The Gathering Storm

Construction in Australia

Market View

Spring 2021

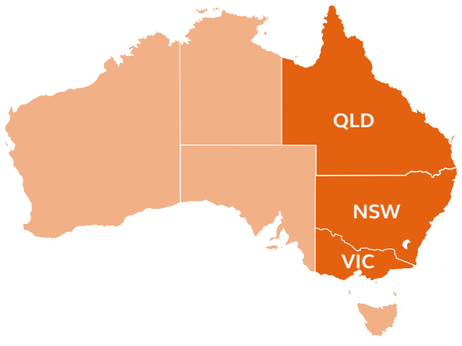
Overview

Construction materials prices are spiralling and further problems like the haulage crisis are making projects even more risky. With contractors under less pressure to secure new work in some quarters, there is the potential for more inflation on the horizon.

- Recent outbreaks of the Delta variant across Australia, and the resulting lockdowns, have introduced a high degree of uncertainty to the overall outlook for the second half of this year. Despite this, the Australian economy entered this challenging period in a strong position, with government fiscal policies directly supporting households and businesses in affected sectors. In the period June 2020 to June 2021, GDP increased by a staggering 9.6%, compared to 3.6% for the same period the previous year. This has provided a strong foundation for our recovery, with the economy forecast to rebound from this setback as restrictions ease, as it has in previous lockdowns.
- Along with the uncertainty to the overall outlook that has been created by the Delta variant, business confidence has also taken a tumble. According to the National Australia Bank, which collects data from a survey of around 350 companies, business confidence has returned to negative territory for the first time since November 2020. Interestingly, consumer optimism has not been impacted as negatively. The Westpac Consumer Sentiment Index, published in September 2021, has increased by 13.2% between September 2020 and September 2021. The improving vaccine situation along with further clarity on border openings appear to be a key factor behind these results, according to the Index.
- As the economy continues to recover, inflationary pressures are likely to grow. Over the twelve months to the June 2021 quarter CPI rose 3.8%. However, the Reserve Bank of Australia anticipates that inflation will fall below 2% before the end of the year, and it appears that most economists are in broad agreement. Automotive fuel has been the most significant contributor to recent inflationary rises, and we anticipate that increases in both goods and energy prices will be a factor for some time to come. This trend is expected to be transient, and the rate of inflation will wane as the balance between supply and demand is restored. However, it is our projection that it will most likely take until the end of 2022 before this happens.
- Output in construction stayed strong in Q2, reaching almost $53 billion in seasonally adjusted terms – a growth of 0.8% from the previous quarter. This has largely been driven by spending in the infrastructure sector, which has increased by 1.8% since the previous quarter. It should also be noted that building and residential work has increased significantly in the period between June 2020 and June 2021, equating to an increase of 2.8% and 8.9% respectively according to the latest ABS data.
- The Performance of Construction Index (PCI) is a composite indicator designed to provide an overall view of activity in the sector. The latest update indicates that it surged 14.9 points to 53.3 in September 2021. This reading points to the first expansion in overall construction activity for the first time since June. For context, a reading above 50 indicates an expansion of the sector compared to the previous month, with a reading below 50 representing a contraction. It will be interesting to see if this level of expansion will continue to the end of the year and beyond.
- Pressures regarding workforce and labour availability in construction are well recognised and often a source of inflation. Currently, this is already the case with some specialist skills in infrastructure. According to the Labour Market Information Portal, which is maintained and updated by the Australian Government, the total construction workforce equates to $1.1 million, which has decreased by 38,200 (3.3%) during the last year. More worryingly, total employment in the sector has reduced to 34,600 (3.0%) during the last quarter alone. The fact that output has performed so well despite subdued levels of employment points to some level of improvement in productivity. If these gains can be maintained as construction returns to normal, this could be a real boost for pay and profitability without the risk of higher inflation.
- Following a modest recovery towards the end of 2020, new orders have been recovering strongly and the pipeline of future projects is increasing. The industry is expected to grow by 2.2% in real terms by the end of the year – which is up from a decline of 2.1% in 2020. Many industry commentators anticipate that the construction industry is on the verge of another upturn, following three years of relative decline. This is largely in connection with the unprecedented level of infrastructure investment that has been committed over the next few years. A house building boom, cultivated by significant government incentives, is currently leading this upturn and it is now forecast that a wave of new projects and investments in the renewable energy sector will provide a further surge of activity.
- We have broadly maintained our forecast that anticipates that the construction sector will achieve a recovery to pre-pandemic levels of activity by the second quarter of 2022. Infrastructure is the only sector expected to fully recover, perhaps even surpassing previous levels, by the end of 2021. By 2022, most sub-sectors will have reached pre-pandemic levels, except for commercial, where growth will be held back by a weakening retail sector.

