

## Sustainability Report Highlights



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The Company estimates its reserves and resources in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves 2012 Edition (“JORC Code”), which governs such disclosures by companies listed on the Australian Securities Exchange.

*Financial figures are in Australian dollars unless otherwise noted.*

*Financial year is 1 July to 30 June.*

*Q1 Sep FY19 = quarter to 30 Sep 2018*

*Q2 Dec FY19 = quarter to 31 Dec 2018*

*Q3 Mar FY19 = quarter to 31 Mar 2019*

*Q4 Jun FY19 = quarter to 30 June 2019*

*This presentation published 13 September 2019.*



As at 30 Jun 2019: AUD 1.00 = USD 0.70, USD 1.00 = AUD 1.42

AUD 1.00 = PGK 2.44, PGK 1.00 = AUD 0.41

[www.rba.gov.au](http://www.rba.gov.au)

Title slide picture: Ben Elliott, Environmental Officer, conducting water testing at Gwalia.



# Welcome to St Barbara's Sustainability Report



- Managing Director's welcome
- St Barbara at a glance
- Sustainability Strategy & Values
- Health and Safety
- People
- Communities
- Environment
- Governance & Economic Performance





Welcome to the St Barbara Sustainability Report.

Highlights in sustainability this year include:

- Welcoming Atlantic Gold to the St Barbara Group in July 2019. Atlantic's sustainability performance was key in our due diligence. In particular, Atlantic Gold has been nominated for Nova Scotia safety awards in its first two years in operation.
- Our injury frequency rate has disappointingly increased this year, although most of the injuries suffered have been relatively minor. Although our safety performance remains significantly better than our peers, we are committed to improving this very important metric.
- Also in this report you will find increased reporting about water recycling, greenhouse gas emissions (where we are in the top efficiency quartile globally) and our continued efforts to set up our Simberi community for life after mining.

Sustainability is a founding and ongoing focus, central to our Company culture. I am proud of St Barbara's considerable financial and sustainability achievements, and I look forward to continued improvement and success in all measures.

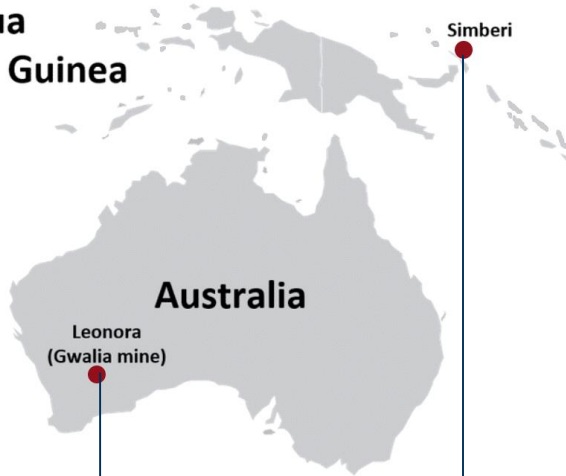
*(Mr Vassie's full statement appears on page 4 of the Sustainability Report)*



**Bob Vassie, Managing Director and CEO**  
Distributing school supplies at Bekou primary school,  
Simberi PNG, 2018.



## Papua New Guinea



### Leonora

- Gwalia underground mine
- FY19 production 220 koz
- Mine plan to FY31
- Prospective tenements

### Simberi

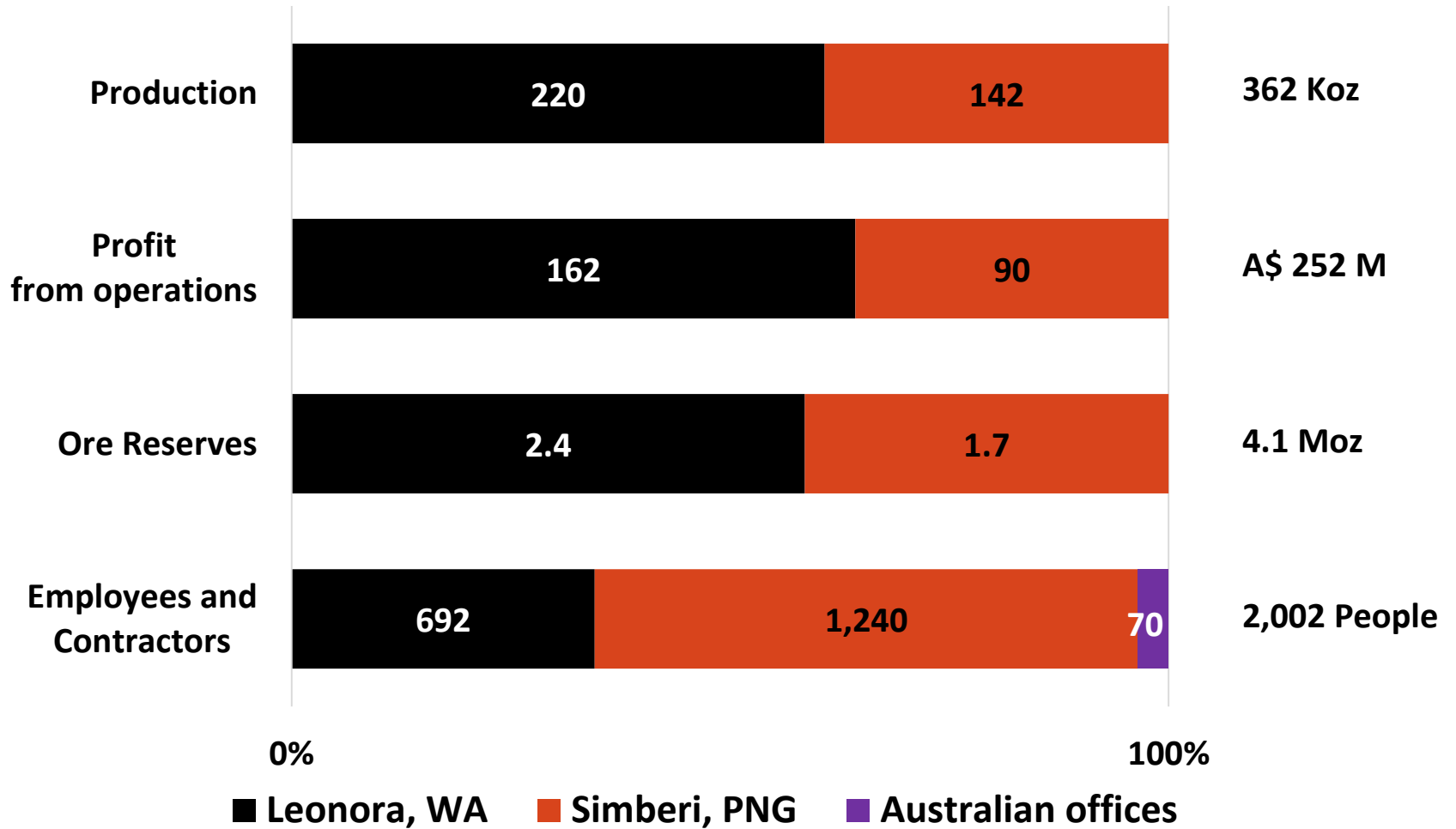
- Open pit mine
- FY19 production 142 koz
- Mine plan to FY21
- Potential for life extension
- Nearby exploration

### Atlantic Gold

- Open pit mine
- FY19 production 93 koz
- Three other mines in development with unified processing strategy



## 2019 Geographic Segments





## Diversify production base

Seeking a portfolio of robust operations



## Sustainable long life operations

Aiming for above average mine life at bottom-third AISC



## Quality growth pipeline

Actively add, manage and progress assets in all phases of the pipeline



## Talented people who deliver

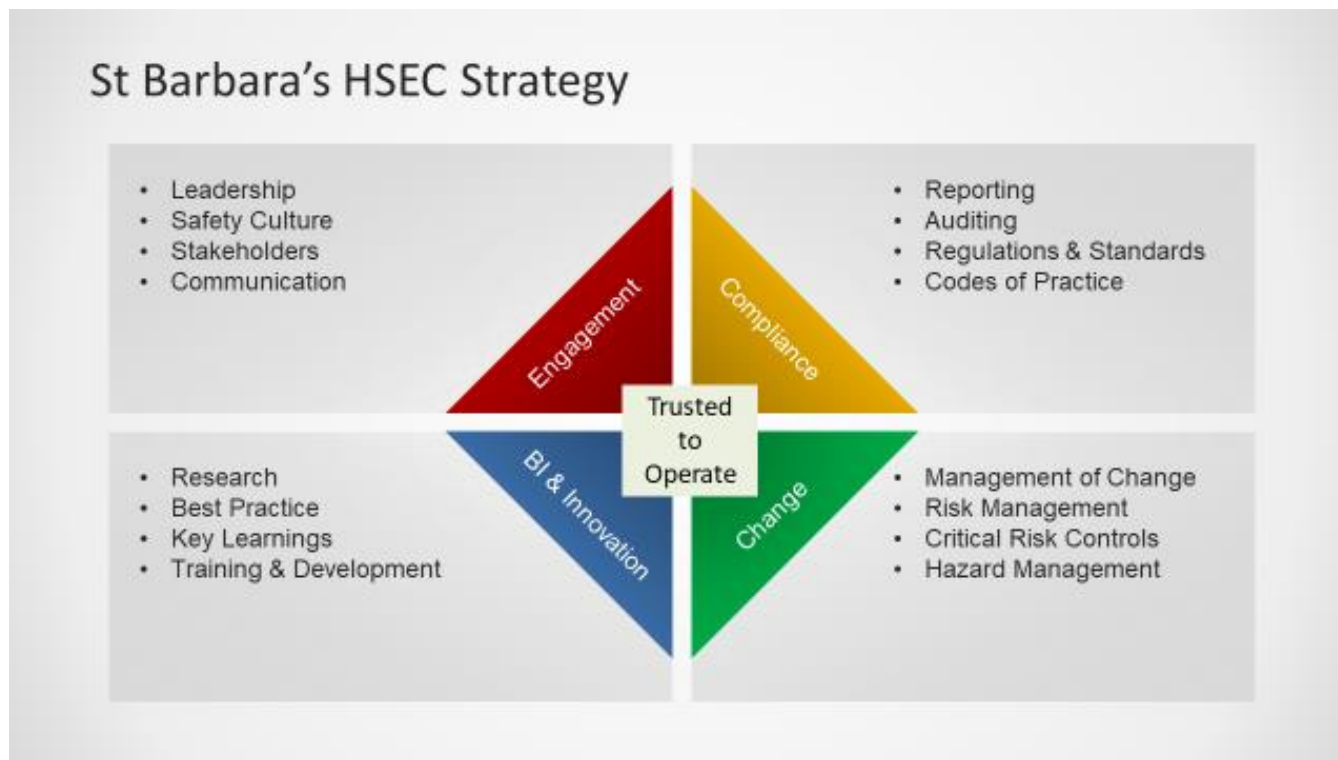
Support and work with our people to continue to achieve extraordinary results



## Trusted to operate

Our various stakeholders trust us everywhere we choose to operate





*A foundation of St Barbara's strategy is to be 'trusted to operate' by all our stakeholders. The Health, Safety, Environment and Community (HSEC) functions are critical to ensure that St Barbara complies with all relevant regulations and operates in accordance with community expectations across each of the HSEC disciplines to maintain our licence to operate.*

We act with **honesty** and **integrity**

We treat people with **respect**

We value **working together**

We **deliver** to promise

We strive to **do better**



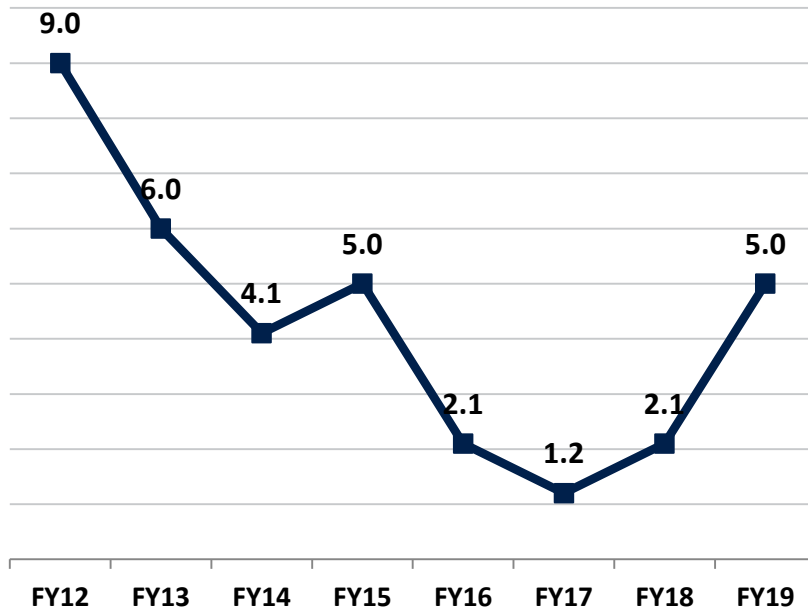
Roger Boston, Processing Manager and Paul Lingei, Superintendent Metallurgy, both At Simberi, PNG, 2018



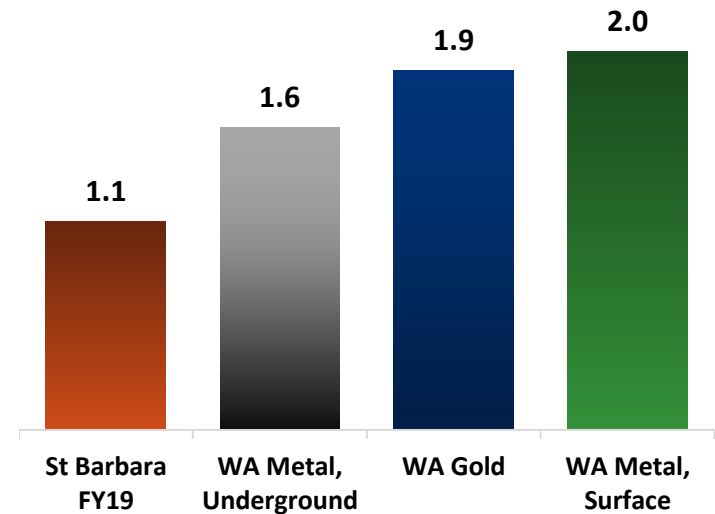




## Total Recordable Injury Frequency Rate<sup>1</sup>



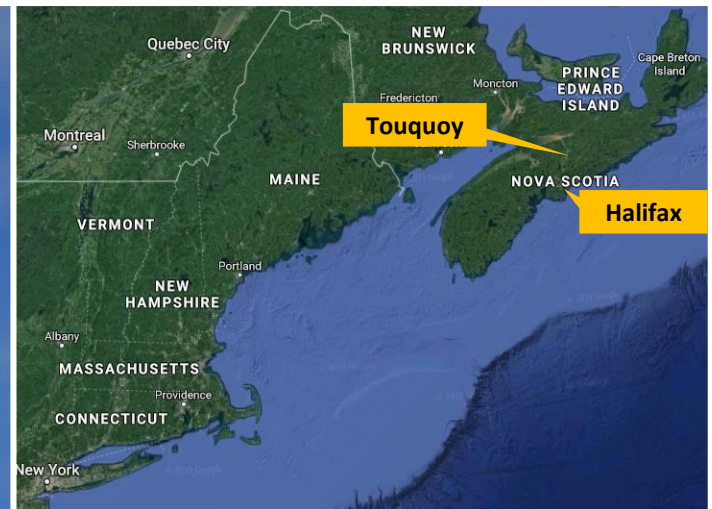
## St Barbara LTIFR<sup>2</sup> in comparison with Western Australian Mining benchmarks<sup>3</sup>



- Deterioration in safety performance is being addressed with focus on training, health and safety culture and maturity, personal accountability and safety mindset.
- Corresponding LTIFR remains well below WA industry average

1. Total Recordable Injury Frequency Rate (12 month avg.), total recordable injuries per million hours worked.  
 2. LTIFR = Lost Time Injury Frequency Rate (12 month avg.), the number of lost time injuries per million hours worked  
 3. Most recent statistics from [http://www.dmp.wa.gov.au/Documents/Safety/MSH\\_Stats\\_Reports\\_SafetyPerFWA\\_2017-18.pdf](http://www.dmp.wa.gov.au/Documents/Safety/MSH_Stats_Reports_SafetyPerFWA_2017-18.pdf)

# Atlantic Gold – Joined the St Barbara Group July 2019





## Atlantic Gold supporting the Nova Scotia Community



<https://www.youtube.com/watch?v=0pNNnMGOSK4&t=28s>

<https://mailchi.mp/50933202ba8c/community-newsletter-february-2019>



**NOVA SCOTIA**  
**MI'KMAW**  
**SUMMER GAMES**



Top left: Donation to Musquodoboit Valley Health Foundation, July 2019. Bottom left: the 2018 NS First Nation 'Summer games', was sponsored by Atlantic. Top right: Interviews with NS small businesses about Atlantic Gold. Bottom Right: Dalhousie University students Sam Rolfe, Ross Bagnell, Robert Barrett, and Kyle Lamont, are a part of the Dalhousie University Engineering Team, supported by Atlantic Gold, who attended the Canadian Mining Games in Edmonton Alberta in February 2019.





## The '5 Pillars' of St Barbara's People Strategy



## A **comprehensive** framework with **award winning** components

- Leadership training and development for all levels of management
- Annual employee engagement survey
- Comprehensive anti bullying and harassment program and training
- Free counselling service for all employees
- Mental health awareness training for all supervisors
- Incentive system for all employees





# Case Study: Lachlan Maitland Indigenous Apprentice



Lachlan (Lachie) Maitland is an Apprentice Mechanical Technician Fitter at the Gwalia mine in Leonora, Western Australia, engaged via St Barbara's Indigenous apprenticeship program.

## Lachie:

"I am Wongatha/Tjuparn from my maternal side of the family and English on my paternal side. I have grown up in Leonora and I have learnt a lot about my culture through my mum who is a strong believer in preserving and learning about Aboriginal culture and language.

I have enjoyed learning new things and gaining skills and knowledge throughout my time at St Barbara."

## Wayne Debono, Lachie's supervisor:

"Lachie came to St Barbara Limited as a shy young teen straight out of high school. Whilst it took him some time to find his feet, Lachie has transformed into a valued member of the maintenance team. He is keen to learn new things and has recently completed the TAFE component of his trade with 'Above Satisfactory' marks."

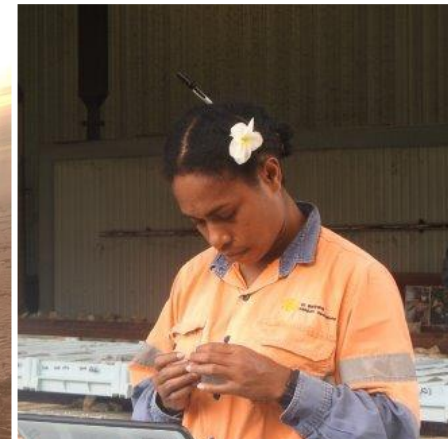


Lachie and Wayne at the in-pit ROM, Gwalia

Lachie in the Gwalia processing plant, beside carbon screen he refurbished earlier.



# Gender Diversity – A leader in Australian Mining



Top L: Shauna Finlay (Field Assistant), Pinjin WA. Photo by Daniel McDwyer. Bottom left: Meredith Tolley Alannah Pemberton, Tram Huynh, Leonora Operations WA. Photo by Paul Lucas. Centre: Nora O'Keefe (Senior Exploration Geologist), Maddie Beaton (Field Assistant), Pinjin WA. Top R: Mashiyat Wima (Exploration Geologist) Simberi PNG. Photo by Rachel Kulame. Bottom L: Maryanne Vunagoi, Simberi PNG.

- WGEA<sup>1</sup> **Employer Of Choice For Gender Equality** since 2014 and the only mining company to be currently certified
- **2018 Winner of AMMA's Australian Women in Resources Alliance Award<sup>2</sup>**
- Representation of **women on the board at 33%**
- Overall **pay equity gap reduced** from 43% in 2007 to **12% in June 2019**
- **Nil gender pay gap** in 'like-for-like' roles<sup>3</sup>
- Bob Vassie, MD & CEO:
  - Appointed in 2014 as one of the first **WGEA Pay Equity Ambassadors**
  - Member of **AusIMM Council for Diversity and Inclusion**





## Domestic and Family Violence Policy Statement (excerpt)

**Domestic and family violence is unacceptable at home and in the workplace.**

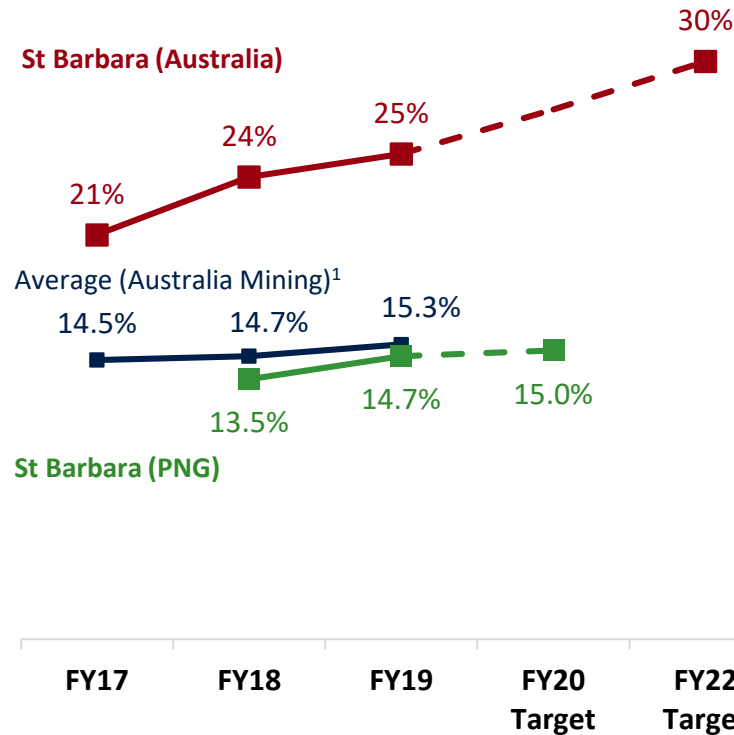
**In promoting a culture that holds the health and safety of the workforce as an absolute priority, the Company provides support to employees that are impacted by domestic and family violence.**

‘The Company’s provision of support will be provided on a case-by-case basis to employees impacted by domestic and family violence. Support may include, but is not limited to:

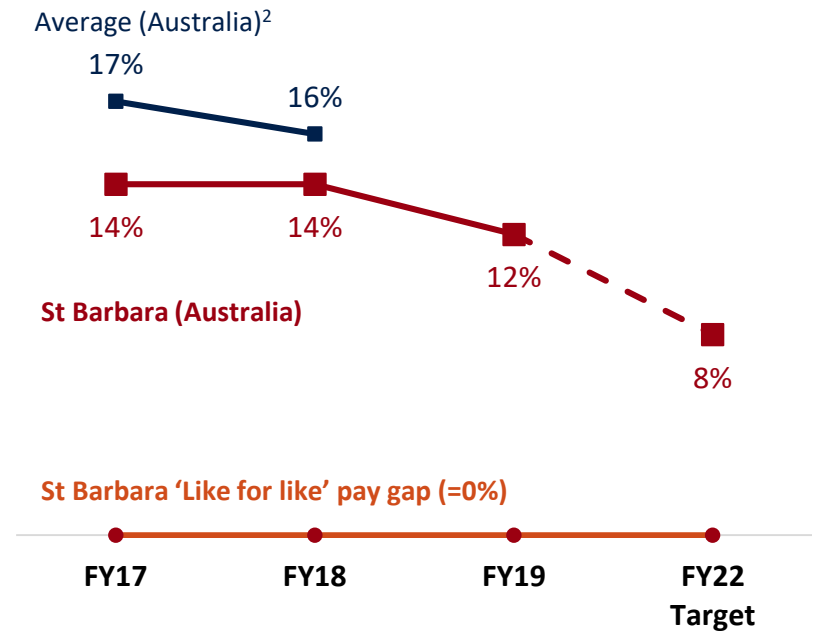
1. Leave provisions (paid and unpaid)
2. Flexible working arrangements
3. Referral services
4. Short-term financial assistance
5. Personal safety arrangements
6. Reasonable workplace adjustments’

*Extract from the Company ‘Domestic and Family Violence Guideline – Australian Operations’*

## Women as % of workforce (Australia)



## Overall Gender Pay Gap (Australia)



<sup>2</sup>'Overall Gender Pay Gap' calculated according to WGEA guidelines ([www.wgea.gov.au](http://www.wgea.gov.au)). 'Like for like' gender pay gap measures the difference in base salary over the year between male and female employees in comparable roles.

1. Average for Australian Mining, WGEA Full time 2018

[https://data.wgea.gov.au/industries/87#gender\\_comp\\_content](https://data.wgea.gov.au/industries/87#gender_comp_content) 2. WGEA's gender pay gap statistics August 2018 for Australia (all industries) [www.wgea.gov.au/sites/default/files/gender-pay-gap-statistic.pdf](http://www.wgea.gov.au/sites/default/files/gender-pay-gap-statistic.pdf)

# Case Study: Amy Lowe

## Inspiring Women in Leadership



“  
IT'S A VERY  
DYNAMIC  
INDUSTRY;  
THERE ARE  
A LOT OF  
CHALLENGES.  
IF YOU APPLY  
YOURSELF,  
YOU CAN  
REALLY GO FAR.  
EVERY DAY IS  
DIFFERENT.”  
AMY LOWE,  
ST BARBARA

Amy Lowe was a former Senior Exploration Geologist at St Barbara, based in Leonora exploring the Company's tenure surrounding the Gwalia operation.

Amy actively promotes the resources industry to younger generations, and particularly girls, through her involvement in a range of events and publications:

- Featured in the Minerals Council of Australia (MCA) 'More to Mining Careers Guide' in 2019, which promotes the resources industry to senior high school and undergraduate university students.
- Volunteered and presented at the recent Get Into Resources event, a careers event designed to showcase the resources industry to secondary school students.
- Amy presented on pathways into STEM subjects for women at the Women in Mining and Resources Leadership Summit in August 2019, hosted by Women Leaders Institute.



# Case Study: Meryl Jones

## 100 Global Inspirational Women in Mining



In 2018, Meryl Jones, Principal Business Development at St Barbara, was named as one of the 100 Global Inspirational Women in Mining.

Speaking of her career, Meryl said: *“I have loved every minute of my 30 years in the industry, and I am still completely hooked. I cannot see myself doing anything else, ever.”*

Meryl is a keen advocate for diversity in mining and encouraging students to consider a career in the industry:

- Vice Chair at Earth Science Western Australia, an organisation which supports the teaching of Earth and Environmental Science in WA
- Member of the Governing Council of North Metropolitan TAFE.
- Founder and patron of Get Into Resources Inc, a volunteer-led organisation that promotes the industry to secondary school students.



Recognised for her extraordinary career, achievements and work towards inspiring a future generation of resource professionals, Meryl was profiled in AMMA’s Resource People magazine in May 2019.





## Case Study: Female heavy vehicle operators at Simberi

Salome, Betty, Joyce, Esther, Rose and Fidelia all work on the same crew driving heavy equipment at Simberi. They consistently record the best safety and performance results across the mining operations team.





