



Better Regulation
Victoria

Addressing Supply Chain Challenges

Review into Issues Facing Victoria's
Building and Construction Industries

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Foreword

Addressing Supply Chain Challenges, outlines the current building supply chain disruptions and their risks for industry and consumers. It makes 10 recommendations to help mitigate the risks – both in the short and longer terms.

The report's preparation has involved significant consultation with industry, including Master Builders Victoria and the Housing Industry Association, as well as many other industry groups working in the forestry, steel and building material supply industries. The review benefitted enormously from discussions with departmental colleagues across the Victorian Government and I thank them for their expertise and sound advice.

Miles Hutchison, Senior Economist and Lucy Farnsworth, Economist, of the Better Regulation Victoria team gave me excellent support as we undertook the research and development of the recommendations, and I would like to acknowledge their hard work and ability to work with all stakeholders in such a collaborative and effective way. My thanks too to Mark Kealy and Angela Jurjevic from the Building Review Secretariat for their insights and help as we finalised the report, and to my Better Regulation Victoria colleagues for their input along the way.

Anna Cronin
Commissioner for Better Regulation



Executive Summary

The home-building industry is under acute stress as a result of an unprecedented increase in demand and pandemic-related disruptions to the supply of some building materials, particularly structural timber. This situation has highlighted vulnerabilities in supply chains which will continue to be a challenge after the current spike in demand passes. The impacts of the current disruptions will ease as market conditions correct. There are some actions which the Victorian Government could consider taking in the short-term to mitigate against the current impacts of supply chain disruptions, as well as actions which in the longer-term will enable the building industry to better respond to any future shocks.

Victoria's construction sector employs 321,000 people across 111,116 businesses. Most of these enterprises (109,736) are small businesses employing under 20 people. The sector contributes \$32.7 billion per year to the State's economic activity (or 8% of Gross State Product).¹ The Victorian Government has made clear its support for the home-building and construction sector, particularly through its housing stimulus initiatives. It is vital that we have a thriving and successful building industry given its significant role in supporting Victoria's economic recovery. The analysis of available information demonstrates that the unprecedented stress on the building industry is likely to impact on consumers – through cost increases and delays – as well as on construction businesses.

However, there are significant lags in data collection, which means that information from industry associations about impacts on builders is not yet clearly represented in official data. Nonetheless, there is no doubt that supply chain constraints have been impacting on costs and delays in home construction and the potential for greater impacts in coming months is high.

The overwhelming cause of project delays and increased cost has been related to steel and timber supply constraints. Although other building materials have increased in cost and the diversity of products available has reduced, the impacts are not as severe as those related to structural timber and steel products. On this basis, the main focus of this report and my recommendations to Government are related to steel and timber supply issues.

¹ Australian Bureau of Statistics, *Counts of Australian Businesses, including Entries and Exits*, (July 2016 to Jun 2020)

<https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/jul2016-jun2020>



The demand for home building materials, including steel products and structural timber, has risen to all-time highs. This spike in demand has occurred globally as governments of developed nations have incentivised their building industries to stimulate COVID recovery. The stimulus of the building industry in Australia has been significant with a strong uptake of the Commonwealth HomeBuilder grants program and Victoria's \$5.3 billion Big Housing Build. The renovation market is remarkably strong as consumers shift spending from areas like travel to investment in their homes to accommodate remote working. The stimulus spending has occurred against a backdrop of historically low interest rates, the movement of people away from metropolitan areas and rebuilding as part of bushfire recovery.

In the case of structural timber, already vulnerable supply chains have been subject to unprecedented shocks from the bushfires and COVID related impacts on shipping and import markets. In the case of steel, because it is used in a range of sectors that have also seen an increase in demand (for example increases in manufacturing and civil construction programs), these peaks have emerged more quickly than steel producers can keep up with, which has been evidenced by record steel prices globally.

The likely trends driving the supply chain disruptions are difficult to predict. Mixed opinions have been offered about when the pressures will subside. The current position seems to be that Victoria (and Australia) may be near the peak of the building materials supply problem but even if that is correct, increasing prices and disruptions to supply are likely to continue well into 2022.

In the report, BRV outlines the nature of the supply chain challenges and their impacts. The review highlights the complexity of the issues and that there are a number of agencies and policy areas within government that could have a role in responding to the construction industry supply chain issues.



We have made 10 recommendations where the Victorian Government could take action – or recommend Commonwealth Government action – to support the construction industry as well as to support consumers to weather the current storm and mitigate against future market disruptions that may arise. The recommendations are grouped into the following three areas:

1. **Alleviating supply issues in the short-term** through assisting business to explore new import sources and supporting efforts to use any other available structural timber in Victoria (although, as noted in the report, the latter option offers only limited scope to increase supply).
2. **Assisting industry and consumers to respond to the supply chain impacts in the short-term** through the provision of advice to businesses and consumers on managing domestic building contracts and supporting an expected increase in demand for dispute resolution services. We also recommend consideration of non-legislative action to enable the use of a cost escalation clause designed to reduce the risks to businesses and consumers and also to promote transparency about cost impacts.
3. **Providing incentives to protect against future shocks over the medium- to long-term**, which are focused on strategic investment in Victoria’s plantation timber industry as well as supports for training and research and development to assist industry with alternatives to timber framing in housing construction. It is likely that the use of steel frames offers the most practical alternative to structural timber for framing in the short-term, but the use of steel would require training and skills development for industry. We have also recommended two areas for the Victorian Government to engage with the Commonwealth on actions that it is taking to respond to supply chain issues.



Recommendations

In response to the issues described in this report, BRV recommends that the Victorian Government and its agencies take the following actions:

Recommendations to Alleviate Supply Issues in the Short-term

Recommendation 1

That the Victorian Government use its international networks through Global Victoria to prioritise assistance to industry to:

- source building imports from new markets (for softwood timber these could include the Baltic States, Scandinavia and Eastern Europe); and
- access maritime freight for transport to Australia.

Such efforts would be significantly enhanced through collaboration with the Commonwealth Government's international networks including Austrade offices and embassy officials.

Recommendation 2

That the Department of Jobs, Precincts and Regions examines opportunities for timber supply firms to source such surplus structural timber that may be available in Victoria. This could include:

- any structural timber held in storage; and
- any mature softwood timber that is currently due for harvest.

This recommendation is made noting that the overall amounts of structural timber available are likely to be small, but working on the premise that where possible, all potential sources of timber should be explored.



Recommendations to Assist the Industry and Consumers to Manage Market Conditions in the Short-term

Recommendation 3

That Consumer Affairs Victoria and other Government agencies work together with industry stakeholders to prepare and disseminate communication materials:

- to improve consumer awareness of the current supply chain issues and their potential impacts on the cost and timing of construction projects; and
- to assist small and medium builders to manage supply shortages, price rises and their implications for contractual obligations.

The following agencies should be involved in this work:

- Domestic Building Dispute Resolution Victoria
- Victorian Building Authority
- Business Victoria

Recommendation 4

That Consumer Affairs Victoria (CAV) prioritises its consideration of proposals for the development of a cost escalation clause for domestic building contracts, giving due consideration to both builders' and consumers' interests by addressing the following:

- the potential impact on access to finance and consumers' financial obligations;
- cost-sharing arrangements, for example an agreement that only a certain percentage of any cost increases would be borne by the consumer, or a capped maximum total or percentage increase in a contract price that could be allowed;
- applying a cost escalation clause for a fixed period, for example 12 months, with the ability to extend that period if the supply disruptions continue for a longer period;
- allowing the clause to apply only where there is price increase for specified materials such as timber or steel;
- preventing the builder from charging a margin on top of any increase in the price of materials; and
- requiring the builder to provide the consumer with receipts confirming the actual cost of materials.

And, that CAV continues to monitor the impacts of supply chain disruptions on the cost of domestic building contracts.

**Recommendation 5**

That Domestic Building Dispute Resolution Victoria (DBDRV) monitor consumer and builder concerns about the impacts of supply chain issues and that the Government makes available additional resources should there be a significant increase in demand for its dispute resolution services arising from the current supply challenges in the industry.

DBDRV would use triage processes to identify and prioritise these types of disputes as efficiently as possible.

Recommendations to Provide Incentives to Protect Against Future Shocks over the Medium- to Long-term**Recommendation 6**

That the Department of Jobs, Precincts and Regions continues to engage with industry to consider opportunities to develop further softwood plantation projects and other relevant initiatives to support the construction industry in the future.

Recommendation 7

That the Victorian Government considers support for an increase in the use of steel for house framing, such as:

- facilitating training to enable builders to use steel in frame construction; and
- encouraging greater uptake of courses to train associated trades such as detailing and specialist engineering practitioners.



Recommendation 8

That the Victorian Government further supports research and development to identify and encourage the use of new building materials and approaches to support innovation and diversification of inputs in the construction industry. These R&D projects could also relate to recycled materials and support Victoria's transition to a circular economy.

Such projects could be delivered through existing construction industry research initiatives such as those undertaken by:

- the Australian Housing and Urban Research Institute;
- Building 4.0 CRC; and
- the Victorian Building Authority's research program.

Recommendation 9

That the Victorian Government requests that the Commonwealth includes building materials as priority products under the Supply Chain Resilience Initiative and the Sovereign Manufacturing Capability Plan, thereby making grant funding available for projects to address vulnerabilities across the supply chain.

Recommendation 10

That the Victorian Government continues to engage with the Commonwealth to encourage changes to the Emissions Reduction Fund that would improve the financial returns and incentives for plantation forestry, including the consideration of recommendations 7, 8 and 10 of the Aussie logs for Aussie jobs report.

These recommendations are set out in the text of this report.



