



2020 Sustainability Report

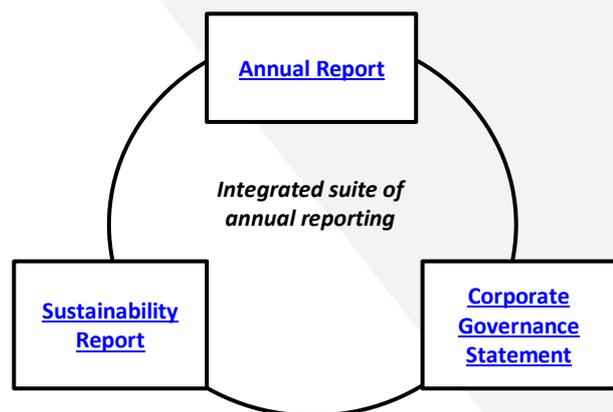
The attached Sustainability Report presents the environmental, social and governance (ESG) performance of St Barbara Ltd and its controlled entities (the ‘Group’) for the 2020 financial year.

The content of this report has been determined by assessing the Group’s material sustainability issues and identifying those which could most impact the Group and its stakeholders.

This announcement comprises:

- Our Sustainability Story, illustrating highlights for the year, and
- The detailed Sustainability Report.

The Sustainability Report complements, and should be read in conjunction with, information contained in the Group’s corresponding Annual Report and Corporate Governance Statement, both released today and available at www.stbarbara.com.au.



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OUR SUSTAINABILITY STORY 2020



We are St Barbara – a growing gold company with a global outlook.

An ASX 200 company, our gold mining operations are located in Australia, Canada and Papua New Guinea.



ABOUT THIS SUMMARY

The purpose of this Sustainability Story is to bring to life St Barbara's approach to sustainability across our operations.

Our approach to sustainability is guided by our five business-wide commitments to safety, our people, our communities, the environment and to growing our business sustainably.

In this way, we will create value for all stakeholders and leave a legacy that we are proud of.

Our strong, values-led culture drives our behaviour and guides our decision making every day as we deliver to promise on our commitments.

At St Barbara, doing the right thing is important to all of us.

Our commitments



SAFETY ALWAYS

Zero harm is always our target. Zero harm to all people as we responsibly operate our assets to their full potential. This focus on safety guides everything we do.



EMPOWERED PEOPLE DIVERSE TEAMS

We are an employer of choice committed to inclusion and diversity. We provide a caring work environment where our talented people are happy, thrive, feel safe and can fulfil their potential.



STRONGER COMMUNITIES

We strive to help our communities thrive, grow and prosper. We build meaningful relationships, investing time and energy to ensure local communities are enriched by being our neighbours.



RESPECTING THE ENVIRONMENT

We are committed to caring for the environment. We think differently to find solutions to actively manage and neutralise our impact; because we care about the environment and our planet.



GROWING SUSTAINABLY

Growing our business sustainably, where it makes sense, and with strong governance practices, means we can add value for everyone: our shareholders, our people and our communities.

More detailed information about our policies, that support these commitments, can be found in the governance section of our website.

Our values



We act with honesty and integrity



We treat people with respect



We value working together

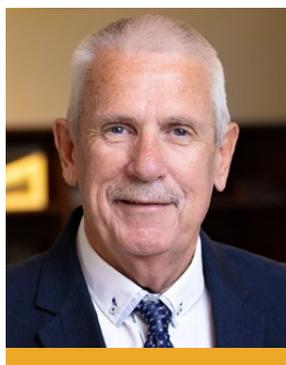


We deliver to promise



We strive to do better

LETTER FROM MANAGING DIRECTOR AND CEO



At St Barbara, doing the right thing genuinely matters to everyone. We are driven by a desire to care for people, communities and the environment, and to growing our business in a sustainable – and responsible – way.

Thank you for your interest in St Barbara's Sustainability Story.

We've prepared this story in addition to our full Sustainability Report; its role is to bring to life our approach to sustainability right across our operations, and I'm delighted to share our sustainability story in this way.

This is the first time I've had the privilege to report on sustainability at St Barbara, having joined the business as Managing Director and CEO in February this year.

What makes me so proud to be leading the team at St Barbara is that doing the right thing genuinely matters to everyone. We are driven by a desire to care for people, communities and the environment, and to growing our business in a sustainable – and responsible – way.

We are responsible for operating our mining assets to the very best of their potential, but we are also responsible for our people, our communities, and minimising the impact we have on the environment. To us, success is defined by striking the right balance between these things and leaving a positive legacy that we are proud of.

Our sustainability agenda is guided by our five business-wide commitments: Safety always; Empowered people, Diverse teams; Stronger communities; Respecting the environment; and Growing sustainably. We also endorse the Carbon Disclosure Project, the United Nations Global Compact and the Extractive Industries Transparency Initiative.

This document provides you with detail around some of our achievements in meeting our sustainability commitments over the past year. I'd like to share some of the highlights from my perspective.

A holistic approach to safety

For us, safety means protecting people from both physical and psychological harm. Over the year, we have significantly reduced our Total Recordable Injury Frequency Rate from 5 to 3 which is encouraging. We will continue to focus our efforts on this as we work towards our goal of zero harm.

Just as people deserve to leave work without injury, they also deserve to feel safe coming to work. That is why we are committed to providing an inclusive and respectful workplace, free from harassment, violence and discrimination. Our Workplace Behaviour Policy and Domestic and Family Violence Policy reinforce that all forms of violence are unacceptable at home and in the workplace. We support employees who might be impacted by domestic and family violence, and we also lend support to the community where we can.

The COVID-19 global pandemic presents significant health, economic and social challenges. Guided by our COVID-19 Management Framework, we are working to keep our people, our partners and our communities safe and well.

Central to our COVID-19 response is our care for people's psychological health and wellbeing. We have developed a specific COVID-19 Psychological Health Program for our workforce, which you can read about in the Empowered people, Diverse teams section of this document. We remain vigilant and agile in our management of the implications of this unfolding world crisis, and I'm reassured by our leadership and proactive management of this risk.

A champion for inclusion and diversity

One of our core values is that we treat people with respect. We are a diverse and inclusive employer, committed to providing opportunity for equal employment. We are the only Australian mining company to be recognised as an Employer of Choice for Gender Equality by the Workplace Gender Equality Agency (WGEA). We received this citation again in 2020, for the sixth consecutive year.

I have also been appointed as a WGEA Pay Equity Ambassador, a responsibility I take seriously. Since I joined St Barbara, we have also increased the number of women in our extended leadership group by 15%. We will continue to ensure gender equality in all aspects of the employee lifecycle, from recruitment to promotions, through our diversity targets and programs.

Our inclusive culture is one of respect and equity, where we celebrate the unique talents of every employee. Our employee engagement survey results confirm that our employees are proud of the stance we have taken and our values-led culture.

Enriching and strengthening our local communities

Having a positive impact on our local communities is so important to us. Naturally, in each of our operations, this manifests differently, but at its heart, our approach is about helping our communities thrive, grow and prosper.

In our Leonora Operations, we have a strong focus on supporting Indigenous youth with our involvement in programs that encourage their attendance at school. In our Atlantic Gold Operations, we provide support for residents in aged-care facilities, the local high school and local charities. At our Simberi Operations, we run the only medical clinic on the island providing free medical treatment and arranging free vaccinations. We also support local education and assist communities with building commercial ventures to help secure their future.

We recently published our new Modern Slavery Policy; we will do our part to detect and defeat this humanitarian challenge that affects so many people, even in advanced countries.

Passionate about responsible environmental management

We consider the environment in everything we do – whether it's planning for future operations, exploring for new deposits or optimising our current assets. We're always looking for ways to reduce our impact and footprint through innovation and technology.

We have set ourselves a target to be carbon neutral by 2050. Our legacy will be long-term clean energy sources for our communities. Our rehabilitation and environmental offset programs have the potential to create a biodiversity legacy richer than we originally found.

St Barbara has a strong track record in production emission efficiency. This stems from an early commitment to gas power generation and the innovative use of cogeneration through our rope conveyor in Papua New Guinea and an absorption chiller in Western Australia.

Our Atlantic Gold Operations in Canada is leading this effort. They have already commenced testing of scalable salt-water battery technology that, with wind turbines, will be the basis for a proposed renewable energy strategy for the Group.

I am excited and honoured to be leading St Barbara. With our talented and diverse team, we are clear on our priorities for each of our operations and on our shared commitments to sustainability.

Doing the right thing, showing care for people, our communities and the environment is our promise.

We hope you enjoy our Sustainability Story. It's one we enjoy telling. More importantly, it's one we enjoy living.



Craig Jetson
Managing Director and CEO

CASE STUDY



Building a sustainable community in Simberi

Our Simberi Operations are on the island of Simberi, approximately 1,000 km north of Port Moresby, Papua New Guinea (PNG). Under the umbrella of Simberi Mine Services (SMS), a community business coordination and governance company, we empower the local community by providing them access to training and helping them to develop commercial ventures.