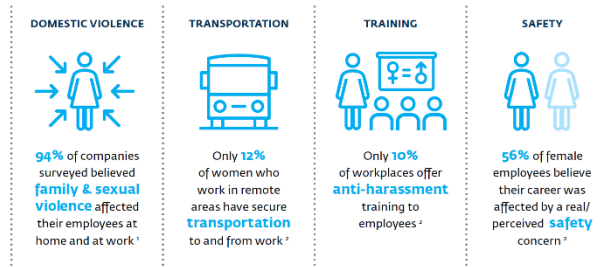


THERE HAVE BEEN POSITIVE IMPROVEMENT IN THE AUDIT RESULTS:



In August 2018, St Barbara presented on its gender safety program at the [Minerals and Energy for Development Alliance](#) Women in Resources conference in Lae, PNG; and in November 2018, at the MCA Gender Diversity Working Group [‘White Ribbon’](#) Event in Brisbane.

#### KEY FACTS AND CHALLENGES – PAPUA NEW GUINEA



#### AN INNOVATION OF THE PAPUA NEW GUINEA AND PACIFIC PARTNERSHIPS

Through the Papua New Guinea and the Pacific Partnerships, Australia, New Zealand and IFC are working together to stimulate private sector investment, promote sustainable economic growth and reduce poverty in the Pacific.



## DIVERSITY IN THE MINING WORKFORCE

### St Barbara's leadership in addressing gender equality

St Barbara, a mid-tier gold miner, demonstrates strong leadership in addressing SDG5 – Gender Equality – Achieve gender quality and empowers all women and girls. While this case study focuses on SDG5, St Barbara's contribution also supports SDG8 – Decent Work and Economic Growth, SDG4 – Quality Education and SDG3 – Good Health and Well-being.

St Barbara demonstrates business leadership and innovation to achieve workplace equality and inclusion, applying a sophisticated approach that integrates gender diversity with core business strategy. St Barbara has improved employment, retention and business outcomes: 100 per cent of its female employees returning from paid parental leave between 2009 and 2018, a nil like-for-like gender pay gap and women representing 25 per cent of its leadership team.



## SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



St Barbara participated in a Minerals Council of Australia initiative showcasing Australian mining company's work in the area of the United Nations Sustainability Development Goals.

Our paper details our industry leading initiatives to improve gender diversity in the St Barbara workforce.

<https://minerals.org.au/sustainable-development-goals>

<http://minerals.org.au/sites/default/files/St%20Barbara%20Case%20Study%20WEB.pdf>

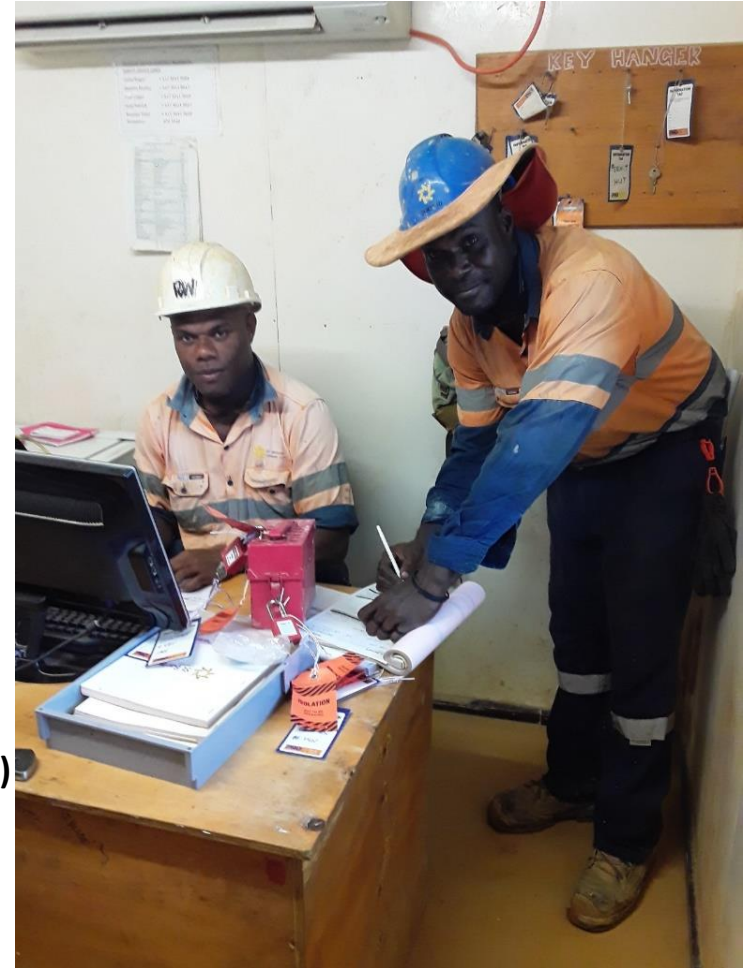
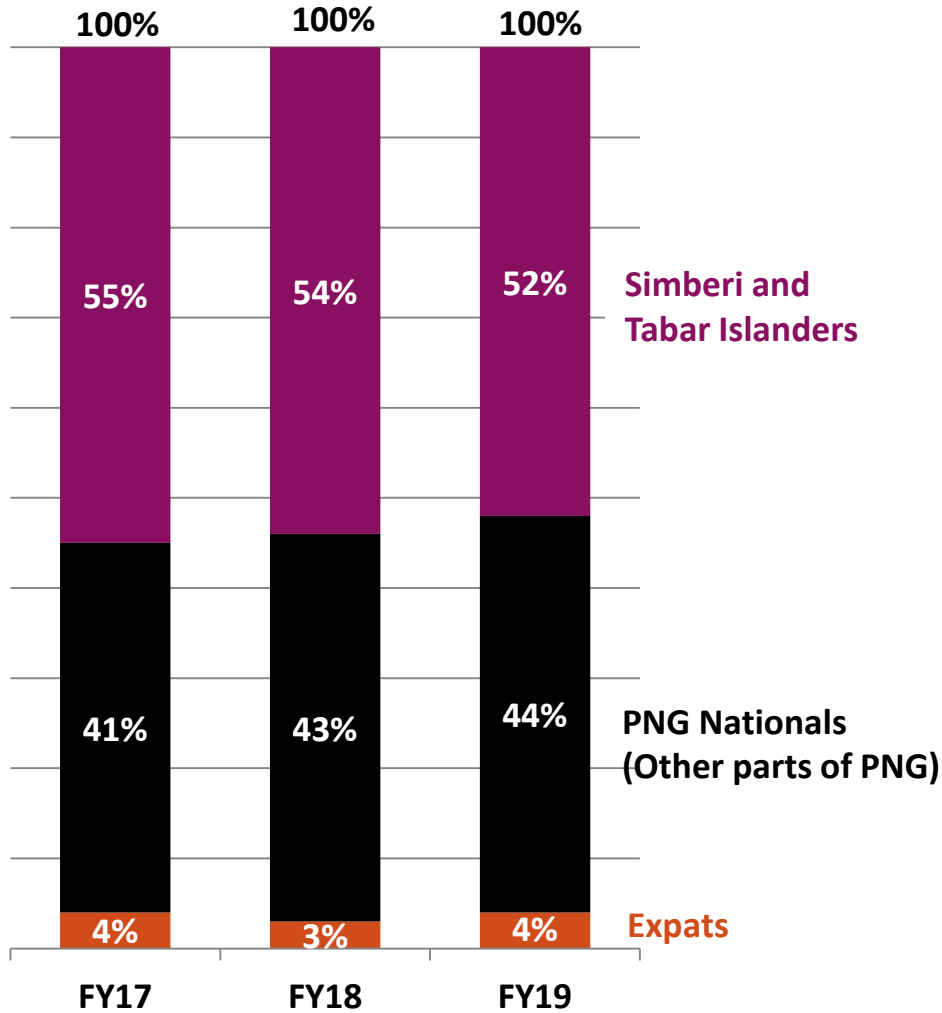


# Simberi – Local Employment





## Simberi employees diversity



Russiat Wartabar and Nathan Bannah completing permit to work documentation at process plant office, Simberi Operations, May 2019. Photo provided by Russiat Wartabar.









## Supervisor

4 x 1 day workshops

Coaching sessions,  
'Supervisor toolkit'

## Superintendent

360 degree leadership  
survey, 4 x 1 day  
workshops

'Leadership Blueprint'

## Manager

360 degree leadership  
survey, 2 day  
workshops

Coaching for high  
performance, leading  
change, managing  
unconscious bias

## Senior Leaders

Leadership circle,  
executive coaching

Navigating  
organisational  
relationships,  
stakeholder  
management



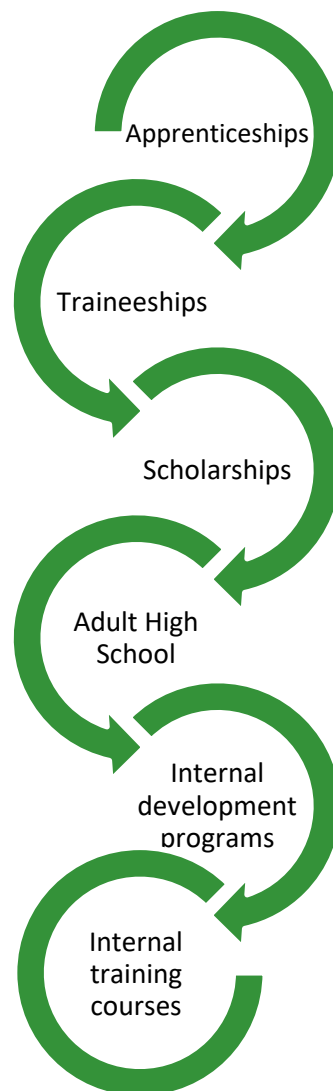
## Commitment to upskilling our workforce

- 1.6 million kina spent on training in 2019
- 13 enrolled in nationally recognised **apprenticeships**. Over and above these, **4** completed their apprenticeships and were appointed as tradespeople
- 2 students were offered **work experience** opportunities
- 3 **scholarships** to university degree level students
- 8 **graduated** from Office Administration trainee program, 5 **employed**

## Flexible Open & Distance Education

(e-learning)

- Free to employees & locals
- 28 completed 1 or more subjects at year 10-12
- 10 completed grades 8-9



Environmental Survey at Monun Creek, Simberi Island, 2018.



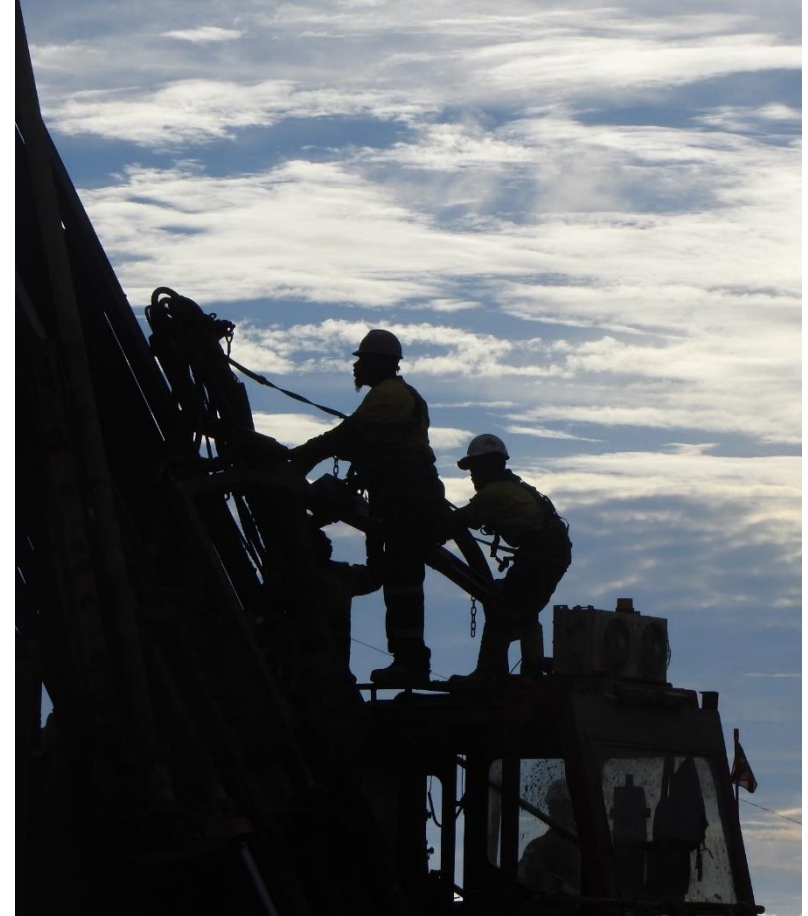
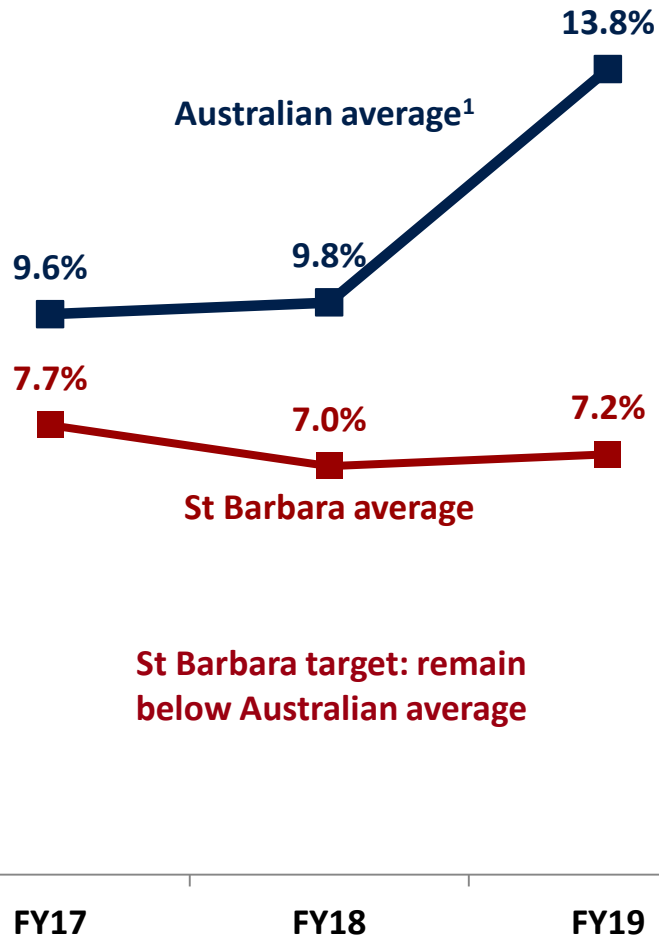
St Barbara proudly sponsors Get Into Resources, a unique careers event designed to showcase the resources industry to secondary school students.

From 19 - 21 June 2019, industry professionals, including St Barbara employees, volunteered their time to present hands-on, interactive activities which highlighted some of the different career opportunities available in the resources sector.

Get Into Resources continues to inspire hundreds of secondary school students each year to make informed decisions about a career in the resources industry.

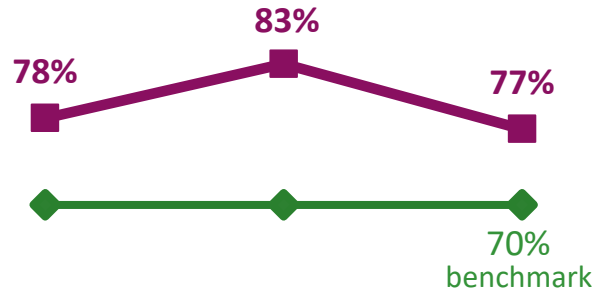


## Annual employee turnover

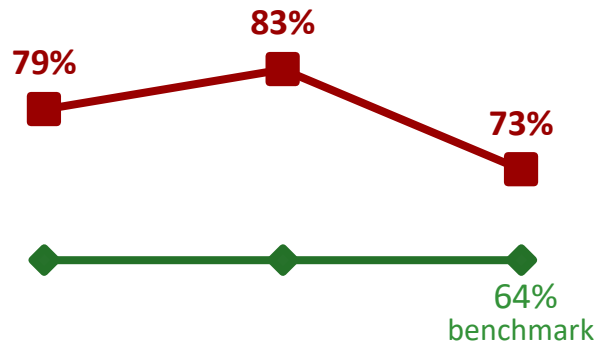


Aircore drillers, Simberi PNG, February 2019. Photo by: Rachel Kulame.

## % of employees who responded



## % favourable responses



**FY17**

**FY18**

**FY19**



Photo: Environment Divers at Simberi checking sediment traps, by Timothy Levika, February 2019





*‘Thinking about your experience working with St Barbara, which of the following words or phrases would you use to describe what it’s like to work at your site /office?’*

Employees were asked to select up to four words. The image shows the words selected with the larger words more frequently selected to describe the culture.







- **New Ireland Province Malaria Alliance.** Works to eliminate malaria in the New Ireland Province of PNG.
- **Australian Doctors International.** Deploys volunteer Australian doctors to PNG to treat and train in rural and remote areas.
- **Bekou Elementary School.** ‘Tutu’ desks and mosquito nets issued to all young students on the island.
- **Tabar Islands Scholarship Program.** Awarding high school and tertiary scholarships to eligible Tabar Islands community members.



Top L: Australian Doctors International volunteer, Simberi Island. Bottom L: Carol Kiaput from Banesa presents Thomas Adamson, Senior Exploration Geologist, with a cultural token of appreciation for the company's community assistance with ground levelling works. Bottom R: Bekou Elementary school students presented with Tutu desks and mosquito nets.



## The Fred Hollows Foundation



In October 2018, St Barbara's Simberi Operations sponsored the Fred Hollows Foundation to bring their eye clinic to site. This is the first time the Fred Hollows Foundation has been sponsored by a company in PNG. It is also the first time in Simberi that this type of surgery has ever been performed.

The Fred Hollows Foundation aims to end avoidable blindness through medication, surgery, education, prevention and training. Restoring sight is a part of helping people out of poverty.

Over the course of a week, the Fred Hollows Foundation team conducted more than 700 eye examinations.

Over 400 pairs of glasses, funded by St Barbara, were distributed free of charge, and 35 cataract and other surgical procedures were completed in St Barbara's Simberi medical clinic.



## Kina 17 million<sup>1</sup> spent with Landowner businesses in FY19

- Landowner business / mine services:
  - Bakery, market garden, wet mess management
  - Boats (exploration & logistics)
  - Earthmoving & trucking
  - Contracts range between A\$1,000 to A\$200,000 per month
  
- Community support:
  - Relocation of houses
  - Roads & water maintenance
  - Implementing plantation and mariculture partnership development initiatives

## Spending in the Community

Kina Ms



**Expenditure via Landowner companies<sup>1</sup>**



**Community Support<sup>1</sup>**

FY17

FY18

FY19

## Road and water infrastructure, education, medical services

- Maintaining roads, bridges, water supply, school and clinics, including new community clinic staff housing in 2018
- Logistical support to school and police including housing, travel and vehicles
- Simberi clinic conducts approx. 900 consultations per month, 40-50 community member medivacs p.a.
- Various visits from Australian Doctors International (ADI) in 2016-19 and Fred Hollows in 2018
- Ongoing efforts to eradicate malaria
- **Planned for 2020** – completion of clinic expansion to minor hospital size.





## Simberi Ring Road Maintenance

- Resurfacing - utilizing local landowner contractors
- Re-sheeting of washouts / potholes
- Culvert and bridge maintenance

## School Support

- Maintenance of classrooms, provision of books and stationery on ad hoc basis
- Joint venture with landowners to construct two teachers' houses

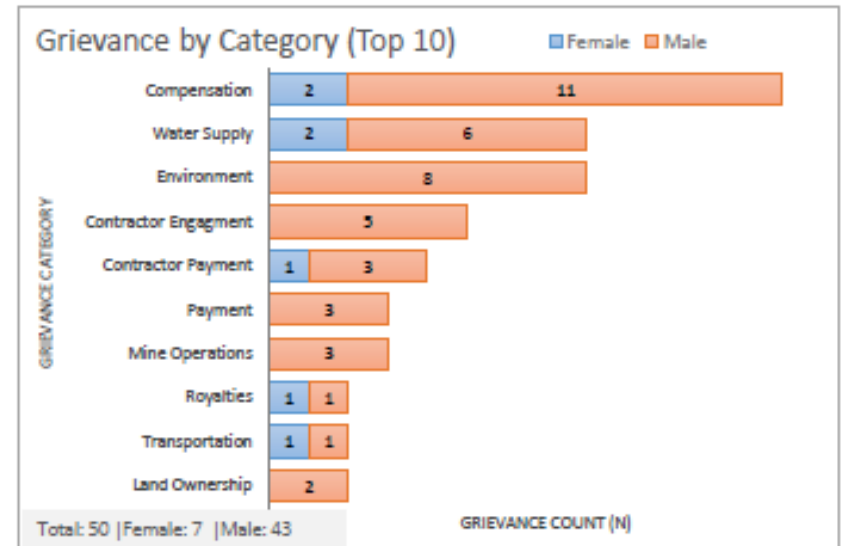
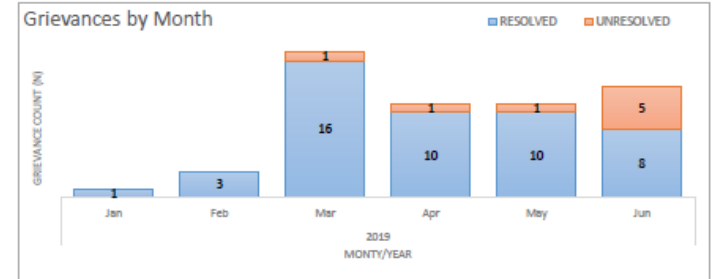
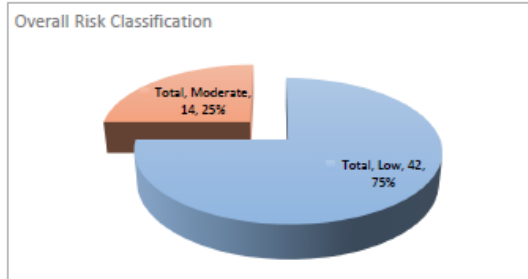
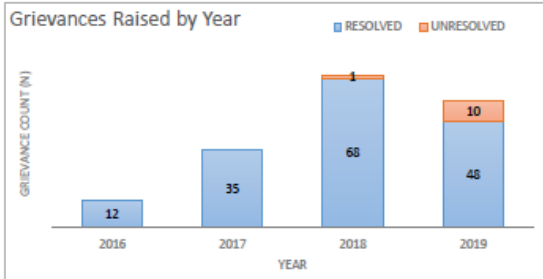
## Community Policing Support

- Provision of vehicle for police operations
- Accommodation and meals onsite
- Travel to and from Simberi Island



## SIMBERI COMMUNITY GRIEVANCE REPORT DASHBOARD

PERIOD: JAN 2019 TO JUN 2019





## Sustainable business development

- Landowners business umbrella company 'SMS' (Simberi Mine Services) established as vehicle for sustainable business opportunities post mining e.g. bakery, rehabilitation, agriculture, tourism, fishing
- Training in business acumen & accounting
- In 2018 fisheries business advisor engaged
- In 2019 commercial cocoa advisor engaged

## Business development initiatives

- |                            |                   |
|----------------------------|-------------------|
| • Market Garden            | Complete FY16     |
| • Chicken Farm             | Complete FY16     |
| • Mariculture              | Ongoing           |
| • Cocoa plantations        | Rapid expansion   |
| • Tomato and Onion exports | Commenced in 2019 |



## Co-operative cocoa plantation project

Company provided:

- Initial 5,000 seedlings, nursery for ongoing seedling production (now self-sustaining)
- Initial plantation within the mining lease, labour provided by SMS with company assistance, demonstrates successful mixed cropping based on traditional organic farming method – subsistence tree crops to provide shade for cocoa plants
- Drainage ditches to prevent water-logging, key problem to overcome in high rainfall area

2019:

- Further plantation land on Simberi Island purchased and cleared
- Strong demand from landowners for seedlings assistance with export via SMS co-operative
- Work on commercialisation with NGO
- New onion and tomato cash cropping.



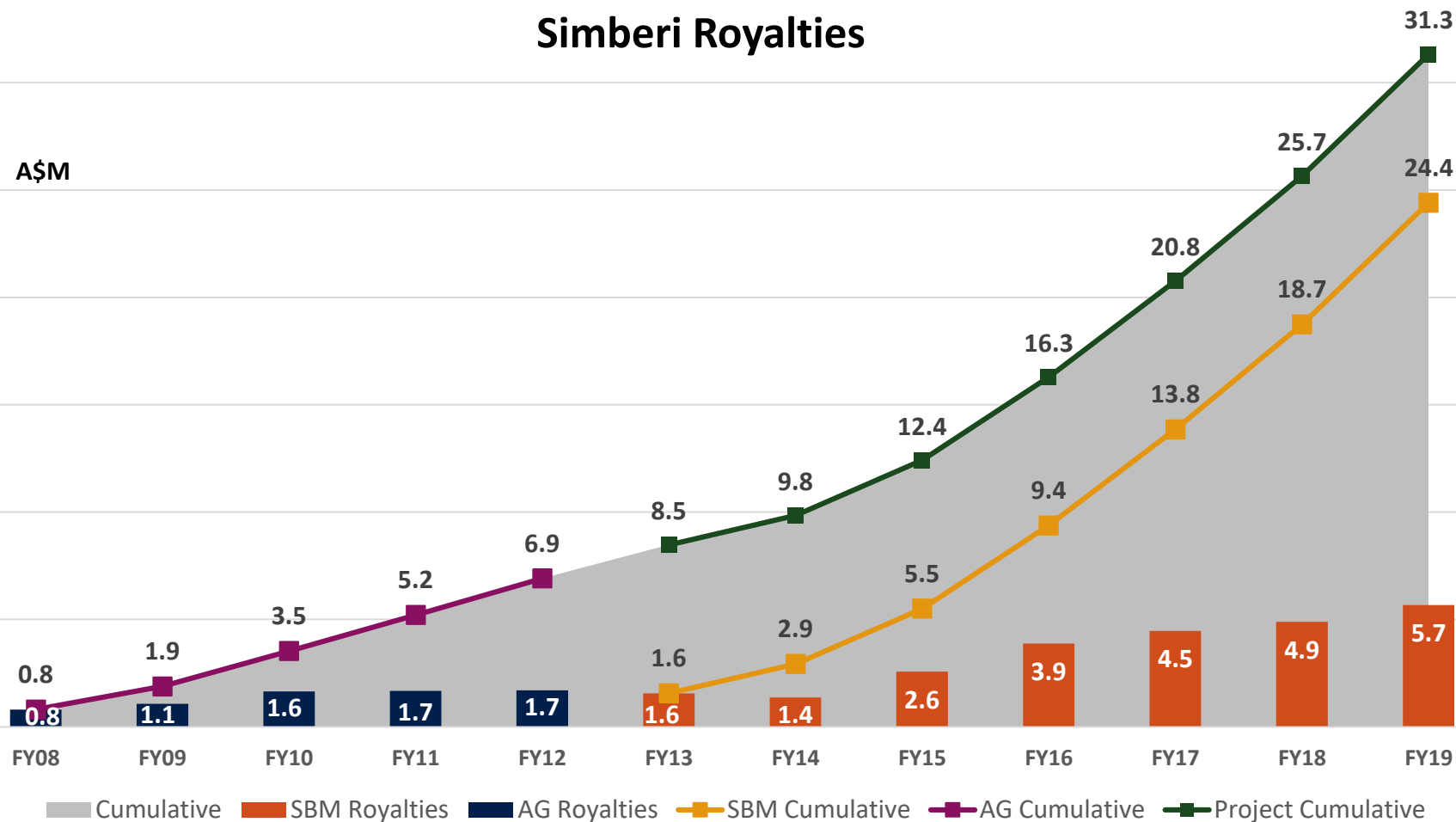
Top: First crop of cocoa pods.