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Table of Abbreviations

The key abbreviations used in this report are listed below:

Table 1: Key Abbreviations Used in this Report

Abbreviation	Meaning
ABCD	Accelerated Builder / Consumer Dispute Framework
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACCUs	Australian Carbon Credit Units
ACL	Australian Consumer Law
AHURI	Australian Housing and Urban Research Institute
ASI	Australian Steel Institute
ATIF	Australian Timber Importers Federation
BRV	Better Regulation Victoria
CAV	Consumer Affairs Victoria
DAWE	Department of Agriculture, Water and the Environment
DBCA	<i>Domestic Building Contracts Act 1995</i>
DBDRV	Domestic Building Dispute Resolution Victoria
DELWP	Department of Environment, Land, Water and Planning
ERF	Emissions Reduction Fund
EWP	Engineered Wood Product
FBX	Freightos Baltic Index
HIA	Housing Industry Association
LGS	Light Gauge Steel
LVL	Laminated Veneer Lumber
MBV	Master Builders Victoria
NASH	National Association of Steel Framed Housing
NFIP	National Forests Industry Plan
QBCC	Master Builders Queensland the Queensland Building and Construction Commission
SCRI	Supply Chain Resilience Initiative
SMCP	Sovereign Manufacturing Capability Plan
VBA	Victorian Building Authority
VFP	Victorian Forestry Plan



Introduction

On 17 June 2021, the Minister for Regulatory Reform, the Hon Danny Pearson MP, requested that the Commissioner for Better Regulation, Anna Cronin, undertake a review of supply chain issues facing the Victorian building and construction industries.

This request was made in response to reports from Industry and other stakeholders that almost 80% of Victorian building and construction businesses were experiencing significant delays in sourcing critical building materials, particularly timber used for framing in house construction.

The Minister asked the Commissioner to provide a report to Government, defining the issues and identifying ways the Victorian Government could assist to address them.

In completing the review, Better Regulation Victoria (BRV) has worked closely with Master Builders Victoria (MBV), the Housing Industry Association (HIA) and the Department of Environment, Land, Water and Planning (DELWP)'s Building Policy Division. BRV also consulted with a range of other stakeholders, including the construction industry, suppliers and Commonwealth and State Government agencies. Meetings held with these stakeholders are listed at Appendix 1.

Other Reviews into Supply Chain Issues in the Construction Industry

There are a number of other related reviews into supply chain issues in the construction industry as a result of COVID-19 impacts. In Victoria. For example, the Office of Projects Victoria is examining supply chain impacts on the civil construction sector and Bushfire Recovery Victoria are looking at consequences for the bushfire recovery efforts.



At the Commonwealth level, in March 2021 the House of Representatives Standing Committee on Agriculture and Water Resources completed its Inquiry into Timber Supply Chain Constraints in the Australian Plantation Sector, issuing a report titled 'Aussie logs for Aussie jobs: Inquiry into the timber supply chain constraints in the Australian plantation sector' (the Aussie logs for Aussie jobs report).² This report has been a useful source of information for our review. The Productivity Commission's report on Vulnerable Supply Chains was published on 13 August and has also been of value.³

The NSW Government is also holding an inquiry into the long-term sustainability and future of the timber and forest products industry. They have received over 200 submissions and are presently conducting oral hearings.

Agencies and Policy Areas Relevant to the Review

The issues arising from this review are complex. They involve the construction industry, the timber and forest industries, skills and training, consumer protection, international trade, freight, research and development and climate change policy.

As a result, responding to our recommendations would trigger actions from a range of Departments and agencies. For this reason, we have consulted widely across government and acknowledge that we have been given valuable input to inform the development of this report.

Building System Review

The Commissioner is also currently chair of the Expert Panel appointed by the Minister for Planning to undertake a comprehensive review of Victoria's building system.

That Expert Panel will consider additional opportunities to reform the *Domestic Building Contracts Act 1995* (the DBCA) and dispute resolution between builders and consumers. These areas are discussed in this report with recommendations for short-term actions pending the more comprehensive review of that Act.

² Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021).

³ Productivity Commission, *Vulnerable Supply Chains* (July 2021) <[Vulnerable Supply Chains - Productivity Commission \(pc.gov.au\)](https://www.pc.gov.au/reports/indicators/vulnerable-supply-chains)>.



The Panel is also looking into skills development and training for the construction industry, in response to the acute skills shortages issues.

The Commissioner has advised the Panel of her work on this report so that the Panel may have regard to its findings in making Panel recommendations.

Structure of this Report

The report is divided into sections as follows:

- Background and context where we define the issues and discuss the causes
- Exploring the expected timing for improvement
- Advising what the Victorian Government could do with recommendations grouped as follows:
 1. Alleviating supply issues in the short term
 2. Assisting the industry and consumers to respond to market conditions
 3. Incentives to protect against future shocks

Background and Context

Defining the Issues

What Issues are being Experienced by the Building Industry?

The building industry has reported that shortages of building materials are causing significant delays to construction and significant increases in the cost of inputs.

In the context of the home-building sector, this has impacts on industry because Victoria's consumer protection laws impose strict limits on the extent to which builders can pass on increasing costs as explained later in this report. Further, when access to material is delayed, this disrupts timelines and can lead to delays which not only impact on financial management but can also trigger a consumer's right to terminate a contract.

Smaller builders running only a few projects a year will often not have the capital or scale to absorb higher costs. Data from the Australian Bureau of Statistics (ABS) shows that 99% (109,736 / 111,116) of Victorian construction firms are small businesses,⁴ so, the inability to pass on costs can have very serious ramifications for business survival, employment, subcontractors and ultimately for consumers.

⁴ Australian Bureau of Statistics, *Counts of Australian Businesses, including Entries and Exits*, (July 2016 to Jun 2020) <<https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/jul2016-jun2020>>.



Industry has reported that these market conditions are unprecedented and causing significant disruptions. They are also impacting on the industry's ability to deliver on COVID recovery economic stimulus initiatives directed at increasing building activity.

What is the Extent of the Impact?

Delays

Master Builders Victoria (MBV) has consulted with its members to determine the extent of delays. They report that delays vary for different products with materials taking an additional 4 weeks to 14 weeks to reach building sites. Table 2 summarises MBV's advice on material delays.

Other stakeholders have also reported delays. Many small and medium sized construction businesses are not in a position to stock up on building materials and, as a result, many projects are being stalled for long periods. These also impact on consumers who may have holding costs (such as rent and storage) that are increased because of extensions of time to their projects.

Table 2: Lead Times for Key Construction Products

Product	Normal Lead Time	Current Lead Time
Mesh and pods	2 weeks	6 weeks
Frame and trusses	4 weeks	14-16 weeks
Windows	4 weeks	8 weeks
Bricks		(additional 4 weeks)

Source: Master Builders Victoria

Cost Increases

Where builders can access materials to support a build, this is often at increased prices from those that were quoted to set the contract price for the job.

Price indices for some building materials show significant increases over the past 12 months. For example, the Timber Market Survey measures timber price movements by surveying a range of timber suppliers.⁵ In June 2021, its survey showed increases in timber prices of between 10% and 36% over the 12 months to June 2021.

Table 3 provides more detail on cost increases for various timber products:

⁵ Indufor Group, *Timber Market Survey* (June 2021) <<https://induforgroup.com/news-media/timber-market-survey/>>.



Table 3: Price Increases for Various Timber Products

Product	Dimensions (mm) or grade	12mo to Jun-21	3mo to Jun-21
MGP10^a	70 x 35 x 4.8m	16.05%	9.72%
	90 x 35 x 4.8m	18.95%	13.09%
LVL^b	200 x 36	21.77%	11.44%
	300 x 45	23.36%	12.10%
I-joist/I-beam	300 x 63	36.43%	27.06%
Outdoor	90 x 20	18.26%	9.41%
Plywood	C / D grade	18.45%	12.61%
Flooring	Select grade	10.19%	9.39%
Kiln-dried F17	90 x 45 x 4.5m	11.34%	10.22%

^aMGP10 is a common grade of pine used to build most parts of a timber frame.

^bLaminated Veneer Lumber (LVL) is an Engineered Wood Product (referred to as EWPs), common in high-strength applications within construction such as beams or lintels.

Source: Indufor Group, *Timber Market Survey* (June 2021).

Industry suggests that the cost increases may be significantly greater than those shown in industry-wide indices. MBV's members report that timber has increased by as much as 50% so far in 2021. They also report increases of up to 30% for plumbing and aluminium products. Table 4 below summarises MBV's data on increases based on consultation with its members:

Table 4: Reported Price Increases for Key Construction Products

Product	Estimated cost increase
Timber	50% so far in 2021
Plumbing supplies	Up to 30%
Aluminium	Up to 30%
Plasterboard and cornice	3.9%
Compounds, plasters, cements, adhesives	4.5%
Cemintel Wallboard	4%
Blocks and pallets	15%

Source: Master Builders Victoria

In addition to the increased cost of materials, delays have an indirect cost impact due to the need to maintain equipment such as fencing, scaffolding and porta loos when work has stalled.



Skills Shortages

Skills shortages have been a growing concern for the building industry over many years. The spike in demand is exposing just how acute this problem is. The pandemic has also exacerbated the issue with disruptions to training and the sudden suspension of skilled migration due to border closures.

MBV highlighted that the National Skills Commission's Skills Priority list includes shortages in 11 construction industry occupations in Victoria which are also facing strong future demand. These occupations include civil and structural engineers, surveyors, electricians, quantity surveyors and metal fabricators.

Infrastructure Australia's first Infrastructure Market Capacity Report was released on 13 October 2021.⁶ The report forecasts a surge in demand for skills, labour and materials due to the rapid increase in public infrastructure investment. It says that shortfalls in jobs are likely to exceed 105,000 across Australia and that there will be a growth in demand for materials of 120%. Infrastructure Australia has called for a coordinated project pipeline to manage capacity constraints. While this report has focused on the issues for the home building sector, skill shortage forecasts in the infrastructure sector will impact the whole construction industry.

The breadth of these matters and relevant policy options to address them are also being considered through the Victorian Government's Expert Panel review of the Building System, which is currently underway.

