per cent lower in the long run than would otherwise have been the case.¹

Despite the need for more well-located homes, new dwelling completions have fallen in recent years. New South Wales built close to 75,000 new homes in 2018. But as of March 2024, the rate of annual completions has fallen 40 per cent to just over 45,000.

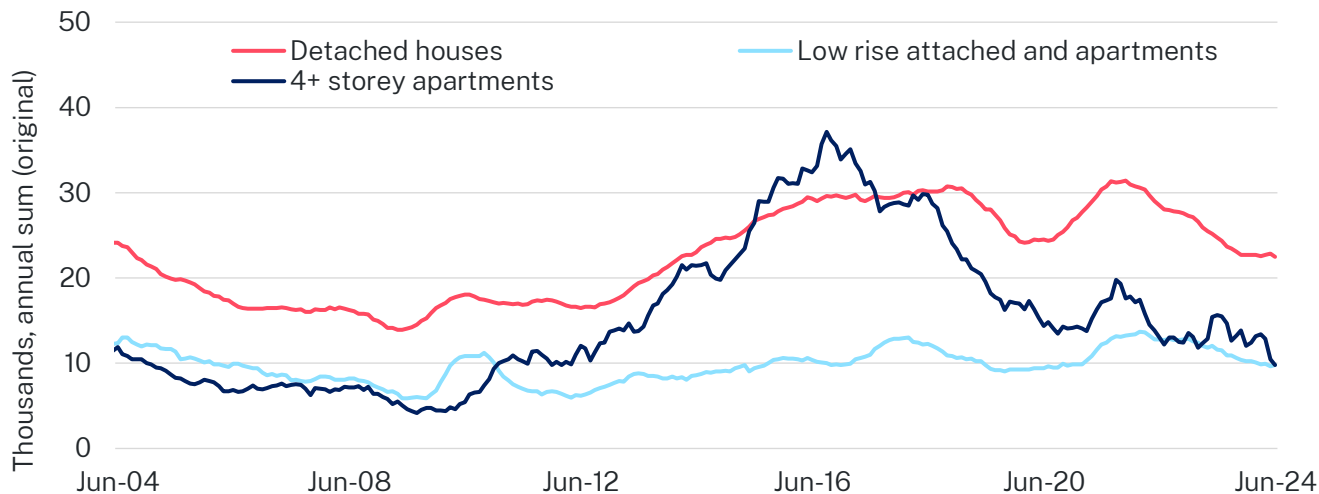
Higher-density housing plays a crucial role in accommodating growing populations in urban areas and providing affordable and accessible housing for a diverse population. However, approvals of higher-density homes like apartments have fallen by over 50 per cent since their peak in 2016 (Figure 3). At the same time, the average completion time for new apartments has increased from around 22 months in 2015 to 30 months in 2023.

Building approvals point to further challenges in the period ahead. The current annualised level of approvals in the June quarter 2024 is around 42,000 dwellings, only a little over half the National Housing Accord's aspirational target for 75,300 new homes per year in New South Wales (Figure 4). This suggests dwelling completions will remain low over the coming year.

¹ Based on the relationship between an increase in the number of dwellings and lower housing costs estimated by Saunders & Tulip (2019) for Australia, assuming no increase in demolitions (Saunders & Tulip, 2019). Other analysis also shows that building more homes can make existing rentals more affordable (Garvin & Maltman, 2024).

Figure 3: Building approvals in New South Wales have fallen in recent years

NSW residential building approvals by type



Source: ABS and NSW Productivity and Equality Commission.

Figure 4: Approvals and completions continue to fall short of Accord targets

NSW annual building approvals and completions



Source: ABS and NSW Productivity and Equality Commission.

2.2 Feasibility is low and holding back supply

Most housing in New South Wales is built by the private sector. Builders and developers need to earn a profit for a project to be commercially viable. The higher the potential profit, the more likely a development will be 'feasible' and go ahead.²

Homebuilding in New South Wales has slowed recently as developers' costs have risen faster than the prices they receive for selling new homes. This squeezes their profit margins, making them less likely to proceed with new projects.

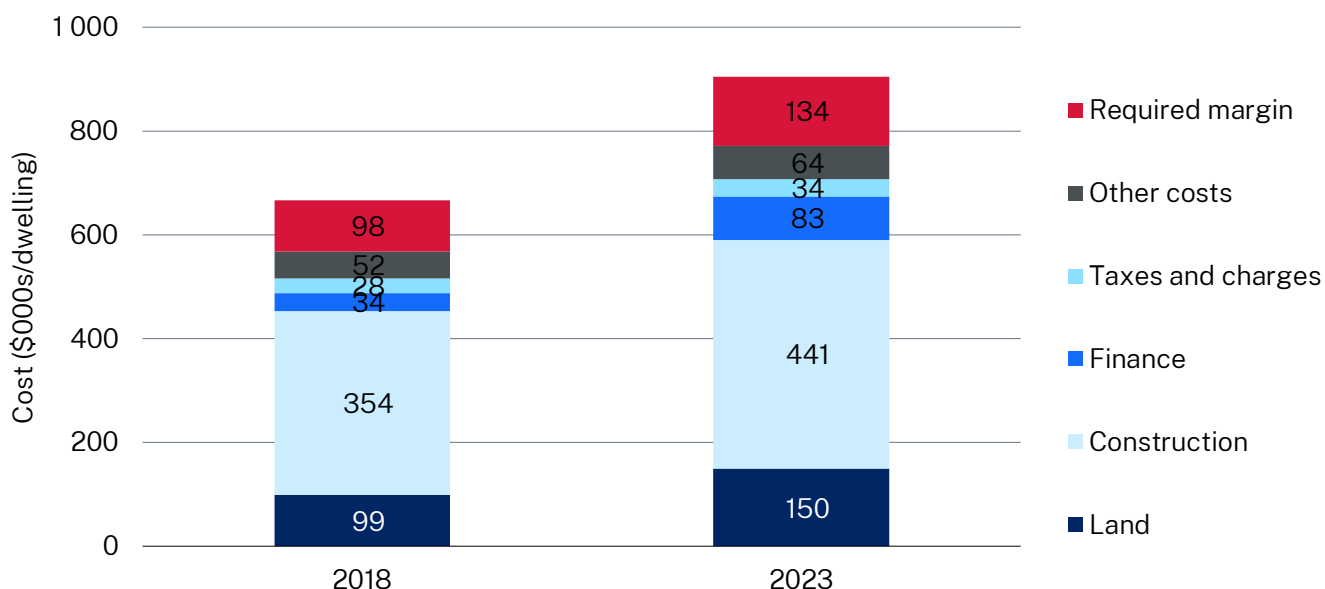
² In this next section, we largely focus on property developers, but the factors we discuss equally affect families wanting to buy land and build a new home.

Analysis commissioned by the NSW Productivity and Equality Commission from the Centre for International Economics (CIE) shows that the cost of delivering new homes in New South Wales has increased significantly over the past five years (see Figure 5 and Table 2).

These estimates are indicative only, and may not reflect different development conditions across the state, including in regional New South Wales, which also faces housing supply and affordability issues. Nevertheless, they show that the cost of delivering a new apartment in a typical mid-rise apartment block in Sydney has increased from \$666,000 in 2018 to \$905,000 in 2023, an increase of \$239,000 or 36 per cent.³

Figure 5: Development costs have increased significantly since 2018

Cost components of developing mid-rise apartments in 2018 and 2023 in Sydney



Source: CIE (2024).

Note: The cost of delivering a typical mid-rise apartment between four to nine storeys. Taxes and charges include land tax, stamp duty, and state and local infrastructure contributions but exclude GST. Other costs include professional fees, sales and marketing.

This reflects increases in:

- **construction costs** – which are the single largest cost of development, and have increased by 29 per cent, driven by significantly higher prices for raw materials, such as steel and timber.
- **financing costs** – which have more than doubled since 2018, to around \$83,000 per apartment, reflecting the large increase in interest rates over this period.
- **land acquisition costs** – which have increased by about 50 per cent since 2018, to around \$150,000 per apartment, reflecting the longer-term trend towards higher land prices as well-located land becomes increasingly scarce.
- **risk and the need to meet required margins** – residential developers typically need to demonstrate they can achieve a profit margin of around 18 per cent to attract financing and compensate investors for risk; since 2018, this has increased noticeably in absolute terms, reflecting elevated levels of risk in the construction and development industry.

Our estimates suggest that state and local infrastructure charges represent a relatively small share of total development costs for infill apartments in Sydney. This is because infrastructure contributions are lower in inner-city infill locations that are already well-served by public infrastructure.

³ Based on a typical apartment in a four-to-nine-storey apartment block.

Some stakeholders report that taxes and charges can represent more than 30 per cent of the total costs of development. These estimates should be treated with caution. They are sensitive to assumptions about the cost, location, and type of development, including the impact of zoning and regulatory frictions and whether estimates are stated including or excluding GST. Notably, infrastructure charges are significantly higher in greenfield areas. This is appropriate as it reflects the high cost of providing public infrastructure in these areas. As discussed in section 4.5.2, waiving infrastructure charges raises land prices.⁴ In terms of the cost stack presented in Figure 5, this means reducing the ‘taxes and charges’ component would be offset by an increase in the ‘land’ component.

Table 2: Cost and feasibility of developing mid-rise apartments between 2018 and 2023

Component	2018	2019	2020	2021	2022	2023	2018 vs 2023 difference	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	Per cent
Construction	263	279	279	294	315	339	76	29
Parking	85	86	86	88	90	93	9	10
Site preparation	6	7	7	7	7	8	2	31
Professional fees	30	32	32	33	35	38	7	24
Land acquisition	99	103	110	120	133	150	50	51
State contributions	11	11	11	11	11	12	1	7
Local government contributions	10	12	10	12	10	11	1	11
Land tax and stamp duty	7	7	8	9	10	11	4	61
Financing costs	34	37	38	41	55	83	49	142
Sales and marketing	22	23	23	24	25	26	4	18
Required margin (18 per cent) ⁵	98	104	105	111	120	134	36	36
Total cost	666	702	708	750	811	905	239	36
Sale price ex GST	748	771	773	830	858	885	137	18
Feasibility gap (\$'000)	81	70	65	80	46	-20	-102	-125
Feasibility gap (per cent)	12	10	9	11	6	-2	-14	

Note: The cost of delivering a typical mid-rise apartment between four to nine storeys. The feasibility gap is the return above or below the required developer margin of 18 per cent. A positive feasibility gap indicates that a development is feasible.

Source: CIE (2024).

⁴ In contrast to infill apartments, our estimates imply the average greenfield development in New South Wales is currently feasible to develop. This is consistent with feedback from industry stakeholders suggesting the most feasible developments at present are greenfield developments or high-end infill developments, such as luxury apartments. For greenfield developments, this partly represents the effect of planning constraints in increasing the cost of land and housing in inner-city areas and pushing people further out of the city.

⁵ For a project to be feasible, developers typically need to demonstrate they can achieve a profit margin of around 18 per cent. As costs increase, so does the amount of risk for a developer, which is reflected in a higher required margin in absolute terms for a project to be feasible.

2.2.1 Construction costs have risen, driven by the cost of raw materials and labour

The biggest impact on feasibility has come from rising construction costs. The cost of housing construction inputs in Sydney has increased by almost 30 per cent since early 2021, reflecting strong demand for materials amid supply shortages in global markets for key commodities. Labour costs in the construction industry have also increased noticeably since the pandemic.

High demand for construction inputs has reflected a number of factors, including:

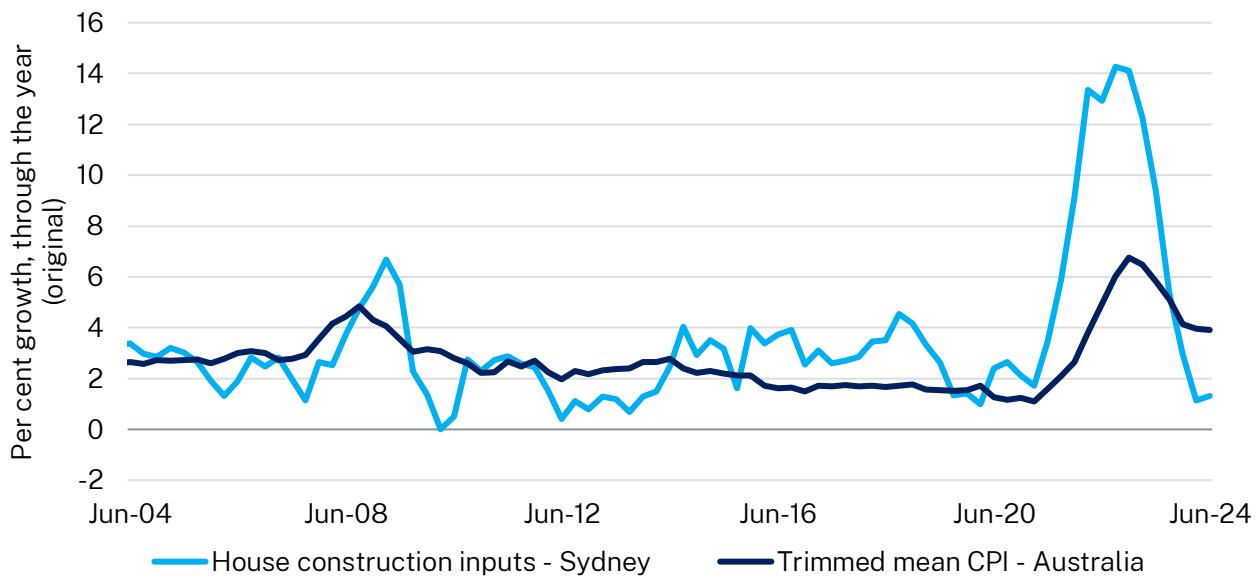
- publicly funded incentives to stimulate housing construction, such as the HomeBuilder scheme
- large public infrastructure programs
- low interest rates
- changing preferences for more space through the COVID-19 pandemic.

At the same time, high demand has coincided with shortages of critical inputs, particularly steel and timber. Broader inflationary pressures have also contributed to higher costs, exacerbated by the impact of COVID-19 on global supply chains and Russia's invasion of Ukraine. The recent depreciation of the Australian dollar has put further pressure on costs, as a significant portion of materials used in residential construction are imported, such as steel and electrical equipment.

The outcome has been a large increase in construction costs, which have grown at twice the rate of underlying CPI inflation (Figure 6). The surge in housing construction costs was broad-based across different types of inputs, with the price of steel products seeing the sharpest rise. While the pace of growth in housing construction costs has eased since the middle of 2023, the level of housing construction costs remains elevated.

Figure 6: Construction costs have risen faster than underlying inflation

Inflation and housing construction costs



Source: ABS and NSW Productivity and Equality Commission.

Note: Trimmed mean inflation is average inflation after removing extreme values on the high and low end.

2.2.2 Interest rate rises have hit home builders as well as home buyers

Interest rates have a powerful influence on the housing market.

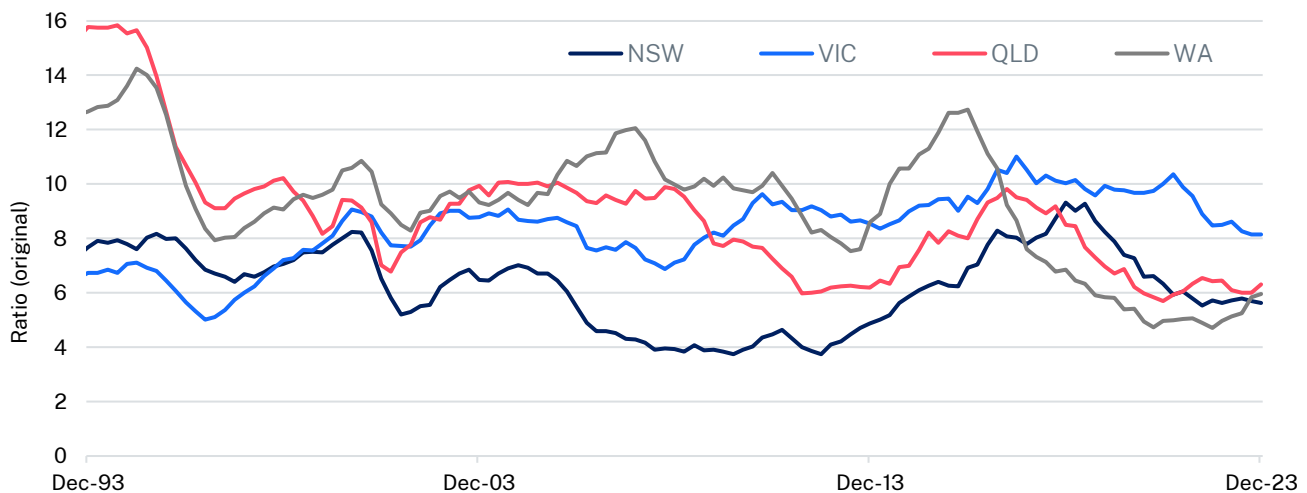
- For households, higher interest rates make it more challenging to secure a mortgage and reduce the amount they can borrow. This reduces the pool of potential home buyers and the prices they can afford to pay for newly developed homes.
- Developers also need to borrow to finance new construction. When interest rates rise, the higher cost of finance raises the overall costs of development.

By increasing the cost of delivering new homes, and reducing the amount people can afford to pay for them, higher interest rates reduce the feasibility of new housing supply. The run-up in interest rates since 2022 is one of the factors behind lower dwelling completions.

Historically, housing construction across Australia has been strongly correlated with the level of interest rates and broader macroeconomic conditions (Figure 7). As a result, the level of housing construction tends to rise and fall in a similar pattern across the states and territories over time.⁶

Figure 7: Housing delivery is cyclical and is currently in a downturn across Australia

Annual dwelling completions per 1,000 people



Source: ABS and NSW Productivity and Equality Commission.

Note: 4-quarter sum completions, population at quarter.

2.2.3 Construction finance has become more difficult to access

Residential developers pay for a large portion of their construction costs by borrowing from the major Australia banks (Shoory, 2016). Developers often supplement bank debt with 'mezzanine finance' provided by non-banks, such as fund managers and private equity firms. These are typically short-term loans with higher interest rates.⁷

Industry stakeholders report that finance for development and construction is currently expensive and can be difficult to obtain. In particular, small- and mid-sized developers, which are active in low- to mid-rise infill development, have historically reported difficulties accessing finance (Rowley et al., 2014). Larger developers typically have better access to debt and equity.

⁶ Indeed, falling interest rates were one of the factors that supported an increase in housing construction in New South Wales, Queensland, Victoria, and Western Australia in the period between 2012 and 2018. This was supported by a number of planning and zoning reforms that encouraged a large increase in high-density dwelling construction in precincts such as Docklands in Melbourne and Mascot in Sydney (Shoory, 2016).

⁷ Mezzanine loans are a type of subordinated debt, which means they are repaid after senior bank debt but before equity if a developer goes bankrupt.

The cost of finance is based on the prevailing interest rate plus a premium that compensates the lender for the project's risk. The cost of finance has increased significantly as interest rates have risen. Our estimates suggest total borrowing costs for developers more than doubled from 2018 to 2023.

Stakeholders reported that the lending standards of the major Australian banks have also become more stringent. For instance, loan-to-value ratios are reported to have decreased, which reduces the amount a developer can borrow. This means developers are having to put more of their equity into a project or seek higher-cost mezzanine finance.

By far the most common issue cited by stakeholders was the need to meet bank pre-sale requirements. Developers are typically required to pre-sell a certain number of units in a development before funding is made available and construction can commence. Following the global financial crisis in 2008, pre-sale requirements are reported to have increased to at least 100 per cent of the amount of debt being sought, though these requirements can vary depending on the bank. The time taken to secure these pre-sales can stretch up to a year, adding to holding costs.

It's very hard to achieve pre-sale requirements – need to find people to buy something that won't be ready for two years – before drawing down on bank finance.

This is forcing some developers to borrow from second-tier banks and non-bank institutions – [these have] higher interest rates.

Property developer, Review consultation

Stakeholders noted many factors that make it difficult to meet pre-sale requirements in the current environment, including:

- low levels of buyer demand, reflecting higher interest rates and uncertainty over whether home loan applications would be approved upon settlement
- challenges in securing foreign buyer purchases of pre-sales⁸
- banking regulation, including minimum deposit requirements, the three-percentage-point mortgage serviceability buffer required by the Australian Prudential Regulation Authority (APRA), and requirements that pre-sales equal at least 100 per cent of the total debt for development and construction loans (APRA, 2023; APRA, 2024).

In contrast, consultation with the major Australian banks pointed to concerns about project feasibility and industry capacity as the main barriers to accessing finance, rather than the banks' willingness to lend or restrictions brought about by banking regulation.

It's not that banks don't want to lend... inflation has increased construction costs. Land is expensive. Fees, taxes, and charges continue to rise. There is a lack of skills and labour. Developments are not feasible. They're not stacking up.

Bank stakeholder, Review consultation

⁸ Australia's foreign investment laws generally restrict foreigners from buying existing dwellings, but foreign purchases of new dwellings have historically been used by developers to help meet their pre-sale hurdles. However, banks have recently reduced the proportion of pre-sales that can be allocated to foreign buyers (APRA, 2017; RBA, 2019). Foreign investors are also required to pay a variety of fees and surcharges when investing in residential land and property.

2.2.4 High construction costs and tight household budgets have reduced feasibility

The combined effect of higher interest rates and elevated construction costs is a reduction in developer feasibility.

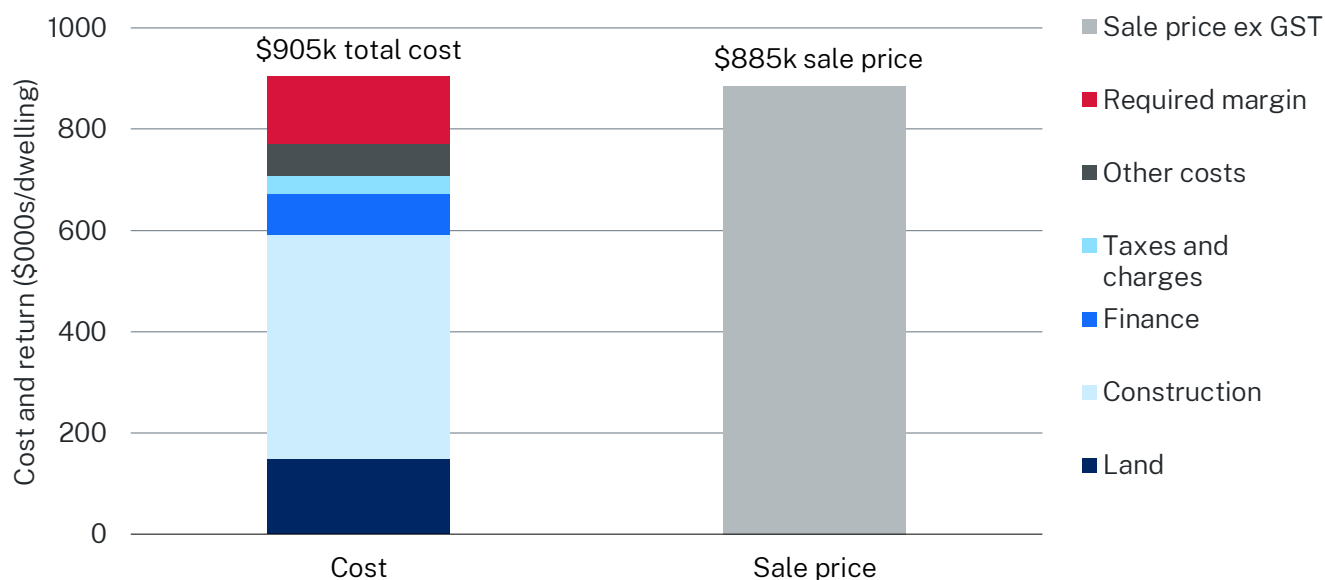
One way to illustrate this is to compare estimates for the average cost of development against the average sale price developers receive for a new apartment. For a project to be feasible, developers typically need to demonstrate they can achieve a profit margin of around 18 per cent. This is necessary to compensate them for risk and to satisfy their lenders that a project is commercially viable. The high required profit margin also reflects the higher risk in this sector, relative to other parts of the economy.⁹

Estimates from the CIE indicate that the cost of delivering a typical mid-rise apartment in Sydney stood at \$905,000 in 2023. This exceeds the expected sale price of \$885,000, suggesting a typical mid-rise apartment development is currently not feasible to deliver (Figure 8).

Another way to interpret this result is that developers are not able to recover the required 18 per cent margin. That is not to say that no development will proceed, but rather that on average we would expect less development than in previous years when feasibility has been stronger.

Figure 8: Developers are unable to recover the costs of development

Cost and feasibility of mid-rise infill apartments, Sydney 2023



Source: CIE (2024).

Note: The cost and sale price are for a typical mid-rise apartment between four to nine storeys. Taxes and charges include land tax, stamp duty, and state and local infrastructure contributions but exclude GST. Other costs include professional fees, sales and marketing.