Bottom: Cocoa plant nursery, new crop of seedlings. Both images July 2019.



## Simberi Royalties

A\$M



## Sponsorships & charities

- Golden Gift (athletic carnival)
- Kambalda/Leonora Football Club
- Goldfields Girl (personal development program for young indigenous women)
- St Barbara Cup (horse race)
- Shooting Stars (netball program for Indigenous girls)
- Clontarf (football program for Indigenous boys)
- Teach Learn Grow (remote 'bridge the gap' learning charity)
- Exercise, school, addiction programs





# Indigenous Hip Hop Project at Leonora District High School



In March 2019, St Barbara joined Shire of Leonora, Saracen Mineral Holdings, Goldfields Agnew Gold Mine and RED5 in sponsoring **Indigenous Hip Hop Projects'** (IHHP) visit to **Leonora District High School**.

The IHHP team worked with the whole school and community members to write a song and create a music video.

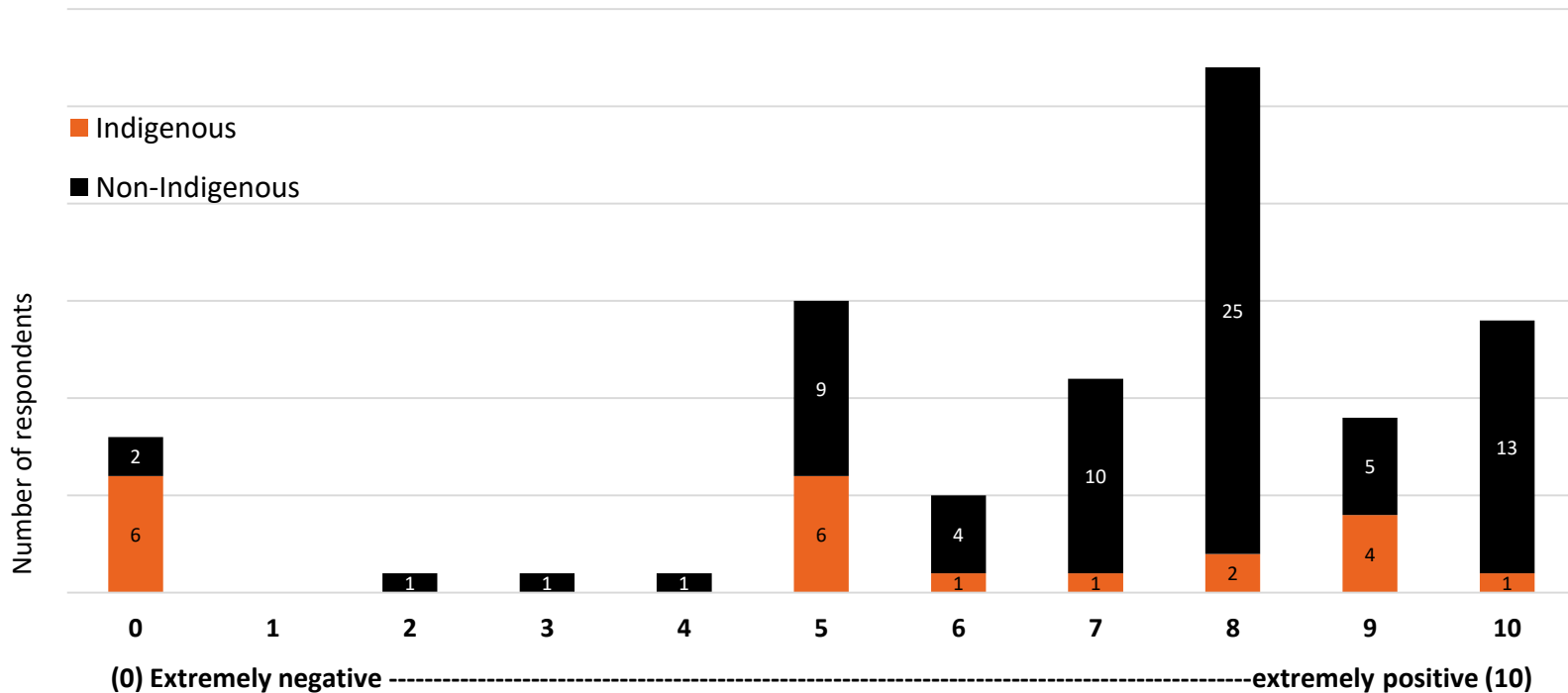
IHHP is a unique team of talented artists in all elements of hip hop, media, entertainment and performing arts, who have been working extensively in Indigenous communities around Australia since 2005. They specialise in week-long intensive projects in Dance, Music, Film, Art and Culture.



The final music video is available to view on YouTube: <http://bit.ly/2H1x6vQ>



## How would you rate your attitude towards St Barbara? (scale of 0 to 10)



Two respondents rated their attitude as '0', due to perceived impact on their business or their perception of the Company's decision to not enforce a local residential workforce, with an associated comment:

*"They are highly supportive of the community, but we need more families living here."*





St Barbara, along with The Gold Fields Australia Foundation, Saracen Limited and Rock on Ground, has partnered with **Shooting Stars**, an organisation that aims to use netball as the vehicle to encourage greater engagement and attendance at school of young Aboriginal girls living in WA's remote communities and regional towns.

St Barbara has committed to contributing \$300,000 to the Shooting Stars Leonora program over three years.

Leonora is the eighth Shooting Stars program, the first to be based in the Goldfields and targets up to 35 Aboriginal and Torres Strait Islander girls from Years 4-10 at Leonora District High School.



Top L: Shooting Stars participant wears St Barbara cap and Shooting Stars polo shirt. Bottom L: Olivia Lewis visits Shooting Stars Leonora program. Bottom R: (L-R): Fran Haintz (Executive Officer Glass Jar Australia) Kylie Okely (Manager Land & Community, St Barbara) Corteaha Thomas (Shooting Stars Leonora Leadership Camp Participant) Hon Julie Bishop (Inaugural Patron of Shooting Stars), Shelley Coleman (Shooting Stars Leonora Program Coordinator). Source: Shooting Stars.



Edwina is a Year 6 student at Leonora District High School. Edwina joined the Leonora Shooting Stars program in Term 3, 2018 not long after it began with significant St Barbara support.

Edwina had not attended school during the 2017 and 2018 school years. She was initially shy and unsure about the Shooting Stars program, but when she chose to take a leap of faith, her progress was rapid. She began to attend more regularly and participated well in weekly netball sessions both before and after school.

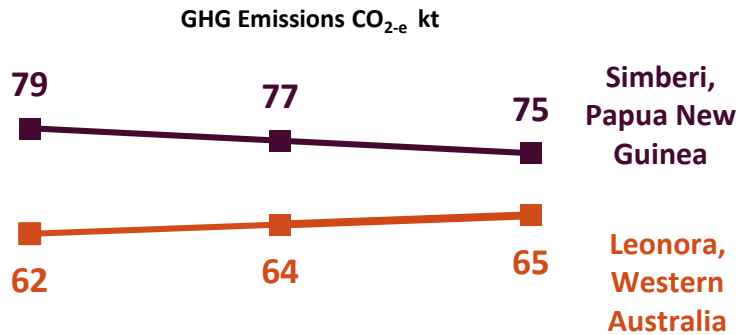
Her ability to play competitively against both girls her age, older girls and adults resulted in a new found enjoyment and achievement that she hadn't experienced before. With this new found confidence and the fun she experienced on the court, her attendance and attitude off the court improved as well. Edwina was awarded the first 'Attendance Improvement Award' for the Leonora Shooting Stars site.





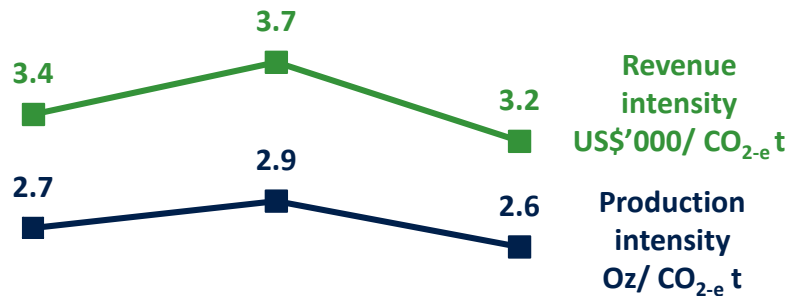


## Greenhouse Gas emissions<sup>1</sup>



## Combined Emissions intensity<sup>2</sup>

US\$'000 revenue and Oz production per CO<sub>2-e</sub> t



FY17

FY18

FY19

Intensity measures the amount of revenue and gold ounces per ton of CO<sub>2</sub> t., allowing comparison to other gold miners and other industries.



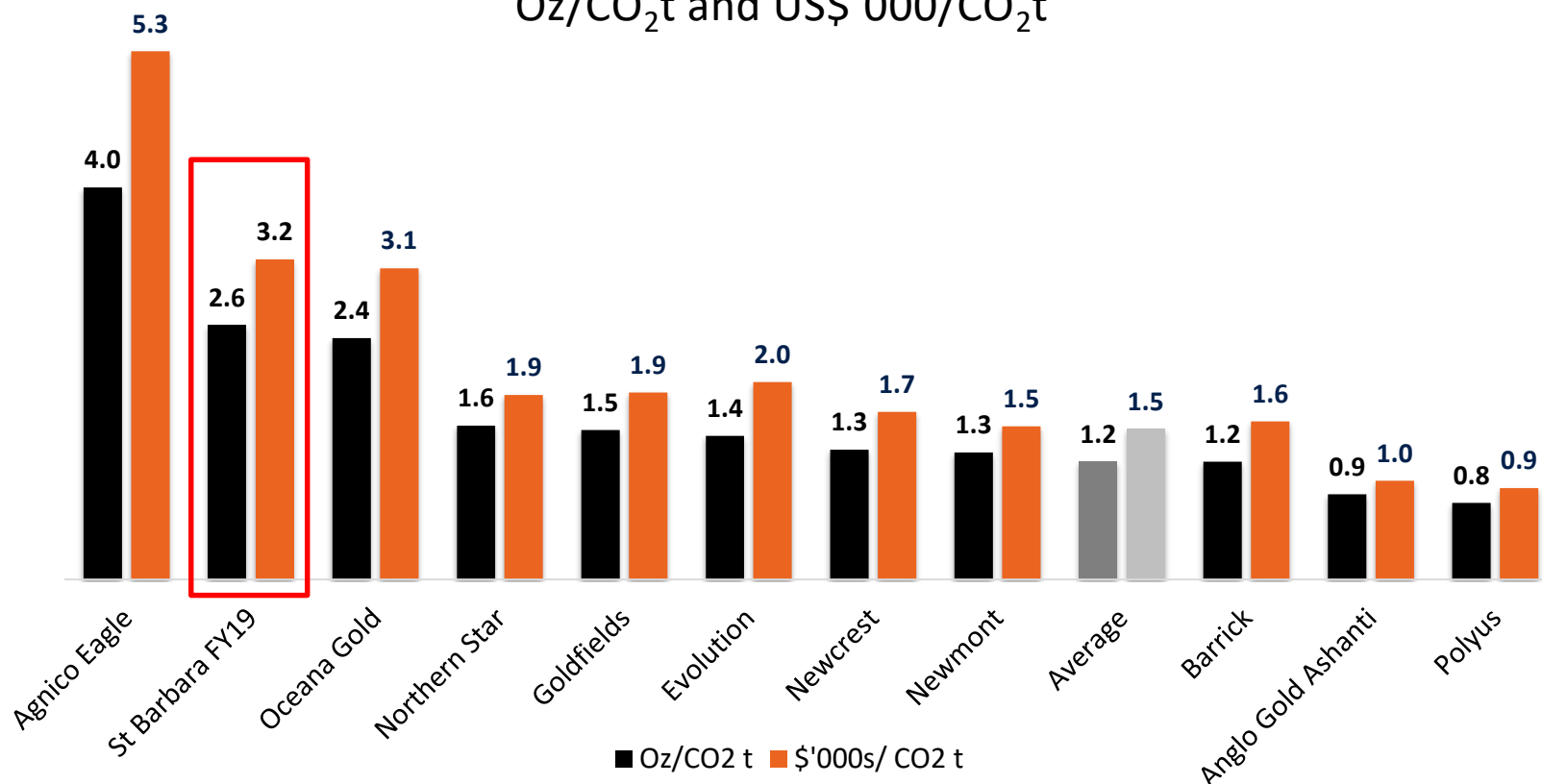
### Simberi 'Ropecon'

- Gravity powered, moves ore 2.4 km from mining pits to processing plant
- 2.5 million tons of ore moved p.a. FY17 to FY19
- Saves ~7,000 tons of CO<sub>2</sub> per year compared to conventional trucking



## Global Gold – GHG emission intensity

Oz/CO<sub>2</sub>t and US\$'000/CO<sub>2</sub>t



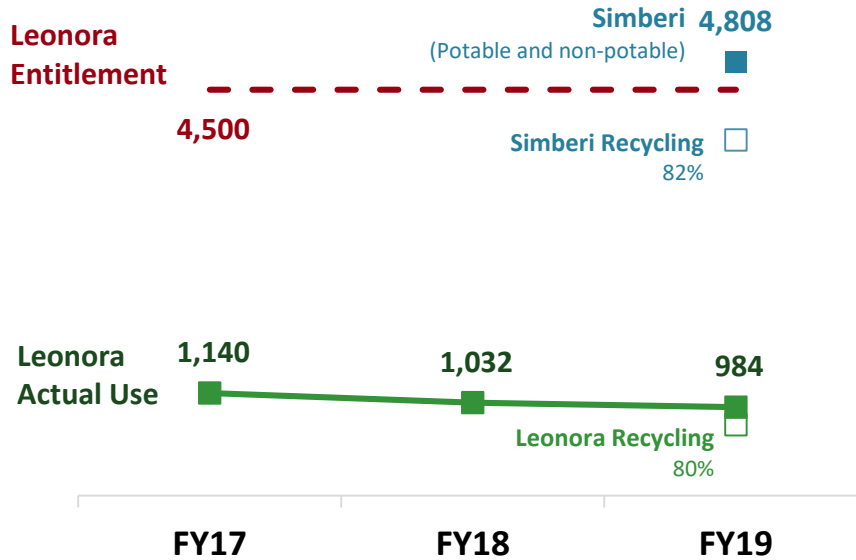
Results most recent publicly available, scope 1 and 2 only, calendar 2018 (Major golds) or FY18 (ASX golds) except St Barbara which is FY19.



- First adsorption chilling plant (using waste heat to cool underground mine) installed in 2015, saves 5,000 CO<sub>2</sub> t p.a.
- Paste Aggregate Fill (PAF) due for completion in 2019, underground crushing of waste to fill mine voids will significantly reduce trucking of waste to surface



## Water use (MI)



## Gwalia mine, Leonora, WA

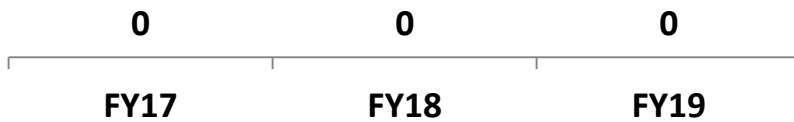
- Water usage is 97% non-potable, unsuitable for domestic or agricultural use
- Net producer of non-potable saline water

## Recycling – Simberi PNG and Gwalia

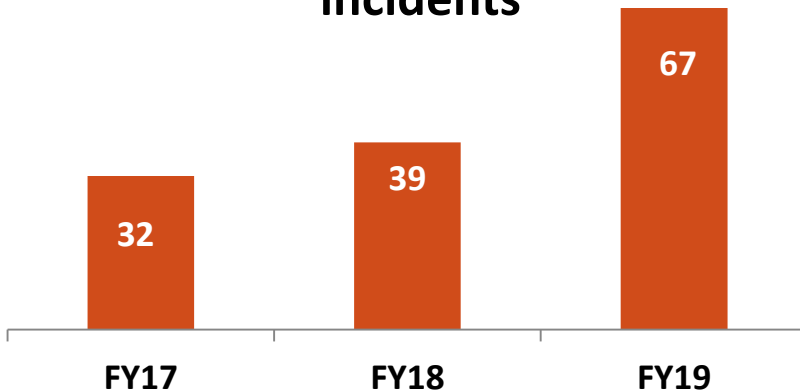
- Both mines recycle 80% - 82% of process water



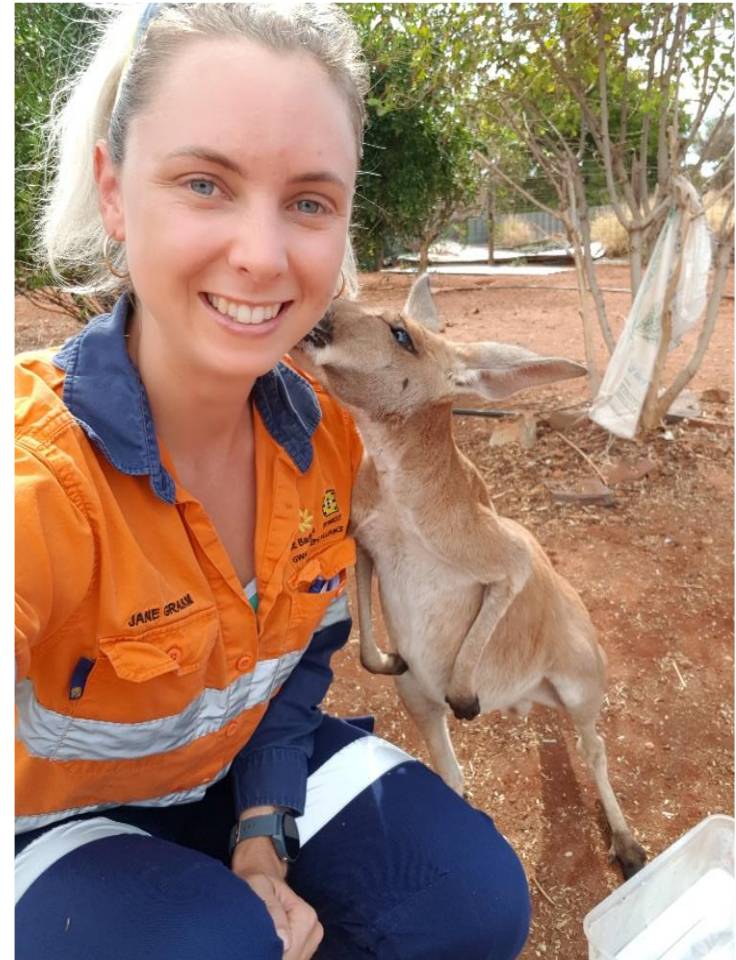
### Significant environmental incidents<sup>1</sup>



### Minor & Moderate Environmental incidents<sup>2</sup>



Increase in minor/moderate incidents due to campaign at Simberi targeting run-off and drainage management and scrap metal clean-up.



Jane Graham, Superintendent Health and Safety, with baby red kangaroo, Gwalia WA, January 2019. Photo by Jane Graham.

1. Significant = 'Major' and 'Critical' incidents, defined by use of a risk matrix. See page 30 of Sustainability Report.  
 2. 'Minor' and 'Moderate' incidents - defined by use of a risk matrix. See page 30 of Sustainability Report.



## Upstream raise construction

- Type of TSF: Paddock

## Metrics:

- First approved: 1992
- Elevation: ~376m
- Current wall height: 30 m
- Projected final wall height: 32 m
- Tailings deposition rate: 750-850 ktpa
- Deposited density: 1.4-1.5 t/m<sup>3</sup>
- Total capacity: 30 Mt
- Perimeter: 3,000 m
- Impoundment area: ~70 ha
- Current impoundment volume: ~17.1 x 10<sup>6</sup> m<sup>3</sup>
- Current mass of solids stored: ~25.6 x 10<sup>6</sup> t
- Final raise expected by 2023; new TSF will be ready for utilisation at that point.
- Tailings are mined for concrete aggregate material for the paste fill plant.
- During 2018/19 a review of emergency plan and dam rating was completed based on ANCOLD<sup>1</sup> and regulatory standards.
- In 2019 stability drill testing was completed and an additional eight piezometers were installed to provide increased certainty of TSF stability.



- **Engineer of Record & Independent Tailings Engineer**
  - Annual safety inspections
- **Insurance Assessment**
  - Annual visit
- **WA Government, Department of Water and Environmental Regulation**
  - Periodic inspections
- **WA Government, Department of Mines, Industry Regulation and Safety**
  - Guide to Departmental requirements for the management and closure of tailings storage facilities (2015)
  - Tailings Dam Audit Guide (2013)
  - Safe Design and Operating Standards for Tailings Storage (1990)
- **A regulatory mine closure plan is in place which includes rehabilitation of the TSF.**







## Income tax, other taxes, royalties and duties<sup>1</sup> paid

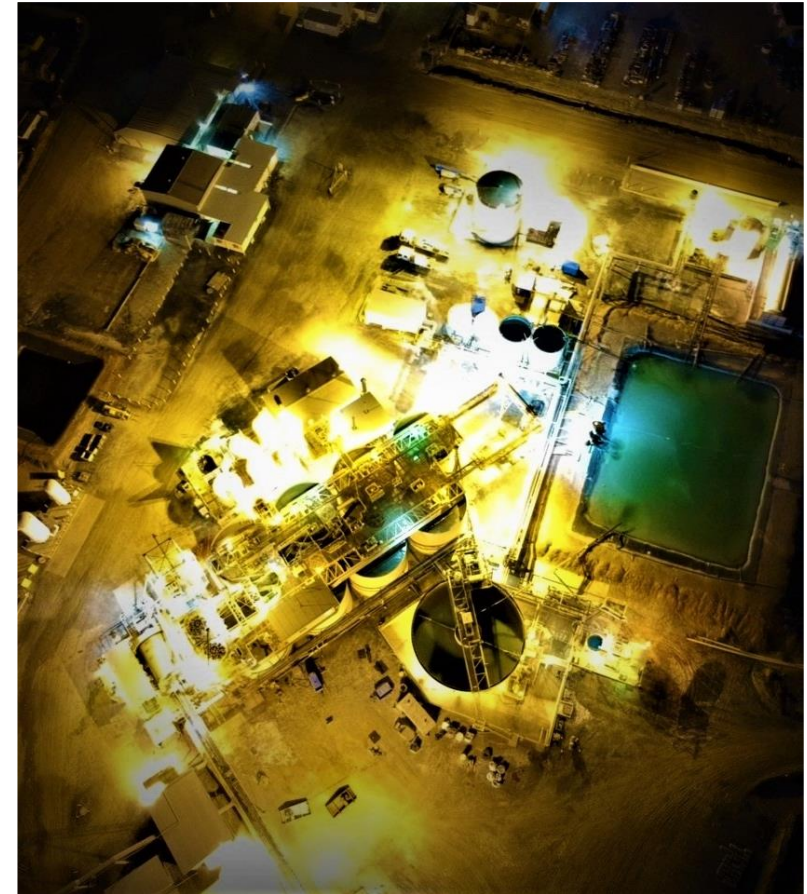
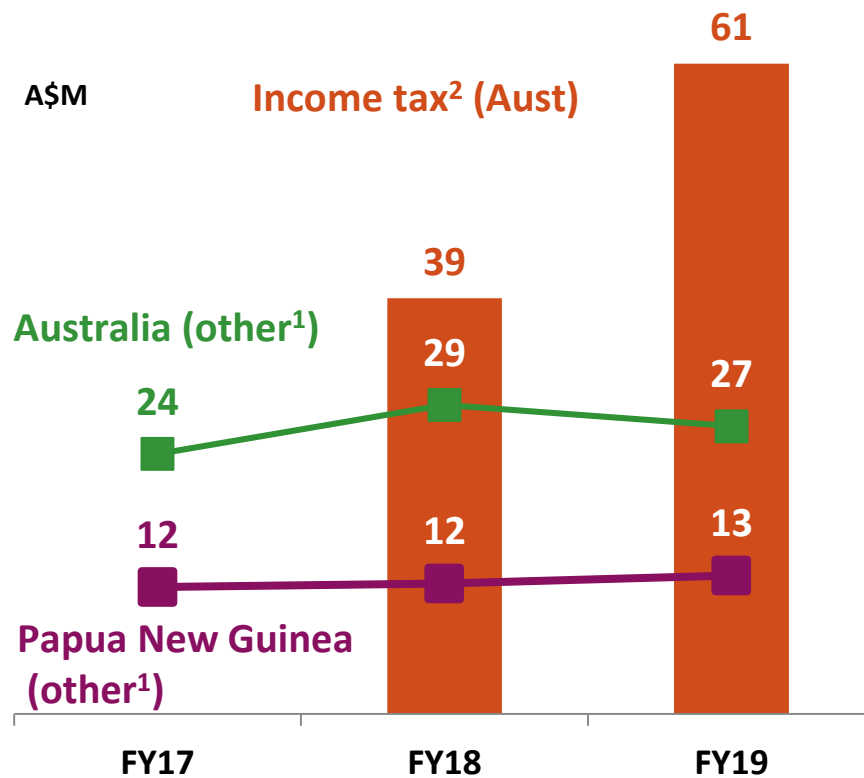


Image: Aerial view of the processing plant, Leonora Operations. Photo by Alex Manco.

1. Other taxes includes salary taxes paid by Group on behalf of employees. Excludes corporate royalties
2. Income tax paid. Commenced paying income tax in Australia in 2018. PNG in net tax loss position, no income tax paid FY17-FY19.



