



SUSTAINABILITY REPORT  
**2020**

**BRICKWORKS**



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## Merri Creek House by WOWOWA

*Bricks: Daniel Robertson Traditional Buff (Certified Carbon Neutral by Climate Active)*

The design of Merri Creek house incorporates many passive design measures including deep shading to the northern windows and plentiful cross ventilation.

Exposed brickwork is used throughout the interior providing thermal mass to capture and store heat energy during the cooler months, the brick adds colour and texture to the living spaces while also being highly durable. Other sustainable measures include a large solar PV system and water collection for reuse.

Throughout the design WOWOWA sought materials with their own inherent natural qualities to create warmth and feeling.



# About this Report

This Sustainability Report is Brickworks Limited's (Brickworks) second stand-alone Sustainability Report and is intended to complement the Annual Report, providing expanded disclosure on non-financial performance, impacts and opportunities. It is informed by the Global Reporting Initiative (GRI) Standards, a leading independent Environmental Social and Governance reporting standard.

In the FY19 report, with the assistance of EY, Brickworks expanded its materiality review, by interviewing internal and external stakeholders. This year, the process of developing this report further validated the identified material issues. Further information is available in the Stakeholder Engagement and Materiality Assessment Process sections of this report. This Sustainability Report provides detailed information on the issues that have been identified as most significant through the materiality review and validation process. Details on the report's GRI Index is included in the Appendix.

The boundary of the Sustainability Report covers operations where Brickworks Limited has operational control. During FY19 and FY20, Brickworks acquired North American businesses Glen-Gery, Sioux City and Redland Brick. During FY20, integration of these operations with Brickworks' Management Systems has been ongoing. This year's Sustainability Report includes key aspects of the U.S. annual business performance; covering safety, workplace profile, environmental compliance, natural gas use, collective bargaining statistics, company changes, partnerships, risk and governance.

The reporting period for most topics is 1 August 2019 to 31 July 2020, aligned with the Brickworks' financial year. An exception is energy and carbon data, where the reporting period is 1 July 2019 to 30 June 2020, aligned with the National Greenhouse and Energy Reporting (NGER) Scheme. Details of fundraising efforts for the Children's Cancer Institute are for the 2019 calendar year.

As part of Brickworks' expanded disclosure, a Limited Assurance review was performed in accordance with the International Standard on Assurance Engagements (ISAE) 3000 for metrics internally identified as significant risks, for both the Australian and North American businesses, including:

- ▶ Lost time injury frequency rate (LTIFR)
- ▶ Total recordable injury frequency rate (TRIFR)
- ▶ Environmental fines
- ▶ Scope 1 and 2 greenhouse gas emissions and energy consumption (Australia only)
- ▶ Natural gas (North America only)

A copy of the Limited Assurance Statement from this audit is included in this report.







# A message from the Managing Director

At Brickworks, we understand our long-term responsibilities, and the impact and influence we have on the environment, our customers, employees, communities and shareholders. We take great pride in manufacturing our products in a sustainable way, creating sustainable developments and beautiful products that last forever. We integrate sustainability and innovation into product design, resulting in greater energy and resource efficiency over the operational lifetime of a building.

## Sustainability Strategy Launch

During FY20, we developed our new sustainability strategy, “Build for Living: Towards 2025”. The strategy will build on the progress we have made and deliver a positive impact for our stakeholders. During its development, we engaged further with our internal and external stakeholders, to understand and validate what issues matter the most to them.

Our sustainability strategy focuses on the opportunity to make buildings and cities safe, resilient and sustainable. It sets a clear pathway with 15 measurable targets and commitments across three pillars: Responsible Business, Environment, and Our People and Community. Among our commitments are the following stretch targets: 35% female senior executives by 2025, double our volume of products sold that hold leading sustainable qualities by 2025, and increase gas efficiency at Austral Bricks plants by 10% by 2030. I would like to record my thanks to my team, the Brickworks Board and the Audit and Risk Committee for their involvement in the development of the strategy.

During FY20, we continued to deliver on the sustainability targets we set in FY19. We have achieved pleasing results and improvements in safety, employee development and diversity, energy, water, resource efficiency, community and governance. Through “Build for Living: Towards 2025”, our commitment to these areas continues. Brickworks recognises the importance of increased disclosure and action related to climate risk. Brickworks has commenced preparing a plan to meet the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

## Responding to Coronavirus Disease (COVID-19)

The COVID-19 pandemic has resulted in significant uncertainty for global economies. This global public health crisis continues to evolve with far reaching consequences that are difficult to predict. Brickworks continues to monitor the situation closely, and our primary focus is on ensuring the safety and wellbeing of all employees and customers. We have enacted a range of procedures, such as hygiene programs, Personal Protection Equipment, remote working and temperature checks for all employees and visitors entering our premises. We regularly check in with our employees to ensure they are managing their mental health and wellbeing during this challenging time.

We have developed business planning and scenario modelling tools to support our decision making over the coming months. Our U.S. business has been most disrupted and our focus is on workforce management, minimising costs, and preparing operations to quickly ramp up when conditions allow. In this unprecedented and challenging period, I would like to acknowledge the entire team at Brickworks, who have remained steadfastly positive and committed. I have never felt more proud to work among such outstanding people.



## Ongoing Commitment to Safety

At Brickworks, we believe there is no task that is so important we can't take the time to find a safe way to do it. Safety performance at our Australian operations improved in FY20, recording a lower annual injury rate. The total recordable injury frequency rate for FY20 (TRIFR) was 11.8, compared to 19.6 in FY19. We focussed on employee education, with employees completing over 34,000 courses in FY20. The national rollout of a behavioural safety leadership program for managers and supervisors was completed, contributing to a stronger safety culture within the company. A mental health first aid training program was rolled out to 10% of our employees, providing timely support throughout the business. Last year, we identified that North American injury rates were higher than our Australian operations. During FY20, we focused on providing behavioural safety leadership training and incorporating key health and safety programs into the U.S. business. Injury rates in North America reduced by 16.6% compared to the previous year, exceeding our target of 10% reduction in injury rates. We are currently introducing new initiatives for worker's health and safety at Brickworks Building Products North America.

## U.S. Business Update

In November 2019, Brickworks announced the acquisition of assets from Redland Brick in the U.S. Completed in February 2020, this is the company's third acquisition of a U.S. brick company, following the purchase of Sioux City Brick in August 2019 and Glen-Gery in November 2018. Brickworks Building Products North America, now has 10 brick plants in operation, one manufactured stone plant, and an extensive network of retail outlets and resellers. On the sustainability front, the year has seen continued integration of the U.S. business into our strategic areas of focus. We are pleased to include a full year of progress from the U.S. business in this year's sustainability report.

## Board Update

In FY20, the Brickworks Board focussed on gender diversity and Board renewal. The Brickworks Board currently consists of 5 independent members and 3 non-independent members. New Board appointments included Malcolm Bunday in October 2019 and Robyn Stubbs in January 2020, both as independent non-executive Directors. The appointment of Robyn increases female Board representation to 25%.

We continued our focus on employee inclusion and diversity in FY20, following the establishment of a Diversity Council to drive our Diversity and Inclusion Strategy in FY19. The percentage of women in senior executive roles has increased from 7% in 2015 to 27% in 2020. During FY20, we continued our focus on mentoring and initiatives to increase gender diversity. Sustaining our strong culture, diversity and talent of our people is critical to our long-term success.

I would like to thank everyone working across the Brickworks Group for their dedication and hard work, during what has been a trying year for all businesses. I am incredibly proud of our continued improvements in safety and our employee's day-to-day demonstration of living our corporate values. The launch of our new sustainability strategy provides us a pathway of continued sustainability achievement and I am excited about the journey ahead.



**Lindsay Partridge AM**  
Managing Director









# BRICKWORKS

LIMITED





# About us

Brickworks Limited (Brickworks) is an ASX200 publicly listed company, with a long and successful history, dating back to 1934.

Brickworks is one of the world's leading providers of building products, employing 1,181 full time equivalent employees across its Australian operations (permanent and part time employees, excluding casuals) and 777 employees in North America.

From bricks to precast concrete panels, pavers and roofing tiles, Brickworks offers a full suite of building products.

Brickworks has a diversified corporate structure that has delivered stability of earnings over the long term. Following the acquisition of Glen-Gery in the U.S., there are now four divisions within the Brickworks Group structure:

- ▶ Building Products Australia
- ▶ Building Products North America
- ▶ Property
- ▶ Investments

This report covers the key operating divisions of Building Products Australia and Building Products North America. The Property division consists primarily of a 50% interest in a Joint Venture Industrial Property Trust. An overview of the sustainability achievements from Goodman Brickworks Joint Venture Trust is provided in this report.

Brickworks' headquarters are in Horsley Park, NSW, approximately 45kms west of Sydney's CBD. Brickworks has a vast network of operational sites and display centers in Australia and North America. As of 31 July 2020, Brickworks operates 40 manufacturing sites and more than 50 quarries, comprising:

- 12** Brick plants (Australia)
- 10** Brick plants (North America)
- 2** Roof tile plants (Australia)
- 1** Timber batten plant (Australia)
- 10** Masonry plants (Australia)
- 1** Stone Plant (North America)
- 3** Precast plants (Australia)
- 1** Cement terminal (JV) (Australia)
- 30+** Quarries (Australia)
- 20+** Quarries (North America)

In addition, the Building Products Group has 54 Design Studios, Displays and Masonry Supply Centres across major capital cities in Australia and North America, complemented by an extensive reseller network.

For FY20, Brickworks' total revenue was \$953 million (AUD). This included Building Products Australia revenue of \$687 million, across four major divisions – Austral Bricks, Bristle Roofing, Austral Masonry and Austral Precast.



# Our BRANDS

Brickworks Building Products is one of the world's largest and most diverse building material manufacturers.

## BRICKWORKS

Under the Brickworks Building Products umbrella are some of the world's best-known building material brands. Our products include clay bricks and pavers, concrete masonry blocks, retaining wall systems, stone, cement, precast concrete panels, concrete and terracotta roof tiles, timber battens, terracotta façades and specialised building systems.

With a broad product portfolio and manufacturing and sales facilities across Australia and North America, Brickworks Building Products is uniquely placed to service the demands of the building industry.

Brickworks continues to lead the way through design, style, innovation, sustainability and collaboration. The company's commitment is to inspire, support, create and build better environments and places for its customers and communities.



Founded in 1908, Austral Bricks is Australia's largest, best-known and most efficient clay brick and paver manufacturer. The company has a well-established national presence with manufacturing and sales facilities in every state. It has long been at the forefront of product innovation and efficient, sustainable production. The introduction of robotic brick handling equipment and the ongoing pursuit of energy and resource efficiencies has enabled Austral Bricks to maintain its competitive edge.

[www.australbricks.com.au](http://www.australbricks.com.au)



GB Masonry collection has been a symbol of quality in the masonry industry since 1978, specialising in sandstone style concrete blocks with an authentic sandstone appearance.

GB Masonry combines industry leading machinery with manual chiselling to produce the hand-crafted sandstone products on which the business made its name. For products that show the skill of master block makers there is no rival to the GB Masonry collection of premium concrete masonry blocks.

[www.gb-masonry.com.au](http://www.gb-masonry.com.au)



UrbanStone began manufacturing paving products in early 1993. UrbanStone are leading craftsman of Australia's finest engineered stone, natural stone and porcelain stoneware.

Having set a new standard in style and distinction, the UrbanStone range is consistently specified by landscape architects, designers and specifiers, and feature in prominent commercial and residential projects across the country.

From a standard range of paving solutions to bespoke options, UrbanStone offers products that suit any style and project.

[www.urbanstone.com.au](http://www.urbanstone.com.au)





## BOWRAL BRICKS

When Bowral Bricks began production in 1922, a teenage Don Bradman was still scoring runs for the local side. Today their distinctive dry-pressed bricks are highly valued by discerning architects and builders across the country. The unique combination of traditional craftsmanship and modern technology will ensure that the Bowral Bricks brand will remain the benchmark for brick excellence for many years to come.

[www.bowralbricks.com.au](http://www.bowralbricks.com.au)



Daniel Robertson has been building Australia from the ground up since 1853.

Our name signifies a continued commitment to deliver outstanding products that are distinctive and aesthetically beautiful.

Our culture of innovation has driven us to develop unique colours, shapes and textures in brick.

[www.danielrobertson.com.au](http://www.danielrobertson.com.au)



With a heritage reaching back to 1862, Nubrik premium-quality bricks are still moulded the traditional way on century-old presses. Their time-honoured expression of authenticity and elegance is acknowledged by architects, builders and discerning homebuyers who also value their rich colour blends, solidity and crisply-defined edges.

[www.nubrik.com.au](http://www.nubrik.com.au)



Founded in 1890, Glen-Gery is one of the U.S.'s largest brick manufacturers and operates nine brick facilities and one manufactured stone facility. Glen-Gery products are sold through a network of over 500 distributors in the United States and Canada.

Glen-Gery is an industry leader for its' diversified line of more than 600 brick products, which are available in a wide-array of sizes and textures.

[www.glengery.com](http://www.glengery.com)



Through organic growth and acquisition, Austral Masonry has grown from a single Victorian plant to become a major player in the concrete masonry market along Australia's East Coast. As well as grey concrete blocks, the workhorses of the building industry, our masonry division manufactures coloured concrete masonry units, pavers and retaining wall systems for residential and large-scale commercial applications.

[www.australmasonry.com.au](http://www.australmasonry.com.au)



Established in 1929, Bristile Roofing is one of the country's largest suppliers and installers of concrete and ceramic roof tiles, offering a comprehensive range of more than 40 colours and seven profiles. Over recent years, the company has expanded to include metal roofing, fascia's and gutters together with a range of innovative roofing solutions including solar and batteries.

[www.bristilerooting.com.au](http://www.bristilerooting.com.au)



Ceramic facade systems are a cost and time efficient approach to cladding commercial and upscale residential buildings. The Terraçade system, developed in Australia by Brickworks Building Products, combines the visual appeal and colourfastness of terracotta with the low maintenance and functional efficiency demanded in today's competitive market.

[www.terraçade.com.au](http://www.terraçade.com.au)



Construction of the Southern Cross Cement import terminal in Brisbane has now commenced and is expected to be fully installed and commissioned in FY19.

This strategic investment will strengthen Brickworks Building Products' core business, by securing high quality and cost-effective raw material supply for our Austral Masonry, Bristile Roofing and Austral Precast operations.

[www.sscement.com.au](http://www.sscement.com.au)



Austral Precast is Australia's premier supplier of high-quality, innovative and customisable precast concrete solutions. Using state-of-the-art technology, production techniques and systems, our precast division produces a diversified range of wall, floor, column, and client-specific solutions. To meet the construction industry's ever-increasing demands, the company operates from five plants located along the eastern seaboard and in WA.

[www.australprecast.com.au](http://www.australprecast.com.au)





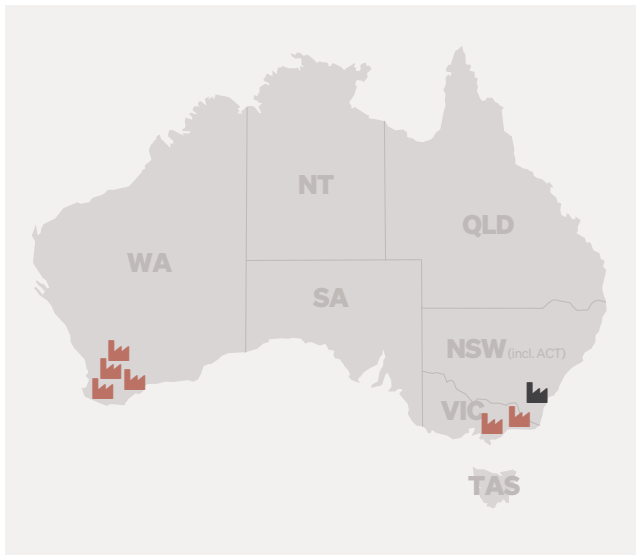


# Organisational Changes

## Building Products Australia

### Exit from Auswest Timbers

In FY19, following a strategic review, Brickworks exited the Auswest Timbers hardwood operations, with four sawmill sites in Western Australia and two in Victoria.



On 23 October 2019, Brickworks completed the sale of Auswest Timbers to Parkside Group, experts in Australian hardwood timber processing for more than 57 years. 93 Brickworks employees were transferred with the sale, 25 Brickworks employees experienced

job losses. The sale excluded the Fyshwick ACT pine batten business, of which Brickworks retains ownership. Now known as Capital Battens Pty Ltd, the company supplies certified and renewable pine timber battens to the Australian market.

Further details of the Auswest Timbers sale are covered in the FY20 Annual Report.

## Southern Cross Cement

Southern Cross Cement is a joint venture company owned by Brickworks (33% interest), the Nielsen Group and the Neumann Group. The company constructed a new cement import terminal during FY19, located in Brisbane. Commissioning of the terminal was completed in the second quarter of FY20, with shareholder volume of >200,000 tonnes per year. The terminal provides reliable and cost-effective cement to Austral Masonry and Bristle Roofing Australia.

## Building Products North America

### Redland Brick and Sioux City

In November 2019, Brickworks announced the acquisition of assets from Redland Brick in the U.S. This acquisition was completed in February 2020 and marks the Company's third U.S. brick acquisition, following the purchase of Sioux City Brick in August 2019 and Glen-Gery in November 2018.

Building Products North America now has significant scale, including 777 employees, 10 brick plants, 1 manufactured stone plant, and an extensive network of company owned retail outlets and resellers.

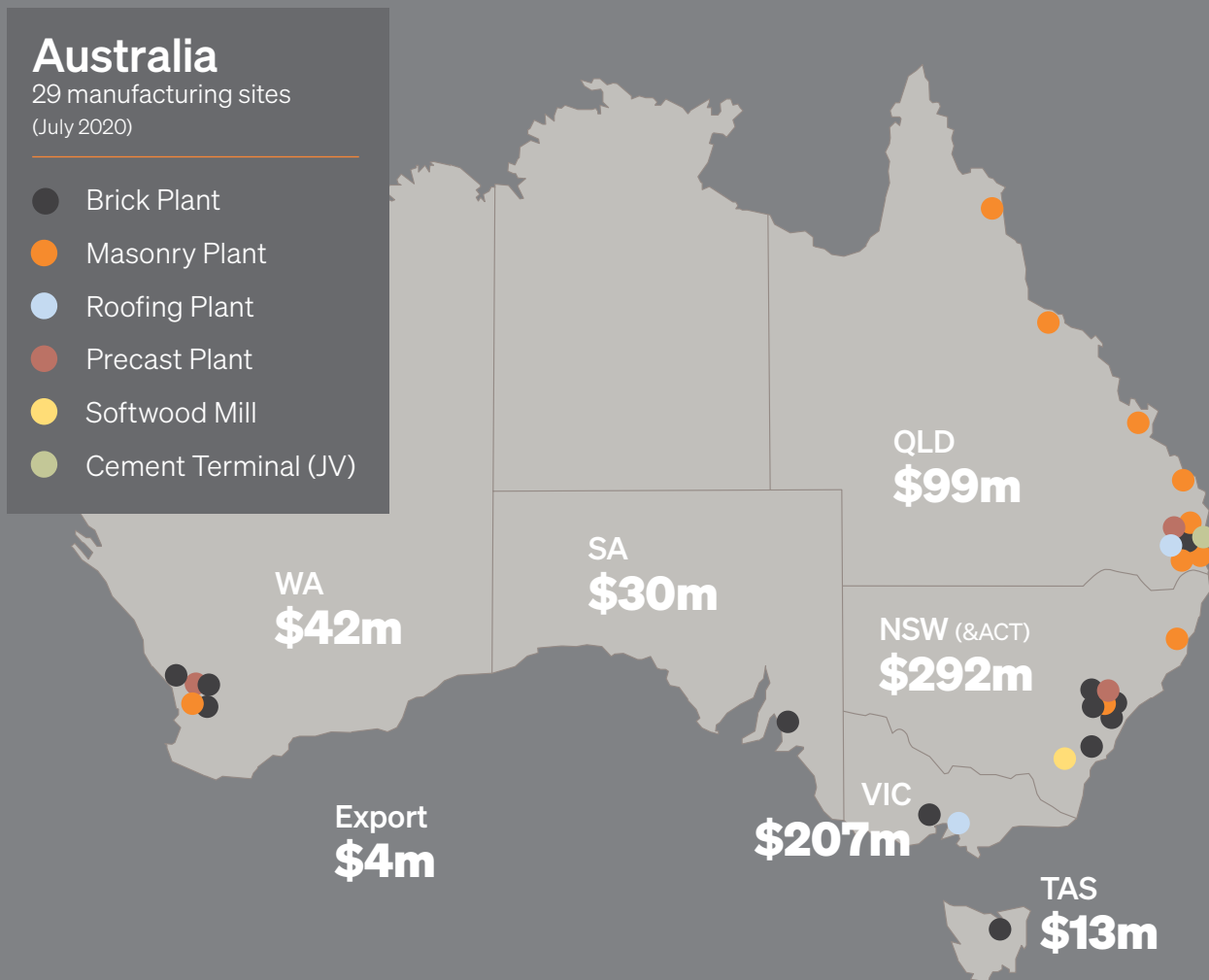
# Brickworks

## at a glance

Brickworks has a diversified corporate structure that has delivered stability of earnings over the long term. There are four divisions within the Brickworks Group structure that span Australia and the U.S.: Building Products Australia, Building Products North America, Property and Investments.

EARNINGS BEFORE INTEREST AND TAXES BY DIVISION	Investments:	\$51m	Building Products (Aus):	\$33m
		Property:	\$129m	Building Products (US):

### BUILDING PRODUCTS AUSTRALIA – \$687m revenue





NUMBER OF  
FACTORIES



**40**

NUMBER OF  
RETAIL OUTLETS



**54**

GROUP  
REVENUE



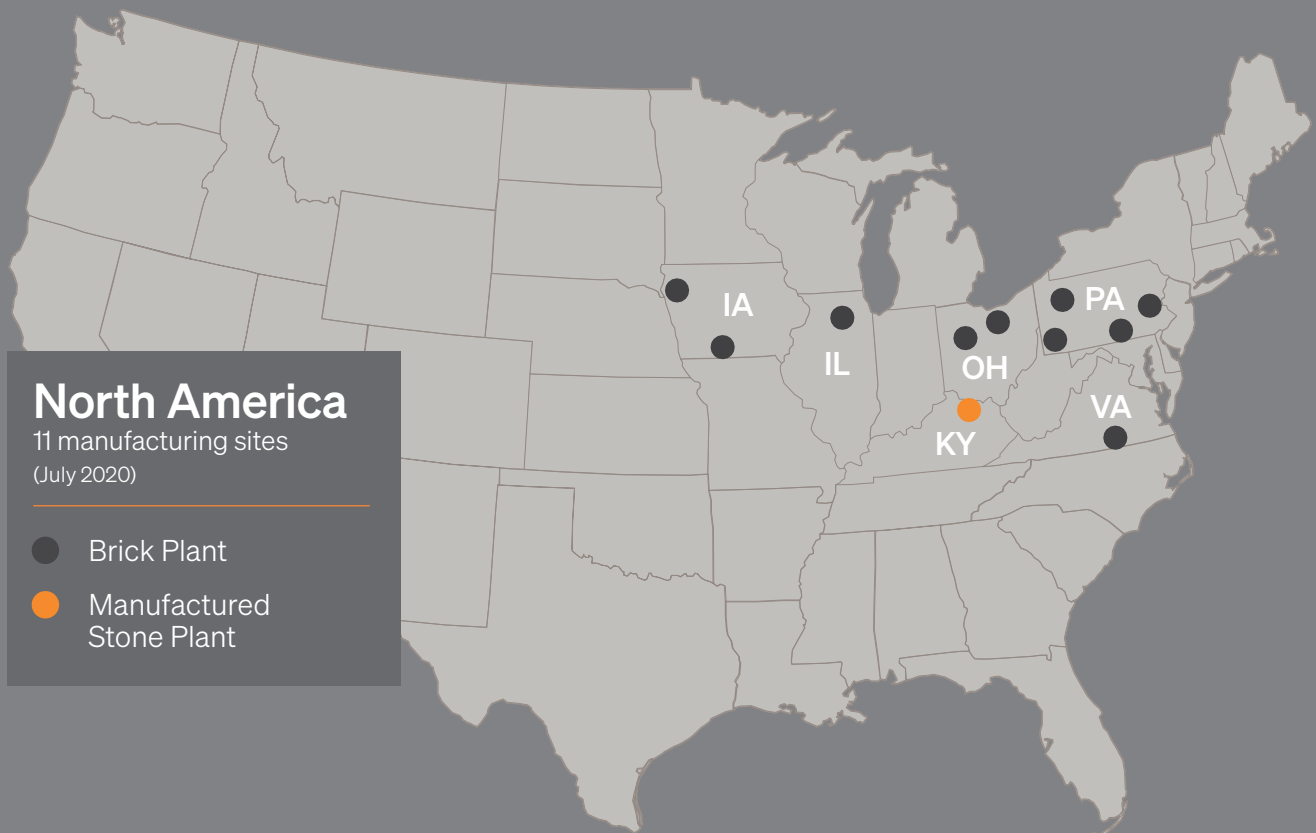
**\$953m**

NUMBER OF  
EMPLOYEES



**1958**

## BUILDING PRODUCTS NORTH AMERICA – AU\$230m revenue (FY20)









# Our business

We create beautiful products  
that last forever



# Sustainability Framework

Brickworks is committed to social and environmental responsibility. As one of the world's largest and most diverse building products manufacturers, Brickworks believes it has a responsibility to shareholders, employees, industry, environment and the wider community.

