PUBLIC DISCLOSURE STATEMENT

BRICKWORKS BUILDING PRODUCTS PTY LTD

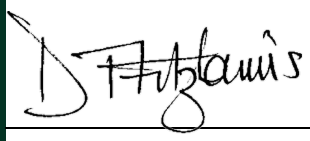
PRODUCT CERTIFICATION

FY2024-25

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	Brickworks Building Products Pty Ltd
REPORTING PERIOD	1 July 2024 – 30 June 2025 Arrears report
DECLARATION	*To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.*  David Fitzharris Executive General Manager – Brickworks Australia and New Zealand 30th April 2026

Australian Government
Department of Climate Change, Energy, the Environment and Water

Version 10.

1.CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	647 tCO_2-e
CARBON OFFSETS USED	31% ACCUs, 69% VCUs
RENEWABLE ELECTRICITY	N/A
CARBON ACCOUNT	Prepared by: Brickworks Building Products
TECHNICAL ASSESSMENT	21 December 2023 Energetics Next technical assessment due: FY 2026

Contents

2. CERTIFICATION INFORMATION

Description of product certification

This product certification is for bricks and pavers manufactured at Brickworks' operations in Horsley Park Plant 1 and 2, Bowral and Punchbowl (NSW), Wollert (Vic), Golden Grove (SA) and Rochedale (QLD) including all associated brands such as Austral Bricks, Bowral Bricks and Nubrik. Products manufactured at our Longford (TAS) facility including Daniel Robertson brand are covered by a separate certification.

- Functional unit: tonne of bricks or pavers manufactured by Brickworks in Australia and used in various applications throughout Australia and overseas.
- Offered as: Opt-in product
- Life cycle: cradle-to-grave

The Cardup and Horsley Park Plant 1 operations were in care and maintenance in FY2025.

The responsible entity for this product certification is Brickworks Building Products Pty Ltd, ABN 63 119 059 513.

This Public Disclosure Statement includes information for FY2024-25 reporting period.

Description of business

Brickworks Building Products Pty Ltd (Brickworks) is one of Australia's largest, best known and most diverse building material manufacturers. Our products include clay bricks and pavers, concrete masonry blocks, retaining wall systems, stone, concrete, terracotta and solar roof tiles, terracotta façades and lightweight building systems.

Brickworks has been transformed from originally a New South Wales state-based operation to a national organisation with currently eight brick manufacturing operations in NSW, Victoria, Tasmania, South Australia and Queensland (see Figure 1).

Austral Bricks is the subsidiary of Brickworks that manufactures and sells Australian made clay bricks and pavers for the Australian and overseas markets. Austral Bricks holds multiple ABNs in each state, and multiple brands including Daniel Robertson, Bowral Bricks and Nubrik, therefore for the purpose of Climate Active, the certification is held by Brickworks Building Products Pty Ltd and Austral Bricks and its brands will use the Climate Active certification to sell carbon neutral bricks.

Brickworks brick and paver products are manufactured to Australian Standard AS/NZS 4455 and AS 3700. Product quality testing is performed in accordance with AS/NZS 4456. Further details on product use and design for different applications can be found on Brickworks' website and more specifically our bricks product page and product information page.

In FY2025, Environmental Product Declarations (EPDs) were published for Horsley Park Plant 1, Bowral and Punchbowl (NSW), Wollert (Vic), Golden Grove (SA) and Rochedale (QLD). Where an EPD has been published, the carbon account is now based on the EPD.

These EPDs are published under the EPD Australasia Programme and are in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021. The EPDs are available on the EPD Australasia website or the Brickworks website. The EPDs cover cradle-to-grave life cycle stages, including cradle-to-gate (modules A1-A3), plus end-of-life (modules C1-C4). This product certification also includes delivery to customer (module A4). Modules A5 (construction process) and B1-B7 (use) have not been included due to the inability to predict how the material will be used following manufacture. The carbon inventory for our bricks and pavers has been calculated based on the global warming potential (GWP-total) results of the EPD.

