



# Weathering the Storm: How the Victorian Building and Construction Industry Survived Covid-19

**Dr Meg Mundell**

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This research was conducted on the unceded lands of the Bunurong and Wurundjeri (Woiwurrung) peoples of the Kulin Nations. The author extends her respects to the Traditional Owners of these lands, to their Elders – past, present, and emerging – and to all Aboriginal and Torres Strait Islander communities across Victoria, the region that is discussed in this report.

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★ Indicates interviewees who are Incolink Board Members.

— Indicates interviewees whose organisations are members of the BIG1 group.

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# ACRONYMS

ABS	Australian Bureau of Statistics
ACMA	Air Conditioning and Mechanical Contractors' Association
AIB	Australian Institute of Building
AMWU	Australian Manufacturing Workers' Union
APC	Australian Prostate Centre
BCIWG	Building and Construction Industry Working Group
BICC	Building Industry Consultative Council (Victoria)
BIG	Building Industry Group of Unions (Victoria)
BIG1	Building Industry Group of Unions and Industry Associations (Victoria)
CALD	Culturally and Linguistically Diverse
CBD	Central Business District
CCFV	Civil Contractors Federation Victoria
CFMMEU	Construction, Forestry, Maritime, Mining and Energy Union <sup>1</sup>
DELP	Department of Environment, Land, Water and Planning (Victoria)
DJPR	Department of Jobs, Precincts and Regions (Victoria) <sup>2</sup>
DHHS	Department of Health and Human Services (Victoria; up to 31 January 2021) <sup>3</sup>
DoH	Department of Health (Victoria; from 1 February 2021)
DPC	Department of Premier and Cabinet (Victoria)
EBA	Enterprise Bargaining Agreement
ETU	Electrical Trades Union
FTE	Full-Time Equivalent
GSP	Gross State Product
HIA	Housing Industry Association
HSR	Health and Safety Representative
ILO	Industry Liaison Officer
IO	Input-Output
IR	Industrial Relations
MBA	Master Builders Australia
MBV	Master Builders Association of Victoria
NECA	National Electrical and Communications Association
NFIA	National Fire Industry Association
NSW	New South Wales
OHS	Occupational Health and Safety
PPTEU	Plumbing and Pipe Trades Employees Union
RIG	Rapid Industry Guidance Covid-19 Taskforce
SPASA	Swimming Pool and Spa Association
UDIA	Urban Development Institute of Australia
VBA	Victorian Building Authority
VBIDP	Victorian Building Industry Disputes Panel
VCSA	Victorian Construction Industry Safety Alliance
VWA	WorkSafe Victoria (Victorian WorkCover Authority)
WHO	World Health Organisation

1 In 2018 the CFMEU merged with the Maritime Union of Australia (MUA), becoming the CFMMEU.

2 In January 2023 the DJPR was replaced by the Department of Jobs, Skills, Industry and Regions (DJSIR).

3 From 1 February 2021, DHHS was split into two separate departments: the Department of Health (DoH), and the Department of Families, Fairness and Housing (DFFH). To avoid confusion, the terms DoH or "Health Department" are used in this report to encompass both the new stand-alone department, and the Health division of the old DHHS.

# EXECUTIVE SUMMARY

## BACKGROUND

In late August 2022, Incolink commissioned research to investigate how the Victorian building and construction industry survived the first two years of the Covid-19 pandemic. Focusing on the period January 2020-December 2021, this report presents the findings of that study.

The research explores how the industry was able to remain largely open during multiple lockdowns, how it protected workers' health and safety over this two-year period, the main challenges faced and how the industry responded, and the key strategies, initiatives, and factors that enabled construction to stay up and running when many other sectors were shut down or had their activities heavily curtailed. The study also estimates the economic benefits of the industry's continued operation during Victoria's lockdowns.

To explore the story of this turbulent time in the industry's history, the first Findings section presents a detailed Narrative Timeline of key events as they unfolded over this two-year period, with a focus on the industry's coordinated response to Covid-19 (Section 3.1). The second Findings section presents the results of Economic Modelling to quantify the economic benefits of Victoria's construction industry remaining largely open during lockdowns (Section 3.2). Key Findings are then outlined (Section 3.3), framed in response to the study's research questions. A brief Discussion (Section 4) draws out relevant themes and implications. The report concludes by outlining four Recommendations for industry action based on the study results (Section 5). Key Findings are also noted in condensed form in this Executive Summary (overleaf).

## METHODOLOGY

This research used a mixed-methods approach, combining qualitative research (interviews, desktop research, site visits) with quantitative analysis (Economic Modelling). The full research Methodology is outlined in Section 2 (p.13). A snapshot version is presented below:

- Qualitative research was carried out by social researcher Dr Meg Mundell (Director, Hatch Insight), who authored this report. The researcher conducted in-depth video/phone interviews with 17 industry stakeholders over September-October 2022, along with two site visits. Interviewees were primarily from the civil and commercial subsectors of Victoria's construction industry, and included members of BIG1, an industry alliance that led the sector's coordinated response to Covid-19. The researcher also consulted a wide range of secondary source material to inform the study.
- Economic Modelling was conducted by economist Guy Jakeman (Principal, ACIL Allen). The modelling sought to calculate the quantifiable (direct and indirect) economic benefits of Victoria's building and construction industry remaining largely open over the 2020-2021 lockdowns. Based on ABS data, the analysis provides estimates for the value of construction work (residential and non-residential) done in Victoria over the period of lockdowns, along with the estimated resulting benefits to the wider Victorian economy (including household income, GSP, and employment).

## KEY FINDINGS

A condensed overview of Key Findings is provided below. A more detailed account is presented in Section 3.3 (p.50), with some implications discussed in Section 4 (p.62).

**ECONOMIC IMPACTS:** Economic Modelling by ACIL Allen estimated that the Victorian construction industry's continued operation over the period of lockdowns (March 2020-September 2021) resulted in:

1. Economic benefits to industry: an estimated \$22.1 billion of construction work done (\$13.6 billion residential; \$8.5 billion non-residential) that would otherwise not have occurred.
2. Economic benefits for Victorian economy: a \$8.2-\$11.8 billion increase in household incomes; a \$16.2-\$23.7 billion increase in GSP; and an employment outcome of 122,233-168,369 FTE jobs.

**SUCCESS FACTORS:** The qualitative research identified some critical success factors that enabled Victoria's building and construction industry to remain largely open over the first two years of the pandemic (January 2020-December 2021). The key success factors are as follows:

3. Alliance-based approach and strong leadership: The formation of an industry alliance (BIG1) comprising construction unions, employers' associations, and related groups was a critical success factor in the sector's continued operation during Victoria's multiple lockdowns. Working in close collaboration with the State Government and other industry groups, leaders from BIG1's 15 member organisations put aside historical tensions to focus on implementing the industry's coordinated response to Covid-19. Underpinned by strong leadership and unity of purpose, BIG1 members pooled expertise and resources, communicated in a consistent

and coordinated way, and swiftly formulated solutions. Presenting a united front increased the industry's lobbying power and access to senior government.<sup>4</sup> Collectively, the BIG1 group became more than the sum of its parts, achieving positive outcomes that would have been impossible had members operated in isolation.

4. Timely, proactive interventions: The industry's proactive rollout of innovative programs was another crucial success factor. Working collaboratively with government and construction sector groups<sup>5</sup> over the two-year focal period, industry leaders rapidly conceived, developed, funded, and rolled out a range of innovative initiatives to protect workers' health and safety and minimise workplace transmission. Examples include the Industry Covid-19 Guidelines (17 versions), onsite Covid-19 testing and vaccination programs, hardship payments for workers, workforce contact tracing, Covid-safe education and training, a Gold Standard worksite program, and communications campaigns, including targeted messaging for CALD workers. Operating effectively in a crisis context, these industry groups were agile and well-organised, driving initiatives and presenting timely solutions to the Victorian Government in particular. While aiming to ensure compliance with public health Directions, these sector-driven efforts often surpassed or presaged the Government's own Covid-safe measures, promoting voluntary mitigations and best-practice protocols to reduce workplace spread.
5. Government investment and support: Support from both State and Federal Governments was also critical to the construction industry's ability to remain largely open during lockdowns. The Victorian Government made major investments in civil

<sup>4</sup> Where the word "Government" is capitalised across this report, it refers to a specific entity (e.g. State or Federal Government). Where "government" is not capitalised, it is a general reference to more than one government, or an unspecified government.

<sup>5</sup> Key entities included BIG1, BCIWG, BICC, and RIG (see Appendix for membership details).



infrastructure, fast-tracked projects, funded a dedicated Industry Liaison Officer (ILO) for the sector, and provided matched funding for the industry's onsite testing and vaccination programs. Key Federal Government support included the HomeBuilder grant program and the JobKeeper wage subsidy scheme. For most of the two-year focal period, the Victorian Government also collaborated actively with industry leaders, kept communication channels open, and was largely receptive to industry's proposed solutions.

**CHALLENGES AND BARRIERS:** While Victoria's construction industry fared much better than many other sectors, it still faced some significant hurdles over the two-year focal period. Key examples follow:

6. **Barriers to success:** Alliance-building was vital to the construction industry's survival over 2020- 2021 (see Point 1, above). However, gaps in these alliances had negative consequences for all parties. The domestic construction subsector - characterised by smaller worksites and a less-unionised workforce - makes up a substantial portion of the industry. The residential subsector is reflected in BIG1's membership base, and its interests and needs were represented. However, the makeup of the BIG1 alliance skews towards the commercial and civil subsectors, which are characterised by major companies, larger worksites, and a more unionised workforce.

While other representatives of the domestic construction subsector were not excluded from BIG1 or associated groups (see Appendix), and many made active contributions, their involvement in the frontline of collaborative decision-making was limited, and they enjoyed less direct access to

senior levels of government. As a result, the industry's efforts were not wholly united. This fragmentation posed challenges for policy formation, consistent messaging, compliance monitoring, and accurately tracking case numbers and workplace transmission. Compliance challenges, for example, were not always addressed in a unified way across the entire industry. Reports of widespread non-compliance on worksites contributed to escalating tensions between industry and the State Government, and the volatile mix of factors that led to the sector's shutdown in September 2021.

7. **Challenges of pandemic:** Covid-19's impacts on industry included lost revenue and income, business insolvencies, job losses, economic uncertainty, reduced work pipelines, supply chain disruptions, material shortages, project delays, increased contractual penalties, higher costs, productivity constraints, and heightened demands on leadership teams. The two industry shutdowns in February and September 2021 also cost the sector an estimated \$455 million in lost revenue and \$63 million in lost wages per day. While effective collaboration between industry and government was an important success factor, there were instances when communication lapses, lack of consultation, politicisation, failure to heed expert advice, or unilateral policy decisions led to negative outcomes that had serious consequences both within and beyond the sector. The industry was also affected by pandemic's broader impacts, including escalating social unrest and misinformation, heightened stress and anxiety, and the general under-preparedness of governments globally to deal with this new but not entirely unforeseen threat.

**OTHER TAKEAWAYS:** This research identified some unanticipated benefits, learning opportunities, and potential longer-term impacts arising from this turbulent period in the industry's history:

8. **Positive outcomes:** Early in the pandemic, the construction sector was formally classified as an “essential” industry, which bodes well for its prospects in responding to future crises. The over-arching crisis context meant Government was open to proactive solutions. The industry rose to this challenge, swiftly rolling out a range of new programs to protect workers' health and safety. Covid-19 also gave the industry an unexpected opportunity to demonstrate effective leadership, agility, and innovation. It also catalysed the formation of new industry alliances, enabling the sector to leverage diverse expertise, mobilise collective resources, and expand knowledge-sharing. This alliance-building led to new collaborative structures, built goodwill within the sector, eased historical tensions, and granted industry leaders greater access to senior government officials.
9. **Lessons learned:** The pandemic has highlighted the vital importance of effective alliance-building and industry collaboration, which were instrumental to the sector's survival. It also vividly illustrated the potential fallout when industry does not operate in a fully unified way; hindsight thus suggests the mutual benefits of a more fully united approach. Covid also drove home the destructive and divisive effects of misinformation, which helped fuel the violent protests and flashpoint events of September 2021, causing reputational damage for the industry. Unfortunately, a lack of comprehensive program data for most of the industry-run pandemic initiatives makes it difficult or impossible to accurately assess their true impact; there are clear benefits in capturing this intelligence more systematically for future use. The two-year focal period also offers lessons for governments, including the importance of ongoing dialogue and consultation, the perils of acting unilaterally on major decisions, the value of effective health messaging, and the risks of ignoring both scientific advice and industry expertise. To help minimise transmission across the wider sector, there was also a missed opportunity for the State Government to embed the protections enshrined in the Industry Covid-19 Guidelines into public health Directions.
10. **Lasting impacts:** The new industry alliances forged during the pandemic represent a major positive shift, and a potentially lasting legacy. The truce on long-standing hostilities between construction unions and employers' associations, for example, is manifesting in increased goodwill, more open dialogue, and tangible improvements to industrial relations within the civil and commercial subsectors, with a sharp drop in the number of disputes coming before the Victorian Building Industry Disputes Panel (VBIDP). The industry's leadership on Covid-safe protocols over 2020-2021 helped to reinvigorate a focus on workforce health and wellbeing within the sector. However, the ongoing health impacts of Covid-19 represent a negative legacy of the pandemic, one that poses a significant and growing concern spanning all industries and the broader workforce.



## RECOMMENDATIONS

Based on a detailed analysis of the study Findings, this report makes four Recommendations for action by industry. Full details of these Recommendations are outlined in Section 5 (p.71). They align with four over-arching themes. A headline overview is provided below:

### 1. UNITY

Sustain and Expand Industry Alliances

### 2. LEADERSHIP

Continue Industry's Leading Role in World's Best Practice Infection Controls

### 3. KNOWLEDGE

Strengthen Information Systems to Capture and Leverage Program Insights

### 4. EDUCATION

Explore Workforce Initiatives to Combat Harmful Misinformation

# 1. INTRODUCTION

## 1.1 BACKGROUND

In the final days of 2019, Australia was in the grips of its most horrific bushfire season in living memory. A sense of grief and loss was felt across the country. No-one could imagine another crisis would soon sweep in from halfway around the world.

Two months later the Covid-19 pandemic claimed its first Australian life. Over the next two years, as Victorians endured a series of prolonged lockdowns and entire sectors were shut down in efforts to curb viral transmission and save lives, the State's building and construction industry remained largely open.

How the sector managed to survive this chaotic period in history is the focus of this report. This research explores how Covid-19 impacted Victoria's building and construction industry over the first two years of the pandemic (January 2020-December 2021), how the industry was able to remain largely open during lockdowns, how it protected workers' health and safety, the main challenges faced and how industry responded, and the key strategies, initiatives, and factors that kept the sector up and running.

How the sector managed to survive this chaotic period in history is the focus of this report.

These questions are explored through a detailed Narrative Timeline of key events (Section 3.1) which draws on the perspectives of industry insiders who were at the forefront of the sector's coordinated

response to Covid-19. The study also uses Economic Modelling to estimate the economic benefits of Victoria's construction industry remaining largely open during multiple lockdowns (Section 3.2). Key Findings are summarised in Section 3.3, with some implications discussed in Section 4. Finally, this report makes a set of Recommendations to industry based on the research results (Section 5).

This study was jointly funded by Incolink, MBV, CFFMEU and PPTEU. In August 2022 Incolink engaged academic researcher Dr Meg Mundell (Hatch Insight) to undertake the qualitative research and produce this report. In December 2022 economist Guy Jakeman (ACIL Allen) was engaged to conduct the Economic Modelling (quantitative analysis). The academic researcher conducted the stakeholder interviews and site visits in September-October 2022, with follow-up questions, further interviews, desktop research, data analysis and write-up occurring over November 2022-February 2023. The Economic Modelling work was conducted over January and February 2023.

## 1.2 OBJECTIVES

This research investigates how Victoria's building and construction industry was able to remain largely open over the first two years of the Covid-19 pandemic, and how the industry protected the health and wellbeing of workers during this time. The study also sought to quantify the economic benefits (direct and indirect) of the Victorian building and construction industry remaining largely open during multiple lockdowns (see Section 3.2).

A third objective was to reconstruct a narrative account of events as they unfolded for industry over this two-year period, and to capture the story of this significant time in the sector's history (Section 3.1). The research questions that drove this study are listed in the next section (see Methodology, p.13).

### 1.3 SCOPE OF RESEARCH

This study draws heavily on insights from members of an industry group that led the sector's coordinated response to Covid-19 over the first two years of the pandemic (January 2020-December 2021). The scope of the study reflects the membership profile of this group, which is mostly made up of organisations from the construction industry's civil and commercial subsectors. These segments of the industry are characterised by larger-scale worksites, major companies, and a more unionised workforce.

While the domestic construction subsector comprises a significant portion of Victoria's building and construction industry, the qualitative research presented in this report does not focus specifically on this subsector. As noted in the Methodology (see Section 2.4), the qualitative analysis focuses primarily on the commercial and civil subsectors. Where the terms "the industry" or "the sector" appear across this report, they should be understood as shorthand terms for the segments of the industry under discussion. The Economic Modelling (Section 3.2) does encompass all subsectors of the construction industry: this analysis draws on data from the Australian Bureau of Statistic (ABS), which divides the industry into "residential" and "non-residential" subsectors.

### 1.4 REPORT STRUCTURE

The study Findings make up the main body of this report. The Findings are presented in three sections:

- Section 3.1 Narrative Timeline: How the Victorian Construction Industry Experienced Covid-19

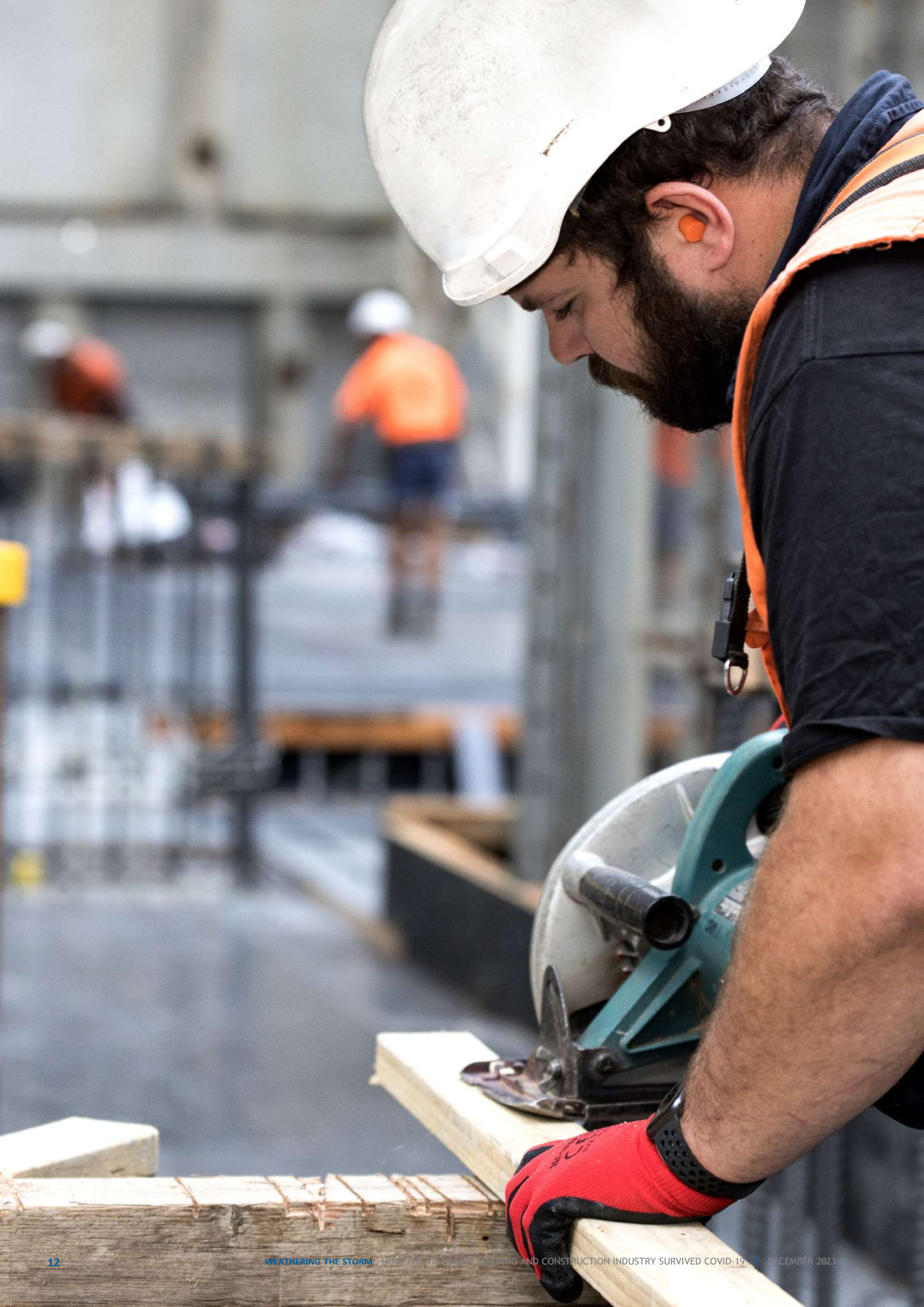
The Narrative Timeline presents the qualitative Findings in story form, giving a detailed account of significant events as they unfolded for industry over the first two years of the pandemic. Capturing insights from stakeholder interviews, the narrative tracks important moments, issues, and initiatives against a two-year timeline of public health data, policy announcements, and media coverage. Underpinned by in-depth research, this section uses non-fiction storytelling techniques to convey the human side of unfolding events and recreate a sense of the wider social backdrop. For ease of reading, the timeline is broken into three-month blocks that line up with yearly financial quarters.

- Section 3.2 Economic Modelling

ACIL Allen conducted Economic Modelling to calculate the quantifiable (direct and indirect) economic benefits of Victoria's building and construction industry remaining largely open over 2020-2021 (see Research Question 5, p.61). The results are presented in a stand-alone Findings section. The analysis provides estimates for the value of construction work (both residential and non-residential) done in Victoria over the period of lockdowns, and uses Input-Output (IO) multiplier analysis to estimate the resulting benefits to the wider Victorian economy (employment, household income, GSP).

- Section 3.3 Key Findings

The Key Findings provide a distilled summary of results from the previous two sections. Framed in response to the research questions, the Key Findings are set out in table form, with explanatory notes.



# METHODOLOGY

## 2.1 RESEARCH QUESTIONS

This research focuses on a two-year period (January 2020–December 2021). The study addresses five Research Questions. Research Questions 1–4 were addressed through qualitative research (see Sections 3.1 and 3.3). Research Question 5 was addressed through Economic Modelling (see Sections 3.2 and 3.3).

The Research Questions are:

1. How was Victoria’s building and construction industry impacted by the Covid-19 pandemic impact over the two-year period?
2. What were the major challenges for the industry during this period, and how did the sector respond collaboratively to these challenges?
3. What were the key factors, strategies, and initiatives that enabled the industry to remain largely open while many other sectors were closed down?
4. How did industry protect the health and safety of workers during this period?
5. What were the quantifiable (direct and indirect) economic benefits of Victoria’s construction industry remaining largely open during multiple lockdowns?

## 2.2 RESEARCH APPROACH

This study focuses on the first two years of the pandemic in the State of Victoria, Australia. The study was conducted using a mixed-methods approach, combining qualitative research and quantitative analysis. The qualitative work (in-depth interviews, desktop research, site visits) was undertaken by social researcher Dr Meg Mundell, who authored this report.

The Economic Modelling (quantitative analysis) was conducted by Guy Jakeman, Principal at ACIL Allen. The results of this modelling are presented in Section 3.2.

## 2.3 DATA COLLECTION AND ANALYSIS

### Interviews

To gather first-hand insights from industry insiders, the researcher conducted in-depth interviews with 17 stakeholders from the Victorian building and construction sector. Candidates were identified in consultation with Incolink, the organisation that commissioned this research. Semi-structured video interviews (40–60 minutes) were conducted over two months (September–October 2022), with walking interviews completed during two site visits (see below).

Interviewees were invited to reflect on how Covid-19 impacted Victoria’s building and construction industry over the two-year period of focus, and how the industry managed to remain largely open while many other sectors were shut down. They discussed pivotal events and challenges faced during this period, measures put in place to protect the health and safety of workers, the development and rollout of key initiatives, the industry’s interactions with government, and the strategies, approaches, and investments that enabled the sector to remain largely operational during Victoria’s extended lockdowns. People were also invited to share personal reflections on living and working through this intense period of upheaval and uncertainty, and to comment on “lessons learned”, potential lasting impacts, and the state of the industry today.

Interview transcripts were typed up in full, then analysed and coded using thematic analysis to identify emergent themes. To cross-check information and address knowledge gaps, follow-up questions were emailed to all interviewees, with responses provided in writing or verbally over the phone.

Interview participants were recruited from three target groups:

1. Members of an industry alliance (the BIG1 group) that worked collaboratively with government to develop and implement the Victorian construction sector's coordinated response to Covid-19.
2. Industry stakeholders who were responsible for implementing key Covid-19 initiatives on the ground.
3. Other industry and Government experts who contributed relevant knowledge, insights, and expertise to the construction sector's coordinated pandemic response.

A full roster of interview participants - listed by name, role, and organisation - appears on the Acknowledgements page (p.1). This participant group reflects the scope of the research, which focuses mainly on the commercial and civil subsectors of Victoria's building and construction industry. Participating organisations include two industry-based employer associations (Master Builders Association of Victoria, Master Plumbers), two unions (Construction Forestry Maritime Mining and Energy Union, Plumbing and Pipe Trades Employees Union), the Victorian Government (Department of Jobs, Precincts and Regions; Department of Health and Human Services), two commercial construction companies (Built, Multiplex), a specialist healthcare provider (Australian Prostate Centre), the industry body that commissioned this research (Incolink), and three independent consultants who worked closely with industry leaders to develop and implement the sector's coordinated Covid-19 response.

### Desktop Research

The academic researcher consulted a wide range of secondary sources to inform this study. This material was used to help construct a narrative timeline of unfolding events, including key announcements, pivotal moments, and relevant milestones. Sources included publicly available documents such as media articles, public health data, government reports, published academic research, media releases, letters, and video footage, along with communication materials and internal documents produced by industry and government. All sources cited in this report are listed in the References section (p.74).

### Site Visits

To gather additional context, colour, and detail, the researcher visited a union office and a construction site in person. Conducted in October 2022, both site visits took around 90 minutes, and involved a tour of the site combined with an informal walking interview. The two locations were:

- CFMMEU (Vic/Tas) Head Office, 540 Elizabeth Street, Melbourne, VIC 3000.
- Gadsden apartment development, 268 Adderley Street, West Melbourne, VIC 3003 (construction worksite, Hamilton Marino/PDG).

### Economic Modelling

ACIL Allen was engaged to conduct Economic Modelling to inform this research project. The aim of this analysis was to calculate the quantifiable (direct and indirect) economic benefits of Victoria's building and construction industry remaining largely open over 2020-2021 (Research Question 5). The results of are presented in a stand-alone Findings section of this report (Section 3.2). Further detail on the methodology can also be found in that section.