St Barbara's Code of Conduct: the framework of policies that puts our values into practice

## Code of Conduct

### Our People

- Diversity & Inclusion Policy
- Equal Employment Opportunity Policy
- Health & Safety Policy

### Community & Environment

- Community Relations Policy
- Donations, Sponsorships and Community Programs Policy
- Environmental Policy

### Business Integrity

- Anti-Bribery and Anti-Corruption Policy (incl. Gifts, Entertainment and Hospitality)
- Code of Conduct
- Conflict of Interest and Related Parties Policy
- Securities Dealing Policy
- Whistleblower Policy

### Safeguarding St Barbara

- Continuous Disclosure and External Communication Policy
- Privacy Policy
- Risk Management Policy
- Social Media Policy

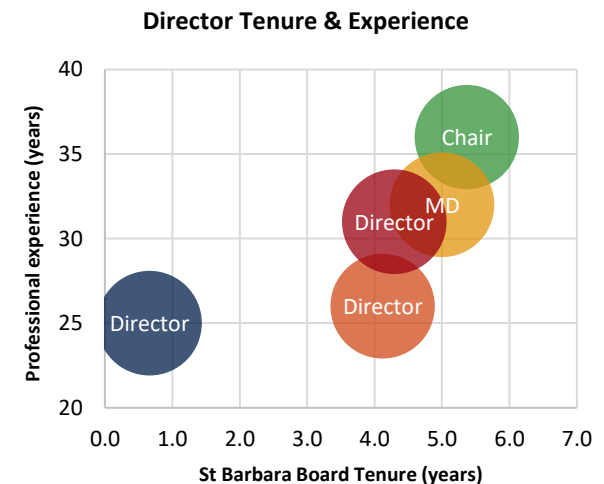
## Values

## Corporate Governance Statement highlights

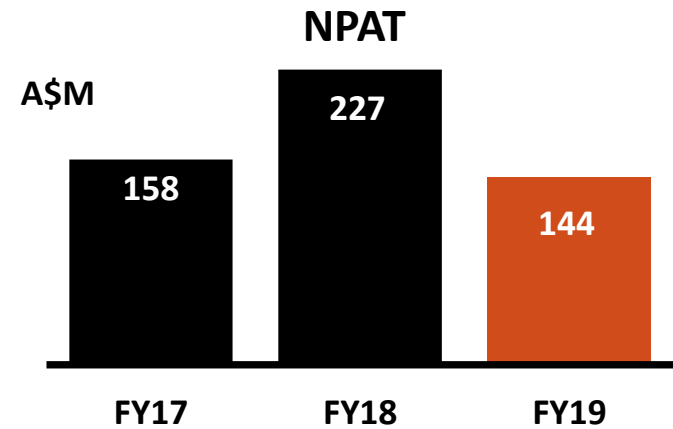
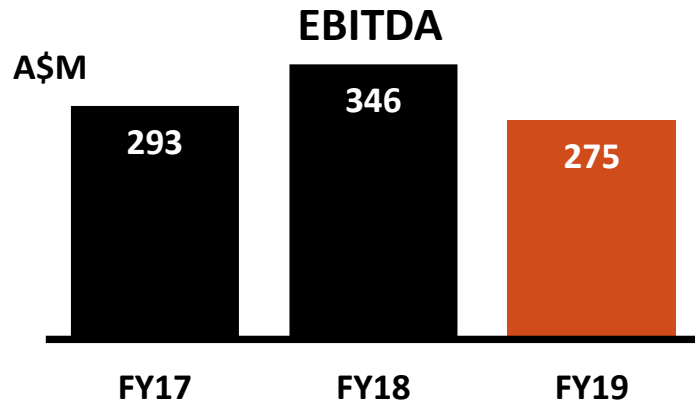
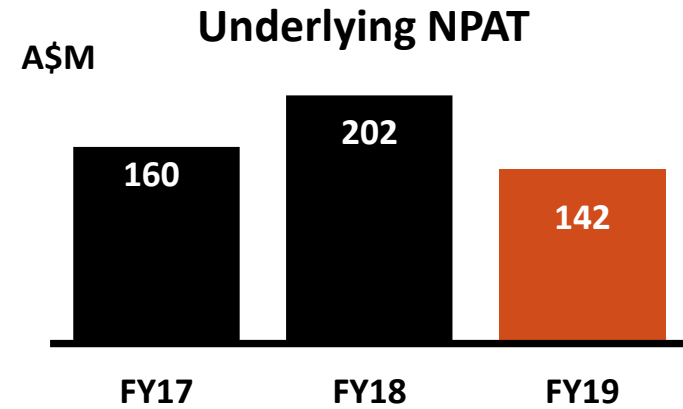
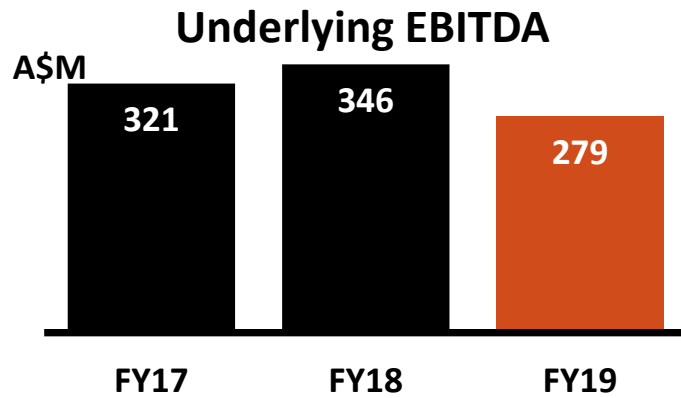
- Corporate Governance Statement published annually at [stbarbara.com.au/about-us/governance](http://stbarbara.com.au/about-us/governance)
- 100% compliance with ASX CGC Principles & Recommendations<sup>1</sup>

### Key features:

- Board comprises a majority of non-executive directors and a non-executive chairman
- Appropriately structured Board committees:
  - Audit and Risk
  - Health, Safety, Environment and Community
  - Remuneration and Nomination
- Board skills and experience matrices
- Comprehensive remuneration disclosure
- Annual Board performance review

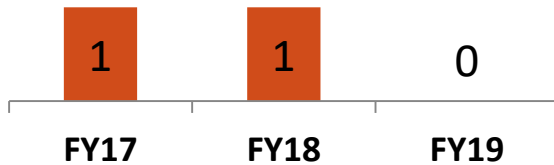






St Barbara has developed a comprehensive framework of **Anti-Bribery and Anti-Corruption** measures to prevent and detect bribery and corruption, comprising an integrated set of policies, training, audits, procedures and registers.

## Whistleblower complaints<sup>1</sup>



### Online registers

- Gifts, Entertainment and Hospitality
- Conflict of Interest and Related Party Transactions
- Donations, Sponsorships and Community Programs

### Training

- Training at **induction** and **annually** for **all staff**
- Specific induction and ongoing training for supplier facing staff

### Policies

- Anti-Bribery and Anti-Corruption (inc. Gifts, Entertainment and Hospitality)
- Conflict of Interest and Related Party Transactions
- Donations, Sponsorships and Community Programs
- Whistleblower





## Implementation status

Overview on how countries are progressing towards meeting the 2016 EITI Standard.


Country statuses explained

 Yet to be assessed against the 2016 Standard

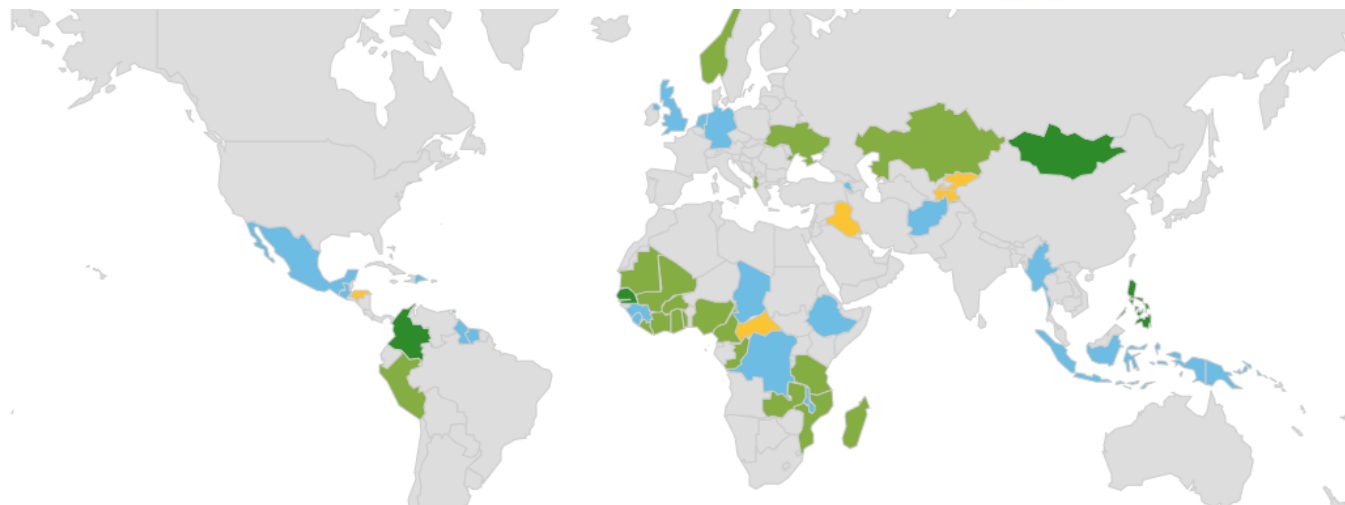
 Satisfactory progress

 Meaningful progress

 Inadequate progress / suspended

 Suspended due to political instability

 Suspended for missing deadline



## The Extractive Industries Transparency Initiative (EITI)

- Not for profit international organisation founded by UK government in 2002, now based in Norway
- Created a global standard for the good governance of oil, gas and mineral resources by companies and governments
- EITI standard requires information along the value chain from the point of extraction, revenue to government, contribution to the economy

**St Barbara endorses the aims and methodology of the EITI and is a financial supporter of the EITI international secretariat.**



United Nations initiative founded in 2004 to build direct commitment by corporations to goals aligned with UN principles.

### **Human Rights**

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. Make sure that they are not complicit in human rights abuses.

### **Labour**

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. The elimination of all forms of forced and compulsory labour;
5. The effective abolition of child labour; and
6. The elimination of discrimination in respect of employment and occupation.

### **Environment**

7. Businesses should support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote greater environmental responsibility; and
9. Encourage the development and diffusion of environmentally friendly technologies.

### **Anti-Corruption**

10. Businesses should work against corruption in all its forms, including extortion and bribery.





Photo: 'Simberi- Safety is a life time commitment' – painted on the roof of accommodation block F at Simberi camp. Photo by Ivan Andrew via drone.

We supplement our financial information reporting determined under International Financial Reporting Standards (IFRS) with certain non-IFRS financial measures, including cash operating costs. We believe that these measures provide meaningful information to assist management, investors and analysts in understanding our financial results and assessing our prospects for future performance.

<b>All-In Sustaining Cost</b>	All-In Sustaining Cost is based on Cash Operating Costs, and adds items relevant to sustaining production. It includes some, but not all, of the components identified in World Gold Council's Guidance Note on Non-GAAP Metrics - All-In Sustaining Costs and All-In Costs (June 2013). Refer most recent quarterly report available at <a href="http://www.stbarbara.com.au">www.stbarbara.com.au</a> for example
<b>EBITDA</b>	EBIT before depreciation and amortisation.
<b>Profit from operations</b>	Excludes corporate costs, exploration expenses, interest and tax and is non-IFRS financial information, which has not been subject to review or audit by the Group's external auditors. See 2019 Annual Report (p4) for details.
<b>Significant Items</b>	Items whose nature or amount is considered material to the financial report. Refer Note 3 of 2019 Financial Report (p51) for details
<b>Underlying EBITDA / NPAT</b>	EBITDA or NPAT after excluding identified significant items. Refer 2019 Annual Report (p3) for details, available at <a href="http://www.stbarbara.com.au">www.stbarbara.com.au</a>



**Rowan Cole**

Company Secretary

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**David Cotterell**

Manager Investor Relations

E: [info@stbarbara.com.au](mailto:info@stbarbara.com.au)



# St Barbara

## Sustainability Report

Environmental • Social • Governance

For the year ended 30 June 2019



2019 Sustainability Report

St Barbara at a glance

Papua New Guinea  
New Guinea



Leonora (Gwalia mine)	Simberi	Atlantic Gold (FY20 onwards)
<ul style="list-style-type: none"> <li>Gwalia underground mine</li> <li>FY19 production 220 koz</li> <li>Mine plan to FY31</li> <li>Prospective tenements</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mine</li> <li>FY19 production 142 koz</li> <li>Mine plan to FY21, potential for life extension</li> <li>Exploration on neighboring islands</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mine</li> <li>FY19 production 93 koz</li> <li>Four open pits planned via consolidated processing plan to FY32</li> </ul>



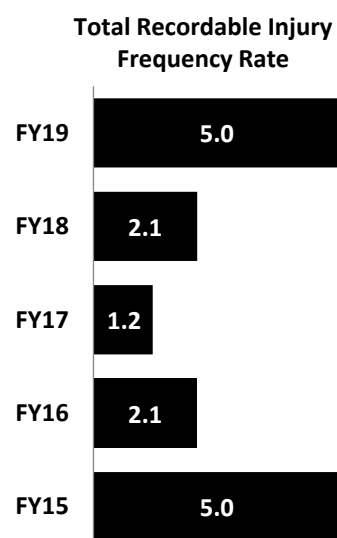
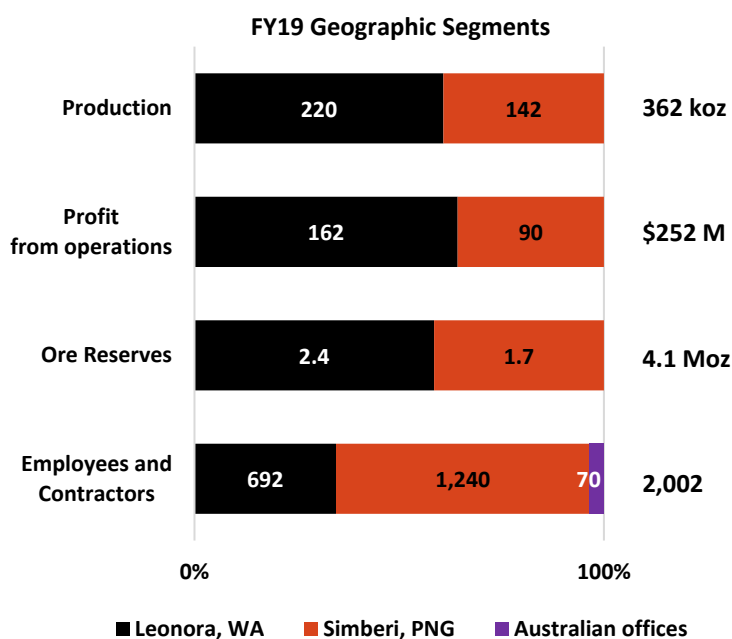
2018



2015



2014 - 2019



Notes: Results and Ore Reserves from 2019 Annual Report. Total Recordable Injury Frequency Rate measured for each million hours worked on a 12-month rolling basis.

## 2019 Sustainability Report

### Sustainability Report

This report presents the **environmental, social and governance** ('ESG') performance of St Barbara Limited and its controlled entities (the 'Company' or 'Group'), or provides the reference to where this information is presented in the Group's corresponding:

- [Annual Report](#),
- [Corporate Governance Statement](#), or
- [www.stbarbara.com.au](http://www.stbarbara.com.au).

The content of this report has been determined by assessing the Group's material sustainability issues and identifying those that could most impact the business and its stakeholders. The 2019 report contains increased disclosure including, where applicable, the Group's targets and commitments.

The Sustainability Report is for the financial year ended 30 June 2019. Financial figures are in Australian dollars unless otherwise stated.

St Barbara acquired Atlantic Gold Corporation (Atlantic Gold) on 19 July 2019, after the end of the reporting period for this Sustainability Report. The ESG performance of Atlantic Gold will be incorporated from the 2020 Sustainability Report.

#### About these disclosures

St Barbara has used the Global Reporting Initiative (GRI) standards to guide its sustainability disclosures. This report is in accordance with the GRI Core option. The content of the disclosures is based on St Barbara's assessment of its material sustainability topic areas. St Barbara's material sustainability topic areas reflect its significant economic, environmental and social impacts, and those areas that substantively influence the assessments and decisions of its stakeholders. St Barbara's sustainability disclosures comprise:

- this Sustainability Report,
- identified sections of the [Annual Report](#),
- the [Corporate Governance Statement](#), and
- the website, [www.stbarbara.com.au](http://www.stbarbara.com.au).

The Sustainability Report has been authorised for release by a resolution of the Board of Directors.

13 September 2019

Rowan Cole

Company Secretary

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St Barbara is committed to achieving its sustainability objectives through its core values:

We act with **honesty** and **integrity**

We treat people with **respect**

We value **working together**

We **deliver** to promise

We strive to **do better**



## Message from Managing Director & CEO

Welcome to the 2019 St Barbara Limited Sustainability Report.

The activities and metrics described in the Sustainability Report are representative of the values that guide everything we do: we act with honesty and integrity, we treat people with respect, we value working together, we deliver to promise, and we strive to do better. Our values are brought into effect by our policies and the diligence of all our team members, including our sustainability team as they implement agreed plans and programs then audit and monitor.

In July 2019, we welcomed the operating team at Atlantic Gold in Nova Scotia, Canada. In our due diligence, it impressed us that Atlantic Gold had been nominated for Nova Scotia safety awards in its first two years in operation.

We recognise that a safe workplace, and the wellbeing of employees, contractors, consultants and visitors, is fundamental to the success of the Group. Our injury frequency rate has disappointingly increased this year, although most of the injuries suffered have been relatively minor. Our lost time injury frequency rate remains well under the Western Australian underground mine average<sup>1</sup>. 'Boom time' conditions in mining in Australia are leading to dilution of experience within our workforce, with inexperience a contributing factor identified in our incident investigations. The \$112 million Gwalia Extension Project has been under construction throughout the year. The many additional contractors doing non-routine construction tasks has also contributed to our increased rate. These are not excuses, rather understanding our context shapes our response; our ongoing focus with both employees and contractors is to improve supervision and training, especially for new entrants to the mining industry.

We place great importance on responsible environmental management and we are committed to continued improvement in the identification, assessment, mitigation and monitoring of the environmental effects of our operations. We are pleased to note that our combined operations are amongst the lowest in greenhouse gas emissions intensity globally.

At our Simberi operations in Papua New Guinea, we are committed to empowering local businesses towards sustainability post mining. The Group facilitated the creation of an umbrella community business co-ordination company Simberi Mining Services (SMS), and has handed over various business functions. SMS is now the commercial vehicle to facilitate building the sustainable export businesses that will

support the Islanders when mining ceases, potentially in 2021.

During the year, we conducted our first stakeholder feedback study in Leonora, Western Australia. Over 75% of participants responded with a favourable or very favourable opinion of St Barbara, as well as confirming our views regarding the importance of supporting the community through funding local charities, and providing employment and business opportunities.

St Barbara's sustainability approach is aligned with, and we endorse, the [Carbon Disclosure Project](#), the United Nations Global Compact and the Extractive Industries Transparency Initiative. In this report, we recognise the risk of climate change as defined in [the Paris 2015 Climate Change Agreement](#) and our disclosure uses the guidelines provided by the [Task Force on Climate-related Financial Disclosure](#) (TCFD).

St Barbara is a member of the Minerals Council of Australia (MCA), in which I have a leadership role as a Director on the MCA Board and Chair of the Gold Forum. The MCA developed an 'Enduring Value Framework' to help its members put sustainable development into practice. A recent example of the critical sustainability work done by the MCA has been in managing the industry response to the legitimate questions raised by global investors following recent tailings dam failures. The MCA is also looking at other initiatives in safety and climate change. This year, in conjunction with the MCA, St Barbara contributed to a paper highlighting Australian mining's [commitment](#) to the UN Sustainability Development Goals, in the area of goal 5, gender equality.

The Group continues to receive national recognition for its gender employment and advocacy programs. The most notable of these is certification as a WGEA 'Employer of Choice for Gender Equality', again in 2019 and consistently since 2014, and we are currently the only mining company to hold the certification.

St Barbara welcomes the challenge and opportunity of providing sustainability related transparency to our stakeholders. I am proud of St Barbara's considerable financial and sustainability achievements, and I look forward to continued improvement and success in all measures.

Bob Vassie  
Managing Director & CEO

<sup>1</sup> See page 10, Safety Performance

## Key developments in Sustainability Activities and Reporting

The key developments in sustainability reporting since the previous Sustainability Report include increased disclosure on:

- Climate change related governance, strategy risks and opportunities and metrics
- Tailing storage facilities
- Water recycling data
- Stakeholder assessments of the Group operations including:
  - Results of the first Leonora WA stakeholder survey
  - Local government feedback to the Papua New Guinea national government during the recent mining lease renewal process and data from the Simberi Operations grievance resolution process

The report does not provide information on the Sustainability performance of the new Canadian based St Barbara subsidiary Atlantic Gold. St Barbara acquired Atlantic Gold on 19 July 2019, outside the period relevant to the report. Information on Atlantic Gold will be included in the 2020 Sustainability Report.

## Key ESG Memberships and Reporting Frameworks

The Group is a member or responds to the following ESG groups:

- a member of the Carbon Disclosure Project (CDP)<sup>1</sup>, Climate (2018 and 2019) and Forests (2019).
- a financial supporter of the Extractive Industries Transparency Initiative (EITI)<sup>2</sup>
- reports its sustainability disclosures in accordance with the Global Reporting Initiative (GRI) standards Core option<sup>3</sup>
- a signatory of the UN Global Compact<sup>4</sup>.

### Ten Principles of the UN Global Compact

St Barbara is a signatory to the UN Global Compact, and subscribes to its Ten Principles.

#### Human Rights

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. Make sure that they are not complicit in human rights abuses.

#### Labour

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. The elimination of all forms of forced and compulsory labour;
5. The effective abolition of child labour; and
6. The elimination of discrimination in respect of employment and occupation.

#### Environment

7. Businesses should support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote greater environmental responsibility; and
9. Encourage the development and diffusion of environmentally friendly technologies.

#### Anti-Corruption

10. Businesses should work against corruption in all its forms, including extortion and bribery.

### Framework for Sustainable Development

As part of its membership of the Minerals Council of Australia (MCA), St Barbara is committed to meeting the obligations of the MCA 'Enduring Value' framework for sustainable development. The Enduring Value framework incorporates the International Council on Mining and Metals (ICMM) Sustainable Development Principles, summarised as:

1. Implement and maintain ethical business practices and sound systems of corporate governance.
2. Integrate sustainable development considerations within the corporate decision-making process.

1 [www.cdp.net/en](http://www.cdp.net/en)

2 <https://eiti.org/>

3 <https://www.globalreporting.org>

4 [www.unglobalcompact.org/](http://www.unglobalcompact.org/)



## 2019 Sustainability Report

3. Uphold fundamental human rights and respect cultures, customs and values in dealings with employees and others who are affected by our activities.
4. Implement risk management strategies based on valid data and sound science.
5. Seek continual improvement of our health and safety performance.
6. Seek continual improvement of our environmental performance.
7. Contribute to conservation of biodiversity and integrated approaches to land use planning.
8. Facilitate and encourage responsible product design, use, re-use, recycling and disposal of our products.
9. Contribute to the social, economic and institutional development of the communities in which we operate.
10. Implement effective and transparent engagement, communication and independently verified reporting arrangements with our stakeholders.

## Material Issues and Boundaries

The Group assesses materiality of issues disclosed in this report according to:

- Our values
- Laws, licences and regulations
- Engagement with stakeholders, issues we discuss with them frequently
- Engagement with experts, industry organisations & international initiatives focused on sustainability issues
- Issues identified as critical in our risk management system.

This Sustainability Report prioritises reported issues according to assessed materiality, as summarised in the table below:

Reported Issues	Boundaries & Stakeholders	
	External	Internal
<b>Governance &amp; Economic Performance</b> <ul style="list-style-type: none"> <li>• Board and management alignment with long term shareholder and stakeholder interest</li> <li>• Ethical business conduct, including Anti-bribery and Anti-corruption</li> <li>• Fines and penalties</li> <li>• Risk management</li> <li>• Taxes, duties and royalties</li> </ul>	<ul style="list-style-type: none"> <li>• Local communities</li> <li>• Government &amp; regulators</li> <li>• Investors &amp; analysts</li> <li>• Suppliers</li> <li>• NGO (non-governmental organisation)</li> </ul>	All the reported issues are identified and managed according to the impact upon our employees and contractors
<b>Health and Safety</b> <ul style="list-style-type: none"> <li>• Safe work environment and workplace practices for employees and contractors</li> <li>• Incident analysis and trends</li> </ul>	<ul style="list-style-type: none"> <li>• Regulators</li> <li>• Visitors</li> </ul>	
<b>People</b> <ul style="list-style-type: none"> <li>• Attract, retain, engage and develop workforce</li> <li>• Diversity, non-discrimination, Equal Opportunity</li> </ul>	<ul style="list-style-type: none"> <li>• Local communities</li> <li>• Government &amp; regulators</li> <li>• Existing and potential employees</li> </ul>	
<b>Social &amp; Communities</b> <ul style="list-style-type: none"> <li>• Engage, respect, enhance</li> <li>• Minimise adverse impact</li> <li>• Resolve grievances fairly</li> </ul>	<ul style="list-style-type: none"> <li>• Local communities</li> <li>• Government</li> <li>• NGO</li> <li>• Local suppliers</li> </ul>	
<b>Environment</b> <ul style="list-style-type: none"> <li>• Closure – planning and provisions</li> <li>• Climate Change – vulnerability, our impact, risk management, GHG emissions, energy efficiency</li> <li>• Incidents</li> <li>• Mine waste management – tailings, waste rock</li> <li>• Water usage and management</li> </ul>	<ul style="list-style-type: none"> <li>• Local communities</li> <li>• Government &amp; regulators</li> <li>• Investors &amp; analysts</li> <li>• NGO</li> </ul>	

## 2019 Sustainability Report

Boundaries are defined by our impacts. We define our impacts to include direct and indirect, intended and unintended, short and long-term consequences. We do not consider our impacts to include:

- Product safety and product recycling
- The role of gold in international political and economic relations
- Engagement with communities beyond those geographically proximate to our operations
- Commercial activity of individuals and entities connected with our operations but not relating to us (for example, other business activities of contractors and royalty recipients)
- Issues relating to minority equity interests and previously divested assets.

## Our Sustainability Approach

We recognise that a safe workplace, and the wellbeing of employees, contractors, consultants and visitors, are fundamental to the success of the Group.

We place great importance on responsible environmental management and we are committed to continued improvement in the identification, assessment, mitigation and monitoring of the environmental effects of our operations.

We believe that mining is a positive force for social and economic development for local communities and work closely with them to nurture a mutually beneficial social licence to operate.

## Governance of sustainability

We believe high standards of governance are critical to delivering on our strategy, creating long-term value and maintaining diversity and our social licence to operate.

The Board oversees the Group's values, culture, governance framework and sustainability approach. The Audit and Risk Committee monitors the Group's systems of financial and operational risk management. The Health, Safety Environment and Community (HSEC) Committee monitors the Group's HSEC responsibilities and compliance across those activities. The Remuneration and Nomination Committee advises the Board on the Group's overall remuneration and diversity strategies and policies.

The Managing Director and CEO has overall responsibility for Sustainability at the executive level.

## Applying our sustainability approach

In applying our sustainability approach, the daily activities and decisions of the Group are supported by the applicable Board policies. These are the foundation for developing and implementing management systems at our operations. These policies align with environmental, social and governance management as set out in the table below.

## Managing risk

The Group maintains an enterprise wide risk management framework to support the responsible achievement of its strategic objectives by identifying and addressing risk in an organised and transparent manner.

The risk management framework delivers enhanced risk reporting and control mechanisms designed to ensure that strategic, operational, environmental, legal, social, reputational, financial and other risks are identified, assessed and managed. The framework is consistent with International and Australian risk management standards.

