## **CSR LIMITED**SUSTAINABILITY REPORT 2016

## BUILDING A SUSTAINABLE FUTURE











# CSR IS COMMITTED TO SUSTAINABLE PRACTICES THROUGHOUT OUR BUSINESS

ABOUT CSR	2
WELCOME MESSAGE	3
SUSTAINABILITY AT A GLANCE	4
CSR INNOVATION	6
OUR PRIORITIES	
- ECONOMIC	9
- ENVIRONMENT	12
- WORKPLACE HEALTH AND SAFETY	17
OUR PEOPLE	19
COMMUNITY	22
LIMITED ASSURANCE	
REPORT	24
CONTACT US	34



#### **OUR APPROACH**

CSR continued to progress its sustainability agenda over the past year





#### **INNOVATION**

CSR innovation – targeting sustainable building solutions

#### **ECONOMIC**

CSR is pursuing a number of actions to mitigate material risks which could potentially impact its operations





#### **ENVIRONMENT**

We remain committed to providing transparent and accurate reporting on how our activities impact the environment and the community



#### **OUR PEOPLE**

CSR recognises that a sustainable workplace is one that is both safe and rewarding for our employees

## ABOUT CSR

CSR is a leading building products company with operations in Australia and New Zealand

#### SPLIT OF EARNINGS BEFORE INTEREST AND TAX (EBIT BEFORE SIGNIFICANT ITEMS) BY BUSINESS

YEAR ENDED 31 MARCH 2016



■ 56% BUILDING PRODUCTS

■ 34% ALUMINIUM

■ 8% PROPERTY

3% VIRIDIAN

#### We are focused on building shareholder value by investing in, and growing our businesses, while operating in a sustainable manner.

CSR is the name behind some of the market's most trusted and recognised brand names, providing building products for residential and commercial construction.

Our businesses include some of the industry's most highly regarded brands such as Gyprock® plasterboard,
Cemintel™ fibre cement, Bradford™ insulation, PGH™ bricks and pavers,
Hebel® autoclaved aerated concrete panels, AFS® walling solutions, Monier™ rooftiles and Viridian™ glass.

In May 2015, CSR and Boral formed a joint venture of their east coast brick and paver operations. As majority owner of the JV, CSR consolidated the operations on to its balance sheet. As a result, the 2016 data for emissions, water and waste cover six additional factories in the CSR Group.

Through our innovation centre, we are also developing innovative products and systems right across our portfolio, targeting sustainable buildings of the future.

Through its 70% shareholding in Gove Aluminium Finance Limited, CSR holds an effective 25.2% interest in the Tomago aluminium smelter, located in NSW. Tomago is a globally competitive smelter which produces around 580,000 tonnes of aluminium annually, some 35% of Australia's primary aluminium production.

CSR also generates additional earnings from its Property division which focuses on maximising financial returns by developing surplus former manufacturing sites and industrial land for sale.

Today, CSR employs approximately 4,200 people in Australia and New Zealand which includes employees from PGH Bricks following CSR's acquisition of Boral's stake in the joint venture on 1 November 2016.

#### CSR's trusted brands



























## **WELCOME**

Message from the Chairman of Workplace Health, Safety & Environment Committee and Managing Director

#### We are pleased to continue to share our progress on our sustainability agenda

Over the last five years, CSR has been helping drive the construction industry to improve the sustainability, energy efficiency, comfort and performance of homes and buildings. This initiative began in 2011 with the construction of CSR House – an 8-star state-of-the art building research centre in Western Sydney. The research from CSR House identified key issues of heat, air and moisture in buildings and the impact of the actual energy required for maintaining a comfortable home.

Today, CSR is bringing new technology to the Australian market to improve building performance including the Bradford Tesla Powerwall solar battery range, Odyssey ventilation and Hebel Powerpanel systems.

Our sustainability agenda goes well beyond the products and services we develop for the building industry.

Our primary focus remains on the safety of our people and the community. We place the same emphasis and importance on managing workplace health and safety and our impact on the environment as any other business imperative.

Over the last five years, CSR has seen major improvements in its safety performance with the rate of total recordable injuries (lost time; restricted work and medical treatment injuries) per million work hours declining by 63%.



This report also includes information on emissions, water use and waste production across our businesses for the 12 months to 30 June 2016. This data includes six additional factories in the CSR Group following the formation of the east coast brick joint venture with Boral in May 2015. CSR has since acquired Boral's stake in this joint venture effective 1 November 2016.

As a result, the aggregate total of data across all of the metrics included in this report has increased due to the additional factories contributing higher volumes and production. The integration of these operations in now completed. We are pleased to report that all sites across CSR's operations continue to make good progress towards our 2020 goal of a 20% reduction in energy, waste and water usage (per tonne of saleable product) using 2009/10 as the base year.

To achieve these targets, CSR progressed a number of initiatives to improve operational performance and efficiency with energy reduction initiatives underway across our sites. In 2016, we also launched the CSR Energy Improvement Fund. This fund provides capital for projects designed to increase the productivity (output per unit of energy) of our energy cost expenditure, reduce costs and lower our energy and carbon footprint.

Our people are key to achieving our sustainability and business objectives over the next few years. We are investing in our people with a suite of programs in leadership, diversity and innovation to enable our people to perform at their best. These programs have become a well-regarded part of our employee value proposition.

CSR has continued to make good progress on sustainability during the past year and we would like to acknowledge and thank all CSR employees and contractors for their contribution.

We hope you find this report informative and encourage you to provide feedback to us via the CSR website **www.csr.com.au**.

PENNY WINN CHAIRMAN, WORKPLACE HEALTH,

SAFETY & ENVIRONMENT COMMITTEE

ROB SINDEL MANAGING DIRECTOR

## SUSTAINABILITY AT A GLANCE

CSR continues to progress its sustainability agenda



#### **Key highlights**

- CSR's safety record continued to improve on the previous year with the number of lost time injuries per million work hours decreasing by 20% over the previous year
- Total greenhouse gas emissions were 712,100 tonnes of CO<sub>2</sub>-e – up on the previous year due to the formation of the PGH Bricks JV
- All sites on track to reach 2020 target of a 20% reduction in resources used per tonne of saleable product with water and waste targets already achieved
- CSR employees have completed 22,070 hours of leadership and training programs over the last year – an increase of 36%
- Bradford Energy Solutions launched a major partnership with Tesla to bring the Powerwall solar battery system to new homes in Australia
- Expanded the Velocity offsite construction system with a major project with Mirvac continuing in Sydney
- Continued support for the CSR Values Champions recognition scheme to recognise the outstanding performance of its people
- CSR and its employees donated \$105,816 to a range of charitable organisations through its community support program and volunteered 655 hours with the Australian Business and Community Network

#### **Overview**

#### LOST TIME INJURY FREQUENCY RATE AS AT 30 JUNE (PER MILLION WORK HOURS)

2016	2.2		
2015	2.7		
2014		4.5	
2013	3.2		
2012			F O

#### **TOTAL WATER CONSUMED**

AS AT 30 JUNE (KILOLITRES)

2016 <sup>2</sup>	931,853
2015 <sup>3</sup>	781,359
2014	766,363
2013	752,692
2012	881,732

### TOTAL RECORDABLE INJURY FREQUENCY RATE

AS AT 30 JUNE (PER MILLION WORK HOURS)

