

BELL BAY ALUMINIUM

PACIFIC **ALUMINIUM**

2014 SUSTAINABLE DEVELOPMENT REPORT

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Our success is founded on our deep commitment to safety and operational excellence.

FRONT COVER

Loading aluminium block on the S-Class vessel, Shuntien, at TasPorts Wharf, Bell Bay.

ABOUT PACIFIC ALUMINIUM

Pacific Aluminium's assets include smelter operations in Australia and New Zealand.

- Bell Bay Aluminium
- Boyne Smelters Limited in Queensland
- Gladstone Power Station in Queensland
- Tomago Aluminium in New South Wales
- New Zealand Aluminium Smelters Limited in New Zealand

The success of Pacific Aluminium is founded on our deep commitment to safety and operational excellence.

We pride ourselves on producing quality aluminium products, created by the best people in the industry.

Pacific Aluminium is also committed to operating sustainably, and our people are actively involved in the local communities in which we operate.

ABOUT BELL BAY ALUMINIUM

Located just south of George Town at the mouth of the Tamar River, the smelter produces around 190,000 tons of aluminium per annum. Our main metal products are ingot, block and T-bar.

Bell Bay Aluminium directly and indirectly employs more than 1,500 Tasmanians and contributes \$690M per annum to Tasmania's Gross State Product.

Bell Bay was the first aluminium smelter built in the Southern Hemisphere, commencing production in 1955 as a joint venture between the Commonwealth and Tasmanian Governments.

...we believe it is important that the Tasmanian community understand how we operate...

BELL BAY ALUMINIUM AND SUSTAINABLE DEVELOPMENT

With a commitment to continuous improvement, sustainable development is integrated into all aspects of our business, including our record of protecting people from harm, actively engaging with our communities and our ability to demonstrate sound environmental management practices and stewardship of our natural resources.

Our sustainable development report is produced annually. We produce and publish this report primarily for the Tasmanian community and interested stakeholders. We aim to make the report as transparent as possible as we believe it is important that the Tasmanian community understand how we operate and the challenges we face.

The 2014 Sustainable Development Report will be available online at www.bellbayaluminium.com.au

IN PART AND

Professor John Mangan (2010) "A Socio-Economic Analysis of the Rio Tinto Alcan aluminium smelter at Bell Bay in Northern Lesmania UQ Business School Commercial 20 April 2010

SHUNTLEN

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OUR COMMITMENT

WORKPLACE, ENVIRONMENT & COMMUNITY



BELL BAY ALUMINIUM

PACIFIC ALUMINIUM



FROM THE GENERAL MANAGER

The almost 1,500 employees, contractors and suppliers who are vital to the ongoing viability of Bell Bay Aluminium should be proud of their contribution to our business throughout 2014. Sustaining the momentum to transform this business from one with a questionable future a few years ago to today where we continue to forge a solid future was never going to be easy.

While significant changes in the global aluminium market in 2012 and 2013 altered the trajectory of our operation, the determination to relentlessly pursue further opportunities throughout 2014 is a real credit to all involved. It has made a difference and importantly has laid a foundation for opportunities in 2015 and beyond which were unimaginable two years ago.

The last of the major restructuring activities on site concluded in late 2014. While it is entirely understandable how difficult the uncertainty was, the true character of Bell Bay Aluminium's employees shone through as they found more efficient ways to work and created a pathway to greater productivity which almost all in the industry felt was unrealistic.

The Bell Bay team places great value on our ability to operate this business safely and healthily so we do not cause harm to our employees, contractors or visitors to site. It is also important that we meet, even exceed community expectations of our environmental performance. We have continued to demonstrate these values in the best way possible. In 2014, we did not record any environmental incidents and the continuation for a fourth consecutive year of zero occupational disease was an outstanding result. However our safety result continues to be the weak link across the dashboard of critical performance measures. Six of our employees and contractors suffered recordable injuries in 2014. While a number of these injuries were relatively minor, and the individuals concerned returned to work within days, there were a number of more serious injuries and for these individuals recovery took much longer. These results only motivate us to be more effective as we strive for zero injuries in our workplace.

A new production record was set in 2014 which saw Bell Bay sell beyond 190,000 tonnes for the first time ever. This increasing capacity helps offset any rises in our costs. Fortunately the smelter supplies specialised aluminium which differentiates us from standard commodity producers.

Our products are mostly destined for South East Asian markets where demand is strong, although we have started to see some signs of change in market dynamics. Our agility, as evidenced further on in this report, is a strength which ensures a Tasmanian-based business can compete ferociously in a global market. **BELL BAY ALUMINIUM**

OUR COMMITMENT

As the opportunities to transform the business 'inside the gate' diminish, Bell Bay Aluminium has sought to highlight State and Federal Government policy that impacts on our ability and the ability of others to do business in Tasmania . We have actively campaigned for a more efficient energy sector and to remove regulatory burdens which impose costs on Bell Bay Aluminium that cannot be passed on to our customers.

It is pleasing to acknowledge that positive progress has been made in these areas at both a State and Federal level. I would certainly like to acknowledge the support on these issues from our State and Federal representatives as well as Tasmania's Federal Senators. Industry, government and community working collaboratively is a critical factor in ensuring positive outcomes for Tasmania are more likely.

As Bell Bay Aluminium enters its 60th year of operation the team on site understands that we did not start with a blank canvas. Those who have gone before us did a fantastic job to get Bell Bay where it is today. We can only hope the future generation of Bell Bay Aluminium employees will look back on these years and the collective efforts of all and make the same observations.

Moster /

Ray Mostogl General Manager - Operations





OUR PURPOSE

BELL BAY ALUMINIUM

PACIFIC **ALUMINIUM**

BELL BAY ALUMINIUM

PROSPERITY

Our goal is to operate a profitable and viable business that produces quality aluminium for our customers and provides a secure future for our employees, their families, our owners and the Tasmanian community.