ESG area of focus	Policies	Board / Board Committee	Executive / General Manager responsible
<b>Environmental</b>	Environmental Policy	HSEC <sup>1</sup>	GM Human Resources & HSEC
<b>Social</b>	Community Relations Policy	HSEC	GM Human Resources & HSEC
	Health and Safety Policy		
	Diversity and Inclusion Policy	Remuneration & Nomination	GM Human Resources & HSEC
	Equal Employment Opportunity Policy		
Donations Sponsorships Community Programs Policy	Board	Company Secretary	
<b>Governance</b>	Anti-Bribery and Anti-Corruption Policy	Board	Company Secretary
	Code of Conduct		
	Conflict of Interest and Related Party Transactions Policy		
	Continuous Disclosure and External Communication Policy		
	Privacy Policy		
	Securities Dealing Policy		
	Social Media Policy		
Whistleblower Policy	Board	Company Secretary & GM Human Resources & HSEC	

1 HSEC: Health Safety Environment & Community Committee



## 2019 Sustainability Report

ESG area of focus	Policies	Board / Board Committee	Executive / General Manager responsible
	Delegation of Authority	Audit & Risk	Chief Financial Officer
	Risk Management Policy	Audit & Risk	Company Secretary

## Governance and Economic Performance

The Board and Management of St Barbara are committed to maintaining high standards of ethics, integrity and statutory compliance in all Group dealings.

The Group has implemented a formal set of behavioural values designed to uphold high standards of integrity and work performance for the Board, Management, employees, and other members of the work force. The Group is committed to achieving its sustainability objectives through its core values:

- We act with honesty and integrity
- We treat people with respect
- We value working together
- We deliver to promise
- We strive to do better.

The Group's internal and corporate governance is explained in depth in the annual [Corporate Governance Statement](#). The Corporate Governance Statement describes the Corporate Governance framework that underpins the Group's conformance with the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations 4th Edition ("the ASX Principles and Recommendations"), by reference to each of the stated principles. The eight central principles are:

1. Lay solid foundations for management and oversight
2. Structure the Board to add value
3. Act ethically and responsibly
4. Safeguard integrity in corporate reporting
5. Make timely and balanced disclosure
6. Respect the rights of security holders
7. Recognise and manage risk
8. Remunerate fairly and responsibly.

The Group has an integrated suite of governance policies that together form our [Code of Conduct](#). The individual policies are available on our website under '[Governance](#)', and include policies addressing:

- Bribery and corruption
- Community relations
- Conflicts of interest
- Continuous disclosure
- Diversity and inclusion
- Donation & sponsorships
- Environment
- Equal opportunity
- Health and safety
- Privacy
- Risk management
- Securities dealing
- Social media
- Whistleblower.

The Group reviews and updates the policies on a regular basis, and has comprehensive employee training, updated on a cyclical basis.

The Group's **economic performance** is published in the [Annual Report](#), with earnings per share as a key indicator set out in the [Performance Data](#) section of this report. Commentary on the Group's economic performance commences on page 3 of the Annual Report.

The Group's direct economic contribution to government is published in the [Performance Data](#) section of this report.

Follow a period of where no income tax was payable due to accumulated income tax losses, the Group resumed paying company income tax in 2018.

Other taxes, royalties and duties have broadly increased over the last several years associated with the increase in gold production and related activity.

The Group's **governance performance** is published in the [Corporate Governance Statement](#), with a key indicator set out in the [Performance Data](#) section of this report. The Group has maintained, and will seek to maintain, 100% compliance with the ASX Principles and Recommendations.

The Group reports annually to the Papua New Guinea Extractive Industries Transparency Initiative (EITI) and is a financial supporter of the EITI International Secretariat. PNG is a candidate country to the EITI. The Group supports the efforts of the EITI to improve transparency in the area of financial dealings between mining companies and governments.

During 2019, the Group was a financial member of selected mining industry bodies, including:

- Australian Mines and Metals Association
- Chamber of Minerals and Energy of Western Australia
- Gold Industry Group (Australia)
- Minerals Council of Australia
- PNG Chamber of Mines and Petroleum.

The Group publishes internally regular 'culture' indicator reports including:

1. safety,
2. employee engagement,
3. employee turnover,
4. whistleblower related activity.

Relevant data is reported in the [Performance Data](#) section, with whistleblower related information reported in 2019 for the first time.

## 2019 Sustainability Report

## Health, Safety and Risk Management

The **health and safety** of our employees, contractors, suppliers, visitors and surrounding community is fundamental to the success of the Group. The Group's health and safety policy is available at: [www.stbarbara.com.au/about-us/governance/](http://www.stbarbara.com.au/about-us/governance/). The Group's Health, Safety and Environment Management System is aligned with AS/NZS 4801:2001 (Health and Safety Management Standard).



The Group's management of safety is comprehensive, well resourced, strict and proactive.

The Group has a comprehensive Health, Safety and Environment Management System (HSEMS) in use across the Group, which is supported by significant numbers of specialist health and safety staff at both mines, as well as in corporate leadership and support. The HSEMS encompasses the following components:

1. Leadership and Accountability
2. Risk and Management of Change
3. Contractor Management
4. Incident Reporting and Investigation
5. Communication, Consultation and Participation
6. Critical Risk Control Standards
7. Environmental Management
8. Training, Competency and Behaviour
9. Health and Hygiene
10. Legal Requirements, Commitments and Document Control
11. Crisis and Emergency Management
12. Design, Construct, Commissioning and Decommissioning
13. Monitoring, Audits and Review
14. Planning, Goals and Targets.

The Group has developed and maintains a set of 'Critical Risk Control Standards', each containing various systems, standards and guidelines. These Critical Risk Control Standards address specific work activities, including:

- Explosives
- Hazardous material management
- Isolation, working at heights, and confined spaces
- Light vehicles
- Marine operations

- Mobile and lifting equipment
- Underground ground control.

Health and safety meetings occur at the start of every shift at all operational sites. Specialist health and safety staff, and all levels of operational management, rigorously identify, prioritise and control risk through active communication and consultation with the workforce.

Working safely in compliance with safety standards and procedures is mandatory. Safety is a personal accountability held by everyone, with all personnel empowered to initiate a "cease work authority" when exposed to, or witnessing, an unsafe activity. Incidents and near-misses are investigated and analysed.

The Group has a zero tolerance approach where key critical risk non-compliances with procedures are observed.

### St Barbara's 'Rules To Live By':

At St Barbara we NEVER:

1. Work on equipment that has not been correctly isolated from all energy sources
2. Remove another person's Underground Tag, Danger Tag and Padlock
3. Move, operate or modify equipment unless authorised
4. Remove, bypass or modify a safety device without authorisation
5. Enter a delineated hazardous area without authorisation or fail to erect barricades as required
6. Work or travel under suspended load
7. Work at heights without fall protection controls

The Group has a proactive regime of training linked to workplace safety observations. Various 'lead' and 'lag' safety targets are included in the at-risk remuneration component of all operational managers.

Health and Safety is audited at the mine sites regularly, including:

- Annual regulatory audits by the relevant government authorities
- External audits of compliance with the Group's Critical Risk Control Standards, part of the Group's HSEMS (also itself regularly audited)
- Regular internal audits performed by the Group's own health and safety specialist staff.

Health and safety performance is measured using 'Total Recordable Injury Frequency Rate', which expresses the number of injuries per million hours worked on a rolling 12-month basis. This measure is a widely recognised benchmark, allowing measurement and comparison of safety performance across industries.

## 2019 Sustainability Report

Health and safety targets are included in the at-risk remuneration of all employees and most contractors.

All standards **apply equally** to employees and contractors.

During the year, the following new health and safety related initiatives commenced:

- Ongoing focused training on hand safety and 'line of fire' at Gwalia, WA.
- A number of systems and standards have been reviewed and improved. These include the incident investigation process, which has been a strong area of focus in 2019.
- As part of a contractor management system review, increased governance of contractor qualifications, a more exhaustive site entry process and increased due diligence of contractors during due diligence prior to engagement.

**External audits** of health and safety practices are conducted at both operations. Audit result improvements are a component of individual at-risk remuneration for employees with middle and senior site management responsibilities. Certification to the new ISO 45001:2018 safety standard is being considered for possible future implementation.

### Safety Performance

The Group's primary safety performance measure is 'Total Recordable Injury Frequency Rate' (TRIFR) per million hours worked on a rolling 12-month basis and has unfortunately increased from 2.1 last year to 5.0 as at 30 June 2019. Benchmarks for TRIFR are not provided by the Western Australian regulator, which reports Lost Time Injury Frequency Rate (LTIFR) per million hours worked. The Group's LTIFR of 1.1 for the year to 30 June 2019 (2018: 0.5) is below relevant available industry benchmarks<sup>1</sup>.

The Group's **health and safety performance** is published in the [Performance Data](#) section of this report.

Details regarding all 23 'recordable' injuries in 2019 (2018: nine) are shown below.

### Details and analysis of safety incidents in 2019

Number	Location and type of injury	Employee/Contractor/location
12	Hand & forearm	All (12) contractors (11 Australia, 1 PNG)
6	Foot & lower leg	2 employees 4 contractors (5 Australia, 1 PNG)
5	Other: <ul style="list-style-type: none"> <li>• 3 head</li> <li>• 2 Body</li> </ul>	3 employees 2 contractor (2 Australia, 3 PNG)
Total 23	Recordable injuries	5 employees 18 contractors (18 Australia, 5 PNG)
includes 5	Lost time injuries (injuries requiring time off work)	1 employee 4 contractors (3 Australia, 2 PNG)

All the impacted colleagues except for one had, at the time of this report's release, returned to their pre-injury duties.

### Analysis and commentary on 2019 Recordable Injuries and trend.

There was a 156% increase in recordable injuries.

The large majority of injuries:

- 1) Occurred at our Gwalia mine in WA (70%)
- 2) Mainly involved contractors (70%)
- 3) Involved minor hand and arm injuries (74%).

Consistent with previous years, and the nature of Western Australian mining, the number of injuries for contractors was higher than for employees. Outsourcing of mining and exploration drilling services is an overwhelmingly typical feature of the Western Australian mining environment.

The Group's underground mining contractor, [ByrneCut Australia](#), has a robust, comprehensive, standardised 'occupational health and safety' (OH&S) approach, and is certified for ISO 9001: 2008 (Quality Management System), ISO 14001:2004 (Environmental Management System), OHSAS 18001:2007 (Health and Safety Management Standard) and AS/NZS 4801:2001 (Health and Safety Management Standard).

Incident investigations have identified inexperience of both supervisors and injured persons as being a recurring contributing factor. This is consistent with an increase in turnover across Australian mining, with overall turnover up from 9.8 to 13.8%<sup>2</sup>.

Also relevant is the \$112 million Gwalia Extension Project, which reached its peak level of activity at the Gwalia mine in

1 Industry Lost Time Injury Frequency Rate (LTIFR) for WA gold companies of 1.9, [www.dmp.wa.gov.au/Documents/Safety/MSH\\_Stats\\_Reports\\_SafetyPerfWA\\_2017-18.pdf](http://www.dmp.wa.gov.au/Documents/Safety/MSH_Stats_Reports_SafetyPerfWA_2017-18.pdf)

2 Resource Industry Turnover Analysis (RITA) Report by Mackie Employer Solutions, January 2019. Turnover for trades and experienced manual labour staff has dramatically increased in 2019, with turnover in contract miners and blue collar positions increasing significantly.



## 2019 Sustainability Report

Western Australia during the year. Construction tasks, as they are non-routine and introduce workers to unfamiliar environments, are inherently more hazardous than normal operations.

The 2019 safety performance is unacceptable and the Group is committed to improvement, working with both employees and contractors. Initiatives, including hiring (directly and via contractors) more training and supervisory staff, are ongoing, as well as implementing a new contractor management system and improvements to the incident investigation system.

### Risk Management & Emergency Preparedness

The Group identifies, assesses and manages risks through an established enterprise-wide risk management framework, which conforms to Australian and international standards and guidance. The Group's risk reporting and control mechanisms are designed to ensure strategic, safety, environmental, operational, legal, financial, reputational and other risks are identified, assessed and appropriately managed.

Senior management and the Board regularly review the risk portfolio of the business and the effectiveness of the Group's management of those risks.

The Group's Audit and Risk Committee oversees risk management. The Group's material business risks are reported in the [Annual Report](#).

The Group has a Crisis Management System and prepares Business Continuity Plans (BCP) for key risks with a business interruption element.

Both mine sites have highly trained 'Emergency Response Teams' (ERT). The ERT are equipped and trained appropriately to perform the functions of first aid, rescue and firefighting, specific to their location and mining activities. At the Chamber of Minerals and Energy of Western Australia (CMEWA) safety competition, the St Barbara Gwalia mine underground ERT came second in the Underground Competition (October 2018) and third in the Surface Competition (May 2019), having won the Underground Competition twice consecutively in 2015 and 2016<sup>1</sup>.

The Simberi team competed strongly at the most recent PNG Extractive Industries Emergency Response Challenge (EIERC) event in 2017 and at the previous 2015 competition, winning four categories in 2015.

## People

The Group has a centralised Human Resources (HR) function with representation at every Group location. The HR Function is charged with ensuring there are capable people in the right roles, doing the right work, all the time.

The Group's HR strategy of 'talented people who deliver' has five pillars:

<b>Talent</b>	ensuring the Group has the talent needed to reliably deliver its business strategy
<b>Diversity</b>	ensuring a diverse and inclusive workforce to support a high performance culture
<b>Leadership</b>	building capable leadership at all levels in the Group
<b>Engagement</b>	maintaining productive direct relations with our people
<b>Performance</b>	maintaining an integrated suite of effective people systems

### Talent

There are a number of HR frameworks, systems and activities to ensure the Group attracts, recruits and retains talent including:

- Talent management framework
- Recruitment system
- Career development system
- Training and development system
- Graduate development system.

All employees have a role description and an annual development plan. Each year the Group conducts talent identification and succession planning.

Training and development spend per employee has been disclosed for the first time in this year's report (in addition to average hours, disclosed for the first time in 2018) in the [Performance Data](#).

### Diversity

The Group's **Diversity and Inclusion Policy** sets the tone for diversity activities, with progress against Board approved objectives reported annually in the [Corporate Governance Statement](#).

The Group's commitment to diversity is demonstrated by its recognition as a Workplace Gender Equality Agency Employer of Choice for Gender Equality every year since 2014, currently the only mining company so awarded.

The Group was awarded the 'Women in Resources' state (Victorian) award and the national award for 'Excellence in

<sup>1</sup> There was no competition in 2017.

## 2019 Sustainability Report

Diversity Programs and Performance' in 2017. In 2018, the Group received the AMMA 'Australian Women in Resources Alliance'<sup>1</sup> national award.

Other diversity initiatives include actively managing the gender pay gap, gender advocacy, gender safety programs, the Women's Internal Network, a commitment to developing the national workforce in PNG, Indigenous engagement targets, and employee wellbeing programs.

Over the last three years, the Group has put in place various measures to support employees who are having to deal with **domestic violence**, including a new policy framework and guideline and training for key staff in first response to domestic violence situations.

The Group seeks to support employees impacted by domestic violence through<sup>2</sup>:

- Paid leave provisions
- Free confidential specialist counselling
- Personal safety arrangements
- Short-term financial assistance and
- Flexible working arrangements.

At its Simberi PNG mine, the Group has pioneered a new **gender safety** program, recognising the different safety concerns of women, in partnership with the PNG 'Business Coalition for Women'.

This program followed a research project into women working in remote locations in PNG and incorporates an annual audit process including employee surveys, focus group meetings, interviews, risk assessments and benchmarking. The annual audit report includes recommended actions based on the findings of the audit.

Examples of changes enacted as a result of the audit include:

- Nightshift signs are now fixed on doors of sleeping quarters so female workers can identify which rooms are occupied during the day.
- Women are provided and have the option to wear trousers for PPE.
- Simberi has now appointed 'Contact Officers' who provide a confidential point of contact for employees to report harassment.
- Dedicated seats for females reserved on company transportation to and from work.

Year-on-year results show:

- 18% improvement in the number of women feeling happy about their safety.
- 15% improvement in the level of concern women have for their safety.

A non-violence initiative for men, the '**Warrior**' program, has been running for male employees since 2015, and since 2018, contractors and community members also. The program is delivered in Tok Pisin, the local language. The content of the workshop covers:

- What is family sexual violence
- Strategies and tools to control temper/anger
- Building strong relationships in the family
- Working with the community to overcome family sexual violence.

In August 2018, the Group presented on its gender safety program at the [Minerals and Energy for Development Alliance](#) Women in Resources conference in Lae, PNG, and sponsored the associated International Women in Resources Mentoring Program Dinner at the same conference. The Group presented at the November 2018 MCA Gender Diversity Working Group '[White Ribbon](#)' Event in Brisbane.

### Diversity Performance

The proportion of women employed in Australian operations increased in 2019 to 25%, with a target to reach 30% in 2022. The proportion employed in Papua New Guinea increased from 13.5% in 2018 to 14.7% in 2019, well on track to meet the 2018 target of 15% by 2020.

The Group conducts regular gender pay audits and has a nil gender pay gap for like-for-like roles<sup>3</sup>. The Group has a target to reduce the 'overall gender pay gap'<sup>4</sup> to 8% by 2022.

The Group's Leonora Operation (incorporating the Gwalia Mine) in Western Australia is progressing towards its target for **indigenous employment of 5%** by 2020, more than trebling this metric since 2016 to achieve 3.4% at June 2019. To support this initiative, 57 senior employees attended **Cultural Awareness training** during NAIDOC<sup>5</sup> week in July 2018 (a program of activities to recognise indigenous Australians' contribution to society). The training was hosted by local elders near significant Indigenous sites in the mine locality.

In the 'highlights' section of this report is a case study featuring one of our Aboriginal apprentices.

1 Australian Minerals and Mining Association (AMMA)

2 Employees of Australian Operations only.

3 'Like for like' gender pay gap measures the difference in base salary over the year between male and female employees in comparable roles

4 'Overall Gender Pay Gap' is calculated according to the WGEA guidelines ([www.wgea.gov.au](http://www.wgea.gov.au)), and represents the difference

between the average pay for all male employees and the average pay for all female employees across the whole organisation.

5 National Aborigines and Islanders Day Observance Committee, <https://www.naidoc.org.au/>

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### Leadership

The Group has developed and delivers annual **leadership** development programs for leaders of all levels including:

- Frontline supervisor program
- Superintendent program
- Manager program
- Senior leaders program
- Leadership essentials workshops
- Project management
- Mental health awareness
- eLearning modules on a range of leadership topics.

### Engagement

Employee engagement is covered through a number of systems, and activities, including:

- Remuneration and benefits system
- Annual employee engagement survey
- Onboarding system and induction program for new employees and contractors
- Mentoring program
- Employee benefits
- Mental health policy and mental health and wellbeing guideline
- Domestic Violence Policy
- Employee photography competition.

An independent provider conducts the annual engagement survey for the Group. The various measures indicating employee engagement had been increasing steadily, with the overall favourability score in the last three years being 79% in 2017, 83% in 2018 and then levelled off, dropping to 73% this year. The detailed comments provided by employees indicates that the operational challenges faced by the Group's mines, with production down 18% year on year at Gwalia, and the potential closure of the Simberi mine approaching in 2021, are having an impact on engagement.

Group employee turnover of 7.2% (2018: 7.0%) remains below our industry benchmark<sup>1</sup> of 13.8%. As anticipated last year, employee turnover in Australia and overall increased in 2019, due to an improving mining employment market in Australia, with most mining subsectors enjoying historically strong commodity prices. The Group has faced challenges in hiring and retaining specialist roles (such as mining engineers, ventilation and seismicity experts), but in 2019 tight labour conditions have extended to most mining roles with overall turnover rates in mining in Australia up 40%<sup>2</sup> year on year.

1 The Mackie 'RITA' Report – January 2019 figures. RITA report has 29 Australian Resource industry companies participating. 'Turnover' is voluntary employment moves only, direct employees only.

### Performance

There are a number of HR systems and processes to ensure that employees perform to their full potential including:

- Recognition and reward
- Employee bonus plans
- Short and long term incentive plans
- Training and development
- Performance improvement
- Professional membership support
- Study assistance
- Annual CEO innovation awards.

Group HR policies are available on the website at [www.stbarbara.com.au/about-us/governance/](http://www.stbarbara.com.au/about-us/governance/), and include:

- Diversity and Inclusion Policy
- Equal Employment Opportunity Policy
- Whistleblower Policy.

These policies are supported by a range of internal guidelines, such as:

- Grievance Resolution Framework
- Fair Treatment System
- Flexible Working Guideline
- Mental Health and Wellbeing Guideline
- Workplace Discrimination and Harassment Guideline.

The Group was a finalist for 'Best Health & Wellbeing Program' at the 2016 [Australian Human Resources Award](#) for **Mental Health and Wellbeing** programs. Wellbeing activities conducted during the year included:

- 'R U OK? Day' campaign<sup>3</sup>
- Mental Health Awareness workshops for employees and supervisors
- Mental Health Week campaign.

Mental Health and Wellbeing resources available to employees include:

- Free professional and confidential counselling services for employees and their immediate family
- Free ergonomic assessments.

Australian employees who are members of the Group's preferred superannuation fund also have access to:

- Free at home medical information service
- Free salary continuance, death and disability insurance
- Free financial advice.

2 The 'RITA' reports per previous footnote, 9.8% (2018) to 13.8% (2019).

3 [www.ruok.org.au](http://www.ruok.org.au)



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The Group's performance on 'people' metrics is published in the [Performance Data](#) section of this report.

### Awards

The Group recently won multiple awards for its achievements in gender equality and mental health and wellbeing.

Financial Year	Authority	Award
FY19	<a href="#">Workplace Gender Equality Agency</a>	Employer of Choice for Gender Equality (awarded annually since 2014)
FY18	<a href="#">Australian Women In Resources Alliance - National Awards 2018</a>	Excellence in Diversity
	<a href="#">Women In Resources National Awards 2017</a>	Excellence in Diversity Programs and Performance
FY17	<a href="#">Victorian Women in Resources Awards</a>	Gender Diversity Programs
	<a href="#">Australian HR Awards</a>	Finalist for 'Best Health & Wellbeing Program'

## Social & Communities

We strive to conduct our activities in a socially responsible manner and demonstrate respect for St Barbara's host communities.

The Group's community relations policy is available on the website at [www.stbarbara.com.au/about-us/governance/](http://www.stbarbara.com.au/about-us/governance/).

Australian employees are entitled to up to five days per annum paid leave for charitable volunteering.

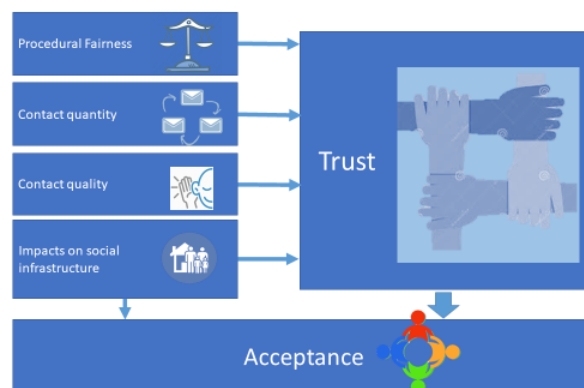
The Group has a mature **stakeholder management** program, resourced with dedicated teams in both Australia and PNG as well as a corporate support and strategy function.

The stakeholder engagement system builds on the guidance and recommendations of peak mining bodies ICMM and MCA, respected Australian and global peers, as well as academic research in Australia and overseas.

The objective of the system is to gain and retain the trust and acceptance of stakeholders through:

- regular and effective engagement;
- recording, monitoring and delivering on promises, especially promises targeted at preventing and mitigating negative environmental and social impacts;
- providing fair and rapid procedural responses (and, if required, action) to concerns or grievances; and
- consulting carefully with stakeholders when there are changes in mining and exploration activities that impact them.

### Trust Model for Stakeholder Engagement<sup>1</sup>



### Simberi

The Simberi Community Relationship Office (CRO) comprises 22 employees, including a project team constantly engaged in community and environment orientated civil works. The Group performs many civil-type functions, providing

<sup>1</sup> Adapted from CSIRO, 3 October 2013, *The paths to social licence to operate: An integrative model explaining community acceptance of mining*

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infrastructure and otherwise supporting health, law and order and education in the community.

During the year local community and provincial government entities provided strong support for the Group's renewal of its mining lease.

*'The Government of New Ireland has formed a positive partnership with the Simberi Mine and St Barbara. I have visited Simberi with members of my Government and was impressed by the operation of the mine, the improvement to infrastructure and services on the island,'* Sir Julius Chan, Governor of New Ireland Province<sup>1</sup>.

The Group has updated the mine closure plan, including an updated mine closure 'Social Impact Analysis' (SIA).

Simberi Island enjoys a high standard of living compared to other parts of Papua New Guinea due to mining. Per capita annual income is approximately US\$1,200<sup>2</sup>, a level that less than 35%<sup>3</sup> of Papua New Guineans enjoy. Housing, schooling and health care are all well above average PNG levels. 43% of males and 14% of females are employed at the mine or in mine related services. The SIA includes detailed planning as to measures towards the Islanders maintaining their current living standard, though this is extremely challenging.

Recent community initiatives at **Simberi** include:

- Ongoing road construction and maintenance
- Drainage management including erosion management and mitigation works
- Construction and maintenance of water infrastructure such as pipelines, tanks and rainwater collection catchments to ensure potable water supply to remote villages
- Construction and maintenance of classrooms and teachers' housing, purchase of books and desks for students, provision of school truck
- Assistance in the construction of community churches
- Long term provision of a fully equipped and staffed medical centre, servicing the community
- Provision of qualified trauma and community health nurse ('Health Emergency Officer or 'HEO'), medical supplies and building maintenance of the community clinic in the neighbouring island.
- Sponsorship of NGO initiatives to prevent malaria ([PIMI](#)) and provide medical services ([Australian Doctors International](#), [Fred Hollows Foundation](#))
- Logistical support to Royal PNG Constabulary (the police) on Simberi Island

- Medical evacuations to regional or national hospital (between 40 and 50 people including carers in each of the three years covered in this report).

The Group is committed to empowering local businesses towards effective business practice and sustainability following the conclusion of mining. Recent community business development initiatives at **Simberi** include establishing:

- Mariculture<sup>4</sup> business (clams and sea cucumbers)
- Market garden and plantation
- Poultry farm
- Bakery and pizzeria
- Simberi Mine Services ('SMS'), a community business umbrella and governance company, established in FY16. The Group provided training in governance and commerce practices, as well as seed funding in FY17.
- Handover of the site store and wet-mess function to a subsidiary of SMS
- Successful negotiation of business support to the Bank of the South Pacific (BSP) for the opening of a branch on the Island.
- In 2019, a new venture exporting tomatoes and onions to the nearby provincial capital. This export crop has the virtue (compared with cocoa or coffee) of being viable in much smaller quantities, immediately, without processing.

Facilitating the creation of the SMS oversight and management organisation has been a particular success. The organisation serves as a centralised voice for the community and landowner-owned businesses. Facilitating the training of SMS staff and partnering in its developing commercial ventures is an ongoing focus for the community relations team.

5,000 cocoa disease resistant seedlings have been purchased by the Group and are being planted progressively in partnership with SMS using traditional organic farming methods of mixed cropping, where subsistence food crops provide shade for the lower growing cocoa plants. The nursery, now self – sustaining, is steadily increasing the numbers of seedlings via grafting and clearing further land on the mining lease for additional plantations. Potentially in time exports will include not just cocoa but also seedlings, spreading the scheme beyond the immediate Tabar Island Group. In 2019 further plantation land has been cleared.

The project moves forward on an influence basis, always seeking to promote ownership by the communities involved.