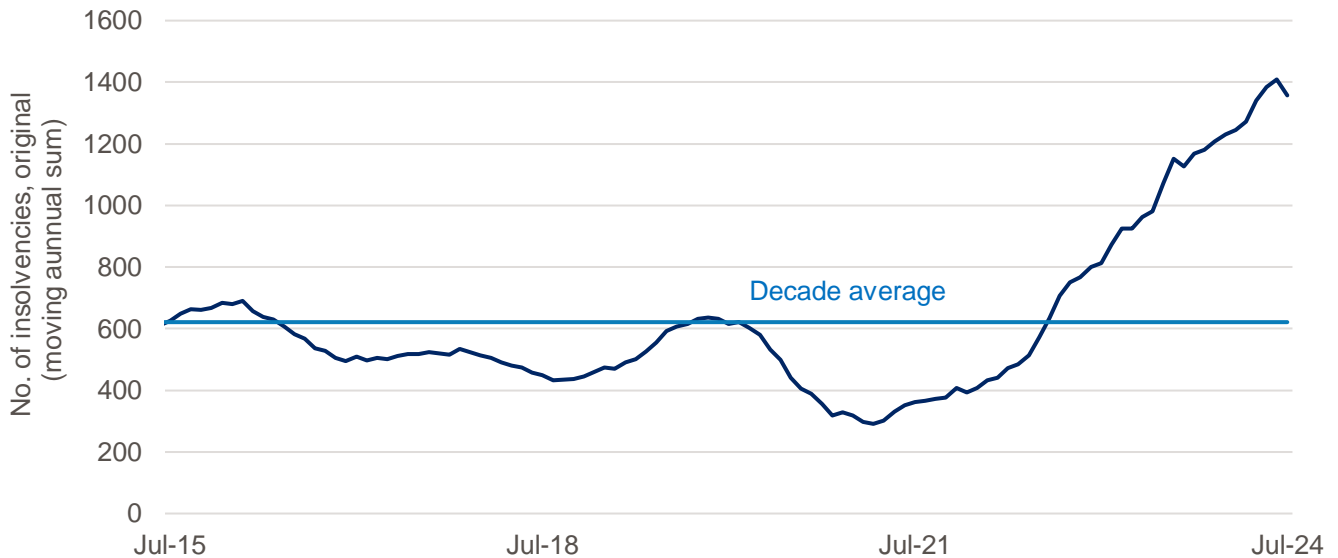
⁹ Competition between developers encourages them not to set their margins too high. Homebuyers' limited borrowing power and budgets also limit the margins developers can charge. That said, developers do typically require a higher profit margin than other types of businesses. Developments are large and complex projects. When things go wrong, developers face significant risks and costs. If the return is not high enough to offset these risks, developers will simply invest in other less risky activities.

2.2.5 Builders and construction firms have been hit hard by rising costs

A large number of residential construction firms have become insolvent in New South Wales since 2022 (Figure 9). This is partly because temporary government supports that suppressed insolvencies across the economy during the COVID-19 pandemic have now ended. But it is also because builders and other construction firms that were locked into fixed-price contracts – common in the industry – have had their profit margins squeezed by rising construction costs and extended project timeframes.

Figure 9: Insolvencies have risen significantly in recent years

Construction insolvencies in New South Wales



Source: ASIC and NSW Productivity and Equality Commission.

There are signs that conditions are stabilising in 2024, with some residential builders managing to rebuild their margins (RBA, 2024). Builders who predominantly work with other developers instead of retail buyers have reportedly been able to switch to more flexible contracts that allow them to pass higher material or labour costs onto their customers even after the contract is signed (RBA, 2022). Banks have also responded by working more closely with financially stressed builders to resolve liquidity issues as they arise.

2.3 The construction sector is at capacity delivering public infrastructure projects

While residential development is subdued across Australia, the construction sector as a whole is not. The NAB quarterly business survey suggests capacity utilisation in Australia's construction sector is elevated compared both to the past and to the economy as a whole (Figure 10).

A major reason the construction sector is struggling to deliver homes across Australia is because Australian governments are diverting resources away from homebuilding and towards public infrastructure projects. Commonwealth, state, and territory governments have made immense commitments and spent heavily on major infrastructure over the past 15 years. This includes investments in metropolitan rail networks, new light rail lines, urban motorways, energy projects, broadband technology, and regional road, rail, and water projects.¹⁰

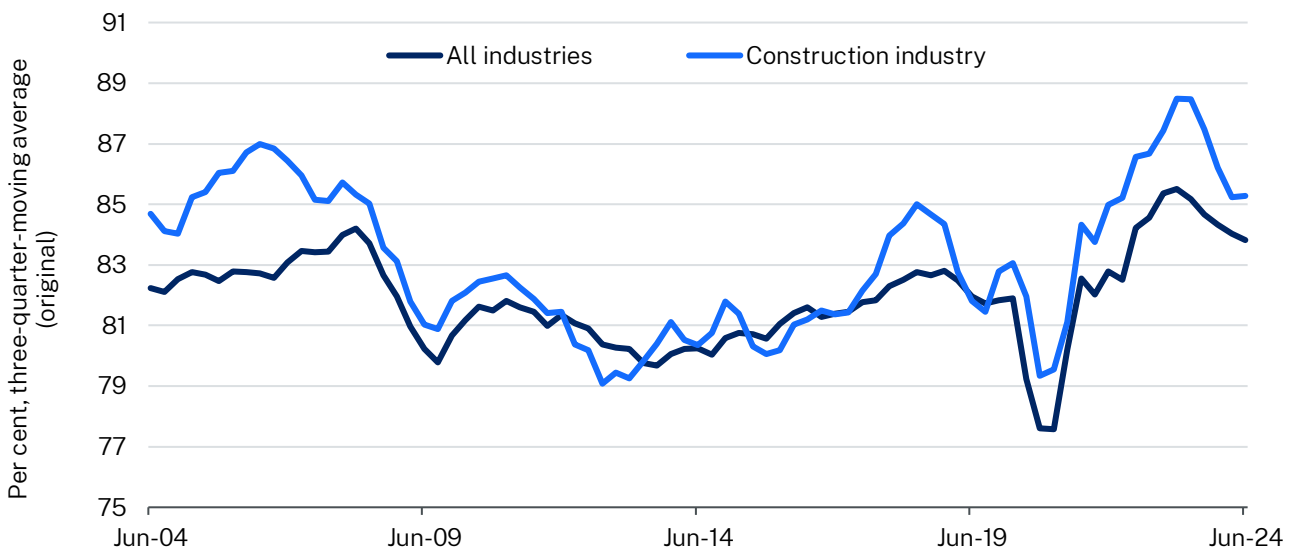
¹⁰ Infrastructure Australia estimated the construction pipeline was worth \$691 billion between 2022-23 and 2026-27 with residential building accounting for \$225 billion (33 per cent) of investment (Infrastructure Australia, 2023).

New South Wales' infrastructure program has been more ambitious than any other state (Figure 11). Since 2011, the NSW infrastructure pipeline has included, among other things:

- the Sydney Metro network
- the WestConnex, NorthConnex, Sydney Gateway, and Western Harbour Tunnel projects
- light rail lines in Sydney, Parramatta, and Newcastle
- an ambitious schools and health infrastructure program to accommodate population growth
- regional roads upgrades, including the Pacific Highway dual carriageway
- the Water Security for Regions program.

Figure 10: The construction industry is at capacity

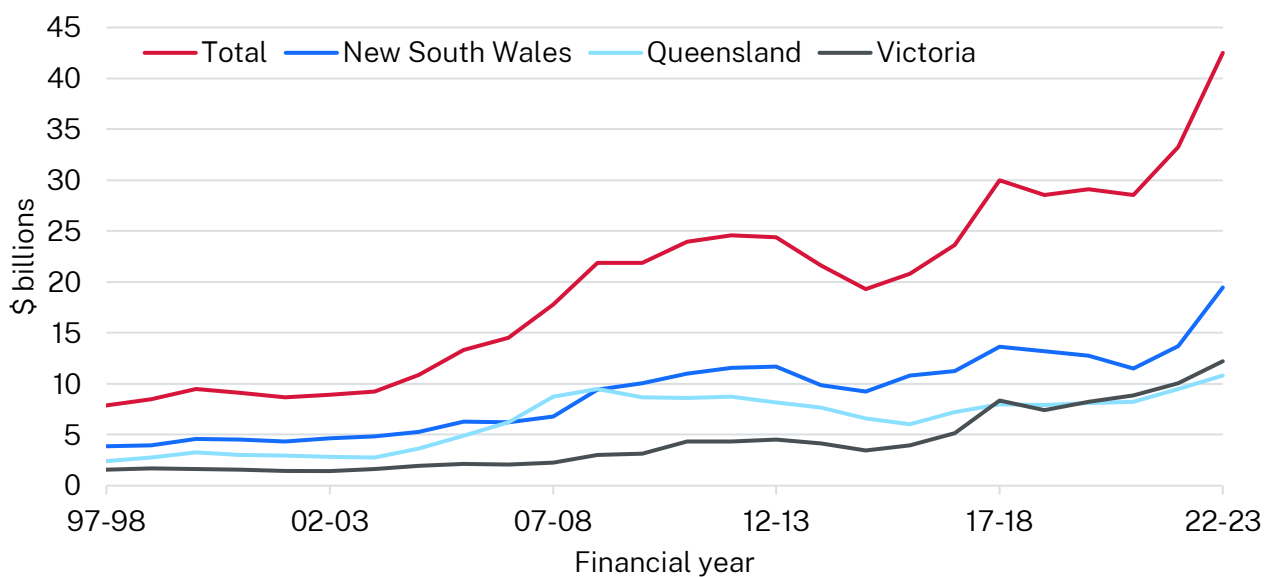
Capacity utilisation in Australia



Source: NAB Business Survey (2024).

Figure 11: Public infrastructure spending in New South Wales has surpassed other jurisdictions

Nominal value of completed public engineering construction for each financial year by state



Source: ABS and NSW Productivity and Equality Commission.

Note: Engineering construction defined by the ABS does not include residential or office space construction.

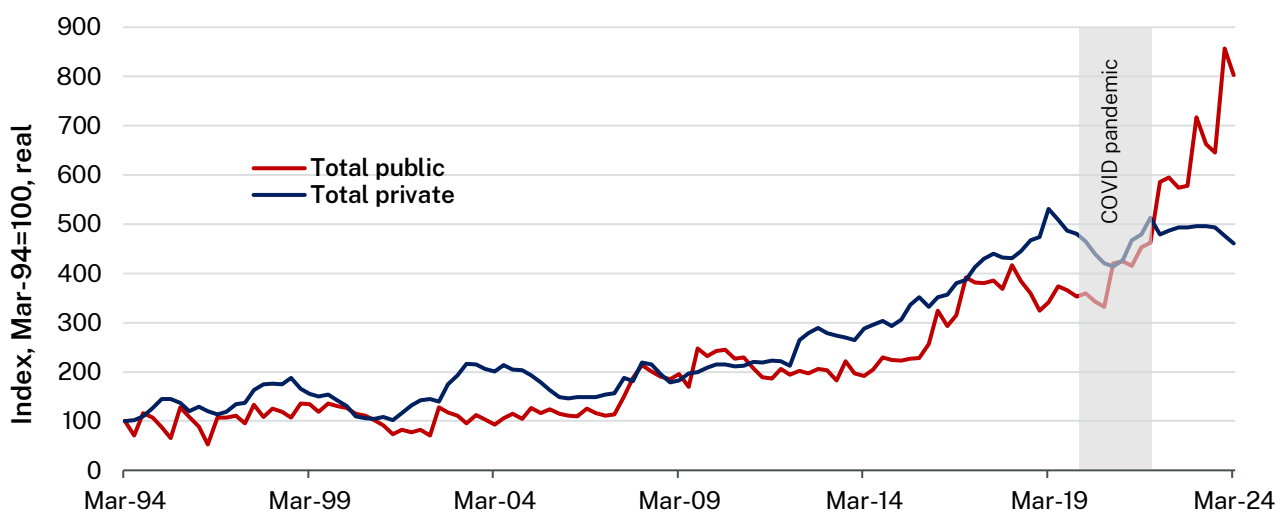
2.4 Public spending is ‘crowding out’ housing construction

Australia’s construction sector has limited capacity, and there are limits to how fast it can grow. Public infrastructure projects compete against private housing developers to use the sector’s limited capacity (see chapter 5). Governments have deeper pockets than private developers and prospective homebuyers. When public infrastructure projects come online faster than the construction sector can grow, governments bid up the price of labour and materials, making residential development less feasible. This directs the construction sector’s efforts towards public infrastructure projects instead of building homes. This effect is called ‘crowding out’.

Crowding out has happened nationally but is acute in New South Wales. Since the COVID-19 pandemic, the value of work yet to be undertaken in the NSW public sector has increased by close to 40 per cent, while growth in the private sector has remained relatively flat (Figure 12).

Figure 12: The construction pipeline in the public sector has outgrown the private sector in New South Wales

Construction expenditure, public and private sector



Source: ABS and NSW Productivity and Equality Commission.

3 What governments can do to build more homes quickly

Key findings

- Housing construction is a cyclical industry and highly sensitive to economic conditions. In an environment of high inflation and high interest rates, governments can support a return to lower interest rates and higher housing construction by moderating their capital spending.
- Tax breaks and subsidies should be used sparingly. They generally impact demand rather than supply, and tend to benefit existing landowners, including developers, rather than people experiencing housing stress. These interventions are also less effective when the construction sector is operating at capacity.
- The recent tightening of finance for residential developers is partly cyclical. In an environment of low construction profitability and high risk, it is appropriate that banks are cautious about extending new loans for development and construction. However, there also appears to have been a structural tightening of lending standards over time.
- There is limited availability of well-located sites for development, adding to land costs. The Commission's research suggests that the largest gains to feasibility can be made by further planning changes that allow greater density in inner-ring areas closer to the Sydney CBD.

Recommendations

- As a priority, Australian governments should work together to reprioritise capital spending to free up capacity in the construction sector.
- New South Wales should immediately prioritise and sequence infrastructure spending according to what is essential to delivering homes quickly, especially in high-feasibility areas.
- Be sparing with tax breaks and subsidies for developers, especially while the construction sector is at capacity. Where financial assistance is being considered, governments should prioritise targeted relief for people experiencing housing stress.
- As a priority, the NSW Government should remove barriers to density in the most feasible locations, prioritising those already well-served by local infrastructure:
 - expand Transport Oriented Development (TOD) relaxed planning controls to more train stations where feasibility is highest, especially in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD
 - significantly lift TOD height limits in areas where feasibility is high
 - double the radius of relaxed planning controls around TOD stations from 400 metres to 800 metres
 - extend rezoning beyond train stations in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD
 - prioritise those highly feasible areas that are well-served by infrastructure or whose infrastructure capacity can be expanded at lowest cost.
- As a priority, allow and fast-track requests to add extra floors to DAs with an existing approval, where appropriate.
- As a priority, rapidly resolve post-consent requirements that are delaying the delivery of feasible projects with an approved DA that will deliver net new dwellings.
- Make all urban industrial land 'review and manage' and adopt an evidence-based approach that also enables housing supply.

3.1 Coordinate fiscal and monetary policy

The RBA sets monetary policy to achieve low inflation and sustainable growth in the economy. Since May 2022, the RBA has increased interest rates 13 times to fight high inflation, which is currently above the RBA's two to three per cent target.

As discussed in section 2.2.2, high interest rates make building new homes less feasible. In an environment of high inflation, the best thing governments can do is limit their spending to support a faster return to low and stable inflation. This will allow housing construction to rise as interest rates normalise. Any attempts by governments to further stimulate demand risks keeping interest rates higher for longer.

3.1.1 Work with other Australian governments to free up construction capacity by reprioritising capital spending

The recent surge in public construction has not been confined to New South Wales. Public infrastructure spending across Australia is competing for a limited supply of construction resources and making homebuilding less feasible in New South Wales and other parts of the country. This is a national problem that requires a national solution.

Australian governments are aware of the large infrastructure pipeline. The NSW Government's 2023 Strategic Infrastructure Review led to the delay or descoping of over \$2.5 billion worth of projects, including the Great Western Highway Duplication and Fast Rail Program. A similar exercise was undertaken by the Commonwealth Government in its Infrastructure Investment Program Strategic Review, which led to 17 projects totalling \$3.5 billion being cancelled in New South Wales alone.

To build more homes more quickly, Australian governments should consider jointly reprioritising, value-engineering, staggering, reducing, or delaying capital expenditure to free up the construction sector to build more homes.¹¹ Infrastructure Australia has previously recommended better coordination of public infrastructure demand and market capacity (Infrastructure Australia, 2023).

The nation-wide demand on construction resources is at a record high. By reprioritising spending or delaying major infrastructure projects, Australian governments can effectively reduce demand for construction resources and reduce inflationary pressures in the construction sector over the short-to-medium term.

The cost base (construction costs, taxes and charges, land costs, design costs) is not expected to reduce because the public infrastructure pipeline remains large and demand in the private sector for residential and net zero construction remains high.

Industry stakeholder, housing event

3.1.2 Prioritise infrastructure essential to delivering homes quickly

In New South Wales, the immediate focus should shift to essential infrastructure spending that supports well-located housing over the Accord period. Some potential prioritisation principles include:

- prioritising infrastructure in strongly feasible areas, based on best-practice cost-benefit analysis and rigorously assured business cases through multiple gateway reviews
- reviewing the staging and sequencing of government infrastructure projects to allow construction resources to be freed up for residential construction
- prioritising smaller projects that make existing networks work better

¹¹ Value engineering is a systematic process of lowering costs with a tolerable loss of performance or functionality.

- supporting the role of the Coordinator General through the Budget process to improve coordination of infrastructure and housing.

The NSW Government's investments in Transport Oriented Development (TOD) program provide a clear example of targeted investment to support essential housing-related infrastructure. Identified TOD precincts will share in \$520 million which has been reserved for investment in community infrastructure. Consultation with key stakeholders including local councils, government agencies, and the community is ongoing to identify the best options to service TODs with additional active transport, open space, and local roads. Specific spending proposals are yet to be identified, meaning expenditure is not anticipated for 2024-25.

3.2 Use tax breaks and subsidies sparingly

Low levels of profitability in the residential development industry have led to increasing calls for governments to subsidise new developments. Subsidies come in many different forms, including:

- grants and other kinds of direct financial assistance
- loan guarantees and concessions
- tax breaks, such as land tax concessions or reductions in infrastructure charges
- the sale of surplus government land to developers at a discount to market rates
- cash flow measures, such as deferring payment on the sale of government land until development is complete.

By reducing the cost of construction, subsidies aim to make development more feasible and therefore stimulate more housing construction. In practice, subsidies have several limitations that reduce their effectiveness.

Firstly, subsidies only increase supply if the target developments are marginally unfeasible — that is, those that are nearly, but not quite, feasible. A government subsidy to a development that would have proceeded anyway provides no public value. It would simply be a transfer of wealth from taxpayers to the developer or landowner. Likewise, a subsidy will not result in additional supply if it is given to developments that will not be viable, even with a subsidy.

Secondly, identifying and targeting marginally unfeasible developments is difficult, in part, because the prospect of a subsidy itself can lead to distortions in behaviour. For example, developers may delay feasible projects in the hopes of securing a subsidy to pursue marginally unfeasible projects. This risks distorting the market towards less efficient activities, without any increase in housing supply.

Consultations by the Commission during this Review indicated that some developers may be holding back development as they lobby government for reductions in infrastructure contributions, given considerable attention at present on increasing housing supply. The Commission expects that feasible development will progress without a reduction in infrastructure contributions or other form of tax break once it is confirmed that reducing developer contributions is not the way to proceed to increase housing supply.

Finally, to make a material impact on housing supply, a subsidy needs to be large enough to influence the behaviour of many developers. But when the economy is at capacity, a large subsidy will increase competition for scarce labour and materials, bidding up their prices rather than increasing housing supply.

3.2.1 Tax breaks generally stimulate demand, not supply

Stakeholders raised concerns that state and federal tax policies are acting as a barrier to supply. Likewise, they suggested taxes on developers could be reduced to support the feasibility of new developments.

The Review does not consider tax breaks to be an effective instrument for increasing housing supply. This is largely because tax breaks have a greater influence on demand and tend to result in

higher prices of land or existing homes rather than increases in new housing supply. These tax breaks include:

- **Land tax** - because the supply of land is fixed, changes in land tax are capitalised into the price of land. This means the incidence of the tax falls on landowners, not developers. As a result, attempts to stimulate housing construction by reducing land tax will tend to increase the price developers pay for land, rather than increasing housing supply.
- **Stamp duty concessions** - similarly, because the stock of housing is fixed in the short run, demand-side measures such as stamp duty concessions and support for first home buyers will tend to increase the price of existing homes, rather than increasing the supply of new homes. Existing homeowners will capture most of the benefit.
- **Negative gearing and the capital gains tax discount** - as above, these tax concessions primarily influence the demand for housing. They do affect new housing supply, as they increase the financial incentive to invest in new homes and assist with meeting pre-sale requirements. But they are not targeted, as they also apply to existing homes as well as new ones, and other investment classes like shares. Any effort to use them to stimulate new home building would have to consider revenue impacts, targeting, and potential unintended consequences.¹²

3.2.2 Build-to-rent has its place but is not the silver bullet for supply

Build-to-rent is often raised as a potential solution to boosting Australia's supply of housing. Build-to-rent projects typically involve large housing developments of 50 or more dwellings, built with the aim of being held long-term by a corporate owner, like superannuation funds, for rental purposes. Build-to-rent can be attractive to institutional investors seeking a stable long-term income stream, and to people seeking stable long-term rental accommodation with professional management.

The share of housing in Australia that is build-to-rent is relatively low by international standards. This reflects some barriers that institutional investors face, including:

- Higher land tax rates for larger landholdings, which increase the tax burden on institutional investors. This contributes to low rental yields, which can deter institutional investment in rental properties (Warlters M. , 2022; Commonwealth Productivity Commission, 2022).
- Difficulties obtaining debt funding due to the risk associated with large upfront development and construction costs, which can only be repaid progressively once rental income is received (Gilbert & Tobin, 2023; NHSAC, 2023).

The NSW and Federal Governments already provide, or intend to provide, a variety of tax and planning concessions to encourage more build-to-rent housing. The NSW Government also announced funding in the 2024-25 Budget for Landcom to develop a number of build-to-rent projects.

Stakeholders that support build-to-rent have suggested it could be used to improve housing supply and affordability, while making the housing supply cycle more stable and responsive. The Commission believes build-to-rent has a valuable role to play in the Australian housing market, but in considering the international and domestic experience with build-to-rent, has not found strong evidence to suggest that governments should favour build-to-rent over other kinds of housing. In general, there is a risk that measures to encourage build-to-rent developments will simply substitute one form of ownership for another, without materially improving housing supply or affordability (Warlters M. , forthcoming).

¹² In the 12 months to April 2024, loans to investors for the construction of new dwellings or purchase of newly erected dwellings in New South Wales made up only 14 per cent of housing lending to investors. In other words, 86 per cent of NSW lending to investors for housing is for existing properties. (ABS lending indicators, table 15, <https://www.abs.gov.au/statistics/economy/finance/lending-indicators/latest-release>).

3.2.3 Government delivery of housing is not a quick fix for more homes

Some stakeholders have suggested the NSW Government could deliver private housing itself, and simply waive some of the profit margin that private sector developers require. This would reduce the cost of development and therefore increase its feasibility.

In this scenario, the government could direct Landcom, Homes NSW, or another government-owned developer to develop housing projects that are just about feasible for the private sector to deliver. This would involve taking on projects where the expected profit margin is slightly below the required minimum of around 18 per cent that is typically required for developers to secure financing.

This approach could have some benefits. It would avoid the dilemma of having to incentivise private developers to pursue marginally unfeasible projects. The government could also pursue projects that have wider social benefits, such as integrating social housing with private market housing.

But this approach to boosting supply has limitations, particularly in the short-term. Without the competitive incentives to drive efficiency, there is always risk that government housing projects will be more costly to deliver than their equivalent private developments. When the construction sector is at capacity, large-scale delivery of housing by the public sector can also:

- crowd out private sector housing delivery, offsetting the desired increase in housing supply
- compete with other public construction projects for scarce labour and materials, causing cost overruns across the sector.

Having said that, the Commission does support a sustained long-term increase in social housing delivery over the long-term (see section 6.3).

3.2.4 Use surplus government land strategically to get value for money

Governments around the world have been exploring ways to use government land to support the feasibility of housing development. The Victorian Government announced its Small Sites Pilot program in July 2024, which frees up surplus government land for private developers to deliver around 260 houses across four sites (Development Victoria, 2024). As part of the pilot, developers will not have to pay for the land until construction is complete, which may act as a modest financial incentive for developers (Victoria State Government, 2024a). Governments in San Francisco and Toronto have pursued similar programs as part of broader housing reform packages (San Francisco Planning, 2014; City of Toronto, 2018).

The Commission supports the use of surplus government land as a way to enhance the delivery of new housing. As with other kinds of subsidies, using surplus government land to deliver housing is generally no free lunch, unless the government is responding to clear evidence of market failure. Every use of government land has an opportunity cost, whether it is used for social housing, private market housing, social infrastructure such as schools and hospitals, or sold and used to pay down government debt. This means alternative uses need to be considered and evaluated to ensure government land is put to its highest value use. When using surplus government land for housing, the government is most likely to maximise value for money when targeting private developments that achieve a broader social outcome or positive externality, such as encouraging the uptake of new construction skills and technologies.

While surplus government land can support housing, its short-term potential to boost overall housing supply also has limits. When the NSW construction sector is at capacity, residential projects subsidised using surplus government land may crowd out other housing projects by competing with them for limited labour and materials.

3.2.5 Explore ways to use existing homes more effectively

Building new housing is only one way to increase housing supply. Another option is to use the existing stock of housing more efficiently. Some estimates suggest that there are around 15,000 vacant dwellings in New South Wales (Department of Planning, Housing and Infrastructure, 2024).¹³ Other dwellings may also be underutilised, for instance, where a home has more rooms than the household requires.