With our support, local community members and landowners have created mariculture (seafood) inland fisheries, market gardens and cocoa plantations, a poultry farm, pizzeria and a bakery.

Helping locals to build on the success of these businesses is a priority for us. A project to create a sustainable cocoa business is now in its third year, with more than 27,000 disease-resistant cocoa seedlings grown in the Company nursery then distributed to local farmers. There are now three nurseries operating, and plans for a fourth on the nearby islands, with five hectares currently under cultivation at two Company plantations for this purpose. In early 2020, the first 120kg shipment of dried cocoa beans was exported to PNG food manufacturer, Paradise Foods, to be made into Queen Emma premium Simberi chocolate.

A new venture in 2019-2020, was the construction of an inland fish farm for breeding Tilapia fingerlings, which are distributed to interested local families who have constructed their own fishponds, or to nearby creeks.

OUR COVID-19 RESPONSE

We've responded to the COVID-19 pandemic swiftly and flexibly, consistent with our care for the safety and wellbeing of our people and our communities.

At the time of writing, the COVID-19 pandemic continues to disrupt the world. Our priority during this ongoing crisis remains the health and wellbeing of our people, our global business partners and suppliers, and the communities in which we operate. To protect them, and manage the ongoing risk, we've fundamentally changed the way we work across our global business.

Our COVID-19 Management Framework

Under our COVID-19 Management Framework, we have implemented measures to manage the ongoing risk of the pandemic. Our comprehensive framework is adhered to business-wide, along with all relevant government recommendations. We have conducted a number of surveys with our people to gauge their psychological health and wellbeing and ensure the support we're providing is both relevant and helpful.

Responsibly managing the movement of our workforce during this time is critical to protecting everyone. All non-essential travel continues to be cancelled, employees are working from home where practicable, increased hygiene and physical distancing is mandatory across our workplaces and self-isolation is enforced when appropriate. Pre-flight and pre-shift screening occurs and, where required, on-site isolation takes place.

Exploration activities outside of our mining leases were suspended until restrictions eased and only resumed when it was safe to do so, and under very strict protocols.

Staying connected with our communities

We have found creative ways to stay connected with our communities to keep the lines of communication, and support, open during these times.

At our Simberi Operations we have committed additional resources to keeping the communities in and around our operation safe. We're assisting with boat checks, and supplying rapid detection test kits to local clinics and the New Ireland Provincial Government. In Western Australia, at our Leonora Operations, we have shown our support by supplying 'At Home Hero' booklets to the children attending Leonora District High School.

The team from our Atlantic Gold Operations supported vulnerable members of our community by providing iPads to local nursing home residents, to keep them connected during this period of isolation. With the local graduating class of 2020 at Muquodoboit Rural High School missing out on a physical celebration, we celebrated them with banners in town.

Information about how we've supported our people throughout COVID-19 can be found on page vi of this report.



SAFETY ALWAYS

Zero harm is always our target. Zero harm to all people as we responsibly operate our assets to their full potential. This focus on safety guides everything we do.

How our sustainability initiatives map to the United Nations Sustainable Development Goals



2020 HIGHLIGHTS

40%
improvement in TRIFR

3
months injury free

We aim to run our business and operations with safety at the heart of every decision we make; that's how we can and will achieve zero harm. We believe in everyone's right to physical and psychological safety. Everyone deserves to be safe at work and feel safe about coming to work because they are respected and accepted.

A reduction in Total Recordable Injury Frequency Rate (TRIFR)

In FY20 our TRIFR reduced by 40%. The majority of recordable injuries were of low severity, with 69% of them involving hand, arm or shoulder injuries.

The 40% decrease in TRIFR was driven by a Visual Leadership approach to safety, complemented by stronger procedures around contractor safety management. Visual Leadership involves our operational leaders spending time in the field examining and observing work and safety practices for themselves. These leaders then formally track actions and prepare improvement plans.

While the overall significant improvement in our TRIFR is encouraging, we remain committed to working towards our ultimate goal of zero harm.

The only gold mining company conducting regular gender safety audits

Through our gender diversity work, we recognised that there is a clear link between gender and safety in the workplace. In 2016, we joined with Oil Search and New Britain Palm Oil to pilot the Gender Smart Safety Audit with Papua New Guinea's Business Coalition for Women in 2016. The audit highlighted the different safety concerns women experience compared to men.

These audits have been regularly conducted at our Simberi Operations in Papua New Guinea since 2016, and at our Leonora Operations in Western Australia since 2018. They are a valuable tool in creating a safe and inclusive workplace for our people.

Outcomes from gender safety audits making a difference

Our gender safety audits have given us helpful insights into how we can make our female employees feel safer at, and on the way to and from, work.

In response to the audits at our Simberi Operations, we have introduced female-only seating on the work commuter bus, as well as a private vehicle transfer service, and a system where women camp cleaners work in pairs. Since the changes, we have noted an 18% improvement in women's happiness about their safety at work (up from 35% to 53%).

At our Leonora Operations, we found that women largely felt safe at work, but did show concern about their safety on the way to and from work. As a result of our audits we have improved underground facilities for women, and introduced revised health and safety policies to reflect the different requirements for women, particularly during pregnancy. We're continuing to work on other areas of concern, including the commute to and from work, making the mine camp gym more female friendly and improving camp security.

CASE STUDY





EMPOWERED PEOPLE DIVERSE TEAMS

We are an employer of choice committed to inclusion and diversity. We provide a caring work environment where our talented people are happy, thrive, feel safe and can fulfil their potential.

How our sustainability initiatives map to the United Nations Sustainable Development Goals



2020 HIGHLIGHTS

71%

favourable engagement response in employee engagement survey

Employer of Choice for Gender Equality (WGEA)

6

years running

Our people strategy has six pillars to ensure we can meet our commitment to empowering our people and providing an inclusive and diverse workplace. These pillars are talent, diversity, leadership, engagement, performance and capability; and we have strong, business-wide programs in place to support each of them.

Providing opportunities for everyone is important to us. That's why we're committed to providing training and development at all levels and to those who would not otherwise have access to it. St Barbara's Indigenous Apprenticeship Program is one such example.

Supporting the wellbeing of our people

Working in remote communities can be challenging, particularly for those who are away from their families for extended periods of time. In acknowledgement of the psychological health issues faced by people working in our industry, our Leonora Operations painted trees at the entrance to the site blue to recognise RU OK? Day.

The COVID-19 pandemic has led to longer periods of separation from family for some of our people. In recognition of this, we've put together a Family Care Package that allows families to select from a range of care services such as gardening, food deliveries, supermarket vouchers and assistance with home chores. These small tokens of assistance are designed to help ease the burden of not having that extra pair of hands at home.

We are acutely aware of the impact of the pandemic on people's psychological health, so we continue to run a number of health education webinars with a leading service provider. These include tailored webinars that cover topics such as psychological wellbeing, effective sleep practices and how to lead through ambiguity.

Genuinely supporting gender diversity

We continue to lead the industry with our gender diversity initiatives. We are the only Australian mining company to be recognised as an Employer of Choice for Gender Equality by the Workplace Gender Equality Agency (WGEA). We're proud to have received this citation for six years running. We were also an initial signatory to the WGEA Pay Equity Pledge and our newly appointed Managing Director and CEO, Craig Jetson, continues the legacy as a Pay Equity Ambassador.

Our key gender diversity highlights

FY20 has been a successful year as we stay focused on being an employer of choice. The highlights include:

- Increased the number of women in the Simberi workforce to 15% by upskilling women in truck, dozer and digger operator roles.
- No gender pay gaps for like-for-like roles across the St Barbara Group.
- 100% of our female Australian employees have returned to work after parental leave for the last 11 years.
- Continued to exceed the percentage of women on ASX 200 Boards with 33% representation.
- Closer to achieving our goal for the proportion of women in our Australian operations.

We are establishing new objectives with regard to the proportion of both women and First Nation employees at our Atlantic Gold Operations.

All female mine truck driving crew

Standing at just 1.5 metres tall, Serah Lawat (pictured far left) really enjoys being in control of a 45 tonne haul truck.

Serah, a 23-year-old local Simberi Islander, has been safely driving a Bell B50D Articulated Dump Truck (ADT) for one year now, working alongside fellow women operators, Roselyn Leto, Olivia Pikene and Hanshaine Gasoreng.

All four women were hired with no experience of driving heavy vehicles. They underwent 400 hours of intensive theory and practical lessons before qualifying to operate haul trucks in the pit. Serah is happy to spend a few years safely meeting her targets before considering upgrading her skills to drive other heavy equipment like her colleague Julie Tokmun. Julie is currently the only female dozer operator in Simberi.

Our Simberi Operations employs 121 women, of whom 65% are local Simberi Islanders.



CASE STUDY



STRONGER COMMUNITIES

We strive to help our communities thrive, grow and prosper. We build meaningful relationships, investing time and energy to ensure local communities are enriched by being our neighbours.

