



## Report on verification type audit of a carbon neutral claim against the National

### *Audited body*

<b>Name and address of audited body (Business Registered Address)</b>	Austral Bricks (Tas) Pty Ltd 738-780 Wallgrove Road, Horsley Park NSW 2175
<b>Name of contact person for audited body</b>	Jessica French
<b>Position title</b>	Energy & Sustainability Manager
<b>Contact person phone number</b>	08 9261 9918
<b>Contact person email address</b>	Jessica.french@brickworks.com.au
<b>Audited body's street address (Facility Address)</b>	Cnr of Cressy Road & Weston St, Longford TAS 7301

### *Audit description*

<b>Kind of audit engagement</b>	Verification
<b>Products covered by engagement</b>	Bricks and pavers (manufactured at Austral Bricks Tasmania, Brickworks' operation in Longford Tasmania)
<b>Reporting period covered by engagement</b>	1 July 2018 to 30 June 2019
<b>Date terms of engagement signed</b>	26 April 2019
<b>Date audit report signed</b>	19 December 2019

### *Audited emissions inventory [2018–19]*

<b>Audited Scope 1 emissions (tonnes CO<sub>2</sub>-e)</b>	2,320
<b>Audited Scope 2 emissions (tonnes CO<sub>2</sub>-e)</b>	576
<b>Audited Scope 3 emissions (tonnes CO<sub>2</sub>-e)</b>	2,158
<b>Emissions reduced through LGCs (tonnes CO<sub>2</sub>-e)</b>	0
<b>Self generated ACCUs voluntarily retired and claimed as emission reductions</b>	n/a
<b>Total retired offsets (tonnes CO<sub>2</sub>-e)</b>	5,054

**Auditor details**

<b>Name of audit team leader</b>	Dr Paul Adams
<b>Organisation</b>	Carbon Intelligence Pty Limited
<b>Email</b>	paul.adams@carbonintel.com.au
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<b>Address</b>	Level 29, Chifley Tower, 2 Chifley Square, Sydney, NSW 2000
<b>Names and contact details of other audit team members if applicable</b>	Andrew Gunst, CEO, Carbon Intelligence Pty Limited Certified Measurement & Verification Professional (CMVP) Level 29, Chifley Tower, 2 Chifley Square, Sydney, NSW 2000 Andrew.Gunst@carbonintel.com.au
<b>Lead auditor's relevant qualifications, registrations and credentials</b>	Registered Greenhouse and Energy Auditor (RGEA 0160/2012) Fellow Chartered Accountant and Practising Certificate (ICAEW) PhD Mechanical Engineering BSc Mathematics, Operational Research & Statistics

Carbon Intelligence confirms that we are not aware of any actual or perceived conflict of interest in having completed this engagement. Paul Adams confirms that he has not carried out more than four previous consecutive audits for Austral Bricks (Tas) Pty Ltd.

**Report of factual findings**

Carbon Intelligence was engaged to undertake a verification engagement of Austral Bricks (Tas) Pty Ltd's carbon neutral claim for Bricks and Pavers in accordance with the requirements set out in the *National Carbon Offset Standard for Products and Services* (the standard). The procedures set out below have been applied to the documentation that forms and supports the carbon neutral claim. Where the carbon neutral claim is used as a basis for certification against the standard, the Australian Government Department of the Environment and Energy determines whether the factual findings provide a reasonable basis for certification. We do not express any conclusion, nor do we provide any assurance regarding the carbon neutral claim or certification.

**Factual findings**

The procedures were performed to ensure the carbon neutral claim was in accordance with the requirements set out in the *National Carbon Offset Standard for Products and Services*.