Bankruptcy and Insolvency Risks

It was not possible for BRV to determine from its review of relevant statistics whether building materials supply issues are resulting in increased insolvencies or bankruptcies. This is because of the range of temporary measures implemented by governments to support businesses during the pandemic, such as a moratorium on insolvent trading, increases to bankruptcy debt thresholds and JobKeeper payments.

Building Disputes and Project Cancellations

Several stakeholders have reported seeing an increasing number of consumers cancelling existing building contracts, citing concern about material supply issues and doubts that builders could deliver projects on-time and on-budget.

⁶ Infrastructure Australia, *2021 Infrastructure Market Capacity* (October 2021) <https://www.infrastructureaustralia.gov.au/publications/2021-infrastructure-market-capacity-report>.



However, Domestic Building Dispute Resolution Victoria (DBDRV) has not yet reported an increase in the use of their dispute resolution services or an increase in complaints relating to contractual disputes about delays or cost increases due to materials supply issues.

Unconscionable Conduct Under the Australian Consumer Law

Some stakeholders described situations where suppliers were quoting inflated prices and taking an unfair advantage of the vulnerable position in which builders find themselves, particularly small- and medium-sized firms.

Industry associations are seeking to support their members by advising them to consider lodging a complaint with the Australian Competition and Consumer Commission (ACCC), if they become aware of unconscionable conduct.

Which Sectors in the Building Industry are Most Affected?

The more acute impacts of the supply chain issues seem to be concentrated in the home building sector of the industry. This is because of the high use of structural timber for frames in home building and the consumer protections required in contracts with consumers.

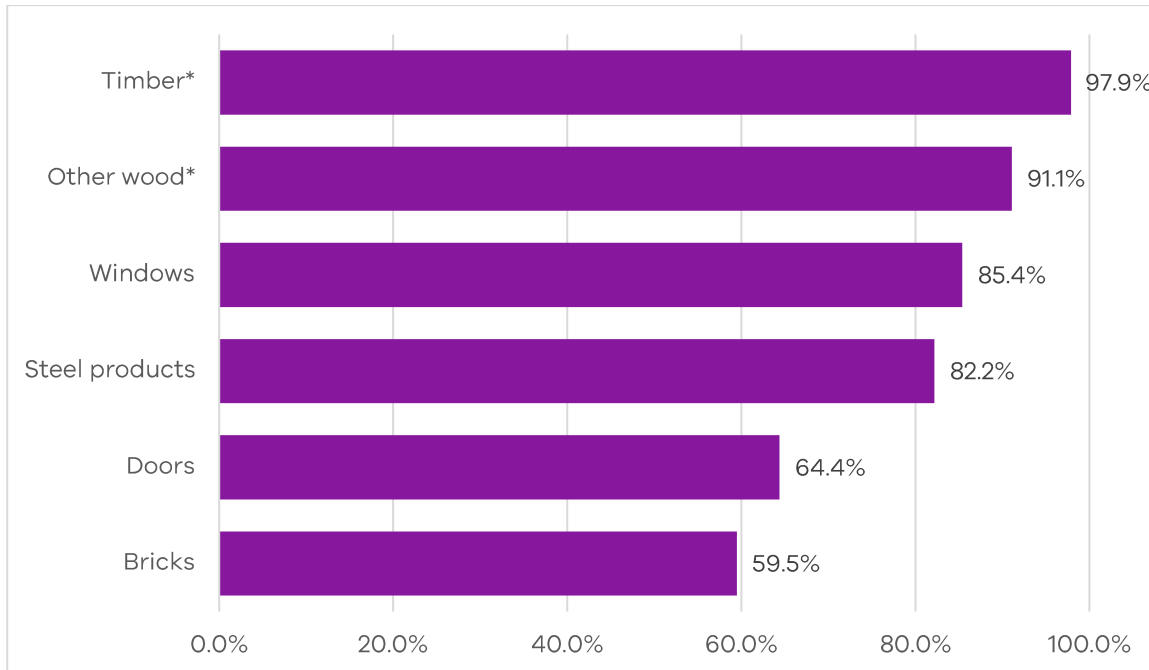
As mentioned elsewhere in this report, there are limits on the extent to which builders can pass on cost increases under the *Domestic Building Contracts Act 1995* (DBCAs). Multi-storey buildings usually use steel and concrete structural materials. These larger residential buildings and other non-residential buildings will commonly use construction contracts that contain rise and fall clauses or allow for cost sharing to be negotiated when there are unexpected price rises in materials.

What Building Materials are Affected by Supply and Cost Issues?

Industry has reported that the delays and cost increases are occurring across a range of products. MBV's consultation with its members indicates that 98% of its members have experienced delays in access to timber and over 80% have had delays in access to windows and steel products. The outcomes of MBV's consultation are shown in Figure 5 below.



Figure 5: Building Products for which Builders are Experiencing Delays, June 2021



* "Timber" refers to structural pine (normally used to build timber frames and trusses). "Other wood" may include other products such as hardwoods or engineered products, that are normally used in specific areas within the build.

Source: Master Builders Victoria

BRV also heard from stakeholders involved in the extractives industry, which supplies sand, gravel and rock. These products are used to make concrete and mortar products. Extractives industry stakeholders advised that the supply of sand and stone has not been keeping up with overall demand, partly due to the civil construction boom. Notwithstanding these reports, in the financial year 2019-20, Victoria produced a record 63 million tonnes of quarry materials⁷.

The Government is also implementing its Extractives Resources Strategy: a priority of this work is to identify and secure new quarry areas. Recent planning scheme amendments have enabled two new Strategic Extractives Resource Areas in the City of Wyndham and South Gippsland Shire Council. These initiatives are supporting potential expansions of the extractives industry over the longer-term.

⁷ Department of Jobs, Precincts and Regions Victoria, *Earth Resources Sector Indicators (2019-2020)* <<https://earthresources.vic.gov.au/geology-exploration/industry-investment/earth-resources-sector-indicators>>.



Consultation with the steel industry confirmed that imports of steel have also been affected by disruption to global markets. The Australian Steel Institute (ASI) reported that the US prices of hot rolled coil (used to make structural steel framing) are at unprecedented levels. The price per tonne has gone from \$500 to \$2000 since early 2020.⁸ It is noted that demands for steel come from a range of sectors including the building industry, the infrastructure sector and other manufacturing sectors. The Office of Projects Victoria is also examining the supply chain issues affecting the civil construction sector.

Understanding the Causes

To understand the causes for the building material supply issues, we summarise below how steel and timber are used, where the products come from and what factors are affecting the current supply and demand issues.

How does the Construction Industry use Timber and Steel?

Timber is used in structural elements of dwellings such as framing as well as for windows, cabinetry, flooring, fencing and external cladding products. For multi storey buildings and non-residential buildings concrete and steel are more commonly used for structural elements. Steel is also used in slab and footing construction, in reinforced concrete and in external cladding products.

According to a report published by the Forest and Wood Products Australia published in 2018, across Australia, 74% of detached houses are built using timber frames (usually plantation pine), 13% use steel frames and 13% use double brick or structural insulated panels.⁹ There is likely to be some state-by-state variation in these figures. For this reason, industry reports that steel supply issues are not impacting the housing sector as much as timber supply issues.

⁸ Australian Steel Institute, *Global Steel Market Dynamics* (July 2021) <<https://www.steel.org.au/ASI/media/Australian-Steel-Institute/PDFs/Global-Steel-Market-Dynamics-280721.pdf>>.

⁹ Australian Construction Insights, *Framing Use in Residential Construction* (September 2018), <<https://www.fwpa.com.au/statistics-count-newsletter/1710-is-steel-growing-its-share-new-report-for-fwpa.html>>.



Timber used in construction falls broadly into two categories of softwood or hardwood. Softwood timber is sourced entirely from plantations, and is mostly radiata pine. This is the most common type of timber used to build frames and trusses for house construction in Victoria. Hardwood timber comes from both plantation and native sources and includes a range of species such as ash and gum. Within construction, hardwood can be used to build furniture, flooring, or high-strength beams, joists and lintels.

Timber is also used to make Engineered Wood Products (EWPs), including I-joists or Laminated Veneer Lumber (LVL) which are made from a combination of timber and glues or resins. EWPs can be made from either hard or softwood, including from pulpwood that would otherwise be appropriate for paper. Engineering processes and structural properties will differ from product to product, but these products can be very strong.

Where do Timber and Steel Supplies Come From?

Australia is a net-importer of timber: data from 2019-20 show that the value of imports (\$5.6 billion) exceeds the value of exports (\$3.2 billion).¹⁰

Although Australia produces some steel domestically, overall it is a net importer, with exports of around \$1 billion and imports of about \$2.6 billion in 2019. Most of the imports (85%) come from China.¹¹

Domestic Supply

Victoria has the largest total area of commercial plantations of all Australia states and territories with 421,000 hectares or 22 percent of the national estate. Victoria produces around 78 million m³/year and has the largest export volume. Over the 10 years to 2019, Victoria has managed to slightly increase its plantation area by 2 per cent.¹² However, the size of Australia's plantation timber estate has been in gradual decline over the past decade. The reasons for this are well-documented in the Aussie

¹⁰ Department of Agriculture, Water and the Environment, *Australian Forest and Wood Products Statistics* (September and December quarters 2020)

<<https://www.awe.gov.au/abares/research-topics/forests/forest-economics/forest-wood-products-statistics#download-the-overview-report-and-datasets>>.

¹¹ Australian Steel Institute, *Capabilities of the Australian Steel Industry to Supply Major Projects in Australia* (Version 2.3, May 2021) <<https://www.steel.org.au/ASI/media/Australian-Steel-Institute/PDFs/Steel-Industry-Capability-document-040521.pdf>>.