In Focus: QLD, NSW, VIC

While there are many factors impacting the construction industry nationally, each State is facing local challenges and opportunities.



Queensland

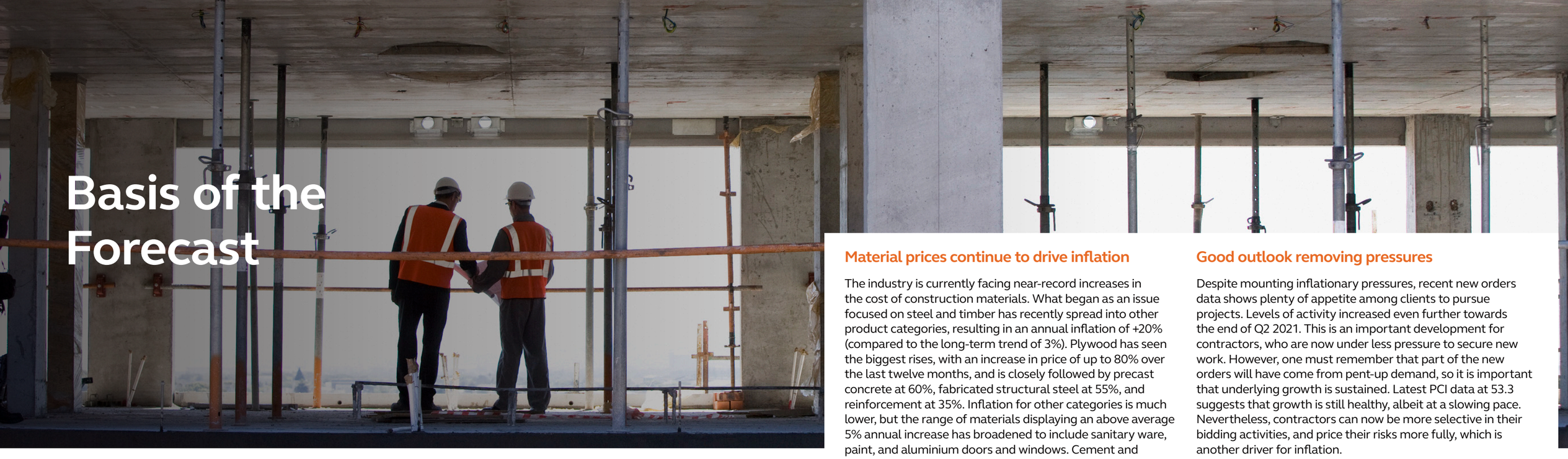
- The 2032 Olympics will drive investment across South East Queensland over the next few years, although the project pipeline associated with this has yet to solidify.
- The Queensland construction market is showing signs of heating up, which is largely being led by the residential sector as a result of growing inter-State migration. The HomeBuilder grant has also contributed to this with a surge in domestic residential construction over the past 12 months.
- Construction prices remain high across Queensland and Brisbane in particular. In some sectors, construction is just as expensive as Sydney and Melbourne. This is largely due to a diminishing pool of contractors and a weakening supply chain. This competitive vacuum has kept construction pricing artificially high.
- Despite an improving forward project pipeline and growing market confidence, construction activity has not yet started to materially increase and has, in fact, been steadily declining since 2017. Current forecasts anticipate that this will start to change from the middle of 2022 onwards, provided that current project commitments are honoured.

