CSR is committed to sustainable practices throughout our business and sharing this knowledge with the communities in which we operate.
Contents

OUR APPROACH
   – SUSTAINABILITY AT A GLANCE 3
   – WELCOME MESSAGE 4
   – ABOUT CSR 5
   – CSR INNOVATION TARGETING SUSTAINABLE BUILDING AND ENERGY EFFICIENT SOLUTIONS 6
   – SCOPE OF THIS REPORT 8
   – GOVERNANCE AND RISK MANAGEMENT 9

OUR PEOPLE 11

WORKPLACE HEALTH, SAFETY & ENVIRONMENT 13

ENVIRONMENT 18
   – ENERGY 20
   – WATER 22
   – WASTE 23

COMMUNITY 24

GLOSSARY 27

REASONABLE ASSURANCE ENGAGEMENT REPORT 28

ENERGY EFFICIENCY OPPORTUNITIES 36

CONTACT US 44
CSR continued to progress its sustainability agenda over the past year.

- CSR’s safety record continued to improve on previous years with the number of lost time injuries (lost time; restricted work and medical treatment injuries) per million work hours decreasing by 48%.
- CSR’s total number of recordable injuries reduced by 33%.
- CSR conducted 8,670 training sessions known as “tool box talks” which are team discussions around a variety of topics including safety and operational improvement.
- CSR’s total greenhouse gas emissions were 626,734 tonnes of CO₂-e – a reduction of 3% on the previous year.
- CSR consumed 752,692 kilolitres of potable water – a decrease of 15% from the prior year.
- CSR produced a total of 22,549 tonnes of solid waste – a decrease of 30% on the prior year.
- CSR reinforced its commitment to sustainable building with the launch of a new quarterly online publication Building Knowledge providing information drawn from CSR’s wide range of building science knowledge.
- CSR continued development of its Australian designed Odyssey™ an intelligent, energy efficient, air cooling system that provides ventilation of homes lowering cooling costs.
- Bradford Energy Solutions was launched to provide homeowners comprehensive energy assessments and professional installation of CSR’s energy efficiency product solutions.
- CSR continued its support of the CSR Values Champions recognition scheme to recognise the outstanding performance of its people.
- CSR and its employees donated $88,807 to a range of charitable organisations through its community support program.

CSR’s Lost Time Injury Frequency Rate Decreased by 48%  
Greenhouse Gas Emissions Reduced by 3%  
Water Usage Decreased by 15%  

Lost time injury frequency rate  
AS AT 30 JUNE (PER MILLION WORK HOURS)  
2013: 2.89  
2012: 5.52  
2011: 4.66  

Total recordable injury frequency rate  
AS AT 30 JUNE (PER MILLION WORK HOURS)  
2013: 15.83  
2012: 23.58  
2011: 27.42  

Tonnes of CO₂-e  
AS AT 30 JUNE  
2013: 626,734  
2012: 644,959  
2011: 686,724  

Total water consumed^  
AS AT 30 JUNE (KILOLITRES)  
2013: 752,692  
2012: 881,732  
2011: 1,018,194  

Total solid waste produced#  
AS AT 30 JUNE (TONNES)  
2013: 22,549  
2012: 32,257  
2011: 36,658  

Number of CSR employees  
AS AT 30 JUNE  
2013: 3,134  
2012: 3,300  
2011: 3,737  

^ Only metered water data is included  
# Solid waste does not include waste taken off-site for recycling/re-use
Welcome message

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.

The demand for new homes and buildings is changing in our region. There is greater need for higher density living while higher energy costs are having a significant impact on the cost of living.

CSR is helping to meet the changing demands in the homes, offices, shops and industrial sites that we help build. We are using our extensive research in sustainable building science to make living and working more comfortable and affordable while minimising its impact on the environment and consumption of resources.

Our aim is to improve the comfort, durability, cost of living and design flexibility of homes and workplaces with new products and services including:

- Continuing research in sustainable housing design from CSR House, an 8-star state-of-the-art building research centre in Western Sydney which opened in November 2012
- Launch of Bradford Energy Solutions providing better energy solutions and lower energy bills to business and homeowners
- Australian designed Odyssey ventilation system that can significantly reduce the need for air conditioning
- Viridian double glazed glass which reduces energy loss from homes and buildings

We use the same approach for innovation in the way we manage our business. We understand that a sustainable business must ensure that it minimises its impact on the environment and consumption of resources.

Many of our ideas to develop sustainable buildings come from projects we have already initiated in our own operations as there are both environmental and financial benefits.

In the past year, we have developed energy efficient lighting plans for all of our major factories. Lighting generally accounts for about 6-8% of the energy bill from a warehouse or factory. Installing high-efficiency lighting saves between 30-60% of lighting costs. Many of these projects are supported by grants from the Government’s Clean Technology Investment Program due to the substantial reduction in energy use.

Our sustainability agenda goes well beyond the products and services we develop for the building industry. Our primary focus remains on safety and we place the same emphasis and importance on managing workplace health and safety and our impact on the environment as any other business imperative.

CSR's safety record continued to improve on previous years with the number of lost time injuries per million work hours decreasing by 48%, with the total number of recordable injuries reduced by 33%. Despite the significant improvement in the twelve months to 30 June 2013, we had two serious injuries in July 2013 which again focused our people to analyse these incidents and other near misses to ensure we avoid the risk of another significant injury. In order to ensure that no one is injured at CSR, we must continue to ask ourselves what else can be done to improve the safety of our workplace.

This report also includes information on emissions, water use and waste production across our businesses.

Our ongoing commitment is to minimise the impact on the environment with specific targets to reduce greenhouse gas emissions and waste production and the consumption of energy and water used in production.

In the twelve months to 30 June 2013, we have continued to reduce levels in all of these categories which ensures CSR is on track to meet its 2020 goal of a 20% reduction using 2009/10 as the base year:

- Total greenhouse gas emissions down 3%
- Potable water usage down 15%
- Solid waste produced down 30%

To achieve these targets, CSR progressed a number of initiatives to improve operational performance and efficiency with over 200 energy reduction initiatives underway across our sites.

Good safety and environmental performance is an indicator of good culture and positive employee engagement.

As part of the feedback received from our cultural program (Project Blueprint) completed in 2012, CSR is doing more to invest in our employees including an expanded program of leadership development and management training courses.

CSR has continued to make progress on sustainability during the past year. We would like to acknowledge and thank employees and contractors across CSR 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).

EIGEAA MCGRAI
Chairman, Workplace Health, Safety & Environment Committee

Rob Sindel
Managing Director
About CSR

CSR is a leading building products company across Australia and New Zealand with an investment in a globally cost competitive aluminium smelter.

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 in 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, Monier™ rooftiles and Viridian™ glass.

We manufacture and supply a wide range of building products, with a particular focus on energy efficiency and sustainability in the built environment. This range includes energy efficient Viridian™ glass, Bradford™ insulation and lightweight Hebel® concrete panels to make buildings more energy efficient.

Through our innovation centre, we are also developing more 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 per cent interest in the Tomago aluminium smelter, located in NSW. Tomago is a globally cost competitive smelter which produces around 550,000 tonnes of aluminium annually, some 25 per cent 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.

CSR employs approximately 3,100 people in Australia and New Zealand.
CSR innovation targeting sustainable building and energy efficient solutions

CSR launches Building knowledge e-zine

Highlights

In November 2012, CSR launched the CSR House, a state-of-the-art building research centre in Schofields, Western Sydney. CSR House is now a working research and development facility where CSR has hosted hundreds of visitors including over 50 of CSR’s major builder customers. This process has reinforced that CSR possesses a wealth of knowledge and expertise unique to the Australian market. This knowledge resides across all of our product groups.

This knowledge is not confined to the residential market as building science principles apply to commercial and multi-residential construction. It is often the case that information regarded as common knowledge by technical and sales professionals is not well understood by our customers and consumers.

To help unlock this knowledge and share it with our customers and the wider industry, in September 2013, CSR launched Building Knowledge, a new quarterly online publication providing information drawn from CSR’s wide range of building product and building science knowledge.

Created specifically for builders, specifiers and other professionals in the building and construction industry, each edition of Building Knowledge will examine areas where building science and ‘buildability’ interact. Drawing on the wealth of knowledge within the CSR business, the e-zine draws out key insights for the industry.

Building Knowledge examines topics ranging from building resilience in Australia and the insurance industry’s efforts to influence in this area, to an analysis of how CSR House’s new data will impact Australian construction trends, the future for energy star ratings for homes, and the dilemma of flexible fire barriers.