With the aim of improving Brickworks' sustainability disclosure; a Sustainability Framework has been developed, which links the company's sustainability commitments with the business strategy. Central to the framework is Brickworks' business purpose "We create beautiful products that last forever".

The Sustainability Framework also defines the company's approach to sustainability reporting and is based on three key topics – Responsible Business, Environment, and Our People and Community. An expanded materiality assessment was completed in FY19, providing updated guidance on material issues of importance to stakeholders. These material issues formed the basis of reporting coverage in the key topic areas.

Material issues identified include: improving resource efficiency, waste management, reducing energy usage and greenhouse gas emissions, climate risk (understanding carbon risks and opportunities), strengthening environmental compliance, engaging closely with local communities, sustainable supply chain (responsible procurement), developing innovative building products (innovation and sustainable products), corporate conduct (governance), health, safety and wellbeing. Additional issues identified in FY20 include COVID-19.

This report outlines the company's approach to managing these material sustainability issues, provides a review of sustainability performance during FY20 and disclosure of ambitions for FY21 and beyond.





# Sustainability Report 2020

## Highlights

**\$965m**

REVENUE

**12.07%**

TOTAL CARBON EMISSIONS  
REDUCTION % (AUS)

**8.85%**

TOTAL ENERGY  
REDUCTION  
% (AUS)

**\$4m**

CHILDREN'S CANCER  
INSTITUTE TOTAL PARTNER  
VALUE SINCE 2002

BRICKWORKS AUSTRALIAN  
**BUSHFIRE  
SUPPORT  
CAMPAIGN**

MODERN SLAVERY  
**POLICY**

**TRIFR 39.8%**

REDUCTION  
IN INJURY RATES  
(AUSTRALIA)

**TRIFR 16.6%**

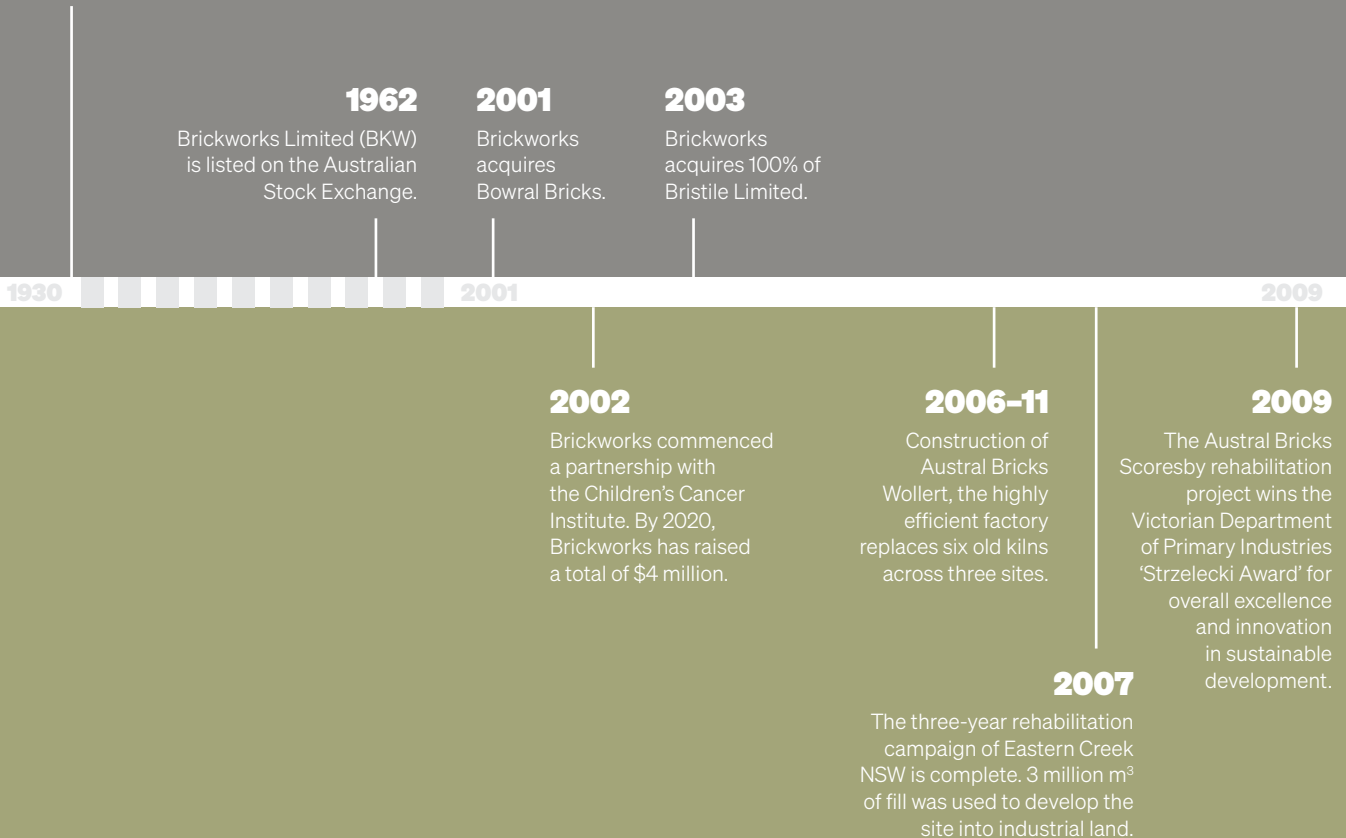
REDUCTION  
IN INJURY RATES  
(NORTH AMERICA)

**105 CPD**

PRESENTATIONS  
DELIVERED SUPPORTING  
LEADING BUILDING DESIGN

## 1934

At the height of the Great Depression brick manufacturers in the New South Wales Brick Masters' Association take drastic action to save the industry. They register Brickworks Limited as a public company, close unprofitable yards and rationalise production. The new company is better able to market and distribute bricks and clay products, especially pipes and tiles.



# Sustainability TIMELINE

For over 100 years, Brickworks has played a key role in building resilient, safe and sustainable cities. Our bricks and concrete products are manufactured to provide resilience. They are durable, fire-proof, contain thermal mass for energy efficient design, excellent acoustic properties and no indoor air emissions (VOCs); and our clay bricks hold a 100-year guarantee.

Brickworks was registered as a NSW based public company in 1934. Since that time, it has grown to become one of the world's largest and diverse building products manufacturers, with operations throughout Australia and North America. Alongside this growth, our sustainability journey continues to develop. This year we have launched a new sustainability strategy, "Build for Living: Towards 2025, charting a path beyond achievements to date into the future, contributing to goals such as the United Nations' Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable".



# COMPANY HISTORY

**2012**

Brickworks completes the acquisition of Daniel Robertson Australia Pty Ltd (following the formation of a 50/50 Joint Venture in 2006).

**2016**

Brickworks facilities in Rochedale, QLD and Cardup, WA undergo major upgrades.

**2018**

Brickworks purchases fourth largest US brick manufacturer, Glen-Gery.

**2019**

Acquisition of Sioux City and Redland Brick.

**2015**

Brickworks completes the sale of the Coles CDC facility for \$253 million.

**2012**

**2012**

Brickworks launches its first 'Build for Living' Sustainability Campaign.

**2014**

Brickworks launches Australia's first "Carbon Neutral Brick" and achieves Carbon Neutral certification for all products made at its Longford Tasmania plant.

**2015**

Austral Bricks NSW wins the Department of Environment and Heritage Green Globe Award for the use of Landfill Gas in Horsley Park Kilns 21 and 23.

**2016**

Bristile Roofing WA wins Waste Authority Infinity Award for recycling clay tile offcuts from building sites.

**2017**

Brickworks launches Bristile Solar, offering premium solar-roof tiles and a full energy management system.

**2018**

Bristile Roofing wins the 2018 HIA 'Industry and Product Innovation Award' for its solar roof tiles.

**2019**

Brickworks launches its first standalone Sustainability Report.

**2020**

**2020**

Brickworks launches *Build for Living: Towards 2025 Sustainability Strategy*.

# SUSTAINABILITY JOURNEY

# Sustainability Governance

Sustainability is embedded into the Brickworks business strategy. The Brickworks Audit and Risk Committee (ARC) is responsible for the oversight of sustainability governance, and day-to-day management of the Group governance arrangements are delegated to the Managing Director and Chief Financial Officer.

Annually, key management personnel make presentations to the Board on safety, human resources, risk, environment and sustainability issues and targets. In FY20, sustainability was formally incorporated into the charter of the ARC. This year the Brickworks Board approved a five-year Sustainability Strategy “Build for Living, Towards 2025”.

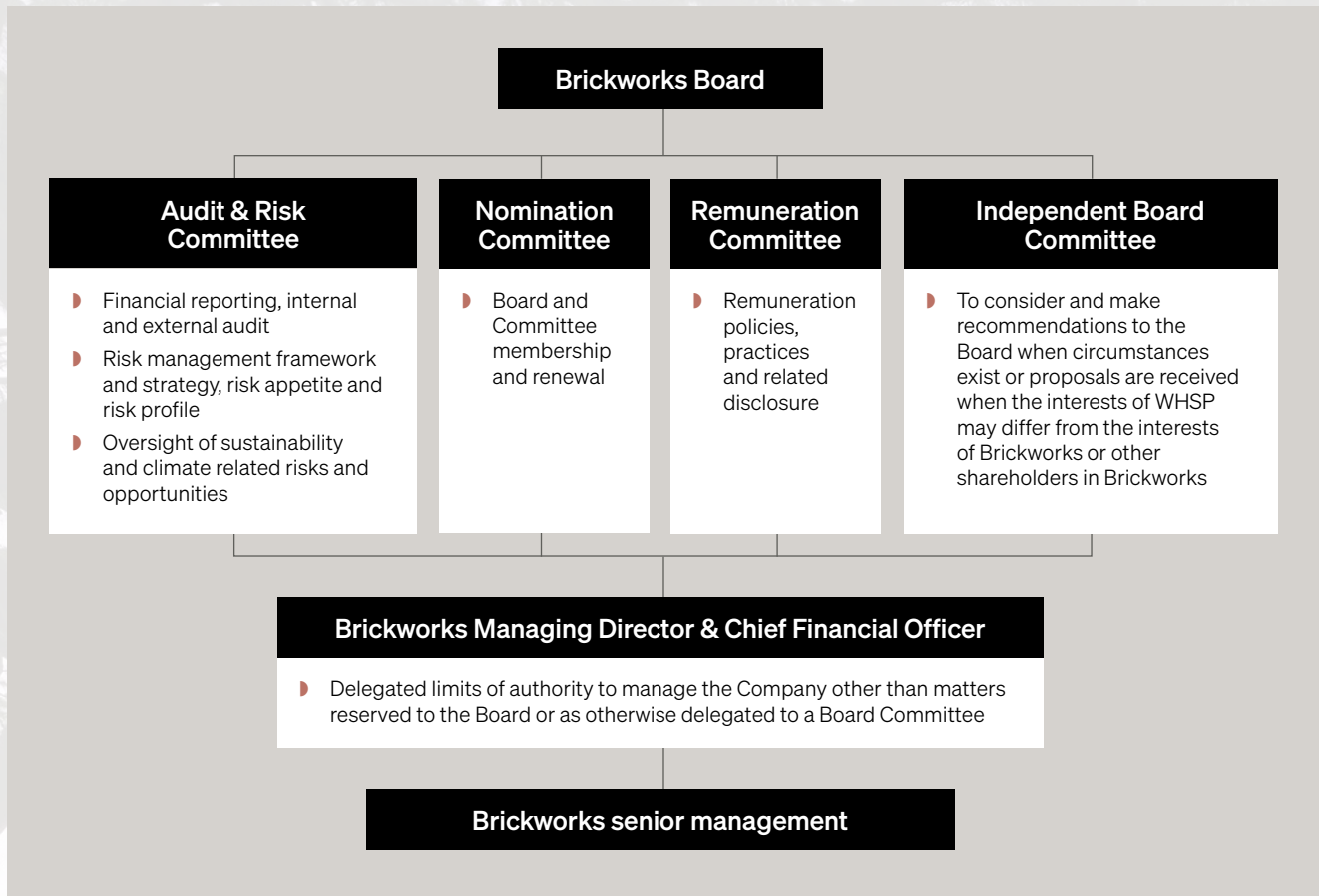
Brickworks’ Environmental Policy includes sustainability commitments and can be downloaded from <https://www.brickworks.com.au/company/environment-and-sustainability>.

Sustainability risk management is integrated through key performance indicators (KPIs) which are set at business level. This year several sustainability KPIs were linked to the divisional bonus structure, for items including: health and safety performance; environmental management training and systems development; completion of monthly inspections and outstanding hazards, and the implementation of community engagement plans and natural gas efficiency plans.





## Brickworks governance framework



# Sustainability

## Strategy

### Build for Living: Towards 2025, Brickworks Sustainability Strategy

The built environment is the fabric of our cities and our lives and Brickworks' products form part of this ever-changing fabric. Brickworks products are integrated into thousands of homes, apartments, commercial buildings, landscapes and infrastructure projects built each year.

Brickworks' sustainability strategy, "Build for Living: Towards 2025", recognises the substantial environmental and social impacts of the built environment, and the role its products play in creating sustainable developments. Brickworks understands its responsibilities, and the impact and influence it has on the environment, customers, employees, communities, and shareholders.

The sustainability strategy focuses on the opportunity to make buildings and cities safe, resilient and sustainable. Design that incorporates sustainability brings greater energy and resource efficiency over the operational lifetime of a building.

The sustainability strategy sets a clear pathway from FY19, with measurable commitments, to ensure Brickworks continues to have a positive environmental and social impact, with strong governance and a culture of care for the community.

At the heart of the strategy is Brickworks' sustainability framework, with three pillars: Responsible Business, Environment and Our People and Community. Within these pillars, Brickworks focuses on three core objectives to deliver positive outcomes for stakeholders:

- ▶ Responsible Business: Leading Building Design - Safe, Resilient, Sustainable
- ▶ Environment: Sustainable Manufacturing
- ▶ Our People and Community: Diversity and Strong Culture of Care for Community

Under these objectives, Brickworks is committed to delivering on 15 targets by 2025 with the baseline year of FY19, except where otherwise noted.



# TOWARDS 2025

## Brickworks Sustainability Strategy

Brickworks is one of the world's leading manufacturers of quality building products. Our purpose has sustainability at our core – to create beautiful products that last forever.

The built environment is the fabric of our cities and our lives and Brickworks' products form part of this ever-changing fabric. Our sustainability strategy focuses on the opportunity to make buildings and cities safe, resilient and sustainable. It demonstrates our approach to sustainable manufacturing, incorporating sustainability into buildings to create greater efficiency during their operation. We do this with strong governance and a culture of care for our community.



### THERMAL DESIGN

We will provide leading research on passive solar thermal design, enabling reduced lifetime energy use.

### LIFE CYCLE EDUCATION

We will support design tools, guidance and information to incorporate life cycle thinking into building design.

### SUSTAINABLE PRODUCTS

By 2025, we will double our volume of products sold in Australia that hold leading sustainable qualities.

### SUPPLY CHAIN

Reduce supply chain risk



### CARBON

Invest in the transition to the hydrogen fuel economy

### GOVERNANCE

Business Ethics and Whistleblower Programs



### WATER

Reduced potable water use in water stressed areas

### SAFETY

Continued reductions in injury rates



### REHABILITATION

Drive progressive rehabilitation

### ENGAGEMENT

100 Community activities each year



### CIRCULAR ECONOMY

Year on year increase in recycled material use

### COMMUNITY SUPPORT

Supporting charities like Children's Cancer Institute



### EMISSION CONTROL

Over \$2 million investment in emission abatement

### DIVERSITY AND INCLUSION

Stretch target: 35% female senior executives. Develop and implement a Diversity and Inclusion Strategy



### ENERGY EFFICIENCY

Stretch target: 10% increase in gas efficiency at Austral Bricks plant by 2030  
Baseline FY18

# Our FY2020

## Target Scorecard

### OUR PEOPLE

- ✓ **Launch Values Survey**  
*Target achieved* – Pilot of values survey was deployed.
- ✗ **30 staff to join mentoring program**  
*Target not achieved* – FY20 focus has been on developing our internal mentoring capability and developing an inhouse program.
- ✓ **Develop targets for gender diversity**  
*Target achieved* – 35% senior executive.
- 🏆 **10% reduction in injury rates**  
*Target exceeded* – 39.8% reduction in Australia and 16.6% reduction in North America.
- ✓ **10% staff trained in Mental Health 1st aid**  
*Target achieved* – 10% Staff Trained.
- 🏆 **25% staff to undergo drug and alcohol testing**  
*Target exceeded* – 59% tested.
- ▶▶ **100% heavy vehicle drivers to complete medical testing**  
*Target 90% achieved* – 90% heavy vehicle drivers tested.
- ▶▶ **Implement the recommendations from the National Transport Audit**  
*Target progressing* – Action plan developed and ongoing commitment to implementation.
- ▶▶ **Increase female board membership to 28%**  
*Target progressing* – 25% female representation, increasing to 29% November 2020.

### COMMUNITY

- ✓ **Implement community engagement plans at relevant sites**  
*Target achieved* – Plans established at relevant sites.
- ✓ **Continue ongoing support of the CCI**  
*Target Achieved* – raised \$491,179 in 2019 calendar year.



OUR PEOPLE



COMMUNITY





## ENVIRONMENT

- ✓ **Implement gas efficiency plans**  
Review of current plans completed. Nine month energy efficiency trend analysed.
- ✓ **Investigate carbon targets**  
*Target achieved* – Investigated and targets will be prepared as part of TCFD plan. Energy efficiency target included as part of Build for Living: Towards 2025 strategy.
- ✓ **Finalise TCFD plan and implement**  
*Target achieved* – TCFD plan finalised and implementation has commenced.
- ✓ **Develop library of technical properties of clay**  
*Target achieved* – Technical library established.
- ▶▶ **Implement production waste and recycling plans at all manufacturing facilities**  
*Target progressing* – Production waste plans in place; Recycling initiatives and waste management study completed at range of sites, rollout to remaining sites to be completed during FY21.
- ✓ **Identify further opportunities to reduce mains water usage**  
*Target achieved* – Water opportunities identified including the Horsley Park Plant 22 rainwater tank.
- ▶▶ **Commence rollout of online software to support Environmental Management System**  
*Target partially achieved* – Rollout commenced, with implementation to be completed during FY21.
- ✓ **Zero environmental fines**  
*Target achieved* – No fines received at Brickworks Building Product Australia and North America.



## RESPONSIBLE BUSINESS

- ✓ **Explore opportunities to further support affordable housing developments**  
*Target achieved* – Initiatives undertaken during FY20, and ongoing target for future years.
- ✓ **Strategic review of additional product disclosures**  
*Target achieved* – Applied for second Climate Active Licence and plans to develop an Environmental Product Disclosure in FY21.
- ✓ **Prepare and present the Environmental Social and Governance Risks and Opportunities Paper, and five-year Sustainability Strategy**  
*Target achieved* – ESG Opportunities paper presented to the Board and Strategy approved as the Build for Living: Towards 2025 strategy.
- ✓ **Form a Sustainable supply chain working group to better understand the risks within our procurement categories and countries of supply, and work towards a robust risk assessment process, a Modern Slavery roadmap and reporting statement.**  
*Target achieved* – Working Group formed, Modern Slavery Policy developed, Supplier Code of Conduct developed, engaged with consultants regarding risk assessment. First Modern Slavery report to be published in FY21.

# Sustainable PARTNERSHIPS

As one of the world's largest and most diverse building products manufacturers, Brickworks Building Products takes its position of industry leadership seriously. We believe the group and its member companies have a responsibility not only to our shareholders and employees but also to the industry, the environment, and the wider community. It is for this reason we consider our partnerships carefully and endeavour to align with other organisations who share our vision and values for a more sustainable future.

## THINK BRICK

Think Brick is the peak body representing Australia's clay brick and paver manufacturing industry. Brickworks is a national member and we have a shared vision of inspiring brick architecture and building design in all areas of the built environment: commercial, residential, and landscape. Our partnership enables Brickworks to support ongoing research programs at the University of Newcastle, contributing significantly to the demonstration of the thermal benefits and performance of bricks compared to lightweight cladding in Australian housing.

## BRICK INDUSTRY ASSOCIATION

Brickworks is a member of the Brick Industry Association (BIA), USA's trade association representing distributors and manufacturers of clay brick and suppliers of related products and services. BIA is the nationally recognised authority on clay brick construction. BIA safeguards the industry through comprehensive advocacy and compliance efforts at the federal and state levels; representation in all model building code forums and national standards committees; and local advocacy programs that educate local planning and elected officials about clay brick.

## GREEN BUILDING COUNCIL OF AUSTRALIA

Brickworks' recently joined the Green Building Council of Australia (GBCA) as a corporate member. The GBCA's vision to create healthy, resilient and positive places, aligns strongly with Brickwork's sustainable vision for our building products to create beautiful, healthy and sustainable homes and environments. Through our partnership with the GBCA, we will help drive advocacy and education of the industry, to help create more sustainable buildings and environments.

## HOUSING INDUSTRY ASSOCIATION

The Housing Industry Association (HIA) is the official body of Australia's home building industry. Brickworks has aligned with the HIA to promote industry standards in our goal towards becoming Australia's best building products company.

## AUSTRALIAN BRICK & BLOCK TRAINING FOUNDATION

Brickworks has partnered with the Australian Brick & Block Training Foundation (ABBTF) who help ensure there is an adequate and competent bricklaying and block laying workforce to support the market. The scheme also works to improve the standing of bricklayers and block layers within the industry. The funding received from the bricklayer training levy goes towards these necessary training schemes.



# THINK BRICK AUSTRALIA







A man in an orange high-visibility vest is looking out a window in an industrial setting. The background is slightly blurred, showing what appears to be a control room or a factory interior with various panels and equipment. The lighting is somewhat dim, with a focus on the man's face and the window frame.