There are a number of potential ways Commonwealth, state, or territory governments could encourage more efficient use of the existing housing stock. These include:

- Incentivising homeowners to rent out spare bedrooms, by providing tax relief on rental income up to a certain threshold (similar to the ‘Rent-a-room’ scheme used in the United Kingdom).
- Allowing student accommodation to be used for other purposes when not in use by students, such as for short-term rental accommodation for holiday makers during the summer months.
- Changing the way the family home is treated in the Age Pension assets test and/or for the purposes of determining the age pension rate, to encourage empty nesters to downsize.
- Efficient policy interventions that encourage long-term rentals over short-term rental accommodation (STRA). A state-wide regulatory framework for STRA was introduced in 2021 which mandated all STRAs to be registered in the NSW STRA Register. The NSW Government is currently reviewing the existing regulatory framework and considering options to encourage the supply of long-term rental accommodation, including revenue measures.

This Review has focused on options to increase the supply of new housing, but these levers may warrant further investigation.

3.3 Give income support to people in housing stress, not landowners and developers

The cost of low housing supply is high rents and house prices. This can have a highly damaging effect on household finances, health, and wellbeing. For vulnerable households renting in the private market, high housing costs can result in insecure and overcrowded housing, food insecurity, or homelessness.

In the short-term, relatively small increases in housing supply will not do much for those already experiencing housing stress. This creates a role for governments to provide income support to those households that need it most.

Direct income support is generally the responsibility of the Commonwealth Government. The Commonwealth provides relatively well-targeted and effective housing income support in the form of Commonwealth Rent Assistance (CRA). This form of income support is an effective use of public funds and should be preferred to financial assistance for developers of housing.

Previous reviews and research have highlighted the value of CRA as a tool for improving rental affordability and called for the rate of CRA to be boosted (Commonwealth Productivity Commission, 2022; Coates, B; Moloney, J, 2022).

¹³ ABS Census figures suggest that there were around 40,000 inactive dwellings in New South Wales in 2021 (based on signs of recent use), although this is still less than 1.5 per cent of total housing stock (ABS, 2021).

3.4 Address feasibility and capacity constraints to support finance for development and construction

The recent tightening of finance for residential developers is largely cyclical. Interest rates have risen to tackle high inflation, and construction costs remain elevated after a period of rapid growth. Profits are low and construction sector insolvencies remain at very high levels. In this environment, it is appropriate that banks are cautious about extending new loans for development and construction.

That said, there appears to have been a structural tightening of lending standards over time. In part, this reflects a global re-pricing of risk after the 2008 global financial crisis. Since then, many European banks have withdrawn from the Australian market, and the major Australian banks have tightened their lending criteria for development and construction loans.¹⁴ Pre-sales are reported to have become ‘essential’ to access financing (Rowley et al., 2014). And non-banks appear to have become increasingly active in the market for mezzanine finance.

Looking ahead, the supply of credit will need to expand over the medium-term if developers are to deliver a substantial increase in housing. ABS data on lending for residential property construction in Australia as a whole suggests that new loan commitments have increased recently, although they remain below the volume seen between 2016 and 2018, when residential construction was close to the levels required to deliver on the aspirations of the National Housing Accord (Figure 13).

Governments can support an increase in lending by aiding the feasibility of new developments and addressing capacity constraints in the construction sector.

Figure 13: New loan commitments remain lower than 2016-2018 levels

New loan commitments to developers for residential property construction, Australia



Source: ABS and NSW Productivity and Equality Commission.

The Commission is not in a position to comment on prudential regulation set by APRA, nor is it able to undertake a detailed assessment of how the Australian financial system is functioning. However, given housing supply is a national priority, and there are mounting calls for governments to intervene directly in the provision of finance for development and construction, the Commission would support further investigation of these issues by Commonwealth agencies such as APRA and the RBA, to advise on:

¹⁴ Loans for residential development involve a high risk of losing money. This is because loans will only be repaid once a project is finished and the new homes are sold. Should the market turn sharply lower or a project be abandoned before then, lenders can lose up to the full value of their loan (Ellis & Naughtin, 2010). Historically, this has contributed to elevated losses on these loans for banks in economic downturns.

- cyclical and structural issues in the market for development and construction finance
- whether financial policy changes, if any, are needed to meet aspirational targets under the National Housing Accord, including any policy responses from state and federal governments.

3.4.1 Government interventions should address a clear market failure

Stakeholders have asked the NSW Government to intervene to support developers' access to finance. This could involve the government using its borrowing power to provide low interest rate loans to developers, by acting as a guarantor, or by buying off-the-plan units to help developers meet their pre-sale hurdles. The intent would be to accelerate access to finance and the delivery of additional housing projects.

In June 2024, the NSW Government announced it will invest in a financing guarantee pilot. The pilot will examine how the state can assist the housing industry to secure finance, improve viability of housing projects, and expedite the construction of new homes (NSW Government, 2024a).

APRA and the RBA are better placed than the Commission to advise on whether key borrowing constraints, such as the need to meet pre-sale requirements, are cyclical and passing, or whether they represent structural barriers or market failures. A deeper understanding of these issues would help Australian governments decide if and how they intervene in these markets. In the meantime, any government interventions should:

- be carefully designed and tested, with strong governance to ensure risks are properly mitigated
- target developments that would be feasible with modest government support, but not those that would have proceeded anyway
- avoid distorting markets and supporting inefficient firms that lower our state's productivity
- address the potential for moral hazard and unintended consequences, such as displacement effects
- comply with the NSW Government's competitive neutrality policy
- be evaluated after an initial pilot.

One area for investigation is potential structural barriers to reputable developers seeking to scale up from delivering Class 1 detached housing to Class 2 apartment buildings. The sector will need to lift its capability to deliver apartments to achieve the aspirations of the National Housing Accord.

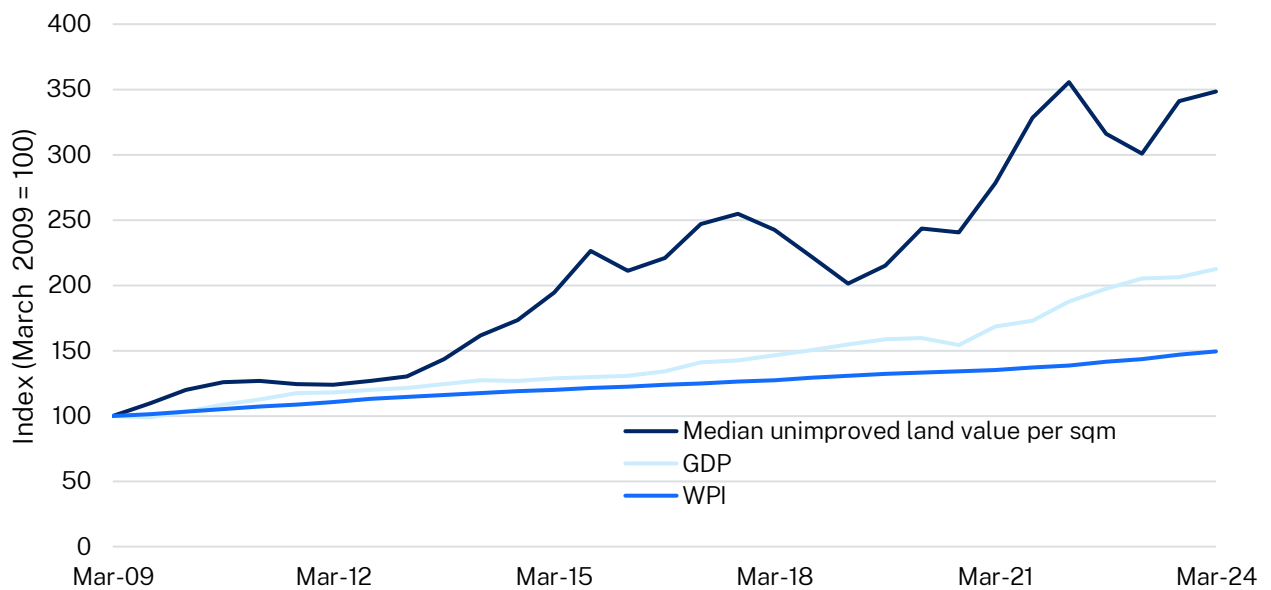
3.5 Allow further density in feasible locations

This Review has only considered the planning system to the extent that it impacts the feasibility of new housing development. Unfortunately, constraints in the planning system hinder other efforts to boost feasibility, such as addressing skills shortages or reducing development costs. In this sense, the planning system can act as a feasibility blocker.

For example, planning constraints such as strict building height and floorspace limits reduce the number of homes that can be built where people want to live. These restrictions make developable land scarce in highly feasible areas, which means developers have to pay more to acquire well-located land. This adds to the price of new homes and puts them out of reach for homebuyers (Figure 14). The CIE's analysis, conducted for this Review, highlights that land acquisition is the second largest cost of developing new apartments in inner-city areas after construction costs. It is a key limit on new housing supply.

Figure 14: Land prices have increased much faster than household incomes

Median unimproved land value per square metre for Greater Sydney, Gross Domestic Product (GDP) and Wage Price Index (WPI) for Australia, indexed March 2009 = 100



Source: ABS and CoreLogic.

Constraints in the planning system also undermine other efforts to improve feasibility. When the planning system makes land scarce where people want to live, reducing other costs like labour or materials just leaves developers with bigger budgets to bid for the scarce land. So instead of making new well-located houses more affordable and feasible, lower building costs get partly or wholly offset by higher land costs.

This problem can be addressed by tackling planning and non-planning barriers at the same time. Clearing feasibility blockers in the planning system helps to ensure that efforts to lower construction costs actually translate into improved feasibility, not just higher land prices.

In urban areas, it's slim pickings for precincts that have had significant uplift. It all comes down to land value... For inner ring projects, [sites] sell out very quickly. It is difficult to buy new sites.

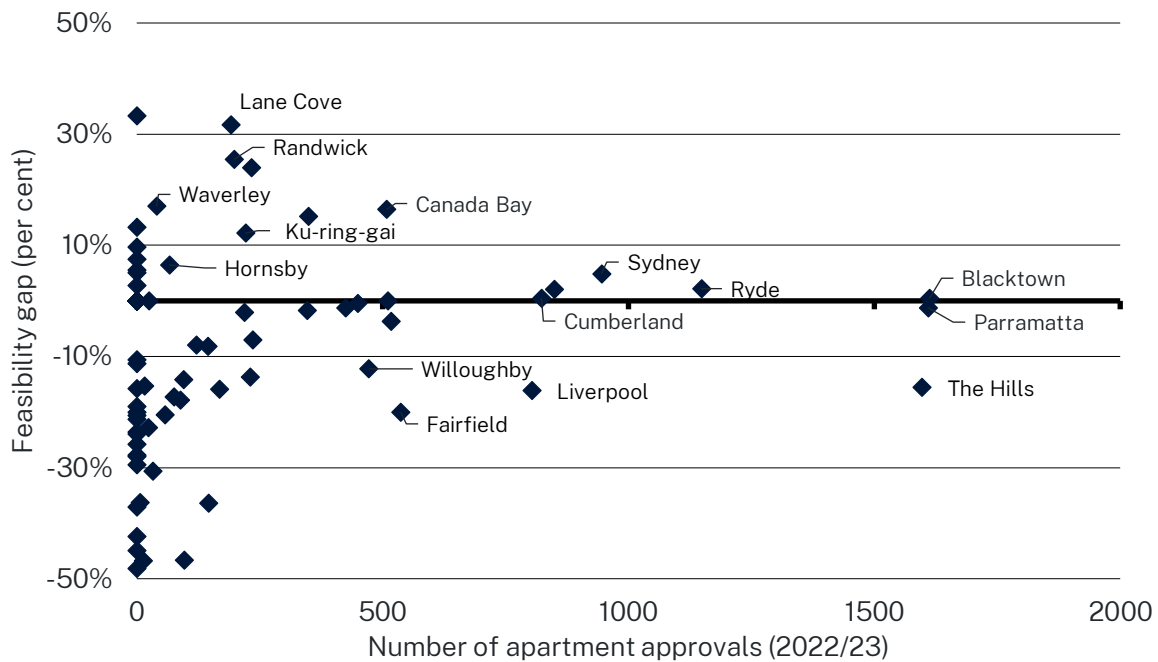
Developer, Infrastructure NSW roundtable

The NSW Government's TOD Program has made important strides towards allowing greater density in desirable locations. The NSW Government has identified eight priority high-growth areas near transport hubs in greater Sydney for accelerated rezoning. Rezoning around these transport hubs will create capacity for up to 61,855 new homes over 15 years, within walking distance of these key stations. The Government has also amended planning controls within 400 metres of 37 stations to deliver more affordable, well-designed, and well-located homes.

However, the CIE's analysis for the Commission suggests the planning system is still blocking density in many areas where it would be highly profitable to deliver, such as Waverley and Ku-ring-gai (Figure 15). By contrast, the planning system has tended to allow more development in areas where feasibility is low or marginal, such as Liverpool, The Hills, and Blacktown. This has made residential development in Sydney more vulnerable to cyclical downturns, and more easily 'crowded out' by other types of construction that offer higher profits.

Figure 15: Development is not occurring in some highly feasible areas

Mid-rise apartment ‘feasibility gap’ versus the number of apartment approvals



Source: CIE (2024).

Note: The y-axis has been limited to +/- 50 per cent, which removes outliers like Woollahra (high profit) and small regional LGAs with few approvals and negative profit. The ‘feasibility gap’ is the return above or below the required 18 per cent developer margin that is built into the CIE estimates of the cost of development.

To accelerate housing supply, the NSW Government should relax feasibility blockers in the planning system and allow more density in the most feasible locations, especially those with existing infrastructure capacity. For example, the recent completion of Sydney Metro City has freed up substantial capacity on the existing Sydney Trains T9 Northern Line. Expanding TOD provisions to allow more dense residential development around Artarmon, Wollstonecraft, and Waverton stations would take advantage of this new infrastructure capacity.

The Commission’s research suggests large gains to feasibility can be made by further planning changes that allow greater density where development is most feasible – that is, in inner-ring areas closer to the Sydney CBD. In its next tranche of reform, the NSW Government should:

- expand TOD relaxed planning controls to more train stations where feasibility is highest, especially in the Eastern Suburbs and Northern Suburbs close to the Sydney CBD
- significantly lift TOD height limits in areas where feasibility is high
- double the radius of relaxed planning controls around TOD stations beyond 400 metres where feasibility is high. 800 metres is a walkable distance to a train station. Doubling the radius of a TOD area to 800 metres quadruples the uplift.
- extend rezoning beyond train stations, as large parts of the Northern and Eastern Suburbs close to the Sydney CBD are highly feasible for new housing
- prioritise those highly feasible areas that are well-served by infrastructure (transport, water, schools, etc.) or whose infrastructure capacity can be expanded at lowest cost.

It is important to target further interventions and rezoning to the most desirable locations, as relaxing planning restrictions in low-feasibility areas has minimal impact on housing supply.

The NSW Government should also investigate and prioritise other planning relaxations that boost feasibility the most, and which are easiest and fastest to implement. As it takes several years to build a new home, planning reforms that impact earlier stages of the development process take longer to show their benefits. High-impact reforms should be combined with reforms whose benefits are felt more quickly. There are opportunities to target reforms towards the latter stages in the

development process to boost feasibility and delivery faster, for example, by allowing and fast-tracking requests to add extra floors to apartment DAs with an existing approval.

Focusing on high-feasibility areas also has the benefit of allowing more homes where people want to live, while discouraging urban sprawl and 'land banking' (see Box 2).

Box 2: Allowing more infill development makes land banking less attractive

Some investors, including some large property developers, purchase land for speculative purposes. They hope future rezoning – for example from agricultural to residential use – will lift land values. This practice is known as 'land banking'. In theory, if a land banker controls enough land in an area, they could influence the price of new housing. They could do this by controlling the rate at which they develop their land and sell new homes, or the rate at which they sell land to others who want to build on it.

The prevalence and impact of land banking on housing supply has become contentious. Prosper Australia found developers reduced sale rates of homes in greenfield developments when market conditions softened to prevent price falls (Fitzgerald, 2022). Another study examined eight greenfield residential developers in Queensland, finding an annual average of 200,000 'land banked' lots between 2004 and 2018 (Murray, 2020). Both studies claimed developers have market power and withhold supply of new homes to drive up prices.

The Commonwealth Productivity Commission, however, has found other potential explanations for development being delayed in this way (Commonwealth Productivity Commission, 2011):

- progressively acquiring fragmented sites to combine them for a single development later
- waiting for the delivery of complementary infrastructure
- changing market conditions that make development unfeasible until costs fall or sale prices rise
- ensuring a steady pace of construction while waiting for planning approvals of other projects.

Land banking is possible, but only in certain local areas, usually greenfield sites. Gaining market power would be very difficult in urban infill areas where land ownership is diverse and fragmented (Commonwealth Productivity Commission, 2022).

Allowing more infill development in attractive inner-city locations where there are many buyers and sellers would reduce the impact of any land banking on housing supply. Zoning restrictions have unduly limited overall developable land supply, driving up land values in metropolitan New South Wales, including in greenfield sites. If planning controls were relaxed to allow more infill development, the relative value of housing and land on the urban fringes would fall, reducing the incentive to hoard or speculate on greenfield land.

While infill development and density in established inner-city areas have many advantages, some stakeholders highlighted that land ownership can be fragmented in these areas. Developers often need to acquire and combine multiple lots to undertake infill residential development. Not all landowners are willing to sell their properties and some may strategically 'hold out' to achieve a higher price. The Commission accepts this can be a challenge to feasibility.

Some stakeholders suggested an authority could be established to compulsorily acquire and combine lots for the purposes of development. The Commission, however, recommends prioritising approaches that address land fragmentation without the government interfering with landowners' property rights. The NSW Government can address land fragmentation in other ways, including by:

- ensuring an abundance of feasible sites are zoned for density, so developers have ample options and opportunities to acquire and combine lots from willing sellers
- relaxing planning restrictions that unduly limit what can be built on individual lots, such as minimum setback and frontage requirements.

Stakeholders highlighted many other potential feasibility blockers in the planning system that should be considered as part of any future review (see Table 3).

Table 3: Stakeholders reported many planning-related feasibility blockers

Category	Planning-related issues that impact feasibility	Scale of impact
Land use planning	Limited sites zoned for medium- and high-density in highly feasible inner-ring areas near Sydney CBD	
	The stringency of land use controls like Floor Space Ratios, height limits, minimum setbacks, deep soil zones, building sustainability requirements, private and communal open space requirements	
	Blanket Heritage Conservation Areas	
	Mixed-use requirements that require residential developments to include commercial space where there is minimal demand	
	Mandatory inclusionary zoning	
	Community and council opposition to new housing	
	Coordination of land use planning with major infrastructure planning	
	Protracted process related to referrals and concurrences	
Development application processes	Inconsistent development controls for similar developments across LGAs	
	Uncertainty from subjective, merits-based administrative decision-making – for example, councils have broad discretion to refuse a DA on the basis they consider it inconsistent with the principles and objectives of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).	
	Excessive delays when engaging councils throughout the process	
	Challenges when having to seek amendments to a DA	
	Issues with instructions, role, and membership of planning panels	
	Inconsistencies in the process across different councils	
	Duplication of processes and certification throughout the process	
	Resourcing issues within councils and state agencies	
	Mismatch between risk/impact of proposals and associated DA assessment pathways	

3.5.1 Smooth the way for feasible projects already approved

Stakeholders report that there are a significant number of NSW DAs that already have approval which have not commenced. Many of these will not become feasible until capacity constraints in the construction sector ease. But even in current conditions, the NSW Government can prioritise clearing hurdles for the most feasible developments that will deliver the most homes fastest. This will mean rapidly resolving post-consent requirements for projects with a DA approval, focusing on clearing any post-DA bottlenecks for the most feasible projects that deliver net new dwellings.

The Department of Planning, Housing and Infrastructure is well-placed to design a feasibility-focused prioritisation process, with support from other government agencies.

Chapter 4 provides solutions that can further smooth the development process across the board.

3.5.2 Make all urban industrial land ‘review and manage’ and adopt an evidence-based approach that also enables housing supply

Planning restrictions can hamper housing supply in other ways. Land use zoning restrictions are supposed to separate incompatible activities, particularly when land use activities reflected technologies of another era. Over time, however, the system has evolved to prohibit co-location of land uses that are otherwise compatible. Moreover, advancements in technology and building design have made previously incompatible uses compatible. Today, industrial land is often ideal for re-zoning for high-density mixed uses, including residential development, because:

- small industrial land parcels are often underutilised and adjacent to in-demand suburbs
- it is simple for developers to acquire large blocks
- many industrial precincts are adjacent to main roads and rail links
- there are fewer existing residents who can be opposed to development.

Today, most activities currently in the E3 (Productivity Support) and E4 (General Industrial) zones are compatible with residential (and other commercial) uses. Activities on land zoned E5 Heavy Industrial are invariably incompatible with non-industrial uses, so their retention is justified.

Sydney’s current ‘retain and manage’ industrial lands policy, introduced in 2016, is an example of this outdated approach – it is essentially passive. It preserves past uses of industrial land, instead of looking to the future. Stakeholders report that industrial land values and rents in Sydney are much higher than in Melbourne, indicating that the planning system has constrained supply of industrial land. This contributes to the cost of construction materials and affects the feasibility of residential development in Sydney.

The Commission recommends replacing ‘retain and manage’ with a proactive ‘review and manage’ approach that supports housing supply and industrial employment more generally, including:

- reform to allow existing industrial land in Sydney to be used more efficiently and effectively – for example, allowing additional storeys in existing light industrial areas where appropriate, or fostering aggregation of sites to enable heavy industrial uses
- rezoning underutilised industrial land for mixed use that includes high-density residential development (see Box 3); Alexandria and Artarmon are two sites worth investigating
- increasing the pipeline of serviced industrial land, comparable to other Australian capitals.

An evidence-based approach to urban industrial lands management could have regard to:

- protecting supply chains and providing services to nearby residential areas
- ensuring businesses will continue to be able to access local workers and customers
- containing impacts of freight movements on the road network
- ensuring industrial businesses have affordable land to operate and grow, especially small manufacturers.

Innovative ways are already being developed to best utilise high-value industrial land. For example, multi-storey warehousing, such as the Goodman’s Axis development at Alexandria, has started to become viable. This allows for ‘last mile’ consumer warehousing using significantly less industrial land.¹⁵ Councils could also extend light industrial activities, like small-scale manufacturing and warehousing, into mixed use or general commercial zones or require developers to provide alternative industrial space for displaced small businesses.

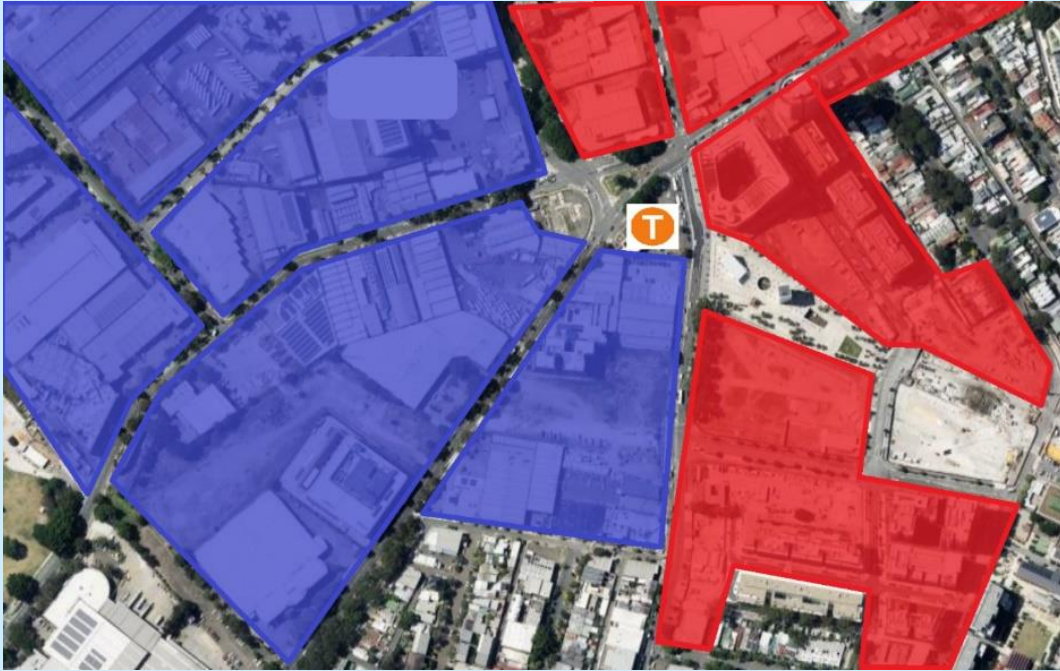
¹⁵ Last mile warehousing refers to a local warehouse or fulfillment centre that dispatches items for final delivery to the customer.

Box 3: Rezoning industrial land at Green Square could unlock further housing

Green Square is a major new residential and commercial infill precinct built on former industrial land in South Sydney. The precinct is built around Green Square train station with several new housing towers constructed in mixed-use rezonings to the east of the station.

However, there are also several E3 (Productivity Support) zoned areas to the south and west of the station (blue areas in Figure 16). Many of these industrial blocks are currently under-utilised, including large areas of vacant land. This land would be well-suited to mixed use industrial and residential zoning, especially with the opening of the new metro station at Waterloo reducing stress on Green Square station.

Figure 16: Aerial view of area around Green Square station (marked with the T symbol)



Source: Google Maps (2024) and NSW Productivity and Equality Commission.

Note: Mixed-use (MU1) zoned areas are shown in red and industrial (E3) zoned areas shown in blue.

4 A fast and smooth development process

Key findings

- Frictions along the development process reduce feasibility and restrict housing supply.
- Conditions attached to development consents play an important role in ensuring that new developments meet statutory obligations and community expectations. However, excessive or onerous conditions can add unnecessarily to costs and delays. Developers also report significant challenges when engaging with state agencies to address DA conditions.
- Stakeholders report that infrastructure contributions are a key challenge in the development process. However, there is strong evidence that well-designed infrastructure contributions, such as those in New South Wales, do not impact on housing feasibility. Past attempts at waiving infrastructure contributions have not been successful in increasing housing supply and have instead resulted in higher land prices.
- Good regulation responds to market failure. Some regulations, such as minimum requirements for car parks and apartment sizes, go beyond addressing market failures and may add disproportionately to construction costs.