Future editions will continue to investigate the policy and regulatory framework for the building industry and is available from CSR’s website www.csr.com.au.

CSR continues to research and develop new products across its portfolio. In the last year, CSR has filed patent applications for 20 separate innovations as part of its extensive portfolio of patents and related applications.
CSR innovation targeting sustainable building and energy efficient solutions (continued)

Launch of Bradford Energy Solutions

Using its knowledge of improving energy efficiency of residential and commercial buildings, Bradford Energy Solutions (BES) was launched this year to offer comprehensive energy assessments to homeowners, small businesses, and commercial and industrial buildings owners. This includes professional installation of CSR’s energy efficiency product solutions including Bradford Solar, Bradford Draught Proofing, Edmonds ventilation, Bradford Lighting, Bradford Insulation and a range of energy efficient accessories.

With our commitment to sustainability and driving down energy costs, we have gained invaluable experience implementing energy efficiency and sustainable power generation measures including:

- Power factor correction across our manufacturing plants
- Installing energy efficient lighting in major sites
- Power monitoring to identify areas of unusual usage.

CSR House keeps cool on hottest day on record

Even on Sydney’s hottest day on record – January 18, 2013 – when the mercury hit 45 degrees Celsius, the interior of CSR House remained 15 to 16 degrees cooler than the outside temperature.

When the ceiling fan cooling effect (or physiological cooling) is factored in, the “feels like” temperature was approximately 26 degrees. Importantly, this data was collected when the CSR House was operating in “Free Running” mode, i.e. with no heating or cooling systems operating.

CSR is continuing to collect data from CSR House including:

- A comparison of the thermal heat flow (bridging) performance of a 90 x 45mm timber stud, in comparison with a 90mm light gauge steel stud and R 2.7 insulation
- A review of the seasonal soil temperature and moisture variations below ground (0.5 m and 1.0 m deep) at various locations around the house
- What does comfort really mean? Is it just temperature and humidity, or do other factors come into play? We are looking at acoustics, radiant heat, natural light and air quality
- How much energy is actually required throughout the year to keep the CSR House within the comfort zone?

Bradford Energy Solutions installs largest private solar panel system in Tasmania

Bradford Energy Solutions (BES) was commissioned by Josef Chromy wines, one of Tasmania’s leading wineries to develop a comprehensive program to reduce their overall energy consumption and carbon footprint. BES developed a number of solutions including insulating bulk wine storage tanks, insulating a wine cool room and installing a 100kW PV solar panel system.

BES developed a detailed energy assessment which enabled the project to receive a $200,000 grant through the Clean Technology Investment Program. The project has reduced their energy consumption by 35% including a 50% reduction in daytime energy use.
Scope of this report

This report provides information on CSR’s sustainability record and also on the opportunities we are pursuing to make our business more sustainable both now and into the future.

This report covers CSR’s activities (including safety performance, emissions and energy data, waste and water use) for the period of 1 July 2012 to 30 June 2013 to be consistent with the National Greenhouse and Energy Reporting (NGER) scheme.

Data for water usage and waste produced by CSR’s businesses has been categorised into the three operating business divisions:

- Lightweight Systems’ major brands include Bradfoid™ insulation, Hebel® panels, Edmonds™ ventilation, Gyprock™ plasterboard, Cemintel™ fibre cement and Ceilector™ ceiling systems
- Viridian™ includes the Viridian glass business
- Bricks and Roofing’s major brands include PGH™ bricks and pavers and Monier™ rooftiles.

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 per cent interest, through its 70 per cent shareholding in Gove Aluminium Finance Limited, are not included in this report. Data from these activities is reported directly by other entities.

All physical measurements in this report are in metric units. All financial figures are in Australian dollars, unless stated otherwise.

In creating this report we continued to reference a wide range of material including:

- Reviewing CSR’s activities and operations across each business to collect data on energy use and emissions and prepare an inventory of greenhouse gas emissions
- Continuing to reference the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, United Nations Global Compact and Federal Government policy towards sustainability reporting in Australia
- Reviewing best practice sustainability reports both in Australia and globally. We monitored and reviewed feedback from CSR’s previous sustainability reports and continued to gauge feedback from stakeholders including investors, corporate governance advisers, analysts, media and staff.
Governance and Risk Management

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

Our corporate governance is the system by which the company is directed and managed.

It is the framework of rules, relationships, systems and processes which underpin CSR’s long established values and behaviours and the way we do business. It is also the framework within which the CSR board of directors is accountable to shareholders for the operations, profit performance and growth of the company and how the risks of the business are identified and managed.

The directors of CSR are committed to ensuring that the company maintains an effective system of corporate governance and that good corporate governance is an integral part of the culture and business practices of the CSR group.

Code of business conduct and ethics

The CSR board has endorsed a Code of Business Conduct and Ethics that formalises the longstanding obligation of all CSR people, including directors, to behave ethically, act within the law, avoid conflicts of interest and act honestly in all business activities.

CSR’s Code of Business Conduct and Ethics reinforces the company’s commitment to giving proper regard to the interests of people and organisations dealing with the company. Each CSR employee is required to respect and abide by the company’s obligations to employees, shareholders, customers, suppliers and the communities in which we operate.

In addition, the board has adopted specific policies in key areas, including trade practices; workplace health, safety and the environment; fairness, respect and diversity in employment; dealing with price sensitive and other confidential information; trading in CSR shares; privacy; indemnification of employees; and requirements for authorising and entering into business transactions on behalf of CSR.

CSR employees are required to sign a certificate of compliance each year signifying that they have read and complied with the Code of Business Conduct and Ethics and are not aware of any breaches of that policy.

CSR values

CSR’s values reflect the company’s commitment to sustainability. They have been developed to ensure CSR acts as a responsible corporate citizen for the benefit of all of stakeholders.

The CSR values are communicated across the company through a variety of formal and informal channels.

- **Workplace Health, Safety & Environment (WHSE)**
  - We care for and protect each other, our business and our environment

- **Working Together**
  - We respect one another and achieve more by working together across CSR

- **Customers**
  - We listen to our customers to understand and meet their needs

- **Innovation**
  - We strive to develop new ideas and continuously improve the way we do business

- **Results**
  - Together we achieve positive and sustainable results for each other and our stakeholders
Annually, CSR employees nominate colleagues for an award as part of the CSR Values Champions Recognition Scheme, which encourages our employees to demonstrate the CSR Values. The nominations are judged by the executive management team, culminating in an awards dinner to acknowledge the achievements of successful champions.

For 2013, the CSR Values Champions were chosen from over 140 nominations with every CSR business and the majority of sites nominating one of their colleagues. In addition, 14 additional employees were awarded the Managing Director’s Award reflecting their extra effort in meeting a customer’s need, commitment to health, safety & environment, working together, innovation or extraordinary results.

Over the past few years children of employees are also given the opportunity to draw a picture, depicting CSR values, which are showcased in the CSR’s internal newsletter.

Risk Management

CSR has a sound system of risk oversight and management and internal control.

There are many 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. In many of these businesses, CSR constantly and deliberately assumes certain levels of risk in a calculated and controlled manner. CSR has in place authority limits and a range of policies and procedures to monitor the risk in its activities and these are periodically reviewed by the board. CSR’s Risk Management Policy sets out the framework for risk management, internal compliance and control systems.

There are several layers that assist the board in ensuring the appropriate focus is placed on the risk management framework.

The Risk & Audit Committee reviews and reports to the board in relation to the company’s financial reporting, internal control structure, risk management systems and the internal and external audit functions. The Risk & Audit Committee recommends to the board the appointment or dismissal of the internal auditor, who is independent of the external auditor.

The Workplace Health, Safety & Environment (WHSE) Committee reviews and reports to the board on the management of the company’s safety, health and environment liabilities and legal responsibilities; and the senior management team manages and reports to the board on operational, financial and business risks.

Risk management is sponsored by the board, and is a top priority for senior managers, starting with the managing director.

It is the policy of the board that the majority of members of each board committee be independent directors, that all Risk & Audit Committee members be independent directors and that the Remuneration & Human Resources Committee and the WHSE Committee be chaired by independent directors.
Our people
CSR recognises that a sustainable workplace is one that is both safe and rewarding for our employees.

As at 30 June 2013, CSR had 3,134 full time equivalent (FTE) employees across its operations in Australia and New Zealand. This total is down 5% from the equivalent figure last year.
The average length of service for CSR employees is 9.8 years, slightly ahead of the prior year. Employee turnover remained steady at 11%.