Directly and indirectly, we employ over 1,500 Tasmanians. In 2014, we injected \$216 million into the local economy purchasing goods and services from 335 local suppliers. Independent studies have demonstrated our contribution to Gross State Product is \$690 million per annum*.

Performance Indicator	2011	2012	2013	2014
Saleable metal produced (total tonnes)	182,241	187,158	189,423	191,246
Hot metal production	180,979	185,206	186,835	188,349
Sale of value added	90.9%	88.5%	85.8%	91.0%
Capital investment	\$40.8 million	\$31.4 million	\$26.5 million	\$21.4 million
Total salaries paid	\$53.4 million	\$52.7 million	\$49.1 million	\$46.2 million
Government taxes and charges paid	\$4.5 million	\$4.6 million	\$4.4 million	\$4.0 million
Amount spent purchasing goods and services from Tasmanian suppliers	\$216 million	\$224 million	\$247 million	\$216 million
Number of Tasmanian suppliers	399	293	326	335



SALEABLE METAL PRODUCED (TOTAL TONNES)



HOT METAL PRODUCTION



GOVERNMENT TAXES AND CHARGES PAID : \$4.0 MILLION
CAPITAL INVESTMENT : \$21.4 MILLION
 TOTAL SALARIES PAID : \$46.2 MILLION

AMOUNT SPENT PURCHASING GOODS AND SERVICES FROM TASMANIAN SUPPLIERS : \$216 MILLION



NUMBER OF TASMANIAN SUPPLIERS : 335

* Professor John Mangan (2010) "A Socio-Economic Analysis of the Rio Tinto Alcan aluminium smelter at Bell Bay in Northern Tasmania", UQ Business School Commercial 20 April 2010





"...I wanted to recognise the dedication and perseverance of the team at Bell Bay..."

RIO TINTO ALCAN CHIEF EXECUTIVE VISIT

Jacynthe Côté, then chief executive, Rio Tinto Alcan arrived in Northern Tasmania in January 2014 for a hectic two-day visit that included a tour of Bell Bay Aluminium's smelter operations at George Town.

Ms Côté and Rio Tinto Alcan's senior management team from Canada spent a full day at the smelter on Wednesday 29 January 2014, meeting with management as well as taking time to meet and talk to employees in operational areas on site.

While it is well known that Bell Bay Aluminium has faced challenging market conditions since 2011 in the form of a high exchange rate and low aluminium prices Ms Cote explained, "The aluminium market will remain tough for some time but Bell Bay Aluminium has been recognised within Rio Tinto Alcan for its business transformation over the last two years with the implementation of a number of significant performance and business improvements. On this visit, I wanted to recognise the dedication and perseverance of the team at Bell Bay during what have been and continue to be very difficult times in the aluminium industry in Australia. "

"While there is still more work to be done and the Bell Bay team is committed to implementing that work, it's important to remember that any performance and business improvements at the smelter must focus on the long-term sustainability of the operation." said Ms Cote. "The world's most competitive economies rely on a strong manufacturing sector that fosters employment growth, provides competitive wages and positively influences the trade balance of an economy. In the case of the aluminium industry the competitive price of delivered energy is one of the key requirements to sustain any operation. In Tasmania, access to a reliable delivered energy supply at an affordable and competitive cost is essential to Bell Bay Aluminium's continued contribution to Tasmania's economic development over the long term."

Bell Bay Aluminium's General Manager Ray Mostogl added: "Bell Bay Aluminium is extremely proud to showcase the performance and business improvements of our operation during this site visit. Tasmania relies on all aspects of its economy functioning well and as we continue to strive to be sustainable, Bell Bay Aluminium has a key role to play in ensuring the economic wheel keeps turning and generating wealth for our state."

Note: Alfredo Barrios was appointed chief exceutive, Rio Tinto Alcan in June 2014. He succeeded Jacynthe Côté who left the business after 25 years to pursue other interests.



OUR PURPOSE

TASNETWORKS TOUR SMELTER

On 23 September 2014, TasNetworks visited Bell Bay Aluminium.

As Tasmania's biggest consumer of electricity, using about a quarter of all electricity in the State, Bell Bay Aluminium connects directly to TasNetworks' 220.000 volt transmission system, via the George Town Substation. This means Bell Bay Aluminium has to reduce the 220,000 volts to meet the needs of the smelter from production right down to the power points in offices. We operate our own infrastructure and that includes things like high voltage equipment, transformers and substations requiring considerable capital expense.

The TasNetworks leadership team was given a tour of the Bell Bay Aluminium switchyard with Leigh Darcy Principal Adviser, Power Supply who manages a high voltage operations team and the provision of electricity services to the site. Noting that over the last 12 years the smelter has spent over \$100M to maintain and upgrade its electrical assets in the switchyard, Leigh showed TasNetworks the significant work that is underway to replace ageing rectiformers which convert the AC supply to DC supplies for use in the smelting process.

The TasNetworks team also met with Bell Bay's management team who explained the ongoing business transformation that has taken place at Bell Bay to keep the smelter viable in the face of many revenue and cost challenges.

NEW PARTNERS JOIN TASMANIA'S **BIG PICTURE** CAMPAIGN!

Take a Look at the Big Picture campaign has gone from strength to strength with new major partners MMG Limited and the Elphinstone Group joining supporting partners, Veolia Environmental Services, Nubco, Cromarty Instrument & Electrical Engineering and Llovds North-uniting under the industry voice.

The campaign, which commenced in 2013 through major employers Nyrstar, Norske Skog Boyer Mill, Bell Bay Aluminium and Grange Resources, highlights the significant economic contribution industry makes to Tasmania and the celebrated its newest partners on television and important flow on effects for communities. The Big Picture partners believe it is critical Tasmania establishes a business environment where industry can be supported to invest in growth, jobs and importantly be viable to support future generations of Tasmanians. Tasmania's major industries are also crucial to other key Tasmanian economic sectors including small and medium business, tourism, education and hospitality.