How our sustainability initiatives map to the United Nations Sustainable Development Goals



2020 HIGHLIGHTS

Engaging with traditional owners

Building local businesses and employment

Proportion of women in Australian workforce

26% (up 4%)

PNG female employee participation achieved 3-year target of

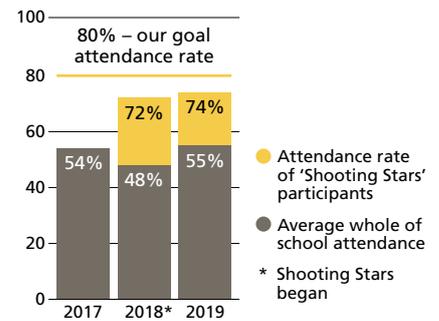
15%

At St Barbara, we value the relationships we have established with our communities. In doing so, we work to ensure we understand what's important to each community; this knowledge is essential in helping them thrive, grow and prosper. Our support ranges from helping build commercial ventures to providing opportunities for education and better health and wellbeing.

Supporting the next generation of Indigenous leaders

Our commitment to care and diversity extends to our communities. Our Leonora Operations proudly supports the Shooting Stars (Leonora) and Clontarf Foundation (Kalgoorlie) programs which help youth from local communities to continue their education and achieve their goals. Our support of the Leonora Shooting Stars has helped increase school attendance by Indigenous girls by 24% above the average school attendance in 2018, and by 19% in 2019. The benefits have moved beyond the original aim of school attendance by fostering relationships that give us a deeper understanding of the community and its people.

Leonora District High School Average whole of school attendance (%)



Domestic violence in Papua New Guinea

At St Barbara, we believe that everyone deserves to feel safe; in their workplace and at home. Everywhere. In Papua New Guinea, around two-thirds of women are the victims of domestic or gender-based violence. That's why we've been helping to address the issue through our Warrior Program, which has been running since 2015. It was extended to contractors and the community in 2018. The program is designed to educate and raise awareness on family and sexual violence. The Warrior Program is facilitated by former Papua New Guinea rugby player, Eddie Aila.

Building cultural awareness and meaningful relationships with communities

We deeply respect and value the traditional owners of the lands on which we operate. In the communities surrounding our operations in Australia, Canada and Papua New Guinea, we make it a priority to learn about the cultures that shape their First Nations' people.

At our Leonora Operations in Western Australia, we offer an Aboriginal cultural awareness session with employees. We want to provide all our people with the opportunity to build their awareness of and respect for the strong and proud history of our Aboriginal people and their culture; this knowledge is critical to a relationship that is built on mutual respect and trust.

In July 2018 during NAIDOC week – which celebrates the history, culture and achievements of Australian Aboriginal and Torres Strait Islander peoples – 57 senior employees from our Leonora team completed a bush day immersion in Aboriginal culture. This was the first of our Aboriginal cultural awareness sessions. The sessions are guided by local elders and involve visiting sites of local cultural significance, getting a better understanding of the medicinal and nutritional value of some common plants and hearing about legends of the area.

The sessions are very popular, evidenced by the fact that most of our senior employees have attended. This shows our people's genuine wish to better understand the unique Western Australian desert environment and the deep and enduring bond that the local Aboriginal community has with the landscape, flora and fauna.



CASE STUDY



RESPECTING THE ENVIRONMENT

We are committed to caring for the environment. We think differently to find solutions to actively manage and neutralise our impact; because we care about the environment and our planet.

How our sustainability initiatives map to the United Nations Sustainable Development Goals



2020 HIGHLIGHTS

New climate change targets: meeting our obligations for Paris 2015

Ongoing record of no long-term harm and no widespread impact

We are committed to a consistent approach to environmental management across all our operations, and to thinking innovatively to minimise our environmental impact.

Carbon neutral by 2050

For the first time, we have set business-wide greenhouse gas emission reduction targets. We commit to being carbon neutral by 2050, and will improve our production emission efficiency (gold ounces/CO₂ t) by 18.6% (on 2013 levels) by 2030. As we engage with the United Nations' Science Based Targets Initiative, these targets may vary according to their guidance.

Initiatives to support us in reaching this target are underway. Our Atlantic Gold Operations is leading this effort, with planning underway for carbon neutrality via wind turbines and scalable salt-water batteries (see case study below).

In 2020, our Leonora Operations completed construction of underground Paste Aggregate Fill (PAF) infrastructure to allow permanent underground storage of up to 100% of waste rock. This involves underground crushing and mixing with paste-fill, which is piped down from the surface, then pumped to fill mining voids.

This PAF and related infrastructure will reduce Gwalia mine's greenhouse gas emissions by an estimated 3% (reducing truck diesel usage by ~18%, and saving

3,000 tons of CO₂ per annum) because less waste rock will need to be transported to the surface, greatly reducing the use of trucks in the process.

Our village accommodation at Leonora Operations won a State Government Golden Gecko award for energy savings via the installation of solar panels.

Leonora recognised as Gold Waterwise Business

Our Leonora Operations achieved significant improvement in town water use and efficiency, which was recognised this year by the West Australian Water Corporation with a Gold Waterwise Business award. This is the second time our Leonora Operations has received this well-deserved recognition.

We achieved these results through training, a structured audit program and the implementation of key actions from the Water Efficiency Management Plan (WEMP). Five sub-metres were installed across the Leonora Operations, leading to the discovery and repair of several leaks. We also added water efficient shower heads and appliances throughout the village accommodation. These two initiatives alone achieved a 15% reduction in water usage across the site.

Innovative solutions to reducing our environmental impact

At our Atlantic Gold Operations we're currently evaluating the introduction of a sustainable, removable, carbon neutral, non-polluting mine at Beaver Dam. The sustainable mine would have no permanent structures, no concrete slab and no on-site water treatment. The main structure would be inflatable and built on removable slabs of recycled plastic. It would be powered by containerised batteries charged from wind turbines. The batteries, which utilise salt water and are scalable, are currently being tested on a small scale at our Touquoy mine, charged by solar panels installed on the administration building.

Cleaning of the sustainable mine will be done with dry ice blasting. The frozen flakes of oil can then be swept up and used in the oil burner to assist with heating the structure. This eliminates the need for water/oil separation, treatment and capture.





GROWING SUSTAINABLY

Growing our business sustainably, where it makes sense, and with strong governance practices, means we can add value for everyone: our shareholders, our people and our communities.

How our sustainability initiatives map to the United Nations Sustainable Development Goals



2020 HIGHLIGHTS

Acquisition of Atlantic Gold already adding value

Global brownfield and greenfield exploration activities

Strong ethics and governance in everything we do

The Board and Management of the Group are committed to maintaining high standards of ethics, integrity and statutory compliance. The Group has consistently achieved 100% compliance with the Australian Securities Exchange (ASX) 'Corporate Governance Principles and Recommendations', which includes the measures listed below.

- A Non-Executive Chairman.
- Annual, confidential Board, Committee and Director performance evaluation.
- Female representation on the Board at 33%.
- All Board Committees (Audit and Risk Committee, Growth and Business Development Committee, Health, Safety, Environment and Community Committee, and Remuneration and Nomination Committee) are chaired by an independent Non-Executive Director with relevant skills and experience (not the Chairman of the Board).
- The Group monitors and reports a 'culture scorecard' (comprising a number of indicators of organisational culture) to the Board on a regular basis. Indicators of culture include selected safety statistics, employee turnover, whistleblower and employee grievance submissions, employee engagement results, and measurable feedback from recruitment and exit interviews.

Supplier Code of Conduct

We are committed to partnering with suppliers whose principles match our own. Our suppliers are required to comply with all applicable laws and, in all cases, to meet the standards and principles set out in our Supplier Code of Conduct across all areas of their business.

Modern Slavery is a key concern for us. We have a new policy, screening process, and due diligence framework in place to ensure we are not purchasing goods produced via human trafficking, slavery, servitude, forced labour, forced marriage, deceptive recruiting for labour and services, debt bondage and child labour.

Our suppliers must comply with all applicable environmental laws and continually strive to improve their sustainability performance, focusing on reduction (as appropriate) of waste, carbon emissions, water and natural resources consumption.

Across our business we have put in place due diligence systems to identify and investigate high risk suppliers.

Economic performance

In FY20 we produced 381,887 ounces of gold at an All-in Sustaining Cost (AISC) of A\$1,369 per ounce. Our cash position sits at A\$406 million, with debt of A\$307 million, of which A\$200 million was repaid on 30 July 2020. We drew down on this debt in March 2020 as a precaution to bolster the balance sheet in the event our operations were impacted by COVID-19.

We have a strong focus on taxation compliance and our financial statements are audited annually by international audit firm PwC. We pay our full income tax and other tax obligations. On average, the total economic contribution of the business to government via all types of taxes and royalties has been equivalent to 49% of profits.

Non-Executive Board members from left to right: Kerry Gleeson, Chair of the Remuneration and Nomination Committee, Stef Loader, Chair of the Health, Safety, Environment and Community Committee, David Moroney, Chair of the Audit and Risk Committee, Steven Dean, Chair of the Growth and Business Development Committee.



