

# AUSTRALIAN CONSTRUCTION MARKET REPORT NOVEMBER 2018



**acif**  
Australian Construction  
Industry Forum

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# Foreword

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The Australian Construction Industry Forum (ACIF) is proud to provide the building and construction industry with the November 2018 Australian Construction Market Report.

Building and construction work had a good year in 2017-18 and activity grew to \$247 billion (in real terms). This level of activity is getting close to rivalling the peak achieved at the height of the resources development boom. Building and construction activity now accounts for 14% of GDP and construction sector jobs account for nearly 10% of total employment.

Looking at the outlook for building and construction activity overall, the pluses are marginally outweighed by the negatives and activity is forecast to shrink next year by less than 1%, landing at \$245 billion (in real terms in 2015-16 prices).

The ACIF Forecasts report on the three sectors the industry operates in, those being:

- Residential Building (houses, apartments, townhouses);
- Non-Residential Building (offices, retail, industrial, hotels, health, education and entertainment facilities); and
- Engineering Construction (major economic infrastructure including roads, rail, ports, and mining resource-based projects).

The outlook for the next few years is finely balanced. We expect the roll out of major infrastructure projects in railways, roads, electricity, water and sewerage to continue. Meanwhile, construction work in *Heavy Industry including Mining* will return to an underlying down-trend over the next two years. *Non-Residential Building* activity is expected to grow again next year in commercial offices, together with increased government consumption and public investment in health, community services and education. *Residential Building* is entering a down-turn at present. The building of new other residential dwellings 'especially apartments', is expected to fall in 2019-20 and into 2020-21.

The report notes that activity will track sideways over the remainder of this year as builders work through the pipeline of high-rise apartments and other dwellings (houses) which take longer to build. The market has received the message from falling house prices, the closing out of international investors, curtailed lending for investors, recent increases in interest rates, and financiers applying greater caution in providing credit.

The ACIF Forecasts that are behind this report outline the next ten years of upcoming demand for work across the four key construction sectors, as well as what is happening with labour requirements. The ACIF Forecasts aim to foster a more informed, transparent, efficient, and respected marketplace; and in doing so, give industry participants quality information and insights that they need to make more informed investment and business decisions.

These forecasts are overseen by the Construction Forecasting Council (CFC), which comprises a panel of economists and industry leaders whose wealth of experience and on-ground insights plays a valuable role in providing input into and reviewing the ACIF Forecasts. The ACIF Australian Construction Market Report is prepared by industry, for industry.

As Chair of the Construction Forecasting Council it has been my privilege to work with my fellow CFC members and I sincerely thank them for their contribution to the forecasts. In addition, I'd like to thank the following:

- Kerry Barwise and his colleagues Peter Downes and Kevin Toohey who prepare the evidence-based forecasts that inform the report;
- CoreLogic who provide critical data on projects with values of \$20 million and above to inform our forecasts and who are a leading authority on project activity and building cost information in Australia; and
- The ACIF team, who manages the production of the ACIF Forecasts and the Construction Forecasting Council.

Finally, I encourage all members of the industry to visit ACIF's website [www.acif.com.au](http://www.acif.com.au) and take advantage of a rich database of information on the industry on the upcoming work demand, the sectors to consider and the labour requirements. The ACIF Dashboard also provides the ability to tailor forecasts to meet your business type and location.

We welcome feedback on the report and forecasts and look forward to receiving any comments on how it might be adapted to provide additional benefits for the industry.



**Bob Richardson**  
Chair, Construction Forecasting  
Council and Managing Director,  
Xmirus



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# Acknowledgements

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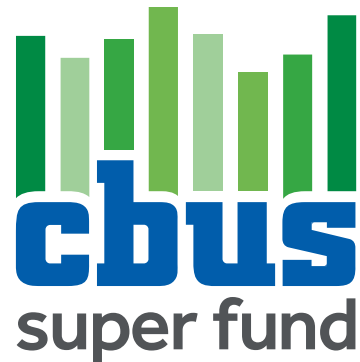
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## Partners

CoreLogic has been part of this work since it started in 2002, providing major projects data which adds to the rich information that underpins these ACIF Forecasts. We are grateful to all at CoreLogic who help make this happen.

Design Build Expo, MNF Group and Viewpoint Construction Software each make a significant financial contribution.

We are grateful for their continued support.



# About ACIF

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The Australian Construction Industry Forum (ACIF) is the meeting place for leaders of the construction industry in Australia. ACIF facilitates and supports an active dialogue between the key players in residential and non-residential building, engineering construction, other industry groups, and government agencies.

Our members are among the most significant associations in the industry, spanning the entire asset creation process from feasibility study through design, cost planning, construction, building and management.

## Our Agenda

ACIF seeks to develop a successful, strong and sustainable construction industry in Australia. ACIF is focused on creating a competitive construction and property industry that is a leader in building Australia's prosperity. As well as facilitating communication within the construction sector, ACIF provides governments and other agencies with a central and efficient industry liaison point.

## ACIF's Policy and Advocacy

The Australian construction industry employs over 1.2 million Australians, and in 2017-18 had a turnover of \$247 billion.

Therefore, the construction industry is one of the main drivers of the Australian economy and its productivity and success is critical to the growth and success of the Australian economy.

ACIF identifies the most important issues on which to create policies, and then advocates on those issues. This assists ACIF's Members and leads to increased productivity and efficiencies in the industry.

## Strategic Forum

ACIF has partnered with its government counterpart, the Australasian Procurement and Construction Council (APCC) to focus government and industry on increasing productivity and developing the processes and culture of the industry to maximise the benefits for all Australians.

Since 2014, this partnership has been known as Strategic Forum for the Australasian Building and Construction Industry, and has produced a series of guides and resources around project team integration and building information modelling.

**More information about these resources is available at [www.acif.com.au/strategicforum](http://www.acif.com.au/strategicforum)**

## Members

- Air Conditioning and Mechanical Contractors' Association of Australia
- Association of Consulting Architects Australia
- Australian Institute of Architects
- Australian Institute of Building
- Australian Institute of Quantity Surveyors
- Australian Window Association
- Fire Protection Association Australia
- Housing Industry Association
- Insulated Panel Council Australasia
- National Fire Industry Association
- PreFabAUS
- Society of Construction Law Australia
- Australian Elevator Association
- National Precast Concrete Association Australia

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# About ACIF Forecasts

## The ACIF Construction Market Forecasts

ACIF forecasts are the industry's 'compass' to the future. They provide rolling ten year forecasts of building and construction activity. These forecasts are a primary source of market information for the building and construction industries in Australia, providing decision makers with comprehensive information and insight to reveal the direction in which building and construction activity is heading.

The forecasts are revised and updated twice a year in order to ensure that the outlook reflects the most recent information about what is actually happening and to refresh insights about what will happen next.

## How ACIF Forecasts are Produced

The ACIF forecasts are prepared by blending macro economic forecasts of the domestic and international economy with information about the projected share of construction activity by sector and by region. The outlook for expenditure is supplemented by CoreLogic's detailed project database – a repository for the building and construction project pipeline.

The forecasts start with the latest available evidence from the Australian Bureau of Statistics in *Residential Building*, *Non-Residential Building* and *Engineering Construction*. Detailed data is available for 20 sub-sectors. The regional analysis splits Australia-wide projections by state and territory, capital cities and 'rest of state'.

Quarterly forecasts are produced for the medium term outlook while annual projections are provided for the next ten years to 2027-28.

The forecasts are projections of the future. They are based on statistics which are themselves estimates and which are subject to further revision. Noise or error is inherent in the estimates of expected outcomes.

## Construction Forecasting Council

The ACIF forecasts are produced by industry, for industry. Industry insight is injected into the forecasts through ACIF's Construction Forecast Council (CFC).

Both the wealth of professional experience of CFC members and the unique insight their respective organisations offer ensures that ACIF Forecasts are credible and provide robust projections for the industry in Australia.

<b>Bob Richardson, Chair</b>	Xmirus
<b>Nerida Conisbee, Deputy Chair</b>	REA Group
<b>Jason Anderson</b>	Macroplan Dimasi
<b>Kerry Barwise</b>	Barwise Consulting
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<b>Mike O'Shea</b>	MBMPL
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<b>Damon Roast</b>	Lend Lease
<b>Andrew Scott</b>	Morgan Stanley
<b>Alex Sinickas</b>	Arup
<b>Kevin Toohey</b>	Toohey Consulting

## Forecast Sectors and Asset Types

Residential Building	Non-Residential Building	Engineering Construction
<ul style="list-style-type: none"><li>■ New Houses</li><li>■ New Other Residential (Apartments and Townhouses)</li><li>■ Large Alterations and Additions</li><li>■ Other (Mainly Small Alterations and Additions)</li></ul>	<ul style="list-style-type: none"><li>■ Accommodation</li><li>■ Education</li><li>■ Entertainment and Recreation</li><li>■ Health and Aged Care</li><li>■ Industrial</li><li>■ Miscellaneous</li><li>■ Offices</li><li>■ Other Commercial</li><li>■ Retail and Wholesale Trade</li></ul>	<ul style="list-style-type: none"><li>■ Roads</li><li>■ Bridges, Railways and Harbours</li><li>■ Electricity and Pipelines</li><li>■ Water and Sewerage</li><li>■ Telecommunications</li><li>■ Heavy Industry including Mining</li><li>■ Recreation and Other</li></ul>



**To make successful business decisions,  
you need the right information.**



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ACIF Forecasts are powered by the industry's own  
Construction Forecasting Council, publishing  
reliable forecasts since 2002 for benefit, not its own profit.

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+ Labour Forecasts + Construction Cost Index

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# Forecast Highlights

## Work Done in Building and Construction

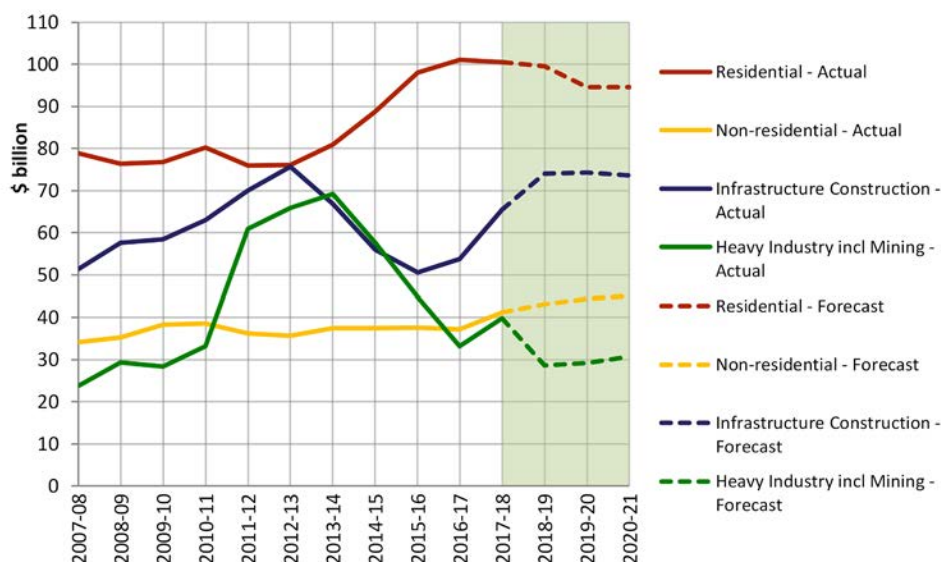
Infrastructure construction activity is continuing to surge. Work done grew by 22% last year to reach \$67 billion (in real terms) boosted by expanded public sector investment in transport, energy and water infrastructure. There are many new major projects being added to an already solid pipeline. Continued strong growth is forecast this year and next, raising work done to \$74 billion by 2019-20.

*Non-Residential Building* is also in a strong growth phase. This activity grew by 11% last year to reach \$41 billion. Expanded business investment in *Accommodation, Offices, and Other Commercial* buildings has buoyed *Non-Residential Building* activity. Public sector investment is also supporting growth especially in *Education, Health and Aged Care, Defence* and other community facilities. New projects are being added to the *Non-Residential Building* pipeline, although approvals have faltered in recent months. The forecasts factor in further growth in *Non-Residential Building* activity, although the rate of growth will taper off over the next three years.

*Heavy Industry Including Mining* is expected to lose \$11 billion in the value of work done this year reflecting the completion of very large resource development projects in Western Australia and the Northern Territory. Changed economic fundamentals have also rekindled investor interest in a number of resource projects that have been waiting in the wings such as the \$11 billion Scarborough Gas Project or the even larger Browse Gas Project. There was a rebound in the number of major projects that have been added to the construction pipeline in recent months. The forecasts project a modest return to growth in the value of work done in this activity in the medium term.

*Residential Building* is weakening. Building activity dipped by 0.5% last year (2017-18) bringing the value of work done to \$101 billion. Completing the work that is already in the construction pipeline may support dwelling completions at current levels over the remainder of this year, but the significant loss in demand reflected in falling house prices has already forced the supply side to adjust its plans and *Residential Building* activity will experience a deeper decline in 2019-20 and 2020-21.

Building and construction work in aggregate is about to be 're-balanced'. The value of all work done in building and construction rose by 10% to \$247 billion last year. The cycles that are playing out in key subcategories will effectively 'cancel out' big changes in the forecasts of total work to be done. Total building and construction work is expected to hover between \$242 billion and \$245 billion over the next three years with minor dips and lifts of around 1%.



## Building and Construction Work Done (\$ billion)

Source: ABS and ACIF CFC

# Forecast Highlights

## Building and Construction Activity in Summary

	2017-18	Forecast 2018-19	Forecast 2019-20	Forecast 2020-21
	Actual (\$ billion)	Forecast (\$ billion)		
Residential Building	100.6	99.5	94.6	94.6
Non-Residential Building	41.2	43.1	44.4	45.0
Engineering Construction	65.6	74.1	74.3	73.6
Heavy Industry Including Mining	39.9	28.6	29.2	30.8
<b>Total</b>	<b>247.3</b>	<b>245.3</b>	<b>242.5</b>	<b>244.0</b>
	% change (YoY)	% change (YoY)		
Residential Building	-0.5	-1.0	-5.0	0.0
Non-Residential Building	10.6	4.6	2.9	1.4
Engineering Construction	21.8	13.0	0.4	-1.0
Heavy Industry Including Mining	20.3	-28.3	2.0	5.3
<b>Total</b>	<b>9.8</b>	<b>-0.8</b>	<b>-1.2</b>	<b>0.6</b>

"YoY" = Year on Year percentage change comparing performance in one year to the previous year.

Source: ABS and ACIF CFC

Most of the growth in building and construction activity over this year (2018-19) is expected to be in New South Wales, Victoria and Queensland. Meanwhile, the value of work done in 2018-19 is forecast to fall in Western Australia and the Northern Territory.

Building and construction provided 1.2 million jobs last year. This accounts for 9.4% of employment in Australia. Employment grew in the building and construction sector by 4.2% last year while the value of work done (or spending) grew by 9.8%. Much of the increase in work done last year was in *Engineering Construction* which is typically capital intensive (and import intensive).

Continued growth in building and construction sector employment in the south eastern states will be offset by a loss of building and construction sector employment in Western Australia and Northern Territory next year. Significant reductions in the amount of labour intensive *Residential Building* work done in 2019-20 will not be fully offset by the expected increases in less labour-intensive infrastructure construction activity, producing a small dip in building and construction employment.

## Building and Construction in the States (\$ billion, 2015-16 prices)

	2017-18	Forecast 2018-19	Forecast 2019-20	Forecast 2020-21
	Actual (\$ billion)	Forecast (\$ billion)		
New South Wales	72	75	73	73
Victoria	57	59	58	58
Queensland	47	48	48	50
South Australia	14	14	14	14
Western Australia	44	36	38	39
Tasmania	3	3	3	3
Northern Territory	7	6	5	4
Australian Capital Territory	4	4	4	4
<b>Australia</b>	<b>247</b>	<b>245</b>	<b>243</b>	<b>244</b>

# Forecast Highlights

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The industry is concerned about a number of key risks to the outlook:

- Further reductions in the availability of credit and increases in the cost of credit following the Banking Royal Commission could compound measures that have already been effective in reducing risky lending and this may deepen the imminent downturn in *Residential Building*.
- Tax reform proposals to raise taxes on investors could reduce investment in residential property.
- Further adjustments to immigration policies could weaken population growth, reducing economic demand and constraining workforce growth.
- Expansion of the large public infrastructure program underway across Australia is placing pressure on the capacity of the construction and building sector, which is already grappling with shortages of highly skilled workers. The risk of cost overruns and delays is rising.





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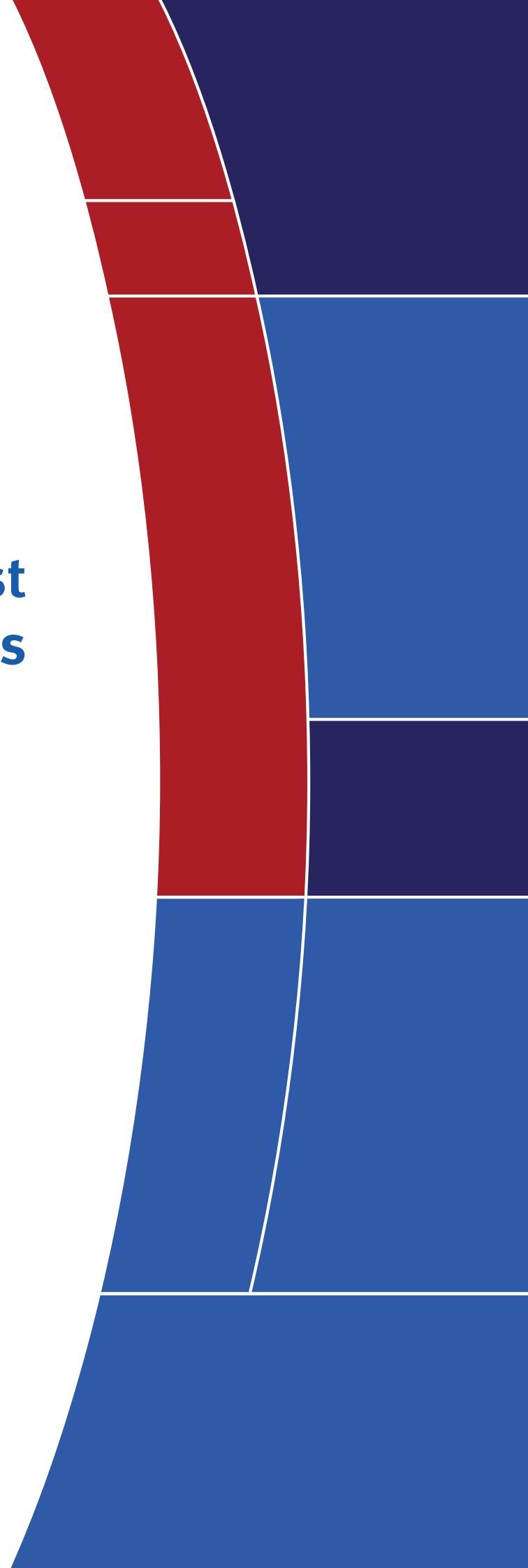
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# Forecast Foundations



# Forecast Foundations

The ACIF Construction Market Forecasts are founded on a detailed economic model and detailed 'bottom-up' information about building and construction activity obtained from industry. These inputs are subject to scrutiny by ACIF's Construction Forecasting Council.

## International Economic Outlook

A sustained trade war between the United States and China would shrink both economies. Bystanders would not be immune from collateral damage. The IMF has trimmed global growth projections to 3.7% for 2018–19 and 2019–20 reflecting the negative effects of recent trade measures, as well as tighter financial conditions and higher oil prices.

Despite turmoil in trade arrangements the fundamentals in international economic conditions have been relatively sound. Growth in global industrial production has been reasonably robust. Strong growth in the United States is being supported by a fiscal stimulus (through significant tax cuts). In the euro area, GDP growth has eased in most countries recently, but it has remained above trend. The UK is obtaining some growth while grappling with Brexit, assisted by a mild devaluation. The Japanese economy is expanding in recent quarters, although recent severe weather events will have a measurable impact on economic performance. In China, the authorities have responded to slowing growth with a targeted fiscal stimulus, including the announcement of new rail infrastructure projects and directives to hasten progress on some current infrastructure projects.

Australia has seen significant increases in resource exports, particularly for liquefied natural gas, as major resource development projects enter into production.

## Real Long Term Interest Rates and Inflation

The Federal Reserve is continuing to raise US interest rates as spare capacity is absorbed and inflationary pressures emerge. Further increases are expected into 2019. While it is not clear when the European Central Bank will proceed down the same path, capital markets are expecting global interest rates to climb gradually into the medium term.

A widening interest rate differential between the US and Australia has seen the Australian dollar fall in value to US\$0.72 by mid-October 2018. A sustained lower exchange rate could support the incomes and international competitiveness of Australian exporters. However, further increases in US interest rates could see increased volatility in capital flows.



**Growth in Australia's Major Trading Partners**

Source: AUSM



**Real Long Term Interest Rates & World Inflation**

Source: AUSM

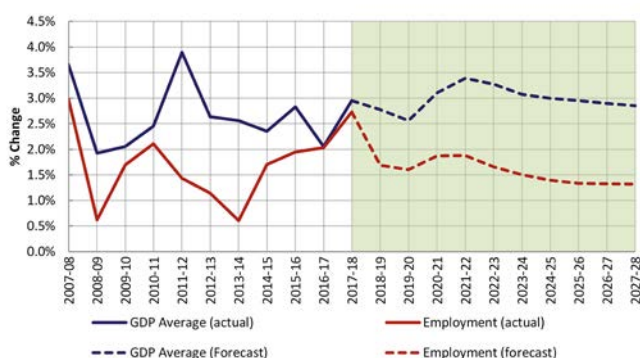
# Forecast Foundations

## Australian Economic Conditions

Growth in GDP rose to 2.9% over 2017-18. Strengthened government consumption, surging government investment (especially in infrastructure), an upturn in underlying business investment and significant improvements in net exports, drove growth last year. These factors have been sufficient to overcome the significant drag on growth from falls in mining and dwelling investment.

The sources of output growth carried over from last year are flattening out. Growth in government consumption will moderate as the roll-out of programs such as the NDIS approaches completion. Similarly, government investment will continue as progress is made in delivery of major infrastructure projects, but the rate of increase will not match the surge experienced in recent years when many large projects commenced. A dip in business confidence and investment expectations seems to be aligned with an increase in concern about the trade war and an unexpected change of Prime Minister, trimming growth in non-mining underlying business investment (which includes *Non-Residential Building* activity). The downturn in dwelling investment is expected to be carried over into the year ahead and to deepen next year. Eastern Australia is in drought and this will detract from farm output. These factors combined will push GDP growth down to 2.8% this year and to 2.6% in 2019-20.

Output growth is expected to obtain a modest lift in 2021-22 and 2022-23 when cycles in mining investment and dwelling investment have fully bottomed out and these activities will then make significant contributions to growth. These effects will be temporary and GDP growth is expected to slip down to around 2.5% over the remainder of the forecast period.

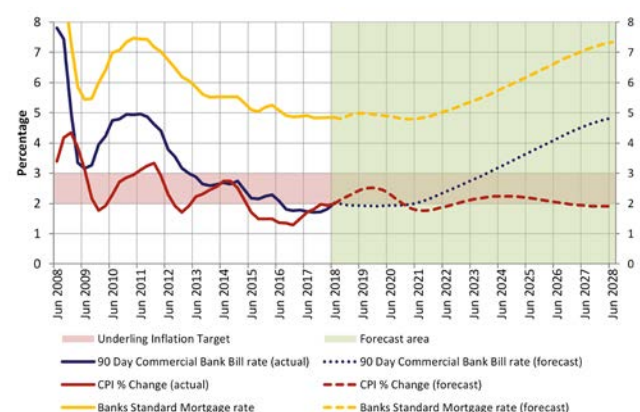


Growth in GDP and Employment

## CPI and Interest Rates

The likelihood of continued subdued growth in incomes and wages presents downward pressure on the outlook for inflation (and for growth in demand in the economy at large and the ability of households to spend and service their mortgages). Meanwhile, oil prices are rising, and the exchange rate is somewhat lower adding inflationary pressures. On balance, 'headline inflation' (measured with the CPI) is expected to rise incrementally from 2.0% to 2.6% over the remainder of 2018-19.

'Official' interest rate settings are not expected to change until 2019. Notably, the major banks have increased interest rates charged on owner occupied mortgages and on investor loans reflecting recent increases in the banks' own cost of borrowing. Banks are adjusting the availability of credit and the cost of credit in the wake of the Banking Royal Commission.



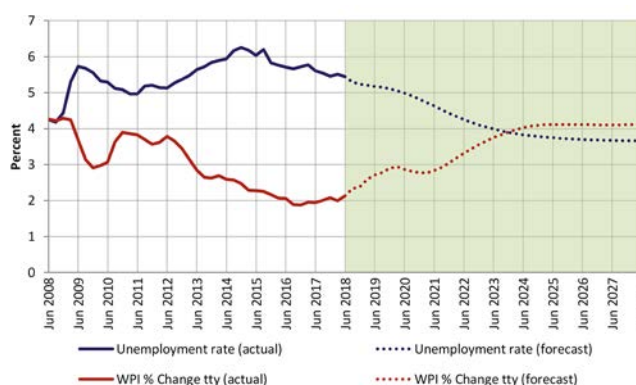
CPI and Interest Rates

Source: ABS and ACIF CFC

# Forecast Foundations

## Unemployment and Wages Growth

Moderate economic growth is expected to generate sufficient employment growth to gradually erode the pool of unemployment (and underemployment) and this is expected to provide just enough wages growth to keep inflation within the RBA's targeted band over the medium term.



Unemployment Rate and Wages Growth

## Recent Economic Performance and Forecasts

	Actual 2017-18	Forecast 2018-19	Forecast 2019-20	Forecast 2020-21
GDP Average (% change yoy)	2.9	2.8	2.6	3.1
Unemployment Rate (% Year end)	5.4	5.2	5.0	4.6
Wage Price Index (% yoy)	2.1	2.5	2.9	2.8
CPI Inflation (% yoy)	2.0	2.5	2.3	1.8
90 Day Bank Bill (% Year end)	2.0	1.9	1.9	2.0
10-year Treasury Bond (% Year end)	2.7	2.7	2.5	2.3
Exchange Rate (\$US/\$A Year end)	0.76	0.72	0.72	0.72

Note: "yoy" = year-on-year. "Year end" = value at 30 June

Source: ABS, AUSM and ACIF CFC

## Components of Expenditure and GDP (a)

	Actual 2017-18	Forecast 2018-19	Forecast 2019-20	Forecast 2020-21
Household Consumption (% change)	3.0	2.4	2.4	2.8
Dwelling Investment (% change)	-0.5	-0.6	-2.2	6.1
Private Business Investment (% change)	8.7	2.4	3.8	5.5
- Underlying Private Business Investment by Industry (% change)	6.0	1.2	3.7	5.3
- Mining Investment (% change)	-6.5	-8.2	6.1	11.8
- Non-Mining Business Investment (% change)	10.4	4.0	3.0	3.5
Private Final Demand (% change)	3.5	2.0	2.5	3.7
Public Final Demand (% change)	3.6	4.5	3.0	2.3
- Government Consumption (% change)	4.4	4.0	2.9	2.8
- Public Investment (Underlying) (% change)	6.9	10.5	3.4	0.4
<b>Gross National Expenditure (% change)</b>	<b>3.7</b>	<b>2.6</b>	<b>2.2</b>	<b>3.3</b>
Exports of Goods and Services (% change)	3.4	4.2	4.2	2.9
Imports of Goods and Services (% change)	6.9	3.3	2.5	4.0
- Net Exports (% contribution)	-0.8	0.1	0.3	-0.3
<b>Real Gross Domestic Product (Average) (% change)</b>	<b>2.9</b>	<b>2.8</b>	<b>2.6</b>	<b>3.1</b>

(a) Real, based on Chain Volume Measures (CVM), 2015–16 reference year

Source: ABS, AUSM and ACIF CFC

# Forecast Foundations

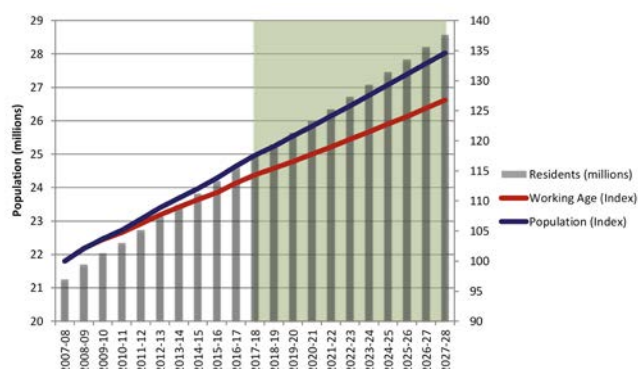
## Population Growth and Employment

Australia's resident population is estimated to have grown to 25 million at the end of 2017-18. Recent ABS long-term and permanent arrivals and departures data indicate a fall in Net Overseas Migration (NOM).

The government has tightened up immigration arrangements. It has replaced skilled worker visas (the 457s) with tighter regulations. Visas requirements for students and partners have been tightened. Fees for visa applications have been raised.

Reductions in 'pull' factors such as the end of the mining construction boom and slower growth in Australian incomes projected for the next few years, is will trim Net Overseas Migration over the next ten years.

These factors reduce population growth rather than halting it and the resident population is projected to reach 28 million by the end of 2027-28. The working age population has not been increasing quite as rapidly as the population and this gap is expected to be maintained over the next decade.



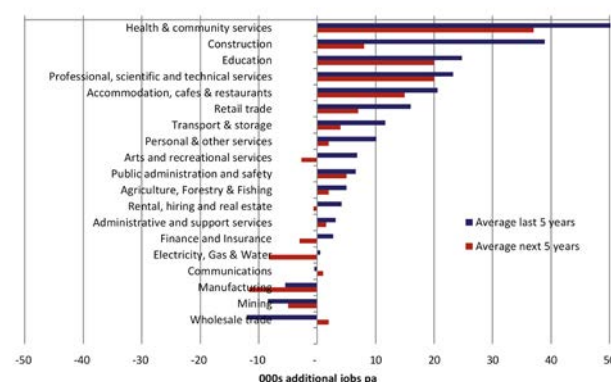
**Australian Resident Population and the Workforce**

Source: ABS, AUSM and ACIF CFC

## Trends in Employment

The largest growth in employment over the last five years has been in services industries including health and community services, professional, scientific and technical services and education. Job numbers have fallen in mining and electricity, gas and water following the end of the mining and resources development boom.

The forecasts reflect a continuation of the shift towards services. Reconfiguration of supply chains and logistics in emerging digital economy is expected to sustain job growth in areas such as wholesale trade and transport and storage. Job numbers are expected to dip in communications following completion of the National Broadband Network (NBN). Some employment growth is expected in tourism related activities including accommodation, cafés and restaurants.



**Growth In Employment by Industry**  
(Additional Jobs, 000s)

Source: ABS, AUSM and ACIF CFC

## Key Risks in the Major Foundations of the ACIF Forecasts

- Key downside risks in the global outlook include rising protectionist sentiment, financial market volatility and uncertainty in the pace of increases in global interest rates.
- In the domestic economy, the outlook for overall business investment is improving while the staying power of the recovery in non-mining business investment remains uncertain. Other downside risks stem from the timing and impact of higher interest rates on the exchange rate, household consumption and dwelling investment.
- A further moderation of activity in dwelling investment, prompted by a rise in interest rates or a general economic downturn, could lead to weaker household sentiment, lower consumption and slower growth in employment, wages and real GDP.
- Further policy measures to decrease immigration could lead to lower growth in domestic demand, lower demand for dwellings and lower GDP growth.



# Forecast Foundations

## Changes in the Major Projects Database

Information about construction projects is obtained from Cordell Connect, an online database of fully researched construction, infrastructure and building project information for the Australian construction market operated by CoreLogic.

The ACIF Major Projects Database identifies projects that are greater than or equal to \$20 million in value (in current prices). The projects are sorted into ACIF's categories, and by state and by project status. Some summary notes describing the project are also recorded, including the expected start of work, as well as CoreLogic's ID number which can be used to obtain the full information that is available about a project from Cordell Connect.

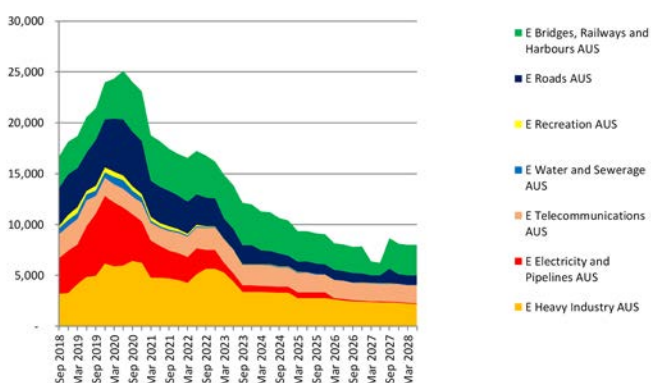
The ACIF Major Projects Database can be searched by subscribers to ACIF's online dashboard.

Currently, there are 7,156 active projects in ACIF's Major Projects Database. Active projects include all projects that have not been identified as having been deferred or abandoned. The combined value of all of the active *Residential* and *Non-Residential* projects in the database peaks at \$30 billion in September 2019.

The value of all active *Engineering Construction* projects in the Major Projects Database would peak at \$25 billion in early 2020 if they were all to commence by the expected start date.

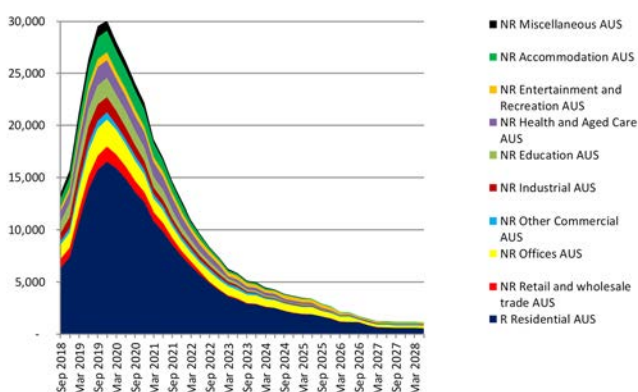
Of course, there is no guarantee that all of the active projects in the Major Projects Database will proceed and many projects do languish for some time in the database and are eventually marked as deferred or having been abandoned. Tracking the entry of building and construction projects in ACIF's Major Projects Database can provide guidance and insight into what is happening in construction markets.