Performance driven remuneration aligned with shareholder interests
CSR’s remuneration framework is based on the following principles:

| Performance driven | Remuneration should reward executives based on annual performance against business plans and long term shareholder returns.
|                    | A significant proportion of executive remuneration should be ‘at risk’ and performance dependent.
|                    | Performance measurement is mainly focused at the organisational level which best reflects the job role’s relative influence.

| Alignment with shareholder interests | Incentive plans and performance measures are aligned with CSR’s short and long term success.
|                                    | Ownership of CSR shares is encouraged through the use of equity as the vehicle for the Long Term Incentive (LTI) plan and the requirement to forgo part of STI to acquire shares for executive management.

| Market competitive remuneration | Remuneration, including those elements which can be earned subject to performance, is set at competitive levels that will attract, motivate and retain high quality executives.

We encourage our people to own a stake in CSR to align their interest with those of our shareholders. The Employee Share Acquisition Plan (ESAP) allows staff employees to forgo up to $5,000 of their cash remuneration to acquire shares in the company.
Under the Universal Share Ownership Plan (USOP), eligible employees can buy shares which are then matched one-for-one by the company at no additional cost up to a maximum value of $1,000. In total, 30% of employees own shares in CSR.

Diversity
CSR strives to ensure diversity within the organisation. 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 improving diversity is important to improving and sustaining a workforce capable of generating better relationships and more innovative solutions for its customers. Ultimately, this improves the results of CSR.
CSR has adopted the ASX CGC’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. The culture change themes have been used by CSR to structure its measurable objectives.
The objectives and achievements for the year ended 31 March 2013 and a brief outline of the objectives for the year ending 31 March 2014 are included the Corporate Governance section of CSR’s 2013 Annual Report which can be accessed from CSR’s website www.csr.com.au.
At board level two of the five non-executive directors are women. 14% 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. Overall, 15.6% of the CSR workforce are women.
Our people (continued)

Engagement, Leadership and Development

At CSR we maintain a commitment to our employees to ensure a safe and rewarding workplace and one which also encourages their personal development. As part of the feedback received from our cultural program “Project Blueprint” completed in 2012, CSR is investing in our employees.

This commitment has been reinforced with a number of new programs completed in the last year.

- **Leaders Program** – designed for senior leaders in CSR to develop skills to grow and expand the business leadership, strategic thinking and innovation. To date 40 senior leaders in CSR have completed the program.

- **Constructive Leaders Program** – a new program launched this year which is designed for leaders in CSR now and into the future to improve our business performance and the way we work together.

- **Strengthening individual leadership program (LSI)** – an intensive leadership effectiveness workshop aimed at facilitating the personal development of our leaders through feedback and self-reflection

- **Trainme portal** – employees have the opportunity to participate in a wide range of training courses covering the following categories: information technology, customer service, influence (such as business writing skills), leadership & team development, professional development, workplace health, safety & environment, sales, and CSR’s induction program, which covers trade practices, code of conduct, chain of responsibility, fairness respect & diversity and managing safety.

Viridian continues apprentice training programs

Viridian has continued its glass and glazing apprentice programs across its manufacturing sites in Australia. A variety of programs are run for apprentices including work placement, site tours, safety and operational presentations and liaison with local TAFE training programs.

This year, Dean Carter, a second year glass and glazing apprentice at Viridian’s site at Morwell in Victoria was awarded the Holmesglen TAFE’s apprentice of the year award. This was the fourth apprentice of the year award for the Morwell site which is an important program for Viridian to ensure new apprentices are supported to join the glass industry.

Investment in CSR people in the last year

53 Leadership Development Programs

- 2 CSR Leaders Programs
- 2 CSR Constructive Leaders Programs
- 20 LSI/LSI Retest Workshops
- 29 Foundations of Leadership Sessions
- 502 Employees have attended LSI workshops
- 3,234 visits to internal Trainme portal
- 14,000 hours invested in training in the financial year ended 31 March 2013.

Redbox – Our future... Why...? What...? How?

In 2013, CSR launched a major campaign to engage employees in the development of CSR’s strategy. Over 500 employees were involved in a number of conferences and focus groups to share why people work for CSR, what CSR means to them and how CSR can better deliver the messages we wish to convey.

The process is called Redbox and involves sessions with all CSR employees over the next six months to discuss:

1. Why we do what we do and what it means to be part of CSR, and
2. Our key strategy themes – encapsulating our plans for growing CSR.
Workplace Health, Safety & Environment

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

Workplace Health & Safety

| LOST TIME INJURY FREQUENCY RATE HAS IMPROVED | 48% ▼ |
| TOTAL RECORDABLE INJURY FREQUENCY RATE HAS IMPROVED | 33% ▼ |
| LOST TIME INJURY SEVERITY RATE HAS IMPROVED | 22% ▼ |

Loss time injury frequency rate
AS AT 30 JUNE (PER MILLION WORK HOURS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>2.89</td>
</tr>
<tr>
<td>2012</td>
<td>5.52</td>
</tr>
<tr>
<td>2011</td>
<td>4.66</td>
</tr>
<tr>
<td>2010</td>
<td>6.06</td>
</tr>
<tr>
<td>2009</td>
<td>7.84</td>
</tr>
</tbody>
</table>

Total recordable injury frequency rate
AS AT 30 JUNE (PER MILLION WORK HOURS)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>15.83</td>
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<td>2012</td>
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<td>2010</td>
<td>33.41</td>
</tr>
<tr>
<td>2009</td>
<td>41.63</td>
</tr>
</tbody>
</table>

Highlights

• CSR’s safety record continued to improve on previous years with the number of recordable injuries (lost time; restricted work and medical treatment injuries) per million work hours decreasing by 33%, with the reduction in the total number of recordable injuries reduced by 33%.

• This was driven by significant improvement in Viridian Primary Products (66%); Viridian Glass Processing & Services (39%) and Bradford Insulation (33%).

• The lost time injury severity rate (shifts lost per million work hours) improved 22%.

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

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 our standards and 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 celebrate their achievement
- Identifying, assessing and controlling hazards and impacts, and eliminate or reduce the risk to an acceptable level
- Informing employees, contractors, visitors and the public of hazards and impacts that may cause potential harm or effect the environment
- Identifying, implementing, monitoring and reinforcing the safe behaviours we expect in our business 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 work 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 shown below to incorporate the continuous improvement cycle common to management standards for Safety (AS/NZ 4801 & OHSAS 18001), Quality (ISO 9001) and Environment (ISO 14001).
Workplace Health, Safety & Environment (continued)

There are three primary drivers behind CSR’s WHSE Management System:

1. Protect the health and safety of people by providing a safe place of work and safe systems of work and protect the environment
2. Operate within the law and meet corporate objectives
3. Ensure people know their WHSE responsibilities and how they are to be met

The five sections of the CSR WHSE Management System are:

1. Commitment and Policy
CSR’s WHSE Policy Commitments demonstrate the commitment to improving the workplace, health, safety and environmental performance at CSR. These policy commitments form the basis of our personal responsibilities and accountabilities at each level of the organisation.

2. Planning
To ensure that it is effective, the planning process at each level of the business takes into consideration:
- Identification, access and communication of legal and company requirements
- Setting challenging improvement targets and objectives, developing and maintaining WHSE improvement plans with clearly defined actions, allocation of responsibilities and completion dates

Plans are developed annually in line with the five year strategy of the business, including agreed objectives and targets. These objectives and targets are reviewed quarterly and tracked in regular reports.

3. Implementation
Effective implementation will ensure that health, safety, and environment focus is maintained on critical activities ensuring:
- Responsibilities and accountabilities are in place and understood at each level of the business, in line with our WHSE Policy statement commitments
- Our people are training to complete the tasks associated with their jobs competently
- Effective communication and consultation mechanisms are in place
- Reporting of business activities is in place including the tracking of key indicators and initiatives
- Effective identification, assessment and control of workplace health, safety and environmental hazards and their associated risk
- Control of documentation to maintain its relevance and regular review
- Emergency situations are identified and controlled appropriately
3. Implementation (continued)

A suite of leading indicators are tracked on a monthly basis. These include:

- Number of monthly meetings conducted (actual v planned) – communication/consultation
- Number of toolbox sessions undertaken (actual v planned) – communication/consultation
- Safety walks conducted in the workplace (actual v planned) – behavioural intervention
- Task observations (review of tasks in line with work instructions) – behavioural intervention
- Environmental inspections conducted at sites (actual v planned)
- Workplace inspections (actual v planned) – hazard identification
- Tracking of hazards reported and closed out – risk management
- Tracking of corrective actions from incidents – incident management

Safety performance is one of the key criteria in determining short term incentives of management across business units. Managers are responsible for leading safety in the workplace and actively demonstrating commitment as safety role models, by undertaking a series of activities on a regular basis.