Primary jobs are the lifeblood of our State, with every primary job creating (on average) a further three indirect jobs within our communities. Furthermore, the export of goods and services produced by local primary industries brings new money into the State, which is then reinvested right here.

Take a Look at The Big Picture features employees from across industry sharing their proud and passionate stories with the Tasmanian community. In August 2014, the campaign in newspapers across the State.

The Big Picture also supported a number of initiatives in 2014 including the WorkSafe Tasmania Awards and Presentation. TasCOSS annual conference, the Heart Foundation's Big Heart Appeal and the Breath of Fresh Air Film Festival.





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ON BOARD THE NEW S-CLASS VESSEL

In February 2013, Bell Bay Aluminium announced an agreement with Swire Shipping—a division of the China Navigation Company (more familiarly CNCo) for the provision of a direct international freight service between Asia and Bell Bay.

Since then, Swire Shipping has provided Bell Bay Aluminium with a multi-purpose vessel capable of both a break bulk and containerised shipping service on a monthly basis from Bell Bay to various ports in Asia, including Singapore.

More than 90 per cent of the metal produced at the smelter is exported to Asia.

In early 2014, the service to Bell Bay Aluminium was upgraded with new state-of-the-art S-Class vessels.

On 16 July, Shuntien, a new S-Class vessel, was welcomed into port by Swire Shipping and Bell Bay Aluminium, who hosted a lunch for a small group of guests, including employees, key suppliers and community stakeholders.

THE SHUNTIEN

Facts about the new S-Class vessel, Shuntien:

- 31,000MT Multi-Purpose Vessel
- 2114 TEU container capacity couple with 700 TEU on-deck capacities
- Flexible towage, accepting cargo up to 32 metres long underdeck and up to eight meters in height, on cargo deck acceptance up to 70 metres
- 120 metre lifting capacity and reefer plugs to accommodate 147 TEUs
- Increased speed capabilities and fuel efficiencies
- Key cargo types: project cargo, general break bulk and containers
- Ventilation in all holds with six air exchanges an hour

IMAGES FROM TOP (L-R)

Steve Clark, CNCo Australia Swire Shipping, Stephanie Pearce, Bell Bay Aluminium, Captain Yang Tang and Theresa Sermon, Australia to Asia, CNCo Australia Swire Shipping Theresa Sermon, Australia to Asia, CNCo Australia Swire Shipping, Mark Ford, heritage Isle Credit Union, George Town, Terri Cameron, George Town Chamber of Commerce Janine Healey, President, Launceston Chamber of Commerce, Charles Black, Tasports, Maree Tetlow, Executive Officer, Launceston Chamber of Commerce



CPT Engineering's Managing Director Geoff Watson with Bell Bay Aluminium's General Manager Ray Mostogl

BIG TICK FOR LOCAL MANUFACTURING

In February 2014, Bell Bay Aluminium and CPT Engineering in George Town announced a four-year supply agreement valued at approximately \$3.7 million to manufacture anode rods for the smelter.

Bell Bay Aluminium is progressively replacing anode rods as they wear out and is, at the same time, modifying the replacement rods to make them more energy efficient. Over the next four years the smelter must replace 13,000 steel/copper anode rods. The rods conduct electricity in each cell where powdered alumina is converted to molten aluminium at 960 degrees celcius.

Bell Bay Aluminium had believed that manufacturing the complete anode rod in China was the lowest cost outcome for our operation. Before committing to a Chinese supplier, Bell Bay's business improvement team worked collaboratively with George Town-based CPT Engineering, assisted by the Business Action Learning Program, to understand what it would take to manufacture the entire fleet of anode rods in Tasmania. The end result of the project was that CPT matched the price enabling a four-year supply agreement worth \$3.7 million to be awarded.

Benefits of the contract include:

- Savings on logistics
- Three new employees at CPT Engineering
- Significant investment in equipment and training by CPT Engineering
- Establishing a culture of supply chain innovation

The subsequent awarding of the contract to CPT is clear evidence of the commitment that CPT has to providing customers such as Bell Bay Aluminium with the highest quality Tasmanian manufactured products. For Bell Bay, it has led to productivity benefits in terms of logistics savings and improving the socioeconomic conditions of the region. It is also helping to increase the innovation capacity and value-add of local suppliers.



CONVERTING **INVENTORY INTO REVENUE**— MEETING THE CHALLENGE!

On 11 June 2014, Pacific Aluminium's Sales and Marketing team issued Bell Bay Aluminium an enormous challenge—to ship 3,000 tonnes of purity T-bar from Bell Bay to Nagoya, Japan before June 30! The Gear bulk vessel, the Mandarin Arrow, was due to dock at Bell Bay on June 26 to load the T-Bar.

With just on two weeks' notice, Bell Bay's challenge was to produce 3,000 tonnes of short-length 750mm T-bar, instead of standard 1,400mm length T-bar. This would require:

- 67 casts
- 2,144 additional saw cuts
- 4,288 additional 'BBY' labels stencilled 4,288 times
- Loading and transport of 126 containers to the Tasports wharf
- Strapping the T-bar into 1,400 packs of three pieces each and completing the strapping seal strength tests and;
- Loading the Mandarin Arrow without incurring a delay to the vessels departure

The final T-bar pieces were sawn on Monday, 23 June and the last containers moved off site to the Tasports wharf at Bell Bay on Tuesday, 24 June.

All T-bar packs were strapped and tested on Wednesday, 25 June, and the Mandarin Arrow loaded on arrival on Thursday, 26 June. The bills of lading were issued prior to 30 June. There were no hold ups and no delays.

