

National Carbon Offset Standard Carbon Neutral Program Independent Audit Report



An Australian Government Initiative

Austral Bricks Longford, Tasmania

Periodic (2015-2016) Verification



Australian Government

Department of Industry, Innovation, Climate Change,
Science, Research and Tertiary Education

SECTION 1 Audit Statement and Audit Findings

Organisation Being Audited

Organisation Name	Austral Bricks, Tasmania
Contact person	Taka Numata
Position title	NSW Innovation and Technical Manager
Telephone number	02 9830 7832
Email address	Taka.Numata@brickworks.com.au
Street address	Cresse Road, Longford, Tasmania, 7301

Carbon Neutral Certification Type

Type of certification (tick all applicable)	<input type="checkbox"/> Organisation	<input checked="" type="checkbox"/> Product/service
	<input type="checkbox"/> Part of organisation	<input type="checkbox"/> Event
Description of product / service / event or organisation	Clay bricks and pavers from Brickworks' Tasmanian operation	
Initial or periodic audit	Periodic Audit	

Auditor Information

Name of audit organisation	JTP Australia Pty Ltd
Name of lead auditor	Jean Wiegard
Names of audit team members (if applicable)	NA
Telephone number	0429378323

Email address

Jtp-aust@bigpond.net.au

NCOS Requirement	Confirmation and provide evidence
Lead auditor's NGER registration number	0095/2010
Is the lead auditor accredited to the international standard ISO 14065:2007?	No

JTP Australia confirms that we are not aware of any actual or perceived conflict of interest in having completed this engagement.

Jean Wiegard confirms that she has not carried out more than four previous consecutive audits for Austral Bricks Tasmania.

Scope of Audit

JTP Australia has been engaged to undertake an independent audit of Austral Brick Tasmania compliance with the National Carbon Offset Standard (NCOS) and the National Carbon Offset Standard Carbon Neutral Program Guidelines (the Guidelines), in order to maintain certification under the Carbon Neutral Program (CNP).

Jean Wiegard of JTP Australia conducted the audit in accordance with ASAE 3000. The audit has been planned and performed in accordance with the proposal approved by the participant to enable me to provide reasonable assurance regarding Austral Brick Tasmania.

NCOS Carbon Neutral Program Participant Responsibilities

The participant is responsible for preparing the NCOS Carbon Neutral Program reporting documentation and for maintaining an effective internal control environment and data management system, in accordance with the requirements of the NCOS and the Guidelines.

Auditor's Responsibilities and Procedures Performed

JTP Australia has undertaken the following procedures that are considered appropriate to be able to provide a reasonable level of assurance, with the exception of Scope 3 emissions for organisations which are only required to be audited to a limited level of assurance:

- Observation and review of relevant documentation;
- Site visit and discussions with relevant Brickworks/Austral Bricks personnel in relation to the production process, consumables used, data collection, systems, procedures, and controls;
- Discussions with relevant suppliers
- Sample testing of source data;

- Confirmation that the most relevant GHG emissions factors have been applied; and
- Confirmation that calculations are correct.

JTP Australia did not conduct any audit procedures with respect to the internal control environment and data management system of the applicant as a whole. As such, no assurance is provided on any internal control environment and data management system not associated with preparing the NCOS Carbon Neutral Program documentation.

The results of the audit procedures undertaken are set out in the following sections of the Report.

Inherent Limitations

Due to the inherent limitations in any internal control environment and data management system it is possible that fraud, error, or non-compliance with requirements of the NCOS or NCOS Carbon Neutral Program Guidelines may occur and may not be detected. Further, the audit process was not designed to detect all weaknesses or errors in the internal control environment and data management system so far as they relate to the scope of audit set out above, as the audit has not been performed continuously throughout the period and the procedures performed on the relevant internal information and data management system were on a test basis. Any extrapolation from this audit to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The audit opinion expressed in this Report has been formed on the above basis.

Assurance statement and opinion

Qualified opinion

In our opinion, except for the effects of the matter referred to in the qualification paragraph, the participant's Carbon Neutral Program annual reporting documents are, in all material aspects, in accordance with the National Carbon Offset Standard and National Carbon Offset Standard Carbon Neutral Program Guidelines.

Qualification Explanation

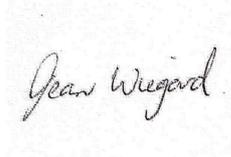
It was evident throughout the verification process that quality control of relevant data and appropriately trained staff inputting data into the LCA is lacking. It appears that some staff producing and/or working on data for the LCA do not have a clear understanding of the process. When incorrect data was entered into the LCA and then sent to the verifier, the verifier had to undertake an extensive investigation to determine the correct data and ensure that the data was then correctly entered into the LCA. This resulted in multiple updates of the documentation and long delays in the completion of the verification. Without this investigation there is the potential for the LCA to not accurately reflect total emissions.

Limitations on Use

This Audit Statement has been prepared for the management of the NCOS Carbon Neutral Program participant and for review by the Department of the Environment, solely for use in

relation to the NCOS Carbon Neutral Program. We disclaim any liability for reliance upon this Report by any other party or for any other purpose other than that for which it was prepared.