During Victoria's multiple fluctuating lockdowns (March 2020 to September 2021 inclusive), sectors that were deemed "non-essential" were



shut down or had their operations heavily curtailed. As a designated “essential industry”, Victoria’s building and construction sector continued to operate for most of this time. The Economic Modelling provides estimates for the value of construction work done in Victoria arising from combined industry and government efforts to keep the sector open during this period, along with estimated benefits to the wider Victorian economy (employment, household income, and GSP).

To estimate the likely impacts on Victoria’s construction industry if it had been shut down over the period of the lockdowns, ACIL Allen examined monthly turnover trends within the food services industry. The analysis focuses specifically on two related food industry subsectors that were subject to very different rules during Victoria’s lockdowns: “cafe, restaurants and catering services”, which was deemed “non-essential”, and was shut down completely for some periods, and operated under heavy restrictions at other times; and “takeaway food services”, which was deemed “essential”, so could continue to operate during lockdowns (albeit with some restrictions).

Taking the change from trends seen in Victoria’s “non-essential” food services subsector and applying it to the pre-COVID-19 trends (adjusted for population growth) for the construction industry, ACIL Allen estimated a “counterfactual” scenario of what may have happened for construction if had not remained largely open. Reflecting the structure of the ABS data sets used for this analysis, results are presented for both the residential and non-residential construction subsectors.

To estimate the broader economic benefits of the Victorian construction sector remaining largely open, ACIL Allen used Input-Output (IO) multiplier analysis. This methodology is frequently used to understand the full linkages of an industry throughout the economy. It provides a robust estimation of the full economic footprint of an activity - and consequently, the potential

economic impact if that activity was suddenly halted. The economic footprint from the IO analysis describes:

- the direct contributions the construction industry makes to the Victorian economy, plus
- the full extent of the indirect contributions the industry makes to the Victorian economy through its demand for intermediate inputs from other industries (wood, cement, aluminium, skips, parts, electricity, machinery, freight etcetera), and through demand stimulated by the wages and salaries of its employees.

## 24 STUDY LIMITATIONS

As noted, the scope of this study does not encompass the full spectrum of Victoria’s building and construction sector. The qualitative research (Section 3.1) focuses primarily on the industry’s civil and commercial subsectors, which skew towards larger-scale worksites and a more heavily unionised workforce.

This focus reflects the makeup of the BIG1 group (see Appendix for members), an alliance of industry leaders who were at the forefront of the sector’s pandemic response, and whose activities provide a key focal point for this study. BIG1’s member organisations are primarily from the civil and commercial subsectors. There are some exceptions - MBV’s broad membership base includes domestic builders, and one of the interviewees owns a small residential building company. But beyond that, the majority of the domestic construction subsector, characterised by non-unionised worksites and smaller operators, are largely unrepresented in the qualitative research. As such, this report represents a partial picture of how the industry experienced the pandemic and responded to its challenges.

Primary data for this study was gathered through in-depth interviews with stakeholders who work in Victoria’s building and construction sector. While interview participants were frank and

forthcoming in our discussions, they agreed to participate in the research on the understanding that they would be identified by name in this report, and that the bulk of direct quotes and paraphrased material from interview data would be attributed to the relevant speaker, rather than de-identified. Because most of the interview data is attributed to specific people, this study is subject to the usual caveats around interview participants' capacity to disclose potentially sensitive information.

People were also invited to share personal reflections on this period of upheaval and uncertainty, and to comment on lessons learned and potential lasting impacts.

The quantitative analysis (see Section 3.2) covers the full spectrum of Victoria's building and construction industry. In preparing the estimates presented in the Economic Modelling, ACIL Allen

economists endeavoured to use what they consider to be the best information available at the date of publication. Due to the way the Australian Bureau of Statistics (ABS) manages its various databases, it is possible that the estimates of retail turnover and building activity used in this analysis may be backwardly revised at a future date. The methodology that was used represents one way of obtaining a high-level estimate of the economic impact of the various measures, initiatives, and strategies that comprised industry and government's combined efforts to keep the industry open during lockdowns. Alternative methods of analysis may produce different estimates.

# 3. STUDY FINDINGS

## 3.1 NARRATIVE TIMELINE: HOW THE VICTORIAN CONSTRUCTION INDUSTRY EXPERIENCED COVID-19

This section presents a narrative account of relevant events, initiatives, and milestones as they unfolded in Victoria over the first two years of the Covid-19 pandemic (January 2020-December 2021). Distilling key insights from interviews, the narrative weaves together direct industry voices and in-depth research to explore how Victoria's construction industry survived this turbulent two-year period. For ease of navigation, the timeline unfolds in a series of three-month blocks, aligning with the financial quarters.

### 3.1.1 CALM BEFORE THE STORM: DECEMBER 2019

As 2019 drew to a close, Victoria's building and construction industry was coasting on the wings of a two-decade boom. After years of frenetic activity, the pace was slowing somewhat. Metro Melbourne was in a lull, but regional Victoria was going strong. A downturn was expected, but the outlook was mostly positive.

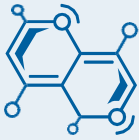
All up, it had been a prosperous decade: over 2018-2019, building and construction contributed some \$34.8 billion to the Victorian economy, around 7.8 percent of GSP (PAEC, 2020: 89). The sector was the State's largest full-time employer, with some 307,000 workers on the books, or just over 9 percent of the Victorian workforce (ACIL Allen, 2020: 10; BIG1, 2020a).

The past decade not been without its challenges: skills shortages were an ongoing concern, industry standards were in the spotlight, and public trust had taken a knock. A series of regulatory reforms were underway to improve practices, training, and public safety across the sector, including new laws targeting combustible cladding (Shergold & Weir, 2018; BMF, 2019).

In the lead-up to Christmas, Sue Eddy, CEO of the Victorian Building Authority (VBA), reflected on the past decade, and speculated about what might lie ahead:

Next year, and perhaps the new decade, will be another challenging time for all of us in this critical industry, with more legislative changes and reforms scheduled to roll out from 2020 (VBA, 2019).

Those concerns would soon be overshadowed by an unforeseen crisis – a threat that would leap borders, topple industries, and claim millions of lives. On New Year's Eve 2019, international media began reporting on a mysterious disease outbreak in China. Health authorities suspected pneumonia. As the sun rose on a new decade, few could have guessed just how swiftly and profoundly the world was about to change.



### 3.1.2 A WORLD OF TROUBLE: JANUARY–MARCH 2020

#### Key Dates

<b>25 JAN</b>	Australia records first coronavirus case
<b>1 MAR</b>	Australia records first Covid-19 death
<b>11 MAR</b>	WHO declares global pandemic
<b>16 MAR</b>	Victoria declares State of Emergency
<b>18 MAR</b>	BIG1 meets with Victorian Government
<b>23 MAR</b>	National shutdown (non-essential businesses)
<b>25 MAR</b>	Industry Covid-19 Guidelines (V1)
<b>31 MAR</b>	Lockdown #1 begins (Vic, Stage 3), JobKeeper scheme launched
<b>31 MAR</b>	Industry Covid-19 Guidelines (V2)

#### Dark Clouds Gather

As construction sites across Victoria reopened after the Christmas break, Australia's Black Summer bushfires were nearing their horrific peak. In January 2020 Eastern Victoria was ablaze, Melbourne blanketed in smoke. Chief Health Officer (CHO) Brett Sutton declared the city's air quality to be "the worst in the world", and the CFMMEU warned its members against working outdoors, with reports of tradies coughing up blood on CBD worksites (Eddie et al., 2020).

Sutton soon had his hands full with a new threat. On 25 January the "novel coronavirus" first identified in the city of Wuhan, China, officially landed in Australia. First stop: Melbourne. Over summer 2020, the virus still seemed remote to most Australians, likely to fizzle out. Initially, most in the building and construction industry shared that sentiment. But that soon changed.

"At first there was some scepticism amongst our board," recalls Incolink CEO Erik Locke. "We'd been through swine flu, bird flu, and escaped reasonably unscathed." A phone call from a well-informed friend, a senior health official working interstate, set Locke straight. "He told me, 'This thing is much more contagious than flu. If it comes here, it's going to be disastrous.'"

Whatever was brewing, Locke realised, Incolink had to be ready. What if the construction industry was shut down? Faced with mass layoffs, the redundancy fund would be flooded with claims from members. "I realised we would go broke very quickly if that happened," says Locke. "That would be bad news for workers, bad for us, and bad for the industry." Work-life balance was about to go out the window. From that point on, he recalls, "We were very much in a siege mentality."

### Safety Net: Hardship Payments

On Sunday 23 February, Victoria's CHO sent out a tweet predicting a pandemic. At 9pm that night, Locke rang Ashleigh Dalmau, his Chief Operating Officer, to brainstorm Incolink's plan. "We had to make sure we could provide financial support to every single one of our members," says Dalmau. "So we put together a mechanism to stop a run on the money."

Anxiety was mounting. On 1 March, Covid-19 claimed its first Australian life. On 11 March, the WHO declared a global pandemic. Meanwhile, Locke and Dalmau began preparing for the worst: they restructured the Incolink fund, streamlined claims, ran a liquidity check, and set up hardship payments for members. They also started thinking about industry testing for this new pathogen. Once tests became available, could Incolink run an onsite testing program for Victoria's construction workforce?

By mid-March, the virus had killed four more Australians. Event cancellations drove the situation home. On Friday 13 March, Mounir Kiwan, a senior advisor to Victoria's Minister for Tourism, Sport, and Major Events, had a day off work to attend the Grand Prix. But an F1 driver had tested positive, and teams were pulling out. That morning, as fans milled outside the locked gates of Albert Park, the CHO's advice finally went public: the Grand Prix was cancelled. Kiwan headed in to work, one thought in mind: *We're about to be in a world of trouble here.*

### Strange Bedfellows:

#### The BIG1 Industry Alliance

On Monday 16 March, the Victorian Government declared a State of Emergency, granting the CHO emergency powers in a bid to "flatten the curve" of infections. That afternoon, a small group of industry leaders from the CFMMEU, MBV, Multiplex, and Probuild were meeting to discuss industry standards.

The new virus hi-jacked the agenda. "At that session it became clear that Covid-19 was an urgent and immediate priority," says Rebecca Casson, former CEO of MBV.<sup>6</sup> "[We realised] the sector must turn its mind to how to deal with that issue, and how we work together to keep the industry safe and open." The group brainstormed ideas, soon filling a whiteboard.

Casson then contacted the office of Victorian Premier Daniel Andrews, seeking an audience with senior Government officials. She rallied the sector's employer associations, while CFMMEU construction boss John Setka gathered the relevant unions. On 18 March an industry delegation met with senior Government advisors, the deputy CHO, and departmental secretaries at Parliament House. The goal: to develop a set of CHO-approved safety guidelines to ensure the sector could safely remain open. Now 12 members strong, the group was christened BIG1, with Casson appointed Chair.<sup>7</sup> (See Appendix for BIG1 members).

This new alliance was highly unusual: for decades, Victoria's construction unions and employer associations had been sworn enemies. The acrimony played out publicly, with neither side pulling punches. Long at loggerheads, they now faced a common foe. The next round of EBA negotiations had already begun, but bargaining was suspended to focus on dealing with this new threat. As the world turned upside down, the newly formed group began hammering out a plan to keep the construction industry afloat.

BIG1 members agreed that three core principles would guide their work: 1) Keep the industry operating; 2) Keep workers safe; and 3) Follow the experts' advice. "That third point was really important," says Randell Fuller, a senior IR advisor and industry leader who worked closely with BIG1's core strategy team in an advisory role.

<sup>6</sup> Casson stepped down as CEO on 2 December 2022, after four years in the role. She is currently President of Incolink.

<sup>7</sup> The BIG1 moniker came from an acronym used by an existing group of unions, BIG (Building Industry Group of Unions). The group added a "1" to reflect the fact that unions and employer associations would work "as one" during the pandemic.

“There were so many rumours flying around, so much uncertainty. We had to be disciplined and listen to the experts, ignore all the gossip that was flying around.”

By this point, 350 countries had closed their borders (Shiraef, 2021). Australia followed suit on 20 March. But just one day prior, 2650 cruise ship passengers had disembarked in Sydney Harbour, scattering home in all directions. Amongst them were some 300 Covid cases. Australia’s first super-spreader event, the *Ruby Princess* debacle would ultimately result in 28 deaths (NSW Health, 2020; State of NSW, 2020).

On 25 March, BIG1 released the first Industry Covid-19 Guidelines for the building and construction sector. Created over a week of intense collaboration, the 17-page document set out measures to minimise transmission on construction sites; protocols for handling cases and close contacts; rules for stand-downs, site closures, lockdowns, and redundancies; and supports and entitlements for affected workers. Anchored in official public health advice, the first Guidelines were drafted by labour relations consultant and industry expert Peter Parkinson, who was subsequently appointed Chair of the newly formed Building and Construction Industry Working Group (BCIWG). These Guidelines would be the first of 17 versions created by the BCIWG (see Appendix for members).

In a media release, the BIG1 group stated that its member organisations “have united to send a strong message” to Victoria’s building and construction industry: “Treat this situation very seriously and with the highest importance by adhering to all the recommended safety procedures” (PCA, 2020).

### The First Wave Hits

In March 2020, Australia battened down the hatches. All “non-essential” businesses and venues shut down, schools and state borders

began to close, and gathering bans and social distancing were imposed. The JobKeeper wage subsidy program was announced, along with major government stimulus packages (Aus Gov, 2020a). As job cuts hit the nation, thousands queued outside Centrelink offices.

On 30 March, Victoria’s stay-at-home orders came into force, with “four reasons to leave home”: essential work/education, essential shopping, medical appointments/caregiving, and exercise. That day, one of 500 construction workers at a Southbank worksite tested positive to Covid-19. He’d caught it offsite from his partner, a nurse. Multiplex closed the site for deep cleaning and 20 workers entered 14-day isolation.

“We were the first or second company [in the industry] to have a positive case,” says Paul Breslin, Regional OHSE Manager for Multiplex (AAP, 2020). “We were trying to contact the Department of Health to seek advice, but there was sheer panic, you couldn’t get through.”

At first, recalls Breslin, when someone tested positive, the initial consensus was to shut down the worksite and move workers on to different projects. But as Victoria’s case numbers escalated and soaring graphs laid bare the reality of exponential spread, the flaws of that approach swiftly became clear: “I think everyone in society was learning on the run during this pandemic,” says Breslin. “We were just starting to come to terms with what was happening, and how to manage it - not just the industry, but the country itself. From there, we lived and learned.”

The learning curve was global: the whole world was caught off guard by this new virus. In late March 2020 the World Health Organisation (WHO) sent out a tweet: “FACT: #COVID19 is NOT airborne (Lewis, 2022). This advice would turn out to be both hugely influential and enduring. Tragically, it was also incorrect.



### 3.1.3 ALL HANDS ON DECK: APRIL–JUNE 2020

#### Key Dates

<b>20 APR</b>	Industry Covid-19 Guidelines (V3)
<b>23 APR</b>	Incolink Covid-19 Hardship Payments launched
<b>28 APR</b>	Industry Testing Program launched
<b>12 MAY</b>	Lockdown #1 eased
<b>18 MAY</b>	Victorian Government Big Build Package (\$2.7b)
<b>4 JUNE</b>	HomeBuilder grant program (Federal)
<b>24 JUNE</b>	Industry Covid-19 Guidelines (V4)

#### Becoming “Essential”

As Covid-19’s first wave broke across Victoria, the State Government had to swiftly decide which sectors should remain open, and under what conditions. Healthcare and supermarkets had a clear mandate; to most observers, building and construction seemed less clear-cut. The pressure was on: by mid-April, Victoria had almost 1300 active cases, 15 people in intensive care, and 14 recorded deaths (DHHS, 2020). The State’s real unemployment rate had hit 9.7 percent (BCEC, 2020: 3).

When select Victorian industries were first granted “essential” status, the announcement had effectively been made by default. The CHO’s office had defined “non-essential” businesses in late March, directing them to shut down (Van Diemen 2020a, 2020b). The building and construction industry was not on the list.

Behind the scenes, BIG1 had been arguing the industry’s case. At this early stage, several factors tipped the scales in its favour: the sector’s economic contribution (\$21.6 billion) and large workforce (300,000+); the critical nature of some of its activities; its highly regulated health and

safety environment, reflecting the work’s often-hazardous nature; and the sector’s proactive, alliance-based approach to working with Government, as evidenced by the early and rapid development of the Industry Covid-19 Guidelines. (See Section 3.3.3 and Section 4.1 for more detail on longer-range “success factors”.)

“Construction is a dangerous industry,” says PPTU Secretary Earl Setches. “Every day our people are working in trenches, dealing with asbestos, silica dust. Working with heights, confined spaces, stagnant water, hepatitis. They’re used to working in hazardous situations, wearing PPE. They’re trained for it. And the way we work is already very systematic. We have systems in place, safety committees. On a worksite you have a risk toolbox meeting every morning to discuss what you’re doing, how dangerous it is, and how you’ll manage it safely. So we were absolutely confident we could manage Covid safely.”

Within the Victorian Government, there were lively discussions about which industries should be deemed “essential”. Mounir Kiwan, then senior advisor to Minister Martin Pakula, was privy to those conversations. “There was some debate, but

there was a fact-check process,” Kiwan recalls. “Some infrastructure is critical. As a result [of that process], there was recognition within Government that from an economic perspective the building and construction industry should be permitted to maintain some level of activity.”

Staying open was both a challenge and a privilege. To earn it, industries had to convince the Government they could minimise the risk of transmission. With other sectors shut down, early reports of non-compliance on construction sites understandably sparked both public ire and Government warnings (Lucas, 2020). BIG1 leaders publicly urged those responsible to lift their game. “[We need] to treat this situation seriously,” MBV’s Rebecca Casson told *The Age*. “It’s a matter of life and death.”

Initially, some industry insiders were wary about remaining open. “Some people said to me, ‘Shut everything down!’” recalls CFMMEU Construction Secretary John Setka. “But then they grasped onto the ramifications. You couldn’t just shut the whole industry down. It would be unfixable.”

#### Viral Surveillance: Workforce Covid-19 Testing Program

By April 2020, Incolink had developed a pilot program to test construction workers for Covid-19, targeting asymptomatic cases onsite. Designed and rolled out in record time, it was springboarded by an existing partnership with the Australian Prostate Centre (APC). Using a specially kitted-out bus, APC had been providing free onsite health check-ups and seasonal flu jabs for Incolink members since mid-2019. Uptake for that program had been strong, helping to counter low GP visitation rates in the largely male construction workforce.

“We were already partners with Incolink, so we could pivot the program we’d already been taking to worksites,” says Chris Bolger, APC’s Operations Manager. Program set-up was a rigorous process involving international accreditation, government approvals, pathology partnerships, medical staffing, PPE training, securing PCR tests, and more. “We had to put all that into place yesterday,” says Bolger.

After a flurry of activity, everything was set: they’d launch the pilot on 28 April and test 1000 workers over four weeks. Two days before kick-off, Incolink CEO Erik Locke got a late-night call from the Victorian Department of Health. Any chance Incolink could bump up the testing numbers? Locke asked by how much. The answer was a shock: could they do 10,000 tests in two weeks? Gritting his teeth, Locke agreed. Just one thing: could the Department provide some bleeping tests?

“We had only a handful of [PCR] tests then,” says Locke. “They were in short supply. Suddenly we went from planning to do 1000 tests over a month, to 10 times that figure in half the time. It was very stressful. But somehow we managed to do it.” The pilot program launched at the West Side Place worksite in Melbourne’s CBD. Media turned out in force, snapping photos as industry leaders gamely bared their nostrils for the swab. Hardship support launched that same month, enabling Incolink members who lost income due to Covid to access \$2000 monthly payments from their accumulated redundancy entitlements.

#### Expertise: The Liaison

The virus was a moving target, and both unions and employers needed fast access to ever-evolving health advice. But the Health Department was snowed under, the coronavirus hotline swamped. A go-between was needed, someone to act as a conduit between employers, unions, and the DoH. Just after Easter in 2020, DHHS appointed consultant Michael Paynter to the new role of Industry Liaison Officer (ILO).

Paynter had a 40-year track record in industrial relations, OHS compliance, and dispute resolution within the sector, working with both employers and unions. Collaborating with the Building and Construction Industry Working Group (BCIWG, see Appendix), Paynter helped coordinate, draft, and disseminate regular updates to the Industry’s Covid-19 Guidelines, in consultation with WorkSafe, DoH, DJPR, the VBA and other industry and Government bodies. During his two-year appointment he also ran the VBA’s dedicated industry Coronavirus Hotline and the sector’s early contact tracing system (July-



September 2020), tracked voluntary case notifications within the sector, undertook risk assessments, provided advice on managing positive onsite cases, worked with unions to train 650 worksite Health and Safety reps (HSRs) (in July 2020), and ran a Gold Standard Award Program to recognise best-practice Covid-safe worksites (see [p.33](#)).

#### Government Stimulus: Building Works and HomeBuilder

In early May 2020, the building and construction sector employed around 303,100 Victorians, around 9 percent of the State's workforce (Pakula, 2020). That workforce had already shrunk 7.3 percent over the previous six weeks, equating to the loss of 22,488 workers (Bleby, 2020). While the industry was faring much better than many other sectors (PAEC, 2020: 89), it was facing a stalling work pipeline, job losses, supply chain disruptions, contractual uncertainties, and additional costs arising from Covid-19 mitigation measures (PAEC, 2020: 93; ACIL Allen 2020: 15, 20; Bell et al., 2022).

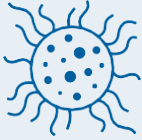
International border closures added to the uncertainty that was spooking the sector. "You didn't know whether a project would be cancelled," recalls Jen Marks, Director of National Strategy at Built. "We had one project, a hotel at the [Tullamarine] airport. We had to stop it at the fit-out stage. That had a huge impact on our future revenue." Supply chain disruptions were a related challenge. "Anything coming from overseas was affected, particularly

China - facades, joinery, stone," says Marks. "Then it spread to Europe. We had lifts coming from Italy, condensers coming from Germany."

The Victorian Government's \$2.7 billion Building Works Package was welcome news for the industry. Announced mid-May, it aimed to create 3700 direct jobs and included funding for 10 new schools, 165 new public housing properties, and upgrades to 57 schools, 23,000 public housing units, transport infrastructure, community and emergency facilities, and tourism sites (Prem Vic, 2020a). The newly formed Building Recovery Taskforce (BRT) also fast-tracked project approvals. Residential construction got a boost in June with the Federal Government's HomeBuilder scheme, granting eligible owner-occupiers and first-home buyers \$25,000 grants for new builds or major renovations, while the JobMaker scheme committed new funding nationally for smaller-scale, shovel-ready infrastructure projects.

During the first lockdown, homebound Victorians discovered baking and gardening. Kids put teddy-bears and rainbow signs in their front windows for passers-by to spot. Case numbers began to wane over April and May. Schools began re-opening in June 2020, with office workers due to return to their desks the following month. But the relief was short-lived: a second wave was already on its way.

"We were already partners with Incolink, so we could pivot the program we'd already been taking to worksites," says Chris Bolger, APC's Operations Manager.



### 3.14 STATE OF DISASTER: JULY–SEPTEMBER 2020

#### Key Dates

<b>2 JUL</b>	Postcode lockdowns (36 Melbourne suburbs)
<b>8 JUL</b>	Lockdown #2 begins (Melbourne + Mitchell Shire, Stage 3)
<b>14 JUL</b>	Industry Covid-19 Guidelines (V5)
<b>28 JULY</b>	Industry Covid-19 Guidelines (V6)
<b>2 AUG</b>	Victoria declares State of Disaster (Melbourne Stage 4, Vic Stage 3)
<b>3 AUG</b>	Melbourne Stage 4, Regional Vic Stage 3
<b>16 AUG</b>	Workforce caps (large sites 25 percent, small sites 5 workers)
<b>21 AUG</b>	Industry Covid-19 Guidelines (V7)
<b>6 SEP</b>	Roadmap out of Stage 4 lockdowns
<b>28 SEP</b>	Workforce caps ease (large sites to 85 percent, or 15 workers)

#### Testing Times

Winter 2020 was tough. Covid's second wave hit Victoria in July, fuelled by outbreaks in hotel quarantine, healthcare, the meat industry, and private gatherings. With case numbers rocketing, a mounting death toll and no vaccine in sight, anxiety levels were high. The construction workforce was no exception. Workers were worried about their kids and elderly relatives; their families were worried too.

"Our members were going home at night to their wives and children. That was a real concern for their spouses," says Rob Graauwmans, President of the CFMMEU's Construction Division (Vic/Tas). "We got a lot of emails from spouses saying, 'Shut the industry down.'" To show solidarity and reassure its members, the union bosses maintained an active presence on worksites.

"It was really important for us to be seen onsite," says John Setka, CFMMEU's State Secretary for Construction. "There was a lot of anxiety. People had never faced something of that magnitude." He recalls a dawn visit to address 800 workers after an outbreak on a site. It took three hours. "We talked to them in groups of 200, all standing 1.5 metres apart, with Xs on the floor. We had to calm everyone down: 'We're here with you. We're not hiding in the office. We're all in this together, and we'll get through it together.'"

Compliance reminders were combined with morale boosts. "It was important to restore people's confidence and remind them to stay safe - 'Look after your mates,'" says Setka. "All the schools, offices and apartments still needed to get built. We told them they should feel proud."

Privately, the anxiety was shared: “I had sleepless nights – ‘What if we have a *Ruby Princess* situation on a building site?’”

To help minimise spread, larger employers developed internal contact-tracing systems, using swipe cards, apps, and/or Bluetooth technology. The industry’s onsite testing program provided further reassurance. APC medics and Incolink staff visited multiple worksites daily, with on-ground support from union delegates. A partnership with Melbourne Pathology enabled quick turnarounds and bulk volumes. The program was backed by the ETU (Electrical Trades Union) and industry super fund Cbus (Construction and Building Unions Superannuation), with matched funding from the State Government. Some workers were initially spooked to see medics clad in full PPE, recalls APC’s Chris Bolger. “But in those early days, they welcomed us. Our medical officers were inundated with questions: ‘Do I have Covid? If I’ve got it, am I going to die? How can you catch it, how sick will you be?’”

#### Flattening the Curve: Winter Lockdowns

By mid-2020, the virus had killed 179 Australians, more than half of them in Victoria (Aus Gov, 2020b). Overloaded Melbourne hospitals cancelled elective surgery. To curb the second wave, the State Government ramped up public health measures. Mask mandates were yet to come, but Incolink had already sourced a supply. “We had identified a need for masks in construction, so I engaged with a KN95 supplier and bought a stockpile,” says COO Ashleigh Dalmau. The timing was spot on.