Recommendations

- As a priority, develop concierge and clearinghouse functions to rapidly escalate, coordinate, and resolve bottlenecks in the DA process that arise before and after a DA has been approved.
- Legislate the concierge and clearinghouse functions in a mechanism similar to Queensland's State Assessment and Referral Agency to ensure whole-of-government coordination and accountability through the DA assessment and consent process.
- Ensure accountability and transparency by publicly tracking post-DA approval metrics and timeframes.
- Require councils and other consent authorities to consider as a priority the impact that DA conditions have on development timeframes and feasibility. The NSW Government should prepare guidelines that require councils to demonstrate that increased and sustained housing supply is being prioritised in their planning and decision-making functions.
- As a priority, expand exempt and complying development to reduce minor DAs and free up resources to process significant applications more quickly.
- Retain infrastructure contributions and support a smooth and certain development process through improvements to the contributions.
- Create a pro-housing regulatory environment:
 - As a priority, restrict the use of design panels and competitions.
 - As a priority, relax design-related requirements in the Apartment Design Guide that weigh on feasibility, such as car parking, solar access, and minimum apartment size requirements. Expand the use of design guides to support high-quality design while overriding more restrictive local government controls.
 - Evaluate the impact of recent building reforms on development feasibility.
 - Pause further building reforms that add to construction costs, unless they can demonstrate an overriding public interest such as addressing building defects or risks to public safety.
 - Prioritise the recruitment and training of certifiers, as well as regulating and enforcing their responsibilities, to improve building quality.
 - Streamline and harmonise local government construction-related controls with a focus on feasibility.

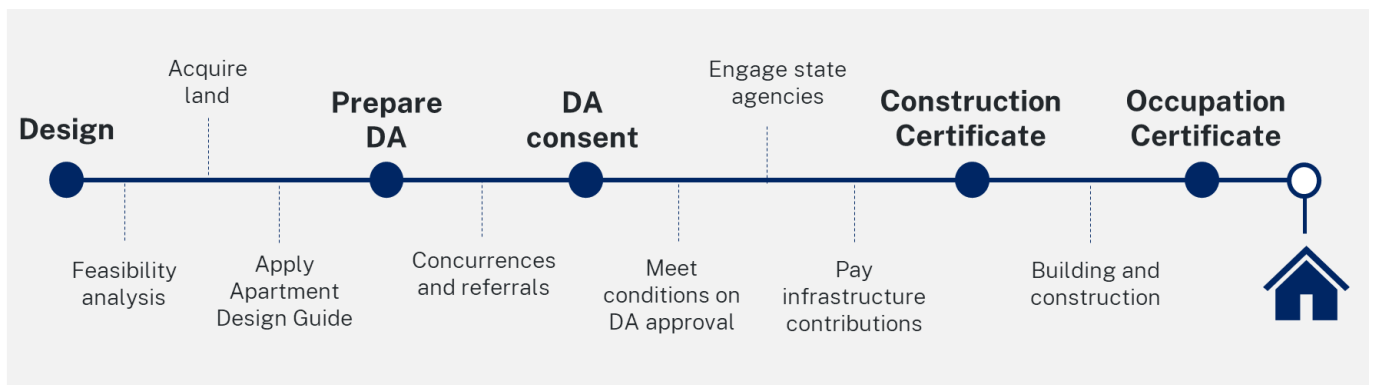
4.1 Delivering a new home takes years from start to finish

There are many steps involved in building a new home (Figure 17). The whole process can span several years after rezoning, including:

- **Design** – developers make a ‘go’ or ‘no-go’ decision based on an initial feasibility analysis, design a project and purchase a site to develop.
- **Preparing DA** – they prepare and lodge a DA, working with councils, consultants, and others, including state agencies, through the process of concurrences and referrals.
- **Development consent** – once a DA is approved by a consent authority, developers must meet a range of requirements and obtain further approvals before applying for a construction certificate and commencing building. This includes:
 - meeting conditions of consent related to the design, construction, or ongoing land use of the development, including non-planning approvals required by state agencies or local councils based on statutory requirements or council guidelines
 - engaging various state agencies like Sydney Water and Transport for NSW to certify that services are available or won’t be impacted by development
 - paying infrastructure contributions.
- **Construction certificate** – once a construction certificate is obtained, developers can commence building work.
- **Occupation certificate** – final approvals and inspections are then sought before the new home is transferred to owner-occupiers or investors.

This process involves interactions with many different stakeholders, including private developers and builders, state government agencies, local councils, banks, contractors, consultants, and others. Stakeholders have suggested that the entire development timeframe for an infill apartment can extend up to seven years, including 18 months for DA approval and 27 months for construction (Property Council of Australia, 2024).

Figure 17: Simplified illustration of the residential development process



4.2 Bottlenecks reduce feasibility and delay housing supply

Stakeholders reported a range of frictions across the development process. These include:

- **Land use planning.** Limited availability of appropriate, well-located sites for development as well as high land acquisition costs. These barriers are affecting feasibility, particularly as land is one of the most expensive inputs to development.
- **Bottlenecks in the development assessment process, both before and after a DA is approved.** Developers face significant delays and challenges when trying to obtain the relevant approvals

to develop and commence construction. Many of these challenges relate to engaging with state agencies, meeting DA conditions, and long approval processes.

- **Non-planning approvals required by state agencies or councils.** Conditions of development consent include non-planning requirements based on statutory requirements or council guidelines. These requirements can be costly and decisions often appear arbitrary or excessive.
- **Infrastructure contributions.** Stakeholders report that infrastructure contributions, along with other taxes and charges, are negatively affecting the feasibility of new housing.
- **Building regulation.** Some building and planning regulation, including the Apartment Design Guide and reforms to the National Construction Code, may be adding disproportionately to the costs of new housing. The rapid pace of regulatory change may also be increasing risk and uncertainty.

These frictions and bottlenecks have a number of impacts on the cost and responsiveness of housing supply, including by increasing delays and uncertainty, adding to holding costs, and increasing the required profit margin that developers must secure in order to attract financing and compensate investors for the risk of development (Table 4).

These factors could be sufficient to affect whether a project is feasible and goes ahead. The CIE’s analysis for the Commission suggests that if an additional year was added to the pre-construction development period, profit would decrease by two per cent. The impact of this on overall feasibility (and broader implications on housing supply) could be significant: the CIE’s estimates suggest there is currently a negative feasibility gap of around two per cent for a typical mid-rise apartment in Sydney.¹⁶

Table 4: Impact of bottlenecks on housing supply

Impact	Description
Increase delays	Many of the steps in the development and construction process are interdependent and sequential, which mean that delays in any one step can flow through to the entire process and cause major delays (NHSAC, 2024).
Raise uncertainty	Frictions in the development process raise uncertainty about costs and feasibility. The tendency to delay housing investment in the face of uncertainty can make supply less responsive to demand.
Add to holding costs	Longer timeframes add to holding costs including for land tax, council rates, and interest payments.
Increase required rates of return	Uncertainty over timeframes can increase the risk that a new development will be less profitable than expected. To compensate, lenders and managers may require a higher rate of return to compensate for risk.
Exacerbate credit constraints	Stakeholders report that lenders are less willing to extend loans for site acquisition, given uncertainty over planning outcomes and timeframes.

No timeframe on planning system – six months, two years, three years for a DA? Hard to benchmark financial return when you have uncertainty over the outcome.

Developer, Infrastructure NSW roundtable

¹⁶ That is, the cost to develop a typical mid-rise apartment in Sydney (including the required developer margin) exceeded the sale price in 2023 by two per cent.

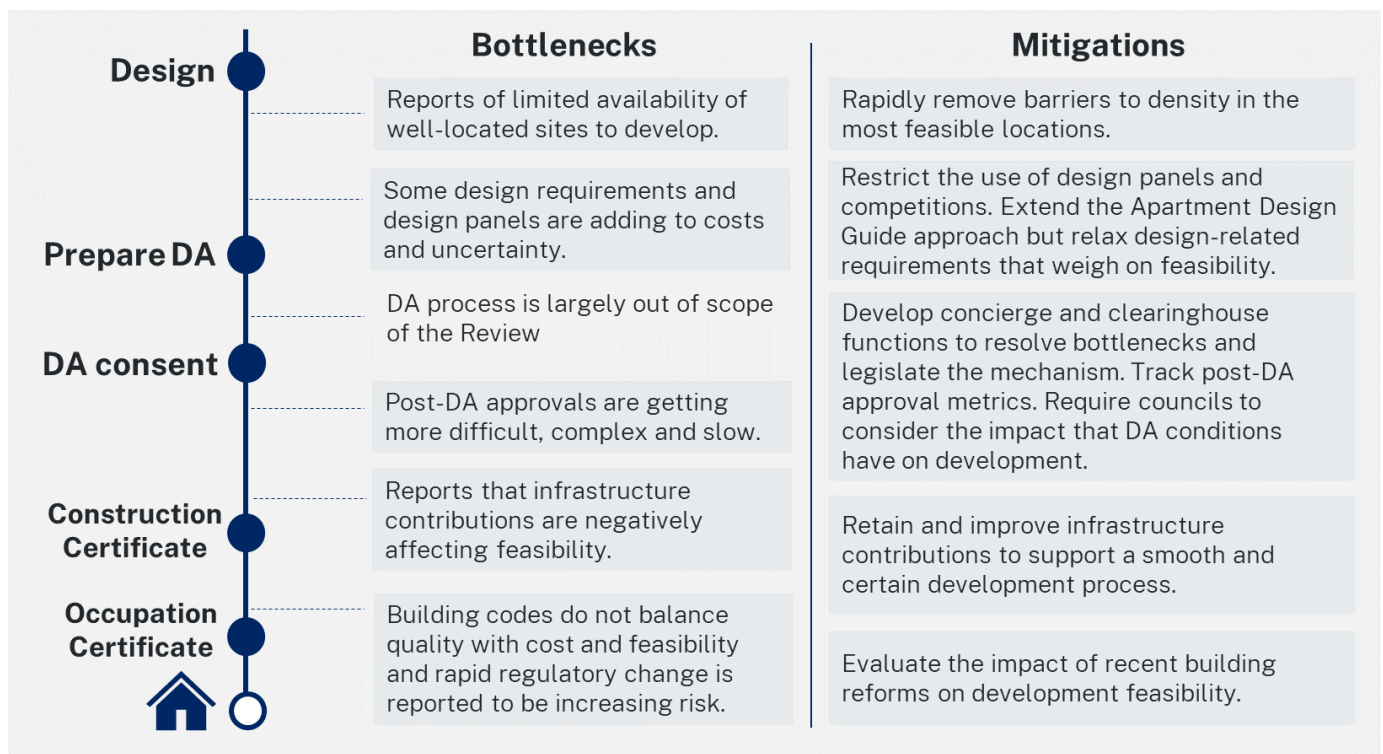
4.3 Clearing bottlenecks will support feasibility and housing supply

While some work is already underway to address challenges in the development process, such as work to reduce DA timeframes, further reform needs to be progressed to address other bottlenecks (see Figure 18). The remainder of this chapter examines these challenges and identifies opportunities to clear bottlenecks to support the feasibility of new housing.

- Section 4.4 explores the bottlenecks after DAs have been approved and ways to address them.
- Section 4.5 outlines the important role of infrastructure contributions and ways that further reforms can improve developer certainty and support feasibility.
- Section 4.6 highlights opportunities to ensure design requirements, building regulation, and other regulatory requirements deliver net benefits for the community.

In addition to the bottlenecks explored in this chapter, some stakeholders reported a risk-averse culture that they suggested was slowing down the overall development process. This culture was also reported to be contributing to excessive red tape and requirements that both developers and councils have to comply with. The Commission makes some recommendations in this Review to address these concerns, but more work is needed to embed a pro-housing culture in the development process, including by considering appropriate incentives and accountability.

Figure 18: Overview of bottlenecks reported in the development process and potential mitigations



From identifying the parcel of land to when developers are finished, that could take about 14 years ... never seen so many broken steps along the development lifecycle.

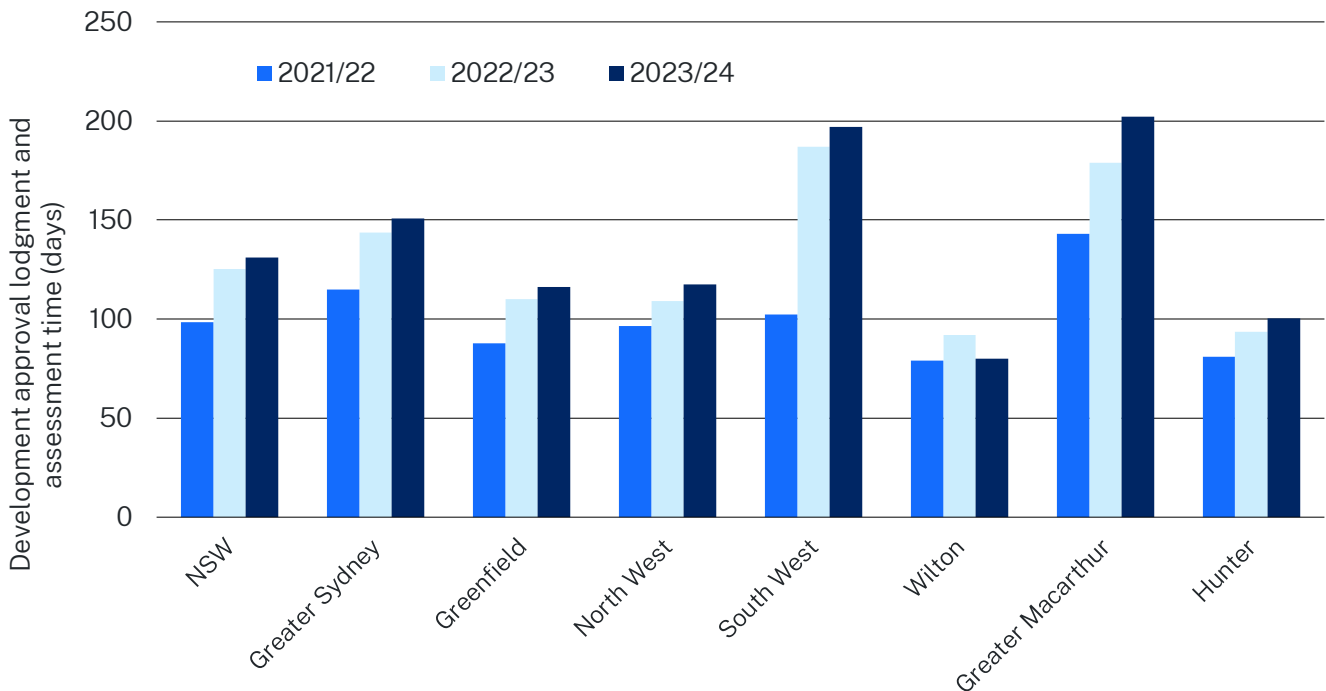
Developer, Review consultation

4.4 Streamline, coordinate, and track DAs after approval

Issues in the development process prior to DA consent are well-known. These timeframes are long in New South Wales compared to other states and have been increasing in recent years (Figure 19). Stakeholders consistently identified issues in this pre-DA consent process as a key challenge. However, these issues are largely outside the scope of this Review.

Figure 19: Development application determination times have gotten longer

Development application lodgement and assessment timeframes



Source: CIE (2024).

In contrast, challenges in the *post-DA* consent stage have received relatively little attention. The Commission has identified significant delays in the development process beyond DA consent, most notably when developers and builders try to secure the necessary approvals to obtain a construction certificate and commence construction. Bottlenecks in this process are reported to be adding significantly to timeframes and hence the costs of developing new housing.

Planning has always had uncertainty, but the middle bit – the transition from the DA to the construction certificate is key. We used to have three stages of construction certificate, now you have ten.

Developer, Infrastructure NSW roundtable

After obtaining development consent, developers must meet a suite of conditions to obtain a construction certificate. This includes:

- meeting conditions attached to the development consent, including NSW Government requirements and council guidelines
- obtaining utility and service provider approvals
- paying infrastructure contributions
- preparing a construction site management plan, erosion and sediment control plan, and a waste management plan, among other documents.

This process may involve engaging various consultants and others for input and reports. In addition, developers must provide written evidence from electricity supply and water authorities, and any other relevant service providers, that all requirements have been met.

These requirements and guidelines are intended to achieve important outcomes, such as environmental protection, workplace safety, and managing construction impacts on neighbouring properties and nearby traffic. Consistent with best-practice regulatory approaches, these should be designed to achieve these outcomes efficiently, flexibly, and transparently, but without adding unnecessarily to compliance costs or delays.

The last DA we went through had about 230 conditions that needed to be addressed before we could get a construction certificate. This process can add another six months.

Developer, Review consultation

4.4.1 Post-DA approvals are getting more difficult, complex, and slow

Stakeholders reported that this process has become more onerous and arbitrary, adding to longer overall project timeframes and contributing to greater risk and uncertainty. One stakeholder suggested that this process took about 18 months for a new mid-rise apartment block.

Consultations suggest that challenges in this process are driven by a range of factors, including difficulties engaging with various state government agencies, having to meet a significant number of conditions associated with the DA approval, and shortcomings related to accountability and reporting (see Table 5).

A lot of their [state agency] experience has left. There is no accountability. Responses can take one week to six months. There is not much of an effect if you complain or escalate.

Developer, Infrastructure NSW roundtable

Table 5: Hurdles after development consent

Challenge	Description
Working with state agencies	Stakeholders report significant communication challenges with state agencies, such as Sydney Water and Sydney Metro. This could reflect resourcing issues within agencies, a loss of trained specialists and engineers, a prevailing culture of risk aversion, among other things.
Meeting consent conditions	Stakeholders suggested that conditions on development consents can be onerous, difficult to comply with, and disproportionate to the impact of the development. Stakeholders noted that it can be difficult to negotiate with councils on these conditions and that more room for staged delivery of these conditions could better support this process.
Accountability and reporting	Stakeholders noted that in the post-DA consent stage, there is less accountability, coordination, monitoring and reporting compared to the pre-DA consent stage.

[There is] no continuity through the process. Lack of accountability for government agencies. If things need escalating, who does it go to? How do we get certainty of the outcome? We need an effective process for escalation.

Developer, Infrastructure NSW roundtable

4.4.2 Focus on the end-to-end process, not just the DA consent

A number of reforms have recently been introduced in New South Wales to reduce DA assessment times, remove blockages, and provide the community with greater transparency (Table 6).

In contrast, relatively little attention has been given to resolving bottlenecks after DA consent. Indeed, the strong focus on DA approval timeframes appears to have created a perverse incentive for consent authorities and referral agencies to approve DAs with substantially more conditions in order to comply with the expected timeframes for DA approval. Applicants are left with many conditions that need to be complied with before commencing construction.

The NSW Government should focus on expediting and resolving bottlenecks in the end-to-end development process, not just the approval of DAs. Addressing challenges in the post-DA consent period prior to commencing construction is key to reducing overall development timeframes and improving the feasibility of new housing projects.

Some stakeholders also noted that communication with consent authorities is frequently bogged down by email communications. Consent authorities should be encouraged to increase face-to-face discussions instead of resorting to the snail's pace of slow-moving emails.

In addition, the Commission notes that concerns have also been raised with the role, accountability, and performance of local planning panels, which may benefit from further review.

Table 6: Overview of recent initiatives to improve the efficiency of DA consent processes

Initiative		Description	Timing
Faster Assessments Program	Financial incentives	\$200 million of financial incentives for councils to help achieve housing targets and improve planning performance. Funding will help to deliver local infrastructure.	Mid-2024
	Statement of Expectations Order 2024	Increases local council accountability by setting new benchmarks for performance on DAs, planning proposals, and strategic planning.	July 2024
	Council league table	An interactive dashboard designed to promote council accountability and public transparency in the DA process. It monitors council performance by reporting on the average number of days taken to lodge a DA and to complete a DA assessment.	July 2024
Early Adopter Grant Program	\$2.7 million awarded to 16 councils to trial AI in their planning systems to help improve the DA assessment process.	April 2024	
Faster Local Assessment Grant (FLAG) Program	\$350,000 allocated to 14 councils to help enable the allocation of additional resources and implement process improvements, with a target of at least 10 per cent reduction in assessment times. ¹⁷	June 2022	
Planning Delivery Unit (PDU)	Established as a central point of escalation to resolve bottlenecks on large or complex DAs. The PDU helps to streamline the DA process by improving coordination and transparency across developers, councils, and government agencies.	July 2020	

Source: NSW Department of Planning, Housing and Infrastructure.

¹⁷ As of 30 June 2023, seven councils met their targets for assessing local residential DAs and four councils met the target for subdivision DAs.

4.4.3 Direct councils and consent authorities to prioritise housing supply as part of their decision-making

Given reports of onerous conditions on consent that reduce feasibility, the NSW Government should prepare Housing Delivery Guidelines for councils exercising regulatory functions under the *Local Government Act*, the *Roads Act*, and other relevant legislation. These Guidelines should require councils to demonstrate the prioritisation of increased and sustained housing supply in their regulatory and decision-making roles. Councils should consider the application of Better Regulation Principles in the development of guidelines and requirements and in approvals that affect housing development, and report on the application of the Housing Delivery Guidelines on a regular basis.

The NSW Government should prepare a ‘Statement of Expectations – Housing Delivery’ for NSW Government agencies and state-owned corporations to inform the development and review of guidelines that impact housing supply and to be applied to approval and concurrence processes.

Other improvements, as identified in consultations, could also support a more efficient process:

- conditions of consent should provide a clearer distinction between design, construction, and land use conditions
- conditions of consent should clearly distinguish between conditions requiring strict compliance with statutory obligations and those that seek to achieve public benefit outcomes as specified by council policies and guidelines
- where conditions seek to achieve public benefits additional to strict statutory compliance, councils should provide a cost impact assessment to the proponent and the Department of Planning, Housing and Infrastructure
- conditions which extend beyond statutory requirements should be proportionate to the development impacts being proposed. This could also provide opportunity for discussion and collaboration between applicants and authorities on conditions seeking additional public benefit outcomes.

4.4.4 Build coordination with concierge and clearinghouse functions

There is currently no end-to-end mechanism to enable better cooperation and engagement with state agencies across the development process. One option for improving coordination and engagement is to introduce a mechanism with concierge and clearinghouse functions. This would allow for rapid escalation, coordination, and resolution of bottlenecks in the pre- and post-DA consent processes.

The Planning Delivery Unit (PDU) has previously played a similar role in the pre-DA process in New South Wales, where it operated as a case manager to resolve stalled projects through coordination and mediation.¹⁸ In consultation, stakeholders consistently spoke highly of the role of the PDU in supporting the smooth and efficient operation of the DA process.

In Queensland, the State Assessment and Referral Agency (SARA) plays a similar role to the former PDU (Box 4). Stakeholders and industry feedback suggest the SARA approach in Queensland is well-regarded. A key feature of SARA is legislative provisions that allow it to engage early in the referrals and approvals process and require it to publish data against key performance indicators, which are associated with statutory timeframes.¹⁹ In contrast, the PDU’s responsibilities were largely confined to stepping into projects that were already experiencing unreasonable delays.

¹⁸ The PDU and its case management function are no longer in operation in New South Wales. Responsibility for concurrences and referrals is currently within the Department of Planning, Housing and Infrastructure.

¹⁹ Under the *Planning Act 2016*, SARA is required to publish material on its website such as the median time taken for referral agencies to assess an application. Under provisions of the *Sustainable Planning Act 2009*, the Department of Infrastructure, Local Government and Planning is the decision-maker for all applications that are referred to SARA.

The NSW Government should legislate concierge and clearinghouse functions in a mechanism similar to Queensland's SARA, to ensure whole-of-government coordination and accountability through the DA assessment and consent process. The concierge and clearinghouse functions should embed key features including:

- central coordination of engagement with state agencies in the pre- and post-DA stages
- defined responsibilities and powers that are embedded in legislation, potentially requiring changes to the *Environmental Planning and Assessment Act 1979*
- broad responsibilities that allow the concierge and clearinghouse mechanism to engage and facilitate agency input early in the process (that is, before delays are already occurring)
- consideration of the end-to-end development process to mitigate against perverse incentives
- powers to escalate and intervene when delays occur after a prescribed period of time
- clearly defined key performance indicators, such as post-DA approval timeframes, which are subject to reporting requirements and regular tracking in public reports (potentially in a similar manner to the Council League Tables)
- commitment to continuous improvement, such as through the collection of customer feedback that helps to inform targeted initiatives to improve the service.

Incentives to encourage a pro-housing approach could be further explored to better support agency engagement and coordination across the system. In addition, work could be done to explore similar ways to improve local council engagement and efficiency in the pre- and post-consent process. This could include embedding some of the features outlined above – for example, introducing mechanisms that allow for escalation and intervention when delays occur with councils.

Box 4: Queensland's State Assessment and Referral Agency (SARA)

While local governments are mostly responsible for assessing DAs in Queensland, SARA becomes involved when the proposed development affects a state interest. When a DA requires input from state agencies, SARA will step in to coordinate the referral process and ensure a whole-of-government approach to the state's development assessment. This provides a 'one-stop shop' approach to DAs that require the involvement of multiple agencies. SARA will also take on the role of assessment manager for certain DAs.

SARA is legislatively required to publish certain material on its website for transparency, such as:

- median time taken for referral agencies to assess an application
- median time taken for an assessment manager to assess an application and make a decision
- feedback about whether SARA conditions were clear, concise, and included reasonable timing/timeframes for required actions
- percentage of applications decided with and without information requests.