The whole operation went smoothly as a direct consequence of the determination and effort of the teams working in Metal Products and the Warehouse at Bell Bay, Toll Tasmania, our strapping supplier, Signode, and stevedores, QUBE. The focus and commitment displayed through this task ensured it was completed safely and on time.



PEOPLE

While we recorded zero occupational disease for the fourth consecutive year, we did not meet our safety performance, with six recordable injuries against a target of three.

2013 2014 2014 Target 2015 **Performance Indicator** Notes actual target actual met target 3 6 X Number of recordable injuries 5 3 One medical treatment (work-related injuries to case injury: employees or contractors) Strain to back while manual handling alumina slide hose Two restricted work dav iniuries: Strain to right shoulder Radiation burn to right foot through boot Three lost day injuries: Fractured leg while operating elevated work platform Injured shoulder while lifting support beam Dust in eve All injury frequency rate (AIFR) 0.96 06 1.2 X 0.6 New cases of occupational disease 0 0 0 0 1 Number of employees (FTE) 468 433.3 434.6 1 428.1 As at end 2014 Percentage of female employees 9.9% 10.6% 11% X 10% As at end 2014 New graduates 0 0 0 1 0 As at end 2014 New first year apprentices 2 2 4 4 Total apprentices 12 12 12 11 Total contractors (FTE) X 71.2 73 81 83 As at end 2014. Note, contractors reported as fulltime equivalent but typically around 60 contractors are working at Bell Bay on any day. Staff turnover 46% 7% 5.2% 1 7%

NUMBER OF RECORDABLE INJURIES : 6

duties of their role on their next given shift or

An occupational disease is defined as an illness or disease that results from workplace exposure and

Prevents a person from returning to site on

their next rostered shift

lasts more than one shift.

What is occupational disease?



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The continuation of zero occupational disease recorded for the fourth successive year was an outstanding result. We continue to focus on early medical intervention to ensure our workers come to work fit and healthy.

FLU VACCINATION PROGRAM

The objective of our Flu Vaccination Program is to help prevent occupational asthma and reduce absence and illness severity during the winter months. Occupational Health Adviser, Heather Jensen, attends tool box meetings armed with information, flyers and posters in order to improve perceptions of the benefits of flu vaccinations and answer any questions or concerns employees may have. Almost 40 per cent of our work force was vaccinated in 2014.

Making the vaccination accessible to all employees in the workplace has proven to be the key to success with this annual program. With improved service provision, this strategy has resulted in an increase in the general uptake of employees over the last two years. Despite getting the vaccines out into the workplace, we did experience a higher number of cases of flu in 2014, which resulted in more employees being monitored for the effect of significant respiratory illness. Due to our monitoring and vigilance, this was mitigated and no cases of Occupational Asthma were reported.

Early reporting of significant flu like symptoms is still the best defence and we will continue to focus on this message in 2015.



AN IMPORTANT MESSAGE!

According to The Heart Foundation, Tasmania has the highest rates of cardiovascular disease, high blood pressure and hypertension in the country, with Launceston and the North-East suffering the state's poorest heart health.

In its blueprint for an active Australia, the foundation said workplaces needed to do more to increase physical activity of their staff through mass communication addressing individual behaviour and introducing social support strategies.

Process Operator, Geoff Baker at Bell Bay Aluminium was happy to be in a position to warn others about the warning signs, having already lived through two heart attacks. Geoff's story is not uncommon in an industry involving a lot of shift work.

Geoff was blacking out and had shortness of breath, but did not understand what was going on when he had his first heart attack 11 years ago. He did, however, recognise the warning signs before his second heart attack in June 2014.

In 2014, Bell Bay Aluminium made a donation to The Heart Foundation's Big Heart Appeal along with Big Picture Tasmania partners, Norske Skog, Grange Resources and Nyrstar. Following the appeal, Geoff bravely agreed to talk about his experience to Jodie Stephens from *The Examiner* to encourage others to learn the warning signs of heart attack and understand why it is important to act quickly and get treatment. 18



OUR OPERATION

LARGEST PRODUCTION ANODE EVER SET IN REDUCTION CELLS!

Bell Bay Aluminium identified 1080 anode implementation as one of five key enablers to allow higher metal production within the smelter's 322 megawatt power block.

The push for implementation of a larger 1080mm-long anode was based on potential performance data provided by Potlines and Greg Picot, specialist process controller.

Analysis showed the potential for an additional 19,245 tonnes of hot metal would be realised from 2014 to 2018 by increasing the anode size from $1058(L) \times 574(W) \times 595(H)$ to $1080(L) \times 574(W) \times 605(H)$ mm.

This project was scoped, fully resourced and delivered quickly. Capital expenditure was critically directed to essential equipment changes to provide capability and reliability and address outstanding anode handling issues. Local contractors and labour were used as much as possible. The introduction of a larger anode meant changes and improvements to all areas on site including work time efficiencies, maintenance and cost reductions, reductions in manual interventions and exposures for our employees thereby improving safety.

Fantastic teamwork from employees and contractors meant the project was implemented safely and successfully.

While this was a team effort, Alex Grodski, mechanical engineer specialist, must receive special acknowledgement for his contribution. As the project lead, Alex did an outstanding job to deliver this initiative, which is contributing to a more sustainable operation at Bell Bay.

On Thursday, 17 April 2014, anode setters went to work on setting the largest production anode ever in the reduction cells; a significant milestone for the Bell Bay smelter!



GENERAL MANAGER, **RAY MOSTOGL** HONOURED AS CEO MAGAZINE'S **2014 MANUFACTURING EXECUTIVE OF THE YEAR**

On Thursday, 27 November, Bell Bay Aluminium General Manager Ray Mostogl was awarded CEO Magazine's Manufacturing Executive of the Year Award at a gala presentation at the Hilton Hotel in Sydney.

