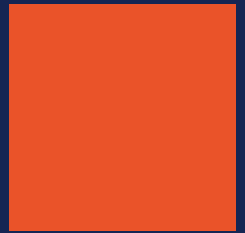


CSQ

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Queensland Major Projects Pipeline 2023

QUEENSLAND
MAJOR
CONTRACTORS
ASSOCIATION



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We would like to thank and acknowledge our partners from across the industry for their support of the 2023 QMCA CSQ Queensland Major Projects Pipeline Report

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EXECUTIVE SUMMARY



The Queensland Major Contractors Association (QMCA), in conjunction with Construction Skills Queensland (CSQ) and key authors (Oxford Economics, Arcadis and Aurora Marketing) is proud to present the 12th edition of the Queensland Major Projects Pipeline Report (QMPPR). The 2023 version of this report and pipeline highlights the significant rise in engineering construction activity in Queensland and identifies that the work ahead of the industry is robust and solid, despite the current headwinds of rising costs, challenging labour

markets, declining productivity and the Federal Government's current ongoing and slow review of infrastructure investment.

For over a decade, the QMPPR has delivered a comprehensive list of major engineering construction projects combined with an analysis on the corresponding level of construction activity. The coverage of the 2023 QMPPR are projects expected to be in the construction phase over the next five years to 2027/28. Major project activity in Queensland is expected to rise strongly in the coming years,

with double digit annual growth rates over the first four years of the pipeline. The current five year pipeline has risen to \$92b, a \$20.6b (29%) increase from 2022. Funded activity accounts for a large portion of this upgrade and has risen in each of the forward years compared to the 2022 report, with total funded activity in the 2023 QMPPR growing by \$16.7b to \$54.4b. Much of the increase in funded work is due to a selection of utilities and mining and heavy industry projects concentrated in the western and south-east regions of the state.

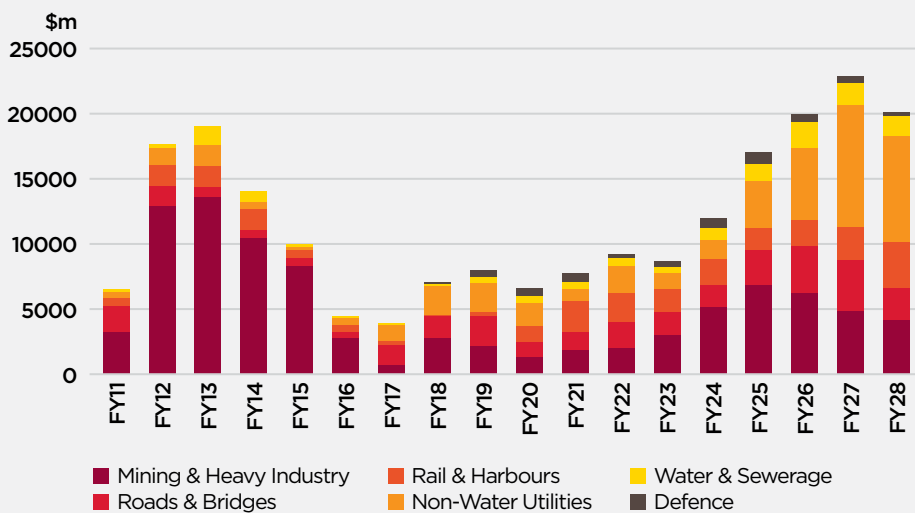
The total pipeline by sector graph highlights the change in the pipeline since 2010/11, where the mining and heavy industry sector (including gas) accounted for up to 80% of the spend; through to the prospect of the industry delivering a much more diversified spread of activity in excess of \$20b annually from 2026.

Unfunded work done on major projects over the next five years is \$3.9b higher than 2022, at an aggregate value of \$37.6b. The peak in unfunded activity has been shifted back (compared to the previous report) and is now anticipated for 2026/27 but will also remain elevated into 2027/28. The non-water utilities sector, reflecting the ‘energy transition’ infrastructure investment, is the biggest contributor to the net increase in unfunded activity and the sector has the second highest value of unfunded construction work (after mining and heavy industry).

Despite an overall improvement in the pipeline outlook for Queensland, the regional outcomes are varied. Funded activity rose in all regions except for Darling Downs-Maranoa and Ipswich-Toowoomba-Logan, while almost half of the regions experienced a decline in unfunded activity. The Ipswich-Toowoomba-Logan region was the only area to see a reduction in both the funded and unfunded construction activity over the next five years. In contrast, the remainder of South East Queensland (Brisbane, Sunshine Coast and Gold Coast) experienced a rise in construction work done that is sufficient to offset this decline. As with the 2022 QMPPR, the bulk of unfunded work is concentrated outside of Greater Brisbane, which raises the pipeline risk in these regions. The locations with the largest net gain in construction work over the pipeline are Wide Bay, Fitzroy and Brisbane - these regions represent 43% of activity.

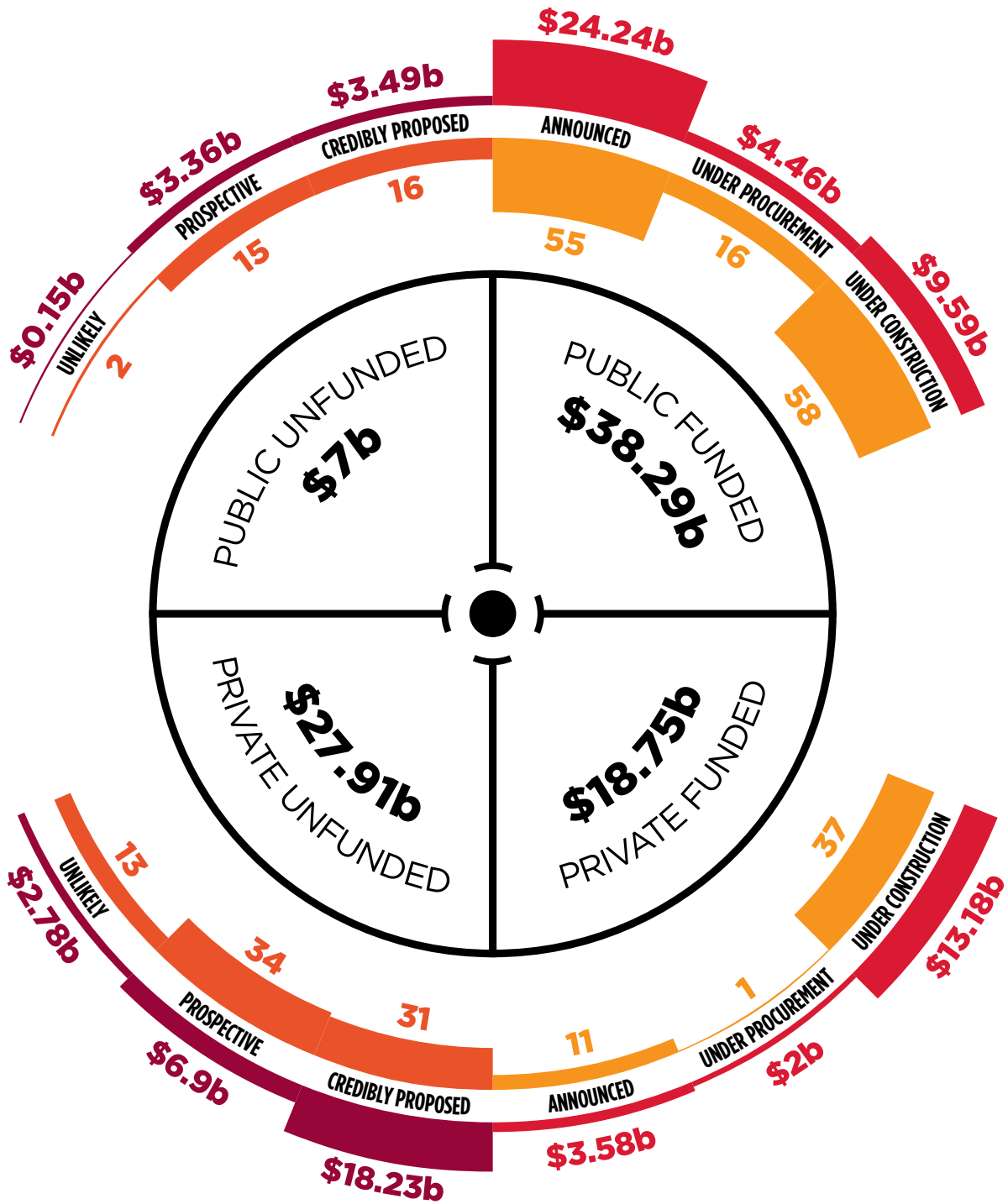


Total pipeline by sector



Source: Oxford Economics, QMCA





Funded work will remain at an elevated level over the entire pipeline period, rising to \$11.4b in 2024/25, dipping slightly in 2025/26 and then peaking at \$12b in 2026/27. The risk to pipeline activity stems from the high level of unfunded work scheduled from 2025/26 onwards.

To ensure the momentum in pipeline activity is sustained, addressing infrastructure gaps early and establishing effective funding and financing initiatives will support investment in productive projects.



KEY FINDINGS

The major projects pipeline continues to grow. In the five years between 2023/24 and 2027/28 inclusive, the major projects pipeline is valued at \$92b. This is much higher than the previous two reports, whereby activity was \$71.3b in the 2022 QMPPR and \$61.9b in the 2021 QMPPR.

\$54.4b (59%) of the pipeline value is funded, up from \$37.6b in 2022. \$37.6b (41%) is unfunded, up from \$33.7b in 2022.

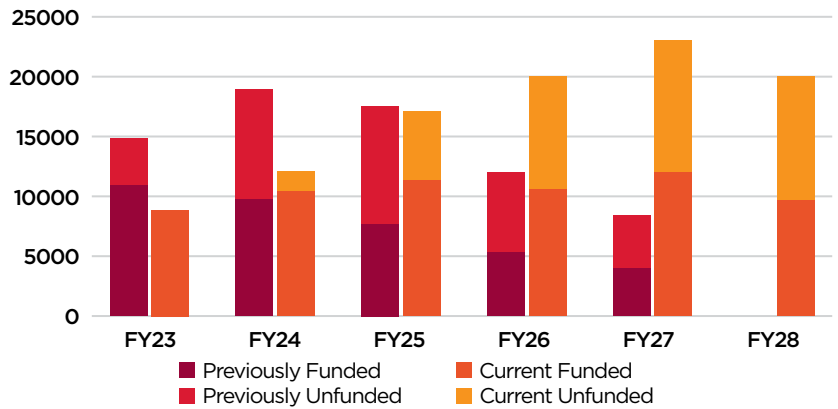
The share of unfunded projects grows across the pipeline from 13% in 2023/24 to 51% in 2027/28. This introduces uncertainty about project development towards the end of the pipeline and calls for a more streamlined approval process.

The public sector remains a key funder of major project work.

51% (up from 49%) of the total pipeline activity is attributed to the public sector, and the public sector represents 67% (down from 74%) of all funded work.

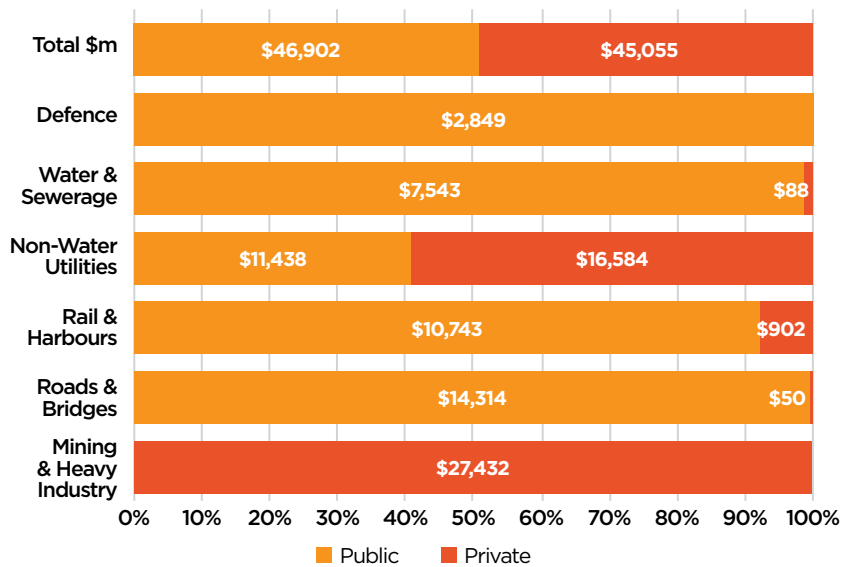
2026/27 is on track to be the strongest year of work since the end of the resources boom in 2014/15, with the highest level of funded activity in the pipeline at \$12b. If all unfunded work proceeds, total major project activity will surge to \$22.9b and exceed the level of completed work seen at the peak of the resources boom in 2012/13 (\$19.1b).

Comparison of major project activity, 2023 versus 2022, \$m

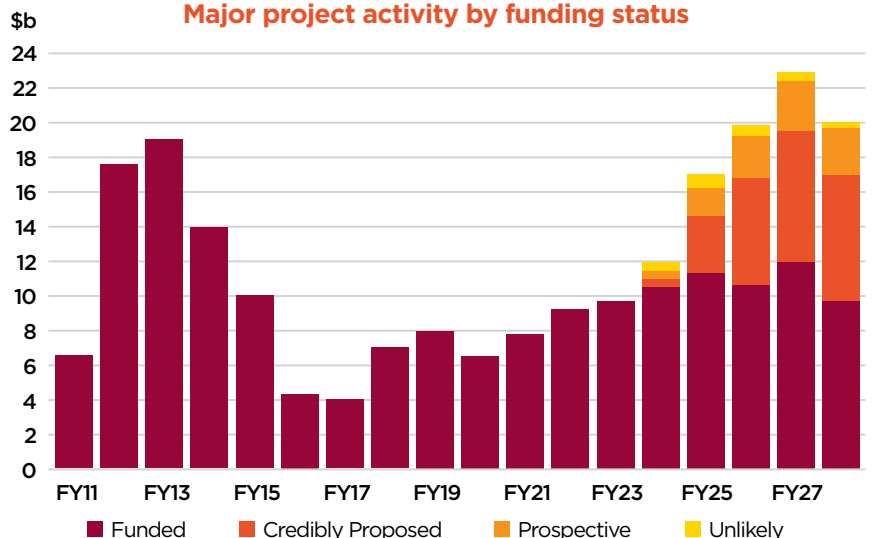


Funding mix by asset class, 2024 - 2028, \$m, all projects

(Total pipeline, next five years)



Major project activity by funding status



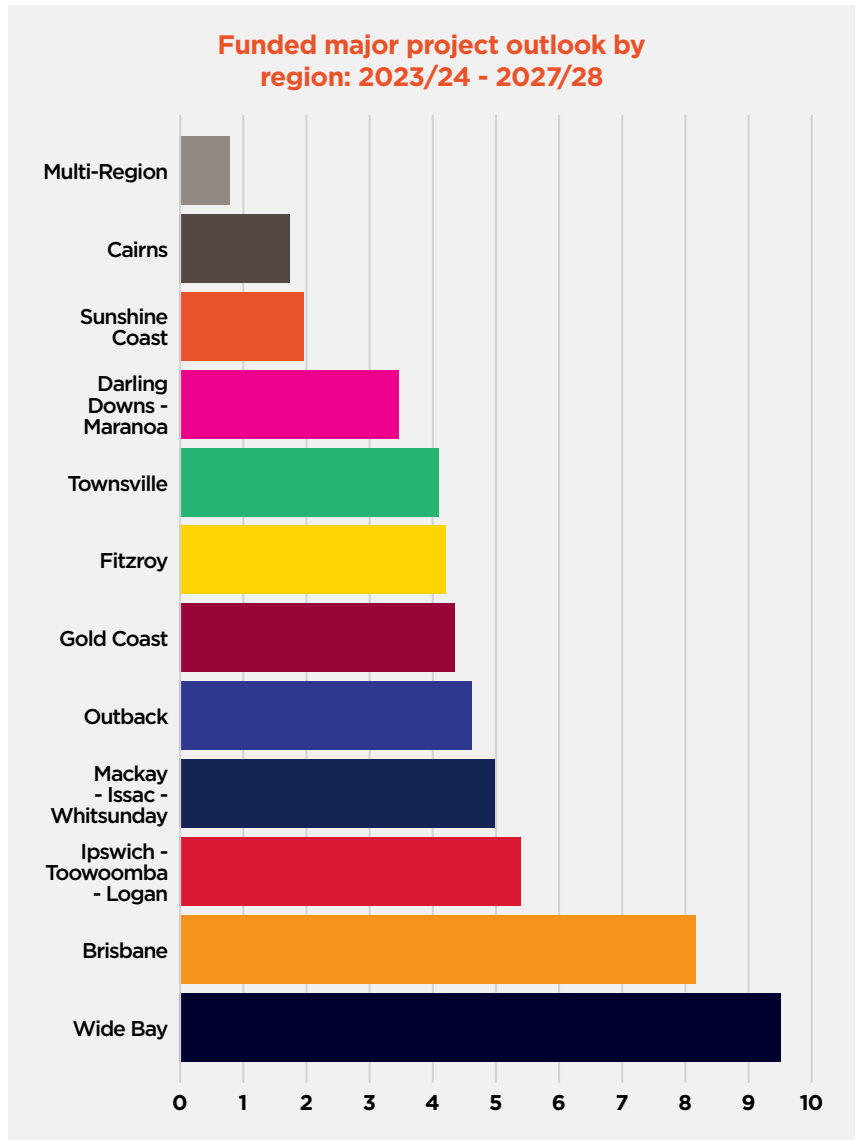
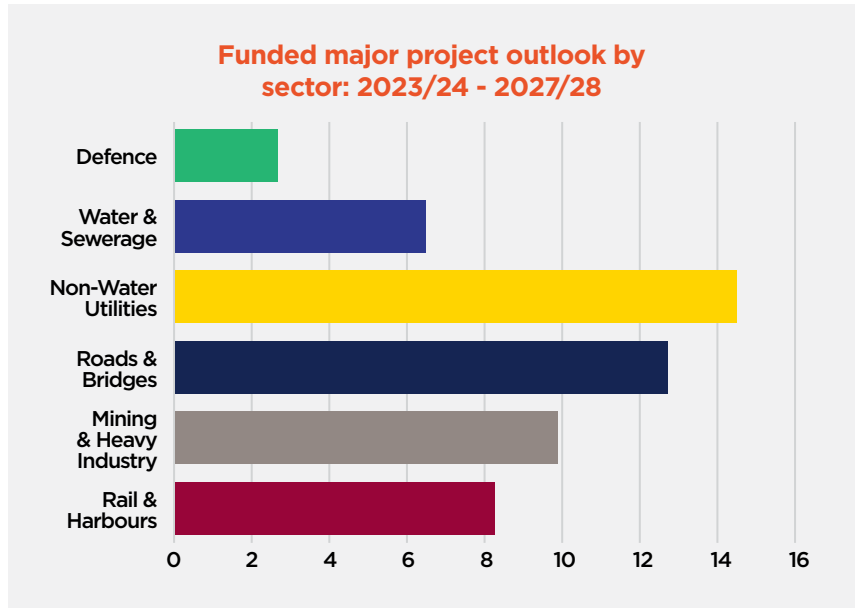
Source: Oxford Economics Australia, QMCA member knowledge

High construction costs coupled with rising domestic demand and supply constraints create barriers that can limit pipeline capacity. Road and bridge construction costs (as reflected by the ABS Road and Bridge Producer Price Index) continue to rise and are 7% higher than one year ago, with broader engineering construction costs remaining above historical averages. Increased input costs, labour shortages and reduced availability of materials and equipment pose a real risk to the construction of major projects and may result in extensive delays, or even cancellations.

Funded activity is expected to remain elevated over the pipeline, tapering off in 2027/28. Boosting growth in the industry (assuming supply constraints are able to be managed) can be achieved through securing unfunded projects in the pipeline. Unfunded activity is anticipated to surpass \$10b in 2026/27, with the private sector responsible for an average of \$8.1b of unfunded projects per annum in the last three years of the pipeline. The mining and heavy industry sector makes up 57% of private unfunded work and the non-water utilities sector accounts for 41%.

Funded work is highly concentrated in ‘megaprojects’ (valued at over \$1b). Megaprojects comprise over half (51%) of funded pipeline activity over the next three years, consistent with previous iterations of the report. However, the ratio of projects valued at under \$200m has fallen to 7% of major project work over the next three years, compared to an average of 14% over the past four publications.

Major project outlooks differ considerably by region. Compared to last year, funded work has declined by 23% in the Ipswich-Toowoomba-Logan region and 33% in Darling Downs-Maranoa, while increasing in all other areas. Wide Bay and Townsville have received the highest growth in pipeline funded work at 497% and 196%, respectively. Projects in the utilities (specifically electricity and defence) and mining and heavy industry sectors are the main drivers of this change.



Source: Oxford Economics Australia, QMCA member knowledge



UPSIDE AND DOWNSIDE RISKS TO THE MAJOR PROJECTS PIPELINE

With Major Projects Pipeline construction activity significantly increasing over the coming years and potentially set to exceed levels seen during the mining and resources boom of 2011-15, capacity constraints may materialise as a downside risk. The heightened drought conditions have also been identified as a downside risk. However, the outlook could experience upside risks should accelerated project deliveries be required for the 2032 Olympic and Paralympic Games and Queensland Government's 2032 70% renewable target.

As the country's construction activity remains elevated, competition for materials and labour is identified as a downside risk. While the industry booms, interstate projects limit Queensland's ability to deliver construction projects on time.

Capacity constraints have already been seen over the past years and are likely to intensify with the

residential and non-residential construction boom expected towards the end of the decade. Heightened construction cost escalation in recent years, with potential for further escalation in coming years, could also mean that some projects may need to be re-evaluated to determine their value for money.

The announcement of the transition back to the El Nino climate cycle, along with subsequent increased likelihood of severe drought conditions, are also a downside risk to the sector.

These weather conditions may mean some infrastructure projects may be prioritised with timelines brought forward, or additional projects may be added. The need for long term bulk water supply and dam upgrades (including the dam safety upgrade program) provide for further upside.

Political and social motivations surrounding the 2032 Olympic and Paralympic Games pose

notable upside risk to the Major Projects Pipeline. Despite the majority of Queensland's planned \$7.1b Olympic and Paralympic Games infrastructure spend tailored towards building projects, the desire to accommodate the event to the highest standard, and to impress the world stage, will necessitate the need for fast tracking of certain transport investments in time for 2032. It is noted that the State Government has yet to announce any of this.

The Queensland Government's commitment to renewable generation targets poses an upside risk to the construction industry.

With net zero emission targets of 50% by 2030, 70% by 2032 and 80% by 2035, increased investment in energy transition infrastructure such as high voltage transmission lines, renewable energy generation and pumped hydro energy storage and generation facilities will drive major investment for the sector for the next decade or more.

COST ISSUES

WHEN WILL CONSTRUCTION COST ESCALATION RETURN TO TREND?

The construction industry experienced hyper-levels of cost escalation during 2022, fuelled by the rising cost of materials, logistics and energy exacerbated by the Ukraine War. During 2023, there has been a growing clamour that material costs are returning to normal levels and that cost escalation is, overall, returning to trend. But is that the case?

Before the pandemic, and going back as far as 2000, average construction cost escalation across Australia was about 3.2% per year. In Queensland, it's been in the region of 3.5%. Cost escalation between 2019 and 2022 averaged 6.8% in Queensland – with the bulk of this falling in 2021 and 2022 where the levels of hyper-inflation were experienced most. 2022 alone saw construction cost escalation at 14.3%.

Expected normal construction escalation trend has been regarded as 3-4% per annum. This expectation is largely based on the assumption that many of the challenges of 2022 have now largely been resolved. However, while the cost of timber and steel has reduced significantly, materials such as sand, concrete, insulation, glazing, and floor coverings remain elevated. So, the narrative that material costs have returned to pre-pandemic levels is far from accurate.

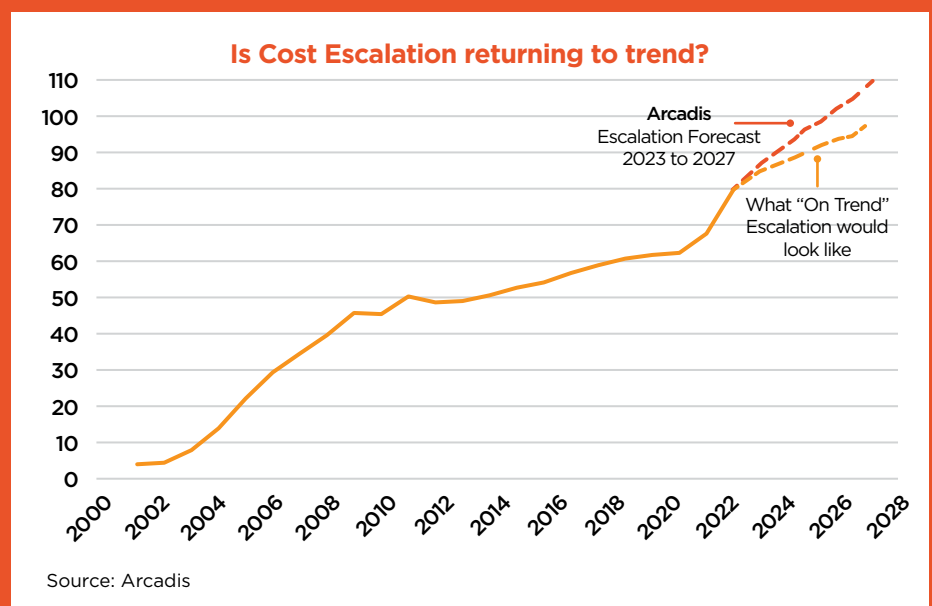
It is also highly unlikely that cost escalation will return to trend in 2024 and beyond (which several forecasters are currently predicting). This is due to several prevailing factors and a growing list of challenges:

- An unprecedented pipeline of government investment (largely transport and social infrastructure) that is yet to hit the market
- A construction supply chain that is already stretched thin with a growing number of industry insolvencies
- There is too much work and not enough people to deliver it
- An unprecedented and growing housing crisis
- The growth in public sector spend will only make it more difficult for private sector clients

to compete for contractors and trades, likely resulting in costs rising further as demand increases and once the private sector recovers. This is exacerbated using Best Practice Industry Conditions, which effectively adds a significant premium to project labour costs.

Ultimately, increasing demand for labour and skilled workers is now beginning to outstrip supply – and with the investment in the Hospital Capital Expansion Program and the 2032 Olympic and Paralympic Games not yet hitting the ground, this situation will only become more challenging.

Based on this, construction cost escalation is unlikely to return to trend any time soon. This will have ongoing impacts on budgets and forecasts for future projects.





INDUSTRY CAPACITY & CAPABILITY ISSUES

Queensland is stepping into its next wave of construction activity. A growing population, 2032 Olympic and Paralympic Games and the state's ambitious net zero transition will drive construction activity over the coming years. The significant volume of work will add to an already bulged infrastructure pipeline and further intensify the state's long-running workforce challenge.

An estimated 33,515 workers on average will be required from now out to 2027/28 to deliver the state's incredible pipeline of civil work.

The average requirements for the funded and unfunded segments are almost the same. Unfunded projects will likely need 17,022 workers, marginally more than the 16,493 workers needed for the funded domain.

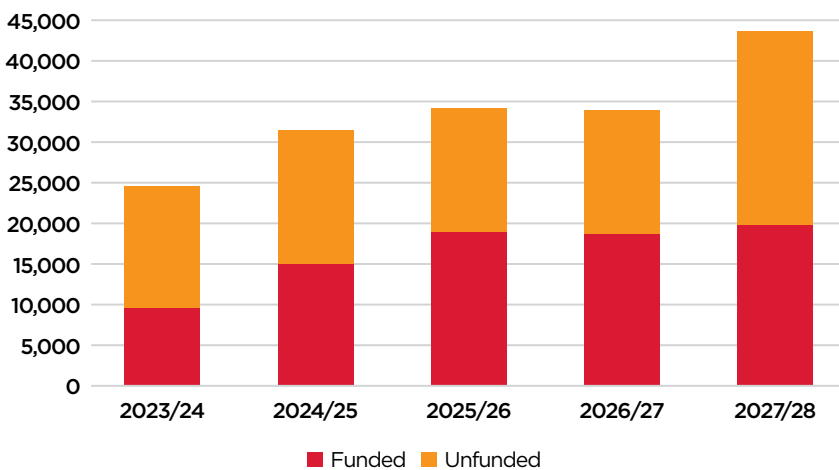
The peak labour demand across funded and unfunded projects is expected to occur in 2027/28 at an average of 43,702 workers. This is a significant 78% surge relative to the average workforce requirements in 2023/24.

Regional and remote Queensland will face stronger labour demand

with most of the renewable energy projects located in these parts of the state. Around 70% of the labour demand will be in these areas where the workforce challenges have always been exacerbated.

Electricity, telecommunications and water projects are expected to dominate labour demand across the project types. Notably, electricity projects will require almost 10,000 workers on average, twice the number of workers needed in telecommunications and water projects.

Major project construction labour demand, Queensland, average, by financial year



Source: CSQ for QMCA

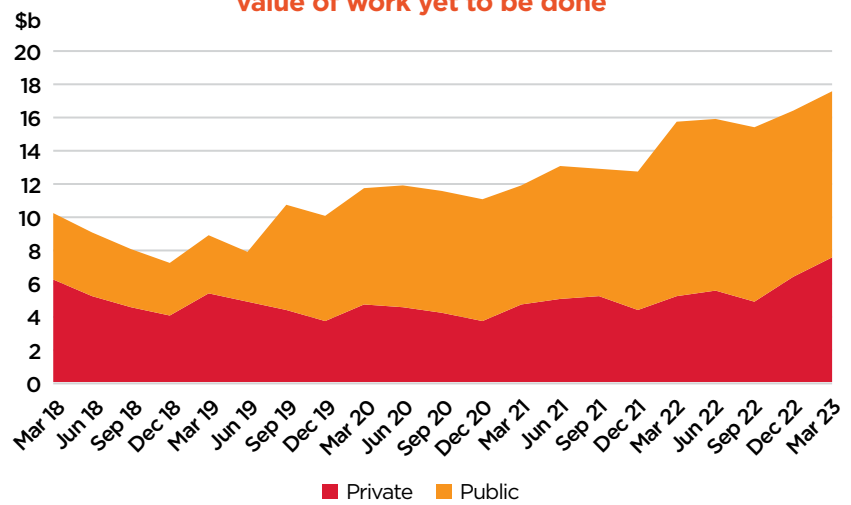


All occupations in the construction bucket will be highly impacted. The labour requirements are spread across the different occupations, with most expected to require more than 1,000 workers on average over the next five years, with most of these being civil construction jobs.

The significant new volume of capital work will add to an already inflated infrastructure pipeline and further intensify the state's long-running workforce challenges. There is already a significant backlog of around \$18b of unfinished projects in the civil pipeline, 60% of which are public projects. This pipeline has grown post-pandemic and currently sits at a new record high. Adding to this is the state's buoyant building activity. While the residential segment has slowed as expected, commercial building activity has turned out stronger with recent data showing a significant 32% surge in approvals.

The labour market challenges refuse to budge despite the growing demand. Supply bottlenecks remain amidst the significant surge in labour demand. Construction industry employment is only 13% more than the pre-pandemic level. This slow pace of growth is insufficient given the mounting volume of residual and new work in the pipeline. The persistent unfilled construction vacancies, which are twice the levels seen before the pandemic, reflect the industry's struggle in finding workers. Unfilled vacancies have grown across all regions of the state. Most of the open vacancies reflect jobs essential to civil projects. These include electricians, structural steel and welding trade workers, and earthmoving plant operators.

Civil construction activity, Queensland, value of work yet to be done



Source: ABS (2023), CSQ (2023)



Construction industry vacancies, Queensland



Source: NSC (2023), CSQ (2023)



THE PRODUCTIVITY CONUNDRUM

Across the nation, the construction industry is experiencing a productivity conundrum. We are delivering less at a higher cost compared to 10, 20, even 30 years ago, and the issue is exacerbated further in Queensland.