After postcode lockdowns, July brought Stage 3 restrictions for Melbourne and Mitchell Shire, with the “four reasons to leave home” rule, remote working, and a “ring of steel” separating Melbourne from regional Victoria. When mask mandates came into force, Incolink quickly distributed 40,000 cost-price masks to industry, all KN95-rated.

In early August, Victoria declared a State of Disaster, closing the NSW border and imposing shutdowns for some sectors and new controls

for others, construction included. Regional Victoria moved to Stage 3 restrictions, while Melbourne went up to Stage 4: home schooling, a five-kilometre travel limit, and nightly curfews (Wahlquist, 2020; Frost & Mizen, 2020; Butt, 2020). Defence troops were deployed to door-knock people eluding phone-calls from contact tracers, with multiple fines issued for self-isolation breaches.

These stringent measures – including mask mandates – would effectively quash Victoria’s deadly second wave (Trauer et al., 2021; Burnet Institute, 2021a; Scott et al., 2021), but not before it swept through aged care facilities, causing a devastating death toll. In mid-August 2020 Covid killed 25 Victorians in one day. Once restrictions took effect, case numbers began to drop. But the public health measures angered some parts of the community. Protests had been springing up since May, some turning violent, with attendees railing against lockdowns, social distancing, and as-yet undeveloped vaccines, and organisers touting conspiracy theories about Covid, 5G, Bill Gates, and climate change (Dexter, 2020; Ball & Maxman, 2020; Paynter, 2020). From August 2020 on, this social unrest began to escalate (Clure & Paul, 2020).

“Construction, which in many respects is the lifeblood of the Victorian economy...will scale back but not fully close,” said Premier Daniel Andrews (Ollie, 2020). The industry shifted to “pilot light” mode under Stage 4 restrictions, with 25 percent workforce caps for large sites, five people on smaller sites, Worker Permits, mobility restrictions, renovation bans, and “High Risk CovidSafe Plans” for all worksites (Vic Gov, n.d.). State infrastructure and civil projects were largely exempt from caps. These Stage 4 restrictions cost the industry an estimated \$600 million over six weeks (Clarek, 2020).

By late August 2020, over 17,000 PCR tests had been administered at 210 construction worksites across Victoria and Tasmania under the industry’s testing program (Incolink, 2020). Remarkably, only 10 people had tested positive (BIG1, 2020b). Where a positive case was detected, a testing blitz was run on remaining workers, either that same day or the next. While tests were voluntary, the Building and Construction Industry Working

Group (BCIWG) strongly recommended that where a case was confirmed onsite, any worker who refused testing should not be allowed back on that worksite (Kilgour, 2020).

#### Expertise: The Strategist

In late August, BIG1 sent Daniel Andrews a letter. The group's second public missive to the Premier (see BIG1 2020a), the letter updated him on industry efforts and restated the sector's support for CHO Directions. Highlighting the financial and logistical impacts of State 4 restrictions, the group estimated that productivity on large-scale projects had fallen to 25 percent of normal levels, while domestic construction had seen an estimated 66 percent drop. Over a dozen or so pages, it also set out a proposed strategy for easing back to Stage 3 restrictions, aiming for a return to full capacity by mid-September (BIG1, 2020b).

This 14-page document was drafted under guidance from consultant Christine Wyatt, who'd been working with BIG1 since June. With 30 years' experience in the private sector, plus senior government roles in planning and infrastructure, Wyatt understood both building sites and bureaucracy. Steering clear of advocacy, over 18 months she provided strategic advice to help BIG1 frame industry concerns, draft proposed solutions, and express them effectively for Government decision-makers. Walking the talk was vital, Wyatt emphasised: "Industry had to demonstrate it had integrity and was serious about this. That it wasn't seen as a bunch of cowboys. That it could do this right and retain credibility."

BIG1 watched the numbers closely. The State Government's daily pressers became essential viewing. "I'd watch the daily press conference, look at the body language, and you could see what message was coming," says Wyatt. In July, Jeroen Weimar was appointed as Victoria's

Covid-19 Response Commander, joining Andrews and Sutton onscreen. "We were all pretty addicted to those press conferences," recalls Earl Setches, head of the plumbing union (PPTEU). "Everything was about the numbers - case numbers, hospital numbers, ICU beds. Every morning when Daniel Andrews got up to read the numbers, we'd all shit ourselves if there was a spike. As soon as he spoke, we'd know if we were getting close to lockdown."

#### The Tide Turns: Roadmap Out of Lockdowns

The Victorian Government released its "Roadmap out of Stage 4 Lockdowns" in early September 2020, setting out a four-step "traffic light" approach for easing restrictions, dependent on case numbers (Prem Vic, 2020c). Regional Victoria would soften restrictions first, with stay-at-home orders set to lift almost immediately. For metro Melbourne, few changes would occur until mid-October.

The Roadmap largely reflected what BIG1 had put to the Premier last week, but with a more cautious slant. "If we open up too early, we risk another resurgence and undoing the work we have done," said Professor Allan Cheng, Deputy CHO. On the Sunday it was released, further discussions ensued. "On Father's Day [BIG1] negotiated with Government to shift to 85 percent workforce, or 15 people [for large-scale sites]," says Rebecca Casson, then-CEO of MBV. Small worksites remained capped at 5 people, but movement restrictions eased slightly. These new rules took effect in late September (Heaton, 2020). Industry lobbying also saw the renovations and domestic construction subsectors allowed to re-open (Casson, 2020: 12).

As spring set in, the graphs began to dip. After a rough winter, Victoria's second wave was finally in retreat.



### 3.1.5 LIGHT ON THE HORIZON: OCTOBER–DECEMBER 2020

#### Key Dates

<b>16 OCT</b>	Industry Covid-19 Guidelines (V8)
<b>23 OCT</b>	Framework for Reopening released (National Cabinet)
<b>27 OCT</b>	Lockdown #2 eased (Melbourne back to Stage 3)
<b>27 OCT</b>	Construction returns to full capacity
<b>9 NOV</b>	Ring of Steel lifted
<b>9 DEC</b>	Industry Covid-19 Guidelines (V9)
<b>21 DEC</b>	Victoria closes NSW border

#### Open for Business

On 26 October 2020, Victoria recorded a “double zero” – two consecutive days of no community transmission – for the first time since June.

On this first auspicious “donut day”, Premier Daniel Andrews announced the easing of lockdowns across Victoria. After 122 days of hard lockdown, metro Melbourne reverted to Stage 3 restrictions, and construction sites went back to full workforce capacity.

Despite easing restrictions, an anti-lockdown protest was held in Melbourne a week later, with 400 people arrested and fined for breaching gathering bans, mask mandates, and the 25-km travel limit (ABC, 2020). In early November the “ring of steel” separating Melbourne from regional Victoria was lifted. The first Rapid Antigen Tests (RATs) arrived in early December, and the industry began trialling them on worksites.

#### A Turbulent Year

In its end-of-year forecast, MBV noted that the pandemic had dealt commercial construction a significant blow in 2020. However, extra government investment in civil construction was predicted to offset this decline, and residential construction had been strongly buffered by the HomeBuilder scheme, which had been extended to March 2021 (MBV, 2021a).

Ongoing uncertainty had seen multiple building projects put on hold or cancelled, jeopardising work pipelines and putting builders at risk of contractual penalties for late delivery. “The most challenging thing was trying to negotiate the penalties,” recalls Jen Marks, National Director of Strategy at construction company Built. “Most clients [gave us some] relief from penalties, but very few paid for the time impact of the delays.” With the stakes so high, greenlighting a new build felt like a major feat. “It was a huge relief to get [one] over the line,” she recalls. “It was a bigger win than it would normally have been.”

The Industry Guidelines had been instrumental to the sector's survival in 2020. So far, the Building and Construction Industry Working Group (BCIWG) had rolled out nine versions, with a growing roster of both Government-mandated and industry-initiated measures to minimise worksite transmission. Updates mirrored changing public health advice, case number trends, fluctuating restrictions, sector-specific rules, and voluntary "best practice" measures driven by industry. Behind the scenes, there had been constant negotiation over the detail: the BIG1 group and the Victorian Construction Industry Safety Alliance (VCSA) provided input, the State Government's Rapid Industry Guidance (RIG) Covid-19 Taskforce had oversight, and the Building Industry Consultative Council (BICC) endorsed each version (see Appendix).

At the worksite level, trained health and safety reps (HSRs) oversaw compliance with the Guidelines. In October 2020, an updated version gave them extra backing in the form of Covid Marshalls - new roles dedicated to supporting compliance on larger worksites (BIG1, 2020, V8). Reflecting the cultural diversity of the workforce, the next version of the Guidelines introduced a Covid-safe messaging campaign targeting culturally and linguistically diverse (CALD) construction workers, with posters and social media tiles in 16 languages (BIG1, 2020, V9); the social media posts racked up millions of views (Faine, 2021).

"The CALD comms had never been done before," says Building Industry Liaison Officer (ILO) Michael Paynter, who worked with the BCIWG to produce the Guidelines. "That [initiative] was conceived by the BIG1 group and all funded by the industry." The Guidelines had also provided a blueprint for other sectors and jurisdictions to devise safety protocols. The meat and heavy haulage industries replicated elements, recalls Paynter, as did construction in NSW, Queensland, and Western Australia.

Based on the best available data, reported case numbers on Victorian construction sites had remained relatively low in 2020 compared to infections in the wider community. However,

reporting positive worksite cases to the ILO was a voluntary process. And while major builders and the civil and commercial sectors had well-established systems for tracking and reporting figures, there was no mechanism for capturing centralised case data across the industry's myriad smaller operators, which are primarily in the domestic construction subsector. These hurdles made it logistically impossible to accurately gauge case numbers across the whole industry. However, data from Incolink's onsite PCR testing program suggests that case numbers in commercial and civic construction likely remained relatively low over 2020. While the program was voluntary, and targeted asymptomatic cases, its coverage was substantial (see p.60).

#### End of the Tunnel?

Over this first eventful year, Covid-19 had killed close to 900 Australians. Almost 90 percent of those deaths were in Victoria, and 75 percent were aged care residents (AIHW, 2021: v). While 2020's challenges had also taken a toll on Victorians' mental health, the State's suicide rate remained the same as the previous year, despite claims to the contrary by anti-lockdown groups (AIHW, 2021: vii).

When construction knocked off for the 2020 Christmas break, the economy was on the upswing, but uncertainty remained rife. Like much of the world, industry leaders were eagerly awaiting news on vaccines. Then-Prime Minister Scott Morrison had announced vaccine deals for Novavax and Pfizer in early November, and Incolink was lobbying Federal Government to secure supplies for the sector.

Days before Christmas, as outbreaks escalated across NSW, Victoria closed the State border (UDIA, 2020). Over in the UK, almost one million people had received their first dose of the Pfizer vaccine in the first two weeks of vaccine rollouts (Campbell, 2020; Timmins & Baird, 2022: 23). The UK's vaccination program launch had sparked a major boost in consumer confidence (Reuters, 2020). With Australian's vaccine rollout due to kick off in February, there seemed to be light at the end of the tunnel.



### 3.1.6 UP IN THE AIR: JANUARY–MARCH 2021

#### Key Dates

<b>12 FEB</b>	Lockdown #3: Snap 5-day lockdown for Victoria (Stage 4); construction shuts down
<b>16 FEB</b>	BIG1 writes to Premier Daniel Andrews
<b>16 FEB</b>	Industry Covid-19 Guidelines (V10)
<b>17 FEB</b>	Lockdown #3 eased (Stage 3); construction re-opens
<b>4 MAR</b>	Industry Covid-19 Guidelines (V11)
<b>28 MAR</b>	JobKeeper scheme ends

One year into the pandemic, the official global Covid-19 death toll was 2.2 million (WHO, 2021), but the true figure was probably double that (Karlinsky & Kobak, 2021; Adam, 2022). In January 2021, Australia's death rate remained comparatively low (Nicholas, 2022). Optimism was boosted by vaccine shipments arriving, with then-Prime Minister Scott Morrison announcing a target of 4 million vaccine doses by end of March.

As construction resumed after the Christmas break, BIG1 bumped up its Covid-safe messaging on worksites. The gist: if you have symptoms, or suspect you've been exposed, don't come in to work. Forget that "soldier on" jingle - just stay home.

"That messaging was interesting, because it was about the social contract," says Christine Wyatt, former strategic advisor to BIG1. "Making sure you protect not just yourself, but also your community, your workmates, your mates. Telling your boss, 'I'm sick, I can't come in.' That was a real shift from how things used to be, when you'd go to work with a cold."

#### Circuit-Breaker: Snap Lockdown

In January 2021, Victoria's leaky hotel quarantine system became host to Alpha, a fast-moving new

UK variant (Katella, 2022). When a quarantined family briefly opened their door to collect a food tray from the corridor, Covid-laden air floated out, infecting the person in the next room. This discovery prompted an important but overdue shift in understanding (see "Something in the Air", overleaf).

On 12 February Premier Daniel Andrews announced a five-day "circuit-breaker" lockdown across Victoria (Murray-Atfield, 2021; Katella, 2022). The Australian Open went ahead, with fans watching from home. But this time, building and construction was not exempt: aside from critical infrastructure projects and emergency repairs, the industry was shut down. Blindsided by this move, industry leaders hit the media.

"The building and construction industry accounts for 45 percent of our state tax revenue," MBV's CEO Rebecca Casson told ABC Gippsland. "This could have a devastating effect on the future economic recovery if lockdown [goes] longer than five days" (Davis et al., 2021). Describing the lockdown as a "total shock", MBV President Mark Little said his domestic building company had just two hours' notice to shut down seven active worksites (Shying, 2021).

The BIG1 group again wrote to the Premier, re-stating the industry’s commitment and urging him to end the snap lockdown, estimating its daily impact at \$455 million in lost revenue and \$63 million in lost wages. Australia’s construction sector was a major recipient of JobKeeper, receiving \$1.67 billion nationally over the final quarter of 2020 (Pickering, 2021). The scheme’s looming demise made further industry lockdowns an even more daunting prospect (Insight Centre, 2021: 10).

Construction re-opened at full capacity on 18 February (Vic Gov 2021a). “Our advocacy focus will now shift to ensure a ‘snap lockdown’ like this does not occur in our industry again,” wrote John Kilgour, CEO of Civil Contractors Federation Victoria (CCFV), in a statement to members (Kilgour, 2021).

#### Something in the Air: Aerosols, Masks, and Ventilation

In the summer of 2021, Australia’s leaky hotel quarantine system drove home an urgent point. Frustrated experts once again urged political leaders to acknowledge the smoking gun: Covid is an airborne disease (Scott, Clark, & Lloyd, 2021; Hyde, Berger, & Miller, 2021). In early February, Premier Daniel Andrews commented that aerosol spread had to be “taken seriously” (Cunningham & Mannix, 2021). When construction reopened two weeks later, the Industry Guidelines had been updated to reflect this shift:

Health Authorities have established that... new variants are more likely to be spread via aerosol transmission and these Guidelines have been amended to enhance the precautions to minimize this risk (BIG1, 2020, V10: 2).

Adequate ventilation and air flow should be maintained in enclosed [worksite] amenities, for example by opening windows/doors to allow fresh air, installing fans and/or exhaust fans and/or air purifiers, turning air conditioners to ‘fresh’ not recirculate (BIG1, 2020, V10: 13).

Until then, public health advice in Australia and many other countries had assumed that Covid-19 could spread in just two ways: through “close

contact” with an infected person, usually via short-range “droplets” from coughing or sneezing, which fell to the ground quickly; or, more rarely, via contact with contaminated surfaces.

But for many months, scientists had been warning that Covid was airborne – spread via tiny floating particles called aerosols. Drifting out whenever we exhale or speak, aerosols can spread long distances and linger in the air for hours. Despite mounting evidence, health authorities in Australia and around the world were slow to acknowledge this risk.

The Industry Guidelines were based on official public health advice and could not deviate from the Government’s official position at the time. But behind the scenes, BIG1 members had been talking about ventilation, masks, airflow, and other air quality issues for many months. The industry harbours wide-ranging expertise, including knowledge of how viruses can spread and how air moves around a building. Plumbers work with ventilation systems, gases, and dangerous infectious pathogens. BIG1 members included the plumbers’ unions and peak bodies, so airborne transmission was on the group’s radar from the outset (see Discussion, Section 4).

“The plumbing sector was very conscious of the lessons from SARs and avian flus,” says Peter Daly, Master Plumbers CEO. “We knew a previous SARS outbreak in Hong Kong was spread through ventilation.” In 2004 scientists traced a major SARS-CoV-1 outbreak to airborne spread via apartment-block plumbing and ventilation systems (Yu et al., 2004). When the Covid-19 pandemic began, researchers warned the world about potential airborne transmission of SARS-CoV-2 via wastewater plumbing (Gormley et al., 2020). The two coronaviruses are close cousins (Goh et al., 2022). Before Melbourne workers had returned to offices after the mid-2020 lockdowns, Master Plumbers sent a bulletin to its members: run all the taps in the building – every shower, toilet, sink and drain – to restore the evaporated water in the U-bends. Why? That “water plug” blocks both bad smells and airborne pathogens, Daly explains.



Study informants reported that industry leaders raised concerns about potential airborne spread with governments on multiple occasions, but their efforts were stymied by official policy settings. “The BIG1 group was warning government about airborne transmission well in advance of them having a lightbulb moment,” Daly recalls. “Government and the public service tried their very best to stay on top of [Covid]. They did some fantastic work. But you can only act on the evidence you have at the time.”

Peter Parkinson, who chaired the group that produced the Industry Covid-19 Guidelines, confirms Daly’s assessment. “From around mid-2020, or even earlier, [industry leaders] were raising the issue of clean air. But the [State] Government’s appetite for that idea was pretty low,” says Parkinson. “They didn’t actively try to shut it down. The Government was acting in good faith. But they were taking their advice from [one expert] who pooh-poohed the whole idea of the air-cleansing approach.”

Like Covid itself, this blind spot was a global problem. Back in mid-2020, some 240 international experts had published a joint letter urging world leaders to recognise Covid-19 as an airborne disease and update their infection control advice: improve ventilation and airflow, monitor air quality, reduce crowding, and install air filters/sterilisers (Morawska & Milton, 2020). “Once the WHO says it’s airborne, then all the national bodies will follow,” predicted campaign head Professor Lidia Morawska, a world-leading Australian aerosol scientist (Lewis, 2020).

But the WHO resisted these warnings for over a year, insisting airborne spread was rare, and lagging well behind the science on both ventilation advice and facemasks (Tufekci, 2021; Lewis, 2022; Mandavilli, 2020; Gruszczynski & Melillo, 2022). Australia’s Federal health authorities followed the WHO’s example, ignoring repeated warnings about airborne spread from medical experts, including the Australian Medical Association (AMA) (Woodley, 2020a; Woodley, 2020c; Dow & Koziol, 2021). The Victorian Government began acknowledging airborne transmission was possible in late 2020, but resulting changes to public health policy were mostly limited to “clinical” or “high-risk” environments (Woodley, 2020b; Mannix, 2020).

Denial of airborne spread stemmed from a century-old scientific error, now thoroughly debunked (Molteni, 2021). As Daly notes, there is no sharp line between droplets and aerosols. But the legacy of the “droplet-only” myth has proven hard to shake.

Australia’s vaccine rollout began on 22 February, with vulnerable groups first in line. The Federal Government made a series of rollout announcements, but the targets and timelines kept changing. Optimism soon gave way to confusion.

For many months, scientists had been warning that Covid was airborne – spread via tiny floating particles called aerosols.



### 3.1.7 HAZARD SIGNS: APRIL–JUNE 2021

#### Key Dates

<b>14 APR</b>	HomeBuilder scheme closes
<b>23 APR</b>	Industry Covid-19 Guidelines (V12)
<b>27 MAY</b>	Lockdown #4 begins: two-week “circuit-breaker”, Victoria (construction exempt)
<b>10 JUN</b>	Lockdown #4 eased
<b>11 JUN</b>	Industry Covid-19 Guidelines (V13; ventilation audits now recommended)

#### Delta Dawns

Determined to avoid another industry shutdown, in April 2021 the BIG1 group held a private briefing with Ministerial advisors and senior departmental officials. Framed as a discussion about “lessons learned”, this was a chance for industry leaders to provide feedback about February’s surprise lockdown, highlight the sector’s Covid-safe efforts, and make the case for retaining “essential service” status (MBV, 2021b).

With a new variant on the country’s doorstep, these lobbying efforts were soon put to the test. Delta first reached Australia’s shores in early May 2021. Far more infectious than previous variants, causing double the hospitalisations and spreading asymptotically, it would soon become the dominant strain globally (Katella, 2022; Lovelace, 2021). Those first cases were contained, but Delta would soon light the fuse on Australia’s third wave.

When Victoria entered a two-week “circuit breaker” lockdown in late May, the building and construction sector was allowed to remain operating at full workforce capacity (UDIA, 2021). “Driving to work [during lockdowns] was eerie,” recalls CFMMEU delegate Rick Bradley. “There was nothing and nobody around. I felt like the last man on earth – like Charlton Heston in *The*

*Omega Man*.” During the two-year period of focus Bradley was lead union steward on a major apartment development in Footscray. While construction crews were grateful to be working, they were not immune from the strains of the pandemic.

“People were highly stressed,” recalls Bradley. “They didn’t know if they’d be working tomorrow. Their wife might not be working because of Covid. Schools are shut, they’re being harangued by the kids. There’s different information coming out, political point-scoring, [former Federal MP] Craig Kelly’s carrying on like an idiot.”

Looking after workers is at the heart of a union delegate’s role, but the pandemic added new layers to these responsibilities. Along with keeping a close eye on worksite Covid-safe compliance, says Bradley, it was vital to ensure that workers felt supported during this stressful time: “My role is always to make sure everyone is safe. “I’d say, ‘If you don’t look after yourself, you’re no good to anyone else. Here’s my number. Put it in your phone. Any problems or worries, call me.’”

Despite the pandemic’s strains being evident onsite, Bradley says the workforce generally coped well. “I personally believe the prevalence of mental health issues didn’t grow nearly as exponentially as some people reckoned,” he notes. Data from

Incolink's workforce counselling service over 2020-2021 backs this view, showing a slight drop in demand compared to pre-pandemic times.

### The Gold Standard Award Program was an incentive-based means of encouraging construction worksites to ramp up their Covid-safe compliance.

#### The Waiting Game: Vaccine Rollout Delays

As Victoria's fourth lockdown took effect, access to Covid-19 vaccines seemed to be just around the corner. "Vaccination is our only real ticket out of this pandemic," said Victoria's Acting Premier. From May 2021, all Victorians over age 40 became eligible for the vaccine (Prem Vic, 2021a). But there was a catch: the Federal Government was handling the vaccine rollout, and it wasn't going well.

By mid-2021, only 3 percent of Australians had received two doses, lagging far behind most comparable countries (BBC, 2021). The bungled rollout was attributed to a mix of supply issues, Federal Government mismanagement, delays in domestic production, confusing and sometimes divisive public health messaging, and fluctuating advice over the safety of AstraZenica, which helped fuel vaccine hesitancy (BBC, 2021; Commonwealth of Australia, 2022: 24). When questioned on the delays, then-Prime Minister Scott Morrison repeatedly declared that the vaccine rollout was "not a race" (Butler, 2021). After a flurry of missed goals, his Government abandoned vaccination targets entirely.

Incolink had been seeking solid answers on vaccine supply since November 2020. "We had a provisional agreement for access to a stockpile," says COO

Ashleigh Dalmau, COO. "But every time we got close to it, there were problems with the Federal supply chain. We had all the approvals, but there weren't enough vaccines. It was incredibly frustrating."

Meanwhile, Incolink and APC continued running worksite surveillance testing. Over the past financial year they'd administered some 23,000 Covid-19 tests at more than 230 sites, while Incolink members had accessed almost 5800 Covid-19 hardship payments of \$2000 (Incolink, 2021).

#### Carrots and Sticks: Gold Standard Award Program

Victorians were now accustomed to public health Directions, and most complied - whether to protect their loved ones and communities, or to avoid copping penalties. But constant vigilance can be tiring, and pandemic fatigue was creeping in. While the "stick" approach is an age-old strategy for encouraging people to follow rules, the "carrot" approach can provide a welcome respite.

The Gold Standard Award Program was an incentive-based means of encouraging construction worksites to ramp up their Covid-safe compliance. Under the voluntary scheme, worksites were inspected and assessed against a checklist of best practice Covid-safe measures. Based on the Industry Guidelines, the checklist included mandatory temperature testing, rigorous record-keeping, density limits, cleaning regimes, QR Code compliance, facemasks, contact tracing, trained Covid Marshalls, CALD messaging, participation in the onsite testing program, infection control training for HSRs and managers, and ventilation audits. (In recognition of the airborne risk, the Industry Guidelines were updated in June 2021 to recommend that all worksites run ventilation audits of crib rooms, hoists, toilets, and change rooms.)

Gold Standard site inspections were overseen by Industry Liaison Officer Michael Paynter (DHHS), with strong support from unions. If any gaps were found, these had to be immediately rectified, with evidence provided. Worksites that passed muster received a Gold Standard plaque and certificate for to be displayed in a prominent spot. Shiny gold hardhat stickers also proved popular. Across the lifetime of the program, around 200 Victorian construction sites were inspected and certified. Most were larger-scale sites, with higher density workforces.

On 16 June, a limousine driver taking international flight crews to and from Sydney airport tested positive. Ten days later Sydney went into lockdown. Unaware he was infectious, the man had meanwhile visited multiple venues, becoming patient zero for the Delta wave that would soon sweep NSW, then the country.

With 30,000 recorded cases and 910 deaths, Australia was still tracking better than many comparable nations (AIHW, 2021). Victoria had not recorded a single Covid death since late 2020 (ABC, 2021b). But now, a string of factors was raising the stakes: lack of leadership at the national level, the bungled vaccine rollout, confusing and sometimes divisive public messaging, leaky hotel quarantine, and NSW's slow response to the recent outbreaks, along with general pandemic fatigue and the increasingly rampant spread of online conspiracy theories. Combined, these circumstances left the country badly placed to defend itself against Delta (Ryan, 2021; Koziol, 2022; Commonwealth of Australia, 2022: 49, 73).



Gold Standard Award - Melbourne construction worksite, July 2021.



### 3.1.8 FLASHPOINT: JULY–SEPTEMBER 2021

#### Key Dates

<b>15 JUL</b>	Lockdown #5 begins (Vic)
<b>27 JUL</b>	Lockdown #5 eased
<b>5 AUG</b>	Lockdown #6 begins (Vic)
<b>17 AUG</b>	Workforce caps, metro Melbourne (24% or 5 people)
<b>21 AUG</b>	Lockdown #7 (Vic)
<b>1 SEP</b>	Industry Covid-19 Guidelines (V14)
<b>8 SEP</b>	Pilot Industry Vaccination Program launch
<b>19 SEP</b>	“Victoria’s Roadmap: Delivering The National Plan” released (Vic Gov)
<b>20 SEP</b>	Riot outside CFMMEU headquarters
<b>21, 22 SEP</b>	Further protests (Westgate Bridge, Shrine of Remembrance)
<b>23 SEP</b>	Two-week industry shutdown begins

Winter 2021 was a time of spiralling tensions. As Delta rampaged across NSW, the Victorian Government closed the border on 11 July, then locked down the State. But Delta still found inroads, ushering in a chaotic period of rising case numbers, new deaths, fluctuating lockdowns<sup>8</sup>, and violent protests.