¹² Department of Agriculture, Water and the Environment, *Australian Forest and Wood Products Statistics* (September and December quarters 2020)

<<https://www.awe.gov.au/abares/research-topics/forests/forest-economics/forest-wood-products-statistics#download-the-overview-report-and-datasets>>.



logs for Aussie jobs report. A key reason stems from the fact that it takes approximately 30 years for a softwood tree to reach a level of maturity that makes it able to be used as structural timber. Therefore, investment in plantations for construction uses requires long-term planning and financial returns over the 30 year cycle, making it difficult to attract investors.¹³

The Aussie logs for Aussie jobs report states that:

Reversing the decline in the plantation estate has been a goal of government policies for many years, both at the federal and state and territory level but to date these policies have had limited success.¹⁴

According to the report, ongoing government support for the plantation industry is warranted due to growing domestic demand for timber products and the associated economic benefits created through jobs and economic and regional development opportunities.

The Victorian Government has demonstrated its commitment to the timber industry through the Victorian Forest Plan. A range of current Victorian and Commonwealth Government schemes aimed at supplementing this supply are summarised at Appendix 2.

Steel production in Australia comes from four steel producers, with over 300 steel distribution outlets. Production capacity exceeds five million tonnes per year which is used by several sectors including building and construction, engineering, manufacturing, agriculture, mining and transport.¹⁵

Imports of Timber and Other Materials

BRV met with Victorian suppliers and importers to seek information about the impacts of the supply chain issues on their businesses. They reported that in most years, approximately 20-25% of Victoria's softwood timber is imported.

¹³ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021) 23(3).

¹⁴ Ibid 21 (12).

¹⁵ Australian Steel Institute, *White Paper - Ensuring a Sustainable Australian Steel Industry in the 2020s and Beyond* (October 2020) <[https://www.steel.org.au/ASI/media/Australian-Steel-Institute/PDFs/ASI-Whitepaper-Ensuring-a-Sustainable-Australian-Steel-Industry-V3-pdf\(10-11-20\).pdf](https://www.steel.org.au/ASI/media/Australian-Steel-Institute/PDFs/ASI-Whitepaper-Ensuring-a-Sustainable-Australian-Steel-Industry-V3-pdf(10-11-20).pdf)>.



During previous periods of increased demand, Victoria and Australia have been able to supplement domestic production of timber and steel by increasing imports further. Other countries are also stimulating demand for housing, including in Canada, the European Union, the United Kingdom, and the United States. This has seen demand and significant cost increases globally.

In the current situation reliance on imports has been undermined by the disruptions in global trade and maritime freight. These include:

- A spike in global demand for shipping driven by online purchasing and exacerbated by the retirement of ageing ships and inefficient fuel sources.
- Increased maritime freight prices which have reportedly risen by over 300% in some cases.¹⁶
- Lockdowns, border closures, port congestion and disruptions in trade routes have all caused significant delays in Australian ports.
- An international shortage of shipping containers, creating significant cost increases. A global container freight index, the Freightos Baltic Index (FBX), reflected container prices at approximately \$1,500 in January 2020, which has risen to \$10,500, as of October 2021.¹⁷

Unprecedented Demand for Building and Construction

Increased levels of construction have been spurred by a number of factors related to the COVID pandemic, most notably economic stimulus packages. As noted above, stimulus for construction has been boosted by governments around the world as a mechanism for post-COVID recovery.

In Australia, the Commonwealth HomeBuilder grant provided eligible owner-occupiers (including first home buyers) with a \$15,000 or \$25,000 grant to build a new home or substantially renovate an existing home. 121,363 Australians have applied for the grant, including 35,169 Victorians.

¹⁶ Freightos, *Shipping and Freight Cost Increases, Freight Capacity, and Shipping Container Shortage* (October 2021) <<https://www.freightos.com/freight-resources/coronavirus-updates/>>.

¹⁷ Freightos, *Freightos Baltic Index (FBX): Global Container Freight Index* (October 2021) <[Freight Rate Index / Freightos Baltic Container Index](#)>.

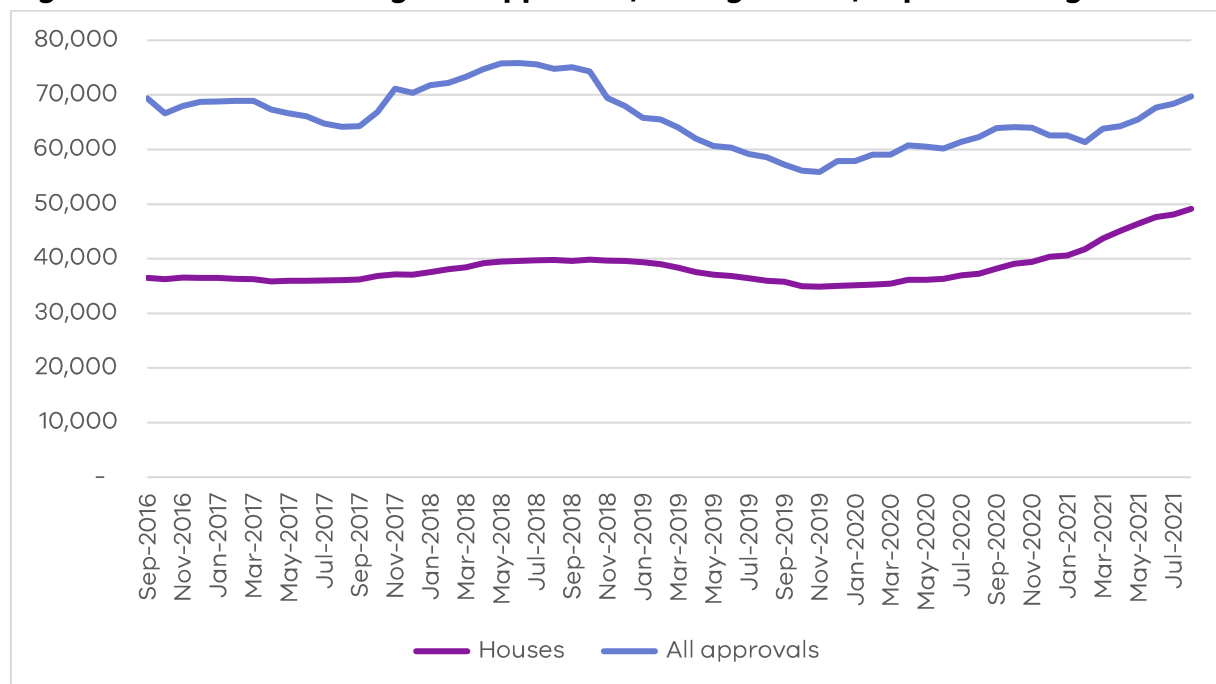


In Victoria, there is the \$5.3 billion Big Housing Build to construct more than 12,000 new homes throughout metro and regional Victoria, and an additional 9,300 new social housing homes. There have also been recent amendments to increase the threshold for 'off the plan' concessions on stamp duty from \$750,000 to \$1 million for first home buyers. The new Homebuyer Fund will provide additional incentives to boost housing demand.

Evidence of the extent of increase in demand is found in the data on building approvals. Figure 6 shows approvals for new dwelling units in Victoria, which can be used to predict future construction activity. In the 12 months to August 2021, 69,715 approvals were granted – 12% more than in the year to August 2020 (and 19% more compared to August 2019).¹⁸

The proportion of all approvals that are for houses has also grown, from 61% and 60% respectively in the years to August 2019 and 2020, to 70% in the 12 months to August 2021.

Figure 6: Victorian Dwelling Unit Approvals, Rolling Annual, Sep 2016 – Aug 2021



Source: Australian Bureau of Statistics (ABS), *Building Approvals, Australia* (August 2021).

¹⁸ Australian Bureau of Statistics, *Building Approvals, Australia* (August 2021) <[Building Approvals, Australia, August 2021 | Australian Bureau of Statistics \(abs.gov.au\)](https://www.abs.gov.au/Building-Approvals-Australia-August-2021)>.



In addition to economic stimulus, other factors affecting the demand for building and construction are low interest rates, the movement of people away from metropolitan areas and bushfire recovery. It is expected that there has been an increased appetite for renovation spending due to changes in the way people are using their homes to accommodate remote working and changes in spending behaviours as a result of the lockdowns and the inability to travel.

According to data from the Victorian Building Authority (VBA), the population shift away from Melbourne is reflected strongly in the building activity numbers as shown below with a 33% increase in permit activity in regional areas and 44% increase in value of works for those permits.

Table 7 highlights building approvals data from VBA's building permit activity summaries dataset.¹⁹ The Gippsland region showed the strongest growth recording an almost 40% increase in permit numbers and almost 45% increase in value of works. This is indicative of a combination of shifting population and the rebuilding of properties impacted by the 2019-20 bushfires: 616 sites were damaged by bushfire and, to date, 167 of these sites have been issued with a building permit.

Table 7: Building Permits by Region, 2019-20 and 2020-21

Region	2020-21	2019-20	% change
Inner Melbourne			
Number of permits	22,559	2,578	-0.4%
Value of work	\$16.2 b	\$17.8 b	-8.6%
Outer Melbourne			
Number of permits	51,422	43,680	17.7%
Value of work	\$15.4 b	\$13.7 b	12.4%
Rural Victoria permit numbers			
Number of permits	46,309	35,172	33.5%
Value of work	\$10.1 b	\$7.5 b	44.6%
Gippsland			
Number of permits	9,556	6,859	39.4%
Value of work	1.7 b	\$1.1 b	44.6%

Source: Victorian Building Authority, *Building Permit Activity Summaries* (2021)

¹⁹ Victorian Building Authority, *Building Permit Activity Summaries* (2021) <<https://www.vba.vic.gov.au/about/data>>



Natural Disasters – Bushfires and Storms

In recent years there have been a number of natural disasters, which have further exacerbated supply chain issues causing demand for infrastructure and homes in affected communities and destroying available resources.