New South Wales

- Restrictions that have recently been in place as part of COVID-19 mitigation strategies have now been lifted, and the construction sector is now returning to previous levels of activity.
- The residential sector is showing early signs of recovery, particularly in the social housing and Build-to-Rent space.
- Labour and skill shortages are becoming more and more prevalent, and the employment market is becoming increasingly competitive and cut-throat. Project managers, site managers, estimators and quantity surveyors, and commercial managers are all in high demand – this is increasing wages and is now starting to impact contractor's preliminaries.
- The recent NSW EBA agreements will increase labour costs by at least 10% over the next two years.
- Contractors are getting busier and, in some quarters, are being far more selective about the projects that they choose to tender. Timing, the number of bidders, overall project attractiveness, and risk allocation are all factors that are now being considered.

Victoria

- The Build-to-Rent sector has increased significantly over the past 12 months, with Victoria home to some of the biggest and most ambitious schemes in the country. There are several seasoned developers now playing in this space and it is anticipated that construction will commence on a number of these schemes within the next 12 months. However, material availability and rising costs may jeopardise the feasibility of some of these projects – at least in the short term.
- Recent increases to the Environmental Protection Agency levy are, typically, now being passed on to the client. Rates for spoil disposal are now significantly higher and this should be considered for any project in the design / pre-construction phase.
- COVID-19 restrictions that were put in place as part of the recent extended lockdown have now been lifted, with large scale construction sites increasing capacity to 100%. However, this is on the condition that workers have received at least one dose of the vaccine or have a valid medical exemption. It remains to be seen whether there will be a longer-term trend of workers that remain unvaccinated and, therefore, the potential impact that this may have on construction.



Basis of the Forecast

With prices and levels of activity rising together, how sustainable is the recovery?

The gathering storm

Availability issues and price hikes affecting construction materials have escalated rapidly over the last few months. Latest market intelligence highlights inflation increases across all product categories. In addition, challenges with logistics have continued from a shortage of containers and a lack of capacity is causing widespread delays to deliveries across the whole economy. This perfect inflationary storm is further supported by a strong new orders intake that has taken away work-winning pressure from contractors, reducing competitiveness in the market. And while many ask, “how long will this last?” what we should also be exploring is, “where could the next inflation trigger come from?”.

The V-shaped recovery has accelerated, and the window of opportunity has shut. Inflationary pressures have continued to grow during winter and, as such, we have again upgraded our forecasts. Pressures related to the supply of construction materials may well ease early next year, but there is plenty in store to keep prices rising – from the uncertainty of labour availability, through to rapidly increasing energy costs, including wholesale gas prices that have risen by over 70% to record levels since February. Clients willing to proceed with their projects in these conditions need to be increasingly vigilant and make sure there is always a negotiation table nearby.

Material prices continue to drive inflation

The industry is currently facing near-record increases in the cost of construction materials. What began as an issue focused on steel and timber has recently spread into other product categories, resulting in an annual inflation of +20% (compared to the long-term trend of 3%). Plywood has seen the biggest rises, with an increase in price of up to 80% over the last twelve months, and is closely followed by precast concrete at 60%, fabricated structural steel at 55%, and reinforcement at 35%. Inflation for other categories is much lower, but the range of materials displaying an above average 5% annual increase has broadened to include sanitary ware, paint, and aluminium doors and windows. Cement and concrete are now up by 4% in the year.