July and August saw a spate of anti-lockdown rallies in Australia and overseas, organised via encrypted apps and livestreamed by right-wing agitators. Crowds of unmasked protesters hit Melbourne’s CBD, chanting “sack Dan Andrews” and “freedom” (Tanuki, 2021), and declaring Covid to be “fake” (Wu, 2021; Woods & Kolovos, 2021).

A big rally on 21 August turned ugly, with six police officers hospitalised and over 200 arrests (Smee & Readfern, 2021).

“Who doesn’t love freedom?” tweeted CHO Brett Sutton, appealing to logic. “I want freedom from being amongst...4 million official (and likely 10 million actual) COVID deaths globally.” He added: “Long COVID doesn’t make you free. Debilitating fatigue, ongoing shortness of breath, neurological and psychiatric symptoms for weeks to months” (Dexter, 2021).

The construction sector was poised to launch its pilot vaccination program on 13 August, with

<sup>8</sup> Space constraints rule out giving a detailed account of the multiple lockdowns that took place over this three-month period.

staff on standby, a social media and billboard campaign (“Get the job done”) ready to roll, and industry leaders talking up the benefits of vaccination. There was just one small problem.

“The Federal Government had promised us a few hundred vaccines so we could run the pilot,” says Incolink CEO Erik Locke. One week out: no vaccines. Fed up with inaction from then-Health Minister Greg Hunt, BIG1 hit the media.

“[The launch] was in the calendar. It was going ahead,” MBV head Rebecca Casson told the *Financial Review*. “We were then advised it couldn’t proceed because the supplies had to be diverted elsewhere.” The full-scale program was due to start next month, Locke added, but Hunt’s office was shy on detail: “They need to give us a date and...ideas about supply” (Bleby, 2021a).

“The construction sector’s ability to remain open is on a knife’s edge,” warned Treasurer Tim Pallas.

Construction had running been at full capacity since February, but worksite outbreaks were a growing concern, with a steep rise in cases linked to the construction sector (Bleby, 2021b; Sakkal, 2021b). On 17 August, workforce caps were reinstated for metro Melbourne, with large sites at 25 percent, small sites at five workers, and new density and movement limits. Some 75 projects classified as “critical and essential” infrastructure remained uncapped (Vic Gov, 2021b).

The August lockdowns averted some 6000 infections (Burnet Institute, 2021b), but case numbers kept rising, and only 35 percent of Victorians were double vaccinated

(ABC, 2021b). Two deaths on 31 August ended Victoria’s nine-month stretch of zero Covid fatalities. As cases hit triple digits, restrictions were tied to vaccination targets: lockdown would lift when 70 percent of Victorians were single dosed; construction workforce caps would ease once 90 percent of workers hit that target (VBA, 2021).

After some last-minute fiascos – a vaccine-packed Eskie stranded in Werribee, frantic calls to couriers – Australia’s first industry-run Covid vaccination program launched on 8 September at a Melbourne construction site. A week later the State Government announced an industry vaccination and compliance blitz: unlimited AstraZeneca doses for Incolink’s program, 20,000 Pfizer shots for tradies at walk-in clinics, and a “zero tolerance” crackdown on construction sites (Pallas, 2021).

The industry was officially put on notice. Victoria now had 3500 active Covid cases, 13 percent of them linked to construction projects. “The construction sector’s ability to remain open is on a knife’s edge,” warned Treasurer Tim Pallas (Godde, 2021; Sakkal, 2021a). Spot checks of 200 worksites on 16 September found 73 percent had compliance breaches; the non-compliance was mostly on small worksites in Melbourne’s north and west, a Government spokeswoman said (Fowler & Lucas, 2021). The CFMMEU said none of the outbreaks were on worksites that held Gold Standard status (Burton, 2021).

That afternoon brought two surprise announcements. Worksite crib rooms (lunchrooms) would immediately close, with no eating or drinking indoors (Prem Vic, 2021b). And all Victorian construction workers must receive at least one vaccine dose by 23 September – a deadline that was just one week away.

The crib room ban raised hackles. Police entered sites and charged some workers. Tradies reacted swiftly, setting up makeshift tearooms on city streets and disrupting traffic, driving home the point that they now had nowhere to eat lunch. This action copped blowback from Government, media, and the public.

“Closing crib rooms showed a huge gap in understanding,” says one industry insider. “Government didn’t realise their importance. For workers, that place is their anchor, their home base. They don’t have a desk to sit at. They caught three trains to work, so they can’t go eat lunch in the car. Now they are literally exposed to the elements. It was really dehumanising.” Crib rooms are typically large spaces seating hundreds of workers, with kitchen facilities, regular cleaning regimes, and areas for employees to wash up.

“We hadn’t been consulted [on the crib room ban],” says CFMMEU Construction Secretary John Setka. “The bureaucrats just made a call. On a building site, you don’t have chairs all over the place. What are they meant to do now – sit down on the wet dirt to eat their lunch? They’re not dogs.”

The vaccine ruling hit a different nerve. On Monday 20 September, five CFMMEU members arrived at the union’s Melbourne headquarters around 8am, asking to speak to Setka. On leave that day, Setka arrived in off-duty boardshorts and flip-flops. President Rob Graauwman joined him outside to talk with the disgruntled members, who opposed the vaccine mandates. They wanted Setka to march to Parliament House with them to protest the mandates. He refused, stating that the union opposed mandates, but always followed CHO advice (Tham, 2021). This was one of BIG1’s guiding principles: listen to the experts.

Meanwhile, people had begun pouring into Elizabeth Street, swiftly outnumbering the original group. Graauwman spotted some union members, but the growing crowd was mostly unfamiliar faces. Many wore unbranded, suspiciously clean hi-vis vests, some of which had been handed out from a Ute parked down the street. Unbeknownst to the union bosses, the gathering was being

livecast by an influential right-wing agitator and promoted online by an anti-lockdown group that had been involved in a violent protest two days earlier (Gillespie, 2021; O’Neil, 2021; Landis-Hanley & Henriques-Gomes, 2021).

Things escalated fast. By 10.30am, says Graauwman, “I realised the situation had been hijacked by outside parties.” Projectiles and abuse were hurled at union leaders, who tried to calm the crowd before retreating inside. Rioters smashed the building’s glass facade, spat at union staff, and tried to break in via the fire exits. Some 150 union delegates arrived to defend the offices, building barricades from furniture and turning fire extinguishers and hoses on the angry mob. Brawls broke out, interspersed with chants of “Shut it down!” and “Fuck the jab!” from the crowd.

Five floors up, the horrified union bosses watched the chaos from a balcony. Around 4.15pm, police began firing tear gas and rubber bullets to disperse the 500-strong mob, who threw bottles back. Caught in the crossfire, injured union stewards raided the staffroom’s ice machines to treat welts and bruises. Outside, the retreating horde left a sea of crumpled beer cartons.

As footage of the riot beamed worldwide, industry leaders held emergency Zoom meetings with Government Ministers. That evening the Victorian Government announced a two-week industry shutdown. All worksites in metro Melbourne, Ballarat, Geelong, Surf Coast, and Mitchell Shire would close from midnight 23 September, “critical infrastructure” projects included. The Government wanted to keep some civil projects running, but given the day’s disastrous events, construction unions strongly objected to this idea, and it was abandoned (Towel & Sakkal, 2021).

With 59 Victorians now in intensive care, 40 of them on ventilators (DHHS, 2021), slowing Delta’s spread was the official reason for the shut-down. But the Treasurer also had stern words: “We put the industry on notice just a week ago,” said Pallas. “We have seen appalling behaviour on site and on our streets, and now we’re acting decisively and without hesitation” (Prem Vic, 2021d).

CFMMEU office staff, two-thirds of whom are women, were unsettled by the attack. “It brought to mind the sixth of January assault on the [US] capitol,” Graauwman says. Ground level was a write-off, blood and broken glass everywhere. The regular cleaning team, all aged in their 60s, arrived to help. Recalling this, Graauwman’s voice betrays a wobble: “They stayed for fourteen hours, God love them.” He left the building at 2am, after compiling a flash drive full of CCTV footage that police had requested.

The chaos would spill into coming days, with riot police deployed as protesters took over the Westgate Bridge and Shrine of Remembrance.

The day’s events would have wider repercussions. At least five union staff caught Covid, Graauwman included. Head office became a tier one exposure site, forcing staff into isolation. The chaos would spill into coming days, with riot police deployed as protesters took over the Westgate Bridge and Shrine of Remembrance. Hundreds were arrested and a protester was hospitalised with Covid (McGowan, 2021a).

Construction could start reopening in early October, pending compliance with new CHO Directions. The industry had two weeks to get its ducks in a row.





### 3.1.9 BACK ON TRACK: OCTOBER–DECEMBER 2021

#### Key Dates

<b>5 OCT</b>	Staged industry reopening begins
<b>22 OCT</b>	Construction returns to full capacity
<b>26 OCT</b>	Lockdown #6 eased
<b>10 NOV</b>	Industry Covid-19 Guidelines (V15)
<b>26 NOV</b>	Industry Covid-19 Guidelines (V16)
<b>20 DEC</b>	Industry Covid-19 Guidelines (V17)

After a fortnight off the tools, the construction industry began reopening on 5 October 2021. Months back, BIG1 had drafted a reopening plan as a contingency against future shutdowns. The Victorian Government’s Roadmap for reopening the industry drew strongly on this existing piece of work (Vic Gov, 2021d; Prem Vic, 2021c, 2021e).

Strict new rules were now in place: all construction workers must be at least single dosed by 5 October, and double dosed by 13 November. All worksites must maintain a workforce vaccination register, have a trained Covid Marshall onsite, and submit to spot checks. Crib rooms could re-open, but strictly for designated meal breaks, with new density limits and ventilation measures in place (Prem Vic, 2021d; ABC, 2021e). Critical and essential infrastructure projects could reopen at 100 percent workforce from 5 October, if fully compliant. Other large-scale sites could re-open at 25 percent, with small-scale sites capped at five workers (VBA, 2021; Cassidy, 2021; Fowler, Sakkal, & Schneiders, 2021).

The sector’s re-opening was also tied to broader vaccination targets. Workforce caps would ease when 70 percent of Victorians were double dosed. People obligingly rolled up their sleeves. By 21 October the State was 70 percent double dosed,

hitting the target early. Construction returned to full capacity the next day (VBA, 2021). The shutdown had cost the sector some \$2 billion in construction activity and \$640 million in lost wages (Ziffer, 2021), although the State Government provided \$196.6m in support payments via the Business Costs Assistance Program (Vic Gov, 2021c).

#### Truth and Consequences

September’s violent scenes left many Victorians shaken. There was lively public debate over exactly who had organised the protests; how police handled the situation; the ratio of “fake tradies” versus genuine construction workers; the number of union members, non-unionised workers, and “man-baby Nazis (in former Labor leader Bill Shorten’s memorable words) in the crowd; and what role far-right agitators, anti-vaxxers, and anti-lockdown groups played in orchestrating what unfolded (McGowan, 2021b; Dudley, 2021; Roose, 2021).

The riots prompted some soul-searching within the industry. For a small minority, they were a wakeup call. Hours of ugly behaviour had been caught on camera, and investigations were afoot. Union officials scrutinised CCTV footage of the attack on CFMMEU headquarters, along with footage of crowds at the Westgate Bridge and

Shrine of Remembrance protests. The Westgate Bridge holds huge symbolic weight in the union movement, standing as a memorial to the 35 lives lost in its tragic 1970 collapse, Australia's worst-ever industrial accident, while the Shrine of Remembrance commemorates Australians who served and died in overseas wars. The disrespectful behaviour on display at both sites was roundly condemned.

Picking out the union members in the footage wasn't hard. Some perpetrators were doxxed by unimpressed workmates or family members who'd spotted them on TV. Eight CFMMEU members were summoned to appear before the union's Division Branch Committee, where elected rank-and-file peers heard their cases, reviewed the evidence and imposed penalties. Four people's union memberships were suspended. Two members were eventually allowed back, while two were permanently banned.

**After the Storm: Reflecting on September 2021**  
The two-week shutdown was a sobering reminder that staying open was indeed a privilege. For BIG1 advisor Christine Wyatt, the Government was sending a clear message, one that reflected the social backdrop of that moment. "I think the shutdown reflected a degree of resentment in the broader community that the [construction] industry was allowed to operate when everybody else was locked down, some people weren't following the rules, and bad behaviours were on display," she says. The shutdown was meant as a short, sharp shock: "It was done to teach lesson, and to draw a symbolic line."

A volatile cocktail of factors had fuelled September's escalating tensions: Delta's rapid spread, bringing a spike in case numbers, hospitalisations, and deaths; pandemic fatigue and growing social unrest; the spread of online misinformation and conspiracy theories; an increase in outbreaks linked to construction sites; reports of widespread non-compliance in some parts of the industry; growing tensions between the sector and DoH; the double-whammy of the crib room ban and vaccine mandate announcement; Government displeasure and public

backlash over tradies taking their lunchbreaks to the streets; and an unpopular proposal that workers forego rest breaks for extra pay in response to the crib room ban.

Non-compliant behaviour on worksites was a thorny issue, reflecting in part the industry's complexity. Around 10 percent of Victoria's construction workforce are CFMMEU members; the AMWU, ETU, and PPTU also have significant workforce coverage. The industry's commercial and civil subsectors - which encompass 20-odd major construction companies, and many large-scale worksites - represent the more heavily unionised and better-resourced end of the spectrum, with strong worker protections and a well-embedded health and safety culture.

Domestic construction, the third major subsector, makes up a significant proportion of the industry. Comprising myriad multiple small and medium businesses, as a whole this subsector has less-centralised systems, a more diffused financial base, higher rates of casual labour, and a less unionised workforce. Relevant industry associations worked hard to encourage Covid-safe practices across the domestic subsector. Amongst MBV's membership base, several domestic construction companies had significant direct input to the Industry Covid-19 Guidelines, and HIA produced its own resources tailored to various smaller-scale sites. But the bulk of this subsector enjoyed less direct access to senior Government (Sakkal, 2021b), and its more fragmented nature posed a challenge for monitoring compliance.

"The upper end of the market was gold plate," says Wyatt. "It had the money, and the systems in place. But the other end of the market, the small operators...that posed a challenge." Former Industry Liaison Officer Michael Paynter concurs: "It's almost impossible to keep tabs on all the smaller operators." Peter Parkinson, who headed several key industry groups at the time (see Appendix), also agrees with this assessment: "The part of the industry that was not organised by unions and employers' organisations went off and did their own thing," says Parkinson. "Most of the compliance breaches were on those non-union sites."

On the vaccine mandate, industry leaders had scant warning. Against a backdrop of growing social discord, the mandate and the ensuing pandemonium effectively cut Incolink's own vax program off at the knees.

"The vaccine mandate was a death knell for our program," says Incolink COO Ashleigh Dalmau. "Some people feared that we'd be turned into a vehicle for delivering mandatory jobs. That was never a possibility. It was a State Government mandate, and we were a voluntary program. But we became a flashpoint for people's reactions." When Incolink staff sent out regular notifications about upcoming onsite appointments, Dalmau began rising at 4.30am to intercept some angry responses landing in a shared inbox, shielding her team from the vitriol.

Anonymous death threats were sent to several interviewees. "That really rattled me," says MBV President Mark Little. "I'd been on [TV], advocating for vaccinations." Soon after receiving one disturbing message, he got an email from a woman whose partner worked in the industry. "She thanked me for being a voice of reason, for giving her hope. That second email really helped."

**The two-week shutdown was a sobering reminder that staying open was indeed a privilege.**

Construction was only the second sector in Victoria to have vaccine mandates. But if some people initially felt singled out, that idea proved short-lived: the mandates soon applied to most Victorian workers. Residential aged care was first up, then construction, freight, healthcare and education across September. In October another 30-plus occupations joined

the list, including meatworkers, miners, bus drivers, retail staff, public servants, scientists, vets, community workers, baristas, and prison officers.

Attitudes varied, but workplace vaccine mandates won broad public support in Victoria. A survey in August 2021 found that 74 percent of employees supported them, while 17 percent were opposed (Melbourne Institute, 2021a). A follow-up survey in September showed industry variations, with slightly lower acceptance in the "construction and utilities" sector: 66 percent supported mandates, while 22 percent were opposed (Melbourne Institute, 2021b). However, an internal industry survey of six major commercial builders before the vaccine mandates were announced found that only 1 percent of their combined workforce was opposed to getting vaccinated (Marin-Guzman & Durkin, 2021). Victoria's vaccine mandates would remain in place until mid-2022 (Fowler, 2021).

The weekend of the riots, industrial relations expert Peter Parkinson resigned as Chair of the Building and Construction Industry Working Group (BCIWG). In that role, Parkinson had overseen production of the Industry Covid-19 Guidelines for 18 months, having drafted the first version in March 2020. At the time, he was also independent Chair of three other entities: the long-standing Building Industry Consultative Council (BICC), which provides advice to the Minister for Industrial Relations; the recently formed RIG Taskforce, which coordinated Government input on the Covid-19 Guidelines; and the Victorian Building Industry Disputes Panel (VBIDP), an independent industry body that resolves industrial disputes in the construction sector. In the lead-up to the riots, Parkinson had internally voiced concerns to the Victorian Government

over its failure to consult industry ahead of some “ill-informed” decisions that had major consequences - in particular, the crib room ban. State Government officials were unhappy with this criticism, says Parkinson, and indicated that they would withdraw Government funding for his industry-appointed role with VBIDP unless he dialled back his advocacy for the sector. “That was unacceptable to me,” says Parkinson. “It undermined the independence of the VBIDP role.” In response, he resigned from BICC, RIG, and BCIWG. Parkinson remains Chair of the VBIDP, and the role is now fully funded by the industry.

After September’s turmoil, the tail end of 2021 was relatively uneventful. Industry leaders renewed efforts to hammer home Covid-safe compliance messages. Three more iterations of the Guidelines were rolled out. The CFMMEU’s smashed façade was replaced with 38mm bulletproof glass, and a gathering was held to welcome staff back to the office, with Wurundjeri Elder Uncle Ringo conducting a smoking ceremony, and the union’s Koori Construction Convenor Joel Shackleton addressing a big crowd of invited supporters. The Andrews Labor Government was re-elected in November’s State election.

By the end of 2021, Covid had killed 6382 Victorians (Tsang, 2022). Over September-November, more than 100 Victorian building and construction companies entered external administration, up by one-third on the year before (MBV, 2022). When the industry downed tools just before Christmas - voluntarily, this time - the Delta wave was finally receding. But once again, the graphs were trending upward. Omicron was here, a new wave already on its way (Morgan, Sakkal, & Clun, 2021).

#### Looking Back: The First Two Years of Covid

Here, our Narrative Timeline comes to a close. To wrap up, interviewees share some brief reflections on the first two years of the pandemic, how the industry fared, and what helped them stay afloat:

It made a massive difference to the Government when [the industry] spoke with one voice. Given [MBV and CFMMEU’s] very long and turbulent history, we had to dig deep, personally and professionally, to nurture relationships in uncharted waters. We all wanted the same thing - to keep our sites safe and open. - Rebecca Casson, former CEO, MBV.

Those relationships [between unions and employers] were forged in the fire of Covid. It was make or break time: we knew we had to make this work, and we couldn’t do it if we were at loggerheads. - Rob Graauwmans, President (Construction), CFMMEU, Vic/Tas.

It was the toughest two years of my working life. The demand to keep up with Government changes was relentless. In fairness, the Government was also living and learning. So were the health experts. - Paul Breslin, Regional OHSE Manager, Multiplex

I was happy to be working. But it got harder as it went on. It felt like the apocalypse, and nobody knew when or if it would end. But the strength of our institutions helped us get through. There’s a lesson in that: join your union, join your employers’ organisation. Talk to each other. - Erik Locke, CEO, Incolink.

Covid has heightened my consciousness around the purpose of work. Thinking about the social aspects and long-term impacts of projects, whether it’s social housing, hospitals, civic buildings... How the construction industry can influence the future - not just changing the city’s built form, but also making a difference to people’s lives. - Jen Marks, Director of National Strategy, Built.

## 3.2 ECONOMIC MODELLING

The Economic Modelling for this study was conducted by ACIL Allen. The aim of this quantitative work was to calculate the economic benefits of Victoria's building and construction industry remaining largely open over 2020-2021. Focusing on the period spanning Victoria's multiple lockdowns (March 2020 to September 2021 inclusive), the Economic Modelling addresses Research Question 5:

- What were the quantifiable (direct and indirect) economic benefits of Victoria's construction industry remaining largely open during multiple lockdowns?

As outlined in the Key Findings (see Section 3.3), Victoria's building and construction industry implemented a range of Covid-19 measures, strategies, and initiatives that were instrumental to its ability to continue operating over the two-year period of focus. Government support, both practical and financial, was also critical to the industry's continued operation during this time. While the industry still faced some major restrictions over 2020-2021, including two snap lockdowns, these combined efforts by industry and government enabled a substantial level of construction activity to continue, which indirectly benefited other parts of the Victorian economy. (See Key Findings, p.56-58, for an outline of the "success factors" that comprise industry and government's combined efforts to keep the sector open.)

The results of the Economic Modelling are presented below, along with further details of the methods used. The modelling estimates the value of construction work done in Victoria (for both residential and non-residential subsectors) arising from combined efforts by industry and government to keep the industry open over this two-year period. The analysis also provides estimates for the consequent direct and indirect benefits to the wider Victorian economy (including employment, household income, and GSP).

The analysis presented in this section draws on publicly available data compiled by the Australian

Bureau of Statistics (ABS). Three ABS data sets were used: "Building Activity, Australia" (ABS 2022a); "National, State and Territory Population" (ABS 2022b); and "Retail Trade, Australia" (ABS 2022c). Full sources are listed in the References section of this report (p.74).

### 3.2.1 ESSENTIAL VERSUS NON-ESSENTIAL SERVICES

During the multiple Covid-19 lockdowns that took place in Victoria over 2020-2021, industries that were deemed "non-essential" were either shut down entirely or had their operations heavily curtailed. As a designated "essential industry", construction was permitted to continue operating for most of this time.

To estimate the likely impacts on Victoria's construction industry if it had been shut down over the lockdowns period (spanning March 2020 to September 2021 inclusive), ACIL Allen examined monthly turnover trends within the food services industry. The analysis focuses specifically on two related subsectors that were subject to very different restrictions. Looking at the trend within these food services subsectors, and applying it to the pre-Covid-19 trends (adjusted for population growth) for construction, it is possible to estimate a "counterfactual" scenario of what may have happened for the construction industry if it had not remained largely open.

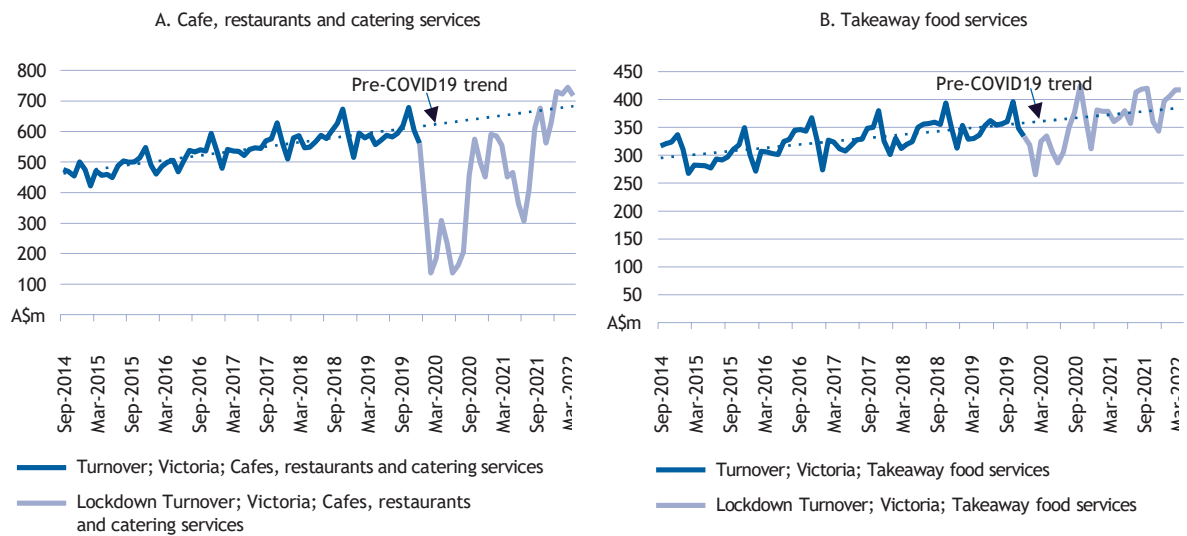
From the results of this counterfactual scenario, ACIL Allen was able to estimate the amount of construction sector activity that was potentially saved due to the combined efforts of industry and government to keep the sector open, along with the consequent direct and indirect economic benefits to the Victorian economy.

#### Turnover: Food Services Industry

Figure 1 (overleaf) presents the monthly retail turnover for two subsectors within the food services industry that experienced significantly different rules during the lockdowns. In particular, Figure 1(A) presents the monthly retail turnover for "cafe, restaurants and catering services", which

was deemed to be a “non-essential” service and was thus subject to shutdowns. Figure 1(B) presents the turnover for “takeaway food services”, which was deemed to be an “essential” service, so could continue to operate (albeit with some restrictions). As can be seen, the lockdowns had a significant impact on the part of the industry that was classified as non-essential, with retail turnover falling by nearly 80 percent relative to trend during the first major lockdown period in 2020, and by around 60 percent during the 2021 lockdowns.

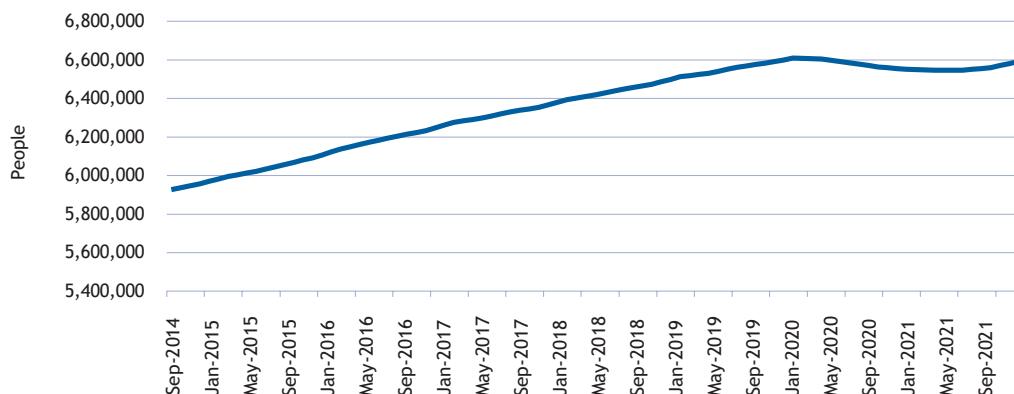
Figure 1: Retail Turnover Before Versus After Lockdowns: Food Services Industry (Vic)



Source: ACIL Allen, based on ABS data (ABS 2022c).