We hope you enjoyed reading our Sustainability Story.

Our sustainable approach to operating our business, and our strong, values-led culture will continue to drive our behaviour every day.

You can read more about our sustainable business operations on the following pages, in our full Sustainability Report for 2020.



St Barbara

Sustainability Report

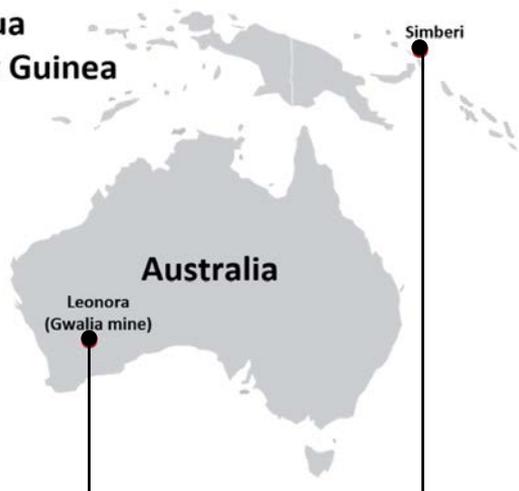
Environmental • Social • Governance

For the year ended 30 June 2020

2020 Sustainability Report

St Barbara at a glance

Papua
New Guinea



Leonora (Gwalia mine)	Simberi	Atlantic Gold
<ul style="list-style-type: none"> Gwalia underground mine FY20 production 171 koz Mine plan to FY31 Prospective tenements 	<ul style="list-style-type: none"> Open pit mine FY20 production 104 koz Mine plan to FY23, advanced study underway of a long term extension Exploration on neighboring islands 	<ul style="list-style-type: none"> Open pit mine FY20 production 107 koz Three additional open pits planned in Moose River Corridor Prospective tenements



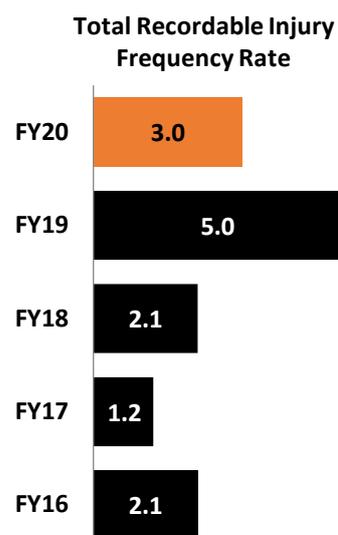
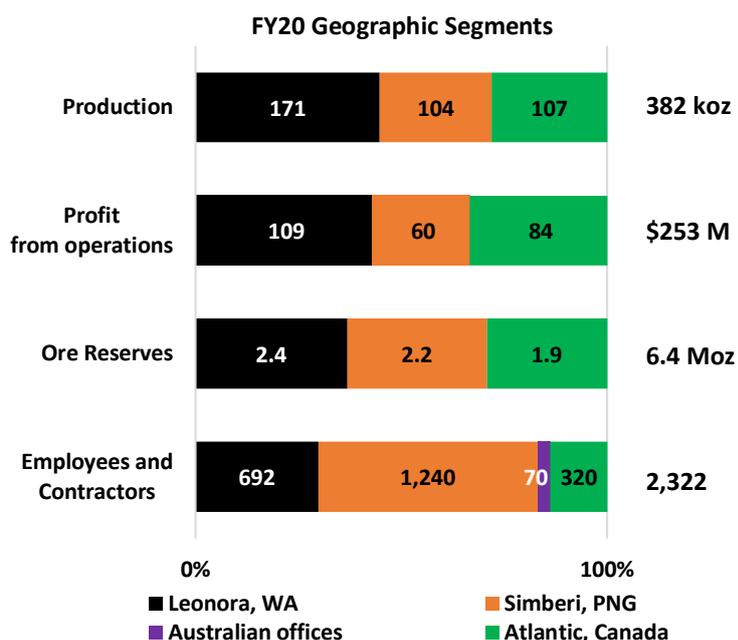
2014 - 2020



2013, 2020



2018



Notes: Results and Ore Reserves from 2020 Annual Report. Total Recordable Injury Frequency Rate measured for each million hours worked on a 12-month rolling basis.

2020 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.

The Sustainability Report is for the financial year ended 30 June 2020. Financial figures are in Australian dollars unless otherwise stated. Highlights of our sustainability activities, 'Our Sustainability Story', immediately precedes this Report.

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 2020 report contains increased disclosure including, where applicable, the Group's targets and commitments.

St Barbara acquired Atlantic Gold Corporation (Atlantic Gold) on 19 July 2019. The 2020 Sustainability Report includes the ESG performance of Atlantic Gold for the full financial year.

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 report is based on St Barbara's assessment of its material sustainability topic areas. These 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.

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

18 September 2020

Rowan Cole

Company Secretary

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St Barbara is committed to achieving its sustainability objectives through its 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**

Key developments in Sustainability Activities and Reporting

The key developments in the Group's sustainability reporting since the previous Sustainability Report include new disclosures (in alphabetical order) on:

- Atlantic Gold, our new Canadian operation, acquired in July 2019
- Carbon Disclosure Project (CDP) climate information
- community engagement standard
- Coronavirus-19 (COVID-19) response and management
- greenhouse gas emission disclosures and reduction targets
- human rights
- modern slavery and supply chain
- protection of indigenous artefacts.

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)¹, Climate (since 2018, rated 'D' for disclosure) and Forests (since 2019)
- a member and financial supporter of the Extractive Industries Transparency Initiative (EITI)²
- a member of the Global Reporting Initiative (GRI) and reports sustainability disclosures in accordance with its Core option³
- a signatory of the UN Global Compact⁴.

As part of its membership of the UN Global Compact, St Barbara supports the United Nations Sustainable Development Goals⁵ (UNSDGs, 'the Goals'). The Group provides the following guidance on our impacts mapped against the most relevant Goals:

UNSDG (only most relevant goals)	Contribution	
	No poverty	<p>We contribute through the employment of people at high relative wages in:</p> <ul style="list-style-type: none"> • a developing country, PNG • a rural location in Nova Scotia, Canada, with relatively low employment rates, wages and opportunities. <p>We pay our taxes, contribute to charities and, in PNG and Canada, engage local businesses.</p>
	Zero hunger	<p>We provided seed money and set up viable businesses, and provide ongoing financial support and advice for local farmers in PNG who sell food to our mine and into the local economy.</p>
	Good health and wellbeing	<p>We aim for zero harm to our employees, with an injury rate well below Australian benchmarks, and strong improvement in our safety metrics year on year.</p> <p>In PNG, we provide free vaccinations to the community at our clinic, and where necessary roll out emergency vaccination programs. We also fund anti-malaria non-governmental organisations (NGOs) in PNG.</p> <p>In Australia and Canada, we provide free flu vaccinations.</p> <p>In all three countries, we offer free mental health advice to all employees, with special measures taken during the COVID-19 pandemic.</p>
	Quality education	<p>In PNG, we support primary schools in the community and adult education for our employees and employees of contractors. This has included building houses for teachers, and donations of stationary, books and desks.</p> <p>In Western Australia, we support educational related sports foundations that encourage Indigenous children in remote locations to attend school such as 'Shooting Stars' for girls and the 'Clontarf Foundation' for boys.</p>

1 www.cdp.net/en

2 <https://eiti.org/>

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

4 www.unglobalcompact.org/

5 www.un.org/sustainabledevelopment/

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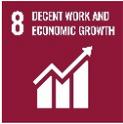
UNSDG (only most relevant goals)	Contribution	
 5 GENDER EQUALITY	Gender equality	We are a global mining industry leader for gender equality, winning numerous awards for promoting and achieving high levels of women's employment, gender safety at work, domestic violence prevention and strong post parental leave return-to-work initiatives.
 6 CLEAN WATER AND SANITATION	Clean water and sanitation	None of our mines is in competition with domestic and agriculture water users. All three mines utilise recycling to minimise water use and costs. Our Gwalia mine in Western Australia has twice received government 'Waterwise' awards for reductions in water use.
 7 AFFORDABLE AND CLEAN ENERGY	Decent work and economic growth	We have kept our mines fully operational and workforce employed during the COVID-19 pandemic, and have growth projects at all three mines in the construction, planning or permitting stages. All employees and contractors are treated with respect and protected by a range of workplace policies. Our Papua New Guinea and Canada mines provide jobs at above average wages in those regions.
 8 DECENT WORK AND ECONOMIC GROWTH	Industry, innovation and infrastructure	In our Gwalia mine in Western Australia, we have pioneered new developments in underground mining. At Simberi in PNG, we build and maintain roads and water infrastructure of our local communities. In Nova Scotia, Canada, we are trialling scalable salt-water batteries that will be the basis of our drive for carbon neutrality.
 13 CLIMATE ACTION	Climate action	We are amongst the most carbon efficient gold mining companies in the world, and this year have announced long-term targets to improve this efficiency further in line with Paris 2015 goals and achieve carbon neutrality by 2050.
 15 LIFE ON LAND	Life on land	We undertake rehabilitation of disturbed land and management of waste and effluent according to best practices and regulatory requirements as well as provide offsets for unavoidable land and water harm to a higher standard of biodiversity. We prepare for closure in accordance with strict government requirements for forward financial provisioning.
 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	Peace, justice and strong institutions	We have been a financial support of the EITI for three years and publish government taxation related information in our Sustainability Report. All political donations are prohibited under our governance policies. We have published our first modern slavery and human rights ('Community Relations') policies this year, as well as a comprehensive supply chain code of conduct .