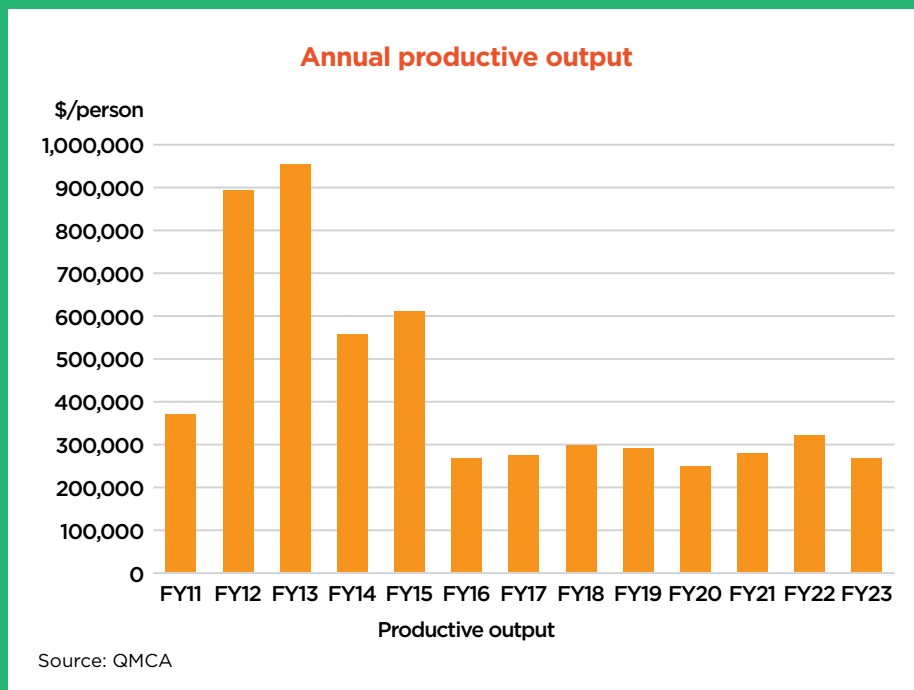
In the five year period between 2011 and 2015, the state's engineering and construction sector delivered on average ~\$13.5b of work annually with a corresponding average workforce of close to 20,000 people. This equates to an average output of \$679k/person. In the

following five year period from 2016 to 2020, the workforce increased to 21,600 people on average, but our annual output per person employed dropped to \$276k/person.

The resources boom of the 2012 to 2015 period involved substantial use of modularisation and other productive construction techniques, which have yet to be further deployed in scale across the industry. This accounts for some of the higher productivity measures during this time.

In the period after the resources boom, Queensland lost a large portion of skilled workforce to the southern states as they commenced large construction programs. A significant number of these workers are largely yet to return to Queensland.

The challenge for the industry in Queensland is to find a way to improve productivity in the short-to-medium term to deliver better value for money, while at the same time sustaining the gains created during this period.



PRODUCTIVITY: WHAT ARE THE IMPACTS?

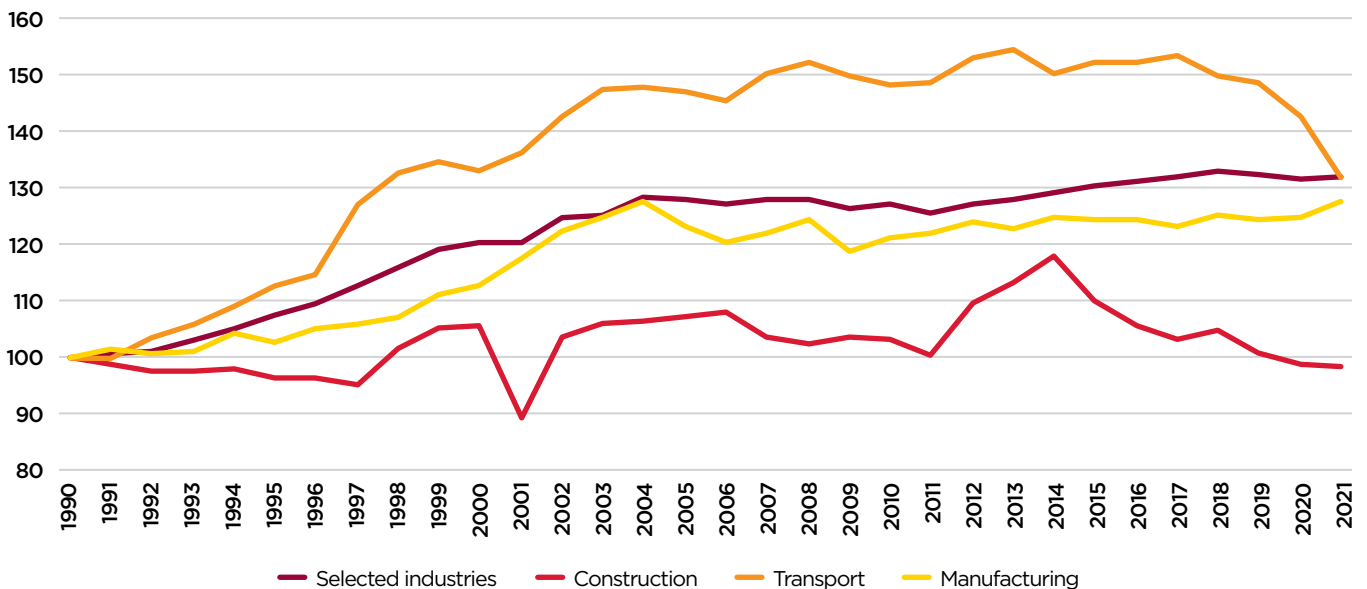
Productivity across the construction sector has been on the decline since 2014, now sitting lower than rates recorded back in 1990. This decline is further compounded when compared to industries such as manufacturing which, despite slightly decreasing over the past five years, have seen a 30% increase since 1990.

Recently, the Commonwealth Government released an inter-generational report which cited the following:

- Average labour productivity growth is at a 60-year low, with just 1.1% growth from 2010 - 2020
- Despite technological optimism, annual productivity growth is projected at only 1.2% over the next 40 years
- Economic growth is expected to slow down to an average of 2.2% per year.

Wage and productivity growth have increasingly separated since the early 2000s, and this ongoing disconnection amplifies the challenge of achieving value for money.

Multifactor productivity indexes by industry: 1990 - 2021



Source: ABS Data



With the Queensland Government's intrusion into Industrial Relations (IR) arrangements via the Best Practice Industrial Conditions (BPIC) policy, construction wages are set to increase by 20-30%. In contrast, productivity is expected to decrease by a similar amount if the conditions included in BPIC are implemented. This will result in a substantial reduction in the value for money equation.

To be able to deliver the pipeline, productivity will be the challenge. The increase in cost against the drop in productivity, with ongoing labour shortages going forward presents a significant hurdle. What we know and can work with, is that the Queensland construction sector's productivity is being impacted by the following key areas:

- Procurement
- Industrial relations
- Adoption of technology and new specifications.

In light of this, a recommended solution for each key area is to promote collaborative efforts among clients, engineers, contractors and third parties. The objective is to gain a strong start to project delivery with collaborative procurement and contracting processes implemented as early as possible, to ensure that appropriate industrial conditions that engender productivity are included, as well as the adoption of initiatives and technology that will drive value for money.



COLLABORATION: THE KEY TO BOOSTING PRODUCTIVITY

PROCUREMENT

Collaborative procurement and contracting is an effective way to start to address these productivity challenges. Typically, the procurement process has involved contractors having to develop a firm price considering all the relevant project risks and opportunities over a 4 - 12 week period. This period of time has shown to be insufficient to develop a strong understanding of price associated with the risks and opportunities. It is often based on unreliable information and the time is not adequate for thoroughly exploring where risks should be

allocated between parties and how to overcome them.

A collaborative procurement process invites diversity of thought and a mutual understanding and sharing of the risks and opportunities involved. The current approach requires parties to price the risk, without the benefit of the information developed through the planning stages. It also doesn't allow enough time for considering appropriate and innovative solutions to evolve in order to successfully manage the risks.

When less productive procurement

processes such as this have been adopted, additional costs are incurred and longer delivery times ensue. **To remedy this, embracing a more collaborative procurement process will set up projects for success.** The outcomes from collaboration tend to generate more suitable innovative solutions to risks, and by identifying opportunities early on, methods to improve productivity are considered up front. When these outcomes have been achieved by mutual input from both parties, it is more likely that better value for money can be achieved.



INDUSTRIAL RELATIONS (IR)

The civil construction IR environment has remained relatively stable for a lengthy period of time. This is mainly due to the positive working relationship between employers, employees and their representatives. Since 2020, the introduction of BPIC policy by the Queensland Government has disrupted this harmonious working relationship.

The BPIC policy and 'guidance information' has set a new 'high floor' for construction rates, extending across the entire sector during times where companies are competing for labour. Additionally, the BPIC policy outlines the conditions upon which work will be undertaken - conditions that have already impacted productivity - with projected times for work being affected and up to 20-30% of additional project costs incurred.

BPIC does not benefit productivity, effectively widening the gap between wage and productivity growth. It has resulted in the industry delivering less for more money, over longer time periods and has removed the workable nexus between employees, employers and their representatives. The conditions BPIC has introduced are at base levels that don't accurately reflect where the industry is currently at. From an IR perspective, solutions could be derived through collaboration between employers, employees and their representatives, however, BPIC restricts this unified approach, stymieing productivity.



ADOPTION OF TECHNOLOGY AND NEW SPECIFICATIONS

The construction sector is often referred to as a 'technology laggard'. This is a moderately accurate reflection on the state of technology adoption when compared to other industries. While parts of the engineering and construction sector have higher technology adoption than others, there is more work required to reap the benefits of significant productivity gains.

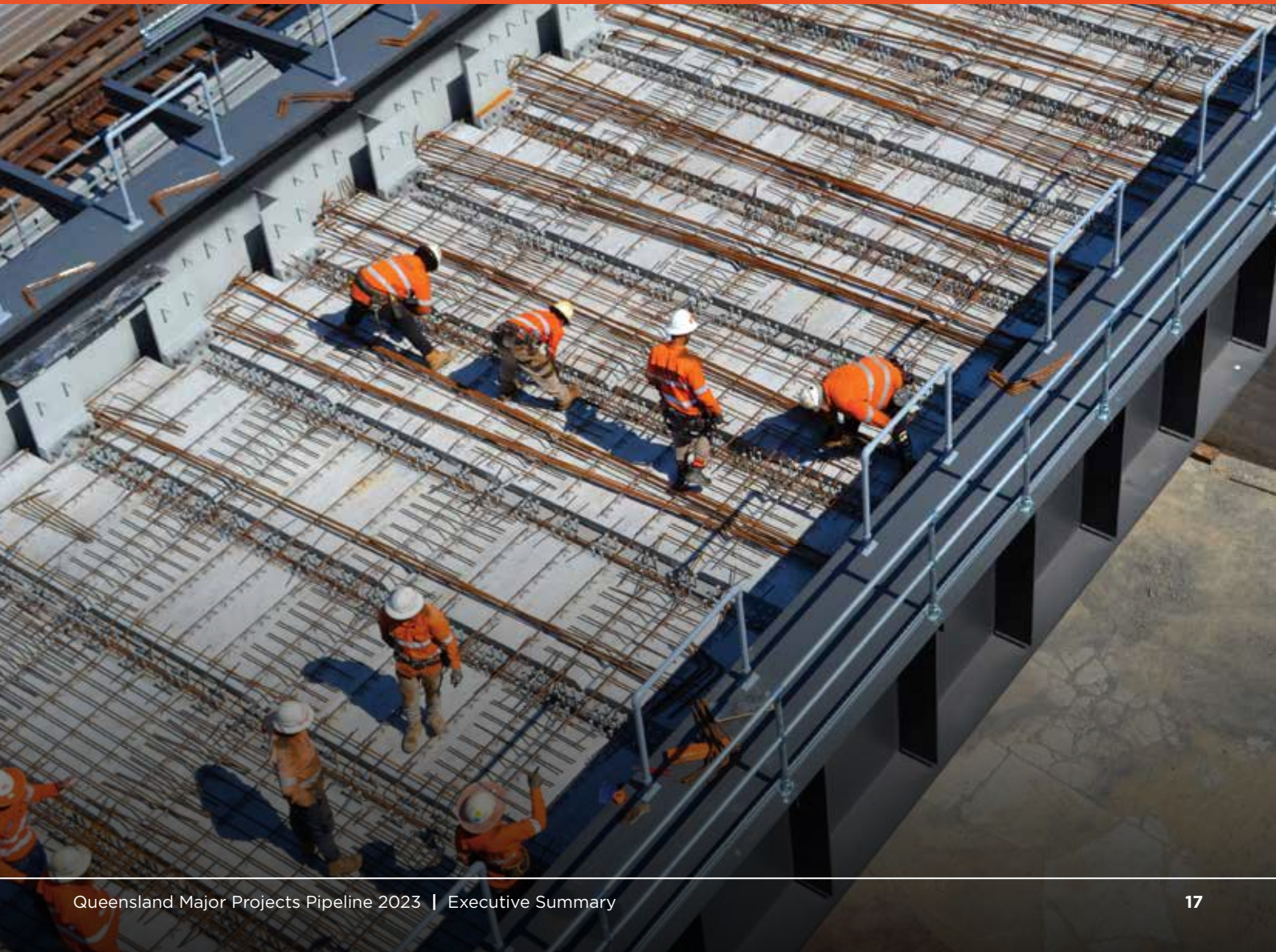
Technology options have the capacity to improve productivity across the sector in ways such as:

- Greater use of modularisation, especially in the resources sector and commercial building

- Greater digitisation deployment of engineering information from planning and design phase, through to construction and operations
- Automated plant operations including earthmoving, paving and craneage
- Use of Artificial Intelligence (AI).

Clients, engineers, contractors and third parties – such as technology providers – are encouraged to work together to set technology more in motion in project delivery. The time has come to adopt new technologies to create safer workplaces, remove human error, improve efficiency, and increase productivity.

In addition to overcoming this lag in technology adoption, we also need to consider how specifications that are too rigid do not encourage industry to offer innovative solutions and alternatives that can improve productivity. **Again, collaborative project planning and delivery** enables consideration of innovative options that will deliver time and cost savings without affecting quality. This has shown to equate to much higher productivity, and when we start seeing this happening industry-wide, it will create the framework that enables construction project teams to look at alternative options and ideas with clients that can deliver productivity benefits.







QUEENSLAND MAJOR PROJECTS PIPELINE LISTING 2023





ROADS, BRIDGES & RUNWAYS

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)												Status	
				21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33		
Brisbane Metro CP	Brisbane City Council	Public	Brisbane Inner City	1700	765	Under Construction	140	170	140	140	140	75					
Breakfast Creek Green Bridge	Brisbane City Council	Public	Brisbane - North	67	54	Under Construction	11	33	10								
Bruce Highway - Caboolture to Steve Irwin Way	QLD Government / Federal Government	Public	Sunshine Coast	663	500	Under Construction	180	180	40								
Bruce Highway - Cairns Southern Access Corridor Stage 3 - Edmonton to Gordonvale	Federal Government	Public	Cairns	535	334	Under Construction	110	80	34								
Bruce Highway - Cairns Southern Access Corridor Stage 5 - Foster Road intersection	QLD Government	Public	Cairns	225	162	Announced				41	81	40					
Bruce Highway - Cooroy to Curra Section D	QLD Government / Federal Government	Public	Wide Bay	1000	750	Under Construction	250	250	125								
Bruce Highway - Dohles Rocks Road North Facing Ramps	QLD Government / Federal Government	Public	Brisbane - North	250	188	Announced				57	73	58					
Bruce Highway - Linkfield Road Overpass	QLD Government / Federal Government	Public	Brisbane - North	150	120	Under Procurement				30	45	45					
Bruce Highway - Proserpine Floodplain Upgrade	QLD Government / Federal Government	Public	Mackay - Isaac	700	600	Credibly Proposed					200	200	200				
Bruce Highway - Mackay Ring Road Stage 2 - Mackay Port Access Road	QLD Government / Federal Government	Public	Mackay - Isaac	350	350	Announced					100	150	100				
Bruce Highway - Managed Motorways Program - Gateway Motorway to Caboolture Stage 2	QLD Government / Federal Government	Public	Moreton Bay - North	105	53	Under Construction	20	20	13								
Bruce Highway - Pine River to Dohles Rocks Road Interchange	QLD Government / Federal Government	Public	Moreton Bay - North	1500	1200	Announced				120	175	200	210	200	175	120	
Bruce Highway - Pavement Widening - South of Home Hill to North Ingham	QLD Government / Federal Government	Public	Townsville	109	81	Under Construction	4	6	5								
Bruce Highway - Rockhampton Ring Road (North & South Packages) - Stage 1	QLD Government	Public	Fitzroy	300	280	Under Construction				140	140						
Bruce Highway - Rockhampton Ring Road (North & South Packages) - Stage 2	QLD Government / Federal Government	Public	Fitzroy	1000	800	Under Procurement				250	300	250					
Bruce Highway - Tiaro Flood Immunity Upgrade	Federal Government	Public	Wide Bay	336	251	Announced				46	175	30					
Bruce Highway - Townsville Northern Access Intersections Upgrade	QLD Government / Federal Government	Public	Townsville	117	81	Under Construction	31	30	15								
Bruce Highway - Townsville Ring Road Stage 5	QLD Government / Federal Government	Public	Townsville	280	140	Under Construction	58	57	25								
Bruce Highway - Upgrade Burdekin River Bridge	QLD Government / Federal Government	Public	Townsville	97	53	Under Construction	3	6	9	10	9	9	6				
Caloundra Transport Corridor Upgrade	Sunshine Coast Council	Public	Sunshine Coast	100	80	Credibly Proposed					25	30	25				
Cairns Ring Road	QLD Government / Federal Government	Public	Cairns	359	251	Announced				31	90	90	40				
Cairns Western Arterial Road - Redlynch Connector Road to Captain Cook Highway, Duplication	QLD Government / Federal Government	Public	Cairns	300	230	Announced				18	60	60	50	42			



RAIL

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)												Status	
				21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33		
Beerburum to Nambour Rail Upgrade (Stage 1)	QLD Government / Queensland Rail	Public	Sunshine Coast	550.8	375	Under Construction	130	150	50	45							
Varsity Lakes to Elnora Extension	QLD Government / Queensland Rail	Public	Gold Coast	859	470	Prospective				130	180	160					
CRR - Tunnel, Stations and Development (TSD) PPP	QLD Government	Public	Brisbane Inner City	4354	4000	Under Construction	933	560	350	250							
CRR - Rail, Integration and Systems package (RIS)	QLD Government	Public	Brisbane Inner City	1080	1080	Under Construction	228	200	100	80							
CRR - European Train Control System Level 2	QLD Government	Public	Brisbane Inner City	736	699	Under Construction	155	88									
CRR - Three New Stations (Pimpama, Hope Island and Merrimac)	QLD Government	Public	Brisbane Inner City	1500	1200	Under Construction		350	450	400							
Inland Mainline Freight Upgrade - NSW/QLD Border to Gowrie	ARTC	Public	Darling Downs - Maranoa	2600	1954	Under Procurement					100	160	260	304	370	530	
Inland Mainline Freight Upgrade - Gowrie to Kagaru	ARTC	Public	Ipswich	7000	4900	Unlikely											180
Elnora to Coolangatta Extension	QLD Government	Public	Gold Coast	700	490	Prospective					196	294					
Ipswich to Springfield	QLD Government	Public	Ipswich	1500	1050	Credibly Proposed					250	250	300				
Moura - Aldoga Link Project (Wiggins)	QLD Government	Public	Fitzroy	500	325	Unlikely					135	140	50				
Wiggins Island Coal Rail Infrastructure Stage 2	Aurizon	Private	Fitzroy	714	499.8	Unlikely					83	167	167	83			
Wiggins Island Coal Rail Infrastructure Stage 3	Aurizon	Private	Fitzroy	450	315	Unlikely					126	126	63				
Gold Coast Light Rail Stage 3	QLD Government / Federal Government	Public	Gold Coast	1200	663	Under Construction	200	263	100	100							
Shorncliffe Line	Queensland Rail	Public	Brisbane - North	350	250	Prospective				125	125						
Brisbane to Toowoomba Rail Passenger Services	Queensland Rail	Public	Townsville	500	325	Prospective					150	175					
Salisbury to Beaudesert - Passenger	Queensland Rail	Public	Logan - Beaudesert	500	325	Prospective					100	125	100				
Loganlea Station Relocation	QLD Government / Federal Government	Public	Logan - Beaudesert	95	62	Under Procurement		14	24	24							
Mt Isa to Townsville	Queensland Rail	Public	Outback - North	380	320	Under Construction	80	80	40								
CRR - Clapham Yard Stabling (Moorooka)	Queensland Rail	Public	Brisbane - South	299	120	Under Construction	40	40									
Logan and Gold Coast Faster Rail (Main Line Upgrade)	QLD Government / Federal Government	Public	Logan - Beaudesert	2600	1820	Announced		114	228	455	569	455					
Logan and Gold Coast Faster Rail (Level Crossing Removals)	QLD Government / Federal Government	Public	Logan - Beaudesert	500	500	Announced		150	200	150							
Direct Sunshine Coast Line	QLD Government	Public	Sunshine Coast	2000	1500	Announced				350	400	400	350				
Sunshine Coast Mass Transit (Light Rail)	QLD Government	Public	Sunshine Coast	1000	1000	Prospective				250	400	350					
Gold Coast Light Rail Stage 4	QLD Government / Federal Government	Public	Gold Coast	750	600	Announced				150	250	200					
North Coast Line Upgrade between Townsville and Rockhampton	QLD Government	Public	Townsville	77	60	Under Construction	20	5	5								
Beerburum to Nambour Duplication (Stage 2)	QLD Government	Public	Sunshine Coast	600	500	Announced				125	125	125	125				
Station Upgrade Program for Olympics	Queensland Rail	Public	Brisbane Inner City	500	500	Credibly Proposed		125	125	125	125	125					



HARBOURS/PORTS

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)	Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Townsville Port Expansion Project - Outer Harbour Expansion (Berths 14+15)	QLD Government	Public	Townsville	200	150	Prospective			30	60	60							
Townsville Port Expansion Project - Channel Capacity Upgrade	QLD Government	Public	Townsville	251	201	Under Construction	50	60	91									
Urangan Boat Harbour	Besix Watpac / Seymour	Private	Wide Bay	800	200	Announced			90	100	10							
Abbot Point Dredging	QLD Government	Public	Mackay - Isaac	600	240	Credibly Proposed					80	80	80					
BP Wharf Repurposing	Port of Brisbane	Public	Brisbane - East	100	80	Credibly Proposed					40	40						
Port of Gladstone - Second Shipping Lane (Gatcombe and Goding Cutting Channel Duplication Project)	Gladstone Port Authority	Public	Fitzroy	760	532	Prospective						170	210	152				
Shiploader and Berth Replacement	BHP Mitsubishi Alliance	Private	Mackay - Isaac	750	600	Under Construction	200	150	150									
Gladstone Coal Shiploader Project	Gladstone Ports Corporation	Public	Fitzroy	100	80	Announced			40	40								
Toondah Harbour Redevelopment	Walker Corporation	Private	Brisbane - East	1400	1050	Credibly Proposed			70	70	70	70	70	70	70	70	70	70
Cairns Port Ship Lift	Ports North	Public	Cairns	600	500	Announced					130	200	170					
Gold Coast Cruise Ship Terminal	Gold Coast City Council	Private	Gold Coast	260	182	Credibly Proposed						25	38	56	38	25		



DEFENCE

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
						103	103	91	150	150	150	150	150	150			
Singapore Force Posture Initiatives - Shoalwater Bay	Federal Government	Public	Fitzroy	1100	Under Construction	103	103	91									
Singapore Force Posture Initiatives - Townsville	Federal Government	Public	Townsville	1100	Announced				150	150	150	150					
C11 80 Cairns	Federal Government	Public	Cairns	200	Under Construction	67	67	67									
EST02202 Other Sites and Redevelopment - Upgrade and Remediation Works to 9 sites	Federal Government	Public	Multi-Region	326	Under Construction		93	93	93								
EST02039 - Borneo Barracks Redevelopment	Federal Government	Public	Toowoomba	200	Under Construction		67	67	67								
RAAF Base Townsville - Pellegrine Facilities (AIR 555 Phase 1)	Federal Government	Public	Townsville	294	Under Construction	18	72	72	72								
HMAS Cairns (NCIS) Facility Upgrade	Federal Government	Public	Cairns	155	Under Construction		22	44	33								
PO010 National Airfields Maintenance RAAF Amberley	Federal Government	Public	Ipswich	100	Under Construction			50	50								
PO012 National Airfields Works - Oakey & Edinburgh	Federal Government	Public	Multi-Region	100	Announced				50	50							
PO012 National Airfields Works - Townsville	Federal Government	Public	Townsville	150	Under Construction			75	75								
ESTJP2093PHI Guided Weapons Explosive Ordnance Storage Project (NSW and QLD)	Federal Government	Public	TBC	200	Announced				67	67	67						
Sherger Airbase Upgrade	Federal Government	Public	Far North	300	Credibly Proposed					60	80	60					
Harveys Range Facility Upgrade	Federal Government	Public	Townsville	1000	Under Procurement			200	200	200	200						



WATER

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
						1200	720	70	140	300	140	70					
Paradise Dam Improvement Project	SunWater	Public	Wide Bay	1200	Under Procurement												
Burdekin Falls Dam - Raising	SunWater	Public	Townsville	1000	Announced				180	255	245	170					
Fitzroy to Gladstone Pipeline Project - Pipeline	GAWB	Public	Fitzroy	647	Under Construction			60	203	130	60						
Somerzet Dam Upgrade	SEQ Water	Public	Ipswich	600	Announced				100	125	125	100					
Lower Fitzroy River Infrastructure Project - Rookwood Weir	SunWater	Public	Fitzroy	569	Under Construction	120	67	63									
Fitzroy to Gladstone Pipeline Project - Water Treatment Plant	GAWB	Public	Fitzroy	336	Under Construction			30	95	70	40						
Toowoomba to Warwick Pipeline	SEQ Water	Public	Toowoomba	370	Announced				30	81	81	20	10				
Haghton Pipeline Duplication - Stage 2	Townsville City Council	Public	Townsville	275	Under Construction	58	58	37	20	10							



WATER

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)		Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
				(\$m)	(\$m)														
Water Treatment for Bowen Fields	Arrow Energy	Private	Mackay - Isaac	250	175	Under Construction	88	88											
The Cairns Water Security Stage 1	Cairns City Council	Public	Cairns	300	250	Under Procurement	75	90	85										
Lake MacDonald Dam Upgrade	SEQ Water	Public	Wide Bay	200	161	Under Procurement	64	96											
Wyralong Dam WTP Stage 1	SEQ Water	Public	Logan - Beaudesert	1000	850	Announced			200	225	200								
Beaudesert Water Supply Zone Projects Stage 1 and 2	SEQ Water	Public	Logan - Beaudesert	160	120	Under Construction	30	10	5										
Big Rocks Weir - Upper Burdekin	Townsville Enterprise	Public	Townsville	90	80	Announced			23	23	23	11							
Houghton Channel Capacity Upgrade	SunWater	Public	Townsville	90	70	Prospective			20	50									
Gold Coast Desal Expansion	SEQ Water	Public	Gold Coast	600	400	Credibly Proposed				200	200								
Sunshine Coast Desal Plant	SEQ Water	Public	Sunshine Coast	1000	800	Prospective					250	300	250						
Coolmunda Dam	SunWater	Public	Darling Downs - Maranoa	100	100	Credibly Proposed							50	50					
Teemburra Dam	SunWater	Public	Mackay - Isaac	100	100	Credibly Proposed							50	50					
Leslie Dam	SunWater	Public	Darling Downs - Maranoa	100	100	Credibly Proposed									50	50			
North Pine Dam	SEQ Water	Public	Moreton Bay - North	200	180	Announced				90	90								
Cressbrook Dam Upgrade	Toowoomba Regional Council	Public	Ipswich	200	180	Under Procurement			90										
Ross River Dam Remediation	Townsville City Council	Public	Townsville	500	400	Announced				200	200								
Rockhampton - Mt Morgan Water Pipeline	Rockhampton City Council	Public	Fitzroy	80	50	Announced			20	30									
Burdekin- Bowen Pipeline	SunWater	Public	Multi-Region	250	200	Credibly Proposed					90	110							
Wivenhoe Dam Safety Upgrade	SEQ Water	Public	Ipswich	1000	850	Credibly Proposed							250	350	250				
Awoonga Dam Spillway Upgrade	GAWB	Public	Fitzroy	150	100	Announced					30	40	30						



SEWERAGE

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)		Status	Year												
				21/22	22/23		23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33			
Luggage Point Sewerage Scheme	Urban Utilities	Public	Brisbane - North	600	500	Under Construction	38	38	38	38	38	38	38	38					
S1 Tunnel Extension to Eagle Farm PS - B	Urban Utilities	Public	Brisbane - North	96	72	Announced									18	18	18	18	
Wamuran Irrigation Scheme	Unity Water	Public	Sunshine Coast	120	72	Under Construction	10	35	20	7									
Caswell Street SPS to Hamilton Siphon	Urban Utilities	Public	Brisbane - East	94	70	Announced			12	12	12	12	12	12					
Burpengary East STP Upgrade	Unity Water	Public	Sunshine Coast	65	55	Under Procurement			25	30									
Brendale STP Upgrade	Unity Water	Public	Sunshine Coast	65	55	Under Procurement			25	30									
S2 & Corinda Chelmer Sewer Augmentation	Urban Utilities	Public	Brisbane - West	69	52	Announced			9	9	9	9	9	9					
Logan Water Infrastructure Program Alliance	Logan City Council	Public	Logan - Beaudesert	1000	746	Under Construction	83	83	83	83	83	83	83	83					
Cannery Creek Sewer Upgrade	Urban Utilities	Public	Brisbane - North	65	39	Under Construction		9	21	9									
Aura & Harmony Water and Sewerage Network	Unity Water	Public	Sunshine Coast	230	200	Under Construction		33	80	57	30								
Gold Coast Council Long Term Recycled Water Release Stage 2 - South Stradbroke Pipeline	GCC	Public	Gold Coast	250	188	Announced				60	128								
Eagle Farm Rising Main Upgrade - A	Urban Utilities	Public	Brisbane - North	165	124	Announced				16	16	16	16	16	16	16	16	16	16
Coombah Sewerage Treatment Plant Stage 6	Gold Coast City Council	Public	Gold Coast	150	105	Under Construction		40	65										
Kawana STP Upgrade	Unity Water	Public	Sunshine Coast	150	100	Under Procurement					25	40	35						
Norman Creek Sewer Augmentation - Brisbane	Urban Utilities	Public	Brisbane Inner City	122	92	Announced			25	37	30								