# Our people

Sustaining a strong culture driven by diverse and talented people is critical to our long-term success

# Our People

## COVID-19 Response

Brickworks has monitored the Coronavirus disease (COVID-19) since January 2020, acting with caution and following stringent health advice. Brickworks implemented a COVID-19 business continuity plan to minimise the chance of COVID-19 spreading throughout the business, and published a set of regularly updated COVID-19 Guidelines on the Brickworks website, for both customers and employees.

On 21 January 2020, the Australian Government took precautions to limit the spread from the source City of Wuhan, China. On the same day, Brickworks prohibited company travel to any part of Asia and implemented a 14-day isolation period for any staff member who had been in contact with a person that had been to Asia. On 5 March, Brickworks prohibited all domestic and international travel.

The health and well-being of employees and customers is of the utmost importance to the company. The following initiatives are in place throughout the duration of the pandemic:

- ▶ National doctor network with Occupational Physician adviser to Brickworks
- ▶ Deep cleaning between shifts
- ▶ Activity register of pandemic related absences and single point of triage
- ▶ Temperature testing all people (including customers) at all sites
- ▶ Unwell workers, contractors and customers with fevers are not permitted on-site
- ▶ Brickworks hygiene program
- ▶ Sanitation caddies and PPE provided at all work stations
- ▶ Limitation of company travel

- ▶ Providing alternatives to ensure that employees are not travelling to and from work using public transport
- ▶ Regular communications to all staff through emails, providing the latest health advice with a focus on mental health and personal wellbeing
- ▶ Leaders are empowered to have regular check in and connections with their teams, checking on wellbeing, connectiveness etc.
- ▶ IT infrastructure and an upgrade to video communications enabled a quick transition for staff to work from home
- ▶ Compliance with Government Guidelines
- ▶ Regular General Manager COVID-19 meetings
- ▶ Daily World Health Organisation (WHO) situation reports
- ▶ Information training for all Brickworks personnel through the E-Learning platform
- ▶ Training reports to ensure assigned training is completed
- ▶ Physical separation of work teams
- ▶ Individual flexibility to help staff who have caring responsibilities (especially during home schooling)

Remote working in response to COVID-19 has been effective across the business. A survey was sent out to employees following the remote working experience, with positive feedback. Business planning and scenario modelling tools have been developed to support decision making.

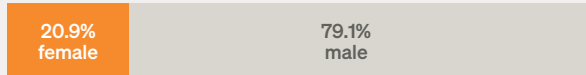
COVID-19 has changed the way that Brickworks does business; accelerating digital sales and marketing, offering contact-free sample deliveries, virtual colour consultations and the business does not currently accept cash payments.



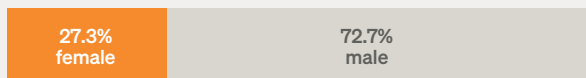
# Our workplace AUSTRALIA



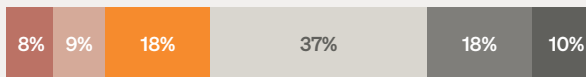
## Brickworks workplace: gender diversity overall



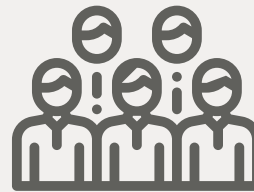
## Brickworks workplace: Senior Executive gender diversity



## Brickworks workplace: employee categories



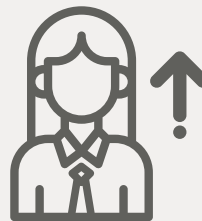
Note: Female % is a fraction of each profile type.



**1181**  
Total workforce



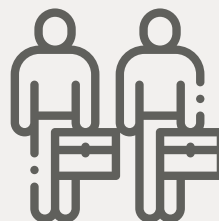
**21%**  
Female employees



**27.3%**  
Female senior executives



**43.1**  
Average age of employees



**32.3%**  
Employees aged 50 and over



**9.1**  
Average years of service

## Culture

Brickworks recognises that sustaining a strong culture driven by the diversity of employees is critical to long-term business success. During FY20, the integration continued of the 'WE ARE BRICKWORKS' Values and Behaviours to drive unity, focus and success across the organisation. Recruitment and selection criteria includes values screening to ensure people joining the business demonstrate the culture and behaviours.

## Values Awards

Brickworks holds a variety of initiatives to celebrate staff that demonstrate the company values, with many divisions holding Quarterly and Annual Value Awards. Employees success in undertaking their day-to-day roles, according to the company values, is measured through annual performance reviews.

## Employee Engagement

Positive employee engagement is driven through a strong employee value proposition, with multiple benefits offered to permanent employees; including paid parental leave, support for further education and employee share schemes. Brickworks hosts frequent social, networking and celebratory events for all employees (impacted by COVID-19 restrictions), including company update evenings.

In FY20, a pilot Values Survey was deployed to identify areas of focus and alignment to values, and levers to help improve engagement. On an ongoing basis exit interviews are conducted and reviewed to also understand areas requiring attention.

## Employees and other workers

Brickworks Australia reports details of its workplace profile annually to the Workplace Gender Equality Agency (WGEA), and the U.S. operations tracks its workplace profile.

Brickworks' commitment to developing internal talent, saw 71 internal promotions in FY20 and numerous international promotions or mobility opportunities between Australia and the U.S.

- ▶ 31% of employees awarded promotions in Australia were female.
- ▶ 26.8% of all manager promotions and 36.7% of non-manager promotions were awarded to women.
- ▶ 19.3% of employees who resigned were women, down from 21.8% in FY19.

Employee voluntary turnover (resignations and retirements) for FY20 sits at 13.5% for the previous rolling 12 months.

## DIVERSITY AND INCLUSION

**Stretch target:** 35% female senior executives. Develop and implement Diversity and Inclusion Strategy.



## Women in Manufacturing

Michelle O'Connor, Brickworks' Plant Manager at Wollert, Victoria, joined the Graduate program in January 2014. She underwent four rotations across the business over four years. Michelle took some time off to travel and returned as Plant Manager in 2019. The Wollert leadership team has strong representation of women in senior leader roles, including General Manager, Sales Manager and Plant Manager. These roles contribute strongly to Brickworks' overall leadership diversity figures, particularly women in non-traditional roles.

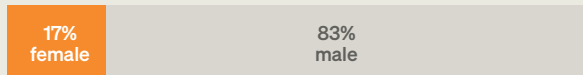




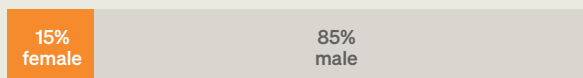
# Our workplace NORTH AMERICA



## Brickworks workplace: gender diversity overall



## Brickworks workplace: Senior Executive gender diversity



## Brickworks workplace: employee categories



Note: Female % is a fraction of each profile type.



**777**  
Total workforce



**17%**  
Female employees



**15%**  
Female senior executives



**46.5**  
Average age of employees



**46.1%**  
Employees aged 50 and over



**13.5**  
Average years of service

## Learning and Development

Brickworks aims to provide an employee experience that aids in staff growth and development. Brickworks offers formalised graduate, apprentice, mentoring and succession planning programs.

All employees and managers are encouraged to undertake two hours of learning every week, and to further their professional development by accessing a learning allowance and development programs. The online e-learning platform and open learning sessions provide accessible learning opportunities. During the COVID-19 working from home period, online learning sessions increased substantially, particularly in Sales, Leadership and Mental Health.

## Graduate Program

Brickworks' 24-month structured graduate program is available across all business divisions. Following induction, all graduates participate in business rotations, gaining technical and professional skills. In their second year, they choose a specialist rotation into a nominated area, where they are assigned business projects to work on.

They participate in 'Smart Seeds', an external project-based development program run by GHD (postponed due to COVID-19). Individuals participate from a cross section of industry to co-create solutions to complex local problems. Graduates work collaboratively in teams and pitch their proposals to industry leaders.

During the graduate program, participants have access to a support network, a career coach and structured mentoring. Brickworks facilitates networking opportunities for the graduates to aid interactions with their cohort, share experiences and elevate their profile with senior leaders.

## Mentoring Program

Launched in April 2018, 60 employees have now completed Brickworks' Mentoring program. In FY20, the focus was on developing internal mentoring capability and an inhouse program. There were no new participants to the mentoring program in FY20, therefore the FY20 target for 30 staff to join the mentoring program was not achieved. During FY21, a self-directed informal program will be launched to help grow a mentoring culture.

## Leadership Development Pathway

Brickworks' annual sales and manufacturing conference focuses on the cultural drivers of safety, through compliance and leadership workshops for leaders. Most senior leaders participated in mental health and first aid training in FY20. At this year's conference, Kamal Sarma joined as keynote speaker on the topic of mental health and wellbeing. The session helped to raise awareness and commitment to the importance of health and wellbeing leadership, personal focus and looking out for others.



## Diversity and Inclusion

Brickworks recognises that everyone is unique and different, by way of gender, ethnicity, age, sexual orientation, physical abilities, family status, and religious beliefs. Brickworks is committed to a diverse and inclusive culture where all employees are treated with dignity and respect, valued for their contributions and diverse backgrounds, experiences and perspectives. By valuing diversity, the business will:

- ▶ Deliver improved customer service, business performance and strengthen corporate reputation.
- ▶ Gain competitive advantage by understanding and reflecting customers and local communities.
- ▶ Engage employees by providing an open, fair and diverse work environment.

Brickworks is committed to eliminating all forms of unlawful discrimination, harassment, bullying and victimisation in the workplace. This commitment is supported by the company's Diversity and Equal Employment Opportunity Policies, that also guide the recruitment process. A Diversity Council was established in FY19, and is led by the Managing Director.

In FY21, a Diversity and Inclusion Strategy with long-term targets and an implementation plan will be developed and presented to the Board. The Strategy, driven by the Diversity Council, will facilitate a collaborative, supportive and respectful working environment, providing psychological safety by valuing people's differences.





## Gender Diversity

During FY20, focus was on a range of initiatives to increase the gender diversity across the leadership of the company, predominately focusing on attracting and retaining female leaders.

Female leadership of Australian operations (managers level and above) has increased from 11% in 2015 to 15.4% in 2020, and female representation in the Senior Executive team has increased from 7% in 2015 to 27.3% in 2020. The U.S. business consists of 21% females in Management and 15% in the Senior Executive team.

During FY20, the objective was to develop targets for gender diversity. This was achieved and the 2025 Sustainability Strategy, includes a stretch target to increase female representation in the Executive team to 35%. The Diversity and Inclusion Strategy and implementation plan will ensure achievement of this ambitious target and provide additional diversity targets for other areas of the workforce. Brickworks' Executive leaders are tasked with driving diversity and inclusion and have KPI's directly linked to their annual bonus payments.



2015: 7%



2020: 27%



## Austral Bricks Victoria Supports HIA Building Women Networking Lunch

Austral Bricks, Vic, was Gold Sponsor of the HIA Building Women Lunch, featuring high profile speaker Nicole Livingstone, OAM Australian former Olympic swimmer, media presenter, and sports administrator. The lunch provided an excellent networking opportunity for the Austral Bricks attendees, helping to create an environment for success for women in the building industry. Brickworks has two staff on the HIA Building Women committee.

## Collective Bargaining Agreements

During FY20 Brickworks Australian operations included 14 non-union enterprise agreements (excluding Auswest Timbers) and six union enterprise agreements. In addition, some sites have individual agreements and a number of sites are covered by the respective modern awards.

During FY20, two non-union site-based enterprise agreements were negotiated and executed, reflecting the strong working relationship between wages staff and local management teams.

A total of 61% of employees in Australia are covered by a collective bargaining agreement and 38% of those agreements are union based. Non-union agreements have reduced due to the exit of Auswest Timbers from the business.

Brickworks North America has 4 non-union plants and 7 union plants. During FY20, two union plants collective bargaining agreements were successfully negotiated and executed at Marseilles and Pittsburgh.

There are 471 labour employees in the North American plants. Of those, 73% are union based employees covered by collective bargaining agreements and 27% are not covered by any type of agreement.

Brickworks Equal Employment Opportunity Policy prevents unlawful discrimination, including a persons industrial activity, union membership and political beliefs.

## Percentage of Employees Covered by Collective Bargaining Agreements

	Australia	North America
Collective Bargaining Agreement	61%	44%
Union Based Agreement	38%	100%
Non-Union Based Agreement	62%	0%
No Agreement	39%	56%

## Compliance

A number of Fairwork conciliations have resulted in settlements, with no fines or non-monetary sanctions received in FY20.





# Health and Safety

There is no task that we undertake that is so important that we can't take the time to find a safe way to do it.

## Strategy

Brickworks is committed to minimising the risks to health and safety of its employees, contractors and the general public. Continual improvement in health and safety is a key requirement for a sustainable workplace. Brickworks' strategy is to have high compliance to legislation, focused safety leadership and a proactive generative culture that integrates safety into all business processes.



## Performance (Australia)

The boundary of this report, and the associated assurance against the International Standard on Assurance Engagements (ISAE) 3000, extends to Brickworks' Australian and U.S. operations for FY20.

Safety performance is measured utilising lead and lag performance indicators to benchmark performance, both internally and externally, to drive progressive safety outcomes. Performance targets are set within the Brickworks Workplace Health and Safety Management System, with a 2025 target of reducing injury rates year on year.

In FY20, safety performance improved, recording one lost time injury (LTI), compared to five in FY19. The lost time injury frequency rate (LTIFR) was 0.4. There were 29 medical treatment injuries, compared to 52 in FY19. The total recordable injury frequency rate (TRIFR) was 11.8, compared to 19.6 in FY19.

The FY20 TRIFR in Australia reduced by 39.8% compared to FY19, exceeding the target of 10% reduction in injury rates.

## Performance (U.S.)

During FY20, there were six lost time injuries (LTI's) recorded. The lost time injury frequency rate (LTIFR) was 4.2 and there were 29 medical treatment injuries (MTI's) with a total recordable frequency rate (TRIFR) of 24.3.

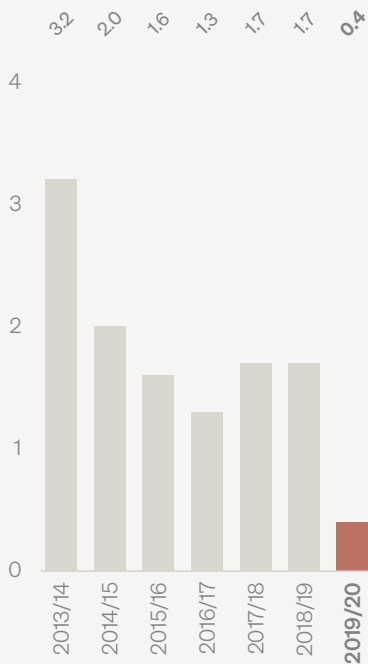
## SAFETY

Continued reduction in injury rates



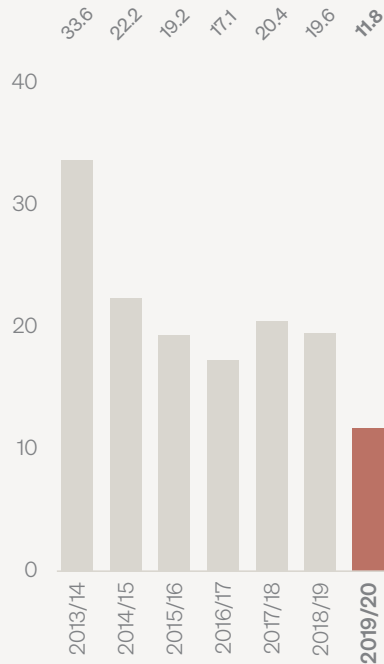
**Lost Time Injury Frequency Rate (Australia)**

(LTI/million hrs worked)



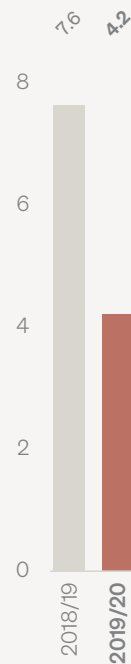
**Total Recordable Injury Frequency Rate (Australia)**

(TR/million hrs worked)



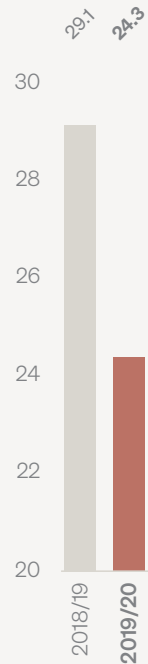
**Lost Time Injury Frequency Rate (US)**

(LTI/million hrs worked)



**Total Recordable Injury Frequency Rate (US)**

(TR/million hrs worked)



In FY20, TRIFR in the U.S. reduced by 16.6% compared to FY19, exceeding the target of 10% reduction in injury rates.

New initiatives to improve work health and safety at Building Products North America are being introduced. The focus is on providing behavioural safety leadership training and incorporating Health and Safety programs into the business.

**Key Initiatives**

Brickworks' work health and safety initiatives are underpinned by a whole of company work health and safety management system.

Employee education is a key safety initiative and a measured lead indicator at Brickworks. Online training is available 24/7 to all Brickworks employees, with courses specific to an employee's role. In FY20, 34,423 courses were completed by employees and a behavioural safety leadership program for managers and supervisors was launched to improve the safety culture within Brickworks.

**Employee Wellness**

Employees are provided advice, education and professional assistance from the employee assistance program (EAP) to improve their personal health. The use of the EAP has increased across the Group with a broader scope of services being offered; including transition assistance, nutrition, financial, wellness and manager support. These services are provided to all staff and immediate family members to ensure teams are supported in the broader aspects of their lives.



**Stand Down for Safety**

Glen-Gery hosted several "Stand Down for Safety" events across facilities to support its safety-first culture. Each team reviewed core safety practices, how to execute them in the workplace, and enjoyed a delicious lunch.



A mental health first-aid training program is underway, providing timely support. The FY20 target of 10% of Brickworks employees to undertake training and qualify in mental health first aid was achieved.

Brickworks is committed to a drug and alcohol-free workplace. With the support of employees and unions, mandatory random testing continues across all divisions and includes contractors. Drug and alcohol testing is undertaken for all new recruitment health assessments. During FY20, 59% of staff were randomly tested, exceeding target of 25%. Functional health assessments for new starters also ensure that new employees are fit for the physical requirements of their positions.

### Contractors and Visitors Safety

All visitors to Brickworks sites must follow the company's induction and sign in rules prior to entering operational zones.

Brickworks actively encourages employees and contractors to identify physical hazards and effective controls to reduce workplace risk. Any new plant installed has an independent risk assessment undertaken to validate its risk-free operation. Open hazards are continually monitored, with minimum monthly closure targets in place.

### Transport Safety

Vehicle loading is undertaken in accordance with the National Heavy Vehicle Law, State legislation and Industry based Codes of Conduct, such as the "Think Brick Code of Conduct – Load Restraint". Austral Bricks has held WA Heavy Vehicle Accreditation for more than 10 years.

During FY19, a review of National Transport systems was undertaken and an audit completed of the company's Australian fleet of heavy vehicles in response to a serious vehicle accident that occurred in December 2018. Recommendations for improvements were made to ensure that all sites are complying with the National Heavy Vehicle Laws and regulations, including:

- ▶ Chain of Responsibility (COR)
- ▶ Fatigue Management
- ▶ Speed Management
- ▶ Mass and Dimension
- ▶ Load Restraint.

Chain of Responsibility (COR) implementation is progressing well, with a range of COR documents being developed for integration with the Health and Safety System.

Following on from the FY19 initiative to conduct medical tests for all heavy vehicle drivers, to ensure they are certified fit to operate a heavy vehicle on a public road, over 90% of heavy vehicle drivers were medically assessed in FY20.









# Environment

Brickworks is committed to managing its operations in an environmentally sustainable manner, whilst considering economic and social influences.



# Energy and Carbon

Brickworks continues its commitment to reducing energy use and carbon emissions. The strategy for FY20 was to drive energy efficiency opportunities and continue the use of renewable fuels as substitutes for natural gas.

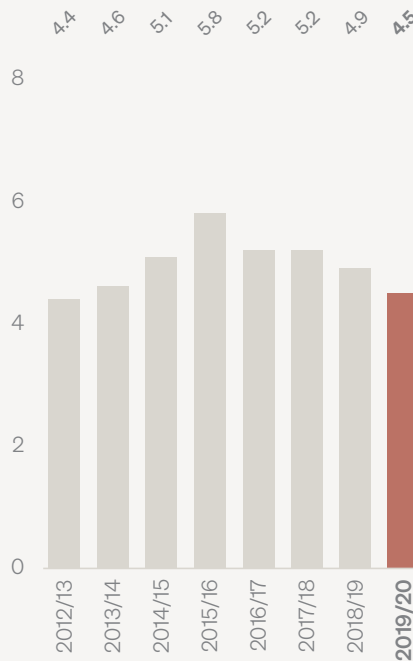
## Energy

In FY20, Brickworks Building Products Australia's (BBP) total energy usage was 4.5 PJ, an 8.85% reduction from 4.9 PJ the previous year.

Energy intensity (energy consumption vs revenue) was 6.5 TJ per million dollars of revenue across BBP Australia, a 0.23% increase, reflecting fluctuations in revenue between FY19 and FY20.

The majority (73%, 3.3 PJ) of the company's Australian energy requirements comes from natural gas, largely used at Austral Bricks' manufacturing facilities. Gas efficiency is measured at a factory level and results are reported to the Managing Director weekly.

**BBP Australia Total Energy Consumption**  
(PJ)<sup>1</sup>



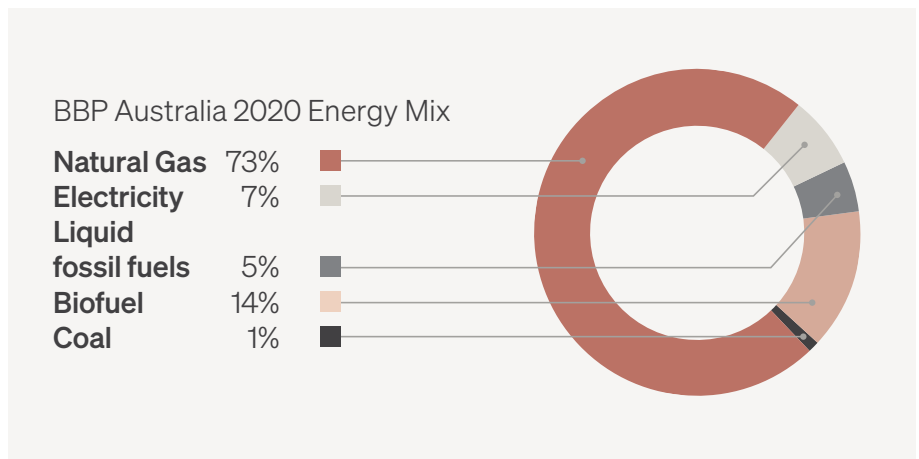
**BBP Australia Energy Intensity**  
(TJ/\$M Revenue)



<sup>1</sup> Total energy use is for Australian operations only. Energy consumption associated with recently acquired US operations will continue to be monitored and reported if material to the group.



Alternative biofuels made up 14% of Brickworks Australian energy requirements, up from 11% in FY19. Biofuel sources include landfill gas and sawdust. Austral Bricks Horsley Park Plant 21 and 23 both continue to substitute natural gas with landfill gas, sourced from neighbouring landfills. The increased percentage of biofuels is attributable to resolving previous interruptions in landfill gas supply at Plant 23 during FY19. Sawdust is the primary fuel used to fire the kiln at Austral Bricks Longford, Tasmania and is acquired from various Tasmanian sawmills.