1 Letter to Chief Mining Warden, Mineral Resources Authority, PNG, 15 October 2018.

2 The Company's own research in fulfilment of Closure planning regulatory requirements.

3 World Bank, April 2019  
<https://databank.worldbank.org/data/download/poverty/33EF>

[03BB-9722-4AE2-ABC7-AA2972D68AFE/Global\\_POVEQ\\_PNG.pdf](#)

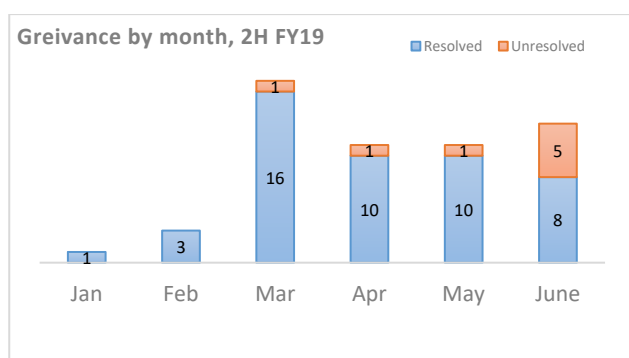
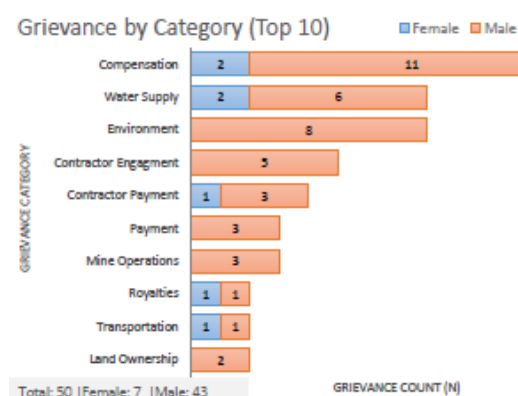
4 The cultivation of marine plants and animals in their natural environment

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The number of requests for seedlings has substantially outpaced supply in 2019.

The **Grievance Resolution Process**, (which is featured in the highlights section), has been enhanced in 2019, with increased capability to track trends and issues and become a proactive tool for Community Relations at Simberi.

For example, analysis of grievances over the second half of FY19 were categorised per the tables below:

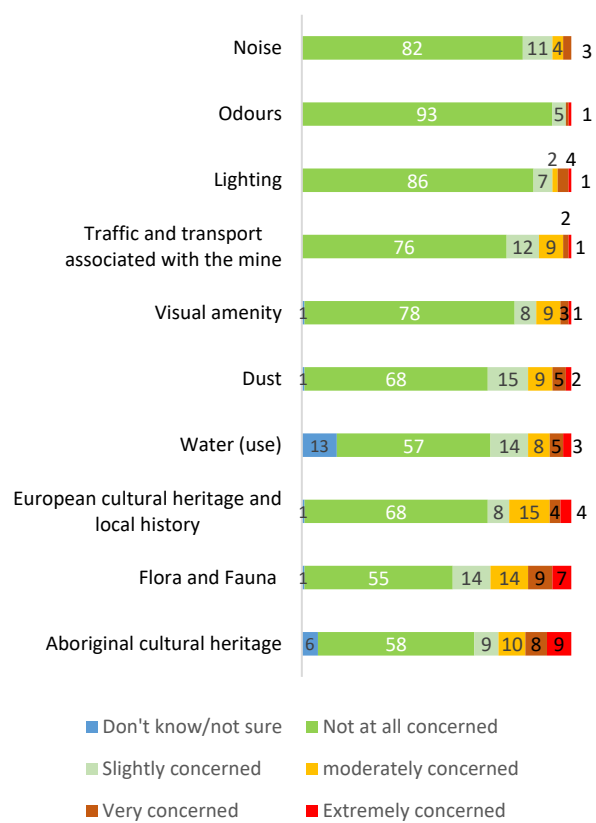


### Leonora

In 2019, the Group engaged consultants to complete a stakeholder survey of the Leonora community. Approximately 14% of Leonora residents participated through either phone, internet, street or focus group aspects of the survey, including a slightly larger proportion of the local aboriginal community.

6% of respondents reported a favourable or very favourable 'opinion or impression of St Barbara'. The main criticisms of the Group concerned the lack of local employment and business opportunities. The Group has taken a number of steps in this area, including working with contractors involved in hospitality aspects of the business as well as local contractors in the areas of civil works. However, the technological and socio-economic shift within Australian mining to smaller, highly-skilled, fly-in fly-out workforces has been evident for a long period.

### Level of concern about potential mining impacts, Leonora (%)



In 2018, the Group announced a three-year commitment to the Leonora netball 'Shooting Stars' program of A\$100,000 p.a., in partnership with neighbouring Leonora-region gold miner Saracen Mineral Holdings Ltd. In 2019, the commitment to women's netball was expanded by joining the [Gold Industry Group](#) three-year sponsorship of women's netball in WA.

The Leonora coordinator of the Shooting Stars' program lives in St Barbara accommodation and teams from the mine workforce compete weekly with program participants.

Also in 2019, the Group announced a three-year sponsorship of [Clontarf](#) of A\$100,000 p.a. This program uses Australian Rules Football as a vehicle to improve the education, discipline, life skills, self-esteem and employment prospects of young Indigenous men.

Other recent community sponsorship and development initiatives supported by the Group at **Leonora** include:

- [Goldfields Girl](#): a series of workshops, scholarships and public events aimed at empowering young indigenous women. Modelled on other successful programs in WA 'Pilbara Girl' and 'Kimberley Girl'.
- [Leonora Golden Gift](#): an historic and world famous elite mile running event. The associated community carnival



## 2019 Sustainability Report

includes fun runs, horse races, fashions on the field, an elite cycling event and live music festival.

- **Kambalda Football Club:** The Group facilitates Leonora players participation in the Kambalda Football Club, (team bus and catering for the often 500 km round trip to play football). An immediate decrease in anti-social youth behaviours was noted when this initiative began in 2017.
- **'Teach learn grow'** bridging the gap educational program: this program brings education students to Leonora to give one on one tutoring to at risk youth.
- The Group sponsors the **Leonora Cup**, a horseracing fixture each October.
- Other sponsorship and in-kind support of Leonora community events in 2018-2019 included the Leonora Bike Challenge, Blue Light (Police) Disco, initiatives combating volatile substance abuse and the Leonora Indigenous Hip Hop Project.

St Barbara is a platinum sponsor of **Get Into Resources**, an initiative to showcase the resources sector to secondary school students in WA.

### Commentary

The Group acknowledges its community responsibilities and seeks to be a good corporate citizen across its operations. The Group has a program of charitable giving and continues to support charitable causes and events associated with our local communities and consistent with our governance obligations.

The Group's **performance on social and community metrics** is published in the [Performance Data](#) section of this report.

## Environment

St Barbara places great importance on responsible environmental management and is committed to continued improvement in the identification, assessment, mitigation and monitoring of the environmental impact of its operations. This section includes commentary on waste management, climate change and water management.

The Group's environment policy is available at [www.stbarbara.com.au/about\\_us/governance/](http://www.stbarbara.com.au/about_us/governance/).

The Group has a well-resourced environment function with a program of compliance and proactive protection and mitigation activities, as part of its comprehensive Health, Safety and Environment Management System (HSEMS) mentioned previously. The HSEMS includes the following environmental components:

- Incident Reporting and Investigation
- Communication, Consultation and Participation
- Environmental Management
- Legal Requirements, Commitments and Document Control
- Crisis and Emergency Management
- Monitoring, Audits and Review
- Planning, Goals and Targets.

At the Leonora Operations (**Gwalia Mine, WA**) the environment team has four full-time qualified professionals, supported by contractors as required.

During the year an asbestos pipe (relating to water infrastructure built in the 1940s) removal project was successfully completed.

In 2018-2019 the Gwalia power station has been increased in size, with a further increase under construction currently. This project requires various permits and studies as part of a detailed regulatory review process around potential noise and emission issues.

Mining in Australia is intensely regulated with numerous reports and audits required by federal and state government regulation. The Group completes a number of externally audited environment related reports pursuant to legislation and licences regarding Gwalia. These reports and audits are summarised below.

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### State Government (Western Australia)

#### Gwalia Closure Plan

Closure planning at Gwalia has shifted from broad strategic planning to specific and highly detailed. This piece of work is considerable and includes:

- Detailed assessments and where necessary rehabilitation plans for current and legacy Tailings Storage Facilities (TSFs).
- Identification of other legacy pollution issues and associated assessment and if needed rehabilitation plans – for example, asbestos related.

In January 2019 the new closure report was submitted to the Department of Mines and is currently being reviewed by them. Subsequent to this review the report will be published to our website and the regulators disclosure website<sup>1</sup>.

The **Annual Environmental Report to Department of Water and Environment (DMER)**<sup>2</sup> – This report provides data on monitoring, compliance, complaints, tailings storage, waste water, dust, incidents, hazardous chemicals, land disturbance and other environmental type metrics. This report is publicly available and on our website<sup>3</sup>.

The **Annual Environmental Report to Department of Mining, Industry Regulation and Safety (DMIRS)** – This report provides data on major activities, environmental management and rehabilitation activities, proposed developments, compliance, incidents, monitoring and disturbance.

The **Water Extraction Management Plan** – This report is to the state government water regulator, the Western Australian ‘Water Corporation’. The report comprises water efficiency and water usage reduction activities.

The **Annual Groundwater Monitoring Review** – This report provides information on water ‘abstraction’, including monitoring, compliance and impact assessment.

### Federal Government (Commonwealth of Australia)

**National Pollution Inventory (NPI)** – This is a report to the Australian federal government and provides data on use of classified ‘priority’ substances (26 identified in the 2018 report) as well as control measures and any improvements. A summary is publicly available<sup>4</sup>.

**National Greenhouse and Energy Reporting (NGERS)** - This is report to the Australian federal government on company

information about greenhouse gas emissions, energy production, energy consumption and related information.<sup>5</sup>

### Environment events and achievements

St Barbara’s Leonora Operations won Gold and Platinum ‘Waterwise Business’ awards in 2013 and 2014 for water conservation from the Western Australian ‘Water Corporation’, as well as ‘Golden Gecko’ certificates of merit in 2009 and 2015, see: [St Barbara Sustainability Awards](#).

At **Simberi (PNG)**, the environment team has four full time qualified staff, an extensive nursery to support revegetation of finished mining areas, supported by landowner companies and casuals from the local community as required. Key recent initiatives include:

- Ongoing investment in site rehabilitation and closure preparation, including disposal of site scrap metal and tree planting of waste dumps and disused mining areas.
- An ongoing investment in hydrology monitoring and management program. This included construction of permanent water monitoring infrastructure at key stream and catchment locations, automatic weather monitoring, and includes daily monitoring schedules and awareness programs with Island communities.
- The environment team manages a long established and effective grievance resolution process, in conjunction with the Community Relations office.
- The exploration team manages a similar grievance resolution function to support communities impacted by exploration activities in the Tabar Island Group.

Details of the grievance process can be found in the [‘Social and Communities’](#) section earlier in this report.

The Group’s **performance on environmental metrics** is published in the [Performance Data](#) section of this report.

The Simberi Environment team produces monthly and quarterly reports to government agencies including water testing results, grievance reporting and progress in meeting closure obligations.

#### Simberi Closure planning

During 2019 the Environment and Community team completed updates to the site closure plan. With closure pending, this included an updated and highly detailed Social Impact Analysis of closure.

1 Available [here](#).

2 Available on our website [here](#), from 2008 to 2016, [and on the regulator’s website here](#) from 2013 to present.

3 Available on our website [here](#), from 2008 to 2016, [and on the regulator’s website here](#) from 2013 to present.

4 A summary is available at the regulator’s website [here](#).

5 The St Barbara 2018 report and summary of previous years is available [here](#)

## 2019 Sustainability Report

### Waste: Tailings and waste rock

Gold mining generates two bulk waste products: process tailings and waste rock.

#### Tailings

The Group manages tailings according to strict regulatory requirements with engineered and audited solutions at both mines.

#### **Gwalia (Leonora Operations WA)**

##### *Tailings Storage Facility*

The current Gwalia Tailings Storage Facility (TSF) was designed by a leading specialist engineering firm to comply with Western Australian regulatory requirements. It is inspected annually by an external firm. Other engineered risk-prevention methods include telemetry, piezometers, freeboard monitoring and chemical testing, all reported to the regulator in compliance with legal requirements.

The current TSF is an isolated and elevated shallow pond, entirely separate to natural water catchments. The wide, arid, desert environment and low propensity for earthquake, together with the particulate qualities of the tailings, makes a permanent storage structure of this style extremely reliable. As for most of outback Western Australia, water courses do not drain to the ocean and have standing water only occasionally at certain times of the year.

##### *Current Gwalia Tailings Storage Facility (TSF3)*

##### Type of TSF:

- Paddock
- Upstream raise construction

##### Metrics:

- First approved: 1992
- Elevation: ~376m
- Current wall height: 30 m
- Projected final wall height: 32 m
- Tailings deposition rate: 750-850 ktpa
- Deposited density: 1.4-1.5 t/m<sup>3</sup>
- Total capacity: 30 Mt
- Perimeter: 3,000 m
- Impoundment area: ~70 ha
- Current impoundment volume: ~17.1 x 10<sup>6</sup> m<sup>3</sup>
- Current mass of solids stored: ~25.6 x 10<sup>6</sup> t
- Final raise expected by 2023; new TSF will be ready for utilisation at that point.
- Tailings are mined for concrete aggregate material for the paste fill plant.

- During 2018/19, a review of emergency plan and dam rating was completed based on ANCOLD and regulatory standards.
- In 2019 stability drill testing was completed and an additional eight piezometers were installed to provide increased certainty of TSF stability.

##### TSF 3 Governance

- Engineer of Record & Independent Tailings Engineer
  - Annual safety inspections
- Insurance Assessment
  - Annual visit
- WA Government, Department of Water and Environmental Regulation
  - Periodic inspections
- WA Government, Department of Mines, Industry Regulation and Safety
  - Guide to Departmental requirements for the management and closure of tailings storage facilities (2015)
  - Tailings Dam Audit Guide (2013)
  - Safe Design and Operating Standards for Tailings Storage (1990)
- A regulatory mine closure plan is in place which includes rehabilitation of the TSF.

##### *Historical rehabilitated TSFs*

A further 11 historical TSFs lie within the St Barbara Mining lease. Ten of these are rehabilitated (buried under layers of soil and rock, vegetated, isolated from potential watercourse erosion). One TSF falls within the area of disturbance of a proposed new mining area that has formal ore reserves 'Tower Hill'.

During 2018 - 2019 a program of drilling was undertaken at 9 of the 11 'legacy' TSFs as part of detailed closure planning. One TSF was excluded after initial drilling was unable to reach below legacy rehabilitation rock armour due to its depth. The Tower Hill TSF, for reasons noted above, was also excluded.

##### This review included:

- Assessment of seismic stability of the TSFs, including water content of dam walls where applicable.
- Chemical and water content testing of the stored tailings to update databased assessments from the time of closure
- Depth of rock armour and soil at previously rehabilitated TSFs
- Assessment of any remaining rehabilitation obligations.

No risk issues have been discovered. Some TSFs do not meet revegetation standards (applicable to any area of disturbance, not just TSFs) for full and final rehabilitation certification.



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### *Underground Tailings Storage*

Gwalia's tailings are themselves mined to provide suitable aggregate material for use in cement (paste-fill) to fill underground mining voids. In 2019, 423,000 tonnes Gwalia's tailings (68% of total tailings) were deposited permanently underground by this method. This also prolongs the life of the existing TSF, by creating space for the deposit of new tailings.

### **Simberi**

Tailings at Simberi are disposed by Deep-Sea Tailings Deposition (DSTP). The discharge point is 135 metres below sea level and 300 metres offshore. The discharged heavier-than-water 'thickened' tailings deposit over a continental shelf to rest approximately three kilometres deep on the ocean floor. The tailings themselves are benign. The system was designed and built by a leading specialist engineering firm to what is generally recognised to be a leading risk standard. The DSTP is a key component of the government approved mining lease.

The Group conducts monthly testing of the marine environment at multiple locations around Simberi Island. Results are reported to the regulators and the Simberi Island communities. The tailings pipeline is regularly inspected by divers, and periodically by deep-sea robotic submersibles.

The Simberi mine has no other safe tailings disposal or treatment option. Pond type tailings storage facilities (such as at Gwalia) are inappropriate due to tropical rainfall, topography and the high potential for earthquakes in the area. The proximity to extremely deep water makes tailings management of this type uniquely low impact and low risk to the environment and local communities.

### **Targets and Progress**

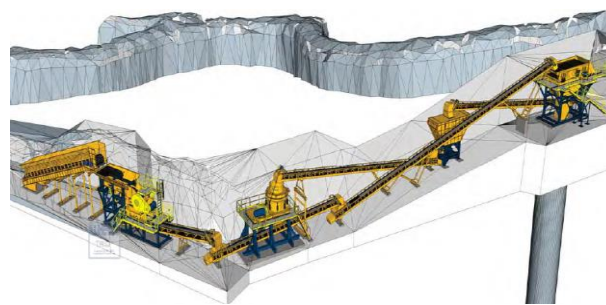
The Group does not have (and does not propose to have) tailings volume reduction targets beyond organic economic incentives, however, the Group seeks to avoid or minimise all environmental impacts, as well as to comply with the related strict regulations and licence obligations in place at both mines.

### **Waste Rock**

The Group manages waste rock according to strict regulatory conditions at both mines.

### **Gwalia (Leonora Operations WA)**

Waste rock is presently deposited in the historic Gwalia open-pit, excavated by mining in the 1980s. This assists with rehabilitation obligations, reducing future closure costs. Since 2015, where possible the Group has deposited waste rock directly in underground voids, generally in conjunction with paste-fill.



### **'Paste Aggregate Fill' underground waste rock crushing**

The Group is building underground infrastructure to allow permanent underground storage of up to 100% of waste rock. This involves underground crushing (equipment circuit pictured above) and mixing with paste-fill piped down from surface. This is due for completion in the December 2018 quarter.

### **Simberi**

Simberi waste rock is deposited into licenced 'dumps' in valleys on the mining lease adjacent to the mining pits.

All dumps have been built to civil engineered designs, reviewed and approved by PNG government environment department auditors.

All the water catchments in the Simberi mining area are fully within the mining lease with engineered drainage, ensuring any erosion does not impact neighbouring communities.

### **Targets and progress**

The Group targets 100% of waste rock to be disposed of via licenced and controlled solutions. The Group does not have (and does not propose to have) waste rock volume reduction targets, as waste rock in open pit mines is determined by safety requirements of in-pit wall angles and access roads.

### **Cyanide and Arsenic**

Compliance and risk management regarding pollution from hazardous chemicals is one of the Group's main risk focus areas.

Cyanide and arsenic are commonly associated with gold mining.

Both of the Group's mines use cyanide in the processing of gold, as do most gold mines globally. The use, storage and disposal of cyanide is closely monitored and subject to strict government regulations.

At Gwalia, cyanide naturally breaks down to harmless cyanate compounds while exposed to air and sunlight in the shallow tailings storage facility 'ponds'. Historical (pre-St Barbara) tailings have safe, background cyanide levels similar to that of the surrounding soil.

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At Simberi, a minimal concentration of cyanide is present in tailings deposited as described in the 'Tailings' section above. The oceanic environment is regularly tested to ensure cyanide levels are within the Government approved limit of 0.01 mg/l, with results reported to the Government on a quarterly basis. This is a fraction of the World Health Organization 'health-based' guide for drinking water of 0.5 mg/l<sup>1</sup>.

There are five (5) routine testing points in a one kilometre radius of the DSTP outlet point. Samples are taken at surface and at 115 m below surface depth. Regular testing also occurs at the final Carbon-In-Leach (CIL) tank in the processing plant and at the 'mixing' tank prior to deposition.

The existing compliance with state and national cyanide regulations in Australia and PNG is consistent with the 'International Cyanide Code', and formal adoption of that Code is not considered necessary to provide additional environmental protection.

Arsenic is not added as a chemical to the gold processing circuit, however, arsenic often occurs naturally in gold bearing ores, especially sulphide 'pyrites'. These types of ore are present at the Simberi mine in PNG and to a lesser extent at Gwalia in WA.

At Simberi, arsenic is present at very low levels of concentration in natural erosion in the region, and therefore it is also present in sediment from the mining areas and in the tailings. The concentration of arsenic in the tailings less than one tenth of the World Health Organization guidelines for drinking-water quality<sup>2</sup>. Arsenic is included in the testing regimes for cyanide mentioned above, with results also reported to the Government on a quarterly basis.

### **Other categories of waste**

Data and commentary on several other categories of waste relating to the Gwalia mine is available in publicly available 'Annual Environment Reports'<sup>3</sup>.

## Water

The Group has low risk with regard to water at its mines.

The Group has expanded water reporting in 2019, including **Simberi usage** and **recycling** data at both mines for the first time. Water recycling information is an economic efficiency measure rather than a sustainability measure. Neither operation is in competition with other users for water abstraction (see below).

### **Gwalia (Leonora Operations WA)**

Gwalia has negligible water security risk as it is not in competition with domestic or agricultural water users. Gwalia is located in a desert region with no natural potable water sources. There is an abundance of non-potable saline water sources, which are not suitable for domestic or agricultural use.

The mine participates in two types of water regulation.

'Town' or 'scheme' potable water (water extracted from non-potable saline sources by the municipal authorities and treated by them to a potable standard) is used in the mining accommodation camp and other domestic type situations and makes up less than 3.5% of overall mine water usage.

The mine works closely with the relevant water regulator and local government on 'town' water usage. This has included voluntarily participating in a second five year Water Efficiency Management Plan ('WEMP'<sup>4</sup>). The plan involves minimising water usage and early detection of leaks and a self-selected target based on projected usage and planned efficiencies.

The Group itself extracts non-potable ground water from saline 'bore' sources, as well as from deep parts of the mine. The Gwalia mine is a net producer of saline water and uses less than a quarter of its regulated 'non-potable' saline water allocations<sup>5</sup>. Much of this water is treated to a near potable standard by the Group's own treatment plants for use in processing applications.

The Group won two [WaterWise Business Awards](#) from the Water Corporation, Western Australian in 2012 and 2013 for excellence in water usage reduction, including a 35% reduction in total water usage.

For the first time this year, the Group has reported potable water data relating to the domestic usage at the 'accommodation camp' in Leonora, 5 km from the minesite.

1 [Guidelines for Drinking-water Quality, 4th edition, World Health Organization](#), health based guide for short-term use.  
2 [www.who.int/news-room/fact-sheets/detail/arsenic](http://www.who.int/news-room/fact-sheets/detail/arsenic), 0.05 mg/l  
3 Available on our website [here](#), from 2008 to 2018, [and on the regulator's website here](#) from 2013 to present.

4 [Western Australian Water Regulator website concerning its WEMP program for major water users](#)  
5 Refer [Performance Data](#) section of this report

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### Simberi

Potable water at Simberi is abundant due to the high rainfall typical of tropical maritime regions, greater than 4 metres per year.

For commercial reasons, the Simberi mine utilises various water efficiency techniques, recycling more than 80% of potable and process water.

#### Targets and progress

The business essential water usage at Gwalia is from saline non-potable groundwater sources and is not in competition with any other user. Less than 25% of the permitted water entitlement is used by the mine. The Group works closely with regulators and local government on an ongoing basis regarding potable 'town' water usage (less than 3.5% of total mine usage).

The Simberi mine is currently expected to close in 2021. The mine's use of water does not impact the community or the environment due to the very high rainfall associated with the tropical climate.

## Climate Change

St Barbara acknowledges the Paris 2015 UNFCCC agreement and seeks to make it relevant to the Group as detailed in this section.

St Barbara seeks to:

- limit absolute emissions,
- use carbon based fuels more efficiently, and
- protect the business from the effects of already occurring climate change and future climate change impacts.

#### Climate risk strategy and governance

##### Summary

In 2019 the St Barbara Board considered climate change risk and governance as part of its strategic planning.

##### *Governance*

The Board has determined it will retain oversight of climate change related issues rather than delegate it to a Board sub-committee.

##### *Strategy*

The Board considered risks and opportunities regarding climate change. A summary of these are available below.

It was concluded that the major 'operational' impacts of climate change (changes to weather patterns, sea level increases) fell beyond the anticipated mine-life of the Group's longest life mines (Gwalia, Western Australia, 2031) and therefore were not material for the current financial reporting period.

Regulatory risk and the possibility of changes to regulation of carbon emissions in Australia pose the strongest climate related risk to the Group. These risks could impact the profitability of the Group:

- through the requirement to purchase carbon credits (or equivalent schemes); or
- through increased operational costs from the requirement to purchase renewable power (or through directly investing in renewable power).

The Board noted benchmarking data showing that the Group production emissions intensity (metric tonnes of carbon dioxide equivalent, per ounce of gold produced) was currently amongst the most efficient of any gold producer declaring the information publicly (presentation at the start of this report, slide 53). It was acknowledged that this advantage may erode. The Group's dominant mine is building additional power generation capacity to facilitate deeper underground mining and production is unlikely to increase commensurately, increasing emissions intensity.



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The Board directed Management to investigate the sensible inclusion of renewable power in its power consumption mix.

A study considering renewable power has commenced at the Group's longest life mine, Gwalia. Details concerning this study are set out later in this report.

### **Risk and opportunity detail**

#### *Gold industry*

The World Gold Council has provided analysis on the potential impact on gold demand from climate change and the transition to a low carbon economy, available [here<sup>1</sup>](#).

#### *Power usage intensity*

Gold producers are significant users of power, and intensity (amount of power used per ounce of gold mined or dollar revenue) absent proactive action by miners, is likely to increase:

- Underground mining is increasing as a proportion of total mining versus 'open cut' mining, and existing underground mines are becoming deeper, requiring more ventilation.
- An increasing proportion of total gold mining is of refractory ores that require more energy intense processing.

This leads to greater vulnerability to climate change related energy regulation.

#### *Geo- political and macroeconomic risk and opportunity*

Gold mines are often located in third world countries with greater vulnerability to climate change. Third world countries are likely to see a greater incidence of disruption to business from climate related impacts, such as:

- natural disasters disrupting infrastructure, supply chain and human resources,
- increased immigrations flows, and
- political and economic instability.

Third world markets such as China and India have been strong growth areas for gold consumption recently, and instability that halted or slowed economic growth in the third world may have an impact on gold demand.

Gold is a traditional hedge instrument for government and investors versus uncertainty and downturn in other markets and may benefit from global instability.

#### *Technology – substitution risk, opportunity*

The power intensive nature of gold production gives risk to the risk of substitution – that is, technological demands for alternatives to gold that are less power intensive, such as crypto-currencies, jewellery items that exclude gold, and high conductivity products that might replace gold's industrial usages.

Demand for gold in industrial applications is likely to increase (in the absence viable substitutions) due to its conductivity properties in micro-circuitry.

#### *St Barbara specifically*

The following section details potential impacts of climate change and the transition to a low carbon economy on the Group and its current mines.

### ***Gwalia (Leonora Operations WA)***

#### *Physical impacts*

The Gwalia mine life currently extends to 2031, in general serious climate change impacts, as outlined by the [RCPs](#) (Representative Concentration Pathways - UN climate scenarios, the basis for companies to model the effects of climate change), occur **well after this time**.