Due to the recent upgrades to the Horsely Park Plant 2, its EPD is still under development. Therefore, Brickworks continues to use the previously completed lifecycle assessment (LCA) which has been built into Brickworks' custom carbon calculator, a tool that allows us to easily calculate the total amount of greenhouse gas emissions associated with the lifecycle of any given brick type and for the exact quantity of bricks supplied to a client or building project.

Brickworks offers carbon neutral bricks in two ways:

- to selected clients and projects (Opt in) which is covered in this PDS, and
- all customers who purchase bricks made at Austral Bricks Longford (please refer to the Austral Bricks (TAS) PDS)

The total carbon inventory to be offset is assessed annually based on the quantity of carbon neutral certified products sold.

3.EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

Quantified emissions have been assessed as 'attributable processes' of a product or service. These attributable processes are services, materials and energy flows that become the product or service, make the product or service and carry the product or service through its life cycle. These attributable emissions have been quantified in the carbon inventory.

Non-quantified emissions have been assessed as attributable and are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

Attributable emissions sources can be **excluded** from the carbon inventory but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

1. A data gap exists because primary or secondary data cannot be collected **(no actual data).**
2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
3. An estimation determines the emissions from the process to be **immaterial**).

Outside the emissions boundary

Non-attributable emissions have been assessed as not attributable to a product or service. They can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D.

Inside emissions boundary

Quantified

Raw materials: Clay, oxides, additives

Manufacturing operations: Fuel, electricity, calcinations emissions, water, wastewater treatment, waste disposal, calcination emissions, packaging of bricks etc.

Transport: Raw materials to manufacturing site, transfers between manufacturing sites and transport to customer

End of life: Deconstruction / demolition, transport to waste processing, waste processing and disposal