### Brickworks Building Products – North American Natural Gas Usage

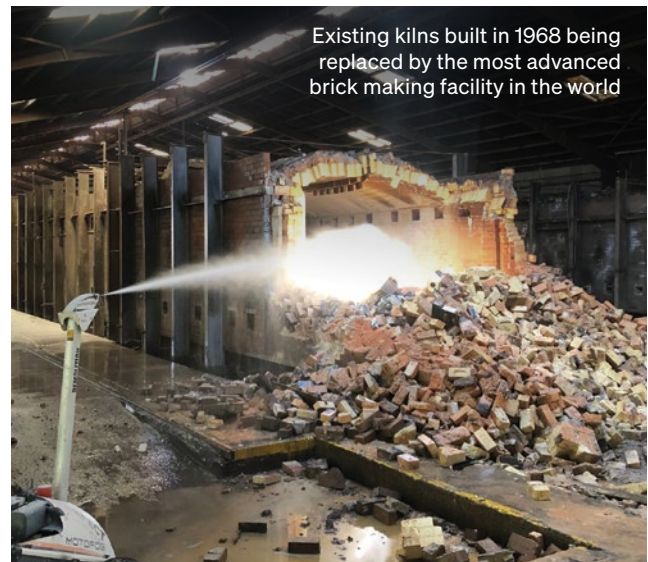
During FY20, 12 clay brick factories owned by Brickworks were in operation in the U.S., all fuelled by natural gas. Six of these factories operated for part of the year, and six operated for the full year. Natural gas consumption at Building Products North America, across 12 sites was 1.5 PJ in FY20. During FY21, the U.S. business will collect and report electricity consumption data.

### Ongoing Energy Efficiency

Energy efficiency is a focal point, managed using audits, regular maintenance and upgrades. Heat recovery systems are used in all Australian brick manufacturing facilities. During FY20, gas efficiency opportunities were reviewed for high gas-using sites and a centralised online gas efficiency KPI trend report was established. During FY21, the KPI trend reporting will trigger additional energy efficiency actions to maintain efficiency.

### Investing in Energy Efficiency Towards 2030

Since its inception, Brickworks has invested in the latest kiln, equipment and manufacturing technologies to improve productivity, product quality and energy efficiency. FY18 marked the start of a strategic 10-year reinvestment vision to drive energy efficiency across Australia. By 2030, major plant upgrades aim to improve total gas efficiency across Austral Bricks Australia by 10%, based on 2018 levels.



Existing kilns built in 1968 being replaced by the most advanced brick making facility in the world

### Efficiencies through Leading Manufacturing Horsley Park Plant 22 Upgrade

Austral Bricks Horsley Park Plant 22 received DA approval to upgrade the site into a state-of-the-art brick manufacturing facility.

At the heart of the new Plant 22 operation will be a JC Steele, 120 extruder, a world first, exclusively built for Brickworks. The new kiln will push the limits of brick production efficiency. It will include automatic gas burners and a convective heat exchange system, linked to a computer supervision system. With best in its class fuel efficiency, product quality, the new Plant 22 operation will be a technical revolution that will set a new standard for brick manufacturing.



## ENERGY EFFICIENCY

**Stretch target:**

10% increase in gas efficiency at Austral Bricks plant by 2030

Baseline FY18

During FY19, the Austral Bricks Horsley Park Plant 22 kiln was shut down, in preparation for an upgrade to a state-of-the-art brick manufacturing facility. Plant 22 received Development Approval for the upgrade in FY20, and work will commence during FY21. The graph below depicts Austral Bricks Gas efficiency trend. Total Gas (including landfill gas at Horsley Park and sawdust at Longford) efficiency has improved by 2.7% since 2018. Natural gas efficiency has improved by 5.5% since 2018.

Brickworks is planning for investments into the latest manufacturing technologies in the U.S. business. Upgrades will provide improvements in productivity, product quality and energy efficiency. Improvements in kiln gas efficiency across the U.S. will be tracked and reported annually.

### Biofuels

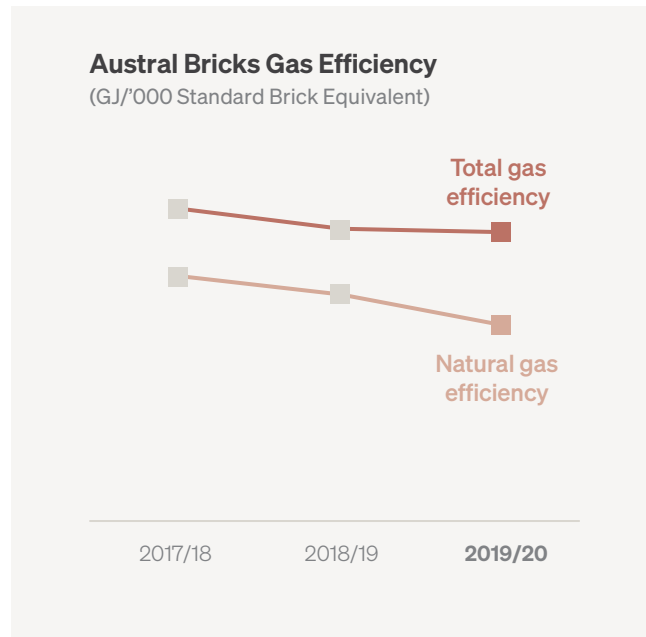
The company's Alternative Fuels Program has seen Brickworks Australia achieve 14% energy composition of biofuels in FY20. Biofuels include landfill gas utilised at Austral Bricks Horsley Park Plant 21 and Plant 23, and sawdust and Austral Bricks Longford.

### Electricity Efficiency

Brickworks drives efficiency improvements by monitoring electricity use, conducting audits and regular maintenance and upgrades. During FY20, Power Factor Correction units were reviewed at key sites, and opportunities identified across Australia.

### Vehicle and Logistics Efficiency

Brickworks continuously replaces its trucks after five years to ensure the highest standards. In FY20, five trucks were replaced with Volvo Euro V. In NSW, Volvo provided fuel efficiency training to drivers.



### Energy Security

Following large price increases for gas and electricity, Brickworks energy costs have increased significantly in Australia, representing a sizeable component of operating costs. Brickworks undertakes energy management activities as business-as-usual, including weekly senior management energy efficiency reviews of plant, installing live metering to monitor gas consumption in real time, and conducting annual reviews to identify energy management opportunities.

Brickworks proactively engages in energy policy reform through its membership with the Energy Users Association of Australia, with a strong opinion on keeping energy prices affordable for manufacturers.





## Natural Gas Strategy

On 1 January 2020, Brickworks became a wholesale gas participant in Qld, Vic, NSW and SA, supported by a five-year gas supply agreement with Santos of natural gas from the Narrabri Gas Project. Brickworks' memoranda of understanding with Santos could result in the supply of long-term gas to the East Coast operations.

Transitioning to wholesale gas required real-time gas metering at East Coast high gas-using sites during FY20. The improved sub-meters allow for high quality, granular gas data collection. The data will be used for a range of important management improvements, including gas forecasting, identification of kiln and dryer errors, efficiency monitoring and improved understanding of gas requirements for production. It is expected that this information will support efficiency improvements across sites.

Transitioning to wholesale gas arrangements means that Brickworks is now its own gas retailer for its East Coast operations, stabilising gas costs for the East Coast operations. Brickworks will continue to evaluate potential supply options for gas to the East Coast operations to ensure that business needs are met at the lowest cost.

## Carbon (Australia)

Australian greenhouse gas emissions are reported and audited for the Australian National Greenhouse and Energy Reporting Scheme (NGERS). Scope 1 and Scope 2 carbon emissions are determined using the methodology and factors outlined within NGERS. Reported carbon emissions include those associated with Building Products Australian operations only. In FY20, emissions were 205,527 tCO<sub>2</sub>-e (Scope 1) and 75,500 tCO<sub>2</sub>-e (Scope 2), Carbon emissions continue a downward trend with a 12.07% decrease on the previous year.

Carbon intensity is 3.31% lower than the previous year, attributable to a full year of landfill gas supply to Plant 23 in FY19 and the closure of Horsley Park Plant 22 in preparation for the Plant 22 upgrade to state-of-the-art brickmaking facility.

Carbon emissions have followed a general downward trend, with a 35.8% decrease compared to the base year 2005/06 (Scope 1 & 2). The decrease can be attributed to efficiencies gained from alternate fuels, manufacturing consolidation, equipment upgrades and operational improvements. Brickworks will explore further carbon management strategies, greenhouse gas metrics and setting targets during FY21 as part of the Taskforce on Climate-related Financial Disclosures (TCFD) review.

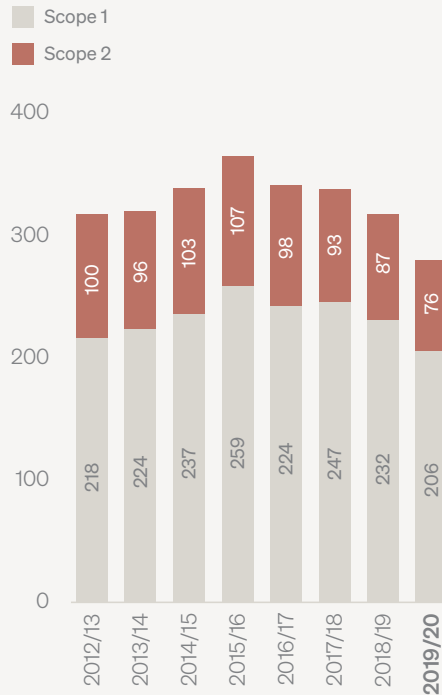
## National Greenhouse and Energy Reporting Data

Brickworks' greenhouse gas emissions and energy data is publicly available on the Clean Energy Regulators website: [www.cleanenergyregulator.com.au](http://www.cleanenergyregulator.com.au)

A copy of the Limited Assurance report for energy and carbon data is contained within the Appendix.

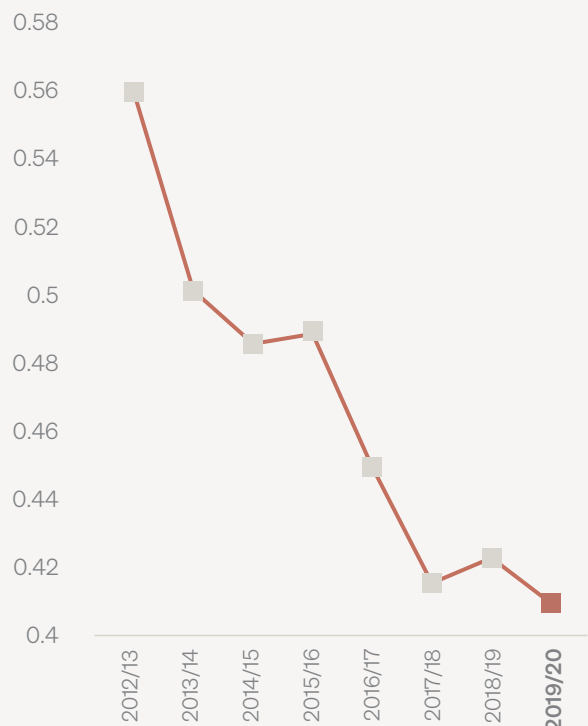
## BBP Australia Total Carbon Emissions

(Carbon Emissions (ktCO<sub>2</sub>-e))



## Carbon Intensity

(ktCO<sub>2</sub>-e / \$million revenue)



## Carbon (North America)

Alongside Brickworks goal to report carbon informed by the GRI Standards, a carbon emissions inventory will be built by FY22 to enable a full estimate of emissions. Although Brickworks' North American operations are not required to report carbon emissions to the U.S. regulator, this information will supplement ongoing carbon reporting for Australian operations.

Natural gas is the predominant energy and carbon emissions source for the U.S. operations. Carbon emissions from natural gas combustion were 80 ktCO<sub>2</sub>-e during FY20.

## Renewable Energy and Biogas

Brickworks has long-since used biogas and sawdust for renewable energy generation. The Alternative Fuels Program saw Brickworks Australia achieve 14% energy use composition of biofuels in FY20.

Austral Bricks Horsley Park Plant 21 has used landfill gas since 2013, and Plant 23 since 2014. The combustion of landfill gas emits 10 times less carbon than natural gas. Horsley Park used 223,597 GJ of landfill gas throughout the year, offsetting approximately 10,442 tonnes of carbon, equivalent to the energy used in 1,200 homes for one year.

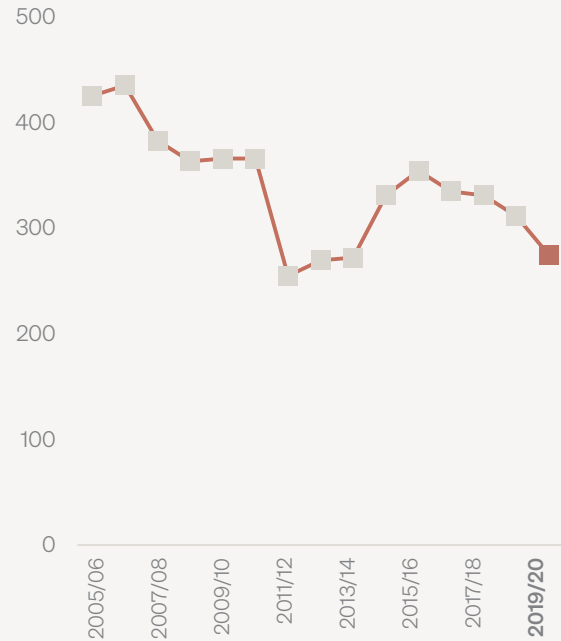
Sawdust is the main fuel source at Austral Bricks Longford. The site used 12,871 tonnes or 133,864 GJ of sawdust throughout the year. The combustion of sawdust emits 40 times less carbon than natural gas, offsetting 6,693 tonnes of carbon, equivalent to removing approximately 1,000 cars from the road each year.

Hydrogen is expected to play a key role in the decarbonisation of sectors such as the replacement of natural gas. Renewable hydrogen, produced through electrolysis from water using renewable electricity can provide industry with emission-free energy. As a large gas user, this fuel may help Brickworks to meet its greenhouse gas emissions reduction targets. However, trials and studies are required to understand the quality, cost and environmental impacts of hydrogen blend fuel on brick manufacturing.

Brickworks is investing in the transition to the hydrogen fuel economy, through desktop and lab-scale trials, in partnership with Murdoch University. The purpose of this investment is to understand the use of hydrogen in the manufacturing of clay bricks.

## BBP Australia carbon emissions since 2005

(ktCO<sub>2</sub>-e)



## Understanding Carbon Risks & Opportunities

Brickworks recognises the tangible business benefits of disclosure of, and action on, climate change-related risks. Greenhouse gas emissions from Brickworks' Australian operations are on a downward trend. In FY20, our emissions decreased 35.8%, compared to the base year 2005/06, reflecting a step change in manufacturing efficiencies. Brickworks is aligning its greenhouse gas reduction strategy with the recognised standard of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, including risk management disclosures, metrics and targets. Through this process, long term carbon management strategies are being explored. These future goals are underpinned by the overarching target to implement energy efficiency opportunities and explore the use of hydrogen fuel in kilns.

The TCFD recommendations provide a disclosure framework supported by investors and regulators. During FY20, a plan was finalised to meet the recommendations on the TCFD, which was approved by the Brickworks Board and Audit and Risk Committee.



## CARBON

Invest in the transition to the hydrogen fuel economy



## Brickworks approach to TCFD Recommendations

	Completed	2020/2021	2021/2022
GOVERNANCE	<ul style="list-style-type: none"> <li>▶ Establish TCFD Working Group.</li> <li>▶ Formalise Board responsibilities and processes regarding climate risk</li> <li>▶ Audit and Risk Committee (ARC) oversight of climate-related risks and opportunities</li> </ul>	<ul style="list-style-type: none"> <li>▶ ARC review of material climate risk and opportunities</li> <li>▶ Formalise management responsibilities and processes regarding climate risk</li> </ul>	<ul style="list-style-type: none"> <li>▶ ARC annual review of material climate risk and opportunities</li> </ul>
STRATEGY		<ul style="list-style-type: none"> <li>▶ Undertake materiality assessment</li> <li>▶ Identify climate-related risks and develop scenarios and appropriate scenario assumptions</li> <li>▶ Undertake scenario analysis and identify potential impacts and opportunities</li> <li>▶ Formalise integration of climate-related risk assessment into strategy, financial and business planning</li> </ul>	<ul style="list-style-type: none"> <li>▶ Report outcomes of scenario analysis</li> <li>▶ Describe strategies to improve the organisation's resilience to climate-related scenarios</li> <li>▶ Integrate scenario analysis and climate risk management into strategy, financial and business planning</li> </ul>
RISK MANAGEMENT	<ul style="list-style-type: none"> <li>▶ Incorporate climate risk into risk assessments processes</li> </ul>	<ul style="list-style-type: none"> <li>▶ Undertake climate-related risk assessments</li> </ul>	
METRICS AND TARGETS	<ul style="list-style-type: none"> <li>▶ Disclose Australian energy and carbon performance and trends</li> <li>▶ Initiate development of US energy and carbon measurement and reporting</li> <li>▶ Develop energy efficiency target</li> </ul>	<ul style="list-style-type: none"> <li>▶ Review existing metrics, measurement and monitoring methods. Develop additional metrics and methods if required</li> <li>▶ Develop additional targets</li> <li>▶ Implement energy efficiency target (ongoing)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Disclose performance against relevant metrics and targets, and the related risks</li> <li>▶ Provide historic trends and performance against metrics based on available production data</li> <li>▶ Disclose performance against relevant metrics and targets, and the related risks</li> <li>▶ Implement additional target</li> <li>▶ Establish target review cycle</li> </ul>

# Resources

## Waste and Water

### Resource Use and Circular Economy

Brickworks is progressing towards a 'circular economy' by 'closing the loop', thus minimising production waste and re-using and recovering resources in the value chain.

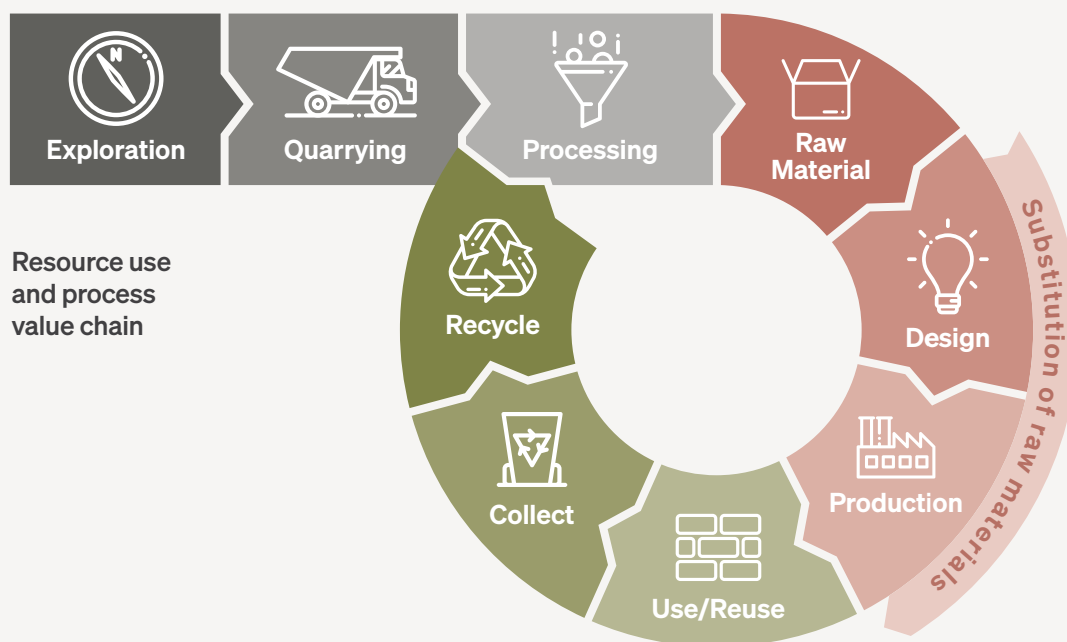
### Resource Use and Process Value Chain

Efficiency and circular economy improvements are made at each step of the resource use and process value chain.

### Exploration and Quarrying

Brickworks is minimising its impact on the environment by maximising the lifespan of quarries and the value of extracted material.

All material extracted from Brickworks quarries is used, such as by-product gravel, which is used for road construction. Overburden and topsoil layers are retained on-site and used for rehabilitation of the site once the resource is fully exhausted.





## Processing and Raw Materials

Processing of raw materials follows strict quality standards to ensure quality and reduce waste. Some of Brickworks' masonry products substitute cement and aggregate with fly ash, bottom ash, glass and crushed concrete, to replace raw materials. The raw clay requirement is reduced in clay bricks by using waste-clay sourced from infrastructure projects.

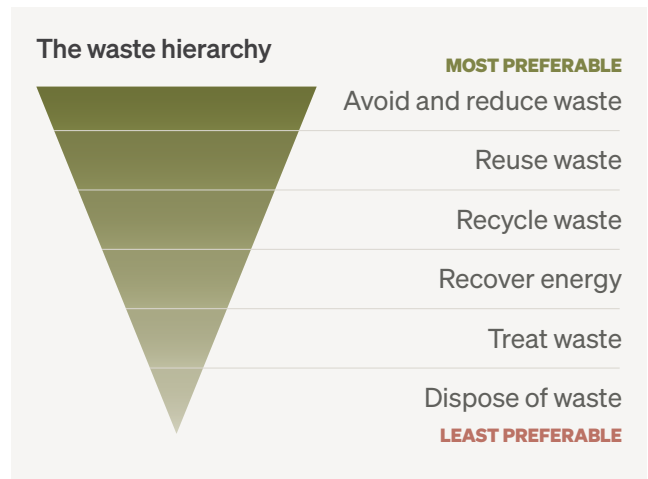
## Design and Production

A key driver of resource efficiency is process optimisation and product innovation. Brickworks invests in the latest technologies and operates in-line with ISO9001 Quality Management Systems, to ensure efficient, high quality building products through smart core design. Brickworks is improving its clay bricks through research into increasing the core percentage volume to make clay bricks lighter weight, while retaining product strength and durability. All damaged or rejected clay products are returned into the raw material mix for reprocessing across Australian and U.S. operations.

Brickworks' brick and concrete products are manufactured to provide resilience. They are durable, reusable, recyclable, inert, low maintenance, fire-proof, contain thermal mass for energy efficient design, excellent acoustic properties and no indoor air emissions (VOCs); and clay bricks hold a 100-year guarantee.

## Managing Waste

Brickworks is committed to minimising the amount of waste sent to landfill from its manufacturing facilities. Opportunities for the reuse of waste are a key focus area for the brick and concrete businesses to decrease material costs, increase resource efficiency and drive the circular economy. We are committed to identifying further opportunities to reduce, reuse and recycle waste. Brickworks follows the objectives of the waste hierarchy, setting the priority on resource efficiency.



## Source Separating Waste

To improve recycling, Austral Bricks Cardup installed a bunker system to ensure production waste is sorted by colour. Improved colour sorting of production waste supports recycling into new production runs. The new bunker system will benefit production waste recycling during the FY21 reopening.

## Avoidance and Reduction

Brickworks is driving initiatives to avoid the use of resources through:

- ▶ Sustainable product design by reducing raw material requirements
- ▶ Material replacement/substitution with otherwise landfilled materials such as fly and bottom ash and crushed concrete

A National Quality Initiative has been implemented across all divisions, examining production waste data tracked across the last 3 years. Production waste consists of waste, reparations and downgrades. During FY20, the Technical Properties of Clay Library was developed and research and development was conducted into the technical properties of input resources such as clay, shale, sand and ash. The Library will support the optimisation of material usage and product innovation.

During FY20, implementation of waste reduction plans at Australian manufacturing facilities continued. Improved monitoring and management has led to continued improvement, achieving a reduction in waste, reparations and downgrades by an estimated total of \$2.8 million over FY20.