Reversing the downtrend seen in recent years the number of active projects added to the ACIF Major Projects Database increased by 665 over the six months to October 2018. The value of projects entering the database also increased over the last six months, rising from \$76 billion to \$110 billion.



**The Value of Residential and Non-Residential Building Projects in the Major Projects Database (\$ million)**

Source: ACIF



**The Value of Engineering Construction Projects in the Major Projects Database (\$ million)**

Source: ACIF

# Forecast Foundations

## Additions to the Major Projects Database (by number of projects and value of projects)

	6 months to April 2018		6 months to October 2018	
	No. of Projects	Value (\$ million)	No. of Projects	Value (\$ million)
<b>Residential Building</b>	<b>211</b>	<b>25,278</b>	<b>225</b>	<b>14,287</b>
Residential	211	25,278	225	14,287
<b>Non-Residential Building</b>	<b>244</b>	<b>17,228</b>	<b>263</b>	<b>22,115</b>
Accommodation	31	2,266	33	2,687
Education	46	2,671	46	2,769
Entertainment and Recreation	8	733	14	2,554
Health and Aged Care	41	3,443	40	3,081
Industrial	35	2,309	41	2,850
Miscellaneous	9	1,126	24	2,248
Offices	37	2,458	28	4,190
Other Commercial	17	946	17	699
Retail and Wholesale Trade	20	1,276	20	1,036
<b>Engineering Construction</b>	<b>158</b>	<b>34,267</b>	<b>177</b>	<b>74,347</b>
Roads	39	5,918	27	2,575
Bridges, Railways and Harbours	24	6,295	32	40,983
Electricity and Pipelines	50	16,708	48	12,990
Water and Sewerage	5	230	8	870
Telecommunications	1	20	1	107
Recreation and Other	6	1,050	15	1,609
Heavy Industry including Mining	33	4,046	46	15,213
<b>Total</b>	<b>613</b>	<b>76,773</b>	<b>665</b>	<b>110,749</b>

Source: ACIF Major Projects Database and CoreLogic

The number of new projects in the *Residential Building* category increased to 225 from 211 over the last six months. This brings the downturn that has been evident in this category over recent years to a halt. The fall in the value of projects in the recent set of *Residential Building* projects added to the database is related to changes in classifications used. The October update of the Major Projects Database treats the \$8 billion Western Sydney Aerotropolis project as falling into *Non-Residential Building* whereas it would have been slotted in as a *Residential Building* project in the April update.

The number of new major projects in *Non-Residential Building* increased over the last six months, consolidating an uptrend in the numbers of projects and value observed over the last year or so. Increases in the number of projects has been almost across the board, with only two categories seeing minor reductions. The largest number of *Non-Residential Building* projects added to the database is in *Education*, repeating the situation reported in April 2018. There are also a large number of *Industrial* projects entering the database followed by increases in the number of *Health and Aged Care* projects.

Some 177 new *Engineering Construction* projects have been added to the database. These projects have a combined value of \$74 billion. This represents a substantial turnaround from the declines recorded over the last few years.

The 'infrastructure boom' is driving most of the improvement in *Engineering Construction* project numbers and value. Most of the growth is in *Bridges, Railways and Harbours*. The numbers in this category grew from 24 in April to 32 by October. The additions relate to very large rail projects, particularly urban rail transport projects. The Melbourne Metro 2 and Suburban Rail Loop projects are at the top of the list of Major Projects added to the database over the six months to October 2018. The increase in infrastructure work has been on the cards for some time. In fact, growth in some sub-categories such as in *Roads* and in *Electricity and Pipelines* is beginning to moderate and the numbers of projects in these sub-categories fell compared to additions in April. It is still the case that projects in these categories dominate the list of projects added to the database represented through projects such as the Northern Gas Pipeline Expansion, and Clarke Creek Wind Farm.

# Forecast Foundations


The October 2018 update also brings a large increase in the number and value of projects in *Heavy Industry* which also includes mining projects. Project numbers increased by 46, up from 33 in April. There was a disproportionate increase in the value of projects being added over the last six months which rose to \$15 billion, up from \$4 billion in April.

Details about all of the projects counted here (and all of the other Major Projects) can be examined by accessing the ACIF Major Projects Database that is available via the Customised Forecasts Dashboard at [www.acif.com.au/dashboard](http://www.acif.com.au/dashboard).

## Top 30 Largest Projects added to the ACIF Major Projects Database

Project Name	Category	CoreLogic Project ID	State	Status	Start Date	Value (\$ million)
Melbourne Metro 2	Bridges, Railways and Harbours	7318640	VIC	Early	10/09/2040	23,000
Suburban Rail Loop	Bridges, Railways and Harbours	7311078	VIC	Early	25/08/2022	9,999
Kangaroo Island Bridge	Bridges, Railways and Harbours	7295696	SA	Early	29/07/2024	5,000
Perdamen Urea Manufacturing Plant	Heavy Industry	7256015	WA	Early	03/05/2022	4,300
Northern Gas Pipeline Expansion	Electricity and Pipelines	7252621	NT	Early	26/12/2019	3,000
Transborders FLNG Project	Heavy Industry	7260989	WA	Early	10/05/2025	1,600
Eagle Street Pier Redevelopment	Offices	7235490	QLD	Early	10/02/2020	1,400
Southbank Arts Precinct	Entertainment and Recreation	7280121	VIC	Early	24/10/2021	1,000
Clarke Creek Wind Farm	Electricity and Pipelines	7272626	QLD	Possible	11/02/2019	1,000
Robe Valley Sustaining Project - Mesa B/C/H	Heavy Industry	7325805	WA	Early	04/10/2021	967
Bowen Space Centre	Industrial	7240465	QLD	Early	27/04/2020	900
Pelican Point FLNG Terminal	Heavy Industry	7323011	SA	Early	25/06/2019	800
New England Solar Farm	Electricity and Pipelines	7291346	NSW	Early	15/07/2019	800
Roma East Oil & Gas Project	Heavy Industry	7264069	QLD	Commenced	17/05/2018	750
Liverpool Health & Academic Precinct	Health and Aged Care	7287694	NSW	Early	03/02/2020	740
Sydney Football Stadium	Recreation	7242376	NSW	Registrations	03/06/2019	729
Bonshaw Solar Farm	Electricity and Pipelines	7297949	NSW	Early	29/07/2019	700
Lara Prison Precinct	Miscellaneous	7256493	VIC	Early	24/07/2019	689
Queen Street Mixed Development	Offices	7237600	QLD	Possible	15/02/2019	650
Buronga Energy Station	Electricity and Pipelines	7291512	NSW	Early	29/07/2019	625
Nundle Wind Farm	Electricity and Pipelines	7326294	NSW	Early	11/10/2021	600
Parkebourne Solar Farm	Electricity and Pipelines	7309891	NSW	Early	26/08/2019	600
Rowley Road Corridor	Roads	7244244	WA	Early	19/02/2033	600
West Angelas Deposits C&D	Heavy Industry	7325725	WA	Possible	04/10/2022	579
Sunbury To Cranbourne Pakenham Corridor	Electricity and Pipelines	7254669	VIC	Early	25/07/2019	571
University Of Newcastle Honeysuckle Stage 1A	Education	7301369	NSW	Possible	19/08/2019	560
Shell Prelude Gas Field Project - FLNG & QGC	Heavy Industry	7264062	-	Registrations	15/10/2019	550
Hurstbridge Line Upgrade Stage 2	Bridges, Railways and Harbours	7305368	VIC	Early	24/08/2020	530
Communities Plus Waterloo	Residential	7301741	NSW	Possible	01/09/2022	500
Newell Highway Program Alliance	Roads	7289899	NSW	Possible	01/02/2021	500

Source: ACIF Major Projects Database and CoreLogic



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# The Big Picture

# The Big Picture

## Where Has the Work Been in Building and Construction?

Building of *New Residential Buildings* (houses and other dwellings) is the leading source of work for the building industry at present. The value of work done in *New Residential Housing* appears to be about to 'top out' at \$66 billion. The fact that work done in *New Residential Building* has risen to levels that are just shy of the massive peak in *Heavy Industry Including Mining* achieved in the mining boom, underlines the strength of the recent surge. It also underlines that just like the mining boom, building of new housing is subject to the tyranny of business cycles.

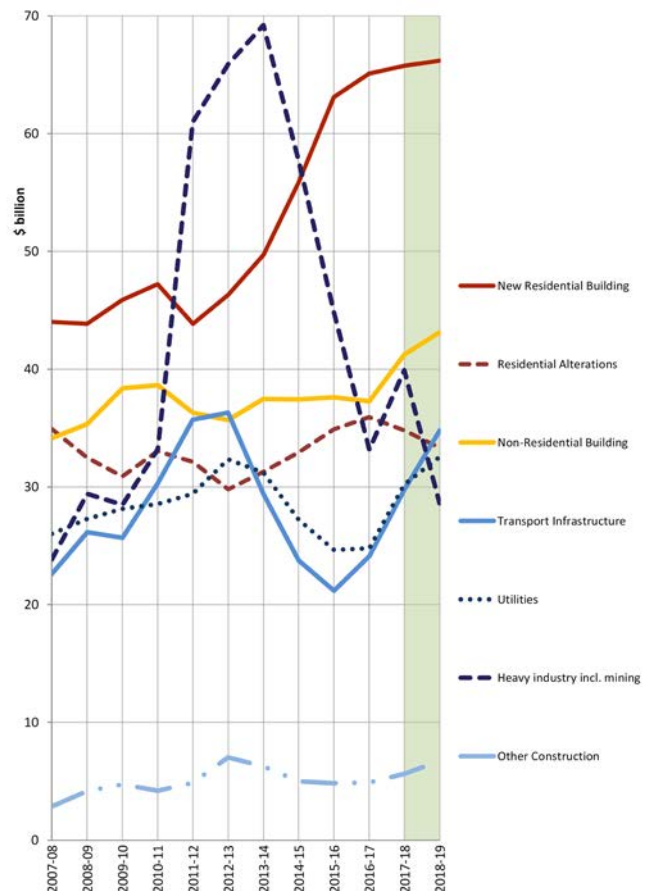
Work done in *Residential Alterations* declined last year from record high levels. This subcategory of activity is clearly subject to a business cycle, although it appears to be a little out of synchronisation with the cycle in *New Residential Building*.

*Non-Residential Building* work surged last year and is a fairly important source of new work for the building industry, after tracking 'sideways' for most of the last several years.

Construction work in *Transport Infrastructure* and in *Utilities* has rebounded over the last year or so on the back of strengthened public investment in roads, rail, ports and airports as well as in energy and water and sewerage facilities.

Work done in *Heavy Industry Including Mining* 'spiked' last year given the finalisation of huge resource projects in Western Australia and the Northern Territory. It is important to note that this reflects expenditure on equipment, much of which is imported.

There is more than a little drama in The Big Picture for the search for work in the building and construction industries. Building new dwellings 'saved' the industry (and, possibly, the Australian economy) from what would have been a particularly chilly contraction following the end of the development phase of the mining boom. What will save the industry if (or when) *Residential Building* work slips into a cyclical decline? Will the recent upturn in *Non-Residential Building* be sufficient and can it be sustained for long? Work in infrastructure projects is already in an upturn, but will it be enough?



**Building and Construction Work Done**  
(CVM, 2015-16 prices, \$ billion)

Source: ABS and ACIF CFC



# The Big Picture

The value of work done in building and construction activity rose by 10% in 2017-18 to amount to \$248 billion (in 2015-16 prices). The ACIF Construction Forecasting Council (CFC) views that the rebounds and spikes in many different subsectors of activity in building and construction work in 2017-18 will not be repeated in 2018-19. The value of work done in aggregated activity across Australia in 2018-19 is forecast to slide essentially sideways (with a small decline of 0.8%) to \$245 billion.

The 'sidestep' in building and construction activity is expected to be carried forward into the next five years, keeping the total to between \$243 billion and \$246 billion over the period to 2022-23.

This apparent stability in the outlook for work done in the aggregate, is obscuring the thrust of the forecasts which include impact of considerable volatility and the operation significant cycles in the various subsectors of building and construction activity (and in the various states and territories) that happen to largely offset each other.

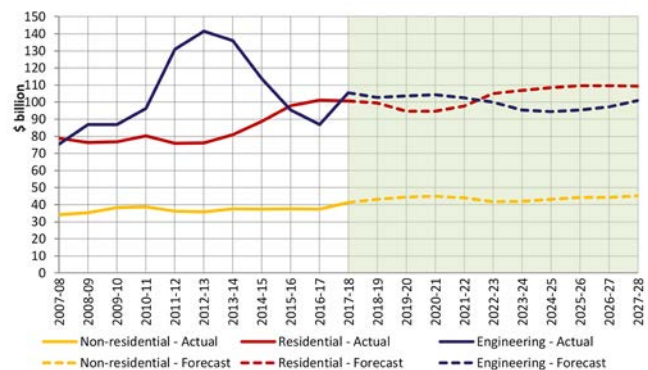
Some of this volatility adding to relative stability in the total can be seen when looking at the building and construction aggregates. The ACIF ACMR forecasts use the same aggregated categories as the Australian Bureau of Statistics to measure and summarise trends. The 'actual' performance as measured by the ABS and the forecasts provided by the ACIF CFC, are summarised in the charts below.

## Where Will the Work Come from Next?

*Residential Building* includes the building of new dwellings and small and large scale alterations and additions to existing dwellings. The value of work done in this category peaked at \$101 billion in 2016-17 and fell slightly (by 0.5%) in 2017-18. The deterioration in market fundamentals in the residential property market will drive a significant contraction in *Residential Building*, but the contraction will be subject to a lag given an enlarged and elongated pipeline of work in projects that have already commenced. Activity is projected to fall by 1% this year and by 5% in 2019-20 bringing it to \$94 billion.

The recovery in *Non-Residential Building* activity that started last year drove an increase in the value of work done to \$41 billion. Momentum from previous year's approvals will support further growth this year driving activity to \$43 billion.

*Engineering Construction* activity draws together transport infrastructure, utilities, heavy industry including mining and other construction activities. Work done increased sharply last year (2017-18) to reach \$105 billion. Most of the increase last year was due to a one-off 'spike' in *Heavy Industry Including Mining*. Resurgent investment in infrastructure including roads, rail, energy and water projects will be large enough in the next two years to more than offset the falls in *Heavy Industry Including Mining* activity that will follow the completion of the 'mega projects'.



**Value of Work Done by Category**  
(CVM, 2015-16 prices, \$ billion)

Source: ABS and ACIF CFC

# The Big Picture

## Changes in Major Projects

The cyclical nature of building and construction activity is most apparent when looking at the changes in the level of activity. Three ‘booms’ stand out. The ‘mining and resources development boom’ shows the largest upturn, with a peak in growth in work done in *Engineering Construction* of 36%.

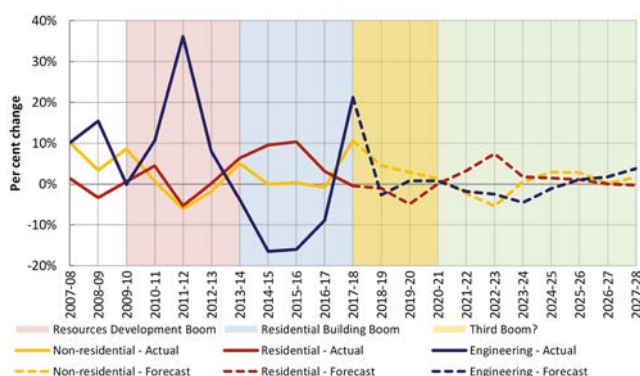
The ‘residential building boom’ was less dramatic involving a 10% surge at its peak.

The ‘third boom’ is somewhat speculative and involves a less emphatic upturn in *Non-Residential Building* as well as fluctuations in *Engineering Construction* activity based on the divergent trajectories in spending on infrastructure investment and heavy industry subcategories.

The forecasts project the continuation of cycles that are deeply imbedded in building and construction activities. The cycles are not synchronised, but they do seem to follow the pattern of the last decade where one of the three categories typically moves in the opposite direction of the other two for a time.

The net effect is that construction activity at large is expected to fall by a small amount in the next two years and then increase by a relatively small amount for the next two-to-three years after that.

It is important to dig deeper into the data that underpins these forecasts and examine the forecasts in all of the types and subcategories in building and construction activity in order to confirm how the upswing that is expected in areas such as infrastructure spending is offset by the expected downturn in activities such as *Residential Building*.



## Change in Work Done (CVM, 2015-16 prices, % change)

Source: ABS and ACIF CFC

## Building and Construction Work Done by Type

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	81,021	88,775	97,989	101,023	100,551	99,513	94,581	94,608	97,650	104,970
Non-Residential Building	37,476	37,448	37,595	37,287	41,249	43,129	44,397	45,029	43,994	41,622
Engineering Construction	136,075	113,626	95,476	86,995	105,477	102,686	103,526	104,338	102,455	99,948
<b>Total Construction</b>	<b>254,572</b>	<b>239,849</b>	<b>231,060</b>	<b>225,304</b>	<b>247,278</b>	<b>245,328</b>	<b>242,504</b>	<b>243,975</b>	<b>244,099</b>	<b>246,540</b>
	% change (YoY)					% change (YoY)				
Residential Building	6.4	9.6	10.4	3.1	- 0.5	- 1.0	- 5.0	0.0	3.2	7.5
Non-Residential Building	5.1	- 0.1	0.4	- 0.8	10.6	4.6	2.9	1.4	- 2.3	- 5.4
Engineering Construction	- 3.9	- 16.5	- 16.0	- 8.9	21.2	- 2.6	0.8	0.8	- 1.8	- 2.4
<b>Total Construction</b>	<b>0.5</b>	<b>- 5.8</b>	<b>- 3.7</b>	<b>- 2.5</b>	<b>9.8</b>	<b>- 0.8</b>	<b>- 1.2</b>	<b>0.6</b>	<b>0.1</b>	<b>1.0</b>

“YoY” = year-on-year

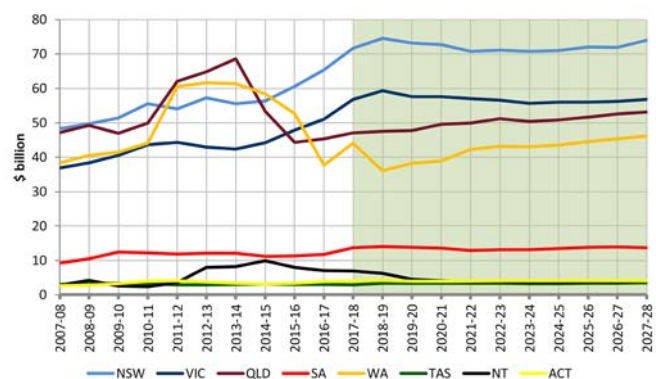
Source: ABS and ACIF CFC

# The Big Picture

## Building and Construction Activity Comparisons

Where is the work coming from next? The ACIF CFC foreshadows strong growth in work to be done in New South Wales and Victoria in 2018-19. Reasonable growth is expected in Queensland, South Australia, Tasmania and the Australian Capital Territory this year.

Last year's spike in Western Australia will not be repeated this year and activity will return to the underlying downtrend this year and next. Activity in the Northern Territory is expected to shrink rapidly as the construction work on the Ichthys project is completed.



**Total Construction Work Done by State**  
(CVM, 2015-16 prices)

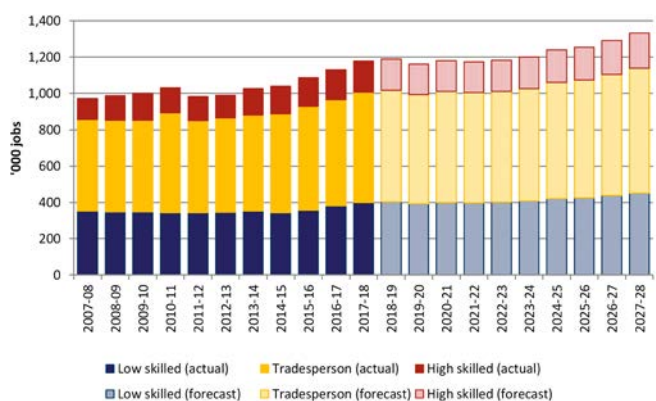
Source: ABS and ACIF CFC

## Building and Construction Employment

Building and construction work is expected to provide 1.2 million jobs this year. This accounts for around 10% of total employment in Australia.

Employment grew in the sector by 4.2% last year while the value of work done (or spending) grew by 9.8%. The divergence in changes in construction employment and spending can be explained by differences in the labour intensity of building and construction activity. Much of the increase in work done last year was in *Engineering Construction* which is typically capital intensive (and import intensive) and increases in this type of spending do not drive similarly sized increases in construction employment.

If construction activity is largely expected to track 'sideways' into the medium term, why do the ACIF November 2018 forecasts project a dip in construction employment deepening in 2019-20? The decrease in employment of 1.6% in 2018-19 is larger than the expected reduction in total work done that is projected for that year (of 1.2%) because the increases in employment due to higher spending in infrastructure will not fully offset the decreases in employment due to the forecast contraction in labour intensive *Residential Building* activity.



**Construction Industry Employment by Skill**  
(‘000 persons)

Source: ABS and ACIF CFC

# The Big Picture

## Building and Construction Employment in the States and Territories

Much of the growth in national employment in building and construction activities over recent years is due to the sharp increase in employment in New South Wales and Victoria.

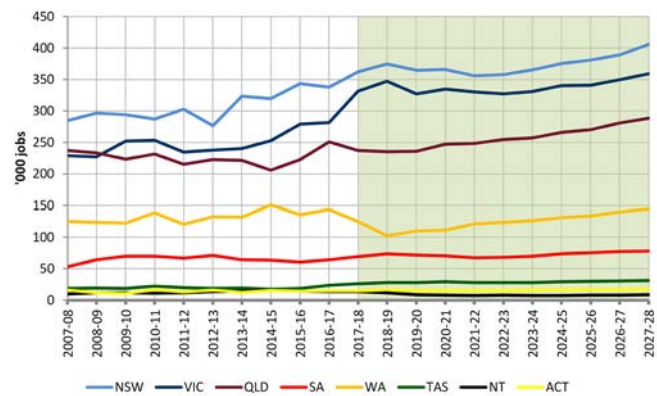
Building and construction employment in Queensland and Western Australia hardly moved over the period of the mining construction boom and bust (confirming that *Engineering Construction* work is capital intensive). Construction employment grew in Queensland over the two-to-three year period up to 2016-17 reflecting increases in *Residential Building* activity. The most recent decline in construction employment in Queensland in 2017-18 is linked to the drop-off of work done in *New Other Residential Building*.

The picture is expected to change in 2019-20 and 2020-21. Construction employment is expected to fall in New South Wales and Victoria, but the falls will be relatively modest as the projected set back in residential building activity is nearly fully offset by expansive infrastructure spending plans in these states. The trough in construction employment will be extended in Queensland and will deepen in Western Australia. This is because these states are not expected to be able to deploy as expansive infrastructure spending plans as New South Wales and Victoria to offset expected declines in *Residential Building* activity.

Industry is concerned about emerging skills shortages, especially in the high skilled categories involved in the roll out of major infrastructure projects.

The surge in building and construction activity in the south-eastern states in 2017-18 increased construction employment by 81,000 jobs. This surge would be accommodated, in part, by the relocation of skilled construction workers displaced by the loss of construction employment in Queensland and Western Australia of 34,000 jobs.

The pool of skilled workers displaced from *Engineering Construction* activities in Western Australia, Queensland and the Northern Territory is drying up. This poses a significant risk to large scale infrastructure investment plans being rolled out, especially the new plans recently announced in Victoria.



**Construction Industry Employment in the States ('000 persons)**

Source: ABS and ACIF CFC



**DESIGN  
BUILD**

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# **ACCESS INFLUENTIAL BUYERS**

# **AT AUSTRALIA'S LEADING INDUSTRY EVENT**

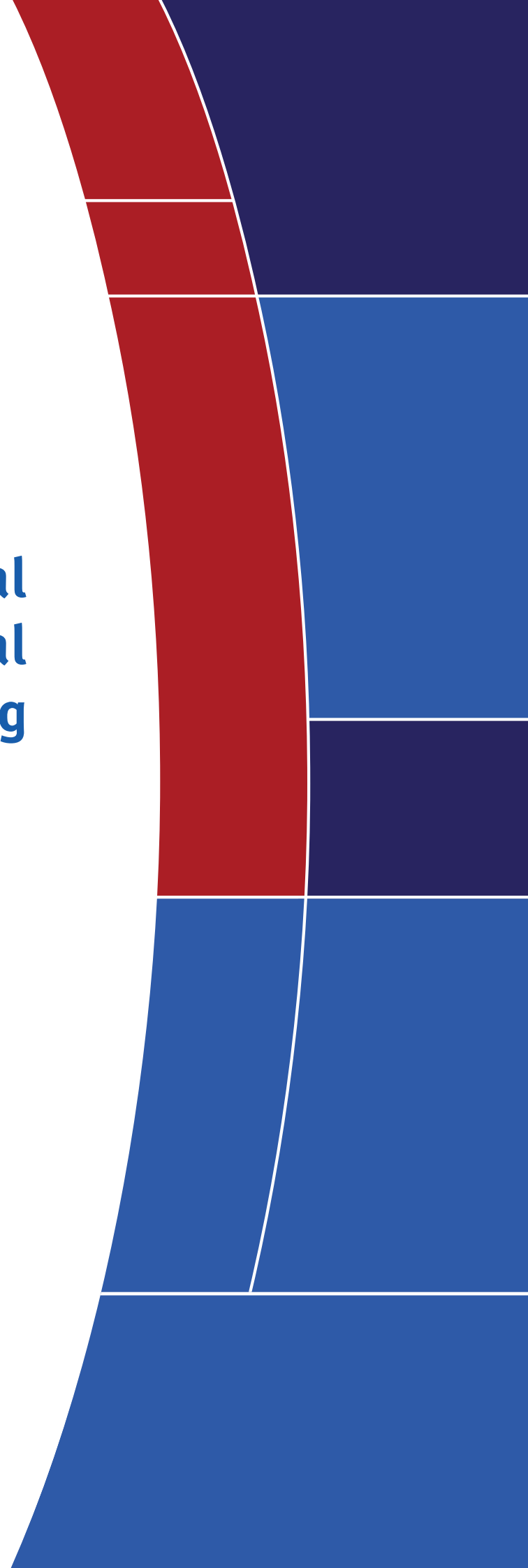
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# National Residential Building





# National Residential Building

## Drivers of Change

There is increasing evidence of a downturn in demand for housing. House prices are estimated to have declined by between 2-4% across Australia over the last year. Prices have been subdued in Perth and Darwin for some time. Significant falls are now being recorded in capital cities such as Sydney and Melbourne. Indicators such as falling auction clearance rates support the general picture of falling demand.

Part of the reduction in demand can be attributed to the exit of foreign investors who have been squeezed out of the market given:

- Punitive increases in taxes on foreign purchasers (including stamp duties, land taxes and vacant property taxes) has cooled investor interest; and
- More stringent policing of Australian foreign investment rules and rules regarding capital outflows from China.

Housing credit growth has eased:

- Lending to investors has been curtailed especially for more risky interest-only loans. It fell by 18% in value terms through the year to August 2018;
- Banks have increased their rate of interest on loans reflecting their marginally higher increased cost of funds due to higher international interest rates; and
- There is rising concern that access to bank finance will be constrained and the cost of borrowing will increase as part of the banks' response to the findings of the Banking Royal Commission.

The reduction in the demand for credit may also be associated with lower than expected capital gains given recent falls in property values.

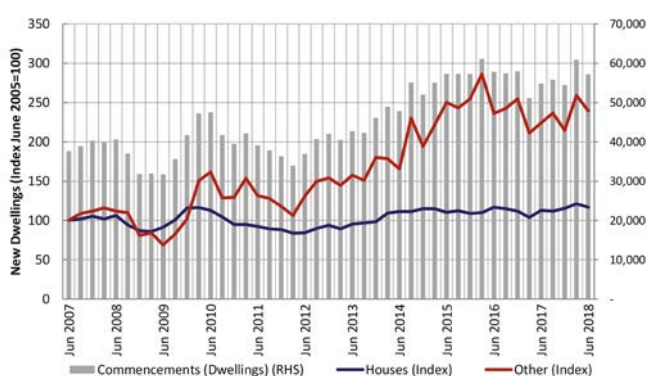
Strong growth in Australia's population and in immigration has underpinned demand for housing. This has been particularly important in Victoria. The direction of further changes in immigration pose a significant risk factor in the outlook for *Residential Building* activity.

Changes in official interest rates and the rates that banks charge on a standard mortgage are a major source of risk in the outlook for *Residential Building* activity. The ACIF November 2018 forecasts factor in the Reserve Bank holding official interest rates down over much of 2019 and that the next move will be upwards when spare capacity in the labour market has been absorbed.

## Commencements

Most of the rebound in commencements over the last year has been in *New Other Dwellings* (especially in multi-story apartments). This subsector of *Residential Building* activity has been very volatile over this cycle. Macro-prudential controls over lending to investors and the stricter enforcement of controls on foreign buyers provided a jolt to the market for new apartments in 2016 and 2017, which might have been expected to continue to drive this building activity into a sustained period of consolidation. Continued population growth, especially in Australia's largest capital cities, and the return of first home buyers, appears to have driven a bounce back in commencements in *Other Residential* dwellings.

New house commencements fell slightly with the application of stricter credit, and they did rebound somewhat over the last year, but the shifts have been relatively modest.



**Leading Indicators - Commencements**  
(Seasonally Adjusted, Dwellings and Index)

Source: ABS and ACIF CFC

# National Residential Building

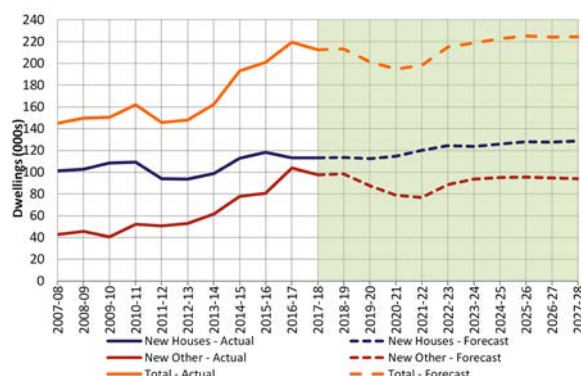
## Dwelling Completions

Completions fell to 212,000 dwellings last year (2017-18). The modest fall was driven by a dip in *New Other Residential* dwellings. This may have been the lagged effect of the policy measures to combat the threat of overheating in the market for investment properties, that were applied from 2016-17.

Looking to the future, the evidence of a significant decline in demand in the housing market is already prompting different parts of the housing supply industry to wind back or defer planned investment. Building activity in *New Other Residential* (especially apartments) experienced the most rapid ramping up of activity over the recent business cycle and it is the subsector that felt the policy measures to constrain lending to investors and to eject foreign investors most keenly. Leads and lags can confuse the issue, but it is to be expected that evidence of falling demand, price falls and the contraction in credit will eventually squeeze and contract building activity levels, and the eventual contraction will cut quite deeply into the activity that saw the highest increases. Reflecting these market dynamics completions in *New Other* dwellings are expected to drop to around 77,000 per annum over the period to 2021-22. This would represent a 26% reduction from peak to trough in this subsector.

The outlook for *New Houses* is rather different. Approvals and commencement data points to an increase in completions in *New Houses* this year. Given falls in housing demand and in credit growth the forecasts do factor in a decline in commencements in *New Houses* in 2019-20, but this is not expected to be very severe. Activity levels in building of *New Houses* have been reasonably stable over recent years and recent developments are not expected to ruffle or disrupt this subsector's poise. The projections factor in activity remaining at or slightly above current levels for the next three years or so.

The net effect of these changes implies that completions will hold their current levels over the rest of this year (2018-19). They are then projected to drop quite sharply, bottoming out at around 195,000 dwellings in 2020-21. Completions will recover in the medium term given sustained population growth and continued increases in employment and (moderate) growth in incomes.



**Leading Indicators - Dwelling Completions**  
(‘000 dwellings)

Source: ABS and ACIF CFC

# National Residential Building

## Approvals, Commencements and Completions

Leading indicators about the supply of new housing appear to be lagging the signs of falling demand in the residential property market.

Approvals recovered over the last year (four quarters), lifting by 4% to 230,000 dwellings. This has returned approvals to levels recorded at the recent peak.

Commencements (or 'starts') also rebounded over last year, rising by 3% to 228,000 dwellings. These building projects will add to and lengthen the construction pipeline.



**Leading Indicators - Approvals and Commencements**  
(Dwellings per quarter, Seasonally Adjusted)

Source: ABS and ACIF CFC

## Dwelling Completions by Subsector ('000 Dwellings)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual Completions (thousand dwellings)					Forecast (thousand dwellings)				
New Houses	99	113	118	113	113	114	112	114	120	125
New Other Residential	62	78	81	104	98	98	87	79	77	89
Alterations and Additions	2	2	2	2	2	1	1	1	2	2
<b>Total</b>	<b>162</b>	<b>193</b>	<b>201</b>	<b>219</b>	<b>212</b>	<b>213</b>	<b>201</b>	<b>195</b>	<b>198</b>	<b>215</b>
	% change (YoY)					% change (YoY)				
New Houses	5.4	14.3	4.8	- 4.3	- 0.2	0.6	- 1.1	1.8	4.8	3.8
New Other Residential	16.8	26.4	3.8	28.5	- 6.0	0.8	- 11.0	- 9.9	- 2.8	15.8
Alterations and Additions	36.1	30.1	- 14.1	13.1	- 21.9	- 21.2	- 2.5	4.6	6.2	6.4
<b>Total</b>	<b>9.8</b>	<b>19.0</b>	<b>4.2</b>	<b>9.1</b>	<b>- 3.2</b>	<b>0.5</b>	<b>- 5.7</b>	<b>- 3.3</b>	<b>1.8</b>	<b>8.4</b>

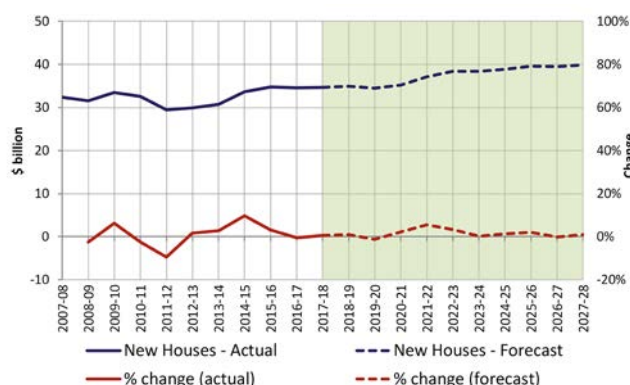
"YoY" = year-on-year

Source: ABS and ACIF CFC

## New Houses

The value of work done in building *New Houses* rose by 0.4% to \$35 billion in 2017-18. Leading indicators suggest that a further small increase in activity can be expected in 2018-19 because it is already locked into the construction pipeline. The contraction in demand will eventually catch up with the building of *New Houses*, bringing a fall of 1.3% in 2019-20.