2016	14.4	
2015	13.2	
2014	17.1	
2013	16.8	
2012		24.6

### TOTAL SOLID WASTE TO LANDFILL PRODUCED

AS AT 30 JUNE (TONNES)

2016 <sup>2</sup>	20,884	
2015 <sup>3</sup>	20,954	
2014	21,679	
2013	22,549	
2012		32,257

#### NUMBER OF CSR EMPLOYEES

AS AT 30 JUNE

2016 <sup>1</sup>	3,581
2015	2,965
2014	3,059
2013	3,134
2012	3,300

#### TONNES OF CO<sub>2</sub>-e AS AT 30 JUNE

2016 <sup>2</sup>	712,100
2015 <sup>3</sup>	586,096
2014	540,031
2013	626,734
2012	644,959

- ${\bf 1}$  Includes Viridian NZ JV purchased during the year but excludes PGH Bricks JV
- 2 Includes 12 months data for the six additional factories from the PGH Brick JV  $\,$
- 3 Includes 2 months data for the six additional factories from the PGH Brick JV

## PROGRESS TOWARDS 2020 GOAL

CSR'S operations are making good progress towards our 2020 goal of a 20% reduction per tonne of saleable product in energy, waste and water usage using 2009/10 as the base year

PROGRESS
TOWARDS OUR
2020 GOAL OF A 20%
REDUCTION IN ENERGY,
WASTE AND WATER USAGE

20%

ENERGY CONSUMPTION GJ/TONNE OF PRODUCT	2020 target	TONN KG/TON
FY15/16		FY15/
FY14/15		FY14/
FY13/14		FY13/
FY12/13		FY12/
FY11/12		FY11,
FY10/11		FY10,
FY09/10		FY09/

TONNES OF CO <sub>2</sub> -e KG/TONNE OF PRODUCT	2020 target
FY15/16	
FY14/15	
FY13/14	
FY12/13	
FY11/12	
FY10/11	
FY09/10	

WATER CONSUMPTION LTR/TONNE OF PRODUCT	2020 target
FY15/16	✓
FY14/15	
FY13/14	
FY12/13	
FY11/12	
FY10/11	
FY09/10	

WASTE PRODUCTION KG/TONNE OF PRODUCT	2020 target
FY15/16	$\checkmark$
FY14/15	
FY13/14	
FY12/13	
FY11/12	
FY10/11	
FY09/10	



Bradford Ingleburn has developed a new system to reduce waste costs by removing excess water from the scrap wool that has been collected by the wash water system.

## **CSR INNOVATION**

CSR innovation targeting sustainable building and energy efficient solutions

## **CSR Building Knowledge and the science** of building

CSR is playing a leading role in the construction industry through its research on building science. This knowledge is shared with the industry through CSR publications including the CSR *Building Knowledge* e-newsletter which covers a variety of topics across building performance and energy efficiency. In January 2016, CSR upgraded its website www.csr.com.au to include detailed case studies on building knowledge and solutions for consumers and industry professionals.



#### VIRIDIAN INNOVATION

LightBridge is a range of high performance insulating glass units, developed specifically for the residential building industry. The double glazed window units use low e-glass and inert gas-fill as standard. The windows offer exceptional insulation combined with high light transmission. Viridian continues to work with the housing industry to promote the use of better insulated glass. LightBridge was awarded the Housing Industry Association's GreenSmart Product of the Year in September 2015.

## DRIVING ENERGY EFFICIENCY IN HOMES AND BUILDINGS

Rising energy prices are impacting homeowners and businesses across the country. Using alternative energy sources is now more important than ever. CSR's Bradford Energy Solutions is playing a key role in this process by providing energy efficiency advice and solutions including increasing the use of solar power. Solar battery storage is the next stage in this process and in January 2016, CSR teamed up with Tesla to bring the Powerwall to Australia.

A typical Australian house consumes around 21 kilowatt hours (kWh) of electricity per day. The Tesla Powerwall is capable of storing 6.4 kWh per day which is enough to cater to an average home's evening usage. CSR has established alliances with major builders across Australia to improve the energy efficiency of new housing.

In February 2016, CSR successfully installed the new Bradford ChargePack Ultra 3kW system at CSR House located at Schofields, NSW. This system includes a monitoring system of PV production and self-consumption data via a cloud based platform and meter. After installation there is no maintenance required and necessary software updates can be implemented by remote access. Monitoring of the CSR House system indicates that the solar panel production and Powerwall storage are performing over and above expected efficiency. CSR House is currently consuming 55% of its on average 110kWh weekly solar production, with the remaining 45% exported back to the grid.



## **OUR PRIORITIES**

CSR recognises that good corporate governance is fundamental to being a sustainable business

There are a number of risks in the markets in which CSR operates. A range of factors, some of which are beyond CSR's control, can influence performance across CSR's businesses.

Our business risks fall into three main categories: economic, environmental and social sustainability. Our approach to manage and mitigate these risks is outlined in the next section of the report.

CSR maintains ongoing dialogue with our key stakeholders including our employees, regulatory bodies, government and community representatives to assess material risks. This process will continue over the coming year to reflect changes in market conditions and potential impacts on the company.



# OUR PRIORITIES (CONTINUED)

Key areas of materiality	
Aluminium and currency markets	CSR's results are impacted by movements in the global US dollar price for aluminium and currency fluctuations
Australian construction activity and higher density living	Approximately 50% of CSR's total revenue is generated from product and service supplied into the new residential construction sector of Australia and New Zealand which is impacted by several macro-economic factors
	Multi-residential construction has increased as a proportion of total new home construction and now represents over 50% of housing starts
	Multi-residential houses are typically smaller which has the potential to reduce CSR product intensity per new dwelling
	The release of future land supply for residential development relies on the coordination of government and regulatory bodies with builders and developers to deliver infrastructure and services for new projects
Digital	Digital services are increasingly used by the construction sector with CSR's digital capability critical to achieving growth in its key markets
Employee and community engagement	CSR recognises that it plays an important role in the success and prosperity of local communities as an employer, as an operator of major manufacturing sites and developer of its legacy property assets
	An engaged and diverse workforce is critical to CSR's long term success – to help develop new ideas and build a workforce more representative of society
	CSR has developed a suite of leadership and training programs to provide our people with the knowledge, skills and support to enable them to perform at their best. Further details on building the diversity and training of our people are included on page 20-21
Energy	CSR's manufacturing operations use significant amounts of energy including electricity and gas.  The transition to a low carbon economy as well as state government regulations and planning may impact the availability and nature of supply
	Where possible, CSR enters into long-term contracts to provide greater security of energy supply for its factories
	Alternative energy sources including solar power are also under review in addition to site specific energy reduction initiatives
Environmental management	CSR has committed to a 20% reduction per tonne of saleable product of energy, greenhouse gas emissions, potable water consumption and solid waste production to landfill by 2020 using 2009/10 as the base year
Product liability	Previous involvement in asbestos in Australia and exporting asbestos to the United States
	CSR ceased asbestos mining in 1966 and divested remaining interests in 1977
	CSR meets all valid claims in both Australia and the United States
	The asbestos provision is impacted by movements in claim numbers, settlement rates and values and movements in AUD/US\$ exchange rates
	Further information regarding the product liability provision is included in the half year report for the period ended 30 September 2016 which is found on the CSR website www.csr.com.au
Supply chain and	CSR relies on an extensive supply chain to manufacture and distribute its products and services
product compliance	This supply chain can be impacted by natural, political or technological disruptions which the company reviews to develop alternative supply options and minimise the risk of potential supply dislocation
Workplace health and safety	CSR has a stated long term objective of achieving zero harm to CSR people across all operations

## **RISK MANAGEMENT**

CSR is pursuing a number of actions to mitigate economic risks which could potentially impact its operations

## Aluminium and currency markets

Through its 70% shareholding in Gove Aluminium Finance (GAF) Limited, CSR holds an effective 25% interest in the Tomago aluminium smelter located near Newcastle, NSW. Tomago is a globally competitive smelter due to its high operating efficiency, access to potline technology and close proximity to alumina supplies.