The Commonwealth Department of Agriculture, Water and the Environment (DAWE) estimated that across Australia approximately 8.5 million hectares of forest were potentially affected, comprising 8.3 million hectares of native forests, 130,000 hectares of commercial plantations and 22,000 hectares of other forests.²⁰

In Victoria, fires destroyed 300 homes and burned more than 1.5 million hectares of public and private land, including 9,800 ha of plantation forests (2% of the total plantation area) and 878,000 ha of native forests.²¹ The loss of plantation areas is likely to have an ongoing impact on Victoria's timber supply.

In addition, Victoria has recently been impacted by severe storms and floods, including the storms in June 2021 which destroyed another 119 properties and damaged 112.²²

Many people impacted by these natural disasters are attempting to rebuild their homes, and Bushfire Recovery Victoria is working with the affected local councils to offer support. The supply chain issues affecting the broader construction industry and its clients are particularly felt by these communities. Bushfire Recovery Victoria is conducting its own review into supply chain issues affecting their work to support these communities.

²⁰ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021) 36(16).

²¹ Australian Institute for Disaster Resilience, *Australian Disaster Resilience Knowledge Hub* <<https://knowledge.aidr.org.au/resources/black-summer-bushfires-vic-2019-20/>>.

²² Emergency Management Victoria, *Assessing the Damage to Homes in Victoria* (June 2021) <<https://www.emv.vic.gov.au/news/assessing-the-damage-to-homes-in-victoria>>.



Market Conditions will Adjust Over Time

There has been mixed advice from industry about how much longer the current situation will continue and the extent to which the supply and demand issues will adjust over time.

Both the Housing Industry Association (HIA) and Master Builders Victoria (MBV), have reported that their members are being advised by suppliers that a further increase in timber prices is expected in January 2022, suggesting that import markets have not yet adjusted. Other stakeholders are claiming that the Northern-hemisphere Winter may provide some respite to Australian softwood importers in terms of additional imports becoming available.

However, the Australian Timber Importers Federation (ATIF) said that although the Northern hemisphere's construction industry is approaching its Winter slow-down period, the timber mills also close over that time and their supplies to existing customers are fully committed heading into this period. The ATIF said although it is working with governments and global markets to unlock supply, there is no silver bullet.²³

On a more positive note, the Timber Market Survey's June 2021 quarter report says that the US and Canada lumber prices declined sharply in June 2021 which is likely to lead to an increase in imports from these countries.

These differences in opinion about import availability and future prices highlight the complexity of the supply chain, including the significantly disrupted maritime freight task.

In the case of steel, the Australian Steel Institute (ASI) reports that recent changes in China will have a significant impact on steel supply. China is the world's largest producer of steel producing more than 10 times more than the next largest producer, India. As a result of this, any changes in China have a significant impact on other markets.

²³ Timberbiz, *Australia Tied to Imported Timber says Australian Timber Importers* (July 2021) <<https://www.timberbiz.com.au/australia-tied-to-imported-timber-says-australian-timber-importers/>>.



In May and June this year, China announced changes to its treatment of taxes on steel exports by reducing tax rebates. This could result in less Chinese steel being available for export. The Chinese Government has also announced measures to improve air quality and reduce greenhouse gas emissions of the Winter Olympics Games in February which include shutting down steel production in some provinces.²⁴

In relation to the disruptions to maritime freight, Freight Victoria and other stakeholders have said they do not expect that the challenges facing maritime freight will improve until 2023.

On balance, analysis of this information about future trends suggests that, even if we are near the peak of the building materials demand, increasing prices and disruptions to supply could continue well into 2022.

²⁴ Australian Steel Institute, *Global Steel Market Dynamics – Part II* (September 2021) <<https://www.steel.org.au/ASI/media/Australian-Steel-Institute/PDFs/Global-Steel-Market-Dynamics-220921.pdf>>.



How Can the Victorian Government Assist?

There is a range of responses that governments could make to address building materials supply issues. BRV's recommendations are grouped as follows:

1. Alleviating supply issues in the short term
2. Assisting the industry and consumers to manage market conditions in the short term
3. Incentives to protect against future shocks over the medium to long term

Alleviating Supply Issues in the Short-term

Sourcing Imports and Trade Logistics

In the short term, the Victorian construction sector is dependent on the use of additional imports of softwood to address the shortage of framing timber as well as importing other building inputs, such as steel.

Importing is significantly more difficult at present due to the disruptions being seen in trade overall and in maritime freight due to COVID. Freight Victoria is monitoring the current supply chain challenges and where possible is taking action to alleviate these pressures through the Victorian Freight Plan. This includes looking into landside transportation to ensure the efficient movement and delivery of goods across regional and metropolitan Victoria.

Recent initiatives include: a voluntary pricing protocol to improve the fairness and transparency of pricing at Victorian ports and a voluntary performance monitoring framework. This includes the development of performance indicators to provide transparency to industry and Government on the performance of the Port of Melbourne landside container supply chain.

Some stakeholders have identified opportunities to increase imports of structural timber into Australia. For instance, stakeholders report that recent engagement with a number of prospective additional suppliers of timber in Baltic States, Scandinavia and Eastern Europe are expected to yield some success.



The Commonwealth Government has international networks through its embassies and Austrade. The Victorian Government has its own trade networks through Global Victoria which could work with Commonwealth Government staff to support industry in locating sources of softwood timber and other important inputs and in providing support to industry in dealing with the logistics challenges of maritime freight.

Recommendation 1

That the Victorian Government use its international networks through Global Victoria to prioritise assistance to industry to:

- source building imports from new markets (for softwood timber these could include the Baltic States, Scandinavia and Eastern Europe); and
- access maritime freight for transport to Australia.

Such efforts would be significantly enhanced through collaboration with the Commonwealth Government's international networks including Austrade offices and embassy officials.

Accessing all Available Timber in Victoria

According to some industry reports, there may be limited sources of additional timber in storage or from smaller plantations, and possibly from weather events.

BRV has been advised that these opportunities are likely to be limited for several reasons:

- Stakeholders have consistently reported that mills and supply firms have been operating at full capacity and that, having already responded to additional demand from the construction sector, they are unlikely to have any significant stores remaining.
- While there may be some additional hardwood material available through some suppliers, this has limited application, as it is only used for beams or joists in combination with softwood studs in a house frame.



- In relation to smaller-scale plantations such as agroforestry projects, forestry stakeholders said that significant costs involved in harvest and haulage often made harvesting economically unviable. This was also discussed in the Aussie logs for Aussie jobs report and is being considered in the Victorian Carbon Farming Program's design.
- Areas where timber has been 'thrown' by weather events can be environmentally sensitive. The process of removing the thrown timber can cause more damage therefore recovery may be detrimental to forest recovery. Further, thrown timber still has a high moisture content and needs to be dried for many months before being useful for construction applications.

Recommendation 2

That the Department of Jobs, Precincts and Regions examines opportunities for timber supply firms to source such surplus structural timber that may be available in Victoria. This could include:

- any structural timber held in storage; and
- any mature softwood timber that is currently due for harvest.

This recommendation is made noting that the overall amounts of structural timber available are likely to be small, but working on the premise that where possible, all potential sources of timber should be explored.

Other Comments on Government Support

Some stakeholders have suggested direct financial assistance to small builders and consumers to help them deal with cost increases.

While in theory this approach could provide some short-term relief to builders and consumers, in the current market and global circumstances of shortages in building materials, such direct financial assistance could be absorbed by suppliers, making it difficult to ensure that the intended benefits are passed on. Accordingly, BRV does not recommend this approach.



Supporting Industry and Consumers to Manage Market Conditions

Communications and Advice to Small Builders and Consumers

Small- and medium-sized building firms are facing particular difficulties in dealing with the shortages and price increases of key building inputs. It would be useful to ensure that these businesses are getting the help they need in terms of business skills and advice as they grapple with the current circumstances.

Peak bodies such as the Housing Industry Association (HIA) and Master Builders Victoria (MBV), are to be commended for swiftly developing and circulating material on these issues to their members. Providing similar messages through Government agencies would help reach a broader audience and reflect a collaborative approach from Government and industry.

Consumer Affairs Victoria (CAV) administers the DBCA and has extensive experience in raising consumer awareness of complex issues. Therefore, CAV is best-placed to be the lead agency in this work, with support from other agencies as required.

Communications to be prepared would include advice on issues such as:

- facilitating communication between builders and consumers about the possibility of supply constraints affecting builders and their ability to deliver a contract on-time or on-price;
- reinforcing the rights and obligations of both parties under the DBCA and how the impacts from supply chain disruption might affect those rights;
- Suggesting that builders report any unconscionable conduct of suppliers to the Australian Competition and Consumer Commission (ACCC).

This information should also be provided in languages other than English. For example, the Queensland Building and Construction Commission prepared an Industry Shortages in the Residential Construction Industry factsheet (see Appendix 3) which is aimed at both builders and consumers. This provides a useful guide to how CAV could develop such material.

The purpose of such information is to ensure that consumers are aware that the impact of supply chain pressures are beyond the control of individual builders and to encourage collaborative engagement between consumers and builders who may be affected. This could help to avoid financially vulnerable consumers over-extending during this high-risk period.

These communications materials should be carefully developed in consultation with industry peak bodies to avoid any risk of discouraging entry into home building contracts.



It would be valuable if information was able to be published on a range of Government websites to ensure wide dissemination, such as those of the Domestic Building Dispute Resolution Victoria (DBDRV) and the Victorian Building Authority (VBA). Industry and consumer representative groups as well as mortgage providers should also be encouraged to make this material available.

Recommendation 3

That Consumer Affairs Victoria and other Government agencies work together with industry stakeholders to prepare and disseminate communication materials:

- to improve consumer awareness of the current supply chain issues and their potential impacts on the cost and timing of construction projects; and
- to assist small and medium builders to manage supply shortages, price rises and their implications for contractual obligations.