The annual CEO Magazine Executive of the Year Awards night is one of Australia's most prestigious business events, recognising leadership skills and business excellence displayed by top executives around the country.

Nominated by Pacific Aluminium CEO Bruce Cox, Ray said the award was a great achievement that reflected the strength of the team at Bell Bay Aluminium.

In a statement released to the media following the announcement, Ray said: "I am proud of our operation and the people that work for our business. Over the past three years we have had to make tough business decisions involving carefully measured and calculated risks that have ultimately led to Bell Bay Aluminium's success today. It is a great honour, not only for me but the smelter to be recognised in this way." Ray has played a vital role in leading Bell Bay Aluminium's business transformation from a loss-making smelter to one that is holding its own amid the most difficult global market ever experienced in the smelter's 59 year history.

Ray told media: "Manufacturing is vitally important to Tasmania's economy. Through hard work and perseverance our business is transforming itself to survive. I'm proud of everything that we've all achieved and I look forward to our continued success."







TASMANIAN MINERALS EMERGENCY RESPONSE COMMITTEE (TMERC) COMPETITION

Tasmanian mine and smelter site emergency response teams competed at the annual TMERC Competition at Nyrstar in Hobart on Friday 7 and Saturday 8 November. Events included first aid, fire fighting, team skills, road crash rescue, confined space rescue, underground search and rescue, rope rescue and rescue theory.

The goal of the annual competition is to ensure exposure to and practice of emergency care and response to the best possible standard.

Emergency response on mine and mineral processing sites involves volunteer teams of employees who train and prepare for all manner of emergency situations in potentially difficult environments. The competition is an essential extension to the mining and minerals processing industry's renowned focus on safety in the workplace.

The competition provides an excellent learning opportunity and is one of the best practical ways in which teams can learn and gain valuable insight into alternate rescue methods from contact with other teams and interaction with experienced adjudicators.

Bell Bay's Emergency Response Team came third in both the confined space rescue and ropes events and performed well in first aid.

Competing teams in the 2014 competition included: Bell Bay Aluminium Emergency Services, Bluestone's Renison Bell Mine Rescue, MMG Rosebery, Cornwall Coal, two teams from Grange Resources and a Tasmanian Minerals Emergency Response Committee team. **3ELL BAY ALUMINIUM**

EMPLOYEE COLLABORATION IMPROVES SAFETY

Employees identified the risks associated with molten material spills on the Potroom floors that could result in burns to the floor operator guiding the General Purpose (GP) crane driver when tipping molten material from the pot.

Although controls had been put in place so the pot could be tipped by the crane driver, this only occurred in one direction as there was only one air-line. An accidental spill could occur when the pot controls on the GP crane were left in the wrong orientation or the pendant control buttons stick, putting the floor operator at risk of a burns injury. So the pot controls were effective in the sense that the floor operator was removed from the area when tipping the pot but the potential risk of molten material accidently being tipped onto the floor when the controls were in the wrong orientation remained.

A collaboration between Potrooms Services Maintenance and Southern Bays resulted in development of an engineering solution to eliminate the risk of the floor operator being in close proximity to the molten material. Andrew Jones, process controller, Jamie Hartnack, technical maintainer (Potrooms Services Maintenance-Mechanical), and Carl Hyman, process maintainer (Potrooms Services Maintenance-Electrical) were responsible for implementing the solution.

The team fitted an extra air hose reel on to the hoist bogey on the GP crane. This now allows the GP crane driver to have full control of the pot and pour molten material in both directions. This removed the need to have a floor operator nearby when the GP crane driver is pouring molten material. The floor operator can now stand at a safe distance and outside the red zone to be able to guide the crane driver.

While the solution has helped to improve safety and reduce risk of injury it has also opened up the potential for production efficiency gains by freeing up a process controller.





L-R Bob Cother, The Action Learning Institute, Andrew Thompson, ACL Bearing Co., Bill Woodworth, Bell Bay Aluminium, Matthew Groom, Minister for State Growth and Tony Gleeson, Australian Institute of Management.

2014 TASMANIAN TRAINING AWARD WINNERS

The Tasmanian Training Awards are the peak awards for vocational education and training (VET), recognising innovation and excellence in the training sector.

Conducted annually by Skills Tasmania, the 2014 Industry Collaboration Award was won by *Business Action Learning Tasmania (BALT)*.

BALT is a collaboration between local industry, the Action Learning Institute and the Department of State Growth.

Bell Bay Aluminium has been an active participant and leader in the BALT program since the pilot program was established in the Tamar Valley in 2010.

BALT supports self-reliant industry development with local Tasmanian companies cooperating to improve their profitability, develop their people, and grow the Tasmanian economy. BALT is built upon three pillars:

- Collaborative action learning
- Nationally recognised qualifications
- Real business improvement

Action learning is a natural way for adults to learn where groups of people with diverse experience form to undertake practical projects to achieve positive business and personal development outcomes.

Bell Bay Aluminium contributes significantly to the leadership, development and support of BALT, including providing the services of Business Improvement Specialist Bill Woodworth to facilitate projects for the program. Bill is a Six Sigma Black belt and has extensive experience implementing Lean initiatives at Bell Bay Aluminium.



BELL BAY ALUMINIUM **ANNUAL SERVICE** RECOGNITION

Bell Bay Aluminium hosted its Annual Service Function in November 2014 at the Boathouse in Launceston.

Employees who achieved a service milestone of 10 years or greater in 2014 were invited to the Annual Service Function. Past and present employees who have previously achieved 25 years' service are also invited to attend. General Manager Ray Mostogl and respective department managers attended and presented gifts to employees in recognition of their service milestone.