The aluminium industry is impacted by a range of demand and supply factors that result in aluminium price fluctuations.

In November 2010, Tomago announced the signing of an 11-year base-load power supply contract with Macquarie Generation locking in power supply requirements from November 2017 to 2028.

This long-term contract includes a step-up in pricing to Tomago which will increase electricity costs by around A\$230 per tonne of production (in 2013 dollars).

**Hedging:** Sales of aluminium are priced and invoiced in US\$ referenced to the London Metal Exchange (LME) aluminium price.

#### LME 3 MONTH ALUMINIUM PRICE IN US\$/t and A\$/t



CSR has a policy to hedge both US dollar sales and foreign currency exposure when specific targets are met, with the primary objective of reducing short-to-medium term earnings volatility. This policy is monitored regularly by CSR's Finance Committee which includes CSR's CEO, CFO, Group Treasurer and the General Manager of GAF.

#### **CSR HEDGING POSITION AS OF 30 SEPTEMBER 2016**

	HYEM17	YEM18
Average hedged aluminium price A\$ per tonne (excludes premiums)	\$2,310	\$2,278
% of net aluminium exposure hedged	78%	33%

## RISK MANAGEMENT (CONTINUED)

# Australian construction activity and higher density living

Australian construction activity: The performance of CSR's Building Products and Viridian businesses is influenced by the level of activity within the building and construction industry. CSR continually monitors housing activity and associated lead indicators. This includes lot sales, finance and building approvals, dwelling commencements and completion levels.

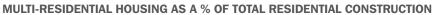
Reviews of market activity are factored into CSR's monthly reporting, quarterly forecasting and annual budget and planning cycles, which in turn drive capacity and capital planning.

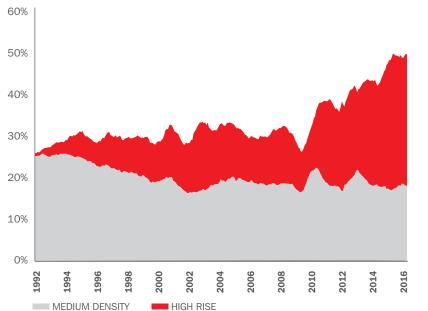
Furthermore, the nature of CSR's building products is that they are typically sold late in the construction process, giving CSR some visibility of changes in market conditions before specifically impacting demand.

### Changing landscape of higher density living: The landscape of how people

**living:** The landscape of how people choose to live and work is changing rapidly and this impacts the buildings we build. Increased land prices and the desire to live closer to work has influenced a significant increase in high density multi-residential housing over the last 20 years.

#### **AUSTRALIAN RESIDENTIAL CONSTRUCTION ACTIVITY PIPELINE** 300,000 250,000 200,000 150,000 100.000 50,000 0 Dec 12 Jun 07 Dec 07 Jun 08 Dec 08 Jun 09 Dec 09 Dec 10 Jun 11 Dec 11 05 10 05 90 90 13 13 14 14 Jun Jun Jun PIPELINE — TOTAL APPROVALS - TOTAL STARTS -TOTAL COMPLETIONS SOURCE: ABS





## RISK MANAGEMENT (CONTINUED)



CSR is actively developing and acquiring new products that increase CSR's exposure to the multi-residential segments.

AFS	April 2014 – acquired AFS – a leader in load bearing permanent formwork walling solutions for the construction industry and has completed over 1,500 projects in the multi-residential market to date
Rediwall	November 2015 – completed commissioning of new AFS Rediwall®PVC permanent formwork production facility which replaces traditional masonry block and vertical formwork
Hebel	November 2015 – completed 30% capacity expansion following strong growth for Hebel in apartments and medium density housing construction
Martini	November 2014 – acquired Martini which produces acoustic polyester insulation for commercial applications
Viridian	November 2016 – completed commissioning on a dedicated commercial double glazing plant

## **Product and System Compliance**

CSR has a quality management system to ensure that all products manufactured or supplied consistently meet the requirements and specifications of international and national quality standards and customer expectations.

CSR's compliance programs include regular audits to assess the quality management systems at manufacturing sites including:

- the adequacy of quality system resources
- product quality compliance
- · results of internal quality audits
- · results of external audits
- customer feedback and opportunities for improvement
- supplier performance
- preventive and corrective actions identified during the year
- · current and proposed training activities
- review of relevant statutory and regulatory changes

CSR also imports a limited number of products into Australia and New Zealand from a number of countries including Japan, China, Germany, Canada and Sweden. These products are also tested by CSR and its suppliers to ensure compliance with Australian/NZ standards. CSR requires all suppliers to provide written certification by laboratories that are accredited by a National Association of Testing Authorities (NATA) recognised or equivalent authority.

# ENVIRONMENTAL MANAGEMENT

We remain committed to providing transparent and accurate reporting on how our operating activities impact the environment

Our goal is to ensure our businesses remain compliant with their operating licences and reduce their impact on the environment and the communities in which we operate.

CSR has an active program to reduce its impact on the environment which is overseen by the Board and the Workplace Health, Safety & Environment Committee. Each business in CSR has a plan which commits site management to:

- Comply with government environmental regulations
- Identify and address key environmental risks
- Improve environmental awareness of employees and contractors
- Reduce greenhouse gas emissions and use of resources
- Continued focus on improving the energy efficiency of our operations

We have articulated our commitment to minimise the impact on our environment with specific targets to reduce greenhouse gas emissions and waste production and the consumption of energy and water used in production.

By 2020, CSR is targeting a 20% reduction in the following categories using 2009/10 as the base year:

- Scope 1 and scope 2 greenhouse gas emissions through a reduction in carbon dioxide equivalent per tonne of saleable product
- Energy consumption per tonne of saleable product
- Potable water use per tonne of saleable product
- Solid waste production disposed to landfill per tonne of saleable product.



Each CSR business sets goals to reduce their indicators over time and these are regularly reviewed by senior management and the WHSE committee.

CSR's progress toward the 2020 goal is included on page 5 of this report with targets for water and waste already achieved this year.

We continue to comply with the requirements of the various regulatory programs and jurisdictions where we operate. We remain committed to providing transparent and accurate reporting on how our operating activities impact the environment.

We provide information through a number of channels:

- Annual reporting as part of site licensing activities
- Emissions data to the National Pollutant Inventory
- Continuing our voluntary participation in the Carbon Disclosure Project.

CSR also continues its involvement with the Federal Government's National Greenhouse and Energy Reporting scheme.

Other CSR initiatives include Lifecycle Assessments (LCA) of products and analysis of its manufacturing operations and supply chain management.