At the same time, some signs of returning sanity can be seen in the price trends for commodities; according to Nasdaq, lumber prices in the US returned to below USD 500 per thousand board feet in mid-August, after having peaked at a May 2021 record of USD 1,600. Copper is back below USD 9,500 after reaching USD 10,700 in late Spring. It is, however, too early to herald the beginning of a ‘return to normal’ and there will likely be a delay before these price corrections reach the market of construction materials.

In the meantime, increases in material prices and availability issues have been the most often quoted reason for project delays, both on-site and in procurement, as contractors are unable to hold their prices. Re-negotiation - and in some cases even rebidding - is taking place, leading to delays. Difficulties in pricing risk have become a major threat to the viability of projects and a potential spanner in the wheels of recovery. Even when supply can be secured and prices return to more reasonable levels, other factors that have emerged recently will continue to impact on the pace of recovery.

Logistics challenges are a long-term issue

Costs related to logistics, especially container shipping, have escalated over the last few months too. In our Winter report, we quoted rates doubling when compared with the end of 2020. At the time of writing, costs have increased further, with recent indicators suggesting that costs have increased by as much as 400% over the last 12 months. This is a consequence of continuing disruption at ports, including a shortage of containers and unloading capacity. The longer that this situation persists, the more likely that contractors will start pricing this risk within their tenders. Contractors are starting to face ‘idle days’, with equipment and workers on site with zero output due to the lack of materials.

Good outlook removing pressures

Despite mounting inflationary pressures, recent new orders data shows plenty of appetite among clients to pursue projects. Levels of activity increased even further towards the end of Q2 2021. This is an important development for contractors, who are now under less pressure to secure new work. However, one must remember that part of the new orders will have come from pent-up demand, so it is important that underlying growth is sustained. Latest PCI data at 53.3 suggests that growth is still healthy, albeit at a slowing pace. Nevertheless, contractors can now be more selective in their bidding activities, and price their risks more fully, which is another driver for inflation.

Everybody’s talking inflation

Concerns regarding inflation and its impact on the pace and success of the post-COVID recovery have been in the news for a while. Due to the situation with materials prices, the construction sector is now actively discussing this issue, and recent challenges around haulage are likely to only exacerbate the situation. The temporary easing of pressure on contractors has removed some of the competitive pressure on pricing and enabled the supply chain to include bigger risk premiums.

Because there are currently so many cost drivers in place, inflation has been generally acknowledged and consequently the supply chain is far from being shy about making allowances for it. The situation is not likely to improve in the mid-term, with a still unclear situation regarding the availability of labour. Wage inflation is the dog that has not yet barked. The Market Capacity Report, which has recently been launched by Infrastructure Australia, tackles the issue of skills shortages head-on and predicts a shortage of trade workers from electricians, painters, and joiners to university trained positions like senior engineers, geologists, project managers, and architects. The report further indicates that, by 2023, one in three skilled positions may go unfulfilled. This will lead to greater competition equating to the cost of wages increasing significantly – unless the structural imbalance between supply and demand can be addressed.

All this considered together has led us to bring some of the inflation forward and upgrade our forecast between 2021 and 2025. These predictions of course assume that the pace of recovery will be maintained. Should clients decide that construction is too expensive, then a quite different pattern of pricing might emerge.

The Arcadis Forecast

Inflationary Factors	Deflationary Factors
• Continued increased in construction materials costs	• AUD still strong against USD
• Labour wages increase significantly due to increasing demand	• Potential adoption of some digital practices and post-COVID-19 productivity increase
• Improvement in order books and eased pressure on winning in new work	
• Contractors less able to price risk and hence higher risk premiums	
• Logistics challenges around container costs	
• General awareness of highly inflationary circumstances	
• Continued expansion in social and economic infrastructure	