Table 1: United Nations Sustainable Development Goals

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.
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 discussed frequently
- Engagement with experts, industry organisations and international initiatives focused on sustainability issues
- Issues identified as critical in our Risk Management System.

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.

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

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

Table 2: Material reported issues, boundaries and stakeholders

Our Sustainability Approach

A safe workplace, and the health and wellbeing of all personnel – 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 Growth and Business Development Committee assist the Board with oversight of business development and strategy. 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 executive responsibility for Sustainability, and his letter outlining the Group's approach to sustainability appears on pages ii and iii of the immediately preceding Sustainability Story.

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 appropriately managed. The framework is consistent with international and Australian risk management standards.

The material business risks faced by the Group that may have an impact on the operating and financial prospects of the Group are described in the [Annual Report](#).

ESG area of focus	Policies	Board / Board Committee	Executive / General Manager responsible
Environmental	Environmental Policy	HSEC ¹	GM Human Resources & HSEC
Social	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 Workplace Behaviour Policy		
Donations Sponsorships Community Programs Policy	Board	Company Secretary	
Governance	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		
	Modern Slavery Policy	Board	Company Secretary & GM Human Resources & HSEC
	Whistleblower Policy		
	Delegation of Authority	Audit & Risk	Chief Financial Officer
Risk Management Policy	Audit & Risk	Company Secretary	

Table 3: ESG areas of focus

1 HSEC: Health Safety Environment & Community Committee

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Five Commitments

As we operate our business and care for our people, we are guided by our five commitments and values-led culture. At St Barbara, doing the right thing is important to all of us.

Our commitments



SAFETY ALWAYS

Zero harm is always our target. Zero harm to all people as we responsibly operate our assets to their full potential. This focus on safety guides everything we do.



EMPOWERED PEOPLE DIVERSE TEAMS

We are an employer of choice committed to inclusion and diversity. We provide a caring work environment where our talented people are happy, thrive, feel safe and can fulfil their potential.



STRONGER COMMUNITIES

We strive to help our communities thrive, grow and prosper. We build meaningful relationships, investing time and energy to ensure local communities are enriched by being our neighbours.



RESPECTING THE ENVIRONMENT

We are committed to caring for the environment. We think differently to find solutions to actively manage and neutralise our impact; because we care about the environment and our planet.



GROWING SUSTAINABLY

Growing our business sustainably, where it makes sense, and with strong governance practices, means we can add value for everyone: our shareholders, our people and our communities.

More detailed information about our policies, that support these commitments, can be found in the governance section of our website.

Environment Social Governance Analysts

The Group engages with a number of agencies throughout the year that gather data on ESG performance for shareholders.

Forward Statements and Targets

This report has been prepared by St Barbara Limited ("Company"). The material contained in this report is for information purposes only. This release is not an offer or invitation for subscription or purchase of, or a recommendation in relation to, securities in the Company and neither this release nor anything contained in it shall form the basis of any contract or commitment.

This report contains forward-looking statements that are subject to risk factors associated with exploring for, developing, mining, processing and the sale of gold. Forward-looking statements include those containing such words as anticipate, estimates, forecasts, indicative, should, will, would, expects, plans or similar expressions. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, and which could cause actual results or trends to differ materially from those expressed in this report. Actual results may vary from the information in this report. The Company does not make, and this report should

not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of such statements or assumptions. Investors are cautioned not to place undue reliance on such statements.

This report has been prepared by the Company based on information available to it, including information from third parties, and has not been independently verified. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information or opinions contained in this report.

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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 workforce. The Group is committed to achieving its sustainability objectives through our 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 detail 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 | • Health and safety |
| • Community relations | • Modern slavery |
| • Conflicts of interest | • Privacy |
| • Continuous disclosure | • Risk management |
| • Diversity and inclusion | • Securities dealing |
| • Donation & sponsorships | • Social media |
| • Environment | • Whistleblower |
| • Equal opportunity | • Workplace behaviour |

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 material business risks faced by the Group that may have an impact on the operating and financial prospects of the Group are described in the [Annual Report](#).

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

The Group commenced paying company income tax in 2018, having fully utilised previously accumulated income tax losses incurred whilst establishing its operations.

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 2020, 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
- Mining Association of Nova Scotia (Canada)
- 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.

Supply Chain

We are committed to partnering with suppliers whose principles are consistent with our own. Our suppliers are therefore required to comply with all applicable laws and, in all cases, they must meet the standards and principles set out in our [Supplier Code of Conduct](#) across all areas of their business.

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Key aspects of the Supplier Code of Conduct include:

Anti-bribery and corruption

Our suppliers must comply with all applicable laws relating to the prevention of bribery, corruption, fraud, tax evasion or similar or related activities.

Diversity and inclusion

Our suppliers must comply with all applicable discrimination laws and actively promote diversity and inclusion within their own workplace, including in recruitment, retention and promotion practices.

Health and safety

Our suppliers must comply with all applicable health and safety laws and aim to create a safe working environment for its employees and anyone else affected by their businesses.

Modern slavery

Our suppliers, whether directly or through their supply chain, must comply with all applicable modern slavery laws, including not engaging in human trafficking, slavery, servitude, forced labour, forced marriage, deceptive recruiting for labour and services, debt bondage and child labour.

Sustainability

Our suppliers must comply with all applicable environmental laws and continually strive to improve their sustainability performance, focusing on reduction (as appropriate) of waste, carbon emissions, water and natural resources consumption.

Due diligence and enforcement

The Group has put in place due diligence systems to identify and investigate suppliers identified as potentially being high-risk in relation to compliance with any of the above requirements. All such suppliers are subject to detailed due diligence.

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. 'Zero harm' is the Group's safety goal. The Group's health and safety policy is available at: www.stbarbara.com.au/about-us/governance/. The Group's Health, Safety, Environment and Community 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, Environment and Community Management System (HSEC MS) in use across the Group, which is supported by significant numbers of specialist health and safety staff at all worksites, as well as in corporate leadership and support. The HSEC MS encompasses the following standards:

1. Leadership and Accountability
2. Risk and Management of Change
3. Contractor Management
4. Incident Investigation and Reporting
5. Communication and Participation
6. Critical Risk Control Standards
7. Environmental Management
8. Training, Competency and Behaviour
9. Health and Hygiene
10. Legal Requirements and Records Management
11. Crisis and Emergency Management
12. Design, Construct, Commission and Decommission
13. Monitor, Audit and Review
14. Planning, Goals and Targets
15. Community Engagement.



The Group has developed and maintains a set of 'Critical Risk Control Standards', each containing minimum requirements and expectations, and which apply to all St Barbara controlled sites and activities.. The purpose of the St Barbara Critical Risk Control Standards are to ensure critical controls are identified and implemented for high risk work activities and are designed to prevent injury to workers including :

- CRCS 1 – Light Vehicles
- CRCS 2 – Surface Mobile Equipment
- CRCS 3 – Underground Mobile Equipment
- CRCS 4 – Lifting Operations
- CRCS 5 – Hazardous Material Handling
- CRCS 6 – Underground Ground Control
- CRCS 7 – Plant, Equipment and Power Tools
- CRCS 8 – Isolations
- CRCS 9 – Working at Heights
- CRCS 10 – Surface Mining Ground Control
- CRCS 11 – Confined Spaces
- CRCS 12 – Explosives
- CRCS 13 – Marine Operations
- CRCS 14 – Drilling Operations
- CRCS 15 – Electrical Work

The Group has a proactive regime of education and 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 of the Group's HSEC Management System including the Critical Risk Control Standards
- 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' (TRIFR), 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.

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:

- Integration of the new Canadian operations 'Atlantic Gold' in Nova Scotia. This included implementation of the Group's standards and processes, performance measurement tools (such as TRIFR and Lost-Time Injury Frequency Rate (LTIFR)). Though there are considerable similarities, for instance in 'rules to live by', the role of safety professionals department, reporting and compliance regime and incident measurement and categorisation are quite different across the jurisdictions.
- A number of systems and standards have been reviewed and improved, including a new community engagement standard.

External audits of health and safety practices are conducted at both operations. Audit result improvements are a component

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of individual at-risk remuneration for employees with middle and senior site management responsibilities.