Non-quantified

Minor ancillary materials

Packaging of additives and oxides

Excluded

N/A

Outside emission boundary

Non-attributable

Head office business travel

Head office energy use

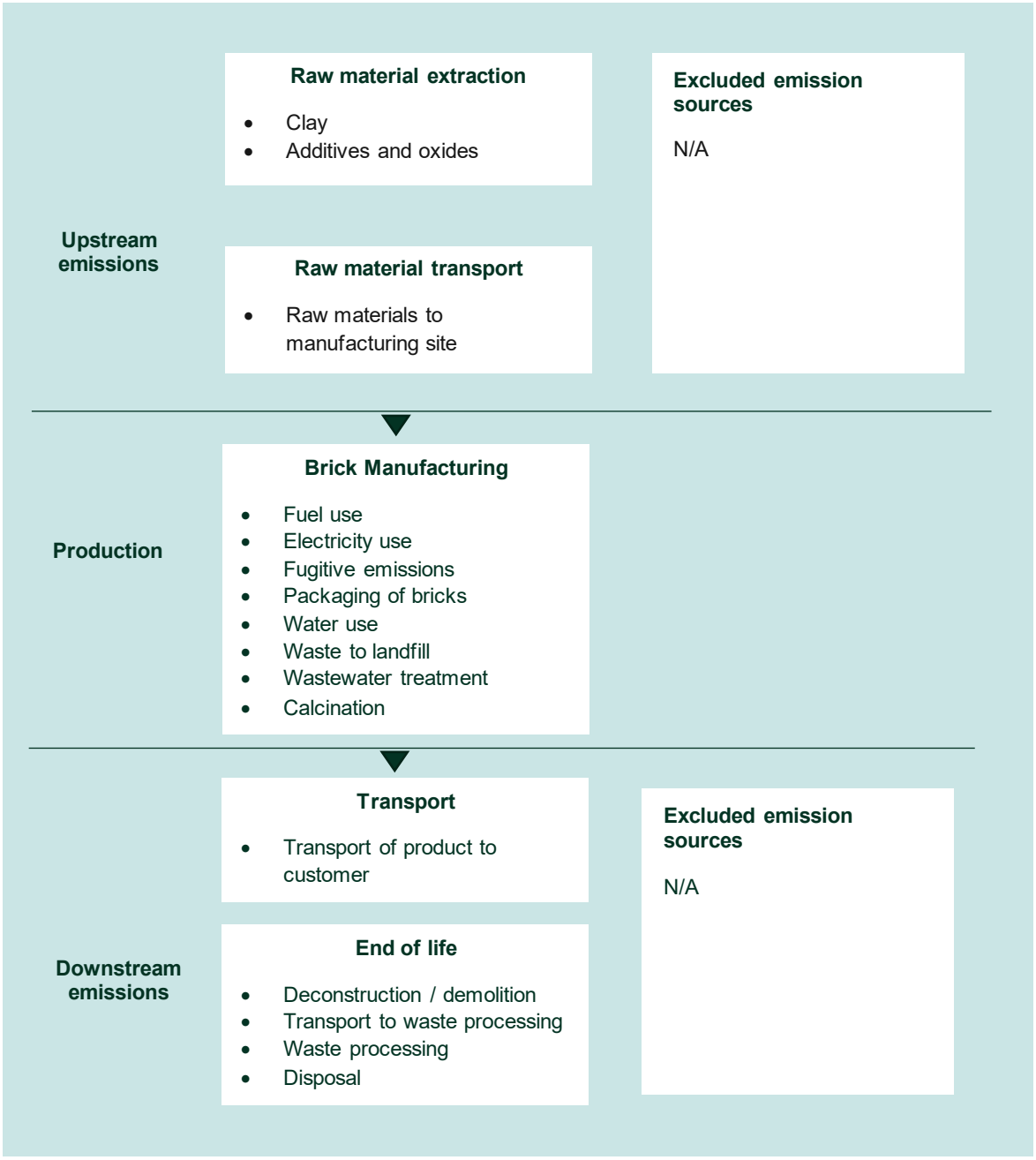
Capital goods

Construction / installation

Product use

Product process diagram

Cradle-to-grave boundary



4.EMISSIONS REDUCTIONS

Emissions reduction strategy

Brickworks' enhanced target is a 15% reduction in brick carbon intensity (Scope 1 and 2) by 2030, from baseline FY22, across combined Australian and North American operations. This intensity-based approach supports greater overall abatement, maintains flexibility for growth, and ensures continued transparent reporting of both absolute and intensity metrics.

The carbon target is also underpinned by our stretch target for a 10% increase in gas efficiency at Austral Brick plants by 2030 since FY2018. Since FY2018, which marked the start of a strategic 10-year investment vision to drive energy efficiency, our Austral Bricks business has seen a 7.4% improvement in gas efficiency.

Brickworks is committed to social and environmental responsibility. As a large and diverse building products manufacturer, we believe we have a responsibility to our shareholders, employees, industry, environment and the wider community. Brickworks accepts responsibility for environmental protection which is integral to the conduct of its commercial operations. Brickworks' key objective is to comply with environmental laws and regulations which relate to its environmental aspects and minimise environmental harm by operating in a manner that reaches an appropriate balance between environmental, technical, economic and social objectives.

Brickworks has over 12 years of experience in providing carbon neutral products from our Longford Tasmania facility which produces one of Australia's lowest embodied carbon fired clay bricks (See the Austral Bricks (TAS) Climate Active PDS). In FY2025 Brickworks published an Environmental Product Declarations for the majority of our Australian made brick products with the remaining EPD for Horsley Park Plant 2 on track to be published in FY2026.

Climate Related Strategy and Programs

In Australia, Brickworks Limited carbon emissions have followed a general downward trend, with a 61% decrease in FY2025 compared to the base year 2005/06 (Scope 1 and 2).

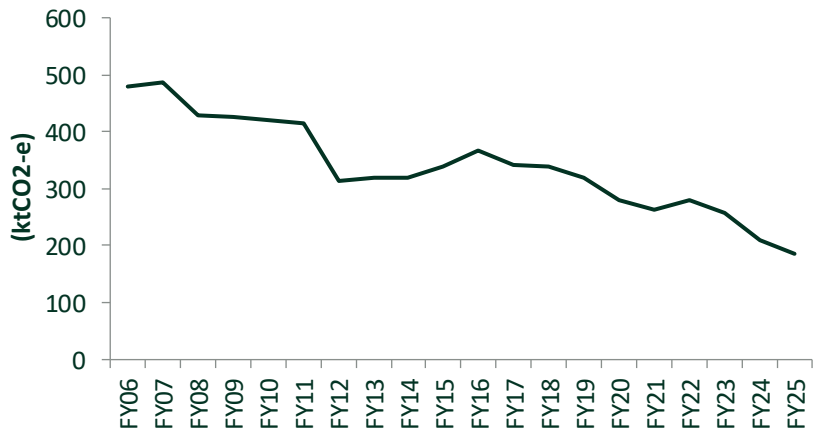


Figure 1. Brickworks Building Products Australia Greenhouse Gas Emissions Since FY06 (ktCO2-e)