ELECTRICITY

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)	Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
North Queensland Power Station	Private / QLD Government / Federal Government	Private	Townsville	800	600	Unlikely								100	250	250		
Bull Creek Solar Farm (>1000 MW)	Genex Power / Solar Choice	Private	Darling Downs - Maranoa	1500	675	Credibly Proposed				125	350	200						
Raglan Solar (300MW)	Eco Energy Group	Private	Fitzroy	327	114	Announced				57	57							
Bouldercombe Solar Farm (200MW)	Genex / Eco Energy Group	Private	Fitzroy	240	84	Prospective				42	42							
Kidston Solar Project - Stage 2 (270 MW)	Genex Power	Private	Far North	400	140	Credibly Proposed				70	70							
150MW Kidston Stage 3 Wind Project	Genex Power	Private	Far North	295	103	Credibly Proposed					20	52	31					
Kidston Pumped Hydro Storage Project	Genex Power	Private	Far North	777	544	Under Construction	50	170	170	154								
Baralaba Solar Farm 92MW	FRV Services Australia Pty Ltd	Private	Fitzroy	150	53	Prospective					26	27						
Collinsville North Solar Project <150MW	Equis Energy	Private	Mackay - Isaac	200	75	Under Construction		37	37									
Koberinga Solar Farm 55MW	ESCO Pacific	Private	Townsville	90	32	Credibly Proposed				16	16							
Mirani Solar Farm 60MW	ESCO Pacific	Private	Mackay - Isaac	110	35	Credibly Proposed				35								
Kelsey Creek Solar Farm 50MW	KCSF Consortium	Private	Mackay - Isaac	80	28	Prospective				28								
Clermont (Phase 2) 75MW	Wirsol Energy	Private	Mackay - Isaac	120	42	Prospective				12	30							
Lower Wonga Solar Farm (Stage 1) 350MW	Solar Q	Private	Wide Bay	560	196	Credibly Proposed				39	78	78						
Blair Athol Solar Farm 60MW	TerraCom Limited	Private	Mackay - Isaac	100	35	Prospective				18	11	7						
Chinchilla Solar Farm 100MW	First Solar	Private	Darling Downs - Maranoa	160	56	Prospective				28	28							
Rugby Run Solar Farm Stage 2 105MW	Adani Australia	Private	Mackay - Isaac	170	60	Prospective				20	40							
Clarke Creek Wind and Solar Farm (Stages 1 and 2)	Squadron Energy	Private	Mackay - Isaac	3000	700	Under Construction	140	140	140	140	140	140	74					
Majors Creek Solar Project 400MW	Edify Energy	Private	Townsville	640	224	Prospective					50	100						
Cape York Solar Storage 55MW	Lyon Group	Private	Outback - North	90	32	Prospective					32							
Barcaldine Remote Community Solar Farm (Stage 2) 50MW	Barcaldine Remote Community Solar Farm	Private	Outback - North	80	28	Prospective				28								
Lakeland Wind Farm 100MW	Windlab	Private	Cairns	160	56	Prospective				36	20							
Freedom Energy One 250MW	CWP Renewables	Private	Townsville	1300	455	Prospective				100	200	155						
Dingo Solar Farm 85MW	ESCO Pacific	Private	Fitzroy	140	49	Announced				25	24							
Rolleston Solar Farm 90MW	RES Australia	Private	Fitzroy	140	49	Prospective				20	29							
Dysart Solar Energy Farm 100MW	Tilt Renewables	Private	Mackay - Isaac	200	70	Prospective				35	35							
Chewko Solar Farm 75MW	Tilt Renewables	Private	Cairns	120	42	Prospective				42								
Mareeba Solar Farm 60MW	CleanGen	Private	Cairns	100	35	Prospective				35								



PIPELINES

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)	Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	
Arrow Bowen Pipeline	Shell / Arrow / Bow	Private	Mackay - Isaac	450	360	Prospective					160	200	710						
Northern Gas Pipeline Extension / Expansion (QLD Component)	Jemena / Galilee Energy	Private	Outback - South	3800	2660	Credibly Proposed				450	750	750							



TELECOMMUNICATIONS

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)	Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	
National Broadband Network - Qld Component	NBN Co.	Public	Multi-Region	9352	6878	Under Construction	459	290	266	60	67								
HyperOne Network - QLD	HyperOne	Private	Multi-Region	280	138	Announced			60	48	30								



OIL & GAS

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)		Status	21/22 22/23 23/24 24/25 25/26 26/27 27/28 28/29 29/30 30/31 31/32 32/33											
				(\$m)	(\$m)		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Queensland Curtis LNG Upstream Field Development (Sustaining)	QGC & Shell	Private	Fitzroy	2200	2000	Under Construction	150	150	150	150	150	150	150	150	100			
Gladstone LNG Upstream Field Development (Sustaining)	Santos & Petronas	Private	Fitzroy	1540	1400	Under Construction	100	100	100	100	100	100	100	100	150			
Australia Pacific LNG Upstream Field Development (Sustaining)	Origin / Conoco Phillips	Private	Darling Downs - Maranoa	2200	2000	Under Construction	150	150	150	150	150	150	150	150				
Arrow - Upstream Field Development (Sustaining)	Arrow / Shell	Private	Darling Downs - Maranoa	715	650	Under Construction	150	150	200	150								
Western Surat Gas Project	Senex	Private	Darling Downs - Maranoa	1500	1200	Under Construction	186	186	186	186	186	186	186	186				
Australia Pacific LNG Salt Handling Facility	Origin / ConocoPhillips	Private	Outback - North	200	160	Unlikely				40	80	40	30					
Curtis LNG Project (Salt Concentrator)	QGC & BG Group	Private	Outback - North	200	150	Unlikely				30	45	45						
Ironbark Gas Facility (Domestic Supply)	Origin	Private	Darling Downs - Maranoa	300	240	Unlikely			140	100								
Surat Gas Expansion Projects	Arrow Energy	Private	Darling Downs - Maranoa	1800	1500	Under Construction	300	300	300	300	300							
Vali Gas	Vintage / Metgasco / Bridgeport	Private	Outback - South	70	56	Under Construction		36	20									
Arcadia Valley CSG Development	Santos & Petronas	Private	Darling Downs - Maranoa	1000	600	Credibly Proposed								200	200	200		



COAL

Product Description	Sponsor	Funding Source	Region	Total Value Eng Value (\$m)		Status	21/22 22/23 23/24 24/25 25/26 26/27 27/28 28/29 29/30 30/31 31/32 32/33											
				(\$m)	(\$m)		21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33
Eagle Downs Coking Coal	South 32	Private	Mackay - Isaac	1250	600	Prospective			158	228	215							
Colton Coal Mine	New Hope Corporation	Private	Wide Bay	300	180	Prospective					66	114						
New Acland Stage 3 Project	New Hope Corporation	Private	Darling Downs - Maranoa	556	445	Under Construction		45	150	100								
Peak Downs Expansion	BHP Billiton / Mitsubishi Alliance (BMA)	Private	Mackay - Isaac	460	345	Under Construction		80	160	105								
South Walker Creek	Stannore	Private	Mackay - Isaac	183	122	Under Construction		30	52	40								
Grosvenor Underground Stage 2	Anglo Coal	Private	Mackay - Isaac	500	350	Under Construction		70	90	105	85							
Middlemount Coking Coal Mine Stage 2	Peabody / Yancoal	Private	Mackay - Isaac	325	284	Under Construction		100	184									
Hail Creek Extension - Underground	Glencore	Private	Mackay - Isaac	1100	660	Under Construction		150	180	150								
Rolleston Expansion	Xstrata / Glencore	Private	Fitzroy	400	280	Under Construction		70	140	70								
Yarrabee	Yancoal	Private	Fitzroy	260	150	Unlikely						75	75	18				
Boundary Hill South Mine Extension	Anglo Coal	Private	Fitzroy	100	70	Unlikely						18	35					
Foxleigh Plains Project	Anglo / CAML / Nippon	Private	Mackay - Isaac	200	140	Under Construction		70	70									
Eaglefield Coal Mine Expansion	Peabody	Private	Mackay - Isaac	1500	1200	Unlikely		250	350	320	280							
Monto Coal Mine Further Stages	Peabody / China Huaneng Group	Private	Wide Bay	265	159	Unlikely						60	99					
Drake Coal	Qcoal	Private	Mackay - Isaac	900	690	Under Construction		130	240	80								
Lake Vermont (Underground)	Jellinbah Resources	Private	Mackay - Isaac	320	300	Announced			100	100	100							
Olive Downs Coal Mine	Pembroke Resources	Private	Mackay - Isaac	1200	960	Under Construction		220	250	240								
Baralaba South Open Cut	The Mount Ramsay Coal Company (Liberty Mutual)	Private	Outback - North	200	160	Credibly Proposed				80								
Millennium Expansion	Stannore Coal / M Resources	Private	Mackay - Isaac	400	320	Under Construction		60	100	60								
Minyango Coal Project Stage 1	QCoal	Private	Outback - North	750	600	Under Construction	120	240	240									
Oaky Creek Longwall Stage 2	Glencore Xstrata / Sumisho / Itochu / ICRA	Private	Outback - North	650	455	Under Construction		150	230	75								
Saraji East	BHP Billiton / Mitsubishi Alliance (BMA)	Private	Mackay - Isaac	2400	1800	Credibly Proposed		360	990	450								
Winchester South	Whitehaven Coal	Private	Mackay - Isaac	1000	900	Prospective		350	450	100								
Moranbah North	Anglo	Private	Mackay - Isaac	500	400	Under Construction		100	150	150								
Gemini Coal Project	Magnetic South	Private	Mackay - Isaac	250	200	Prospective		67	89	44								
Carborough Downs Metallurgical Coal Mine Extension	Fitzroy Australia	Private	Mackay - Isaac	350	263	Credibly Proposed		133	130									
Isaac River Coal Mine Project	Bowen Choking Coal	Private	Mackay - Isaac	250	200	Credibly Proposed		50	75	50								
Vulcan Coal Mine	Vitrinite	Private	Mackay - Isaac	250	100	Prospective		50	50									



OTHER MINERALS & HEAVY INDUSTRY

Product Description	Sponsor	Funding Source	Region	Total Value (\$m)	Eng Value (\$m)	Status	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	
Merlin Molybdenum-Rhenium Phase 2	China	Private	Outback - North	345	250	Unlikely		100	100	50									
Cannington Expansion	BHP Billiton	Private	Outback - North	400	120	Under Construction	30	60	30										
Cloncurry Copper Project (Roseby Copper / Little Eva / Eva)	CMCC	Private	Outback - North	320	96	Under Construction		50	46										
Red Dome Mungana	Consolidated Tin Mines Limited	Private	Cairns	330	215	Unlikely		65	85	65									
Charters Towers Gold Mine	Citigold Corporation	Private	Townsville	246	135	Prospective			35	80	20								
SCONI Scandium Project (Phase 1)	Australian Mines	Private	Townsville	1014	304	Credibly Proposed			94	140	70								
Paradise Phosphate South project	Phosphate International	Private	Outback - North	300	225	Announced			65	95	65								
Mt Dromedary - Graphite Project	Novonix	Private	Outback - North	100	80	Unlikely			40	40									
Gladstone Energy and Ammonia Project	Australian Future Energy	Private	Fitzroy	1000	600	Prospective				200	200	200							
Agripower Amorphous Silica - Fertiliser Processing Plant	Agripower Australia Ltd	Private	Townsville	663	500	Under Construction	150	200	150										
Agripower Amorphous Silica - Stage 2 Development	Agripower Australia Ltd	Private	Townsville	2000	1600	Credibly Proposed				400	800	400							
St Elmo Vanadium Project	Multicom Resources	Private	Outback - North	470	329	Under Construction	29	200	100										
Townsville Hydrogen Facility (300MW)	Origin / Kawasaki Heavy Industries	Private	Townsville	1000	1000	Credibly Proposed					167	333	333	167					
H2-Hub™ Gladstone Green Hydrogen and Ammonia Production Facility	Hydrogen Utility (H2U)	Private	Fitzroy	4700	2585	Credibly Proposed				800	1300	485							
Aldoga Renewable Hydrogen Facility - Stage 1	Stanwell / Iwatani	Private	Fitzroy	500	350	Announced			50	200	100								
Hydrogen-Equipment Manufacturing Facility - Stage 2	Fortescue	Private	Fitzroy	885	619.5	Prospective							103	310	207				
Eva Copper Project	Harmony Gold Mining	Private	Outback - North	836.4	501.84	Prospective			102	200	200								
Green Energy Manufacturing Centre - Stage 1	Fortescue	Private	Fitzroy	114	91	Under Construction	21	60	10										
Collinville Green Energy Hub	Ark Energy	Private	Mackay - Isaac	20000	11000	Credibly Proposed							850	1700	1700	2750	2725	1275	
Green Ammonia production facility	Keppel / Dyno Nobel	Private	Fitzroy	2,000	1,000	Credibly Proposed					200	280	270	250					
Gibson Island Green Ammonia and hydrogen Electrolysis Facility	Fortescue Future Industries / Incitec Pivot Fertilizers	Private	Brisbane Inner City	3,000	1,000	Credibly Proposed					230	265	265	240					
Julia Ck Vanadium Project	GEM	Private	Outback - North	242	100	Credibly Proposed				20	50	30							
Critical Minerals Processing Facility	QLD Government	Public	Townsville	75	15	Announced			6	9									
Alpha HPA Project - Stage 1	Alpha HPA	Private	Fitzroy	308	40	Under Construction			10	20	10								
Alpha HPA Project - Stage 2	Alpha HPA	Private	Fitzroy	300	40	Credibly Proposed					10	20	10						
Townsville Energy Chemicals Hub (TECH) Project	Queensland Pacific Metals	Private	Townsville	2,100	250	Announced			50	65	70	65							
Cape Flattery Silica Sand Project	Metallica Minerals Ltd	Private	Far North	80	10	Under Construction			3	4	3								
Northern Silica Project	Diatreme Resources Ltd	Private	Far North	1,000	100	Credibly Proposed					30	40	30						
Richmond - Julia Creek Vanadium	Richmond Vanadium Technology Pty Ltd	Private	Outback - North	242	25	Credibly Proposed			7	10	8								



CSQ has estimated that the pipeline of new construction activity planned over the next decade could equate to \$90b, driving annual construction activity 20% higher than historic averages.

Given the scale of projects in the pipeline, continuing to build our own talent pool is more critical than ever.

CSQ is ramping up work with industry partners, government and schools to broaden the pool of young people considering a career in construction.

Through pre-trade programs and the Construction Pathways initiative, the aim is to raise the profile of construction opportunities across Queensland and boost numbers of new entrants moving forward.



Find out more at csq.org.au

CSQ

**CONSTRUCTION
PATHWAYS**

Providing civil construction, earthworks, roadworks and plant hire services.

Based in Queensland's Surat Basin, Western Downs Civil (WDC) is a diversified civil infrastructure company with project delivery capability across a range of industry sectors. Current projects are in the oil & gas, renewable energy, power & battery infrastructure.

Our goal is to create a longstanding partnership with your business to ensure the successful delivery of your projects. WDC focus on building strong, ongoing relationships with clients since 2013 indicates our commitment to client satisfaction and project success.

WDC

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QUALITY



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RELATIONSHIPS

Building a sustainable future in QLD

Webuild is a leading global player in the construction of large, complex projects for sustainable mobility, clean hydro energy, clean water, and green buildings.

Together with our Australian subsidiary, Clough, which this year celebrates 50 years in Queensland, we are ready to deliver the challenging and rewarding projects supporting the future of the state, its people and communities.

Explore more about the Webuild Group
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We are a major provider of electricity and energy solutions to Queensland, the National Electricity Market and large energy users throughout Australia.

We're putting our energy into finding better, cleaner ways to reliably generate, store and move electricity. Through our pipeline of proposed renewable energy projects throughout central and southern Queensland we'll reduce our emissions intensity and create future opportunities for our people and communities.

At Stanwell, we provide the spark for a bright future. That future starts now.

[Find out more at Stanwell.com](https://www.stanwell.com)



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BMD Constructions is a wholly owned subsidiary of the BMD Group, and provides civil and industrial construction services to public and private sector organisations throughout Australia. Established in 1979, BMD Constructions strives to be deliberately different in its approach to business with every project being regarded as an opportunity to build long-term relationships of mutual benefit.



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For over 25 years, Townsville Enterprise has been a key driver in attracting major investment to the region. It ensures that Townsville, Magnetic Island, Palm Island, the Burdekin Shire, the Hinchinbrook Shire and the Charters Towers region benefit from investment and economic prosperity, tourism opportunities and the business events market.



TSBE is an independent, member-driven economic development organisation actively linking our business community to opportunities across the Toowoomba, Western Downs, Maranoa and surrounding areas.



Established in 1968 on the Gold Coast, we have been privileged to play a significant role in key projects and areas of development legislation that have helped shape South East Queensland.

Our success and longevity within the industry comes from our experience, and ability to work with an outstanding array of clients who continue to put their trust in us. Through collaboration, ongoing improvement, upskilling and technology investment we are able to adapt our services to best meet their changing needs, whilst ensuring we remain current in an evolving market.



Gladstone Engineering Alliance is the reputable self-funded, not for profit organisation linking business with opportunity to create sustainable growth and diversity for the Gladstone Region.

We have a significant proven track record in running diversified private and public grants and projects with excellence. Our diverse capabilities stem from many years of project management assisting organisations of all sizes from the SME's and global corporations. We have a history of successfully using government funding to deliver programs that provide lasting benefits and skills to their participants, businesses and the wider-community.







THE PIPELINE: 2024 TO 2028

The QMPPR gathers data from 277 projects, each with an engineering construction value of \$50m or greater, organised into 12 sectors and 11 regions.



THE PIPELINE: 2024 TO 2028

Each project in the pipeline is separately assessed as either funded or unfunded and then assigned to one of six different project statuses:

FUNDED



ANNOUNCED

Projects which have funding support but have not yet entered the procurement stage (as at September 2023). There are \$27.8b in announced projects in the pipeline.



UNDER PROCUREMENT

Projects in a procurement stage but have not yet started construction (as at September 2023). There are \$6.5b in projects under procurement in the pipeline.



UNDER CONSTRUCTION

Projects in flight/under construction. There are \$22.8b in projects currently under construction in the pipeline.

UNFUNDED



CREDIBLY PROPOSED

Projects that are supported by governments and/or the private sector but still in prefeasibility/business case mode and therefore do not have funding committed. There are \$24.8b in credibly proposed projects in the pipeline.



PROSPECTIVE

Projects considered likely to occur over the next five years but not yet formally proposed. There are \$10.3b in prospective projects in the pipeline.



UNLIKELY

Projects considered not to occur in the next five years, even if announced. There are \$2.8b in unlikely projects in the pipeline.

Should international developments or public sector finances deteriorate significantly, or the combination of threats to the Queensland construction industry remain unaddressed, the funded forecast view is similar to a 'worst case scenario' outlook.

Maintaining a growing pipeline of major project work requires shifting currently unfunded projects into the funded category, as well as incorporating new projects into the pipeline. While the most likely scenario for major project work excludes unlikely projects, these are included to show their potential impact on major project work, particularly later in the forecast.

KEY POINTS

The Major Projects Pipeline contains \$92b in work between 2023/24 and 2027/28 inclusive. This comprises \$54.4b in funded work and \$37.6b in unfunded work. Public projects represent \$46.9b of the pipeline, while \$45.1b comprises private works.

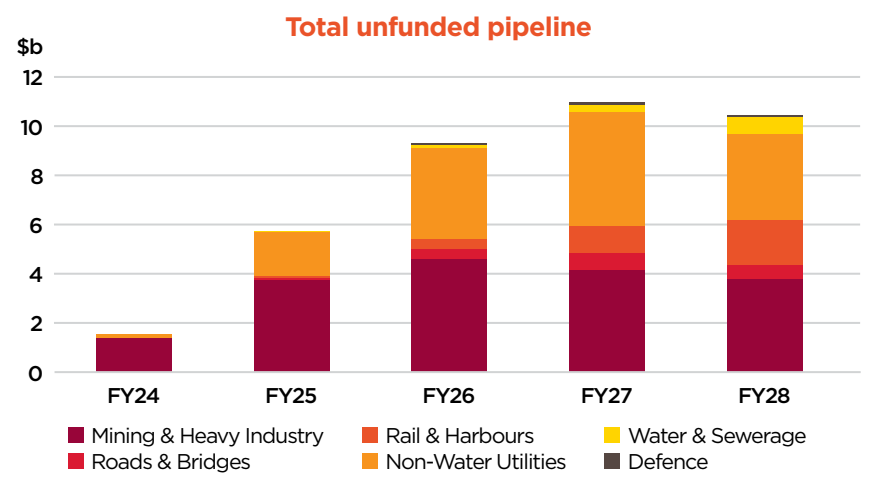
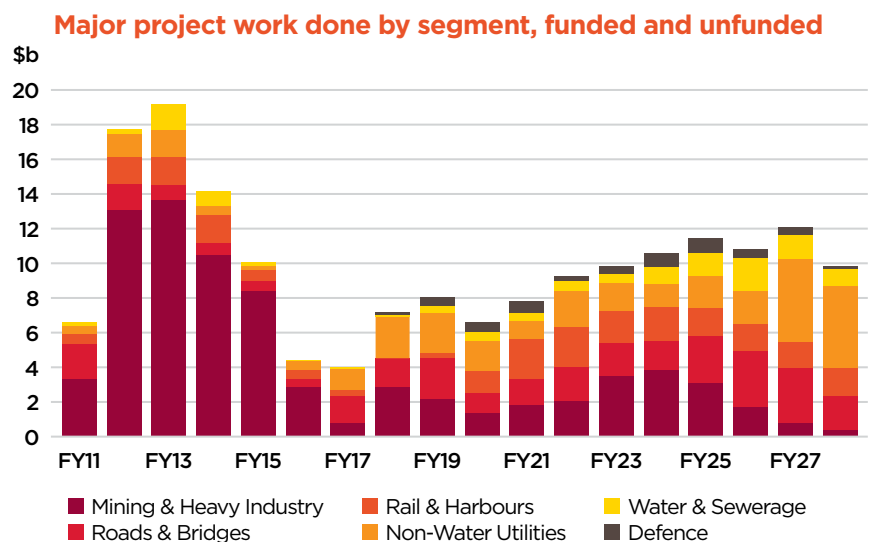
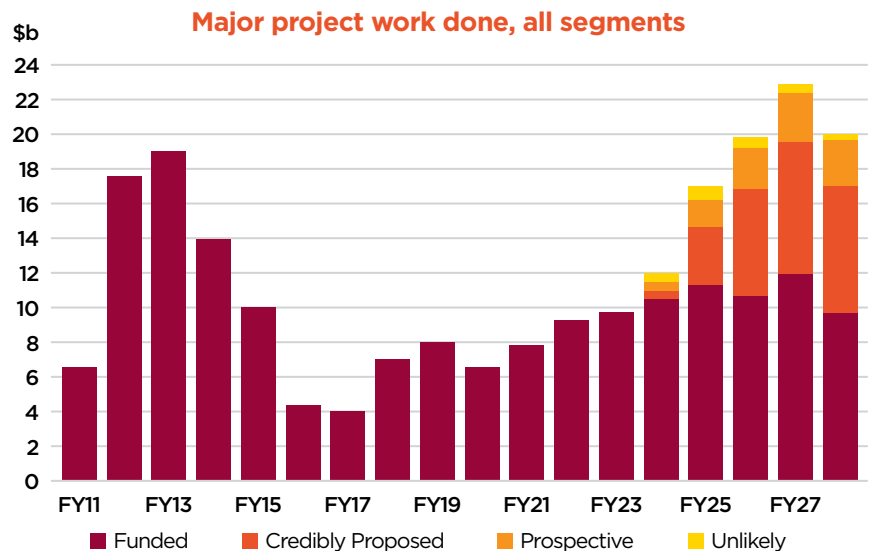
The Major Projects Pipeline outlook for activity has risen compared to the 2022 QMPPR, increasing by \$20.6b over the next five years to 2027/28.

Major project construction activity in the pipeline is equal to \$92b between 2023/24 and 2027/28. The non-water utilities sector (namely the electricity component) is responsible for most of this increase, with overall construction activity growing by \$14.2b.

There is a strong growth profile, with major project construction activity growing from \$9.8b in 2022/23 to a \$22.9b peak in 2026/27. This sharp increase reflects an average annual growth rate of 28% over the four year period from 2022/23 to 2026/27.

There is an increased proportion of funded work in the pipeline, rising from 53% to 59% relative to the 2022 QMPPR. While unfunded pipeline construction activity has increased by 11% relative to the 2022 QMPPR, funded construction activity has increased by a substantial 44%.

The number of projects in the pipeline has increased by 8% compared to the 2022 MPPR, with 153 public projects and 124 private projects representing \$46.9b and \$45.1b worth of construction activity, respectively. The proportion of public construction activity has risen from 49% to 51% of pipeline activity.



Source: Oxford Economics, QMCA

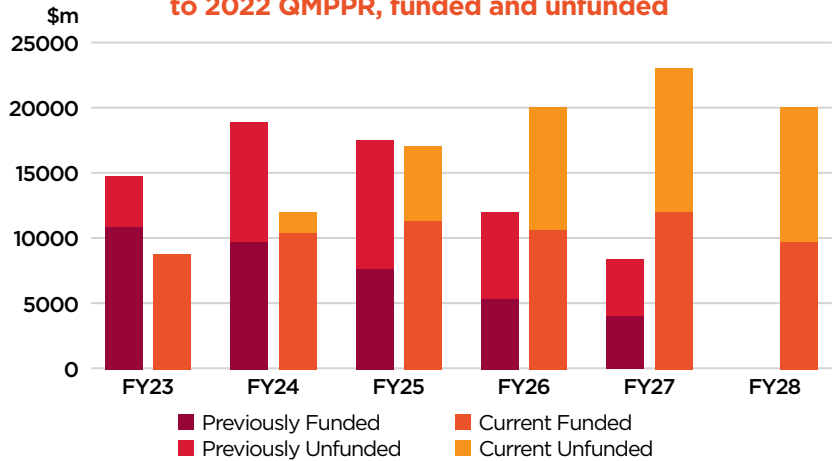
Compared to the 2022 QMPPR, private projects receiving funding has risen from 27% to 31%. In addition, public projects receiving funding has increased from 79% to 86%. The average private project size (\$363m) is greater than the average public project (\$307m).

The number of projects classified as unlikely has fallen from 22 to 15, while projects that are considered prospective (still unfunded) remains relatively consistent with previous reports. The number of projects categorised as credibly proposed has increased from 32 to 47. The proportion of projects in the unfunded stage of delivery sits at 63%, a slight increase from the 60% share in the 2022 QMPPR.

The share of funded projects in the pipeline has risen by 13%, from 155 to 178, relative to the 2022 QMPPR. This change is mostly driven by an increase in the number of funded mining and heavy industry projects, which grew to 33 projects with an increase of 94%.

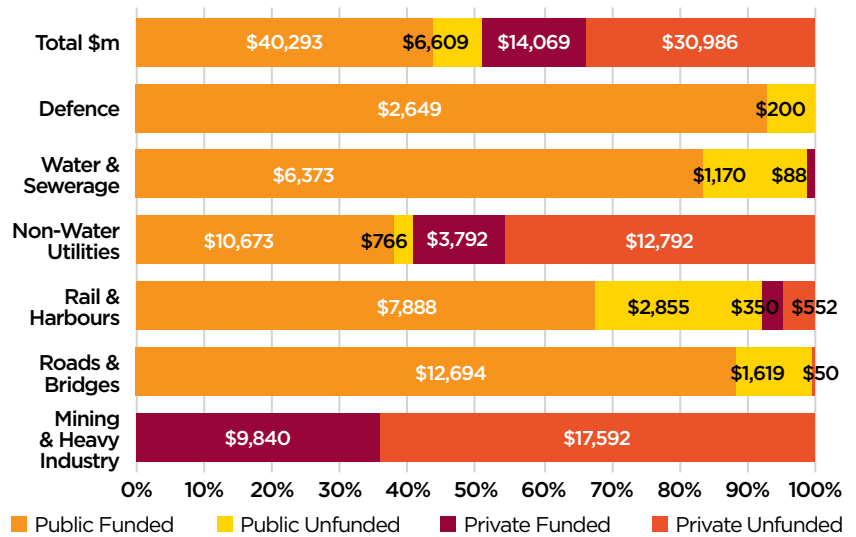
Overall, total funded activity across all sectors has increased by \$16.7b. Total unfunded activity across all sectors has increased by \$3.9b. The increase in funded activity is driven by the non-water utilities sector and the mining and heavy industry sector, which have seen funded pipeline activity rise by \$9.5b and \$5b compared to the previous Major Projects Pipeline, respectively. In terms of unfunded activity, the non-water utilities and rail sectors have contributed \$4.8b and \$0.8b to the net increase in unfunded pipeline works, respectively.

Major project work done in comparison to 2022 QMPPR, funded and unfunded

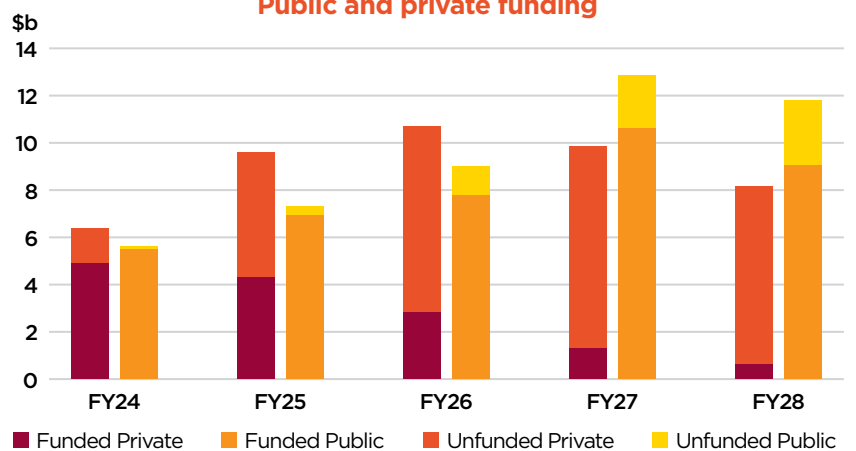


Pipeline funding mix by sector and year

Funding mix of major project pipeline



Public and private funding



Source: Oxford Economics, QMCA





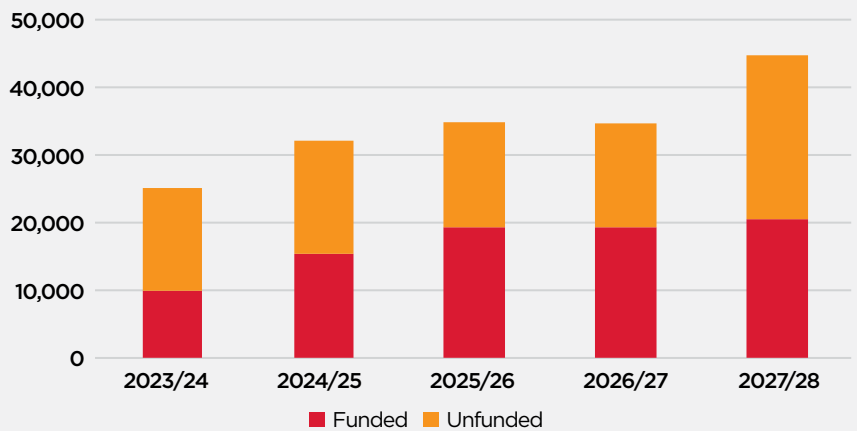
CSQ LABOUR AND SKILLS REPORT

CSQ

Labour requirements

Queensland has ambitious plans for public infrastructure. In the recent state budget, the government committed a record four year \$89b projected capital works program. The three main forces driving Queensland’s public sector capital projects are the 2032 Olympic and Paralympic Games, renewables initiatives and a growing population. This positions the state’s construction sector at an interesting juncture, where it is challenged to deliver a combination of concurrent projects.