The *EP&A Act* provides the Secretary for Planning with powers that can support faster DA determinations for some applications. The Secretary can step in to prevent excessive delays when a referral authority has not decided to either grant or refuse concurrence by a specific time or when there is inconsistency in the terms of approval of two or more approval bodies.²⁰

Planning legislation in New South Wales does not currently provide a similar authorising environment for an agency to step in to address delays post-consent. Work should also be done to provide a sufficient authorising environment for agencies involved in the post-consent process to step in and resolve bottlenecks.

²⁰ These powers apply to the determination of DAs for integrated development. These are outlined in section 4.47 (4A) of the *EP&A Act 1979* as well as section 46 of the *EP&A Regulation 2021*.

4.4.5 Expand exempt and complying development to reduce minor DAs

Stakeholders reported that some councils and state agencies lack adequate resourcing to efficiently process DAs and support the progression of applications through to commencement. Matching the impact and risk of DAs with the associated assessment pathway is key to ensuring an efficient development process and freeing up resources for more high-risk DAs.

Exempt and complying development are two pathways that allow for certain types of development to proceed without the need for a full DA. These pathways are designed to simplify or eliminate DAs for low-impact and low-risk development.

Stakeholders flagged that current exempt and complying development provisions are overly narrow, resulting in local councils still having to process many minor and low-risk DAs. For example:

- Properties in Heritage Conservation Areas are often automatically excluded from access to exempt and complying development pathways, even if the proposed development has no or limited impact on heritage values.
- Many types of exempt and complying development have strict setback requirements, which seem to have been developed with large suburban residential blocks in mind. This rules out some types of exempt and complying development for inner-city areas with small blocks.

Exempt and complying development provisions should be relaxed to eliminate as many low-risk, low-impact DAs as possible. This will free up council planning resources to process significant DAs more quickly, including the assessment of large-scale housing projects. This will have the added benefit of reducing the cost to existing homeowners associated with preparing DAs for minor forms of development such as sheds, fences, and driveways that should not require a detailed planning assessment. Section 4.6.8 discusses further opportunities to improve the complying development process to support construction.

4.5 Retain and improve infrastructure contributions

A common objection to new housing is that communities do not have enough capacity to absorb the increase in population. These objections often stem from concerns that infrastructure may be inadequate to service growth. When infrastructure is under-provided, it is usually due to a lack of funding. Developer charges, also known as infrastructure contributions, play an important role in addressing these concerns, by linking new housing to new local infrastructure.

4.5.1 What are infrastructure contributions?

Infrastructure contributions fund the roads, footpaths, stormwater systems, open space, drinking water and sewage systems that we need. They are paid by developers to ensure developments are accompanied by infrastructure to support growing communities (Box 5).

Infrastructure contributions also reduce the utility bills paid by NSW residents. For example, if the cost of providing water and wastewater to new homes is not recovered through developer charges, the water utility passes it on to all customers through higher bills. It is estimated that the reintroduction of water and wastewater developer charges will save Sydney Water and Hunter Water customers \$140 per year on average over the decade from 2019 (IPART, 2020).

When infrastructure contributions are set to reflect the true cost of providing infrastructure to a property, they encourage development in areas where infrastructure is cheapest to provide. On the other hand, they also discourage development in areas where infrastructure is expensive to provide. This leaves the state and taxpayers better off.

Box 5: Infrastructure contributions in New South Wales

Section 7.11 infrastructure contributions were first introduced under the *Environmental Planning and Assessment Act 1979*. Reforms in succeeding years introduced other contributions mechanisms, including those payable to the state.

Local council contributions

Section 7.11 local infrastructure contributions plans are determined by councils and the Independent Pricing and Regulatory Tribunal (IPART). They reflect the cost of additional infrastructure demand that new housing imposes on local roads, footpaths, stormwater facilities, and local open space. 'Section 7.11s' mostly apply to greenfield sites.

Section 7.12 contributions are a simpler alternative to 'section 7.11s' levied based on the cost of development to a maximum of three per cent. These are generally used for infill development and where councils do not have sufficient expertise to prepare section 7.11 plans.

State contributions

The Housing and Productivity Contribution (HaPC) is a flat charge on development levied by the state government and implemented in 2023. It comprises three parts: a base charge, a transport projects component (TPC), and a strategic biodiversity component (SBC). All components will be charged on *additional development capacity* – a *per dwelling* basis for residential developments and on a *per square metre* basis for non-residential uses.

- The base charge has been implemented across Greater Sydney, Illawarra-Shoalhaven, the Central Coast, and Lower Hunter.²¹
- The TPC and SBC are yet to be fully implemented but will be additional to the base charge:
 - the TPC will apply to up-zoned land in service catchments that benefit from new major transport capacity to support capital cost recovery
 - the SBC will be charged to reflect the damage of development to biodiversity, with funds pooled to plan and deliver biodiversity recovery and restoration projects.

Development Servicing Plans (DSPs) are charges paid to state-owned corporations – Sydney Water and Hunter Water – to fund connections to potable water and wastewater systems. These charges are cost-reflective and vary by geography, depending on the cost of delivering connections to new homes in metropolitan New South Wales.

Both state and local governments can also enter into **section 7.4 planning agreements** with developers. These are negotiated on a case-by-case basis and can involve developers building infrastructure as works-in-kind in lieu of paying contributions.

Finally, all contributions are liable to be paid at or before issuance of a construction certificate, which is obtained after development approval and just before construction begins. Ideally, infrastructure contributions should be determined at or before land is re-zoned for higher and better uses to avoid unduly impacting development feasibility.

²¹ In Greater Sydney, developers pay a state infrastructure charge of \$12,000 per house and \$10,000 per unit (NSW Government, 2024). By way of comparison, in Melbourne a contribution is collected on developments in growth areas identified by the Victorian Government. Contributions range from \$115,530 to \$137,230 per hectare (Victoria State Government, 2024). Data on local infrastructure charges across Australia is not readily available; however, a 2021 report by Housing Australia found that local contributions could amount to between \$25,000-85,000 per dwelling in New South Wales and between \$37,000-77,000 per dwelling in Victoria (Housing Australia, 2021).

4.5.2 Waiving contributions increases land prices, not housing supply

Some stakeholders have asked that infrastructure contributions be waived, arguing that taxes and charges are making residential development less feasible. This includes, among others:

- temporarily suspending Sydney Water DSPs and HaPC charges for the duration of the Housing Accord period (Property Council of Australia, 2024)
- freezing HaPC charges and applying a capped section 7.12 levy for TOD sites to support more housing in the short-term (UDIA NSW, 2024).

The Commission does not support waiving or reducing infrastructure contributions. When designed well, as NSW contributions are, infrastructure contributions do not reduce new housing supply. By the same token, waiving contributions does not boost housing supply.

Developers generally cannot pass the cost of infrastructure contributions onto homebuyers, because homebuyers' budgets are limited by their borrowing capacity. Housing prices are generally set by prices in the established market, not by the cost of developing new housing. So, when a government signals infrastructure contributions requirements clearly and in advance, as the NSW Government has, developers adapt to them by reducing what they are willing to pay for developable land.²² This means contributions are effectively paid by landowners rather than developers or homebuyers.

The reverse is also true. When developers are given concessions on their contributions, they use the extra funds to bid for scarce developable land, and land prices rise. Waiving infrastructure contributions therefore results in windfall gains for landowners, not more homes or cheaper homes.

This idea is well-supported by the academic literature, and we have strong empirical evidence that waiving infrastructure contributions increases land prices, not housing supply. The NSW Government waived water developer charges in 2008-09 in the hope of boosting housing supply, but the outcome was higher land prices, not higher housing supply (Box 6).

Box 6: Waiving water developer charges in 2008-09 did not improve housing supply

The NSW Government set DSPs for Sydney Water and Hunter Water to zero in 2008-09 as a stimulatory response to the global financial crisis (NSW Government, 2008). It was intended to support the construction sector during an economic downturn, but the waiver was not reversed, even after the Australian economy and property markets recovered in the ensuing years.

The NSW Productivity Commission recommended charges be restored in its 2020 Review of Infrastructure Contributions in New South Wales. A phased-in return to water developer charges commenced in 2023.

IPART recently analysed the experience of zero developer charges for metropolitan water utilities (IPART, 2024). It concluded the additional cashflow for developers had no effect on housing supply. IPART found:

- vacant land prices in areas where water and wastewater charges were removed increased by roughly the value of the charges compared to areas not subject to the policy change
- the change had no statistically significant impact on housing prices compared to other Australian capital cities (where there was no change in charges).

They conclude that landowners benefited from the removal of developer charges, without a significant impact on housing supply and/or prices. Additionally, they expect the cost burden of the reintroduction of developer charges will be primarily borne by owners of vacant land and will not impact housing prices.

²² The NSW Government signalled its recent infrastructure contributions reforms well in advance, with phase-in arrangements. This avoided any impacts on developments already underway and gave developers time to adjust their land budgets for future developments.

Some developers are also major landowners or ‘land bankers.’ These developers buy land not just to develop but to speculate on future land prices. When infrastructure contributions are waived, their landholdings rise in value immediately, regardless of whether or when they build new homes. Waiving infrastructure contributions rewards them for owning land, not for building homes. It also benefits land bankers more than other landholders. This is because land bankers tend to have large holdings in greenfield areas where new infrastructure is costly to provide and infrastructure contributions are set at higher rates (see Box 2). When these contributions are waived, large greenfield landowners benefit the most.

The fact that housing supply did not increase in 2008-09 shows that in practice, there are relatively few residential projects where waiving developer charges provides a genuine incentive to develop faster or makes a material difference to feasibility. Such cases are possible in theory but have been found to be rare in practice.

4.5.3 Indecision creates uncertainty and delays development

There is potential risk to housing supply if the government signals a willingness to consider relief from infrastructure contributions. Doing so creates uncertainty about the future rate of contributions. The Commission understands some developers may be holding off on developments in the hope of receiving a future waiver. Providing certainty was a key principle of the NSW Productivity Commission’s 2020 Infrastructure Contributions Review.

4.5.4 Improvements could increase certainty and support housing supply

Infrastructure contributions can still be improved to provide developers with certainty over the charges they face. This would help to reduce risk and encourage more development and is in line with recent suggestions from industry.

Shift payment of section 7.11 contributions from construction certificate to occupation certificate phase.

Industry stakeholder, Infrastructure NSW roundtable

Key recommendations are as follows:

- **Allow payment of contributions at the occupation certificate stage.** Currently contributions are required to be paid at the construction certificate stage, just before construction commences. Shifting payment to the occupation certificate stage would help to align developers’ revenues with expenditures, lowering financing costs and improving feasibility.

Although councils would receive contributions revenue later, they are able to forward-fund local infrastructure using cheaper government financing through TCorp. Consideration could also be given to options for councils to deposit or pool unspent funds for investment through TCorp, or ways to encourage payment at the construction certificate stage if councils are able to improve the speed and efficiency of their development assessment processes.²³ Stakeholders have also suggested that councils could better disclose how infrastructure contributions are spent on their websites. Investigating these options would require additional stakeholder consultation.

- **Develop contribution plans upfront as part of the zoning process.** Currently infrastructure contribution plans are only needed before development approval. This means for section 7.11 plans, developers don’t necessarily know their contribution liabilities when purchasing land to develop. Clarifying the infrastructure needs of an area before land is rezoned would reduce uncertainty and help to lower costs.

²³ According to UDIA NSW, nearly \$3.2 billion in unspent infrastructure contributions is being held by councils across Sydney as of FY2021-22. UDIA has called for the improvement of governance around contributions to support infrastructure delivery (UDIA NSW, 2023).

- **Simplify section 7.11 plans by implementing benchmark costs and mandating the essential works list.** The cost of infrastructure can vary substantially between local government areas and can fall prey to gold-plating by councils who seek to shift maintenance costs to the contributions system. Ensuring developers are only liable to pay for development-contingent costs and centralising cost estimation within IPART could further decrease uncertainty. IPART could also allow charges based on benchmarked costs to be indexed based on market conditions.
- **Refine the use of section 7.4 planning agreements to increase certainty for developers.** There is still no legislative requirement for councils to publicly exhibit and register these agreements with developers, reducing public trust in the process. The outcome of negotiations is extremely uncertain for developers and should be limited in use.

4.6 Create a pro-housing regulatory environment

Building regulation includes standards, licensing and insurance requirements, and compliance and enforcement powers. Some planning controls also regulate the design of new buildings. These regulations are aimed at ensuring that buildings are safe, well-designed, high-quality, free of defects, sustainable, and accessible. But it is also important to ensure these objectives are achieved in ways that do not unduly compromise the feasibility of delivering new homes.

Two market failures provide a justification for regulating housing design and construction (NSW Productivity Commission, 2021):

- **Information asymmetry.** It is not reasonable to expect the buyers and users of a building to know important details about its construction. Buildings hide aspects of their construction, including their structural integrity, waterproofing, and fire safety. This can make inspection challenging, even for experts.
- **Negative externalities.** These can arise when private developments impose costs on the broader community, such as reduced privacy or pressure on local infrastructure. These impacts can be subjective and should be balanced against any positive impacts, such as agglomeration benefits, higher productivity, and the amenities that come with growing neighbourhoods.

Good building regulation responds to these market failures. It produces safer buildings, reduces the cost of defects for homeowners, and increases public confidence in the building industry.

But building regulations can also increase dwelling costs for buyers and raise compliance costs for builders. The social, economic, and environmental benefits of building regulation therefore need to be carefully balanced against the higher cost and potentially lower supply of housing.

4.6.1 Relax design requirements that limit choice and supply

Stakeholders consistently raised the impact of design requirements on the feasibility of development. Reforming these requirements could significantly boost the feasibility of building new homes. Even better, these reforms could help to allow more housing to be delivered within the construction sector's existing capacity – letting the sector build more homes with the same labour and materials.

4.6.1.1 Restrict design panels and competitions to reduce costs and uncertainty

Design competitions have been a feature of major public works and urban planning since the late-19th century. In recent years, the use of design excellence standards, including competitions and design review panels, has been expanded to private sector developments including residential developments.

Requirements for design excellence can be imposed through environmental planning instruments in the NSW planning system. The Department of Planning has issued Design Competition Guidelines to inform the development and application of local guidelines by councils (other than the City of Sydney) and consent authorities in the development consent process.

Typically the proponent is required to run a competition process, with three to six design teams preparing design responses to a brief, with a jury choosing the winning response. The competition, including the work of the design teams, competition jury, and probity and technical advisor are funded by the proponent. In other cases, the DA is referred to a local independent design review panel for advice, and changes may be requested based on that advice.

Design excellence requirements, especially the use of panels, can be major source of uncertainty in the development process.

Industry stakeholder, Review consultation

There are likely to be important social benefits generated from design excellence, for residents and other users of a development and for the broader community. However, there are also costs on the proponent and community. Design competitions impose direct costs on proponents by requiring them to pay for the services of multiple design teams and by delays in the development process that increase holding costs. The use of design review panels and competitions can increase uncertainty regarding development fundamentals such as floor space, dwelling numbers, and building costs.

Independent design panels can also weaken a developer's control over the market positioning of new housing developments, a fundamental element of the development process. All of these factors reduce the feasibility of residential development.

Currently, the thresholds at which residential developments can be subject to a design review panel or design competition can be very low – for example, the height threshold for reference to a local design panel is just three storeys, and the dwelling threshold is just four dwellings. These thresholds seem to contemplate a sprawling low-rise city where 'building up' is unusual. They are not suited to New South Wales' mission of delivering abundant well-located and well-designed homes through medium- and high-rise development around transport hubs.

In all but exceptional cases, design quality should be assured through:

- requirements to use a registered design practitioner for multi-unit residential buildings
- regulation of registered design practitioners
- the 'design guide' approach (see section 4.6.1.2)
- design-related requirements in the National Construction Code.

The Commission recommends adopting a consistent policy across local and state government that improves certainty and restricts design review panels and competitions to where they deliver clear net benefits. Design panels should also be regulated to minimise their potential unintended consequences on the feasibility of the homes New South Wales needs. This should include:

- high thresholds that ensure design panels and competitions are used only for the highest impact residential developments, such as very large high-density and high-rise developments
- strict time limits on panel and competition processes
- a requirement for panels to include members with construction and developer expertise
- a requirement that requests for design changes be required to consider and justify impacts on cost, feasibility, and housing supply.

4.6.1.2 Relax the Apartment Design Guide but expand the approach of using guides to promote quality design while overriding restrictive controls

The Apartment Design Guide (ADG) is beneficial as it provides consistent planning and design standards for New South Wales. It can mitigate the risk of poorly designed buildings. It assists with the feasibility of development by overriding some potentially more restrictive controls in local Development Control Plans (DCPs) and restricting the grounds on which councils can refuse DAs. To some extent, the ADG operates as a ceiling on restrictive planning controls, and it improves certainty about what kinds of proposals will be approved.

To further increase the feasibility of housing, the NSW Government should broaden the extent to which the ADG is binding on councils when assessing DAs and overrides DCPs.

Stakeholders also raised that the ADG is often applied strictly by some councils. Councils should be more open to merit-based deviations from the design guide.

The NSW Government should expand the use of design guides to support high-quality design while overriding more restrictive or inconsistent local government controls, including for low- and medium-density housing. This would complement the NSW Government's current work to develop a pattern book of endorsed building designs.

The NSW Government should also relax certain requirements in the ADG, including:

- car park requirements
- minimum apartment sizes
- solar access requirements.

As the following sections explain, these elements of the ADG are regulating where there is no market failure. Not all NSW residents can afford or want to pay for a spacious, sunny apartment with a car spot. Many people value these features but are willing to forgo one or more of them to live in a more desirable location. Mandating these features reduces the diversity of housing options in New South Wales, and prices some residents out of buying or renting where they want to live.

4.6.1.3 Relaxing car parking requirements can significantly boost feasibility

The ADG caps minimum parking requirements at levels set in 2002, and a draft update to these guidelines is keeping them relatively unchanged.²⁴ Changes since 2002 that would have affected car parking needs include increased urban density, greater use of car sharing schemes, increased working from home, and the expansion of public transport networks.

The amount of parking currently required likely exceeds demand (Brodie & Longworth, 2010). The net cost of building excessive parking in Greater Sydney has been conservatively estimated to be \$303 million in present value terms (The Centre for International Economics, 2021). Further analysis for the Commission done by the CIE found that parking requirements were a major component of development costs for a typical new mid-rise apartment: \$93,000 or one fifth of construction costs.

While many households will continue to want parking on title, for others, access to shared or commercial parking, public transport, or car share schemes will better meet their needs. For these households, having to purchase or rent a parking lot with their home represents an unnecessary expense. For some it could put home ownership out of reach.

Reviews by the Commonwealth Productivity Commission and Australian Housing and Urban Research Institute have both suggested relaxing parking requirements for apartments (Commonwealth Productivity Commission, 2022; Australian Housing and Urban Research Institute, 2012). This would reduce costs with minimal potential for negative impacts. In general, developers are better placed to decide appropriate parking offerings for particular locations based on homebuyers' preferences.

There are concerns that on-street parking could be abused by apartment residents who do not have sufficient parking. Some councils mitigate this risk by not providing parking permits for new apartment residents (e.g. the City of Sydney). A more efficient solution would be for the NSW Government to work with councils and the property sector to investigate models that separate parking ownership from home ownership in high-density mixed use areas.

²⁴ The ADG refers to the rates set out in the Roads and Traffic Authority's *Guide to Traffic Generating Developments* (2022). Transport for NSW completed the consultation period for the draft update to the *Guide to Traffic Generating Developments* (2002) at the end of May 2024. The updated guide provides reference rates rather than requirements and are intended to assist in determining suitable numbers of parking spaces for a development considering its local context. The updated guide refers to parking rates based on historical minimum rates from the 2002 guidance, stating that these have not been substantially revised. See [here](#).

The NSW Government should relax the ADG's car parking requirements by:

- reducing minimum car parking requirements
- removing them in the vicinity of transport hubs like TOD sites.

4.6.1.4 Remove minimum apartment sizes to build more homes with less resources

Regulation is important to protect consumers from hidden dangers. But there is nothing hidden or dangerous about a modest apartment. Indeed, there is demand for smaller apartments in New South Wales and the ADG stops developers from meeting that demand. Indeed, enabling smaller apartments would have a net benefit of around \$1 billion in net present value terms (The Centre for International Economics, 2021). Similarly, minimum balcony sizes, storage requirements, and requirements to include larger bedrooms in 'family-sized' units all regulate clearly observable characteristics. Consumers are well-placed to decide which of these features they are willing to pay for, and which are worth forgoing to live in a more attractive location. These requirements should be removed.

As with parking requirements, the Commonwealth Productivity Commission and Australian Housing and Urban Research Institute have both suggested relaxing minimum size requirements for apartments. This allows developers to offer a range of apartment sizes based on homebuyers' preferences. Relaxing these requirements will enable the construction industry to deliver more dwellings at the same cost.

4.6.1.5 Let consumers decide how much solar access they want to pay for

Developers are expected to meet a range of solar access requirements in apartment developments as outlined in the ADG. For example, a certain percentage of apartments in the building must receive direct sunlight in order to meet guidelines. Solar access requirements limit the ability to build apartments close to each other, which reduces the number of apartments that can be built in desirable locations. Solar access requirements are at odds with Australia's and New South Wales' national goal of building more well-located homes.

Regulators should be mindful that perceptions of dis-amenities may vary... the shade provided by high-rise buildings can actually benefit residents and visitors.

What we gain by building more homes in the right places, NSW Productivity and Equality Commission

Many prospective buyers are happy to live in a home with less solar access if it means homes are more affordable in their desired neighbourhood. It is unclear why regulations should take this choice away. Consumers are well-placed to choose how much solar access they are willing to pay for. Research also suggests that shadier apartments can have benefits, like reducing the risk of melanoma and cooling costs in summer (NSW Productivity Commission, 2024; Arbel et al., 2022).

4.6.2 Building codes do not always balance quality with cost and feasibility

Building standards in Australia are regulated under the National Construction Code (NCC). The NCC sets standards for buildings so they are reliable and can resist adverse weather. They include specifications for drainage and plumbing, fire safety, energy efficiency, and health management. The NCC is updated every three years.

The challenge for policymakers is to strike the right balance between competing social objectives, such as affordability and sustainability. In recent updates, there is some evidence that policymakers have pursued other social objectives at the expense of increases in housing costs, even where lower cost options may have been available.

For example, the 2022 version of the NCC included updates to energy efficiency standards. The Regulatory Impact Statement (RIS) prepared for the changes found the preferred option would increase construction costs by \$2,100 to \$4,700 per house and \$431-\$917 per apartment. The RIS found the costs of these changes would be greater than their benefits, with a benefit-cost ratio of

0.8 (ACIL Allen, 2022). Industry estimates for the impact on construction costs are much higher, ranging from \$20,000 to 40,000 per dwelling, although these claims can be exaggerated.²⁵

New South Wales adopted higher energy efficiency standards in October 2023 (through enhanced BASIX requirements, which apply only to new dwellings). Stakeholders have suggested that homeowners brought forward new home purchases to September 2023 to avoid paying the higher costs.²⁶ It is also worth noting that the energy efficiency of the existing housing stock can be a bigger problem than it is for the new stock (Commonwealth Productivity Commission, 2022).

4.6.3 Rapid regulatory change may be increasing risk and uncertainty

In recent years, the NSW Government has significantly reformed different aspects of building regulation (Table 7). Many of these changes implement important recommendations from a national assessment of compliance and enforcement systems for the building industry (Shergold & Weir, 2018).

Prior to the reforms, the Centre for International Economics (2021) estimated the problem associated with building defects to have an Australia-wide cost of \$2.5 billion, illustrating the strong need to address safety and defect issues in the sector. The high-profile evacuations of Opal Towers in 2018 and Mascot Towers in 2019 created additional impetus for government intervention into the building industry. The NSW Government appointed the Building Commissioner in 2019, who established the Office of the Building Commissioner (now Building Commission NSW).

Table 7: The rapid pace of building regulation reform in New South Wales

Type of regulation	Reforms	Year of implementation in New South Wales
Standards and guidelines	NCC2022, with New South Wales adopting updates relating to residential energy efficiency implemented in enhanced BASIX, commercial energy efficiency, and condensation management.	2023
Licensing and insurance	The <i>Design and Building Practitioners Act 2020</i> , which includes requirements such as registration of practitioners and submitting designs and requirements for continuing professional development.	2020
	Decennial Liability Insurance, which is insurance covering common property of strata apartment buildings against defects for a period of 10 years.	Potential reform, not yet implemented
Compliance and enforcement	<i>Residential Apartment Buildings (Compliance and Enforcement Powers) Act 2020</i> (RAB Act), which provides the regulator with investigation, rectification, and enforcement powers (e.g. to issue stop work orders) and establishes a developer notification scheme.	2020
	Expansion of enforcement powers for Class 1 buildings (i.e. the ‘anywhere, anytime’ inspection powers).	2023
	Strengthened powers to suspend a certifier, design practitioner, and other professionals while disciplinary action is being finalised.	2023
	Building product safety reforms, which establish a chain of responsibility and new duties for manufacturers, tradespeople, and	2025

²⁵ Estimates in this range are also reported in media articles. For example, Queensland’s peak industry body, Master Builders, stated in 2022 that they anticipated the seven-star energy efficiency requirements would increase the cost of construction by \$30,000 per dwelling (Rafferty, 2022).

²⁶ Housing Industry Association data about the number of private new house sales in New South Wales suggests that sales in September 2023 were more than double the number in preceding months (HIA, 2023).

