



# 2017 BOYNE SMELTERS LIMITED

Sustainable Development Report





# A MESSAGE FROM OUR GENERAL MANAGER



Welcome to our 2017 Sustainable Development Summary. We produce this report card to help our interested stakeholders understand more about our business, while also providing a snapshot in time of our operational performance.



## Celebrating BSL History

What better way to demonstrate our long-term sustainability than to celebrate 35 years in operation as we were proud to do in 2017. When we first opened in 1982, BSL produced 210,000 tonnes of aluminium per year. A series of multi-million dollar investments in the plant over the years has seen us capable of almost tripling that tonnage today. In 2017 we looked back on the projects and the people who, over the year, helped forge a path for us to become one of the largest smelters in the southern hemisphere. To mark our 35-year milestone, we opened our gates to employees and their families, offering them a unique opportunity to explore the site and witness the contribution made by our valued staff to the national economy and regional community.

Our 35-year celebrations were made even more special in 2017 by being acknowledged for the fourth year in a row as the Gladstone Observer Best in Business for Industry, Engineering and Manufacturing. Considering the challenges faced by the business this year, the award was a humbling reminder of the value placed on us by the community who nominated us once again.

## Energy

BSL is Queensland's largest single energy user, with power representing more than a third of its manufacturing costs.

It is therefore critical that BSL has access to secure, reliable power at internationally competitive prices for its ongoing success. BSL has historically purchased around 15 per cent (150 MW) of its electricity needs from the Queensland wholesale contract market (the remaining 810 MW base load is provided through a long-term contract with the owners of the Gladstone Power Station).

The doubling of wholesale prices in Qld since 2015 added millions of additional costs to BSL which ultimately was not economically sustainable and forced the difficult decision to curtail production by 14 per cent in March 2017. Our smelter now operates solely on its 810 MW base load.

Of course, a decision of this magnitude has repercussions for our people. We have a proud, hard-working workforce who have contributed to making BSL a world-class operation with outstanding processes, safety, sustainability practices and innovation. It was very disappointing

knowing we had to lose some of that winning formula and that some local families would be impacted by job losses.

BSL will continue to pursue opportunities for a long-term, internationally competitive power price as this will be critical for the business to achieve our vision of being 'Proudly Australian operating beyond 2030'.

## Our People - BSL's richest asset

Our people are proud to come to work. Generations of families have been employed at the smelter and their contributions make us a great Australian story. We take care of our people, as they take care of the business.

We were proud to launch our BSL Peer Support Program in 2017 where 30 volunteers from across the business received formal training by a professional counsellor. The training equips our people with the necessary skills to have an initial conversation with a colleague who might be finding it hard to cope and some good knowledge to pass on of available service providers for them to take the next step in seeking professional help. It is our belief that being physically fit and

mentally healthy are key foundations to a successful life, both inside and outside of work. The Peer Support Program now provides BSL employees with an opportunity to have their first contact point amongst their peers and for referral to health practitioners or counsellors where required.

In the hustle and bustle of Gladstone industry, where new industries come and go, Boyne has been quietly contributing to the region for 35 years. We contribute \$1.2 billion a year to the Australian economy, waving the flag of the manufacturing sector for years to come. The 2017 snapshot of BSL operations is proudly summarised and I trust you will find this an informative overview of the past year's performance at BSL. I welcome any questions or feedback you may have.

Regards

**Joe Rea**  
General Manager



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# 2017 Snapshot

## Social Performance

### Our People

Full time employees

894

Contractors

85

Local Wages and benefits

\$135M



Celebrating our people

11,049

**Services Awards** -  
Total years' service by  
employees with an  
average of 12.04 years

**Beyond 2030  
Awards** -  
recognising  
individual and team  
performance

2

GM  
Awards

10

Category  
Award  
Winners  
(Individual or Team) -  
5 Categories

Employee  
Engagement  
and Site  
Communication

8

Employee  
GM Briefing  
Sessions

28

General  
Manager Blog  
Posts / Video  
Blogs

30

BSL Hot  
Tappings  
Employee  
newsletter

98

Visible Leadership -  
cross site toolbox  
sessions attended by GM  
and Operations Manager

### Health and Safety



#### Safety Statistics

- Industry leading safety performance - All Injury Frequency Rate over last 4 years 0.4
- Attributable to visible leadership and focus on Critical Risk Management