Confirmation of Audit Findings

Name of lead auditor	Jean Wiegard
Position of lead auditor	Director, JTP Australia Pty Ltd
Signature of lead auditor	
Date	20/02/2017

SECTION 2: Life Cycle Assessment

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Has the LCA been prepared in accordance with current international standards?</p> <p>For example: ISO 14040:2006, ISO14044:2006, or other international standards based on the ISO14040 series, for example PAS 2050.</p>	Yes	<p><i>Annual Inventory 2016.docx (page 1)</i></p> <p>The LCA has been prepared in accordance with ISO: 14040:2006, ISO: 14044:2006 and the GHG Protocol: Product Life Cycle Accounting and Reporting Standard</p>
<p>Has the time period for the LCA been clearly stated?</p>	Yes	<p><i>Annual Inventory 2016.docx (page 1)</i></p> <p>The time period for the LCA has been clearly stated as 1/07/2015-30/06/2016</p>
2.1 Product / Service Scope		
<p>Has the product been fully described, including its function and purpose?</p>	Yes	<p><i>LCA report 2016.docx (page 3)</i></p> <p>The product has been fully described including its function and purpose. The product is all clay bricks and pavers manufactured at the companies Longford facility for use in construction</p>

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Has a clear statement on the scope of the LCA been provided, including any limitations that may affect the validity of the LCA?</p>	<p>Yes</p>	<p><i>LCA report 2016.docx (page 6, 28)</i></p> <p>A clear statement on the LCA has been provided. The LCA covers the full life cycle of clay bricks and pavers manufactured in Longford, Tasmania.</p> <p>Limitations Scope 3 Natural gas emission factors are not available for Tasmania. As a proxy, the median value for non-metro regions was chosen (Queensland) from the available NGA factors. The company believe they have used a conservative approach.</p> <p>A cut-off approach was applied to cardboard recycling; effectively setting the emissions factor to zero. The company acknowledges that cardboard recycling will carry impacts (transport, sorting, re-pulping process, etc.) but also has benefits from replacing other fibre-sources. The net impact could be either positive or negative, but is expected to be significantly smaller than for the original production process emissions factor. The company believes that this approach has no material impact on the overall footprint of bricks and pavers.</p> <p>Literature data was used to estimate the emissions associated with plastic packaging. The emissions are predominantly based on European data sources, where possible adjusted for Australian circumstances. As packaging contributes about 1% to the total footprint, the company believes this has no material impact on the results</p> <p>The verifier agrees that each of the above limitations has no material impact on the total footprint.</p>

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Has the functional unit of the product been described?	Yes	<p><i>LCA report 2016.docx (page 18)</i></p> <p>The functional unit is 1,000 Single Brick Equivalents (SBEs) of bricks or pavers manufactured in Longford and used in various applications throughout Tasmania, interstate and overseas.</p>
Are all uncertainties within the LCA clearly documented and valid?	Yes	<p><i>LCA report 2016.docx (page 16)</i></p> <p>The uncertainties (fuel usage for clay extraction, production of some raw materials, transport of clay, raw materials and bricks to the construction site and at end of life) have all been clearly documented and in the opinion of the verifier are valid.</p>
<p>Has the system boundary been clearly defined, including all relevant stages of the product over its entire life cycle?</p> <p>A system boundary is best displayed as a flow chart.</p>	Yes	<p><i>Data overview 2015-16 04Jan 2016.xlsx ('System boundaries' worksheet)</i></p> <p><i>LCA report 2016.docx (page 10)</i></p> <p>The system boundary has been clearly defined including all relevant stages of the product over its life cycle.</p> <p>These stages are:</p> <ul style="list-style-type: none"> • Raw material extraction • Transport of raw materials to Longford • Brick and paver manufacturing at Longford • Packaging of fired products • Transport to customers • Application in works • Use and maintenance during their life time • Demolition and disposal at end-of-life <p>A comprehensive system boundary flow chart has been provided.</p>

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Have any exclusions from the system boundary been clearly stated and justified?	Yes	<p><i>LCA report 2016.docx (page 30)</i></p> <p>All exclusions from the system boundary have been clearly stated and justified. The exclusions are:</p> <ul style="list-style-type: none"> • Mortar and/or other materials used to bond bricks in their application as these are not supplied to clients by Austral bricks. • Use of bricks and pavers during their life time. Excluded on the basis that due to their inert nature there are no GHG emissions associated with their use. • Brick maintenance was excluded as the cleaning and maintenance of bricks and pavers in their application cannot be related to the functional unit. • Demolition: As the machinery used depends on the overall demolition job, the company found that they were unable to relate emissions to a single brick. • Infrastructure was excluded as it already existed. • Capital goods were excluded as they have a long lifetime and their impact on a single brick would be very small. • Land use emissions have been excluded due to the characteristics of the extraction process. • Sawdust has been treated as a zero-value by-product of sawmills. Therefore, no (forestry sector) land use emissions are allocated to the sawdust. <p>The verifier agrees that the above exclusions are justifiable.</p>