Major project construction labour demand, Queensland, average, by financial year



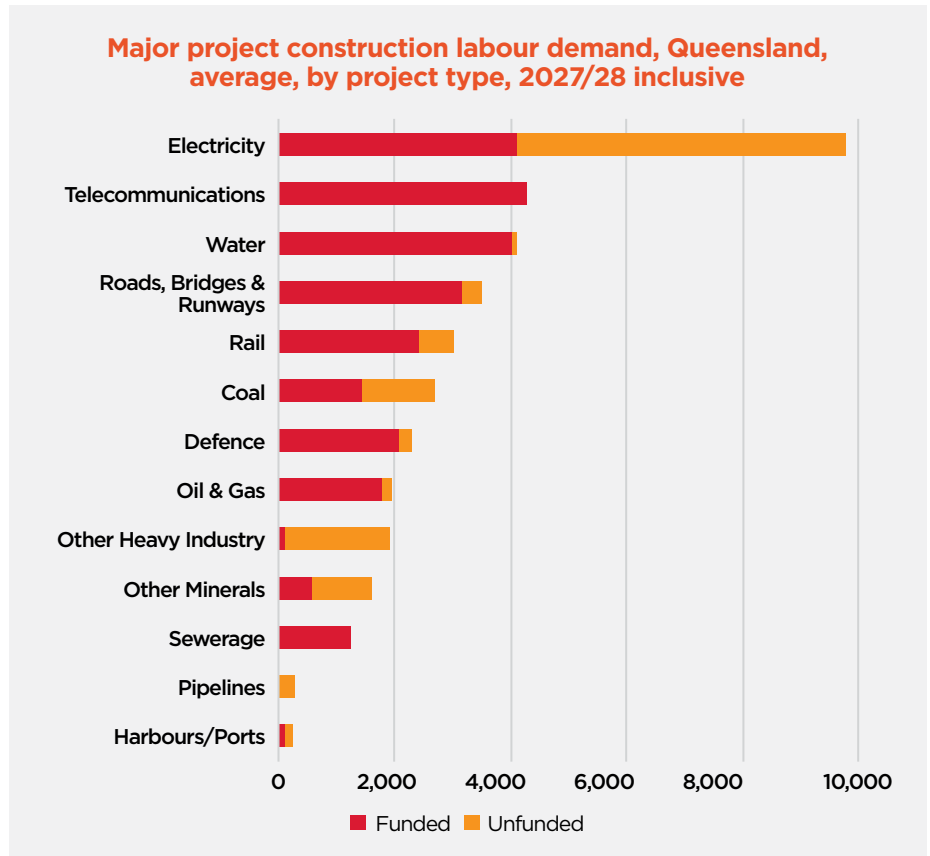
Source: CSQ for QMCA



This new wave of construction activity enters the pipeline at a time when the industry is already confronted with a large backlog of construction work and is still navigating a combination of challenges. Of these, the industry's long-standing issue of worker shortages remains the single largest downside risk.

In the years ahead, the significant uplift in construction activity in Queensland will push labour requirements to record levels. For the pipeline of work detailed in this report, the industry will require an estimated 33,515 construction workers on average over the next five years. This comprises an average of 16,493 for funded and 17,022 workers for unfunded projects.

Labour requirements for the full portfolio (funded and unfunded projects) are expected to grow steadily over this five year horizon and likely peak at 43,702 workers on average in 2027/28. This is a significant 78% surge in the average labour requirement relative to 2023/24. The peak labour requirement for both funded and unfunded projects are predicted to occur concurrently in 2027/28.



Source: CSQ for QMCA

The labour requirement for funded projects is predicted to grow sharply (by 56% and 25%) in the next two periods, respectively. This pace of growth is then predicted to slow somewhat before reaching a peak of almost 20,000 workers in 2027/28.

Unfunded projects are predicted to need almost 15,000 workers on average in the immediate period.

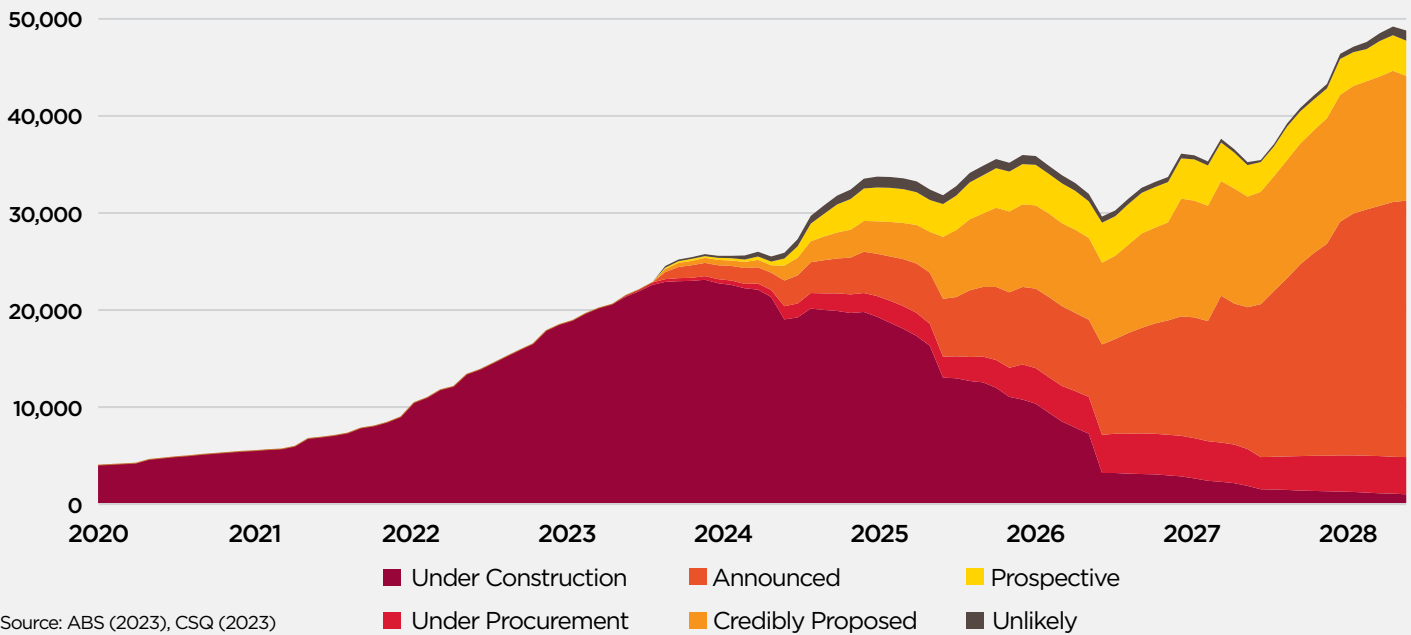
Labour needs are anticipated to fluctuate around these levels until 2026/27, before surging by a significant 58% in 2027/28 to a peak of 24,000 workers.

The average labour requirements vary by project type. Electricity type projects are estimated to consume the most workers, requiring almost 10,000 workers on average over the five year period.

As discussed later in this report, the state is already confronted with a significant volume of unfilled electrician vacancies likely to be needed for these projects. These electricity projects are expected to demand twice the number of workers needed in telecommunications and water projects.



Average headcount required, by project status



From the funded pool, electricity, telecommunications and water projects account for the highest number of workers needed, with each project type requiring just above 4,000 workers on average from now until 2027/28. For unfunded projects, electricity accounts for the highest number of workers needed, followed by other heavy industries and coal.

Labour demand to deliver Queensland's next infrastructure boom is spread across the different occupations. Concreters are expected to lead demand, with an estimated 2,700 concreters needed on average over the five year period. All occupations in the construction bucket will be highly impacted. Around 80% of the occupations (most of which are civil construction jobs) are predicted to require 1,000 plus workers on average over the five year period. With shortages in construction workers already prevalent across all occupations, the industry's struggle to find workers is positioned to intensify further.

By mid-2028, the demand of average monthly headcount to deliver the civil infrastructure pipeline is projected to jump to a peak of almost 50,000 workers. This is almost double the average headcount of around 25,000 workers currently consumed in projects under construction. About 10% of this peak 50,000 workers projected for mid-2028 are associated with projects that are under construction and under procurement. A larger 88% are for projects that are currently in an announced or credibly proposed status. As these projects roll into construction, meeting this demand will become challenging given the current tight labour market.

The state already has significant work under construction over the short-to-medium term, that will continue to consume a large share of the workforce. The incredible volume of announced and credibly proposed projects for the forthcoming years will add to this huge workload and heighten workforce constraints, particularly from late 2024 onwards. From this period, the average monthly headcount is predicted to increase to almost 30,000. The steep upward trajectory in average headcount requirement signals deeper workforce shortages for the state.



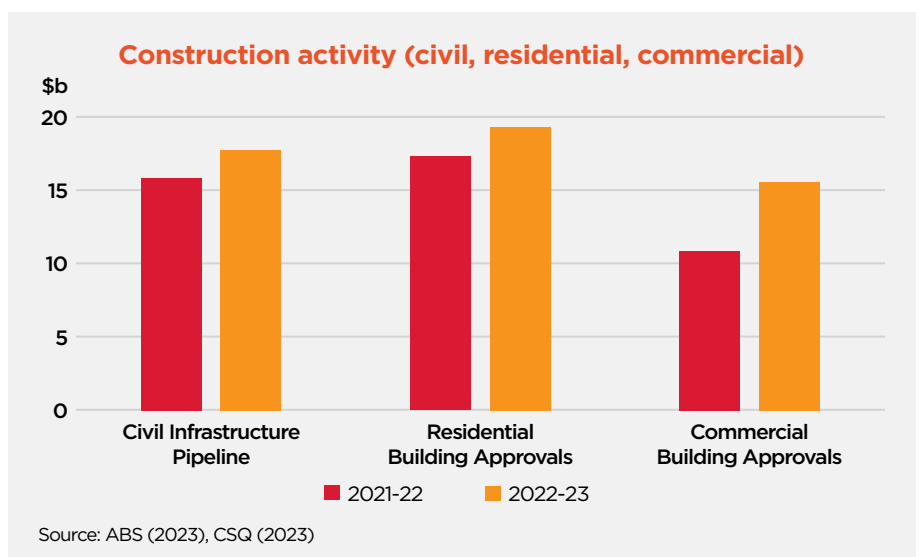
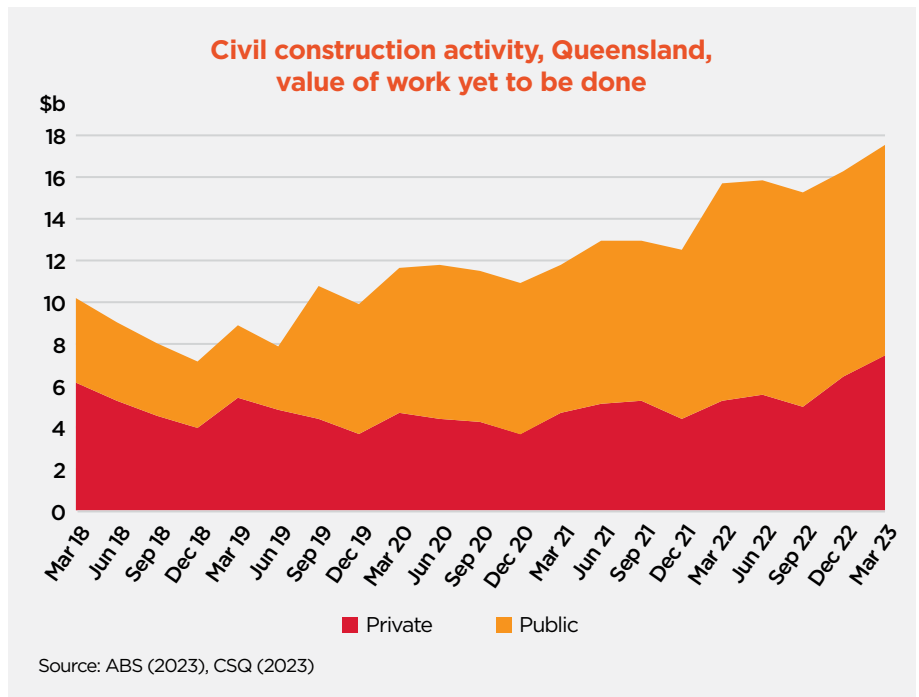
Current demand

The significant capital works program envisaged for Queensland from now up until 2027/28, will add to an already bulged pipeline of residual civil projects. Queensland faces a significant backlog of around \$18b of unfinished projects. Public projects account for almost 60% of this outstanding civil work. The residual civil pipeline has grown progressively post-pandemic and is currently at a record high.

A significant volume of capital programs had entered the civil pipeline as part of the state's post-pandemic recovery measure. However, a large portion of these projects are yet to commence, resulting in an expanded pipeline.

In addition to the massive civil infrastructure pipeline, building activity in the state remains buoyant amidst several strong headwinds. Both residential and commercial building approvals registered growth over the year, with some noticeable slowdown in the residential segment. Higher prices are accountable for the nominal increases across civil, residential and commercial construction activity. Taking this into account, the civil pipeline and residential building approvals registered an annual real growth of around 1% each, while commercial approvals surged by a significant 32%. The subdued residential building activity is not surprising, with further slowdowns likely as the full impacts of the current cycle of interest rates flow through. At the same time, a strong population growth amidst a housing shortage crisis is likely to cushion any significant drags. Commercial building approvals turned out stronger, mainly reflecting increased public sector investment in health buildings.

A strong civil pipeline and buoyant building activity indicates the state is set to see a period of heightened construction activity.



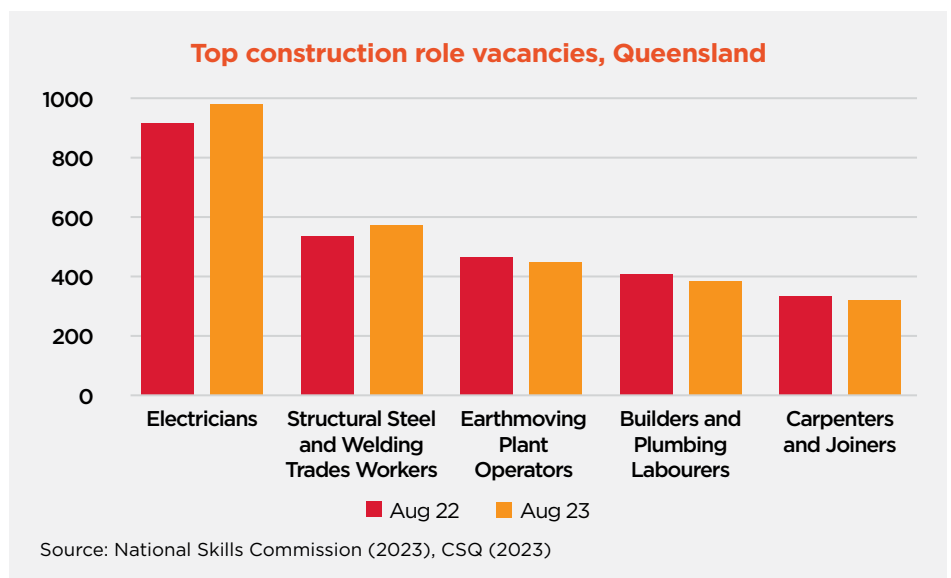
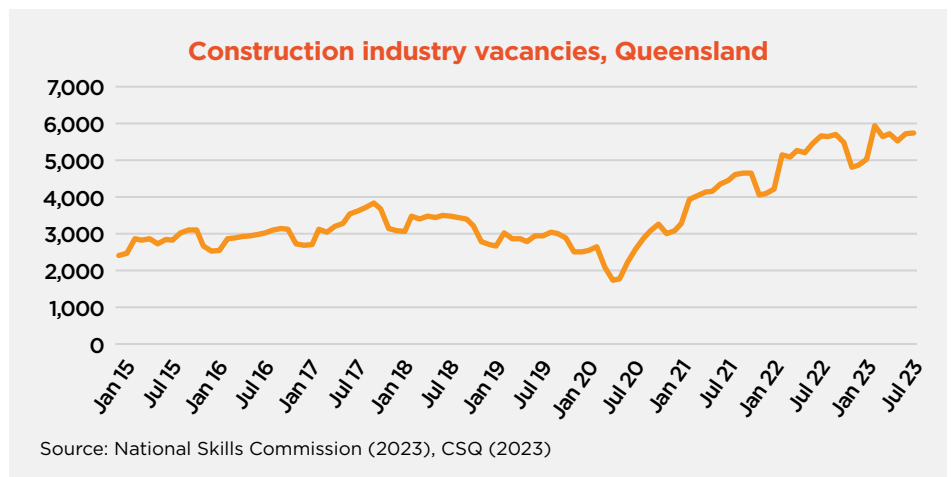
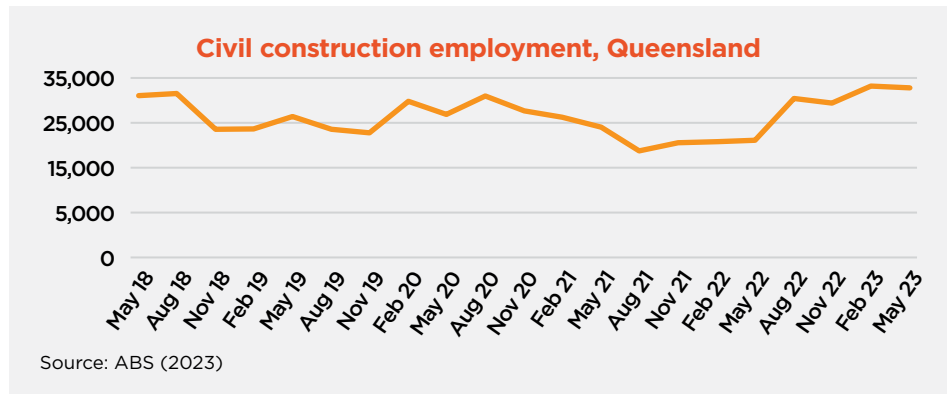
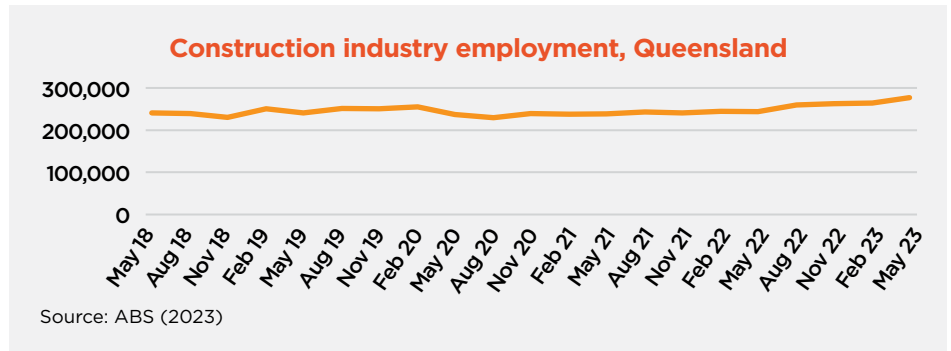
Current shortages

Key labour market indicators suggest the enduring challenge to find workers remains elevated. The state's significant infrastructure pipeline will bolster labour demand to new heights over the next five years. However, despite this growing demand, labour market challenges refuse to budge. The number of construction workers in the state is increasing far too slowly. Latest data shows that the construction industry employment is only 13% more than the pre-pandemic level. This pace of growth is clearly insufficient given the mounting volume of backlogged and new construction activity in the state.

Civil construction employment has performed much worse. The sluggish trend in the state's civil construction workforce highlights mounting challenges for the industry in providing the required workforce over the coming years.

After a continuous and sharp downturn to around 19,000 workers in mid-2021, civil construction employment has since turned around. However, the latest data shows another decline. The current workforce of around 34,000 workers is largely insufficient to meet the growing demand, given Queensland's enormous civil infrastructure pipeline.

The industry's persistent struggle to find workers is reflected in the growing number of unfilled vacancies. Almost 6,000 unfilled positions highlight the acute labour shortages faced by the industry. The number of open vacancies is twice the levels seen just before the pandemic. This is the first time the state has been faced with this significant number of unfilled positions.



Almost every construction occupation essential to civil projects faces significant labour shortages. The largest number of vacant positions are for electricians. There are currently almost 1,000 unfilled electrician positions in the state, around 7% more than the number of vacancies a year ago. This is followed by structural steel and welding trades workers (571) and earthmoving plant operators (448).

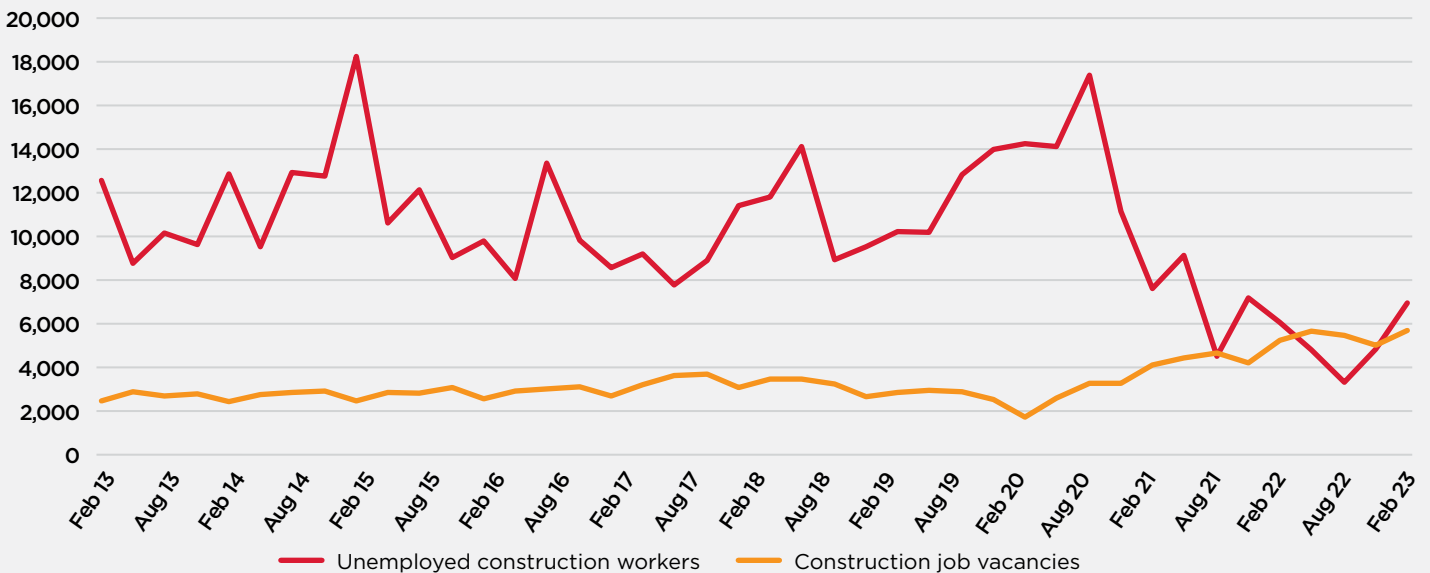
As pointed out earlier, electricity

projects are predicted to require the highest number of workers on average (almost 10,000) from now to 2027/28. The persistently high vacancies for electricians (likely to be absorbed in these projects) in the state is one of the many indicators of the acute worker shortages currently challenging the industry.

The tight labour market conditions are evident in the narrow gap between the pool of unemployed construction workers and

construction job vacancies. The number of unemployed construction workers in the state is only marginally above the number of unfilled construction vacancies. There are currently only 6,945 unemployed construction workers amidst 5,785 open vacancies. As more construction activity transitions into work on the ground, it will spark demand for more workers. The number of vacancies will clearly surge over the coming period, along with this subdued spare capacity.

Unemployed construction workforce, construction job vacancies, Queensland



Source: ABS (2023), National Skills Commission (2023), CSQ (2023)



The regional challenge

Labour demand will be largely concentrated in regional and remote Queensland. This holds for both funded and unfunded projects. Around 70% of the labour requirements are estimated to occur in the regional parts of the state. Fitzroy is predicted to experience a comparatively stronger labour demand of almost 6,000 workers on average out to 2027/28, mainly for unfunded projects. Wide Bay and Multi-Region work lead the labour demand for funded projects.

The problem of attracting and retaining workers has always been exacerbated in regional and remote Queensland. This major skills deficiency can substantially impinge on the construction sector's capacity to deliver the growing pipeline of projects planned in these areas. With most of the renewable energy projects located in these parts, workforce challenges are set to intensify further as work on these projects picks up.

Labour mobility has often been

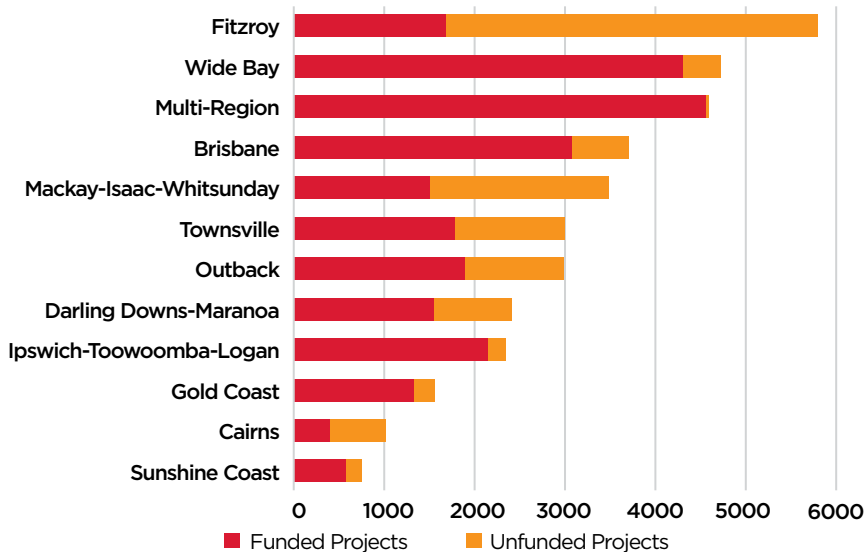
used as a solution to these localised shortages, for instance during the previous mining and gas boom era. However, the current infrastructure pipeline has projects that are running concurrently and widely spread across various parts of the state, thus further heightening the severity of workforce shortages.

Much of the labour shortages will be concentrated in regional and remote parts of the state. The surge in unfilled vacancies across all regions of the state reflects that acute worker shortages are widespread. While South East Queensland zones (Sunshine Coast, Gold Coast and Brisbane) are currently reporting greater difficulties in filling open vacancies than others, an upward trend is prevalent across all regions, with a sharp upturn in open vacancies in Toowoomba and South West Queensland.

This widespread and growing worker shortage is a serious challenge for the industry and the state, given that a large proportion of projects in the pipeline are headed towards regional Queensland.



Major project construction labour demand, 2027/28 inclusive

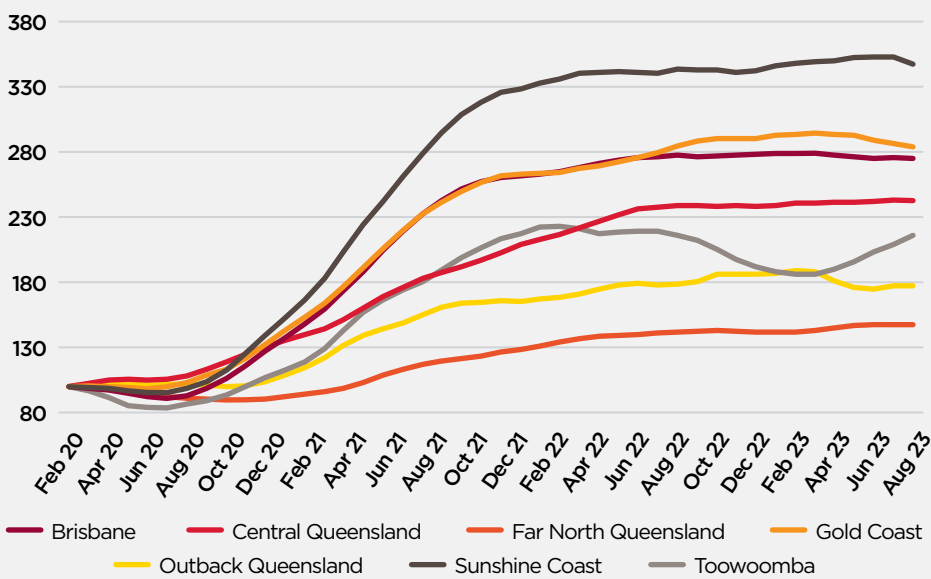


Source: CSQ for QMCA





Index of construction trade worker vacancies, Queensland



Source: National Skills Commission (2023), CSQ (2023). Index = 100 Jan 2020



Supply constraints driving the workforce shortage

The current shortage is both a supply and demand driven outcome. The pandemic-induced labour supply shock is still weighing heavily on the state's construction talent pool. Worker shortages are likely to remain the largest drag for the construction sector. The anticipation that migration would pick up quickly and return to normal levels has not yet occurred.



Permanent and skilled migrants

Migration has always played a critical role in addressing the sectors labour deficiency over the years, until the pandemic severely disrupted this supply corridor.

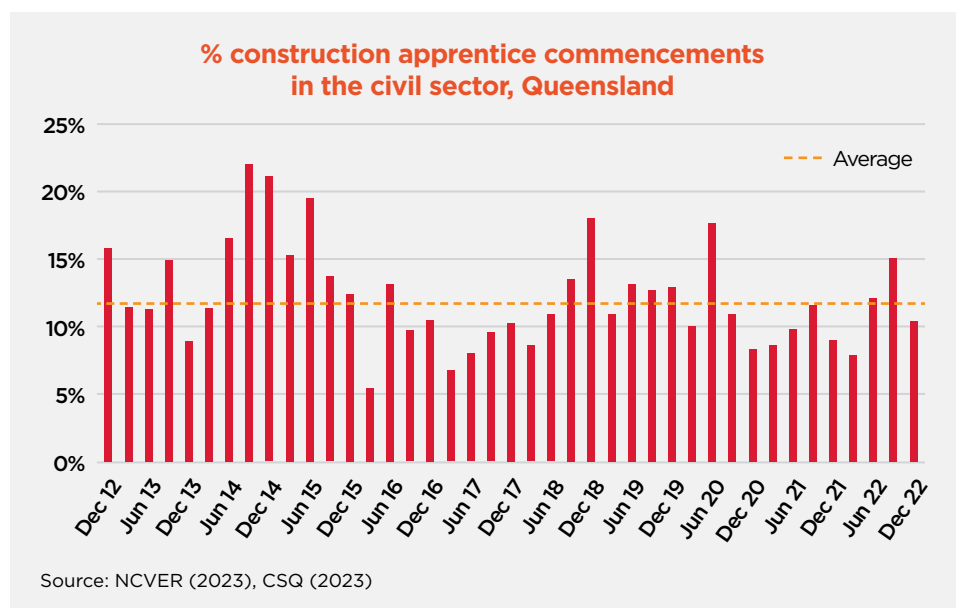
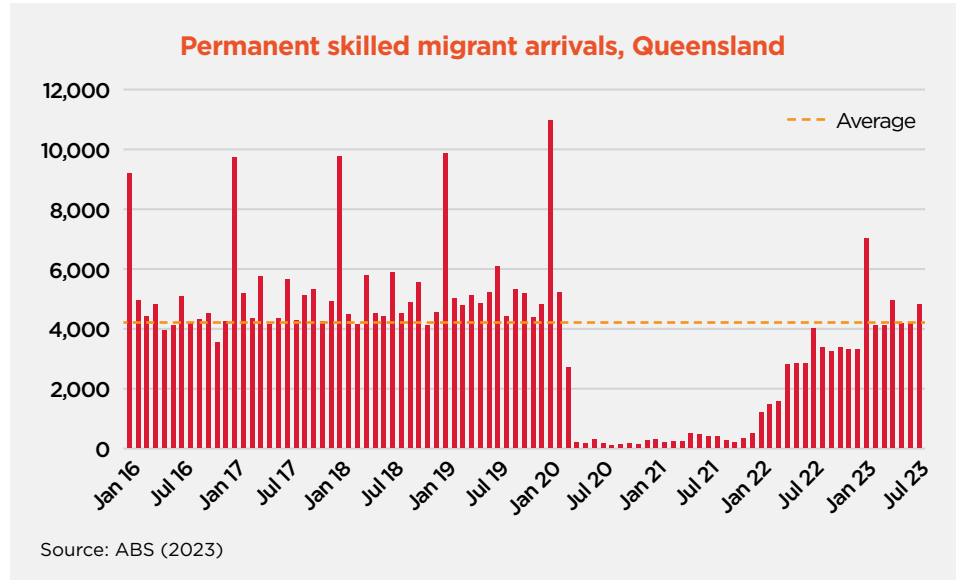
Current data shows that only 4,800 permanent and skilled migrants entered Queensland in the month of July 2023, which is only marginally more than the pre-pandemic average of 4,215 entrants per month. The number of permanent and skilled worker arrivals in the 12 months to July 2023 is 23% below the arrivals in the year prior to the pandemic.