The Arcadis Forecast

Arcadis Buildings Tender Price Forecast

	Adelaide	Brisbane	Canberra	Darwin	Melbourne	Perth	Sydney
2021	0.0% (0.0%)	0.5% (0.0%)	0.0% (0.0%)	0.0% (0.0%)	1.5% (1.0%)	0.0% (0.0%)	1.5% (1.0%)
2022	2.5% (2.0%)	3.0% (2.5%)	2.5% (2.5%)	0.0% (0.0%)	3.5% (3.0%)	0.5% (0.5%)	3.0% (2.5%)
2023	2.0% (2.0%)	3.5% (3.0%)	2.5% (2.5%)	1.0% (0.0%)	4.5% (3.0%)	1.0% (0.5%)	4.0% (3.0%)
2024	2.0% (2.0%)	3.5% (3.0%)	2.0% (2.0%)	2.5% (2.5%)	4.5% (3.0%)	1.5% (0.5%)	4.5% (2.5%)
2025	1.5% (1.5%)	4.0% (2.0%)	2.0% (2.0%)	2.0% (2.0%)	3.5% (2.5%)	1.0% (0.5%)	4.0% (2.5%)
Total	**8.0% (8.0%)**	**14.5% (10.5%)**	**9.0% (9.0%)**	**5.5% (4.5%)**	**17.5% (11.5%)**	**4.0% (2.0%)**	**17.0% (11.5%)**

Arcadis Infrastructure Tender Price Forecast

	Queensland	Victoria	New South Wales
2021	3.0% (3.0%)	4.5% (4.0%)	5.0% (5.0%)
2022	4.5% (4.5%)	5.5% (5.0%)	6.0% (6.0%)
2023	5.0% (5.0%)	6.0% (5.0%)	6.5% (6.0%)
2024	6.0% (4.0%)	6.5% (5.0%)	6.0% (5.0%)
2025	5.0% (3.0%)	6.0% (4.0%)	5.5% (5.0%)
Total	**24.0% (19.5%)**	**28.5% (24.5%)**	**29.0% (27.0%)**

Spotlight on: Mitigating the risk of construction materials price volatility

Construction materials prices have been escalating rapidly in recent months, creating challenges for on-going projects, and potentially threatening the viability of new schemes. What can clients do to avoid project delays and cancellations?

The discrepancy between supply and demand has been rapidly driving up the cost of construction materials, with steel products and precast concrete typically having increased by 60-80% on an annual basis. The situation is similar across the world and has become a source of concern because high prices might hold back the pace of recovery.

Ongoing projects need to tackle price hikes and delays, as lead times for many products have extended and some materials are being allocated on a project-by-project basis. This can result in additional costs for both contractors and clients, especially on time constrained projects, and in extreme cases could lead to contract disputes.

Increased nervousness and high levels of uncertainty are not good for new projects either. Contractors and clients may both be put off by elevated levels of risk, and the increased price of delivery can undermine a business case, leading to project suspension. However, pausing activity until prices return to 'normal' in many cases is not possible. There are interventions, though, that could help limit exposure. They are not a silver bullet, and come with pros and cons, but in the current conditions of heightened uncertainty, they can facilitate decision making.

Procurement options

With procurement, the key consideration is achieving a balance between competition and how attractive the project is to bidding contractors.

Single stage tender competitions are suitable for highly competitive sectors where a quick turnaround is needed but are increasingly less acceptable to bidders. It is advisable to undertake extensive supply chain engagement first to confirm continuing levels of interest.

Two stage tender competitions offer a possibility to delay or bring forward tendering for some work packages and can help avoid price peaks and mitigate some delays. However, they present a particular risk in volatile markets such as today's, with the possibility of a last-minute upward price adjustment at the end of the second stage.

Reverse two stage tender competitions, where the client directly procures specialist packages as well as the main contract, could be an attractive option in the current market – providing greater transparency over pricing. This could facilitate early procurement of long-lead-in items. But the inability of the client to contract directly with specialists may mean that it is not possible to secure cost certainty prior to the agreement of the second stage bid.

Construction Management, where there is no cost certainty until all packages are procured, is likely to be riskier for clients, but means the timing of procurement can be optimised. This route will benefit most clients with previous experience and access to appropriate resources, and who can agree to sub-contract prices quickly to achieve cost certainty.