The following agencies should be involved in this work:

- Domestic Building Dispute Resolution Victoria
- Victorian Building Authority
- Business Victoria

Legal and Contractual Issues under the Domestic Building Contracts Act 1995

The *Domestic Building Contracts Act 1995* (the DBCA) regulates contracts for domestic building work. Key features of the consumer protection framework are:

- To provide consumers with price certainty, including by restricting the ability for builders to pass on materials cost increases that occur after a contract is entered into under some contracts.
- Rights for consumers to terminate a contract where there are delays of more than 1.5 times the agreed time for completion, or where the overall price has increased by 15% or more.

The Act prohibits the use of cost escalation clauses for works valued at \$500,000 or less, unless the clause is approved by the Director of Consumer Affairs. Stakeholders noted that the Director has approved a cost escalation clause only once – to allow for cost increases associated with the introduction of the GST in 2001.

Nonetheless, the approval of a cost escalation clause could assist to balance the impacts of supply chain effects between contracting parties more fairly.



It is important to note that any such cost escalation clause would only apply to prospective contracts with the consumer being informed, consenting to, and initialling the cost escalation clause. Consideration of the use of a cost escalation clause could be of value given that there are many new contracts still to be entered into whilst this spike in demand for building work persists.

An approved cost escalation clause would help to provide transparency in how builders are managing price increases in their contracts with consumers. It could be drafted to provide for cost sharing by setting a maximum percentage increase for price rises of specified materials.

In the absence of increased transparency, builders could “build in” excessive margins that are beyond the actual cost increases they may face.

Another advantage of this action is that a cost escalation clause can be approved by the Director without the need for legislative amendment, so it so could be in place relatively quickly.²⁵

Provisional Sums

There was some discussion with stakeholders about whether existing provisions in the DBCA relating to the use of ‘provisional sums’ in domestic building contracts could be used to allow builders to pass on increases in the cost of materials. The DBCA defines a provisional sum as an amount which is provided for under the contract when the cost of works cannot be accurately estimated before entering into the contract. Provisional sums are typically used to allow for unknown risks specific to the project, such as encountering rock during an excavation. They are not typically used to cover broad external factors such as increases in the cost of materials due to supply chain issues.

In the absence of alternative ways to deal with supply chain impacts such as through an approved cost escalation clause, builders may begin to use provisional sums to manage these cost increases. This approach would not be as transparent as a cost escalation clause and could erode price certainty for consumers.

In light of this risk, BRV favours the Director of CAV considering a cost escalation clause that would only operate while current market conditions prevail. This would increase transparency, could be drafted carefully to minimise any increased financial risk for consumers, and could be either extended or wound back by the Director in the future.

²⁵ *Domestic Building Contracts Act 1995* (Vic) s 122. This provides for the making of an approval cost escalation clause to occur via its publication on the CAV Internet site.



Cost Escalation Clauses

Master Builders Victoria is seeking an approved cost escalation clause. The MBV's proposed clause, if approved by the Director of Consumer Affairs, would allow builders to pass on cost increases for any materials affected the current supply chain shortage. The MBV proposal is that only the increased cost of materials would be passed on with the proposed clause stating that the builder cannot charge a margin on top of any cost increase.

BRV supports the development of a cost escalation clause, provided it is not "open-ended", and suggests that CAV addresses the following in its consideration of a cost escalation clause:

- the potential impact on access to finance and consumers' financial obligations;
- cost-sharing arrangements, for example an agreement that only a certain percentage of any cost increases would be borne by the consumer, or a capped maximum total or percentage increase in a contract price that could be allowed;
- applying a cost escalation clause for a fixed period, for example 12 months, with the ability to extend that period if the supply disruptions continue for a longer period;
- allowing the clause to apply only where there is price increase for specified materials such as timber or steel;
- preventing the builder from charging a margin on top of any increase in the price of materials; and
- requiring the builder to provide the consumer with receipts confirming the actual cost of materials.



Recommendation 4

That Consumer Affairs Victoria (CAV) prioritises its consideration of proposals for the development of a cost escalation clause for domestic building contracts, giving due consideration to both builders' and consumers' interests by addressing the following:

- the potential impact on access to finance and consumers' financial obligations;
- cost-sharing arrangements, for example an agreement that only a certain percentage of any cost increases would be borne by the consumer, or a capped maximum total or percentage increase in a contract price that could be allowed;
- applying a cost escalation clause for a fixed period, for example 12 months, with the ability to extend that period if the supply disruptions continue for a longer period;
- allowing the clause to apply only where there is price increase for specified materials such as timber or steel;
- preventing the builder from charging a margin on top of any increase in the price of materials; and
- requiring the builder to provide the consumer with receipts confirming the actual cost of materials.

And, that CAV continues to monitor the impacts of supply chain disruptions on the cost of domestic building contracts.

Domestic Building Dispute Resolution Victoria

In 2017, the Victorian Government established Domestic Building Dispute Resolution Victoria (DBDRV) under the DBCA as an independent agency providing free services to help resolve domestic building disputes.

DBDRV's approach is focused on conciliation, bringing both builders and consumers together to discuss and resolve matters in dispute. If this does not resolve the dispute, the Chief Dispute Resolution Officer can issue binding dispute resolution orders and certificates.

In response to advocacy from Master Builders Queensland the Queensland Building and Construction Commission (QBCC) has offered a free mediation service called the Accelerated Builder / Consumer Dispute Framework (ABCD). This service offers direct support to builders and consumers whose contracts are affected by increases in input prices and shortages of inputs.



Master Builders Queensland noted that, as of September 2021, approximately 300 initial calls to QBCC had resulted in 15 applications being made under the framework (11 from consumers, four from contractors).

The low level of engagement so far matches the experience in Victoria, where although peak bodies have noted significant project delays and cost increases, DBDRV advises (as at October 2021) that it is not yet seeing evidence of increased disputes or complaints as a result of supply cost increases or delays in projects brought on by the supply chain issues.

This may be because building contracts are normally paid in stages, with serious disputes being more common toward the final stages when it may become clear an agreed time schedule will not be met, or when builders need to request additional money to recoup unexpected cost increases.

Exactly when disputes may start to occur is difficult to predict, but stakeholders have suggested the supply chain issues may reach a peak and disputes may spike within the next 12 months. This would lead to a similar spike in demand for DBDRV services.

In discussions with BRV, DBDRV confirmed its existing powers are sufficient to respond to the supply chain issues.

BRV recommends that DBDRV be asked to monitor the situation carefully and ensure that if increases in complaints and disputes occur, it has processes in place to triage complaints and to identify those that relate to contractual disputes in regard to supply chain issues. These matters can then be prioritised for fast-track conciliation by suitably trained and experienced conciliators.

Recommendation 5

That Domestic Building Dispute Resolution Victoria (DBDRV) monitor consumer and builder concerns about the impacts of supply chain issues and that the Government makes available additional resources should there be a significant increase in demand for its dispute resolution services arising from the current supply challenges in the industry.

DBDRV would use triage processes to identify and prioritise these types of disputes as efficiently as possible.



Incentives to Protect Against Future Shocks

The impacts of the current shortage of structural timber on the construction industry are particularly acute because of the dependence of industry on timber for framing and other structural functions.

In the 10 years to 2018-19, Victoria's softwood plantation area has increased by 2%, and its production of soft sawn wood by 4%.²⁶ However, in the same time period Victoria's estimated population has increased by 22%.²⁷ This suggests that the demand for timber is rising faster than local production. Although the pandemic has created unique conditions that have prevented the usual response to increase imports, the confidence that this response will be a reliable buffer against future increases in local demand has been eroded.

Victorian Government Incentives for Plantation Timber and Alternative Construction Supplies

As mentioned above, the Aussie logs for Aussie jobs report is a timely and useful contribution to government consideration of options for forestry policy in the future.

The report discusses a number of issues which warrant consideration, including:

- **Direct investment:** As part of its Victorian Forestry Plan (VFP), the Victorian Government has taken a number of initiatives consistent with the approach taken in the Aussie logs for Aussie jobs report. For example, in October 2020, the Government announced a \$110 million investment in plantation development in Gippsland through incentives for plantation investors. It has also allocated \$10 million to develop a farm forestry program, \$15.3 million for a carbon farming initiative and provided grants to expand the state's nursery seedling production. Given the increased pressures on timber supply consideration could be given to further opportunities for plantation development.

²⁶ Department of Agriculture, Water and the Environment, *Australian Forest and Wood Products Statistics* (September and December quarters 2020) <<https://www.awe.gov.au/abares/research-topics/forests/forest-economics/forest-wood-products-statistics#download-the-overview-report-and-datasets>>.

²⁷ Australian Bureau of Statistics, *National, State and Territory Population* (March 2021) <<https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release>>.



- **Support agroforestry investment:** Supporting smaller-scale farms to develop timber plantations is also raised in the Aussie logs for Aussie jobs report.²⁸ The report noted several benefits of farm forestry and discussed the need for programs to improve individual farmers' forestry expertise and to provide the equipment and supports required to harvest mature trees.²⁹ The Victorian Government has already invested \$10 million into its farm forestry program.

Many of the issues canvassed as part of these approaches are highly technical and require careful consideration by the Department of Jobs, Precincts and Regions.

Recommendation 6

That the Department of Jobs, Precincts and Regions continues to engage with industry to consider opportunities to develop further softwood plantation projects and other relevant initiatives to support the construction industry in the future.

Victorian Government Investment in the Increased Use of Steel

Given the challenges facing the timber industry and the fact that any meaningful increase in timber production in Australia will take several years, in addition to adopting a strategic plan to manage those changes, the construction industry will need to increase use of alternative products for house framing. The most obvious alternative is steel framing.

As noted above, in 2018, across Australia 74% of detached houses were built using timber frames, 13% use steel frames and 13% use double brick or structural insulated panels.³⁰ Some building stakeholders suggested their consumers preferred timber, and that where a home has been designed for a timber frame, substitution to a steel frame would require a redesign and most builder's carpenters would require additional training in steel frame construction.