The procedures performed and the factual findings obtained are as follows:

Test performed	Factual findings	Errors, exceptions or contraventions identified
<b>AUP1: Preparation of the product greenhouse gas inventory</b>		
Verify that the product GHG inventory has been prepared in accordance with current international standards.	<p>The product GHG inventory has been prepared by following the principles of the GHG Protocol and life cycle approach established by ISO LCA standards 14040 (2006) and 14044 (2006).</p> <p>A Basis of Preparation document has been produced for reporting Scope 1 and Scope 2 emissions under NGER. There is also a GHG Inventory calculation spreadsheet and PDS which explains the assumptions.</p>	No panel review has been undertaken, therefore the data may not be used for comparative assertions against other products that are disclosed to the public. This is due to the ISO 14000 series requiring a panel review of the LCA itself.
Verify that the time period for the product GHG inventory has been clearly stated and is for the correct reporting period.	The time period 1 <sup>st</sup> July 2018 to 30 <sup>th</sup> June 2019 is clearly stated in the product GHG inventory, Public Disclosure Summary (PDS), and supporting documents. This is for the correct reporting period.	None.
<b>AUP2: Product or service scope and emissions boundary</b>		
Verify that the product or service has been fully described.	The “2019 Public Disclosure Summary” (PDS) document provides a detailed description of the product with key assumptions clearly explained.	None.
Verify that the functional unit or declared unit has been described.	<p>Yes, the functional unit is given as “1,000 Single Brick Equivalent (SBEs) of bricks or pavers manufactured in Longford and used in various applications throughout Tasmania, interstate and overseas.”</p> <p>Note that the GHG inventory has been developed for the whole site operations at Longford, hence the functional unit is used more for calculating the total material inputs (and hence emissions) associated with each type of brick and paver. Each product has a different recipe to derive the final brick structure and appearance so the inputs consumed are derived from the total production over the year for each product at Longford, the Product’s recipe, and the SBEs produced.</p>	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
Verify that all material uncertainties are clearly documented and valid.	Most of the GHG inventory data has a reasonably high accuracy as it is based on primary data obtained from the Longford plant operations. All key assumptions and data sources are clearly referenced with supporting data provided. The main uncertainties are the reuse and recycling of bricks and pavers at the end of their life cycle hence these are excluded from the GHG inventory. We note that the counterfactual, disposal of bricks or pavers to landfill, would result in no material additional carbon emissions because they do not biodegrade and emit greenhouse gases when landfilled.	None.
Verify that the emissions boundary has been clearly defined.	The emissions boundary described in the PDS and in the product GHG annual inventory is clearly defined in accordance with section 2.3.1 of the Product and Service Standard.	None.
Verify that any exclusions from the emissions boundary have been clearly stated and justified.	The PDS clearly states and justifies the GHG emissions sources that have not been quantified. The impact of excluding these sources is not expected to materially affect the overall total emissions.	None.
<b>AUP3: Calculation of emissions</b>		
Verify that all emissions sources have been clearly identified and catalogued.	All sources of emissions from within the emissions boundary have been clearly identified and catalogued in accordance with the instructions in section 2.3.2 of the Product and Service Standard.	None.
Verify that all exclusions of emissions from within the emissions boundary have been clearly stated and justified.	There are no exclusions of emissions arising from attributable sources. The non-quantified emissions are clearly stated and justified in the PDS.	None.
Verify that renewable energy certificates have been treated correctly.	There are no emissions associated with renewable energy certificates that have been included in the product GHG inventory.	None.
Verify that any carbon neutral claimed products/services are genuinely National Carbon Offset Standard certified.	There are no carbon neutral claimed products/services included in the product GHG inventory.	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
Verify that Scope 1 and Scope 2 emission factors have been sourced from approved sources.	<p>Approved Scope 1 and 2 emission factors have been used in accordance with the requirements set out in section 2.3.5 of the Product and Service Standard. Most of these are derived from NGA factors and the NGER (Measurement) Determination. Where this is the case, the correct factors were used.</p> <p>There was some uncertainty over the scope 2 factor to use for electricity in Tasmania due to minor differences between the most recent NGA and NGER factors. To be conservative the GHG inventory has included the higher emission factor.</p>	Some minor (not material) differences were identified for some emission factors. These were corrected by Austral Bricks prior to finalising their GHG Inventory / Carbon Account.
Verify that Scope 3 emission factors have been sourced from appropriate sources.	<p>All Scope 3 emission factors have been sourced from appropriate sources in accordance with section 2.3.5 of the Product and Service Standard.</p> <p>The scope 3 emission factor for natural gas use in Tasmania also had some uncertainty, hence the site has used Queensland as a proxy which is expected to be similar or slightly conservative (higher).</p>	None.
Verify activity data for all material emission sources identified in the product GHG assessment.	<p>All source data values for material sources of emissions match the values inputted into the product GHG inventory. This has been validated by the activity data provided by Austral Bricks, for example production information including material flows, energy and fuel use, transportation, mass and energy balances, waste, financial information, etc. Our detailed testing agreed activity to source data including production records and externally audit NGER data.</p>	None.