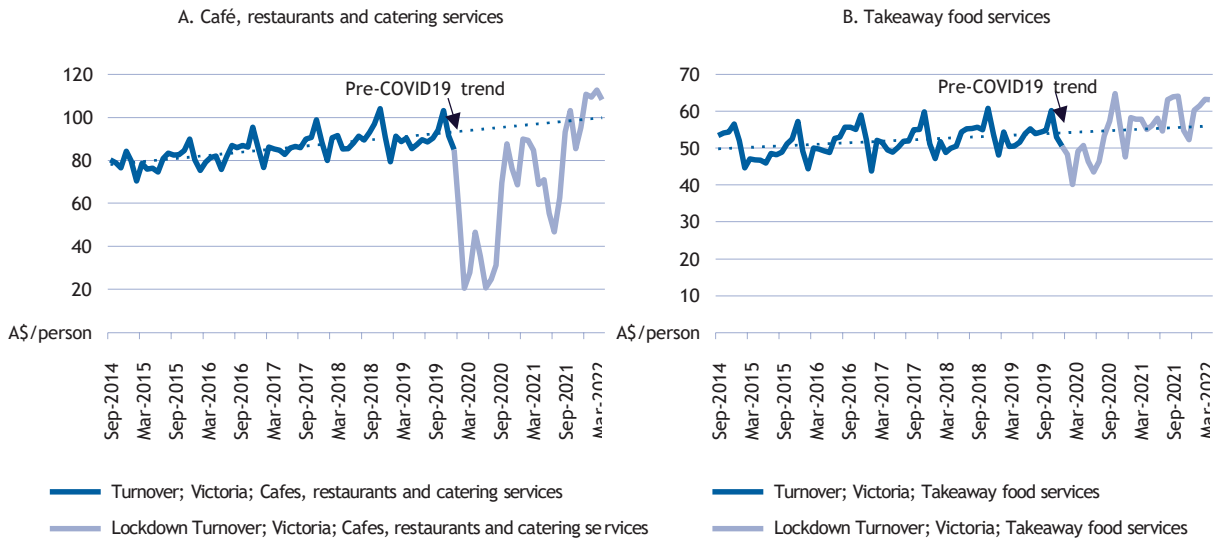
As Figure 2 (below) shows, Victoria’s population growth was also impacted by the various Covid-19 policies put in place by Australian governments. Notwithstanding the change in population growth, retail turnover for Victoria’s cafe, restaurants and catering services subsector still fell substantially during the State’s lockdown periods (see Figure 3A, overleaf).

Figure 2: Estimated Resident Population (Vic)



Source: ACIL Allen, based on ABS data (ABS 2022b).

Figure 3: Retail Turnover (Per Person) Before Versus After Lockdowns: Food Services Industry (Vic)

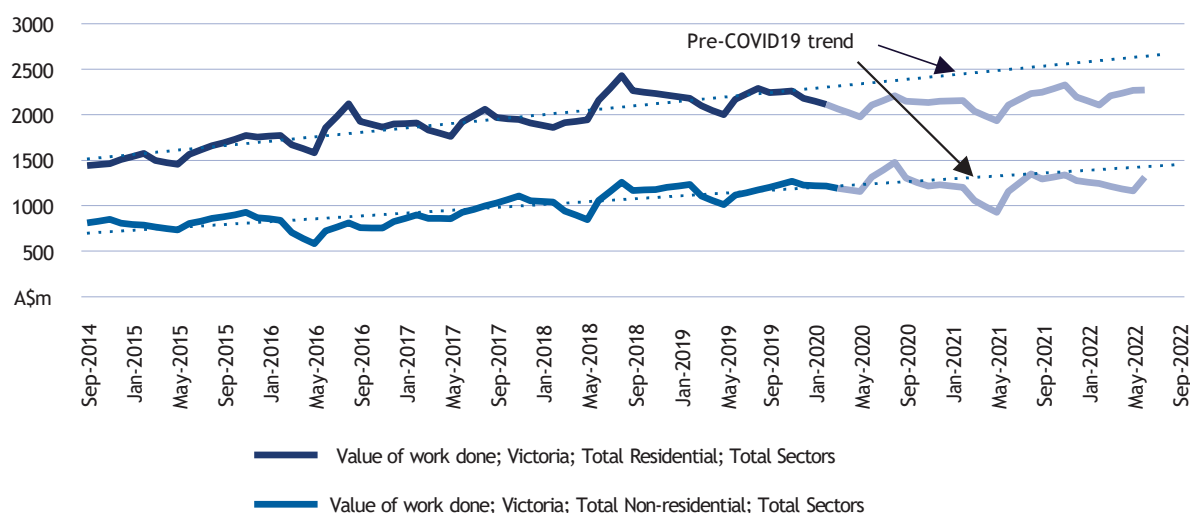


Source: ACIL Allen, based on ABS data (ABS 2022c).

**Turnover: Building and Construction Industry**  
 In contrast to the “cafe, restaurants and catering services” subsector of the food services industry, the Victorian building and construction industry was deemed “essential”, meaning that most of its activities were allowed to continue (albeit with restrictions) during Victoria’s lockdowns. This was particularly the case for civil construction, which falls within the “non-residential” part of the industry (together with commercial construction). Civil construction comprises government projects,

including essential and critical infrastructure, and was subject to fewer restrictions than the industry’s commercial and residential subsectors. This is reflected in Figure 4 (overleaf), which presents the estimated value of work done each month in the residential and non-residential sectors, including their pre-Covid-19 trends.

Figure 4: Total Value of Construction Work Done: Residential and Non-Residential (Vic)



Source: ACIL Allen, based on ABS data (ABS 2022a).

### 3.2.2 ECONOMIC IMPACT ON VICTORIA'S BUILDING AND CONSTRUCTION INDUSTRY

Taking the change from the trend experienced by Victoria's ("non-essential") cafe, restaurants, and catering services subsector, and applying it to the pre-Covid-19 trends (adjusted for population growth) for the construction industry, it is possible to estimate a "counterfactual" scenario of what may have happened for the construction industry if it had not remained largely open during the period of focus.

Reflecting the way ABS data is collected, Figure 5 (overleaf) presents estimates for both the residential and non-residential construction subsectors of the Victorian construction industry.

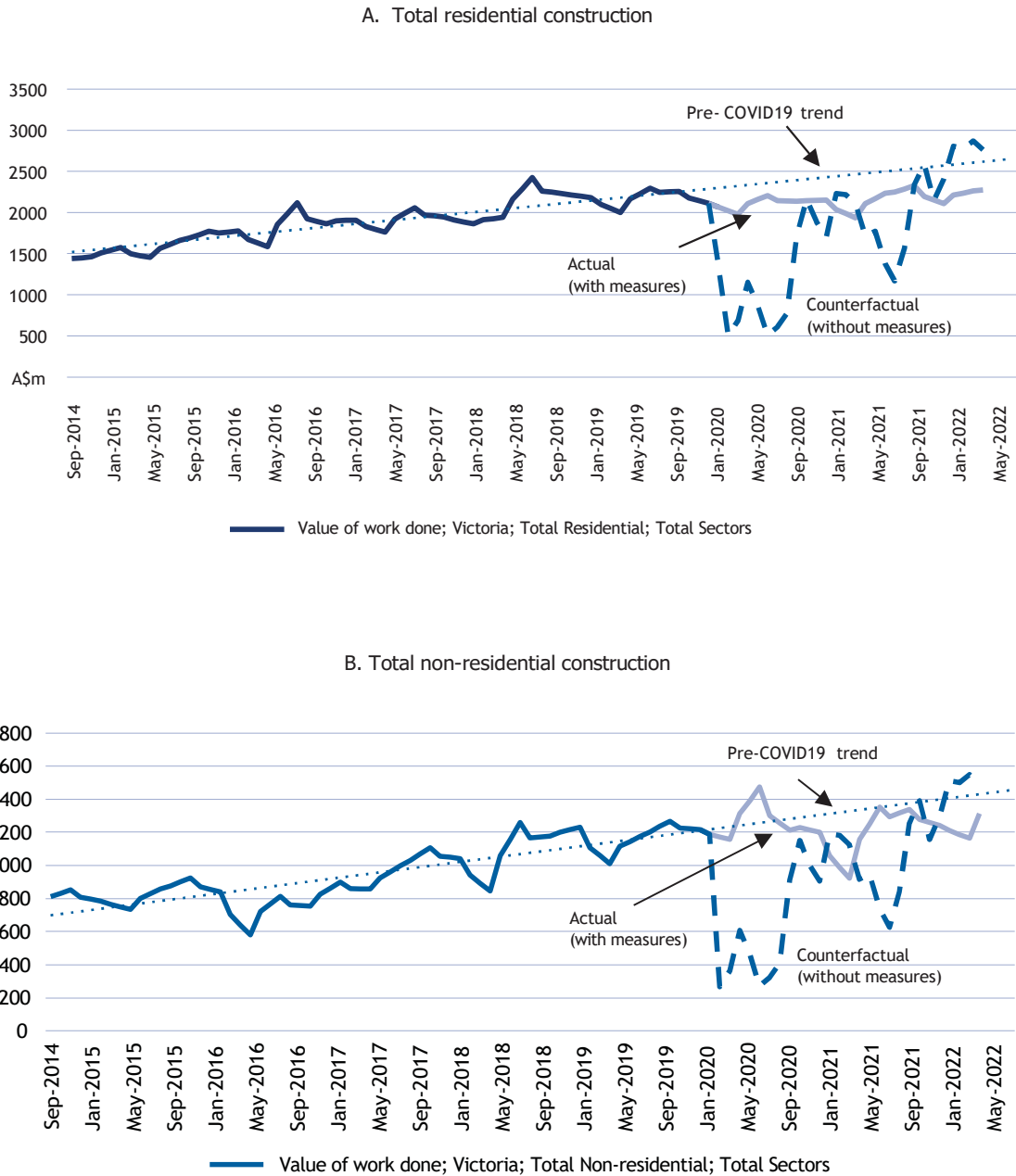
On the graphs in Figure 5, the terms "with measures" and "without measures" refer to industry and government's combined efforts to keep the construction sector open during lockdowns.

In total, over the period of Victoria's lockdowns (March 2020 to September 2021 inclusive), it is estimated that combined efforts to keep the Victorian construction sector open could have saved a total of \$22.1 billion of construction work done, comprising:

- \$13.6 billion of work done by the residential construction sector
- \$8.5 billion of work done by the non-residential construction sector.



Figure 5: Estimated Value of Construction Work Done: With/Without Efforts to Remain Open (Vic)



Notes: “Measures” refers to the full suite of efforts undertaken by the Victorian construction industry and governments aimed at maintaining industry activity during lockdowns. The “counterfactuals” include adjustments for the slower population growth experienced during the pandemic period.

Source: ACIL Allen, based on ABS data (2022a, 2022b, 2022c).

### 3.2.3 ECONOMIC IMPACT ON BROADER VICTORIAN ECONOMY

To estimate the broader economic benefits of the Victorian construction sector remaining largely open during the lockdowns of 2020-2021, ACIL Allen used a methodology called Input-Output (IO) multiplier analysis. This methodology is frequently used to understand the full linkages of an industry throughout the economy. It provides a robust estimation of the full economic footprint of an activity – and consequently, the potential economic impact if the activity was suddenly halted. The economic footprint from our IO multiplier analysis describes:

- the direct contributions the construction sector makes to the Victorian economy, plus
- the full extent of the indirect contributions the sector makes to the Victorian economy through its demand for intermediate inputs from other industries (wood, cement, aluminium, skips, parts, electricity, machinery, freight etcetera), as well as through the demand stimulated by the wages and salaries of employees.

Tables 1 to 3 (overleaf) present the results of the Input-Output multiplier analysis. In total, over the period of the lockdowns (spanning March 2020 to September 2021 inclusive), it is estimated that the construction industry's continued operation increased Victoria's:

- household incomes by \$8.2-\$11.8 billion
- GSP by \$16.2-\$23.7 billion
- employment by 122,233-168,369 FTE jobs.

These estimates of economic impact have been provided as lower and upper bounds. The lower bound estimate includes the effect of the loss of the direct contribution made by the construction sector to Victoria's household income, GSP, and employment, along with the contribution embodied in the sector's supply chain. The upper bound estimates embody the lower bound contribution, as well as the economic contribution made by workers across the construction sector's supply chain spending their after-tax incomes on other Victorian goods or services (such as hairdressers, restaurants, retail traders etcetera). The lower and upper bound estimates are generated by using Simple and Total multipliers, respectively.

When properly calculated, the lower bound estimates of the construction sector are additive, with the lower bound estimates for other non-overlapping sectors (that is, sectors that are not part of the construction sector's supply chain) and will never add up to more than Victoria's total GSP, household income, or employment. While the lower bound estimates of the footprint are useful for many contexts, they are a conservative estimate of the total economic activity or employment that could have been affected by a major change or disruption to the construction industry's activities if it had not remained open. In light of this, the upper bound estimates provide a useful upper bound on the total amount of economic activity or employment that would have been impacted in some manner.

Table 1: Estimated Impact of Victorian Construction Industry Remaining Open: Household Income

	Direct impact	Indirect impact – Lower bound	Indirect impact – Upper bound	Total impact – Lower bound	Total impact – Upper bound
	A\$m	A\$m	A\$m	A\$m	A\$m
Residential construction	1,093	3,850	6,023	4,943	7,116
Non-residential construction	886	2,352	3,776	3,238	4,661
<b>Total</b>	<b>1,978</b>	<b>6,202</b>	<b>9,799</b>	<b>8,180</b>	<b>11,778</b>

Note: Totals may not add due to rounding. Lower bound estimates are limited to the direct impacts plus the indirect impacts embodied in the construction industry's supply chain.

Source: ACIL Allen

Table 2: Estimated Impact of Victorian Construction Industry Remaining Open: GSP

	Direct impact	Indirect impact – Lower bound	Indirect impact – Upper bound	Total impact – Lower bound	Total impact – Upper bound
	A\$m	A\$m	A\$m	A\$m	A\$m
Residential construction	2,912	7,026	11,566	9,939	14,478
Non-residential construction	1,901	4,351	7,346	6,252	9,247
<b>Total</b>	<b>4,813</b>	<b>11,378</b>	<b>18,912</b>	<b>16,191</b>	<b>23,725</b>

Note: Totals may not add due to rounding. Lower bound estimates are limited to the direct impacts plus the indirect impacts embodied in the construction industry's supply chain.

Source: ACIL Allen

Table 3: Estimated Impact of Victorian Construction Sector Remaining Open: Employment

	Direct impact	Indirect impact – Lower bound	Indirect impact – Upper bound	Total impact – Lower bound	Total impact – Upper bound
	FTE jobs	FTE jobs	FTE jobs	FTE jobs	FTE jobs
Residential construction	29,458	48,035	75,911	77,493	105,369
Non-residential construction	14,820	29,920	48,180	44,740	63,000
<b>Total</b>	<b>44,278</b>	<b>77,955</b>	<b>124,091</b>	<b>122,233</b>	<b>168,369</b>

Note: Totals may not add due to rounding. Lower bound estimates are limited to the direct impacts plus the indirect impacts embodied in the construction industry's supply chain.

Source: ACIL Allen

### 3.3 KEY FINDINGS

The Key Findings of this study are outlined below. Framed below in response to the Research Questions, they distil core insights derived from the Narrative Timeline and Economic Modelling (see Sections 3.1 and 3.2). For a snapshot overview of Key Findings, see the Executive Summary at the front of this report.

#### 3.3.1 HOW COVID-19 IMPACTED VICTORIA'S BUILDING AND CONSTRUCTION INDUSTRY

**Research Question 1: How was Victoria's building and construction industry impacted by the Covid-19 pandemic over the two-year period January 2020–December 2021?**

Covid-19 posed enormous challenges for Victoria's building and construction industry, dealing out a succession of blows over the two-year period of focus. However, the pandemic's impacts on the sector were not exclusively negative. As one of the few industries permitted to remain operating during Victoria's lockdowns, construction was in a fortunate position; while the hardships faced far outweighed the benefits, the positive aspects warrant consideration. Table 4 (below) sets out the key Covid-related factors ("pandemic consequences") that led to negative impacts for the building and construction sector; Table 5 (p.52) outlines the aspects that had beneficial effects for industry.

Table 4: Negative Impacts of Covid-19 Pandemic: Building and Construction

NEGATIVE CONSEQUENCE OF PANDEMIC	NEGATIVE IMPACTS ON INDUSTRY
1. Economic uncertainty	<ul style="list-style-type: none"> <li>▪ Reduced work pipeline</li> <li>▪ Lost revenue</li> <li>▪ Lost income</li> <li>▪ Job losses</li> <li>▪ Project delays (financial penalties)</li> <li>▪ Business insolvencies</li> <li>▪ Exacerbation of some skills shortages</li> </ul>
2. Covid-19 mitigations (challenges)	<ul style="list-style-type: none"> <li>▪ Increased costs</li> <li>▪ Reduced productivity</li> <li>▪ Lost income</li> <li>▪ Project delays (financial penalties)</li> <li>▪ Compliance challenges</li> </ul>
3. Supply chain disruptions	<ul style="list-style-type: none"> <li>▪ Material shortages</li> <li>▪ Cost hikes</li> <li>▪ Lost income</li> <li>▪ Project delays (financial penalties)</li> </ul>
4. September 2021 riots	<ul style="list-style-type: none"> <li>▪ Industry shutdown (two weeks)</li> <li>▪ Lost revenue</li> <li>▪ Lost income</li> <li>▪ Workforce caps, additional restrictions</li> <li>▪ Reputational damage to industry</li> <li>▪ Internal conflict and division</li> </ul>
5. Industry shutdowns	<ul style="list-style-type: none"> <li>▪ Productivity losses</li> <li>▪ Lost revenue (est. \$455m per day)</li> <li>▪ Lost income (est. \$63m per day)</li> <li>▪ Project delays (financial penalties)</li> <li>▪ Threat contributed to uncertainty</li> </ul>
6. General psychosocial effects (population-wide)	<ul style="list-style-type: none"> <li>▪ Increased stress and anxiety</li> <li>▪ Work/life balance challenges</li> <li>▪ Social conflict, misinformation, pandemic fatigue</li> </ul>

The pandemic's negative impacts on industry included economic uncertainty, supply chain disruptions, project delays, lost revenue, reduced income, lowered productivity, disrupted work pipelines, contractual penalties, job losses, business insolvencies, and additional costs arising from Covid-19 mitigation measures. For some builders with large-scale worksites, for example, the weekly cleaning bill could top \$1million.

Industry shutdowns cost the sector an estimated \$455 million in lost revenue and \$63 million in lost wages per day (Faine, 2021). Workflows within the construction industry are highly intermeshed, so the two industry shutdowns in February and September of 2021 caused major disruptions, both within the sector and in adjacent industries. While the State Government paid out almost \$200m in business support to industry for the second shutdown, this came nowhere near offsetting the enormous losses for the two shutdowns, which together spanned 14 workdays. The threat of imminent shutdowns also caused increased uncertainty across the sector, while

the chain of events surrounding the September shutdown surfaced internal frictions and caused reputational damage for the industry.

Despite these setbacks, some potential negative impacts from the pandemic were softened or offset by positive developments. Aside from the obvious benefits of the sector surviving during this two-year period – jobs and businesses saved, the prevention of the industry's potential collapse – the crisis also catalysed some highly effective new alliances, eased certain long-held conflicts, increased collaboration within the sector, and sparked the development of innovative programs and initiatives. For the organisations that united to form the BIG1 alliance, the pandemic also granted industry leaders an unprecedented level of access to senior government officials, with group members attending roundtable meetings with the Treasurer and key State Government Ministers, and regular phone calls between parties. Some of these positive outcomes may have beneficial longer-term effects for industry (see Section 4.4, p.66).

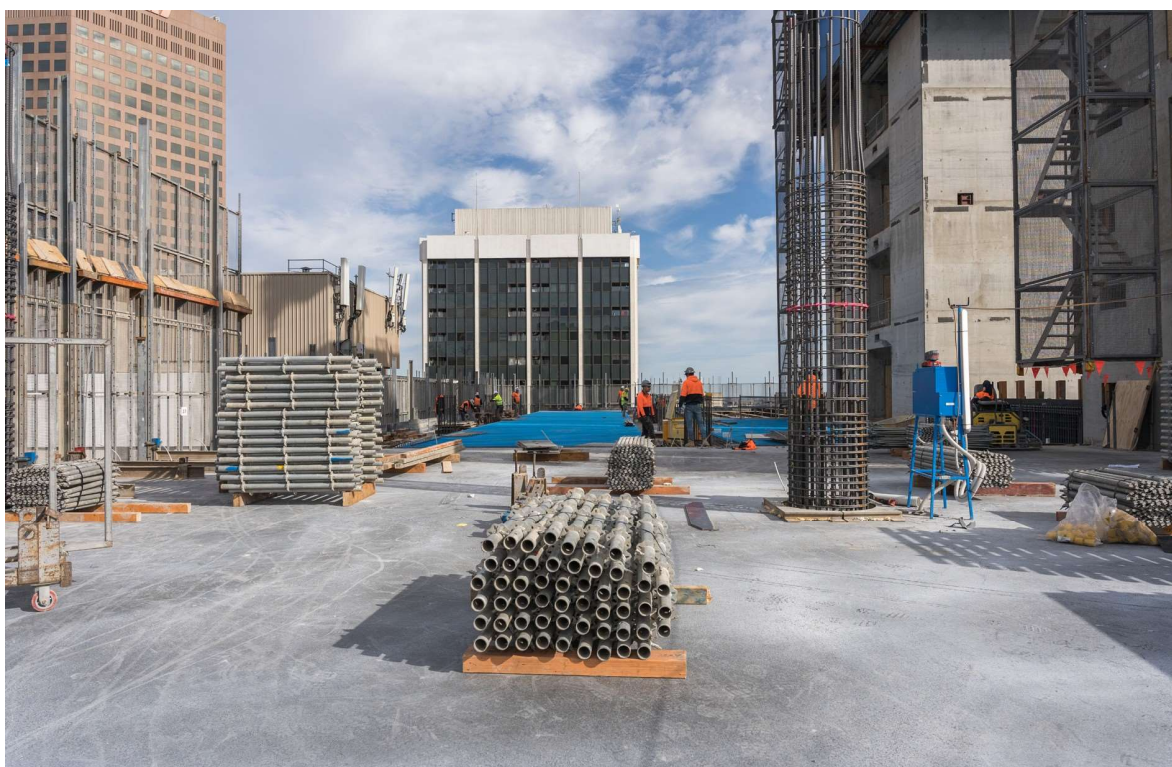


Table 5: Positive Impacts of Covid-19 Pandemic: Building and Construction

POSITIVE CONSEQUENCE OF PANDEMIC	POSITIVE IMPACTS ON INDUSTRY
1. Construction deemed "essential"	<ul style="list-style-type: none"> <li>▪ Industry remained mostly open</li> <li>▪ Job losses averted</li> <li>▪ Business insolvencies averted</li> <li>▪ Potential collapse of industry prevented</li> <li>▪ Greater access to senior government</li> <li>▪ Face-to-face training permitted (some industry occupations)</li> </ul>
2. Covid-19 mitigations (benefits)	<ul style="list-style-type: none"> <li>▪ Industry remained mostly open</li> <li>▪ Workers' health safeguarded</li> <li>▪ Job losses averted</li> <li>▪ Business insolvencies averted</li> <li>▪ Potential collapse of industry prevented</li> <li>▪ Demonstration of effective leadership</li> <li>▪ Real-world testing and refinement of measures</li> </ul>
3. New industry alliances	<ul style="list-style-type: none"> <li>▪ Industry remained mostly open</li> <li>▪ Timely rollout of innovative initiatives</li> <li>▪ Greater access to senior government</li> <li>▪ Increased lobbying power</li> <li>▪ Pooling of diverse expertise and resources</li> <li>▪ Knowledge-sharing, capacity-building</li> <li>▪ Improved collaboration</li> <li>▪ Reduced conflict between unions/employers</li> </ul>
4. Government investment and support (industry-specific)	<ul style="list-style-type: none"> <li>▪ Industry remained mostly open</li> <li>▪ Job losses averted</li> <li>▪ Business insolvencies averted</li> <li>▪ Potential collapse of industry prevented</li> </ul>
5. General psychosocial effects (population-wide)	<ul style="list-style-type: none"> <li>▪ Innovation and adaptation</li> <li>▪ New ways of working</li> <li>▪ Sense of solidarity (common foe)</li> </ul>

### 3.3.2 MAJOR CHALLENGES AND HOW THE INDUSTRY RESPONDED

**Research Question 2: What were the major challenges for the industry during this two-year period, and how did the sector respond to these challenges?**

The crisis context of the pandemic threw up an ongoing series of challenges for the industry, including a high-stakes, pressurised working environment for both industry leaders and government officials. Circumstances changed rapidly, and the public service was often overwhelmed. This volatile setting called for an approach that was proactive, organised, co-ordinated and united.

The early formation of the BIG1 alliance, through which construction unions and employer groups worked together and spoke with one voice, was instrumental in meeting the challenges of Covid-19. Faced with a new and rapidly evolving threat, the industry had to demonstrate to Government that it could operate safely, protecting its workforce from infection and minimising the risk of wider transmission. BIG1 and other industry groups worked proactively to develop mitigation measures in close collaboration with the State Government, establishing clear communication channels and ensuring that public health Directions were firmly embedded into the Industry Covid-19 Guidelines, member messaging, and workforce education. The industry's efforts on this front set the bar well above compliance, encompassing voluntary sector-driven mitigations (see Table 6, below) and promoting best practice workplace infection controls.

While collectively BIG1 had significant resources, networks, and in-house expertise, it was a small leadership team, and Covid placed high demands on it. Recognising this, the group enlisted outside expertise to support its work, engaging

experienced advisors to provide it with strategic guidance, and proposing that DHHS appoint an Industry Liaison Officer (ILO) to act as a conduit between the sector and the State Government. Established early on, these dedicated roles provided valuable support to the sector's pandemic response.

Ongoing dialogue with senior levels of Government was vital. Following the February 2021 shutdown, for example, BIG1 met with State Government Ministers and senior officials to provide feedback on the shutdown's effects and the sector's Covid-safe measures. Government consultation resulted in better-informed policy decisions, more agile responses, and more effective mitigation measures, and the BIG1 alliance provided a platform for this work. However, despite best efforts, there were times when dialogue lapsed, understandings were incomplete, the sector was not as united as it could have been, compliance gaps were not addressed in a unified way, or industry leaders were not consulted on major decisions. In addition, the sector's size and complexity, along with the crisis context of the pandemic itself, made it impossible to accurately track case numbers and workplace spread within the industry.