Group Procurement is launching a new supplier survey program to develop a better understanding of key vendors of imported products:

- Sustainability
- Ethical sourcing
- · Packaging and recycling
- · Quality and compliance.

This process ensures CSR can align more effectively with organisations with shared values, objectives and, as a result, collectively pursue and implement sustainable outcomes.

This report covers only activities in which CSR has a majority equity interest. For these activities CSR has reported 100% of emissions. This report does not include activities where CSR is not the majority shareholder. For example, the activities of Tomago Aluminium Company, in which CSR has an effective 25.2% interest, through its 70% shareholding in Gove Aluminium Finance Limited, are not included in this report. Data from these activities is reported directly by other entities.

## ENVIRONMENT (CONTINUED)

## **CSR's goal remains zero** environmental incidents

We report environmental incidents based on five levels of breaches in compliance with regulatory and CSR requirements.

Level 1 - Minor

Level 2 - Significant

Level 3 - Serious

Level 4 – Severe

Level 5 – Extreme/catastrophic

For the year ending 30 June 2016, CSR incurred 111 environmental incidents compared to 82 incidents in the previous year. This includes the data from six additional factories from the PGH Bricks JV.

This year, the environmental incidents were categorised as follows:

• Level 1: 75

• Level 2: 35

• Level 3: 1

The level 3 incident occurred following heavy rain of over 200mm in two days at the Bringelly brick factory. The factory's dam capacity was breached resulting in water being discharged above the site's licensed discharge limits. To limit any re-occurrence, management measures have been strengthened including:

- Installation of level indicators to indicate the amount of sediment load
- De-silting dams when revised trigger levels have been reached
- Greater visual scrutiny of water quality after high rain events

#### **CLEAN-UP BUSINESS DAY**

As part of CSR's commitment as a signatory to the Australian Packaging Covenant, CSR sites across Australia participated in Clean-up Business Day in March 2016. This was the third year CSR has participated in the program to help promote a clean, healthy and sustainable work environment for its employees.







# ENVIRONMENT ENERGY

#### CSR seeks to reduce greenhouse gas emissions by improving energy efficiency across its network of manufacturing facilities

For the period on 1 July 2015 to 30 June 2016, total greenhouse gas emissions from CSR's majority owned businesses were 712,100 tonnes of  $\rm CO_2$ -e – higher than the previous year due to the formation of the PGH Bricks JV. Higher levels of production in line with increased construction market activity also impacted emissions.

Direct or Scope 1 emissions are emitted from sources within the plant or factory boundary.

Indirect or Scope 2 emissions are associated with the consumption of imported electricity, heat or steam.

CSR engaged Deloitte Touche Tohmatsu to provide limited assurance over CSR Limited's total Scope 1 and 2 greenhouse gas emissions, energy consumed and energy produced for Australia prepared in accordance with the National Greenhouse and Energy Reporting (NGER) Act 2007.

A copy of the unqualified assurance statement (Part A) is available to download in the Limited Assurance Report.

CSR also discloses its greenhouse gas emissions to the Carbon Disclosure Project, which also requires CSR to report on the management of risks and opportunities of climate change impact.

#### SCOPE 1 DIRECT EMISSIONS<sup>1</sup>

AS AT 30 JUNE (TONNES OF CO<sub>2</sub>-e)

#### **AUSTRALIA**

2016 <sup>2</sup>	444,296
2015 <sup>3</sup>	345,985
2014	306,565
2013	359,861
2012	361,805

#### **OUTSIDE AUSTRALIA**

2016 855	
2015	5,927
2014	6,896
2013	7,252
2012	8,203

## CSR BRADFORD ENERGY SOLUTIONS – ENERGY IN EDUCATION PROGRAM



Bradford Energy Solutions partnered with Coomera Anglican College in Queensland to develop a major energy efficiency initiative. The upgrade included solar power and replacing inefficient lighting which is expected to deliver a reduction in energy use of 30% and savings of \$70,000 per year. Coomera was the first school in Queensland and one of the first nationally to take up the Government Energy in Education Program for schools.



Picture: Regi Varghese

#### SCOPE 2 DIRECT EMISSIONS<sup>1</sup>

AS AT 30 JUNE (TONNES OF CO<sub>2</sub>-e)

#### AUSTRALIA

2016 <sup>2</sup>	266,814	
2015 <sup>3</sup>	233,714	
2014	226,036	
2013	259,124	
2012	273,915	

#### **OUTSIDE AUSTRALIA**

2016135		
2015	470	
2014	534	
2013	497	
2012		1,036

- 1 Data excludes contractor emissions over which CSR has operational control
- 2 Includes 12 months data for the six additional factories from the PGH Brick JV
- 3 Includes 2 months data for the six additional factories from the PGH Brick JV

# ENVIRONMENT WATER

CSR recognises the importance of using water efficiently. Our storm water and groundwater management, together with the treatment and disposal of water used at our manufacturing facilities is central to our on-site environmental plans.

CSR consumed 931,853 kilolitres of potable water during the year ended 30 June 2016 – an increase on the previous year due to the formation of the PGH Bricks JV. This increase is also due to the higher levels of production in line with increased construction market activity.

CSR businesses have continued to implement water saving measures across manufacturing sites to reduce usage.

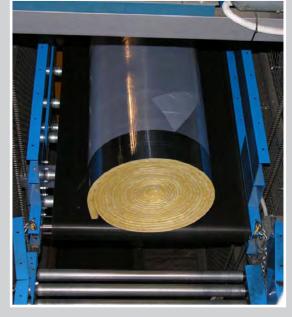
#### TOTAL WATER CONSUMED<sup>1</sup>

AS AT 30 JUNE (KILOLITRES)

2016 <sup>2</sup>	931,853
2015 <sup>3</sup>	781,359
2014	766,363
2013	752,692
2012	881,732

- 1 Only metered water data is included
- 2 Includes 12 months data for the six additional factories from the PGH Brick JV
- 3 Includes 2 months data for the six additional factories from the PGH Brick JV

## MAJOR IMPROVEMENTS OF BRADFORD INSULATION WASH WATER SYSTEM



**Bradford Ingleburn has** developed a new system to reduce waste costs by removing excess water from the scrap wool that has been collected by the wash water system. This system was developed and tested by the operations team at Ingleburn with the project reducing wet waste going to landfill from an average of 32kg per tonne of product produced to 22kg per tonne of product. This equates to a reduction of about 1000kg of waste per day or about 30%.

# ENVIRONMENT WASTE

#### Reducing waste remains a key priority across all of our businesses

CSR produced a total of 20,884 tonnes of solid waste to landfill in the year ended 30 June 2016 – in line with the previous year which includes the formation of the PGH Bricks JV.

Improvements in operational efficiency are also reducing the amount of materials required in the production process. Where possible, CSR uses recycled materials in production including the use of recycled glass cullet in the production of Bradford glasswool insulation and recycled paper used in Gyprock plasterboard.

### TOTAL SOLID WASTE TO LANDFILL PRODUCED

AS AT 30 JUNE (TONNES)

2016 <sup>1</sup>	20,884	
2015 <sup>2</sup>	20,954	
2014	21,679	
2013	22,549	
2012 <sup>3</sup>		32,257

- 1 Includes 12 months data for the six additional factories from the PGH Brick JV
- 2 Includes 2 months data for the six additional factories from the PGH Brick JV
- 3 Restated due to change in classification of some waste types. The increase was due mostly to a program to rationalise inventory which resulted in a one-off material increase in waste being sent to landfill.