Verify that emissions have been calculated correctly for each emissions source.	<p>Calculations have been re-performed and agreed to be accurate and in accordance with section 2.3.5 and Appendix B of the Product and Service Standard.</p>	None.
Verify that total emissions have been correctly calculated.	<p>All individual emission sources been accurately summed to give the total attributable emissions for the full life cycle of the product. This is documented in the Carbon Account and supporting spreadsheet. We re-performed the emission calculations to confirm the accuracy of the totals.</p>	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
<b>AUP4: Product GHG inventory analysis</b>		
Verify that the data collection procedures and calculation methodologies have been clearly stated.	All data collection procedures and calculation methodologies are clearly stated in the supporting documentation provided for the verification.	None.
Verify that the sources of information and activity data have been clearly identified.	All sources of information and activity data have been clearly identified in the GHG Inventory, Carbon Account and supporting documentation provided.	None.
Verify that regional variations in emission factors have been accounted for.	Correct national and state emissions factors have been applied when calculating emissions that occur in particular locations, i.e. Tasmania and Australia.  Where a choice of factors was available, the higher of the factors was used.	None.
Verify that data periods and database and software versions used have been disclosed.	The GHG inventory has been compiled in Excel, hence no software/database is used. Data used is obtained from Brickworks systems with much of this data externally audited as part of the annual NGER assurance engagement. Reliance is therefore placed on integrity of the data collected through on site operations which use Brickworks management systems and financial software (SAP).  The data periods used for emission factors have been clearly disclosed in the GHG inventory.	None.
Verify that assumptions and constraints have been clearly described and justified.	To the best of our knowledge and belief all assumptions and constraints been clearly described and justified.	None.
<b>AUP5: Base year identification</b>		
Verify that the Product GHG inventory base year has been correctly identified.	The product GHG inventory base year (2012/13) has been correctly identified in accordance with section 2.3.3 of the Product and Service Standard.	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
Verify that significant changes in the carbon account since base year have been disclosed.	<p>There are two (2) changes from the base year.</p> <p>Firstly, emissions from calcination have been included whereas for previous reporting periods up to 2016-17 these were not included in the GHG inventory. Austral Bricks have retrospectively accounted for this by retiring additional carbon credits.</p> <p>Secondly, in previous reporting periods sawdust was reported as dry when it was in actual fact green. This impacts the moisture content and calorific value and therefore the emission factor applied. The site has updated this in the GHG inventory and noted this on the Carbon Account.</p>	None.
<b>AUP6: Environmental Product Declaration verification</b>		
Confirm that the EPD has been verified in line with the requirements of the Australasian EPD Programme.	n/a – this application does not use an EPD.	None.
<b>AUP7: Calculation of emissions</b>		
Verify that renewable energy certificates have been treated correctly.	n/a – there are no emissions associated with renewable energy certificates that have been included in the product GHG inventory.	None.
Verify that any carbon neutral claimed products/services are genuinely National Carbon Offset Standard certified.	There are no carbon neutral claimed products/services included in the product GHG inventory.	None.
Verify that Scope 1 and Scope 2 emission factors have been sourced from approved sources.	Approved Scope 1 and 2 emission factors been used in accordance with the requirements set out in section 2.3.5 of the Product and Service Standard. See above (AUP3).	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
<b>AUP8: Emissions reductions</b>		
Verify that the emissions reduction strategy has been adequately described.	<p>The site has documented the emissions reduction strategy in the PDS. This is relatively high level as many of the potential emissions reductions have already been implemented and the site has a continuous improvement approach, i.e. emission reduction measures are always looked for, in particular when capital equipment is due for upgrade or replacement.</p> <p>During the audit some additional description was provided over the gas efficiency measures which have been implemented for all Brickworks brick kilns in 2019. This should reduce emissions due to more efficient plant however this is difficult to quantify.</p>	The site could consider providing some additional description of the future potential emission reduction measures which may be implemented.
Verify that emissions reduction measures have been considered and documented.	Emission reduction measures have been considered and documented in accordance with sections 2.4.1 and 2.6 of the Product and Service Standard.	None.
Verify that quantities of planned emissions reductions have been estimated where practicable.	Planned emissions reductions have not been estimated as these are not documented in the PDS.	There are no significant planned upgrades hence no estimations provided.
Verify that total estimated emissions reductions have been calculated where practicable.	<p>Austral Bricks have implemented several emission reduction measures over the last few years. Only one reduction measure has been described and quantified in the PDS, being the upgrade to its lighting systems throughout the factory. This is estimated to reduce the factory's scope 2 carbon emissions by 0.9 tonnes per year.</p> <p>Other reduction measures have not been quantified.</p>	None.
<b>AUP9: Carbon offsetting</b>		
Assess the offset units.	All the offsets units meet the requirements of the NCOS Products and Services standard. These are provided in the PDS and can be checked by following the links contained therein.	None.