Together, these factors played a part in the escalating tensions and flashpoint events of September 2021, including the riots outside CFMMEU headquarters and the subsequent two-week industry shutdown. Industry leaders publicly denounced the riots and the behaviour of those present, and the CFMMEU identified and sanctioned a small number of union members who were directly involved in the violence. While the composition of the crowds at that gathering and subsequent protests remains unclear, these events revealed some internal divisions, and the fallout included reputational damage for the industry.

Table 6: Covid-19 Challenges and Industry Responses: Building and Construction

CHALLENGE	SPECIFICS	INDUSTRY RESPONSES
1. Crisis context	<ul style="list-style-type: none"> <li>▪ New, rapidly evolving threat</li> <li>▪ Governments underprepared</li> <li>▪ Public service overwhelmed</li> <li>▪ Constantly changing situation</li> <li>▪ Health threat to workforce</li> <li>▪ Confusing public health messaging</li> <li>▪ Data gaps (e.g. workplace cases)</li> <li>▪ Lag between science and policy</li> <li>▪ Heavy workloads, high stakes</li> <li>▪ Some reactive policy decisions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Draw on wide-ranging expertise</li> <li>▪ Build alliances, put aside conflicts</li> <li>▪ Drive initiatives, present solutions</li> <li>▪ Secure Industry Liaison Officer</li> <li>▪ Promote best practice mitigations</li> <li>▪ Workforce education campaigns</li> <li>▪ Voluntary case reporting (via ILO)</li> <li>▪ Lobby for science-based measures</li> <li>▪ Engage expert advisors to BIG1</li> <li>▪ Request greater consultation</li> </ul>
2. Internal divisions	<ul style="list-style-type: none"> <li>▪ Gaps in alliance-building</li> <li>▪ Domestic subsector not fully represented within BIG1</li> <li>▪ Partial workforce coverage</li> <li>▪ Compliance challenges (small sites)</li> <li>▪ Opposition to union/employer unity</li> <li>▪ Some support for shutdowns</li> </ul>	<ul style="list-style-type: none"> <li>▪ Work with other industry groups</li> <li>▪ Efforts to expand engagement</li> <li>▪ Domestic subsector produced own tailored advice for smaller sites</li> </ul>
3. Divergent understandings	<ul style="list-style-type: none"> <li>▪ Large, complex, multifaceted sector</li> <li>▪ Different frames of reference</li> <li>▪ Unexpected Government decisions</li> <li>▪ Culturally diverse workforce</li> </ul>	<ul style="list-style-type: none"> <li>▪ Alliance-building, coordination</li> <li>▪ Regular dialogue with Government</li> <li>▪ Feedback and lobbying</li> <li>▪ Covid-safe CALD communications</li> </ul>
4. Industry shutdowns (actual and potential)	<ul style="list-style-type: none"> <li>▪ Major income and revenue losses</li> <li>▪ Threat contributed to uncertainty</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ongoing lobbying and negotiation</li> <li>▪ Proactive mitigation measures</li> <li>▪ Rapid rollout of programs</li> <li>▪ Member education</li> <li>▪ Compliance messaging</li> <li>▪ Surveillance testing program</li> </ul>
5. Reputational challenges	<ul style="list-style-type: none"> <li>▪ Resentment/perceived favouritism</li> <li>▪ Public anger over non-compliance</li> <li>▪ Blowback from crib room action</li> <li>▪ Construction linked to protests</li> <li>▪ Widespread condemnation of riots</li> </ul>	<ul style="list-style-type: none"> <li>▪ Acknowledge privilege of staying open</li> <li>▪ Strengthen compliance messaging</li> <li>▪ Actively engage with media</li> <li>▪ Union censure of perpetrators</li> <li>▪ Industry condemnation of riots</li> </ul>
6. Social unrest, misinformation (population-wide)	<ul style="list-style-type: none"> <li>▪ Pandemic fatigue, climate of anxiety</li> <li>▪ Vocal minority of insiders</li> <li>▪ Vulnerabilities within workforce</li> <li>▪ Outside agitators targeting industry</li> </ul>	<ul style="list-style-type: none"> <li>▪ Publicly support CHO Directions</li> <li>▪ Promote science-based approach</li> </ul>





### 3.3.3 KEY FACTORS, STRATEGIES, AND INITIATIVES THAT ENABLED THE INDUSTRY TO REMAIN OPEN

**Research Question 3: What were the key factors, strategies, and initiatives that enabled the industry to remain largely open while many other sectors were closed down?**

This study identified eight “success factors” that were most influential in enabling Victoria’s construction industry to remain largely open while other sectors were shut down (see Table 7, overleaf). Four of these factors have “internal” origins - in other words, they’re about how industry groups and leaders handled the pandemic; the other four are more “external” in origin - the result of outside forces, historic context, or the actions of other parties. The “internal” factors arise from deliberate, goal-oriented actions by people within the industry; the “external” factors were largely outside their control. These success factors are discussed further in Section 4.1 (p.62).

The industry’s alliance-based approach was a critical success factor. This was exemplified by the BIG1 group’s proactive leadership and effective communication strategies, and the rapid development and timely deployment of specific pandemic initiatives, including programs to protect workers’ health and safety and minimise the risk of transmission. Key examples of these timely and proactive interventions are listed in Table 7 (overleaf) and are outlined in more detail in Section 3.3.4 (see p.58).

Incolink’s onsite testing program was the most resource-intensive example of the pandemic initiatives funded or part-funded by the sector, costing in the realm of several million dollars. Targeting asymptomatic cases, this comprehensive surveillance program helped monitor and mitigate workplace transmission on larger worksites, reducing the risk of infection and providing reassurance for workers. Data provided by program partner APC spanning late April 2020 to January 2021 showed over 21,000 PCR tests had been administered across construction worksites in Victoria, with just 12 positive cases identified. These employees were at work while potentially infectious, but unaware that they were Covid-positive.

Full program data, including financial details, is unavailable for most of these industry-run initiatives, so the specific investments made cannot accurately be quantified. Designed and rolled out within a very compressed timeframe, and typically funded by multiple partners, few of these interventions were fully costed, either at the time or retrospectively. Where an initiative was deemed necessary and viable, industry would seek to fund and implement it. For example, a series of phone calls led to a group of large employers swiftly chipping in \$120,000 to fund MBV’s billboard campaign to increase vaccination rates within the sector (the “Get on with the job” campaign).

Table 7: Covid-19 Success Factors and Industry Actions: Building and Construction

SUCCESS FACTORS: INTERNAL	INDUSTRY ACTIONS: Strategies, Activities, Initiatives
1. Alliance-based Approach	<ul style="list-style-type: none"> <li>▪ Early formation of BIG1 industry alliance (mid-March 2020)</li> <li>▪ Unity of purpose: keep industry open, protect workers, heed experts</li> <li>▪ Truce on long-standing hostilities between unions/employers</li> <li>▪ Coordinated action, consistent messaging, united front</li> <li>▪ Active collaboration with Victorian Government</li> <li>▪ Collaborative input from other industry groups (including long-standing Building Industry Consultative Council [BICC])</li> </ul>
2. Strong Leadership	<ul style="list-style-type: none"> <li>▪ Leverage specialist in-house knowledge and networks</li> <li>▪ Secure additional expertise (key advisors, Industry Liaison Officer role)</li> <li>▪ Clarity on people’s respective roles</li> <li>▪ Clear commitment to collaborating with State Government</li> <li>▪ Model support for public health measures (e.g. media coverage of leaders modelling vaccination, testing, masking)</li> <li>▪ Leaders engaged in frontline work (mask delivery, testing, site visits)</li> </ul>
3. Timely and proactive interventions	<ul style="list-style-type: none"> <li>▪ Rapid development/updates of Covid-19 Industry Guidelines</li> <li>▪ Swift design and rollout of industry-run pandemic programs</li> <li>▪ Early set-up of Covid-19 Hardship Payments</li> <li>▪ Onsite Covid-19 industry testing program</li> <li>▪ Onsite workforce vaccination program</li> <li>▪ Workplace contact tracing systems (individual companies + ILO)</li> <li>▪ Infection control training for 650 HSR personnel</li> <li>▪ Member education (Covid safety, compliance, vaccine uptake)</li> <li>▪ CALD-specific communications campaigns (in language)</li> <li>▪ Early distribution of 40,000 KN95 masks to industry</li> <li>▪ Gold Standard Award Program (with ILO site inspections)</li> <li>▪ Industry Roadmaps and briefings to inform Government decisions</li> <li>▪ Technology trials and research collaborations (heat-sensing, wearable tech, workplace mapping, vaccine attitudes/messaging)</li> </ul>
4. Effective communications	<ul style="list-style-type: none"> <li>▪ Coordinated approach to communications</li> <li>▪ Consistent messaging on Covid-safe practices</li> <li>▪ Regular and well-executed media engagement</li> <li>▪ Comms tailored to Government (Roadmaps, briefings, letters)</li> </ul>

Table 8: Covid-19 Health and Safety Precautions: Building and Construction

SUCCESS FACTORS: EXTERNAL	SPECIFICS
1. Sector's size and economic contribution	<ul style="list-style-type: none"> <li>Large workforce (300,000+)</li> <li>\$21.6 billion per annum contribution to Victorian economy</li> </ul>
2. Critical and essential services, highly regulated industry	<ul style="list-style-type: none"> <li>Industry provides multiple essential services and functions</li> <li>Government projects play major role in sector activity</li> <li>Strict and well-embedded Health and Safety regulations</li> </ul>
3. Government investment and support	<ul style="list-style-type: none"> <li>Major investments in civil infrastructure (Vic)</li> <li>Building Works Package (\$2.7b, Vic)</li> <li>Approvals fast-tracked by Building Recovery Taskforce (Vic)</li> <li>HomeBuilder grant scheme (Federal)</li> <li>JobKeeper program (Federal)</li> <li>Support payments for workers isolating due to Covid</li> <li>Offsite Construction program (\$4.5m, Vic, 2021 budget)</li> <li>Dedicated Industry Liaison Officer (DHHS-funded, Vic)</li> <li>Business Costs Assistance Program (\$196.6m, Vic, shutdown two)</li> <li>Willingness to actively collaborate and consult with industry (Vic)</li> </ul>
4. Crisis context	<ul style="list-style-type: none"> <li>Government receptive to industry's proactive approach</li> <li>Public service overstretched</li> <li>Opportunity for industry to generate, propose, and drive solutions</li> </ul>

### 3.3.4 HOW THE INDUSTRY PROTECTED WORKERS' HEALTH AND SAFETY

#### Research Question 4: How did industry protect workers' health and safety over this period?

Victoria's building and construction industry took a leading role in developing and implementing measures to help mitigate the spread of Covid-19 and protect workers' health and safety. The industry showed strong initiative on this front, moving swiftly to fund and develop a series of well-designed initiatives and rolling them out in a coordinated and timely way (see Table 8, overleaf). For further discussion of these interventions, see Section 4.1 (p.62).

The Covid-19 Industry Guidelines are one prominent example. Developed in close collaboration with the State Government, and anchored in official public health advice, they quickly became the "bible" for Covid-safe practices across the sector. These protocols set out a comprehensive list of both mandatory regulations and recommended "best practice" measures to minimise transmission on construction sites, including relevant CHO Directions, sector-led initiatives, and processes for handling positive cases and close contacts. They also set out rules for stand-downs, site closures, lockdowns, redundancies, and workers' supports and entitlements.

The first version of the Guidelines came out in late March 2020, just two weeks after the WHO declared a pandemic. In total 17 versions were produced, some running to 50 pages, and all were disseminated widely across the sector. Regular updates reflected changing public health advice, fluctuating restrictions, case number trends, new variants, sector-specific rules, and the rollout of new industry programs. On-the-ground compliance was overseen by workplace Health and Safety reps (HSRs), with support from in-house Covid Marshalls from October 2020.

A genuinely collaborative effort, the Guidelines came about through an acronym-riddled rollcall of expertise. They were developed by a drafting subcommittee of the Building and Construction Industry Working Group (BCIWG), chaired by Peter Parkinson, in collaboration with Industry Liaison Officer Michael Paynter (DHHS), with guidance from BIG1 and input from a slew of other industry and Government bodies, including the VCSA, BICC, DoH, DJPR, VBA, WorkSafe, and the Rapid Industry Guidance (RIG) Covid-19 Taskforce (see Appendix).

As noted in the previous section, the sector's onsite PCR testing program also provided an extra layer of protection and reassurance for workers. Delivered by Incolink and health partner Australian Prostate Centre (APS), this comprehensive and timely initiative was rolled out efficiently at multiple major construction sites across the

State. Designed to detect asymptomatic cases, the program supported rapid contact tracing, helped reduce the risk of workplace transmission, functioned as a barometer of asymptomatic spread, and gave the Government confidence that the sector was proactively monitoring its workforce to mitigate risk. Under this partnership the sector also implemented a well-designed industry vaccination program. This program was launched successfully, but the rollout was undermined by the unexpected announcement of vaccine mandates for Victoria's construction workforce.

Workforce education programs and tailored communications were also rolled out to help embed Covid-safe practices and drive home health messages to workers. Relevant industry initiatives included training modules in infection control and workplace mapping, and communications campaigns to promote best practice, encourage compliance, boost vaccination rates, reduce transmission beyond the workplace, and communicate health information to culturally and linguistically diverse (CALD) workers. The CALD campaigns reached an audience of millions (Faine, 2021).

Unfortunately, a lack of comprehensive program data for most of these industry-run initiatives makes it difficult or impossible to accurately assess their true impact, or to evaluate how effective they were in protecting workers' health and safety.

Table 8: Covid-19 Health and Safety Protections for Workers: Building and Construction

INDUSTRY INITIATIVE OR APPROACH	SPECIFICS
1. Industry Covid-10 Guidelines	<ul style="list-style-type: none"> <li>▪ Early BIG1 initiative (first version mid-March 2020)</li> <li>▪ Updated regularly and disseminated widely</li> <li>▪ 17 versions over two years</li> <li>▪ Developed by BCIWG, with Industry Liaison Officer (DHHS), BIG1, and other industry bodies</li> <li>▪ Close consultation with Government (Vic)</li> <li>▪ Based on CHO Directions (public health advice)</li> <li>▪ Supported and socialised via industry groups</li> <li>▪ Influential model, adopted by other sectors</li> </ul>
2. Onsite PCR testing program	<ul style="list-style-type: none"> <li>▪ Surveillance testing for asymptomatic cases</li> <li>▪ Delivered by Incolink and Australian Prostate Centre</li> <li>▪ Co-funded by industry and Government (Vic)</li> <li>▪ Visibly supported by industry leaders</li> <li>▪ 18,000 tests in 2019-2020 FY</li> <li>▪ 23,000 tests in 2020-2021 FY</li> </ul>
3. Industry vaccination program	<ul style="list-style-type: none"> <li>▪ Delivered by Incolink and Australian Prostate Centre</li> <li>▪ Co-funded by industry and Government (Vic)</li> <li>▪ Visibly supported by industry leaders</li> <li>▪ Rollout delayed by vaccine supply issues (Federal)</li> <li>▪ Compromised by vaccine mandate announcement (Vic)</li> </ul>
5. Industry education, member communications	<ul style="list-style-type: none"> <li>▪ Training in infection control and workplace mapping</li> <li>▪ Member communications (Covid safety, compliance, vaccination, reducing transmission outside work)</li> <li>▪ CALD communications</li> <li>▪ Worksite visits by union leaders</li> <li>▪ Coordinated and consistent messaging</li> </ul>
4. Hardship support payments	<ul style="list-style-type: none"> <li>▪ For Incolink members who lost work due to Covid</li> <li>▪ Safety net for workers (and wider workforce/employers)</li> <li>▪ \$2000/month income support</li> <li>▪ 5773 payments made in 2020-2021 FY</li> </ul>
5. Other initiatives	<ul style="list-style-type: none"> <li>▪ Distribute KN95 masks (40,000)</li> <li>▪ Fund technology pilots (e.g. Deakin University, 2021)</li> </ul>

### 3.3.5 ECONOMIC BENEFITS OF THE INDUSTRY REMAINING OPEN

**Research Question 5: What were the quantifiable (direct and indirect) economic benefits of Victoria’s construction industry remaining largely open during multiple lockdowns?**

#### Benefits to Victoria’s Building and Construction Industry

To estimate the likely impacts on Victoria’s construction industry if it had not been able to continue operating during the 2020-2021 lockdowns, ACIL Allen examined monthly turnover trends within the food services industry. The analysis focuses specifically on two related subsectors within this industry that were respectively deemed “essential” and “non-essential” and were thus subject to very different restrictions.

Applying these turnover trends to pre-Covid-19 trends (adjusted for population growth for construction), ACIL Allen compiled a counterfactual scenario of what may have happened for the construction industry if it had been closed down.

In total, over the period of Victoria’s lockdowns (March 2020 to September 2021 inclusive), ACIL Allen estimated that combined efforts by industry and government to keep the Victorian construction sector open could have saved a total of \$22.1 billion of construction work done, comprising:

- \$13.6 billion of work done by the residential construction sector
- \$8.5 billion of work done by the non-residential construction sector.

#### Benefits to Victoria’s Broader Economy

To estimate the broader economic benefits of the Victorian construction sector remaining largely open during the period of focus, ACIL Allen used Input-Output (IO) multiplier analysis. This methodology provides a robust estimation of the full economic footprint of an activity - and consequently, the potential economic impact if that activity was suddenly halted.

This analysis encompasses both the direct contributions the construction industry makes to the Victorian economy, and the indirect contributions it makes through demand for intermediate inputs from other industries, along with demand stimulated by the wages and salaries of employees. In total, over the period of lockdowns (March 2020 to September 2021 inclusive), it is estimated that the Victorian building and construction industry’s continued operation resulted in the following benefits to the State’s economy:

- Increased household incomes by \$8.2-\$11.8 billion
- Increased GSP by \$16.2-\$23.7 billion
- Increased employment by 122,233-168,369 FTE jobs.

# 4

## 4. DISCUSSION

Key insights from the Findings of this research are discussed briefly below. Discussion points are grouped under six themes: the main “success factors” that enabled Victoria’s building and construction industry to remain largely open during the first two years of the Covid-19 pandemic; the main challenges the sector faced over this period; a reflection on “lessons learned” from this turbulent time in the sector’s history; a consideration of potential lasting impacts; a note on the limitations of this study; and a short snapshot of how the industry is faring now, at the time of writing.

### 4.1 SUCCESS FACTORS

The industry’s alliance-based approach was a critical factor in keeping construction up and running during the two-year period of focus. The early formation of the BIG1 group – comprising leaders from both unions and employers’ associations, two parties with a long and fraught history of hostile relations – exemplifies this alliance-building. Unity of purpose established a strong foundation for meeting the challenges of the pandemic. As a strategy, this alliance was both unique and highly effective, enabling shared decision-making, rapid knowledge-sharing, coordinated action, and more unified lobbying efforts. It also had a positive impact on union-employer relations at the national level (MBA, 2020) and opened new lines of direct communication between industry leaders and senior levels of government:

This [alliance] was very unusual. It didn’t happen anywhere else in the world – a collective of unions, membership-based employers’ associations, and related

groups literally coming to the table, looking for common ground. Those parties were not usually on same side.  
– Consultant Christine Wyatt, former advisor, BIG1 group.

A Government minister told us, “Listen, when you’re all singing off the same song sheet, there is so much more we can do for you.” – John Setka, Secretary (Construction), CFMMEU, Vic/Tas.

One politician said to me, “If [employer groups] hadn’t worked with the unions, your industry would have been shut down.” – Mark Little, President, Master Builders Victoria (MBV).

That said, the group’s formation was not without controversy. It took considerable gumption for industry leaders to call a truce on decades of acrimonious relations and work together constructively, and not everyone was happy about it:

Some people thought we should take a more combative approach. They felt [MBV was] far too close to the unions. I personally received some very strong and ongoing criticism resulting from my desire to change the traditional dynamic with the unions and reduce the hostility in our industry.” – Rebecca Casson, former CEO, MBV.

Being proactive was another strategy that paid off. Rather than waiting for government to set the agenda or propose solutions, industry leaders moved quickly to investigate, fund, develop, and roll out the sector’s own Covid-19 initiatives.



Working with other industry groups, BIG1 kept tabs on emerging issues, investigated options, and put forward timely solutions, securing input and collaboration from the State Government.

Backed by strong leadership, a diverse pool of expertise, small-team agility, creative thinking, and the sector's substantial resources, the BIG1 alliance was often one step ahead of government in introducing measures to protect workers and mitigate transmission. Examples of proactive industry-run initiatives include the onsite Covid-19 testing program, the Industry Covid-19 Guidelines, hardship payments for furloughed workers, workforce contact tracing, KN95 mask distribution, and the industry vaccination program. Most of these programs were established by industry ahead of being required or implemented by government.

Building and construction was more proactive than other industries. They were an exemplar in terms of industry coordination. They put aside their issues, got together and worked it out themselves. And they created their own [Covid-19 Industry] Guidelines, which was helpful. - Mounir Kiwan, former Ministerial Advisor, DJPR.

The pandemic has highlighted how quickly the industry can adapt, and how creative we are at finding solutions when we all work together. - Paul Breslin, Regional OHSE Manager, Multiplex.

External factors also helped the building and construction industry remain open. The sector's sheer size and economic might, its role in providing critical infrastructure and essential services, and its stringent health and safety settings were major advantages. Collectively, the industry is responsible for a long list of things we cannot do without, including hospitals, schools, roads, heating, cooling, ventilation, fire protections, electricity, drinking water, waste systems and medical gases. Many of these functions are funded by public investments.

Government projects make up a significant proportion of construction sector activity, and public investments in construction can be used by governments to influence the broader economy (Pheng & Hou, 2019). Together, these factors provided further impetus for the Victorian Government to keep the industry open. As a dangerous industry, construction is also governed by strict health and safety regulations, particularly within the more unionised civil and commercial subsectors. Early on, industry leaders successfully argued that this tight regulatory climate made the construction industry well-equipped to manage Covid.

The industry's own substantial efforts aside, it could not have survived the first two years of the pandemic without significant government support. Along with granting the sector "essential" status - an early-stage hurdle requirement for staying open - the Victorian Government made major investments in civil infrastructure projects, fast-tracked approvals (Prem Vic, 2020b), co-funded the industry's onsite testing and vaccination programs, and appointed a dedicated Industry Liaison Officer (ILO). The Federal Government rolled out the HomeBuilder and JobKeeper schemes, both of which injected substantial funds into Victoria's building and construction sector.

It was government investment in [civil infrastructure] projects that helped to the industry alive. - Jen Marks, National Director of Strategy, Built.

Beyond financial measures, the Victorian Government also supported the sector by being receptive to industry perspectives, keeping communication channels largely open, and being willing to collaborate:

The [State] Government really opened the door for dialogue. They were very open and inclusive about working with us through the mayhem of Covid. Ministers answered phone calls within seconds. - Earl Setches, Secretary, PPTEU.

## 4.2 BARRIERS AND CHALLENGES

While Victoria's building and construction industry banded together admirably to face the challenges of the pandemic, the industry's efforts were not wholly united. As noted elsewhere in this report, membership of BIG1 – the group of industry leaders who drove the industry's coordinated pandemic response – skews heavily towards the commercial and civil construction subsectors. These subsectors are characterised by major construction companies, larger-scale worksites, and a more unionised workforce.

The domestic construction subsector, which makes up a substantial portion of the industry, was not unrepresented in BIG1's activities, and was certainly on the group's radar: MBV's membership base includes domestic builders, the organisation's President runs a small residential building company, and representatives from the residential subsector had active input on the Industry Covid-19 Guidelines. These connections helped keep residential and smaller-scale construction on the Government's agenda, and resulted in some beneficial policy tweaks on decisions that were impacting these segments of the industry disproportionately. However, while other industry bodies covering the residential subsector were not excluded from BIG1, their involvement in the frontline of collaborative decision-making was limited. This gap in the alliance had repercussions for all parties.

The Housing Industry Association (HIA), a national peak body representing the residential building industry, did a substantial amount of work to promote Covid-safe practices, liaising regularly with the Victorian Government, keeping their membership base updated on compliance obligations, and producing tailored guides for different types of small-scale worksites. However, the HIA did not enjoy the same level of access to senior Government as its counterparts in BIG1, and had limited involvement in associated industry groups that were on the frontline of the sector's response to Covid-19 (see Appendix). Leaders in the domestic subsector criticised some Government regulations as being designed

around the needs of large-scale construction, and unsuitable or unworkable for smaller worksites (Sakkal, 2021b).

While data from the State Government's 2021 worksite inspection blitz in was never made public, it's clear that compliance challenges were not always addressed in a unified way across the sector. Reports of widespread non-compliance on worksites contributed to escalating tensions between industry and Government, and the volatile mix of factors that led to the sector being shut down in September 2021.

One critical thing was getting the upper end of town, the big construction sites and unions, to [factor in] the smaller sites. If those small sites don't operate properly, the tail will wag the dog. You'll all be shot down. – Consultant Christine Wyatt, former advisor, BIG1 group.

Some things were outside the industry's control. Amongst growing social tensions, the Government's unexpected announcement of crib room bans and vaccine mandates escalated an already-tense situation, and the industry became a flashpoint for anger and dissent. Backlash was also directed at industry leaders, including harassment and death threats, which took a personal toll. The ensuing riots also revealed internal divisions within the workforce, with some segments clearly vulnerable to misinformation and/or manipulation by extremist groups.

## 4.3 LESSONS LEARNED

Establishing the BIG1 alliance was a highly effective strategy for industry in tackling the challenges of the pandemic. Calling a truce on decades-old grievances brought unions and employers' associations together to fight a common foe, and this unity of purpose enabled close collaboration with both other industry groups and Government. However, as outlined above, there were gaps in the alliance that had negative consequences for all parties. Hindsight suggests the mutual benefits of a more fully united approach.

During this chaotic two-year period, the industry deployed several well-conceived communications strategies and initiatives. The campaign targeting culturally and linguistically diverse (CALD) workers is one example. Developed in response to incidents of workplace transmission in which language barriers and misunderstandings were a contributing factor, the campaign provides a model for rolling out future communications more proactively across this culturally diverse workforce.

We had one group of workers who are used to eating together in groups, sitting together on the floor, sharing a meal. They didn't realise they weren't meant to do that. - Earl Setches, Secretary, PPTEU.

Construction is a melting pot, and different communities needed different messaging. - Ashleigh Dalmau, COO, Incolink.

Despite some strong collaborative work between industry and Government, there were times when dialogue lapsed, communications missed the mark, decisions were made unilaterally, important expertise was not sought, or the parties simply did not see eye to eye. Occasionally, a badly timed or reactive policy decision undid good work or inflamed an already-fraught situation. The Government was on a crisis footing, and consultation is time-consuming. But it's also an important risk management tool, and there were clearly times when a more consultative approach would have yielded far better outcomes.

When they shut the industry down, we were rolling out vaccines. We were due to launch the [full] industry vaccination program when that occurred. - Erik Locke, CEO, Incolink.