Steady growth is expected to prevail in the medium to longer term reflecting a continuation of underlying growth in the economy, steady reductions in unemployment, steady (if modest) growth in household incomes, and sustained population growth.



**Value of Work Done - New Houses**  
(Seasonally Adjusted, Dwellings and Index)

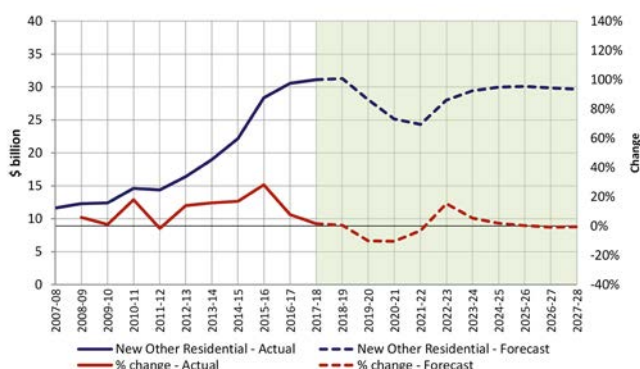
Source: ABS and ACIF CFC

# National Residential Building

## Apartments and Townhouses

Building activity in *New Other Residential* (or ‘apartments and townhouses’) is beginning to respond to changed market conditions. Caps on bank lending, firmer enforcement of controls on foreign investment, and concerns about overheated markets in key capital cities have worked to halt, and in some markets, reverse the previous surge in activity. Growth in this activity fell to 1.7% last year. Given recent leading indicators and evidence of an enlarged construction pipeline some further growth is expected this year of 0.5%.

The supply of *New Other Residential* dwellings will eventually have to catch up with the contraction in demand. Activity is expected to see a significant reduction over the three year period to 2021-22.

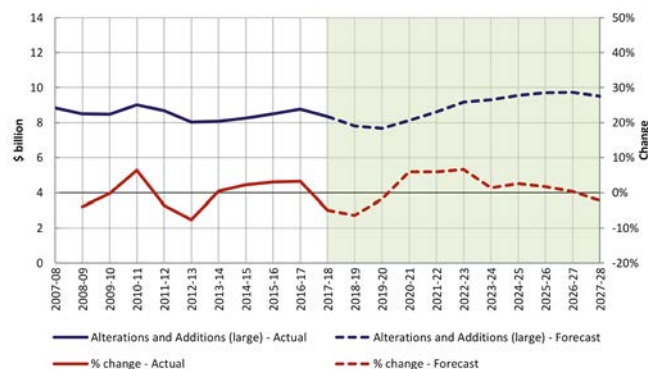


**Value of Work Done - Apartments and Townhouses**  
(\$ billion, CVM and % Change)

Source: ABS and ACIF CFC

## Large Alterations and Additions

*Large Alterations and Additions* experienced a significant decline of 4.9% in 2017-18 reversing a reasonably long run of growth. It seems that this sector of activity succumbed to growing householder concerns about softening house prices in key cities, modest income growth and relatively high household debt levels which has dragged activity down. Work done in this subsector is expected to experience a further decline of 6.4% this year.



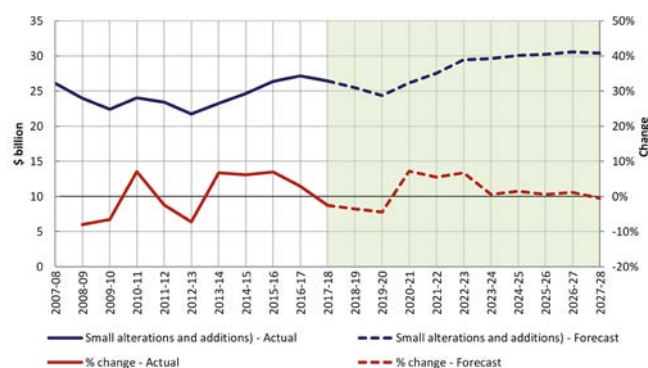
**Value of Work Done - Large Alterations and Additions**  
(\$ billion, CVM and % Change)

Source: ABS and ACIF CFC

## Other (Small Alterations and Additions)

*Small Alterations and Additions* involves the wide range of building activities including kitchen renovations, pools and landscaping. While spending may be on small items, it is being undertaken over the large number of existing dwellings resulting in a relatively large amount of spending for the category that is nearly as large as spending on *New Other Residential* (Apartments and Townhouses).

Factors such as a moderation in the demand for dwellings, falls in property values, and constraints on lending growth have reduced interest in renovating dwellings in preparation for sale or in use as a rental property. This is eroding interest in small alterations and additions in recent quarters. Activity declined by 2.6% last year (2017-18) and a further decline of 3.5% is in prospect for this year (2018-19), pushing expenditure down to \$26 billion.



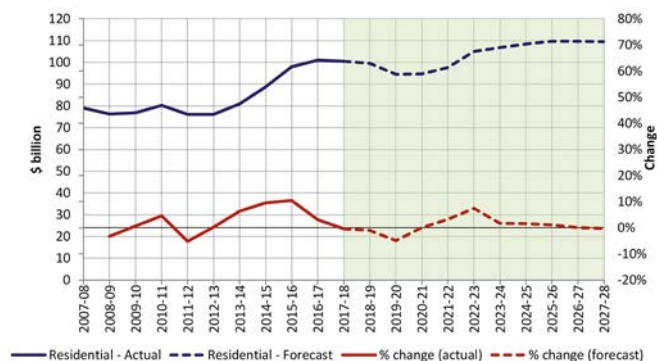
**Value of Work Done - Small Alterations and Additions**  
(\$ billion, CVM and % Change)

Source: ABS and ACIF CFC

# National Residential Building

## Residential Building Total

*Residential Building* activity peaked at \$100 billion last year. Activity is now on the down side of the cycle that will push the value of work done down to around \$94 billion over the period to 2020-21.



## Value of Work Done - Residential Building Total (\$ billion, CVM and % Change)

Source: ABS and ACIF CFC

## Value of Work Done - Residential Building (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Value of Work Done (CVM, \$ million)					Forecast (\$ million)				
New Houses	30,762	33,696	34,735	34,538	34,681	34,957	34,500	35,216	37,152	38,356
New Other Residential	18,965	22,160	28,375	30,570	31,085	31,243	28,028	25,122	24,308	27,985
Alterations & Additions (Large)	8,064	8,250	8,499	8,772	8,344	7,810	7,671	8,122	8,607	9,175
Other (Alterations & Additions)	23,229	24,670	26,380	27,143	26,442	25,504	24,382	26,147	27,584	29,454
<b>Residential Building</b>	<b>81,021</b>	<b>88,775</b>	<b>97,989</b>	<b>101,023</b>	<b>100,551</b>	<b>99,513</b>	<b>94,581</b>	<b>94,608</b>	<b>97,650</b>	<b>104,970</b>
	% change (YoY)					% change (YoY)				
New Houses	2.7	9.5	3.1	- 0.6	0.4	0.8	- 1.3	2.1	5.5	3.2
New Other Residential	15.8	16.8	28.0	7.7	1.7	0.5	- 10.3	- 10.4	- 3.2	15.1
Alterations & Additions (Large)	0.5	2.3	3.0	3.2	- 4.9	- 6.4	- 1.8	5.9	6.0	6.6
Other (Alterations & Additions)	6.8	6.2	6.9	2.9	- 2.6	- 3.5	- 4.4	7.2	5.5	6.8
<b>Residential Building</b>	<b>6.4</b>	<b>9.6</b>	<b>10.4</b>	<b>3.1</b>	<b>- 0.5</b>	<b>- 1.0</b>	<b>- 5.0</b>	<b>0.0</b>	<b>3.2</b>	<b>7.5</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC




# National Residential Building

## Top 30 Residential Building Projects in the Major Projects Database

Project Name	CoreLogic Project ID	State	Status	Start Date	Value (\$ million)
Wilton Junction New Town Masterplan	1690743	NSW	Early	16/03/2022	7,000
Springfield Central Gardens Area 5B	7183927	QLD	Possible	18/02/2019	6,000
Port Adelaide Waterfront Redevelopment	2133977	SA	Early	10/12/2018	6,000
Nelson Cove (Former Moolap Salt Works Site)	2001518	VIC	Early	04/06/2019	4,000
Wilton North Precinct	7218519	NSW	Early	14/03/2022	3,500
Belmont Park Racecourse Residential Redevelopment	1769955	WA	Possible	02/09/2019	3,500
Riverlea Country Township Town Centre	1676965	SA	Early	03/11/2022	3,500
Former Maribyrnong Defence Site Redevelopment	244581	VIC	Early	19/04/2021	2,500
Bushmead Residential Subdivision Remaining Stages	1630176	WA	Possible	10/05/2018	2,400
Yarrabilba Masterplanned Community	420924	QLD	Commenced	02/10/2017	2,400
Dry Creek Residential & Industrial Subdivision Development	1736850	SA	Possible	01/12/2020	2,200
Windemere Development	7100988	VIC	Possible	15/07/2019	1,900
Communities Plus - Ivanhoe Estate at Macquarie Park	6821302	NSW	Early	23/03/2020	1,790
Mount Atkinson Mixed Use Precinct	7134279	VIC	Possible	17/05/2020	1,700
University Of Canberra Campus Development	6902391	ACT	Early	11/05/2020	1,700
Western Edge Master Planned Residential Subdivision/Urban Development	1640891	WA	Early	10/04/2018	1,500
Carrington Road Mixed Development	7163950	NSW	Early	23/03/2022	1,300
Moonee Valley Racecourse Redevelopment	1478029	VIC	Possible	03/06/2019	1,250
Eden Village Township Expansion	1823621	SA	Firm	29/03/2019	1,225
Collins Wharf 2 & Collins Wharf 3 Residential Towers (Docklands Precinct)	7114149	VIC	Possible	03/12/2019	1,200
Spirit Mixed Development	991811	QLD	Possible	15/12/2018	1,200
Millennium Square Redevelopment Stage 2	7181846	QLD	Early	15/08/2021	1,000
Norwood Valley Masterplanned City	7087058	QLD	Early	17/06/2019	1,000
Better Neighbourhoods Logan	7059302	QLD	Possible	23/04/2018	1,000
Rockbank Precinct Master Planned Community	7019789	VIC	Possible	15/12/2018	1,000
Ingles Street Mixed Use Development (Sandridge) Fishermans Bend Redevelopment	2085164	VIC	Possible	07/10/2019	1,000
Lara West Precinct Structure Plan & Lara West Growth Area Masterplan	1659664	VIC	Possible	03/02/2020	1,000
Fishermans Bend Urban Renewal Project	1453292	VIC	Early	04/01/2020	1,000
Merrifield Masterplanned Community	1448104	VIC	Possible	26/01/2018	1,000
Southbank Waterfront Redevelopment	1081750	QLD	Early	01/12/2018	1,000

Source: ACIF Major Projects Database and CoreLogic



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# **National Non-Residential Building**



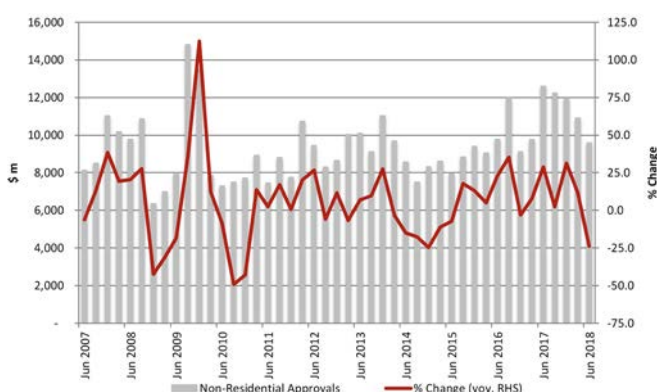
# National Non-Residential Building

## Non-Residential Building Approvals

The value of *Non-Residential Building* approvals grew by 3% in real terms over the year to June 2018 to reach \$45 billion. The sharp contraction in the value of approvals in the June quarter 2018 may reflect ordinary volatility, the completion of expansion plans, or a loss in investor confidence. Experience suggests that there is a lag of some four-to-five quarters between seeing changes in approvals and changes in actual construction activity on the ground.

The macro-economic forecasts, which provide guidance in the preparation of the ACIF forecasts, point to an easing in the growth of underlying non-mining business investment, falling from 10% last year to 4% in 2018-19 and 3% in 2019-20.

Additions to the ACIF Major Projects database in *Non-Residential Building* increased by 263 projects, up from 244 in the previous six months. These indicators generally point to the continuation of growth in *Non-Residential Building* activity, but with a moderation in that growth rate down from the surge seen last year.



**Leading Indicators -Non-Residential Building**  
(Value of Work Approved, Seasonally Adjusted)

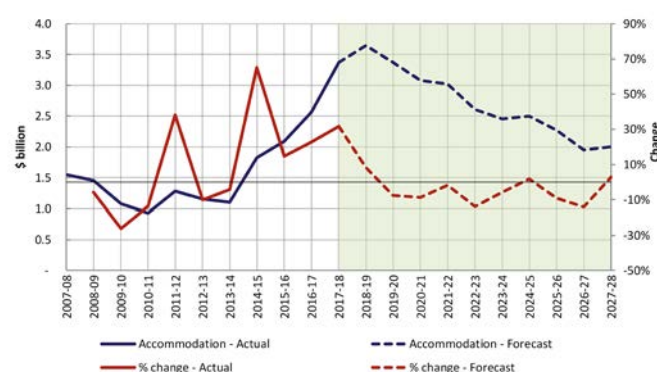
Source: ABS 8731.0

## Accommodation

Work done in *Accommodation* rose to \$3.4 billion over the year to June 2018, an increase of 32%. This sector has now achieved strong growth over the last four years. Sustained strong growth in *Accommodation* building work is founded on growth in demand for rooms. Growth in international arrivals, particularly from countries in the Asia-Pacific region such as China and steadily increasing domestic business travel continue to lift demand. Buoyant international student numbers are also boosting demand for student accommodation facilities.

Some 61 new *Accommodation* projects have been added to the major projects database over the last year with a combined value of \$4.9 billion. The additions to the list spans luxury resorts, such as the Crown Sydney Hotel Resort in Barrangaroo South, The Pacificus Tourism Project on the Great Barrier Reef in Queensland, Yaroomba Beach Village and the Westin Resort and Spa in Queensland. The new additions raise the number of active *Accommodation* projects in the Major Projects Database to 311. In contrast to earlier comments about the larger new additions, the majority of projects are not always resort style hotel buildings and most are located in Australia's capital cities. Melbourne accounts for the largest number in any one city.

Many *Accommodation* projects in the Major Projects list or under development at the moment are being built within a mixed use development, combining accommodation with commercial, cultural, institutional or entertainment uses. Where the hotel or accommodation is the larger part of the development plan projects have been categorised as being *Accommodation*. The forecasts factor in continued expansion in *Accommodation* building activity over the next four financial years.



**Value of Work Done - Accommodation**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC

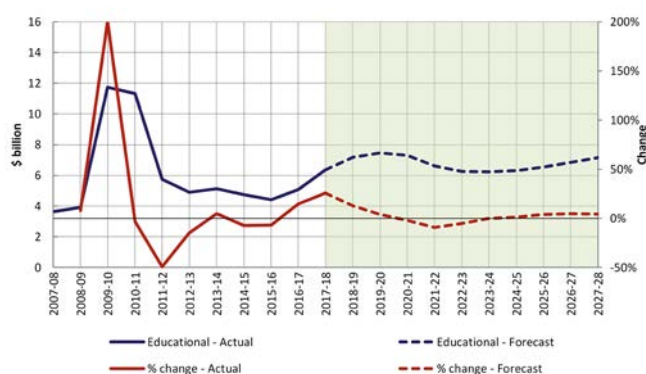
# National Non-Residential Building

## Education

*Education* is now a rapidly growing service export industry. It has overtaken tourism and transport services to become Australia's largest service export industry. It is also the second largest overseas export industry after coal. Rapid growth in international student numbers in Higher Education, VET and non-award courses, is adding to the need to invest in education institutions.

Population growth is also raising demand for places in educational institutions. The mini 'baby boom' that occurred around 2006 is driving demand in inner city schools that need to be reconfigured to avoid overcrowding. New schools are also needed in the outer suburbs and in growth corridors of rapidly growing capital cities. Building work done in *Education* is increasing to meet growing needs. It rose to \$6.4 billion in 2017-18, an increase of 26%. It is growing at a rate of growth not seen since the BER fiscal stimulus package that was applied to counter the Global Financial Crisis.

Some 92 additional projects were added to the Major Projects Database over the last year. The largest of these include Murdoch University Eastern Precinct in Perth and the University of Canberra Bruce Campus development in the ACT. Projects in the major projects database span universities and VET institutes, private colleges providing education and training to students from overseas, and a large number of school development and redevelopment projects. *Education* building activity grew by 26% 2017-18, lifting work done to \$6.3 billion. The pipeline of projects that have recently been approved and commitments to invest in educational projects in public sector budgets will sustain growth for the next two years at least, raising activity levels to \$7.4 billion a year.



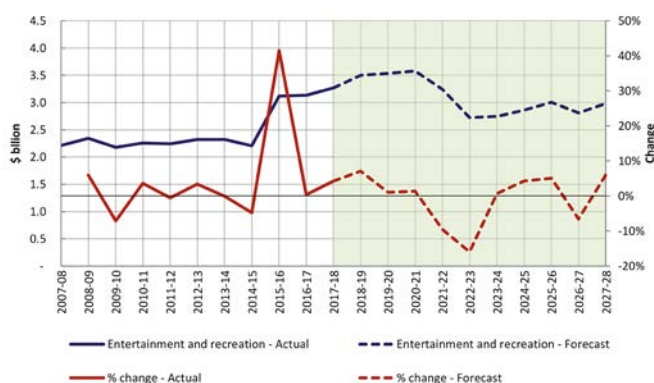
**Value of Work Done - Education**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC

## Entertainment and Recreation

Building activity in *Entertainment and Recreation* rose by 4% last year to \$3.2 billion. This category of building activity is volatile reflecting the transitory nature of major events. Projects in this category tend to be large and lumpy and so they do appear on the top 30 lists of new projects added to the Major Projects Database – such as the Southbank Arts Precinct Project in Melbourne, or the Top 30 Non-Residential projects – such as the Western Sydney Theme Park – Worlds of Wonder in Sydney.

Many projects in this category are bundled within large mixed use projects such as the Queens Wharf Redevelopment in Brisbane, the Crown Hotel and Casino in Sydney and the extension of the Museum of Old and New (MONA) and related hotel accommodation in Hobart. Approvals for Entertainment and Recreation point to expenditure on this activity growing to \$3-to-\$3.5 billion. The ACIF forecasts see this being achieved over this year with growth in this activity holding on for the next 2-3 years albeit with a moderation in the rate of growth.



**Value of Work Done - Entertainment and Recreation**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC



# National Non-Residential Building

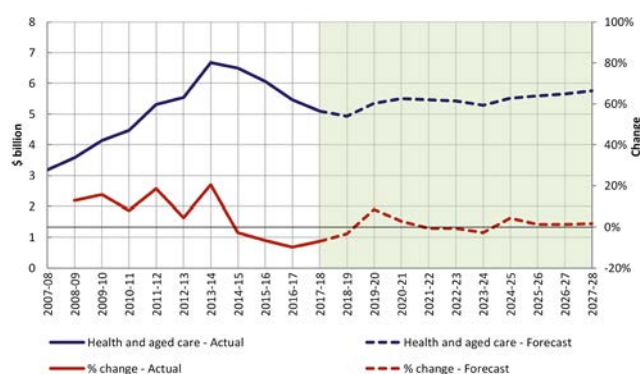
## Health and Aged Care

*Health and Aged Care* building work done continued its downtrend in 2017-18, falling by 7% to \$5.1 billion. This is the fourth year of falls in this activity.

Major health facilities including large hospital projects are entering into the construction pipeline. Projects that appear as new projects in the Major Projects Database include Liverpool Health and Academic Precinct in Sydney, Royal Melbourne Hospital, and the Herston Quarter Health Precinct redevelopment masterplan in Queensland, the Sunshine Coast University Hospital in Queensland and Westmead Hospital in Sydney. While smaller in size per project there are a reasonably large number of aged care facilities in the Major Projects Database and they now account for a little over half of the value of work done in this category of building activity.

The number and value of new *Health and Aged Care* projects added to the Major Projects Database fell marginally over recent months. The value of approvals in *Health and Aged Care* reversed recent falls and rose to around \$5.4 billion over last year. These indicators point to expansion in work done once allowances have been made for the lag in time between receiving an approval and commencement of building activity.

Building work in this category is expected to continue to dip to \$5 billion over 2018-19, and then recover and growth to reach \$5.4 billion by 2020-21.



**Value of Work Done - Health and Aged Care**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC

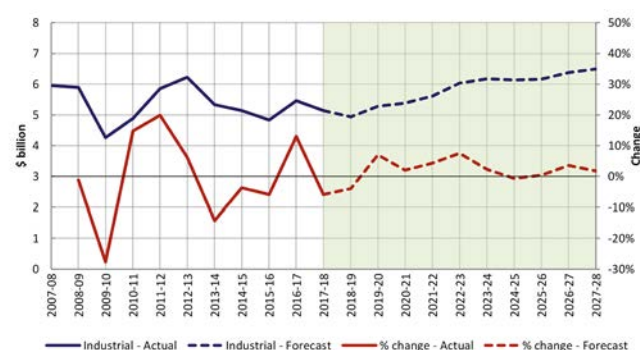
## Industrial

*Industrial* building work suffered a setback last year falling by 5.9% to \$5 billion.

Participants in the market for *Industrial* space report seeing an increase in demand especially in the eastern states. The shift is particularly pronounced towards transport and logistics services located in the more rapidly growing capital cities on the eastern seaboard.

Approvals indicators continue to point to further growth in prospect in *Industrial* building activity. Additions to the major projects database indicate that there is reasonably strong interest in *Industrial* projects and confirms that this is located on the eastern seaboard – especially in New South Wales, Victoria and Queensland.

The projections factor in a further small decline in *Industrial* building over the remainder of this year, followed by an upturn that will sustain growth in activity over the next four years.



**Value of Work Done - Industrial**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC



# National Non-Residential Building

## Offices

Office building activity increased by 32% last year. Approvals data suggests that an increase in activity of around \$1 billion on top of current levels is in the pipeline. The value of office building projects that entered the major projects database nearly doubled over the six months to October 2018. Most of the increase are in the greater capital city areas of Sydney and Melbourne. Interest in office building is still subdued in Perth and in Brisbane.

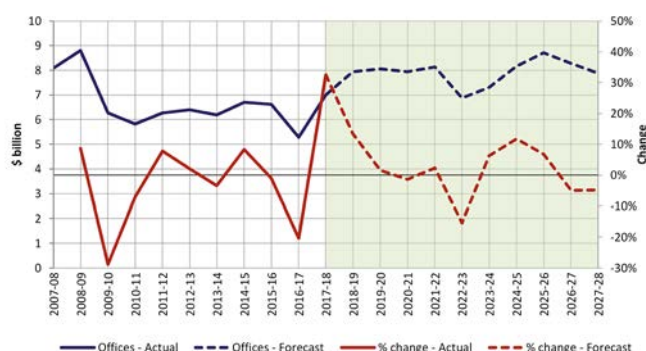
A number of mixed-use developments that combine *Offices* with other uses such as retail, civic buildings (which are sometimes categorised under *Miscellaneous*) are difficult to assign to any one classification. Some recent projects have raised the bar in classification issues. The \$1.4 billion Eagle Street Pier Redevelopment in Brisbane involves a premium business and leisure destination. The \$8 billion Western Sydney Aerotropolis – World Trade Centre proposal involves development of a minicity including buildings to house health, education, research, advanced manufacturing facilities, an aerospace institute, a business district that will include accommodation, conference and meeting venues, and a freight and logistics hub. For now, the largest single use has been deemed to be offices. The classification of this building activity will improve as more information comes to hand with specific building projects.

Work done to build *Offices* is forecast to increase by 13%, to \$7.9 billion this year. Growth will be sustained into 2019-20, although the rate of growth will moderate (to 1.5%), which will be sufficient to push work done to exceed \$8.1 billion.

Growth in this activity is very volatile and busts generally follow booms as the market generally takes some time to accommodate alternating gluts with falling rents and investor yields and periods of scarcity with increasing rents. The ongoing upturn is actually a bit of a 'spike' that will (if previous cycles are a guide) run out of momentum within the next two-to-three years.

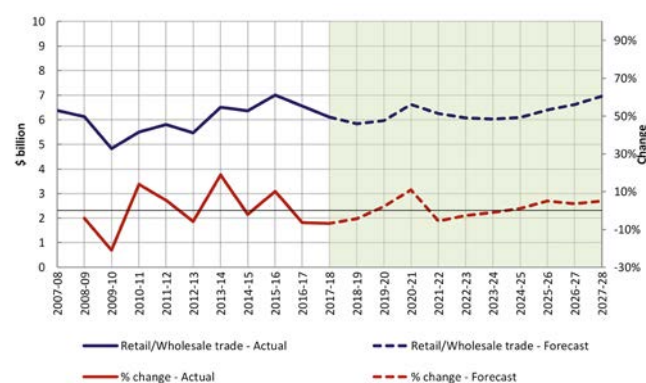
## Retail and Wholesale Trade

Building activity in *Retail and Wholesale Trade* has declined over the last two years. Retail sales have faced significant challenges over recent years from the disruption caused by the entry of online competition. The shift towards online sales is accompanied by a redesign of logistical supply chains linking producers and customers via new industrial, wholesale and transport facilities. Some of these changes would result in some building activity in that would still be counted as falling within the *Retail and Wholesale Trade* building category, while much is probably being shifted towards other *Non-Residential Building* categories including *Industrial* and other commercial.



**Value of Work Done - Offices**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC



**Value of Work Done - Retail and Wholesale Trade**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC

# National Non-Residential Building

Retailers are adapting to better meet consumers changing needs and to better face increasing competition, including from online sales. Many are refreshing and reorienting their physical retail outlets. Shopping centre landlords are changing the mix, allocating more space to cafes, restaurants and takeaway food services, lifestyle services and entertainment. These activities generally involve smaller levels of investment in buildings than would probably have been built in an earlier time.

The approvals data points to a decline in the value of investment in *Retail and Wholesale Trade* building projects is still in the pipeline. The forecasts project that a further decline of around 4.3% is expected this year, lowering activity to around \$5.8 billion. Activity is expected to lift due to cyclical factors in 2020-21, but otherwise maintain an average rate of growth that is in line with underlying growth in the economy at large.

## Miscellaneous

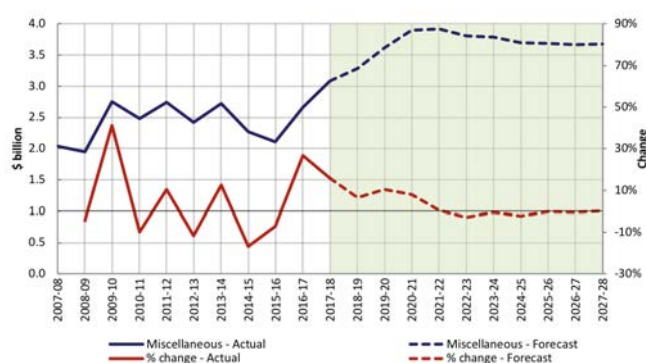
*Miscellaneous* building activity includes religious buildings and buildings not elsewhere classified. This captures quite a wide range of building types, particularly those that are being built to meet a public or community purpose.

Activity in this type of building work grew by 15% last year to reach \$3.1 billion so while this building type may be difficult to define it is certainly not inconsequential.

The leading indicators suggest that activity in this category of building will continue to expand this year and next. 33 new projects with a combined value of \$3.3 billion were added to the Major Projects Database over the last twelve months. There are now 138 active *Miscellaneous* projects in the Major Projects Database. Defence projects often appear at the top of lists because of their size. Typical defence projects include the RAAF Facilities projects in New South Wales and the Northern Territory and the HMAS Cerberus Redevelopment Project (Victoria). There are also a number of prisons in this category including The Lara Prison Precinct (Victoria) and Grafton Correctional Centre (New South Wales).

The Commonwealth Government is engaged in a program of defence facility redevelopments and public investment is expected to increase in many state and territory Government budgets.

Work in this building category is forecast to increase by 6% to \$3.3 billion this year. Growth is expected to be sustained into the medium term, raising activity levels to \$3.9 billion by 2021-22.



**Value of Work Done - Miscellaneous**  
(\$ billion, 2015-16 prices and % Change)

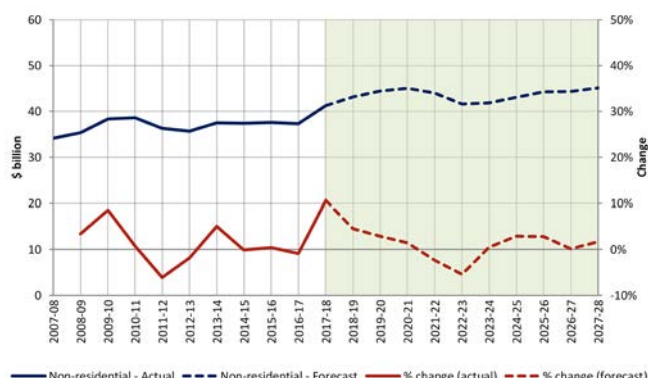
Source: ABS and ACIF CFC

# National Non-Residential Building

## Non-Residential Building Total

The value of work done in *Non-Residential Building* rose by 10% last year to reach \$43 billion. This is the largest increase recorded over the last decade and it has lifted activity to reach an historic high point for *Non-Residential Building* activity. The projections for many *Non-Residential Building* subcategories reflect expectations that the broad based recovery in business investment will carry over into this year and the next, although the rate of growth will moderate.

The outlook for this sector at large is shaped by the transition that is underway in the Australian economy at large with investment in 'traditional' manufacturing and mining activities being replaced by investment in services activities. There is also a transition underway within the *Non-Residential Building* category. New technologies and intensified competition for the attention of customers is forcing a resizing of *Retail and Wholesale Trade* building needs. The competitiveness of Australian education service exports, and in tourism and accommodation is raising demand for building solutions to support these capabilities. Altered retail and industrial supply chains require new investment in building of *Industrial* and other commercial buildings. The combined effect of these changes will drive further increases in *Non-Residential Building* activity into the medium term, raising activity to between \$43-45 billion a year.