The decrease is attributed to efficiencies gained from alternate fuels, manufacturing consolidation, equipment upgrades and operational improvements. Brickworks has invested over $400 million dollars since 2006 in equipment upgrades and operational improvements (including new plants) and carbon reduction strategies.

Our climate-related strategy, targets and programs build on these achievements, focusing on four key areas, including efficiency, lower carbon energy sources, innovation and improving the energy efficiency of homes over lifetime operations.

In addition to this Brickworks continue research and development projects that are embedded into production across the Brickworks Building Product operations including new products and efficiency gains. The relevant projects for Austral Bricks are described below.

Thermal mass

Provide leading research on passive thermal design enabling reduced lifetime energy use. We have invested in updating critical thermal mass research demonstrating benefits from thermal mass with the University of Newcastle. We continue to educate designers and customers on the advantages of thermal mass in design through tailored advice to optimise customer designs to enhance NatHERS ratings for seven stars and beyond.

Light-weighting and higher recycled content

Brickworks' dedication to excellence means our products are fired in some of the leading energy-efficient kilns, with ongoing research to reduce brick weight through enhanced core percentage and innovative core patterns, resulting in savings on clay, energy, fuel, and ease for bricklayers.

Raw material optimisation

Optimal raw material mixes can reduce embodied carbon or process heat demands. Brickworks commitment to innovation continues to be rewarded by significant developments in energy savings and premium product development. Ongoing research into traditional clay materials has provided us with a deep understanding of their physical and chemical properties. This knowledge allows us to successfully develop raw material optimised mixes which require less process heat energy, reducing the embodied carbon of bricks.

Exploring additional biofuels opportunities – We are actively advancing various feasibility studies for a series of projects designed to significantly boost the utilisation of bioenergy. These opportunities encompass harnessing additional landfill gas resources, integrating alternative organic raw materials, and generating on-site bioenergy through anaerobic digestion. Brickworks is assessing the feasibility of a 253 TJ renewable bioenergy facility to be located next to a brick plant in Horsley Park, NSW.

Emissions reduction actions

Brickworks has made significant sustainability strides, FY2025 emissions fell 28% from FY2022 levels, driven by maintenance activities and intermittent plant shutdowns, while brick carbon intensity improved 4% per m² globally.

Energy efficiency

- Brickworks has a long-standing commitment to investing in advanced kiln and manufacturing technologies, a key driver in achieving significant reductions in greenhouse gas emissions
- Investments of over $200 million into upgrades at Horsley Park Plant 2 has reduced achieved a 58% improvement in energy intensity compared to FY2018 and a 44% improvement in greenhouse gas intensity
- Austral Bricks is making progress towards its 10% gas efficiency FY2030 stretch target with FY 2025 improved by 7.4% compared to the FY2018 baseline.

Renewable electricity

- 3.7 MW of rooftop solar added across multiple sites, generating 1,030 MWh annually
- Upcoming installations include 1,460 kW in Melbourne.
- Recently installed Horsley Park Plant 2 set to cover 17% of electricity needs, equivalent to powering 442 Sydney households annually

Bioenergy

Brickworks has long-since used biogas and sawdust for renewable energy generation. Multiple plants are continuing to trial using small amounts of various biofuels as onboard fuel which replaces some of the energy traditionally provided by natural gas.