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
2.2 Emission Sources		
<p>Have all sources of emissions from within the system boundary been clearly identified?</p> <p>This should include emissions from the six GHGs included under the Kyoto Protocol.</p>	Yes	<p><i>Annual Inventory 2016.docx (Table 4)</i></p> <p><i>LCA report 2016.docx (page 13)</i></p> <p>All emissions sources from within the system boundary have been clearly identified e.g. diesel, natural gas, electricity, additive usage. The LCA considers the emission of greenhouse gases (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆) in line with the NCOS</p>
<p>Have any emission exclusions from within the boundary been clearly stated and justified and has the impact of the exclusions been considered?</p>	Not applicable	<p><i>LCA report 2016.docx (page 30)</i></p> <p>There are no emission exclusions from within the system boundary.</p>
2.3 Emissions Calculations		
<p>Has the purchase of GreenPower™ and/or the voluntary surrender of GreenPower™ eligible Large-scale generation certificates (LGCs) been correctly taken into account?</p>	Not applicable	<p><i>Annual Inventory 2016.docx (Table5)</i></p> <p>The company has not purchased any GreenPower™ or voluntarily surrendered GreenPower™ eligible Large-scale Generation Certificates (LGCs).</p>
<p>Have any purchases of NCOS certified carbon neutral products been correctly accounted for?</p> <p>Emissions from NCOS carbon neutral products are zero rated to avoid double counting. Only NCOS certified products can be accepted under the CNP.</p>	Not applicable	<p><i>LCA report 2016 V3.docx (page 31)</i></p> <p>No NCOS certified carbon neutral products have been purchased</p>

Requirement (Refer to NCOS Section 4.3)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Have Scope 1 and Scope 2 emission factors been sourced from the National Greenhouse Account Factors?	Yes	<p><i>Annual Inventory 2016.docx (Table 4)</i></p> <p><i>Data overview 2015-16 04Jan2016.xlsx</i></p> <p><i>'Emission Factors' worksheet</i></p> <p>Scope 1 and 2 emission factors have been sourced from the National Greenhouse Account Factors August 2016 edition</p>
Have Scope 3 emission factors been sourced from the most current and appropriate source?	Yes	<p><i>Annual Inventory 2016.docx (Table 4)</i></p> <p><i>Data overview 2015-16 04Jan2016.xlsx</i></p> <p><i>'Emission calculations' worksheet</i></p> <p>Scope 3 emission factors have been obtained from the most appropriate source</p> <p>For example:</p> <ul style="list-style-type: none"> • Transport of face additives to Longford – NGGI Analysis of Recent Trends and Greenhouse Indicators 1990-2005. • Solid waste to landfill - NGERS Method 1 NGA Factors 2016. • Business travel - ICAO flight emissions calculator. • Packaging - Emission factors established based on literature data (SimaPro/ecoinvent data).

Have the emissions attributable to each emission source been calculated correctly?

Minor CARs

Minor CAR 1

Copy of data overview 2015-16 BR-RR.xlsx

- Electricity data for July, August, September and November 2015 has been incorrectly reported
- Documentation relating to Caltex fuel data has not been supplied
- Emission factor for LPG for transport is incorrect

Minor CAR 2

Data overview 2015-16 06Dec 2016.xlsx

- Clay Extraction and Transport Worksheet. Wyena – the additional 700 litres has not been taken into account. Share this equally between diesel for mining (should give you 0.49 L/m³) and diesel for transport (4.09 L/m³). Equations in Columns F and G in Clay extraction and transport worksheet are incorrect
- Electricity data for July 2015 is still incorrect

Minor CAR 3

Data overview 2015-16 08Dec16.xlsx, Data overview 2015-16 13Dec16.xls

- Relevant transfer and sales data and contractor delivery volumes has not been incorporated into the LCA
- 'Business Trips by Month' worksheet. Data has not been included (rows 54-60)
- Reported quantity of coal used during the relevant period is incorrect

Minor CAR 4

Data overview 2015-16 15Dec16.xlsx

- Scope 1 company cars (petrol) emissions have not been incorporated into the uncertainty calculations
- H11 in 'Transport of bricks' worksheet has not been calculated correctly
- 'Bricks Carbon Footprint' worksheet Column EU - The formula needs to change to incorporate rows G12-G26 of 'Overhead Emissions'

<p>Have the emission calculations been quantified correctly for each life cycle stage of the functional unit?</p>	<p>Yes</p>	<p><i>Data overview 2015-16 04Jan2016.xlsx</i> <i>'Results-graphs' worksheet 'Life Cycle Emissions Breakdown'</i></p> <p>Emission calculations have been quantified correctly for each life cycle stage of the functional unit</p>
<p>Does the sum of all individual emission sources accurately represent the total attributable emissions for the full life cycle of the product?</p>	<p>Yes</p>	<p><i>Annual Inventory 2016 V5.docx (Table 4)</i> <i>Data overview 2015-16 04Jan2016.xlsx</i> <i>'Bricks – carbon footprint' worksheet</i></p> <p>The sum of all individual emission sources accurately represents the total attributable emissions for the full life cycle of the product</p>
<p>2.4 LCA Analysis</p>		
<p>Have the data collection procedures and calculation methodologies been clearly stated?</p>	<p>Yes</p>	<p><i>Annual Inventory 2016.docx (Table 4)</i></p> <p>Data collection procedures and calculation methodologies have been clearly stated.</p> <p>For example, Some FY 2015-2016 data have been sourced from usage invoices (fuel cards, gas electricity) and monthly consumption reports (sawdust, coal).</p> <p>Methodologies and emission factors used include Method 1 from the National Greenhouse and Energy Reporting (Measurement) Determination, NGA Factors 2016, NGGI Analysis of Recent Trends and Greenhouse Indicators 1990-2005 and SimaPro/ecoinvent data)</p>
<p>Have the sources of all information and activity data been clearly identified?</p>	<p>Yes</p>	<p><i>Annual Inventory 2016.docx (Table 4)</i> <i>Data overview 2015-16 04Jan2016.xlsx</i> <i>'Emission Factors' worksheet</i></p> <p>The sources of all information and activity data have been clearly identified. For example: Company vehicle fuel use – litres sourced from fuel cards, electricity and gas usage from provider invoices.</p>