4. Monitor and Measure

By measuring, monitoring and evaluating WHSE performance, business units are able to take preventative or corrective action to improve performance, including:

- Health assessment and management of appropriate records. CSR is increasingly focusing on the fitness and wellbeing of its workforce. As part of this commitment, CSR sponsored its employees to participate in the Global Corporate Challenge – the world’s largest corporate health and wellbeing initiative that combines exercise, fun and virtual interactive experiences. In 2013, CSR entered 78 teams in the challenge representing 548 employees across the company for the fourth consecutive year. This year a new weight loss program was launched in conjunction with the Global Corporate Challenge where a total of 30 CSR people lost an average of 10 kilos following participation in the program
- Auditing of our systems and tracking of actions to address non compliance identified. External auditors inspect CSR operations to ensure compliance with the WHSE Standards, to identify any systemic deficiencies and compliance issues. Recommendations from these audits are reviewed, actions developed, assigned to applicable personnel, time framed and monitored to completion
- Injury/incident reporting, recording, investigation and corrective actions – to assess the root cause of the incident and provide an insight to what trends are occurring and need to be addressed

Viridian designs new truck fall prevention system

Viridian’s team at Clayton in Victoria has developed a new truck fall prevention system in conjunction with USafe Platforms. The new system can be retrofitted to the existing truck fleet and provides a safety mechanism to protect people working on the backs of trucks. The TranzGuard system can be manufactured to fit any vehicle with the intention of being used as a guardrail for the operator. Viridian has worked with a number of stakeholders including local management, suppliers, customers and WorkSafe to develop and test the system to ensure it is a robust and safe solution which will be rolled-out across the Viridian fleet once the initial trials are completed.
Workplace Health, Safety & Environment (continued)

5. Management Review

All sites are required to undertake regular reviews of performance to improve the WHSE management system and performance.

CSR safety and environment performance is afforded the highest priority through formal reporting to the board WHSE committee. It is the policy of the board that a majority of the members of this committee be independent directors, and that the committee is chaired by an independent director. The committee receives regular reports from management and regularly visits and inspects sites.

The committee reviews the adequacy of management systems and performance, ensures that appropriate improvement targets and benchmarks and monitors, changes in legislation, community expectations, research findings and technological changes.

Performance is measured using both lead and lag indicators and monthly data is then consolidated quarterly reporting to the board WHSE committee.

Regular reviews of business performance are conducted, with actual performance measured against the agreed annual targets. Reports are reviewed by the senior leadership team, as well as by the divisional, business unit and site leadership teams.

Gloves on for glass safety

Viridian was selected as a finalist in the 2013 WorkCover NSW SafeWork Awards for its ongoing dedication to improving work health and safety outcomes and reducing incidents and injuries.

Viridian’s workplace, health, safety and environment manager Mark Peagam helped lead a number of initiatives to improve health and safety of our employees including a customised safe manual handling guide for the glass industry DVD and training package. Viridian also developed practical solutions with the assistance of a national physical protection equipment provider, including cut-resistant gloves for the glass industry which resulted in almost 70% reduction in cuts at Viridian over the past four years. These gloves are now being used by many companies within the glass industry.

Hebel safety system wins Master Builder Association Excellence in Construction Award

Hebel has developed a new panel separator tool which removes the risk of injuries on site. The tool separates the panels while support bars prevent the panels from falling to the ground and provides support to attach lifting gear. This system reduces risk of injury and panel damage when unpacking bundles of Hebel panels on site. This innovation by Hebel was awarded the MBA Excellence in Construction award and is certified for use with all Hebel panel products.
Environment

At CSR, our policy is to act responsibly, ensuring that our people follow appropriate procedures to minimise the company’s impact on the environment. Many of our products and business strategies aim to contribute to its improvement.

**Environment**

Our primary goal is to ensure our businesses remain compliant with their operating licences and reduce their impact on 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.

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 per cent 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
- Waste production disposed at 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 board committee.

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 and the Energy Efficiency Opportunities program.

In addition, CSR has completed life cycle assessments (LCA) of a number of products including Hebel panels, Gyprock plasterboard and Bradford insulation. The LCA assessment tool enables us to analyse the "cradle to grave" environmental impact of our products and develop environmental product declarations for our customers.

CSR is also extending its analysis of its manufacturing operations to supply chain management. Group Procurement is continuing its supplier survey program to develop a better understanding of key vendors’

- organisational values
- management system capabilities and
- work they are undertaking within their businesses to create sustainable offerings for their customers.

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

CSR’s goal remains zero environmental incidents. We report environmental incidents based on five levels of compliance breaches to meet 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 2013, CSR incurred 78 environmental incidents (compared to 92 incidents in the previous year). The environmental incidents were categorised as follows:

• Level 1: 62
• Level 2: 14
• Level 3: 2

There were no level 4 or 5.

Two level 3 incidents occurred at a brick factory at Horsley Park, NSW and a glass processing site in Canberra, ACT.

• Horsley Park – Due to heavy rainfall over three days in June 2012, the factory water supply catchment dam overflowed with the overflow making its way to the local creek. The overflow was not an authorised discharge under the existing licence. Water samples of the discharge were taken at the time of the overflow and the EPA were notified that the turbidity levels in the stormwater discharge breached the factory licence discharge limits. Subsequent to the overflow event, CSR amended its environmental protection licence so that it may discharge from the dam if such a need arises again. In addition, CSR has engineered an overflow that allows sediment to drop out before discharge from the CSR site.

• Glass processing site Canberra – An inspection by ACTEW Water of the Viridian glass processing site in Canberra in November 2012 highlighted that non-domestic waste was being discharged to sewer without the proper discharge consent. A direction was issued by ACTEW Water to the site noting that consent was required. Discharge was immediately stopped. As the site is currently in the process of modifications, all wastewater is being disposed by tanker, until the modifications are complete and a new trade waste discharge agreement is obtained.
Environment – Energy

CSR seeks to minimise the impact of greenhouse gas emissions by improving energy efficiency across all its manufacturing facilities.

For the period 1 July 2012 to 30 June 2013, total greenhouse gas emissions from CSR’s majority owned businesses were 626,734 tonnes of CO₂-e – a reduction of 3% on the previous year.

The reduction reflects some deterioration in market conditions and the associated reduced levels of production to align with demand.

However, the reduction also reflects CSR’s continued focus on initiatives to reduce energy consumption and GHG emissions across its various manufacturing facilities.

Scope 1 (direct) tonnes of CO₂-e in Australia for the period were 359,861 tonnes, a reduction of 0.5% on the prior year. For the same period, the Scope 1 (direct) greenhouse gas emissions of CSR’s majority-owned businesses operating in New Zealand were 7,252 – down 12% from last year.

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

Scope 2 (indirect) tonnes of CO₂-e emitted in Australia were 259,124 tonnes – a reduction of 5%.

For the same period, the Scope 2 (indirect) greenhouse gas emissions of CSR’s majority-owned businesses operating in New Zealand was 497 tonnes compared to 1,036 tonnes in the prior year.

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

CSR engaged Deloitte Touche Tohmatsu to provide 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 is included in the Reasonable Assurance Report found on page 28 of this report.

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

### Scope 1 direct emissions^¹

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>359,861</td>
<td>361,805</td>
<td>382,248</td>
</tr>
<tr>
<td>Outside Australia</td>
<td>7,252</td>
<td>8,203</td>
<td>12,150</td>
</tr>
</tbody>
</table>

### Scope 2 indirect emissions^¹

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<th>2012</th>
<th>2011</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>259,124</td>
<td>273,915</td>
<td>288,239</td>
</tr>
<tr>
<td>Outside Australia</td>
<td>497</td>
<td>1,036</td>
<td>4,087</td>
</tr>
</tbody>
</table>

^¹ Data excludes contractor emissions over which CSR has operational control.
Environment – Energy (continued)

Energy Efficiency Opportunities

CSR continues to be a participant in the Federal Government’s Energy Efficiency Opportunities Program and is required to report on assessments undertaken under the program. In CSR’s case, one assessment was undertaken within the 2012-2013 reporting period. CSR’s Energy Efficient Opportunities public report template can be found at the end of this report.