Test performed	Factual findings	Errors, exceptions or contraventions identified
Assess reporting of offsets banked for future years.	<p>Austral Bricks has reported the offsets held for future reporting years within the PDS. These include:</p> <p>1635 units retired and banked for the 2020 reporting year  <a href="#">7068-368110465-368116464-VCU-034-APX-IN-1-1197-01012016-31122016-0</a></p> <p>1000 units retired and banked for the 2020 and 2021 reporting years  <a href="#">4147-176334640-176335639-VCU-016-MER-AU-14-641-16042012-15042013-0</a></p>	None.
Assess reporting of previously banked offsets used this reporting period.	We reviewed the Carbon Account and Carbon Credits held and retired over time. This shows the total emissions, the credits used, and the balance that is banked. All banked offsets used in this reporting period are transparently reported.	None.
<b>AUP10: Record keeping, data management and quality control</b>		
Verify the adequacy of record keeping and data management practices.	Record keeping and data management practices have been carried out in accordance with the requirements set out in section 2.3.4 of the Product and Service Standard.	None.
Verify that records of reporting documents have been kept.	Details of the required annual inventories, product disclosure summaries and audit reports for the duration of the carbon neutral claim are understood to be included in records management systems.	None.
Verify that responsibility for record keeping is clearly stated.	<p>Jessica French (Energy &amp; Sustainability Manager) has been nominated as the person responsible for establishing and maintaining the records.</p> <p>Brickworks have established quality control procedures around the secure retention of data which are considered to be robust and sufficient for compliance with NCOS record keeping requirements.</p>	None.

Test performed	Factual findings	Errors, exceptions or contraventions identified
Verify that quality control practices have been described.	Austral Bricks manufacturing facilities are guided by ISO 14001:2009 Environmental Management Systems, ISO 9001:2015 Quality Management Systems, and OHSAS 18001:2007 Health & Safety Management Systems.	None.
<b>AUP11: Trade mark use and marketing</b>		
Verify that adequate records have been kept of use of the Carbon Neutral Certification Trade Mark.	A list of where the Trade Mark is maintained by the company. This is also described in the PDS. Austral Bricks is currently reviewing its use of the trade mark as the marketing material is being updated following the launch of Climate Active.	None.
Verify that approval has been sought for Trade Mark use in accordance with the User Guide.	All documents are sent to the Carbon Neutral team for approval prior to publication. An email record is retained to confirm any use of the Trade Mark in marketing material has been approved.	None.
<b>AUP12: Reporting documents</b>		
Verify that the reporting documents are consistent.	All reporting documents have been reviewed and found to be consistent.	None.
Verify the signed declaration in the Public Disclosure Summary.	The Public Disclosure Summary has been signed by David Johnson on 19 December 2019.	None.