Type of regulation	Reforms	Year of implementation in New South Wales
	others involved in building product supply to enhance accountability, compliance and safety.	
	Anti-phoenixing laws.	2023

Stakeholders expressed strong support for the work of the Building Commission to improve safety and compliance in the construction industry. Nevertheless, the pace of reform has been brisk, and many builders were concerned that recent reforms had increased risk in the industry and reinforced negative attitudes about ‘dodgy’ builders. This could have the unintended effect of pushing builders out of the industry (or to other states where building regulation is less stringent) and undermining consumer confidence in new apartments.

Regulatory overlay is without a doubt driving people away from New South Wales to other jurisdictions. It creates too much risk, and it’s become too invasive. The sheer volume of regulations places too much burden on the industry.

Industry stakeholder, Review consultation

There are also instances where recent reforms have not undergone a proper cost-benefit analysis through a formal Better Regulation Statement or RIS. Examples include a set of RIS prepared by the Building Commission in 2022 to support consultation on a proposed *Building Bill* to replace the current *Home Building Act*, in which no non-regulatory options were considered and no cost-benefit analysis was attempted.

These processes are designed to minimise the potential for unintended consequences and ensure that regulatory change brings net benefits to the community. The Commission notes that the Building Commission’s Decennial Liability Insurance reforms have included a RIS with cost-benefit analysis. It will be important that future reforms follow a similar approach, consistent with NSW Government guidelines.

4.6.4 Evaluate the impact of new building regulations on feasibility

Given the pace of recent regulatory reform, and the impact that recent changes have had on new dwelling costs, the NSW Government should evaluate recent building regulation to ensure the benefits of reform justify the impact on development feasibility. The review could compare building regulation across states and territories and identify areas where New South Wales is more stringent. The review should consider the findings of the Legislative Council Public Accountability and Works Committee’s review of the DBP and RAB Acts, which is ongoing at the time of writing.

4.6.5 Pause further reforms that add to construction costs

Further building reforms that add to construction costs should be paused in the interim, unless they can demonstrate an overriding need to address building defects or risks to public safety. The Commission notes that South Australia has committed to no further changes to construction standards for 10 years to ensure developer certainty. A similar pause could support the delivery of new housing if it avoids regulation that adds unnecessarily to costs.

4.6.6 Build the certifier workforce so existing regulations are enforced

Building and development certifiers play a crucial role in ensuring that new buildings are safe and built to a high standard. Certifiers inspect building work and ensure it complies with key requirements and standards, such as the National Construction Code and conditions of development consent. In New South Wales, a local council or private certifier must be satisfied that these standards have been met before they can issue a construction certificate or occupation certificate.

During consultation, stakeholders raised concerns about certifiers in New South Wales. These include concerns about:

- the integrity of private certifiers and their compliance with NSW building regulation
- a shortage of local council certifiers, partly reflecting challenges in hiring new certifiers
- the need to offset the exit of some private certifiers from the industry following recent building reforms, which is adding materially to delays in the certification process.

The NSW Government should prioritise the recruitment and training of certifiers, as well as regulating and enforcing their responsibilities, to improve building quality. In some cases, this will be more effective than developing new regulatory tools and approaches. Future reforms should also consider the impact on certifiers to avoid unintended delays in the certification and the development process.

4.6.7 Ensure Home Building Compensation Fund requirements do not unduly impact feasibility

Construction industry stakeholders raised some concerns with accessing insurance through the Home Building Compensation Fund (HBCF). The HBCF is provided by icare and covers homeowners for incomplete or defective work when a builder dies, disappears, or becomes insolvent. Builders must be insured for residential work over \$20,000. Concerns related to:

- the financial assessments used to determine eligibility limits, which were seen as overly strict and inflexible
- the exclusion of principle residences under the personal assets test
- large compliance costs
- limited consultation and engagement with industry, especially in areas where eligibility requirements may have unintended consequences.

These issues could be considered as part of the recently announced Review of the Home Building Compensation Fund to ensure that any impacts of the scheme on housing supply are carefully weighed against broader consumer protection objectives.

More broadly, the Commission has heard instances where accounting, finance, and insurance requirements are not harmonised across the various frameworks that apply at a state or national level. Efforts to support harmonisation can help to lower compliance costs and improve development feasibility.

4.6.8 Streamline and harmonise local government construction-related controls with a focus on feasibility

Industry has noted local government building approval requirements and construction-related controls vary by location, particularly in developments only requiring a Complying Development Certificate (CDC). They can impose additional approval timeframes, create unnecessary costs, and undermine the purpose of CDCs to be a faster and simpler approval route. For example:

- Some aspects of new dwelling construction are not covered within complying development certification and require separate approval and permits from council. This includes driveways or 'crossover' permits, road opening permits and an associated traffic control plan, and stormwater requirements.
- Councils may require acoustic reports from a 'qualified consultant', despite the CDC process already ensuring air conditioning units meet noise level requirements.

The NSW Government should audit local council controls impacting construction activity, including by reviewing relevant legislation, like the *Local Government Act 1993* as well as the Codes SEPP. This work should aim to harmonise requirements, permit streamlining, and relax any controls that have undue impacts on construction costs of timeframes.

For example, as part of its Standard Requirements for Construction Management Plans, the City of Sydney requires that all vehicles enter and exit sites in a forward direction, and that builders must seek a separate additional approval on every occasion a truck reverses into a site (City of Sydney, 2020). Stakeholders indicated that this and some other blanket requirements were impracticable or added disproportionate expense and delay to delivering projects.

5 A construction sector that can deliver

Key findings

- Widespread labour shortages are adding to the cost of building new homes and reducing feasibility of residential development across the country. In New South Wales, around 30,000 more construction workers are needed to meet the National Housing Accord targets.
- These labour and skills shortages reflect structural factors like difficulty attracting people to start (and finish) construction apprenticeships, and low female participation. They also reflect competition for labour which is, in part, fuelled by governments making significant demands on the construction workforce through public infrastructure projects.
- Construction sector productivity is weak and lags other sectors, like manufacturing and transport. This is consistent with trends in other advanced economies over the last 30 years.

Recommendations

- As a priority, work to boost the construction share of migrant workers. Tailor the Skills in Demand visa program to better align with sector needs and include key construction occupations on the Core Skills Occupation List.
- As a priority, ensure migrants can put their construction skills and experience to work through cohort-targeted skills gap training and smoother licensing processes.
- Better recognise overseas qualifications in the visa process.
- Reduce barriers to interstate mobility, including by expanding Australia's Automatic Mutual Recognition scheme.
- Deliver training reform that targets experienced workers to get them fully qualified.
- Ramp up efforts to diversify the workforce and improve the culture of the construction industry.
- Promote construction careers to school leavers and the community.
- As a priority, develop a recognised pathway for experienced Class 1 builders to transition to working on Class 2 buildings.
- Remove regulatory barriers to modern methods of construction, including through the Building Commission NSW's work on a new regulatory framework for prefabricated and manufactured buildings.
- Use training, migration, regulation, and building contract terms to support and promote innovation in the construction sector.

5.1 The Housing Accord requires about 30,000 more construction workers in New South Wales

New South Wales needs to build around 377,000 houses by mid-2029 under its National Housing Accord target. Further work would be needed to model the specific workforce needs to deliver this target. However, BuildSkills Australia estimates that Australia requires an additional 90,000 residential building workers to meet the overall National Housing Accord target of 1.2 million new well-located homes over five years from mid-2024.²⁷ Just based on New South Wales' share of the

²⁷ BuildSkills Australia is a body established by the Australian Government to work with industry to find solutions to the workforce challenges facing the construction, property, and water industries.

national population, the state’s construction workforce would need to expand by about 30,000 workers if the overall national target is to be met.

5.2 The national infrastructure pipeline demands 193,000 extra workers, and 96,000 more in New South Wales alone

The workforce requirements to deliver the National Housing Accord are dwarfed by the demands of Australia’s infrastructure pipeline. As of July 2024, Infrastructure Australia estimates that to deliver the national infrastructure pipeline:

- Australia needs an additional 193,000 workers
- New South Wales alone needs an additional 96,000 construction industry workers (Infrastructure Australia, 2023a).

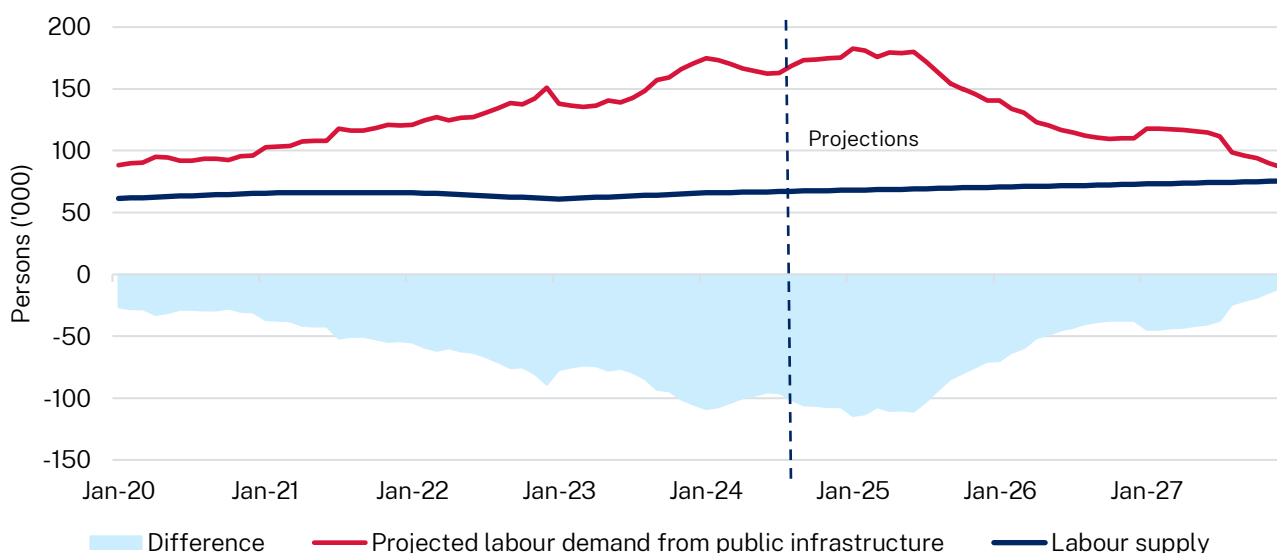
In New South Wales, public infrastructure labour demand is expected to continue to far outstrip the supply of labour, signalling a continued labour shortage with escalating labour costs (Figure 20).

These projections can only account for known projects, so workforce gap projections trail off in future years. Infrastructure Australia has modelled labour demand from projects committed as of June 2023, so it does not account for some projects now in the pipeline. When the workforce demands on newer commitments are accounted for, the future workforce gap could be higher than projected.

Infrastructure Australia’s projections highlight that public infrastructure projects create demand for both higher- and lower-skilled occupations, including high demand for labourers (Table 8).

Figure 20: There is still not enough labour to meet the demand of infrastructure projects in New South Wales

Projected labour demand and labour supply, persons ('000)



Source: Infrastructure Australia (2024).

There is a drain of labour to major government infrastructure. There are higher wages in major infrastructure projects. Standard labourers like truck drivers on Snowy Hydro are getting \$180,000 a year.

Industry stakeholder, Review consultation

Table 8: Additional labour required to deliver on the infrastructure construction commitments in New South Wales (estimates from July 2024)

Occupation	Shortfall between labour supply and public infrastructure demand
General construction labourer	19,100
Painting trades	3,300
Structural engineer	5,000
Total construction related occupations (includes occupations not listed in this table)	95,900

Source: Infrastructure Australia (2023).

Note: Projections are from June 2023.

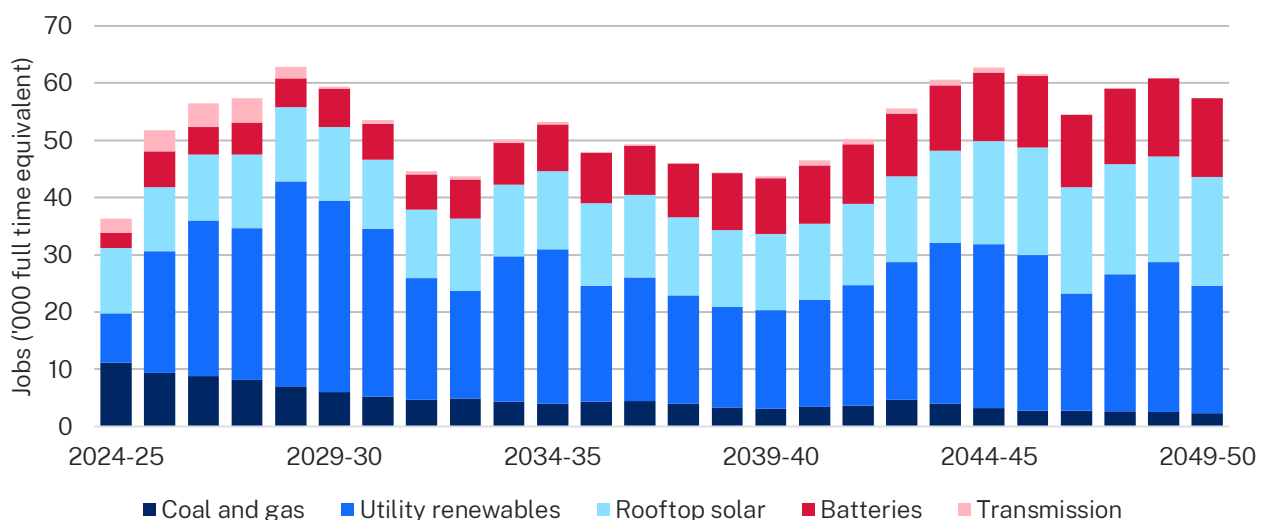
5.2.1 Government net zero commitments will require even more workers

The NSW Government’s commitment to deliver a net zero greenhouse gas emissions economy is driving substantial investment in rebuilding and retrofitting our electricity and transportation systems, and our housing, commercial, and industrial building stock. The nature of our mining, manufacturing, and agricultural sectors are also set to be transformed. In some cases, this will be into entirely new activities as the state seeks new competitive advantages in a net zero world.

This transformation of public infrastructure (and the private capital stock) will require investment of millions of labour hours by skilled and semi-skilled workers and billions of dollars of private capital and raw materials. Across the country, the Australian Energy Market Operator (AEMO) estimates that over 60,000 skilled workers will be needed to build and maintain the energy infrastructure necessary to decarbonise the electricity sector by 2050 (Figure 21).²⁸

Figure 21: Tens of thousands of skilled workers are needed to get to net zero

National workforce needs for consumer energy resources (CER) and utility infrastructure, NEM (2024-25 to 2049-50, Step Change)



Source: AEMO and NSW Productivity and Equality Commission.

²⁸ For New South Wales, it is estimated that between 2023 and 2040 the NSW Government’s Electricity Infrastructure Roadmap will require up to 7,000 new jobs across New South Wales at its peak (Briggs et al., 2022). This number is additional to the Infrastructure Australia estimates above.

Labour costs are going to stay high because of government infrastructure spend on net zero, ESG, and infrastructure.

Contractor, Infrastructure NSW roundtable

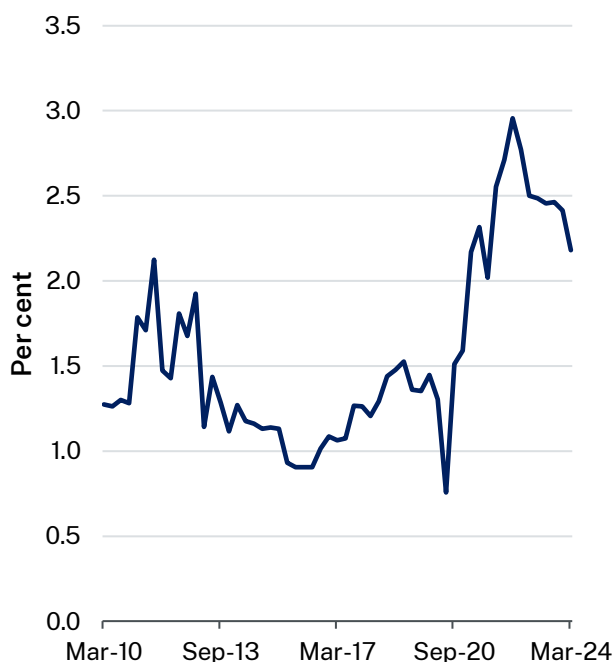
5.3 The construction workforce cannot grow fast enough

The construction industry in New South Wales accounts for 9.4 per cent of the state's workforce. Over the last three years, employment growth in the construction industry has outpaced that of New South Wales' overall workforce. In May 2024, the construction industry overtook the retail trade industry to be the third largest industry by employment in New South Wales, employing over 420,000 people.

Although the share of vacant positions relative to total jobs within the national construction industry has seen a decline from a year ago, construction firms are still facing difficulties finding labour, especially when compared to the decade before the COVID-19 pandemic (Figure 22). Trade shortages remain widespread in New South Wales, with job vacancies in structural and civil trades (e.g. concreters and bricklayers) and finishing trades (e.g. painters and glaziers) having risen the most from December 2019 to May 2024 (Figure 23).

Figure 22: Not enough labour supply to fill vacancies

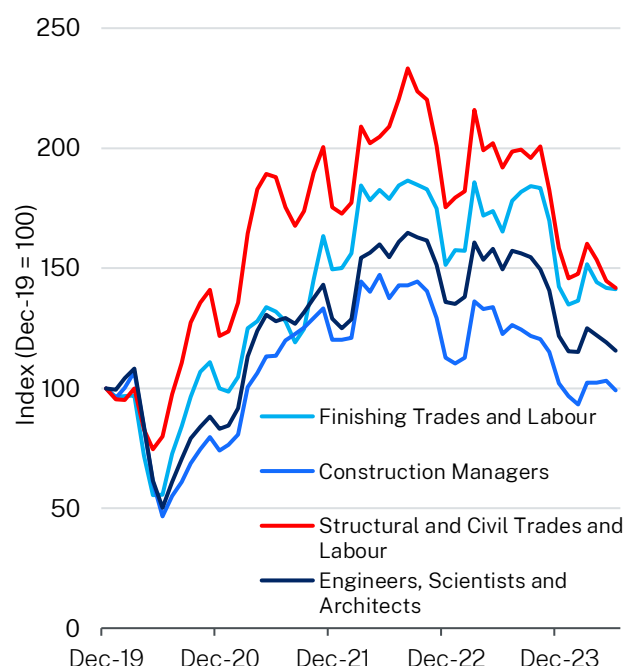
Construction vacancies as a share of total construction jobs, Australia



Source: ABS and NSW Productivity and Equality Commission.

Figure 23: Vacancies are high across the construction industry

Construction job vacancies since December 2019, New South Wales

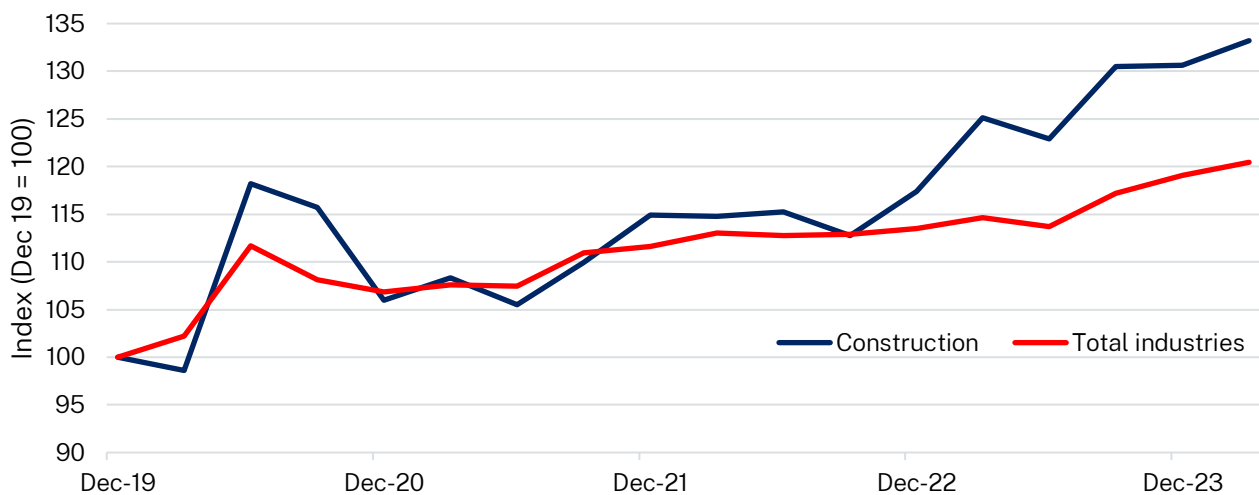


Source: Jobs and Skills Australia and NSW Productivity and Equality Commission.

The shortage of construction workers is adding to the cost of building homes and reducing the feasibility of residential development across Australia. The average labour cost per hour worked in the construction industry has risen by over 33 per cent nationally since before the pandemic, outpacing the 20 per cent increase seen across all industries (Figure 24).

Figure 24: Labour costs have risen faster in construction compared with other industries

Average hourly income per employed person in Australia



Source: ABS and NSW Productivity and Equality Commission.

5.4 Governments are pricing homebuilders out of labour

Many skills in the construction sector are highly transferable and allow a worker to transition between subsectors, including between renewable energy, public infrastructure, and residential development projects. Box 7 provides an example regarding electrotechnology skills. As a result, the construction workforce tends to move to the parts of the sector that have the most or biggest projects, the most stable work, and the best pay and conditions.

Box 7: Transferability of electrical skills

The Clean Energy Council, in their *Skilling the Energy Transition* report (Clean Energy Council, 2022), explain that a Certificate III in Electrotechnology – Electrician is a preferred pathway into the renewable energy sector. This certificate is the same basic qualification that anyone seeking to work as an electrician in any sector is required to hold.

For example, a Transgrid electrical apprentice will receive training in the installation, inspection, maintenance, and repair of assets within a high voltage substation. At the conclusion of their apprenticeship, they will receive a Certificate III in Electrotechnology – Electrician. Holding this certificate and an appropriate license, an electrician seeking to transition between sectors will be well-placed to find employment as much of the specialised knowledge required is learned on the job or through additional certifications.

This transferability is not limited to trades. Some construction skills are applied in a relatively similar manner across the whole construction sector. For example, both public engineering and private residential projects use general and civil construction skills, such as the skills required to do preparatory earthworks. Workers in professional roles such as engineers, architects, and procurement are also able to move between construction subsectors, provided they can demonstrate an ability or willingness to learn role-specific skills. As a result, a new apartment tower project will be competing for many of the same skilled people as a public sector railway project, or a project in the renewable energy sector. Some examples of widely transferrable skillsets are in Table 9.

Table 9: Examples of transferable professions

Profession/Trade	Qualifications
Crane operator	Certificate III in Construction Crane Operations
Concreter	Certificate III in Concreting
Bricklayer/Blocklayer	Certificate III in Bricklaying and Blocklaying
Plumber	Certificate III in Plumbing (General Plumber) Certificate IV in Plumbing and Services (Operations)
Civil plant operator	Certificate III in Civil Construction Plant Operations
Construction rigger	Certificate III in Rigging
Project manager	Diploma of Construction Management Bachelor of Construction Management

A worker’s existing skills or experience need not be perfectly aligned with their new role as they move between subsectors. When skilled roles are highly paid and in short supply, workers have a strong incentive to upskill to bridge any skills gap, and employers have strong incentives to facilitate gap training or on-the-job experience.

Renewable energy, infrastructure, and residential projects also use and compete for lower and unskilled construction labour. If demand for low-skilled labour is strong enough in one part of the sector, it may even draw higher-skilled labour from another part of the sector. For example, a plumber who works on residential apartment projects may be attracted to a lower-skilled role as a truck driver on a public infrastructure project, if the pay and conditions are attractive enough.

We need to get tradespersons out of government projects and back into the building industry.

Builder, Review consultation

As noted in chapter 2, governments have deeper pockets than private citizens like developers, homebuyers, and investors. If the pipeline of construction projects grows faster than the construction workforce, publicly funded construction projects will generally outbid private projects for skilled and unskilled labour. Both the publicly and privately funded projects will experience delays and cost overruns due to rising labour costs. Publicly funded projects tend to respond to these overruns by expanding their budgets. Privately funded projects – whether funded by investors, homebuyers, or developers – tend to become unviable and get shelved. As a result, when labour is scarce, public projects tend to crowd out private projects like residential developments.

The wage disparity between infrastructure projects and private development is also impacting residential builders’ ability to attract new apprentices, as apprentice wages that are very low – particularly in the early stages of an apprenticeship – may be less attractive than lower-skilled labouring jobs with higher starting pay. This may exacerbate skills shortages in professions with a training pathway that begins with apprenticeships.

5.5 Shift the migration intake to support construction

The Australian Government can adjust migration settings to support labour supply and productivity in housing construction through:

- temporary visas, mainly employer-sponsored
- permanent migration pathways, employer sponsorships, or state nominations
- enhancing critical skills with specialist migrants.

Cooperation between the Commonwealth, state, and territory governments would better inform and coordinate these efforts.

Of the skilled migrants coming into Australia, those with construction skills make up a relatively low share. Between 2012 and 2021, there were around 700,000 new skilled migrants and around 44,000 of these migrants had construction skills. This means that in the last decade, just over six per cent of new skilled migrants had construction skills (ABS, 2021b; 2021c).^{29,30} Public estimates about the construction share of migrants vary depending on the type of visa, applicant, and time period, among other factors. More recent estimates suggest that visa applications granted for those with construction skills range between seven and eight per cent of all temporary or permanent visas granted, which is lower than the construction industry's share of the total workforce (Department of Home Affairs, 2024; 2024a).