- In FY25, bioenergy made up 7% of Brickworks Australian energy mix. Bioenergy sources include sawdust and landfill gas.
- In FY25, development approval has been received for a bioenergy facility that could increase total bioenergy use to 14%, up from the current 7%
- Daniel Roberston Longford uses 73% bioenergy of the site's energy mix, avoiding over 80,000 tCO2 in emission over 12 years

Product light-weighting to improve energy efficiency

Using enhanced clay materials, our Queensland and NSW brick factories have increased core percentage for some products from 27-28% to 41%, reducing material use by 18%, cutting energy consumption, and maintaining/improving product quality while increasing kiln capacity. These gains are being rolled out across selected Austral Brick products.

Vehicles and logistics efficiency

Brickworks continuously modernises its trucks after five years to provide up to date safety features for the community and public and improved fuel efficiency. All company vehicles are fitted with telematics providing drivers and managers with real time monitoring and feedback on fuel efficiency indicators.

5.EMISSIONS SUMMARY

Emissions over time

In FY2024-25 Environmental Product Declarations (EPDs) were published for Horsley Park Plant 1, Bowral and Punchbowl (NSW), Wollert (Vic), Golden Grove (SA) and Rochedale (QLD). Where an EPD has been published, the carbon account is now based on the EPD. Brickworks also uses a simplified carbon calculator to estimate the emissions for transport to our customers for both domestic and export sales.

Horsely Park Plant 2 EPD is currently under development and is expected to be published in the FY2026 reporting period. Therefore, the Horsley Park Plant 2 emissions are based on the previous comprehensive life cycle assessment for our Australian brick manufacturing facilities.

Results below are modules A1-A3 + module C as published in the EPDs or calculated using the Brickworks custom built carbon calculator, designed by a certified Life Cycle Assessment (LCA) practitioner. It should be noted that module A4 is included when calculating requirements for offsets for our Opt-in certification. Module A4 is calculated on a case by case basis for our Opt-in customers using our custom built calculator.

The FY2024-25 reporting period has now been set as a new base year, replacing FY2018-19. There are methodology changes between the EPD product category rules (PCR) and the life cycle assessment initially completed for our initial climate active assessment. These changes include a shift to EPD based methodology (EN 15804+A2), the inclusion of biogenc emissions, and new system boundaries and factors that prevent alignment with previous years.

Emissions since base year	**Life cycle emissions (Modules A1-A3 + Module C)**						
Production location	(kg CO2-e/tonne of bricks)						
	Year 0 2018-19	Year 1 2019-20	Year 2 2020-21	Year 3 2021-22	Year 4 2022-23	Year 5 2023-24	Base Year[1] 2024-25
Wollert (Vic)	201.1	240.2	231.4	214.2	211.4	217.3	198
Golden Grove (SA)	175.9	215.0	169.2	172.0	219.1	217.6	231
Horsley Park Plant 1 (NSW)	202.2	241.3	203.9	203.7	206.3	193.2	n/a[2]
Horsley Park Plant 2 (NSW)	369.4	408.4	n/a	n/a	n/a[3]	215.8	222[4]
Bowral (NSW)	319.8	358.8	299.9	279.4	317.1	324.1	305
Punchbowl (NSW)	289.7	328.7	271.3	269.6	290.8	289.5	269
Cardup (WA)	328.1	367.2	337.2	320.0	315.1	n/a	n/a[5]
Rochedale (QLD)	213.0	252.1	212.0	210.6	229.6	226.2	201

[1] Methodology has changed to be based on recently published EPDs unless otherwise noted. Trends begin from the new base year (FY2024-25) and that earlier years in the table are not comparable.

[2] Plant 1 is in care and maintenance as of FY2025.

[3] Plant 2 shut down for major upgrades between FY2021 and FY2023. Upgrades to plant were fully commissioned in FY24.

[4] Based on the Brickworks custom built carbon calculator, designed by a certified Life Cycle Assessment (LCA) practitioner. EPD currently under development and expected to be published in FY26.

[5] Cardup factory has been in care and maintenance since FY2024.

Performance against Brickworks' carbon target (15% reduction in brick carbon intensity (Scope 1 and 2) by 2030, from baseline FY22, across combined Australian and North American operations) is provided below. Performance is based on kgCO2e (Scope 1 and 2) per m2 of product. Brickworks' Scope 1 and 2 emissions has been externally limited assurance for NGERs reporting each year.