Migration alone cannot address the current severe labour constraints faced by the construction sector. While a pick-up in arrivals will provide some relief in selected occupations immediately, and in others, with some lag, it cannot resolve all shortages in the industry. Broader-based measures are needed to address these acute worker shortages.

Apprentice pathways

Given the scale of construction projects in the state's pipeline, building a local talent pool is critical. Apprentice pathways are one option to bridge the gap in worker shortages. It provides a longer-term solution for the industry as these trainees add to the construction talent pool over time.

However, the current data on commencements in the civil sector shows a slowdown to around 10% share of construction industry commencements, which is below the historical average of 12%.

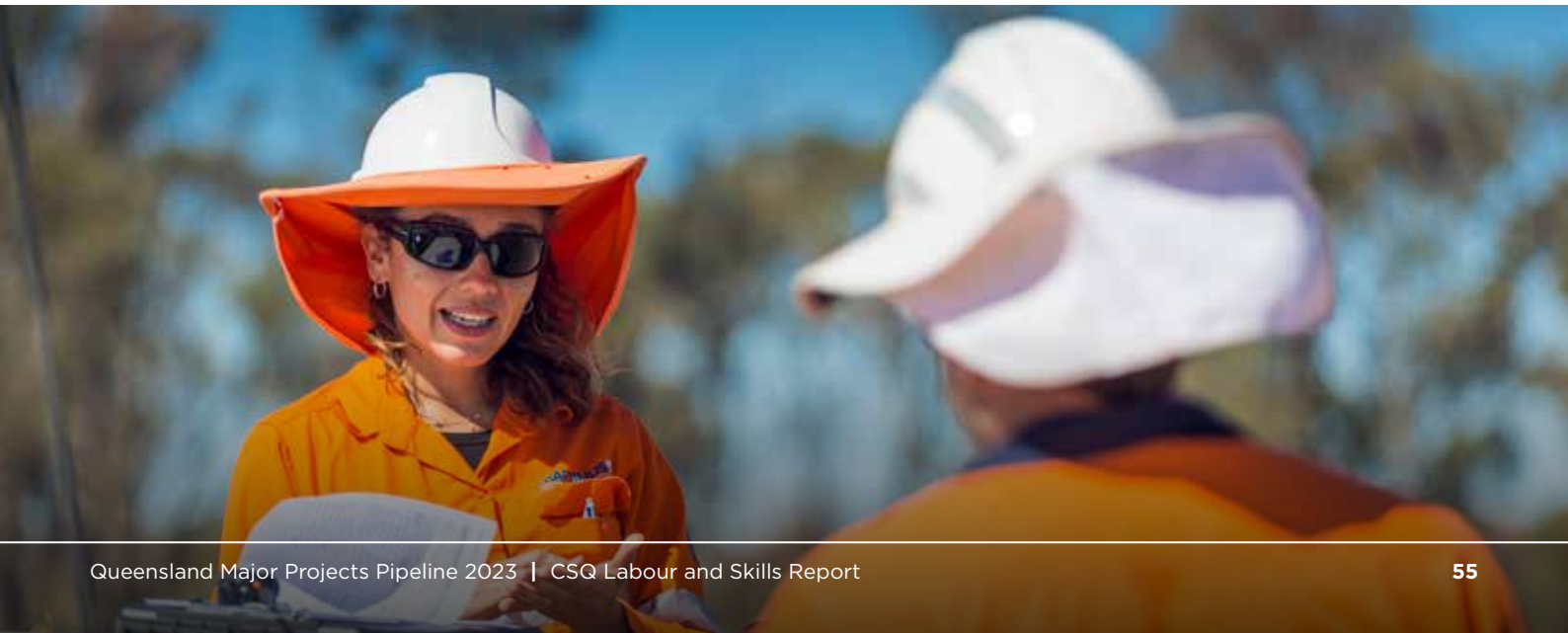
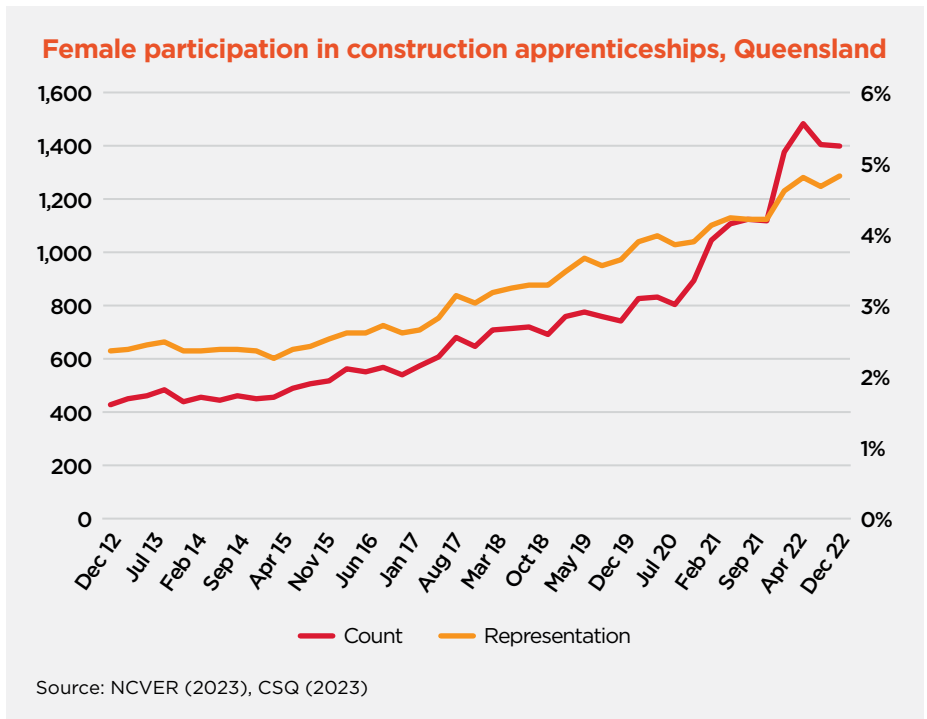
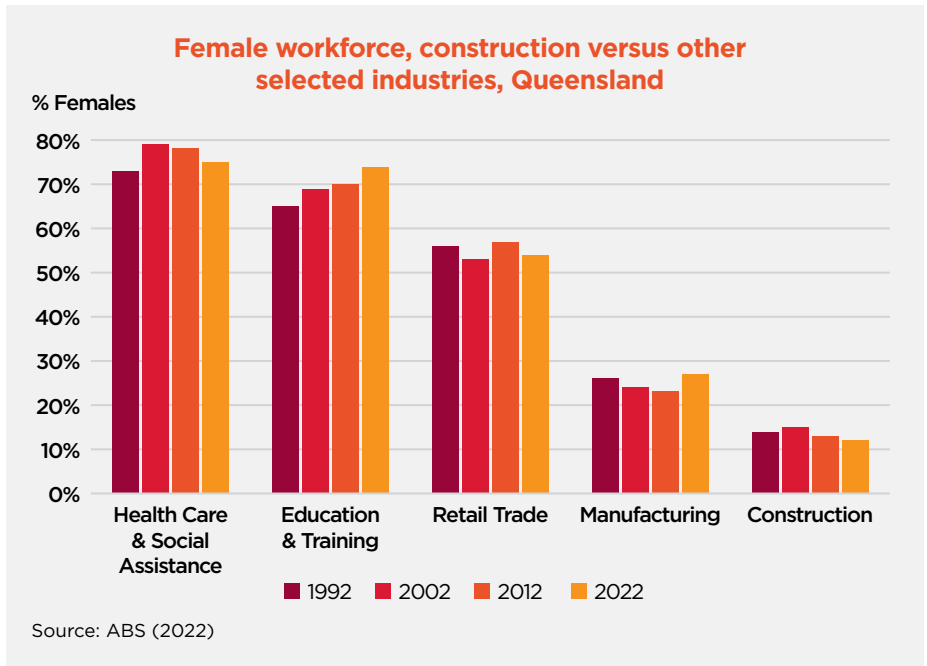


Women in construction

Another pathway to increasing the construction talent pool is through attracting and retaining more women in construction jobs. Tapping into this underutilised pool of talent will provide some relief to the current workforce shortage, along with other benefits of a more diverse workforce. Lifting female workforce participation in construction has never been more crucial.

Female participation in construction has always been low. Despite representing almost half of the state's workforce, females are severely underrepresented in construction. Women have continued to work in the same industries, with health care and social assistance being their most preferred industries over construction.

The female apprentice training numbers provide optimism. Recent efforts to attract more females into construction have translated into some encouraging results. Female construction apprentices are now three times more than a decade ago, but these improvements are not sufficient given the industry's growing labour needs. The industry is still well behind in terms of female representation, which severely limits the sector's ability to grow its workforce.





Delivering infrastructure for Queensland's key priorities: **2032 Olympic and Paralympic Games and renewable energy**

In addition to providing the required economic and social infrastructure for a growing economy, the construction sector is also confronted with delivering projects for the 2032 Olympic and Paralympic Games and the state's transition towards a net zero economy. These objectives have already contributed to a surge in the state's infrastructure pipeline, along with the sustained labour scarcity challenge confronting the Queensland construction industry.

Building for Brisbane 2032

A key priority for Queensland will be building the required infrastructure for the upcoming Olympic and Paralympic Games in 2032. With nine years until the event, the state has already commenced work on some projects in line with its masterplan, with others in the pipeline. As much as a prestigious and an exciting time for the state, the journey to deliver the Olympic and Paralympic Games infrastructure will need to steer through several challenges, in particular the availability of workers.

The sporting venues are spread across South East Queensland, concentrated in three primary zones (Brisbane, Gold Coast and Sunshine Coast). Existing infrastructure (some with upgrades) will be used together with new projects. According to the Brisbane 2032 Master Plan, 84% of venues will use existing or temporary buildings, while 16% will be new construction.

The venue's infrastructure program is jointly funded by the State and Federal Government. A total capital expenditure of \$7.1b has been announced in the recent budget, which comprises \$2.5b for the Brisbane Arena, \$2.7b for Gabba rebuild and \$1.9b for other venues. The Gabba will be fully demolished and rebuilt with improved accessibility.

As work on these Brisbane 2032 projects gather pace, it will trigger a substantial jump in demand for construction workers across various occupations.

As details on Brisbane 2032 projects are finalised and made available, it will facilitate modelling the associated workforce requirements. For now, CSQ estimates the Olympic and Paralympic Games will account for an 8% share of new construction activity over the years to 2032.

Transition to a net zero economy

Queensland is committed to an ambitious net zero target which will drive significant investment in renewable energy projects in the state over the coming decade. It has bold targets to achieve 70% renewable energy by 2032, 80% by 2035 and zero net emissions by 2050.

According to the infrastructure investment blueprint (2022) accompanying this net zero journey, the state government announced an estimated \$62b capital investment is required to achieve this target (QMCA estimate is ~\$90b before BPIC is applied). In the recent state budget, the government announced a significant capital investment of \$19b over four years to deliver a strong pipeline of renewable energy and storage projects. Chief among these is the Borumba (located west of Gympie) and Pioneer-Burdekin (west of Mackay) Pumped Hydro projects, expected to consume a combined investment of around \$30b.

With more than a quarter of its energy now powered by renewables, the state is optimistic on its bold target of zero emissions by 2050. The scale of construction activity required to achieve this target is gigantic. CSQ estimate renewables will account for the largest share of new construction activity over the next decade.





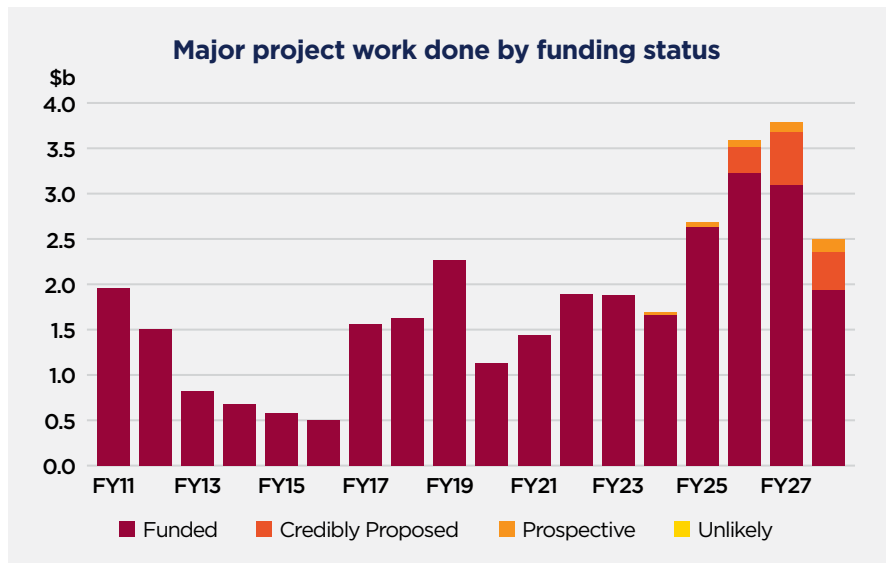
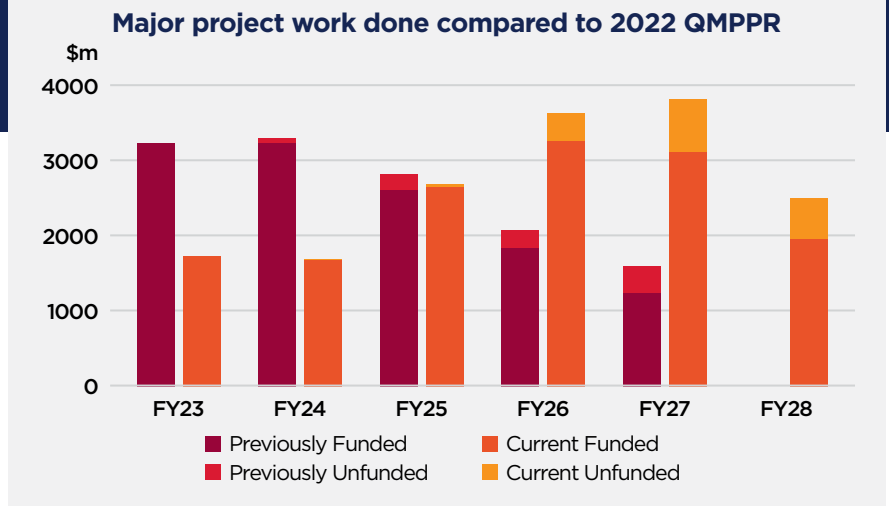
Sector outlook



Roads and Bridges

Road and bridges construction activity declined by 9% to \$1.7b in 2022/23 as project delays stemming from skilled labour shortages, lengthy planning processes and a direct result from the Commonwealth Government's "90 day review" of investments have shifted back construction timelines. Key projects with start dates pushed back include Bruce Highway-Rockhampton Ring Road (North and South Packages), Coomera Connector Stage 1: Central, M1 Pacific Motorway North: Daisy Hill to Logan Motorway and Inland Freight Route (Mungindi to Charters Towers) Upgrades. Construction is expected to pick up towards the middle of the pipeline as work commences on the lagged projects, with activity estimated to peak at \$3.8b in 2026/27.

Total funded projects in the pipeline have moderately increased to \$12.7b, which corresponds to a 4% growth compared to the 2022 QMPPR outlook. Funding for roads and bridges remains dominated by the public sector, representing 99.7% of total activity in this segment over the next five years.



Source: Oxford Economics, QMCA

Key projects supporting activity throughout the forecast period include:

- **M1 Pacific Motorway North: Daisy Hill to Logan Motorway** - Valued at \$2b, with construction to commence in 2024/25 and completion expected in 2028/29
- **Bruce Highway: Pine River to Dohles Rocks Road Interchange** - Valued at \$1.2b, with construction to commence in 2024/25 and completion expected in 2030/31
- **Gateway Motorway: Bracken Ridge to Pine River** - Valued at \$1.2b, with construction to commence in 2024/25 and completion expected in 2027/28
- **Bruce Highway: Rockhampton Ring Road (North & South Packages) Stages 1 and 2** - Valued at \$1.1b, with construction to commence in 2023/24 and completion expected in 2026/27
- **Brisbane Metro CP** - Valued at \$765m, with construction commenced in 2020/21 and completion expected in 2025/26.



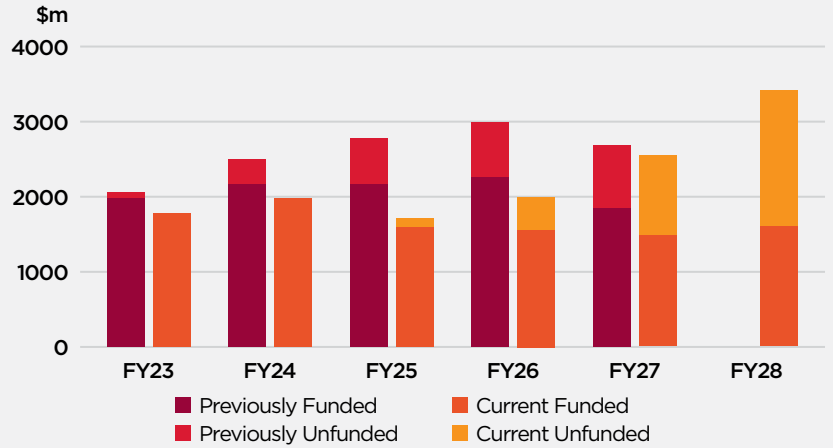
Railways and Harbours

Rail and harbour major project activity has contracted in the most recent financial year, from \$2.3b in 2021/22 to \$1.8b in 2022/23. Activity is expected to return to elevated levels over the pipeline period, with an average of \$2.3b per annum. The pipeline of funded projects has been downgraded relative to the 2022 QMPPR. This is largely driven by a reassessment of the Inland Rail Project, which has led to extensive postponements of construction dates. Two major sections now fall outside the pipeline.

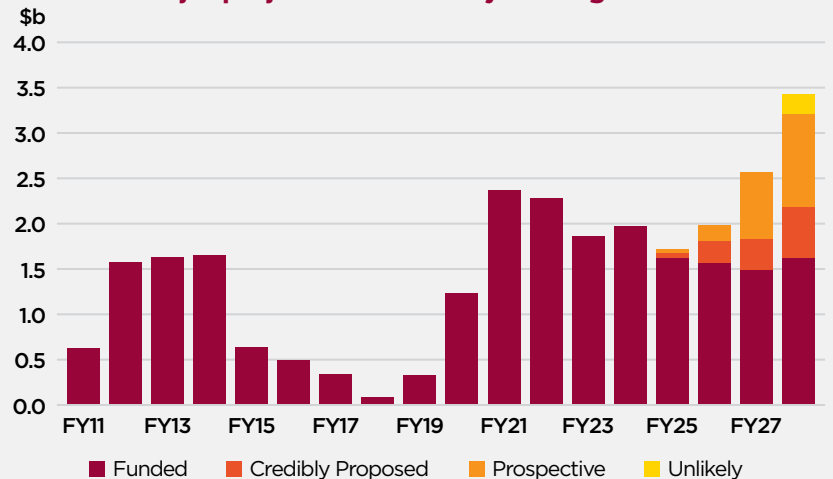
Major projects which continue to drive growth in the sector include the following:

- **Cross River Rail** - Various packages with an engineering construction value of \$7.1b, with construction on major packages commenced in 2019/20 and completion expected in 2025/26
- **Logan and Gold Coast Faster Rail (Main Line Upgrade and Level Crossing Removals)** - Valued at \$2.3b, with construction to commence in 2023/24 and completion expected in 2028/29
- **Direct Sunshine Coast Line** - Valued at \$1.5b, with construction to commence in 2026/27 and completion expected in 2029/30
- **Gold Coast Light Rail Stages 3 and 4** - Valued at \$1.3b, with construction commenced in 2022/23 and completion expected in 2028/29
- **Beeburum to Nambour Rail Upgrade Stages 1 and 2** - Valued at \$875m, with construction to commence in 2023/24 and completion expected in 2029/30.

Major project work done compared to 2022 QMPPR



Major project work done by funding status



Source: Oxford Economics, QMCA

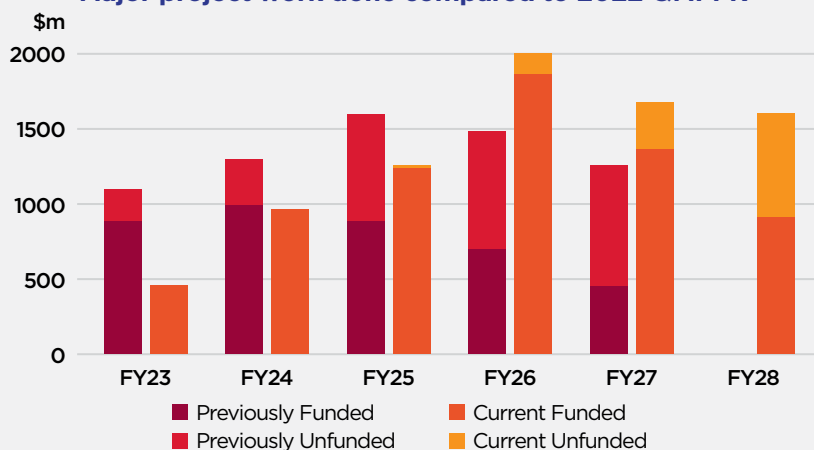


Water and Sewerage

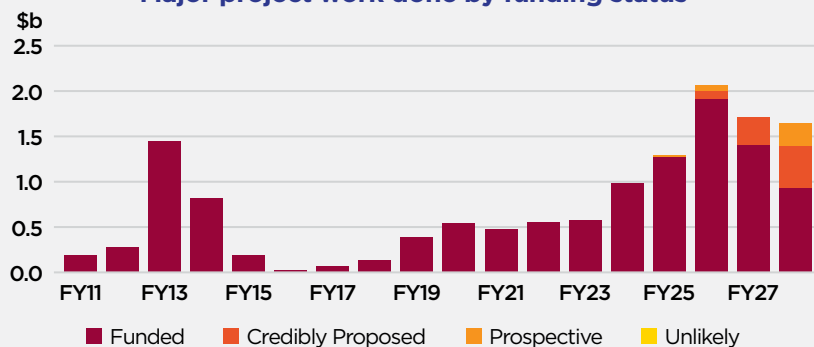
The water and sewerage sector has seen a significant increase (\$2.5b) in secured funding for major projects, following the 2023/24 state budget. This funding boost is partially due to the addition of various dam upgrade and desalination projects. Another cause of the rise in funded activity are the changes to the unfunded pipeline, with funding confirmed for the Somerset Dam Upgrade (\$450m) and the Wyaralong Dam WTP Stage 1 (\$850m) while the Urannah Dam (\$1.9b) has been cancelled. Accordingly, the composition of funded and unfunded projects has changed markedly from the 2022 QMPPR outlook, with the share of unfunded projects reducing from an average of 40% to 14%.

With the commencement of a number of publicly funded dam and pipeline projects, construction activity in 2023/24 will grow to \$985m from \$461m in 2022/23 – representing a 114% increase. Construction activity will then peak at \$2b in 2025/26 and remain at historically high levels for the rest of the pipeline period.

Major project work done compared to 2022 QMPPR



Major project work done by funding status



Source: Oxford Economics, QMCA

Major funded projects which support construction activity in the pipeline period include:

- **Burdekin Falls Dam Raising** – Valued at \$850m, with construction to commence in 2025/26 and completion expected in 2028/29
- **Wyaralong Dam WTP Stage 1** – Valued at \$850m, with construction to commence in 2025/26 and completion expected in 2028/29
- **Logan Water Infrastructure Program Alliance** – Valued at \$746m, with construction commenced in 2019/20 and completion expected in 2027/28
- **Paradise Dam Improvement Project** – Valued at \$720m, with construction to commence in 2023/24 and completion expected in 2027/28
- **Fitzroy to Gladstone Pipeline Project (Water Treatment Plant and Pipeline)** – Valued at \$688m, with construction to commence in 2023/24 and completion expected in 2026/27.



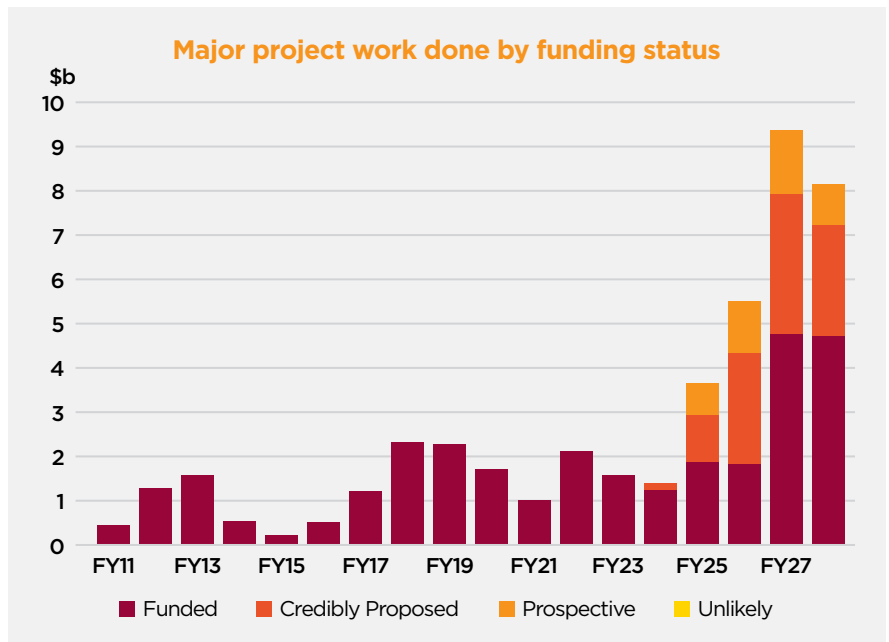
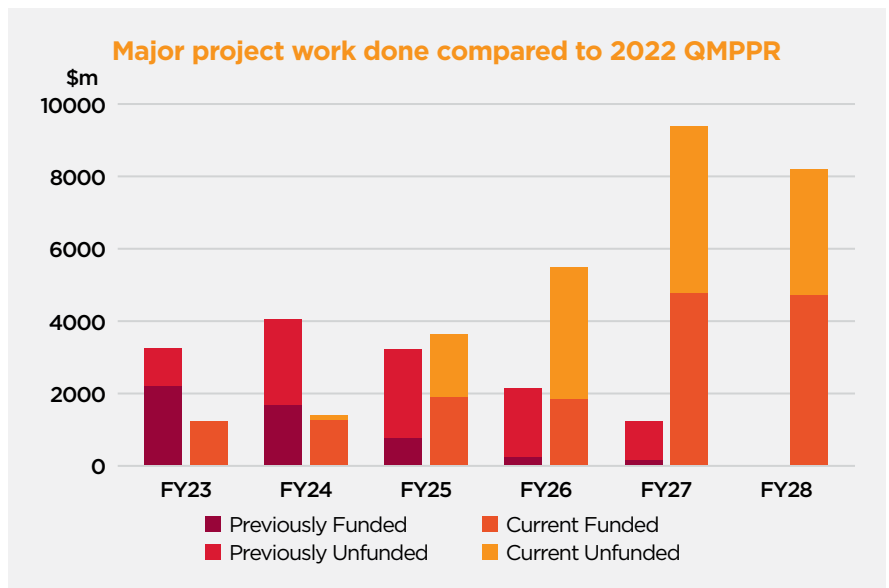
Electricity, Pipelines and Telecoms

Non-water utilities construction activity is expected to grow rapidly and peak at \$9.3b in 2026/27 following the commencement of large electricity projects, including the Copperstring Transmission Line 2032 (\$4b) and the Borumba Dam: Pumped Hydro Project (\$11.2b).

The non-water utilities sector is comprised of predominantly privately projects, with public projects representing only 14% of total projects in the sector.

Major funded and credibly proposed (but unfunded), projects which support construction activity in the forecast period include:

- **Borumba Dam: Pumped Hydro Project** - Valued at \$11.2b, with construction to commence in 2026/27 and completion expected in 2028/29
- **North Queensland Super Hub** - Valued at \$7.2b, with construction to commence in 2025/26 and completion expected in 2030/31
- **Copperstring Transmission Line 2032** - Valued at \$4b, with construction to commence in 2024/25 and completion expected in 2029/30
- **QLD Component Northern Gas Pipeline Extension/Expansion** - Valued at \$2.7b, with construction to commence in 2024/25 and completion expected in 2027/28
- **Big T Pumped Hydro Storage Project** - Valued at \$1.1b, with construction to commence in 2024/25 and completion expected in 2027/28.



Source: Oxford Economics, QMCA



Electricity, Pipelines and Telecoms

However, the share of construction activity for private electricity, pipelines and telecommunications projects has reduced to 59% (from 86% in the 2022 QMPPR). Key projects influencing this shift are the increased investment in the public Borumba Dam: Pumped Hydro Project and the cost blowout of the Copperstring Transmission Line 2032, leading the state government to seize control of the project. Increased state government funding in renewable energy projects is contributing to the Queensland Government's \$62b Energy and Jobs Plan and could lead to more public investment in this sector in the future.

Given the high volume of private projects, investment in this segment also tends to be more volatile than other sectors. Evidently, the majority of projects in the non-water utilities sector with delayed start dates were private unfunded projects and as a result the share of unfunded projects

in 2023/24 has fallen to 9%. In terms of funding status for the rest of the outlook, unfunded projects as a share of total activity will increase to an average of 51% as multibillion dollar renewable energy projects are scheduled for construction, such as the North Queensland Super Hub (\$7.2b) and Moah Creek Renewable Energy (\$2.7b).

We note that there exists considerable downside risk to the Borumba Dam - Pumped Hydro Project's timeline, which could have a large impact on this sector outlooked over 2026/27 and 2027/28. Considering the unique nature of this project, with considerable engineering complexity and size, and the outcomes of other pumped hydro projects, there is a risk that the delivery of this project will take longer than currently suggested.



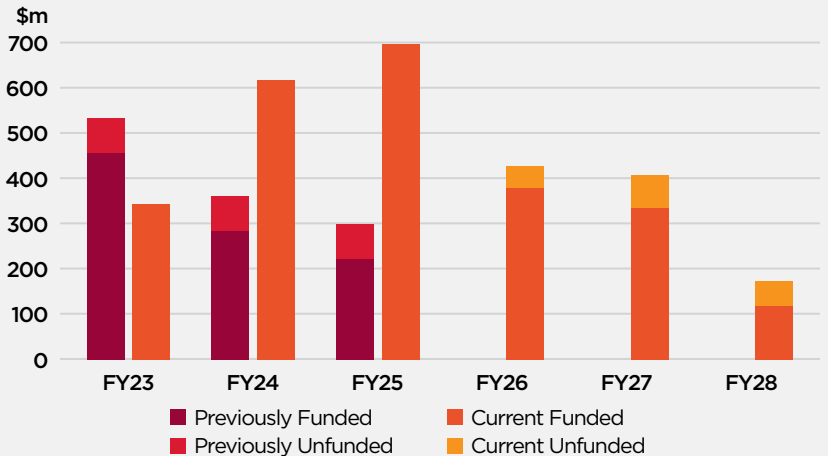
Defence

Major defence construction activity has grown in comparison to the 2022 QMPPR publication, with the total funded pipeline outlook rising from \$1.5b to \$2.8b. Given the relatively small size of this sector, a few key projects direct the changes in pipeline activity.