The Australian Government needs to balance the composition of migration for construction sector workforce shortages with shortages in other critical sectors such as health and education. That said, there is an opportunity for the government to align construction migration more closely with job market needs.

The Australian Government can tailor the Skills in Demand visa program to better align with job market needs for the construction sector. This program, set to replace the Temporary Skills Shortage Visa by the end of 2024, is a temporary employer-sponsored migration program with no cap on visas for any occupation. It aims to swiftly bring in workers with critical skills, guided by the Core Skills Occupation List (CSOL) from Jobs and Skills Australia (JSA).

Despite the pressing need for more housing, construction trades such as painters, roof tilers, and bricklayers are not on the CSOL, but rather on a draft list awaiting further review. This exclusion is surprising, especially when seemingly less critical roles such as yoga instructors and dog handlers appear on the core list. While JSA notes the CSOL is not ranked, the absence of key construction trades from the list could impact the sector's ability to address job shortages effectively. Key construction occupations should be included on the CSOL.

5.5.1 Better recognise overseas qualifications in the visa process

The Australian Government's Migration Strategy proposes reforms to the points test system – which applies to skilled permanent visas that are not employer-sponsored – to attract skilled migrants whose expertise aligns with various industry needs. One avenue is for the points test to value construction-related Vocational Education and Training (VET) qualifications more closely in line with university degrees, especially where these VET qualifications are for well-paid occupations. This would acknowledge the valuable skills that VET-qualified migrants can bring to address workforce shortages in housing construction.

²⁹ This figure includes skilled migrants only, and includes both permanent and temporary visas. It also includes both primary and secondary applicants.

³⁰ Other estimates have found that only 2.8 per cent of the construction workforce are recent arrivals, compared to 4.4 per cent in the Australian workforce (Grattan Institute, 2024).

5.5.2 Ensure migrants can put their construction skills and experience to work

Australia's construction sector is known for its stringent regulations, particularly for worker safety. These standards often differ from international practices, which can pose challenges for migrant workers. There are several key areas that can be addressed to help integrate migrant workers into the construction industry, while ensuring that worker safety is protected. These include:

- the mutual recognition of international trade qualifications, skills, and occupational licences from a broader range of countries, in line with recommendations from the Commonwealth Productivity Commission as well as the Australian Government Review of the Migration System
- where mutual recognition is not possible, bridging courses that efficiently close knowledge gaps and allow target cohorts of overseas qualified migrants to work in New South Wales and Australia
- administrative reforms to reduce, remove, or waive fees for the most in-demand jobs for employer-sponsored visas
- establishing links to settlement services to improve outcomes for migrants and new arrivals
- improving coordination between jurisdictions to alleviate any administrative burden preventing the uptake of migrant workers.

Addressing these issues would enhance efficiency, facilitate worker mobility between jurisdictions, and boost productivity. Lessons could be learned from the integration of foreign medical professionals into the Australian healthcare system, supported by the International Medical Graduate and Overseas-Trained Doctor programs.

In the shorter-term, we can get more from the existing labour force. We can better assess skilled migrants who have moved here but haven't been formally assessed. This should only take one year, not four years.

Industry stakeholder, Review consultation

Given these considerations, we recommend establishing a national taskforce that combines government and industry representatives, focused on efficiently integrating migrant workers with construction skills into appropriately skilled and qualified roles in the domestic construction workforce. State and territory governments would need to contribute on skills, training, and licensing aspects, and the Commonwealth on migration aspects.

The Commission also found limited data tracking the work outcomes of migrants with construction skills or qualifications. It is unclear to what degree these migrants are able to put their skills to use in relevant construction occupations, or the industries and occupations they work in. The Australian Government should track and publish such data as a priority.

5.5.3 Reduce barriers to interstate labour mobility

Different licensing requirements across states and territories deter interstate mobility of construction workers. This adds to construction costs and delays and reduces employment options for construction workers.

These barriers affect both Australian workers who want to work interstate, as well as migrant workers coming from overseas. An overseas electrician wanting to work in Australia must be licensed in each jurisdiction they plan to work in. This can be a significant hurdle for prospective migrants uncertain of their work location before they secure employment. Forthcoming analysis by the Commission on occupational entry regulations has found that New South Wales is the only state analysed that lacks a process for recognising builders' qualifications that are obtained overseas.

Australia's Automatic Mutual Recognition scheme allows individuals licensed or registered in one jurisdiction to work in another using their home state licence. However, not all states and

occupations are operating in the scheme. Introducing the occupations that are currently exempt (e.g. general building licence, electrical wiring work) would ensure more construction workers can effectively move across jurisdictions, helping to fill labour shortfalls.

5.6 Grow the workforce with training reform, cultural change, and targeted recruitment

Labour shortages in construction have been a chronic issue nationwide. This partly reflects structural factors, including low female participation and difficulty attracting people to start and complete construction apprenticeships. Acute shortages have been frequent over the past two decades, with notable skills shortages during the periods of 2002 to 2007 and 2016 to 2018 (Leal, 2019).

VET plays a critical role in training the labour we need to increase housing supply. In New South Wales, a VET qualification was the highest education attained for over 136,000 building and construction workers, which is 45 per cent of the total NSW building and construction workforce (ABS, 2021a). Following the signing of the National Skills Agreement, Skills Ministers have also agreed to add housing supply as a national priority.

The central VET pathway for many key construction occupations is an apprenticeship. However, commencements and completions of apprenticeships have been steadily declining. There was a 22 per cent decline in building and construction apprenticeship commencements in the year to December 2023. In 2023, for every apprentice that completed a construction-related apprenticeship course, 1.6 withdrew.

The Commonwealth has committed to providing funding to states and territories for additional fee-free apprenticeship places in construction courses in the 2024-25 Budget. However, despite significant fee-free training provided in previous years, there is still a shortage of people entering apprenticeships, including in the construction trades (Department of Education, 2022). It is not clear whether these additional places will help address the shortage.

The NSW Productivity Commission's 2021 White Paper examined structural challenges with the apprenticeship pathway. As the rest of the economy and education system has modernised, apprenticeships have become less attractive because the courses are long relative to the qualification level attained, and they cannot be completed without securing and maintaining an employment contract at low rates of pay.

In 2023, the average accommodation and food service worker earned \$1,400 per week, more than double many junior apprentice rates (ABS, 2023; Fair Work Ombudsman, 2024). The NSW VET Review Interim Report highlights the issue of remuneration of apprenticeships as a major barrier to uptake and completion and provides corroborating insights from stakeholders (Bruniges, Ardler, & Firth, 2024). Apprentices who do not complete their apprenticeship cite low pay and poor working conditions above any other factors (National Centre for Vocational Education Research, 2023)

An apprenticeship involves investing three to four years to attain a Certificate IV qualification, when a Bachelor's or Honours degree can be attained in the same time. Unlike university study, if an apprentice loses their job, their training stops too. This means the apprenticeship pipeline is interrupted by economic cycles and construction downturns.

An unskilled labourer is earning \$6,000 a week. Why would you become an apprentice when you could earn that? There is no investment in apprentices.

Industry stakeholder, Review consultation

To deliver more housing, now and in the future, apprenticeship pathways should be reformed to address these issues. This could include, for example, allowing the practical and theoretical parts of training to be completed more flexibly, and separately, if needed. It could also include enabling those completing training to access higher-paying work in the sector during their training.

5.6.1 Target workers with industry experience and get them fully qualified

Because apprenticeships have low completion rates, there are many people working in the construction industry who have significant practical experience but no qualification, or who have done part but not all of an apprenticeship. This cohort could boost the supply of qualified trades if their existing skills and experience were recognised and could access targeted, 'skills gap' training.

In response to the NSW Productivity Commission's 2020 Green Paper, the NSW Government announced in November 2020 the state's first trade recognition and pathways initiative: the Trade Pathways Program. The Government should build upon lessons learned from the Trade Pathways for Experienced Workers (TPEW) stream of this program.

The TPEW Program recognised the skills and experience of trade workers through the recognition of prior learning and gap training and provided an alternative pathway to achieve trade qualifications outside of an apprenticeship. Under the key eligibility criteria, the learner must have at least two years' relevant work experience in the trade they will be undertaking, and either be currently (or in the past five years) employed in the relevant industry.

An independent evaluation of the Trade Pathways Program found that of the 1,858 commencements in the TPEW Program, from 2020 to 31 March 2024, 53 per cent were construction workers and there were 886 completions (Sparrowly Group, 2024).³¹

The TPEW Program drove an overall increase in completions. Non-Apprenticeship and Trade students were 40 per cent more likely to complete their course when they had recognition of prior learning. Specifically, TPEW students had higher completion rates (72 per cent) compared to Entitlement Full Qualification students (50 per cent). Building on the success of this pilot initiative, future programs should continue to recognise prior learning to encourage workers with existing skills to complete their training to update their skills and gain formal qualifications.

Further investment in initiatives like the TPEW Program should be considered and any future funding should be sustainable and should grow with demand. The aim should be to learn what works and then mainstream these initiatives not as special programs, but as permanent, recognised, 'second chance' pathways to a trade.

5.6.2 Ramp-up efforts to diversify the workforce and improve the culture

The construction sector faces issues of excessive work hours and fatigue, poor mental health, and extremely low gender diversity (Construction Industry Culture Taskforce, 2023). As of March 2024, across 20 pilot government infrastructure projects, the NSW Department of Education reports that six per cent of the total project workforce were women in non-traditional roles, and 3.5 per cent of the trade's workforce were women.

While progress in gender diversity has been made by recent initiatives, there is still room for improvement. There are a range of existing initiatives and diversity targets in place to tackle these issues that could be built upon or expanded over time.

The Women in Trades (WiT) stream of the recently concluded NSW Trade Pathways Program included various programs and initiatives aimed at building the participation of women in non-traditional trades, including:

- Women in Construction Infrastructure Skills Legacy Program (ISLP)
- Women in Trades Strategy 2021-2024
- Connecting Women to Trades Grant Program
- Women in Trade Behavioural Insights research and resources
- Girls Can Too
- Group Training Organisation Recruitment Program – Women in Trades incentive.

³¹ At time of writing, completion outcomes are continuing to flow through for the TPEW Program.

An independent evaluation of the WiT program showed that over 11,938 people engaged in WiT information sessions. The WiT programs resulted in around 120 apprenticeship and traineeship commencements and over 300 employment outcomes, with numbers building steadily throughout the program. Early evaluation results point to successes through leveraging industry and community partnerships (Sparrowly Group, 2024).

Subject to the WiT's final evaluation results, it could provide a template for future programs to engage industry and the community and get more women into the trades. The learnings from WiT interventions should be incorporated into future program design.

The Department of Education also runs NSW Women in Construction programs, such as the Women in Construction Infrastructure Skills Legacy Program (ISLP), which increases the existing target for women in trades from two per cent to four per cent and introduces a new target of seven per cent for women in non-traditional roles on government infrastructure projects. This initiative is being piloted until 30 June 2025.

The Construction Industry Culture Taskforce's Culture Standard is another initiative which aims to boost productivity the construction sector, focusing on issues such as working hours, diversity, and wellbeing. The Standard is being piloted through a range of projects such as the NSW Government Infrastructure Traineeship which creates employment and training opportunities for Year 12 school leavers. Outcomes of this pilot and others in New South Wales should be evaluated, and initiatives which are successful should be further invested in and scaled up. The broader ISLP also has targets for government infrastructure projects to promote broader diversity in the workforce, including young people, Aboriginal and Torres Strait Islander people, and the employment of local staff.

5.6.3 Promote construction careers to school leavers and the community

The construction industry offers careers that are rewarding and well-paid. The trades also offer an applied focus and hands-on learning that is better suited to the interests, talents, and learning styles of many students.

Yet construction industry stakeholders told us they believed careers advisors, parents, teachers, and policymakers are still biased towards university pathways over VET and the trades. And the data reveals that more students are choosing university study over VET. In 2022, around 54 per cent of Year 12 completers in New South Wales went on to university, while only 17 per cent chose VET (Centre for Education Statistics and Evaluation, 2022).

We need to promote the industry better. There's a very negative sentiment towards trades and building in society and the media.

Industry stakeholder, Review consultation

Targeted programs such as the Trade Readiness Program, Girls Can Too, the Educational Pathways VET Ambassadors initiative, and the NSW Government Infrastructure Traineeship are starting to address this issue. The results of these programs should be evaluated and built upon in the future.

- The Trade Readiness Program is a construction skills program for students aged 15 and over, which promotes careers in construction and subject selection choices for Years 11 and 12. In 2023-24, the program was delivered to around 250 students.
- The Girls Can Too Program allows high-school-aged girls to explore careers in non-traditional trades. The program was delivered to over 500 female students in New South Wales in 2023-24.

Stakeholders recommended that school students be given more exposure to the industry, by recruiting careers advisors from construction backgrounds and having builders and tradespeople promote the industry at careers fairs. Stakeholders called for the promotion of careers across the construction industry, including engineering, project management, certifying, and the trades.

Stakeholders also raised the idea of a national campaign to promote the benefits and profile of careers in the trades, targeting broad cohorts including women, school leavers, and the community at large. As part of these promotional efforts, work could also be done to support unemployed job seekers to find and fill suitable roles in the construction industry. An overview of the different

avenues to grow the construction workforce is presented in Figure 25.

We should be broadcasting that doing a trade is honourable, and it’s even better to be the best at your trade.

Builder, Review consultation

Figure 25: Overview of avenues to grow the construction workforce



Source: NSW Productivity and Equality Commission.

5.6.4 Support capability uplift so Class 1 builders can move to Class 2

Higher-density housing, like apartments, play a crucial role in accommodating growing populations. These are known as Class 2 buildings, with standalone homes being Class 1.³²

Delivering a large increase in apartments will require some builders to transition from Class 1 to Class 2 building. However, consultations highlighted a number of barriers to moving from Class 1 to Class 2, such as licensing requirements and insurance costs, which is limiting the availability of Class 2 builders.

For instance, the *Design and Building Practitioners Act 2020* requires that Class 2 applicants hold a contractor license and have at least five years of recent and relevant experience on specific types of building work in the past ten years.³³ From 1 July 2025, there will also be a mandatory requirement for building practitioners to hold relevant insurance (contingent on existing financial resources and proportionate to risk) to commence work, representing further costs (NSW Fair Trading, 2024).

Stakeholders reported limited avenues for Class 1 builders to gain the required experience beyond closing or scaling back their business to work for another Class 2 builder. Stakeholders also reported that making the shift to Class 2 comes with significant risk, and the need to meet additional regulatory requirements.

³² Class 1 buildings refer to standalone residential dwellings (i.e. houses) while Class 2 buildings are generally multi-storey, multi-unit apartment buildings.

³³ Relevant practical experience is defined as building work involving a class 2, 3, 9a or 9c building.

The Commission suggests developing a recognised pathway for experienced Class 1 builders to transition to working on Class 2 buildings. This could include recognised training and/or opportunities to partner with Class 2 builders on projects.

It's almost impossible for a Class 1 builder to graduate to Class 2 buildings. You have to close your company and go work for a Class 2 builder for five years to get the required experience and start again. There must be a better way.

Builder, Review consultation

How do we encourage people to shift from Class 1 to Class 2? We need to de-risk the model. Even 25 years in Class 1 doesn't mean you're qualified for Class 2.

Builder, Infrastructure NSW roundtable

5.6.5 Encourage experienced workers to stay in the sector

One way to support the construction workforce is to encourage experienced workers to keep participating later in life. Many construction occupations are physically demanding, and some workers will find it difficult to continue working in these occupations later in life. In other cases, incentives can encourage continued participation part-time or in less physically demanding roles, such as trainers or supervisors.

Current rules around eligibility for the age pension may act as a barrier to increasing labour force participation for Australians aged 65 and over. Australians on the age pension earning more than \$204 per fortnight from personal income lose about \$0.50 of the age pension per \$1.00 of increase in personal income per fortnight, representing a marginal tax rate of 50 per cent (Department of Social Services, 2024). However, tax is not payable if the age pension is the sole source of income, creating a disincentive to work.

The Australian Government could consider changes to the age pension by reducing the loss of the age pension with additional employment income, or by increasing the Work Bonus, which currently allows for the first \$300 of fortnightly income from work to be excluded from the pension income test, in addition to the pension income-free area. From 1 July 2023, the pension income-free area is \$204 per fortnight for single pensioners, and \$360 per fortnight, for couples combined (Department of Social Services, 2024).³⁴ These changes could be targeted at older construction industry workers to encourage their continued participation in the sector.

5.7 Encourage innovation, productivity, and a 'race to the top'

There are many different ways to measure productivity in the construction industry, each with their own advantages and limitations. On some measures, productivity in the construction industry in Australia is lower today than it was in the 1990s. That suggests building a house requires more workers and equipment today than it did 30 years ago.³⁵

The poor productivity performance of the construction industry is an outlier when compared with other sectors of the economy (Figure 26). The improvement in productivity in other industries reflects the ability of businesses and the government to leverage advancements in technology and worker skills to produce more goods and services with fewer workers and capital.

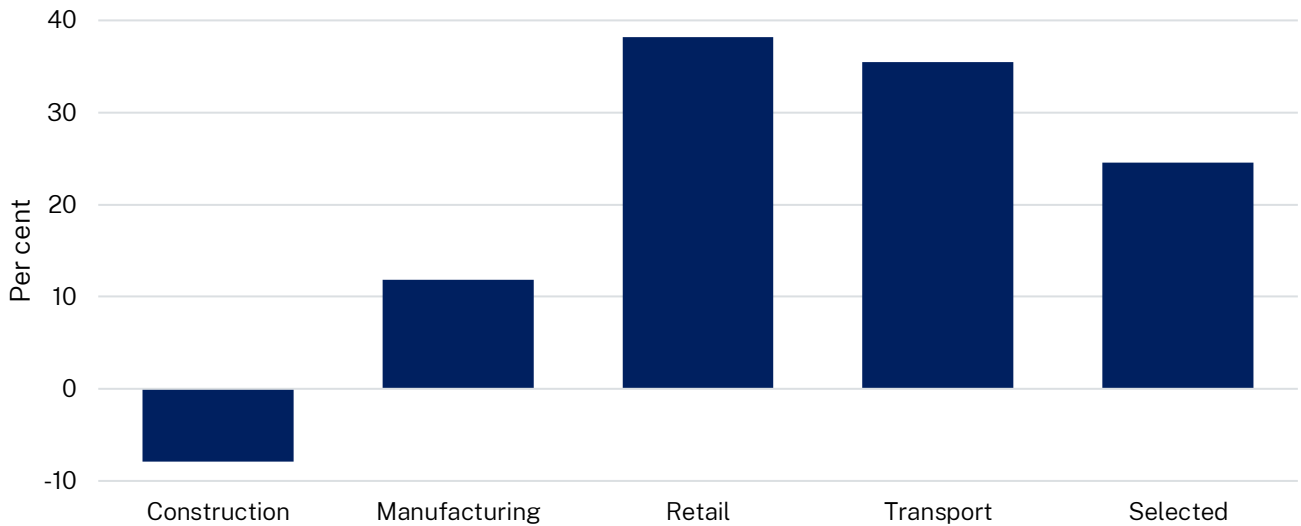
³⁴ This means a single pensioner of age-pension-age with no other private income could earn up to \$504 a fortnight from work and still receive the maximum rate of pension.

³⁵ Measurement issues include: industry classification issues (e.g. some prefabricated construction may be classified as manufacturing); inadequate reflection of quality improvements in housing; and difficulties in comparing different types of construction projects (e.g. the composition of renovation activity, detached and higher-density construction).

It is worth noting that poor productivity growth in the construction industry is not unique to Australia or New South Wales. Construction productivity has been weak in most other advanced economies over the last 30 years (Figure 27). Overall, Australia’s productivity performance in the construction industry has been broadly similar to other advanced economies (Commonwealth Productivity Commission, 2022). This points to broad and fundamental challenges in finding productivity gains in the construction sector. The Commonwealth Productivity Commission is also conducting research to investigate issues weighing on productivity growth in the housing construction sector (Commonwealth Productivity Commission, 2024).

Figure 26: Productivity in Australia’s construction industry has lagged other areas of the economy

Productivity by industry, change from 1989/90 to 2022/23

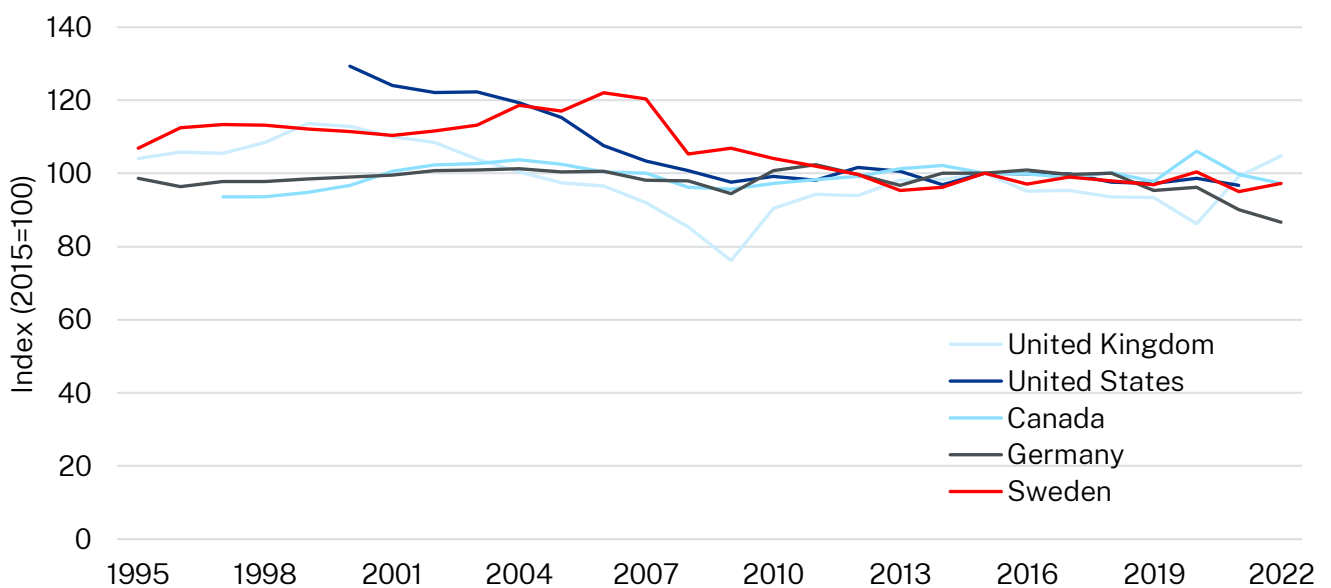


Source: ABS and NSW Productivity and Equality Commission.

Note: Gross Value Added based Multifactor Productivity (quality adjusted hours worked basis). Selected Industries includes: Agriculture; Forestry and Fishing; Mining; Electricity, Gas, Water and Waste Services; Wholesale Trade; Accommodation and Food Services; Information, Media and Telecommunications; Financial and Insurance Services; Arts and Recreation Services.

Figure 27: Poor labour productivity growth in the construction industry has been evident in many countries

Construction productivity index, by country



Source: OECD and NSW Productivity and Equality Commission.

Note: Gross Value Added per person employed, constant prices.

In short, poor productivity has contributed to worsening housing affordability. Boosting productivity in the construction sector would also have broader benefits, as building and construction supplies crucial inputs to many other industries.

Regulation and enforcement is the traditional approach to improving quality in the construction industry. These rules work by creating a disincentive to doing poor quality work. There is a strong need for regulation and enforcement, but too much regulation can create a compliance culture that adds to costs and delays and reduces productivity. It can also discourage the experimentation and innovation needed to improve quality and lower costs in the long term.

Instead, policy needs to focus more on market design: creating the regulatory conditions that will drive greater innovation. The rate of defective work in the construction industry suggests its competitive incentives are poorly structured, encouraging firms to cut costs and corners.³⁶ Policymakers need to foster a competitive ‘race to the top’, where companies seek market share through innovation and investments that improve quality and efficiency over time. The rest of this chapter explores some potential ways to do that.

5.7.1 Support the adoption of modern methods of construction

Modern methods of construction (MMC) are innovative building techniques that enhance the efficiency, quality, and sustainability of work in the construction industry. Examples include prefabricated buildings or modules, which are constructed off site in factories and assembled on site, as well as new technologies such as virtual reality and 3D printing.

Greater use of MMC could help to lift productivity in the construction industry. For example, reports have found that prefabricated building techniques could help to reduce construction times by 20 to 50 per cent, improve labour efficiency through specialisation, improve quality and safety, and reduce the costs of travel and waste (McKinsey & Company, 2019). Countries such as Singapore have significantly improved their construction productivity through the use of MMC (Box 8).

Even so, widespread adoption of MMC in New South Wales faces a number of challenges, relating to regulation, skills, finance, and contract design. These barriers affect the ability to deliver MMC at scale, which is key to reaping its benefits. MMC can require expensive investments in factories, machinery, and equipment, so products need to be sold at high volumes to defray the initial cost of investment.

In Australia, when people hear ‘prefab’ they think of caravan parks. Overseas, prefab is seen as a quality and customised product.

Builder, Review consultation

Box 8: Singapore used MMC to boost its construction productivity

Singapore’s home ownership rate was around 30 per cent in 1970 and housing shortages were widespread (Deng, Sing, & Ren, 2013). The government responded by committing to increasing the quantity and quality of housing and implementing reforms to acquire land and accelerate the delivery of high-density government housing (Phang & Kim, 2013). Home ownership rates increased to almost 90 per cent in the 1990s, and today most Singaporeans live in government-built apartments bought through the Housing Development Board (Department of Statistics Singapore, 2024).

Singapore’s efforts to boost construction productivity

³⁶ Productivity in the construction industry can be held back by defective work and materials. For example, around 53 per cent of strata buildings surveyed in New South Wales had serious defects in common property in 2023 (NSW Office of the Building Commissioner, 2023). This need for re-work hurts productivity because it diverts resources away from new construction.