Should Gwalia be a viable mine past 2040, the long term climate change impacts in the [central WA geography](#) outlined by the RCPs (page 12) include drying and increased average temperatures (in 2 degree to 8.5 degree scenarios).

Implications for Gwalia mine:

- (Saline) water is currently abundant, with the Leonora central desert environment characterised by large aquifers of usually hypersaline water unsuitable for domestic or agricultural use, meaning the mine is not generally in competition with others users. Changes in rainfall are not therefore high risk for operations.
- Increases in temperature: As well as making surface maintenance and other operational tasks more difficult, extreme heat (in excess of 42 deg) impacts the gas power generation of the type currently used at Gwalia - the gas/air mix has to be altered, reducing the power output. This is a current challenge at Gwalia that impacts the operation for up to five days per year, lessening the upper limit of availability of underground mine ventilation at those times. An increase in the number of such days would have an arithmetic impact.
- Though increases in rainfall extreme events is not predicted, Gwalia is resilient to these. In the last five years, 1 in 100 and 1 in 200 year rainfall events were managed with minimal interruption to production (2014: 6 days, 2017: no interruption).
- Possible impact on surface staff – health and safety processes for extreme weather days are known and effective. Should extreme weather events duration be greater than 2-3 days additional measures have been considered.

<sup>1</sup> [www.gold.org/goldhub/research/gold-investor/gold-investor-february-2019/golds-role-in-a-low-carbon-economy](http://www.gold.org/goldhub/research/gold-investor/gold-investor-february-2019/golds-role-in-a-low-carbon-economy)

Figure 2

## Core Elements of Recommended Climate-Related Financial Disclosures



### Governance

The organization's governance around climate-related risks and opportunities

### Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

### Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

### Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

### The TCFD 'Core elements'<sup>1</sup>

#### Simberi, PNG

##### Physical impacts

Simberi is currently expected to close in 2021, but under some scenarios, [discussed](#) by the Group, mining could extend a further 10 years or longer, with an active drilling campaign currently occurring to support this possibility.

Should Simberi be a viable mine from 2040:

- Potential for impact via sea level increases *after 2050*. The mine processing plant, airfield and wharf facilities are situated at low elevation on the coast.
- Increased rain likely (per the RCPs page 12) [in this region](#) could impact mining open pits. Though not currently a significant issue at Simberi due to the altitude and situation of mining (on ridges), open cut mines in high rainfall areas are occasionally impacted via pits flooding.

#### Regulatory Impacts, Gwalia and Simberi

Regulatory impact is the major short-term climate-related risk and potential impact on the Group.

#### Carbon tax or trade

The Group, as with all other significant energy consumers, would be impacted by commencement of carbon taxing and trading, should this occur in Australia or Papua New Guinea, or through extension of current Australian climate change

mitigation initiatives such as the '[Safeguard](#)' scheme (which does not currently impact Gwalia).

The Group's margins are able to manage various possible scenarios.

**Papua New Guinea** has no carbon emission monitoring or targets nor any readily observable trend in its public discourse advocating such legislation.

#### Strategy

*Energy efficiency and renewable energy studies*

#### Gwalia: minimisation of diesel in power generation

When burned in appropriate generators, natural gas based power production is approximately 40% more emission efficient than diesel. In general however gas generators take several minutes to become operational, where as diesel generators provide power nearly instantaneously. Gwalia is currently engaged in a project seeking to minimise the use of diesel in power generation versus natural gas. The use of

batteries is being considered as part of this project.

Gwalia: renewable power

A further study is underway seeking to understand opportunities for renewable power generation at Gwalia. This includes:

- Solar photo-voltaic
- Wind

<sup>1</sup> From the Task Force for Climate related Disclosure, TCFD, <https://www.fsb-tcfd.org/>

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- Both solar and wind in combination with battery storage
- Purchase of carbon emission offsets.

Renewable power might be delivered via agreements with power providers, direct investment, or agreements with green funding type entities and their project agents.

The energy costs of power transmission mean that Gwalia as a significant power consumer, is viewed favourably as a situation where other entities seeking to offset their emissions might invest in a renewable power project. Solar voltaic presents the lowest risk in terms of investment capital, flexibility and operational complexity and would be the likely methodology.

The current visualised model has solar generation capacity that meets minimum full power needs, with gas to provide excess, night and back-up capacity with some combination of batteries and diesel generation to manage integration between modes. Total potential reduction in greenhouse gas emissions is estimated at between 25% and 33%.

Challenges to be managed include life of asset vs life of mine considerations (with a solar array typically having a longer life than the mine), suitable situation and acreage for the solar array (which would effectively render that area inaccessible for drilling and other business activities for the life of the asset) and interaction with current power generation contracts.

### Accounting treatment of climate change

#### *Impairments*

The Group has conducted sensitivity testing to forecast results using a number of different physical and regulatory scenarios.

The physical impacts of climate change on the Leonora and Simberi Operations of the Group are too remote in time versus the mine life of these operations (closing 2031 and 2021 respectively) and uncertain in nature to lead to impairments at this time.

The impact of a regulatory change such as implementation of a carbon trading scheme or changes to the Safeguard mechanism has been assessed as not material due to uncertainty.

#### *Closure – Asset Rehabilitation Obligations*

With closure at both currently owned mines occurring well before the period identified by the IPCC when climate change impacts on the intensity and frequency of extreme weather events (as well as the onset of chronic weather impacts), closure obligations are not materially impacted by climate change risks.

Both the Gwalia and Simberi mines have potential for mine life to be extended, as is the case with all mines with open deposits.

The Group will consider this each year as part of its strategic and accounting processes.

### ***Gwalia: greenhouse gas emissions – current performance and future trends***

Greenhouse gas emissions intensity on a production and revenue basis at the Gwalia mine have trended downwards in recent years. This is due to ongoing improvement in operational performance as well as key efficiency innovations.

In 2015 an ‘adsorption chiller plant’ was built and commissioned at Gwalia, a world-first application for a mine. The chiller plant uses waste heat from the power plant, and replaced a traditional ammonia refrigeration plant, saving an estimated 4,000 to 5,000 tonnes of CO<sub>2</sub> per year. The \$5.5 million purchase and construction price of the chiller plant was repaid in power savings within 2 years.

Emissions intensity is likely to increase over time at Gwalia. The depth of mining increases by approximately 40 metres each year. In general, this increases the demands on ventilation and the distance trucks must travel.

In addition, it is anticipated that the mined grade will gradually reduce as the mine gets deeper.

The Group is seeking to manage costs of production and contain the increase in emissions intensity by continuing to implement innovative projects as well as by incremental efficiencies.

### ***GEP – Gwalia Extension Project***

The Group is currently engaged in building various items of infrastructure that will reduce costs and increase mine-life. ‘GEP’ includes additional power generation, ventilation and cooling, as well as the ‘Paste-Aggregate-Fill’ (PAF) underground crushing and mixing infrastructure.

### ***Simberi greenhouse gas emissions – current performance and future trends***

Greenhouse gas emission intensity at Simberi has improved over the last five years due to the improvements in production at that site.

An important contributor to emission efficiency at Simberi is the **Aerial Rope Conveyor** (or ‘Ropecon’). This conveyor stretches nearly 2.5 kilometres from the mining areas to the processing plant over rugged terrain and utilises gravity as a power source. When fully loaded the Ropecon contributes power to the Simberi grid and is a net contributor overall. Maximising usage of the Ropecon has a strong impact therefore on greenhouse gas emissions at Simberi. The Ropecon has saved approximately 7,000 tonnes of CO<sub>2</sub> per annum since 2017 compared to conventional trucking.



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**2019 Sustainability Report****Targets**

The Group is satisfied with its current performance, being one of the best performers in intensity of emissions in the gold industry globally (see chart in the presentation earlier in this report, slide 53). In the short term, the Group will target remaining in the top two quartiles for intensity versus the gold industry globally.

The Group is considering specific greenhouse gas reduction targets for future adoption, including consideration of guidance provided by the Science Based Targets Initiative (SBTI)<sup>1</sup>.

The Group has engaged with representatives of the SBTI and sought guidance regarding the appropriate measure for targets for the gold industry and it was confirmed as per published guidance ([here](#), page 19) that the appropriate measure is 'production intensity' as part of a 'Sectoral Decarbonation Approach'.

The intention of the SBTI in their guidance is that market supply (global gold production) will stay approximately static, meeting consumer demand, while associated emissions reduce in line with global requirements for emission reductions. An important element is that globally all producers 'converge' to a best practice level ([here](#), page 21).

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1 <https://sciencebasedtargets.org/>

## 2019 Sustainability Report

## Performance Data

	Notes	FY17	FY18	FY19	Target
<b>Governance &amp; Economic Performance</b>					
<b>Governance</b>					
Governance performance reported in Annual Report and Corporate Governance Statement (CGS).		<a href="#">Annual Report</a>	<a href="#">Annual Report</a>	<a href="#">Annual Report</a>	
Selected key indicator of Governance Performance:		<a href="#">CGS</a>	<a href="#">CGS</a>	<a href="#">CGS</a>	
Compliance with ASX Corporate Governance Council Principles and Recommendations	1	100%	100%	100%	100%
Political Donations (A\$)		\$0	\$0	\$0	\$0
Payments to Peak Bodies (A\$M)	2	\$0.2 M	\$0.3 M	\$0.3 M	n/a
Whistle-blower complaints		1	1	0	n/a
<b>Economic Performance</b>					
Economic performance reported in Annual Report.		<a href="#">Annual Report</a>	<a href="#">Annual Report</a>	<a href="#">Annual Report</a>	
Selected key indicator of Economic Performance:					
Earnings per share (basic, underlying)		\$0.32	\$0.39	\$0.27	n/a

**People**

<b>Diversity –reported in Corporate Governance Statement</b>					
Diversity performance reported in Corporate Governance Statement.		<a href="#">CGS</a>	<a href="#">CGS</a>	<a href="#">CGS</a>	
Selected key indicator of Diversity Performance:					
Proportion of women employed (Australia)		21%	24%	25%	30% by 2022
Indigenous Employees at Leonora Operations		3.1%	3.6%	3.4%	5% by 2020
Overall Gender Pay Gap	3	14%	14%	12%	8% by 2022
Nil gender pay gap for 'like-for-like' roles	4	nil	nil	nil	maintain nil
<b>Employee and Contractor numbers</b>					
Australia	Employees	219	229	242	n/a
	Contractors	326	397	520	
	Total	545	626	762	
Papua New Guinea	Employees	747	762	770	
	Contractors	391	483	470	
	Total	1,138	1,245	1,240	
Total	Employees	966	991	1,012	
	Contractors	717	880	990	
	Total	1,683	1,871	2,002	
<b>PNG employment participation</b>					

- 1 Compliance, or satisfactory disclosure of alternative governance practices adopted in lieu of a recommendation, as prescribed under the ASX Corporate Governance Council Principles and Recommendations (4th edition).
- 2 Comprises Minerals Council Australia, Chamber of Minerals and Energy Western Australia and (from FY18) Gold Industry Group. Excludes where company pays professional service fees and employee memberships (for CME WA).
- 3 The 'Overall Gender Pay Gap' is calculated according to the WGEA guidelines ([www.wgea.gov.au](http://www.wgea.gov.au)), and represents the difference between the average pay for all male employees and the average pay for all female employees across the whole organisation.
- 4 The 'like for like' gender pay gap measures the difference in base salary over the year between male and female employees in comparable roles.

## 2019 Sustainability Report

	Notes	FY17	FY18	FY19	Target
Nationality	PNG - Simberi and local islanders	55%	54%	52%	
	PNG - Other	41%	43%	44%	
	Non - PNG (expatriates)	4%	3%	4%	Remain under 5%

## People (continued)

Employee turnover					
Australia		8.8%	7.2%	16.1%	Remain under benchmark
Australia Mining average for comparison	1	9.6%	9.8%	13.8%	
Papua New Guinea		7.4%	7.0%	4.6%	
Total turnover		7.7%	7.0%	7.2%	
Maternity/Paternity leave, return to work, last 3 years total		Total 3 years FY17 to FY19			
		# took parental leave	% returned to work	% retained 12 months after returning	Target % returned to work by 2022
Australia %, # maternity leave		12	100%	83%	80%
Australia %, # paternity leave		25	100%	92%	80%
PNG %, # maternity leave		27	88%	77%	80%
PNG %, # paternity leave,		0	0%	0%	No target
Overall		64	95%	88%	80%
Employee Training & Development hours p.a.		FY17	FY18	FY19	
Australia overall	2	34	25	31	Target under consideration
Australia: Women		31	24	32	
Australia: Men		35	25	30	
Papua New Guinea overall		26	30	35	
PNG: Women		34	38	44	
PNG: Men		25	29	34	
Overall		28	29	34	
Overall women		33	33	36	
Overall men		27	28	30	
Employee Training & Development spend A\$ p.a.		FY17	FY18	FY19	
Australia overall	3	1,360	1,822	1,594	Target under consideration
Australia: Women		1,240	1,749	1,645	
Australia: Men		1,400	1,822	1,542	
Papua New Guinea overall		649	831	608	
PNG: Women		701	890	644	
PNG: Men		597	773	571	
Overall		819	1,068	843	
Overall women		804	1,104	967	
Overall men		822	1,055	810	

- 1 The Mackie 'RITA' Report – Jan 2019 figures. RITA report has 29 Australian Resource industry companies participating. 'Turnover' is voluntary employment moves only. Only direct employees measured.
- 2 Does not include Study Assistance, Study leave hours and contains an approximate consideration for annual hours spent in online compliance training.
- 3 Does not include Study Assistance, Study leave hours and contains an approximate consideration for annual hours spent in online compliance training.



## 2019 Sustainability Report

	Notes	FY17	FY18	FY19	Target
<b>Employee engagement survey</b>					
% of employees who responded	1	78%	83%	77%	70%
% favourable responses	2	79%	83%	73%	64%
<b>Performance and development reviews, % of employees receiving</b>					
Australia %		100%	100%	100%	100%
PNG% management and supervisory staff		100%	100%	100%	100%
PNG% overall	3	Insufficient data	16%	16%	No target
Overall%		Insufficient data	35%	35%	No target

**Economic contribution**

<b>Taxes/Duties paid (excluding company income tax, GST &amp; employee salary taxes)</b>					
	A\$M				
Australia		2.2	4.4	3.3	n/a
Papua New Guinea		0.3	0.3	0.3	
Total taxes / duties paid		2.6	4.9	3.6	
<b>Income tax paid</b>					
	A\$M				
Australia	4	0	39	61	n/a
Papua New Guinea	5	0	0	0	
Total Group income tax paid		0	39	61	
<b>Wage/Salary taxes (paid by Group on behalf of direct employees)</b>					
	A\$M				
Australia		11	13	14	n/a
Papua New Guinea		7	7	7	
Total		18	20	22	
<b>Royalties paid to gov't and communities (excluding corporate royalties)</b>					
	A\$M				
Australia		11	11	10	n/a
Papua New Guinea		4	5	6	
Total royalties paid		15	16	16	
<b>Total taxation and royalties (excluding corporate royalties)</b>					
	A\$M				
Australia		24	68	89	n/a
Papua New Guinea		12	12	13	
Total		36	81	102	
Total as % of Net Profit After Tax		23%	36%	71%	
<b>Community Expenditure</b>					
	A\$M				
PNG community expenditure	6	1.4	2.3	1.4	n/a
PNG expenditure with Landowner associated companies	7	7.6	6.6	7.0	
Australian sponsorships, in kind support		0.1	0.1	0.1	

1 Target = top quartile of participation observed by external survey provider (Blue Provident), global, all industries.

2 Target = top quartile of participation observed by external survey provider (Blue Provident), global, all industries.

3 FY18-19 figures represents number involved in the performance management system

4 The Group applied previous tax losses to reduce tax payable until 2017. The Group commenced paying income tax in 2018.

5 The Company has accumulated tax losses in PNG, which have been applied to reduce tax paid during the reporting period.

6 Cost of Community Clinic and support functions. Converted from US\$ at exchange rates shown at the end of the Performance Data table. 2017 re-stated from previous year, was 1.7.

7 Converted from PGK to A\$ at exchange rates shown at the end of the Performance Data table. 2017 re-stated from previous year, was 7.2.

## 2019 Sustainability Report

	Notes	FY17	FY18	FY19	Target
<b>Health and Safety</b>					
Total recordable injury frequency rate (TRIFR)	1				Target
Australia		1.8	4.8	11.0	3.1
Papua New Guinea		0.8	1.2	1.7	1.9
Total		1.2	2.1	5.0	2.3
<b>Recordable injuries</b>					
Australia		2	6	18	N/A
Papua New Guinea		2	3	5	
Total		4	9	23	
<b>Lost time injury frequency rate (LTIFR, 'serious injury rate', not used in Group targets, provided for information)</b>					
Australia	2	0	0	1.4	N/A
Papua New Guinea		0.8	0.8	0.7	
Total (includes exploration)		0.5	0.5	1.1	
Benchmark (Underground mines, Western Australia)	3	2.6	2.9	1.9	
<b>Fatalities</b>					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Total		0	0	0	0
<b>Health and Safety Fines &amp; Penalties</b>					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Total		0	0	0	0
<b>Environment</b>					
Total Incidents	4				
Australia		10	10	14	No target
Papua New Guinea		22	29	53	
Reportable Incidents	5				
Australia		2	2	2	No target
Papua New Guinea		5	8	0	

1 Historical rolling 12 months recordable injuries per million hours worked.

2 Historical rolling 12 months lost time injuries per million hours worked.

3 <http://www.dmp.wa.gov.au/Safety/Safety-statistics-16198.aspx>

4 2018 GHG, water and energy usage data is based on management reports. Final external reporting for NPI and NGERS (National Pollutant Inventory & National Greenhouse Emissions Reporting Standard – Federal Australian government reporting obligations) had not been finalised as at the date of this report and may vary.

5 Incidents are categorised via St Barbara Environment Incident Categorisation risk matrix as to their potential and actual environmental impact. The consequence component of this matrix is shown below. 'Total' incidents include all types of incident except 'insignificant', i.e. Minor, Moderate, Major, Critical.

Insignificant	Minor	Moderate	Major	Critical
Very low environmental impact (e.g.: localised spill)	Reversible environmental impact, immediately contained	Reversible environmental harm extending beyond site boundary, immediately contained.	Widespread environmental impact, not immediately contained.	Widespread irreversible environmental harm.

6 A reportable incident is where a licence or regulatory condition requires certain events to be reported. Typically, any environmental incident that impacts beyond the mine lease borders must be reported. Some events within the mine boundary must also be reported, for instance, discovery of certain hazardous materials in landfill. Relatively low impact environmental events can therefore sometimes be reportable.

## 2019 Sustainability Report

	Notes	FY17	FY18	FY19	Target
<b>Significant Incidents</b>					
	1				
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
<b>Environmental Fines &amp; Penalties</b>					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Total		0	0	0	0
<b>Water use Leonora Western Australia mega litres (ML)</b>					
Potable	2	47	43	38	35
Non-potable	3	1,140	1,032	984	Below allocation
% of Allocation Utilised		25%	23%	22%	
Non-potable recycling		Not calc	Not calc	80%	
<b>Water use Simberi (PNG) mega litres (ML)</b>					
Potable and non-potable	4	Not calc	Not calc	4,808	
Recycling	5	Not calc	Not calc	82%	
<b>Absolute GHG Emissions Australia kilo tonnes (kt) CO<sub>2</sub></b>					
Scope 1 emissions	6	62	64	65	
Scope 2 emissions	7	1	1	1	
<b>Absolute GHG Emissions PNG<sup>8</sup> kilo tonnes (kt) CO<sub>2</sub></b>					
Scope 1 emissions		79	77	75	
Scope 2 emissions		0	0	0	
<b>Absolute Energy Usage, tera joules (TJ)</b>					
Australia, all sources	9	1,430	1,348	1,365	Target under consideration
PNG, all sources	10	1,004	976	958	
<b>Production GHG Emissions Intensity – tons of CO<sub>2</sub> per ounce</b>					
Gwalia, Australia, scope 1		0.24	0.24	0.30	
Simberi, PNG, scope 1		0.68	0.57	0.53	
<b>Production GHG Emissions Intensity – Ounces per ton of CO<sub>2</sub></b>					
Gwalia, Australia, scope 1		4.25	4.22	3.39	
Simberi, PNG, scope 1		1.47	1.76	1.89	
<b>Revenue GHG Emissions tons of CO<sub>2</sub> per US\$000 revenue</b>					
Gwalia, Australia, scope 1		0.19	0.18	0.23	
Simberi, PNG, scope 1		0.54	0.44	0.42	
<b>Revenue GHG Emissions US\$000 revenue per ton of CO<sub>2</sub></b>					
Gwalia, Australia, scope 1		5.39	5.52	4.27	
Simberi, PNG, scope 1		1.87	2.29	2.38	
<b>Consolidated GHG Emissions results (Scope 1 and 2)</b>					
Absolute GHG emissions (kt) CO <sub>2</sub>		142	141	141	

- 1 Incidents are categorised via a risk matrix as to their potential and actual environmental impact. The consequence component of this matrix is shown in note 2 above. 'Significant' incidents include 'Major' and 'Critical' incidents.
- 2 Leonora only, potable water usage is measured versus an annual self-selected then approved target. Results re-stated to include use in the Leonora 'village' – the mining accommodation camp 5 km away from the Gwalia mine. Simberi is in a high rainfall environment with normal rain activity (>4m p.a.) typically in excess of community requirements. The operation nevertheless has a strong commercial focus on process water recycling and potable water usage minimisation.
- 3 Non-potable water at Leonora is usually saline, unfit for domestic or agricultural use and comes from bore holes or is pumped from the underground mine. The mine has an allocation associated with earlier operations.
- 4 Estimate from one quarter (3 months) sample size.
- 5 Estimate based on limited sample size.
- 6 2018 is estimate only pending formal NGRS report subsequent to this report
- 7 Australian office locations
- 8 Estimates from fuel & lubricants purchases
- 9 2018 is estimate only pending formal NGRS report subsequent to this report
- 10 Estimate factor applied to generate total energy used from net energy used.



## 2019 Sustainability Report

	Notes	FY17	FY18	FY19	Target
CO <sub>2</sub> tons per US\$000 revenue		0.29	0.27	0.31	
CO <sub>2</sub> tons per ounce		0.37	0.35	0.39	Remain in
US\$000 revenue per ton of CO <sub>2</sub>		3.40	3.73	3.23	top two quartiles
Ounces per ton of CO <sub>2</sub>		2.68	2.85	2.56	
<b>Gwalia Tailings</b>					
Absolute tons (dry, kt)		828	679	652	No target
# Leakage/spills to environment		0	0	0	0
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%
<b>Simberi Tailings</b>					
Absolute tons (dry, kt)		3,690	3,586	3,072	No target
# Leaks/spills to environment		0	0	0	0
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%
<b>Gwalia waste rock – absolute and target</b>					
Absolute tons (Mt)		0.3	0.3	0.4	No target
% stored furthering rehab obligations or underground		100%	100%	100%	100%
<b>Simberi waste rock– absolute and target</b>					
Absolute tons (Mt)		10.3	9.4	8.9	No target
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%

**Foreign exchange rates**

The Group uses Australian dollar presentation currency for reporting purposes. Financial figures are in Australian dollars unless otherwise stated. The following exchange rates (as used in previously published financial statements ) have been applied where appropriate:

A\$ / US\$ - average for year	0.7539	0.7751	0.7153
PGK / A\$ - average for year	2.3345	2.4995	2.4378

## 2019 Sustainability Report

## GRI Content Index

This table indicates how St Barbara has used the Global Reporting Initiative (GRI) sustainability reporting standards to guide its sustainability disclosures. St Barbara's sustainability disclosures comprise relevant sections of its:

- 2019 [Annual Report](#) (AR in table below),
- [Corporate Governance Statement](#) (CGS in table below) and
- website ([www.stbarbara.com.au](http://www.stbarbara.com.au)).

Sustainability reporting, as promoted by the GRI Standards, is an organisation's practice of reporting publicly on its economic, environmental, and/or social impacts, and its contributions – positive or negative – towards the goal of sustainable development.

St Barbara is a member of the UN Global Compact. The column to the furthest right in the table below provides additional guidance as to where to find CoP (Commentary on Progress) relevant discussion for the UNGC 10 principles.