Viridian product currently recycled that previously went to land fill



Monier packaging waste reduction project in Victoria



Compacted plastic in Viridian, Clayton South

CSR has a variety of waste reduction projects underway across its operations with teams across the company developing unique ways to reduce waste.

#### **Waste reduction projects**

CSR	Part of Australian Packaging Covenant and has developed an action plan to reduce packaging waste
Monier	Developed a unique bag collection system to collect stretch wrap used to transport roof tiles to building sites in Victoria
Viridian	Utilising a new compactor system to reduce plastic waste at Clayton South. Other projects include providing waste plastic to manufacturer RED3 for use in other applications
Gyprock	Developed an integrated plan to reduce waste through improvements in changeover times and more efficient start-ups reducing product wastage by 6,500 tonnes in 2015

# WORKPLACE HEALTH AND SAFETY

CSR places the same emphasis and importance on managing safety as any other business imperative

While CSR's safety record continues to improve year on year, there is considerable work still required to achieve our ambition of zero harm across all our operations.

CSR management is held accountable for safety performance and all employees are expected to take personal responsibility and be involved in setting and complying with CSR's standards and by instigating improvement initiatives.

CSR will continue the drive to achieve zero harm in respect to workplace health and safety by:

- Complying with the laws, regulations and CSR operational policies and standards
- Establishing measurable WHSE objectives and targets, recognising and celebrating their achievement
- Identifying, assessing and controlling hazards and impacts, and eliminating or reducing the risk to an acceptable level
- Informing employees, contractors, visitors and the public of hazards and impacts that may cause potential harm or affect the environment
- Identifying, implementing, monitoring and reinforcing the safe behaviours we expect to eliminate unsafe acts and practices

- Providing appropriate workplace health, safety and environmental training to employees and contractors
- Investigating incidents and sharing lessons learned with applicable stakeholders to prevent re-occurrences
- Consulting and communicating with employees and contractors to continually improve the health, safety and environmental performance in our workplaces.

The CSR WHSE System provides the framework for management of workplace health and safety and environment at CSR, by clearly setting out the standards we require our people to meet. Managers and supervisors are required to provide leadership in relation to workplace health and safety by:

- Effectively implementing the requirements of the appropriate legislative standard
- Developing and sustaining a strong culture of working safely and continuous improvement
- · Setting stretching improvement goals
- Allocating sufficient resources to achieve the goals.

The CSR WHSE Management Standards are divided into the sections to incorporate the continuous improvement cycle common to management standards for Safety (AS/ NZ 4801 & OHSAS 18001), Quality (ISO 9001) and Environment (ISO 14001). YEAR TO 30 JUNE 2016

TOOLBOX TALKS CONDUCTED

8,426

SAFETY MEETINGS CONDUCTED

1,306

SAFETY WALKS CONDUCTED

6,255

WORK
INSTRUCTION
REVIEWS

7,120

WORKPLACE INSPECTIONS CONDUCTED

7,973

# WORKPLACE HEALTH AND SAFETY (CONTINUED)

## Workplace Health and Safety Highlights

CSR's safety record continued to make significant improvement in the last year with the rate of lost time injuries down 20% while the total recordable injury frequency rate was up 9%.

There were no fatalities at CSR during the year – the last fatality at CSR was in 2002.

#### LOST TIME INJURY FREQUENCY RATE

AS AT 30 JUNE (PER MILLION WORK HOURS)

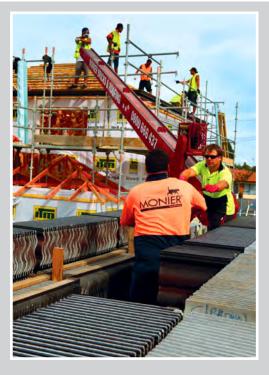
2016	2.2		
2015	2.7		
2014		4.5	
2013	3.2		
2012			5.8

## TOTAL RECORDABLE INJURY FREQUENCY RATE

AS AT 30 JUNE (PER MILLION WORK HOURS)

2016	14.4	
2015	13.2	
2014	17.1	
2013	16.8	
2012		24.6

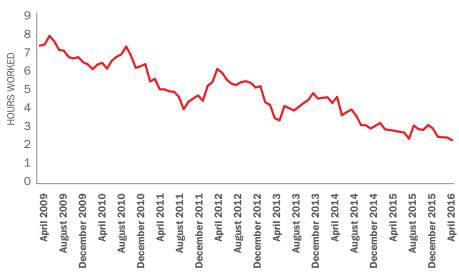




#### MONIER LAUNCH INCIDENT PREVENTION INDICATOR (IPI)

Monier launched the incident prevention indicator (IPI) to their construction teams in June 2016. The IPI is a CSR wide lead indicator which includes five proactive safety activities aimed at continual safety improvement already used at Monier's manufacturing sites. The IPI works seamlessly with the existing iPad mobility solutions allowing teams to complete IPI activities on site with no paperwork, easy tracking, uploading videos and effective corrective actions with follow-up.

#### **LOST TIME INJURY FREQUENCY RATE (LTIFR)**



## **OUR PEOPLE**

CSR recognises that a sustainable workplace is one that is both safe and rewarding for our employees

## At CSR we are committed to investing in our people.

Over the last five years we have developed a suite of leadership development programs designed to provide our leaders with the knowledge, skills and support to enable them to perform at their best.

#### TOTAL HOURS OF TRAINING YEAR ENDED 31 MARCH

2016		22,070
2015	16,201	
2014	15,713	
2013	14,076	
2012	12,755	

We have three leadership development programs to invest in leaders at all levels within CSR:

- CSR Leaders Program
  - for senior leaders
- CSR Constructive Leaders Program for middle/line managers
- CSR Foundations of Leadership Program – for team leaders & supervisors

## Expanding workplace health and safety leadership training

In the last 12 months, over 100 CSR people participated in a two day workplace health and safety leadership training program. The specialised course focuses on leadership, risk management, behavioural based safety and accident investigation. This training is key to CSR's safety objective to promote continuous improvement across the company.

#### **Leaders Program**

Initiated in 2011, the Leaders Program is designed for senior leaders in CSR to develop skills to grow and expand the company targeting leadership, strategic thinking and innovation.

#### **Constructive Leaders Program**

Initiated in 2012, the CSR Constructive Leaders Program is focused on developing leaders who are capable of improving our business and the way we work together.

#### **Foundations of Leadership Program**

The newest program in our suite is the CSR Foundations of Leadership Program which was developed in conjunction with feedback from the businesses. The program is designed to provide insights and tools to build personal, team and organisational effectiveness. Participants also learn to delegate effectively, set realistic goals and coach and provide feedback to others in order to achieve positive and sustainable results.



#### CSR IN(FOCUS)

CSR continues to publish its company newsletter in(focus) which features news,

employee profiles, safety and environmental projects and innovations. The newsletters encourage communication and collaboration for employees across CSR's network in Australia and New Zealand.



CSR Constructive Leaders Program is for middle and line managers, focussing on developing leaders who are capable of improving our business and the way we work together.