The Australian Steel Institute (ASI) and the National Association of Steel Framed Housing (NASH) reported increased interest in the use of steel frames over the past 12 months as a result of timber shortages. They said that apprenticeship training for carpenters now has compulsory units on steel framing.

²⁸ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021).

²⁹ Ibid 81 (61).

³⁰ Australian Construction Insights, *Framing Use in Residential Construction* (September 2018) <<https://www.fwpa.com.au/statistics-count-newsletter/1710-is-steel-growing-its-share-new-report-for-fwpa.html>>.



In addition, they have developed, and with the assistance of MBV, are delivering 6-hour courses for qualified carpenters to learn how to install steel frames. NASH reported that the tools required for steel framing were minimal with the total cost to train and equip an experienced builder or carpenter to install steel frames being under \$1,000.

In addition to being able to increase the production of steel much quicker than timber, steel has some benefits over timber including, resistance to termites, better fire performance, lighter and enables high levels of flexibility in design. Steel is 100% recyclable but the energy used in its production means that it has a higher embodied carbon than timber. The steel industry is heavily committed to a transition to zero-carbon green steel using hydrogen. It is likely that over time the environmental differences between timber and steel production will be comparable.

The ASI and NASH said one of the barriers to increased use of steel in housing would be skills shortages for associated trades such as detailers and engineers specialising in cold formed steel. They said they had recently developed micro credentials to train detailers and were working on specialist training content to upskill engineers. Attracting people to these courses and supporting businesses to provide complementary vocational training was a challenge. These associations have worked successfully with the Victorian Skills Authority and the Victorian Future Industries Fund to enable them to progress their work so far and welcomed any similar support that could be provided.

As noted above, the Expert Panel leading the Building System Review will be exploring skills development and training more broadly. Pending this work, we recommend the Victorian Government support the skills and training required to enable increased use of steel and other materials.

Recommendation 7

That the Victorian Government considers support for an increase in the use of steel for house framing, such as:

- facilitating training to enable builders to use steel in frame construction; and
- encouraging greater uptake of courses to train associated trades such as detailing and specialist engineering practitioners.



Victorian Government Investment in Research and Development into Innovative Building Materials

A range of stakeholders referred to other potential alternatives to timber for house framing such as carbon fibre and recycled products. In a submission to the current NSW parliament inquiry into timber supply issues, the HIA sought government support for research and development and the removal of barriers to uptake new and innovative products and materials, particular in relation to modular systems.³¹

BRV was also referred to government initiatives to support the transition to a circular economy, to be led by Recycling Victoria through its plan 'Recycling Victoria – a new economy'. A recent report from independent research network, the Australian Housing and Urban Research Institute (AHURI) into the evidence base and framework to support a transition to the circular economy for housing in Australia. AHURI have proposed scope of inquiry projects to progress its research so that it can inform circular economy housing policy making.³²

There are other research initiatives focused on the construction industry. The Victorian Building Authority (VBA) has a statutory function to conduct or promote research relevant to the regulation of the building and plumbing industries. The VBA's program includes managed research, sponsorships and partnerships with industry and academia and covers research on technologically advanced and innovative solutions.

Building 4.0 CRC is an industry-led research initiative established in 2020 to lead research into better buildings, new efficiencies and markets and human capacity. Current projects include:

- Prefabricated housing solutions for bushfire and disaster relief
- Hybrid Timber-Steel Structural Systems for Mid to High Rise Buildings
- Systems and methods for robustness of mid-rise Light Gauge Steel (LGS) structures
- Long-span Low-Carbon Floor Systems
- Environmental Decision-Support for Structures

Further information about Building 4.0 CRC is found in Appendix 4.

³¹ Housing Industry Association, *Submission to the NSW Parliamentary Inquiry into the Long Term Sustainability and Future of the Timber and Forest Products Industry* (May 2021) <<https://hia.com.au/-/media/3ef02f7fef6f464d8c27105f66f44552.ashx>>.

³² Australian Housing and Urban Research Institute, *Inquiry into Housing in a Circular Economy* (Discussion Paper 1, August 2021).



The construction industry is a willing adopter of new technologies and approaches, for example the use of modular construction and the increased use of prefabrication which can result in less waste and reduction in labour costs. Further Victorian Government support for research and development in these areas and in supporting the development of alternatives to timber framing would be worthwhile and of benefit to manufacturing and construction industries.

Recommendation 8

That the Victorian Government further supports research and development to identify and encourage the use of new building materials and approaches to support innovation and diversification of inputs in the construction industry. These R&D projects could also relate to recycled materials and support Victoria's transition to a circular economy.

Such projects could be delivered through existing construction industry research initiatives such as those undertaken by:

- the Australian Housing and Urban Research Institute;
- Building 4.0 CRC; and
- the Victorian Building Authority's research program.

The Expert Panel reviewing Victoria's building system is also reviewing the use of new building technologies, including prefabrication and modular housing, and will be advising the Government on relevant regulatory frameworks.

Gaining Access to Relevant Commonwealth Grants Programs

The Commonwealth Government has set up a \$1.5 billion Modern Manufacturing Strategy which includes the Supply Chain Resilience Initiative (SCRI). The SCRI is a \$107 million program, which will run over four years (from 2020-21 to 2023-24).

Under this initiative, eligible entities can receive grants from \$50,000 to \$2,000,000 for projects that address supply chain vulnerabilities for a critical product or input identified in the Sovereign Manufacturing Capability Plan (SMCP).



Projects may involve investing in manufacturing-related capabilities, equipment, technology, skills or processes. For instance:³³

- acquiring new technology and/or purchasing intellectual property that will increase capability, create new market opportunities and reduce reliance on vulnerable supply chains;
- acquiring, replacing, upgrading, designing, installing and commissioning new plant, equipment and machinery where this will support addressing vulnerabilities for critical products or inputs in the SMCP; or
- workforce training, upskilling and accreditations that directly support the achievement of project outcomes.

The intended outcomes of the SCRI are to:

- improve Australia's resilience to future supply chain shocks;
- facilitate diversification of supply options and increase investment in the economy;
- enable diversification into export markets and reduce reliance on domestic markets;
- improve collaboration between domestic and international manufacturers and suppliers;
- mitigate supply chain risks for critical products and enhance visibility and transparency of the supply chain for critical products identified in the SMCP; and
- accelerate digitalisation and deeper integration of technology to optimise supply chain performance.

Eligible product categories under the SMCP currently include personal protective equipment, medicines, agricultural production chemicals, water treatment chemicals, telecommunications equipment and semiconductors.

It should be noted that, at present, building and construction materials (such as timber and steel) have not been included as eligible product categories, despite the significant supply chain issues impacting them.

³³ Australian Government, *Supply Chain Resilience Initiative* (Accessed: 29 October 2021) <<https://business.gov.au/grants-and-programs/supply-chain-resilience-initiative#guidance>>.



The inclusion of these materials under the SCRI would provide further support to the building and construction industry to respond to many of the supply chain issues and help to protect the industry against future shocks. Examples of projects that could be funded include timber mill upgrades to enable them to transition to softwood or increase production, or processing plants to increase production of engineered wood products in Australia.

Recommendation 9

That the Victorian Government requests that the Commonwealth includes building materials as priority products under the Supply Chain Resilience Initiative and the Sovereign Manufacturing Capability Plan, thereby making grant funding available for projects to address vulnerabilities across the supply chain.

Commonwealth Policy Changes to Improve Incentives

The Aussie logs for Aussie jobs report recommended a range of initiatives that the Commonwealth could undertake to support Australia's timber industry.³⁴ Some of these have been referenced above in relation to recommendation 6.

The report also looked into issues related to plantation projects and the Commonwealth's Emissions Reduction Fund (ERF). The ERF was introduced in 2011 as a voluntary scheme aimed at providing incentives for organisations and individuals to reduce their greenhouse gas emissions. Under the scheme, 'methods' are established by which carbon abatement or storage can be achieved and for which project operators can earn Australian Carbon Credit Units (ACCUs). Businesses (including forestry businesses) can sell the ACCUs to generate income, either to the government through a carbon abatement contract, or in the secondary market.

Plantation forestry is one of the methods that generate ACCUs under the ERF. Shortcomings in the method have been recognised for some time and are discussed in detail in the Aussie logs for Aussie jobs report.

One particular issue identified is that plantation projects are only eligible for inclusion in the ERF scheme if they do not impact on water availability, other water uses and values, as well as the environment. This requirement (the 'water rule') is currently under discussion between the Victorian and Commonwealth Governments.

³⁴ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021).



The House of Representatives Standing Committee on Agriculture and Water Resources made a number of recommendations in their Aussie logs for Aussie Jobs report, including the following:³⁵

Recommendation 7: *The Committee recommends that the Clean Energy Regulator, during its review of the Emissions Reduction Fund method for plantation forestry, consider the options for inclusion of the carbon abatement embodied in wood products.*

Recommendation 8: *The Committee recommends that work be accelerated to develop an Emissions Reduction Fund methodology for carbon stored in the built environment.*

This work should be underpinned by ongoing work to enhance existing methodologies for farm forestry and plantation forest.

Recommendation 10: *The Committee recommends that the Australian Government prioritise new carbon abatement projects which deliver co-benefits to the Australian economy beyond carbon storage, including, but not limited to, supporting local industry, creating and sustaining jobs, and generating new downstream manufacturing opportunities.*

The Victorian Government should continue to engage with the Commonwealth on issues relating to the ERF and improving its effectiveness.

Recommendation 10

That the Victorian Government continues to engage with the Commonwealth to encourage changes to the Emissions Reduction Fund that would improve the financial returns and incentives for plantation forestry, including the consideration of recommendations 7, 8 and 10 of the Aussie logs for Aussie jobs report.

These recommendations are set out in the text of this report.

³⁵ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Agriculture and Water Resources, *Aussie logs for Aussie jobs: Inquiry into timber supply chain constraints in the Australian plantation sector* (March 2021).



Appendix 1: Key Stakeholder Meetings

The meetings held to inform this review are noted in table 8 below.