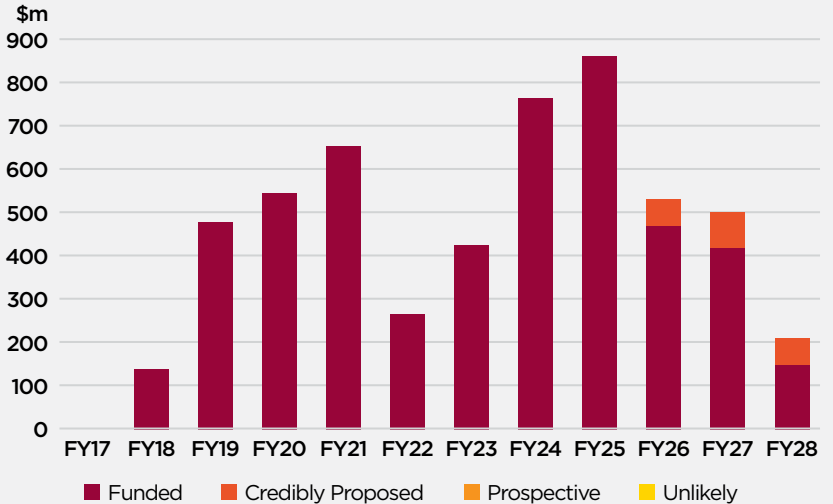
The inclusion of four additional projects in the 2023 QMPPR and adjustments to the status of existing projects, have driven the rise in pipeline activity. Activity is anticipated to peak at \$857m in 2024/25 and then move on a downward trajectory as projects near completion, reaching a trough of \$210m in 2027/28 with the last two remaining projects wrapping up construction.

Notably, defence projects contain a combination of both engineering and building infrastructure, with the inclusion of projects that contain barracks and warehouse style facilities which would be traditionally classified within the non-residential building sector.

Major project work done compared to 2022 QMPPR



Major project work done by funding status



Source: Oxford Economics, QMCA

The pipeline activity will be driven by several projects:

- **Harveys Range Facility Upgrade** - Valued at \$800m, with construction to commence in 2023/24 and completion expected in 2026/27
- **Singapore Force Posture Initiatives: Townsville** - Valued at \$600m, with construction to commence in 2024/25 and completion expected in 2027/28
- **Singapore Force Posture Initiatives: Shoalwater Bay** - Valued at \$400m, with construction commenced in 2020/21 and completion expected in 2023/24
- **RAAF Base Townsville: Pellegrine Facilities** - Valued at \$234m, with construction commenced 2021/22 and completion expected in 2024/25
- **The Borneo Barracks Redevelopment** - Valued at \$200m, with construction commenced in 2022/23 and completion expected in 2024/25
- **The National Airfield Works: Oakey and Townsville** - Valued at \$150m, with construction to commence in 2023/24 and completion expected in 2024/25
- **The National Airfield Works: Amberley** - Valued at \$100m, with construction to commence in 2024/25 and completion expected in 2025/26.

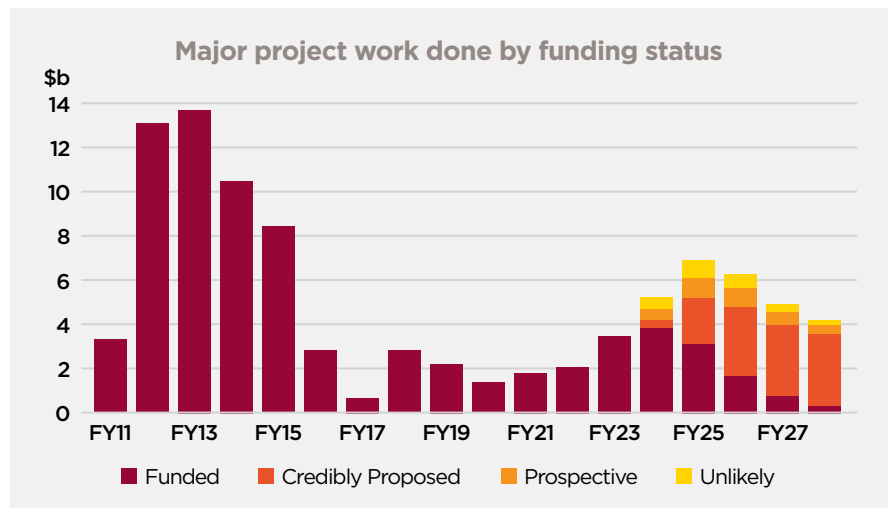
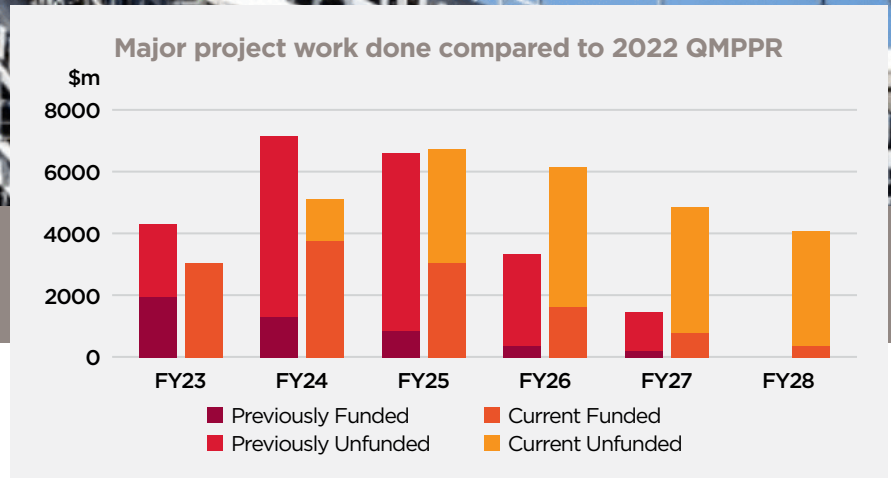


Mining and Heavy Industry

Construction activity in the mining and heavy industry sector has increased to \$3.1b in 2022/23 from \$2.1b in 2021/22. Total pipeline activity over the five years to 2027/28 has increased by \$4.2b compared to the 2022 QMPPR publication, sitting at a total of \$27.4b. The strong recovery of the mining and heavy industry sector that was anticipated in the 2022 QMPPR outlook has been pushed back to 2023/24 as several large-scale projects have experienced delayed start dates.

However, after 2023/24 the growth is predominantly driven by projects considered to be unfunded within the pipeline. Unfunded projects comprise 66% of the outlook for the sector, which is equivalent to \$17.6b. This mainly lands on coal and other heavy industry projects, which represent 33% and 44% of unfunded activity over the pipeline, respectively. Given the high proportion of projects which are currently unfunded, future activity in the sector is the most 'at-risk'.

Furthermore, 14% of unfunded activity is assigned to projects that are considered unlikely to occur. Coal projects account for around half of the unlikely projects in the pipeline. We anticipate that many of these prospective projects will soon be reaching make-or-break points in terms of funding decisions. Construction of water and rail infrastructure related to the recently completed Carmichael Coal Mine and onset of work at the Olive Downs Coal Mine and Drake Coal may allow otherwise uneconomic projects to



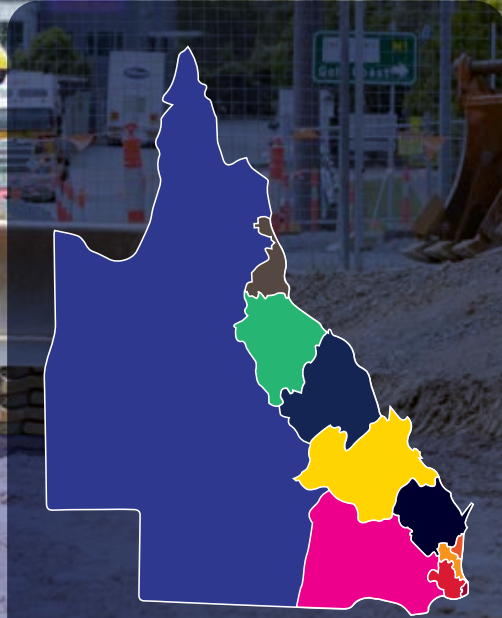
Source: Oxford Economics, QMCA

go ahead but these potential mines will still have to compete with a declining long-term coal price due to weaker global demand.

This year's pipeline has seen the addition of a significant unfunded heavy industry project, the Collinville Green Energy Hub (\$11b) and three unfunded coal mine projects - Carborough Downs Extension (\$263m), Isaac River Coal Mine Project (\$200m) and Vulcan Coal Mine (\$100m).

Funded activity in the sector is largely driven by coal and oil and gas projects - these projects account for 86% of total funded work in the sector. Major funded projects in the mining and heavy industry sector include:

- **Surat Gas Expansion Projects** - Valued at \$1.5b, with construction commenced in 2020/21 and completion expected in 2024/25
- **Western Surat Gas Project** - Valued at \$1.2b, with construction commenced in 2020/21 and completion expected in to 2026/27
- **Olive Downs Coal Mine** - Valued at \$960m, with construction commenced in 2022/23 and completion expected in 2025/26
- **Drake Coal** - Valued at \$690m, with construction commenced in 2022/23 and completion expected in 2025/26
- **Hail Creek Extension: Underground** - Valued at \$660m, with construction commenced in 2022/23 and completion expected in 2025/26.



Funded major project work over the next 5 years by region

REGIONAL PIPELINE SUMMARY

Queensland Regional Outlook

This section examines how the Major Projects Pipeline is divided across the different regions of Queensland – the regional split separates Queensland according to ABS SA4 regions. While there are 19 SA4 regions, we condense the five Brisbane SA4s (East, West, North, South, and Inner City) with two Moreton Bay SA4s (North and South) into a Greater Brisbane category.

We then combine Toowoomba with Ipswich and Logan-Beaudesert. The Queensland Outback SA4 region combines Outback North, Outback South, and Far North Queensland

– essentially an area that covers the bulk of non-coal base metals and minerals mining, and the townships of Mt Isa, Cloncurry and Weipa.

Provided here is a separate outlook for the project pipeline for each of the 11 regions listed above. This outlook includes an analysis of the major projects, split by funding status and sector. The overall Queensland outlook has improved since the previous year’s QMPPR, however, there continues to be substantial disparity between different regions in terms of activity size, growth, and funding volatility.





Key points

The 2023 Queensland Major Projects Pipeline shows an increase in funded project activity across most regions.

The highest concentration of funded work over the next five years has shifted from Ipswich-Toowoomba-Logan to Wide Bay, with 18% of funded activity.

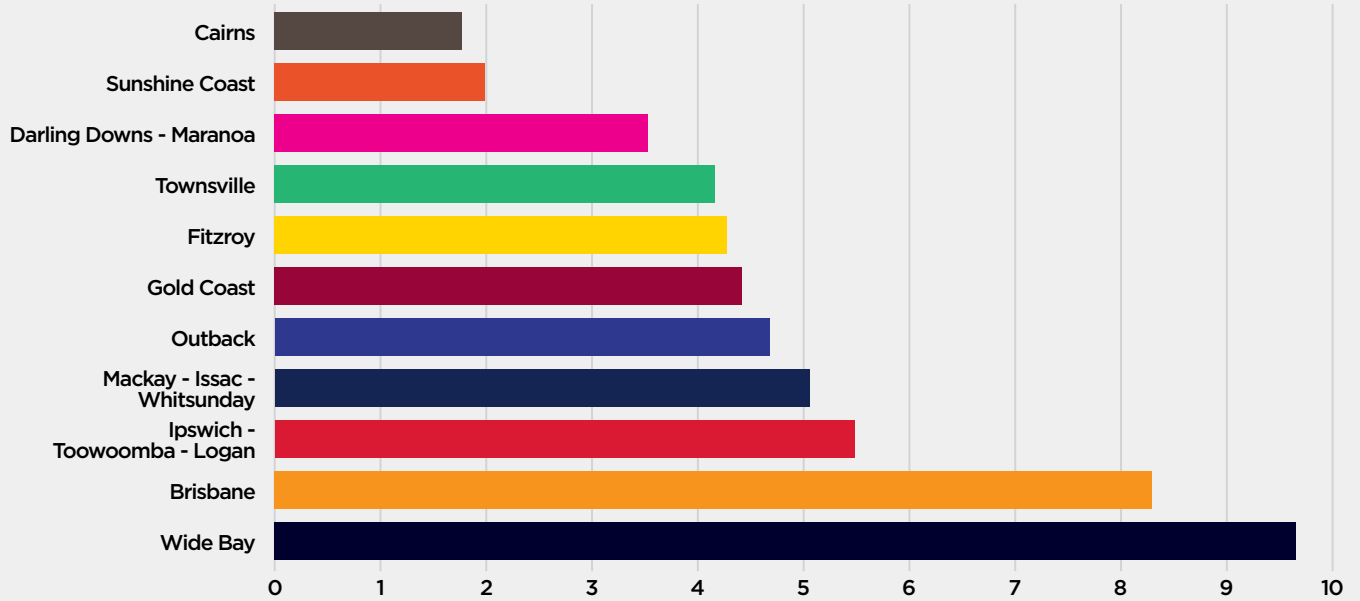
South East Queensland (SEQ) accounts for 37% of all funded project activity over the pipeline. Given heightened population growth in the region (above the national average), there is a strong pipeline of publicly funded infrastructure works to accommodate the current and future population base. This is represented in the Major Projects Pipeline, with funded activity in SEQ mainly driven by transport infrastructure, which accounts for 61% of SEQ's total pipeline activity.

The regions with the largest portion of pipeline activity over the next five years are the Mackay-Isaac and the Fitzroy areas, which account for 31% (\$28.4b) of all project activity over the next five years. Notably, these areas have over 67% of project activity unfunded despite the higher proportion of pipeline activity in the mining and heavy industry sector. Correspondingly, these two regions account for 38% of total unfunded project pipeline activity.

Darling Downs-Maranoa and Ipswich-Toowoomba-Logan see funded pipeline activity fall with a 28% average decrease compared to the 2022 QMPPR. Excluding Wide Bay which has substantially grown due to a significant upward revision in key project values, all other regions have seen funded activity increase by 42% on average.

Comparing historical construction activity to future activity, the Wide Bay area is the fastest growing region. Total construction activity over the past five years, compared to the next five years, will increase by 857%, with the Borumba Dam: Pumped Hydro Project a major source activity in the last two years of the pipeline.

Funded major project work over the next five years by region, \$b



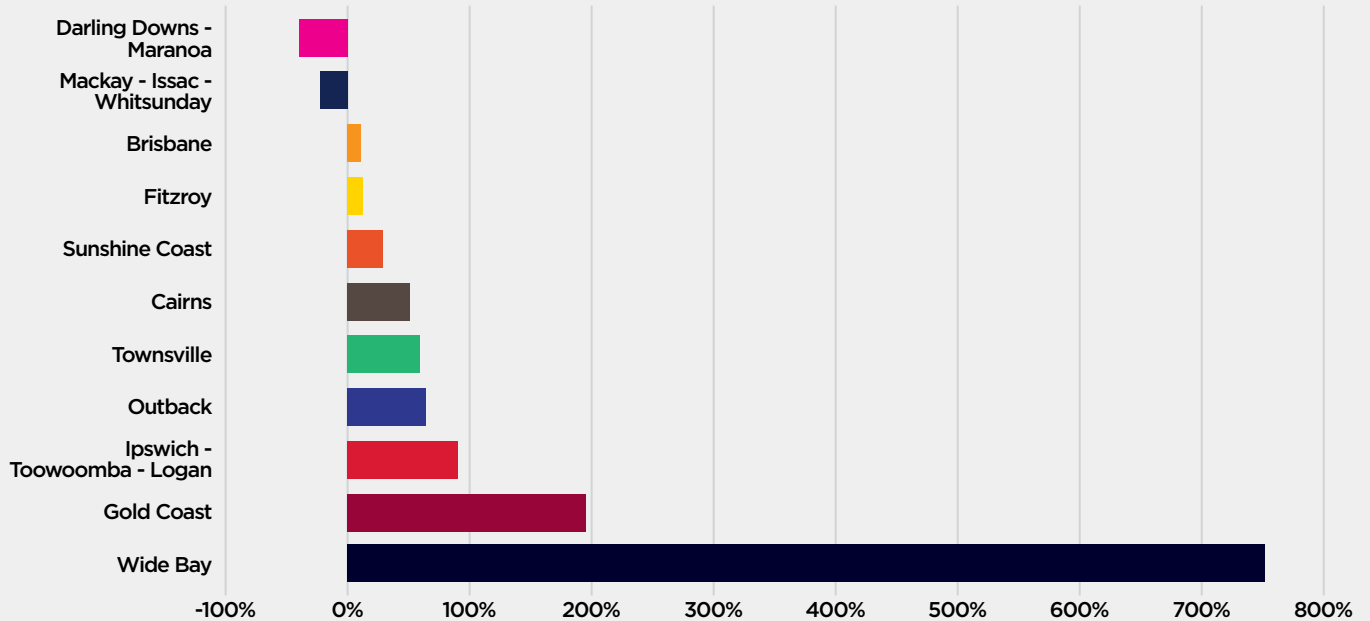
Source: Oxford Economics, QMCA

¹Regions may not add to total Queensland due to Multi Regional Projects.



Average growth in major project work over the next five years by region

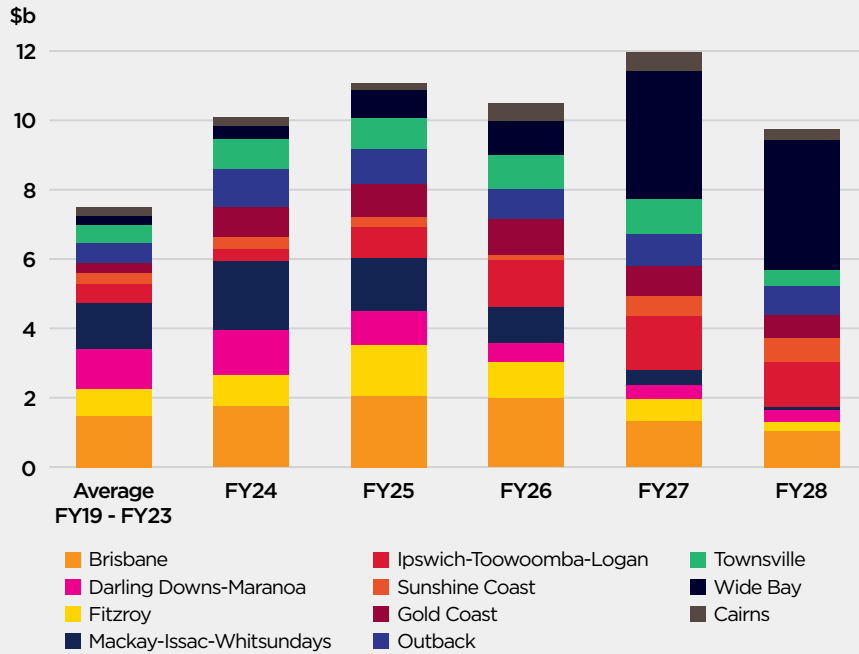
Expected growth in funded major project work (next five years vs previous five years)



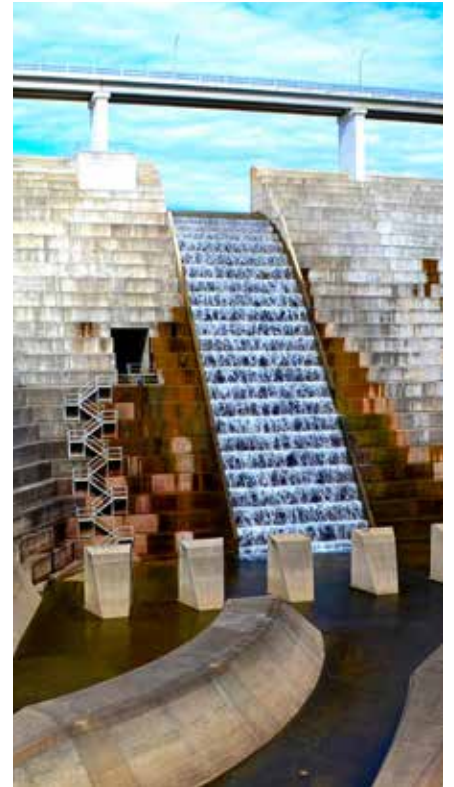
Source: Oxford Economics, QMCA

²Figures in this chart represent the ratio of average funded work over the next five years 2022/23 to 2026/27 compares to the estimated average of major project work in the region between 2017/18 and 2021/22 inclusive.

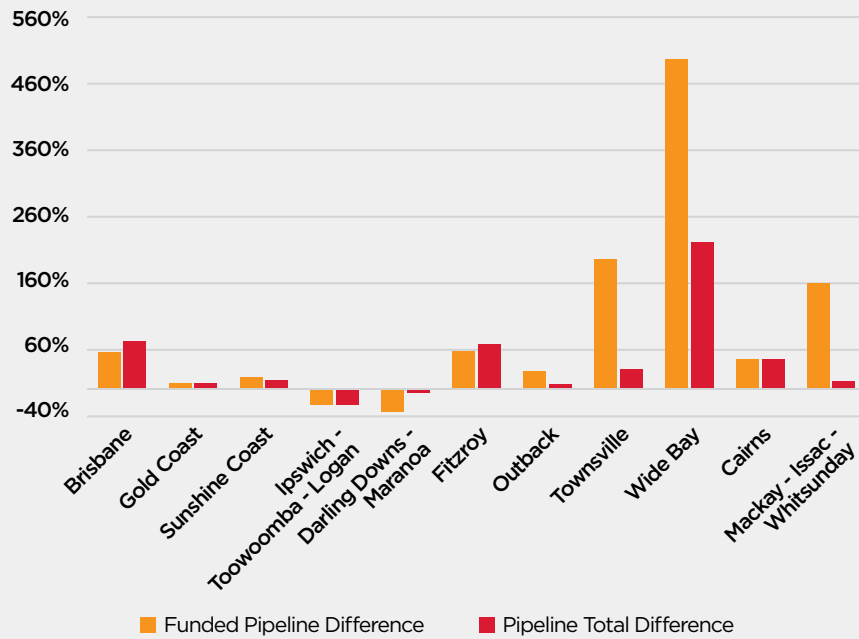
Annual funded major project work over the next five years by region



Source: Oxford Economics, QMCA



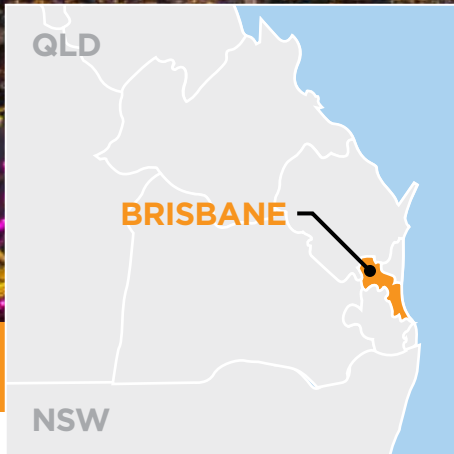
% change in funded and total major project work over the next five years by region, compared the 2022 QMPPR



Excludes Multi-region projects



Brisbane

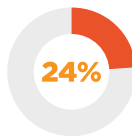


Population:
1,862,104
while growth has averaged 1.6% per annum over the last 10 years.



Sectors Driving Growth: Transport infrastructure – Road and Rail

Proportion of total unfunded work:



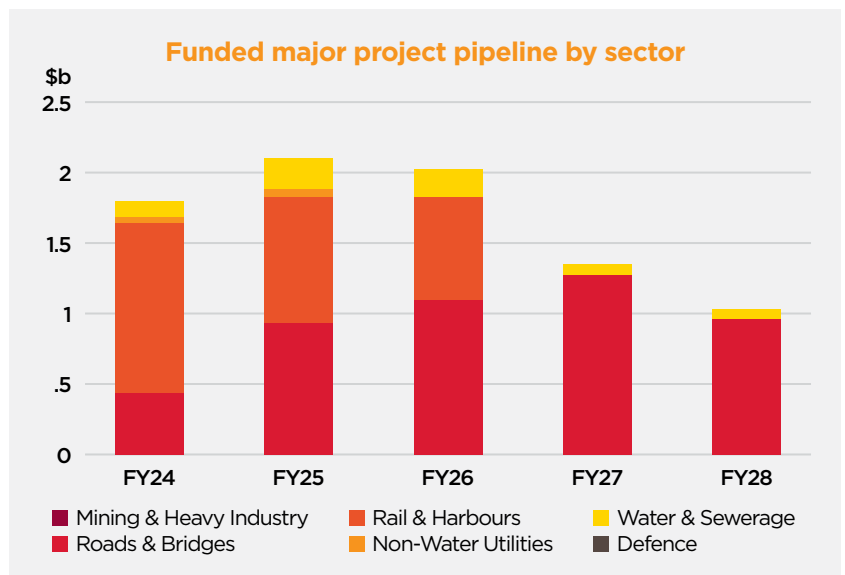
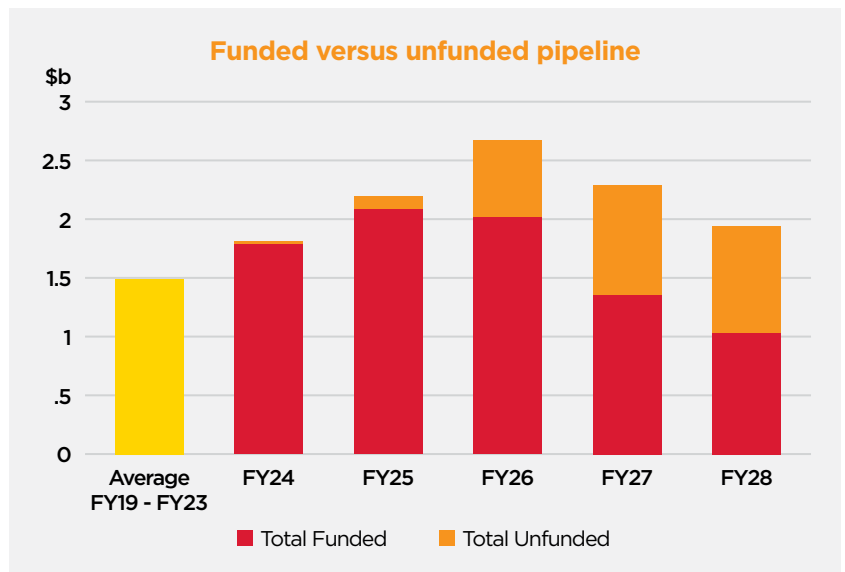
Total Pipeline Size:

\$10.9b

Key Funded Projects¹: Cross River Rail Packages combined value of \$7.1b
Bruce Highway – Pine River to Dohles
Rocks Road Interchange \$1.2b
Gateway Motorway – Bracken Ridge to Pine River \$1.2b
Brisbane Metro \$765m

Key Unfunded Projects:
Toondah – Harbour Redevelopment \$1.1b
Gibson Island Green Ammonia and Hydrogen Electrolysis Facility \$1b
North South Urban Arterial Corridor – Moreton Connector \$690m
Station Upgrade Program for Olympic and Paralympic Games \$500m

Outlook: Brisbane continues to be among the top five regions with the highest ratios of funded to unfunded major project work, owing to the strong pipeline of publicly funded transport infrastructure projects over the next five years. Activity will peak in 2025/26, driven by increasing activity on the Cross River Rail, Bruce Highway, Brisbane Metro CP and the Gateway Motorway. The completion of the Cross River Rail will mark the beginning of pipeline activity beginning to taper off after 2025/26 and the share of unfunded projects in the pipeline will rise.



Source: Oxford Economics, QMCA
¹All project values will be construction estimates (as opposed to total spend)

Gold Coast



Population:
663,216
while growth has averaged 2.0% per annum over the last 10 years.



Sectors Driving Growth: Transport infrastructure – Road and Rail

Proportion of total unfunded work:



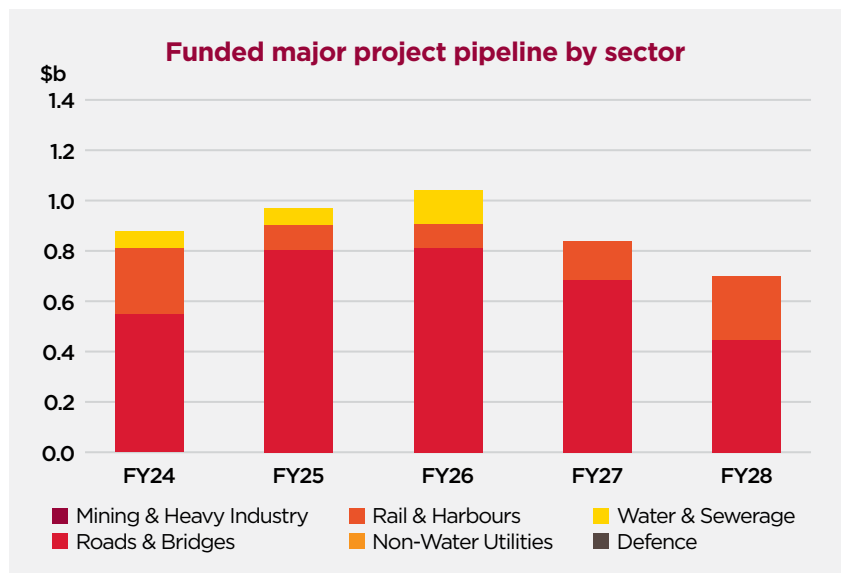
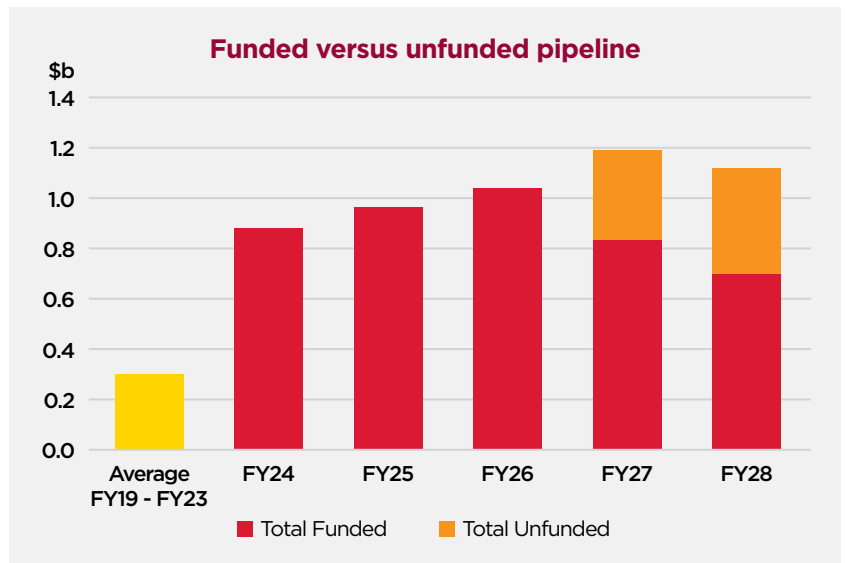
Total Pipeline Size:
\$5.2b

Key Funded Projects:

- M1 Pacific Motorway North – Daisy Hill to Logan Motorway \$2b
- Coomera Connector Stage 1 – North, Central and South \$1.4b
- Gold Coast Light Rail Stage 3 – \$1.2b
- M1 Pacific Motorway – Varsity Lakes to Tugun \$750m

- Key Unfunded Projects:**
- Varsity Lakes to Elanora Rail Extension \$470m
 - Gold Coast Desal Expansion \$400m
 - Gold Coast Cruise Ship Terminal \$182m

Outlook: Activity in the Gold Coast region over the three years to 2025/26 is driven exclusively by publicly funded projects in the transport and water sewerage sectors – a response to the strong growth in population and tourism in the high-density region of South East Queensland. Public expenditure on transport infrastructure in the region is split between 79% road and 21% rail over the five year pipeline. A peak in activity is anticipated in 2026/27 as three unfunded projects and the Gold Coast Light Rail Stage 4 are scheduled to commence.



Source: Oxford Economics, QMCA

Sunshine Coast



Population:
413,218
while growth has averaged 2.4% per annum over the last 10 years.