**Value of Work Done - Non-Residential Building Total**  
(\$ billion, 2015-16 prices and % Change)

Source: ABS and ACIF CFC

## Value of Work Done - Non-Residential Building (\$ million, 2015-16 prices)

"YoY" = year-on-year  
Source: ABS and ACIF CFC


	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Value of Work Done (CVM, \$ million)					Forecast (\$ million)				
Accommodation	1,103	1,820	2,088	2,565	3,375	3,649	3,371	3,079	3,024	2,607
Educational	5,123	4,745	4,421	5,071	6,375	7,194	7,471	7,297	6,623	6,264
Entertainment and Recreation	2,319	2,208	3,122	3,134	3,267	3,498	3,533	3,582	3,240	2,725
Health and Aged Care	6,677	6,492	6,062	5,467	5,092	4,926	5,347	5,502	5,467	5,428
Industrial	5,338	5,137	4,837	5,466	5,142	4,936	5,279	5,384	5,614	6,037
Miscellaneous	2,723	2,267	2,104	2,666	3,082	3,280	3,620	3,903	3,917	3,808
Offices	6,187	6,699	6,629	5,280	6,999	7,942	8,061	7,949	8,133	6,874
Other Commercial	1,504	1,716	1,322	1,081	1,813	1,863	1,746	1,709	1,720	1,792
Retail and Wholesale Trade	6,504	6,365	7,009	6,557	6,104	5,843	5,968	6,623	6,257	6,087
<b>Non-Residential Building</b>	<b>37,476</b>	<b>37,448</b>	<b>37,595</b>	<b>37,287</b>	<b>41,249</b>	<b>43,129</b>	<b>44,397</b>	<b>45,029</b>	<b>43,994</b>	<b>41,622</b>
	% change (YoY)					% change (YoY)				
Accommodation	- 4.2	65.1	14.8	22.8	31.6	8.1	- 7.6	- 8.7	- 1.8	- 13.8
Educational	4.7	- 7.4	- 6.8	14.7	25.7	12.8	3.9	- 2.3	- 9.2	- 5.4
Entertainment and Recreation	- 0.1	- 4.8	41.4	0.4	4.2	7.1	1.0	1.4	- 9.5	- 15.9
Health and Aged Care	20.5	- 2.8	- 6.6	- 9.8	- 6.9	- 3.3	8.6	2.9	- 0.6	- 0.7
Industrial	- 14.3	- 3.8	- 5.8	13.0	- 5.9	- 4.0	6.9	2.0	4.3	7.5
Miscellaneous	12.5	- 16.7	- 7.2	26.7	15.6	6.4	10.4	7.8	0.4	- 2.8
Offices	- 3.4	8.3	- 1.0	- 20.4	32.6	13.5	1.5	- 1.4	2.3	- 15.5
Other Commercial	21.5	14.1	- 23.0	- 18.2	67.7	2.8	- 6.3	- 2.1	0.6	4.2
Retail and Wholesale Trade	18.9	- 2.1	10.1	- 6.4	- 6.9	- 4.3	2.1	11.0	- 5.5	- 2.7
<b>Non-Residential Building</b>	<b>5.1</b>	<b>- 0.1</b>	<b>0.4</b>	<b>- 0.8</b>	<b>10.6</b>	<b>4.6</b>	<b>2.9</b>	<b>1.4</b>	<b>- 2.3</b>	<b>- 5.4</b>

# National Non-Residential Building

## Top 30 Non-Residential Building Projects in the Major Projects Database

Project Name	Category	CoreLogic Project ID	State	Status	Start Date	Value (\$ million)
Central To Eveleigh Urban Renewal & Transport	Offices	1787401	NSW	Early	29/08/2022	10,000
Western Sydney Aerotropolis - World Trade Centre	Offices	7269595	NSW	Early	29/05/2018	8,000
Aura Estate Master Planned Community	Other Commercial	1007044	QLD	Possible	04/11/2016	5,000
East Werribee Employment Precinct Development	Offices	1693924	VIC	Firm	15/12/2019	4,000
Queens Wharf Redevelopment	Entertainment and Recreation	1847785	QLD	Possible	07/03/2022	3,000
Sydney Science Park - Penrith (Overall Project)	Offices	1922342	NSW	Early	14/06/2021	2,500
Barangaroo South - Crown Sydney Hotel Resort	Accommodation	1654383	NSW	Commenced	05/03/2018	2,400
Murdoch University Eastern Precinct	Education	6879951	WA	Early	06/01/2020	2,000
Brisbane Live Indoor Entertainment Arena	Entertainment and Recreation	1847808	QLD	Early	16/03/2020	2,000
Royal Melbourne Hospital	Health and Aged Care	982939	VIC	Early	19/11/2020	2,000
Humex Centre	Retail and Wholesale Trade	2126477	VIC	Possible	07/12/2019	1,700
Westport Project	Industrial	110156	WA	Early	15/08/2019	1,500
Eagle Street Pier Redevelopment	Offices	7235490	QLD	Early	10/02/2020	1,400
Herston Quarter Health Precinct Redevelopment	Health and Aged Care	1964900	QLD	Possible	09/07/2019	1,100
Southbank Arts Precinct	Entertainment and Recreation	7280121	VIC	Early	24/10/2021	1,000
Western Sydney Theme Park - Worlds Of Wonder	Entertainment and Recreation	6802947	NSW	Early	12/04/2021	1,000
University Of Canberra Bruce Campus Project	Education	1827914	ACT	Early	20/07/2020	1,000
Collins Arch	Offices	1636045	VIC	Commenced	06/07/2017	1,000
The Canning Bridge Activity Centre	Offices	1581258	WA	Early	25/12/2017	1,000
Jewel Mixed Use Development	Accommodation	1487948	QLD	Commenced	01/04/2016	1,000
Pacificus Tourism Project	Accommodation	788277	QLD	Possible	15/08/2019	1,000
Waterford Estate - Toolern (Further Stages)	Retail and Wholesale Trade	752722	VIC	Possible	23/01/2017	960
Sydney Metro City & Southwest - Central Station	Other Commercial	7066466	NSW	Firm	15/10/2018	955
Sunshine Coast University Hospital	Health and Aged Care	665054	QLD	Commenced	01/10/2012	940
Bowen Space Centre	Industrial	7240465	QLD	Early	27/04/2020	900
Westmead Hospital - Central Acute Services	Health and Aged Care	1866751	NSW	Firm	20/11/2017	900
Yaroomba Beach Village & The Westin Resort	Accommodation	616265	QLD	Possible	04/05/2019	900
RAAF Facilities - Air Combat Capability	Miscellaneous	1093767	-	Commenced	24/11/2014	800
ASMTI SWBTA Facilities Project	Miscellaneous	7226239	QLD	Firm	22/11/2018	750
Albion Train Station - Transit Development	Other Commercial	1919434	QLD	Possible	10/06/2019	750

Source: ACIF Major Projects Database and CoreLogic



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# **National Engineering Construction**





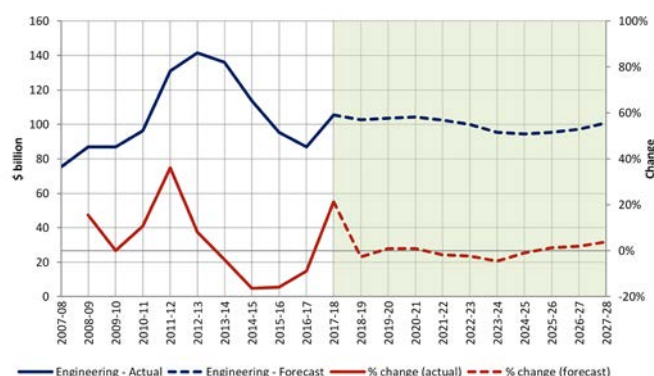
# National Engineering Construction

## Engineering Construction Total

The November 2018 ACIF forecasts project significant and sustained increases in construction of transport infrastructure and in utilities. These activities are expected to increase by 13%, lifting the value of work done to \$74 billion in 2018-19.

Meanwhile the 'spike' in *Heavy Industry Including Mining* due to one off factors is dropping out of the base and this activity will revert to the downtrend established over the last several years. Work done is expected to fall by 28%, squeezing the value of work to be done to \$29 billion.

Overall, taking the balance of increases and decreases in the various subsectors into account, *Engineering Construction* work done is projected to dip by 2.6% to \$103 billion in 2018-19. Activity is projected to essentially step 'sideways' over the medium to long term as swings and cycles in the various subsectors essentially cancel each other out.



**Value of Work Done - Engineering Construction Total**  
(\$ billion and % Change)

Source: ABS and ACIF CFC

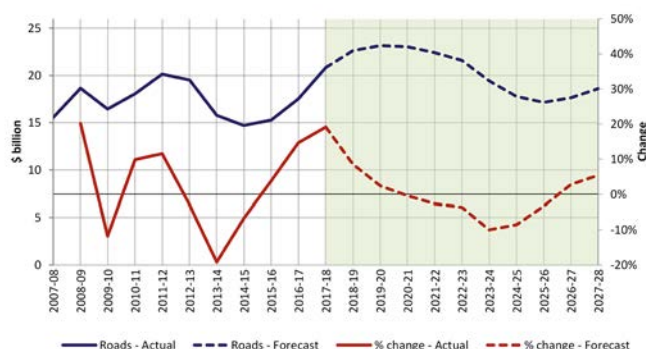
## Engineering Construction Activity in Summary

	Actual 2017-18	Forecast 2018-19	Forecast 2019-20	Forecast 2020-21
Infrastructure Construction (\$ billion)	65.6	74.1	74.3	73.6
Heavy Industry Including Mining Construction (\$ billion)	39.9	28.6	29.2	30.8
<b>Total (\$ billion)</b>	<b>105.5</b>	<b>102.7</b>	<b>103.5</b>	<b>104.3</b>
Infrastructure Construction (% change)	21.8	13.0	0.4	-1.0
Heavy Industry Including Mining Construction (% change)	20.3	-28.3	2.0	5.3
<b>Total (% change)</b>	<b>21.2</b>	<b>-2.6</b>	<b>0.8</b>	<b>0.8</b>

## Roads

Construction activity in *Roads* grew by 19% in 2017-18, lifting work done to \$21 billion. There is a further substantial increase in activity in the construction pipeline. Some 27 new *Roads* projects, with a combined value of \$3 billion, were added to the Major Projects Database over the last six months. There is now a total of 399 *Roads* projects in the Major Projects Database that have a combined value of over \$145 billion. Commonwealth and State Governments have announced and funded a major land transport infrastructure construction plan and they are getting on with building activity. There are some reports that the outturn cost of some particularly large road projects, especially those that involve tunnelling in urban areas, are rising beyond background rate of inflation. This may reflect growing capacity constraints.

Activity is projected to continue to grow to \$23 billion by 2019-20. This will push activity to be the highest on record. Activity is expected to hover around \$21 billion or more each year over the next five years.



**Value of Work Done - Roads**  
(\$ billion and % Change)

Source: ABS and ACIF CFC

# National Engineering Construction

## Bridges, Railways, and Harbours

Construction of *Bridges, Railways and Harbours* grew by 34% in 2017-18, and the value of work done rose to \$9 billion over the year. This is the second year of substantial growth in this activity which reflects the implementation of extensive rail transport infrastructure investment plans. Some flagship projects, such as Newcastle Light Rail or the City Tram Extension in Adelaide have just been completed (as of October 2018), or are expected to be completed in the remainder of this year, such as the Sydney Metro -Northwest. Work is in hand in a large pipeline of projects including the Capital Metro in Canberra, further states of the Sydney Metro, the Metro Tunnel in Melbourne and the Cross River Rail project (in Brisbane). Some very large rail projects appear at the top of the list of projects added to the Major Projects Database including Melbourne Metro 2 (\$23 billion) and Suburban Rail Loop (\$10 billion). The Inland Rail project has been funded by the Australian Government and tenders have been called that will lead to the commencement of construction activity.

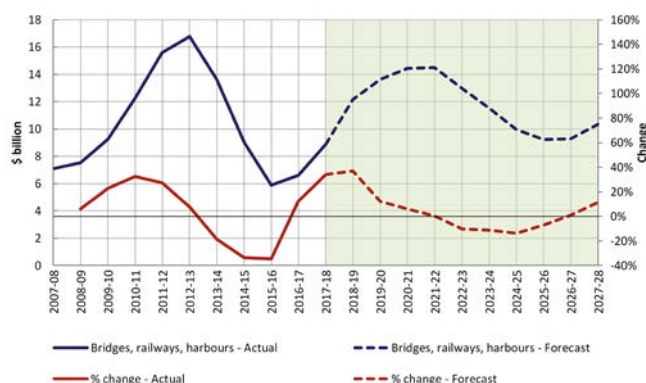
The Kangaroo Island Bridge also appeared at the upper end of the list of Major Projects added to the ACIF database in September 2018. Construction work is projected to increase over the next four years, reaching a peak of around \$14 billion by 2021-22.

## Electricity and Pipelines

*Electricity and Pipelines* construction activity is focused on raising the sustainability of energy supplied and improving the reliability of energy supply at present. There are 328 *Electricity and Pipelines* projects in the Major Projects Database. This lists many renewable electricity supply options including Snowy 2.0, multiple wind generation projects, solar 'farms', and large-scale batteries. Proposals to build new large-scale coal burning base load generation plants are rare. There are some smaller peak-load, gas fired plants that are intended to raise reliability of supply.

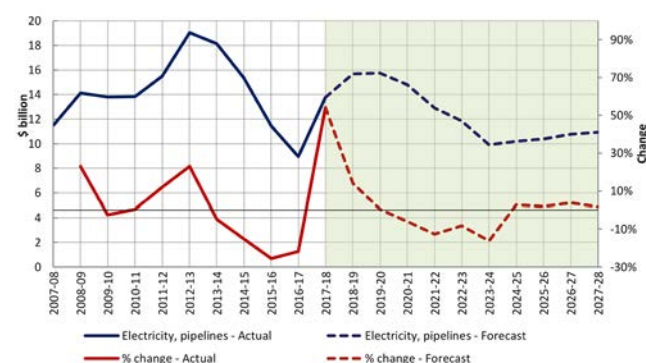
The commencement of a few gas pipeline projects such as the Northern Gas Pipeline and the Tanami Gas Pipeline in the Northern Territory contributed to the spike in construction activity in 2017-18. These projects are expected to be completed over 2018-19. The forecasts do not factor in very large-scale gas pipeline projects that have been put on the table such as the proposal to Connect WA's north to the sources of rising domestic demand on the east coast which appear to be uneconomic. There are some other large gas pipeline projects that have entered the major projects list recently and their status is viewed as being 'early'.

A rebound in construction activity in *Electricity and Pipelines* is apparent in the most recent statistics about work done. This rebound in the value of work done is expected to gain momentum in the next few years raising the value of work done to around \$11 billion per year by 2019-20.



**Value of Work Done - Bridges, Railways, and Harbours**  
(\$ billion and % Change)

Source: ABS and ACIF CFC



**Value of Work Done - Electricity and Pipelines**  
(\$ billion and % Change)

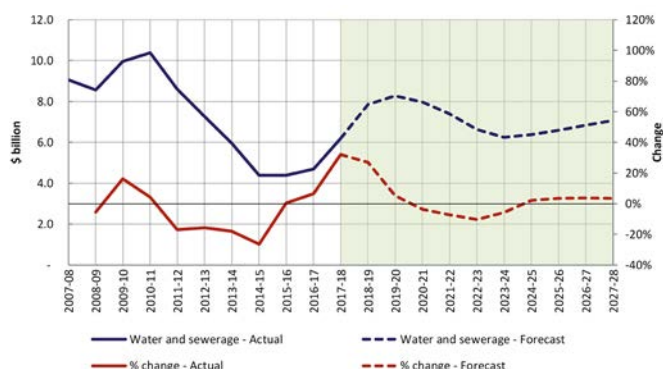
Source: ABS and ACIF CFC

# National Engineering Construction

## Water and Sewerage

There are 127 *Water and Sewerage* projects in the Major Projects Database at present with a combined value of \$12 billion. They span urban water and waste water, as well as development and upgrade of major rural water and irrigation schemes. Eight projects were added to the Major Projects Database over the last six months indicating that the construction pipeline in this activity is still increasing.

Growth of 32% was achieved in work done in 2017-18. Further strong growth of 27% is expected this year. The current upturn is expected to peak in 2019-20 when the value of work done in this activity will reach \$8 billion.



**Value of Work Done - Water and Sewerage**  
(\$ billion and % Change)

Source: ABS and ACIF CFC

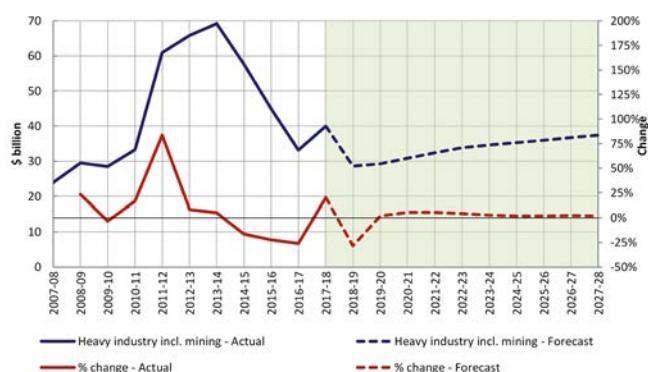
## Heavy Industry Including Mining

Work done in *Heavy Industry Including Mining* rebounded with a 20% increase last year. Most of this increase was recorded in Western Australia and relates to the installation of Prelude – a floating LNG facility imported from South Korea that is said to be “the biggest vessel the world has ever seen”. The Australian Bureau of Statistics advised that at the time of installation of a ‘complete module’ *Engineering Construction* activity records the total value of the imported structure plus the installation costs, causing a ‘spike’ in the data.

The completion of other mega-projects, such as Ichthys in the Northern Territory, without similar sized replacements in the construction pipeline will lead to falls in construction activity in *Heavy Industry Including Mining* over the next two years.

New projects are being added to the Major Projects Database. There are a number of major projects that have been parked in the Major Projects Database as proponents assess market conditions and movements in factors such as energy prices and exchange rates. Development of the Scarborough and Browse gas fields, located off the coast of northwest Western Australia, are oft cited examples of large projects that are inching closer towards development. Other possibilities involve extension of existing facilities such as pipelines and production plants (especially LNG liquefaction ‘trains’).

The forecasts factor in a gradual renewal of construction activity in the medium to longer term reflecting these and other possibilities.



**Value of Work Done - Heavy Industry Including Mining**  
(\$ billion and % Change)

Source: ABS and ACIF CFC

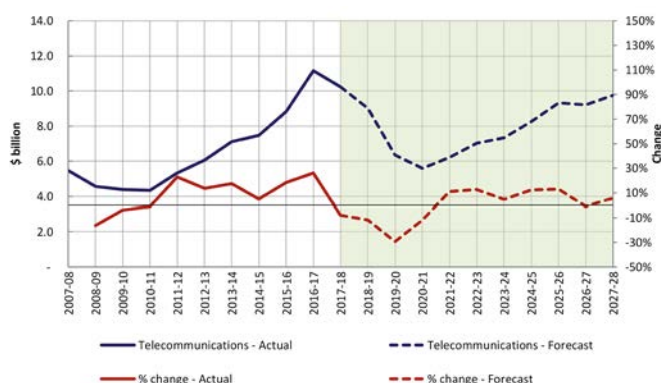
# National Engineering Construction

## Telecommunications

NBN Co. has indicated that it is on the 'downhill stretch' in rolling out the National Broadband Network and work done in *Telecommunications* construction activity is now in decline.

Construction levels are predicted to fall in line with shrinking capital expenditure planned by NBN Co. over the next three years.

Activity is projected to rebound in the medium term with the rollout of the 5G wireless networks.



**Value of Work Done - Telecommunications**  
(\$ billion and % Change)

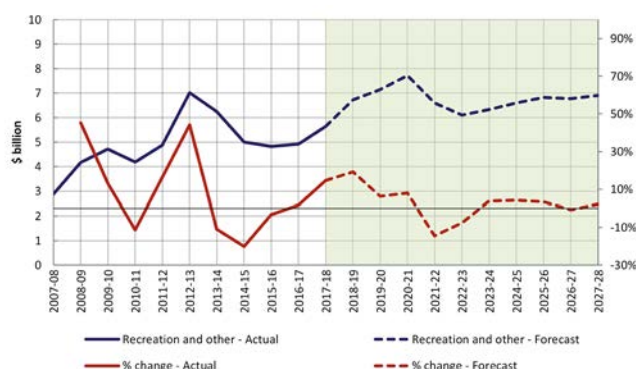
Source: ABS and ACIF CFC

## Recreation and Other

Construction in *Recreation and Other* projects often involves building large scale stadiums which tend to be very 'lumpy'. The time series of actual work done over the last decade does reveal a few short term 'spikes' in growth. Activity grew by 15% to \$6 billion in 2017-18.

There is a long list of major stadium projects that are underway at present or have been announced. Additions to the Major Projects Database added another 15 projects, with a value of \$1.6 billion over the last six months including the Sydney Football Stadium. There are currently 86 projects Major Projects Database with a combined value of \$8 billion. These include the Western Sydney Stadium, the North Queensland Stadium and the rebuilding of the Olympic Stadium and the Sydney Football Stadium.

The forecasts project a further increase in this activity, raising work done by 19% to \$7 billion. Further increases in activity are expected given the major projects that have been announced and funded.



**Value of Work Done - Recreation and Other**  
(\$ billion and % Change)

Source: ABS and ACIF CFC

# National Engineering Construction

## Value of Work Done - Engineering Construction (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Value of Work Done (CVM, \$ million)					Forecast (\$ million)				
Roads	15,784	14,704	15,269	17,504	20,856	22,624	23,154	23,042	22,421	21,589
Bridges, Railways, Harbours	13,622	9,031	5,900	6,622	8,873	12,161	13,635	14,437	14,487	12,979
Electricity and Pipelines	18,131	15,360	11,424	8,932	13,763	15,683	15,755	14,803	12,912	11,839
Water and Sewerage	5,958	4,383	4,396	4,688	6,191	7,863	8,284	7,979	7,400	6,630
Telecommunications	7,108	7,475	8,842	11,161	10,244	9,012	6,354	5,601	6,217	7,014
Heavy Industry incl. Mining	69,218	57,681	44,813	33,173	39,916	28,623	29,195	30,757	32,416	33,795
Recreation and Other	6,253	4,993	4,831	4,914	5,634	6,720	7,149	7,718	6,602	6,102
<b>Engineering Construction</b>	<b>136,075</b>	<b>113,626</b>	<b>95,476</b>	<b>86,995</b>	<b>105,477</b>	<b>102,686</b>	<b>103,526</b>	<b>104,338</b>	<b>102,455</b>	<b>99,948</b>
	% change (YoY)					% change (YoY)				
Roads	- 19.2	- 6.8	3.8	14.6	19.1	8.5	2.3	- 0.5	- 2.7	- 3.7
Bridges, Railways, Harbours	- 18.8	- 33.7	- 34.7	12.2	34.0	37.1	12.1	5.9	0.3	- 10.4
Electricity and Pipelines	- 4.7	- 15.3	- 25.6	- 21.8	54.1	14.0	0.5	- 6.0	- 12.8	- 8.3
Water and Sewerage	- 17.9	- 26.4	0.3	6.6	32.1	27.0	5.4	- 3.7	- 7.3	- 10.4
Telecommunications	17.4	5.2	18.3	26.2	- 8.2	- 12.0	- 29.5	- 11.8	11.0	12.8
Heavy Industry incl. Mining	5.0	- 16.7	- 22.3	- 26.0	20.3	- 28.3	2.0	5.3	5.4	4.3
Recreation and Other	- 10.9	- 20.2	- 3.2	1.7	14.7	19.3	6.4	8.0	- 14.5	- 7.6
<b>Engineering Construction</b>	<b>- 3.9</b>	<b>- 16.5</b>	<b>- 16.0</b>	<b>- 8.9</b>	<b>21.2</b>	<b>- 2.6</b>	<b>0.8</b>	<b>0.8</b>	<b>- 1.8</b>	<b>- 2.4</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC




# National Engineering Construction

## Top 30 Engineering Construction Projects in the Major Projects Database

Project Name	Category	CoreLogic Project ID	State	Status	Start Date	Value (\$ million)
East Coast of Australia High Speed Rail Network	Bridges, Railways and Harbours	1489919	-	Early	24/08/2027	114,000
Ichthys Gas Project	Electricity and Pipelines	661317	WA	Commenced	30/03/2013	30,000
Wheatstone Gas Project	Heavy Industry	981801	WA	Commenced	15/06/2016	29,000
Melbourne Metro 2	Bridges, Railways and Harbours	7318640	VIC	Early	10/09/2040	23,000
Australian Inland Rail Expressway	Bridges, Railways and Harbours	2070300	-	Early	04/04/2020	20,000
North East Link	Roads	1207104	VIC	Early	06/01/2020	16,500
Adelink Tram Network	Bridges, Railways and Harbours	6876657	SA	Early	15/12/2022	15,000
Sydney Metro, City & Southwest	Bridges, Railways and Harbours	7001775	NSW	Commenced	07/06/2017	12,000
Melbourne Airport Rail Link	Bridges, Railways and Harbours	7184380	VIC	Early	25/06/2028	10,000
Roy Hill Iron Ore Project - Stages 1 & 2	Bridges, Railways and Harbours	1090202	WA	Commenced	16/09/2015	10,000
Suburban Rail Loop	Bridges, Railways and Harbours	7311078	VIC	Early	25/08/2022	10,000
Proposed F6 Extension - Southconnex	Roads	7093294	NSW	Early	22/08/2027	9,000
Melbourne Metro Rail Project - Tunnels & Stations	Bridges, Railways and Harbours	1148378	VIC	Commenced	01/01/2018	9,000
North West Rail Link (Sydney Metro Northwest)	Bridges, Railways and Harbours	1575889	NSW	Commenced	02/03/2016	8,300
Gippsland Windfarm	Electricity and Pipelines	7098403	VIC	Early	15/12/2020	8,000
Sydney Metro - West Rail Project	Bridges, Railways and Harbours	1195598	NSW	Early	02/02/2022	8,000
Melbourne South East International Airport	Roads	7114062	VIC	Early	03/06/2019	7,000
Snowy Mountains Scheme 2.0	Electricity and Pipelines	7063003	NSW	Early	18/11/2019	7,000
Melbourne Airport (Third)	Roads	1827798	VIC	Early	01/10/2030	7,000
Western Distributor Project/West Gate Tunnel	Roads	2098451	VIC	Commenced	31/01/2018	6,700
Alpha Coal Project	Heavy Industry	418162	QLD	Possible	01/07/2020	6,500
China Stone Coal Project	Heavy Industry	1645451	QLD	Possible	15/07/2020	6,000
West Gate Tunnel Project	Roads	7078756	VIC	Firm	15/12/2017	5,500
Cross River Rail	Bridges, Railways and Harbours	2164941	QLD	Possible	30/10/2019	5,400
Western Sydney Airport - Badgerys Creek	Roads	324515	NSW	Commenced	27/06/2018	5,300
Westconnex M4-M5 Link	Roads	7010515	NSW	Possible	06/04/2020	5,247
Kangaroo Island Bridge	Bridges, Railways and Harbours	7295696	SA	Early	29/07/2024	5,000
Westconnex New M5	Roads	1989028	NSW	Commenced	04/07/2016	5,000
Westconnex M4 East	Roads	1681442	NSW	Commenced	28/06/2015	5,000
Arrow Energy CSG-LNG Plant Remaining Stages	Heavy Industry	1603835	QLD	Possible	01/07/2022	5,000

Source: ACIF Major Projects Database and CoreLogic



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# **State and Territory Overview**



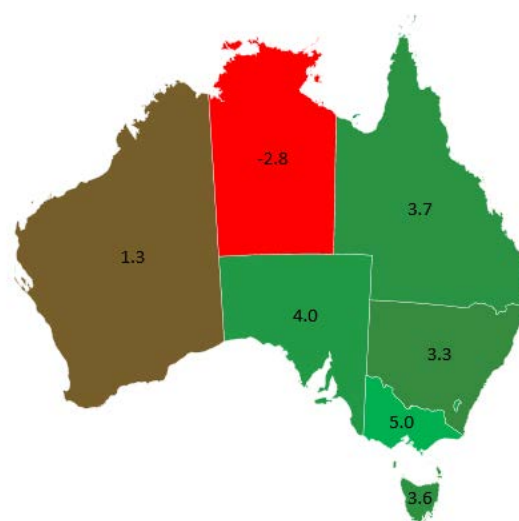
# State and Territory Overview

## Economic Drivers of Change

The economic situation in the Australian states and territories is far from uniform. The southern and eastern states are experiencing strong growth in economic activity. Victoria is the star performer, turning in 5% growth in State Final Demand over the year to June 2018.

Western Australia is achieving growth, but it is quite subdued, while the Northern Territory is in a contractionary phase shrinking State Final Demand by 2.8% in 2017-18.

The divergence in the economic situation in the states and territories is being driven by structural change in the Australian economy and by demographic factors. The drag on growth from the end of the mining and resources development boom is most notable in the north and west of Australia. The shift in business investment towards non-mining activities, is favouring the southern and eastern states. New South Wales and Victoria, the largest and most populous states, benefit most from increases in government consumption and in public investment. This is because they have the larger populations to be served and also because the governments of these states have the fiscal resources.



**Economic Growth in 2017-18**  
(% change in State Final Demand)

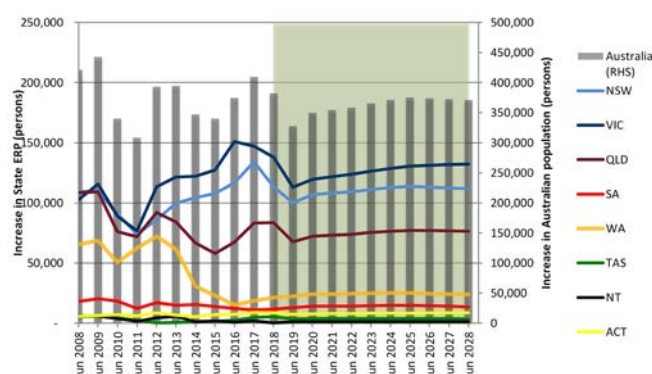
Source: ABS 5206.0

## Changing Demographics

There is considerable divergence in the distribution of Australia's population growth. The more populous states on the eastern seaboard are attracting the most growth in residents. Victoria has had the largest growth in terms of the resident numbers (estimated at 138,000 additional residents), followed by New South Wales (113,000) in 2017-18.

Queensland, Western Australia and the Northern Territory saw a strong surge in population growth at around the time of the mining boom.

The forecasts factor in an expectation that Victoria, New South Wales and Queensland will hold their current share of additional residents arriving into Australia (via immigration or natural growth). Population growth is expected to recover in Western Australia, although this is not expected to match the rates achieved last decade.



**State Population Growth**  
(Persons)

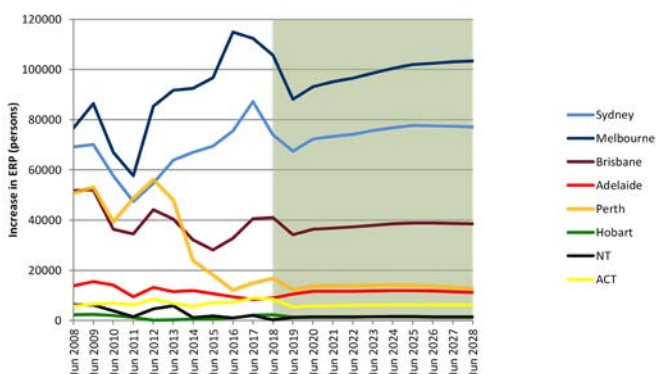
Source: ABS and ACIF CFC

# State and Territory Overview

## Changing Demographics - Capital Cities

Much of the growth in population has been in the largest capital cities. Melbourne has attracted more than 100,000 additional residents in each of the last seven years. While the inflows into Sydney and Melbourne appear to be moderating, they are expected to remain at elevated levels for some time.

Continued rapid growth in Melbourne and Sydney is placing pressure on liveability and is increasing calls for a concerted investment in urban infrastructure, especially in transport networks.



**Capital City Population Growth (Persons)**

Source: ABS and ACIF CFC

## Changes in the Major Projects Database in the States and Territories

Looking at the additions to the Major Projects Database recorded over the last six months can provide some insight into what is changing in the building and construction market in each of the Australian states and territories. One simple way to do this is to count the number of major projects that has arrived over the last six months as an indicator of the level of interest in building and construction activity.

## Additions to the Major Projects Database up to October 2018 (by State, Type, and Number)

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
	Count	Count	Count	Count	Count	Count	Count	Count
<b>Residential Building</b>	<b>15</b>	<b>99</b>	<b>0</b>	<b>35</b>	<b>5</b>	<b>3</b>	<b>51</b>	<b>17</b>
Residential	15	99	0	35	5	3	51	17
<b>Non-Residential Building</b>	<b>7</b>	<b>103</b>	<b>6</b>	<b>29</b>	<b>20</b>	<b>6</b>	<b>68</b>	<b>24</b>
Accommodation	2	9	1	2	2	1	11	5
Education	0	26	0	2	4	2	12	0
Entertainment and Recreation	1	3	1	2	1	1	5	0
Health and Aged Care	0	16	1	8	2	0	7	6
Industrial	0	20	0	6	3	2	8	2
Miscellaneous	1	6	2	2	4	0	6	3
Offices	1	12	1	3	1	0	10	0
Other Commercial	1	5	0	3	1	0	3	4
Retail and Wholesale Trade	1	6	0	1	2	0	6	4
<b>Engineering Construction</b>	<b>1</b>	<b>48</b>	<b>13</b>	<b>26</b>	<b>8</b>	<b>4</b>	<b>33</b>	<b>44</b>
Roads	1	6	0	6	1	1	1	11
Bridges, Railways and Harbours	0	8	0	4	3	2	9	6
Electricity and Pipelines	0	21	3	7	1	1	12	3
Water and Sewerage	0	1	1	0	1	0	3	2
Telecommunications	0	0	0	1	0	0	0	0
Recreation and Other	0	4	0	2	1	0	5	3
Heavy Industry including Mining	0	8	9	6	1	0	3	19
<b>Total</b>	<b>23</b>	<b>250</b>	<b>19</b>	<b>90</b>	<b>33</b>	<b>13</b>	<b>152</b>	<b>85</b>

Source: ACIF Major Projects Database and CoreLogic



# State and Territory Overview

*Residential Building* projects have been added to the Major Projects Database over the last six months in most states and territories except the Northern Territory. The state with the largest number of additional *Residential Building* projects is New South Wales. This is in contrast to recent editions of the ACIF Forecast reports where Victoria was consistently the state with the largest number of *Residential Building* projects (with nearly double the number reported in the table above). The number of *Residential Building* projects added in Queensland up to October 2018 is about half of the number added in the May 2018 report.

*Non-Residential Building* projects were added to the database in every state over the last six months. New South Wales has attracted the largest number of new major projects in *Non-Residential Building*, which probably reflects its status as the state with the largest economy and the largest population base. Victoria has attracted the largest number of new projects in *Accommodation and Entertainment and Recreation*, and it matches New South Wales with the number of *Retail and Wholesale Trade* projects.

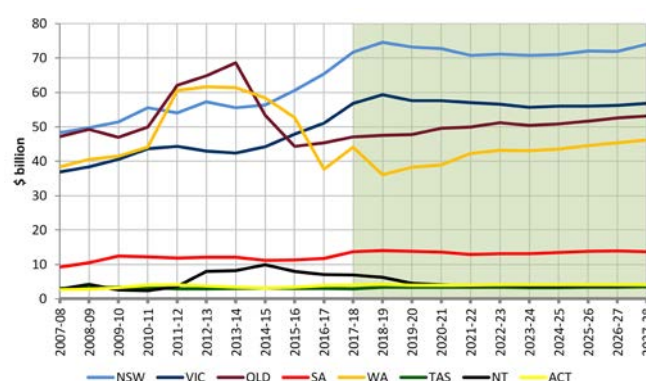
*Engineering Construction* projects have been added to the Major Projects Database in every state over the last six months. The table points to an extension of the recent surge in infrastructure investment concentrated in the larger eastern seaboard states (that is, New South Wales, Victoria and Queensland). The largest number of *Electricity and Pipelines* projects are in New South Wales. Victoria is hosting the largest number of new projects in *Bridges Railways and Harbours*. *Engineering Construction* is the main area of interest in Western Australia and the Northern Territory. In particular, there has been a rebound in the number of additional projects in these regions in *Heavy Industry Including Mining*. While this rebound does not approach the very large numbers of projects seen at the peak of the mining boom, it does add evidence of increasing investor interest in resources development in these regions.

## Building and Construction Activity Comparisons

Building and construction has followed the changing economic situation of the states and territories and activity has shifted south and east.

New South Wales and Victoria have continued to surge.

Queensland and Western Australia have lost their former lead with the end of the mining and resources development boom. The significant upturn in building activity in the Northern Territory also peaked based on the boom in resources development, but it is now also in decline.



**Total Construction Work Done by State**  
(\$ billion)

Source: ABS and ACIF CFC

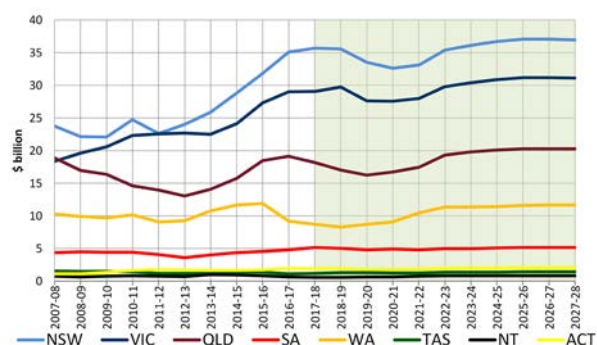
# State and Territory Overview

## Residential Building Activity Comparisons

The states are at different stages in the housing market cycle. Work done in *Residential Building* peaked three years ago in Western Australia and the Northern Territory. Activity in Queensland peaked two years ago and entered into decline last year.

Rapid population growth in Victoria has sustained strong growth in the demand for housing throughout most of the last decade. New South Wales appears to have had the biggest backlog of unmet housing demand at the start of the last decade that may now have been filled by the ongoing surge in the building of new dwellings. The large amount of work in the pipeline will sustain activity at current levels in New South Wales and Victoria over the remainder of this year. New housing supply will eventually catch up to recent falls in house prices and housing demand. A downturn in the business cycle will dominate the outlook for residential building activity in most states from 2019-20.