Performance against carbon target				
Year	2021-22	2022-23	2023-24	2024-25
% improvement from FY22 Baseline	0%	1.9%	3.8%	4.0%

Emissions summary

Life cycle stage	**tCO_2-e**
Upstream emissions	424.8
Product delivery	191.7
Downstream emissions	29.7
Attributable emissions (tCO_2-e)/ tonne	**646.2**

Product offset liability	
Emissions intensity per functional unit (average t CO2e/1 tonne of bricks)[6]	Commercial in confidence
Emissions intensity per functional unit including uplift factors	N/A
Number of functional units covered by the certification	Commercial in confidence
Total emissions (tCO_2-e) to be offset	**647**

[6] Emission intensity per functional unit is based on the actual data of products sold and transport to the project site.

Significant changes in emissions

There are methodology changes between the EPD product category rules (PCR) and the life cycle assessment initially completed for our initial climate active assessment. The key methodology changes are described in the significant changes in emissions section below.

- Accounting for biogenic emissions such as waste sawdust is required under the PCR whereas the National Greenhouse Account (NGA) factors used in the previous LCA model and Climate Active requirements do not contain any scope 3 emission factors for these biogenic materials.
- Market based electricity accounting (as required under the PCR) rather than location-based electricity accounting used in the previous model.

Use of Climate Active carbon neutral products, services, buildings or precincts

N/A

6. CARBON OFFSETS

Eligible offsets retirement summary

Offsets retired for Climate Active certification

Type of offset unit	Quantity used for this reporting period	Percentage of total units used
Australian Carbon Credit Units (ACCUs)	202	31.22%
Verified Carbon Units (VCUs)	445	68.78%

Project name	Type of offset unit	Registry	Date retired	Serial number	Vintage	Total quantity retired	Quantity used in previous reporting periods	Quantity banked for future reporting periods	Quantity used for this reporting period	Percentage of total used this reporting period
Paroo River North Environmental Project	ACCU	ANREU	2/09/2020	3,788,417,534 – 3,788,417,617	2019-20	84	20	0	64	9.89%
Paroo River North Environmental Project	ACCU	ANREU	2/09/2020	3,786,369,101 – 3,786,369,266	2019-20	166	28	0	138	21.33%
Usak Wind Power Plant, Turkey	VCU	Verra Registry	22/12/2021	8493-25265219-25269218-VCS-VCU-1590-VER-TR-1-1546-01012015-31122015-0	2015	4000	3555[7]	0	445	68.78%

[7] 2858 of these offsets have been transferred to the FY2024-25 Austral Bricks (TAS) PDS. These credits have been captured as "used in previous reporting period" to ensure no double counting of these units occurrs.

Co-benefits

Paroo River North Environmental Project KACCUs (ERF104646) This project establishes permanent native forests through assisted regeneration from in-situ seed sources (including rootstock and lignotubers) on land that was cleared of vegetation and where regrowth was suppressed for at least 10 years prior to the project having commenced.

International Units: Usak Wind Power Plant, Turkey is a wind farm in Banaz Town of Usak Province, providing renewable electricity to the Turkish grid. The project also stimulates the economic development as wind power, being an infinite and natural resource, is ecologically more sustainable than other fossil fuel-based energy generation. From a local perspective, the project provides employment opportunities for local people. Ancillary works are undertaken by local companies providing opportunities to advance technological capacity.

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

N/A

APPENDIX A: ADDITIONAL INFORMATION

Brickworks and Greening Australia Partnership

In 2025, Brickworks has established a partnership with Greening Australia to support Australian bushland restoration projects and through its carbon credits business, Canopy the selection of nature-based offsets to support our future FY2026 Climate active offerings.

Nature-based Carbon Credit Procurement (Australian & International Markets)

As a broker of carbon credits generated from Greening Australia projects and of high-quality third-party credits, Canopy is helping Brickworks meet our Climate Active certification. Canopy only sells high integrity nature-based ACCUs (Australian Carbon Credit Units) and international units verified under carbon standards that are fully compliant with the Australian Climate Active (carbon neutral) standard.

As a signatory to the voluntary Australian Carbon Industry Code of Conduct, Canopy Nature Based Solution is a signatory to the Carbon Market Institute's (CMI's) Carbon Industry Code of Conduct.