Total Pipeline Size:

\$3b



Sectors Driving Growth:
Transport
Infrastructure -
Road, Rail, Water

Proportion of total unfunded work:



Key Funded Projects:

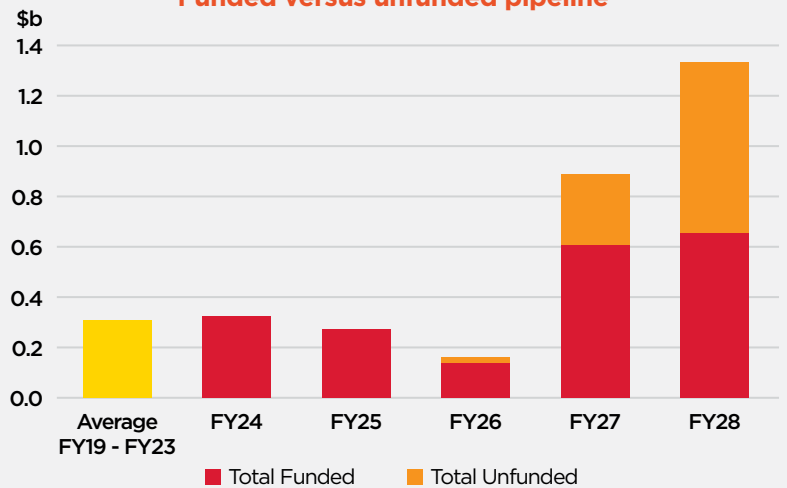
- Direct Sunshine Coast Line (\$1.5b)
- Beerburum to Nambour Rail Upgrade Stage 1 and 2 \$875m
- Sunshine Motorway - Mooloolah River Interchange Stage 1 \$250m
- Aura and Harmony Water and Sewerage Network \$200m

Key Unfunded Projects:

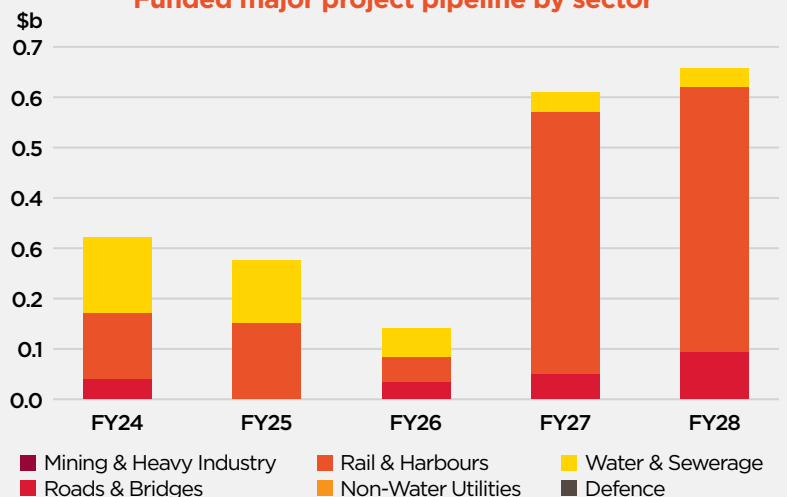
- Sunshine Coast Mass Transit - Light Rail \$1b
- Caloundra Transport Corridor Upgrade \$80m

Outlook: The Sunshine Coast region benefits from the overlapping belt of publicly funded transport and infrastructure investment in South East Queensland. Activity is estimated to trend downwards to a trough in 2025/26 at \$165m, before growing rapidly in 2026/27 with the start of three major rail projects - Direct Sunshine Coast Line, Beerburum to Nambour Duplication Stage 2 and Sunshine Coast Mass Transit - Light Rail (prospective). The level of construction in the last two years of the pipeline will see record highs for the Sunshine Coast region at an average of \$1.1b per annum, albeit unfunded projects contribute approximately half of the activity in 2027/28.

Funded versus unfunded pipeline



Funded major project pipeline by sector



Source: Oxford Economics, QMCA

Ipswich-Toowoomba-Logan



Population:
930,436
while growth has averaged 2.1% per annum over the last 10 years.



Total Pipeline Size:

\$6.5b



Sectors Driving Growth: Transport Infrastructure – Road and Rail, Water and Renewables

Proportion of total unfunded work:



Key Funded Projects:

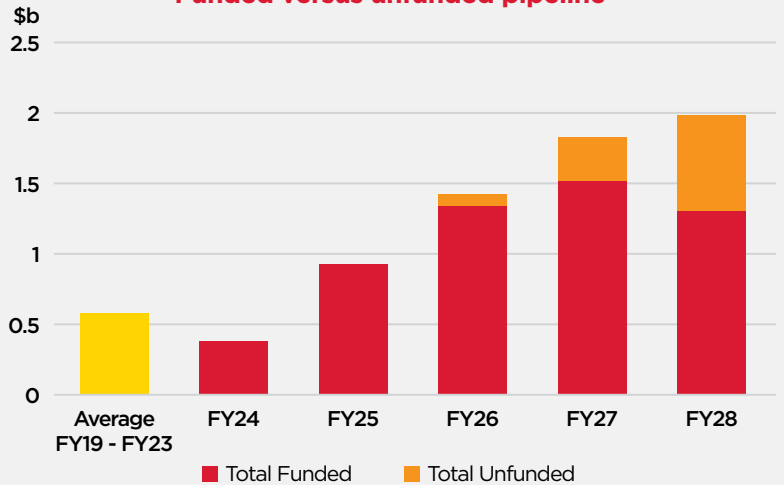
Logan Gold Coast Faster Rail – Main Line Upgrade and Level Crossing Removals \$2.3b
Big T Pumped Hydro Storage Project \$1.1b
Wyaralong Dam WTP Stage 1 \$850m
Logan Water Infrastructure Program Alliance \$746m

Key Unfunded Projects:

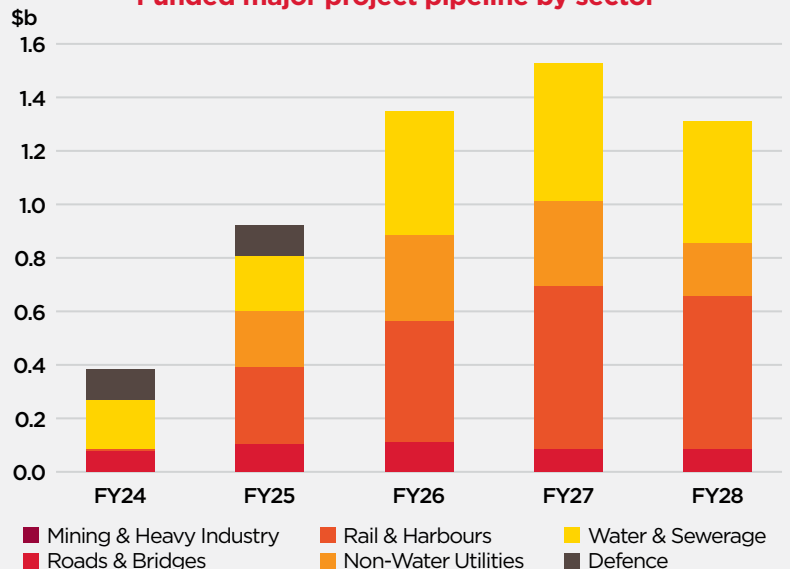
Ipswich to Springfield Rail \$1.1b
Wivenhoe Dam Safety Upgrade \$850m
Ipswich Motorway – Rocklea to Darra Stage 2 \$390m
Salisbury to Beaudesert Passenger \$325m

Outlook: Major project activity in the Ipswich-Toowoomba-Logan region is projected to follow an upward trajectory, reaching a peak of \$2b in 2027/28. This strong growth is supported by the start of the Big T Pumped Hydro Storage Project and the Logan and Gold Coast Faster Rail (Level Crossing Removal and Main Line Upgrade components) in 2024/25. The significant adjustments to the timeframe for the Inland Rail project have moved the project outside the pipeline, therefore transport activity as a share of total construction activity in the Ipswich-Toowoomba-Logan region has fallen.

Funded versus unfunded pipeline

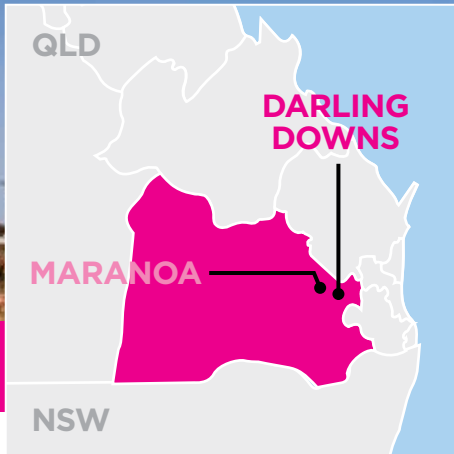


Funded major project pipeline by sector



Source: Oxford Economics, QMCA

Darling Downs-Maranoa



Population:
131,012
 while growth has averaged 0.4% per annum over the last 10 years.



Total Pipeline Size:
\$5.8b



Sectors Driving Growth:
 Gas Development (Mining and Other Heavy Industry) and Renewables

Proportion of total unfunded work:



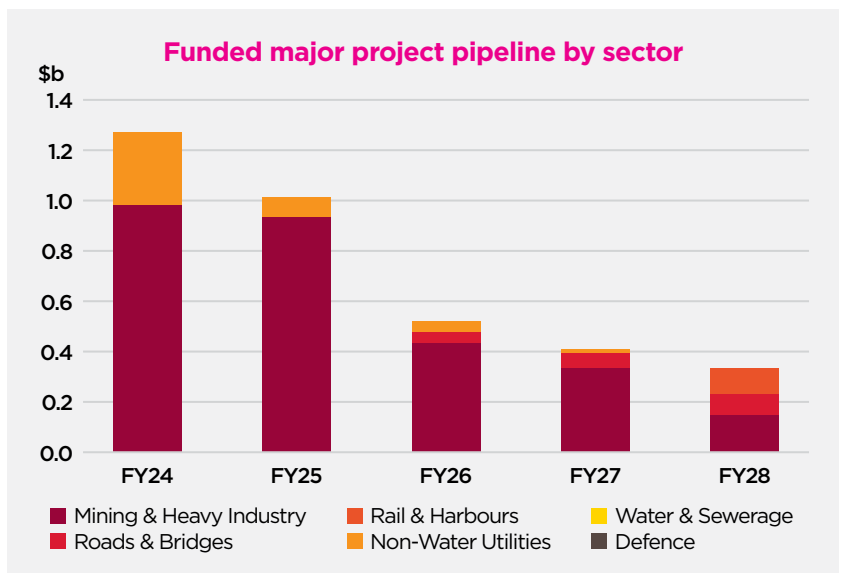
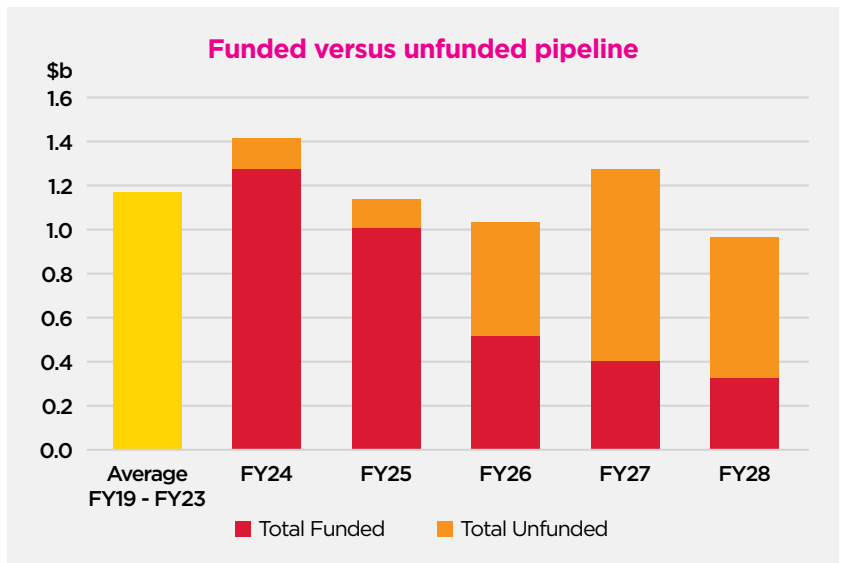
Key Funded Projects:

- Surat Gas Expansion Projects \$1.5b
- Western Surat Gas Project \$1.2b
- Inland Freight Route (Mungindi to Charters Towers) Upgrade \$715m
- New Acland Stage 3 Project \$445m

Key Unfunded Projects:

- Herries Range Wind Farm \$1b
- Bulli Creek Solar Farm \$675m
- Arcadia Valley CSG Development \$600m
- Lockyer Valley Hybrid Gas-BESS \$120m

Outlook: Major project activity in the Darling Downs-Maranoa region will continue to be supported by the development and ongoing sustainment of gas projects. The region covers key gas fields such as the Cooper Basin and Eromanga Basin in the west and south-west of Queensland. The exploration of new fields (such as Western Surat) in recent years is expected to add to the existing levels of expenditure on well sustainment. Activity in the region will decline over the next three years as private funded electricity and resource and heavy industry projects reach completion but will be partially offset by a new wave of predominantly unfunded projects set to start construction in 2025/26.



Source: Oxford Economics, QMCA

Fitzroy



Population:
234,179
while growth has averaged 0.6% per annum over the last 10 years.



Sectors Driving Growth:
Road, Renewables, Water, Mining (Coal) and Heavy Industry (Hydrogen)

Proportion of total unfunded work:



Total Pipeline Size:

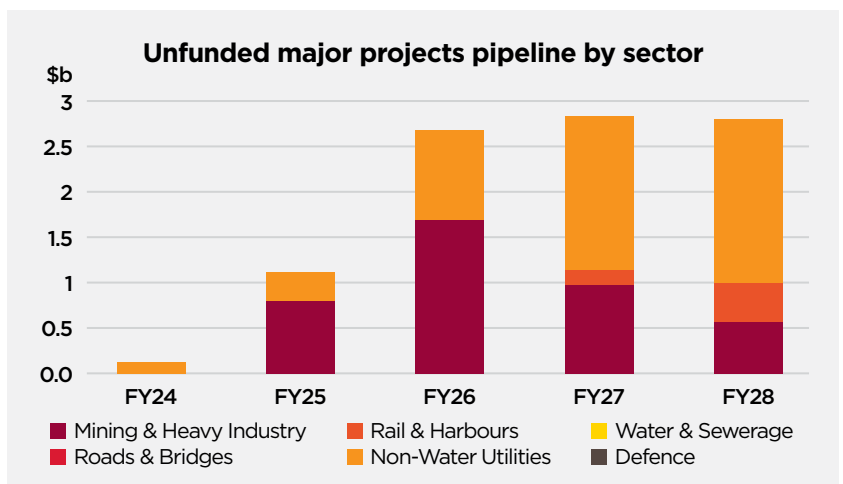
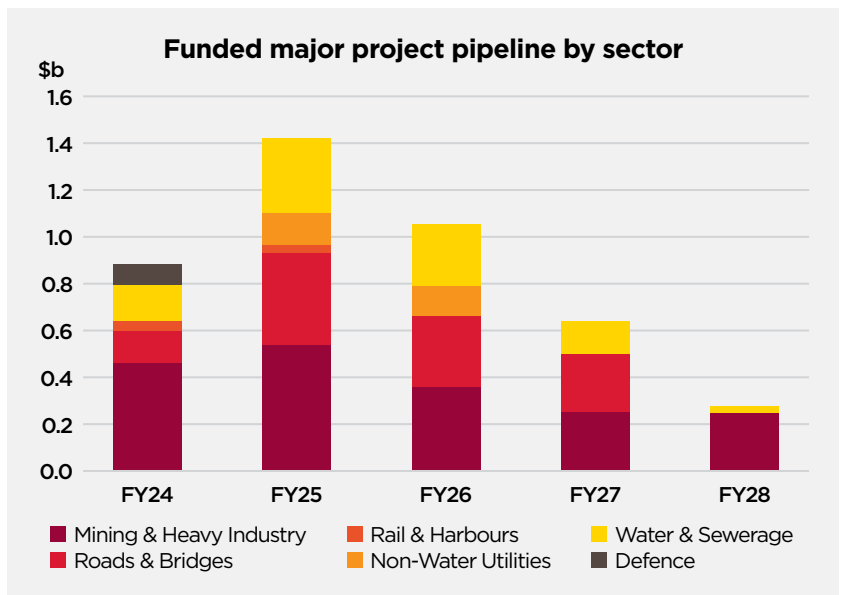
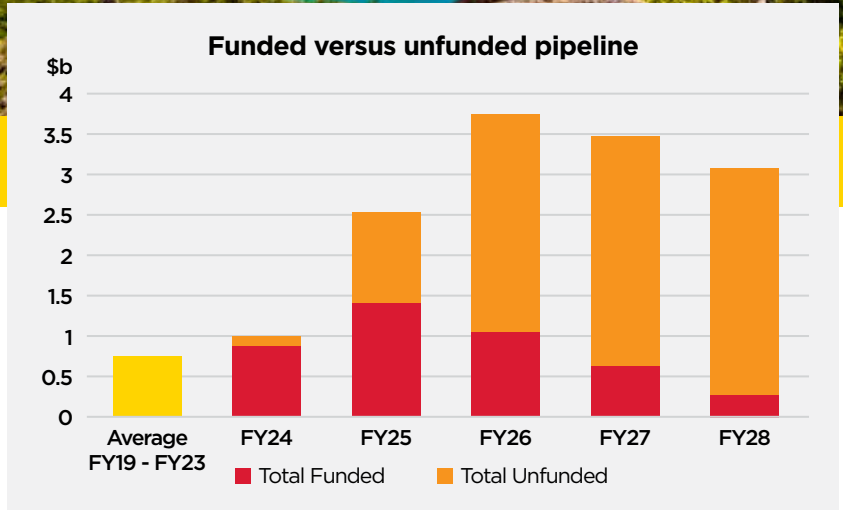
\$13.8b

Key Funded Projects: Bruce Highway - Rockhampton Ring Road \$800m
Fitzroy to Gladstone Water - Pipeline and Water Treatment Plant \$688m
Aldoga Renewable Hydrogen Facility - Stage 1 \$350m
Lower Fitzroy River Infrastructure Project - Rookwood Weir \$310m

Key Unfunded Projects:

North Queensland Super Hub \$7.2b
Moah Creek Renewable Energy \$2.7b
H2-Hub™ Gladstone Facility \$2.6b
Green Ammonia Production Facility \$1b

Outlook: Major project funded activity in the Fitzroy region is projected to peak in 2025/26. Projects across a range of sectors, broadly transport, utilities and mining and heavy industry, will maintain construction at an elevated level of over \$3b during the last three years of the pipeline. However, we note that after 2024/25 the portion of unfunded projects in the pipeline significantly increases, averaging 81% over 2025/26 to 2027/28.



Source: Oxford Economics, QMCA

Outback



Population:
81,691
while growth has averaged -0.6% per annum over the last 10 years.



Sectors Driving Growth: Roads, Energy and Mining

Proportion of total unfunded work:



Total Pipeline Size:

\$9.4b

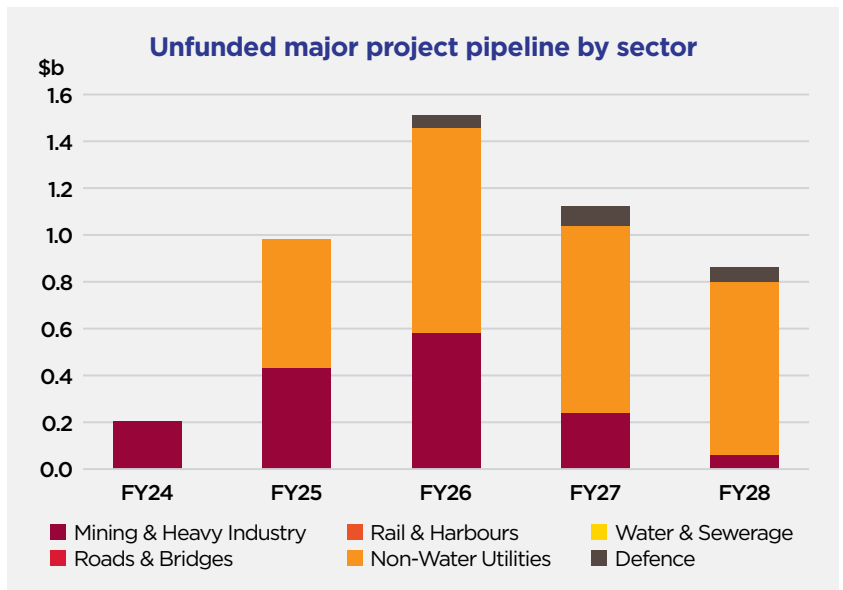
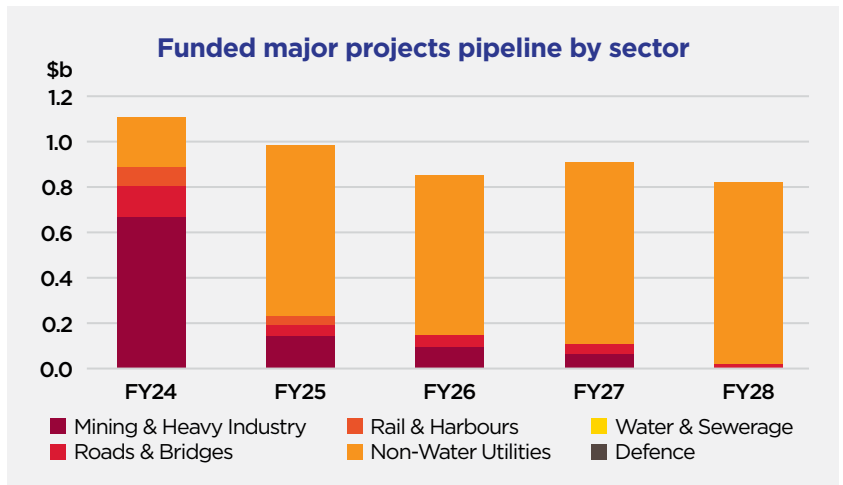
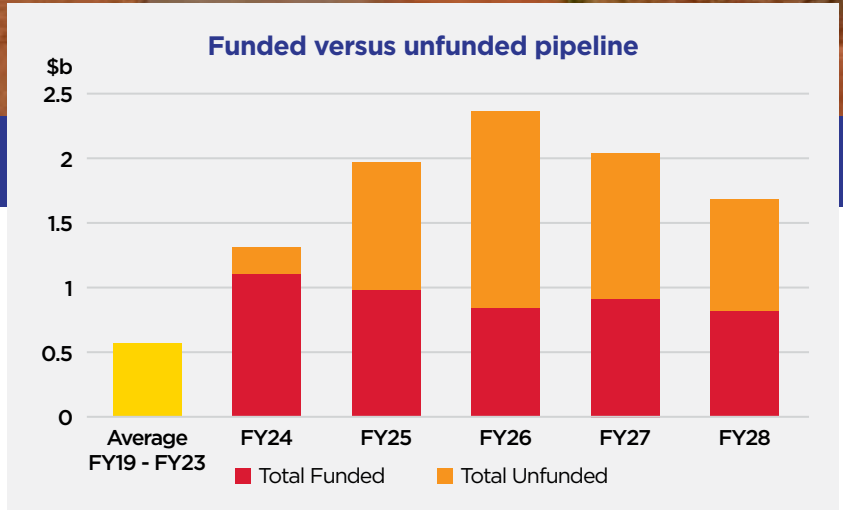
Key Funded Projects:

- Copperstring Transmission Line 2032 \$4b
- Minyango Coal Project Stage 1 \$600m
- Kidston Pumped Hydro Storage Project \$544m
- Oaky Creek Longwall Stage 2 \$455m

Key Unfunded Projects:

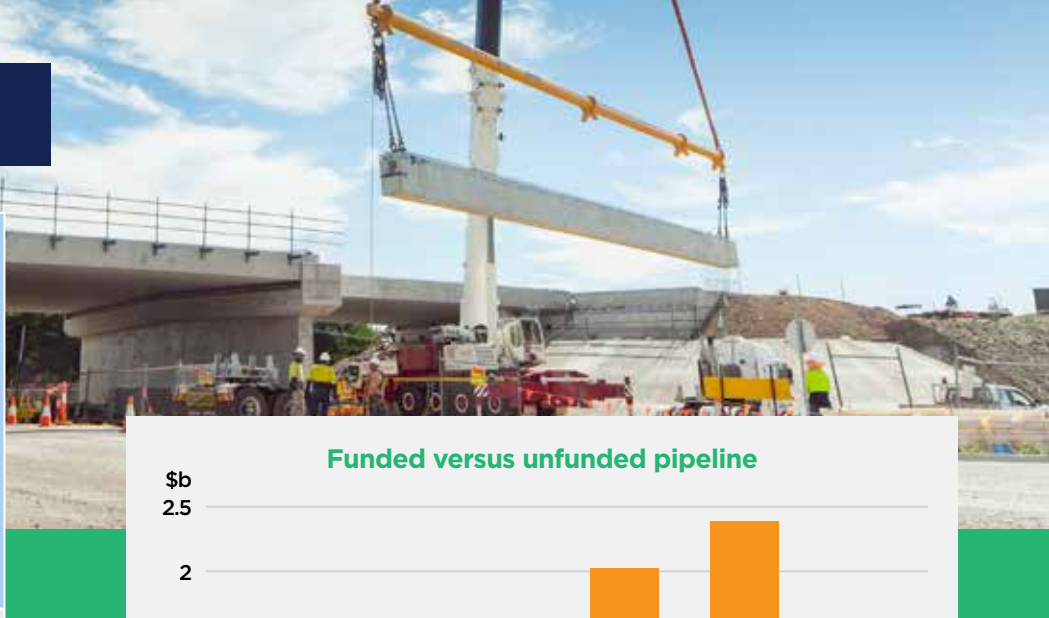
- Northern Gas Pipeline Extension/Expansion - QLD Component \$2.7b
- Eva Copper Project \$502m
- Sherger Airbase Upgrade \$200m
- Baralaba South Open Cut \$160m

Outlook: The regional profile for the Outback – an area that covers approximately two-thirds of Queensland – is distinct from the other regions due to its low population and historical reliance on resource related activity. Due to the larger number of private resource projects in the region, unfunded activity makes up 50% of the total pipeline – the third highest across all the regions. Two key non-water utilities projects drive the level of activity over the pipeline period – Copperstring Transmission Line 2032 and the Northern Gas Pipeline Extension/Expansion. Accordingly, the cost blowout and adjusted start date of 2024/25 of the Copperstring Transmission Line 2032 will see activity peak in 2025/26 as opposed to the 2023/24 peak expected in the 2022 QMPPR.



Source: Oxford Economics, QMCA

Townsville



Population:
240,276

while growth has averaged 0.5% per annum over the last 10 years.



Sectors Driving Growth: Water, Roads, Defence and Minerals

Proportion of total unfunded work:



Total Pipeline Size:

\$7.9b

Key Funded Projects:

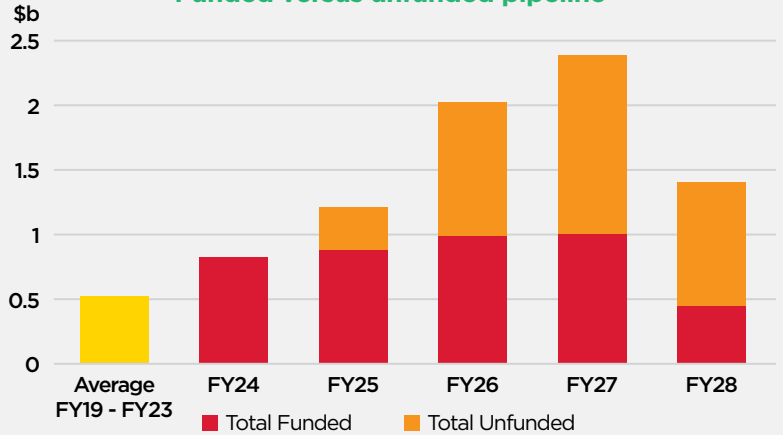
- Burdekin Falls Dam Raising \$850m
- Harveys Range Facility Upgrade \$800m
- Singapore Force Posture Initiatives - Townsville \$600m
- Agripower Amorphous Silica - Fertiliser Processing Plant \$500m

Key Unfunded Projects:

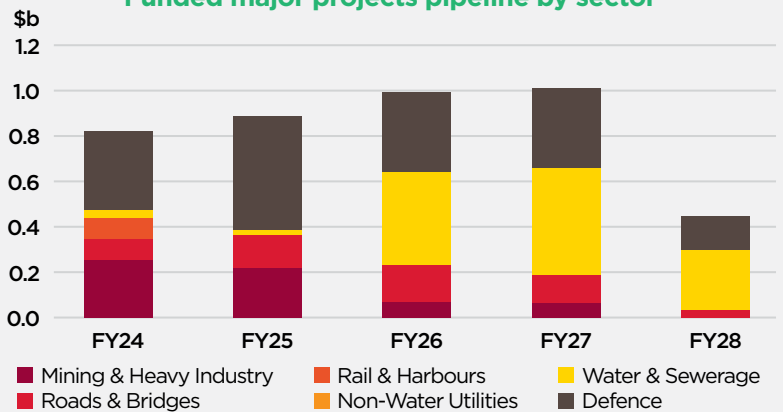
- Agripower Amorphous Silica - Stage 2 Development \$1.6b
- Townville Hydrogen Facility \$1b
- Freedom Energy One Project \$455m
- SCONI Scandium Project - Phase 1 \$304m

Outlook: The Townsville region exhibits the greatest diversity in major project activity, with activity split between mining and other heavy industry, water and non-water utilities, roads and defence. Pipeline activity is set to peak in 2026/27 at \$2.4b, then will drop back to \$1.4b in 2027/28 with approximately two-thirds of projects in the pipeline having reached construction end dates. Compared to the 2022 QMPPR, the portion of unfunded activity has fallen by thirty percentage points. This is largely due to the inclusion of additional publicly funded water and defence projects including, the PO012 National Airfields Works - Townsville, Harveys Range Facility Upgrade and the Ross River Dam Remediation.

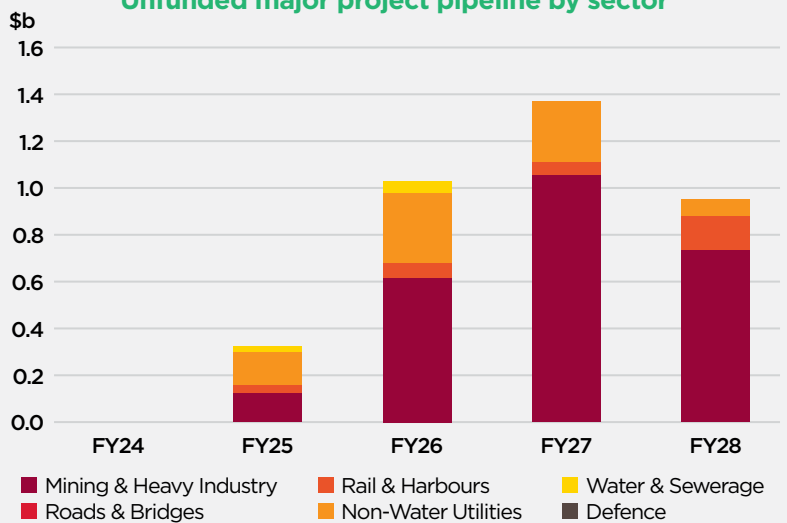
Funded versus unfunded pipeline



Funded major projects pipeline by sector



Unfunded major project pipeline by sector



Source: Oxford Economics, QMCA

Wide Bay



Population:
317,500
while growth has averaged 1.1% per annum over the last 10 years.