The outlook for *Residential Building* in the states in the long run is expected to be shaped by a return to underlying fundamentals such as growth in employment and population in each state.



Residential Building by State

Source: ABS and ACIF CFC

## Dwelling Completions by State and Territory

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual Completions (thousand dwellings)					Forecast (thousand dwellings)				
NSW	39	48	53	64	65	68	61	57	56	60
VIC	50	56	59	66	66	68	62	60	60	64
QLD	30	40	39	48	44	40	39	39	40	46
WA	25	29	32	24	19	19	20	21	25	27
SA	9	12	10	10	11	11	11	10	10	10
TAS	2	2	3	2	2	3	3	3	2	2
NT	2	2	2	1	1	1	1	1	1	1
ACT	4	5	3	4	5	4	4	4	4	4
States										
	% change (YoY)					% change (YoY)				
NSW	18	22	12	19	2	4	-9	-7	-2	7
VIC	1	11	5	13	0	3	-8	-4	-1	7
QLD	4	32	-2	24	-9	-9	-2	0	3	14
WA	34	14	13	-27	-21	1	5	3	22	8
SA	8	29	-14	-1	8	7	-8	-2	-9	5
TAS	-12	29	7	-19	9	16	-3	-4	-10	5
NT	51	11	-22	-36	-33	-1	19	-8	26	9
ACT	-11	5	-30	32	6	-9	-7	-5	2	9

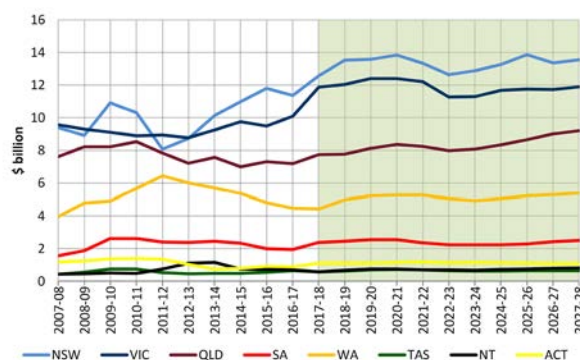
"YoY" = year-on-year

Source: ABS and ACIF CFC

# State and Territory Overview

## Non-Residential Building Activity Comparisons

New South Wales and Victoria dominate *Non-Residential Building* activity. Rapid growth in Victoria's population is driving increases in demand for key services which is in turn driving the need to build or expand *Non-Residential Buildings*. Victoria may also be outcompeting New South Wales in making the transition to new and growing areas of economic activity and employment. Victoria consistently has a disproportionate number of additions to the Major Projects Database in the areas of *Offices, Retail and Wholesale Trade, Other Commercial and Accommodation*.



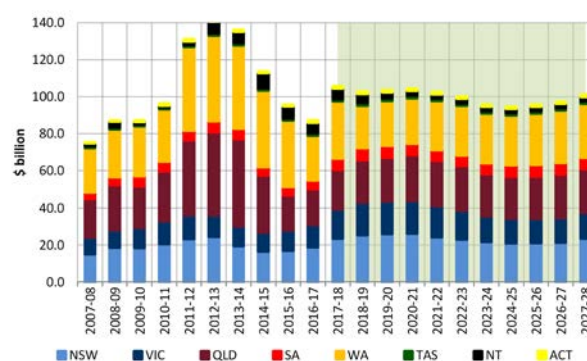
### Non-Residential Building by State

Source: ABS and ACIF CFC

## Engineering Construction Activity Comparisons

Queensland and Western Australia dominated *Engineering Construction* activity over the last decade reflecting their role in the mining and resources boom.

The infrastructure boom is driving a lift in *Engineering Construction* activity in New South Wales and Victoria in the next several years.



### Engineering Construction by State

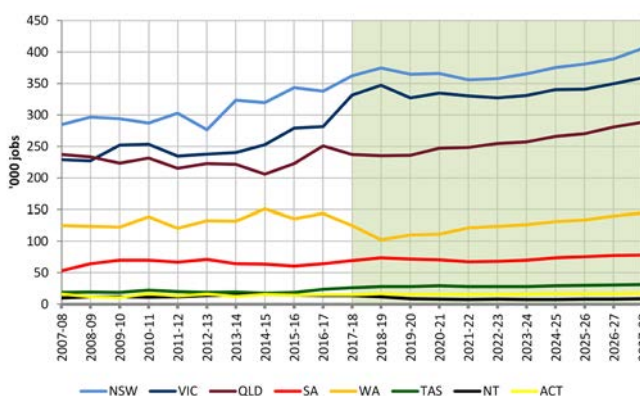
Source: ABS and ACIF CFC

## Building and Construction Employment in the States and Territories

Employment in building and construction is surging in the eastern states. Meanwhile, there is a downturn in construction employment in Queensland, Western Australia and in the Northern Territory.

Leaders in industry and government are concerned about emerging shortages of high-skilled construction workers necessary to implement the substantial increases in infrastructure construction activity that are already underway.

It is not yet clear if the construction workers that are finishing project work in the Northern Territory, Western Australia and Queensland will be able to slot in immediately to meet the growing emerging job opportunities in *Non-Residential Building* and *Engineering Construction* activities in the south eastern states.



### Construction Industry Employment in the States ('000 persons)

Source: ABS and ACIF CFC



## **State-by-State Outlook**

# Australian Capital Territory

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State Final Demand (SFD), which is a measure of total spending in the Australian Capital Territory (ACT) by households, business and governments, grew by 4.4% in real terms over last year (2017–18). The ACT is continuing to diversify its economic base. The national Government's share of total demand in the ACT economy has fallen from 44.7% of the economy in December 2011, to 41.3% as of December 2017. Significant growth in services exports (especially in education) construction and reasonable growth in household consumption, given increases in wages, are contributing to growth in demand and economic activity.

The relatively strong economic environment is supporting growth in employment in the ACT. The 2018-19 budget papers observed that some 10,000 jobs were created in Canberra over the year to end 2017. Employment is forecast to grow by an additional 2% in 2018-19, before returning to trend growth of 1 1/2% into the medium term. Given diversification of the ACT's economic base, those jobs have been in a broad range of industries including retail, healthcare, telecommunications, as well as employment in administrative services which reflects the role played by Canberra as the seat of Government accommodating much employment in the Australian Public Service.

Growth in both construction and household consumption is being supported by strong population growth in the ACT. The resident population is estimated to have grown by 2.1% over the year to June 2018, well over the national average growth rate.

The residential property market in the ACT has put in a robust performance over recent years, supported by low interest rates, strong employment growth and strong population growth. Signs of a moderation are emerging. Growth in the number of new dwellings completed fell to 6% in 2017-18, after spiking with 32% in the previous year. Recent approvals data point to a patchy performance in prospect in 2018-19, with steady growth in new house building being overshadowed by reductions in *New Other* dwellings and in *Alterations and Additions*.

The value of *Non-Residential Building* approvals showed a fall over 2017-18. Reductions in approvals were recorded in *Retail and Wholesale Trade*, *Offices* and *Industrial* buildings. Government spending is expected to increase with investments in new schools and hospitals (including the new SPIRE Centre at the Canberra Hospital). The ACT Government has facilitated the development of the Constitution Place precinct in Civic (adjacent to the Legislative Assembly building), as well as the redevelopment of the Dickson Motor Vehicle Registry. Establishment by the University of NSW of a new tertiary campus in Canberra would add a significant lift to education spending (contributing to further growth in education service exports).

Government spending is expected to support growth in *Engineering Construction* activity, including infrastructure projects such as the completion of Stage 1 of Light Rail, commencement of Stage 2 of Light Rail and development of new transport infrastructure (mainly *Roads*) supporting the Molonglo region.



# Australian Capital Territory

## ACT Building Activity Comparisons

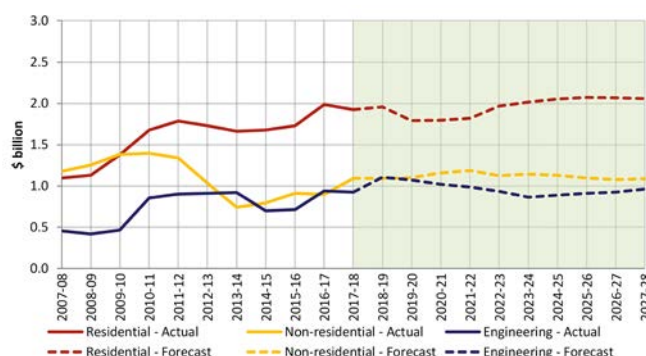
Total building and construction activity grew by 3% to reach \$3.9 billion in the Australian Capital Territory last year. Growth is due to a 22% uplift in *Non-Residential Building* activity offsetting falls in *Residential Building* and *Engineering Construction*.

The projected cyclical downturn in *Residential Building* has already arrived in the ACT. It started in *New Other Residential* building activity last year and is expected to widen to include three out of the four residential building subcategories this year. The contraction is expected to widen to all four *Residential Building* subcategories in 2019-20 and deepen, producing a contraction of 8% in that year.

*Non-Residential Building* activity is expected to hold the ground won last year with increases in *Accommodation*, *Offices* and *Miscellaneous* largely offsetting significant falls in volatile subsectors such as *Retail and Wholesale Trade* and *Industrial*. *Non-Residential Building* work is projected to return to growth into the medium term.

*Engineering Construction* work is expected to lift significantly this year with the completion of Stage 1 of the Capital Metro project and possibly groundwork for the next stage. Other categories of *Engineering Construction*, such as *Telecommunications* are in decline and this will drive consolidation in work done in this activity over the medium term.

Total building and construction activity in the ACT is forecast to grow by 5% this year and then fall by 4% next year as the cyclical downturn in *Residential Building* activity bites at its hardest.



**ACT Building and Construction Aggregates**  
(\$ billion, 2015-16 prices)

Source: ABS and ACIF CFC

## ACT Value of Work Done by Type (\$ million, 2015-16 prices)

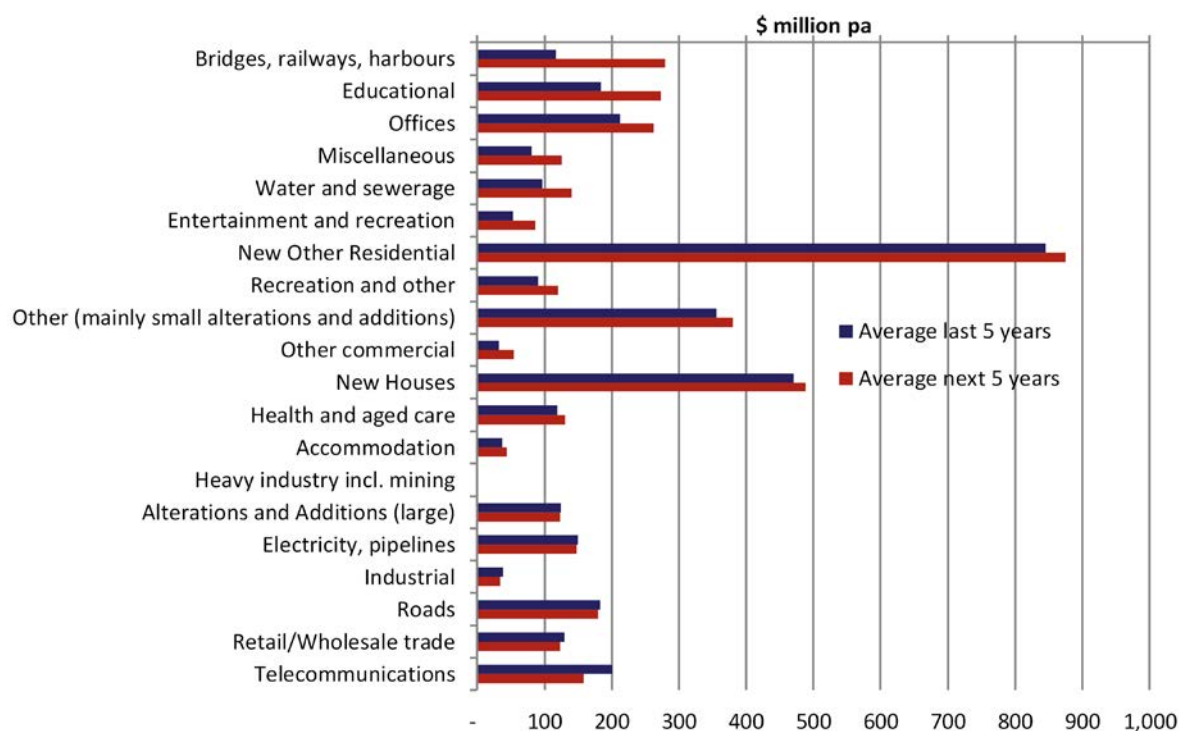
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	1,662	1,675	1,731	1,985	1,925	1,957	1,792	1,795	1,821	1,968
Non-Residential Building	739	791	910	898	1,094	1,093	1,104	1,159	1,185	1,125
Engineering Construction	920	699	710	938	925	1,104	1,075	1,023	987	933
<b>Total Construction</b>	<b>3,321</b>	<b>3,165</b>	<b>3,351</b>	<b>3,821</b>	<b>3,944</b>	<b>4,154</b>	<b>3,970</b>	<b>3,976</b>	<b>3,993</b>	<b>4,025</b>
	% change (YoY)					% change (YoY)				
Residential Building	- 3.8	0.8	3.4	14.7	- 3.0	1.6	- 8.4	0.2	1.5	8.1
Non-Residential Building	- 28.7	7.0	15.0	- 1.3	21.8	- 0.1	1.0	5.0	2.3	- 5.1
Engineering Construction	0.8	- 24.0	1.6	32.1	- 1.4	19.4	- 2.7	- 4.9	- 3.5	- 5.4
<b>Total Construction</b>	<b>- 9.7</b>	<b>- 4.7</b>	<b>5.9</b>	<b>14.0</b>	<b>3.2</b>	<b>5.3</b>	<b>- 4.4</b>	<b>0.1</b>	<b>0.4</b>	<b>0.8</b>

“YoY” = year-on-year

Source: ABS and ACIF CFC

# Australian Capital Territory

## ACT Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Australian Capital Territory

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

*Bridges, Railways and Harbours* is the subsector in the ACT with the greatest increase in forecast work activity levels over the next five years compared to actual work done in the previous five years. Work on the first and second stages of the light rail network will maintain activity at elevated levels into the medium term.

Other work 'winning' sectors in the ACT includes *Education*, *Offices* and *Miscellaneous* buildings (where some public sector buildings including defence establishments are often located). This reflects continuation of growth patterns in the ACT economy and the structural shift to services as well as the ACT's role as the nation's capital.

Building of *New Other Residential* dwellings (that is, apartments and townhouses) is the biggest subsector of building activity in the ACT. It is in the middle of the chart because the forecast levels of activity in the next five years are only a little more than the level of work sustained over the last five years.

There are six subsectors where the value of work done in the next five years is expected to fall compared to the work done in the last five years, but these falls are mostly of a modest scale except for the falls in *Telecommunications*.

# Australian Capital Territory

## ACT Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	534	543	396	436	441	488	469	510	477	496
New Other Residential	678	737	777	1,045	987	983	852	792	827	920
Alterations and Additions (Lrg)	120	125	134	124	119	117	114	121	129	137
Other (Alterations & Additions)	330	269	424	380	378	369	357	372	389	414
<b>Non-Residential Building</b>										
Accommodation	30	74	20	28	33	53	54	38	38	34
Education	125	148	181	164	301	277	268	286	266	266
Entertainment and Recreation	34	36	46	66	85	90	82	91	91	75
Health and Aged Care	106	75	143	189	81	97	126	140	143	147
Industrial	40	33	34	32	52	30	34	33	36	39
Miscellaneous	55	99	96	70	84	108	124	130	132	133
Offices	246	172	179	199	265	276	251	266	294	225
Other Commercial	23	37	45	25	30	45	42	43	61	80
Retail and Wholesale Trade	80	116	168	124	162	117	123	131	123	126
<b>Engineering Construction</b>										
Roads	265	270	156	116	108	174	184	175	176	187
Bridges, Railways and Harbours	17	19	18	213	316	319	315	281	271	209
Electricity and Pipelines	268	139	113	142	85	151	152	162	138	136
Water and Sewerage	102	54	131	86	109	135	162	146	134	124
Telecommunications	155	165	201	255	229	207	146	129	145	162
Heavy Industry inc. Mining	1	1	0	1	1	1	0	0	0	0
Recreation and Other	110	51	92	124	78	119	116	130	122	115
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	- 10.0	1.7	- 27.0	9.9	1.3	10.7	- 3.9	8.6	- 6.4	4.1
New Other Residential	- 7.4	8.7	5.3	34.6	- 5.6	- 0.4	- 13.3	- 7.1	4.4	11.3
Alterations and Additions (Lrg)	- 13.2	4.0	7.4	- 7.4	- 4.2	- 1.9	- 2.6	6.2	6.5	6.9
Other (Alterations & Additions)	24.9	- 18.2	57.3	- 10.4	- 0.6	- 2.4	- 3.3	4.4	4.4	6.6
<b>Non-Residential Building</b>										
Accommodation	- 53.6	150.5	- 73.7	43.4	19.5	59.2	1.2	- 30.1	0.6	- 9.6
Education	- 47.0	18.3	22.2	- 9.3	83.2	- 8.1	- 3.3	7.0	- 7.1	0.2
Entertainment and Recreation	- 7.9	7.7	25.6	43.1	30.1	5.8	- 9.2	11.1	- 0.4	- 17.7
Health and Aged Care	- 23.4	- 29.5	90.0	32.6	- 57.3	20.3	29.7	11.0	2.5	2.5
Industrial	- 2.6	- 17.3	3.3	- 6.2	60.7	- 42.6	14.8	- 2.9	10.4	6.4
Miscellaneous	37.0	78.3	- 3.2	- 26.4	19.1	29.2	14.8	4.4	2.0	0.5
Offices	- 25.3	- 29.9	3.6	11.4	33.3	4.1	- 9.2	6.2	10.4	- 23.7
Other Commercial	- 71.8	60.9	21.4	- 43.3	20.6	47.6	- 5.7	2.3	40.6	31.6
Retail and Wholesale Trade	15.4	45.7	44.1	- 26.0	30.4	- 28.1	5.4	6.8	- 6.1	1.9
<b>Engineering Construction</b>										
Roads	- 12.2	1.9	- 42.4	- 25.3	- 7.6	61.4	5.9	- 5.1	1.1	6.1
Bridges, Railways and Harbours	1,278.2	10.0	- 6.8	1,094.9	48.5	0.8	- 1.4	- 10.7	- 3.5	- 22.8
Electricity and Pipelines	66.3	- 48.2	- 18.4	25.3	- 40.5	78.0	1.0	6.7	- 14.8	- 1.9
Water and Sewerage	- 51.6	- 47.4	142.9	- 34.3	27.4	23.1	20.0	- 9.9	- 7.8	- 7.8
Telecommunications	28.8	5.9	21.9	27.1	- 10.4	- 9.4	- 29.5	- 11.4	12.0	11.9
Heavy Industry inc. Mining	86.6	- 44.3	- 100.0	-	-	- 18.2	- 47.5	- 75.6	26.2	13.5
Recreation and Other	- 4.7	- 53.6	80.3	35.9	- 37.7	53.0	- 2.1	11.7	- 6.2	- 5.5

# New South Wales

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The New South Wales economy is expected to maintain above-trend growth for the next two years. The Government of New South Wales is forecasting an easing of the pace of growth and a shift in the composition of growth towards exports and business investment and away from household consumption and dwelling investment.

Business investment is expected to accelerate in the medium term. Growth in household consumption is expected to be below its long-run average in the next two years as declining house prices, high household debt, modest wages growth and tightening credit conditions see households limit spending. While the dwelling construction cycle has peaked, the large pipeline of projects is expected to support elevated levels of activity over the remainder of this year.

A substantive \$87 billion four-year capital program, involving some very large transport infrastructure initiatives and the expansion of services such as the National Disability Insurance Scheme (NDIS) are expected to drive a contribution to growth from public sector investment and spending.

Population growth has strengthened to 1.4% per annum over recent years. This will see the population of New South Wales reach 8 million residents over this year. Much of the growth has been through increases in Net Overseas Migration, including arrivals of overseas students.

Meeting the demands of strong population growth requires the provision of sufficient housing and adequate infrastructure.

There is some concern about cost blow-outs and delays in some major infrastructure projects currently underway in New South Wales. The enlarged infrastructure investment program may be placing pressure on the supply of high-skilled workers.

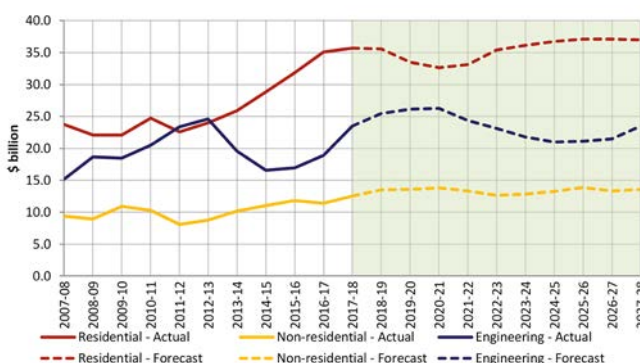
# New South Wales

## NSW Building Activity Comparisons

Total building and construction activity in New South Wales grew by a healthy 9% last year topping off the fourth straight year of growth. Growth was achieved in all three types of building and construction work.

The most substantial gains were recorded in *Engineering Construction*, reflecting double digit growth in every subsector except *Telecommunications* (which experienced a contraction given the winding down in the rollout of the NBN). A 10% upturn in *Non-Residential Building* provided an emphatic confirmation of the return of business investment and investment by the public sector in expanded service delivery in areas including *Education* and *Health*.

Continued growth in building and construction activity is expected this year, although the rate of growth will decline to 4%. The *Residential Building* sector is expected to shift into being a drag on growth, while the state is losing momentum in *Non-Residential Building* and *Engineering Construction*.



**NSW Building and Construction Aggregates**  
(\$ billion)

Source: ABS and ACIF CFC

## NSW Value of Work Done by Type (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	25,874	28,842	31,858	35,105	35,666	35,593	33,522	32,642	33,094	35,405
Non-Residential Building	10,144	10,990	11,810	11,376	12,574	13,521	13,574	13,844	13,343	12,649
Engineering Construction	19,568	16,560	16,933	18,926	23,502	25,488	26,143	26,279	24,355	23,132
<b>Total Construction</b>	<b>55,586</b>	<b>56,392</b>	<b>60,601</b>	<b>65,406</b>	<b>71,742</b>	<b>74,601</b>	<b>73,239</b>	<b>72,764</b>	<b>70,792</b>	<b>71,186</b>
	% change (YoY)					% change (YoY)				
Residential Building	7.8	11.5	10.5	10.2	1.6	- 0.2	- 5.8	- 2.6	1.4	7.0
Non-Residential Building	16.2	8.3	7.5	- 3.7	10.5	7.5	0.4	2.0	- 3.6	- 5.2
Engineering Construction	- 20.4	- 15.4	2.3	11.8	24.2	8.5	2.6	0.5	- 7.3	- 5.0
<b>Total Construction</b>	<b>- 3.0</b>	<b>1.4</b>	<b>7.5</b>	<b>7.9</b>	<b>9.7</b>	<b>4.0</b>	<b>- 1.8</b>	<b>- 0.6</b>	<b>- 2.7</b>	<b>0.6</b>

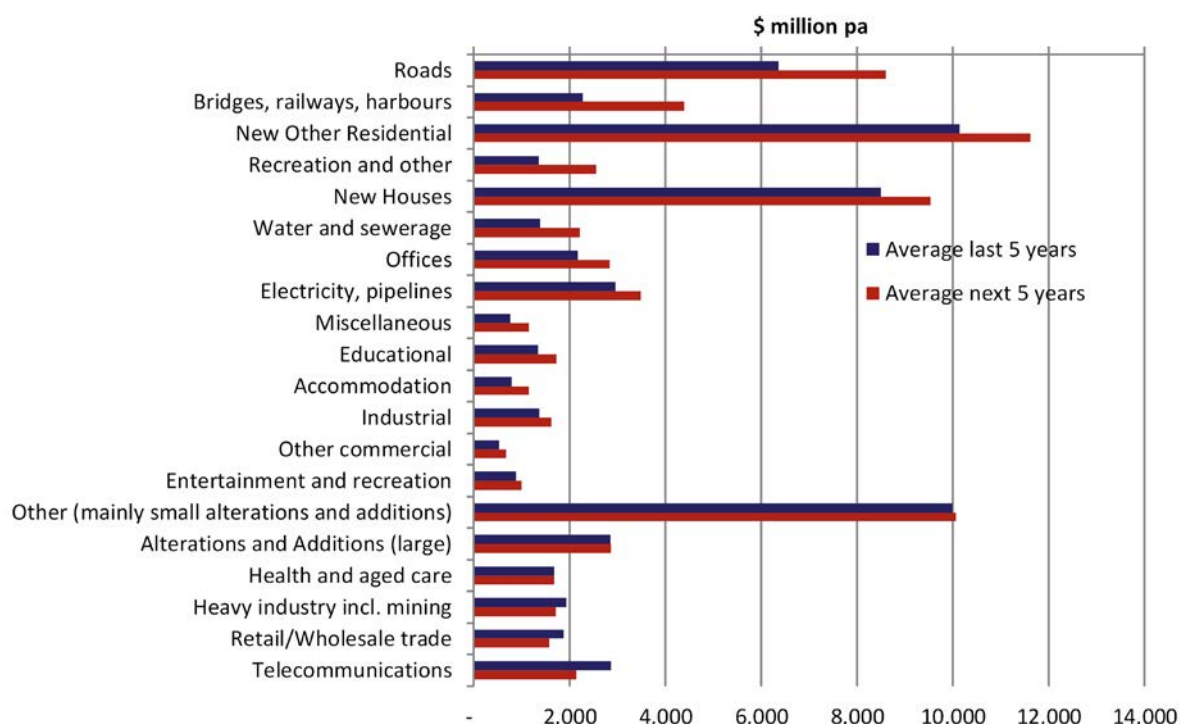
"YoY" = year-on-year

Source: ABS and ACIF CFC



# New South Wales

## NSW Changes in Building and Construction Activity (\$ million)



### Changes in Activity - New South Wales (\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

All but three of the various building and construction subsectors in New South Wales are projected to be 'winners'. Winning in this context is where work done over the next five years is expected to be larger than work done in the last five years. Infrastructure construction categories, such as *Roads* and *Bridges, Railways and Harbours* are at the top of the list of 'winners'. *New Other Residential Building* activity is also at the top end of the list of 'winners' reflecting the large amount of work that is locked in to the construction pipeline and will be completed in the next couple of years (before the cyclical downturn that is expected begins to bite).

The three subcategories that are expected to be 'losers' in New South Wales appear at the bottom of this list. *Heavy Industry Including Mining* is expected to see some loss of value. *Retail and Wholesale Trade* is expected to see experience some downsizing reflecting the shift to on-line sales and the downhill run in the rollout of the NBN will lead to a sizable decline in *Telecommunications* construction activity.

# New South Wales

## NSW Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	7,065	8,017	8,466	9,403	9,524	9,518	9,217	9,354	9,642	9,874
New Other Residential	6,559	7,715	10,624	12,295	13,502	13,864	12,444	10,584	10,028	11,126
Alterations and Additions (Lrg)	2,577	2,835	2,816	3,100	2,880	2,680	2,692	2,796	2,960	3,157
Other (Alterations & Additions)	9,673	10,275	9,952	10,308	9,760	9,531	9,169	9,907	10,465	11,248
<b>Non-Residential Building</b>										
Accommodation	393	784	768	957	1,046	1,314	1,240	1,129	1,084	926
Education	1,548	1,262	1,069	1,071	1,751	1,917	1,810	1,753	1,600	1,523
Entertainment and Recreation	709	757	1,259	805	879	1,076	1,111	1,068	935	803
Health and Aged Care	1,459	1,671	1,648	1,961	1,651	1,591	1,655	1,761	1,706	1,685
Industrial	1,214	1,243	1,099	1,733	1,562	1,543	1,555	1,611	1,645	1,717
Miscellaneous	592	628	630	895	1,060	1,003	1,112	1,221	1,222	1,171
Offices	1,872	2,214	2,543	1,905	2,273	2,801	2,894	2,945	2,936	2,622
Other Commercial	374	510	517	440	770	727	679	665	653	658
Retail and Wholesale Trade	1,983	1,921	2,278	1,608	1,583	1,548	1,517	1,690	1,563	1,543
<b>Engineering Construction</b>										
Roads	5,517	4,827	6,098	6,955	8,362	8,577	8,667	8,747	8,481	8,521
Bridges, Railways and Harbours	1,746	1,871	2,152	2,383	3,202	3,941	4,430	4,702	4,768	4,107
Electricity and Pipelines	4,060	2,904	2,097	2,259	3,419	3,892	4,089	3,798	2,961	2,681
Water and Sewerage	1,299	1,043	1,284	1,414	1,888	2,268	2,390	2,329	2,141	1,898
Telecommunications	2,268	2,502	2,874	3,377	3,262	2,839	1,993	1,739	1,939	2,196
Heavy Industry inc. Mining	3,402	2,229	1,273	1,164	1,595	1,748	1,708	1,678	1,686	1,724
Recreation and Other	1,276	1,184	1,155	1,373	1,773	2,223	2,866	3,285	2,379	2,006
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	3.9	13.5	5.6	11.1	1.3	- 0.1	- 3.2	1.5	3.1	2.4
New Other Residential	19.5	17.6	37.7	15.7	9.8	2.7	- 10.2	- 14.9	- 5.3	10.9
Alterations and Additions (Lrg)	0.2	10.0	- 0.7	10.1	- 7.1	- 7.0	0.5	3.9	5.8	6.7
Other (Alterations & Additions)	5.9	6.2	- 3.1	3.6	- 5.3	- 2.4	- 3.8	8.1	5.6	7.5
<b>Non-Residential Building</b>										
Accommodation	22.9	99.7	- 2.1	24.6	9.3	25.7	- 5.7	- 8.9	- 4.0	- 14.5
Education	18.5	- 18.5	- 15.3	0.3	63.4	9.5	- 5.6	- 3.2	- 8.7	- 4.9
Entertainment and Recreation	4.4	6.8	66.3	- 36.1	9.2	22.4	3.3	- 3.9	- 12.5	- 14.1
Health and Aged Care	34.2	14.5	- 1.4	19.0	- 15.8	- 3.7	4.1	6.4	- 3.1	- 1.2
Industrial	0.6	2.4	- 11.6	57.7	- 9.9	- 1.2	0.8	3.6	2.1	4.4
Miscellaneous	0.5	6.0	0.2	42.1	18.5	- 5.4	10.9	9.8	0.1	- 4.2
Offices	7.3	18.3	14.8	- 25.1	19.3	23.2	3.3	1.8	- 0.3	- 10.7
Other Commercial	53.7	36.2	1.4	- 14.8	74.9	- 5.6	- 6.6	- 2.0	- 1.9	0.8
Retail and Wholesale Trade	27.7	- 3.1	18.6	- 29.4	- 1.6	- 2.2	- 2.0	11.4	- 7.5	- 1.3
<b>Engineering Construction</b>										
Roads	- 23.4	- 12.5	26.3	14.1	20.2	2.6	1.0	0.9	- 3.0	0.5
Bridges, Railways and Harbours	- 14.6	7.2	15.0	10.7	34.4	23.1	12.4	6.1	1.4	- 13.9
Electricity and Pipelines	- 12.7	- 28.5	- 27.8	7.7	51.3	13.8	5.1	- 7.1	- 22.1	- 9.4
Water and Sewerage	- 12.7	- 19.7	23.1	10.1	33.5	20.1	5.4	- 2.5	- 8.1	- 11.3
Telecommunications	10.4	10.3	14.8	17.5	- 3.4	- 13.0	- 29.8	- 12.7	11.5	13.2
Heavy Industry inc. Mining	- 37.7	- 34.5	- 42.9	- 8.6	37.1	9.6	- 2.3	- 1.8	0.4	2.3
Recreation and Other	- 24.1	- 7.2	- 2.5	18.9	29.1	25.4	28.9	14.6	- 27.6	- 15.7

# Northern Territory

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Economic activity in the Northern Territory is facing significant challenges following the completion of the development phase of major projects (particularly the Ichthys LNG project).

State Final Demand (SFD) declined by 2.8% in 2017-18, following a 7.6% increase in 2016-17, mainly driven by falling private investment. The Government of the Northern Territory has flagged that it expects further falls in SFD over the medium term, given contraction in mining and resources-oriented business investment. Increased public investment will add to demand, but this will not be sufficient to fully offset the large scale of the expected decline in private investment.

Transition of the Ichthys project from construction activity to the less labour-intensive operational phase is driving a softening in the labour market. Employment growth of 0.3% was recorded over the year to August 2018, down from growth rates of 3% or so seen over recent years. Employment is expected to grow at a rate below the long-term trend into the medium term. A sectorial shift in the composition of employment is also expected with less reliance being made of employment in construction activity and more reliance being placed on growth in other key activities in the Northern Territory including tourism, education, agricultural activities and defence.

Population growth in the Northern Territory essentially ground to a halt last year when it recorded an increase of 0.1%. The population may actually decline over the remainder of 2018 as workers, who had relocated to the Northern Territory to work on the major projects that are now essentially complete, depart.

There is evidence of a cooling in the residential property market. The median house price in greater Darwin decreased by 7.4% to \$500,000 over the year to June 2018. The median unit price decreased by 18.7% in annual terms to \$382,000. In the June quarter 2018, Darwin recorded the highest vacancy rate of all capital cities. *Residential Building* work has been falling in the Northern Territory over the last four years. Approvals and commencements have maintained their downtrend and further falls in *Residential Building* work done are expected over 2018-19.

Many new *Non-Residential* buildings were put in place especially in the greater Darwin area to support the needs of the enlarged workforce involved in the construction of major projects. Building activity has been on a downtrend since 2013-14 and falls in the value of *Non-Residential Building* approvals suggests that building work is likely to fall again in 2018-19, although there are some bright spots such as *Accommodation* and *Education* where some growth will be realised.

Not everything is contracting in *Engineering Construction*. Work has already commenced on the Northern Gas and Tanami Gas pipeline projects and this will continue over the remainder of 2018-19, raising activity in *Electricity and Pipelines*. Nine new projects in *Heavy Industry* were added to the major projects list for the Northern Territory over the last six months. Members of the ACIF CFC reported that they are aware of reasonably significant projects that are reaching an advanced stage and could be expected to have 'boots on the ground' over the next two-to-three years. Construction work in *Heavy Industry* will drop from record levels achieved in recent years, but activity is expected to stabilise at levels observed at the beginning of the last decade. The Territory Government has decided to lift the moratorium on hydraulic fracturing. There is an upside risk that construction work in *Heavy Industry* and in *Electricity and Pipelines* will be higher than forecast in these projections.