<p>Have all the allocation of emissions been clearly stated and justified?</p>	<p>Yes</p>	<p><i>LCA report 2016 V3.docx (page 12)</i></p> <p>The allocation of emissions has been clearly stated and justified.</p> <p>Allocation was applied to the manufacturing process. The Longford plant can produce at least 75 varieties of bricks and pavers, in different shapes, sizes, colours and textures.</p> <ul style="list-style-type: none"> • Fuel and energy use and waste generated data are available at site level, not at a product level. • Overhead processes (e.g. water use, business travel, company vehicles, etc.) are also applicable for the whole site, not any specific product. • The kiln firing process is the main consumer of energy in a brick plant <p>The kiln temperature at which the bricks are fired typically ranges from 1100 to 1135 degrees Celsius. The company considers this range to be small enough to treat all products equal from a temperature point of view. The duration of the firing process is also similar between brick types. Based on the above, the company determined that the (dried) mass of the products was the most appropriate parameter to attribute kiln energy across all the products. This meant that all site level energy data (energy, kiln fuels) was attributed to individual products based on their share of the annual production mass. The company acknowledges that the decision impacts on the emissions intensity of individual bricks, but not on the total carbon footprint.</p> <p>The verifier is in agreement with the allocation of emissions.</p>
<p>Has the geographical representativeness of the data been considered? Have any local and/or regional variations in the calculation of emissions been clearly stated?</p>	<p>Yes</p>	<p><i>LCA report 2016 V3.docx (page 17)</i></p> <p>The geographical representativeness of the data has been considered. The data used reflects the production of bricks and pavers in Longford, actual supplier locations and use of the products in Tasmania, interstate and overseas.</p>

Has the data period been clearly stated?	Yes	<p><i>Data overview 2015-16 04Jan2016.xlsx</i> <i>'Annual Consumables Inventory' worksheet</i></p> <p>The data period in the report has been clearly stated as the financial year 2015-16.</p>
Have all assumptions and constraints been clearly described and justified?	Yes	<p><i>Annual Inventory 2016.xlsx (Table 6)</i></p> <p>All assumptions have been clearly stated and justified and apply to:</p> <ul style="list-style-type: none"> • Scope 3 emissions, natural gas • Cardboard collected for recycling • Solid waste sent to landfill • Clay extraction and transport to Longford • Face and body additives • Transport of sawdust to Longford • Raw materials: Density of clay, sawdust, coal • Plant energy use • Plastic packaging materials • Timber Pallets, packaging <p>• Transport of bricks to landfill and recycling facility</p> <p>It is the opinion of the verifier that the above assumptions are justified.</p>
2.5 Assessment of Uncertainty		
Has uncertainty of Scope 1 emission estimates been assessed in accordance with the National Greenhouse and Energy Reporting (Measurement) Determination?	Yes	<p><i>Annual Inventory 2016 V4.xlsx (Table 7)</i></p> <p>The uncertainty of scope 1 emissions (11.5%) has been assessed in accordance with the National Greenhouse and Energy Reporting (Measurement) Determination.</p>
2.6 Base Year Recalculation Policy		
Has the LCA base year been correctly identified (i.e., the first year for which the LCA has been completed)?	Yes	<p><i>Annual Inventory 2016 V4.xlsx (Page 1)</i></p> <p>The LCA base year has been correctly identified as 1/07/12 to 30/06/13</p>

Has a base year recalculation policy been included that is consistent with the GHG Protocol and NCOS?

Yes

Consideration to be given to mergers, divestments, acquisitions, organic growth and decay, insourcing, outsourcing and significance thresholds.

NCOS Section 4.3.2 and the GHG Protocol Product Life Cycle and Accounting Standard Ch. 14 and the GHG Protocol Corporate & Accounting Standard Ch. 5 provide specific guidance.

Annual Inventory 2016 V4.xlsx (Page 15)

A base year recalculation policy has been included that is consistent with the GHG Protocol and NCOS.

Austral Bricks Longford have a comprehensive Base Year recalculation policy which requires the company to review and account for changes in operational boundaries, quantification methodologies, significant errors, mergers, divestments, acquisitions, organic growth and decay, insourcing, out-sourcing that may lead to changes in emissions.