#### Occupational Health

- Zero recorded illnesses and zero respiratory illnesses attributable to focus on reduction in exposures, personal protective equipment maintenance and a medical surveillance program



#### Employee Health and Wellbeing Campaigns

- Peer Support Program established with 30 staff volunteers trained by professional counsellor to assist with peer contacts requiring support and referral to other services
- Mental Health Awareness

### Our Communities



#### Total Community Investment

\$263,500



#### Partnerships

- Sponsorships and Donations
- In-kind sponsorships



#### Education

- Building School Legacies - School Grant Program
- Hosting of onsite learning centre (EBITS) through Education Queensland and Industry Partnership



#### Consultation

- 2 Community Forums providing 2-way communication
- Community Observations - 2 minor contacts fully investigated and responded

## Business Performance

### Operational

Number of aluminium  
reduction cells

638

- Record saleable metal production - reduced to 510,667t
- Record current efficiency for Reduction Lines 1/2

### Financial



- Cash Position \$9.8M better than plan
- 2017 cost saving initiatives delivered savings of \$8.4M in ideas contributed by employees in site wide '10K Banked' initiative
- Local spend \$58.9M

### Awards



**Gladstone Observer Best in  
Business Award** - 4th consecutive year

## Environmental Performance

### Environmental Incidents / Compliance



- **Zero non-compliance** for Category 1 or 2 environmental events
- Results attributable to
  - dedicated bag changing team
  - work on drain management and controlling what can flow into drains

### Emissions

- **Fluoride** - Fluoride emissions during 2017 were higher than 2016. This reflects increased process variability being experienced with Reduction Line 3
- **Waste to landfill** - Waste generation in 2017 decreased compared to 2016, however this is still above target predominantly due to carbon dusting in Reduction Line 3
- **Benzo[a]pyrene (BaP)** - BaP emissions were well below target however slightly higher than 2016 and reflect shutdowns performed to maintain emission control equipment

## Sustainability

### Energy Projects



#### Works Feeder

By challenging the use of electricity in non-aluminium producing operations and redirecting to aluminium production, this has allowed for \$3.8M worth of aluminium production.

#### Anode Assembly Voltage Drop

By improving the electrical connection in Reduction Line equipment this reduces the voltage losses. Reducing the electrical losses through the anodes has been verified delivering pathway to savings of \$4.75m per annum.

#### Under Cell Bus and Side Riser Trial

The 3 cell trial has demonstrated the value of reducing the movement of liquid metal in the reduction cell. The trial is now being extended to verify an expected production increase of 9,200 tonnes with no additional power out of Line 2.

### Other Critical Projects



#### Building Future Potential

To progress the plant beyond 2030 a number of critical projects with an intensive focus were progressed to deliver sustainable cash flow improvements.

#### Ingot Surface Quality

Improvements to surface quality of ingots to ensure market requirements are met and exceeded.

#### Pallet Station Automation

Elimination of a manually intensive task performed in challenging operating conditions by the successful completion of an automation process.

#### Hasler Control System Replacement

\$1M investment to future proof the Green Carbon control system for delivery of quality anodes beyond 2030.

#### S230 Larger Anode

Optimisation of anode size; delivering improved electrical current efficiency of the reduction cells.