## **DIVERSITY**

CSR strives for diversity within the organisation



#### **Diversity**

CSR's policy on diversity is contained within the Fairness, Respect & Diversity Policy. A summary of this policy is available on CSR's website in the "Careers" section under "Our People". CSR recognises that greater diversity is important to improving and sustaining a workforce capable of generating better relationships and more innovative solutions for customers. Ultimately, this improves the results of CSR.

CSR has adopted the ASX Corporate Governance Council's revised Principles and Recommendations (including the 2010 amendments) in respect of diversity. CSR recognises that improving diversity requires cultural change driven by the leadership and commitment of the board and senior management. Measurable objectives are set for CSR management.

The objectives and achievements for the year ended 31 March 2016 and a brief outline of the objectives for the year ending 31 March 2017 are included the Corporate Governance section of CSR's 2016 Annual Report which can be accessed from CSR's website <a href="https://www.csr.com.au">www.csr.com.au</a>.

At board level two of the five or 40% of non-executive directors are women and one woman is on the senior executive management team at CSR. In addition, 14.8% of employees in senior management positions are women including the company secretary, general manager investor relations & corporate communications, group treasurer and the group financial controller. During the year ended 31 March 2016, the percentage of women in the CSR workforce remained steady at 16.7%.

#### Improving diversity at CSR

#### **KEY DIVERSITY ACHIEVEMENTS IN THE LAST YEAR**

#### Leadership and culture

- 28% of attendees at CSR leadership programs were women
- Detailed pay equity reviews were completed as part of annual salary and talent review processes
- Senior executives were assessed on diversity achievements and performance in this area impacted short term incentives
- Improved diversity reporting within the organisation to drive more informed recruitment decisions
- CEO led diversity council meets every two months to drive and review diversity initiatives

#### **Career management**

- Each business unit Executive General Manager completed a review of female talent within their business unit with a focus on pay equity, development and career aspirations
- Promoted career opportunities and development of women (in YEM16, 33% of internal promotions were women, compared with 30% in YEM15)
- Participated in multiple industry projects to attract more female candidates to the building industry

#### **Recruitment and retention**

- Achieved a 20% increase in number of female applications through better attraction strategies, presence at universities and industry partnerships
- Partnered with labour hire and recruitment providers to source more female applicants especially in operational roles
- Promoted CSR as a more diverse and inclusive organisation
- Achieved a 7% reduction in voluntary turnover of women
- Completed nine workshops with senior leaders in the organisation on any bias that can affect recruitment decisions
- Conducted "superannuation for women" seminars across the company

#### % OF WOMEN IN THE CSR WORKFORCE

AS AT 31 MARCH (% OF WORKFORCE)

2016	16.7
2015	16.7
2014	16.4
2013	15.6
2012	14.3



#### Key diversity achievements in the last year

#### **IMPROVING DIVERSITY ACROSS CSR**

There are a number of projects across CSR to encourage diversity both within CSR and across the building and manufacturing industry



#### PARTNERSHIPS WITH EDUCATION

CSR is working with a number of educational institutions to improve exposure and interest in manufacturing careers to encourage a diverse group of students to enter the industry. Recent site tours included Braybrook College in Victoria for VCAL students focusing on occupational health and safety at Yarraville. Bradford's site at Ingleburn in NSW also hosted students from UTS Business School to visit the operations to focus on operations and supply chain management.





#### **PARENT / DAUGHTER DAY**

Major sites in Lightweight Systems hosted a parent and daughter day to foster positive impressions in the minds of the next generation of women about their role in business and manufacturing. The day promoted the different types of jobs available in the industry with the young women participating in a number of science experiments and activities.



## PILOT FEMALE INTERNSHIP PROGRAM

Lightweight Systems is also completing a pilot of 37 female internships during December 2016 targeting women. Three female students from Evans High School, who have been working with CSR mentors as part of the Inter-Act Program have been selected to join the internship program. There are 34 female university students who have also joined the pilot program for a four week work experience program.

## COMMUNITY

#### CSR engagement with local communities

There are three components to CSR's community support program. Employees can make donations to our three partner charities, volunteer their time by participating in one of the student mentor programs, or by CSR donating building products to a worthy cause.

#### **OUR PARTNERSHIPS**

OVER 13 YEARS, CSR AND EMPLOYEES HAVE DONATED OVER

\$2.8m

We continue to partner with a number of organisations in line with our commitment to operate in a sustainable manner and to

gain the confidence of the communities in which we operate. A core component of our community involvement is the CSR Community Support Program, under which CSR matches employee contributions dollar for dollar to three charitable organisations.

CSR launched the CSR Community Support Program in 2003 and during that time CSR and its employees have donated over \$2.8 million to charity. In the year to 30 June 2016, CSR and its employees donated \$105,816 to three charitable organisations, The Salvation Army, Youth Off The Streets and Assistance Dogs Australia.

CSR extends its relationship with its partnership charities by providing volunteer support for various campaigns and activities during the year.



#### THE SALVATION ARMY - CHRISTMAS BAG PACKING

CSR employees volunteered to pack Christmas bags for The Salvation Army's Oasis Youth Support Network fundraiser. For the last few years The Salvation Army have been the recipients of funds raised from the sales of Christmas bags at Woolworths' Carols in the Domain, Sydney. The event is attended by thousands of people and is broadcast by Channel 7. The Salvation Army are generously provided the space by Woolworths to pack the bags. The funds from the sale of the Christmas bags go towards funding the crisis refuge, Oasis, in Surry Hills, New South Wales.



**THE SALVATION ARMY** is a national charity, offering caring support for every problem "from the cradle to the grave." Their services are as wide-ranging and diverse as the areas of need in the community. They offer services to aged care, crisis accommodation, suicide prevention, youth and families at risk, telephone counselling, to name just a few.



**YOUTH OFF THE STREETS** is a youth-specific charity, assisting young people dealing with issues of substance and other abuse, alienation from family and community and homelessness. Youth Off The Streets offers a continuum of care from assistance on the streets; crisis and short term accommodation to long term residential care, treatment and secondary schooling.



**ASSISTANCE DOGS AUSTRALIA** is a national charity which trains Labradors and Golden Retrievers to help people with physical disabilities. They currently have over 90 dogs around Australia, with over 50 dogs currently in training. The charity requires significant funding to achieve its goal of placing at least 30 dogs per year with recipients.

## COMMUNITY

In the community



#### **WORKING IN THE COMMUNITY**

CSR commenced working with the Australian Business and Community Network (ABCN) in 2011. It is a partnership of highly committed national business leaders and companies working on mentoring and coaching programs in schools in high need areas.

For the year to 30 June 2016, CSR volunteers donated 655 hours, providing mentoring support to over 200 students from disadvantaged schools in New South Wales, Queensland and Victoria.

## LIGHTWEIGHT SYSTEMS HELP BUILD NEW ACTIVITY ROOMS FOR LIFESKILLS PLUS

Annually the NSW regional Lightweight Systems team get together to work in the community for a day. Over the past four years the team have helped in schools, cooked for the homeless and this year in conjunction with Petries Mitre 10, insulated and sheeted three large rooms at the Lifeskills Plus stage 2 project in Mudgee. These new rooms will be used as program rooms for one-on-one activities, such as sewing, reading and quiet sensory time.



The NSW regional Lightweight Systems team in conjunction with Petries Mitre 10 insulated and sheeted three large rooms at the Lifeskills Plus stage 2 project in Mudgee.