SECTION 3: Greenhouse Gas Inventory- **NOT APPLICABLE**

This section must be completed for participants seeking to obtain or maintain certification for an organisation (or specified part of an organisation) under the NCOS Carbon Neutral Program. This section documents the review of the application or annual reporting documents and supporting information.

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Has the GHG Inventory been prepared in accordance with current domestic and international standards?</p> <p>For example: ISO 14064.1:2006, National Greenhouse and Energy Reporting Act and supporting documentation, and Greenhouse Gas Protocol</p>	Choose an item.	
<p>Has the time period for the GHG Inventory been clearly stated?</p>	Choose an item.	
3.1 Organisation Description and Boundary		
<p>Has the GHG Inventory base year been correctly identified (i.e., the first year for which the Inventory has been completed)?</p>	Choose an item.	
<p>Has the organisational boundary been transparently documented?</p> <p>The boundary is best displayed diagrammatically.</p>	Choose an item.	

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Does the organisational boundary accurately reflect the operations undertaken by the organisation/part of organisation?	Choose an item.	
Have all exclusions to the organisational boundary been described and justified?	Choose an item.	
Have the methodologies used to determine the organisational boundary (e.g., “operational control” test) been clearly identified?	Choose an item.	
3.2 Emission Sources		
<p>Have all Scope 1 and Scope 2 sources of emissions from within the organisational boundary been included in the GHG Inventory?</p> <p>This should include emissions from the six GHG’s included under the Kyoto Protocol.</p>	Choose an item.	
Have Scope 3 emission sources within the established organisational boundary been identified?	Choose an item.	
Have any Scope 3 emission sources been excluded? If so, are the exclusions clearly stated and justified and the impact of the exclusions been considered?	Choose an item.	

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
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3.3 Calculation Methodology and Emission Factors

Have the sources of all information and activity data been clearly documented?	Choose an item.	
Have Scope 1 and Scope 2 emission factors been sourced from the National Greenhouse Accounts Factors?	Choose an item.	
Have Scope 3 emission factors been sourced from the most current and appropriate source?	Choose an item.	
Has the purchase of GreenPower™ and/or the voluntary surrender of GreenPower™ eligible LGCs been correctly taken into account?	Choose an item.	
<p>Have all purchases of NCOS certified carbon neutral products been correctly accounted for?</p> <p>Emissions from NCOS carbon neutral products are zero rated to avoid double counting. Only NCOS certified products can be accepted under the CNP.</p>	Choose an item.	

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Have all assumptions relating to the calculation of greenhouse gas emissions been clearly described and justified?	Choose an item.	
3.4 Emissions Calculations		
Have the emission calculations been quantified correctly for each emission source?	Choose an item.	
Does the sum of all individual emission sources accurately represent the total attributable emissions for the organisation/part of the organisation included within the GHG Inventory?	Choose an item.	
3.5 Assessment of Uncertainty		
Has uncertainty of Scope 1 emission estimates been assessed in accordance with the National Greenhouse and Energy Reporting (measurement) Determination?	Choose an item.	
3.6 Base Year Recalculation Policy		
Has the GHG Inventory base year been correctly identified (i.e., the first year for which the GHG Inventory has been completed)?	Choose an item.	

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Has a base year recalculation policy been included that is consistent with the GHG Protocol and NCOS?</p> <p>Consideration to be given to mergers, divestments, acquisitions, organic growth and decay, insourcing, outsourcing and significance thresholds.</p> <p>NCOS Section 4.2.2 and the GHG Protocol Corporate & Accounting Standard Ch. 5 provide specific guidance.</p>	<p>Choose an item.</p>	

SECTION 4: ADDITIONAL INFORMATION

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Is the information contained in the PDS consistent with the Inventory/LCA?</p> <p>Consideration to be given to total emissions, emission sources, description of boundary and excluded emissions, reporting year, reduction and offsetting activities.</p>	<p>Minor CAR 5</p>	<p><i>Public Disclosure Summary 2016.docx (page 13)</i></p> <p>The information contained in the PDS in terms of emission reductions is not fully consistent with the LCA and supporting documentation.</p>
<p>4.1 Emissions Reductions</p>		
<p>Has the emissions reduction strategy been adequately described?</p>	<p>Yes</p>	<p><i>Public Disclosure Summary 2016.docx (page 12)</i></p> <p><i>Annual Inventory 2016 V4.docx (page 3)</i></p> <p>The emissions reduction strategy has been adequately described</p>
<p>Have reduction measures been considered and documented?</p>	<p>Yes</p>	<p><i>Public Disclosure Summary 2016.docx (page 13)</i></p> <p>The reduction measures have been considered and documented but are not consistent with LCA documentation. See Minor CAR 5</p>