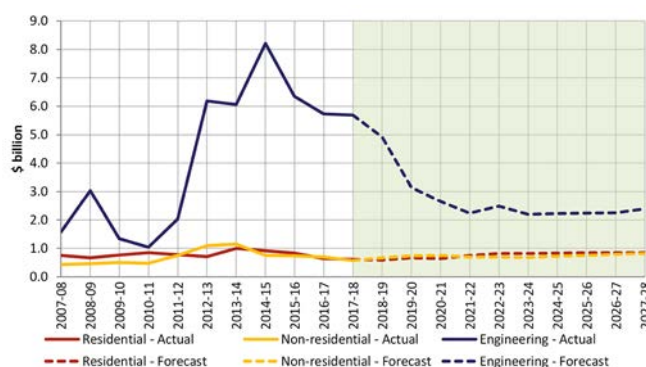
# Northern Territory

## NT Building Activity Comparisons

*Engineering Construction* activity has peaked and is expected to fall from \$6 billion to around \$2 billion in the next three years.

Much *Residential Building* and *Non-Residential Building* activity grew over recent years to support the needs of an enlarged workforce and population in Darwin. Construction employment is now winding down and so is *Residential Building* and *Non-Residential Building* activity.

The forecasts project a return to 'normal' levels of total building and construction activity in the territory in the medium term (by around 2020-21).



**NT Building and Construction Aggregates**  
(\$ billion, 2015-16 prices)

Source: ABS and ACIF CFC

## NT Value of Work Done by Type (\$ million, 2015-16 prices)

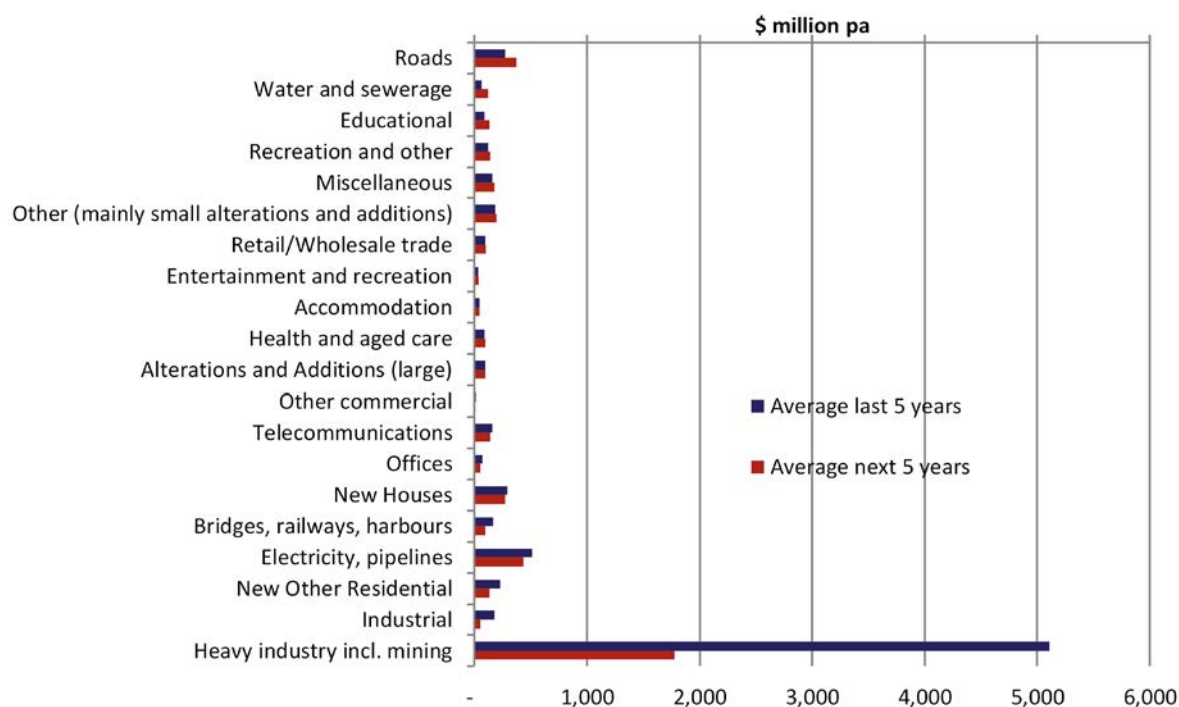
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	1,002	917	836	644	605	587	660	644	749	821
Non-Residential Building	1,151	747	731	686	575	661	736	744	691	694
Engineering Construction	6,066	8,204	6,349	5,723	5,693	4,923	3,147	2,650	2,239	2,477
<b>Total Construction</b>	<b>8,219</b>	<b>9,867</b>	<b>7,915</b>	<b>7,053</b>	<b>6,873</b>	<b>6,171</b>	<b>4,543</b>	<b>4,037</b>	<b>3,680</b>	<b>3,992</b>
	% change (YoY)					% change (YoY)				
Residential Building	41.2	- 8.5	- 8.8	- 22.9	- 6.1	- 3.0	12.5	- 2.5	16.4	9.5
Non-Residential Building	5.2	- 35.1	- 2.1	- 6.1	- 16.2	15.0	11.4	1.1	- 7.1	0.4
Engineering Construction	- 2.0	35.2	- 22.6	- 9.9	- 0.5	- 13.5	- 36.1	- 15.8	- 15.5	10.6
<b>Total Construction</b>	<b>2.9</b>	<b>20.1</b>	<b>- 19.8</b>	<b>- 10.9</b>	<b>- 2.6</b>	<b>- 10.2</b>	<b>- 26.4</b>	<b>- 11.1</b>	<b>- 8.9</b>	<b>8.5</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC

# Northern Territory

## NT Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Northern Territory

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

The substantive fall in *Heavy Industry Including Mining* dominates the outlook. This sector saw the largest amount of work done in the territory over the last five years and it is inevitable that it will see the largest fall over the next five years with the completion of the Ichthys project. This fall will also drag down other subsectors that were previously supporting the resource development activity in the territory such as *Industrial* and *Electricity and Pipelines* and *New Other Residential* building which was expanded to house the workforce.

You have to adjust your focus to see which sectors are expected to be 'winners' in the territory over the next five years. Investment in infrastructure through construction of *Roads* and *Water and Sewerage* activity are at the head of the list of 'winning' sectors as they are expected to gain work over the next five years compared to the average of work done in the last five years. Expended public investment in *Education* buildings is another 'winner' at the top of the list.



# Northern Territory

## NT Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	304	325	350	270	217	221	247	242	311	330
New Other Residential	446	319	206	81	84	84	149	117	135	167
Alterations and Additions (Lrg)	74	84	90	109	116	91	87	96	102	107
Other (Alterations & Additions)	177	189	189	184	188	191	177	188	202	216
<b>Non-Residential Building</b>										
Accommodation	54	93	42	6	21	66	54	31	40	45
Education	99	71	107	103	75	120	143	140	125	134
Entertainment and Recreation	34	35	16	36	51	41	40	45	41	29
Health and Aged Care	66	47	102	159	87	75	97	106	99	97
Industrial	336	232	191	82	41	39	53	45	46	67
Miscellaneous	374	72	58	128	156	156	184	199	171	166
Offices	85	144	58	31	49	63	55	53	57	45
Other Commercial	47	9	4	4	8	11	8	8	8	8
Retail and Wholesale Trade	56	44	154	139	87	89	103	118	104	104
<b>Engineering Construction</b>										
Roads	209	264	272	290	340	392	368	365	365	371
Bridges, Railways and Harbours	692	32	19	45	51	101	80	99	103	96
Electricity and Pipelines	360	1,622	87	37	462	535	450	386	436	388
Water and Sewerage	55	64	78	39	87	128	130	122	123	106
Telecommunications	94	137	227	231	114	184	135	118	127	146
Heavy Industry inc. Mining	4,535	5,952	5,543	4,968	4,526	3,437	1,844	1,418	946	1,235
Recreation and Other	121	133	122	114	113	147	140	144	139	135
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	- 0.9	6.6	8.0	- 22.9	- 19.7	1.9	11.7	- 2.0	28.3	6.2
New Other Residential	73.0	- 28.5	- 35.4	- 60.7	3.9	- 0.4	77.2	- 21.1	15.2	23.5
Alterations and Additions (Lrg)	- 6.2	13.6	7.2	21.4	6.6	- 22.0	- 3.6	10.0	5.8	5.5
Other (Alterations & Additions)	171.4	6.6	0.1	- 2.8	2.1	1.9	- 7.3	6.3	7.1	7.3
<b>Non-Residential Building</b>										
Accommodation	30.0	71.8	- 55.0	- 86.0	264.1	211.6	- 18.0	- 43.2	31.6	10.3
Education	73.7	- 27.8	49.7	- 3.5	- 27.2	60.6	18.7	- 2.2	- 10.6	7.2
Entertainment and Recreation	65.0	1.6	- 54.1	125.6	42.3	- 19.0	- 4.1	13.3	- 8.1	- 30.3
Health and Aged Care	45.9	- 29.0	116.2	55.6	- 45.4	- 13.0	29.1	9.3	- 7.3	- 1.9
Industrial	- 23.6	- 30.8	- 17.9	- 57.3	- 49.9	- 5.4	36.3	- 15.2	2.5	46.5
Miscellaneous	- 8.7	- 80.8	- 18.6	118.2	22.3	0.1	18.1	7.9	- 13.9	- 3.1
Offices	76.7	68.9	- 60.2	- 46.3	58.5	29.4	- 13.8	- 3.0	7.7	- 21.1
Other Commercial	787.3	- 81.5	- 52.2	- 14.1	128.8	35.3	- 32.2	- 0.1	2.2	- 1.7
Retail and Wholesale Trade	104.6	- 21.1	249.3	- 9.4	- 37.4	1.8	16.0	14.7	- 11.9	0.2
<b>Engineering Construction</b>										
Roads	25.2	26.7	2.8	6.5	17.3	15.3	- 6.1	- 0.8	0.2	1.4
Bridges, Railways and Harbours	- 39.2	- 95.4	- 40.0	134.2	13.8	96.4	- 20.7	23.4	4.9	- 7.3
Electricity and Pipelines	91.5	351.0	- 94.6	- 57.4	1,143.4	15.8	- 15.9	- 14.3	13.1	- 11.1
Water and Sewerage	- 55.0	16.6	22.7	- 50.9	126.6	46.9	1.3	- 6.3	0.9	- 13.5
Telecommunications	82.7	44.5	66.3	1.8	- 50.7	61.7	- 26.6	- 13.1	7.8	15.2
Heavy Industry inc. Mining	24.7	31.2	- 6.9	- 10.4	- 8.9	- 24.1	- 46.4	- 23.1	- 33.3	30.6
Recreation and Other	- 86.3	9.4	- 7.7	- 7.2	- 0.9	30.5	- 4.5	2.3	- 3.4	- 2.5

# Queensland

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State Final Demand grew by 3.7% over last year. Growth is being driven by improved fundamentals reflected in a rebound in business investment as well as a recovery in coal exports following the pause caused by Cyclone Debbie. Economic growth is expected to be nudged higher in 2018-19, with growth in household consumption gaining momentum supported by moderate growth in employment (and reductions in unemployment) and with somewhat belated and gradual increases in incomes and wages.

Queensland's population grew by 1.7% to reach an estimated 5 million residents by the end of 2017-18. Growth is projected to increase to around 1.8% over the next ten years.

Substantial investment in transport, health and education infrastructure, from both the public and private sectors, will be required to support the productive capacity of Queensland's increased population base.

Queensland is on the downside of the *Residential Building* cycle that peaked in 2016-17. Driven by a sharp decline in the construction of *Other Residential* dwellings (especially in inner urban apartments), *Residential Building* is forecast to contract in 2018-19 and 2019-20, as the large amount of new apartment supply is absorbed into the market. Growth in *Residential Building* is expected to return from 2020-21 onwards, as the deep decline in attached dwelling construction slows and is offset by the construction of new houses and the resumption of growth in alterations and additions. Steady increases in Queensland's population and given sustained employment growth, demand for housing will recover in the medium term.

*Non-Residential Building* work increased by 7% last year. This was driven by the rebound in business investment supported by increased government consumption and investment. While business confidence seems to have faltered in the most recent leading indicators such as the value of *Non-Residential Building* approvals, growth is expected to be carried forward into 2018-19, albeit at a less rapid rate. The approvals data suggests that the largest increases in activity will be in *Education* and *Health and Aged Care*. Notably, eight new projects in *Health and Aged Care* were entered into the Major Projects Database for Queensland over the last six months.

Strong growth of 11% in *Engineering Construction* last year was supported by very large increases in *Electricity and Pipelines* (particularly investment in renewable energy projects, including wind and solar farms), *Water and Sewerage* and *Roads*. The Queensland Government's \$12 billion capital works program in 2018-19, is expected to underpin continuation of high levels of construction activity in infrastructure although the rate of growth is levelling out. Looking at business investment trends, fewer new major resources projects are entering into consideration at present and those that are appearing, are smaller in scale than the mega-projects that have been recently completed. Work done in *Heavy Industry* is expected to continue to decline into the medium-term.

The downturn in the residential property market and *Residential Building* activity may be deeper than projected and this would erode employment growth, posing a downside risk to these forecasts. Growth in business investment may be stronger than projected, raising construction employment and posing a source of upside risk to these forecasts.

## QLD Building Activity Comparisons

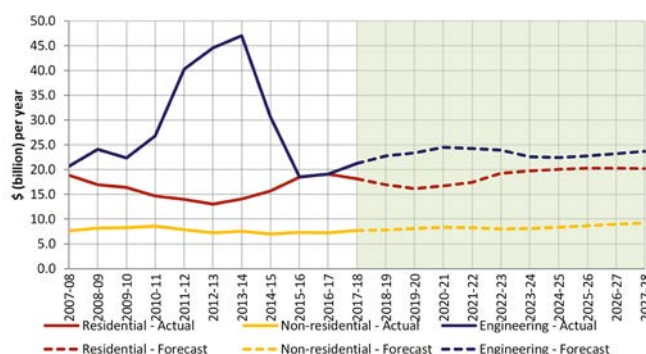
Total building and construction work increased by 3.8% last year. Significant increases in *Non-Residential Building* and *Engineering Construction* activity were offset by a contraction in *Residential Building* activity.

The contraction in *Residential Building* is expected to deepen this year and be carried over into 2019-20. This contraction started with a 20% reduction in *New Other Residential* (apartments and townhouses) last year and it will extend to every other Residential Building subcategory this year and next year.

Growth in *Non-Residential Building* approvals moderated over last year. While a significant number of new projects have entered the Major Projects Database over the last year, the numbers in the second half of the year were lower than in the first half. Growth in the value of *Non-Residential Building* work done is expected to moderate to 0.5% this year.

Further strong growth in *Engineering Construction* activity is expected, mainly through continued investment in major infrastructure projects. This will be sufficient to more than offset the drag on growth posed by declining activity in *Telecommunications* and *Heavy Industry Including Mining*.

Total work done is expected to increase this year to \$47 billion. It will continue to grow over the next five years to reach \$51 billion in 2022-23.



## QLD Building and Construction Aggregates (\$ billion)

Source: ABS and ACIF CFC

## QLD Value of Work Done by Type (\$ million)

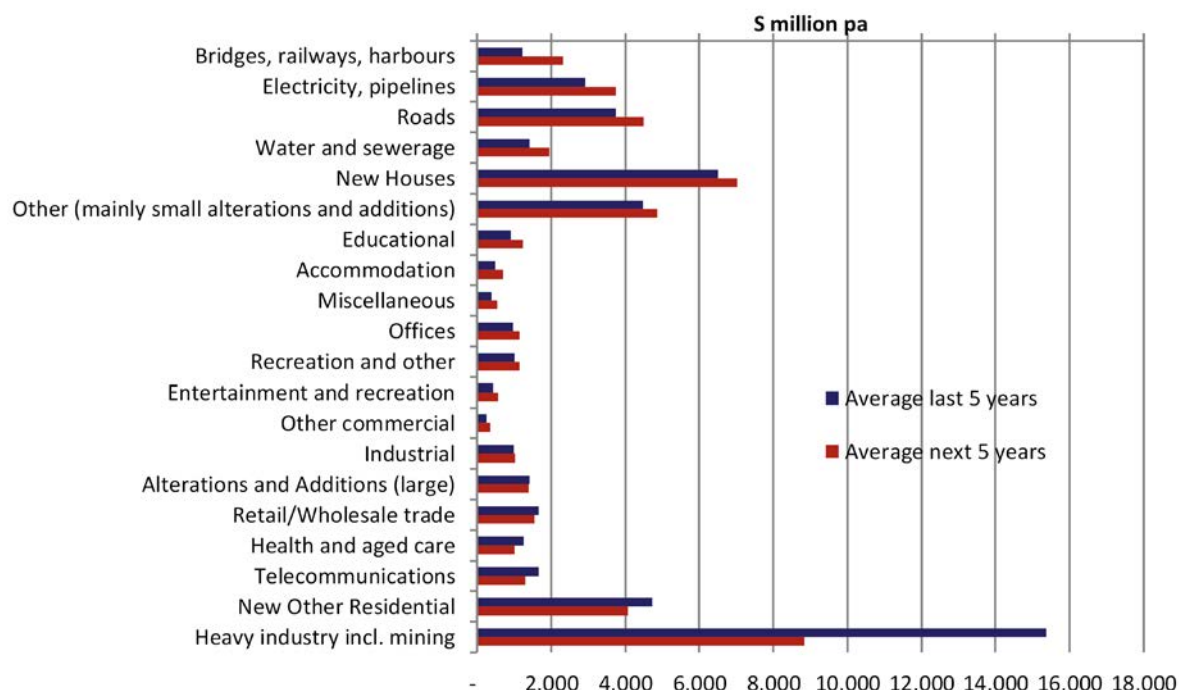
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	14,051	15,733	18,478	19,114	18,190	16,993	16,208	16,727	17,455	19,300
Non-Residential Building	7,563	6,994	7,313	7,192	7,728	7,767	8,112	8,366	8,256	7,978
Engineering Construction	46,998	30,706	18,577	19,113	21,229	22,770	23,430	24,511	24,301	23,918
<b>Total Construction</b>	<b>68,612</b>	<b>53,433</b>	<b>44,368</b>	<b>45,419</b>	<b>47,146</b>	<b>47,529</b>	<b>47,751</b>	<b>49,604</b>	<b>50,013</b>	<b>51,195</b>
	% change (YoY)					% change (YoY)				
Residential Building	7.9	12.0	17.4	3.4	- 4.8	- 6.6	- 4.6	3.2	4.4	10.6
Non-Residential Building	5.0	- 7.5	4.6	- 1.7	7.5	0.5	4.5	3.1	- 1.3	- 3.4
Engineering Construction	5.5	- 34.7	- 39.5	2.9	11.1	7.3	2.9	4.6	- 0.9	- 1.6
<b>Total Construction</b>	<b>5.9</b>	<b>- 22.1</b>	<b>- 17.0</b>	<b>2.4</b>	<b>3.8</b>	<b>0.8</b>	<b>0.5</b>	<b>3.9</b>	<b>0.8</b>	<b>2.4</b>

“YoY” = year-on-year

Source: ABS and ACIF CFC

# Queensland

## QLD Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Queensland

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

Infrastructure construction activities are at the top of the list of 'winners' in building and construction activity in Queensland. Winning in this context means that a subsector will see increases in the value of work to be done in the next five years compared to work actually done in the last five years. The four largest winners include *Bridges, Railways and Harbours*, *Electricity and Pipelines* and *Roads* and *Water and Sewerage*.

*New Houses* appears at the top end of the list despite an expected cyclical downturn, because growth is projected to resume from around the middle of the next five years.

The sectors with the biggest losses include *Heavy Industry Including Mining*, *Telecommunications* and *New Other Residential* which are all subject to declines that have already started.

## QLD Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	5,925	6,281	6,639	6,818	6,821	6,694	6,679	6,935	7,290	7,491
New Other Residential	3,108	4,067	5,650	6,006	4,787	4,193	3,895	3,649	3,678	4,910
Alterations and Additions (Lrg)	1,332	1,380	1,503	1,408	1,468	1,325	1,278	1,360	1,444	1,548
Other (Alterations & Additions)	3,686	4,005	4,686	4,883	5,114	4,782	4,356	4,783	5,043	5,350
<b>Non-Residential Building</b>										
Accommodation	252	312	441	536	892	777	709	674	700	609
Education	922	1,008	734	991	922	1,251	1,323	1,305	1,162	1,112
Entertainment and Recreation	240	204	596	512	613	534	585	611	560	519
Health and Aged Care	1,867	1,155	1,448	913	926	928	1,056	1,030	1,005	1,039
Industrial	1,227	874	801	1,112	946	844	949	1,051	1,094	1,164
Miscellaneous	384	299	298	377	539	479	486	574	604	589
Offices	875	1,082	1,021	838	1,052	1,138	1,174	1,152	1,212	1,018
Other Commercial	214	322	206	233	294	353	329	326	349	377
Retail and Wholesale Trade	1,582	1,737	1,768	1,679	1,543	1,462	1,500	1,643	1,570	1,552
<b>Engineering Construction</b>										
Roads	4,440	3,249	2,984	3,691	4,350	4,603	4,601	4,555	4,358	4,360
Bridges, Railways and Harbours	1,295	1,436	1,082	1,289	1,000	1,761	2,341	2,562	2,665	2,219
Electricity and Pipelines	4,749	2,691	1,816	1,749	3,575	3,857	4,023	4,061	3,701	3,093
Water and Sewerage	1,986	1,404	996	1,195	1,456	2,045	2,098	2,023	1,901	1,706
Telecommunications	1,328	1,240	1,535	2,199	2,024	1,704	1,194	1,069	1,180	1,322
Heavy Industry inc. Mining	32,258	19,565	8,984	8,107	7,907	7,619	8,008	9,064	9,392	10,124
Recreation and Other	943	1,121	1,180	882	917	1,181	1,165	1,177	1,105	1,095
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	0.7	6.0	5.7	2.7	0.1	- 1.9	- 0.2	3.8	5.1	2.8
New Other Residential	29.2	30.8	38.9	6.3	- 20.3	- 12.4	- 7.1	- 6.3	0.8	33.5
Alterations and Additions (Lrg)	1.1	3.7	8.9	- 6.4	4.3	- 9.7	- 3.5	6.4	6.2	7.2
Other (Alterations & Additions)	8.0	8.6	17.0	4.2	4.7	- 6.5	- 8.9	9.8	5.4	6.1
<b>Non-Residential Building</b>										
Accommodation	1.4	23.8	41.6	21.5	66.4	- 12.9	- 8.8	- 4.9	3.8	- 12.9
Education	- 9.4	9.3	- 27.2	35.0	- 6.9	35.7	5.7	- 1.4	- 10.9	- 4.4
Entertainment and Recreation	- 20.0	- 14.7	191.5	- 14.1	19.7	- 12.9	9.6	4.4	- 8.3	- 7.3
Health and Aged Care	34.1	- 38.1	25.4	- 36.9	1.4	0.2	13.9	- 2.5	- 2.4	3.4
Industrial	4.7	- 28.7	- 8.4	38.9	- 14.9	- 10.8	12.4	10.8	4.1	6.4
Miscellaneous	- 19.2	- 22.2	- 0.5	26.7	42.8	- 11.1	1.6	18.1	5.2	- 2.6
Offices	- 26.8	23.7	- 5.6	- 18.0	25.6	8.2	3.2	- 1.9	5.1	- 16.0
Other Commercial	- 22.6	50.9	- 36.1	13.2	26.2	19.8	- 6.7	- 0.8	7.1	7.9
Retail and Wholesale Trade	40.2	9.8	1.8	- 5.0	- 8.1	- 5.2	2.6	9.5	- 4.4	- 1.2
<b>Engineering Construction</b>										
Roads	- 15.0	- 26.8	- 8.1	23.7	17.8	5.8	- 0.0	- 1.0	- 4.3	0.0
Bridges, Railways and Harbours	- 16.7	10.9	- 24.7	19.2	- 22.4	76.0	32.9	9.4	4.0	- 16.8
Electricity and Pipelines	- 5.4	- 43.3	- 32.5	- 3.7	104.4	7.9	4.3	0.9	- 8.9	- 16.4
Water and Sewerage	- 19.8	- 29.3	- 29.1	20.0	21.8	40.5	2.6	- 3.6	- 6.0	- 10.3
Telecommunications	16.8	- 6.6	23.8	43.2	- 7.9	- 15.8	- 29.9	- 10.4	10.3	12.1
Heavy Industry inc. Mining	14.0	- 39.3	- 54.1	- 9.8	- 2.5	- 3.6	5.1	13.2	3.6	7.8
Recreation and Other	11.6	18.9	5.3	- 25.2	3.9	28.8	- 1.3	1.0	- 6.2	- 0.9



# South Australia

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South Australia's economy is showing a rapid rate of improvement. State Final Demand (SFD) grew by 4% in real terms over 2017–18, a significant improvement over some years in the recent past of low or no growth. The state seems to be weathering the issues caused by the end of car manufacturing. While employment growth in South Australia has been lower than the national employment growth rate, the state is achieving some employment growth and the unemployment rate is falling gradually. Declines in production and employment in manufacturing have been offset by growth in services especially in health care and education.

A relatively low rate of population growth still challenges more rapid economic growth in South Australia. An average annual rate of growth of 0.9% was achieved over the last decade, marginally below the national average. Analysts frequently note that younger people keep leaving, which exacerbates the key demographic challenge faced by the state as the number of retirees increases relative to the working age population.

Earlier forecasts of construction activity in South Australia probably paid excessive attention to the significant economic challenges facing the state and underplayed the early signs of emerging strength in building and contraction activity. It is now clear that building and construction activity has been at the centre of the improvement in South Australia's recent economic performance. The recent lift in construction activity for South Australia has been broadly based, with strong rises over the past year in *Residential Building*, *Non-Residential Building* and in *Engineering Construction*.

Dwelling investment (which includes all types of *Residential Building* work tracked by ACIF) increased by 8% over 2017-18 to reach \$5 billion, a record high level. *New Other* dwelling (which includes town houses and apartments) is subject to a particularly strong upturn with approvals in this sub-sector increasing by 16% through the year to June 2018. Residential building activity (especially new houses and other dwellings) will grow again in 2018-19 as the sector completes work that is already in the construction pipeline. Weakening housing finance commitments and increases in interest rates charged by the major banks on mortgages is expected to force a decline in *Residential Building* activity in 2019-20.

Higher levels of business investment have been driving growth. This can be seen in the 23% increase recorded in *Non-Residential Building* work done in 2017-18. There is \$1.8 billion of *Non-Residential Building* projects under construction in the Major Projects Database at present and a further \$7 billion that are viewed as being 'firm' or where registrations have been called. These include \$670 million for defence facilities (classified under *Miscellaneous*) the \$300 million redevelopment of Adelaide Festival Plaza, the \$300 million redevelopment of the Westin Hotel in Adelaide, the \$300 million Calvary Adelaide Hospital and others.

The growth in approvals for *Non-Residential Building* grew over most of last year but seems to have suffered a set-back in recent months. This points to a softening in growth in *Non-Residential Building* activity, bringing it down from the 23% recorded last year to 2-5% over the next two years.

Growth in *Engineering Construction* activity expanded by 23% last year. Analysts note that the 'catch-up investment' required to raise the reliability of electricity supply has been rapid. Growth has also been provided through increased government investment on *Roads and Bridges*, *Railways and Harbours*.

# South Australia

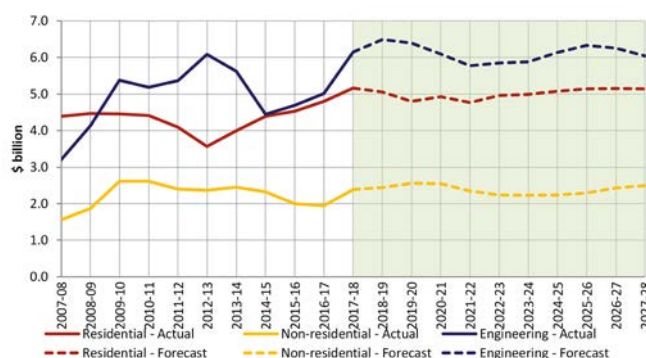
## SA Building Activity Comparisons

The forecasts project a faltering, and then weakening in *Residential Building* activity, becoming a drag on growth, in an otherwise very positive outlook for building and construction activity in South Australia.

Growth is being led by a rebound in *Engineering Construction*. The rebound is broadly based with strong growth in every subcategory of activity except *Telecommunications*.

*Non-Residential Building* approvals grew by 27% over last year. New *Non-Residential Building* projects have been added to the Major Projects Database over the last six months, but the numbers have fallen from those added in the first six months of the year. Areas of particular interest include *Accommodation, Industrial Education, Health and Aged Care* and *Miscellaneous*. Building activity is projected to increase in by 2% over 2018-19 and by 4% in 2019-20.

Total building and construction activity is projected to grow by 2.1% this year. Total activity will dip slightly in 2019-20 and 2020-21 reflecting the period when the expected downturn in *Residential Building* will be at its worst.



## SA Building and Construction Aggregates (\$ billion)

Source: ABS and ACIF CFC

## SA Value of Work Done by Type (\$ million, 2015-16 prices)

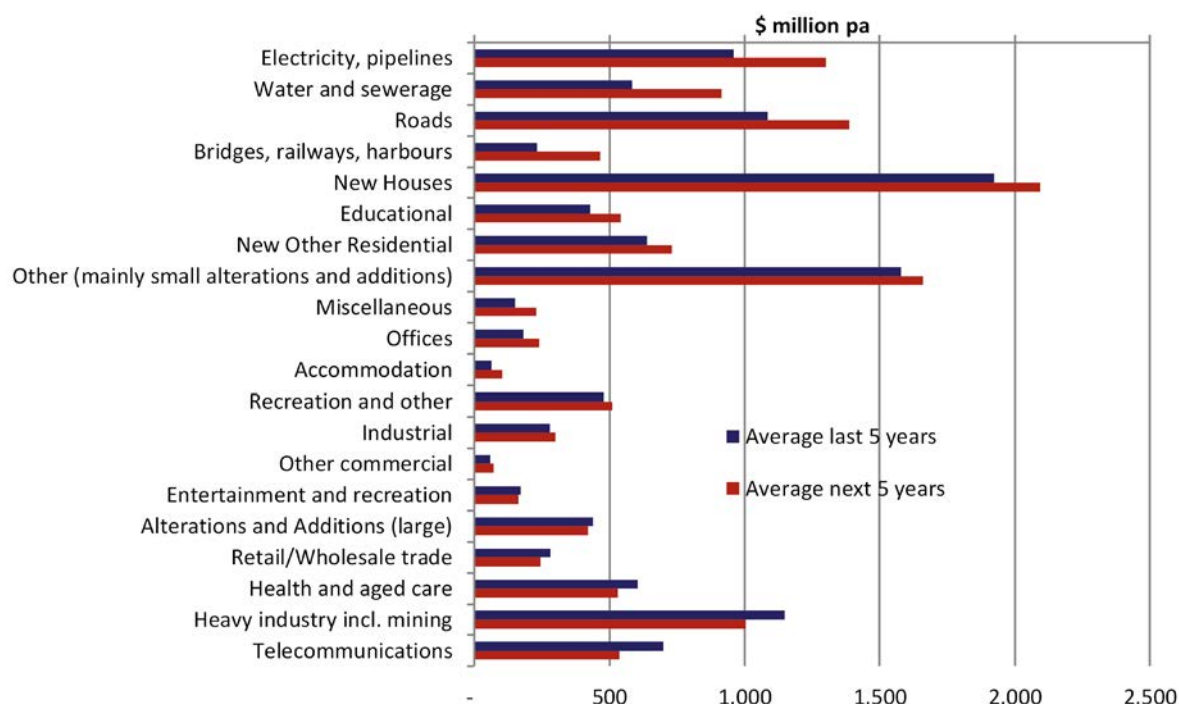
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	4,000	4,396	4,534	4,802	5,165	5,058	4,803	4,926	4,771	4,960
Non-Residential Building	2,450	2,329	1,998	1,944	2,386	2,443	2,557	2,548	2,347	2,238
Engineering Construction	5,623	4,446	4,697	5,012	6,149	6,491	6,397	6,090	5,773	5,843
<b>Total Construction</b>	<b>12,073</b>	<b>11,171</b>	<b>11,229</b>	<b>11,758</b>	<b>13,700</b>	<b>13,991</b>	<b>13,757</b>	<b>13,564</b>	<b>12,892</b>	<b>13,041</b>
	% change (YoY)					% change (YoY)				
Residential Building	12.0	9.9	3.1	5.9	7.6	- 2.1	- 5.0	2.5	- 3.1	3.9
Non-Residential Building	3.4	- 4.9	- 14.2	- 2.7	22.8	2.4	4.7	- 0.3	- 7.9	- 4.6
Engineering Construction	- 7.6	- 20.9	5.7	6.7	22.7	5.6	- 1.4	- 4.8	- 5.2	1.2
<b>Total Construction</b>	<b>0.4</b>	<b>- 7.5</b>	<b>0.5</b>	<b>4.7</b>	<b>16.5</b>	<b>2.1</b>	<b>- 1.7</b>	<b>- 1.4</b>	<b>- 5.0</b>	<b>1.2</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC

# South Australia

## SA Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - South Australia

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

Infrastructure categories dominate at the upper end of the list of 'winners' as they are expected to gain building and construction activity over the next five years. This includes *Electricity and Pipelines*; *Water and Sewerage*; and *Roads* (featuring the north south corridor including the Northern Connector).

*Residential Building* categories such as *New Other* (mainly small alterations and additions) and *New Houses* appear in the middle sections of the list of winners despite an expected cyclical downturn, because growth is projected to resume from around the middle of the next five years. Some of this growth could be in major projects such as the Port Adelaide Rejuvenation project or the Eden Village Township Expansion.

The largest 'loser' of work done in the next five years compared to the last five years is in *Telecommunications*, *Heavy Industry Including Mining* and *Health and Aged Care*. *Health and Aged Care* is on the list of 'losers', reflecting the point that the completion of the Royal Adelaide Hospital and UniSA Centre for Cancer Biology held more value than projects currently in the pipeline. These include projects such as the New Children's Hospital stage 2, and the new Adelaide Women's Hospital.