CSR has launched a number of initiatives to improve operational performance and efficiency with over 200 energy reduction energy reduction initiatives underway across our sites.

CSR continues Clean Technology Investment Program projects to reduce energy across operating sites

CSR is implementing energy reduction projects across our sites and has leveraged the Clean Technology Investment Program to help fund many of these projects. In the financial year to 31 March 2013, CSR reduced its energy consumption by 4% through these initiatives.

These projects will result in a reduction of over 120,000 tonnes of CO\textsuperscript{2} over the lifetime of the projects:

- Installed energy efficient 250W induction lights at 8 factories across Australia. These projects delivered anywhere between 30-50% energy savings in the lighting load and are a cost effective way to reduce energy consumption across the facility.
- Installed a high temperature off-take kiln to utilise waste heat to feed a tunnel dryer system. This project has delivered a 14% reduction in gas consumption at the facility of over 17,000 GJ per annum.
- Replaced dryer end seals and gas metering equipment at a number of sites.
- Inefficient air compressors were replaced by new high efficiency compressors which have resulted in energy reductions up to 20%.
- Major refiner equipment was replaced in the fibre cement operations with a new high efficiency refiner resulting in a 44% energy reduction for the project.
Environment – Water

CSR recognises the requirement to use 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 752,692 kilolitres of potable water during the year ended 30 June 2013 – a decrease of 15% from the prior year. The bulk of water consumption continues to be in the Lightweight Systems division which represents 76% of the total. Viridian comprised 14% and Bricks and Roofing accounted for 10%. The decrease in water consumption in Viridian is largely due to the creation of a joint venture for the New Zealand glass operations in March 2013. CSR businesses have continued to implement water saving measures across manufacturing sites to reduce usage.

Water consumed by business

<table>
<thead>
<tr>
<th>Business</th>
<th>AS AT 30 JUNE (KILOLITRES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lightweight Systems</td>
<td>2013: 568,392</td>
</tr>
<tr>
<td></td>
<td>2012: 630,176</td>
</tr>
<tr>
<td></td>
<td>2011: 705,739</td>
</tr>
<tr>
<td>Viridian</td>
<td>2013: 103,180</td>
</tr>
<tr>
<td></td>
<td>2012: 155,717</td>
</tr>
<tr>
<td></td>
<td>2011: 209,243</td>
</tr>
<tr>
<td>Bricks and Roofing</td>
<td>2013: 81,120</td>
</tr>
<tr>
<td></td>
<td>2012: 95,836</td>
</tr>
<tr>
<td></td>
<td>2011: 103,362</td>
</tr>
<tr>
<td>Total water consumed</td>
<td>2013: 752,692</td>
</tr>
<tr>
<td></td>
<td>2012: 881,732</td>
</tr>
<tr>
<td></td>
<td>2011: 1,018,194</td>
</tr>
</tbody>
</table>

^ Only metered water data is included

Bradford testing recycled water project

During the last year, the insulation site at Ingleburn, New South Wales began trials to use recycled water in its glasswool manufacturing. The goal of the project is to utilise waste water from other industries and recirculate through Bradford’s oven and binder systems.

Gyprock awarded for water reduction program

Gyprock’s operations in Welshpool, WA were recognised along with businesses across Western Australia by the WA Water Minister Terry Redman for their efforts to save more than 7.9 billion litres of water in 2011-2012. The Welshpool site received a Bronze Award for a 10-25% improvement in water use during the year.
Environment – Waste

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

Waste

CSR produced a total of 22,549 tonnes of solid waste in the year ended 30 June 2013 – a decrease of 30% on the prior year. The majority of waste is produced by Lightweight Systems with 45%, Viridian 39% and 16% by Bricks and Roofing.

The Bricks and Roofing data for 2012 has been restated due to a change in classification of some waste types and to ensure consistency with the 2013 data. The increase in waste in Bricks and Roofing in 2012 was due predominantly to a programme to rationalise inventory resulted in a one-off material increase in waste being sent to landfill.

Waste produced by business

<table>
<thead>
<tr>
<th>Business</th>
<th>AS AT 30 JUNE (TONNES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lightweight Systems</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>10,202</td>
</tr>
<tr>
<td>2012</td>
<td>13,603</td>
</tr>
<tr>
<td>2011</td>
<td>22,172</td>
</tr>
<tr>
<td>Viridian</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>6,608</td>
</tr>
<tr>
<td>2012</td>
<td>7,630</td>
</tr>
<tr>
<td>2011</td>
<td>9,091</td>
</tr>
<tr>
<td>Bricks and Roofing</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>5,739</td>
</tr>
<tr>
<td>2012</td>
<td>11,012</td>
</tr>
<tr>
<td>2011</td>
<td>5,522</td>
</tr>
<tr>
<td>Total solid waste produced</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>22,549</td>
</tr>
<tr>
<td>2012</td>
<td>32,257</td>
</tr>
<tr>
<td>2011</td>
<td>35,658</td>
</tr>
</tbody>
</table>

* Solid waste does not include waste taken off-site for recycling/re-use

Cemintel Fibre Cement investing in waste recycling technology

Cemintel’s fibre cement operations at Wetherill Park, NSW has invested $1 million in a waste recycling plant. The new technology recycles waste, a mixture of sand, cement, clay and pulp produced during the manufacturing process and reintegrates it back into the production process. By utilising the recycled material, Cemintel has reduced its net raw material usage by 3% and this percentage is expected to increase as the system completes its final commissioning by the end of 2013.

CSR joins the Australian Packaging Covenant

In January 2013, CSR Building Products became a signatory to the Australian Packaging Covenant (APC). To join the APC, CSR has developed a two year action plan to reduce its environmental footprint and by extension the amount of waste, including packaging waste, that may be disposed to landfill through:

• designing packaging that is more resource efficient and more recyclable
• increasing the recovery and recycling of used packaging from households and away-from-home sources and
• taking action to reduce the incidence and impacts of litter.
Community
CSR continues to engage with the local communities in which we operate.

Our partnerships

We continue to partner with a number of organisations in line with our commitment to operate in a sustainable manner to ensure the confidence and trust 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.

CSR launched the CSR Community Support Program ten years ago and during that time CSR and its employees have donated $2.5 million to charity. In the year to 30 June 2013, CSR and its employees donated $88,807 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 to various campaigns and activities during the year including the Australian Business and Community Network.

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.

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 for schools in high needs areas. In the year to 30 June 2013, 133 employees have mentored 184 students and have volunteered 1,293 hours.

With assistance of CSR mentors, we continued supporting reading programs at a number of primary schools close to CSR’s manufacturing facilities in New South Wales, Queensland and Victoria. CSR mentors partner with the school students weekly for one or two terms to offer one-on-one reading and support at school.
Community (continued)

The ‘Spark’ program

The Spark program is designed to address literacy challenges faced by students in primary schools. Whilst the focus of the program is on reading and comprehension, there is a critical element of socialisation whereby reading mentors act as positive role models to students. The weekly one-to-one sessions offer an opportunity to introduce sustained adult conversations in English, encourage the student personally and offer an additional role model in their lives.

Mentor: “What my highlight of this whole experience was, talking to my child’s mother on Graduation day, and her thanking me for helping her son with his reading, and what a difference it has made to the way he looks at reading. Instead of playing games before bed, he now reads a book for 10 minutes, that is when you know that this program does work, and everyone benefits from it, including me.”

Principal: “The program provides not only great partnerships but also it’s great to see the students get so much out of the program.”

Student: “I enjoyed reading and looked forward to Wednesday because it was my reading day.”

The ‘Aspirations’ program

The Aspirations program is designed to enable high school students from high need schools to engage in the workplace. It also allows students to start to build an understanding of the skills which will be required of them in a modern work environment.

Mentor: “Without realising it when signing up, the mentors have had their eyes opened and get the opportunity to tune in to a teenager. If we want to employ young people in our business then it is important that we also understand what makes them ‘tick’. So as a company we gain knowledge and so do the mentees.”

Teacher: “In addition to giving the students involved more of a focus or a relevancy as to why they are still at school or trying to achieve higher results, it has been a catalyst for other students enquiring about how they can become part of the program.”