## Re-using Waste

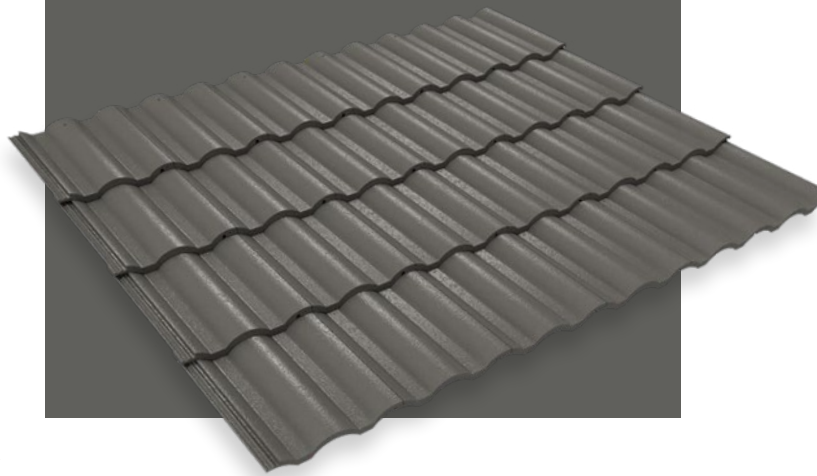
Brickworks has established systems for the re-use, recycling and reprocessing of waste, including:

- ▶ Re-use/reprocessing 100% of production waste in clay brick manufacturing
- ▶ Re-use of concrete waste, where possible
- ▶ Recycling of waste types on site through waste separation

Bricks are recyclable, allowing 100% of damaged or rejected clay products to be returned to the raw material mix. Production waste reduction continues as a focus to save on materials, energy, water and additives.

## Recycling Roof Tiles at Bristle Dandenong

The Bristle Roofing team has developed a procedure to return production waste into the raw material mix, by crushing and recycling production waste. This initiative reduces raw material requirements necessary to manufacture concrete roof tiles, diverting waste from landfill. Dandenong recycled 1,363 tonnes of production waste over FY20.



## CIRCULAR ECONOMY

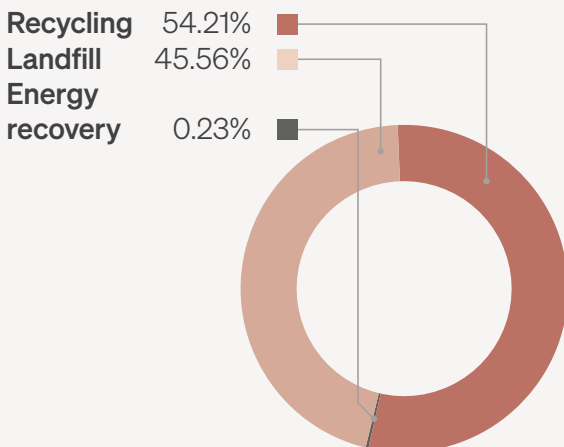
Year on year increase in recycled material use



## Waste to Landfill – Representative Study Findings

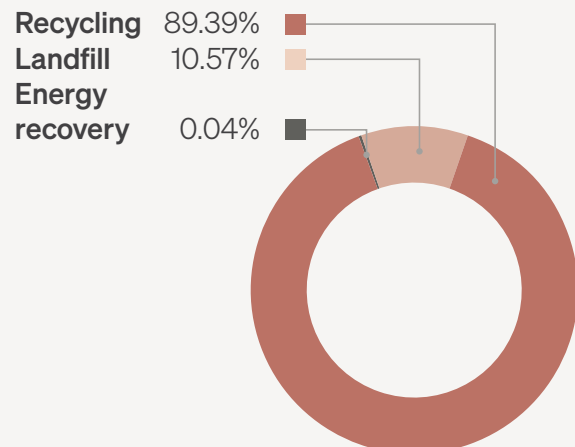
### Waste to landfill by volume

YTD volume



### Waste to landfill by weight

YTD tonnes





## Recycling Waste

During FY20, Brickworks has optimised recycling procedures, such as source separation of waste at many factories and developing recycling plans. Recycling opportunities provide significant benefits across Brickworks sites. A representative waste management study undertaken in FY20 indicates 89% of waste by weight is diverted from landfill and 54% by volume.

During FY20, 94,718t of recycled clay material (Virgin Excavated Natural Materials VENM) was recycled into bricks. Natural gas is substituted with sawdust (which would have otherwise gone to landfill) at Austral Bricks Longford as the main fuel for the kiln.

Measurement of recycled material use requires careful quantification of received materials against standardised definitions and procedures. During FY21, measurement procedures will be tested to ensure they are robust and transparent.

Brickworks is continually investigating recycling opportunities to achieve the target of increasing year on year re-use volumes. Progress against this target will be reported once measurement procedures are reviewed during FY21.

## Disposal of Waste

Approximately 10.5% of Brickworks waste (by weight) is sent to landfill. Initiatives that contribute to waste management performance include Brickworks management system procedure (MSP), an e-learning module on the correct disposal of waste, a monthly environmental inspection and checklist undertaken at all operational sites to check on the correct disposal of waste.

The packaging of hazardous materials is returned to the supplier in most cases. If not accepted by the supplier, it is disposed of in accordance with the MSP and the jurisdictions regulations.





## Stormwater Management

Across WA and NSW, Brickworks' quarry teams benefit from innovations in mobile water pump and discharge equipment. This assists in utilising captured rainwater for dust suppression and irrigation.

## Water

Water is a limited and often restricted resource across all states of Australia. It is critical to Brickworks' production process, with quarrying and manufacturing facilities using runoff or bore water as the major water supply. Recycled water including runoff is captured and reused on-site, for activities such as dust suppression. If there is a need to discharge captured water, activities such as water monitoring, analysis and treatment is undertaken to ensure it meets discharge quality requirements. Mains (potable) water is used when ponds are dry or inaccessible, ground water is unavailable, or to maintain acceptable product quality.

During FY20, 128.8 ML of potable mains water was recorded at sites in Australia and water management plans identified further opportunities to reduce mains water. During FY21, ongoing water efficiency initiatives to reduce potable water use will be measured against this baseline.

## Rainwater Tanks in New Developments

The Goodman 'Oakdale East' development will be the location of a new Austral Masonry plant, six ancillary offices, and five warehouses. Water management has been considered as part of the design, with rainwater tanks proposed for rainwater harvesting and re-use for landscape irrigation and flushing of toilets.

Austral Bricks Horsley Park Plant 22 upgrade will incorporate the capture of rainwater for reuse within the manufacturing facility.

## Water Recycling During 2019/20 Summer

During the summer of 2019, bushfire and drought conditions existed across many Australian states. Austral Bricks utilised captured and recycled rainwater to reduce the load on potable water.

## Investments in Rainwater Capture

Over the past couple of years, the Horsley Park and Rochedale quarry sites have invested in capacity expansion of rainwater capture basins. Rainwater capture is used for purposes such as dust suppression and garden maintenance.

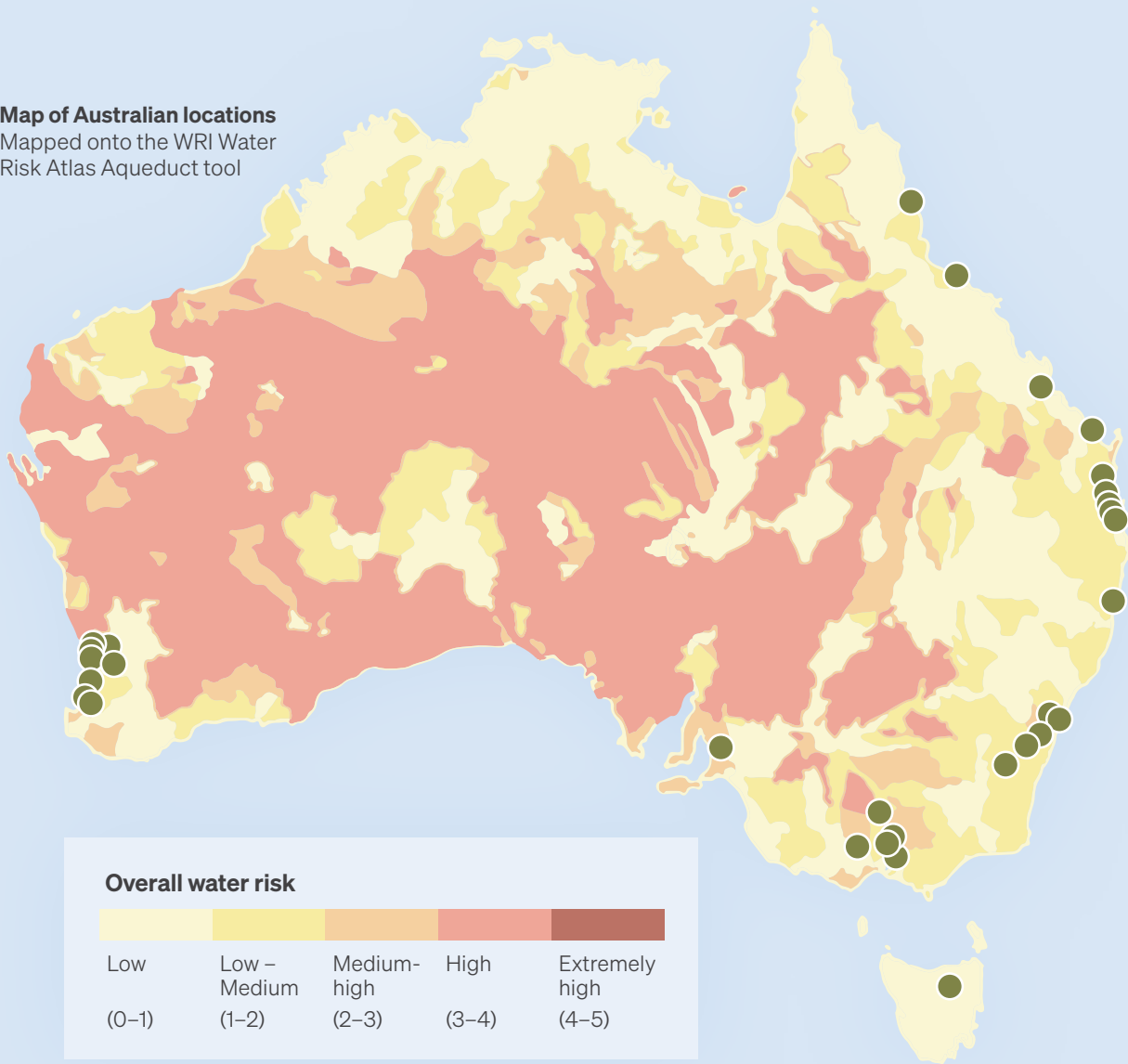
## Water Reuse

Brickworks Administration at Horsley Park uses recycled water to irrigate the gardens. The water is sourced from processed water from Plant 21 and rainwater. The Horsley Park Quarry uses collected rainwater for dust suppression.





**Map of Australian locations**  
Mapped onto the WRI Water Risk Atlas Aqueduct tool



## Water Risk Management

Water resource management is most important in water stressed areas. The World Resources Institute (WRI) ranks water stress, drought risk and riverine flood risk in the Aqueduct Water Risk Atlas. During FY20, Australian locations were mapped onto the WRI Aqueduct Water Risk Atlas.

Some Brickworks sites are located in medium-high water risk areas, with most sites located in low-medium or low risk areas. Initiatives in water stressed areas will receive particular focus. During FY21, U.S. locations will be mapped onto the WRI Aqueduct Water Risk Atlas.



## Solar Pump Trial

Austral Bricks Victoria installed an innovative solar pump which can move 15ML of water per year. The pump was initially installed for improved water management, however the co-benefits of the stand-alone system meant the site was able to install an electric pump with zero fuel costs, no carbon emissions and no requirement to install energy infrastructure.



## WATER

Reduced potable water use  
in water stressed areas

# Community Engagement

Maintaining positive relationships with stakeholders is paramount to business success. Brickworks is embedded in local communities where the business operates, with many employees living in the local area. With a reliance on local goods, services, markets and natural resources, developing mutually beneficial relationships helps business and communities.

Brickworks has strong attendance at community forums, such as consultation for development applications and community group meetings. Company representatives maintain strong relationships with legislative and regulatory authorities and are involved with industry groups to promote issues, such as sustainable building products.

In FY19, community engagement plans were developed for relevant sites. The plans have improved the company's socio-political knowledge of the area, ability to identify community concerns and expectations, knowing when to engage and methods of engagement. During FY20, the plans were implemented across these sites, with engagement activities including stakeholder meetings, site visits, investigating and resolving complaints, as well as donations and other forms of support for community members and projects. Community engagement plans are now expanding for use across sites around Australia. In FY21, the target is to undertake 100 activities that relate to maintaining community relationships.



## Glen-Gery Supporting Local Community Fire Department

Glen-Gery's Sergeant Bluff site worked on an opportunity to support the city fire department by providing facilities to conduct training exercises. As part of a site upgrade plan for Sergeant Bluff, demolition of a building was required. Arrangements were made to allow the local community fire department to undertake a live fire training activity on the building prior to demolition. The fire department was grateful for the opportunity to sharpen their skills and appreciated Glen-Gery's support.



### ENGAGEMENT

100 Community activities each year



## Community Group

# Engagement at Cardup

Austral Bricks WA operates a brick factory and clay pit in Cardup, an area with strong brickmaking history since the 1890's. In 2013, the team established the Cardup Stakeholder Consultative Group (SCG) to collaborate with community. Chaired by an independent party, the group operates in accordance with an approved Terms of Reference and consists of representatives from the local community, Ratepayers Associations and the Shire of Serpentine-Jarrahdale.

Though the initial scope of the SCG focused on the Shale Road clay pit, this has since expanded to include discussions around the Cardup Brickworks.

Austral Bricks applied for a Development Approval (DA) for a factory upgrade, set to bring many environmental benefits, including a new and highly efficient natural gas fired kiln and baghouse scrubber.

Austral Bricks continues proactive communication with nearby residents, including holding multiple meetings with the SCG, facilitating robust discussions and adopting a transparent approach to engagement.



# Auswest Timbers

Brickworks recognises the importance of protecting Australia's native forests and the importance of sustainable forest management.

In October 2019, Auswest Timbers was sold to the Parkside Group, experts in Australian hardwood timber processing with 51 years' experience in the timber milling business.

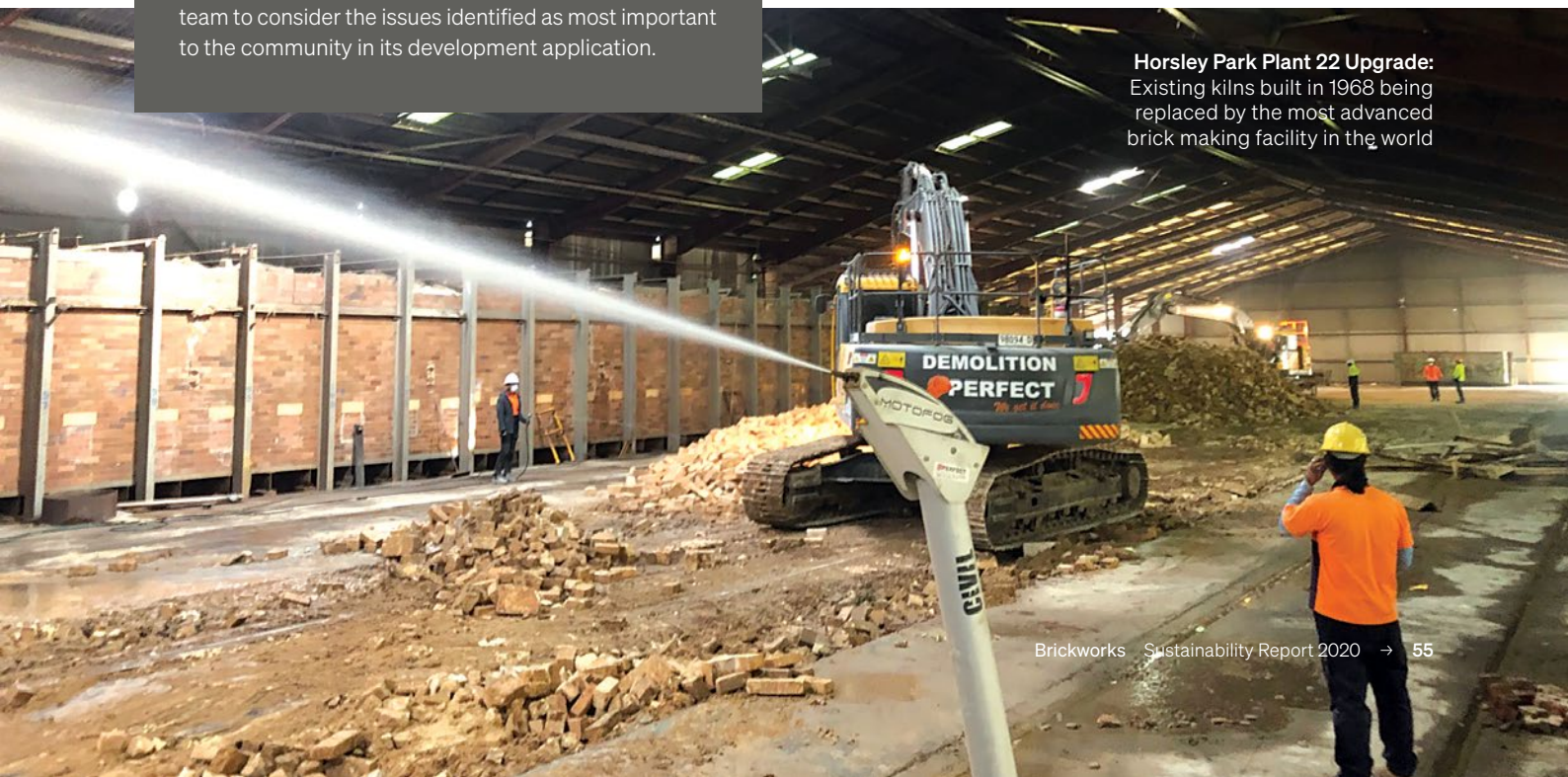
During the commissioning of Greenbushes sawmill, there were some delays which led to complications and resulted in some degraded hardwood sawlogs. The degraded logs were sold to be processed into high-grade activated carbon, rather than its intended use as a timber building product. High-grade activated carbon is used in the manufacturing process to produce silicon, which in turn is used in solar panels, silicon chips for electronic products, optical glass, aluminium alloy and polymers.

Auswest Timbers had systems in place to ensure that the hardwood products processed were derived from sustainable and certified sources.

## Ongoing Investment in Plant Upgrades

Austral Bricks NSW proposes to undertake major investments in new plants at Horsley Park Plant 22 and New Berrima. Several engagement methods were utilised to ensure stakeholder groups were given an opportunity to provide meaningful feedback for the project.

The community feedback received has enabled the team to consider the issues identified as most important to the community in its development application.



**Horsley Park Plant 22 Upgrade:** Existing kilns built in 1968 being replaced by the most advanced brick making facility in the world

# Rehabilitation

As a large-scale landholder, Brickworks’ approach to rehabilitation is to establish, operate and rehabilitate Brickworks sites in a manner that promotes optimum environmental and social outcomes.

At the end of their productive lives, Brickworks rehabilitates its quarries for use by future generations. Final land-use varies from pasture, landfill and bush, to built-up areas. For sites that are filled, the sites can be capped with topsoil and planted with flora native to the area. Frequently today, these quarries are clean filled in highly compacted layers (to eliminate settlement) and can be reused as residential and industrial estates and beautiful public spaces.

Rehabilitation and land-use planning is an essential aspect of managing Brickworks quarries, with a focus on meeting legislative requirements and community expectations.

Within the Environmental Management System, progress of rehabilitation projects is monitored across the Group, to ensure the protection and enhancement of biodiversity. Brickworks has delivered major rehabilitation projects.

## REHABILITATION

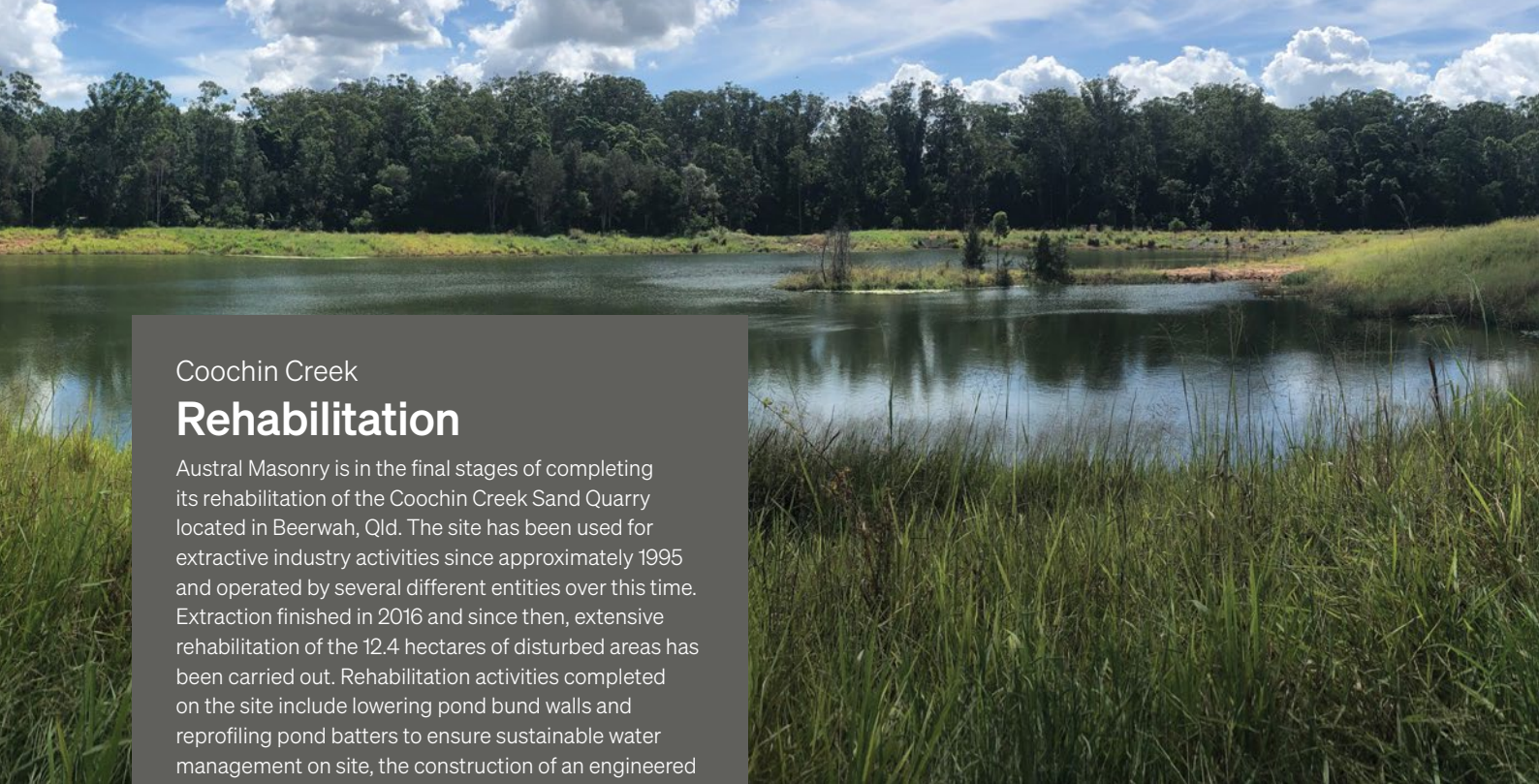
Drive progressive rehabilitation



### Major Rehabilitation (Site Closure) History Highlights – Australia

2006 Eastwood, NSW	2007 Eastern Creek, NSW	2009 Scoresby, Vic	2010 Donnington South, WA	2018 Coolup, WA	2020 Oakdale East Industrial Estate, NSW
1.5 million m <sup>3</sup> of clean fill delivered to the site and compacted to geotechnical requirements to allow residential development.	The three-year rehabilitation campaign of Eastern Creek NSW utilised 3 million m <sup>3</sup> of clean fill which was geotechnically placed to allow industrial development.	The Austral Bricks Scoresby rehabilitation project won the Victorian Department of Primary Industries ‘Strzelecki Award’ for overall excellence and innovation in sustainable development.	In collaboration with Landcare, the Donnington South clay pit was landscaped and returned to native bushland with the sites stockpile of topsoil and approximately 20,000 trees.	Site closure rehabilitation, and reshaping stormwater dams. The site was returned to pasture with approximately 15,000 trees planted around final dam infrastructure.	Austral Bricks rehabilitated a section of Mining Lease ML7, previously used as a stockpile area. The area required remediation and to remove historic waste on the site. Approximately 2.2 million tonnes of material was moved to create Industrial land.