#### **ABCN 'INTERACT' PROGRAM**

CSR is part of ABCN's InterACT program which is designed to assist students from a migrant or refugee background to gain cultural and vocational literacy in order to participate in Australian life. The program focuses on 'soft skills' such as communication and building relationships. There is also a critical socialisation aspect through which students learn to sustain a conversation with a positive role model outside their immediate community. CSR has a team of mentors who meet with the students over six weeks as part of the program.



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#### **S19 NGER Limited Assurance Conclusion**

The Directors CSR Limited Triniti 3, 39 Delhi Road North Ryde, NSW 2113

21 October 2016

Dear Directors

Re: Limited assurance engagement report on CSR Limited's ("CSR") compliance with Section 19 of the National Greenhouse and Energy Reporting Act 2007 for the reporting period ended 30 June 2016 to the Directors of CSR Limited

Please find herewith our limited assurance report and detailed findings in respect of CSR Limited's compliance with Section 19 of the *National Greenhouse and Energy Reporting Act 2007* ('NGER Act') in accordance with the *National Greenhouse and Energy Reporting (Audit) Determination 2009* ('NGER Audit Determination'), Standard on Assurance Engagements *ASAE 3410 Assurance Engagements on Greenhouse Gas Statements* ('ASAE 3410'), Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements* ('ASQC 1') and the guidance contained in the NGER Audit Determination Handbook.

#### **Audited Body**

Name of audited body:	CSR Limited			
ABN of audited body:	9000001276			
	Audited body contact	Ms Linden Birch, Group Sustainability Manager		
Audited body contact	Phone number	(02) 9235 8358		
details:	Address	Triniti 3, 39 Delhi Road		
North Ryde, NSW 2113				

#### **Reporting Requirements**

Total scope 1 emissions for audited body	447,471 tonnes of CO2-e
Total scope 2 emissions for audited body	266,814 tonnes of CO2-e
Total energy consumption for audited body	8,378,476 GJ

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Total energy production for audited body	0 GJ
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#### **Audit Description**

Kind of audit	Limited assurance
Audit objective	To provide limited assurance on scope 1 emissions, scope 2 emissions, energy production and energy consumption as reported in CSR's Section 19 2016 NGER Report.
Time period audited	1 July 2015 to 30 June 2016
Date terms of engagement signed	29 April 2016
Date audit report signed	21 October 2016

#### **Auditor Details**

Auditor Details	Name of Audit Team Leader	P R Dobson	
	GEA Registration number	0208/2013	
	Organisation	Deloitte Touche Tohmatsu	
	Phone number	(02) 9322 5422	
		Grosvenor Place	
	Address	225 George Street	
		Sydney NSW 2000	
Names and contact details of audit team other persons working with the audit team leader	Victor Kalimugogo (02) 9322 7000 Jennifer Foo (02) 9322 7000 Lubna Sharmeen (02) 9322 7000		

Details and evidence of exemptions under section 6.71 of the NGER Regulations for the audit team leader or professional member of the audit team. This includes:

- conflict of interest and details of the procedures for managing conflict of interest;
- relevant relationships; and
- exemptions for an audit team leader to carry out more than five consecutive greenhouse and energy audits in relation to the audited body.



#### **Peer Reviewer Details**

Name of peer reviewer	Peter Rupp
Organisation	Deloitte Touche Tohmatsu
Phone number	(08) 9365 7285
Address	Deloitte, Tower 2, Brookfield Place
Address	123 St Georges Terrace, Perth, WA, 6000, Australia

Should you have any questions with the above please contact me on (02) 9322 5422 or at <a href="mailto:padobson@deloitte.com.au">padobson@deloitte.com.au</a>.

Yours sincerely

P R Dobson

Partner



Limited assurance engagement report on CSR Limited's compliance with Section 19 of the National Greenhouse and Energy Reporting Act 2007 for the reporting period ended 30 June 2016 to the Directors of CSR Limited

#### Part A - Auditor's Report

We have conducted an engagement to provide limited assurance regarding the compliance of CSR Limited's ("CSR") Section 19 of the National Greenhouse and Energy Reporting Act 2007 ('NGER Act') ('NGER Report'). The NGER Report consists of the following:

- Scope 1 greenhouse gas emissions of 447,471 tonnes of CO2-e
- Scope 2 greenhouse gas emissions of 266,814 tonnes of CO2-e
- Energy production of 8,378,476 GJ
- Energy consumption of 0 GJ

for the period 1 July 2015 to 30 June 2016.

#### **Details of audited body**

Name of audited body	CSR Limited		
Address	Triniti 3, 39 Delhi Road		
	North Ryde, NSW 2113		
ABN	9000001276		

#### **Management's Responsibility**

Management of CSR is responsible for the preparation and fair presentation of CSR's NGER Report in accordance with section 19 of the NGER Act. This responsibility includes the design, implementation and maintenance of internal controls relevant to the preparation and presentation of the NGER Report that is free from material misstatement, whether due to fraud or error; selecting and applying measurement methodologies in accordance with the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* ('NGER Measurement Determination') and making estimates that are reasonable in the circumstances.

CSR has developed a Basis of Preparation which details how CSR has interpreted and applied the requirements of the NGER Act, which for the purposes of our engagement represents the criteria.

#### **Assurance Practitioner's Independence and Quality Control**

We have complied with the independence and other relevant ethical requirements relating to assurance engagements, which are founded on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. This includes all of the requirements as defined in the NGER Regulations regarding the Code of Conduct, independence and quality control.

The firm applies Auditing Standard ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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#### **Assurance Practitioner's Responsibility**

Our responsibility is to express a limited assurance conclusion, on CSR's compliance with Section 19 of the NGER Act for the period 1 July 2015 to 30 June 2016, based on the procedures we performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the *National Greenhouse* and Energy Reporting (Audit) Determination 2009 ('NGER Audit Determination') and the Standard on Assurance Engagements ASAE 3410 Assurance Engagements on Greenhouse Gas Statements ('ASAE 3410'). The NGER Audit Determination and ASAE 3410 require that we plan and perform the engagement to obtain limited assurance about whether the NGER Report is free from material misstatement.

We read other information included within the CSR NGER Report and considered whether it was consistent with the knowledge obtained through our procedures. We considered the implications for our report if we became aware of any apparent material inconsistencies with the NGER Report. Our responsibilities did not extend to any other information.

A limited assurance engagement in accordance with the NGER Audit Determination and ASAE 3410 involves assessing the suitability in the circumstances of CSR's selection of measurement methods and criterion provided in the NGER Measurement Determination as the basis for the preparation of the NGER Report, assessing the risks of material misstatement or material non-compliance of the NGER Report, whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the NGER Report. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an assessment of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgement and included enquiries, observations of processes performed, inspection of documents, site visits to a sample of CSR facilities, analytical procedures, evaluating appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. An assurance engagement also includes:

- Evaluating the appropriateness of the quantification methods and reporting policies used, and the reasonableness of emissions estimates made by management of CSR;
- Assessing the suitability in the circumstances of CSR's selection of measurement methods and criterion
  provided in the NGER Measurement Determination as the basis for the preparation of the NGER Report;
- Evaluating the application of the activity definitions in determining facility boundaries and operational control in determining controlling corporation boundaries; and
- Evaluating the overall presentation of the NGER Report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly we do not express a reasonable assurance opinion about whether CSR's NGER Report has been prepared, in all material respects, in accordance with Section 19 of the NGER Act

As audit team leader, I attest that the assurance engagement was carried out in accordance with the assurance engagement terms, the requirements of the NGER Regulations, the NGER Audit Determination and ASAE 3410.