Student: “I was very surprised with how helpful the program was. I was expecting it to be boring and non-interactive. There were no barriers holding me back from asking questions and their offices made me speechless at how friendly their workers are. The building is very modern and very attractive. I am certainly hoping to remember these people, the company and the tips in the future, so I can maybe hopefully be educated enough and lucky enough to work here.”
Community (continued)

The ‘GOALS’ program

GOALS aims to raise awareness of the wider range of personal, educational and vocational choices for high school students, through structured group mentoring sessions over three school terms, by business people working in a range of roles and businesses. Students are carefully chosen by the school as those most likely to benefit from participating in this mentoring program after a process of profiling and interviews. They are then matched with a corporate mentor who has shared interests and experiences.

Mentor
Not only are you potentially making a difference to a student’s life, you get a lot out of it yourself.

Principal
The GOALS program opens up the parameters of the students’ little world. It opens up their minds to possibilities for their futures. It motivates and inspires them to dream.

Student
“The best thing about GOALS was meeting my mentor and getting to travel to the city. She is one of the best people I will ever know.”

Career Choice Day

Career Choice Day aims to raise awareness of the wider range of career, education and vocational choices for students by giving students an exclusive look behind the scenes at some of Australia’s most recognisable companies. The students can also meet and discuss career options with business people in their chosen careers.

Selected year 10 students and SRC members from Sarah Redfern HS visited Bradford Insulation’s Ingleburn, NSW site for a Career Choice day. The students were given a close-up of the production processes used in making insulation.

The students were also given the opportunity to tour the national call centre, with a former Sarah Redfern HS student, giving the students an understanding of what his job entailed and how his career has progressed since leaving school. The students were shown, through role play, a typical poor and excellent interview scenario.

“I was surprised by how motivated some students were, I found they already had clear ideas about what they wanted to achieve and just needed some guidance reaching their goals.”

CSR Career Choice Day Participant

CSR continuing relationship with Macarthur Disability Services

CSR’s Bradford insulation site at Ingleburn, NSW is working with Macarthur Disability Services (MDS) to provide work experience and training for their clients. For the last two years, MDS participants are provided hands-on experience in operations and office skills and specialist training to achieve certifications such as forklift driver licences to apply for future job opportunities. MDS also provide teams to assist with gardening and maintenance of the surrounding site.

CSR supports the Asbestos Diseases Research Institute’s tissue biobank study

The building of a comprehensive nationwide tissue biobank of considerable size incorporating serum, plasma, DNA, RNA and tumour tissue will permit the construction of a comprehensive catalogue of genomic abnormalities associated with mesothelioma in both tumour and control tissue, which will help researchers better understand the biology of the disease in an effort to try and achieve better clinical outcomes.

Information on the tissue bank (which will be very high quality and quite rare) will be made available to the international research community. The resources needed to establish the tissue bank are considerable and include the initial equipment, as well as access to trained nursing staff on site around the country to be ready to collect samples from mesothelioma sufferers.
## Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASX</td>
<td>Australian Securities Exchange</td>
</tr>
<tr>
<td>CGC</td>
<td>Corporate Governance Council</td>
</tr>
<tr>
<td>Bricks and Roofing</td>
<td>Bricks and Roofing – includes CSR’s building product brands – PGH™ bricks and pavers Monier™ and Wunderlich™ roof tiles</td>
</tr>
<tr>
<td>Carbon dioxide equivalent (CO₂-e)</td>
<td>Unit for comparing the radiative forcing of a greenhouse gas to carbon dioxide. It is calculated using the mass of a given greenhouse gas multiplied by its global warming potential</td>
</tr>
<tr>
<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
</tr>
<tr>
<td>ESAP</td>
<td>Employee Share Acquisition Plan</td>
</tr>
<tr>
<td>FTE</td>
<td>Full Time Equivalent</td>
</tr>
<tr>
<td>GAF</td>
<td>Gove Aluminium Finance</td>
</tr>
<tr>
<td>GRI</td>
<td>Global Reporting Initiative – guidelines for sustainability reporting</td>
</tr>
<tr>
<td>ISO 9000</td>
<td>International Organisation for Standardisation. ISO 9000 family of standards that address quality management systems</td>
</tr>
<tr>
<td>ISO 14001</td>
<td>International Organisation for Standardisation. Standard which outlines Environment Management Systems requirements with guidance for use</td>
</tr>
<tr>
<td>Lightweight Systems</td>
<td>Lightweight Systems’ – includes CSR’s building product brands – Bradford™ insulation, Hebel® panels, Edmonds™ ventilation, Gyprock™ plasterboard, Cemintel™ fibre cement</td>
</tr>
<tr>
<td>LTI</td>
<td>Long Term Incentive</td>
</tr>
<tr>
<td>LTIFR</td>
<td>Lost Time Injury Frequency Rate – per million hours worked</td>
</tr>
<tr>
<td>NGER</td>
<td>National Greenhouse and Energy Reporting scheme</td>
</tr>
<tr>
<td>STI</td>
<td>Short Term Incentive</td>
</tr>
<tr>
<td>Viridian™</td>
<td>Viridian glass business</td>
</tr>
<tr>
<td>WHSE</td>
<td>Workplace Health, Safety and Environment</td>
</tr>
<tr>
<td>USOP</td>
<td>Universal Share Ownership Plan</td>
</tr>
<tr>
<td>TRIFR</td>
<td>Total Recordable Injury Frequency Rate – per million hours worked</td>
</tr>
</tbody>
</table>
The Directors  
CSR Limited  
Triatt 3, 39 Delhi Road  
North Ryde, NSW 2113  

25 October 2013  

Dear Directors  

Re: Reasonable assurance engagement report on CSR Limited’s compliance with Sections 19 of the NGER Act for the reporting period ended 30 June 2013 to the Directors of CSR Limited  


Audited Body  

<table>
<thead>
<tr>
<th>Name of audited body</th>
<th>CSR Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audited body contact details:</td>
<td>Ms Linden Birch, Group Sustainability Manager</td>
</tr>
<tr>
<td></td>
<td>(02) 9235 8358</td>
</tr>
</tbody>
</table>
| | Triatt 3, 39 Delhi Road  
North Ryde, NSW 2113 |

Audit description  

<table>
<thead>
<tr>
<th>Kind of Audit</th>
<th>Reasonable assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Objective</td>
<td>To provide reasonable assurance on CSR Limited’s Section 19 2013 NGER Report</td>
</tr>
<tr>
<td>Time period audited</td>
<td>1 July 2012 to 30 June 2013</td>
</tr>
<tr>
<td>Date terms of engagement signed</td>
<td>3 May 2013</td>
</tr>
<tr>
<td>Date Audit report Signed</td>
<td>25 October 2013</td>
</tr>
</tbody>
</table>

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Member of Deloitte Touche Tohmatsu Limited
# Auditor Details

<table>
<thead>
<tr>
<th>Auditor Details</th>
<th>Name of Auditor:</th>
<th>B J Pollock</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEA Registration number:</strong></td>
<td>0060/2010</td>
<td></td>
</tr>
<tr>
<td><strong>Organisation:</strong></td>
<td>Deloitte Touche Tohmatsu</td>
<td></td>
</tr>
<tr>
<td><strong>Phone number:</strong></td>
<td>(02) 9322 7458</td>
<td></td>
</tr>
<tr>
<td><strong>Address:</strong></td>
<td>Grosvenor Place 225 George Street Sydney NSW 2000</td>
<td></td>
</tr>
</tbody>
</table>

**Names and contact details of audit team other persons working with the audit team leader:**
- Paul Dobson (02) 9322 7000
- Shalish Tyagi (02) 9322 7000
- Gloria Karaiskos (03) 9671 7000
- Victor Kalimugogo (02) 9322 7000
- Jennifer Foo (02) 9322 7000
- Rechel Hoffman (02) 9322 7000

**Details 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 energy audits in relation to the audited body.

None.

Should you have any questions with the above please contact me on (02) 9322 7458 or at bpollock@deloitte.com.au.

Yours sincerely,

B J Pollock
Partner
Reasonable assurance engagement report on CSR's compliance with Section 19 of the NGER Act for the reporting period ended 30 June 2013 to the Directors of CSR Limited

Part A – Auditor’s Report

We have conducted an audit to provide reasonable assurance regarding the compliance of CSR ("CSR") with Section 19 of the National Greenhouse and Energy Reporting Act 2007 (the "NGER Act" or "matter being audited"). The NGER Report consists of the following:

- scope 1 greenhouse gas emissions of 361,216 tonnes of CO2-e
- scope 2 greenhouse gas emissions of 259,123 tonnes of CO2-e
- energy production of 6 GJ
- energy consumption of 6,916,369 GJ

for the period 1 July 2012 to 30 June 2013.