In the 1990s and 2000s, the government's focus shifted to building homes more efficiently. The construction industry suffered from low productivity, in part reflecting Singapore's reliance on lower-skill imported labour. The government set targets for productivity, introduced financial incentives, invested in research and development, and mandated the use of technology and prefabrication for government housing (McKinsey & Company, 2017).

These efforts saw Singapore become a world leader in prefabrication, particularly for government housing, and productivity increased significantly in the 2010s (Meng, 2013). For example, between 2010 and 2021, the square metres of floor area that one person constructed in a work day increased from 0.44 to 0.55 for government housing projects, compared to 0.32 to 0.39 for other residential housing (BCA, 2022). As a result, Singapore's efforts to support prefabrication boosted growth in its construction productivity, although its overall level of productivity appears to be lower than many other countries (McKinsey & Company, 2017).

How has the government supported MMC?

The government has used its status as a major provider of housing to directly implement MMC at scale in Singapore. While housing is generally delivered differently in Australia, there may be lessons we can learn from Singapore's experience.

Singapore's Building and Construction Authority (BCA) commissioned a series of prefabrication hubs and set targets and mandates for the use of prefabrication. Incentives and subsidies were used to support innovation, and government agencies have been encouraged to implement offsite manufacturing, with the BCA co-funding up to 70 per cent of the uptake costs for some forms of technology. The government has also pursued a range of other initiatives:

- All new government housing projects require prefabricated elements.
- The government mandated that all new bathrooms in government-built houses be modular. These are entire bathrooms that are assembled off site, including finishes and concealed pipes. This improves quality control and can deliver labour savings of up to 30 per cent (BCA, 2023; HDB, 2024).
- The government has adopted a 70 per cent target for 'design for manufacturing and assembly' techniques by 2025, meaning all construction should involve at least 70 per cent being designed for off-site manufacture and on-site assembly (Sweet, 2020). Using these techniques has helped to increase productivity by around 20 per cent from 2010 to 2020 (BCA, 2020).
- The government supported the development of prefabrication hubs. These are manufacturing facilities which specialise in producing government-regulated prefabricated elements which are then transported to construction sites (BCA, 2020a). These hubs operate on land with 30-year lease terms, with the largest able to build up to 17 blocks of flats each year (BCA, 2023a).

5.7.2 Clear regulatory hurdles to modern methods of construction

Regulation can hinder the adoption of prefabricated construction (Swinburne University of Technology, 2022). Barriers include:

- **Planning regulations that are unclear**, such as whether prefabricated homes are classified as a manufactured or traditional home. This confusion can cause costly delays, and the classification affects where prefabricated homes can be built and the applicable design rules.
- **Ambiguous design, performance, and approval processes**. Australia's main building design regulations, the NCC, were not written with prefabrication in mind. Code requirements can make it more difficult and expensive for building surveyors to approve developments where aspects of the product cannot be examined onsite.
- **Standards** that do not address, allow for, or enable aspects of design, construction, or installation which are unique to prefabricated and modular buildings (e.g. requirements regarding the transport of components to site).

These hurdles could be mitigated by:

- Supporting the Building Commission NSW's work to investigate a new regulatory framework for prefabricated and manufactured buildings, which can improve building quality in the sector and provide better protection for consumers.
- Supporting the work of the NSW Government Modern Methods of Construction Taskforce and the review of prefabricated building work being undertaken by the Australian Building Codes Board. This work could include investigations into the merits of developing a manufacturer certification scheme and broader mechanisms to overcome some of the shortcomings of the National Construction Code and building products conformity regulations for prefabricated buildings.
- Identifying and removing any other regulatory barriers to MMC.

Currently, Homes NSW is working with industry on the use of MMC for permanent homes that are compliant with the National Construction Code and Building Sustainability Index (NSW Land and Housing Corporation, 2024).

5.7.3 Ensure finance policies support innovative construction techniques and broader investment

Finance policy settings may also impose barriers to the adoption of innovative construction methods, such as modular homes. Traditional financial arrangements assume a home is built on site and that milestones are reached requiring the homebuyer to make partial payments to the builder. A prefab or modular home, in contrast, is built wholly off site and treated as a manufactured product, requiring the finance provider to support a different payment regime: either a deposit at the start and full payment at end, or full payment before work starts.

Banks may also be more hesitant to lend for modular home construction for other reasons. Prefabricated constructions are not required to have cover through the HBCF, so there is greater uncertainty over the capacity for work to be completed if a construction firm becomes insolvent. There is also greater uncertainty around the oversight of the sector by planning, building, and insurance regulators.

5.7.4 Design a market where enterprises have incentives to scale up

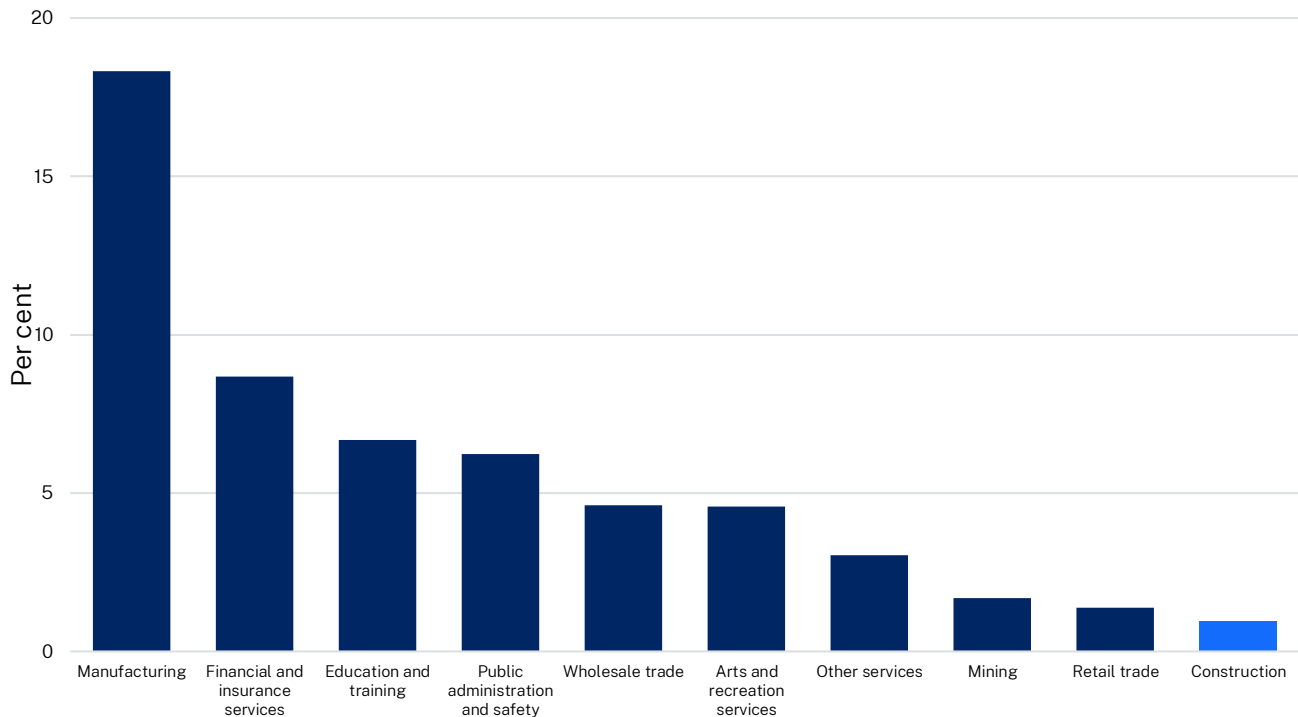
As of June 2023, over 99 per cent of firms in the NSW residential construction sector are either a sole trader or small business. Over half are sole traders, reflecting the prevalence of subcontracting in the industry.

While this can benefit consumers by boosting competition for services, the small scale of these businesses may act as a barrier to adopting new technologies and construction techniques. The construction industry has a comparatively low level of investment in research and development (Figure 28).³⁷ Lower investment may partly reflect the difficulty small-scale construction firms have in accessing the funds they need to adopt the latest technologies. ABS data suggests a lack of access to additional funds was the largest barrier to innovation for businesses across the whole economy over the two years to 30 June 2023 (ABS, 2024).

³⁷ Industry classification issues may result in some prefabricated investment being classified under manufacturing rather than construction.

Figure 28: Research and development in the construction sector is low

Research and development investment by sector, 2024



Source: ABS and NSW Productivity and Equality Commission.

5.7.5 Use training, migration, and regulation to promote innovation

Infrastructure Australia found that ‘the infrastructure and construction sector has one of the slowest adoption rates of technology, innovation, and digitally supported ways of working’ (Infrastructure Australia, 2021). In light of this, a key focus should be equipping workers to use new technologies. Training and skilled migration can each contribute (see sections 5.5 and 5.6).

Policymakers should also consider how to use existing training tools, such as apprenticeships and continuing professional development, to increase the sector’s awareness of regulatory changes and the benefits of adopting the latest technologies.

5.7.6 Investigate building contract terms that could support productivity and innovation

Fixed-priced contracts are widely used in construction as they provide cost certainty for the client. Contracts also commonly include detailed and prescriptive specifications to help ensure a uniform product (Australian Constructors Association, 2023). For example, contracts often stipulate residential construction methods and materials based on or influenced by construction standards or tradition. While these practices have benefits, they can also reduce innovation and productivity.

- When construction costs increase due to uncontrollable factors, such as a shortage of materials, fixed-price contracts may encourage contractors to cut corners to maintain profits.
- By preventing the substitution of materials, overly prescriptive contracts can make projects more vulnerable to delays and cost escalation.
- When contractors are exposed to the risk of having to absorb large cost overruns, their incentives and capacity to invest in technology and fixed capital is reduced.
- Fixed-price and prescriptive contracts incentivise builders and homebuyers to dispute contract terms after scope changes or cost overruns. This can lead to delays and costly litigation.

Further work could investigate the merits of more flexible contract terms, and mechanisms to encourage their use. Policy settings should aim to balance consumer protection, innovation, and investment, and reduce the potential for contractual disputes.

6 Ensuring a diverse and equitable supply of homes

Key findings

- We need variety in the housing stock to meet the diverse needs of the population. That means building homes in the right places, building different kinds of homes such as apartments and ‘missing middle’ housing, and giving everyone the opportunity to live in housing that is affordable and suits their needs.
- While policy options that aim to diversify housing have good intentions, there is a risk that they could negatively impact the feasibility of development and constrain overall supply.
- There is good evidence that sound investments in social housing can deliver social, fiscal, and economic benefits. The policy basis for affordable and key worker housing is not as strong.

Recommendations

- Policy interventions that aim to generate diversity in housing supply, such as requirements for family-sized apartments or affordable housing, should be coupled with planning incentives that support feasibility, such as height and Floor Space Ratio bonuses.
- Prioritise sustained public investment in social housing.

6.1 We need diverse stock to meet diverse needs

Sufficient variety in the housing stock is necessary to meet the diverse needs of the population. Housing needs can vary across different demographic and age groups. Young professionals might prefer smaller apartments in urban centres, while families with children might seek larger apartments or stand-alone homes with yards in suburban areas. Older adults might seek out more accessible housing in close proximity to family and healthcare.

Urban planners and developers need to consider these factors to ensure the housing stock matches the needs and preferences of households. This includes ensuring we have homes in the right places, building both detached houses and higher-density housing such as apartments, and helping people move into the housing that suits them best.

Some people have argued that Sydney needs more diverse housing, including more family-friendly apartments and more kinds of medium-density housing, such as townhouses. The potential for these gaps in the market may reflect a number of issues, including restrictive planning controls, the high cost of land, and barriers to innovation in the construction sector (Gilbert et al., 2020).

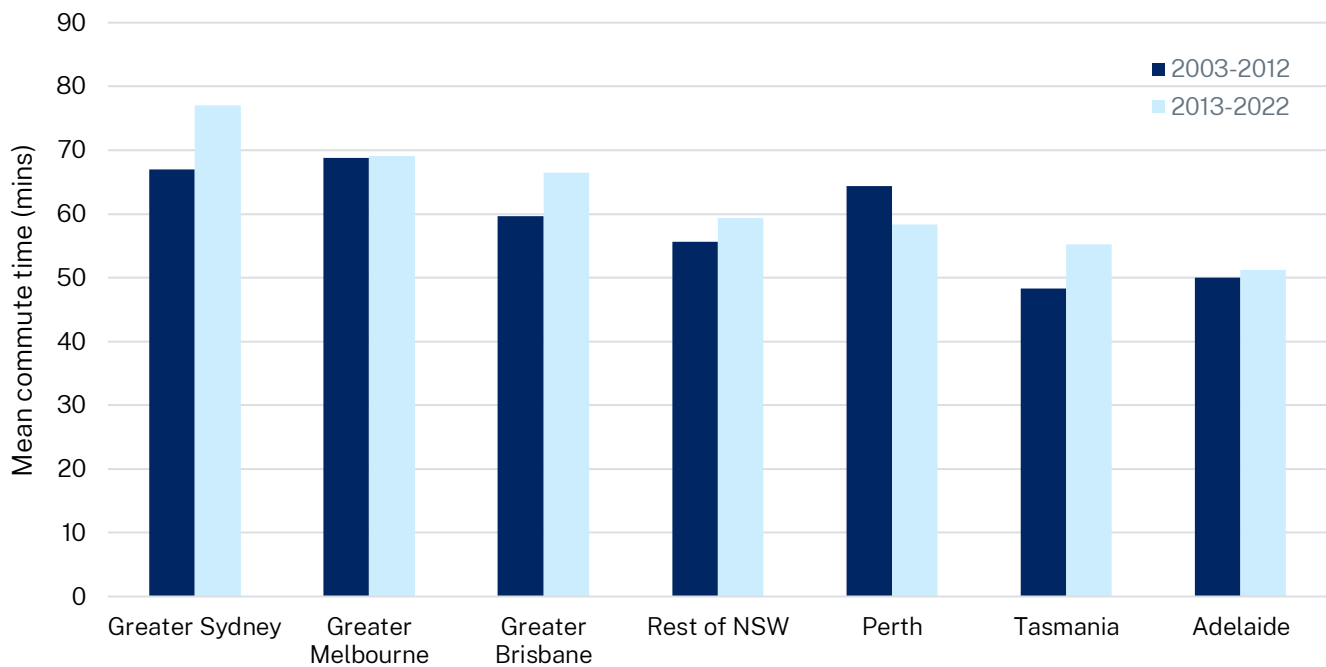
6.1.1 Homes in the right places

Building in the right location is crucial to meeting household needs and preferences. People generally want to live in areas that are close to amenities, workplaces, family and friends, schools, and public transport. However, restrictive zoning laws and under-provision of infrastructure can limit the availability of land that is suitable for development, leading to a mismatch between where people want to live and where new housing is being built.

New homes have increasingly been built in the outer suburbs of Sydney, in a process known as ‘urban sprawl’. Urban sprawl has helped more families afford larger houses on larger blocks, but has come with higher infrastructure, transportation, environmental, and social costs (Han, Peng, & Xu, 2023). Urban sprawl has also contributed to households in Sydney facing longer commutes compared to other Australian cities, and this has only worsened since the early 2000s (Figure 29).

Figure 29: Sydney households face longer commutes compared to other major cities, and it's getting worse

Mean commute time to work, average by decade



Source: Household, Income and Labour Dynamics in Australia (HILDA) survey and NSW Productivity and Equality Commission.

The Commission's previous research has highlighted the substantial benefits of increasing housing density in the inner- and middle-suburbs of Sydney. These benefits include increased amenities for households, shorter commutes, and less environmental and infrastructure costs (NSW Productivity Commission, 2023). Section 3.5 discusses planning system constraints that hinder density and development feasibility in areas close to the city.

6.1.2 Family-friendly apartments

Some studies have suggested there is an undersupply of family-sized three-bedroom apartments, such as in Liverpool, which is making it difficult for families with children to find suitable apartments (Cook, Herath, & Kerr, 2023; Chang, 2024). The suggestion is that developers do not build enough family-friendly apartments due to the role of investors as buyers of new housing, who prefer to invest in smaller apartments (Goodwin, 2023).

In practice, it is unclear whether there is a shortage of family-friendly apartments. The proportion of three-bedroom apartments in high-rise apartment buildings in Greater Sydney has remained unchanged at 16 per cent from 2016 to 2021. At the same time, the overall share of families with children living in high-rise apartments, whether they are two-bedroom or three-bedroom apartments, has slightly increased from 17 to 18 per cent over the same period (ABS Census, 2021). This would suggest the number of families seeking to live in three-bedroom apartments is relatively well-matched with what is available in the housing market.

That said, the proportion of families choosing to raise children in apartments may continue to rise as detached houses become less affordable. This could have implications for apartment supply. An undersupply of larger apartments can force families to stay in housing that is too small for their needs or to move further away from jobs and sought-after amenities. Likewise, an undersupply of smaller apartments could mean that other households, such as young professionals living in shared housing, may be forced to outcompete families for access to large apartments, even though they are not best-suited to their needs.

6.1.3 More student accommodation

Purpose-built student accommodation is highly sought after by students. That's because it brings a number of benefits, including security and proximity to university campuses and social activities. However, high occupancy rates and rising rents for student accommodation across Australia suggests that supply may not be keeping up with demand (CBRE, 2023). Some estimates indicate there is only one bed for every 14 students (ABS Census, 2021; Savills, 2021).³⁸

The upshot is that many students will need to live in private market housing, such as apartments and share houses. In 2021, almost 20 per cent of renters in apartments in Australia were higher education students (ABS Census, 2021). The concentration of higher education students is especially high in some areas. Even when only accounting for international students (not domestic students), one in four renters in Burwood are reported to be temporary student visa holders, almost one in five in Strathfield and roughly one in six in Sydney and Bayside (The Student Accommodation Council, 2024).

Building more student accommodation adds to overall housing supply. It also helps to free up rental stock for other households. In the 2024-25 Federal Budget, the Commonwealth announced that caps on international students would be determined for each institution, with additions above those caps tied to the construction of additional student accommodation (The Commonwealth of Australia, 2024). If additional student accommodation can be used to increase overall housing supply, then not only will students benefit, but other households will too as private dwellings are vacated and freed up for others to occupy (through the process of 'filtering').

If you build more student accommodation, you can put capacity back into the rental pool in New South Wales.

Contractor, Infrastructure NSW roundtable

6.1.4 'Missing middle' housing

Others have argued that Sydney's housing market is polarised between detached homes on greenfield lots and high-rise apartments (Korsanos, 2022). The 'missing middle' refers to homes that fall in between, such as townhouses, duplexes, and small apartment buildings. As high-rise apartments have grown in share, these 'missing middle' homes have declined slightly as a proportion of Greater Sydney's total housing stock (from 30 per cent in 2016 to 28 per cent in 2021) (ABS Census, 2021). These homes can provide a compromise for those looking for some of the features of a detached house, such as ground-floor access, but at lower cost or in a more convenient area than they could otherwise afford.

While 'missing middle' housing has a clear role to play in Sydney's housing market, it does have some limitations. Most notably, this kind of medium-density housing is not the most efficient use of space in high-demand areas where land is most scarce and expensive (NSW Productivity Commission, 2023). In these locations, supplying housing for a given number of people is much more expensive for medium-density townhouses compared with higher-density apartment buildings. This can also mean that in some areas, demolishing a single dwelling to construct only a few additional units may not be feasible.

6.1.5 Housing everyone can afford

We rely on the private market to supply adequate housing for households that are ineligible for social housing. But if economic conditions and planning constraints restrict a large increase in housing supply, it's unlikely the private sector will be able to deliver housing that is affordable for

³⁸ There are indications that this is lower than in other countries such as the United Kingdom. CBRE reports that in the United Kingdom, there is one bed for every two to three students.

everyone. This creates a role for government, including by encouraging housing supply to respond quickly to increases in demand.

6.2 Couple interventions that aim to increase housing diversity with incentives that make it feasible

In an efficient housing market, housing supply responds to the level of housing demand as well as household preferences for different kinds of housing. Strong demand for certain types of housing – such as family-friendly apartments or ‘missing middle’ housing – should result in higher prices over time, increasing the profitability of development and encouraging greater supply. However, if the market is not functioning efficiently (perhaps due to restrictive planning controls or distortions in the tax system), then the market may end up oversupplying some kinds housing and undersupplying others.

Governments use a range of regulatory tools to influence what kind of housing is built and where. Local DCPs and the ADG are key instruments in this process. These regulatory frameworks set standards and guidelines for liveability, sustainability, and community needs that must be met for new developments to proceed.

These tools are designed to ensure the community benefits from new housing. However, they can also reduce the feasibility of new housing supply if they are poorly designed or overly prescriptive. For example, requiring new developments to include a minimum number of family-sized apartments could reduce their overall feasibility, and at the margin reduce the number of new homes being built. The 2021 Productivity White Paper therefore recommended that new and existing regulations be carefully considered on their merits through the production of a Better Regulation Statement. This helps to strike the right balance between the benefits of housing diversity and the potential for fewer or more expensive homes.

In general, the Commission recommends that government interventions aiming to increase the diversity of housing – such as three-bedroom apartments or affordable housing managed by a registered community housing provider – should be coupled with planning or regulatory relief that supports the feasibility of new developments. This could include planning incentives such as height bonuses or Floor Space Ratio bonuses.

The NSW Government’s affordable housing bonus is an example. The reforms were introduced in 2023 and offer developers a 30 per cent floor space bonus and a 30 per cent height bonus when their proposal includes at least 15 per cent of the gross floor area as affordable housing.

6.3 Prioritise sustained public investment in social housing

Not everyone can access safe and secure housing in the private market. This includes households suffering from domestic and family violence, those living with a disability or complex needs, and households on very low incomes. Without support, these groups risk experiencing homelessness.

Social housing provides an essential safety net for these households (Commonwealth Productivity Commission, 2022). In New South Wales, social housing includes public housing, community housing, and Aboriginal housing. Providing social housing improves recipients’ health and quality of life. It also relieves pressures on other government services, such as health, mental health, justice, and specialist homelessness services, which can be costly to provide.

Social housing is an effective and well-targeted government intervention. The supply of social housing, however, has not kept pace with demand. The social housing waitlist in New South Wales is large and growing. The number of applicants has grown from almost 58,000 households in June 2022 to around 68,000 households (or 140,000 individuals) in June 2023 (Parliament of New South Wales, 2023; Department of Communities and Justice, 2023).

In the 2024-25 Budget, the NSW Government announced it will invest \$6.6 billion in social housing and homelessness services over the next four years. This will deliver 8,400 new social homes (of which 2,200 will be replacement homes) and will restore and fix 33,500 social homes.

While there is strong policy basis for a sustained increase in public investment in social housing, the evidence on the public and private benefits of subsidies for affordable housing and key worker housing is less strong (Grattan Institute, 2019; Commonwealth Productivity Commission, 2022).³⁹ These measures have a number of shortcomings that reduce their fairness and effectiveness:

- they can 'lock' people into their current circumstances, because the subsidies are tied to a specific property
- their eligibility is relatively broad but their availability is relatively narrow, which means some people benefit but others don't, despite being in the same circumstances
- when they add to development costs, they can reduce the feasibility of new housing development or push up the cost of renting in the private market.

In general, governments should focus on increasing the overall supply of housing as an effective way to improve housing affordability, while ensuring a sufficient stock of social housing is available to meet the needs of those who need it most.

³⁹ Affordable housing is delivered, managed or owned by registered community housing providers.

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Appendix A: Terms of Reference

Purpose

- To identify housing market, residential development, and construction industry barriers currently impacting housing supply in New South Wales and to recommend actions for the NSW Government and other stakeholders to address them.

Scope

- Review the current conditions of the housing market, residential development sector, and construction industry in New South Wales, as they relate to the delivery of additional housing supply.
- Identify critical non-planning system challenges negatively impacting housing supply delivery, noting that planning system challenges are being considered through other processes.
- Provide prioritised recommendations for the NSW Government and other stakeholders to efficiently address identified challenges in the short-, medium-, and long-terms.
- The Review will have regard to:
 - housing construction industry challenges identified by the Housing Industry Working Group and the findings of Infrastructure NSW roundtables
 - barriers to delivering different housing / development types, and to delivering the housing types sought by NSW renters and owner-occupiers
 - other impediments to housing delivery that may emerge during the Review.

Review process

- The Review will be undertaken by the Productivity and Equality Commissioner, Mr Peter Achterstraat AM. The Commissioner will deliver a report with recommendations and suggested prioritisation to the Premier and the Treasurer by end-August 2024 for the purposes of submission to Cabinet.
- The Commission may undertake targeted consultations with industry and public sector stakeholders.

Appendix B: Stakeholders consulted

In addition to consultation undertaken as part of Infrastructure NSW roundtables, the NSW Productivity and Equality Commission undertook further targeted consultations with stakeholders as part of the Review. These include:

- Australian Banking Association and members
- Building 4.0 CRC
- Building Commission NSW
- Community Housing Industry Association NSW and members
- Deicorp
- Housing Industry Association and members
- Laing O'Rourke Australia
- Local Government NSW
- Master Builders Association and members
- MECONE
- Meriton
- Mirvac
- NSW Department of Planning, Housing and Infrastructure
- Office of Local Government (NSW)
- Property Council of Australia
- The Australian Glass and Window Association (AGWA)
- Urban Development Institute of Australia NSW
- Urban Taskforce

The Commission also held a Builder Roundtable at NSW Parliament House. The roundtable brought together 60 experienced builders to share their knowledge and insights with the Commission. Discussion focused on the barriers the construction industry faces to deliver new homes over the next five to ten years, as well as what government and industry can do to support housing supply.

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