Back L-R Jamie Hartnack, Michael Spinks, Neil Andrews, Ray Mostogl, Peter Scher, Derik Scher, Rodney Pickering, Stephanie Pearce, Rick Coetzee

Front L-R Dale Richards, Greg Turner, Paul Reay, Steve Oppermann, Tony Burr, Maurie Krushka, George Moolenschot, Jon Sawford, Craig Wegman, Andrew Bott, Russell Perkins, Bryan Sharman

- **40 YEARS 35 YEARS** Kelvin Morrison Peter Scher Robin Axton
- Shane Coleman Terry Clark Michael Spinks Steve Oppermann Klaus Geier Nick Gillman Bryan Sharman

Eric Kellner Rob Claudio Rodney Pregnell Russell Perkins Derik Scher Tim Clark Paul Moolenschot Tony Burr

lain Nixon

30 YEARS

25 YEARS Jon Sawford Maurie Krushka Paul Reav Craig Wegman Mathew Deane Ray Ashenden Darren Bryan Matt Geeves Tony Jetson Rodney Pickering Andy Busch Andrew Bott Jamie Hartnack Gerd Siebert Andv Scheibl Chris Andrews

Neil Andrews

20 YEARS Ricky Brockman Chris Murray Simon Peters

- **15 YEARS** Nigel Britton
 - Glen Currie Shane Kerrison Martin Zeeman Paul Hicks Andrew Locke **Ricky Coles**

Aaron Baillie

10 YEARS

Paul Krushka Craig Brown Gavin Mayes Margaret Richmond Evgeniy Mitev Bruce Duncan Ben Davies Paul Wilson Mark Warren

Richard Mudge



BELL BAY ALUMINIUM

PACIFIC **ALUMINIUM**

ENVIRONMENTAL MANAGEMENT

There were no incidents of non-compliance against our Environmental Protection Notice in 2014. We further reduced our site fluoride emissions and met our water use and on site greenhouse gas emissions targets. Our commitment to recycle and reduce hazardous waste to storage is a continued focus.

Performance Indicator	2013 actual	2014 target	2014 actual	Target met	2015 target
Non-compliance with environmental permit conditions	2	0	0	1	0
Number of community complaints		0	0	1	0
Total on site greenhouse gas emissions (tonnes CO_2 -e per tonne aluminium produced)	1.76	1.79	1.78	1	1.79
Total energy use (gigajoules per tonne of aluminium produced)	71.81	71.45	71.58	X	71.89
Energy efficiency (DCkWh per kilogram of aluminium produced)	14.21	14.10	14.17	X	14.14
Total fluoride emissions (kilograms of fluoride per tonne of aluminium produced)		0.90	0.67	1	0.90
Waste to landfill (tonnes per month)	15.0	13.5	14.0	X	13.5
Fresh water usage (kilolitres per tonne of aluminium produced)	0.65	0.80	0.77	1	0.78



(TONNES PER MONTH)

(KILOGRAMS OF FLUORIDE PER TONNE OF ALUMINIUM PRODUCED)





RGET : 14.10

ACTUAL : 14.17

ALUMINIUM PRODUCED)

- X In 2014, we missed our target for waste to landfill by 0.5t/month. We continue to look for opportunities to further reduce waste to landfill. During the last quarter of 2014, we revised our waste skip arrangement to encourage better segregation of wastes. This should allow the site to reduce its general waste to landfill during 2015.
- As part of our ongoing commitment to reduce hazardous waste to storage, 3,572 tonnes of aluminium dross was recycled by Weston Aluminium and 4,057 tonnes of Spent Cell Liner (SCL) was recycled at Railton Cement. The smelter's SCL stockpile was reduced by 1,150 tonnes in 2014.
- We met our water use targets in 2014.
- The smelter met its total fluoride emissions target for 2014 as a result of our practices to minimise leakage of fume from reduction cells and sustain the performance of the potline fume scrubber. A more accurate and up-to-date measurement of the upward air velocity within the potlines building also contributed to a reduction in reported fugitive emissions.
- The land that surrounds the smelter is home to a number of plant and animal species and vegetation communities that are threatened, endangered, vulnerable and rare. As part of our commitment to preservation of biodiversity in the Tamar region, we donated 6,000 trees to the Launceston and Tamar Valley communities in 2014. The trees were planted by local school students at three locations in Launceston and the Tamar Valley, assisted by Bell Bay Aluminium and Launceston City Council employees.

CASE STUDY

ACTION ON **CLIMATE CHANGE**

Bell Bay Aluminium is committed to best practice environmental performance. Since 1990, we have made significant progress in reducing on site greenhouse gas emissions.

The aluminium smelting process creates emissions from the consumption of carbon anodes and production of perfluorocarbons (PFCs). PFCs have high global warming potential and have been a focus of industry efforts to reduce emissions. Aluminium smelting is also very energy intensive and indirectly generates greenhouse gas emissions from electricity consumption.

Bell Bay Aluminium has a long-standing commitment to reducing greenhouse emissions resulting from our operation.

Our reputation as a sustainable business depends on our ability to demonstrate sound environmental management practices and stewardship of our natural resources. The smelter has invested in stateof-the-art technology, processes and production improvements to dramatically reduce direct emissions. Since 1990, the company has reduced direct CO_2 emissions per tonne by 75 per cent to just under 1.8 tonne of CO_2 per tonne of aluminium produced. This is a world class performance for a smelter of any age.

This per tonne reduction is equivalent to a 62 per cent reduction in absolute direct emissions, and was achieved despite a 55 per cent increase in production between 1990 and 2014.

These reductions are a result of our efforts to reduce emissions of PFCs. New technologies have enabled the smelter to virtually eliminate the production of PFCs since 1990.

We continue to work to reduce our direct emissions and improve energy efficiency.