## General Disclosures

GRI Ref <sup>1</sup>	GRI Core <sup>2</sup>	Item	Disclosure	UNGC <sup>3</sup>
	●	<b>Organisational profile</b>		
102-1	●	Name of the organisation	St Barbara Limited	
102-2	●	Activities, brands, products, and services	<a href="#">Annual Report</a> , Principal activities (p2)	
102-3	●	Location of headquarters	<a href="#">Annual Report</a> , Registered Office (back cover)	
102-4	●	Location of operations	<a href="#">Annual Report</a> , St Barbara at a glance (pii)	
102-5	●	Ownership	<a href="#">Annual Report</a> , Shareholder information (p87-88)	
102-5	●	Legal form	St Barbara Limited is a public company incorporated in Australia and listed on the Australian Securities Exchange (ASX:SBM).	
102-6	●	Markets served	All gold bullion is sold to Australian registered financial institutions.	
102-7	●	Scale of the organisation	<a href="#">Annual Report</a> , Directors' Report (p3)	
102-8	●	Information on employees and other workers	Sustainability Report, Performance Data	
102-9	●	Supply chain	<a href="#">Annual Report</a> , Directors' Report (p3)	
102-10	●	Significant changes to the organisation and its supply chain	<a href="#">Annual Report</a> , Directors' Report (p3)	
102-11	●	Precautionary Principle or approach	<a href="#">Environmental Policy</a>	7
102-12	●	External initiatives	<a href="http://stbarbara.com.au/profile/recognition/">stbarbara.com.au/profile/recognition/</a>	
102-13	●	Membership of associations	The Group maintains membership involvement in relevant business associations, resource sector specific associations, commodity specific associations, at local and national levels, including: Chamber of Minerals and Energy of Western Australia (CME WA) Minerals Council of Australia (MCA) Gold Industry Group (GIG) PNG Chamber of Mines and Petroleum	
<b>2. Strategy</b>				
102-14	●	Statement from senior decision maker	Sustainability Report, Message from MD & CEO	

1 GRI disclosure standard, [www.globalreporting.org](http://www.globalreporting.org)

2 Disclosure required to comply with GRI Standards core reporting option, [www.globalreporting.org](http://www.globalreporting.org)

3 UN Global Compact Principle

## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core <sup>2</sup>	Item	Disclosure	UNGC <sup>3</sup>
102-15		Key impacts, risks, and opportunities	The Group's activities have various impacts upon the environment, neighbours and local communities. See for example regarding Leonora (annual emissions and environmental impact report): <a href="https://stbarbara.com.au/sustainability/our-environment/">https://stbarbara.com.au/sustainability/our-environment/</a> Risks: <u>Annual Report</u> , Material business risks (p10-12) Opportunities: <u>Annual Report</u> , Business strategy and future prospects (p9-10)	8, 9
<b>3. Ethics and integrity</b>				
102-16	●	Values, principles, standards, and norms of behaviour	<a href="#">Corporate Governance Statement</a> , Principle 3: Act ethically and responsibly  Code of Conduct, <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	
102-17		Mechanisms for advice and concerns about ethics	Board Charter, 6. Independent Advice, <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>  Whistleblower Policy, <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	10
<b>4. Governance</b>				
102-18	●	Governance structure	<a href="#">Corporate Governance Statement</a> , <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	10
102-19		Delegating authority	High level delegation set out in <u>Board Charter</u> .  Detailed delegation not published externally.	
102-20		Executive level responsibility for economic, environmental, and social topics	Board and Committee Charters <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	
102-21		Consulting stakeholders on economic, environmental and social topics	Relationships and topics in general covered by licences and regulation. Participation with AMMA, CME, MCA other peak bodies on a variety of topics including economic, environmental, and social issues.	
102-22		Composition of the highest governance body and its committees	<a href="#">Corporate Governance Statement</a> , Principle 2: Structure the Board to add value	
102-23		Chair of the highest governance body	<u>Annual Report</u> , Directors' Report (p14)	
102-24		Nominating and selecting the highest governance body	Constitution, <a href="https://stbarbara.com.au/about-us/governance/">https://stbarbara.com.au/about-us/governance/</a>	
102-25		Conflicts of interest	Conflict of Interest and Related Parties Policy, <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	
102-26		Role of highest governance body in setting purpose, values, and strategy	Board charter <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	
102-27		Collective knowledge of highest governance body	<u>Annual Report</u> , Directors' Report (p14-16) <a href="#">Corporate Governance Statement</a> , Principle 2: Structure the Board to add value	
102-28		Evaluating the highest governance body's performance	Board performance review, reported in <a href="#">Corporate Governance Statement</a> , Principle 2: Structure the Board to add value	
102-29		Identifying and managing economic, environmental, and social impacts	Board and Committee Charters, Board Policies inc. Code of Conduct, Community Relations Policy, Diversity Policy, Environmental Policy, Health and Safety Policy, Risk Management Policy, all available at <a href="https://stbarbara.com.au/about_us/governance">stbarbara.com.au/about_us/governance</a>	
102-30		Effectiveness of risk management processes	<a href="#">Corporate Governance Statement</a> , Principle 7: Recognise and manage risk	



## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core <sup>2</sup>	Item	Disclosure	UNGC <sup>3</sup>
102-31		Review of economic, environmental, and social topics	Economic topics are reviewed annually as part of the strategic planning process. Environmental and Social topics are reviewed regularly in the Health, Safety, Environment and Community Committee (HSEC) with broader reviews annually at Board level as part of strategic planning.	
102-32		Highest governance body's role in sustainability reporting	As per 102-31 above	
102-33		Communicating critical concerns	Group has clear hierarchy, role responsibility for communicating critical concerns and escalating where needed.	
102-34		Nature and total number of critical concerns	None in this or former reporting periods	
102-35		Remuneration policies	<u>Annual Report</u> , Remuneration report (p18-39)	
102-36		Process for determining remuneration	<u>Annual Report</u> , Remuneration report (p18-39)	
102-37		Stakeholders' involvement in remuneration	<u>Annual Report</u> , Remuneration report (p18-39)	
102-38		Annual total compensation ratio	Disclosure not required for GRI Core option	
102-39		Percentage increase in annual total compensation ratio	Disclosure not required for GRI Core option	
<b>5. Stakeholder engagement</b>				
102-40	●	List of stakeholder groups	See page 6 of this report.	
102-41	●	Collective bargaining agreements	The Group respects employee rights to freedom of association and collective bargaining. The majority of Group employees are not covered by collective bargaining agreements.  There have been no examples of significant industrial action in the reporting period.	3
102-42	●	Identifying and selecting stakeholders	The Group utilises in-house qualified and experienced (and where needed external) advisors and managers to manage government and community relations. The relevant departments have agreed mechanisms with executive management and the Board for managing and reporting on stakeholder engagement.	
102-43	●	Approach to stakeholder engagement	As per 102-42 above.	
102-44	●	Key topics and concerns raised	No general or significant concerns were noted in the reporting period.	
<b>6. Reporting practice</b>				
102-45	●	Entities included in the consolidated financial statements	<u>Annual Report</u> , Note 17 Controlled Entities (p66)	
102-46	●	Defining report content and topic Boundaries	In general, matters relating to Health and Safety, Environment and Community.	
102-47	●	List of material topics	Sustainability Report, Material Topics and Boundaries	
102-48	●	Restatements of information	GHG emissions at Leonora & Simberi have been re-stated. At Leonora measurement process for GHG emissions each year concludes in October so an estimate is used in the Sustainability report. Other minor corrections as noted in the report.	
102-49	●	Changes in reporting	A number of changes have been made, in general increasing disclosure. See page 5.	
102-50	●	Reporting period	1 July 2018 to 30 June 2019.	
102-51	●	Date of most recent report	14 September 2018.	
102-52	●	Reporting cycle	Annual, released in conjunction with <u>Annual Report</u>	

## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core <sup>2</sup>	Item	Disclosure	UNGC <sup>3</sup>
102-53	●	Contact point for questions regarding the report	Company Secretary, <a href="mailto:company.secretary@stbarbara.com.au">company.secretary@stbarbara.com.au</a> <a href="http://stbarbara.com.au/contact-us/contact-details/">stbarbara.com.au/contact-us/contact-details/</a>	
102-54	●	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option.	
102-55	●	GRI content index	Sustainability Report, GRI content index.	
102-56	●	External assurance	This report has been reviewed by the Board.  This report has been prepared in accordance with ASX Corporate Governance Council 'Corporate Governance Principle 5' to be 'factual, complete, balanced (disclosing both positive and negative information) and expressed in a clear and objective manner'.  The Remuneration Report and Financial Report in the <u>Annual Report</u> is subject to independent external audit, the report on which appears in the <u>Annual Report</u> as the 'independent auditor's report' (p74-78).  Certain other information is assured by external providers, as noted in this report.	

## 2019 Sustainability Report

## GRI Materiality Commentary

The Group has reported its identified material issues under the following headings:

- Governance & Economic Performance
- Health and Safety
- People
- Social and Communities
- Environment.

Detail is provided as to which topics are included.

Coverage of reported issues in the Sustainability Report is prioritised according to materiality. Not all standards, areas and topics are considered material, and have been excluded from this report because they have less impact on the Group and /or less impact by the Group than the issues that are included in the Report.

GRI Ref <sup>1</sup>	GRI Core met <sup>2</sup>	Item	Discussion	UNGC <sup>3</sup>
201	Yes	Economic Performance	The Group discloses the following material issues: <ol style="list-style-type: none"> <li>1. Direct Economic value generated</li> <li>2. Financial implications and other risks and opportunities due to climate change</li> </ol> <p>The following issues are not considered material to the Group and are not disclosed:</p> <ol style="list-style-type: none"> <li>3. The Group does not have exposure to defined benefit plans</li> <li>4. The Group does not receive any financial assistance from government (other than generally available tax deductions)</li> </ol>	10 7,8,9  10
		Mining & Metals Supplement area G4EC1	<ul style="list-style-type: none"> <li>• Report countries of operation that are either candidate to or compliant with the Extractive Industries Transparency Initiative (EITI). – disclosed</li> <li>• Payments to local communities as part of land use agreements, not including land purchases. – disclosed, royalties, spending with local community companies.</li> </ul>	
202	No	Market Presence, Mining & Metals Supplement area G4EC6	<i>In significant locations of operation, report proportion of the facility's total workforce from the local community.</i> – disclosed. This is a key requirement of PNG Government reporting so is considered material.	1, 6
205	No	Anti-corruption	The Group became a financial supporter of the International EITI and has provided information for the PNG EITI since the acquisition of the PNG operations in 2012. The Group has invested in anti-corruption efforts at all sites, including training, policies and procedures as well as related areas such as insider trading and conflict of interest. The Group has a whistle-blower service and investigation system. Detail regarding this is disclosed. This system has been evaluated via external audit but not within the reporting (3 year) period.	10
302	Yes	Energy	<ol style="list-style-type: none"> <li>1. Energy Consumption within the organisation, - disclosed</li> <li>2. Energy consumption outside the organisation – not disclosed</li> <li>3. Energy Intensity, - disclosed</li> <li>4. Reduction of Energy Consumption. – disclosed</li> <li>5. Energy requirements of products and services – not disclosed</li> </ol> <p>Energy consumption outside the organisation (2) and Reductions in energy requirements of products and services (5) have not been reported on as they are inappropriate for a gold mining company.</p>	7,8,9
303	Yes	Water	All topics are disclosed to the extent of topic relevance.	7,8,9

1 GRI disclosure standard, [www.globalreporting.org](http://www.globalreporting.org)

2 Disclosure required to comply with GRI Standards core reporting option, [www.globalreporting.org](http://www.globalreporting.org)

3 UN Global Compact Ten Principles, <https://www.unglobalcompact.org/what-is-gc/mission/principles>



## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core met <sup>2</sup>	Item	Discussion	UNGC <sup>3</sup>
305	Yes	Emissions Mining &Metals Supplement area G4DMA  G4EN21	All topics 1-7 except 6 'Ozone depleting substances' are disclosed <i>Dust, Noise, Seismic.</i> Dust and noise are covered at Leonora by the Regulatory 'Annual Environment Report' which is disclosed here: <a href="https://stbarbara.com.au/sustainability/our-environment/">https://stbarbara.com.au/sustainability/our-environment/</a> Neither Leonora Western Australia nor Simberi PNG have had stakeholder complaints on these issues in the period. For this and other reasons the area is considered of low materiality. <i>NOX, SOX, Ambient air quality.</i> Broadly the Group considers this related to health and safety. Neither Leonora nor Simberi have had a stakeholder complaint on these issues in the period. For these and other reasons the area is considered of low materiality.	7,8,9
306	Yes	Effluents and Waste  Mining &Metals Supplement area G4DMA, MM3 G4EN23	1. Water discharge – disclosed 2. Waste by type and disposal method – not disclosed here. Leonora Western Australia – several types of waste are covered in the Annual Environment Reports here: <a href="https://stbarbara.com.au/sustainability/our-environment/">https://stbarbara.com.au/sustainability/our-environment/</a> 3. Significant spills – disclosed 4. Transport of Hazardous waste – not disclosed as this is not considered material due to the lack of significant transported hazardous waste. 5. Water bodies affected – disclosed <i>Waste rock and mine tailings</i> These topics are material and are disclosed.  Waste oil and various others- disclosed for Leonora Western Australia as per above separately in The Annual Environment Report here: <a href="https://stbarbara.com.au/sustainability/our-environment/">https://stbarbara.com.au/sustainability/our-environment/</a>	7,8,9
307	Yes	Environmental Compliance	Disclosed	7,8,9
401	No	Employment  Mining &Metals Supplement area G4DMA	Disclosed: 1. Turnover is provided. Not disclosed: 2 & 3. Benefit Full time vs Part time/ temporary employees is not considered material. Parental leave is disclosed. <i>Application of policies to contractors.</i> Group OH&S policies apply equally to contractors. Group HR policies do not apply to contractors, however, the 'Code of Conduct' and all related policies (including Workplace Discrimination and Harassment Guideline) apply to contractors.	6
403	Yes	Occupational Health and Safety (OH&S)	Disclosed: 2. Data concerning injuries 3. High risk of occupational disease Not disclosed: 1. Worker representation in formal HS committees and 4. HS topics in formal agreements with trade unions. Health and Safety in Australia & PNG is the subject of detailed government regulation put in place by democratic representative governments.	1,2

## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core met <sup>2</sup>	Item	Discussion	UNGC <sup>3</sup>
404	Yes	Training and Education	Average hours per year, and percentage of employees getting a performance and development review are disclosed.	1,2
405	Yes	Diversity and Equal Opportunity	All topics are disclosed. The focus in Australia is Gender and Indigenous diversity. In PNG the focus is on minimisation of expat labour, which is disclosed as a component of 413 and the Mining and Metals Supplement G4 DMA and MM5	6
413	No	Local Communities, Mining and Metals supplement - G4 DMA MM6, MM7 G4DMA Mining and Metals supplement - MM10	<i>'Impact on local communities'</i> in the Mining and Metals supplement G4 DMA is excluded as a heading, but is disclosed under 'waste'. Benefits to the community in terms of initiatives is disclosed. MM6 'Disputes' and MM7 'Grievance Mechanisms' are disclosed . Emergency preparedness: Community aspects are disclosed in the 'Waste' section. Number of sites with Closure plans. This is disclosed. 100% of Group sites have fully funded closure plans.	7,8,9 1,2 1,2 7
415	Yes	Public Policy	Political contributions are disclosed	10

### Commentary on selected standards, areas and topics considered not to be material and excluded from this report:

202	-	Market Presence  Mining & Metals Supplement area G4EC6:	The Group does not have a sufficient size and market power to have a material impact in this area.  <i>Proportion of senior management hired from the local community at significant locations of operation</i> - the Group holds that this area is not a material impact for the Group.	-  1, 6
203	-	Indirect Economic Impacts	The Group does not have a sufficient size and market power to have a material impact in this area.	10
204	-	Procurement Practices	The Group performs due diligence related to the sustainability performance of suppliers. The Group has an appropriate policy and detailed training for procurement specialists. However, given the Group's small size, with the large majority of its spend with large multinational conglomerates, this area is considered to be immaterial.	10
206	-	Anti-competitive behaviour	The Group does not have a sufficient size and market power to have a material impact in this area. Gold mining globally is not vulnerable to this type of market manipulation.	10
301	-	Materials  Mining & Metals Supplement area G4EN2:	The Group's material environment impacts are not related to recyclable impacts. The Group pays third parties to recycle some waste products, notably waste oil, tyres and scrap metal.  <i>Percentage of materials used that are recycled input materials</i> - not disclosed. Tailings are used as an ingredient for underground void-filling concrete at Leonora, but in general this area is not material.	7
304	-	Bio-diversity  Mining & Metals Supplement area G4DMA, G4EN12, MM1 & 2:	The Group's mining operations are located in areas of low biodiversity characterised by pervasive long term human habitation.  <i>Disturbed land and other impacts</i> - Not disclosed as per above. Disturbed land area is tracked and reported to government in both Australia and PNG in regulatory annual environmental reports, see here: <a href="https://stbarbara.com.au/sustainability/our-environment/">https://stbarbara.com.au/sustainability/our-environment/</a>	7
308	-	Supplier Environmental Assessment	The Group performs due diligence related to the sustainability performance of suppliers. The Group has an appropriate policy and detailed training for procurement specialists. However, given the Group's small size, with the large majority of its spend with large multinational conglomerates, this area is considered to be immaterial.	7

## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core met <sup>2</sup>	Item	Discussion	UNGC <sup>3</sup>
402	-	Labour management relations  Mining and Metals supplement - MM4	Though important, the Group holds that this area is not a material impact for the Group. Employees at both our Australian and PNG mines have wages and conditions far exceeding the norm in those countries because of market factors (such as possession of in-demand skills and difficulties in attracting labour to remote locations).  <i>Number of strikes and lock-outs exceeding one week's duration</i> – Though also important, the Group holds this area to be of low materiality. No strikes or lock outs of this duration have occurred at any location in the Group's ownership in the period covered by this report.	3
406	-	Non-Discrimination	The Group has appropriate anti-discrimination policies, annual training for managers and staff, a whistle-blower service, and in Australia, is a national award winner and recognised industry leader in gender diversity. Notwithstanding this, the Group holds that this area is not a material impact for the Group.	1,2
407	-	Freedom of association and collective bargaining  Mining and Metals supplement	Though important, the Group holds that this area is not a material impact for the Group. Employees at both our Australian and PNG mines have wages and conditions far exceeding the norm in those countries because of market factors (in-demand skills and difficulties in attracting labour to remote locations). In PNG Labour relations with local employees are also regulated via mining licence type regulation where certain levels of local employment are mandated.  The <i>Freedom of Association</i> areas in the Mining and Metals supplement under 'Human Rights' are also excluded for the same reasons.	3
408	-	Child Labour	Children are forbidden from entering (as well as working in) the Group's operations. The Group holds that this area is immaterial because the assessed risk of incidence is low.	5
409	-	Forced or Compulsory Labour	The Group holds that this area is immaterial, as the assessed risk of related issues is low.	4
410	-	Security Practices	The Group holds that this area is immaterial, as the assessed risk of related issues is low.	2
411	-	Rights of Indigenous Peoples  Mining and Metals supplement	This area is considered immaterial. The Group has extensive procedures in place to ensure the rights of Indigenous peoples are not violated and has had no significant incidents during the reporting period and is therefore considered immaterial. The area is not considered material due to the established nature of the Groups operations, with mining activities confined to areas where mining has occurred for more than a 100 years at Gwalia Leonora WA and for 10 years at Simberi PNG.  <i>MM5 Operations adjacent to indigenous people's territories</i> . This area is considered immaterial for the same reasons.  In Simberi PNG the local community is a party to a 'Memorandum of Agreement' along with different layers of government and the Group, in line with mining regulation.	2  2
412	-	Human Rights Assessment  Mining and Metals supplement	The long term history of democratic liberal constitutional government in Australia and Papua New Guinea make these important issues of low materiality to the Group, in the sense that the assessed risk of related issues is low.  The <i>Human Rights</i> areas in the Mining and Metals supplement G4 DMA and MM5 are excluded also for the same reasons.	1,2  1,2
413	-	Local Communities	In Leonora, Western Australia, 'fly-in, fly-out' and centralised procurement functions, have reduced the economic relevance of the local community to the mine. In Papua New Guinea mining regulation mandates a high level of involvement. As a result, 1-2% of total costs of the Simberi mine are related to Community support functions, ~45% of the workforce lives locally, and 6% of total costs are spent with local suppliers and contractors. The Group reports on its employment of local community members, it's contracting with local community companies and its grievance/complaint function in this report.	1,2,3, 6



## 2019 Sustainability Report

GRI Ref <sup>1</sup>	GRI Core met <sup>2</sup>	Item	Discussion	UNGC <sup>3</sup>
		Mining and Metals supplement - G4 DMA	<i>'Impact on local communities'</i> in the Mining and Metals supplement G4 DMA is excluded as a heading, but is disclosed under 'Waste'. Benefits to the community in terms of initiatives is disclosed.	7,8,9
		Mining and Metals supplement - MM8	<i>Artisanal and Small-scale Mining:</i> The Group has no mine sites that feature artisanal mining. The Leonora Western Australia mine is underground. The gold in Simberi ore can typically only be liberated by modern processing methods.	1,2
		Mining and Metals supplement – MM9	<i>Resettlements</i> – The Group has no mine sites with significant resettlements.	1,2
414	-	Supplier social assessment	The Group has invested considerably in due diligence related to the Sustainability performance of suppliers, with design of an appropriate policy and detailed training for procurement specialists. However, given the Group's small size, with the vast majority of its spend with large multinational conglomerates (or in the case of Simberi with known local community firms), this area is considered to be immaterial.	All
416	-	Customer Health and Safety	This area is considered to be immaterial.	1,2
417	-	Marketing and Labelling	This area is considered to be immaterial.	1,2
418	-	Customer Privacy	This area is considered to be immaterial.	1,2
419	-	Socio-economic Compliance	All environmental and safety related penalties are disclosed (inclusive of G4 SO8 in the Mining and Metals supplement).	1,2,7

## 2019 Sustainability Report

**UN Global Compact - Communication on Progress<sup>1</sup>**

In this section, we describe our integration of Global Compact principles into our business strategy, culture and daily operations.

Issue Area	Global Compact Principle	Implementation and measurement
Human Rights	<b>Principle 1 -</b> Businesses should support and respect the protection of internationally proclaimed human rights	<a href="#">Company policies and charters</a> , especially: <ul style="list-style-type: none"> <li>• <a href="#">Code of Conduct</a></li> <li>• <a href="#">Community Relations Policy</a></li> <li>• <a href="#">Health and Safety Policy</a></li> </ul> 2019 Sustainability Report [this document] ‘Health and Safety’, ‘Social and Communities’ sections and related data table components
	<b>Principle 2 -</b> Businesses should make sure that they are not complicit in human rights abuses	
Labour	<b>Principle 3 -</b> Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	<a href="#">Company policies and charters</a> , especially: <ul style="list-style-type: none"> <li>• <a href="#">Code of Conduct</a></li> <li>• <a href="#">Diversity and Inclusion Policy</a></li> <li>• <a href="#">Equal Opportunity Policy</a></li> <li>• <a href="#">Health and Safety Policy</a></li> </ul> 2019 Sustainability Report [this document] ‘People’ and related data table components.
	<b>Principle 4 -</b> Businesses should uphold the elimination of all forms of forced and compulsory labour	
	<b>Principle 5 -</b> Businesses should uphold the effective abolition of child labour	
	<b>Principle 6 -</b> Businesses should uphold the elimination of discrimination in respect of employment and occupation	
Environmental	<b>Principle 7 -</b> Businesses should support a precautionary approach to environmental challenges	<a href="#">Company policies and charters</a> , especially: <ul style="list-style-type: none"> <li>• <a href="#">Environment Policy</a></li> </ul> 2019 Sustainability Report [this document] ‘Environment’ section (sub-sections, ‘Waste’, ‘Climate Change’ and ‘Water’).
	<b>Principle 8 -</b> Businesses should undertake initiatives to promote greater environmental responsibility	
	<b>Principle 9 -</b> Businesses should encourage the development and diffusion of environmentally friendly technologies	
Anti-Corruption	<b>Principle 10</b> Businesses should work against corruption in all its forms, including extortion and bribery	<a href="#">Company policies and charters</a> , especially: <ul style="list-style-type: none"> <li>• <a href="#">Anti-Bribery and Corruption Policy</a></li> <li>• <a href="#">Audit and Risk committee charter</a></li> <li>• <a href="#">Code of Conduct</a></li> <li>• <a href="#">Conflict of Interest and Related Parties Policy</a></li> <li>• <a href="#">Donations, Sponsorships, Community Programs Policy</a></li> <li>• <a href="#">Whistleblower Policy</a></li> </ul> 2019 Sustainability Report [this document] ‘Governance’ section and related ‘Governance and Economic results’ data table component

<sup>1</sup> [www.unglobalcompact.org/](http://www.unglobalcompact.org/)

## 2019 Sustainability Report

## Glossary

ref

Annual Report / AR		<a href="#">St Barbara Limited Annual Report 2019</a>
CDP		Carbon Disclosure Project, <a href="http://www.cdp.net/en">www.cdp.net/en</a>
Climate Change	1	“a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.”
CGS / Corporate Governance Statement		<a href="#">St Barbara Limited ASX Appendix 4G and Corporate Governance Statement 2019</a>
EITI		Extractive Industries Transparency Initiative, <a href="https://eiti.org/">https://eiti.org/</a>
ESG		Environmental, social, governance
GHG		Green-house gas
GRI		Global Reporting Initiative, <a href="http://www.globalreporting.org">www.globalreporting.org</a>
material topic	2	“topic that reflects a reporting organisation’s significant economic, environmental and social impacts; or that substantively influences the assessments and decisions of stakeholders”
MCA		Minerals Council of Australia, <a href="http://www.minerals.org.au/">www.minerals.org.au/</a>
NGO		non-governmental organisation
RCP		Representative Concentration Pathways, UN climate scenarios, the basis for companies to model the effects of climate change, <a href="http://www.environment.gov.au/climate-change/publications/fact-sheet-rcps">www.environment.gov.au/climate-change/publications/fact-sheet-rcps</a>
stakeholder	2	<p>“entity or individual that can reasonably be expected to be significantly affected by the reporting organisation’s activities, products and services, or whose actions can reasonably be expected to affect the ability of the organisation to successfully implement its strategies and achieve its objectives “</p> <p>Note 1: Stakeholders include entities or individuals whose rights under law or international conventions provide them with legitimate claims vis-à-vis the organisation.</p> <p>Note 2: Stakeholders can include those who are invested in the organisation (such as employees and shareholders), as well as those who have other relationships to the organisation (such as other workers who are not employees, suppliers, vulnerable groups, local communities, and NGOs or other civil society organisations, among others).</p>
sustainability / sustainable development	2	<p>“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”</p> <p>Note 1: Sustainable development encompasses three dimensions: economic, environmental and social.</p> <p>Note 2: Sustainable development refers to broader environmental and societal interests, rather than to the interests of specific organisations.</p> <p>Note 3: In the GRI Standards, the terms ‘sustainability’ and ‘sustainable development’ are used interchangeably.</p>
Sustainability Report		This report.
TCFD		Task Force on Climate-related Financial Disclosures, <a href="https://www.fsb-tcfd.org/">https://www.fsb-tcfd.org/</a>
UNGC		United Nations Global Compact, <a href="http://www.unglobalcompact.org/">www.unglobalcompact.org/</a>

1 United Nations Framework Convention on Climate Change, 1992  
[https://unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf)

2 Definitions from GRI Standards Glossary 2016, [www.globalreporting.org](http://www.globalreporting.org)



## 2019 Sustainability Report

## Contributors

This Sustainability Report encompasses all aspects of the Group. Its preparation involves a diverse range of people whose contribution is acknowledged below (in alphabetical order).

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Bob Love	Manager Geology	Gwalia
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Caitlin Steel	Human Resources Officer	Melbourne
Christine Roden	EA Corporate Services Administration	Melbourne
Daan Van Pletzen	Manager Health, Safety and Security	Simberi
Dan Pintea	Environment Superintendent	Gwalia
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David Cotterell	Manager Investor Relations	Melbourne
David Cullen	Principal Legal Counsel - Procurement	Melbourne
David Debono	Financial Accountant	Melbourne
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Debbie Hall	Administration Superintendent	Gwalia
Dot Crimp	Manager Finance and Administration	Simberi
Emily Mort	Plant Metallurgist	Gwalia
Felicia Quatela	Legal Counsel (Seconded)	Melbourne
Gillian Wong	Manager Legal and Deputy Company Secretary	Melbourne
Henny Mote	Senior HR Officer	Simberi
Jack Grotter	Senior Tax Advisor	Melbourne
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Jason Eade	Maintenance Manager	Simberi
Jodie Nankervis	Logistics Superintendent	Lytton
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Joss Ruel	Superintendent Finance and Administration	Simberi
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Roy Hewitt	Manager Processing	Gwalia
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Shaun Higgins	Manager HSE	Gwalia
Stean Barrie	General Manager Leonora	Melbourne
Stuart Coles	Systems and Business Improvement Superintendent	Melbourne
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Susan Scheepers	Manager Human Resources	Gwalia
Symakus Suglo	Community Relations Superintendent	Simberi
Tim Hunt	Senior Corporate Services Advisor	Simberi
Tim Netscher	Non-Executive Chairman	Melbourne
Tim Richards	General Manager Simberi Operations	Perth
Val Madsen	General Manager HR & HSEC	Simberi
Vaughan Smith	Manager Mining	Melbourne
Yasmin Corkill	Manager Procurement	Simberi
		Melbourne

**CORPORATE DIRECTORY****BOARD OF DIRECTORS**

T C Netscher	Non-Executive Chairman
R S Vassie	Managing Director & CEO
S G Dean	Non-Executive Director
K J Gleeson	Non-Executive Director
S E Loader	Non-Executive Director
D E J Moroney	Non-Executive Director

**COMPANY SECRETARY**

R Cole

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**STOCK EXCHANGE LISTING**

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Ticker Symbol: SBM

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**AMERICAN DEPOSITORY RECEIPTS (ADR)**

American Depositary Receipts (ADR OTC code "STBMY")  
through BNY Mellon,  
[www.adrbnymellon.com/dr\\_profile.jsp?cusip=852278100](http://www.adrbnymellon.com/dr_profile.jsp?cusip=852278100)