#### **Limitation of Use**

This report has been prepared for the Directors of CSR for the sole purpose of reporting on the NGER Report in accordance with Section 19 of the NGER Act. We understand that a copy will be provided to the Clean Energy Regulator ('CER") for the purpose of reviewing CSR's compliance with the NGER Act and NGER Regulations. We agree that a copy of the report may be provided to the CER for this purpose.

We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than CSR, or for any purpose other than that for which it was prepared.

#### **Inherent Limitations**

There are inherent limitations in performing an assurance engagement - for example, assurance engagements are based on selective testing of the information being examined – and it is possible that fraud, error or non-compliance may occur and not be detected. An assurance engagement is not designed to detect all instances of non-compliance with the NGER Act and NGER Regulations, as an assurance engagement is not performed continuously throughout the year and the procedures performed in respect of compliance with the NGER Act and NGER Regulations are undertaken on a test basis.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and sampling or estimating such data.

Emissions quantification is subject to inherent uncertainty because incomplete scientific knowledge has been used to determine emission factors and the values needed to combine emissions due to different gases.

A limited assurance engagement is restricted primarily to enquiries and analytical procedures and the work is substantially less detailed than undertaken for a reasonable assurance engagement. As such the level of assurance is lower than would be the case for a reasonable assurance engagement.

#### **Limited Assurance Conclusion**

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the reported greenhouse gas emissions, energy production and energy consumption are not prepared, in all material respects, in accordance with Section 19 of the NGER Act, for the period 1 July 2015 to 30 June 2016.

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P R Dobson Partner

## Deloitte.

Limited assurance engagement report on CSR Limited's compliance with Section 19 of the National Greenhouse and Energy Reporting Act 2007 for the reporting period ended 30 June 2016 to the Directors of CSR Limited

#### Part B - Detailed Findings

In accordance with NGER Audit Determination we report our key findings from our limited assurance engagement over CSR's NGER Report.

#### Issues requiring particular attention

None noted

#### Aspects impacting on assurance engagement

None noted

#### Contraventions of the NGER legislation

None noted

#### Other matters

None noted

#### **Audit Findings and Conclusions Table**

The results that are provided in the table below should not be construed as providing a conclusion on the NGER Report being as a whole, instead they should be read in the context of providing evidence to support the conclusion. These findings, conclusions and recommendations are designed to inform CSR and the Clean Energy Regulator of any compliance issues and will be used, in part, to better inform regulatory decisions and broader advice to the regulated community.

Issue/Risk area investigated	Testing conducted	Findings	Conclusion	Recommendations
Operational	We have:	No	Risk area has	None.
control/facility	1) Assessed CSR's	material	been	
boundaries	documented positions in	issues	appropriately	
	respect to decisions	were	addressed as	
CSR is required to apply the	reached in determining	identified.	part of our	
NGER Act	CSR's corporate		NGER limited	
definition of	boundaries to ensure		assurance	
operational control in order	compliance with NGER		engagement.	
to determine				
which facilities,	2) Assessment included			
operations and	consideration of the			
activities should be reported	determination of group			
in the 2016 NGER Report.	members, activities of			
	contractors and joint			

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Issue/Risk area investigated	Testing conducted	Findings	Conclusion	Recommendations
	venture arrangements			
	3) Reviewed CSR's definition of facilities to ensure that facilities have been determined in accordance with NGER			
	4) Reviewed changes to the corporate structure during the year, and reasons for inclusions and exclusions Also reviewed documented position on			
Industrial processes emissions – glass production – Viridian Glass production and processing is an energy intensive manufacturing process and results in carbon dioxide emissions through the conversion of carbon oxidation-reduction reactions during the melting phase.	such changes.  We have:  1) Reviewed CSR's process used to measure carbonates and carbon oxidation-reduction reaction activity data, and in particular how CSR reconciled the data to operational production reporting outputs  2) Site visit to Viridian's Dandenong site to review these processes on site  3) Performed substantive testing of the activity input data focusing on soda ash, dolomite and natural gas, as well as leveraging the financial audit team's testing of purchase data  4) Reviewed the calculations of the carbon-oxidation reaction against the requirements stipulated in the NGER Measurement Determination  5) Where estimates were used, we reviewed the	No material issues were identified.	Risk area has been appropriately addressed as part of our NGER limited assurance engagement.	None.
Industrial process	assumptions used and assessed these for reasonableness.	No	Dick area has	None
Industrial process	We have:	No	Risk area has	None.

## **Deloitte**

Issue/Risk area investigated	Testing conducted	Findings	Conclusion	Recommendations
emissions – Bricks and Roofing The Bricks and Roofing division has a complex emission profile as a result of the manufacturing of a range of bricks and roofing materials. Inputs that generate GHG emissions include coal slurry, coal stone and natural gas.	1) Assessed CSR's process used to calculate emissions from the inputs into the Bricks and Roofing division, particularly relating to the coal slurry, coal stone and natural gas. 2) Assessed the technical measurement methodologies and performed a site visit to a significant site (Oxley) in order to assess the processes in place and considered completeness of emissions sources 3) Performed substantive testing of activity data to source documentation such as invoices to ensure that the data is complete and accurate. To do this, we utilised information already used in the audit and leveraged the financial audit team's testing of this data.	material issues were identified.	been appropriately addressed as part of our NGER limited assurance engagement.	
Industrial process emissions- Light Weight Systems The Light Weight Systems division generates significant emissions as a result of the manufacture of Gyprock and fibre cement products particularly relating to the use of natural gas.	We have reviewed the process CSR has in place to calculate emissions from the Light Weight Systems division, focusing on natural gas.	No material issues were identified.	Risk area has been appropriately addressed as part of our NGER limited assurance engagement.	None.
Completeness and accuracy of data across multiple sites CSR has a significant number of sites located throughout Australia operating a diverse range of businesses. Management of the data collation process in	We have:  1) Reviewed the process used by CSR to capture, collate and compile data across multiple sites to ensure that the data is complete and accurate, including assessment of any IT or spreadsheet	No material issues were identified.	Risk area has been appropriately addressed as part of our NGER limited assurance engagement.	None.



Issue/Risk area	Testing conducted	Findings	Conclusion	Recommendations
investigated				
these circumstances can be	based system used			
challenging and requires the	2) Performed substantive			
co-ordination and co-	testing of a sample of			
operation of personnel	data to source			
across multiple departments	documentation as well as			
across the business.	analytical reviews and			
	enquiries of the			
	Sustainability and Finance			
	teams regarding the			
	controls in the process.			

#### Other matters to be reported

Nil.			

#### Peer reviewer conclusion

Name of the peer reviewer	Peter Rupp
Peer reviewer's credentials	Partner, Registered Company Auditor, Registered Greenhouse & Energy Auditor
Peer reviewer contact details	Deloitte Touche Tohmatsu, (08) 9365 7285
Outcome of the evaluation undertaken by the peer reviewer	I concur with the assurance conclusion contained in the limited assurance report above.

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P R Dobson Partner

Registered Greenhouse and Energy Auditor Sydney

21 October 2016

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