COVID-19



Shortly after the World Health Organisation characterised COVID-19 as a pandemic in March 2020, Managing Director and CEO Craig Jetson noted, “St Barbara’s first priority is the safety, health and wellbeing of our employees and their families, our business partners and our communities during this crisis. I want to acknowledge the extraordinary effort demonstrated by our people and our business partners in keeping each other safe whilst maintaining operations to this point.”

The Group has managed the health and safety aspects of the COVID-19 pandemic effectively, with no employee or contractor cases related to work and no transmission to local community members caused by our operations.

The Group has worked closely with government at all levels and followed government guidelines, taking these as minimum requirements on which we have built more robust practices. We have sought and implemented the advice of expert crisis managers, psychologists and epidemiologists.

The Group did not reduce its workforce during the 2020 financial year as a result of COVID-19, and has not sought any COVID-19 related government financial assistance, such as the Australian Government ‘JobKeeper’ scheme.

COVID-19 charitable contributions

Our operations are located in communities that have at times struggled to manage the medical and economic impacts of the virus and the disruptions necessary to contain its spread. Some of our charitable efforts related to COVID-19 are detailed on page 17.

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.

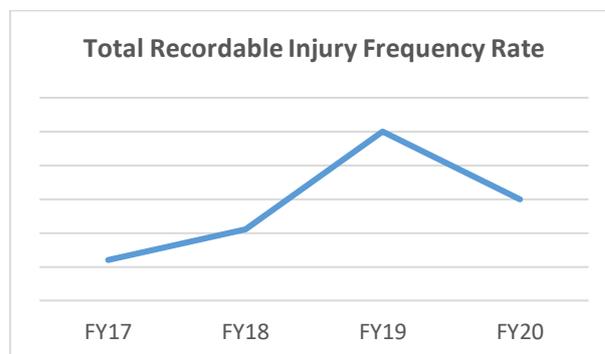


Figure 1: Total recordable injury frequency rate

Benchmarks for TRIFR are not readily available, so Lost Time Injury Frequency Rate (LTIFR) per million hours worked is used for external comparison. The Group’s LTIFR of 0.4 for the year to 30 June 2020 (2019: 1.1) is well below relevant available industry benchmarks¹.

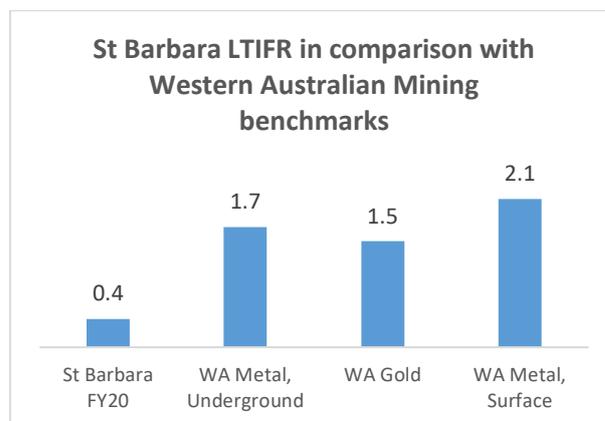


Figure 2: Long term injury frequency rate

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

Analysis and commentary on 2020 Recordable Injuries and trend.

There was a **48% decrease** in recordable injuries with respect to ongoing operations. This year’s results includes our Canadian Atlantic Gold operations for the first time.

1 Industry Lost Time Injury Frequency Rate (LTIFR) for Western Australia Mining industry

http://www.dmp.wa.gov.au/Documents/Safety/MSH_Stats_Report_SafetyPerfWA_2018-19.pdf

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In FY20, the majority of recordable injuries were of low severity, and:

- 1) Occurred at our Gwalia mine in WA (63%)
- 2) Mainly involved contractors (69%)
- 3) Involved hand, arm and shoulder injuries (69%).

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

Details and analysis of safety incidents in 2020

Number	Location and type of injury	Employee	Contractor	Australia	Canada	PNG
7	Fingers, hand, arm	1	6	3	2	2
4	Shoulder	1	3	2	2	-
2	Ankle	1	1	2	-	-
2	Back	1	1	2	-	-
1	Eye	1	-	1	-	-
Total						
16	Recordable injuries	5	11	10	4	2
total includes	Lost time injuries	2	-	-	1	1
2	(injuries requiring time off work)					

Table 4: Analysis of safety incidents

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 with Business Continuity Plans (BCP) for key risks with the potential to interrupt operations.

All three mine sites have highly trained 'Emergency Response Teams' (ERT). The ERTs 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 ERT

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).

The 2020 safety performance is encouraging given the very significant improvement, however, there is still work to be done to achieve our ultimate goal of 'zero harm'.

Details regarding all 16 'recordable' injuries in 2020 (2019: 23) are shown below:

came third in the Surface Competition (May 2019) and third in the Underground Competition (October 2019).

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.

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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 six pillars:



Talent	Ensuring the Group recruits, identifies, develops and retains talent to reliably deliver its business strategy
Diversity	Building greater awareness of the diversity throughout the Group and ensuring all employees are able to access and experience the same rewards, resources and opportunities
Leadership	Developing adaptable leaders with a growth mindset who can proactively navigate and manage St Barbara's operations into the future
Engagement	Ensuring we maintain productive direct relations with our people
Performance	Developing a high performance culture and support the right work being done well by all employees
Capability Development	Building St Barbara's workforce capability at an individual, team and operational level to facilitate increased productivity and technology adoption to accelerate growth

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.

HR metrics, including average hours and training and development expenditure per employee is reported 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 also runner up at the international [2019 Mining Journal awards](#) for 'Gender Diversity Leader'.

The Group was awarded the 'Women in Resources' state (Victorian) award and the national award for 'Excellence in Diversity Programs and Performance' in 2017. In 2018, the Group received the AMMA 'Australian Women in Resources Alliance'¹ national award.

Other diversity initiatives include actively managing the gender pay gap, training for all employees, gender advocacy, gender safety programs, a Women's Internal Network established in 2012, a commitment to developing the national workforce in PNG, Indigenous engagement targets, and employee wellbeing programs.

Since 2016, the Group has put in place various measures to support employees who are dealing 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 through²:

- 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 **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

¹ Australian Minerals and Mining Association (AMMA)

² At this time, employees of Australian Operations only.

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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 with and have the option to wear trousers for personal protective equipment (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.

In 2019, the above changes resulted in:

- 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, for 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 2020 to 26%, with a target to reach 30% in 2022. The proportion employed in Papua New Guinea increased from 14.7% in 2018 to 15.0% in 2020, successfully meeting the 2018 target of 15% by 2020. A new target is being considered for PNG, together with a similar gender composition target for the Canadian operations.



Figure 3: Gender diversity

The Group conducts regular gender pay audits and has a nil gender pay gap for like-for-like roles¹. The Group has a target to reduce the 'overall gender pay gap'² to 8% by 2022.

The Group's Leonora Operation (incorporating the Gwalia Mine) in Western Australia has been unsuccessful in achieving its target for **Indigenous employment of 5%** by 2020, however it has successfully more than trebled this metric since 2016 to achieve 3.2% at June 2020. The target has been reviewed and extended to 2022. To support this initiative, from 2018 Leonora (WA) employees attend 'Cultural Connection to Country' (a program of activities to recognise indigenous Australians' contribution to society). The training is hosted by local Wangatha/Tjupan elders near significant Indigenous sites in the mine locality.

Leadership

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

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

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

2 'Overall Gender Pay Gap' is calculated according to the WGEA guidelines (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.

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Due to COVID-19 restrictions, leadership courses have been moved to virtual delivery or paused temporarily.

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, together with smaller, periodic 'pulse' surveys. The various measures indicating employee engagement have been declining, with the overall favourability score in the last three years being 83% in 2018, 73% in 2019 and 71% this year. The detailed comments provided by employees indicate that the operational challenges faced by the Group's mines, with production down 22% year on year at Gwalia and 27% at Simberi, and the potential closure of the Simberi mine, at that time anticipated in 2022, were having an impact on engagement. It is anticipated that with recent operational performance improvements, and the announcement of the Simberi Sulphide project with the potential to extend mine life at Simberi to 2035¹, that employee engagement will improve again. Our new Atlantic Gold (Canada) operations were not included in the general survey but were surveyed twice as to their perceptions on joining the Group and on integration, with the results being positive overall.

A further 'pulse' survey was taken of employee views on how the Group was managing the COVID-19 crisis. This provided valuable information for management and was overwhelmingly positive with employees indicating high levels of satisfaction with the Group's management of COVID-19.

Group employee turnover of 8.3% (2019: 7.2%) remains below the Australian industry benchmark² of 14.1%.

The main influence on the overall turnover rate is the inclusion of our new Atlantic Gold, Canada operations where turnover was 10%, slightly above our average. Turnover in Australian operations dropped, while in PNG it increased. In Papua New Guinea there has been a sharp increase in turnover since the

onset of COVID-19 due to the impact of interrupted travel, extended rosters and quarantine periods.

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 awards.

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

- Diversity and Inclusion Policy
- Equal Employment Opportunity Policy
- Workplace Behaviour 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.