OUR FUTURE

COMMUNITY TREE PLANTING

In July and August 2014, students from South George Town Primary School, Port Dalrymple, East Tamar Primary, St Finn Barr's, Mowbray Heights, West Launceston, Trevallyn Primary School and St Anthony's Catholic School swapped pens and computers for gardening gloves and trowels as they teamed up with Bell Bay Aluminium to plant 2,000 trees at a location on Bridport Road, Bell Bay and 4,000 trees at Tailrace Park in Launceston.

For the past four years the smelter has planted trees with students from schools in George Town and Launceston as part of our Biodiversity Action Plan.

Our annual tree planting project is a great initiative to get students involved in helping the environment. The students learn about threatened plant ecosystems and about proper planting practice. Every tree that the students plant with Bell Bay Aluminium will have a positive impact on the future of our planet and help to preserve the current environment in the Tamar Valley region.

Students planted a mix of trees in both locations including:

- Swamp Paperbark (*Melaleuca ericifolia*)
- Australian Blackwood (Acacia melanoxylon)
- Black Peppermint (*Eucalyptus amygdalina*)
- White Gum (*Eucalyptus viminalis*)
- Black Sheoak (Allocasuarina littoralis)
- Silver Banksia (*Banksia marginate*)
- Silver Wattle (*Acacia dealbata*)

Forestry Tasmania grew beautiful, healthy seedlings from locally sourced seed for this annual planting project.

Since 2010, Bell Bay Aluminium has planted in excess of 20,000 trees with the assistance of local school children in the Launceston and Tamar Valley region.

COMMUNITY INVESTMENT

Bell Bay Aluminium contributes to the Tasmanian community in many ways. We provide assistance in the form of community partnerships, sponsorships, donations and in kind support:

In 2014, we proudly supported:

- F1 in Schools program
- Theatre North's Kids Accessing Theatre program
- Tasmanian Symphony Orchestra
- Governor's Environmental Scholarship
- UTAS Electronics and Computer Systems Prize
- TasTafe Apprentice Awards
- Tasmanian Science Talent Search Awards
- George Town Chamber of Commerce **Business Excellence Awards**
- Launceston Chamber of Commerce Business Excellence Awards
- WorkSafe Tasmania Awards and Gala Presentation
- Tasmanian Regional Arts Material Girl Awards and Exhibition
- South Launceston Athletics Club

- Bell Bay Aluminium Junior Tennis Championships
- Launceston Tornadoes Basketball team
- Cape Hope Foundation
- Heart Foundation Big Heart Appeal
- Little Athletics Tasmania, 2014 International Children's Games
- George Town Rotary Club Aero Open Day
- George Town Scouts Club
- George Town RSL sub-branch Anzac Day
- George Town Fire Brigade
- Breath of Fresh Air Film Festival
- Melaleuca heritage museum project
- End of Year School prizes
- Annual tree planting days at George Town and Launceston with students from local schools and the Rotary Clubs of George Town, Evandale and West Tamar.
- QVMAG's National Science Week

- Paid leave for employee involvement in community initiatives such as Try A Skills Day and F1 In Schools judging
- Donations of surplus equipment including computers, batteries and office furniture to a number of community organisations
- Employee participation in health and wellbeing initiatives such as the Launceston Ten. Sally's Ride. White Lion and Police Charity Trust Golf Day and Launceston Aquatic membership
- Making land and associated facilities available at minimal rent to George Town Golf Club. George Town Gun Club and the George Town Ponv Club
- Providing Bell Bay Aluminium-owned land for community use as Lauriston Park

COMMUNITY AND REGIONAL DEVELOPMENT

In 2014, Bell Bay Aluminium continued to engage, participate and contribute to a number of community and economic development forums and initiatives including:

- Department Infrastructure, Energy and Resources Freight Logistics Coordination Team
- Tasmanian Chamber of Commerce and Industry Freight Logistics Committee
- Big Picture Tasmania
- Department of State Growth Lean Manufacturing Forums
- Launceston Chamber of Commerce State **Election Forum**

- Tasmanian Chamber of Commerce and Industry Three Amigos Forum
- Tasmanian Leaders Program Sustainability Linking Session
- Membership of Tasmanian Chamber of Commerce & Industry, Launceston Chamber of Commerce. George Town Chamber of Commerce, Tasmanian Minerals and Energy Council
- TasCOSS Annual Conference

- Tasmanian Minerals and Energy Council Annual Conference & Regional Forum
- Tasmanian Government's Energy Strategy Working Group
- Launceston Chamber of Commerce Board membership
- Business Action Learning Program

COMMUNITY FEEDBACK

We welcome and encourage feedback to assist us to improve the way we work. We take all complaints seriously and investigate each one in a timely and responsive manner.

Remedial actions are taken where appropriate. All complaints are reported to the Site General Manager and are recorded in the site incident reporting system.

We did not receive any community complaints in 2014.

BELL BAY ALUMINIUM'S COMMUNITY CONSULTATIVE COMMITTEE

With Bell Bay Aluminium's change in community engagement strategy from one of consultation exclusively, to one of promoting a more independent local economy, the Community Consultative Committee is exploring potential options to grow and diversify the local George Town economy in a way that is less reliant on existing major industry for much of its employment and community prosperity.

In 2014, Bell Bay Aluminium's Community Consultative Committee met twice. New members of the committee include representatives from Regional Development Australia Tasmania, Northern Tasmania Development, George Town Council and George Town Chamber of Commerce. Guest speakers at our August and November meetings included Sarah Jones, Facilitator, Ausindustry-Entrepreneur Development, Department of Industry and Science and Dr Marcus Bowles, Adjunct professor, AMC, University of Tasmania.

With many key community, business and government stakeholders in the George Town and Bell Bay precinct it is vital that we continue to work collaboratively to see how we can leverage our collective networks to promote the potential capability of the region and its competitive advantages.