Missed opportunities for fruitful consultation were also evident in some public health messaging, which was not framed effectively for the construction workforce:

The State Government hadn't considered that the industry was best placed to communicate with workers. Why not ask the people who speak to their own membership bases daily:

"How would you best communicate this? How can we facilitate that?" - Ashleigh Dalmau, COO, Incolink.

This was especially apparent in Government communications on vaccination, including the mandates:

That the risk of not taking the vaccine far outweighed the risk of taking it - that [message] wasn't communicated well. The communication style was very scientific. And it was paternalistic, not a peer-to-peer approach, so class came into it too. You can logic the shit out of something, but it won't work if you're also triggering a fear that you'll take away someone's income. - Ashleigh Dalmau, COO, Incolink.

The industry's size, complexity, and multifaceted nature presented challenges in ensuring a consistent approach to compliance across the entirety of the sector. To ensure consistent standards and minimise transmission across the wider industry, there was also a missed opportunity for Government to embed the protections enshrined in the Industry Covid-19 Guidelines into public health Directions:

Had Government been prepared to pick up our Guidelines and mandate them, there would have been no capacity to allow parts of the industry to run rampant. - Peter Parkinson, Chair, Victorian Building Industry Disputes Panel (VBIDP); former Chair, BCIWG, BICC, and RIG.

On the industry's side, there was no cohesive strategy in place to combat the spread of misinformation that contributed to explosive events of September 2021. Echoing what occurred across the broader population, some construction workers got sucked into conspiracy theories circulating on social media. A small but vocal minority would stir up trouble on worksites. For the CFMMEU, this was a lesson learned:

[In future] we would probably come out stronger against the [people spreading misinformation]. We'd call out that loud

minority. We let them have them a voice because we're too democratic. They'd be one or two of them on every job. At site meetings they'd try to argue down our organisers. And some of our organisers didn't have the tools to push back. – Rob Graauwmans, President (Construction), CFMMEU, Vic/Tas.

“Alliances work exceptionally well when there's a common adversary. Our common adversity was Covid.”

While the industry rolled out a suite of innovative initiatives to protect workers' health and safety during the first two years of the pandemic, this study found a regrettable lack of comprehensive program data documenting these initiatives. While this is understandable, given the crisis context in which programs were rapidly deployed, the lack of information makes it near-impossible to assess the effectiveness of these initiatives and difficult to glean valuable intelligence about how they were implemented. In future, better documentation and centralisation of program intelligence would present numerous potential benefits for industry. Covid-19's trajectory also reveals how governments here and overseas were severely underprepared for the pandemic (Commonwealth of Australia, 2022: 9; IGEM, 2022), how public health policy can lag behind scientific knowledge, and how political leaders may fail to take account of valuable industry expertise. This is a global problem spanning multiple governments and sectors, but one that emerged strongly in this study via the connected issues of airborne spread, facemasks, ventilation, and indoor air quality:

[The Government] was too slow on masks. We knew about the risk of airborne transmission months and months before [the mask mandates].

Masks should have been introduced much earlier. – Randell Fuller, Consultant and Senior Industrial Relations Advisor (BIG1).

Thanks to in-house expertise from the plumbing sector and other industry specialists, since early 2020 industry leaders had been aware that airborne spread was a reality for SARs (SARS-CoV-1), and a strong possibility for Covid (SARS-CoV-2), and that ventilation and plumbing systems could be a vector (Yu et al., 2004; Gormley et al., 2017, 2020). Behind the scenes, for several years now, industry bodies have been lobbying State and Federal Governments on the risk of airborne transmission and the need to improve indoor air quality through better ventilation and other evidence-based measures. This work continues today.

#### 4.4 LASTING IMPACTS

Results from the Economic Modelling (Section 3.2) give a sense of what was at stake had Victoria's construction industry been shut down during the first two years of the Covid-19 pandemic. A complete shutdown would have had major negative repercussions for Victorian workers, businesses, and the broader economy. In averting these outcomes, the industry's continued survival embodies multiple positive impacts, now and into the future.

New industry alliances forged during the pandemic are also likely to yield ongoing benefits. Prior to Covid, Victoria's construction unions and employer groups had been at loggerheads for decades. Asked to describe the relationship, two interviewees characterised it as “icy cold, like Mount Everest” and “I hate you, you hate me, let's go from there.” Forged in the fire of Covid, the alliance formed between these previously warring parties represents a major shift, one that looks likely to endure in some shape or form:

The [alliances] forged by the pandemic will have lasting legacies. It's a fundamental change. That level of collaboration is something I'd never seen in 40 years. Now that we're no longer starting from a point of trust and disagreement, we can do anything. - Consultant Michael Paynter, former Industry Liaison Officer, DHHS.

That [alliance] has made a really positive contribution to IR [industrial relations] behaviour generally. If we look back to 2019, the [Victorian Building Industry Disputes Panel] was dealing with an average of 40 to 60 informal disputes every year. Now we're dealing with a handful. [The alliance] has created a significant legacy, and I'm hoping it will continue. - Peter Parkinson, Chair, Victorian Building Industry Disputes Panel (VBIDP); former Chair, BCIWG, BICC, and RIG.

As a union, we'll always strive to get the best outcome for members. But now there's that goodwill [between employer groups and unions], so we'll listen to each other's needs. - Earl Setches, Secretary, PPTU.

More goodwill and less hostility are positive outcomes for the industry. As one participant pointed out, shared crises can be very fruitful for alliance-building. But as circumstances shift and the initial threat recedes, a group's shared goals and priorities may change. To sustain any strong alliance, members may need to collectively revisit their common purpose and set new shared goals.

Alliances work exceptionally well when there's a common adversary. Our common adversity was Covid. - Peter Daly, CEO, Master Plumbers.

Now we're out the other side, the [unions/employers] relationship is getting diluted - maybe not quite as open and transparent. We need to work out what the new normal is. How can we continue this relationship? - Mark Little, President, MBV.

It would be great to have a yearly forum where [industry] reflects on what've we've done, how we've travelled, and what else we could be doing. - Consultant Christine Wyatt, former advisor, BIG1 group.

Some stakeholders felt that the pandemic has helped strengthen the industry's relationship with the Victorian Government. Over the two-year focal period industry leaders clearly had greater direct access to Government decision-makers, via both formal and informal channels. How lasting this effect will be remains to be seen.

The relationship between industry and Government has dramatically improved. Ultimately Government has a better understanding of how the industry operates. - Consultant Michael Paynter, former Industry Liaison Officer, DHHS.

While evidence remains limited, there are signs the pandemic may have improved health and safety processes within construction (Selleck et al., 2022). The Industry Covid-19 Guidelines were certainly influential both within and beyond the sector, with elements replicated in the meat processing and heavy haulage industries, and the NSW, Queensland, and WA construction sectors.

We had industry [leaders] in Philadelphia, USA, trying to understand how we'd managed to bring those parties together. - Peter Parkinson, Chair, Victorian Building Industry Disputes Panel (VBIDP); former Chair, BCIWG, BICC, and RIG.

Some of those standards will be there forever: sanitation, cleaning, staggered rosters... There's generally more awareness of health now, and how you set up a site to be healthier. - Consultant Michael Paynter, former Industry Liaison Officer, DHHS.

For CFMMEU leaders, the pandemic has sparked a renewed focus on health and wellbeing. Construction is physically demanding work, with long and unsociable hours. Workplace injuries are a daily risk on building sites, and both stress levels and suicide rates amongst construction workers are double the national average (Lingard et al., 2021). The union is currently retrofitting the building next door to its Melbourne headquarters to create a Resilience and Wellness Centre, with plans for a rooftop garden, gym, rehab equipment, lifestyle education, and physical therapists for members who are injured on the job:

We spend millions every year fixing our broken members. Instead of being reactive, we want to be proactive: give them the tools and skills they need to navigate modern life. My vision is to create a mentoring hub where members do a one-day resilience course in how to navigate difficult situations. – Rob Graauwmans, President (Construction), CFMMEU, Vic/Tas.

A more widespread ongoing health impact is posed by the virus itself. Covid's stubborn presence has clear implications for workforce health and safety across all industries. Since Australian governments have rolled back or abandoned most pandemic mitigations, including workplace protections, Covid-19 has become Australia's third-leading cause of death (OzSage, 2023). Vaccination rates are waning, new variants are continually evolving, and Long Covid is emerging as a major disabling event impacting Australia's workforce. Even after mild infections, the virus can cause heart disease, brain inflammation, diabetes, and strokes, all of which can disable or kill. Reinfection increases the risks (Corliss, 2021; UQ News, 2021).

This issue is by no means specific to the construction industry: it is an ongoing legacy of the pandemic that will affect all sectors of industry and the wider workforce. The Actuaries Institute warns that Australia faces a looming health and economic burden as a growing number of people are left seriously disabled by Long Covid. "What we've effectively done is added another form of disability into the community," said Jennifer

Lang, from the Institute's Covid-19 working group. Workplace supports will be needed for employees affected by Long Covid, she said. "If we have more disabled people in the community, we need to make sure that we're trying to support them as well as we can" (Whitson, 2022).

Long Covid is currently costing Australia an estimated \$3.6 billion annually (O'Brien, 2022), with around half a million Australians affected (Angeles & Hencher, 2022: 19). "We know this is going to have a long-term effect, not just on workforce availability, but on people's health," ACTU Assistant Secretary Liam O'Brien has said. No industry-specific data is available on the incidence of Long Covid, other ongoing health problems, or excess mortality associated with Covid-19 infection. But construction will not be immune from these workforce health impacts.

Here and around the world, pandemic fatigue and politicisation have manifested in a lapse of policy leadership on public health protections. But the tide is turning, with a groundswell of scientists, medical bodies, economists, and industry experts calling for sensible and sustainable mitigation measures to be embedded into our public health frameworks, workplaces, and built environments (Monbiot 2023; Nikiforuk, 2023; OzSage, 2022, 2021; Hanmer, 2021; Read, 2021).

Indoor air quality is emerging as a major point of focus, both here and overseas. At the time of writing, a parliamentary enquiry on Long Covid and repeated Covid-19 infections has just concluded. World-leading Australian experts - including airborne diseases specialist Professor Lidia Morawska, Burnet Institute Director Professor Brendan Crabb, and building ventilation specialist Professor Geoff Hanmer - are calling for Australian governments to embed minimum air quality standards into building codes, and to prioritise public investments in ventilation, filtration, CO2 monitoring, and sterilisation/disinfection for indoor public spaces (Morawska, 2022; Hanmer, 2022; Crabb & Dessau, 2022; Meagher, 2022). Belgium, which introduced indoor air quality laws in late 2022, is a world leader on this front (Kingdom of Belgium, 2022).

To date, Covid-19 has killed over 20,000 Australians, and indoor air has been the main route of transmission (Hanmer, 2022). Australia is seeing a gathering wave of employees with ongoing health problems and/or disability after catching the virus at work. Along with WorkCover claims, lawsuits have also been launched, with workers taking action against employers for exposing them to Covid-19 infection (Lucas, 2022; Whitson, 2022). Dr Dominic Meagher, Chief Economist at the John Curtin Research Centre, warns that governments and companies that fail to mitigate the risks of Covid are likely to be in breach of workplace health and safety laws, along with other State and Federal legislation (Meagher, 2022: 8-12). Regulatory changes around indoor air quality may well be an emerging impact of the pandemic, one that will present both challenges and opportunities for the building and construction industry.

#### 4.5 STUDY LIMITATIONS

As noted, the scope of this research does not encompass the full spectrum of Victoria's multifaceted building and construction industry. Most interviewees work in, or with, the industry's civil and commercial subsectors. This study therefore represents a partial picture of how the industry experienced the pandemic and responded to its challenges.

The activities of the BIG1 group (see Appendix) in leading the industry's coordinated pandemic response are an important focal point for this study. Reflecting this group's makeup, the research focuses primarily on the industry's commercial and civil subsectors, comprising larger-scale worksites and a more heavily unionised workforce. MBV's membership base includes domestic builders, and one interviewee owns a small residential building company. Not all the organisations invited to take part in this research could participate. The domestic construction subsector, which skews towards smaller operators and non-unionised worksites, is only partially represented amongst the participant group, and is thus not a primary focus of this research.

Another study limitation was the scarcity of program data. None of the industry programs discussed in this report have been subject to formal evaluations, and scant program data is available. This poses a major barrier to assessing how effective they were, and capturing what was learned along the way. The crisis context likely contributed to this gap. Industry initiatives were developed and rolled out during an intensive period that stretched organisational capacity and imposed significant workload pressure on senior staff and leadership teams. Resources were necessarily focused on program design and rollout, with refinements made as circumstances changed or gaps were identified.

Some program data was recorded, but there were no formal mechanisms in place to capture and preserve this intelligence in a form that enables future analysis. While interviewees' first-hand accounts yielded valuable insights, and available documentation offered some useful detail, the overall paucity of data represents a limitation for this study.

In preparing the estimates presented in the Economic Modelling (Section 3.2), ACIL Allen analysts endeavoured to use what they consider to be the best information available at the date of publication. Due to the way the Australian Bureau of Statistics (ABS) manages its various databases, it is possible that the estimates of retail turnover and building activity used in this analysis may be backwardly revised at a future date. The methodology used for this modelling is one way of obtaining a high-level estimate of the combined economic impact of the various measures, initiatives, and strategies that comprised industry and government's combined efforts to keep the industry open. Alternative methods may produce different estimates.

#### 4.6 THE INDUSTRY TODAY

At the time of writing, the outlook for Victoria's building and construction industry looks mixed. Master Builders Australia's forecast for February 2023 noted interest rate hikes, rising costs, and labour shortages as key concerns (MBA, 2023).

A recent spate of insolvencies is causing anxiety, with Infrastructure Australia warning that the industry is facing “unprecedented uncertainty” (Wiggins, 2022).

### Vaccination rates are waning, new variants are continually evolving, and Long Covid is emerging as a major disabling event impacting Australia’s workforce.

Construction businesses in Victoria and elsewhere are facing ongoing material shortages, particularly for timber, with demand spikes fuelled by post-bushfire rebuilds, global supply chain disruptions, and the international impact of pandemic stimulus packages. Given the intermeshed nature of construction workflows, the resulting delays are having flow-on effects. To help address skill shortages and boost female participation, the Building Industry Consultative Council (BICC) has developed the Women in Construction Strategy, while the Victorian Government is rolling out the Building Equality Policy (BEP), which will introduce workforce gender quotas on civil projects.

Things can change fast. But speaking in October 2022, interview participants offered some reflections on how Victoria’s building and construction industry is faring these days:

The industry as a whole is in pretty good shape now. It has just completely changed, because of the things that are being built. There are less apartments being built now, due to the migration slowdown. But there are many more civil projects and social projects – schools, hospitals, social housing. – Erik Locke, CEO, Incolink.

The industry is starting to slow down a bit. But that’s part of the cycle. There was a boom cycle because of Homebuilder, and we’re coming out of that now. The main challenge right now is material shortages, especially timber. You’re facing an 18 to 20-week wait for windows, joinery board, glass. – Mark Little, President, MBV.

The industry is going okay. There was the government stimulus packages, and the State Government is investing heavily in hospitals. A hospital needs a lot of plumbing! Thanks to that investment in hospitals our people are busy, we’re going okay. – Earl Setches, Secretary, PPTEU.

The industry is back to normal, although not as busy as it was prior to Covid. Generally, as humans, we’re very resilient. Two and a half years down the track, you forget about those hard times. – Paul Breslin, Regional OHSE Manager, Multiplex.



# 5. RECOMMENDATIONS

## Where to From Here?

This study set out to investigate how Victoria's building and construction industry survived the first two years of the Covid-19 pandemic, how the sector managed to remain largely open while many other sectors were shut down, and how it protected the health and safety of workers during this time.

The research also reconstructs a detailed Narrative Timeline of key events over the two-year focal period (Section 3.1) and uses Economic Modelling to quantify the direct and indirect economic benefits of the industry remaining largely open during Victoria's lockdowns (Section 3.2). As noted, while the Economic Modelling addresses Victoria's building and construction industry as a whole, the qualitative research primarily focuses on the activities of the industry's civil and commercial subsectors.

Based on analysis of the research Findings, this report makes four Recommendations for action by industry. These Recommendations are aligned with four themes: Unity, Leadership, Knowledge, and Education.

### 5.1 UNITY

#### Recommendation 1: Sustain and Expand Industry Alliances

The first Recommendation is that leaders in Victoria's building and construction industry ensure that the strong alliances built during the first two years of the pandemic are sustained, and that these alliances are expanded to include all subsectors of construction. Covid-19 has demonstrated how industry can benefit from acting collectively, pooling expertise and resources, achieving unity of purpose, and presenting a united front. It has also vividly

illustrated the potential pitfalls that can arise when industry does not act in concert.

This presents a clear opportunity to explore the mutual benefits of a more fully unified approach, encompassing the wider spectrum of the building and construction industry. Broadening and strengthening existing alliances will enable the sector to leverage further expertise and resources and create a more inclusive forum for knowledge-sharing, lobbying, and other collaborative work. This could involve further efforts to expand the existing BIG1 alliance to encompass the residential construction subsector, and/or creating other forums for further alliance-building. Agenda-setting work could provide a starting point for dialogue to explore shared goals and priorities, further opportunities for collaboration, approaches to working collectively and constructively with Government, and strategies for bolstering the industry against future crises, including new disease outbreaks.

### 5.2 LEADERSHIP

#### Recommendation 2: Continue Industry's Leadership Role in World's Best Practice Infection Controls

The second Recommendation is that Victoria's construction industry sustain its world-leading efforts to promote best practice infection controls and workforce health and safety protections. The sector showed strong leadership, agility, and innovation in protecting workers and the wider community over the first two years of the pandemic, and these efforts proved influential beyond the sector. With this hard-won experience under its belt, and a wealth of in-house expertise, the industry is in an ideal position to continue its world-leading work and explore how it might be extended in new directions.

The compliance hoops of 2020-2021 may have vanished, but the imperative to protect workers has not. Nor has the virus itself left the building: since governments wound back most mitigations, including workplace protections, Covid-19 has become Australia's third-leading cause of death. Covid is also causing a serious and growing disease burden across Australia's workforce, including disability from Long Covid and other chronic health conditions. Some affected workers are taking legal action against employers for exposing them to infection in the workplace.

Pandemic fatigue and politicisation have led to a leadership lapse on public health policy. But a groundswell of leading scientists, health bodies, and industry experts are now calling for sensible mitigation measures to be embedded into our workplaces and broader built environments. As a leading light in best practice protocols during Covid's first two years, Victoria's building and construction industry is ideally placed to respond to this call. Industry could explore what practical measures might best serve its workforce going forward, and what new innovations might be developed for broader application.

Indoor air quality is one obvious candidate. While industry leaders are already advancing the air quality agenda behind the scenes, the sector has an opportunity to lead a public conversation on this vitally important issue. Options include knowledge-exchange forums with industry experts in ventilation, filtration, and sterilisation, building design, sustainability, and health and safety, along with leading infectious disease scientists, public health experts, behavioural insights specialists, engineers, architects, standards bodies, and government. Given how underprepared the world was for Covid, collaboration on scientific research to future-proof industry against coming disease outbreaks is another avenue well worth pursuing.

## 5.3 KNOWLEDGE

### Recommendation 3: Strengthen Information Systems to Capture and Leverage Program Insights

A third Recommendation is that the Victorian building and construction industry develop more robust, integrated systems to capture valuable program information and retain it for future use. Ensuring this intelligence is recorded and preserved offers multiple benefits. Capturing program data is a gateway to understanding what worked, what didn't, and why. Retaining this information establishes a base for policy and program evaluation, along with opportunities to leverage the insights that emerge - whether to refine existing projects, inform future initiatives, achieve cost savings, or celebrate successes. More broadly, creating stronger information systems opens the way for sharing knowledge and insights across the wider sector, which has positive implications for promoting program quality, innovation, and collaboration.

This Recommendation reflects the lack of program data that became evident during this study (see p.66). This gap is understandable, and not unique to the construction sector. Over the two-year period of focus industry leaders developed, refined, and rolled out a variety of innovative programs within remarkably compressed timeframes. This work unfolded in a crisis context, marked by a sense of urgency, constant change, elevated stress, and a relentless workload for senior staff and leadership teams. In this high-stakes setting, capturing program data for future analysis was not a top priority. However, this documentation gap represents a dissipation of valuable industry knowledge and a lost opportunity to capitalise on what was learnt during this time. Establishing stronger systems to capture program intelligence will help ensure valuable knowledge is retained, rather than lost, so it can be leveraged for the industry's benefit.

## 5.4 EDUCATION

### Recommendation 4: Explore Workforce Initiatives to Combat Harmful Misinformation

The fourth Recommendation is for leaders in Victoria's building and construction industry to gain a better understanding of how misinformation may be impacting its workforce and consider options to help minimise its harmful effects. The anxieties of the pandemic have been shadowed by a surge of misinformation and conspiracy theories, spread through social media and taking root widely across society. For Victoria's construction sector, the tumultuous events of September 2021 reveal how misinformation can fuel division, mistrust, and conflict, and can negatively impact workforce health and wellbeing.

Stress levels and suicide rates amongst construction workers are more than double the national average, indicating that the workforce already has some vulnerabilities. Workers are predominantly male and culturally diverse, and the job often involves long and unsociable hours, hard physical labour, and extended commutes. While the construction workforce is by no means unique in being vulnerable to misinformation, the riots and what followed throw its potentially harmful impacts into stark relief.

The riot outside union headquarters and the chaotic days that followed were promoted and broadcast online by right-wing agitators. This

reflects a broader pattern of extremist groups exploiting people's fears and uncertainties, using misinformation and conspiracies to fuel social conflict, erode trust in institutions, and recruit others to their networks. In this case, concerns over the vaccine mandates amongst a minority of construction workers were exploited by a mix of entities – including anti-lockdown groups, anti-vaxxers, white supremacists, and far-right influencers – to amplify their own agendas.

The violent protest stoked internal divisions and resulted in injuries, destruction of property, an outbreak of Covid-19 infections, and anxiety and distress for union staff and their families. Broadcast around the world, the incident also triggered a two-week industry shutdown and caused the sector reputational damage. Left to spread unchallenged, misinformation and conspiracy theories have the potential to stoke further divisions and expose workers to risks, including influence by racist and extremist groups. It is recommended that industry leaders explore peer-driven initiatives to counter harmful misinformation and its negative influence on workers, approaching the issue from a health and wellbeing perspective. Options include peer-to-peer education, social media campaigns, worksite posters, guest speakers, and toolbox sessions. Recognising that the industry spans several subsectors and numerous occupations, and that parts of the workforce are not unionised, a unified approach is recommended.



# REFERENCES

- AAP (2020). "Positive Covid-19 Test Shuts Vic Worksite." *The Canberra Times*, 31 March.
- ABC (2020). "Melbourne Anti-Lockdown Protest Sees Around 400 Demonstrators Arrested and Fined." *ABC News Online*, 3 November.
- ABC (2021a). "Melbourne Covid Outbreak Grows by Five Cases as CBD Construction Site Put on High Alert." *ABC News Online*, 5 June.
- ABC (2021b). "Victoria Records Two Covid Deaths as Plan to Ease Restrictions Due to be Announced." *ABC News Online*, 31 August.
- ABC (2021c). "Police Label Protesters 'Cowards' as 62 Arrested After Crowd Storms Through Melbourne's CBD." *ABC News Online*, 21 September.
- ABC (2021d). "Melbourne Tradie Who was in ICU with Covid Urges Protesting Construction Workers to Get vaccinated." *ABC News Online*, 24 September.
- ABC (2021e). "Victoria's Construction Industry is Reopening After a Two-Week Closure. Here are the new rules." *ABC News Online*, 1 October.
- ABS (2021). "One Year of Covid-19: Aussie jobs, business and the economy." Australian Bureau of Statistics.
- ABS (2022a). "Building Activity, Australia: Table 14." Australian Bureau of Statistics.
- ABS (2022b). "National, State and Territory Population: Table 4." Australian Bureau of Statistics.
- ABS (2022c). "Retail Trade, Australia: Table 11." Australian Bureau of Statistics.
- ACIL Allen (2020). *Recessionary Impacts of Covid-19 on the Victorian Building and Construction Sector*. ACIL Allen Consulting. Report for Incolink, 20 June.
- Adam, D. (2022). "The Pandemic's True Death Toll: Millions more than official counts." *Nature Briefing*, 18 January.
- AIHW (2021). *The First Year of Covid-19 in Australia: Direct and Indirect Health Effects*. Cat. no. PHE 287. Canberra: Australian Institute of Health and Welfare.
- Angeles, M. & Hensher, M. (2022). *Estimating the Current Scale and Impact of Long Covid in Australia*. Menzies Institute for Medical Research/Institute for Health Transformation, Deakin University, 11 November.
- Aus Gov (2020a). "March 2020 News Archive." Australian Government.
- Aus Gov (2020b). "Coronavirus (Covid-19) at a Glance: 29 July 2020", Australian Government.
- Ball, P. & Maxmen, A. (2020). "The Epic Battle Against Coronavirus Misinformation and Conspiracy theories." *Nature Briefing*, 27 May.
- Bell, J., Chan, H., Chan, M. & Moon, S. (2022). "Covid-19 and Construction: Impact Analysis on Construction Performance during Two Infection Waves in Victoria, Australia." *Sustainability*, 14(5).
- BBC (2021). "What's Gone Wrong With Australia's Vaccine Rollout?" *BBC News Online*, 17 June.
- BCEC (2020). "Labour Market Update: April 2020." Bankwest Curtin Economics Centre, Curtin University.
- BIG1 (2020a). "Letter to the Hon. Daniel Andrews, Premier of Victoria." Building Industry Group of Unions and Industry Associations (BIG1), 4 May.
- BIG1 (2020b). "Letter to the Hon. Daniel Andrews, Premier of Victoria." Building Industry Group of Unions and Industry Associations (BIG1), 26 August.
- BIG1 (2020, V1). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Version 1)*, Building Industry Group of Unions and Industry Associations (BIG1), 25 March.