All profits from carbon offset brokerage are reinvested into Greening Australia's work.

We're proud to purchase a select portion of verified credits from large-scale, high-integrity projects to offset the emissions associated with our certified products. These offsets will be disclosed in future Climate Active Public Disclosure Statements.

Bush Regeneration Partnership (Non-Credit Generating)

Brickworks is proud to launch our new partnership with Greening Australia for bush regeneration.

Brickworks partners with Greening Australia to restore ecosystems and deliver broader environmental benefits beyond carbon offsets, while also working with Greening Australia's Canopy on nature-based offsets to support product carbon neutrality.

Through our partnership with Greening Australia, we're supporting targeted, landscape-scale restoration across NSW to create and protect critical habitat for the Glossy Black-Cockatoo. The Brickworks and Greening Australia partnership is contributing $50,000 funding in 2025–26 for habitat restoration for the Glossy Black Cockatoo.

APPENDIX B: ELECTRICITY SUMMARY

N/A

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

The following emissions sources have been assessed as attributable, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. These emissions are accounted for through an uplift factor. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant non-quantified emission sources	Justification reason
Minor ancillary materials	Immaterial (as described in the EPD)
Packaging of additives and oxides	Immaterial (as described in the EPD)

Data management plan for non-quantified sources

There are no non-quantified sources in the emission boundary that require a data management plan.

Excluded emission sources

Attributable emissions sources can be excluded from the carbon inventory, but still considered as part of the emissions boundary if they meet **all three of the below criteria**. An uplift factor may not necessarily be applied.

1. A data gap exists because primary or secondary data cannot be collected **(no actual data).**
2. Extrapolated and proxy data cannot be determined to fill the data gap (**no projected data**).
3. An estimation determines the emissions from the process to be **immaterial (less than 1% of emissions**).

Emissions Source	No actual data	No projected data	Immaterial
No excluded emission sources			

APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. To be deemed attributable, an emission must meet two of the five relevance criteria. Emissions which only meet one condition of the relevance test can be assessed as non-attributable and therefore are outside the carbon neutral claim. Non-attributable emissions are detailed below.

1. **Size** The emissions from a particular source are likely to be large relative to other attributable emissions.

2. **Influence** The responsible entity could influence emissions reduction from a particular source.

3. **Risk** The emissions from a particular source contribute to the responsible entity's greenhouse gas risk exposure.

4. **Stakeholders** The emissions from a particular source are deemed relevant by key stakeholders.

5. **Outsourcing** The emissions are from outsourced activities that were previously undertaken by the responsible entity or from outsourced activities that are typically undertaken within the boundary for comparable products or services.

Non-attributable emissions sources summary

Emission sources tested for relevance	Size	Influence	Risk	Stakeholders	Outsourcing	Justification
Head Office business travel	N	Y	N	N	N	Corporate business travel emissions (at 738-780 Wallgrove Rd, Horsley Park NSW) have been excluded from the boundary, as these emission sources are not attributable to the products.
Head Office energy use	N	Y	N	N	N	Corporate head office energy use emissions (at 738-780 Wallgrove Rd, Horsley Park NSW) have been excluded from the boundary, as these emission sources are not attributable to the products.
Capital goods	N	Y	N	N	N	The embodied emissions of capital goods (plant equipment, buildings, infrastructure) are considered non-attributable to the product. This is consistent with industry standard LCAs for construction products, as outlined in the Product Category Rules (PCR) of the International EPD System and has been verified by the Registered Consultant that has compiled our inventory.
Construction and installation	N	N	N	N	N	Austral Bricks cannot influence or determine site specific installation practices, operational energy/water, maintenance, repair, replacement or refurbishment scenarios. These stages therefore do not meet the relevance criteria for inclusion in the product carbon neutral boundary.
Product sse stage	N	N	N	N	N	Austral Bricks cannot influence or determine site specific installation practices, operational energy/water, maintenance, repair, replacement or refurbishment scenarios. These stages therefore do not meet the relevance criteria for inclusion in the product carbon neutral boundary.

An Australian Government Initiative

Climate Active