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Has the estimated quantity of emissions reductions from each emission reduction measure been stated?	Yes	<i>Public Disclosure Summary 2016.docx (page 13)</i> The estimated quantity of emission reductions from each emission reduction measure has been stated but is not consistent with LCA documentation. See Minor CAR 5
Has the total estimated quantity of emissions reductions been calculated?	Yes	<i>Public Disclosure Summary 2016.docx (page 13)</i> The total estimated quantity of emission reductions have been calculated but is not consistent with LCA documentation. See Minor CAR 5
4.2 Carbon Offsets		
Are offset quantities and the total offsets cancelled consistent with the total emissions?	Yes	<i>Public Disclosure Summary 2016.docx (page 15)</i> Offset quantities and the total offsets cancelled are consistent with the total emissions
Are the details, including serial numbers and registry, of the offsets provided?	Yes	<i>Public Disclosure Summary 2016.docx (page 15)</i> The offset details including serial numbers and registry has been provided
Has the quantity of offsets banked for future years been clearly stated?	Observation 2	<i>Public Disclosure Summary 2016.docx (page 16)</i> 38 offsets have been banked for future years but the appropriate serial numbers have not been stated

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
<p>Have details of banked offsets been provided?</p> <p>This should include the offset type and evidence to support the transaction.</p>	Yes	<p><i>Public Disclosure Summary 2016.docx (page 16)</i></p> <p>Details of banked offsets have been provided including the offset type and evidence to support the transaction.</p>
<p>Are the offset types cancelled deemed eligible under the NCOS?</p>	Yes	<p><i>Public Disclosure Summary 2016.docx (page 16)</i></p> <p>The offset types cancelled (VCUs) are deemed eligible under the NCOS</p>
<p>Has the approach for retiring carbon offsets for the reporting period been stated?</p> <p>Including the offset type, name of registry, and whether the participant plans to forward purchase the abatement?</p>	Observation 3	<p><i>Public Disclosure Summary 2016.docx (page 16)</i></p> <p>The company has stated that the purchase and surrender of offsets will occur within 8 months of the each reporting period.</p> <p>In the opinion of the verifier offsetting within 8 months of each reporting period does not comply with the spirit of the NCOS. Up-front offsetting ensures that at any point during the certification period when the company makes a claim of carbon neutrality, they can have confidence in the validity of their claim as emissions have already been offset.</p>
<p>If offsets are used from earlier periods, have these been adequately described?</p>	Yes	<p><i>Public Disclosure Summary 2016.docx (page 16)</i></p> <p>Offsets used from earlier periods have been adequately described and verified</p>

4.3 Record Keeping

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Are record-keeping practices adequate?	See Observation 1	<i>Record keeping and QC Jan 2017.docx</i> Although adequate on paper, data is sometimes incorrectly reported and inputted into the LCA
Have the records that are required to be maintained been specified? Participants must also include details of NCOS documents in their records management.	Yes	<i>Record keeping and QC Jan 2017.docx</i> The records that are required to be maintained have been specified and include NCOS documents
Has the person that is responsible for establishing and maintaining the records, and their role, been identified?	Yes	<i>Record keeping and QC Jan 2017.docx</i> The persons responsible for establishing and maintaining the records, and their role, have been identified

4.4 Quality Control Practices

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Has a description of the quality control practices that are in place to ensure that data quality is maintained been provided?	Yes	<p><i>Record keeping and QC Jan 2017.docx</i></p> <p>The company has detailed which records need to be kept and identified the source data relevant to the record. The quality control practices include cross referencing the documentation against source data such as invoices. This check will occur quarterly (items 1-11).</p> <p>Items 12-15 are reviewed annually by the internal reviewer shown in the table. Item 12-18 are then reviewed by the qualified external auditor for the first, third and fifth reporting period.</p> <p>See Observation 1</p>
4.5 Trade mark use and Marketing		
Has a detailed register of the use of the NCOS Trade Mark been provided?	Yes	<p><i>Public Disclosure Summary 2016.docx (page 17)</i></p> <p>The trade Mark is used in the</p> <ul style="list-style-type: none"> • Carbon Neutral Brick Brochure • Austral Brick Website • Austral Brick Tasmania Product Brochure
4.6 Participant Declaration		
Has the declaration been completed and signed?	Minor CAR 6	<p><i>Public Disclosure Summary 2016.docx</i></p> <p>The declaration has not been completed and signed</p>

SECTION 5: Summary of Corrective Action Requests and Observations

Finding	Summary of CAR/ Observation	Reference to Sections Reviewed in Certification Package	Summary of Action Taken to Address the CAR/ Observation
Observation 1	Quality Control of data and attention to detail is not evident in all instances of data collection and input into the LCA.	Throughout the entire verification process	<p><i>Participant's response:</i> The company realises the issues raised have impacted on the verification. The Sustainability and Environment section of Brickworks Building Products will take over the process and take responsibility for the collection of accurate data from this financial year (FY17). This is more appropriate as they look after the NGRS report and the report and the reporting process is regularly audited by an external body. Therefore, we think they are more suitable to prepare the documentation for NCOS reporting.</p> <p><i>Auditor's conclusion:</i> The Sustainability and Environment section of Brickworks Building Products taking responsibility for NCOS seems to be more appropriate. Whether this is the case will be evident at the next audit</p> <p>Observation 1 closed out</p>