OUR FUTURE

TEAMS ON STARTING GRID FOR F1 IN SCHOOLS FINALS

Ulverstone, Brooks and Queechy High Schools, Port Dalrymple and Launceston College battled it out in the Tasmanian F1 in Schools Final on Friday, 19 September 2014 at the Tailrace Centre, Riverside.

Sixteen teams of students from Years 7-12, using the same technology as is currently used by the real F1 teams and vehicle manufacturers; designed, made, marketed, tested and raced their miniature F1 style cars. Capable of speeds exceeding 80 kilometres per hour, the gas-powered cars can cover the track in less than 1.5 seconds.

Teams were assessed against set criteria including engineering, car speed, technical portfolio, industry collaboration and verbal presentations.

Bell Bay Aluminium, in partnership with Re-Engineering Australia, established the innovative program in a number of Northern Tasmania schools seven years ago as a way of introducing students to the world of engineering and manufacturing-related trades and professions.

This exciting competition exposes students to 3D modelling, virtual wind tunnels, graphic design, project management, fund raising, computer-aided manufacturing, marketing, sponsorship, presentations skills and team work.

The competition is the largest secondary school technology program in the world, involving more than nine million students from 17,000 schools in 31 countries. Northern Tasmanian schools have a strong history of success in F1 in Schools.

2014 winners were:

enior Professional Champions - Ignition, Ulverstone High School	
unior Professional Champions - Red Storm Racing, Queechy High School	

Development Class Champions - High Octane Racing, Queechy High School

Cadet Class Champions - Vivid Racing, Queechy High School

Ignition, Red Storm Racing and High Octane Racing will represent Tasmania at the National Championships to be held in 2015.

STUDENTS **CRASH! BANG! RECYCLE** AT **MINI TSO** IN GEORGE TOWN

The Tasmanian Symphony Orchestra (TSO) and Bell Bay Aluminium were delighted to announce Crash! Bang! Recycle! an instrument-making competition open to students who attended the mini TSO concerts in George Town in September.

Sponsored by Bell Bay Aluminium, Crash! Bang! Recycle! challenged students to make a percussion instrument out of recycled aluminium.

The concerts were attended by students from Port Dalrymple School, Star of the Sea Catholic College, Beaconsfield, South George Town, Exeter and Bridport Primary Schools.

All students were invited to play along with the orchestra on their aluminium instrument during the concert. Finalists in the competition were chosen to play the final piece with the orchestra before TSO Principal Percussion Gary Wain selected the winners.





L-R Margaret Sonnemann, winner Premier's Choice Award, Anne Morrison, Judge, Wendy Quinn, Zonta, Judge/Sponsor, Janet Bush, winner Zonta Emerging Artist Award, Fiona Francois, winner Bell Bay Aluminium Award for Overall Excellence, Elise Archer, MP, Speaker, Lou Clark, Bell Bay Aluminium, Sponsor/Judge

2014 MATERIAL GIRL AWARDS

Tall Poppies: Late Bloomers was the theme for the 2014 Material Girl Awards, presented by Tasmanian Regional Arts. Renowned for its quirkiness, the competition attracts a diverse range of artists and mediums with entries this year including a short film, a diorama and a Facebook page.

The Material Girl Awards acknowledge, reward and celebrate women artists in Tasmania and the important contribution they make to our cultural landscape and heritage.

Material Girl is an annual, themed art award that began as an International Women's Day event in 2002. It continues to support, celebrate and promote female creativity in Tasmania and encourages people to consider women's roles in society. Bell Bay Aluminium has been a sponsor of the Material Girl Awards since their inception in 2002.

The name, Material Girl, was chosen for the awards to acknowledge that textiles were traditionally a female art form. The awards originally focused heavily on this medium but now Material Girl encompasses all media and this ever-popular competition ensures a dynamic exhibition for audiences.

Exhibition openings were held across the State; the first at the Moonah Arts Centre, in Hobart on Friday, 9 May where the winners of the awards were announced.

The awards are sponsored by Bendigo Bank, the Department of Premier and Cabinet, Zonta International and Bell Bay Aluminium.

The winner of the Bell Bay Aluminium Overall Award for Excellence in 2014 was Fiona Francois.

COMMUNITIES BENEFIT FROM BELL BAY ALUMINIUM GRANTS PROGRAM

A program to tackle bullying, new equipment to help the SES deliver road crash rescue training, and a facility upgrade for the Exeter Show Society, were three of the five projects selected by Bell Bay Aluminium to receive a community grant in 2014.

West Tamar SES Unit, Exeter Show Society Inc, George Town Community Bowls Club, Angels Goal Inc. and George Town Ambulance Social Club all received funding from Bell Bay Aluminium's community grants program.

An employee committee had the arduous task of assessing the community grants.

The successful organisations received a \$2,000 grant at a morning tea and presentation at Bell's Café in George Town on Tuesday, 13 May.

The grants enable these organisations to purchase much needed equipment or deliver specific support programs.

Exeter Show Society Inc. will use the funds to upgrade facilities by replacing a dilapidated and unsafe roof on a toilet block used by a range of sporting and community groups.

George Town Ambulance Social Club will purchase a new rescue mannequin for training purposes.

Angels Goal Inc. will use the grant funds to help deliver Angels Goal Social Media Peer Support Program to George Town Schools to support and help students affected by bullying and anti-social behaviour.

West Tamar SES Unit will purchase a vehicle trailer to assist with road crash rescue training.

George Town Community Bowls Club will use the grant to help provide universal access to their ladies toilet facilities.



BELL BAY ALUMINIUM

YEAR IN **REVIEW**



GEORGE TOWN

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JM 2014 SUSTAINABLE DEVELOPMENT REPORT

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PO Box 290, George Town TAS 7253 Australia **T:** +61 (3) 6382 5129 bellbaycommunityrelations@pacificaluminium.com.au **www.bellbayaluminium.com.au**