## Coochin Creek

# Rehabilitation

Austral Masonry is in the final stages of completing its rehabilitation of the Coochin Creek Sand Quarry located in Beerwah, Qld. The site has been used for extractive industry activities since approximately 1995 and operated by several different entities over this time. Extraction finished in 2016 and since then, extensive rehabilitation of the 12.4 hectares of disturbed areas has been carried out. Rehabilitation activities completed on the site include lowering pond bund walls and reprofiling pond batters to ensure sustainable water management on site, the construction of an engineered inlet to control the ingress of flood waters onto the site and seeding and revegetating exposed areas.

## Progressive Rehabilitation

Progressive rehabilitation is a key strategy for minimising environmental risk, end-of-life closure costs and achieving increased efficiency through reduction of double handling of rehabilitation materials.

Progressive rehabilitation of 40,840m<sup>2</sup> was completed at sites across Australia, and an additional 41,500m<sup>2</sup> was completed during FY20 for the closure of quarries. Progressive rehabilitation will be driven across the business by adding available land reviews to annual rehabilitation planning.



## Ford Road

# Hydroseeding Success

Following a successful hydroseeding trial in 2018, with good seedling strike rate and high diversity, Austral Bricks Qld continues to progressively rehabilitate Ford Road Quarry with a hydroseed mix of mulch, soil binder, cover crop and native seed mix. The seed mix comprises of koala preferred Eucalyptus and other native species, providing a mix of top, mid and lower story plants. During FY20, 19,800m<sup>2</sup> of hydroseed mix was laid over an area of the quarry, which has been exhausted of clay.



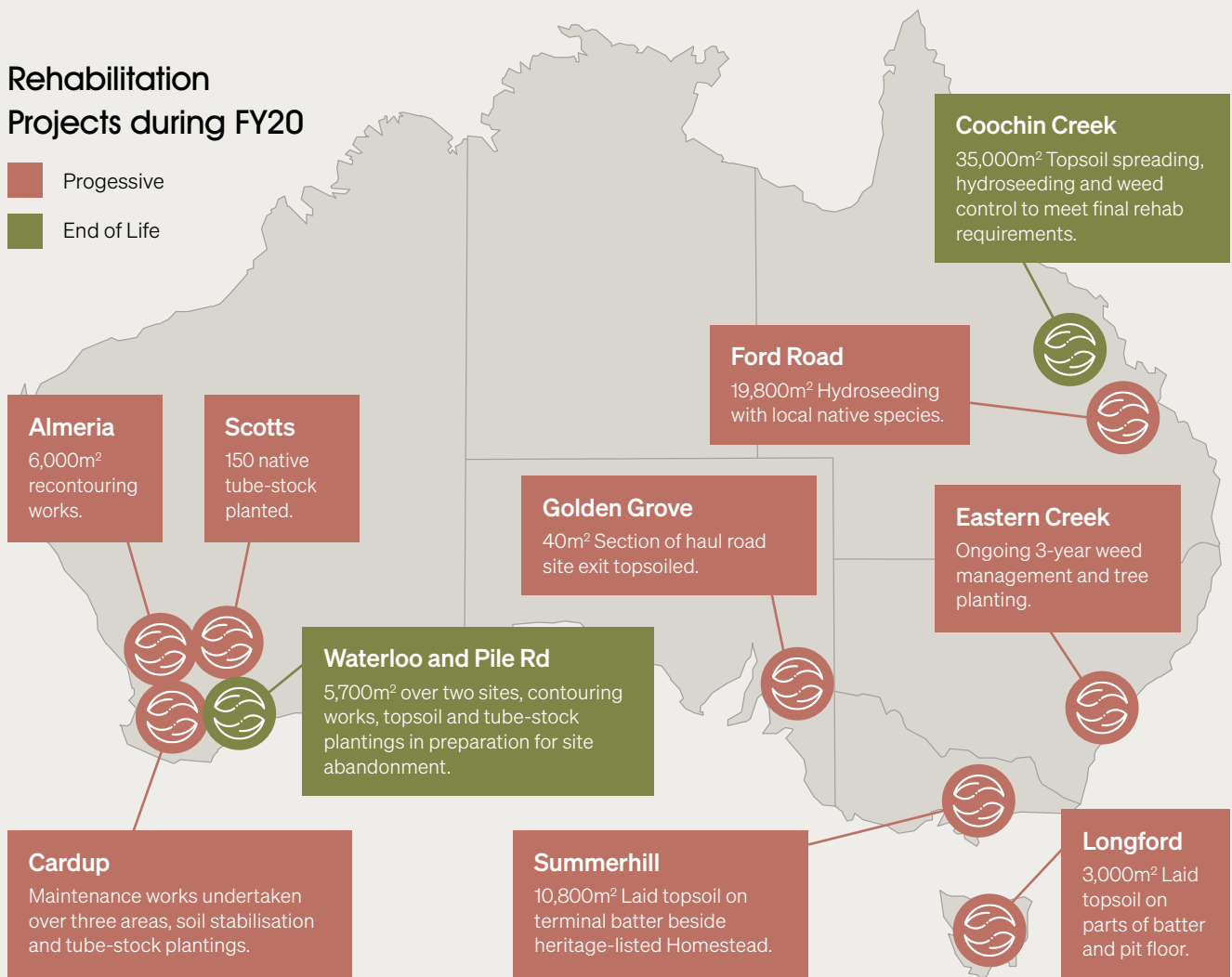
# Native Tree Planting

Over 1500 native tube stock were planted across five WA quarries in September 2019, during final rehabilitation works. The planting focused on infill planting ensuring all previous areas contained healthy thriving plants. This planting provided rehabilitation at the completion of extractive industry activities.



## Rehabilitation Projects during FY20

- Progressive
- End of Life





# Environmental

## Performance

### Environmental Management System

Brickworks Building Products Australia monitors its environmental performance and compliance in accordance with its Environmental Management System (EMS), aligned with ISO14001:2004, utilised across the company.

During FY20, an external audit of the EMS was completed by PwC to review the implementation processes and controls of environmental-related components of the Safety, Health and Environmental Management System (SHEMS) across Brickworks Australia sites. PwC identified notable strengths and one outstanding low risk audit finding, to be addressed during FY21.

Manufacturing and raw material sites across Australia are audited regularly by internal and external auditors. Any issues are reported as either a hazard or an incident and rectified in a timely manner. During FY20, four external audits were postponed due to COVID-19 travel restrictions and have been added to the FY21 audit schedule. During FY20, eighteen external site audits were undertaken out of twenty-two that were scheduled.

Hazard and incident reporting are undertaken in Australia in accordance with the Risk Management Framework, involving assessment of the likelihood of an event occurring, the potential impact of each event and the controls and processes in place to continually mitigate each risk. This information is reported to Divisional and Group management. Issues of material concern are reported to the Board monthly.

During the last two years, a range of improvements were made to core components of the EMS, including the implementation of site level environmental compliance plans and environmental awareness training across Australian operational sites. Continuous improvement to the system and training will continue during FY21.

During FY20, online software was developed to support the EMS in Australia and assist in maintaining and auditing compliance. Manufacturing and quarry sites will upload licence conditions, including monitoring and reporting requirements to the module during FY21, once final testing and trialling of the software has been completed.

Brickworks Building Products U.S. monitors its environmental performance and compliance to meet the requirements of each of their authorising entity. A key focus for FY21 is the development and integration of an EMS aligned with the ISO14001 Environmental Management System framework across U.S. operations.

### Compliance<sup>1</sup>

Brickworks treats all non-compliance instances with the upmost importance. Details of incidents, notices and complaints are raised at the weekly General Manager's meeting, which the Managing Director attends. Each non-compliance incident is investigated and tracked to ensure corrective actions are undertaken within deadlines.

Reporting incidents raises awareness and identifies corrective and preventative actions. Incident reporting procedures and training are a central part of the EMS. Reportable incidents were 26 during FY20, compared to 19 in FY19. Brickworks is committed to minimising its impact on the environment, such as through Air and Water Environmental Programs. During FY20, seven reportable incidents related to stack emissions exceedances at licence limits at Austral Bricks Horsley Park. Significant investments are allocated to implement the Horsley Park Scrubber Installation Program to install emissions abatement equipment.

<sup>1</sup> Reported environmental fines and penalties include those received and paid during the reporting year (ending 31 July). Penalties received regarding property and penalty notices are excluded. All figures reported in Australian dollars.

The total number of incidents recorded in FY20 was 47, compared to 51 in FY19. During FY20, zero penalty notices and prosecutions were received. The FY21 target remains at zero environmental fines and continued risk reduction.

## Air Environmental Program

Brickworks is committed to minimising its impact on the environment and compliance with environmental law and community standards as they evolve.

All brick factories hold licences issued by the state environmental regulator, and are required to meet emissions limits that have been assessed by the regulator as acceptable to the environment and human health. To monitor compliance with emissions limits, qualified air monitoring consultants are engaged to undertake air emissions testing for parameters specified in licences. Should an exceedance of the emissions limits occur, the matter is reported in line with licence or regulatory requirements. An investigation and corrective actions are undertaken in accordance with Brickworks' EMS.

Brickworks other building products divisions generally do not have specific emissions limits within licences, however, emissions are limited to the provisions of state and local laws.

Investments are made into upgrading kilns, plant, control systems and emission control technologies. Limestone scrubbers are committed for installation at the Austral Bricks Horsley Park brick manufacturing facilities, through a staged rollout program, commencing in FY20 with a scrubber installed at Plant 23.



## EMISSION CONTROL

Over \$2 million investment  
in emission abatement

The Air Environmental Program will continue identifying investments in leading environmental initiatives. During FY19-FY20, over \$2 million was invested in emissions abatement scrubber equipment installations at Horsley Park Plant 23. Having achieved significant specific environmental investments in recent years, further contribution to the Air Environmental Program requires complex connections between capital expenditure, technical projects and stakeholder collaboration. By 2025, over \$2 million additional investment in emissions abatement is scheduled.

Most of Brickworks' large Australian facilities trigger reporting requirements under the National Pollutant Inventory (NPI). Brickworks estimates its emissions using a calculation tool that incorporates monitoring results and NPI's emissions estimation technique manuals. The latest emissions data can be downloaded by searching "Austral Brick" at [www.npi.gov.au/npi-data/latest-data](http://www.npi.gov.au/npi-data/latest-data).

During FY20, all plants in the U.S. commenced data acquisition for reporting to the Toxics Release Inventory (TRI). The TRI is a resource for learning about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities within the U.S. TRI data supports informed decision-making by communities, government agencies, companies, and others.

## Water Environmental Program

The Water Environmental Program identifies investments in leading environmental initiatives across Australia. Brickworks closely monitors its water use and discharge, investing in water capture systems to ensure the quality of water discharge through appropriate treatment systems.

The company complies with stringent Australian environmental regulations to ensure that activities, in particular raw material quarrying, do not endanger local bodies of surface water and groundwater. Brickworks ensures the quality of discharged process water by using settling ponds and pH neutralisation systems, where required.

Building Products North America will continue to leverage the development and integration of an EMS, and develop environmental programs where required.





## Environmental Awards

In FY20, Brickworks held its third year of Awards for Environmental Excellence, celebrating and promoting environmental excellence and innovation with employees. The three categories of awards included Environmental Champion, Environmental Collaboration and Environmental Innovation. This year, 25 nominations were received, demonstrating the passion and enthusiasm for the environment across the business. The outstanding efforts of all nominees and winners towards environmental management is recognised and highly valued.

### Environmental Champion

A team member from Bristle Roofing, Wacol, received this year's Environmental Champion Award for continuously encouraging staff to recycle batteries, plastic bottles, cans, soft plastics, toner cartridges, mobile phones and coffee pods. The award recognised the efforts of setting up a recycling station and managing the logistics of the initiative over and above day-to-day job responsibilities.

## Environmental Innovation

Several team members from Austral Masonry, Prospect, worked together to develop a new and sustainable brick made from 14.5% recycled glass. It is anticipated that the new product will divert 6,500 tonnes of glass from landfill each year, and save the company \$100,000 per year.

## Environmental Collaboration

The team at Aussie Concrete Products, Hemmant, found value in managing their waste. The team focused on waste minimisation by source separating materials to improve recycling and reduced their waste costs. Emphasis has been placed on concrete waste, waste water and recyclables. Several education initiatives have improved the team's understanding of the environmental and economic benefits of placing waste in the correct bin for recycling.









# Community

Brickworks is committed to social responsibility in our communities and we aim to make a valued contribution to our communities.



# Community

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## Children's Cancer Institute

Brickworks is a long-standing partner with the Children's Cancer Institute (CCI), the only independent medical research institute in Australia dedicated to research into the causes, cure and prevention of childhood cancer.

Brickworks became partner of CCI in 2002 with the first pledge made towards the CCI Capital Appeal of \$70,000. To date, Brickworks' total partner value exceeds \$4 million dollars, comprising of direct and indirect sources of revenue, including corporate and staff donations, state fundraising, sponsorships and supporting CCI events.

The reporting period for the CCI partnership is the 2019 calendar year and the team at Brickworks raised \$491,179, helping CCI move closer to achieving the vision of curing all children with cancer.

Brickworks staff have offered their time and efforts to drive a range of fundraising activities for CCI, including the Diamond Ball and Build for a Cure initiative. This fundraising supports real impacts through programs such as CCI's Zero Childhood Cancer.

The contributions from both Brickworks and its staff has provided the opportunity for several pieces of vital equipment to be purchased by CCI Australia. The contributions will help CCI continue their life saving work that impacts thousands of families around Australia.

As a result of COVID-19, many of CCI's fundraising activities for the next reporting period have been cancelled or postponed, placing many of the life-saving research programs at risk. Brickworks is committed to continuing its support of CCI in FY21.



## COMMUNITY SUPPORT

Supporting charities like Children's Cancer Institute

## Staff Donations

The ongoing company support for CCI's work has been supplemented with staff donations, primarily through the Casual Friday program. In return for a payroll donation of \$2 per week, staff are issued with a "Care for Cancer Kids" shirt to wear with their casual clothes on Fridays. 2019 saw the Brickworks staff contribute an amazing \$69,600 through the Casual Friday program.



## Golf Day Raises Funds For CCI

Brickworks Vic holds an annual Golf Day, supported by the Austral Bricks, Austral Masonry, and Bristle Roofing divisions. This year 18 teams, with four players each, participated. Sponsorship was provided from Winnings Appliances and Eurolinx, and a guest-appearance was made by ex-AFL player, David Schwartz. A total of over \$1,700 was raised for the Children's Cancer Institute (CCI).



## Diamond Ball ticket sales

Brickworks was proud to be Diamond Partner of Diamond Ball Sydney, and Founding Partner of Diamond Ball Melbourne. An amazing \$304,228 was raised through corporate and staff contributions at the Sydney and Melbourne events.



## Zero Childhood Cancer Jack's Story

**Zero Childhood Cancer is revolutionising the way children with aggressive cancers are treated.**

Jack was an all action kid. Bubbly and energetic, he was always doing something and willing to try anything. When Jack turned nine, something changed. Jack lost his energy and began to be absent and dazed. An MRI showed a large brain tumour. A successful operation followed and Jack was given a positive prognosis. Within three months, he was back to himself, and the ordeal looked like it was over.

But a year later, Jack woke up with a terrible headache and started vomiting. The tumour was back. This time it had a devastating effect on his young body. This bright, energetic young boy was bedbound, losing sight and in constant pain.

Jack was enrolled in the Zero Childhood Cancer program, where his tumour was sent to the CCI lab. Using the latest technology, CCI analysed the specific genetic make-up of the tumour, discovered a genetic mutation that was driving the cancer's growth and identified a drug that would target it.

Within a matter of days, Jack's condition improved. Six weeks later, he was not only out of the wheelchair, he was playing tennis. Today, Jack is back at school, as active as ever.

"We got to celebrate another precious birthday with our son," says Viv, Jack's mum. "And I hope that, because of Zero Childhood Cancer, there will be many more to follow."





## Endure for a Cure

The Brickworks team participated in the 12-hour marathon cycle around Sydney Motorsport Park for the annual Endure for a Cure. The team raised a total of \$64,300 through sponsorship and fundraising initiatives.

## Australian Bushfire Support Campaign

### Austral Bricks Drivers Supporting Farmers During Bushfires

A large percentage of farmers were affected by bushfires, making it difficult to find feed for livestock. Several Austral Bricks drivers personally donated their time and trucks to 'Need for Feed' to transport urgent feed to a number of areas. In a show of support, Austral Bricks covered the fuel costs for the trucks. The drivers reported amazing support and cheers from the small towns along their journeys. Such acts of kindness and support during difficult times are a true reflection of the Brickworks company values.

### Supporting

## Bushfire Victims

The catastrophic bushfires destroyed millions of hectares of land and thousands of homes across New South Wales, Queensland and South Australia. Lives were lost and hundreds of Australians were displaced as they have watched their homes and communities burn to the ground. Brickworks has launched an initiative to help bushfire victims rebuild their homes. For any home built with Austral Bricks, Brickworks will replace all bricks, free of charge including delivery. For homes constructed from other building materials, Brickworks will assist in the re-build, with 50% off all materials in the Brickworks Building Products portfolio. This initiative is available to bushfire victims for two years. For Terms and Conditions see our website: [www.brickworks.com.au/bushfire-relief](http://www.brickworks.com.au/bushfire-relief).









## Supporting Housing

### Bristile Helps Power the Lives of Homeless Kids

Bristile Roofing teamed up with the Property Industry Foundation and Mirvac to construct a six bedroom, solar-equipped house for homeless youth in Greater Sydney, to be managed by the charity Marist180. Along with roof tiles and guttering, Bristile Roofing contributed a state-of-the-art 10.45kW solar array installation that will significantly reduce energy costs, ensuring the home remains viable for years to come. Donations were provided from Fronius for an inverter, Sonnen providing a battery and Leeson Solar installing the solar system free of charge. Bristile Roofing will donate the resulting solar credits, estimated to be in the order of \$5,500, to Marist180.

### Glen-Gery Habitat for Humanity

Glen-Gery's Reading Masonry Supply Centre worked with Habitat for Humanity of Berks County to achieve the goal of rebuilding a neighbourhood that will have a foundation in affordable homeownership, as well as access to employment, healthcare, and educational resources.

Glen-Gery supplied Olde Detroit Thin Brick and the Thin Tech Elite System to the project. Sabad LaSerna, the Thin Systems Installation Manager, worked on site at the Buttonwood Gateway project to oversee the installation of the system.



Glen-Gery Habitat for Humanity  
Berks County

## Supporting Communities

### Christmas Donations from Austral Bricks Victoria

The Austral Bricks Social Club in Victoria known as “the Brick Collective” is active in creating events for volunteering and driving donations for communities in need. For four weeks leading up to Christmas, the Brick Collective placed donation bins for staff to donate non-perishable food items to local charities who provide for those in need. The items collected were donated to charities providing grocery boxes, meal preparation and community pantry programs across Victoria.

### Engraved Bricks Honour Illinois Fallen Soldiers

Some 200 people gathered last autumn to dedicate the Surround of Honour at the Illinois Fallen Soldiers Tree Memorial at Illini State Park to remember over 300 of Illinois' fallen soldiers from the Middle East conflicts.

A highlight of the ceremony was the placement of engraved bricks, honouring the dead provided by Watsontown MSC and coordinated locally by Kim Rardin, Marseilles Distribution Manager. In total, Glen-Gery donated 542 bricks to be used in the memorial site.

“This was something that touched my heart to pay tribute to the Illinois Fallen Soldiers and am grateful that Glen-Gery allowed us to contribute to their honour and the community,” said Kim.

### The Helmsman Project

Brickworks is a Gold Program Partner of the Helmsman Project and has contributed \$127,500 to the Project over the last three years.

The Helmsman Project is a coaching and experiential learning program for Australian Year 9 students located in communities experiencing disadvantage. Through professional coaching, hands-on experiences and community projects, young people learn to see the opportunities available to them and increase their sense of hope, self-regulation, resilience and community mindedness. Equipped with these essential life skills, they can make better decisions and reach their full potential.





# Responsible Business

We continue to lead the way through design, style, innovation, sustainability and collaboration.





# Product Innovation and Design

Brickworks partners with architects and builders to create innovative products and support the construction of highly efficient homes.

**Brickworks' goal is to remain Australia's leading building products company. Brickworks continually strives to improve quality and product integrity, while investing in product innovation.**

During FY20, Brickworks' Australian operations formed a cross-functional, national technical team and conducted a strategic review of Research, Development and Quality functions. The review identified opportunities for alignment and collaboration across Brickworks Building Products to help create unique products with unrivalled quality. Improvements have been made to our monitoring and tracking of a range of quality indicators, including waste and reparations. As a result, our teams have focussed on quality projects that have shown substantial product improvements and increased customer satisfaction. Customer aspirations will continue to be monitored throughout FY21.

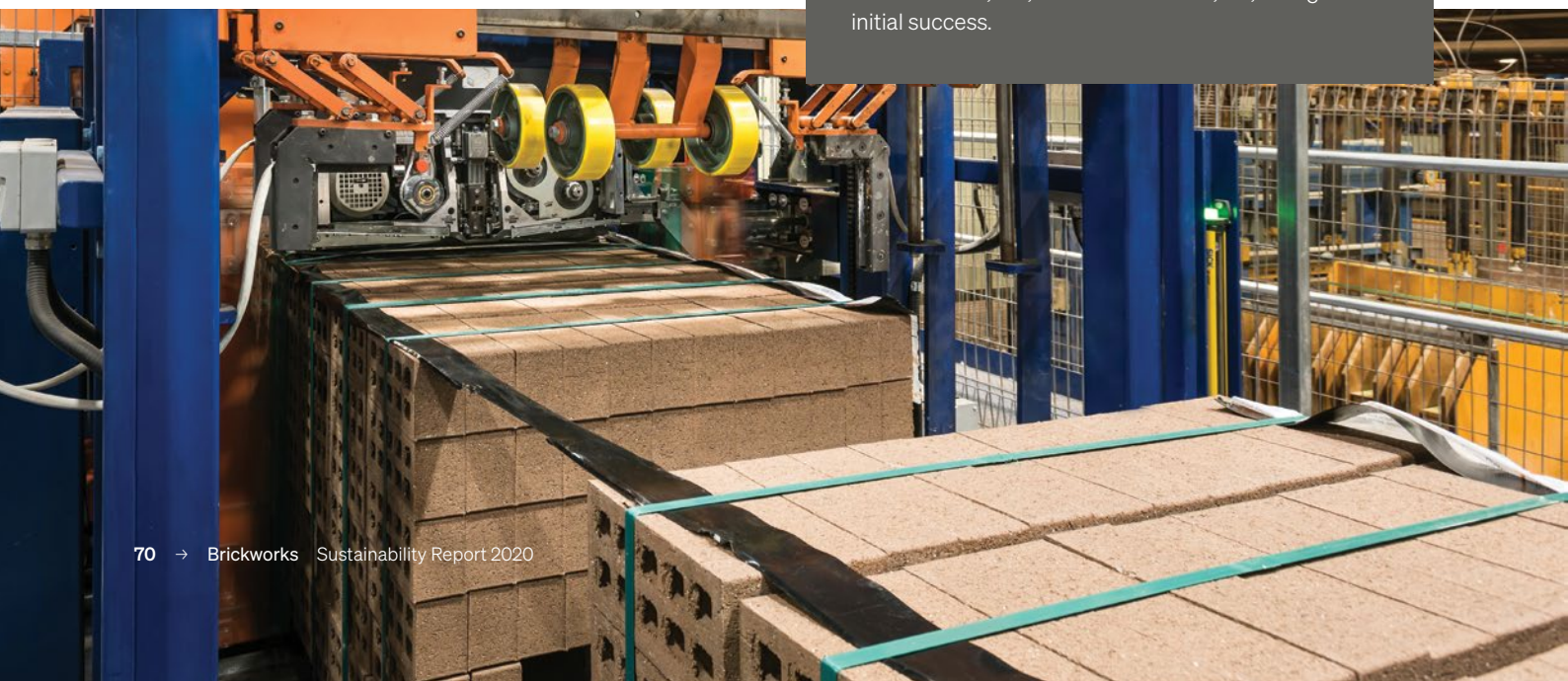
## Product Design

### Clay Brick Improvements

Brickworks continues to make incremental improvements to our clay bricks through ongoing research into increasing the core percentage volume to make clay bricks lighter weight. Development of new core patterns will reduce the amount of clay, the energy needed to fire the bricks, the fuel required for delivery and will make the bricks lighter for bricklayers. The addition of reclaimed or recycled materials into our clay bricks has lowered the energy demand during manufacture, reduced product weight and minimised the amount of virgin raw materials required.