<p>Minor CAR 1</p>	<p><i>Copy of data overview 2015-16 BR-RR.xlsx</i></p> <ul style="list-style-type: none"> • Electricity data for July, August, September and November 2015 has been incorrectly reported • Emission factor for LPG for transport is incorrect 	<p>2.3 Emissions Calculations</p>	<p><i>Participant's response:</i></p> <ul style="list-style-type: none"> • Electricity data is now correct in the LCA • The emission factor for LPG for transport is now correct <p><i>Auditor's conclusion:</i> <i>Data overview 2015-16 06Dec 16.xlsx</i> Minor CAR 1 is now closed out</p>
<p>Minor CAR 2</p>	<p><i>Data overview 2015-16 06Dec16.xlsx</i></p> <p>Clay Extraction and Transport Worksheet.</p> <ul style="list-style-type: none"> • Wyena – the additional 700 litres has not been taken into account. • Equations in Columns F and G are incorrect 	<p>2.3 Emissions Calculations</p>	<p><i>Participant's response:</i> Clay Extraction and Transport Worksheet.</p> <ul style="list-style-type: none"> • Wyena – the additional 700 litres has now been shared equally between diesel for mining and transport • Equations in Columns F and G are now correct <p><i>Auditor's conclusion:</i> <i>Data overview 2015-16 08Dec 16.xls</i> Minor CAR 2 is now closed out</p>
<p>Minor CAR 3</p>	<p><i>Data overview 2015-16 08Dec16.xlsx, Data overview 2015-16 13Dec 16.xls</i></p> <ul style="list-style-type: none"> • Relevant transfer and sales data and contractor delivery volumes have not been incorporated into the LCA • 'Business Trips by Month' worksheet. Data has not been included (rows 54-60) • Incorrect quantity of coal has been put into the LCA • Documentation relating to Caltex fuel data has not been supplied 	<p>2.3 Emissions Calculations</p>	<p><i>Participant's response:</i></p> <ul style="list-style-type: none"> • Relevant transfer and sales data and contractor delivery volumes has now been incorporated into the LCA • 'Business Trips by Month' worksheet. Data now includes rows 54-60 • Reported quantity of coal used during the relevant period is now correct • Documentation relating to Caltex fuel data has now been supplied and verified <p><i>Auditor's conclusion:</i> <i>Data overview 2015-16 15Dec 16.xlsx</i> Minor CAR 3 is now closed out</p>

<p>Minor CAR 4</p>	<p><i>Data overview 2015-16 15Dec16.xlsx</i></p> <ul style="list-style-type: none"> • Scope 1 company cars (petrol) emissions have not been incorporated into the uncertainty calculations • H11 in 'Transport of bricks' worksheet has not been calculated correctly • 'Bricks Carbon Footprint' worksheet Column EU - The formula needs to change to incorporate rows G12-G26 of 'Overhead Emissions' 	<p>2.3 Emissions Calculations</p>	<p><i>Participant's response:</i></p> <ul style="list-style-type: none"> • Scope 1 company cars (petrol) emissions has now been incorporated into the uncertainty calculations • H11 in 'Transport of bricks' worksheet has now been correctly calculated • 'Bricks Carbon Footprint' worksheet Column EU - The formula now incorporates rows G12-G26 of 'Overhead Emissions' <p><i>Auditor's conclusion:</i> <i>Data overview 2015-16 04Jan16.xlsx</i></p> <p>Minor CAR 4 is now closed out</p>
<p>Minor CAR 5</p>	<p><i>Public Disclosure Summary 2016.docx</i></p> <p>The information contained in the PDS in terms of emission reductions is not fully consistent with the LCA and supporting documentation.</p>	<p>Section 4</p>	<p><i>Participant's response:</i> The information contained in the PDS in terms of emission reductions is now consistent with the LCA and supporting documentation.</p> <p><i>Auditor's conclusion:</i> <i>img-220142455-0001.pdf (page 14)</i></p> <p>Minor CAR 5 closed out</p>
<p>Minor CAR 6</p>	<p><i>Public Disclosure Summary 2016.docx(page 1)</i></p> <p>The declaration has not been completed and signed</p>	<p>Declaration</p>	<p><i>Participant's response:</i> Declaration has now been signed</p> <p><i>Auditor's conclusion:</i> <i>img-220142455-0001.pdf</i></p> <p>Minor CAR 6 closed out</p>

<p>Observation 2</p>	<p>Public Disclosure Summary 2016.docx</p> <p>38 offsets have been banked for future years but the appropriate serial numbers have not been stated</p>	<p>4.2 Carbon Offsets</p>	<p><i>Participant's response:</i> Serial numbers of banked offsets have now been documented</p> <p><i>Auditor's conclusion:</i> <i>Public Disclosure Summary 2016 V2.docx (page 16)</i></p> <p>The correct serial numbers of banked offsets has now been stated</p> <p>Serial Number: 4079-173927646-173927646-VCU-041-APX-CN-1-1126-25122007-24122008-0</p> <p>Observation 2 closed out</p>
<p>Observation 3</p>	<p><i>Public Disclosure Summary 2016.docx</i></p> <p>The company has stated that the purchase and surrender of offsets will occur within 8 months of the each reporting period.</p> <p>In the opinion of the verifier offsetting within 8 months of each reporting period does not comply with the spirit of the NCOS.</p> <p>Up-front offsetting ensures that at any point during the certification period when the company makes a claim of carbon neutrality, they can have confidence in their claim as emissions have already been offset.</p>	<p>4.2 Carbon Offsets</p>	<p><i>Participant's response:</i> The company is not changing the strategy for the purchase and surrender of offsets</p> <p><i>Auditor's conclusion:</i> The Clean Energy Regulator needs to clarify with the company whether their strategy is appropriate</p> <p>Observation 3 remains open</p>