# South Australia

## SA Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	1,752	1,985	1,868	1,941	2,066	2,152	2,061	2,065	2,065	2,122
New Other Residential	494	582	620	644	856	940	836	775	514	583
Alterations and Additions (Lrg)	438	447	437	434	438	406	390	417	445	450
Other (Alterations & Additions)	1,316	1,382	1,610	1,783	1,806	1,560	1,515	1,668	1,747	1,805
<b>Non-Residential Building</b>										
Accommodation	73	37	35	64	114	129	128	118	87	56
Education	508	291	420	416	503	529	614	577	505	482
Entertainment and Recreation	281	131	137	124	187	187	176	174	159	122
Health and Aged Care	655	908	561	535	365	499	530	534	541	546
Industrial	235	294	266	245	359	290	308	310	289	305
Miscellaneous	98	136	93	142	284	203	203	232	257	254
Offices	228	210	141	103	228	310	278	264	191	154
Other Commercial	58	54	36	69	76	82	73	72	69	66
Retail and Wholesale Trade	315	267	309	246	270	213	248	267	250	252
<b>Engineering Construction</b>										
Roads	1,116	994	876	1,120	1,319	1,413	1,378	1,374	1,388	1,382
Bridges, Railways and Harbours	400	91	96	185	390	426	436	450	425	588
Electricity and Pipelines	899	636	794	1,033	1,434	1,693	1,531	1,304	1,046	933
Water and Sewerage	659	394	642	538	687	914	1,034	960	870	794
Telecommunications	496	657	788	852	700	698	512	439	485	553
Heavy Industry inc. Mining	1,345	1,247	1,127	867	1,150	826	989	1,039	1,058	1,108
Recreation and Other	708	428	373	418	469	520	517	525	501	485
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	12.5	13.3	- 5.9	3.9	6.4	4.2	- 4.2	0.2	- 0.0	2.7
New Other Residential	38.6	17.9	6.5	3.9	32.9	9.9	- 11.1	- 7.4	- 33.7	13.5
Alterations and Additions (Lrg)	8.2	1.9	- 2.3	- 0.6	0.9	- 7.4	- 3.8	7.0	6.5	1.3
Other (Alterations & Additions)	4.9	5.0	16.5	10.8	1.3	- 13.6	- 2.9	10.1	4.8	3.3
<b>Non-Residential Building</b>										
Accommodation	48.0	- 48.9	- 4.7	82.5	76.1	14.0	- 1.4	- 7.9	- 26.3	- 35.0
Education	13.3	- 42.8	44.2	- 1.0	21.0	5.2	16.0	- 6.0	- 12.4	- 4.5
Entertainment and Recreation	- 4.4	- 53.2	4.0	- 9.0	50.6	- 0.0	- 6.2	- 1.1	- 8.7	- 23.2
Health and Aged Care	22.3	38.6	- 38.3	- 4.6	- 31.8	36.8	6.2	0.9	1.3	0.9
Industrial	5.4	25.2	- 9.4	- 8.0	46.5	- 19.1	5.9	0.8	- 6.9	5.8
Miscellaneous	- 40.9	39.3	- 31.6	52.5	99.5	- 28.5	0.2	14.2	10.6	- 1.1
Offices	- 11.7	- 7.7	- 33.0	- 27.0	121.8	35.9	- 10.4	- 4.8	- 27.9	- 19.3
Other Commercial	- 37.8	- 6.8	- 33.0	90.5	11.5	7.0	- 10.5	- 1.2	- 4.6	- 3.7
Retail and Wholesale Trade	3.6	- 15.3	16.0	- 20.6	10.1	- 21.2	16.6	7.4	- 6.3	0.7
<b>Engineering Construction</b>										
Roads	- 13.2	- 10.9	- 11.9	27.8	17.8	7.1	- 2.4	- 0.3	1.1	- 0.4
Bridges, Railways and Harbours	- 54.3	- 77.3	5.4	93.2	110.6	9.3	2.3	3.3	- 5.5	38.2
Electricity and Pipelines	- 19.7	- 29.3	24.9	30.1	38.8	18.1	- 9.6	- 14.8	- 19.8	- 10.8
Water and Sewerage	- 17.9	- 40.3	63.3	- 16.3	27.8	33.1	13.1	- 7.2	- 9.4	- 8.7
Telecommunications	52.5	32.4	20.1	8.0	- 17.7	- 0.4	- 26.7	- 14.2	10.4	14.2
Heavy Industry inc. Mining	36.9	- 7.3	- 9.6	- 23.1	32.6	- 28.1	19.7	5.0	1.9	4.7
Recreation and Other	1.7	- 39.5	- 12.9	12.1	12.2	10.9	- 0.7	1.6	- 4.6	- 3.2

# Tasmania

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The Tasmanian economy has performed reasonably well over 2017-18, with growth in State Final Demand increasing by 3.6%. Key drivers of growth have been moderate increases in household consumption, business investment and significant increases in public consumption and investment.

The relatively strong labour market in Tasmania has assisted in keeping net interstate migration into Tasmania on the positive side of the ledger. Above trend population growth has supported recent growth in demand.

The residential property market is running warm-to-hot. House prices in Hobart increased by around 12% over the past year (making the price increase in Hobart the highest of all of the capital cities at present). Rental demand is very strong, especially in the greater Hobart area, reflected in low rental vacancy rates, increasing rental prices and high rental yields. *Residential Building* work done increased by 5% in 2017-18. Residential building approvals, commencements, and residential building work yet to be done are increasing suggesting that growth in dwelling investment will be carried over into 2018-19.

*Non-Residential Building* activity is expected to increase in 2018-19. This is driven in part by increased public sector investment in health facilities including projects such as the redevelopment of the Royal Hobart Hospital, the construction of new schools, the Cradle Mountain Experience and a new prison in the north of the state, funded in the 2018-19 budget. The University of Tasmania has several major investment projects underway or planned. These include the continued work on The Hedberg in Hobart, and the planned relocation and expansion of the Launceston facilities from the Newnham campus to Inveresk.

Increased private sector investment will also contribute towards expanded *Non-Residential Building* work to be done in 2018-19. Key projects include the Reeve Street Commercial Development, Macquarie Point Waterfront, and redevelopment of the former Odeon Theatre site. There are many major tourism accommodation developments in the Major Projects Database at present including the development of a \$300 million multi-storey hotel to be attached to the Museum of Old and New Art (MONA) in Hobart.

The outlook for *Engineering Construction* activity in Tasmania is also bright. The 2018-19 Budget increased funding for infrastructure projects across Tasmania. TasWater also has a major capital investment program to upgrade its water and sewerage infrastructure. The Midland Highway and Illawarra Road roadworks and various other state-wide roadworks will add \$100 million to *Roads*. Large private sector projects planned or underway include the Cattle Hill, Port Latta and Granville Harbour wind farms with an estimated combined cost of around \$500 million.



## TAS Building Activity Comparisons

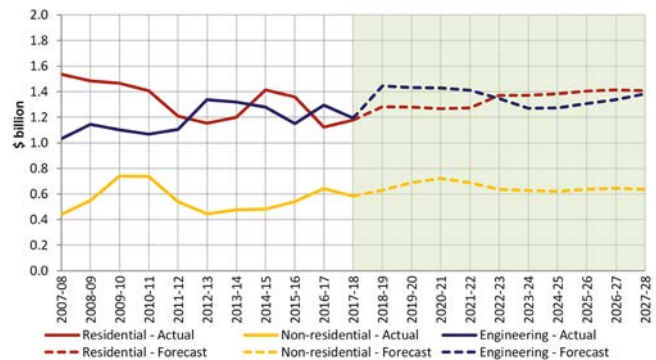
Total building and construction activity declined last year reflecting significant drops in *Non-Residential Building* and *Engineering Construction*.

All of the three types of building and construction activity are expected to increase this year, resulting in a 13% increase in total building and construction activity.

Dwelling approvals grew by a hefty 27% over 2017-18 suggesting that there is still significant growth in the pipeline. A significant increase in the value of *Residential Building* work is on the cards for 2018-19. Factors such as an Australia-wide reduction in the availability of credit are expected to drive a dip in activity in 2019-20, but this will be fairly modest in given signs of strength in underlying demand in Tasmania.

The value of *Non-Residential Building* approvals increased by 11% over the last year and a reasonable number of new projects are appearing in the Major Projects Database. This points to an increase in *Non-Residential Building* work over this year being carried over into 2019-20.

*Engineering Construction* is expected to increase significantly in 2018-19 largely reflecting increased investment in infrastructure (with the notable exception of an ongoing decline in *Telecommunications*).



**TAS Building and Construction Aggregates**  
(\$ billion)

Source: ABS and ACIF CFC

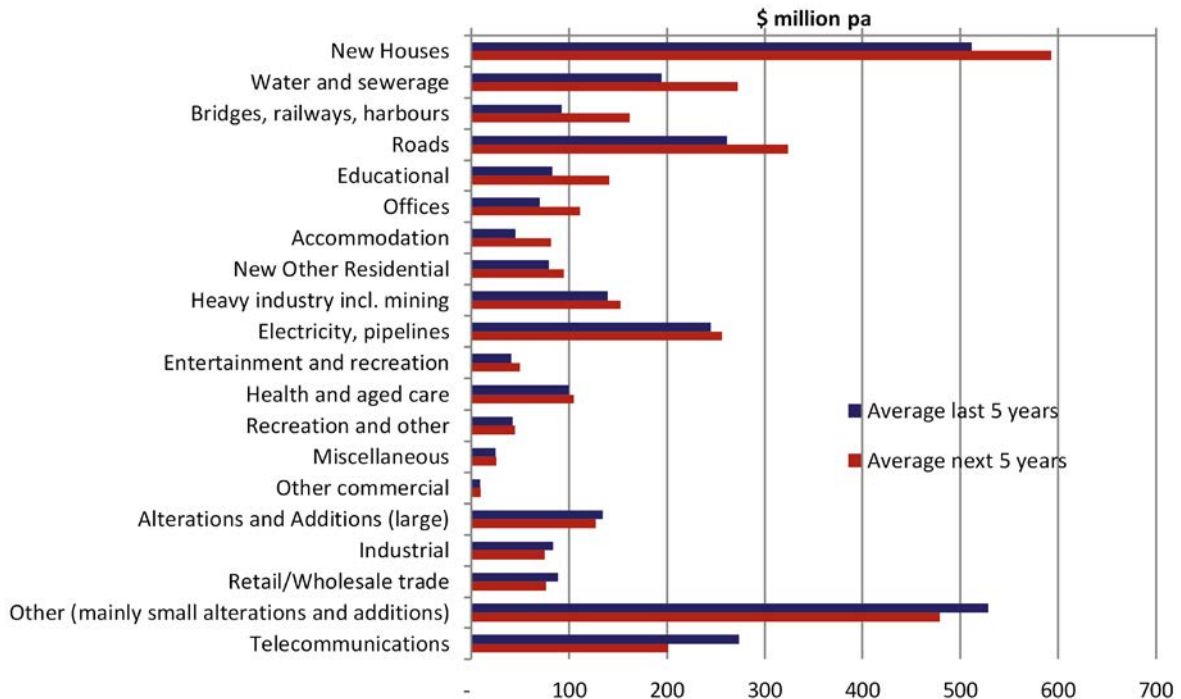
## TAS Value of Work Done by Type (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	1,201	1,413	1,360	1,122	1,178	1,282	1,279	1,266	1,273	1,370
Non-Residential Building	474	482	540	643	583	632	688	723	688	637
Engineering Construction	1,318	1,280	1,152	1,296	1,195	1,444	1,434	1,429	1,409	1,346
<b>Total Construction</b>	<b>2,993</b>	<b>3,175</b>	<b>3,053</b>	<b>3,061</b>	<b>2,956</b>	<b>3,359</b>	<b>3,401</b>	<b>3,417</b>	<b>3,371</b>	<b>3,353</b>
	% change (YoY)					% change (YoY)				
Residential Building	4.0	17.7	- 3.8	- 17.5	5.0	8.8	- 0.2	- 1.0	0.6	7.6
Non-Residential Building	6.9	1.6	12.2	18.9	- 9.3	8.4	8.9	5.0	- 4.8	- 7.4
Engineering Construction	- 1.5	- 2.9	- 10.0	12.5	- 7.8	20.9	- 0.7	- 0.3	- 1.3	- 4.5
<b>Total Construction</b>	<b>1.9</b>	<b>6.1</b>	<b>- 3.8</b>	<b>0.3</b>	<b>- 3.4</b>	<b>13.6</b>	<b>1.3</b>	<b>0.5</b>	<b>- 1.4</b>	<b>- 0.5</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC

## TAS Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Tasmania (\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

*New Houses* are at the top of the list of 'winners' which are subcategories of building and construction work where the projected amount of work to be done over the next five years is higher than the work done over the last five years. This reflects the fact that New House building is generally the largest or close to the largest subcategories of work (in terms of the value of work done) and that activity is expected to hold up fairly well into the medium term. The other areas at the top of the list of winners are generally infrastructure oriented including *Water and Sewerage*, *Bridges, Railways and Harbours*, and *Roads*.

The sectors that are expected to see the largest losses in the value of work to be done are *Retail and Wholesale Trade*, *Other* (mainly small alterations and additions) and *Telecommunications* (as the rollout of the NBN draws to a close).

## TAS Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	411	566	566	478	539	604	623	600	558	581
New Other Residential	58	82	82	65	110	118	106	97	71	80
Alterations and Additions (Lrg)	150	137	138	128	121	121	118	124	131	142
Other (Alterations & Additions)	583	627	575	450	408	439	432	444	513	567
<b>Non-Residential Building</b>										
Accommodation	8	18	42	102	56	82	88	87	81	68
Education	64	75	83	131	63	118	149	160	139	141
Entertainment and Recreation	29	28	33	42	72	54	51	54	50	37
Health and Aged Care	65	41	88	151	152	89	100	117	111	105
Industrial	95	117	87	56	62	70	76	71	74	84
Miscellaneous	53	27	10	12	21	23	23	27	28	26
Offices	43	57	80	79	91	109	115	119	123	92
Other Commercial	14	8	8	9	6	11	9	9	8	9
Retail and Wholesale Trade	104	112	109	60	59	76	78	78	74	76
<b>Engineering Construction</b>										
Roads	224	291	230	288	272	323	328	322	320	326
Bridges, Railways and Harbours	97	80	70	129	83	116	161	195	197	142
Electricity and Pipelines	317	241	215	214	237	271	268	270	244	227
Water and Sewerage	157	186	161	158	311	293	291	275	265	237
Telecommunications	322	264	321	362	101	259	196	166	176	208
Heavy Industry inc. Mining	162	164	127	115	129	133	147	157	161	163
Recreation and Other	40	53	28	29	62	49	42	44	46	43
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	- 7.6	37.9	- 0.0	- 15.5	12.6	12.2	3.1	- 3.7	- 7.1	4.2
New Other Residential	- 16.5	42.2	- 1.0	- 19.9	68.7	6.7	- 9.7	- 8.9	- 26.3	12.4
Alterations and Additions (Lrg)	- 1.2	- 8.3	0.3	- 7.0	- 5.4	- 0.2	- 2.4	5.6	5.7	8.1
Other (Alterations & Additions)	19.0	7.6	- 8.4	- 21.7	- 9.3	7.6	- 1.7	2.9	15.4	10.6
<b>Non-Residential Building</b>										
Accommodation	- 25.2	108.6	138.5	142.6	- 44.6	45.6	7.4	- 1.4	- 6.4	- 16.4
Education	- 28.9	16.0	10.8	57.9	- 51.6	86.0	26.3	7.7	- 13.3	1.4
Entertainment and Recreation	- 14.3	- 2.9	18.0	28.0	71.2	- 25.2	- 6.0	6.5	- 7.9	- 25.4
Health and Aged Care	60.8	- 37.3	116.6	71.2	0.7	- 41.6	12.5	16.9	- 5.3	- 5.1
Industrial	- 0.4	23.8	- 25.7	- 35.9	11.3	13.5	7.8	- 5.9	4.0	13.1
Miscellaneous	111.2	- 49.3	- 61.5	20.7	69.7	10.9	- 3.2	16.7	7.0	- 10.0
Offices	- 12.2	34.0	39.7	- 0.6	15.0	19.5	5.2	3.5	3.4	- 25.6
Other Commercial	- 20.9	- 39.4	- 3.1	15.3	- 39.8	99.7	- 14.2	0.1	- 12.8	8.4
Retail and Wholesale Trade	26.3	7.2	- 2.1	- 45.1	- 1.6	28.4	3.0	0.4	- 5.8	3.3
<b>Engineering Construction</b>										
Roads	20.9	29.9	- 21.2	25.6	- 5.6	18.7	1.6	- 1.9	- 0.7	1.9
Bridges, Railways and Harbours	26.5	- 17.5	- 12.3	84.2	- 35.5	39.3	38.8	21.1	1.1	- 28.3
Electricity and Pipelines	- 25.8	- 23.8	- 10.9	- 0.7	10.9	14.5	- 1.2	0.6	- 9.6	- 6.9
Water and Sewerage	- 28.3	18.7	- 13.6	- 1.8	96.9	- 5.9	- 0.7	- 5.3	- 3.6	- 10.7
Telecommunications	15.2	- 18.0	21.7	12.9	- 72.2	156.7	- 24.3	- 15.3	6.1	18.4
Heavy Industry inc. Mining	83.2	1.5	- 22.4	- 9.3	11.6	3.4	10.7	6.3	2.8	1.3
Recreation and Other	- 36.5	33.8	- 46.2	3.0	109.9	- 20.5	- 14.2	5.0	4.3	- 7.2

# Victoria

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The epicentre of economic growth in Australia is in Victoria. State Final Demand grew by 5% over 2017-18, and this is the third year in which growth in Victoria has been well above the national average. The Victorian economy has benefited from sustained strong population growth and low interest rates, both of which have supported strengthening consumption and dwelling investment. Public demand has also grown strongly, contributing half of the overall growth in the state in previous years.

Strong economic conditions have generated record levels of employment in Victoria. Employment growth has been led by growth in jobs in service industries and in construction.

Victoria's population is estimated to have grown by 2.2% in the year to June 2018, reaching 6.5 million resident persons. The ACIF forecasts factor in continued rapid population growth rates over the rest of this decade, although the rate is expected to moderate to under 1.9% reflecting reductions in Net Overseas Migration inflows.

Public investment is expected to continue to contribute to growth in the economy, with government infrastructure investment forecast to average \$10.1 billion a year over the period to 2021-22. The raft of major infrastructure projects and other public investment activities has been dubbed "Victoria's Big Build" and it includes major projects such as the Suburban Roads Upgrade, the Monash Freeway Upgrade – Stage 2, and completion of projects already underway such as the Metro Tunnel, West Gate Tunnel Project and Level Crossing Removal Program.

Business investment is forecast to grow modestly over the forward estimates. Non-residential construction is expected to contribute to growth, underpinned by solid demand and low capital costs.

"Victoria's Big Build" relies on a large, highly skilled workforce with expertise in all aspects of building and construction to ensure that projects are delivered on time and on cost. Increased demands on the building and construction workforce is coming at a time when other states – particularly New South Wales and Queensland – are also making significant investment in infrastructure and will be competing with Victoria for skilled workers.

There is a significant downside risk that the significant expansion in infrastructure and other building projects in Victoria, without measures to increase the supply of skilled workers, will encounter bottlenecks and suffer delays and unexpected cost increases.

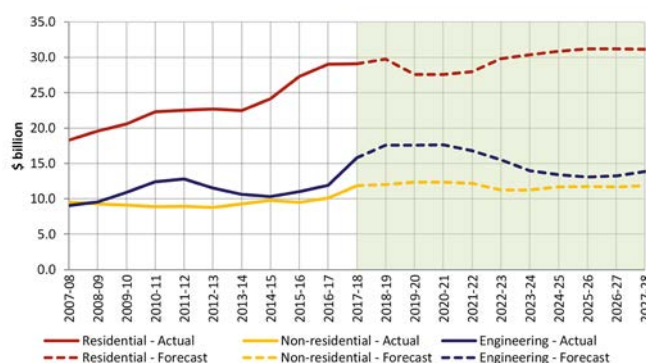
## VIC Building Activity Comparisons

Total building and construction activity grew by 11% last year (2017-18). Growth was led by a 32% increase in *Engineering Construction* activity. The 18% increase in *Non-Residential Building* also supported growth. *Residential Building* appeared to peak over last achieving modest growth of 0.2%, after being the main source of growth in Victorian building and construction activity over the previous four years.

The combination of tightened controls over foreign investors, credit constraints, and the tapering off of the rush of immigration into Melbourne have halted growth in *Residential Building*. Approvals and commencements data suggest that the industry may still have a significant amount of work in the pipeline. Notably, demand for *New Houses* still appears to be sound. *Residential Building* activity is expected to hover at elevated levels over the remainder of this year. Steep falls are expected in the following two-to-three years. While the rate of population growth is expected to moderate it will still drive significant demand for housing that will in turn drive a return to growth in *Residential Building* work in the medium term.

There are a relatively large number of Victorian *Non-Residential Building* projects in the Major Projects Database, although less were added in the last six months than in the earlier part of the year. The value of *Non-Residential Building* approvals contracted over the last year. This suggests that a moderation in growth in this type of building activity is in the pipeline. Activity is projected to slow to 1% this year.

*Engineering Construction* will see an 11% surge this year, bringing up the value of work done to \$18 billion. Strong growth will be broadly based, spanning most infrastructure subcategories except in *Telecommunications* (where the rollout of the NBN is tapering off) and in *Recreation and Other*.



## VIC Building and Construction Aggregates (\$ billion)

Source: ABS and ACIF CFC

## VIC Value of Work Done by Type (\$ million, 2015-16 prices)

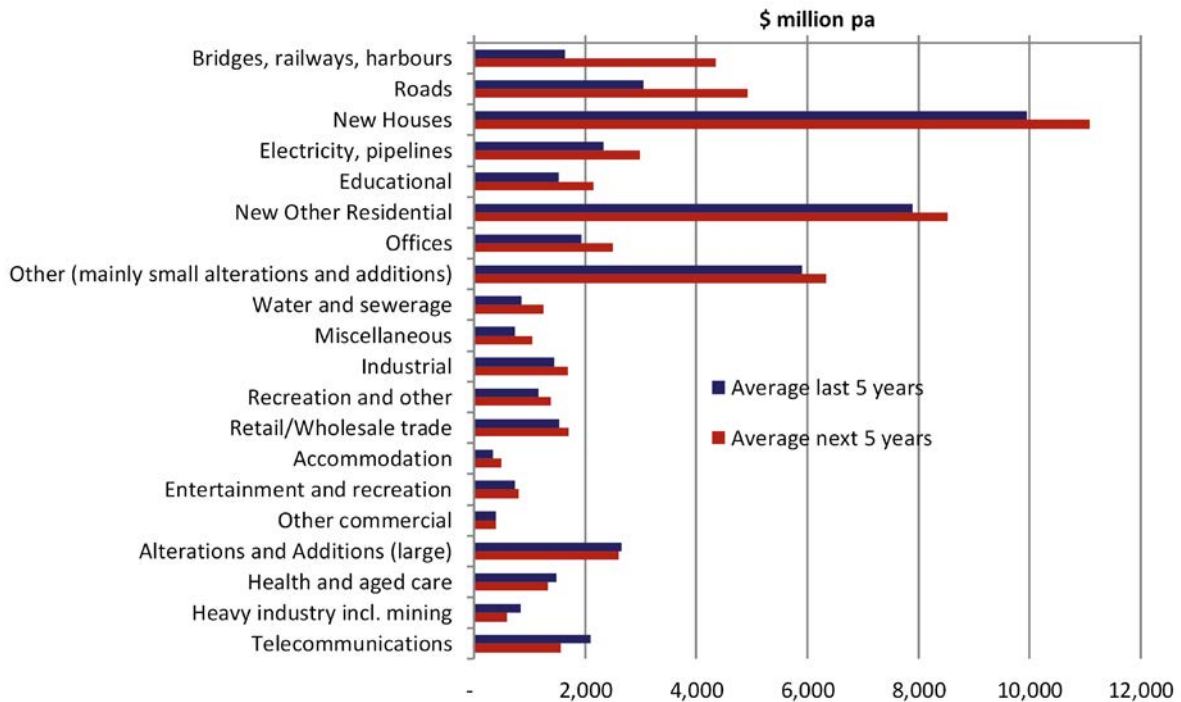
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	22,500	24,123	27,293	29,034	29,084	29,729	27,600	27,558	27,999	29,810
Non-Residential Building	9,251	9,762	9,487	10,084	11,878	12,043	12,399	12,393	12,221	11,266
Engineering Construction	10,643	10,316	11,073	11,940	15,831	17,607	17,590	17,674	16,803	15,520
<b>Total Construction</b>	<b>42,394</b>	<b>44,201</b>	<b>47,853</b>	<b>51,058</b>	<b>56,793</b>	<b>59,378</b>	<b>57,589</b>	<b>57,625</b>	<b>57,023</b>	<b>56,596</b>
	% change (YoY)					% change (YoY)				
Residential Building	- 0.9	7.2	13.1	6.4	0.2	2.2	- 7.2	- 0.2	1.6	6.5
Non-Residential Building	5.3	5.5	- 2.8	6.3	17.8	1.4	3.0	- 0.1	- 1.4	- 7.8
Engineering Construction	- 7.8	- 3.1	7.3	7.8	32.6	11.2	- 0.1	0.5	- 4.9	- 7.6
<b>Total Construction</b>	<b>- 1.5</b>	<b>4.3</b>	<b>8.3</b>	<b>6.7</b>	<b>11.2</b>	<b>4.6</b>	<b>- 3.0</b>	<b>0.1</b>	<b>- 1.0</b>	<b>- 0.7</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC



## VIC Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Victoria

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

Infrastructure categories are at the top of the list of 'winners'. Wining in this context is where a subcategory of building and construction activity is forecast to gain more work over the next five years than work done over the last five years. *Bridges, Railways and Harbours* is not the largest building and construction subcategory, but it is expected to see the largest gain in activity in the next five years reflecting the high priority given to investment in rail transport projects such as the ongoing Melbourne Metro and the very large scale of the recently announced Melbourne Metro 2 project.

Construction of *Roads* is also a major winner reflecting continued work on Western Distributor and the high priority expected to be given to projects such as the M80 Ring Road upgrade. New Houses are third on the list of 'winners' because the projected cyclical downturn in *Residential Building* activity is not expected to bite deeply into work in this subcategory and it will sustain some growth over most of the next five years.

There are few 'losers' in Victoria in this set of forecasts and most of the losses are quite small. The exception is *Telecommunications* which is expected to lose work over the next five years reflecting the completion of the NBN.

## VIC Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	8,516	9,286	10,341	10,679	10,918	11,220	10,699	10,790	11,202	11,499
New Other Residential	6,001	6,838	8,402	8,850	9,419	9,945	8,583	8,007	7,568	8,498
Alterations and Additions (Lrg)	2,674	2,575	2,594	2,837	2,563	2,448	2,379	2,565	2,721	2,899
Other (Alterations & Additions)	5,309	5,424	5,956	6,669	6,184	6,116	5,939	6,196	6,508	6,914
<b>Non-Residential Building</b>										
Accommodation	169	189	221	421	696	580	501	486	486	410
Education	1,233	1,227	1,263	1,668	2,218	2,175	2,313	2,277	2,101	1,897
Entertainment and Recreation	793	633	401	868	961	871	797	851	806	643
Health and Aged Care	1,421	1,899	1,583	1,151	1,371	1,218	1,328	1,350	1,389	1,341
Industrial	872	1,506	1,549	1,632	1,649	1,580	1,670	1,623	1,711	1,826
Miscellaneous	883	728	691	736	632	948	1,090	1,075	1,052	1,032
Offices	1,910	1,745	1,899	1,608	2,463	2,620	2,639	2,535	2,563	2,096
Other Commercial	473	458	297	207	478	468	399	350	356	362
Retail and Wholesale Trade	1,496	1,377	1,585	1,793	1,412	1,583	1,663	1,846	1,755	1,657
<b>Engineering Construction</b>										
Roads	1,920	2,927	2,836	3,247	4,286	4,882	5,306	5,236	5,070	4,153
Bridges, Railways and Harbours	1,600	949	1,202	1,449	2,965	4,153	4,389	4,664	4,385	4,127
Electricity and Pipelines	2,578	2,040	2,339	2,027	2,671	3,295	3,179	3,127	2,715	2,596
Water and Sewerage	911	706	724	720	1,174	1,320	1,340	1,292	1,222	1,093
Telecommunications	1,703	1,700	1,904	2,507	2,682	2,077	1,431	1,272	1,421	1,596
Heavy Industry inc. Mining	869	1,095	1,014	788	445	454	602	640	599	652
Recreation and Other	1,062	900	1,052	1,202	1,609	1,425	1,344	1,443	1,391	1,303
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	- 6.0	9.0	11.4	3.3	2.2	2.8	- 4.6	0.8	3.8	2.6
New Other Residential	2.2	14.0	22.9	5.3	6.4	5.6	- 13.7	- 6.7	- 5.5	12.3
Alterations and Additions (Lrg)	3.2	- 3.7	0.7	9.4	- 9.6	- 4.5	- 2.8	7.8	6.1	6.6
Other (Alterations & Additions)	2.6	2.2	9.8	12.0	- 7.3	- 1.1	- 2.9	4.3	5.0	6.2
<b>Non-Residential Building</b>										
Accommodation	- 25.8	11.7	16.7	90.6	65.5	- 16.6	- 13.7	- 3.0	0.0	- 15.7
Education	1.2	- 0.4	2.9	32.1	33.0	- 1.9	6.3	- 1.6	- 7.7	- 9.7
Entertainment and Recreation	16.8	- 20.3	- 36.7	116.7	10.7	- 9.4	- 8.5	6.8	- 5.2	- 20.2
Health and Aged Care	32.4	33.6	- 16.7	- 27.3	19.1	- 11.2	9.1	1.6	2.9	- 3.4
Industrial	- 20.4	72.8	2.9	5.3	1.0	- 4.1	5.7	- 2.8	5.4	6.7
Miscellaneous	91.9	- 17.5	- 5.1	6.5	- 14.2	50.1	15.0	- 1.3	- 2.2	- 1.9
Offices	- 4.2	- 8.6	8.8	- 15.3	53.1	6.4	0.7	- 3.9	1.1	- 18.2
Other Commercial	76.6	- 3.3	- 35.2	- 30.3	130.8	- 2.1	- 14.7	- 12.3	1.9	1.6
Retail and Wholesale Trade	- 15.3	- 7.9	15.1	13.1	- 21.3	12.1	5.1	11.0	- 4.9	- 5.6
<b>Engineering Construction</b>										
Roads	- 29.6	52.5	- 3.1	14.5	32.0	13.9	8.7	- 1.3	- 3.2	- 18.1
Bridges, Railways and Harbours	11.6	- 40.7	26.7	20.6	104.6	40.1	5.7	6.3	- 6.0	- 5.9
Electricity and Pipelines	- 13.0	- 20.9	14.7	- 13.3	31.8	23.4	- 3.5	- 1.6	- 13.2	- 4.4
Water and Sewerage	- 10.9	- 22.5	2.6	- 0.5	62.9	12.5	1.5	- 3.6	- 5.5	- 10.5
Telecommunications	14.7	- 0.2	12.0	31.6	7.0	- 22.5	- 31.1	- 11.1	11.6	12.4
Heavy Industry inc. Mining	- 23.7	25.9	- 7.3	- 22.4	- 43.5	2.1	32.6	6.2	- 6.3	8.7
Recreation and Other	37.0	- 15.3	17.0	14.2	33.9	- 11.5	- 5.7	7.4	- 3.6	- 6.3

# Western Australia

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The Western Australian economy is on its way to recovery from the after-effects of the end of the construction phase of the recent resources boom. After suffering a 2.7% contraction in GSP in 2016-17, the recent Western Australian budget estimated that activity grew by 2.5% in 2017-18. The return to growth is sponsored by an expansion in export volumes following the entry into the production phase of many large resource development projects.

The recent budget papers project an increase in GSP growth to 3.3% per annum into the medium term, with the domestic economy, primarily household consumption, expected to take over from exports as the major driver of growth from 2019-20. As the budget papers note, increases in activity in both the mining and non-mining sectors would represent a healthy transition to steadier and more balanced growth.

Further evidence of the transition that is underway in the Western Australian economy can be seen in the labour market. Recent improvements in employment growth have been driven by a diverse range of industries, many of which are in the non-resource sector of the economy (and most of which are the services sector such as in tourism, education, health care).

Dwelling investment in Western Australia declined by 5% in 2017-18 in response to weakening demand and mounting evidence of spare capacity in the housing market (underlined by significant falls in house prices and an increase in rental property vacancy rates). The number of dwelling approvals fell over 2017-18 and remain well below the average for the last decade. Dwelling investment is expected to continue to fall in 2018-19. Improvements will begin to be felt from 2019-20 in dwelling investment, in line with gradual improvements in employment and wages and given moderate improvements in population growth.

Growth in government consumption is projected to remain subdued in the medium term, averaging around 2% per annum. Public investment is forecast to increase by 3.5% in 2017-18 and 6% in 2018-19, before moderating to average growth of around 2% per annum over the last three years, broadly in line with trends in the Government's Asset Investment Program.

Western Australia has been suffering record low rates of population growth over recent years. This slow rate of growth, particularly in interstate and overseas migration, has been one of the drivers behind the decline in dwelling investment. Falls in population growth now appear to have troughed. Growth in the state's population rose to 0.8% over the year to March 2018, up from 0.6% in the previous year. The net decline from interstate migration is expected to taper off and natural increase is expected to be the primary driver of growth into the medium term. The ACIF forecasts factor in a moderate increase in the rate of population growth in Western Australia over the longer term.

# Western Australia

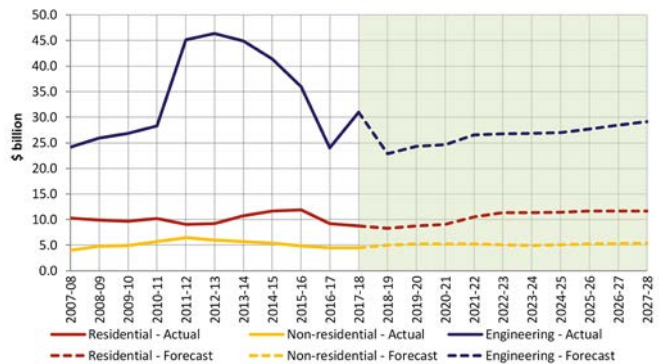
## WA Building Activity Comparisons

The 16% expansion in total building and construction activity last year was driven by a 'spike' in *Engineering Construction*.