Sectors Driving Growth: Roads, Renewables and Water

Proportion of total unfunded work:



Total Pipeline Size:

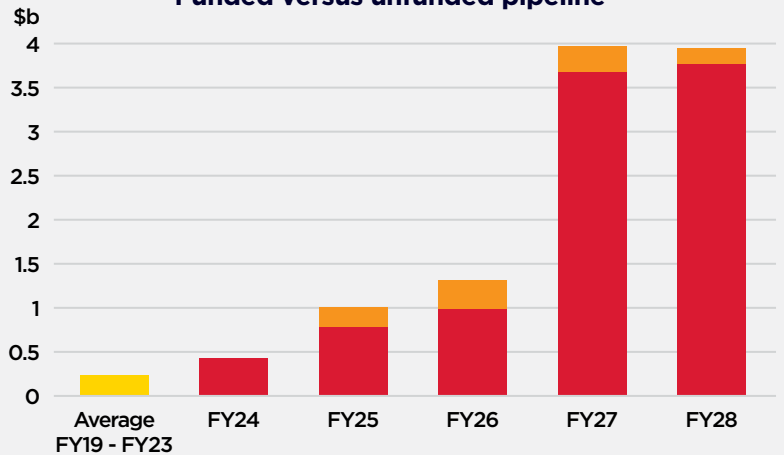
\$10.7b

Key Funded Projects: Borumba Dam - Pumped Hydro Project \$11.2b
Forest Wind \$1b
Paradise Dam Improvement Project \$720m
Bruce Highway - Tiaro Flood Immunity Upgrade \$251m

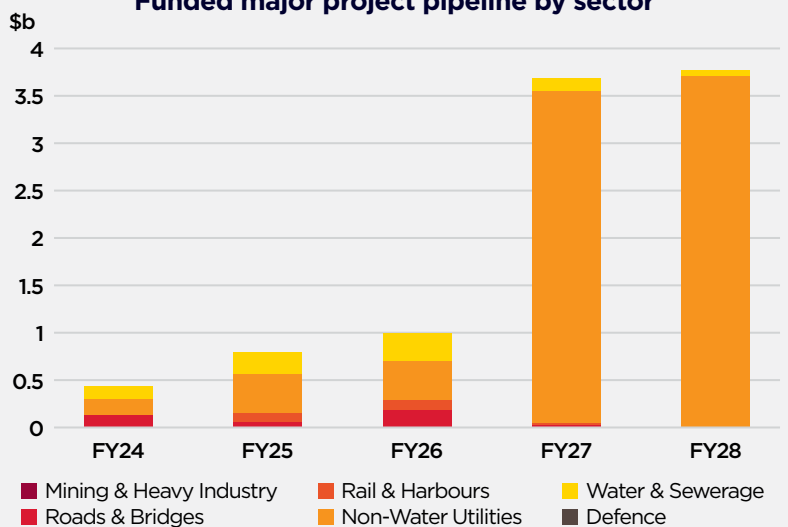
Key Unfunded Projects:
Tarong West Wind Farm \$466m
Lower Wonga Solar Farm - Stage 1 \$196m
Urangan Boat Harbour \$200m
Colton Coal Mine \$180m
Aramara Solar Farm \$98m

Outlook: Major project activity in the Wide Bay region is supported by a mixture of road, water, renewable energy and coal projects. Activity in the last two years of the pipeline is estimated to average \$4bn per annum and is dominated by the Borumba Dam - Pumped Hydro Project, which is scheduled to commence in 2026/27. The funding composition has shifted due to the large impact of the publicly funded Borumba Dam - Pumped Hydro Project, with the share of funded activity rising to 91% of total activity.

Funded versus unfunded pipeline



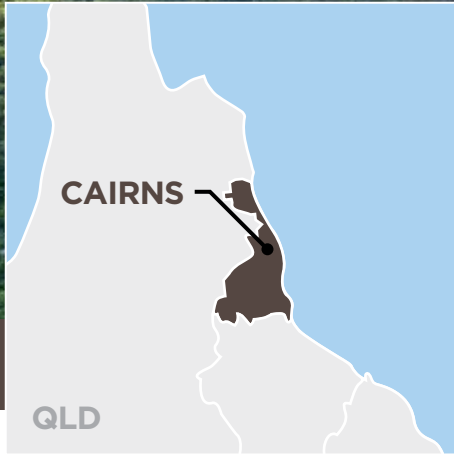
Funded major project pipeline by sector



Source: Oxford Economics, QMCA

As mentioned in the previous chapter, risks surround the project timeline of the Borumba Dam project, with a likelihood that the significant pickup in Wide Bay's construction activity over 2026/27 and 2027/28 will be dampened and pushed back over later years. The likelihood of which is driven predominantly by the sheer size and complexity of the project, and also by the fact that the Wide Bay region will be witnessing historically high levels of engineering construction activity in coming years, putting pressure on the region's resources even without the +\$11b Borumba project.

Cairns



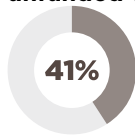
Population:
260,649

Population growth has averaged 1.0% per annum over the last 10 years.



Sectors Driving Growth: Transport Infrastructure – Road and Rail, Water and Defence

Proportion of total unfunded work:



Total Pipeline Size:

\$3b

Key Funded Projects:

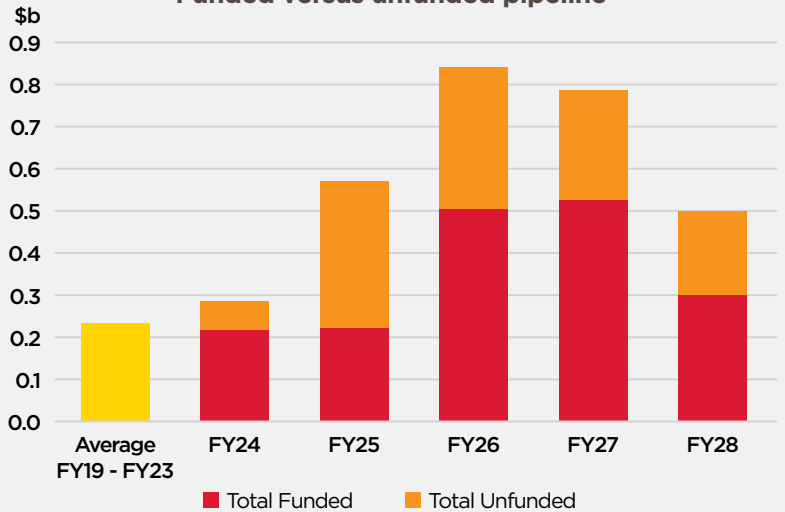
- Cairns Port Ship Lift \$500m
- Cairns Ring Road \$251m
- Cairns Water Security Stage 1 \$250m
- Captain Cook Highway Upgrade – Cairns CBD to Smithfield \$244m

Key Unfunded Projects:

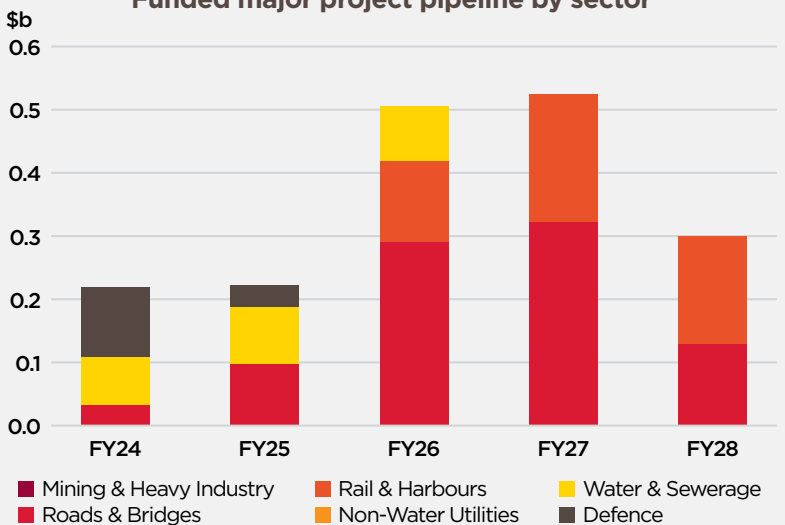
- Desaillly Renewable Energy Park \$560m
- Powering North Queensland Transmission Line \$300m
- Red Dome Mungana Mine \$215m
- Lakeland Wind Farm \$56m

Outlook: Construction activity in the Cairns region will ramp up in 2024/25 and 2025/26 as funded transport projects enter the construction phase, with 2025/26 marking peak activity at \$841m. The level of activity is expected to remain elevated in 2026/27 and then subside in 2027/28. Roads projects will be consistent drivers of activity over five years to 2027/28 and will be supported by projects in the water sector at the beginning of the pipeline then a major ports project (Cairns Port Ship Lift) towards the end.

Funded versus unfunded pipeline



Funded major project pipeline by sector



Source: Oxford Economics, QMCA

Mackay-Isaac-Whitsundays



Population:
186,215
while growth has averaged 0.7% per annum over the last 10 years.



Sectors Driving Growth: Mining (Coal), Roads and Renewables

Proportion of total unfunded work:



Total Pipeline Size:

\$14.6b



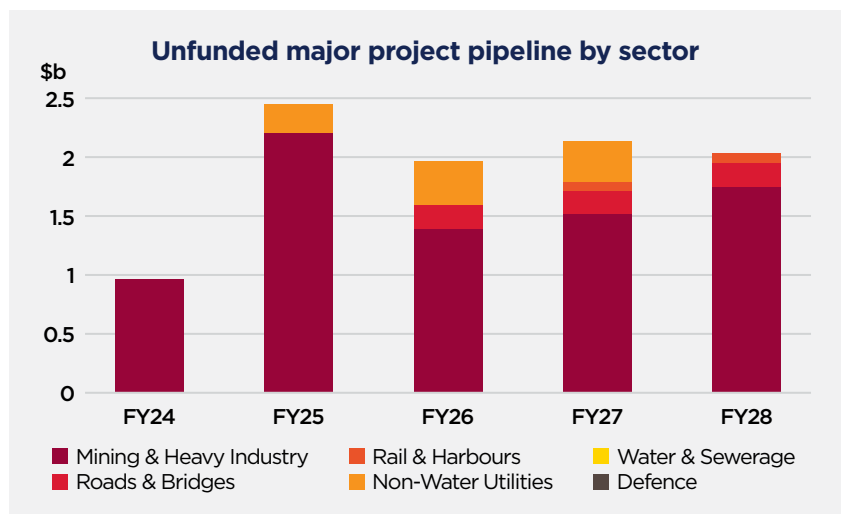
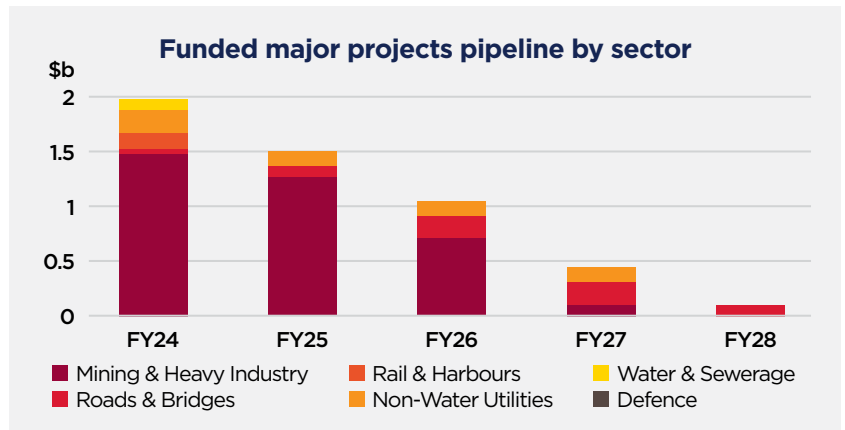
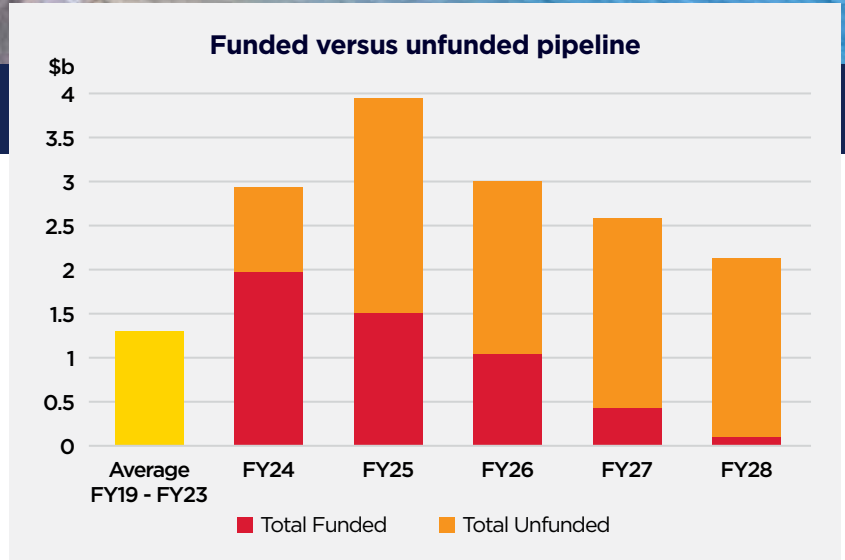
Key Funded Projects:

- Olive Downs Coal Mine \$960m
- Clarke Wind and Solar Farm Stages 1 and 2 \$700m
- Drake Coal \$690m
- Hail Creek Extension - Underground \$660m

Key Unfunded Projects:

- Collinsville Green Energy Hub \$11.2b
- Saraji East \$1.8b
- Winchester South \$900m
- Bruce Highway - Proserpine Floodplain Upgrade \$600m

Outlook: The Mackay-Isaac-Whitsunday outlook has historically, and will continue to be, supported by large coal projects. However, activity will also be supported by renewable projects towards the middle of the five year pipeline. Funded work is anticipated to peak around the \$2b mark in 2023/24 and then will descend over the remainder of the pipeline, dropping off to \$100m in 2027/28. Mackay-Isaac-Whitsunday has one of the largest proportions of unfunded work out of the regions - valued at approximately \$9.5b over the next five years. From 2025/25 onwards, unfunded projects will account for 55% of activity in the region and will be predominately comprised of coal projects, including the Eaglefield Coal Mine Expansion and Saraji East.



Source: Oxford Economics, QMCA

Multi-Region



Sectors Driving Growth:
Non-Water Utilities, and Defence



Total Pipeline Size:

\$1b

Proportion of total unfunded work:

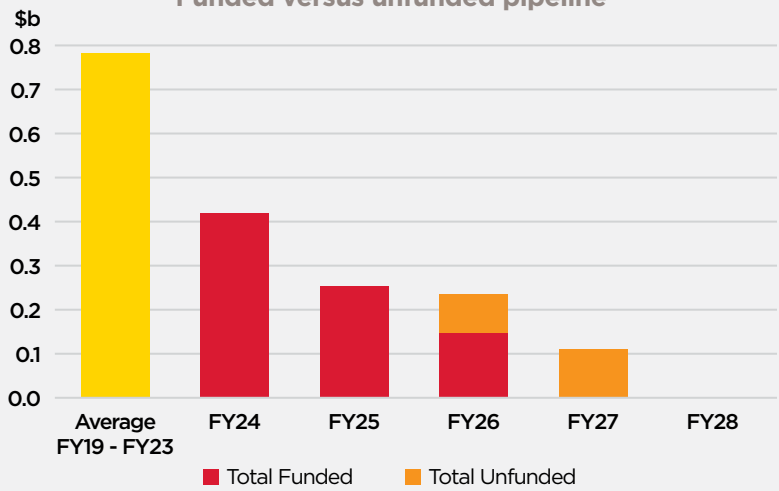


Key Funded Projects:

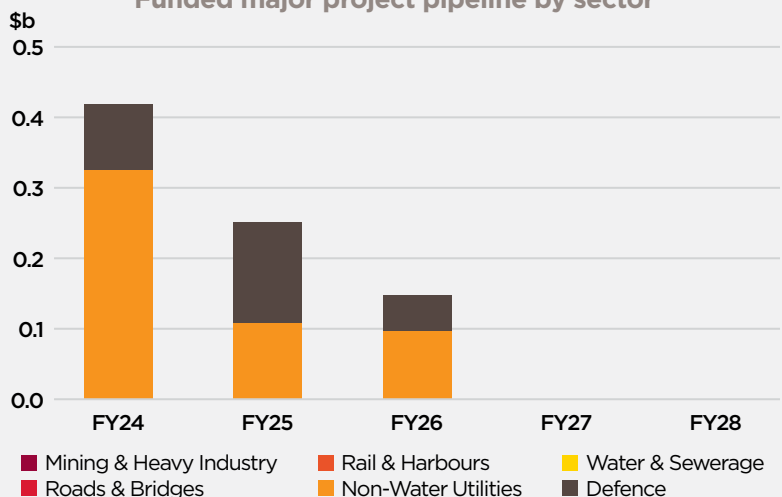
- National Broadband Network - Qld Component \$6.9b
- ESTO2202 Other Sites and Redevelopment - Upgrade and Remediation Works to 9 Sites \$279m
- HyperOne Network - Qld Component \$138m

Outlook: The Multi-Region pipeline is funded primarily by telecommunications projects through the continued rollout of the National Broadband Network, for which funding slows after 2023/24 and the privately funded HyperOne Network. In addition, defence projects will also contribute to activity over 2023/24 to 2025/26. Unfunded work will be the sole source of activity in 2026/27, with no major construction activity currently recorded for 2027/28.

Funded versus unfunded pipeline



Funded major project pipeline by sector



Source: Oxford Economics, QMCA



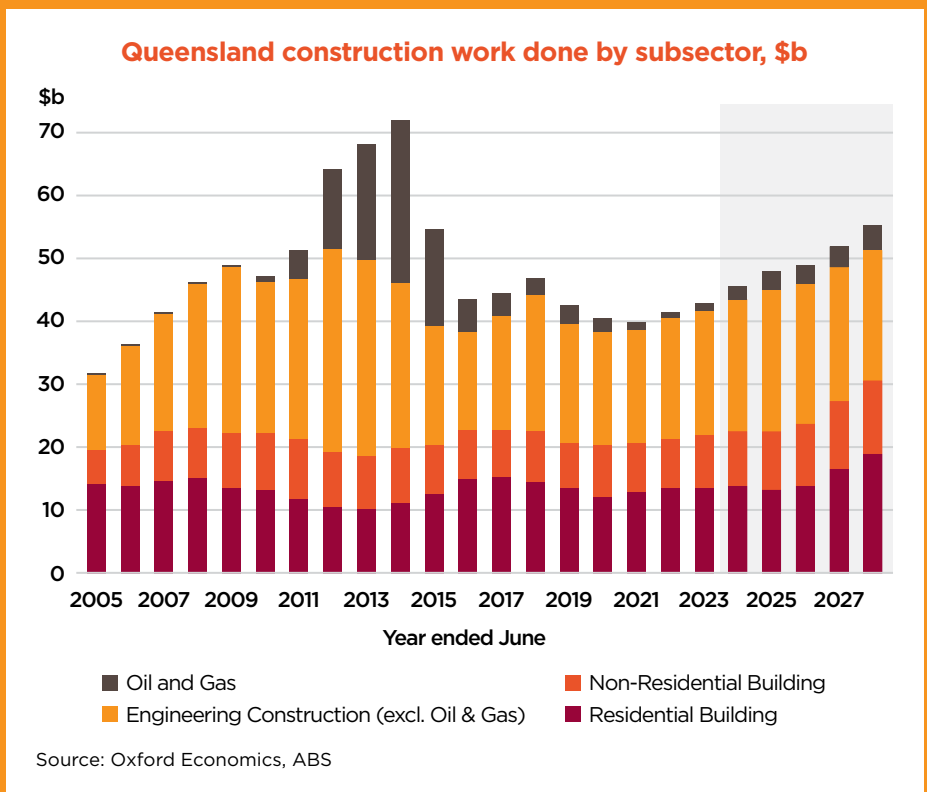


QUEENSLAND CONSTRUCTION OUTLOOK

Queensland's construction sector has experienced volatile cycles in activity over the past two decades.

Activity surged in the early 2010s, reaching a record high \$72.4b (in 2020/21 constant prices) in 2013/14, a figure yet to be surpassed by any other state or territory.

This unprecedented growth was driven by exceptional resources investment (particularly coal and LNG projects), with strong increases in productivity and population growth (particularly via net overseas migration) providing critical supply-side support. Construction activity fell sharply in 2014/15 and continued to decline in the subsequent year as mining related investment eased back post resources boom. Activity then picked up in 2016/17 and 2017/18 led by the NBN rollout and investment in renewable generation to meet 2020 targets. However, achieving sustained growth in the construction industry since the end of the resource boom has been a major challenge.



Following three years of consecutive declines in construction investment and COVID-19 related disruptions, activity has risen by 7% to \$41.8b in 2022/23 as investment in civil engineering construction has lifted.



Construction activity set for prolonged period of growth

Queensland's construction outlook is on a trajectory of sustained growth over the next decade. Infrastructure works related to the 2032 Olympic and Paralympic Games (estimated to be around \$7.1b - of which only \$780m is currently geared towards engineering projects, and the rest to building infrastructure) and the \$62b Queensland Energy and Jobs Plan will further support activity during this period. In addition, fundamental drivers of demand in the state economy will outpace national averages over the next decade, including Queensland's population growth which is projected to average 1.6% per annum relative to the Australian average of 1.3%. Ultimately, total construction activity is expected to surpass the \$50b mark by 2026/27 and is estimated to reach \$56b in 2027/28.

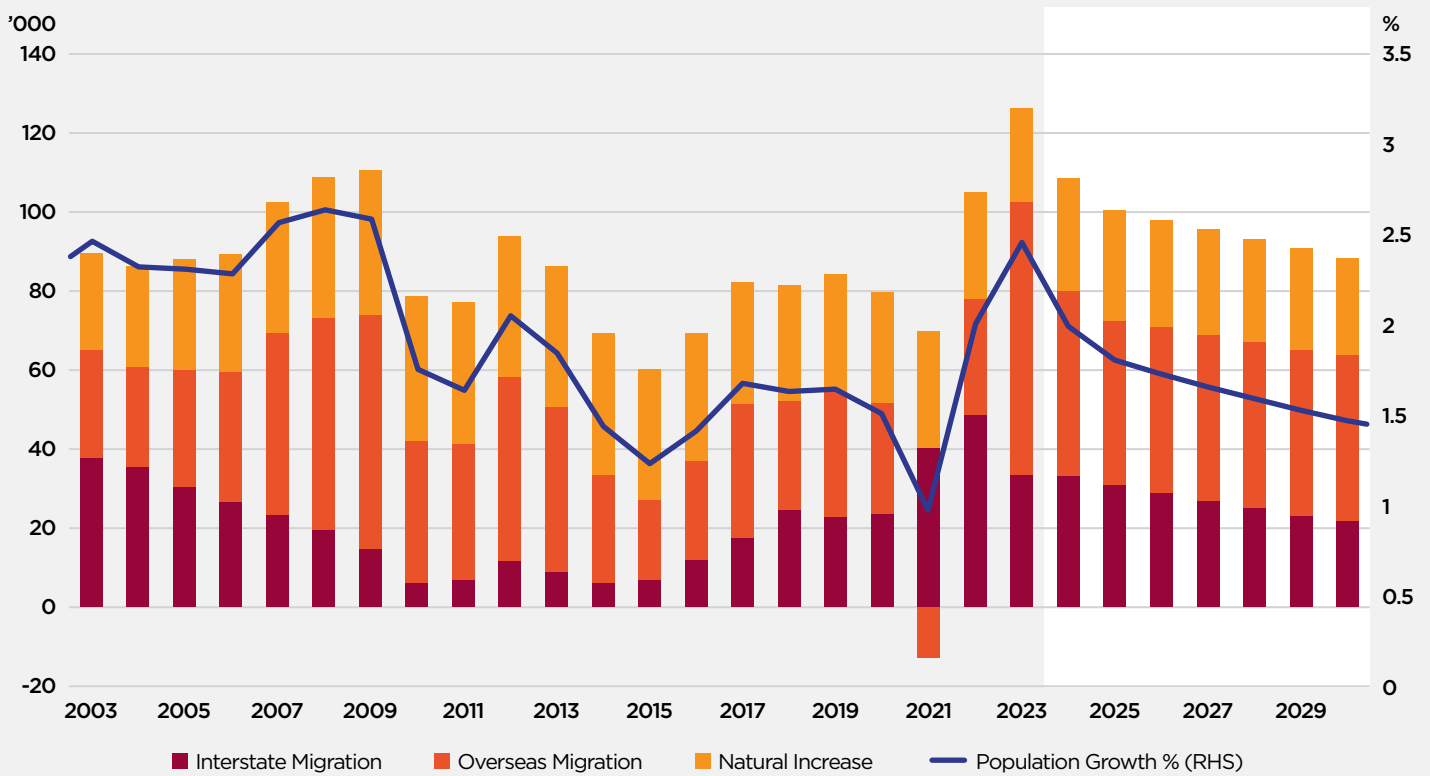
Excluding oil and gas, construction can provide a better measure of historical market capacity pressures – under this scenario Queensland is expected to overtake previous record highs in activity (\$50.2b, 2011/12) within the next five years. Historically, when construction exceeds previous investment levels it has significant implications for market capacity. Supply capacity had to rise to meet the peak of demand in the 2010s, therefore it is more likely to be constrained when demand transcends those previous peaks.

Residential building investment is set to increase towards the end of the pipeline as heightened population growth will exacerbate the existing undersupply of dwellings. In the near-term, activity will weaken as the residential market is characterised by escalations, higher borrowing cost and lengthy delays.

Non-residential building construction activity will be supported by strong social and institutional investment, particularly publicly funded projects in the education and health sectors. Privately funded projects in the retail and offices sectors will begin to contribute to growth from 2026/27.

Engineering construction will strengthen over the next five years, peaking at \$27.3b in 2027/28. Publicly funded transport projects will continue to support activity and will be supplemented by public and private investment in utilities infrastructure, especially in the latter half of the pipeline. Additionally, privately funded renewable energy projects represent a positive upside risk to the outlook.

Population growth, Queensland



Source: Oxford Economics, ABS data

Queensland's population is expected to reach approximately 6 million people by 2028/29 (+11% on the current 5.4 million persons) and will drive state demand over the medium to long-term. A major source of Queensland's heightened population growth is the rise in net interstate migration, which hit a record of 48,780 persons in 2021/22. As pandemic preference shifts partially reset, interstate migration is forecast to ease in coming years to a 24,000 persons inflow in 2027/28, yet remain at a historically elevated level. The proportion of net overseas migration which locates in Queensland is expected to steadily rise over the next five years (from -14% to -17% by 2025/26) and resettle above its pre-pandemic level at around 40,000 per annum.





Slowdown in construction cost escalation growth, but prices remain elevated

Civil construction cost trends can be captured through two broad price series that are published by the Australian Bureau of Statistics (ABS):

- **The implicit price deflator (IPD) for engineering construction work done**, which is derived by dividing current price (nominal) engineering construction data from the ABS by its corresponding constant price (real) data series. This effectively isolates changes in the price of construction, as opposed to changes in activity.
- **The road and bridge index (RBI)** was also published by the ABS as part of the producer price index,

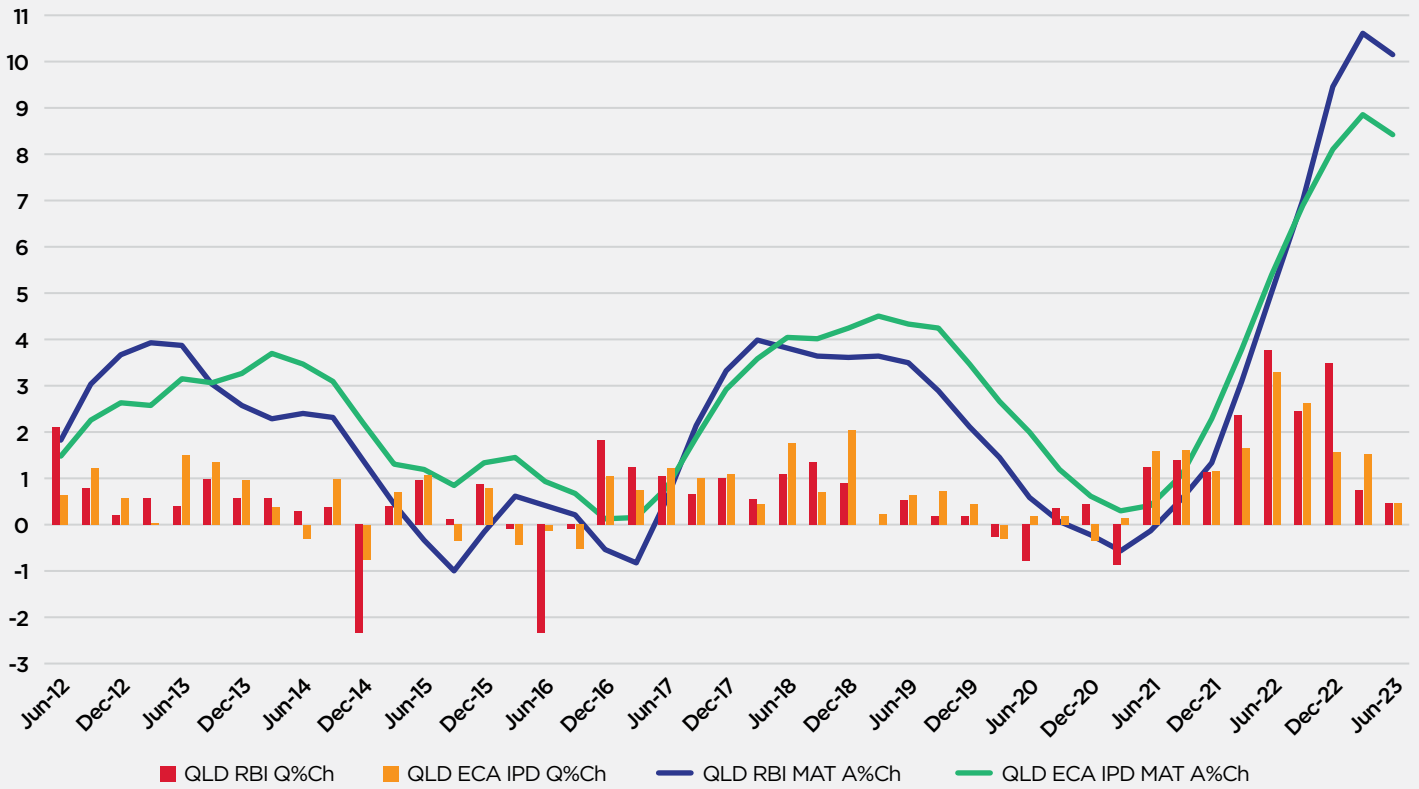
which is available at the national level as well as for the five largest jurisdictions in Australia: New South Wales, Victoria, Queensland, South Australia and Western Australia.

Cost escalation in the construction industry remains high and has surpassed economy-wide inflationary pressures. The national ABS Input to Housing Construction rose 17.3% in June 2022 (y/y) and 7.4% in June 2023 (y/y). In addition, ABS producer price index data shows that the price of reinforcing steel is slowly declining (-1.7% y/y in June 2023) while other items such as timber and cement are still growing but at slower rates than a year ago. Queensland exhibits a

similar trend with the price of steel products falling (-7.4% y/y in June 2023) while the price increases for cement products have not slowed, rising by 13.6% June 2022 (y/y) and 13.5% in June 2023 (y/y). The quarterly percentage change for the engineering construction work done IPD and the RBI in Queensland for the June 2023 quarter recorded the lowest levels since March 2021, while annual average growth remains high at 8.4% and 10.1%, respectively.

This suggests that price growth is reaching peaks and will begin to decelerate, however is unlikely to return to long run averages in the medium term.

Construction price growth, Queensland



Source: Oxford Economics, ABS data

The Russia-Ukraine conflict intensified price growth for a range of commodities typically exported by the two countries and used in the global construction industry, notably energy (oil and gas), timber products and iron and steel products. Production cuts and improving global demand has led to tightness in the oil market and climbing prices. Looking ahead however, construction cost growth is expected to ease as global demand weakens and supply rebalances for oil and steel. As global supply chains start to improve, the risks to supply becomes increasingly domestic driven. Rising demand has created difficulties hiring skilled and unskilled labour, longer lead times and shortages in domestically manufactured products such as quarry materials and local steel.





For all the details, see the full Report,
available online at www.qmca.com.au/2023qmppr