## Product Re-engineering

High void bricks manufactured in Queensland have reduced raw material requirements by 11% and energy requirements by 15%. Trials are underway at Austral Bricks Wollert, Vic, and Golden Grove, SA, with good initial success.







Austral Precast Double Wall

## Case Studies

### Austral Precast Double Wall

The new Austral Precast Double Wall product consists of a pair of precast reinforced concrete shells, connected by reinforcement trusses to form a cavity that is core filled once installed on site. Double Wall is factory-made offsite and delivers savings in both installation time and costs, while improving safety on site. Through rigorous testing, the precast concrete panels of Double Wall are proven to be fire resistant and are non-combustible.

### Glen-Gery Wall System

Glen-Gery Wall Systems powerfully extend the options of designers, architects and builders by providing products and solutions which extend beyond just the brick. Glen-Gery systems have been developed to overcome antiquated limitations of space, time, and budget while simplifying installation. Systems include Thin Tech, Tru-Brix, Precast and Tilt-up and Terracade Façade System.

### Panel Brick

Panel Brick was released and is a prefabricated brick panel that combines the low maintenance and strength of clay bricks with precast construction technology. Panel Brick is factory-made offsite under controlled conditions, ensuring minimum wastage and maximum quality. Panel Brick is manufactured with custom Dovetail bricks that provide mechanical engagement into the precast concrete ensuring long term performance. Panel Brick is the fastest way to build with brick using the installation methodology of panel construction.

# SWINBURNE

SWINBURNE UNIVERSITY  
OF TECHNOLOGY

Research and Development

## Cement Reduction

Bristle Roofing partnered with Swinburne University of Technology in Melbourne to optimise the mix design of concrete roof tiles with a focus on reducing cement requirements.



# Sustainable

## Products

Brickworks' genuine building products create the most beautiful and sustainable environments and places in Australia.

The built environment forms the fabric of our cities and our lives, and contributes to substantial environmental and social impacts.

Cities around the world are adapting to be more resilient.

In an unpredictable world, those living in cities must be creative and adapt in order to withstand the shocks and stresses that this century is predicted to bring. Brickworks' building products support the core planning principles of resilience:

- ▶ Adapt: Reduce our exposure to future shocks and stresses.
- ▶ Survive: Withstand shocks with durability and bounce back better than before.

- ▶ Thrive: Improve quality of life.
- ▶ Embed: Combine resilience thinking into design thinking.

Brickworks' bricks and concrete products are manufactured to provide resilience. They are durable, fire-proof, contain thermal mass for energy efficient design, excellent acoustic properties and no indoor air emissions (VOCs); and the company's clay bricks hold a 100-year guarantee.




These attributes of Brickworks' products help cities contribute to goals such as the United Nations' Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable".

### 10 reasons why bricks are better

<p><b>1</b></p> <p>Bricks last forever</p>	<p><b>2</b></p> <p>Bricks can be reused or recycled</p>	<p><b>3</b></p> <p>Bricks are maintenance free, they don't fade, rot or rust</p>	<p><b>4</b></p> <p>Bricks are fireproof, unlike glass &amp; fibre cement that shatter and fail</p>	<p><b>5</b></p> <p>Bricks are known for their outstanding durability and colourfastness for life</p>
<p><b>6</b></p> <p>Bricks are a thermal battery keeping your home cooler in summer and warmer in winter</p>	<p><b>7</b></p> <p>Brick homes are more energy efficient than those constructed with lightweight materials</p>	<p><b>8</b></p> <p>Bricks have excellent sound reducing qualities</p>	<p><b>9</b></p> <p>Bricks are the natural healthy choice as they breathe and allow moisture to escape. Bricks emit no VOC's</p>	<p><b>10</b></p> <p>Only Austral Bricks are guaranteed for 100 years</p>



Brickworks is committed to driving innovation in sustainable buildings with three key 2025 targets:

	<p><b>THERMAL DESIGN</b></p> <p>We will provide leading research on passive solar thermal design, enabling reduced lifetime energy use.</p>
	<p><b>LIFE CYCLE EDUCATION</b></p> <p>We will support design tools, guidance and information to incorporate life cycle thinking into building design.</p>
	<p><b>SUSTAINABLE PRODUCTS</b></p> <p>By 2025, we will double our volume of products sold in Australia that hold leading sustainable qualities.</p>

### Thermal Design

The built environment has substantial environmental and social impacts. Sustainable building design offers greater energy and resource efficiency over the operational lifetime of a building. Building product companies have an important role to facilitate innovation through providing durable and naturally sustainable products.

Brickworks' research and innovation has led the way to realising the thermal benefits of bricks, in partnership with the University of Newcastle. Through the Responsible Business pillar of our 2025 Sustainability Strategy, Brickworks is committed to:

*Provide leading research in passive solar thermal design, enabling reduced lifetime energy use.*



### Austral Bricks Plays a Key Thermal Mass Role

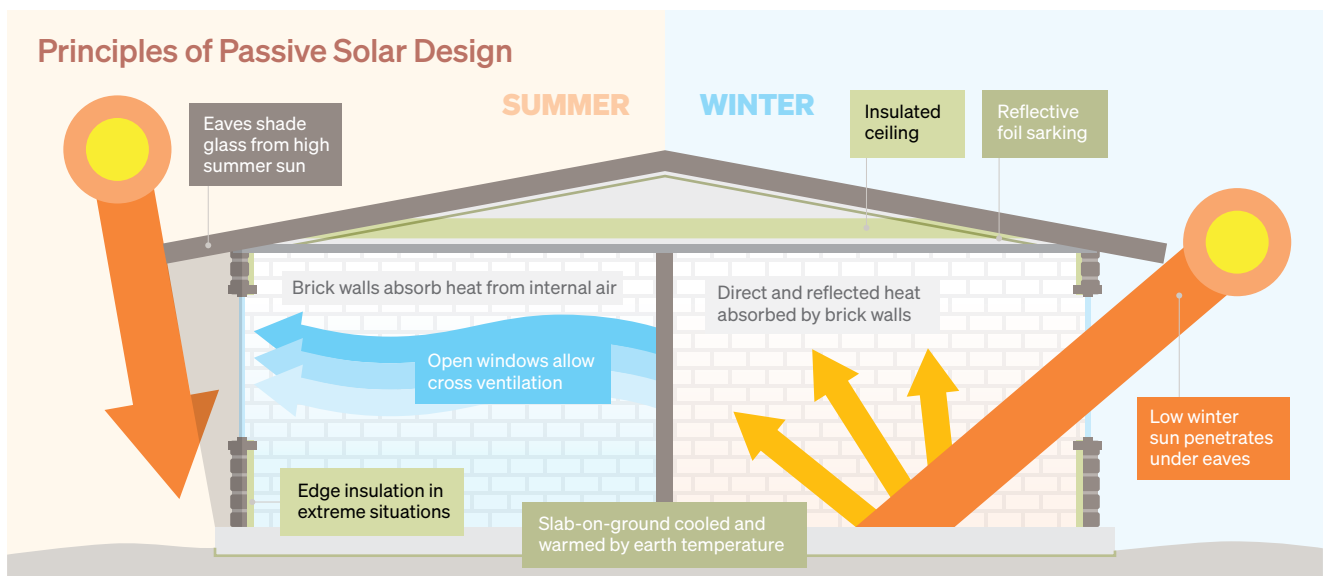
The project, designed by Polystudio, implements genius spatial planning to create a generous amenity within a compact footprint. Built according to the most rigorous efficiency standards in the world, the Passive House standard, the home is also revolutionary in its sustainable credentials.

In accordance with the home's ethos of accommodating living patterns both now and into the future, A House for all Seasons features sustainable principles that have been incorporated into the design, layout and living capabilities of the home.

The team at Polystudio incorporated both Passive House and passive solar design principles into the home, to minimise the need for mechanical heating and cooling, reducing energy use. Austral Bricks La Paloma in Miro play a key role with their high thermal mass acting as a 'thermal battery'. Unlike conventional homes, A House for all Seasons is so well insulated and airtight that its internal environment is largely independent from external temperatures, keeping the home warm in winter and cool in summer, as its name implies.

With sustainability front of mind, the home uses durable materials, a reduction in water use and drought-tolerant native and edible vegetation.

'Sustainability is a key focus in how we approach homes,' says Daniel from Polystudio. 'We recognise the pressing need to swiftly respond to climate change, and this home is just an example of how smart design can significantly reduce a home's carbon footprint.'



Brickworks boasts a number of buildings products that contribute to improvements in thermal performance. Bricks provide human thermal comfort, and are high density materials, meaning they have an ability to effectively absorb and store heat energy keeping your home cooler in summer and warmer in winter. This is something lightweight materials cannot do.

Correct use of thermal mass moderates internal temperatures, averaging out day and night temperature extremes, which makes a large difference to human comfort, and reduces energy bills.

### Life Cycle Education

Brickworks' strategy is to support design tools, guidance and information to incorporate life cycle thinking into building design.

Brickworks delivers high-quality architectural programs for industry professionals that inspire and contribute to continued development through accredited Continuous Professional Development (CPD) presentations, delivered via webinars. Registered participants receive formal CPD points, which meet CPD requirements of the various Australian State Boards of Registration for Architecture.

In FY20, Brickworks delivered 105 CPDs across various subjects, including Non-Combustible Façades, Understanding Solar and Energy Efficiency. A Sustainability CPD presentation is currently being developed and the goal is to present at least 100 CPD presentations during FY21.

In FY20, Brickworks published the brochure, Sustainable Living with Bricks - Bricks for Living, which provides information on the sustainability of bricks. In FY21, a library of Sustainable Product Information will be built up through the development of Environmental Product Declarations (EPDs).

### Sustainable Products

Brickworks is proud of its innovative product accomplishments. It was the first company in Australia to provide Climate Active Certified Carbon Neutral Bricks to national and international markets. These Carbon Neutral Bricks have held Climate Active (formally known as NCOS) certification since 2013/14.

By 2025, Brickworks target is to double the volume of products sold in Australia that hold leading sustainable qualities, compared with a baseline of FY19.

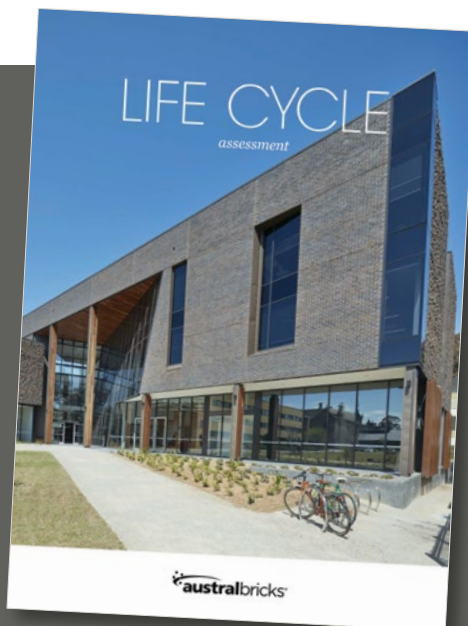
Brickworks' most significant range of sustainable products consists of carbon neutral bricks manufactured in Tasmania, sold throughout Australia, New Zealand, Korea and Japan. Despite a decline in FY20 carbon neutral sales of 11.3%, the carbon neutral offering has received positive responses across a range of market segments and will continue to grow over the upcoming years.

During FY21, Brickworks has an additional focus of providing an expanded range of carbon neutral, locally-made products to projects which demonstrate sustainability attributes. A focus will be to work on project-specific requirements with selected architects and commercial builders, to deliver low carbon buildings.

All bricks made in Australia will be part of this offer, to create low-maintenance, energy-efficient and enduring buildings with greatly reduced embodied energy, while providing a platform to meet the 2025 target.

### Providing Lifecycle Information

Austral Bricks Tasmania published a Life Cycle Assessment, prepared in accordance with ISO14025 Environmental Labels and Declarations and EN15804 Sustainability of construction works - Environmental product declarations; and in-line with the Australasian Environmental Product Declarations System. The document is available for download from our website [www.australbricks.com.au](http://www.australbricks.com.au).



### Volume of Sustainable Product Sales

FY19 to FY20







## Partners in Sustainable Products for Sustainable Housing **Nightingale Housing**

Brickworks has entered into a mutually beneficial partnership with Nightingale Housing. Brickworks will provide Nightingale with locally made, sustainable products; and Nightingale will promote Brickworks as a Premier Design Partner.

Nightingale seeks to create a world in which housing in contemporary urban environments is built to support well-being, community, liveability and affordability. Nightingale supports, educates and advocates for the delivery of designer led multi-residential housing which considers at its core: social health, economic resilience, and environmental sustainability.

### The Nightingale Approach

Nightingale Housing delivers apartments which are:

**Sustainable:** Energy efficient (at least 7.5 NatHERs stars), carbon neutral in operations and built near public transport, with rooftop solar and water harvesting for productive gardens.

**Community:** Nightingale apartments are only sold to residents, not investors. Shared amenities like laundries and rooftop gardens provide opportunities to build community.

**At-cost:** Nightingale Housing provides housing at-cost, and are motivated to create homes for people, not profit. New residents sign a caveat agreeing to pass on this saving to future owners.

**Lower living costs:** Because Nightingale buildings are built for people, not profit, they can invest time and effort in reducing the long-term cost of ownership. Things like rooftop solar, embedded energy networks, avoiding gas supply, and a shared super-fast commercial internet connection mean lower ongoing costs.

## Products with Sustainable Qualities

Brickworks' product range offers valuable features for energy efficient and sustainable housing. Our clay and concrete products have long product life expectancies, making the energy embodied in bricks a once-off investment that pays dividends now, and in the future. Brickworks' precast panels are designed for disassembly, making buildings completely demountable. The company's quality products last forever and many come with a 100-year guarantee. Brickworks Building Products website [www.brickworks.com.au](http://www.brickworks.com.au) provides case studies and technical information about products.



## Grasspave by Austral Masonry

Grasspave masonry pavers reduce the Urban Heat Island effect and allow drainage of storm water into underground soil. For more information, visit: <https://australmasonry.com.au/nsw/product/grasspave>.

## Terraçade Façade Design System

Terraçade retains its Ecospecifier Verification to qualify its leading position as a façade system that is worthy to be used in green building projects [www.ecospecifier.com.au/products](http://www.ecospecifier.com.au/products).

## Austral Bricks Nubrik

Nubrik Traditional and Artisan Ranges of clay bricks, manufactured at the Wollert plant in Melbourne, hold the Declare label, meaning the bricks have been "declared" Living Building Challenge (LBC) Red List free – or free of the worst in class materials prevalent in the building industry [www.living-future.org/declare-products/nubrik-range](http://www.living-future.org/declare-products/nubrik-range).



## Bristile Solar

Bristile Roofing offers the award winning integrated solar tile system, solar panels and solar batteries to customers who install a Bristile roof. The offer supports household energy optimisation. For more details, please visit <http://www.bristileroofting.com.au/solar>.

## Product Wellness

Bricks are a healthy, natural building material that have no volatile organic compounds (VOCs) emissions and improve indoor air quality. Poor indoor air quality, caused by a range of products in homes, is a large contributor to negative health effects, such as headaches, tiredness or lethargy, asthma and allergic responses. Bricks are naturally mould resistant and can eliminate the need for paints, which emit VOCs. Bricks have a high thermal mass, meaning they regulate internal temperature fluctuations to keep an even temperature in winter and summer, reducing reliance on heating and cooling. Not only are bricks better for human health, they are also better for the planet. Bricks are taken from the ground and can be returned to the ground without causing landfill or pollution. They can be reused, keeping their original properties and features intact, or even recycled.

## High Quality Affordable Housing

Rising household bills and rental prices place financial pressure on Australian households and the dream of owning a house is out of reach for many. Brickworks believes that affordable can also mean high quality. Many of Brickworks' high-end products have featured in affordable housing developments across the country.



## Recycled Glass Brick

Austral Masonry recently developed a new brick containing sustainable qualities. The product contains 14.5% recycled glass. It is anticipated that the new product will divert 6,500 tonnes of glass from landfill each year.



## Bricks: a durable and safe choice for multi-storey developments

Darling Square in Sydney, NSW, comprises of 577 apartments over three towers. The façade of the development showcases 70 unique brick types.

- ▶ Tower 1, 19 storeys
- ▶ Tower 2, 8 storeys
- ▶ Tower 3, 41 storeys.

A brick facade was selected for its ability to deliver a low maintenance, high quality, and long lasting, durable architectural response.

An 18-storey apartment complex in the heart of Redfern will increase the supply of social and affordable housing and provide stable accommodation for vulnerable people in close proximity to public transport and services. The State Significant Development is currently under construction by Lendlease.

Bowral Bricks were selected by architects DKO for social housing provider St George Community Housing. The project will use 100,000 Hereford Bronze and 60,000 Bowral Brown bricks.



Brickworks supports the work of the National Housing Finance and Investment Corporation (NHFIC) via its membership with the Housing Industry Association (HIA). The Federal Government committed \$500 million to NHFIC to underwrite first home buyers with a deposit of <20% (by reducing lenders mortgage insurance) and \$25 million to research Australia's housing demand, supply and affordability.

Brickworks was fully supportive of the Federal Government's plans to introduce new home-building grants, and for state governments to match the federal grant dollar-for-dollar. A stimulus package was announced by the Australian Government on 4 June 2020 and has resulted in funding of up to \$90,000 for eligible first home buyers in some states, ensuring a solid pipeline of work for the construction industry, essential during the COVID-19 pandemic.

In FY21, Brickworks will further explore opportunities to supporting affordable housing developments.

Examples of Brickworks involvement in Affordable Housing developments will be featured on our updated website in FY21: [www.brickworks.com.au](http://www.brickworks.com.au)

## Product Safety and Compliance

Brickworks places the upmost importance on consumer health and safety, with products tested to meet quality standards, which are key in the prevention of involvement with defective building materials. Bricks have been proven over centuries as a superior material choice as they are non-flammable, low maintenance, weatherproof, reusable, recyclable, inert, have excellent acoustic properties, are colourfast and durable with a 100-year warranty lifetime.

Further details on product safety and compliance can be found on our Brickworks website [www.brickworks.com.au](http://www.brickworks.com.au)

## Product Safety and Compliance Australia

All Brickworks clay and concrete products are non-combustible and pass AS 1530.1, combustibility test for building materials. Brickworks' cladding products have all been tested and pass AS 1530.1, combustibility test for building materials.

Brickworks' lightweight products and cladding, including Terraçade and Pronto Panel, have undergone extensive testing at CSIRO, University of Newcastle, and other NATA accredited laboratories, to ensure compliance with the National Construction Code, and are certified non-combustible. Pronto Panel has attained CodeMark Certification and Pronto Panels are approved for all Bushfire Attack Levels.

Brickworks undertakes ongoing assessments of changes in building codes and legislation to ensure products are fit for purpose and compliant. The product approval process comprises testing programs to meet the requirements of the National Construction Code, Australian Standards and ensures products are fit for purpose. Testing programs are specifically designed to reflect product applications, and include testing such as mechanical, fire, structural, acoustic and installation.

All products are tested either at Brickworks NATA Accredited Laboratories, or at independent NATA Accredited Laboratories, to ensure they meet the relevant Australian Standards and the performance requirements of the National Construction Code. All products are accompanied by Technical Data Sheets, providing information on the product specifications.

Manufacturing operations are managed in accordance with Brickworks' internal Quality Management System, which aligns with ISO9001. Austral Precast and Austral Masonry hold ISO 9001 Quality Management Systems certification.

Defined and measurable quality objectives are established for product compliance, and a reporting system is maintained on each manufacturing site. The Audit and Risk Committee have oversight of product safety with a strong focus on quality control. Quality results and performance are reported to the Managing Director fortnightly. Monthly customer satisfaction surveys are undertaken which provide valuable feedback and insight into consumer expectations regarding the quality of Brickworks products. Staff attend industry events and training courses to ensure knowledge of product safety is maintained.



## Education about Safety and Resilience

As part of Brickworks' commitment to supporting the design of resilient buildings, the company supports industry education around building products safety. Combustibility of building materials is a crucial area of concern and Brickworks supports the growing calls from consumers and industry participants for tighter controls and increased compliance in relation to the use of building products in construction projects. In FY20, 8 CPDs were delivered on Non-Combustible Façades, detailing the performance, regulations, standards, required testing and the key factors to consider when designing non-combustible facades.

# Goodman Brickworks JV Trust

Goodman has implemented its 2030 sustainability strategy which covers all of its partnerships around the world, including the Goodman Brickworks Joint Venture (JV) and its operations at the Oakdale Industrial Estate.

Goodman's strategy includes several specific ESG targets, including its ambition to have carbon neutral operations by 2025, using 100% renewable energy and targeting 400MW of solar PV installed globally by 2025.

Highlights for the Oakdale Industrial Estate include:

- ▶ Sustainable design initiatives incorporated into the developments including:
  - ▶ LED lighting
  - ▶ Solar PV
  - ▶ Translucent roof sheeting
  - ▶ Energy and water monitoring
  - ▶ Drought tolerant landscaping
  - ▶ Rainwater harvesting for irrigation
- ▶ 5 Star GreenStar Design & As Built v1.2 rating for Building 1A
- ▶ 5 Star GreenStar Performance rating for Building 2B
- ▶ 4 Star GreenStar Performance rating for Building 1C
- ▶ Approximately 3MW of solar PV has been installed across the estate including the new 1.7MW system on Building 5A leased to DHL



## Green Star Rating

During FY20, Site 1A Oakdale South achieved GBCA's 5 GreenStar rating for Design & As Built v1.2.

- ▶ Smart irrigation system is being installed in Oakdale South
- ▶ An onsite café for occupants and visitors with additional amenity services close by, including supermarkets, cafés, convenience stores, gyms, childcare, and post offices
- ▶ The precinct is centrally located with good access to the M7 and M4 Motorways



## Risk

# Management

To ensure robust and effective risk management systems are in place and operating effectively, the Board, through the Audit and Risk Committee (ARC), determines the risk profile for the company. It ensures that business initiatives are consistent with its risk appetite, reviews the controls and systems in place to continually mitigate risk, and oversees reporting and compliance requirements.

### Risk Management

A Risk Management Framework has been implemented, consistent with each element of the Australian Risk Management Standard AS/NZS3100:2018. Key elements of the framework cover business process, financial, human resources, information, property, environmental, climate, health and safety and insurable risks.