Management’s responsibility

Management of CSR are responsible for the preparation and fair presentation of the CSR NGER Report in accordance with Section 19 of the NGER Act, in all material respects. This responsibility includes 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 NGER (Measurement) Determination ("the 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.

Auditor’s responsibility

Our responsibility is to express a reasonable assurance opinion on CSR’s compliance with Section 19 of the NGER Act for the period 1 July 2012 to 30 June 2013, in all material respects. The procedures selected depend on our judgment, including an assessment of the risks of material misstatement or material non-compliance of the matter being audited. We conducted our engagement in accordance with the National Greenhouse and Energy Reporting (Audit) Determination 2009 (the “NGER Audit Determination”) and Standard on Assurance Engagements ASAE 3410 Assurance Engagements on Greenhouse Gas Statements (“ASAE 3410”)

Liability limited by a scheme approved under Professional Standards Legislation.
Member of Deloitte Touche Tohmatsu Limited
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 matter being audited. Our responsibilities did not extend to any other information.

An assurance engagement involves performing procedures to obtain assurance evidence about the matter being audited. The procedures selected depend on the audit team leader's judgement, including the assessment of the risks of material misstatement or material non-compliance of the matter being audited, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to CSR's compliance with the NGER Act in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of CSR's internal control. 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 the company;
- 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.

Reasonable assurance means a high but not absolute level of assurance. Absolute assurance is very rarely attainable as a result of factors such as the following: the use of selective testing, the inherent limitations of internal control, the fact that much of the evidence available to us is persuasive rather than conclusive and the use of judgement in gathering and evaluating evidence and forming conclusions based on that evidence.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

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.

Use of our reasonable assurance engagement report

This report has been prepared for the directors of CSR for the sole purpose for reporting on the matters being audited in accordance with Sections 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 assurance - for example, assurance engagements are based on selective testing of the information being examined - 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. The conclusion expressed in this report has been formed on the above 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. We specifically note that CSR’s has used estimates or extrapolated underlying information to calculate certain amounts included within the greenhouse and energy information.

Summary of procedures undertaken

A reasonable assurance engagement involves performing assurance procedures to obtain evidence about the greenhouse gas emissions, energy production and energy consumption disclosures in the CSR NGER Report. The procedures selected depend on the auditor’s judgement, including the assessment of the risks of material misstatement of the CSR NGER Report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the CSR NGER Report in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control as it relates to the CSR NGER Report. These include such procedures as analysing procedures that the audited body used to gather data, testing of calculations that the audited body performed, and identifying and testing assumptions supporting the calculations performed by management.

Our independence

We have compiled with the relevant ethical requirements of the Australian professional accounting bodies relating to assurance engagements, which include independence and other requirements founded on 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 conclusion expressed in this report has been formed on the above basis.
Our conclusion

In our opinion, CSR has reported its greenhouse gas emissions, energy production and energy consumption in accordance with Section 19 of the NGER Act, in all material respects, for the period 1 July 2012 to 30 June 2013.

Brad Pollock
Partner
Registered Greenhouse and Energy Auditor
Sydney
25 October 2013
### Reasonable assurance engagement report on CSR's compliance with Sections 19 of the NGER Act for the reporting period ended 30 June 2013 to the Directors of CSR

#### Part B – Detailed Findings

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

#### Audit Findings and Conclusions Table

The results that are provided in the table below should not be construed as providing an opinion on the matter being audited 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 the corporation 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.

<table>
<thead>
<tr>
<th>Issue/Risk area investigated</th>
<th>Testing conducted</th>
<th>Findings</th>
<th>Conclusion</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational control / facility boundaries</strong></td>
<td>Regarding corporate boundaries, facility identification and operational control, we performed the following:</td>
<td>We have not identified any material issues.</td>
<td>Risk area has been appropriately addressed as part of our NGER assurance engagement.</td>
<td>None.</td>
</tr>
</tbody>
</table>
| CSR is required to apply the NGER Act definition of operational control in order to determine which facilities, operations and activities should be reported in the 2013 NGER Report. | • Assessed CSR’s documented position in respect to decisions reached in determining their corporate boundaries to ensure compliance with NGER.  
• Performed site visits to material sites and held discussions with CSR personnel  
• Reviewed CSR’s definition of facilities to ensure that facilities have been determined in accordance with NGER. | | | |
| **Industrial process emissions** | We performed the following procedures:  
• site visits to the | We have not identified any material issues. However we did note | Risk area has been appropriately addressed as | CSR Bricks Oxley should:  
• ensure inventory |
<table>
<thead>
<tr>
<th>Issue/Risk area investigated</th>
<th>Testing conducted</th>
<th>Findings</th>
<th>Conclusion</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| operations means that a number of its major divisions produce industrial process emissions at material facilities, including:  
  • Glass production  
  • Brick manufacturing  
  • Gyprock manufacturing, and  
  • Insulation manufacturing | following sample of material facilities to assess the completeness of emission and energy sources and the data capture and reporting processes:  
  - Glass: Dandenong and Ingleburn;  
  - Bricks: Oxley; Gyprock: two Wetherill Park sites.  
  - Insulation: Ingletown  
  - sample testing of material data streams to source documentation including invoices and stocktake records across these sites  
  • assessment of emission calculation methodologies at these major facilities against the NGER Measurement Determination (NGER MD) requirements. | the following:  
  1. NGER Method 1 is used for all material emission sources with the exception of coal stone/slurry at the CSR Bricks Oxley facility where NGER Method 2 is used. In respect of this NGER Method 2 calculation we noted the following:  
  • bias testing on the coal stone and slurry sampling process was not performed during the 2013 reporting period as required by s.274 of the NGER Measurement Determination. However, a bias assessment was performed in September 2013 which confirmed that the process that had been operating during the 2013 reporting period complied with the NGER MD, with the exception of the shovel used for coal stone which was slightly too small.  
  • Stocktake adjustments from surveys of raw materials were performed using standard density factors rather than the most up to date movements are recorded in a more timely manner,  
  • ensure that stockpile densities are assessed annually and the most recent factor issued for stocktake adjustments  
  • going forward, ensure that bias testing is assessed when the sampling process changes. | part of the NGER assurance engagement. | Where a carboxy reductant is used CSR Viridian should ensure that the calculation of emissions from carbonates is performed in accordance with the requirements of Division 4.35 of the NGER MD. |
PUBLIC REPORT

Part 1 - Corporation details

Period to which the report relates
Start Period 1st July 2011  End Period 30th June 2013

Controlling corporation
CSR Limited

Table 1.1 - Major changes to corporate group structure or operations

Table 1.1 – Major changes to corporate group structure or operations in the last 12 months

There were no major changes to the Corporate Structure during the reporting period.

Market conditions for CSR’s products stabilised in the year to June 2013. Dwelling starts improved by 10% in the year mainly in the multi-residential market segment, but renovations activity continued to weaken. Residential activity was broadly flat and the non-residential segment declined by 4%. The strength of the Australian dollar continues to impact adversely the competitiveness of Australian manufactured product. As a result, CSR continues to realign its manufacturing operations via site closures, mothballing and consolidation, to reflect this reduced level of activity.

Declaration

Declaration of accuracy and compliance

The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the Energy Efficiency Opportunities Act 2006 and Energy Efficiency Opportunities Regulations 2006. All opportunities have been assessed to a level of accuracy that is commensurate with the financial investment required for implementation.

Alan Robert Sindel
CEO & Managing Director

Date 11th December 2013
Part 2 - Assessment outcomes

Table 2.1 – Assessment details

<table>
<thead>
<tr>
<th>Name of entity</th>
<th>Bradford Insulation - Ingleburn</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Total corporate energy use in the last financial year</td>
<td>5,501,806 – 8,252,712 GJ</td>
</tr>
<tr>
<td>B. Total energy use covered by assessments</td>
<td>339,299 – 508,948 GJ</td>
</tr>
<tr>
<td>C. Total percentage of energy use assessed (B ÷ A) x 100</td>
<td>6% %</td>
</tr>
</tbody>
</table>

Description of the way in which the entity carried out its assessment:

Assessments were carried out in line with the approved assessment and reporting schedule. CSR has an in-house energy improvement team (part of CSR Bradford Energy Solutions) which co-ordinates energy improvement initiatives within the company and drives energy reduction.