Table 8: Key Stakeholder Meetings

Date	Stakeholder
23 June	Department of Environment, Land, Water and Planning – Forestry Policy and Planning Division
29 June	Timber Merchants Australia
30 June	Master Builders Victoria and members
1 July	Master Builders Victoria and members
7 July	Department of Jobs, Precincts and Regions – Forests and Climate Change Division
8 July	Department of Environment, Land, Water and Planning – Waste Division
12 July	Master Builders Victoria (webinar)
13 July	Urban Development Institute of Australia (webinar)
16 July	Housing Industry Association and members
20 July	Commonwealth Department of Industry, Science, Energy and Resources
21 July	Department of Environment, Land, Water and Planning – Biodiversity Division
22 July	Master Builders Victoria, Bunnings Group and AKD Softwoods
22 July	VicForests
23 July	WoodSolutions
23 July	Housing Industry Association
29 July	Master Builders Queensland
30 July	AG Brown Sawmill
4 August	VicForests
16 August	Department of Justice and Community Safety, Consumer Affairs Victoria, and Domestic Building Dispute Resolution Victoria
17 August	WoodSolutions (webinar)
23 August	Cladding Safety Victoria
27 August	University of Melbourne and Bambra Agroforestry Farm
30 August	(private citizen)
3 September	Victorian Forest Products Association
3 September	Consumer Affairs Victoria, and Domestic Building Dispute Resolution Victoria
17 September	Department of Jobs, Precincts and Regions – Forestry and Climate Change Division
28 September	Master Builders Victoria (summit)
30 September	Construction Industry Advisory Group
4 October	Frame and Truss Manufacturers Association



Date	Stakeholder
6 October	Department of Jobs, Precincts and Regions – Forestry and Climate Change Division
7 October	Bushfire Recovery Victoria
11 October	South Australian Department of Primary Industries and Regions
18 October	Master Builders Victoria
18 October	Bushfire Recovery Victoria
18 October	Cement, Concrete and Aggregates Australia
18 October	Master Builders Queensland
19 October	Department of Environment, Land, Water and Planning – Waste Division
20 October	Housing Industry Association
20 October	Australian Steel Institute
20 October	Bowens Timber (webinar)
22 October	Department of Justice and Community Safety and Consumer Affairs Victoria
22 October	Bushfire Recovery Victoria (forum including several Victorian Government Departments and agencies, and regional local councils)
22 October	Office of Projects Victoria
26 October	National Association of Steel-framed Housing
27 October	Department of Jobs, Precincts and Regions – Forestry and Climate Change Division
28 October	Freight Victoria
28 October	Master Builders Victoria
29 October	Master Builders Australia
29 October	Department of Environment, Land, Water and Planning – Building Policy Division

Note: In addition to this list, BRV has engaged more closely with staff at Master Builders Victoria, the Housing Industry Association and the Building Policy Division at DELWP.



Appendix 2: Government Investments in Forestry

The Victorian and Commonwealth Governments have both made significant investments to support forestry, including through the programs listed below. These programs play an important role in supporting Victorian forestry and strengthening domestic timber supply chains.

Victorian Government Programs

The Victorian Government has invested in a range of programs to increase plantation timber and support the forestry sector under the Victorian Forestry Plan (VFP) and Climate Change Strategy.

The VFP is a 30-year plan, including a \$120 million package, to support industry as it transitions away from native forest harvesting. Programs include:

- **Timber Innovation Grants:** provides grants of up to \$100,000 for research and development projects that support forestry businesses to transition from native timber to plantation fibre and/or investigate manufacturing opportunities. This includes feasibility studies, investigations into alternative timber supply, mill upgrades and process innovation projects.
- **Victorian Forest Nursery:** a \$10 million nursery established by VicForests to increase the eucalypt seedling supply chain (producing up to 5 million seedlings annually) to support planting and reforestation of approximately 5,000 hectares annually.
- **Gippsland Farm Forestry and Plantations Investment Programs:** these programs operate in parallel, focusing on different types of plantation investment opportunities. The Gippsland Plantations Investment Program supports new plantation development in the region, providing incentives to plantation investors to undertake industrial scale planting. The Gippsland Farm Forestry Program maximises the contribution farm forestry, enabling Gippsland landholders to participate in plantations development.

Victoria's Climate Change Strategy sets out the Victorian Government's current action on climate change.

This includes many of the programs discussed above, as well as the **Victorian Carbon Farming Program** – a \$15.3 million program delivered over 10 years to provide incentives for private landowners to plant shelterbelt trees and engage in agroforestry. This will support private landowners to access existing incentives and carbon markets, to realise productivity benefits and new income streams.



Commonwealth Government Programs

The Commonwealth Government has also invested in a range of programs to reduce supply chain vulnerabilities and support Australia's forestry industry.

The **National Forests Industry Plan (NFIP)** is a national plan established in 2018, which sets out a range of measures to support Australia's forest industries and boost domestic timber supply, with the goal of planting one billion new trees by 2028. To date, action under the plan has included:

- establishing nine regional forestry hubs (two in Victoria);
- establishing a jointly funded research centre in Victoria (the National Institute for Forest Products Innovation); and
- supporting reviews into the effectiveness of other Commonwealth programs in relation to forestry (e.g. the Emissions Reduction Fund).



Appendix 3: Queensland Building and Construction Commission Factsheet

Figure 9: Queensland Building and Construction Commission Factsheet

Industry shortages in the residential construction industry

The Queensland residential construction industry is currently impacted by an Australia-wide shortage of building materials and skilled trades.

These challenges are a result of market forces, amplified by the COVID-19 pandemic. Industry shortages are impacting everyone in the supply chain, from suppliers and builders through to subcontractors, employees and consumers.

It is expected that it will take some time for the industry to get back to its usual supply and operating rhythm.

During the construction, renovation or repair of your property, keep in contact with your builder or tradesperson to understand how materials or labour shortages may impact your work and which measures can be put in place to address the situation.

Queensland laws, including those that help protect consumers and keep the Queensland building and construction industry safe and sustainable, still apply.

Your builder or tradesperson may need to seek an extension of time to complete your contract due to issues beyond their control. If they cannot access the products they usually use, or those specified in your contract, they may seek your agreement to use alternative products.

It is recommended you consider obtaining independent legal advice if you are looking to make changes to an existing contract. Parties should also be aware of risks associated with cost-plus contracts, information can be found qbcc.build/cost-plus.

If you have tried to reach agreement in relation to material and labour shortages but still have concerns, as a first step, you can consider mediation.

The Queensland Government's Accelerated Building / Consumer Dispute (ABCD) framework may be an option if you have a domestic building contract for a new home or a major renovation over \$150,000.



21% increase in dwelling building approvals ABS March 2021



82% of builders report delays with supplies or trades HIA April 2021



15-week lead time on frame and truss deliveries MBQ March 2021

To determine eligibility for the ABCD, you can contact the Queensland Building and Construction Commission (QBCC) via qbcc.qld.gov.au or by phoning the QBCC on 139 333.

If a dispute remains, it is important to be aware of the strict timeframes that apply for any claims under the QBCC's Home Warranty Scheme. For non-completion of a fixed price contract, the contract must end within two years of the day work starts, and you must make your claim with the QBCC within three months after the date the contract ends.

Delays, additional costs and flow-on effects can have a significant personal impact. If you feel you need support, please reach out to organisations that are there to help, like Lifeline (13 11 14).

Industry associations such as Master Builders Queensland and the Housing Industry Association are working together with the Queensland Government and the QBCC to help address the current situation.

For more information, please refer to qbcc.build/industry-shortages.



Source: Queensland Building and Construction Commission



Appendix 4: Building 4.0 CRC

Building 4.0 CRC is an industry-led research initiative established in 2020 as part of the Australian Government's Cooperative Research Centre Program, which aims to develop an internationally competitive, dynamic and thriving Australian advanced manufacturing sector, deliver better buildings at lower cost and the human capacity to lead the future industry. Targets under the initiative are listed in Table 10:

Table 10: Targets Under Building 4.0 CRC

Better Buildings	New Efficiencies and Markets	Human Capacity
<p>Energy: 40% reduction in lifecycle costs through high-performing, efficient buildings</p> <p>Sustainability: Up to 50% reduction in CO² emissions for more sustainable buildings</p> <p>Regulation: Improved policy & regulatory frameworks</p> <p>Quality and Safety: Fewer defects & improved quality, customer satisfaction, safety & certainty</p>	<p>Cost: Up to 30% reduction in project costs through digital technology & off-site manufacturing</p> <p>Time: 40% reduction in project delays through integrated, live scheduling</p> <p>Waste: 80% reduction in construction waste & re-work for higher productivity</p> <p>Exports: Up to 25% increase in the export of building products & construction services</p> <p>Communication: A connected industry with common protocols & interfaces, and shared data</p>	<p>Education: Train 36 PhDs and 1,000 Masters Students</p> <p>Jobs and Training: Create new high-skill jobs, training 7,000 apprentices in the new technologies of the 4th industrial revolution</p> <p>Culture: Create an open, collaborative, innovative, inclusive, and gender diverse industry</p>

Source: Building 4.0 CRC



The initiative supports three integrated research programs:

1. **Sectoral transformation:** including business model innovation, risk management, change management and construction safety.
2. **Digital transformation:** including cybersecurity, digital project management, robotics, IoT, sensors and construction tech.
3. **Building transformation:** materials and systems innovation, advanced manufacturing, sustainable materials and design and prototyping and fabrication technologies.

The initiative is co-funded by the Australian government with 28 with partners across the Victorian Government and a range of Commercial Industry (17), Peak Industry and Associations (4), Research Organisations (3) and Vocational Education and Training (1). These include: Bluescope, Hyne Timber, M-Modular, Master Builders Victoria, Standards Australia, Monash University and University of Melbourne, to name a few. The current Victorian Government partners are the Department of Jobs, Precincts and Regions and the Victorian Building Authority.