Mental Health and wellbeing initiatives during 2020 were dominated by COVID-19 orientated programs, including:

- Online sessions for leaders on 'Leading through ambiguity and uncertain times' and 'Psychological health awareness'
- Resources and tools for employees, including maintaining healthy sleep patterns and mental health in lockdown/quarantine
- Counselling for employees undergoing travel-related isolation and quarantine.

Mental Health and Wellbeing resources available to employees generally include:

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

1 Note that the Group has progressed to a feasibility study to extend mine-life at Simberi to FY35 stbarbara.com.au/investors/announcements/2020.05.05-asx-simberi-sulphide-feasibility-study.pdf

2 The Mackie 'RITA' Report – April 2020 figures. RITA report has 32 Australian Resource industry companies participating. 'Turnover' is voluntary employment moves only, direct employees only .

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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.

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

Awards

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

Financial Year	Authority	Award
FY20	Workplace Gender Equality Agency	Employer of Choice for Gender Equality (awarded annually since 2014)
	International Mining Journal	Runner up 'Gender Diversity Leader'
FY18	Australian Women In Resources Alliance - National Awards 2018	Excellence in Diversity
	Women In Resources National Awards 2017	Excellence in Diversity Programs and Performance
FY17	Victorian Women in Resources Awards	Gender Diversity Programs
	Australian HR Awards	Finalist for 'Best Health & Wellbeing Program'

Social & Communities

COVID-19

A key priority with our management of COVID-19 was to ensure that Group employees and contractors did not introduce COVID-19 into a community associated with our operations or exploration.

The Group also contributed to and initiated various measures to support our local and wider community to cope with the medical, isolation-related and economic impacts of COVID-19. Some of these initiatives are described briefly in this section.

Many of the community outreach, volunteering and other programs undertaken by the Group were suspended due to COVID-19 restrictions.

Our Community commitment

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/.

Community Engagement Standard

In 2020, the Group implemented a new Community Engagement Standard as part of the Health, Safety, Environment and Community Management System.

The purpose of this Standard is to ensure that the Group develops and implements effective and transparent engagement, communications, stakeholder management and appropriate reporting arrangements with relevant stakeholders. The standard has 15 requirements, including:

- There are strategies in place to employ, engage and retain local talent, underpinned by employment protocols on work rights and conditions and in line with the Group's commitment to diversity
- An assurance process is in place to verify the absence of compulsory and/or child labour across the St Barbara Group, and to the extent possible, supply chain
- All workers should be trained in cultural awareness and human rights relevant to their area of work and the operations' local cultural context
- The Group seeks to minimise resettlement and, where this is not feasible, to structure appropriate arrangements that maintain and/or improve the livelihoods of affected peoples
- A process shall be in place to manage risks to local culture and heritage and to effectively maintain and, where possible, enhance local culture and heritage through an ongoing and open dialogue

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- A system is in place to manage questions, concerns, issues, complaints and requests from the local community and includes records management, reporting and processes to engage and respond to submissions.

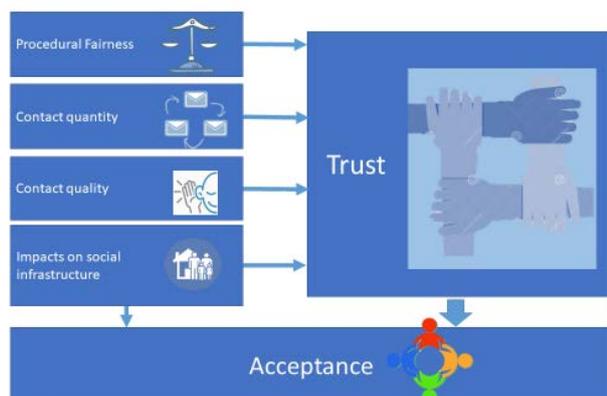
The Group has a **stakeholder management** program, resourced with dedicated local teams as well as a corporate support and strategy function.

The stakeholder engagement system builds on the guidance and recommendations of peak mining bodies the International Council on Mining and Metals (ICMM) and the Minerals Council of Australia (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
- consulting carefully with stakeholders when there are changes in mining and exploration activities that impact them.

Trust Model for Stakeholder Engagement¹



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

In late 2019, the Group's mining lease at Simberi was extended for 10 years, which reflects government and community support for the operation.

'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 Province².

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\$1,200³, a level that less than 35%⁴ 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.



Recent roadworks at Simberi on behalf of the community, including a new bypass at the Maragon Health clinic and a new Bridge at Botlu.

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
- COVID-19 initiatives, such as:
 - Assisting the islanders with monitoring boats moving between other islands, with employees and

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

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

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

4 World Bank, April 2019

https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_PNG.pdf

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- contractors taking temperatures and completing questionnaires
 - Testing community members with symptoms for COVID-19
 - Donation of 1,000 test kits to the provincial health authorities
- Long-term provision of a fully equipped and staffed medical centre, servicing the community. In 2019, the Group renovated the Simberi Island hospital and purchased a portable ultrasound unit for use there
- 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:

- Mariculture¹ 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 2016. The Group provided training in governance and commerce practices, as well as seed funding in 2017
- 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 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
- In 2020 the creation of an inland fisheries business development capability, breeding Talapia in the inland company fish farm and distributing fingerlings to interested local families who have constructed their own fishponds or to nearby creeks.

Facilitating the creation of the SMS oversight and management organisation has been a particular success. The organisation

¹ The cultivation of marine plants and animals in their natural environment

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.

A project to create a **sustainable cocoa business** is in its third year with over 27,000 disease resistant cocoa seedlings grown in the company nursery then distributed to local farmers in partnership with SMS. Traditional mixed cropping organic farming methods, where subsistence food crops provide shade for the lower growing cocoa plants, are utilised. In addition to the original company nursery on Simberi, there are now two additional nursery with plans for a third in the nearby islands, and 5 hectares under cultivation at two company plantations.

A cocoa dryer has been purchased and in early 2020 the first 120 kg shipment of dried cocoa beans was exported to be made into 'Queen Emma' premium Simberi chocolate by the PNG Company Paradise Foods.



Cocoa Dryer (left) and fermenter box, April 2020

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

The **Grievance Resolution Process**, has recorded relevant data over more than four years, giving the Community Relations team at Simberi a proactive tool for data analysis, reporting and self-assessment.

For example, analysis of grievances over the January to August 2020 were categorised per the tables below:

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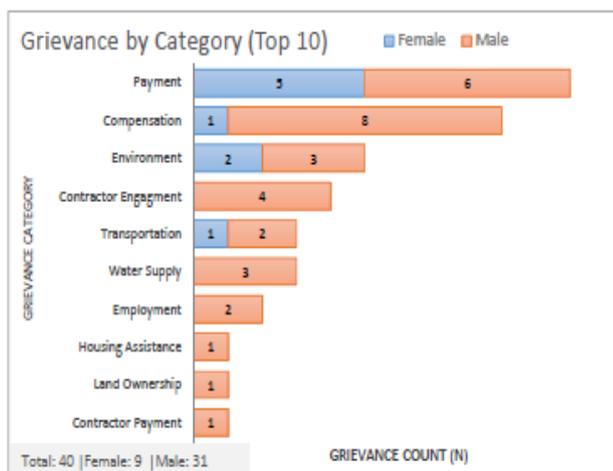


Figure 4: PNG grievances by category

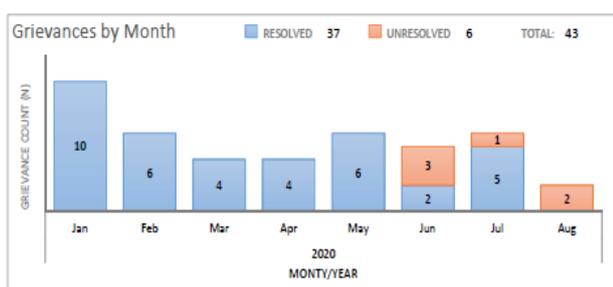


Figure 5: PNG grievances by month

The Simberi Community team produces quarterly and annual reports to government agencies detailing grievance reporting, community development activities, ongoing social impact studies, payment of locally owed royalties, employment of locals directly, and usage of Landowner companies.

Leonora (Western Australia)

In 2019, the Group engaged consultants to complete a community perception survey of the Leonora community. Approximately 14% of Leonora residents participated through phone, internet or street interviews, or through focus groups, including a slightly larger proportion of the local Aboriginal community. This survey will be repeated in 2021.

88% 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. Plans for the coming year include the hire of three new Aboriginal apprentices and a further five trainees as well as the partnerships with local training institutions that will support the new hires.