## REFERENCES

- [BIG1 \(2020, V2\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 2)*, Building Industry Group of Unions and Industry Associations (BIG1), 31 March.
- [BIG1 \(2020, V3\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 3)*, Building Industry Group of Unions and Industry Associations (BIG1), 20 April.
- [BIG1 \(2020, V4\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 4)*, Building Industry Group of Unions and Industry Associations (BIG1), 24 June.
- [BIG1 \(2020, V5\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 5)*, Building Industry Group of Unions and Industry Associations (BIG1), 14 July.
- [BIG1 \(2020, V6\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 6)*, Building Industry Group of Unions and Industry Associations (BIG1), 28 July.
- [BIG1 \(2020, V7\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 7)*, Building Industry Group of Unions and Industry Associations (BIG1), 21 August.
- [BIG1 \(2020, V8\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 8)*, (with Explanatory Note), Building Industry Group of Unions and Industry Associations (BIG1), 16 October.
- [BIG1 \(2020, V9\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 9)*, (with Explanatory Note), Building Industry Group of Unions and Industry Associations (BIG1), 9 December.
- [BIG1 \(2021, V10\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 10)*, Building Industry Group of Unions and Industry Associations (BIG1), 16 February.
- [BIG1 \(2021, V11\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 11)*, (with Explanatory Note), Building Industry Group of Unions and Industry Associations (BIG1), 4 March.
- [BIG1 \(2021, V12\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 12)*, (with Explanatory Note), Building Industry Group of Unions and Industry Associations (BIG1), 23 April.
- [BIG1 \(2021, V13\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 13)*, Building Industry Group of Unions and Industry Associations (BIG1), 11 June.
- [BIG1 \(2021, V14\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 14)*, Building Industry Group of Unions and Industry Associations (BIG1), 1 September.
- [BIG1 \(2021, V15\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 15)*, Building Industry Group of Unions and Industry Associations (BIG1), 10 November.
- [BIG1 \(2021, V16\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 16)*, Building Industry Group of Unions and Industry Associations (BIG1), 26 November.
- [BIG1 \(2021, V17\)](#). *Coronavirus (Covid-19) Guidelines for the Building and Construction Industry Victoria (Revision 17)*, Building Industry Group of Unions and Industry Associations (BIG1), 20 December.
- [Bleby, M. \(2020\)](#). “Construction Sheds \$14 Billion Since March.” *Financial Review*, 21 May.
- [Bleby, M. \(2021a\)](#). “Victorian Builders Left Fuming as Vaccines Pulled.” *Financial Review*, 18 August.
- [Bleby, M. \(2021b\)](#). “Builders Rush to Contain Surging Covid Infections on Sites.” *Financial Review*, 5 September.
- [BMF \(2019\)](#). *Building Confidence Report: Implementation Plan*. Building Ministers’ Forum. March.
- [Burnet Institute \(2021a\)](#). “World-First Study Shows Effectiveness of Masks in Preventing Covid Transmission”, 22 July.
- [Burnet Institute \(2021b\)](#). “Victoria’s Community Effort Helps Avert Around 6000 Covid-19 Cases, Burnet Modelling Shows.” 1 September.
- [Burton, T. \(2021\)](#). “Victorian Construction Sector Threatened with Closure.” *Financial Review*, 13 September.
- [Butler, J. \(2021\)](#). “Fact Check: Why Scott Morrison’s claim his ‘not a race’ comments were ‘taken out of context’ is wrong.” *The New Daily*, 22 July.
- [Butt, C. \(2020\)](#). “Ten Graphs that Show the Rise and Fall of Victoria’s Covid-19 Second Wave.” *The Age*, 27 October.
- [Campbell, D. \(2020\)](#). “138,000 people in UK receive Covid vaccine in first week.” *The Guardian*, 16 December.

- Cassidy, C. (2021). “‘We’ve Set Higher Standards’: Victoria construction industry returns under strict Covid rules.” *The Guardian*, 5 October.
- Casson, R. (2020). “Our Partnership in Advocacy Continues.” *Master Builder Victoria*, 75, 4, October-December.
- Clarek, C. (2020). “Melbourne’s Second Coronavirus Shutdown Sees Businesses Closing for Good.” *ABC News*.
- Clure, E. & Paul, M. (2020). “Anti-lockdown Coronavirus Protesters Arrested in Melbourne, ‘Solidarity’ Rallies Held Across Australia.” *ABC News Online*, 5 September.
- Commonwealth of Australia (2022). *The Senate Select Committee on Covid-19: Final Report*. April.
- Cortiss, J. (2021). “Covid-19 Diagnosis Raises Risk of Heart Attack, Stroke.” *Harvard Health Publishing*, Harvard Medical School, 1 November.
- Crabb, B. & Dessau, L. (2022). “Submission to the Parliamentary Inquiry to Long Covid and Repeated Infections.” Burnett Institute.
- Cunningham, M. & Mannix, L. (2021). “‘Perfect Storm of Risk’: Experts warn of more cases in coming days.” *The Sydney Morning Herald*, 4 February.
- Davis, R., Howe, C., Field, E. & Kendall, J. (2021). “Victorian Builders Baffled by Decision to Stop Construction in Lockdown.” *ABC Gippsland*, 15 February.
- Deakin University (2021). “World-first Trial to Help Build Covid-Safe Construction.” *Research News*, 12 August.
- DHHS (2020). “Coronavirus Update for Victoria: 14 April 2020.” Media Release, Department of Health and Human Services, Victorian State Government.
- DHHS (2021). “Coronavirus Update for Victoria: 20 September 2021.” Media Release, Department of Health and Human Services, Victorian State Government.
- Dexter, R. (2020). “Ten Arrested, Police Officer Injured in Anti-Lockdown Protest.” *The Age*, 10 May.
- Dexter, R. (2021). “‘Let’s Not Pretend’: Sutton Hits Out at Melbourne Anti-Lockdown Protesters.” *The Age*, 24 July.
- Dow, A. & Koziol, M. (2021). “New Advice on Covid Spread Puts Air Quality in the Spotlight.” *The Sydney Morning Herald*, 9 May.
- Dudley, E. (2021). “Protesters are from ‘Far Right Groups’: CFMEU.” *The Australian*, 21 September.
- Eddie, R., Cowie, T. & McMillan, A. (2020). “Flash-Flood Threat as Large Hail Batters Melbourne in Peak-Hour Storms.” *The Age*, 15 January.
- Faine, J. (2021). “John Setka and the Covid-19 Truce.” *The Saturday Paper*, 27 February.
- Fowler, M. (2021). “Your Questions Answered: Mandatory vaccines for authorised workers in Victoria.” *The Age*.
- Fowler, M. & Lucas, C. (2021). “Building Site Inspections Find 73% Breach Covid-Safe Rules.” *The Age*, 17 September.
- Fowler, M., Sakkal, P. & Schneiders, B. (2021). “Big Test Awaits as Construction Industry Prepares to Reopen.” *The Age*, 30 September.
- Frost, J. & Mizen, R. (2020). “Lockdown Revealed: Victoria goes into ‘pilot light’ mode.” *Financial Review*, 3 August.
- Gillespie, E. (2021). “Experts Say the Far Right and Anti-Vaxxers are Infiltrating Industry Protests.” *The Feed*, SBS Online, 21 September.
- Godde, C. (2021). “Vic Building Sites on Notice as Cases Rise.” *The West Australian/AAP*.
- Goh, G., Dunker, A., Foster, J. & Uversky, V. (2022). “Computational, Experimental, and Clinical Evidence of a Specific but Peculiar Evolutionary Nature of (Covid-19) SARS-CoV-2.” *Journal of Proteome Research*, 21, 874-90.
- Gormley, M., Aspray, T., Kelly, D. & Rodriguez-Gil, C. (2017). “Pathogen Cross-Transmission Via Building Sanitary Plumbing Systems in A Full-Scale Pilot Test-Rig.” *PLOS ONE*, 12.
- Gormley, M., Asprey, T. & Keely, D. (2020). “Covid-19: Mitigating Transmission Via Wastewater Plumbing Systems.” *The Lancet: Global Health*, 8(5).
- Gruszczynski, L. & Melillo, M. (2022). “The Uneasy Coexistence of Expertise and Politics in the World Health Organization.” *International Organizations Law Review*, 19(2), 301-331.
- Hanmer, G. (2021). “Ventilation and Covid-19.” *The Business of Architecture*, Association of Consulting Architects, Australia.

## REFERENCES

- Hanmer, G. (2022). "Submission 274." Submission to the Parliamentary Inquiry into Long Covid and Repeated Infections.
- Heaton, A. (2020). "What Melbourne Builders Need to Know About Victoria's Covid Roadmap." *Sourceable*, 7 September.
- Hyde, Z., Berger, D. & Miller, A. (2021). "Australia Must Act to Prevent Airborne Transmission of SARS-CoV-2." *Medical Journal of Australia*, 215(1), 7-9.
- IGEM (2022). *Review of Victoria's Preparedness for Major Public Health Emergencies, Including Pandemics*. Inspector-General for Emergency Management, Victoria, Australia.
- Incolink (2020). "Incolink's Covid-19 Testing 'Impossible' Under Proposed Laws." *Industry News*, 27 August.
- Incolink (2021). *Annual Report 2021*.
- Insight Centre, The (2021). *A Cost Benefit Analysis of On-site Vaccinations*. Report for Incolink, June.
- Ryan, J. (2021). "How the Delta Variant Breached Australia's COVID Fortress." *CNET*, 18 August.
- Karlinsky, A. & Kobak, D. (2021). "Tracking Excess Mortality Across Countries During the Covid-19 Pandemic with the World Mortality Dataset." *eLife*, 10.
- Katella, K. (2022). "Omicron, Delta, Alpha, and More: What to Know About the Coronavirus Variants." *Yale Medicine*, 17 November.
- Kilgour, J. (2020). "Coronavirus (Covid-19) Update - From the CEO's Desk - 6 August 2020." Civil Contractors Federation Victoria (CCFV).
- Kilgour, J. (2021). "Coronavirus (Covid-19) Circuit Breaker Lock-down Update - From the CEO's Desk - 17 Feb 2021." Civil Contractors Federation Victoria (CCFV).
- Kingdom of Belgium (2022). "Law of 6 November 2022 on the improvement of indoor air quality in closed spaces accessible to the public."
- Koziol, M. (2022). "Secrecy and Decision Delays Hampered Covid Delta Wave Response, Review Finds." *Sydney Morning Herald*, 21 December.
- Landis-Hanley, J. & Henriques-Gomes, L. (2021). "Melbourne and Sydney Anti-lockdown Protests: Violent clashes as police arrest demonstrators." *The Guardian*, 18 September.
- Lewis, D. (2020). 'Mounting Evidence Suggests Coronavirus is Airborne - But health advice has not caught up' (news feature). News Feature, *Nature*, 8 July.
- Lewis, D. (2022). "Why the WHO Took Two Years to Say Covid is Airborne." News Feature, *Nature*, 6 April.
- Lovelace, B. (2021). "WHO Says Delta is Becoming the Dominant Covid Variant Globally." *CNBC*, 18 June.
- Lingard, H., Nette, A., Harley, J., Pirzadeh, P. et al. (2021). *Triple Wins: Work Hour Cultures for Health, Safety and Gender Equality in Construction*. Construction Work Health and Safety Research @RMIT, RMIT/Australian National University, April.
- Lucas, C. (2020). "No Distance Between Unions, Bosses on Improving Building Site Hygiene." *The Age*, 24 March.
- Lucas, C. (2022). "'I've Never Felt So Desperate': Aged care nurse leads wave of Covid lawsuits." *The Age*, 15 January.
- Mandavilli, A. (2020). "In the WHO's Coronavirus Stumbles, Some Scientists See a Pattern." *The New York Times*, 9 June.
- Mannix, L. (2020). "Experts Accuse Federal Government of Ignoring Science on Airborne Covid Spread." *Sydney Morning Herald*, 12 October.
- Marin-Guzman, D. & Durkin, P. (2021). "Just 1pc of Workers on Major Building Sites are Anti-Vaxxers." *The Financial Review*, 23 September.
- MBA (2020). "Joint Statement: Master Builders Australia and CFMEU National Construction Division: Denita Wawn (CEO) and Dave Noonan (Secretary)." Master Builders Australia, 23 March.
- MBA (2023). "Building and Construction Industry Forecasts, Australia." February 2023.
- MBV (2021a). "Victorian Building and Construction Industry Forecasts: December 2020." Master Builders Victoria, 21 January.
- MBV (2021b). "Update from the CEO Rebecca Casson." Master Builders Victoria, 29 April.
- MBV (2021c). "Recent Positive COVID-19 Cases in Building and Construction Industry." Media Release, Master Builders Victoria, 3 September.

- MBV (2022). "Victoria Accounts for a Third of Building and Construction Insolvencies in 2021." Master Builders Victoria, 9 February.
- McGowan, M. (2021a). "CFMEU Blames Protests for Covid Outbreak at Victorian Headquarters." *The Guardian*, 29 September.
- McGowan, M. (2021b). "Workers' Rights or The Far Right: Who was behind Melbourne's pandemic protests?" *The Guardian*, 25 September.
- Meagher, D. (2022). "Reasonable, Practicable and Sustainable Prevention." Submission to the House Standing Committee on Health, Aged Care and Sport Inquiry into Long Covid and Repeated Infections, John Curtin Research Centre, 18 November.
- Melbourne Institute (2021a). "Taking the Pulse of the Nation: Wave 39 (16-21 August 2021)." Melbourne Institute: Applied Economic & Social Research, University of Melbourne.
- Melbourne Institute (2021b). "Taking the Pulse of the Nation: Wave 40 (6-11 September)." Melbourne Institute: Applied Economic & Social Research, University of Melbourne.
- Molteni, M. (2021). "The 60-Year-Old Scientific Screwup that Helped Covid Kill." *Wired*, 13 May.
- Monbiot, G. (2023). "We are All Playing Covid Roulette. Without clean air, the next infection could permanently disable you." *The Guardian*, 26 January.
- Morawska, L. (2022). "Submission 304." Submission to the Parliamentary Inquiry to Long Covid and Repeated Infections.
- Morawska, L. & Milton, D.K. (2020). "It Is Time to Address Airborne Transmission of Coronavirus Disease 2019 (Covid-19)." *Clinical Infectious Diseases*, 71 (9), 2311-2313.
- Morgan, C., Sakkal, P. & Clun, R. (2021). "Victoria Reports Record 5919 New Covid-19 Cases, Seven Deaths on New Year's Eve." *The Age*, 31 December.
- Murray-Atfield, Y. (2021). "Daniel Andrews Announces Snap Coronavirus Lockdown for Victoria in Response to 'Hyper-Infectious' UK Strain." *ABC News Online*, 12 February.
- Nicholas, J. (2022). "How Does Australia's Covid Death Rate and Hospitalisations Compare with Other Countries?" *The Guardian*, 21 July.
- Nicholas, J. Evershed, N. & Ball, A. (2022). "Covid-19 Australia Data Tracker: Coronavirus cases, deaths, hospitalisations and vaccination." *The Guardian*, 6 December.
- Nikiforuk, A. (2023). "We Now Face an Army of Covid Viruses." *The Tyee*, 24 January.
- NSW Health (2020). "Ruby Princess Update." Media Release, 3 April.
- Ollie, E. (2020). "Is Construction Shutting Down in Victoria?" *7 News*.
- O'Brien, E. (2022). "Long Covid Costs Australia Economy \$3.6 Billion a Year: Report." *Bloomberg*, 10 September.
- O'Neil, P. (2021). "Who is the Real Rukshan?" *The Age*, 25 September.
- OzSage (2022). "Long Covid: OzSAGE makes detailed submission to the Parliamentary Inquiry." 29 November.
- OzSage (2023). "Covid Now the 3rd Highest Cause of Death in Australia: 2022 summary." 11 January.
- PAEC (2020). *Inquiry into the Victorian Government's Response to the Covid-19 Pandemic: Interim Report*. Public Accounts and Estimates Committee (PAEC), Parliament of Victoria, July.
- Pakula, M. (2020). "Backing Sport, Tourism and Cultural Icons to Rebound." Media release, Victorian Government.
- Pallas, T. (2021). "Massive Construction Compliance Blitz Across Victoria." Media Release, Tim Pallas MP, Victorian Government, 13 September.
- Paynter, J. (2020). "Melbourne Lockdown Protest Organiser Fanos Panayides Arrested." *The Australian*, 2 September.
- Pheng, L.S. & Hou L.S. (2019). "The Economy and the Construction Industry." In: *Construction Quality and the Economy*. Management in the Built Environment. Springer, Singapore. pp. 21-54.
- Pickering, C. (2021). "Australian Hiring Surges Despite End of JobKeeper." *Hiring Lab*, 19 May.
- Prem Vic (2020a). "Building Works: More Jobs for Victorians." Media Release, Premier of Victoria, 18 May.
- Prem Vic (2020b). "Building Recovery Taskforce Continues Fast Tracking." Media Release, Premier of Victoria, 25 May.



## REFERENCES

- Prem Vic (2020c). "Statement from the Premier." Media Release, Premier of Victoria, 6 September.
- Prem Vic (2021a). "Statement from the Acting Premier." Media Release, Premier of Victoria, 27 May.
- Prem Vic (2021b). "New Freedoms When 70 Per Cent First Dose Target Reached." Premier of Victoria, 16 September.
- Prem Vic (2021c). "Victoria's Roadmap: Delivering the National Plan." Media Release, Premier of Victoria, 19 September.
- Prem Vic (2021d). "Construction Industry to Shut Down for Two Weeks." Media Release, Premier of Victoria, 20 September.
- Prem Vic (2021e). "CovidSafe Reopening for Victorian Construction Industry." Media Release, Premier of Victoria, 1 October.
- PCA (2020). "Building and Construction Industry Employers and Unions Unite on Covid-19 Safety Message." Media release from BIG1 group, Property Council of Australia, 26 March.
- Read, R. (2021). "Scientists Call for Sweeping Change in Building Design to Reduce Airborne Diseases like COVID-19." *Los Angeles Times*, 13 May.
- Reuters (2020). "UK Consumer Confidence Jumps by Most in 8 Years on Vaccine News: GfK." 18 December.
- Roose, J. (2021). "It's Almost Like Grooming': How anti-vaxxers, conspiracy theorists, and the far-right came together over COVID." *The Conversation*, 21 September.
- Selleck, R., Cattani, M. & Hassall, M. (2022). "How Did Covid-19 Pandemic Impact Safety Performance on a Construction Project? A Case Study Comparing Pre and Post Covid-19 Influence on Safety at an Australian Construction Site." *Safety*, 8(77).
- Sakkal, P. (2021a). "Why Victoria, and the Premier, Can't Afford to Shut Down Construction." *The Age*, 14 September.
- Sakkal, P. (2021b). "Top Adviser Quits in Protest Over Building Industry Crisis." *The Age*, 23 September.
- Scott, N., Saul, A., Spelman, T., Stoove, M. et al. (2021). "The Introduction of a Mandatory Mask Policy was Associated with Significantly Reduced Covid-19 Cases in a Major Metropolitan City." *PLOS ONE*, 16(7).
- Scott, S., Clark, E. & Lloyd, M. (2021). "Experts Say 'Clearly Aerosol Transmission' of Covid-19 is the Gap in Australia's Hotel Quarantine System." *ABC News Online*, 4 February.
- Shergold, P. & Weir, B. (2018). *Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia*. February.
- Shiraeef, M. (2021). "Closed Borders, Travel Bans and Halted Immigration: 5 ways Covid-19 changed how - and where - people move around the world," *The Conversation*, 19 March.
- Shying, O. (2021). "Building Woes Grow." *Geelong Advertiser*, 17 February.
- Smee, B. & Readfern, G. (2021). "Australia Anti-Lockdown Rallies: Protesters violently clash with police in Melbourne." *The Guardian*, 21 August.
- State of NSW (2020). *Report: Special Commission of Inquiry into the Ruby Princess*, 14 August.
- Storen, R. & Corrigan, N. (2020). "Covid-19: A chronology of state and territory government announcements (up until 30 June 2020)." Research Paper, Parliament of Australia, 22 October.
- Tanuki, T. (2021). "Melbourne Anti-Lockdown Protests are a Disorganised Mess." *Independent Australia*, 23 September.
- Tham, J.C. (2021). "Why Unions Support Vaccination — But not employer mandates." *The Conversation*, 20 September.
- Timmins, N. & Baird, B. (2022). *The Covid-19 Vaccination Programme: Trials, tribulations and successes*. The Kings Fund, January.
- Towel, N. & Sakkal, P. (2021). "Government Wanted to Keep Building Amid Construction Shutdown." *The Age*, 23 September.
- Trauer, J.M., Lydeamore, M.J., Dalton, G.W., Pilcher, D. et al. (2021). "Understanding how Victoria, Australia Gained Control of its Second Covid-19 Wave." *Nature Communication*, 12, 6266.
- Tsang, K. (2022). "Cumulative View of Deaths by State." Covid-19 in Australia (website).
- Tufekci, Z. (2021). "Why Did it Take So Long to Accept the Facts About Covid?" *The New York Times*, 7 May,
- UDIA (2020). "Covid-19 Industry Hub: Covid-19 Rolling Updates." Urban Development Institute of Australia.
- UDIA (2021). "Covid-19 Industry Hub: Covid-19 Rolling Updates." Urban Development Institute of Australia.
- UQ News (2021). "'A Silent Killer': Covid-19 shown to trigger inflammation in the brain." University of Queensland, 1 November.

- Van Diemen, A. (2020a). *Non-Essential Business Closure Directions*, Deputy Chief Health Officer, Victorian Government, 23 March.
- Van Diemen, A. (2020b). *Non-Essential Activity Directions*, Deputy Chief Health Officer, Victorian Government, 25 March.
- VBA (2019). "VBA Mail - December 2019." Victorian Building Authority.
- VBA (2021). "Coronavirus (Covid-19): Construction Sector Guidance." Victorian Building Authority, 22 October.
- VCSA (2022). "Victorian Building and Construction Industry: Covid-19 Guidance Summary - March 2022." Victorian Construction Safety Alliance.
- Vic Gov (n.d.) "High Risk CovidSafe Plan - Construction." Victorian Government.
- Vic Gov (2021a). "Letter to the Construction Sector: Circuit-breaker restrictions." 15 February.
- Vic Gov (2021b). "Covid-19 Restriction Updates: Construction." Victorian Government, 16 August.
- Vic Gov (2021c). "Business Costs Assistance Program Round Four - Construction." Victorian Government, September.
- Vic Gov (2021d). "Construction Industry Roadmap: Victoria's Roadmap - Delivering the National Plan." Victorian Government, 4 October.
- VSA (2022). *Victorian Skills Plan: Construction Industry Insight*. Victorian Skills Authority, Department of Education and Training, Victorian Government, October.
- Wahlquist, C. (2020). "'It Has to Work': The reins are tightening on a Covid-stricken Victoria, but how did we get here?" *The Guardian*, 5 August,
- Whitson, R. (2022). "Long Covid Cases Set to Grow as More People Fall Through the Cracks of Support." *ABC News Online*, 19 July.
- Wiggins, J. (2022). "Contractor Collapses Expose Industry 'At Breaking Point'." *Financial Review*, 14 December.
- WHO (2021). "COVID-19 Weekly Epidemiological Update: 31 January." World Health Organisation.
- Woodley, M. (2020b). "Infectious Disease Expert Dismisses Letter Warning of Airborne Spread." *GP News*, 7 July.
- Woodley, M. (2020b). "Victoria Has Strengthened PPE Requirements for Aged Care - Should other states follow suit?" *GP News*, 6 August.
- Woodley, M. (2020c). "CDC the Latest to Acknowledge Covid Aerosol Spread." *GP News*, 8 October.
- Woods, E. & Kolovos, B. (2021). "Lockdown Anger as Hundreds of Protesters Descend on Melbourne's CBD, 15 Arrested." *7News*, 6 August.
- Wu, D. (2021). "Victoria Police Clash with Maskless Protesters in Melbourne as State Enters Sixth Covid-19 Lockdown." *Sky News Online*, 6 August.
- Yu, I., Li, Y., Wong, T., Tam, W. et al. (2004). "Evidence of Airborne Transmission of the Severe Acute Respiratory Syndrome Virus." *New England Journal of Medicine*, 350(17), pp. 1731-1739.
- Ziffer, D. (2021). "Construction Ban Could Cost Victoria More Than \$2 billion - And it was completely avoidable." *ABC News Online*, 21 September.

# APPENDIX

## 7.1 KEY INDUSTRY GROUPS

Listed below are four key industry groups mentioned in this study, along with their membership profiles.

**BIG1 (Building Industry Group of Unions and Industry Associations)**

Chair: Rebecca Casson, former CEO, Master Builders Victoria (MBV); now Incolink President

Member organisations:

- AIB (Australian Institute of Building)
- ACMA (Air Conditioning & Mechanical Contractors' Association)
- AMWU (Australian Manufacturing Workers' Union)
- CCFV (Civil Contractors Federation Victoria)
- CFMMEU (Construction, Forestry, Maritime, Mining and Energy Union)
- ETU (Electrical Trades Union)
- MBV (Master Builders Association of Victoria)
- Master Plumbers
- NECA (National Electrical and Communications Association)
- NFIA (National Fire Industry Association)
- PreFab Aus
- PPTEU (Plumbing and Pipe Trades Employees Union)
- Property Council of Australia (Victoria)
- SPASA (Swimming Pool and Spa Association)
- UDIA Urban Development Institute of Australia)

**BICC (Building Industry Consultative Council)**

Advisory council to Victoria's Minister for Industrial Relations, established by Government in 2001. Comprises employers, industry associations, unions, government bodies and an independent chair.

Former Chair: Peter Parkinson, Independent Consultant (resigned September 2021); current Chair of Victorian Building Industry Disputes Panel (VBIDP).

Current Chair: Rebecca Casson, former CEO, Master Builders Victoria (MBV); now Incolink President (appointed Chair of BICC in June 2022)

Member organisations:

- AMCA (Air Conditioning and Mechanical Contractors' Association)
- CEPU (Electrical Division)
- CFMMEU (Construction and General Division)
- CFMMEU (Forestry and Furnishing Products Division)
- DELP (Department of Environment, Land, Water and Planning) (Victoria)
- Development Victoria
- Lend Lease
- MBV (Master Builders Association of Victoria)
- Master Plumbers (Master Plumbers and Mechanical Services Association of Australia)
- Multiplex
- NECA (National Electrical and Communications Association) (Victoria)
- NFIA (National Fire Industry Association)
- Office of Projects Victoria
- PPTEU (Plumbing and Pipe Trades Employees Union)
- Probuild
- PCA (Property Council of Australia)
- Victorian Trades Hall Council
- VWA (WorkSafe Victoria/Victorian WorkCover Authority)

#### BCIWG (Building and Construction Industry Working Group)

Former Chair: Peter Parkinson, Independent Consultant (resigned September 2021); current Chair of Victorian Building Industry Disputes Panel (VBIDP).

Member organisations: Formed near the start of the pandemic, this group comprised over 50 industry bodies from across the spectrum of Victoria's building and construction industry. Around 150 group members met weekly over Zoom during the two-year period of focus. A subcommittee of this group was responsible for drafting, developing, and updating the Industry Covid-19 Guidelines.

#### RIG: Rapid Industry Guidance Taskforce (Building and Construction Industry)

Former Chair: Peter Parkinson, Independent Consultant (resigned September 2021); current Chair of Victorian Building Industry Disputes Panel (VBIDP). Formed near the start of the pandemic, RIG was a group of Government representatives that provided input and oversight on the Industry Covid-19 Guidelines.

#### Member organisations:

- DHHS (Department of Health and Human Services, Victoria)
- DJPR (Department of Jobs, Precincts and Regions, Victoria)
- DOT (Department of Transport, Victoria)
- DPC (Department of Premier and Cabinet, Victoria)
- VWA (WorkSafe Victoria)
- VBA (Victorian Building Authority)