Negotiation in the current market is likely to result in full pass-through of inflation costs at the outset of a project, and hence is only recommended where there is not enough time for a competitive process.

With any lump-sum procurement, some flexibility can be built into the pricing by using provisional or early procurement activities.

Provisional sums can be used to delay the procurement of later packages on a project, for example fit-out, and avoid some of the inflationary 'fever' and risk-averse pricing seen in 2021. However, prices will continue to rise, and the contractor and project team will need to remain alert to material availability issues to manage the risk to the program.

Early procurement of bulk materials/production slots. Clients can secure early orders for bulk materials with manufacturers either directly or through the supply chain. The advantages of early procurement are price and program certainty. The disadvantage is the client's financial and physical commitment to the purchase.

Risk transfer options

Another option for securing a competitive initial price from the market is to vary the terms of the risk transfer in the contract. The changes required in the current market are significant – increasing the scope for extensions of time with or without cost. When introducing a change to the balance of risk transfer, the client is taking a calculated risk that the reduced bid price will justify taking the risk and that the full risk will not materialise. The upside of this approach is that the client will only ever pay if the risk occurs. As a result, a relaxation in the balance of risk transfer should only be considered if bidders are keen to offer a discount in their bids.

With availability of materials being a particular problem now, clients who have some flexibility on completion dates might consider including materials availability as a permitted trigger for a compensation event/extension of time. Awarded on a time only basis, this step will eliminate one source of contractor risk (i.e. cost of Liquidated and Ascertained Damages) without exposing the client to full inflation risk.

Employing best procurement practice

There are many different strategies that can be adopted to mitigate the risks of material price escalation during all phases of a project. One of the simplest is to adopt a clear procurement strategy that can be quickly adapted to meet changing dynamics and by engaging with the market as early as possible. By taking the following actions, clients will significantly improve their chances of obtaining a spread of competitive tenders:

- Ensure that your procurement and contract strategy is clearly articulated.
- Engage with prospective bidders as early as possible to ensure that they are interested and willing to tender your project – this is essentially the client 'selling' the project to the market.
- Ensure that your tender period is sufficient for pricing the project and that there is sufficient time included to review and respond to requests for information.
- Ensure that tender documentation is complete, accurate, and coordinated as far as possible so that prospective bidders can estimate the materials required for the project.
- Try to be flexible when determining the period for how long tender prices should be 'fixed'.
- Identify opportunities for tendering contractors to identify and nominate alternative materials or delivery strategies.

In summary

It is difficult to predict how long construction materials price increases and associated shortages will persist. The situation is not likely to stabilise before the end of Q2 2022 and some sectors, such as infrastructure, are likely to continue to be exposed to materials-related risks in the longer-term.

Implementing the above steps will not make clients and contractors immune to cost hikes, but enhanced transparency and a more equitable sharing of these risks, when they occur, will help manage price increases and mitigate the consequences.

Zoom into:
Carbon pricing and its impacts to construction

One of the biggest challenges in meeting net zero targets will be decarbonising high intensity sectors such as steel or concrete.

As Australia starts to move towards more ambitious carbon targets, carbon taxes related to emissions trading schemes (ETS) and Federal funded support will emerge to play a crucial role in reducing consumption and incubating new technologies. Here, we describe how ETS operates, how it is likely to evolve over time, and what the impacts on the construction sector are likely to be. The current Government plan does not include substantial changes to policy or new legislation. This has been politically controversial and a change in Government in the next election could see the implementation of other market forces to meet targets.

What is an ETS and how relevant is it to construction?

ETS's have been designed to encourage decarbonisation of the largest CO2 emitters, such as power generators and carbon intense industries, which includes the production of steel, concrete, and aluminium. As of 2019, there were 17 GHG emissions trading schemes established globally, operating in 35 countries, 12 states and seven cities.