Brickworks' Board has adopted a Risk Management Framework that identifies risk tolerance and risk appetite for the Group, and then considers how each identified risk is placed within that framework.

That framework involves assessment of the likelihood of an event occurring, the potential impact of each event, and the controls and processes in place to continually mitigate each risk.

Risk management is a priority for senior management. Details of risk management and the significant risks that may impact the achievement of the Group's business strategies and financial prospects are included in the Brickworks FY20 Annual Report and the Corporate Governance Statement which can be downloaded from [www.brickworks.com.au/investors/group-overview#corporate-governance](http://www.brickworks.com.au/investors/group-overview#corporate-governance)

### Procurement – Modern Slavery and Supply Chain

Brickworks is committed to respecting and supporting the dignity, well-being and human rights of employees and the supply chain. Brickworks is committed to working collaboratively with its partners and suppliers to ensure business is conducted in an honest and ethical manner. This includes identifying and addressing modern slavery and human rights risks throughout the business and supply chain.

#### SUPPLY CHAIN

Reduce supply chain risk



Reporting frameworks and requirements to disclose risks of modern slavery in supply chains include the Federal Modern Slavery Act, which came into effect in 2019. The Modern Slavery Act 2018 (NSW) is expected to come into force at a future date. Brickworks' first Modern Slavery Statement for the FY20 reporting period will be published by January 21. Brickworks is engaging consultants to keep up to date with all legislative requirements and provide updates for any proposed changes or harmonisation between Federal and State legislation.

During FY20, Brickworks engaged experts in the field to undertake a review of current processes, and provide recommendations. A sustainable supply chain working group was formed to engage the business and employees to better understand the legislation and risks within procurement categories and countries of supply. A Modern Slavery Policy was launched, accessible on the Company's intranet.

During FY20, the Board approved a Modern Slavery Supplier Code of Conduct that sets out the expectations of suppliers. The Code of Conduct is part of the new-vendor set up process and seeks to work collaboratively with the supply chain to identify and eradicate any instances of modern slavery.

These activities have helped Brickworks work towards a robust risk assessment process, a Modern Slavery roadmap and reporting statement, which when released, will be found on the company intranet site.

## Cyber Security

Cyber threats are becoming more prevalent against the construction and manufacturing industry, such as ransomware and denial of service attacks against Information Technology and Operational Technology environments. In this context, Brickworks acknowledges the need to invest in cyber security to protect against cyber threats. Investment will enable the business to execute its strategies securely and protect its critical assets.

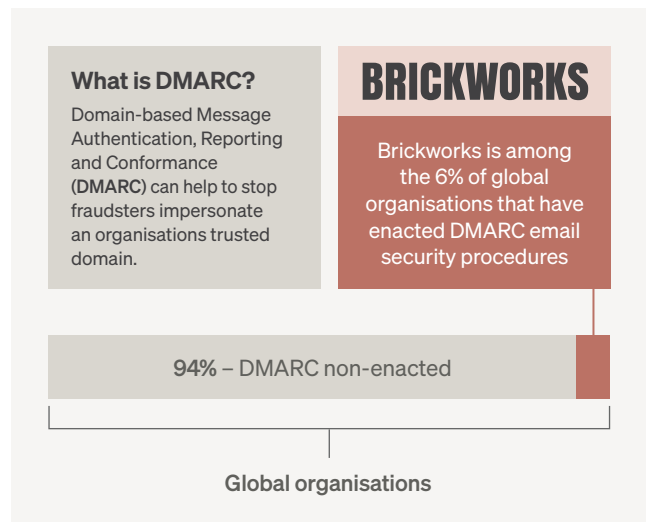
To date, Brickworks has focussed on understanding key cyber threats and associated risks across the business and has developed a cyber delivery plan to improve its capability. This plan is aligned to the National Institute of Standards and Technology (NIST) Cyber Security Framework and includes the following work streams:

- ▶ Security Policies, Risk and Governance
- ▶ Security Awareness and Training
- ▶ Third Party and Acquisition Security Risk Management
- ▶ Identity and Access Management
- ▶ Threat and Vulnerability Management

- ▶ Information Classification and Data Security
- ▶ Network Security and Security Tools Implementation
- ▶ Security Logging and Monitoring
- ▶ Disaster Recovery and Business Continuity

Brickworks engages in numerous education and awareness techniques, including real world examples of threats that employees could be exposed to. Security Awareness Training and Phishing Simulation technology has been introduced and Brickworks has seen an 80% reduction in click rates and a 50% increase in reporting of potential threats to the Security Team.

Brickworks has successfully deployed and continues to invest in solutions including Identity Management, Privileged Management, Multi Factor Authentication and Single Sign-on. To help combat email fraud, Brickworks has implemented full Domain Keys Identified Mail (DKIM) signing and Domain-based Message Authentication, Reporting & Conformance (DMARC) reject across all Australian domains. These email protection initiatives place Brickworks among the top 6% of Global 2000 organisations to achieve this level of email security.





# Governance

The Brickworks' Board is committed to developing and maintaining good corporate governance and the company recognises that this is best achieved through its people and their actions.

The company's long-term future is best served by ensuring that its employees have the highest levels of honesty and integrity. These employees are retained and developed through fair remuneration, appropriate long-term incentives and equity participation in the company. It is also critical to the success of the company that an appropriate culture is nurtured and developed, starting from the Board itself. A Governance Statement can be found on Brickworks' website [www.brickworks.com.au](http://www.brickworks.com.au). The statement has been prepared in line with the principles of the ASX Corporate Governance Council's "Corporate Governance Principles and Recommendations (4th Edition)".

Brickworks has policies and procedures in place that ensure the highest standards of corporate governance, abiding by all Australian laws and the requirements of regulatory authorities in each state.

## Board Succession Planning and Diversity

In FY20, the Board focussed on gender diversity and Board renewal. Malcolm Bunday was appointed as an independent non-executive Director to the Brickworks Board, with effect from 1 October 2019, and Robyn Stubbs was appointed an independent non-executive Director on 1 January 2020.

Brickworks recognises the importance of gender diversity in a board. The appointment of Robyn Stubbs as an independent board member increases female representation to 25%. Robyn has valuable operational experience in property, leasing, sales and marketing, strategy and new product development.

Brickworks' diversity target was to increase female board membership to 28% by 2020. Female director membership at the date of this report is 25%. Following the retirement from the Board of Brendan Crotty at this year's AGM, the female director representation will increase to 29%.

## Board Independence

The Brickworks Board currently consists of five independent members and three non-independent members.

## Code of Conduct

Brickworks staff are guided by the Brickworks Code of Conduct. The purpose of the code is to set standards of conduct expected of Brickworks employees. The Code applies to all directors, officers and employees of Brickworks Limited and its controlled entities.

The Code of Conduct is based on the Brickworks values, which underpin the way in which the team acts and behaves at Brickworks. They describe what's important to us, and guide interactions with colleagues, customers, suppliers, contractors and the community.

The Brickworks core values are:

- ▶ Care: Sustainably Safe
- ▶ Collaborate: Succeed Together
- ▶ Exceed: Passionately Play to Win
- ▶ Integrity: I Do What I Say
- ▶ Innovate: Everyone, Everywhere, Everyday
- ▶ Lead: Inspire People

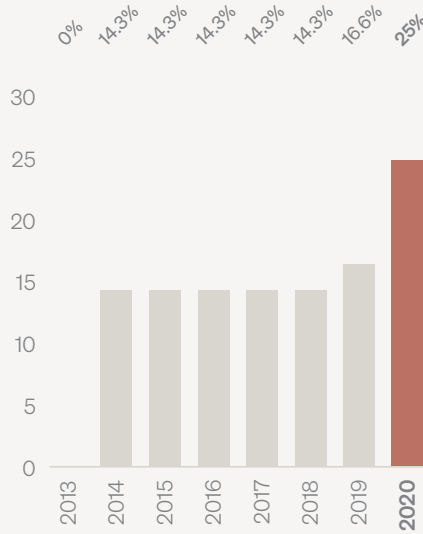
### Board Membership

Tenure of Non-Executive Directors



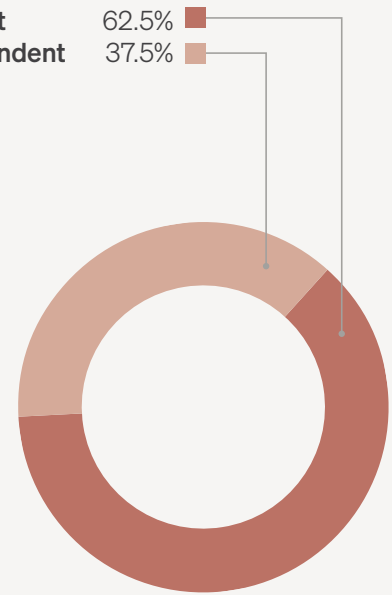
### Gender Diversity

% of Female Directors



### Board Independence

Independent  
Non-Independent



Brickworks employees should be respectful, professional and act with honesty and integrity to maintain high ethical standards and uphold Brickworks reputation. High standards of conduct will serve to enhance Brickworks reputation for fair and responsible trading and encourage appropriate behaviour across the business.

All staff are required to undertake annual training on the Code of Conduct through an on-line learning platform. Staff completion of the module is tracked and reported internally.

### Anti-Bribery and Corruption and Whistleblower Policies

The Anti-Bribery and Corruption, and Whistleblower Policies were introduced in May 2019. All staff are required to undertake annual on-line training to demonstrate their understanding of the policies. The Whistleblower Policy provides a mechanism which encourages concerns to be raised about misconduct or any improper state of affairs or behaviour that is inconsistent with the Group's culture, values or policies.

Be Honest @ Brickworks is an anonymous avenue for staff to raise concerns of suspected or actual misconduct. Staff are encouraged to make a report if they see or suspect something wrong such as; theft, fraud, dishonesty, harassment, unethical behaviour, workplace safety and environmental hazards or misconduct.

The Be Honest @ Brickworks reporting platform is easily accessible 24/7 from the company's intranet page, and posters containing the contact details are located in all work centres. The platform is administered by Deloitte's Risk Advisory Service.

Brickworks aims to improve its performance in business ethics management to align with best practice, with a strategy target to formalise Business Ethics and Whistleblower programs.

## GOVERNANCE

Business Ethics and Whistleblower Programs



### Public Policy

Brickworks Political Donations Policy prohibits the making of Political Donations at any time on behalf of the Brickworks Group or otherwise using funds of the Brickworks Group. No political donations were made during FY20.



# Sustainability Disclosure

Our disclosure approach is based on the robust framework and reporting standard set out in the Global Reporting Initiative, to ensure our stakeholders are well informed of our material sustainability issues.

# Stakeholder Engagement

Stakeholder engagement is an important part of Brickworks' materiality assessment process. Engaging with internal and external stakeholders supports the company's understanding of the most significant sustainability issues.

In FY19, Brickworks undertook a process of identifying stakeholder groups by considering the individuals and entities that would be affected by, or interested in the company's operations, products and management. These stakeholder groups are set out in the following table. During the development of the Sustainability Strategy "Build for Living: Towards 2025", further engagement was conducted with internal and external stakeholders, to validate what issues matter the most to them.





## Brickworks Internal and External Stakeholders Groups

Stakeholder Group	Areas of Interest			Key methods of engagement	
<b>Employees</b>	<ul style="list-style-type: none"> <li>Management</li> <li>Employees</li> </ul>	<ul style="list-style-type: none"> <li>Business performance</li> <li>HR</li> </ul>	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>WHS</li> </ul>	<ul style="list-style-type: none"> <li>Employee Materiality Survey</li> <li>Newsletters</li> <li>Conferences</li> </ul>	<ul style="list-style-type: none"> <li>Team meetings</li> <li>Performance reviews</li> <li>Sustainability Strategy</li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>BKW Business Development Managers (customer perspectives)</li> <li>Architects</li> <li>Developers</li> <li>Customers</li> </ul>	<ul style="list-style-type: none"> <li>Price</li> <li>Quality</li> <li>Reliability</li> <li>Innovation</li> <li>Eco credentials</li> <li>Wellness</li> <li>Reputation</li> </ul>	<ul style="list-style-type: none"> <li>Ethical practices</li> <li>Care</li> <li>Disclosure</li> <li>Building waste</li> <li>Affordable housing</li> </ul>	<ul style="list-style-type: none"> <li>Customer satisfaction surveys</li> <li>Events (Double talk, international speaker, Continuous Professional Development presentations), Newsletters</li> <li>Brochures</li> </ul>	<ul style="list-style-type: none"> <li>Website</li> <li>Education</li> <li>Materiality survey (customer insights provided by Business Development Managers)</li> <li>Sustainability Strategy</li> </ul>
<b>Investors</b>	<ul style="list-style-type: none"> <li>Investors</li> <li>Analysts</li> <li>Shareholders</li> </ul>	<ul style="list-style-type: none"> <li>Business performance</li> <li>Sustainability</li> <li>Environmental performance</li> <li>Climate related issues</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety</li> <li>HR</li> <li>Regulatory compliance</li> <li>Risk management disclosure</li> </ul>	<ul style="list-style-type: none"> <li>AGM</li> <li>Annual Report</li> <li>Meetings</li> <li>ASX Updates</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability Strategy</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>Local government</li> <li>State government</li> <li>Federal government</li> </ul>	<ul style="list-style-type: none"> <li>Compliance</li> <li>New and emerging legislation</li> <li>Carbon and energy</li> <li>Investing in new technology</li> </ul>	<ul style="list-style-type: none"> <li>Environmental performance</li> <li>WHS performance</li> <li>HR / EEO / Employment performance</li> <li>Planning issues</li> </ul>	<ul style="list-style-type: none"> <li>Meetings</li> <li>Training</li> <li>Audits and inspections</li> <li>Reporting</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability Strategy</li> </ul>
<b>Industry</b>	<ul style="list-style-type: none"> <li>Competitors</li> <li>Similar Industry/ companies</li> </ul>	<ul style="list-style-type: none"> <li>Trends</li> </ul>		<ul style="list-style-type: none"> <li>Analysis of documents</li> <li>Gap analysis</li> </ul>	<ul style="list-style-type: none"> <li>Sustainability Strategy</li> </ul>
<b>Community Groups</b>	<ul style="list-style-type: none"> <li>Local community group organisations</li> <li>Neighbours</li> </ul>	<ul style="list-style-type: none"> <li>Communications</li> <li>Local employment and economy</li> </ul>	<ul style="list-style-type: none"> <li>Environmental performance</li> <li>Disclosure</li> </ul>	<ul style="list-style-type: none"> <li>Group meetings</li> <li>Local events</li> </ul>	<ul style="list-style-type: none"> <li>One on One discussions,</li> <li>Complaints management,</li> <li>Newsletters</li> <li>Site tours</li> </ul>
<b>Sustainability organisations</b>	<ul style="list-style-type: none"> <li>World Business Council for Sustainable Development</li> <li>Sustainable Business Australia</li> <li>Supply Chain Sustainability School</li> </ul>	<ul style="list-style-type: none"> <li>Climate risk</li> <li>Materials use</li> <li>Social licence to operate</li> </ul>		<ul style="list-style-type: none"> <li>Survey</li> <li>Webinars</li> <li>Meetings</li> <li>Training</li> </ul>	<ul style="list-style-type: none"> <li>Newsletters</li> <li>Subscriptions</li> <li>Sustainability Strategy</li> </ul>

## Materiality

# Assessment Process

In FY19, Brickworks engaged EY to assist in expanding its materiality assessment, which supports the company's understanding of the most significant sustainability issues, to enable better integration and alignment of sustainability in its business strategy. The assessment entailed the following materiality assessment process:

- ▶ Scanning the external and internal environment
- ▶ Engaging with internal and external stakeholders
- ▶ Prioritising the most material issues from a long list of potentially material issues
- ▶ Validating the list of issues through surveying a selection of external stakeholders and additional customer and investor feedback

Significant issues were rated according to Stakeholder Interest (Y axis) and Brickworks capacity to impact (X-axis). This approach is consistent with the expectations of the GRI Standards.

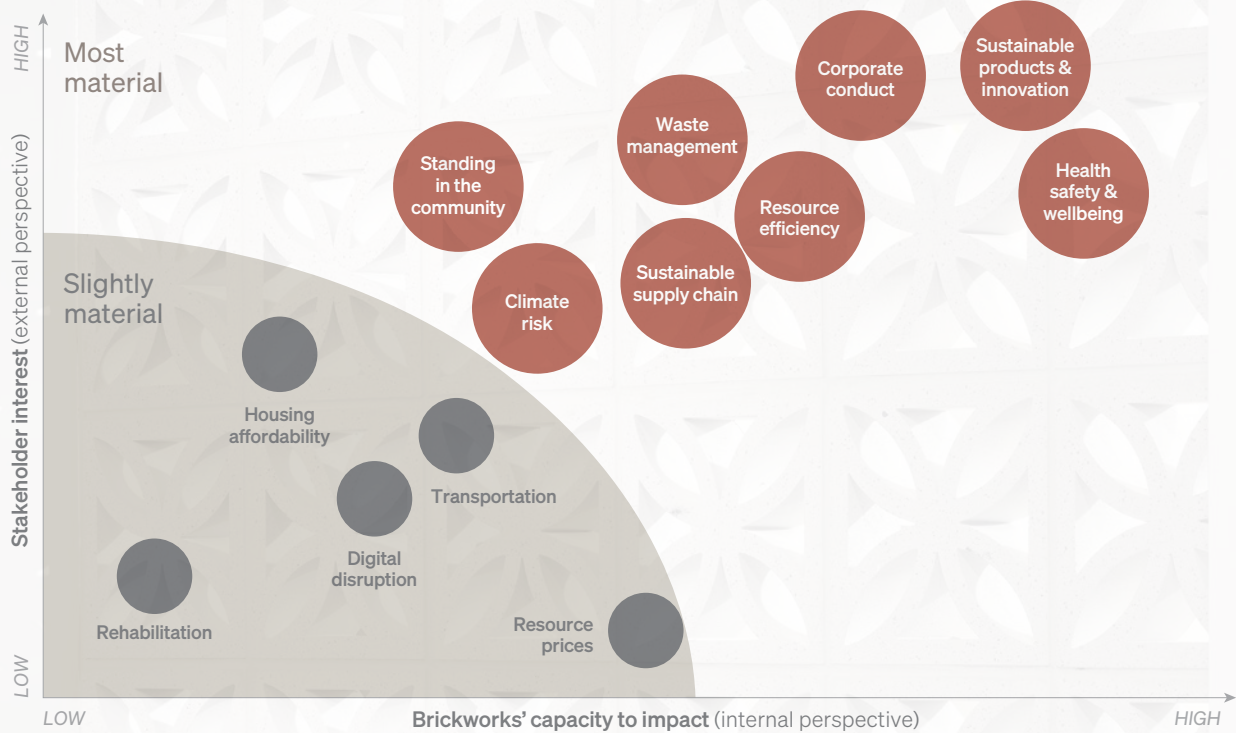
Information regarding the most material issues is included in the FY20 Brickworks Sustainability Report, and assessed against the GRI Standards, where possible. In addition to the material risks identified in FY19, response to the COVID-19 pandemic was identified as an additional material issue in FY20. During FY21, the materiality assessment process will be refreshed.

### Auditor Assurance Statement

As part of Brickworks' disclosure, auditor Carbon Intelligence performed a Limited Assurance engagement on selected key data, published on page 88.



## Material Risks Identified in FY19 Materiality Assessment



#### Our Conclusion:

Carbon Intelligence Pty Ltd ('Carbon Intel', 'we') was engaged by Brickworks Limited ('Brickworks') to undertake 'limited assurance' as defined by Australian Auditing Standards (hereafter referred to as a 'review' or the 'engagement'), over selected sustainability performance data within Brickworks Sustainability Report for the year ended 31 July 2020. Based on our review and evidence obtained, nothing came to our attention that caused us to believe that the selected sustainability data has not been prepared and presented fairly, in all material respects, in accordance with the criteria defined below.

#### Scope of our Engagement

We conducted a review over selected sustainability performance data within the Sustainability Report for the year ended 31 July 2020.

#### Engagement Subject Matter

The Subject Matter for our limited assurance engagement included selected sustainability performance data, limited to those aspects listed below, for the year ended 31 July 2020:

##### Australian Operations

- Total Scope 1 greenhouse gas (GHG) emissions (in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>-e)) \*
- Total Scope 2 GHG emissions (tCO<sub>2</sub>-e) \*
- Total energy consumed (in petajoules (PJ)) \*
- Total number and cost (in Australian dollars (AUD\$)) of significant environmental fines and penalties
- Lost Time Injury Frequency Rate (LTIFR)
- Total Recordable Injury Frequency Rate (TRIFR)

\*Reported for the year ended 30 June 2020, to align with the reporting period for the *National Greenhouse and Energy Reporting (NGER)* scheme.

##### US Operations

- Total natural gas consumed (in petajoules (PJ)) \*
- Total number and cost (in US dollars (US\$)) of significant environmental fines and penalties
- Lost Time Injury Frequency Rate (LTIFR)
- Total Recordable Injury Frequency Rate (TRIFR)

\*Reported for the year ended 30 June 2020, to align with Australian Operations.

#### Criteria

In preparing the Sustainability Report, Brickworks applied the following criteria:

- Global Reporting Initiative (GRI) Standards
- Brickworks' own publicly disclosed criteria as established in the Sustainability Report.

#### Our Responsibilities

Our responsibility is to express a conclusion on the selected sustainability performance data, based on our review and the evidence provided by Brickworks. We were also responsible for following the assurance standards, maintaining our independence and confirm that we have met the requirements of the APES 110 Code of Ethics for Professional Accountants and that we have the required competencies and experience to conduct this assurance engagement.

#### Brickworks' Responsibilities

Brickworks' management is responsible for selecting the Criteria, and for preparing and fairly presenting the Sustainability Report in accordance with that Criteria. This responsibility includes establishing and maintaining internal controls, adequate records, making estimates that are reasonable in the circumstances, and providing the evidence required to support the engagement subject matter.

#### Our Approach to Conducting the Engagement

We conducted this review in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other Than Audits or Reviews of Historical Financial Information' and 'Australian Standard on Assurance Engagements (ASAE) 3410 on Greenhouse Gas Statements' and the terms of engagement as agreed with Brickworks.

#### Summary of Assurance Procedures Performed

Our review consisted of obtaining the engagement subject matter, making enquiries of persons responsible for preparing the selected sustainability performance data, and applying detailed testing, analytical and other review procedures.

Our procedures included:

- Planning the engagement, assessing the risks of misstatement, and designing assurance procedures
- Conducting site reviews and interviews with site and corporate personnel to understand the business, data management systems, and reporting processes
- Conducting interviews with key personnel to understand the process for collecting, collating, calculating, and reporting the selected sustainability performance data
- Checking that the calculation criteria have been appropriately applied in accordance with the methodologies outlined in Brickworks' Criteria
- Undertaking detailed testing and analytical review procedures to support the reasonableness of the data
- Identifying and testing assumptions, source data, and methodologies supporting calculations
- Testing, on a sample basis, to underlying source information to check the accuracy of the data.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

#### Limited Assurance

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. While we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Furthermore, our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within or extraction from Financial or IT systems.

#### Use of our Assurance Statement

We disclaim any assumption of responsibility for any reliance on this assurance statement to any persons other than management and the Directors of Brickworks, or for any purpose other than that for which it was prepared.

*PAdams*

Dr Paul Adams  
Audit Team Leader, Carbon Intelligence Pty Ltd

8 September 2020





# BRICKWORKS

Contact details for  
questions relating to  
the content of this Report

**Principle Administrative Office**

738-780 Wallgrove Road  
Horsley Park NSW 2175

Telephone: (02) 9830 7800  
Email: [info@brickworks.com.au](mailto:info@brickworks.com.au)

Website: [www.brickworks.com.au](http://www.brickworks.com.au)