This team which contains certified energy managers and internal engineering process expertise works with the relevant site management (in Ingleburn’s case the operations manager; engineering manager and process improvement manager) to identify opportunities for energy reduction. A brainstorming session identified all potential opportunities which were then allocated to respective personnel for further investigation. Identified opportunities are listed on an internal CSR web-site with the status of the opportunity updated on the site, as appropriate. All of CSR’s major manufacturing sites (which cover over the 90% of CSR’s energy use) have quarterly energy reviews to examine progress of the existing and new energy reduction opportunities.
Table 2.2 - Energy efficiency opportunities identified - Bradford Insulation - Ingleburn

<table>
<thead>
<tr>
<th>Status of opportunities identified</th>
<th>Total Number of opportunities</th>
<th>Total estimated energy savings per annum (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implemented</td>
<td>3</td>
<td>11,513</td>
</tr>
<tr>
<td>Implementation commenced</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>To be implemented</td>
<td>1</td>
<td>1,440</td>
</tr>
<tr>
<td>Under investigation</td>
<td>1</td>
<td>1,555</td>
</tr>
<tr>
<td>Not to be implemented</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Outcomes of assessment</td>
<td>Total identified</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14,508</td>
</tr>
</tbody>
</table>

(1) Opportunities with a payback greater than 4 years have been included in implemented, implementation commenced and to be implemented but not other categories.
(2) Opportunity implementation is subject to the normal capital expenditure approval process.
(3) Opportunities are not implemented for a number of reasons including those identified may already have been addressed through other opportunities, operational/process constraints, or payback greater than the life of plant.
(4) The opportunity “not to be implemented” consumes more energy than it would save and therefore has been reported as zero.
Part 2 - Assessment outcomes

Table 2.1 – Assessment details

<table>
<thead>
<tr>
<th>Name of entity</th>
<th>Lightweight Systems – Coopers Plains</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Total corporate energy use in the last financial year</td>
<td>5,501,808 – 8,252,712 GJ</td>
</tr>
<tr>
<td>B. Total energy use covered by assessments</td>
<td>219,651 – 329,476 GJ</td>
</tr>
<tr>
<td>C. Total percentage of energy use assessed (B + A) x 100</td>
<td>4%</td>
</tr>
</tbody>
</table>

Description of the way in which the entity carried out its assessment:

Assessments were carried out in the line with the approved assessment and reporting schedule. CSR has an in-house energy improvement team (part of CSR Bradford Energy Solutions) which co-ordinates energy improvement initiatives within the company and drives energy reduction.

This team which contains certified energy managers and internal engineering process expertise works with the relevant site management (in Coopers Plains case, the operations manager; the maintenance manager; maintenance planner; and finance manager) to identify opportunities for energy reduction. A brainstorming session identified all potential opportunities which were then allocated to respective personnel for further investigation. Identified opportunities are listed on an internal CSR web-site with the status of the opportunity updated on the site, as appropriate. All of the CSR’s major manufacturing sites (which cover over the 90% of CSR’s energy use) have quarterly energy reviews to examine progress of existing and new energy reduction opportunities.
### Table 2.2 - Energy efficiency opportunities identified – Lightweight Systems – Coopers Plains

<table>
<thead>
<tr>
<th>Status of opportunities identified</th>
<th>Total Number of opportunities</th>
<th>Total estimated energy savings per annum (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implemented</td>
<td>2</td>
<td>1,426</td>
</tr>
<tr>
<td>Implementation commenced</td>
<td>1</td>
<td>6,000</td>
</tr>
<tr>
<td>To be implemented</td>
<td>1</td>
<td>3,000</td>
</tr>
<tr>
<td>Under investigation</td>
<td>1</td>
<td>468</td>
</tr>
<tr>
<td>Not to be implemented</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Outcomes of assessment</td>
<td>Total identified</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10,894</td>
</tr>
</tbody>
</table>

(1) Opportunities with a payback greater than 4 years have been included in implemented, implementation commenced and to be implemented categories but not other categories.

(2) Opportunity implementation is subject to the normal capital expenditure approval process.

(3) Opportunities are not implemented for a number of reasons including those identified may already have been addressed through other opportunities, operational/process constraints, or payback greater than the life of plant.
Part 2 - Assessment outcomes

Table 2.1 – Assessment details

<table>
<thead>
<tr>
<th>Name of entity</th>
<th>Bricks and Roofing - Schofields</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Total corporate energy use in the last financial year</td>
<td>5,501,808 – 8,252,712 GJ</td>
</tr>
<tr>
<td>B. Total energy use covered by assessments</td>
<td>267,780 – 401,670 GJ</td>
</tr>
<tr>
<td>C. Total percentage of energy use assessed (B ÷ A) x 100</td>
<td>5% %</td>
</tr>
</tbody>
</table>

Description of the way in which the entity carried out its assessment:

At the time of the assessment, CSR’s second assessment cycle Assessment Plan had not been approved by the Department however the assessment was carried out in accordance with the assessment framework and relevant regulations.

The assessment was carried out with relevant site and national management including participation by the plant manager; production manager; engineering manager; electrician; and team leader and national representation by the group engineer; national operations manager; technical manager and sustainability project manager. All were brought together to identify opportunities for energy reduction through a brainstorming session. The brainstorming session identified all potential opportunities, which were then allocated to respective personnel for further investigation. Identified opportunities are listed on an internal CSR web site with the status of the opportunity updated on the site, as appropriate. All of the major sites (which cover over the 90% of CSR’s energy use) have quarterly energy reviews to examine progress of existing and new energy reduction opportunities.

CSR has an in-house energy improvement team (part of CSR Bradford Energy Solutions) which co-ordinates energy improvement initiatives within the company and drives energy reduction.
Table 2.2 - Energy efficiency opportunities identified – Bricks and Roofing – Schofields

<table>
<thead>
<tr>
<th>Status of opportunities identified</th>
<th>Total Number of opportunities</th>
<th>Total estimated energy savings per annum (GJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implemented</td>
<td>3</td>
<td>23,563</td>
</tr>
<tr>
<td>Implementation commenced</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>To be implemented</td>
<td>2</td>
<td>20,115</td>
</tr>
<tr>
<td>Under investigation</td>
<td>2</td>
<td>30,780</td>
</tr>
<tr>
<td>Not to be implemented</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Outcomes of assessment</td>
<td>Total identified</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>74,458</td>
</tr>
</tbody>
</table>

(4) Opportunities with a payback greater than 4 years have been excluded.
(5) Opportunity implementation is subject to the normal capital expenditure approval process.
(6) Opportunities are not implemented for a number of reasons including those identified may already have been addressed through other opportunities, operational/process constraints, or payback greater than the life of plant.
(7) Estimated savings have been re-evaluated during the last review.
Table 2.3 - Details of significant opportunities identified in the assessment

<table>
<thead>
<tr>
<th>Description of opportunity No. 1</th>
<th>Type of information to be covered</th>
</tr>
</thead>
</table>
| **Lightweight Systems, Coopers Plains:** Install Energy Efficient Lighting. 400 watt metal halide lights were replaced with 250 watt induction lights across the site. | Equipment type: Lighting  
Business response: Implemented  
Energy saved (GJ): 1,426  
Greenhouse gas abated (CO2-e): 325 T  
$ saved: $46,500 p.a.  
Payback period: 2.9 years |

<table>
<thead>
<tr>
<th>Description of opportunity No. 2 - voluntary</th>
<th>Type of information to be covered</th>
</tr>
</thead>
</table>
| **Bradford Insulation, Ingleburn:** Batt packer air recovery. The opportunity identified reduces compressed air consumption (and hence compressor energy consumption) by re-piping the air flow at the batt packer, so that the air from the non-pressure side of the pneumatic cylinder is redirected back into the pressure side of the cylinder to bring the packer down (rather than vent this air to atmosphere), and use air from the pressure line to push the packer down. | Equipment type: Packaging equipment  
Business response: Under Investigation  
Energy saved (GJ): 1,555  
Greenhouse gas abated (CO2-e): 376 T  
$ saved: $38,450 p.a.  
Payback period: 0.9 years |

<table>
<thead>
<tr>
<th>Description of opportunity No 3 - voluntary</th>
<th>Type of information to be covered</th>
</tr>
</thead>
</table>
| **Lightweight Systems, Coopers Plains:** Upgrade seals. The seals at the end of the industrial drier to be completely replaced with seals of greater efficiency, to reduce potential leaks. | Equipment type: Industrial Dryer  
Business response: To Be Implemented  
Energy saved (GJ): 115  
Greenhouse gas abated (CO2-e): 28 T  
$ saved: $20,000 p.a.  
Payback period: 3.25 years |
Contact us

www.csr.com.au