The dip in *Engineering Construction* work done as activity returns to its underlying level dominates the forecasts for in Western Australia this year. Growth in most infrastructure construction activities will contribute \$1.4 billion to growth in *Engineering Construction* work done. The problem is that the loss of the 'spike' in *Heavy Industry Including Mining* will subtract \$10 billion from activity this year. There has been renewed interest in *Heavy Industry Including Mining* projects. Significant numbers of new projects are being added to the Major Projects Database. This points to a return to growth in the medium term.

*Residential Building* activity fell by 5% last year. The deepest part of a cyclical downturn has passed, but a further fall of around 5% is still in the pipeline. *Residential Building* activity will eventually recover and grow given a recovery in population growth and reasonable growth in employment.

*Non-Residential Building* came close to shrugging off a prolonged trough last year and growth is expected this year, admittedly it will be from a relatively low base in the level of activity.



## WA Building and Construction Aggregates (\$ billion)

Source: ABS and ACIF CFC

## WA Value of Work Done by Type (\$ million, 2015-16 prices)

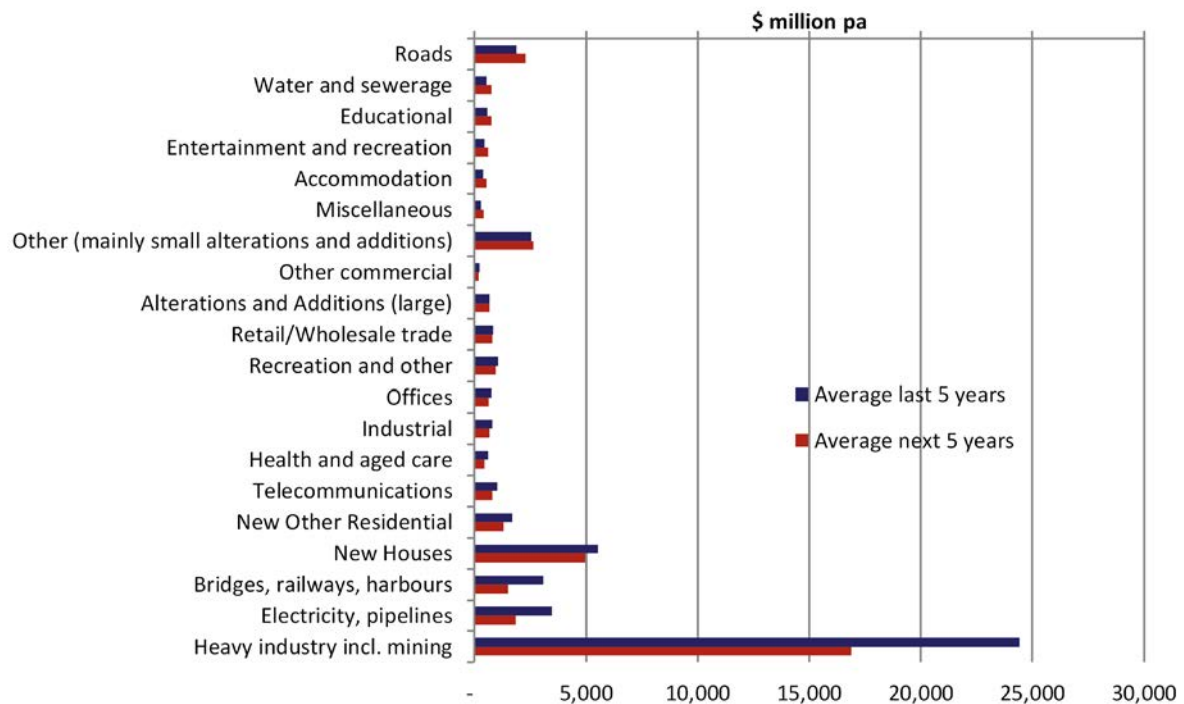
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Actual (\$ million)					Forecast (\$ million)				
Residential Building	10,731	11,677	11,899	9,217	8,738	8,315	8,717	9,051	10,487	11,338
Non-Residential Building	5,704	5,353	4,806	4,466	4,432	4,970	5,227	5,254	5,263	5,035
Engineering Construction	44,938	41,416	35,986	24,047	30,954	22,859	24,311	24,683	26,587	26,779
<b>Total Construction</b>	<b>61,373</b>	<b>58,446</b>	<b>52,690</b>	<b>37,729</b>	<b>44,124</b>	<b>36,144</b>	<b>38,254</b>	<b>38,988</b>	<b>42,336</b>	<b>43,152</b>
	% change (YoY)					% change (YoY)				
Residential Building	16.2	8.8	1.9	- 22.5	- 5.2	- 4.8	4.8	3.8	15.9	8.1
Non-Residential Building	- 5.1	- 6.1	- 10.2	- 7.1	- 0.8	12.2	5.2	0.5	0.2	- 4.3
Engineering Construction	- 3.1	- 7.8	- 13.1	- 33.2	28.7	- 26.2	6.4	1.5	7.7	0.7
<b>Total Construction</b>	<b>- 0.4</b>	<b>- 4.8</b>	<b>- 9.8</b>	<b>- 28.4</b>	<b>16.9</b>	<b>- 18.1</b>	<b>5.8</b>	<b>1.9</b>	<b>8.6</b>	<b>1.9</b>

"YoY" = year-on-year

Source: ABS and ACIF CFC

# Western Australia

## WA Changes in Building and Construction Activity (\$ million, 2015-16 prices)



### Changes in Activity - Western Australia

(\$ million, 2015-16 prices)

Source: ABS and ACIF CFC

The expected losers in *Heavy Industry Including Mining* dominates the chart. 'Losers' in this context is where a subcategory of building and construction activity is forecast to gain less work over the next five years than work done over the last five years. *Heavy Industry Including Mining* is the single largest building and construction subcategory and activity is expected to fall by \$10 billion next year as construction activity in many very large resource development projects was completed last year and the next wave of projects are not as large or will take some years to ramp up activity. While it is of a smaller scale the situation for *Electricity and Pipelines* is similar to that of *Heavy Industry Including Mining*.

Infrastructure construction projects are at the head of the list of 'winners'. This includes construction of *Roads* and *Water and Sewerage*. Plans for expanded public investment place *Education* at the upper end of the list of winners.



# Western Australia

## WA Value of Work Done by Subsector (\$ million, 2015-16 prices)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Residential Building</b>	<b>Value of Work Done (CVM, \$ million)</b>					<b>Forecast (\$ million)</b>				
New Houses	6,255	6,693	6,108	4,513	4,156	4,059	4,504	4,720	5,606	5,963
New Other Residential	1,620	1,818	2,014	1,584	1,340	1,116	1,163	1,101	1,487	1,702
Alterations and Additions (Lrg)	700	667	787	632	638	624	613	642	676	734
Other (Alterations & Additions)	2,156	2,499	2,989	2,487	2,604	2,516	2,438	2,588	2,718	2,940
<b>Non-Residential Building</b>										
Accommodation	124	314	520	451	516	646	597	517	508	458
Education	622	662	565	527	542	806	852	800	724	709
Entertainment and Recreation	199	383	636	680	418	644	693	689	599	498
Health and Aged Care	1,036	695	489	408	459	429	454	464	473	468
Industrial	1,320	838	810	575	472	539	635	640	718	834
Miscellaneous	283	278	228	305	307	359	397	445	449	437
Offices	928	1,073	709	517	578	624	656	613	757	623
Other Commercial	302	319	210	94	150	166	207	235	215	231
Retail and Wholesale Trade	888	791	638	908	989	756	736	851	818	777
<b>Engineering Construction</b>										
Roads	2,093	1,881	1,818	1,797	1,821	2,261	2,322	2,269	2,261	2,290
Bridges, Railways and Harbours	7,774	4,553	1,261	928	865	1,344	1,484	1,484	1,672	1,492
Electricity and Pipelines	4,900	5,087	3,962	1,471	1,881	1,988	2,063	1,696	1,671	1,786
Water and Sewerage	790	532	380	538	479	759	839	832	744	672
Telecommunications	742	811	992	1,378	1,132	1,044	748	668	745	831
Heavy Industry inc. Mining	26,645	27,428	26,744	17,164	24,164	14,405	15,896	16,762	18,574	18,789
Recreation and Other	1,995	1,124	829	771	614	1,057	959	971	920	920
<b>Residential Building</b>	<b>% change (YoY)</b>					<b>% change (YoY)</b>				
New Houses	17.9	7.0	- 8.7	- 26.1	- 7.9	- 2.3	11.0	4.8	18.8	6.4
New Other Residential	35.4	12.2	10.8	- 21.4	- 15.4	- 16.7	4.2	- 5.3	35.0	14.5
Alterations and Additions (Lrg)	- 9.6	- 4.7	18.0	- 19.7	0.9	- 2.2	- 1.8	4.8	5.3	8.5
Other (Alterations & Additions)	9.9	15.9	19.6	- 16.8	4.7	- 3.4	- 3.1	6.2	5.0	8.2
<b>Non-Residential Building</b>										
Accommodation	- 34.4	151.9	65.9	- 13.3	14.4	25.2	- 7.5	- 13.5	- 1.6	- 9.8
Education	19.8	6.4	- 14.7	- 6.7	2.9	48.6	5.7	- 6.0	- 9.5	- 2.1
Entertainment and Recreation	- 28.3	91.9	66.0	7.1	- 38.6	54.2	7.5	- 0.5	- 13.0	- 16.9
Health and Aged Care	- 15.7	- 32.9	- 29.6	- 16.7	12.6	- 6.6	5.9	2.2	2.0	- 1.2
Industrial	- 32.4	- 36.5	- 3.3	- 29.0	- 17.8	14.2	17.7	0.7	12.3	16.1
Miscellaneous	11.4	- 1.5	- 17.9	33.7	0.6	16.9	10.6	12.0	1.0	- 2.8
Offices	17.6	15.6	- 33.9	- 27.2	11.9	8.0	5.1	- 6.5	23.4	- 17.7
Other Commercial	18.9	5.6	- 34.1	- 55.2	59.7	10.9	24.2	13.7	- 8.4	7.5
Retail and Wholesale Trade	63.7	- 11.0	- 19.4	42.4	8.9	- 23.5	- 2.7	15.6	- 3.8	- 5.0
<b>Engineering Construction</b>										
Roads	- 14.0	- 10.1	- 3.4	- 1.1	1.3	24.2	2.7	- 2.2	- 0.4	1.3
Bridges, Railways and Harbours	- 19.4	- 41.4	- 72.3	- 26.5	- 6.7	55.4	10.4	0.0	12.7	- 10.8
Electricity and Pipelines	8.9	3.8	- 22.1	- 62.9	27.8	5.7	3.8	- 17.8	- 1.5	6.9
Water and Sewerage	- 14.2	- 32.6	- 28.6	41.7	- 11.1	58.6	10.5	- 0.9	- 10.6	- 9.6
Telecommunications	22.8	9.4	22.2	38.9	- 17.9	- 7.8	- 28.4	- 10.6	11.5	11.5
Heavy Industry inc. Mining	1.4	2.9	- 2.5	- 35.8	40.8	- 40.4	10.4	5.4	10.8	1.2
Recreation and Other	1.7	- 43.7	- 26.3	- 7.0	- 20.4	72.2	- 9.3	1.3	- 5.3	- 0.0



# Specialist Reports

Detailed Expert Commentary  
from Industry Leaders

## Australia's Construction Industry is Alive & Well!

Despite slowing housing market conditions and a recent peak in residential construction activity, housing construction costs are still trending higher.

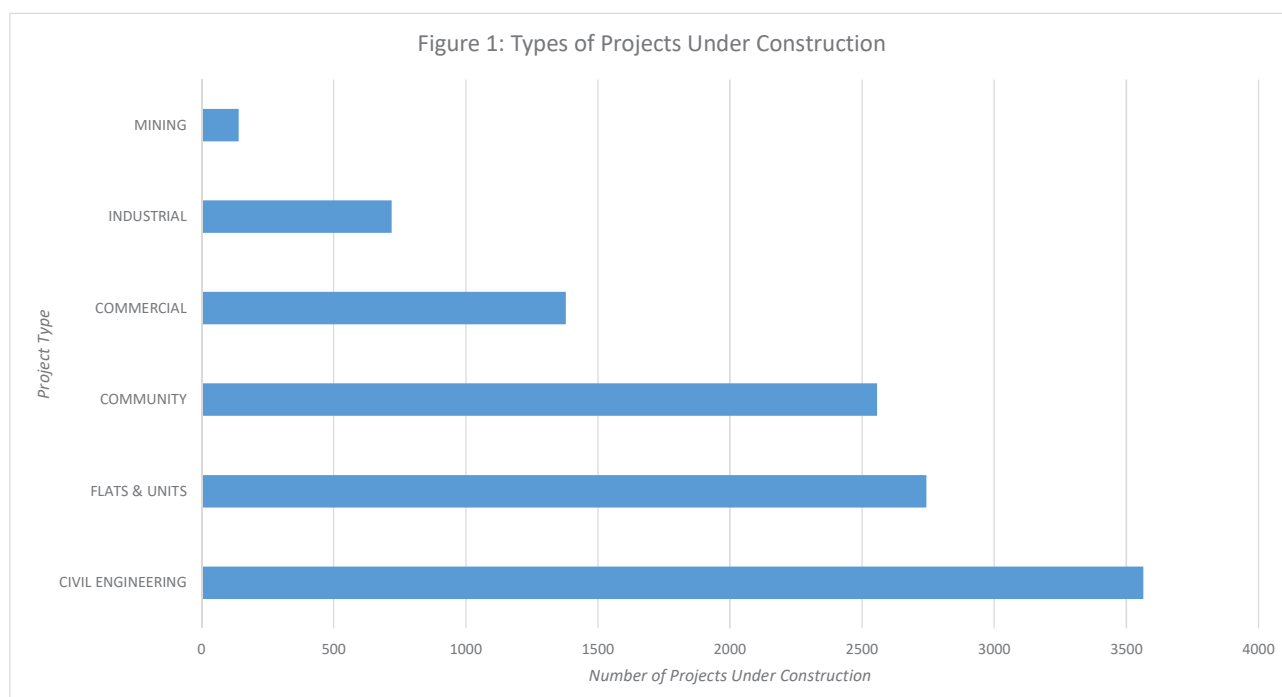
CoreLogic's CHIP index, which tracks the rate of change in residential construction costs has tracked at a consistently higher rate than CPI, with costs rising 3.7% over the twelve months to September 2018 while the quarterly growth rate in construction costs was nearly triple the rise in inflation reported for June 2018.

With a softening residential market, we need to turn our attention to the non-residential sector for an understanding of what is driving the continued upward pressure on residential construction costs.

CoreLogic project data, sourced from our Cordell database, highlights that civil engineering projects account for approximately 30% of projects currently under construction nationally.



**James Shang**  
Commercial Research Analyst  
CoreLogic



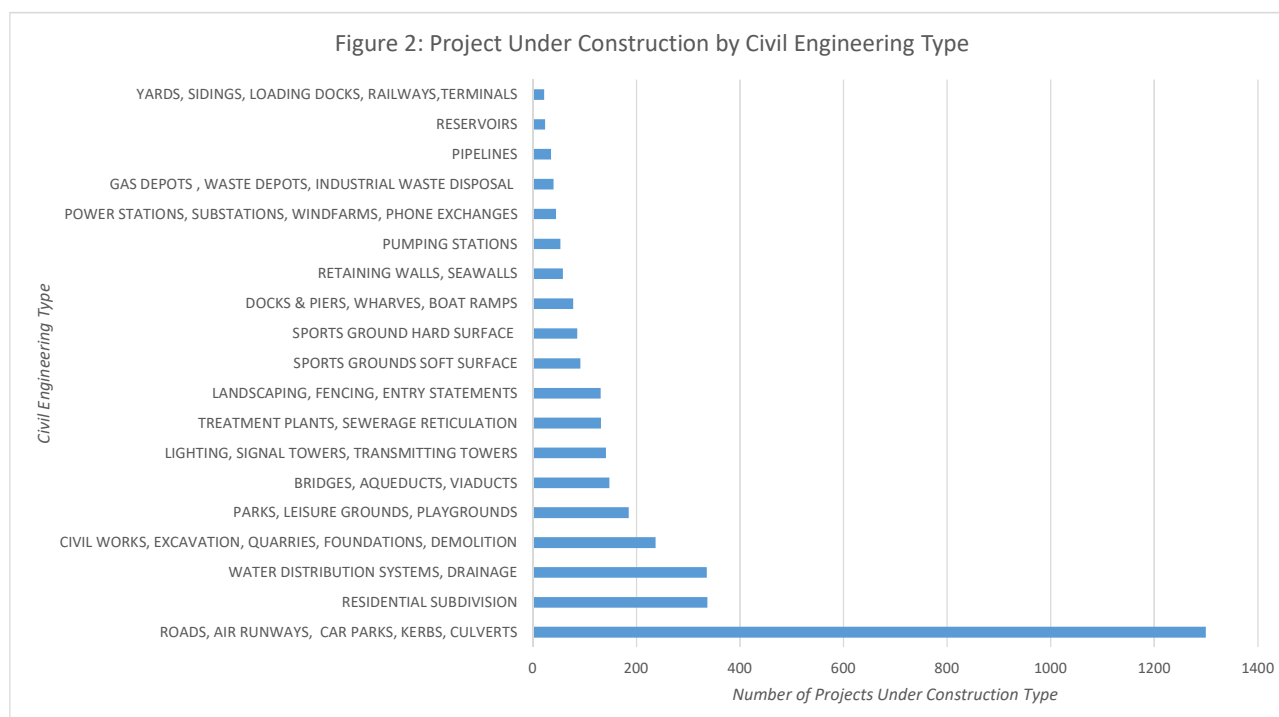



Figure 2 shows a breakdown of the types of engineering projects currently underway and confirms the infrastructure boom with transport-related development projects clearly the most common.

On a month-on-month basis the number of new commercial projects has eased, however, the total value of new projects reported for September is estimated at \$32 billion, which is the highest monthly figure since July 2013. We can conclude that Australia's construction industry is alive and well, whilst the residential market is weakening, non-residential development activity is expected to gather some pace.

The current government has budgeted a \$75 billion ten year rolling infrastructure plan, which is welcome news for the broader economy. Developing our infrastructure to facilitate efficiency improvements, easing congestion, creating jobs and boosting the economy is also likely to continue to contribute to the increased cost of construction.

With the residential construction sector sharing many of the same resources, including workers and materials, there is a likelihood this infrastructure boom will push housing construction costs higher as well.



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# Appendices



# Appendix A: Data and Forecast Methodology

## Data Provenance

These forecasts take into account data and other information available up to the middle of October 2018. Of particular importance are the historical data or 'actuals' published by the Australian Bureau of Statistics ABS, including:

- "Building Activity, Australia, Jun 2018", ABS Cat No. 8752.0, released 10 October 2018;
- "Engineering Construction Activity, Australia, Jun 2018", ABS Cat No. 8762.0, released 26 September 2018; and
- "Australian National Accounts: National Income, Expenditure and Product, Jun 2018" ABS Cat No. 5206.0 released 5 September 2018.

The value of work done in the ACIF forecasts are reported in Chain Volume Measures (CVM) -- that is in real value terms or in constant prices -- instead of nominal values (current prices). The reference year for Chain Volume Measures in the November 2018 Forecasts is 2015-16.

There are changes in the actuals (or history) and forecasts reported in this edition of the ACIF Forecasts.

The figures reported for Australia in the ACIF forecasts are the sum of the states and territories and there are sometimes discrepancies between this and the estimates for Australian as a whole published by the ABS.

## Forecast Building and Construction Asset Types and Sub-Sectors

Residential Building	Non-Residential Building	Engineering Construction
<ul style="list-style-type: none"><li>■ New Houses</li><li>■ New Other Residential (Apartments and Townhouses)</li><li>■ Large Alterations and Additions</li><li>■ Other (Mainly Small Alterations and Additions)</li></ul>	<ul style="list-style-type: none"><li>■ Accommodation</li><li>■ Education</li><li>■ Entertainment and Recreation</li><li>■ Health and Aged Care</li><li>■ Industrial</li><li>■ Miscellaneous</li><li>■ Offices</li><li>■ Other Commercial</li><li>■ Retail and Wholesale Trade</li></ul>	<ul style="list-style-type: none"><li>■ Roads</li><li>■ Bridges, Railways and Harbours</li><li>■ Electricity and Pipelines</li><li>■ Water and Sewerage</li><li>■ Telecommunications</li><li>■ Heavy Industry including Mining</li><li>■ Recreation and Other</li></ul>

## Forecast Methodology

The ACIF Forecasts are prepared using 'top-down' and 'bottom-up' analytical frameworks.

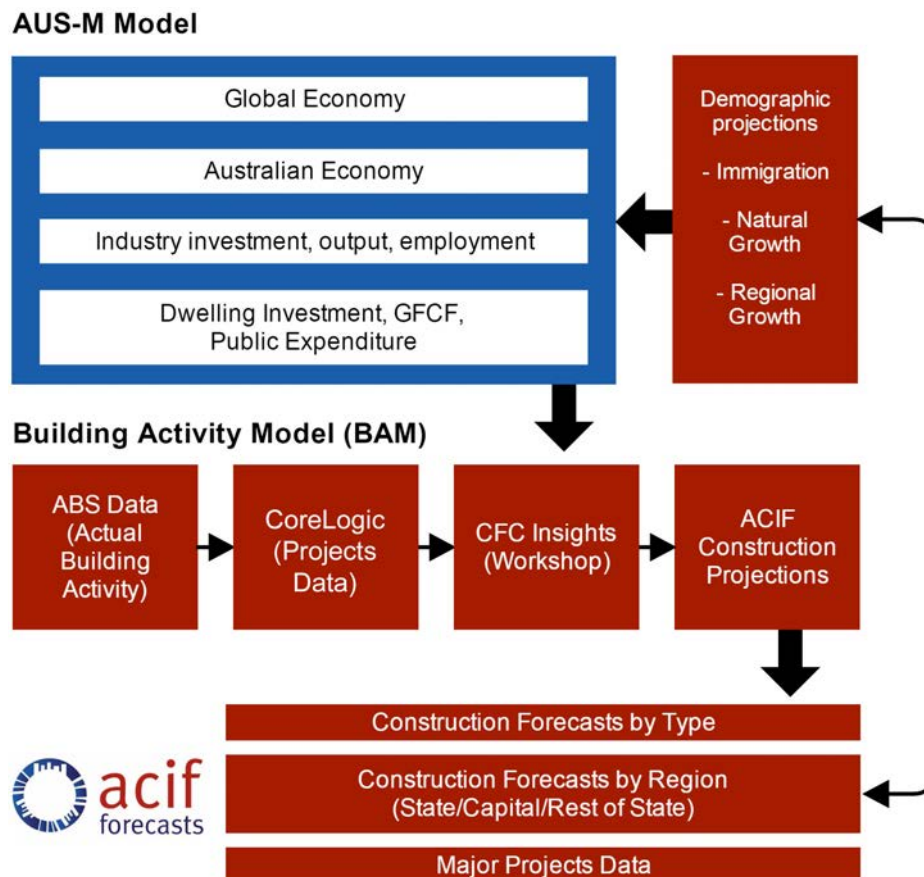
The 'top-down' framework starts with the preparation of economic forecasts. These are compiled through the use of the AUS-M model that is operated by Outlook Economics. The AUS-M model is a large quarterly time series structural model of the Australian economy. It is based on the TRYM model, originally developed by the Australian Treasury. AUS-M builds on TRYM by incorporating input-output based demand systems and more industry and commodity detail. In terms of common labels, AUS-M is a modern Keynes-Klein-style model, to which Computable General Equilibrium features have been added.

Forecasts for the global and the Australian economy are prepared. The forecasts include information about policy settings, including fiscal and monetary policies, as well as supply and demand, investment, trade, capital and labour markets, and changes in prices. A high level of industry detail is also provided in the AUS-M forecasts, spanning investment, output, employment and prices. The key elements of the national accounts that relate to construction are tracked in detail, which is very helpful when projecting changes in construction expenditure which is largely a portion of Gross Fixed Capital Formation and public sector spending and investment.

AUS-M also involves considerable information about demographic change in Australia. Information is tracked about natural growth, net immigration and net internal migration.

# Appendix A: Data and Forecast Methodology

The Building Activity Model (BAM) draws together 'bottom-up' information tracking actual construction projects and actual construction spending and employment over the recent past in considerable industry and geographic detail. Data is sourced from the ABS National Accounts and Buildings Approval data, and CoreLogic. The BAM identifies the share of investment in the asset types that make up the *Residential Building* and *Non-Residential Building* and *Engineering Construction* sectors by construction type and subcategories and across Australia, by state, by capital city and by the rest of state. The ABS asset type definitions are included in the Appendix to this report.



Additional bottom-up information is factored into the ACIF forecasting methodology with the involvement of the Construction Forecasting Council (CFC). The CFC review and vary the initial results of the BAM through the conduct of forecasting workshops. It is notable that the CFC input is used to adjust the shares of activity between activity and over time based on discussion between industry experts and the forecasting team. This provides flexibility to respond to cyclical and industry specific factors while also preserving the overall integrity of the agreed macro-economic projections.

## Appendix B: Major Project Stages

Definitions for the codes included in the CoreLogic data provided in the 'Projects' forecast tool in the Customised Forecasts Dashboard are below.

<b>Early</b>	<p>The project could fall under one of the following CoreLogic Early Planning reporting stages:</p> <ul style="list-style-type: none"> <li>■ Rezoning Application</li> <li>■ Preliminary Enquiries to Council</li> <li>■ Site Acquisition</li> <li>■ Feasibility Study</li> </ul>
<b>Possible</b>	<p>The project falls into one of the following stages:</p> <ul style="list-style-type: none"> <li>■ Sketch Plans</li> <li>■ DA Submitted/Approval</li> <li>■ DA Refused</li> <li>■ Working Drawings</li> <li>■ Tenders for Consultants/Development</li> <li>■ Tenders for Design/Construct</li> </ul>
<b>Registrations</b>	<ul style="list-style-type: none"> <li>■ Expression of Interest (EOI) is released on the project</li> <li>■ Companies interested in tendering the particular project are submitting their EOI</li> <li>■ Tender documents become available, so interested companies can familiarise themselves with the conditions of tendering, the advertised selection criteria, the specifications, and the conditions of contract, especially the clauses dealing with delivery and price variations, before deciding whether they are suitable or not.</li> </ul>
<b>Firm</b>	<p>The project is at one of the following CoreLogic Tender reporting stages</p> <ul style="list-style-type: none"> <li>■ Building Application/Approval</li> <li>■ Contract under negotiation</li> <li>■ Tenders Called/List of Tenderers</li> <li>■ Lowest Tenderers named. No Tender Accepted. Tenders Closed</li> <li>■ Also includes projects where the contract has been let but construction has not commenced and projects where site preparation is in progress.</li> </ul>
<b>Deferred</b>	<p>The project has stalled for an unusual amount of time. The period of time may vary and can range from a couple of months at tender stage to years at the planning stage. Project can be deferred indefinitely.</p>
<b>Abandoned</b>	<p>Projects final reported with no end date</p> <p>The project is not going ahead and will not reappear in its present form. Projects can be abandoned at any stage of development e.g. planning or tender stage.</p>
<b>Finished (i.e. no further info) in Planning</b>	<p>Projects final reported with no end date</p> <p>The project can no longer be followed-up e.g. contacts are no longer involved, architect may not have heard from client and DA has expired, site sold to undisclosed developer, no further application in council.</p>
<b>Finished (i.e. no further info) in Construction</b>	<p>Projects final reported with end date</p> <p>Construction was found to be completed at time of call.</p>

## Appendix C: Building and Construction Types

ACIF Type	ABS Category	Description
<b>Residential Building</b>		
<b>New Houses</b>	New Houses	A house is a detached building predominantly used for long-term residential purposes and consisting of only one dwelling unit. Thus, detached 'granny flats' and detached dwelling units (such as caretakers' residences) associated with Non-Residential buildings are defined as houses for the purpose of these statistics.
<b>New Other Residential</b>	New Other Residential Building	A new 'other residential' building is a building other than a house primarily used for long-term residential purposes and which contains (or has attached to it) more than one dwelling unit (e.g. includes blocks of flats, home units, attached townhouses, villa units, terrace houses, semi-detached houses, maisonettes, duplexes, apartment buildings, etc.)
<b>Large Alterations and Additions</b>	Alterations and Additions to Residential Buildings	Building activity carried out on existing buildings, which may result in the creation of almost new dwelling units. This includes adding to or diminishing floor area, altering the structural design of a building and adding rigid components which are integral to the functioning of the building. It also includes converting a Non-Residential building to a residential building, e.g. conversion of a warehouse to residential apartments. Conversion is considered to be a special type of alteration. 'Conversions, etc.' are the number of dwelling units created as part of alterations and additions to, or conversions of, existing residential or Non-Residential buildings and as part of the construction of Non-Residential building. 'Conversions, etc.' are included in the total number of dwelling units. However, while the value of conversions is included in the value of alterations and additions to residential buildings, the value of new dwelling units associated with Non-Residential buildings is included in the value of Non-Residential buildings.
<b>Other (Mainly Small Alterations and Additions)</b>	Private dwelling investment that has not been counted within residential building	Small alterations and additions include additions and extensions, internal renovations to kitchens, bedrooms, attics, living room areas, insulation, in-ground swimming pool, outside building, landscape contractor, other outside improvements. It includes work done by builders or contractors, interior designers, landscape designers etc. This series is not separately identified in ABS Building Activity publication but is estimated as the part of private dwelling investment expenditure published in the ABS Quarterly National Accounts that are not accounted for in the residential building statistics.

## Appendix C: Building and Construction Types

ACIF Type	ABS Category	Description
<b>Non-Residential Building</b>		
<b>Non-Residential Building</b>	Non-Residential Building	A Non-Residential building is primarily intended for purposes other than long-term residential purposes.
<b>Accommodation</b>	Short-Term Accommodation Buildings	Accommodation includes buildings primarily providing short-term or temporary accommodation. It includes self-contained, short-term apartments (e.g. serviced apartments); hotels (predominantly accommodation), motels, boarding houses, cabins and other short-term accommodation not elsewhere classified (e.g. migrant hostels, youth hostels, lodges).
<b>Education</b>	Education Buildings	Education buildings include those used in the provision or support of educational services, including group accommodation buildings (e.g. classrooms, school canteens, dormitories).
<b>Entertainment and Recreation</b>	Entertainment and Recreation Buildings	Entertainment and recreation includes buildings used in the provision of entertainment and recreational facilities or services (e.g. libraries, museums, casinos, sporting facilities).
<b>Health and Aged Care</b>	Health Buildings, Aged Care Facilities	Health buildings include those used in the provision of non-aged care medical services (e.g. nurses quarters, laboratories, clinics). Aged care facilities include buildings used in the provision or support of aged care facilities, excluding dwellings (e.g. retirement villages). Includes aged care facilities with and without medical care.
<b>Industrial</b>	Factories and other secondary production buildings, Warehouses, Agricultural and Aquacultural Buildings, Other Industrial Buildings NEC*	Industrial buildings are used for warehousing and the production and assembly activities of industrial establishments, including factories and plants. Factory buildings include those that house, or are associated with, production and assembly processes of intermediate and final goods. Warehouse buildings are primarily used for storage of goods, excluding produce storage. Agriculture/aquaculture buildings include those that house, or are associated with, agriculture and aquaculture activities, including bulk storage of produce (e.g. shearing shed, grain silo, shearers' quarters).
<b>Miscellaneous</b>	Religious buildings, other Non-Residential Buildings NEC*	Miscellaneous Non-Residential building includes religious buildings used for or associated with worship, or in support of programs sponsored by religious bodies (e.g. church, temple, mosque, church hall, dormitories).
<b>Offices</b>	Offices	Office buildings include those primarily used in the provision of professional and business services (e.g. accountancy, engineering, insurance and banking/finance) and public administration.
<b>Other Commercial</b>	Transport buildings, Commercial buildings NEC*	Buildings primarily occupied with or engaged in commercial trade or work intended for commercial trade that have not been classified as Retail trade, Warehouses, Industrial or Miscellaneous. This category also includes buildings that support transport activities or primarily used in the provision of transport services including passenger transport buildings (e.g. passenger terminals), non-passenger transport buildings (e.g. freight terminals), commercial car parks (excluded are those built as part of, and intended to service, other distinct building developments) and other transport buildings not elsewhere classified.
<b>Retail/Wholesale Trade</b>	Retail and wholesale trade buildings	Retail/wholesale trade buildings include those primarily used in the sale of goods to intermediate and end users.



## Appendix C: Building and Construction Types

ACIF Type	ABS Category	Description
<b>Engineering Construction</b>		
<b>Roads</b>	Roads	Roads, highways and subdivisions include parking areas; cycle paths; airport runways; pedestrian and vehicle overpasses; traffic lights; roundabouts; associated road drainage works; street and highway lighting; road resurfacing, kerbing and guttering, road tunnels.
<b>Bridges, Railways and Harbours</b>	Bridges, Railways and Harbours	Railways include tracklaying; overhead power lines and signals; platforms; tramways; tunnels for underground railways; fuel hoppers. Bridges includes those for the support of roads, railways, causeways and elevated highways. Harbours include boat and yacht basins; breakwaters; retaining walls; docks and piers; terminals; wharves; dredging works; marinas.
<b>Electricity and Pipelines</b>	Electricity and Pipelines	Electricity generation, transmission and distribution includes construction of power stations; substations; hydro-electric generation plants; associated work i.e. towers; chimneys; transmission and distribution lines. Pipelines include oil and gas pipelines; urban supply mains for gas; pipelines for refined petroleum products, chemicals, foodstuffs, etc.
<b>Water and Sewerage</b>	Water and Sewerage	Sewerage includes sanitary and storm sewers; sewage treatment plants; storm water drains; drainage systems. Water includes dams; weirs; reservoirs; embankments for water diversion; water pipelines; mains and treatment plants; flood prevention and erosion; aqueducts; water conduits; systems conveying water to residences, commercial and industrial establishments.
<b>Telecommunications</b>	Telecommunications	Telecommunications include mobile phone, radio, television, microwave and radar transmission towers; telephone lines and underground cables; coaxial cables.
<b>Heavy Industry Including Mining</b>	Heavy Industry Including Mining	This category includes the construction of production, storage and distribution facilities; refineries; pumping stations; construction of mines; construction of chemical plants; blast furnaces; steel mills; other industrial processing plants; ovens.
<b>Recreation and Other</b>	Recreation and Other	Recreation includes golf courses; playing fields; racecourses; stadiums; swimming pools; landscaping; park construction.

“NEC” = not elsewhere classified



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