## Documents reviewed

*This section provides details of all documents reviewed by the Auditor during the audit.*

Name or description of document	Document title / filename	Author and date prepared, and version if applicable
		<b>Key:</b> JF = Jessica French
Annual GHG Inventory (Carbon Account)	2019 Annual Carbon Account Report	JF, 18/12/2019 - Version 2
Public Disclosure Summary	2019 Public Disclosure Summary	JF, 18/12/2019 - Version 2
Excel version of the product GHG inventory including activity data emission factors, supporting data, and references	Data Overview 2018-19.xlsx	JF, 18/12/2019 - Version 2
Summary of yearly emissions and carbon credit units purchased and retired	Carbon Neutral credits over time.xlsx	JF, 17/12/2019 - Version 1
Brickworks NGER s19 Report	s19 Submission.pdf	Brickworks, Final version submitted to CER
Brickworks NGER Assurance Report	Brickworks NGER Assurance Report.pdf	EY Audit Report Final Version
Additive & Packaging Usage data	Additive & Packaging Usage.xlsx	JF, 25/11/2019 - Version 1
Bin Weights waste data	Bin Weights.xlsx	JF, 25/11/2019 - Version 1
Carbon Neutral Data Collection - Packaging & Transport	Carbon Neutral Data Collection - Packaging & Transport.xlsx	JF, 25/11/2019 - Version 1
Tasmania Staff Travel Report FY19	Copy of Tasmania Travel Report Detail - 01st July 19 - 30th June 19.xls	JF, 25/11/2019 - Version 1
Energy and Emissions Report Tasmanian Quarries FY19	EEC Report - ABTAS Quarries YTD 2018-19.xls	JF, 25/11/2019 - Version 1
Energy and Emissions Report Tasmania Operations	EEC Report - ABTAS YTD 2018-19.xls	JF, 25/11/2019 - Version 1
Details of Exported amounts	Export Data.csv	JF, 25/11/2019 - Version 1
Interstate Transport data	Interstate Transport.xlsx	JF, 25/11/2019 - Version 1
Local Deliveries - Trucks data	Local Deliveries - Trucks.xlsx	JF, 25/11/2019 - Version 1
NGA Factors 2019	national-greenhouse-accounts-factors-august-2019.pdf	Dept. of the Environment and Energy, August 2019
NCOS Products and Services Standard Manual	ncos-products-and-services.pdf	Dept. of the Environment and Energy, 2017
Tasmanian Sales by state data	Sales by state pathway WBM.xlsx	JF, 25/11/2019 - Version 1

***Other matters to be reported***

During the audit process the National Carbon Offset Standard (NCOS) was re-launched as 'Climate Active', refer to <https://www.environment.gov.au/climate-change/government/climate-active/certification>. It is important to note that as Austral Bricks were registered under NCOS, the reporting period, and audit commencement relate to NCOS requirements and documentation. Therefore the Climate Active Carbon Neutral Standard is not relevant for this verification. Nonetheless it is understood that Austral Bricks plan to transfer across to the new Standard in the future.

***Restriction on use of report***

This report is intended for solely for the use of the audited body and the Department of the Environment and Energy, solely for use to verify carbon neutral claims under the *National Carbon Offset Standard for Products and Services*. Accordingly, we expressly disclaim and do not accept any responsibility or liability to any party other than these intended users for any consequences of reliance on this report for any purpose.

Yours faithfully

P Adams

Paul Adams  
Audit Team Leader  
Carbon Intelligence  
19 December 2019