# 2017 Data Book

KEY REPORTING AREA	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual	2018 Target
<b>BUSINESS PERFORMANCE</b>							
Number of Reduction Cells	-	749	-	749	-	638	616
Saleable Metal Production	584,720	579,082	583,978	584,742	516,933	510,667	497,566
<b>SAFETY</b>							
All Injury Frequency Rate*	0.33	0.49	0.41	0.35	0.35	0.68	0.46
Lost Time Injury Frequency Rate	n/a	0.25	n/a	0.26	n/a	0.39	n/a
Lost Time Injuries	n/a	3	n/a	3	n/a	4	n/a
Recordable Injuries **	4	6	5	4	4	7	5
<b>HEALTH</b>							
New Occupational Illness***	0	4	0	2	0	0	0
<b>ENVIRONMENT</b>							
Environmental Incidents Category 1 (on site near source confined and promptly reversible impact typically a shift/off site not applicable)	0	7	0	2	0	0	0
Environmental Incidents Category 2 (on site near source confined and short-term reversible impact / off site near source confined and promptly reversible impact)	0	1	0	0	0	0	0
Environmental Incidents Category 3 (on site near source confined and medium-term recovery impact / off site near source confined and short-term reversible impact)	0	0	0	0	0	0	0
Non-compliance with Licence Conditions	0	8	0	2	0	0	0
Fresh Water Use (ML) (Raw + Treated)	845	828	845	811	845	814	845
Water Recycled (ML)	155	171	155	168	155	171	155
Fluoride Emissions (kg F/t Al, 12-month rolling average)**	0.80	0.65	0.80	0.68	0.80	0.76	0.80
Benzo[a]pyrene (BaP) (kg/year) +Licence condition commenced in 2013	50	14	50	6.7	50	11.1	50
Total Waste to On-site Hazardous Landfill and Transfer Station	1,121	1,076	1,068	1,607	1,196	1,466	1,498
Onsite Greenhouse Gas Emissions (Scope 1) # Mt CO <sub>2</sub> -e	No target set	1.03	1.01	1.06	1.01	0.93	1.01
Greenhouse Gas Emissions associated with Purchased Electricity (Scope 2) ## Mt CO <sub>2</sub> -e	No target set	6.78	No target set	6.62	No target set	5.74	No target set
Total Greenhouse Gas Emissions Mt CO <sub>2</sub> -e	7.72	7.81	No target set	7.68	No target set	6.67	No target set

KEY REPORTING AREA	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual	2018 Target
<b>HUMAN RESOURCES</b>							
Full Time Employees ^	951	953	944	950.6	907	860	910
Contractors (number of full time equivalent contractors, not including capital contractors)	73	111	70	66.39	39	85	50
Developing Roles (graduates, apprentices & trainees)	0	32	n/a	22	21	18	33
Indigenous Employment %	n/a	2%	3%	2%	3%	2%	3%
Local Wages and Benefits (million \$)	\$138.9	\$139.1	\$138.5	\$136.3	\$142.0	\$134.7	\$123.2
<b>COMMUNITY OBSERVATIONS / COMPLAINTS</b>							
Category 0 (observation) (general feedback, enquiries and minor issues)	0	7	0	5	0	3	0
Category 1 Complaints (minor impact to the community)	0	0	0	0	0	2	0
Category 2 Complaints (moderate impact to community and environment)	0	0	0	0	0	0	0
Category 3 Complaints (serious impact to community and environment)	0	0	0	0	0	0	0
Total Community Investment	\$300,000	\$308,415	\$270,500	\$274,000	\$262,000	\$263,500	\$310,500
Partnerships	\$60,000	\$61,400	\$15,000	\$16,000	\$15,000	\$24,500	\$15,000
Building School Legacies – School Grants	\$30,000	\$28,000	\$29,000	\$15,000	\$15,000	\$15,000	\$15,000
Sponsorships and Donations	\$10,000	\$10,515	\$16,500	\$33,800	\$20,000	\$14,000	\$21,000
In-kind	\$200,000	\$208,500	\$210,000	\$210,000	\$210,000	\$210,000	\$257,000

KEY REPORTING AREA INFORMATION: \* The All Injury Frequency Rate (AIFR) converts the numbers of recordable injuries into a number that enables comparison of our safety performance against previous years, as well as with other Pacific Aluminium operations in Australia and New Zealand. \*\* Pacific Aluminium uses the globally recognised "Occupational Safety and Health Administration: (OSHA) guidelines for injury classification which defines a Recordable Injury as any work-related injury that either needs treatment by a doctor, over and above general first aid, prevents a person from performing all of the duties of their role on their next given shift or prevents a person from returning to site on their next rostered shift. \*\*\* An occupational illness is defined as an illness or disease that results from workplace exposure and lasts more than one shift.

+ Licence limit set by administering authority. ++ Targets are internal only. # Scope 1 – Greenhouse gas emissions as a result of onsite activities. ## Scope 2 – Greenhouse gas emissions from consumption of purchased electricity. Emissions are calculated taking the electricity MWh used on site multiplied by a default Queensland emissions factor. The reduction in Scope 2 emissions since 2011 is mostly due to the decrease in the Queensland emission factor. ^ Full time equivalent is the average of all full time and part time employees.