SECTION 6: Documents Reviewed

Name or Description of Document	Document Title / Filename	Author and Date Prepared, and Version if Applicable
Life Cycle Assessment	Data overview 2015-16.BF.xlsx	Energetics/Brickworks 3rd November 2016
Life Cycle Assessment	Copy of data overview 2015-16 BR-RR.xlsx	Energetics/Brickworks 15th November 2016
Life Cycle Assessment	Final data overview 2015-16 BR-RR.xlsx	Energetics/Brickworks 19th November 2016
Life Cycle Assessment	Data overview 2015-16 06Dec2016.xlsx	Energetics/Brickworks 6th December 2016
Life Cycle Assessment	Data overview 2015-16 08Dec16.xlsx	Energetics/Brickworks 8th December 2016
Life Cycle Assessment	Data overview 2015-16 13Dec16.xlsx	Energetics/Brickworks 13th December 2016
Life Cycle Assessment	Data overview 2015-16 15Dec16.xlsx	Energetics/Brickworks 15th December 2016
Life Cycle Assessment	Data overview 2015-16 20Dec16.xlsx	Energetics/Brickworks 20th December 2016
Life Cycle Assessment	Data overview 2015-16 04Jan16.xlsx	Energetics/Brickworks 04th January 2017
Monthly consumption data	Consumption reports for the period July15-June 16	Yingwei Huang Austral Bricks - Summerhill
Monthly electricity data	Electricity invoices for the period July15-June 16	ERM Business Energy
Longford fuel data for the period 2015-16	Fuel stops by period.xlsx	Michael Muller Austral Bricks 13 th October 2016

Monthly gas data	Gas invoices for the period July15-June 16	Tas Gas
Yearly mining data	ABTAS Clay Mining Data 2015-2016.xlsx Barton Austral Mining Data.xlsx Creswell Mining Data 15-16.xlsx Longford Austral Mining data.xlsx Relbia Clay Mining Data.xlsx Sideling Austral Mining Data.xlsx Wyene Austral Mining Data.xlsx	Rob Rouwette/Energetics Giraffe Excavations
Production data for 2015-16	ABTAS Jul1-Jun16 Product Summary.pds	Austral staff July 2016
Monthly waste data	Waste invoices for the period July15-June 16	Tox Free Australia Pty Ltd
Coal data for July 15-June 16	Coal data.xlsx	Andrew Clark Business Unit Manager Austral Bricks 29 th November 2016
Volumes of SBEs delivered by contractors	Contractor delivery volumes – SBEs.xlsx	Andrew Clark Business Unit Manager Austral Bricks 29 th November 2016
Transfers and sales for 2015-16	Transfers-total.xlsx	Andrew Clark Business Unit Manager Austral Bricks 29 th November 2016
Caltex Fuel Card data	Fuel info.xlsx	Penny Pinner Production assistant Austral Bricks

Waste and water data for July15-June 16	Longford Waste- Water Summary Jul15-Jun16.xlsx	NSWM_Fishburn Austral Bricks October 2016
Annual Inventory/LCA	Annual Inventory 2016.docx	Takafumi Numata Brickworks 09 January 2017
Annual Inventory/LCA	Annual Inventory 2016 V2.docx	Takafumi Numata Brickworks 10 January 2017
Annual Inventory/LCA	Annual Inventory 2016 V3.docx	Takafumi Numata Brickworks 11 January 2017
Annual Inventory/LCA	Annual Inventory 2016 V4.docx	Takafumi Numata Brickworks 13 January 2017
Annual Inventory/LCA	Annual Inventory 2016 V5.docx	Takafumi Numata Brickworks 13 January 2017
LCA Report 2016	LCA Report 2016.docx	Takafumi Numata Brickworks 10 February 2017
LCA Report 2016	LCA Report 2016 V3.docx	Takafumi Numata Brickworks 13 January 2017
2015 EMP	ABTAS EMP 2015V2.pds	Takafumi Numata Brickworks 18 March 2016
2015 LCA Report	ABTAS LCA Report 2015 V2.pds	Takafumi Numata Brickworks 18 March 2016

2015 PDS	ABTAS PDS 2015V2.pds	Takafumi Numata Brickworks 18 March 2016
Record keeping and quality control	Record keeping and QC Jan 2017.docx	Takafumi Numata Brickworks 13 Jan 2017
Offsets Report	Brickworks Carbon Offset Report 2016.pdf	Takafumi Numata Brickworks 9 Feb 2016
Offsets Report	Brickworks Carbon Offset Report 2017.pdf	Takafumi Numata Brickworks 18 Jan 2017
PDS	Public Disclosure Summary 2016.docx	Takafumi Numata Brickworks 31 Jan 2017
PDS	Public Disclosure Summary 2016 V2.docx	Takafumi Numata Brickworks 10 February 2017
PDS	img-220142455-0001.pdf	Takafumi Numata Brickworks 20 February 2017