Schemes have been designed as a market-based approach to controlling GHG emissions and therefore mitigating the effects of climate change. Emissions are limited either through the allocation or purchase of emissions allowances from a central authority or the purchase of emissions credits from market participants. For example, a company that emits more GHGs than it permits allow can buy credits from others willing to sell them. GHG emissions credit units are often known as carbon credits or GHG emission-reduction credits. How does this impact construction? The answer is through an additional cost, which depends on the CO2 emissions generated in the production process.

With all States and Territories now committing to net zero by 2050 at the latest, more and more ambitious targets are being integrated into contract requirements. NSW has also set an interim target of halving emissions by 2030, only 8 years from now. Proposing low carbon solutions is becoming a competitive advantage and net zero construction is now being proposed for large scale infrastructure projects. This will result in increased costs (and risks) within the supply chain as project stakeholders may not be prepared and may therefore resort to offsetting with a cost-effective strategy in place. Those without a robust decarbonisation strategy in delivery will see an increase in construction costs with potentially lower levels of return in local value.

Didn't Australia used to have an ETS?

Yes. The carbon pricing mechanism was an emissions trading scheme that put a price on Australia's carbon pollution. It was introduced by the Clean Energy Act and other related legislation in 2011 and applied to Australia's biggest carbon emitters (known as liable entities). Under the mechanism, liable entities had to pay a price for the carbon emissions that they produced between 2012 and 2014. This covered approximately 60% of Australia's carbon emissions including from electrical generation, stationary energy, landfills, wastewater, industrial processes, and fugitive emissions. The carbon pricing mechanism covered a range of large business and industrial facilities. It did not directly cover most Australian businesses, including smaller businesses, or households.

It was repealed from July 2014.

While this carbon tax was only in effect for two years, the data indicates that it had an immediate impact. Emissions dropped almost immediately after it was introduced as businesses made the transition to technologies that emitted less. When the scheme was repealed in 2014, carbon emissions began to rise again almost immediately. It is not a stretch to see this mechanism introduced again despite its current absence in policy.

What is next for ETS and will it come back to Australia?

Following COP26, the UN Climate Change Conference, that took place in Glasgow in November 2021, the Federal Government is now facing a backlash from the Australian press as they have indicated that they are unwilling to review their existing targets and pledges - which was one of the key outcomes from the Conference. At the time of writing, Australia is ranked dead-last amongst developed countries in terms of its carbon mitigation track record and commitments. This is despite our economy and wellbeing being highly exposed to the risks of climate change. While it is unclear what formal mechanisms will be implemented, industry is steaming ahead toward a low carbon economy. The construction industry is certainly part of this shift, with many of the larger Tier 1 contractors committing to their own ambitious targets and building product suppliers innovating with low carbon products. Whatever the outcome, we are sure to see at least a short-term increase in the costs associated with these changes.

Regardless, we believe that the Federal Government will not be able to continue without regulating carbon pricing for much longer.

What does this mean for clients?

Clients have little control over their exposure to carbon pricing. The price of credits will be set by the market, and the amount of emissions will be determined by the manufacturer's process. Looking further ahead, the impact that carbon pricing will have on construction costs will depend both on the pace of reducing CO2 emissions, the implementation of suitable mechanisms, the ability for construction related business to innovate and the pace of expansion.

Emissions reduction can be achieved either by transitioning to innovative processes and products or implementing carbon capture and storage. But we must acknowledge the enormous size of the decarbonisation challenge, which will require new processes and products to be developed. The change will not happen overnight. There is a lot of work to do, and clients have their role to play in the process.

The first step is to understand the carbon content of products so that low-carbon alternatives can be considered. What initially seems unfeasible may turn out to be suitable after modifications to the design or construction delivery process. Clients also have a role in creating the market for low-carbon products, and the faster they make the switch, the sooner economies of scale will be achieved. Otherwise, net-zero will remain a costly and niche option…almost as costly as carbon.

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