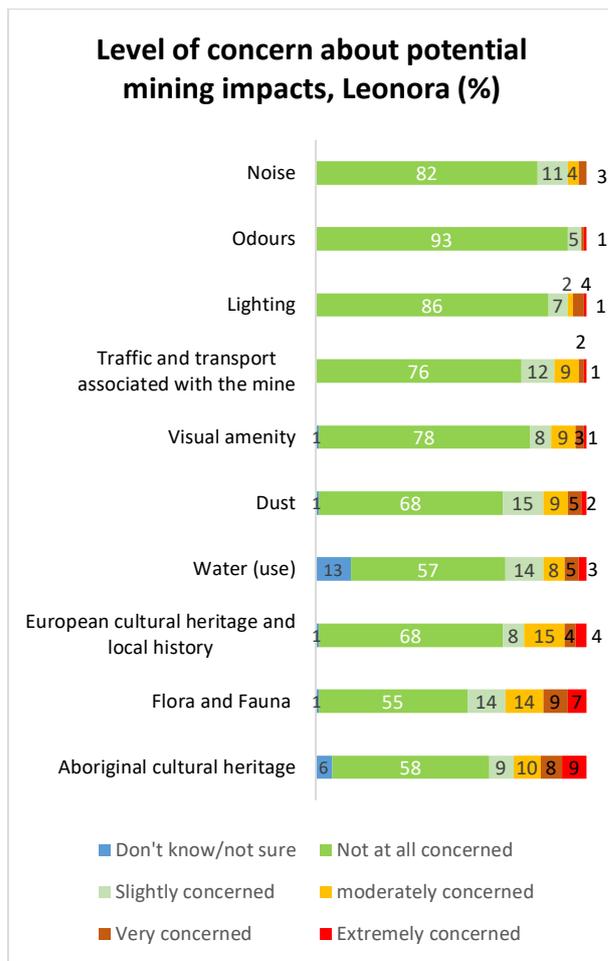


Figure 6: Leonora community perception survey 2019

In 2018, the Group announced a three-year commitment to the Leonora ‘Shooting Stars’ program of A\$100,000 p.a., in partnership with neighbouring Leonora-region gold miner Saracen Mineral Holdings Ltd. Shooting Stars is an educational program that uses netball and other vehicles to drive its primary vision of increasing school attendance rates for your Aboriginal and Torres Strait Islander girls living in remote communities and regional towns to 80-90%. In 2019, the commitment to women’s netball was expanded by joining the [Gold Industry Group’s](#) three-year sponsorship of women’s netball in WA. During the two years of the Shooting Stars program, a 24% and 19% improvement above the average school attendance has been achieved.

The Shooting Stars Leonora Program Coordinator lives in a house provided by St Barbara and employees from the mine take part in weekly netball games with the program participants. In 2019, the Group supported the NAIDOC¹ Netball challenge and various other Shooting Stars netball initiatives.

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

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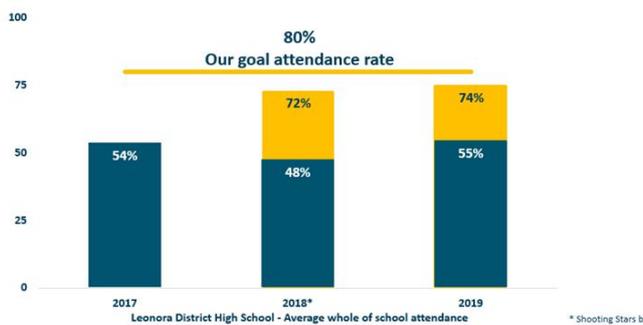


Figure 7: Shooting Stars attendance Leonora High School

Also in 2019, the Group announced a three-year partnership with the Clontarf Foundation 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. Clontarf have agreed to provide a talent pipeline to our Leonora Operations, including ongoing support for onboarding and external mentoring.

Coronavirus

From March 2020, Community activities in **Leonora** have been limited in terms of the participation of Group staff members due to state government restrictions and the need for social distancing to prevent the spread of COVID-19. Protection of vulnerable remote communities has been a key concern and the Group has worked closely with the Western Australian government through the Chamber of Mining and Energy to ensure social distancing and other measures are in place to protect the Leonora community. Some long term Group sponsorships that had to be cancelled or suspended due to COVID-19 included:

- Leonora Golden Gift: an historic and world famous elite mile running event. The associated community carnival includes fun runs, horse races, fashions on the field, an elite cycling event and live music festival.
- Kambalda Football Club: Sponsorship enabled Leonora players participation with the Kambalda Football Club as part of the Goldfields Football League. An immediate decrease in anti-social youth behaviours was noted when this initiative began in 2017.

Other sponsorships have been ongoing and include:

- Leonora Bike Challenge 2019 – a daily cycling program and event to encourage fitness and exercise, resilience and commitment in the Leonora community.
- The Group sponsors the Leonora Cup, a horseracing fixture each October.
- 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’.
- Teach Learn Grow: a rural program provided one-on-one tutoring to students through sending university student

volunteers out to Leonora District High School, with a special focus on mathematics.

- Career Pathway Program: commencing in 2019, each week an employee speaks with students about their role and the pathways taken to get where they are. The program provides students with exposure to the wide variety of jobs on the mine site and the opportunity to ask questions directly.
- Other sponsorship and in-kind support of Leonora community events in 2019-2020 include the Blue Light Disco, and initiatives combating substance abuse and the Leonora ‘RUOK’ day.
- St Barbara supports a number of other charities and initiatives in Australia, including in 2019-2020:
 - The Chamber of Minerals and Energy Western Australia COVID-19 Community Support Initiative
 - The Australian Red Cross, ‘Walk in her Shoes’ charity for education and infrastructure that benefits women in developing countries
 - Donation of a commemorative solid gold coins to the Breast Cancer Research Centre WA, Leonora Emergency Services and WA Police Legacy fundraising event nights.
 - Platinum sponsor of Get Into Resources, an initiative to showcase the resources sector to secondary school students in WA. This includes hosting students at the mine for guided tours and presentations

Atlantic Gold (Nova Scotia Canada)

The team at Atlantic Gold in Nova Scotia are proud of the program of community sponsorships, charitable contributions and support of community and First Nations (indigenous Canadians) aspirations.

In 2019-2020 the Group:

- Supported the graduating year at the Middle Musquodoboit High School who were unable to celebrate their high school graduation because of COVID19 restrictions. The Group provided a series of banners and posters to decorate the public spaces of the town with photos of every student who graduated
- The Group purchased an ultrasound machine for the Middle Musquodoboit hospital
- The Touquoy mine site have a volunteer group known as ‘The Green Team’. As well as spearheading sustainability innovation for the site, the green team also attend public fairs and social events to provide clean-up and rubbish collection help
- In 2020 the Group agreed to support ten graduating students from First Nations backgrounds with summer internships, after COVID-19 related circumstances resulted in the cancellations of most of the previously arranged internships in other industries

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- Donated funds to the 'Feed Nova Scotia' initiative for families struggling with the economic impacts of COVID-19
- Donated 500 face masks to the Regional Health Authority as part of the #HealthCareHeroes initiative
- Donated funds to the Rural Institute for Cultural Heritage and Environmental Sustainability, an initiative in Sherbrooke Nova Scotia associated with the Sherbrooke Village Museum
- Donated funds to the Canadian Red Cross to assist with support for the families of victims killed in the April 2020 gun violence incident in Nova Scotia.

Protection of Indigenous Artefacts

All three of the Group's operations have practices for ensuring mining and exploration activities do not impact sites of archaeological or spiritual significance for Indigenous peoples.

As well as their operating mines, the Group has active exploration programs in remote areas. Prior to exploration commencing, very thorough environmental and community orientated review of the proposed ground is required. Regulatory requirements around protection of sites of spiritual and archaeological significance for Indigenous people differ in our various jurisdictions, so as well as targeting compliance, the Group is determined to ensure that local Aboriginal, First Nations and island communities (in Australia, Canada and Papua New Guinea respectively) are consulted and involved in surveys of proposed exploration and development sites.

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.

Human Rights

The Group has policies for Equal Opportunity, Diversity and Inclusion and Community Relations, protecting employees from discrimination based on race, age, union affiliation, ethnicity, religion, gender, sexual orientation, disability, family and marital status, nationality and political belief.

These are available at www.stbarbara.com.au/about-us/governance/:

[Diversity and Inclusion Policy](#)

[Equal Employment Opportunity Policy Statement](#)

[Community Relations Policy](#)

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/.

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 Environment and Community Management System (HSEC MS). The HSEC MS includes the following environmental components:

- Communication and Participation
- Crisis and Emergency Management
- Environmental Management
- Incident Investigation and Reporting
- Legal Requirements and Records Management
- Monitor, Audit and Review
- Planning, Goals and Targets.

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

During the year, there has been intense activity around clean-up of contaminated sites from historical mining as well as the various permits relating to the completion of the Gwalia Extension Project.

Mining in Australia is intensely regulated with a number of 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.

State Government (Western Australia)

Gwalia Closure Plan

Closure planning at Gwalia has shifted from broad strategic planning to specific and highly detailed, 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 (e.g. asbestos).

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The **Annual Environmental Report to Department of Water and Environmental Regulation (DWER)**¹ – 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.

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.

Mine Rehabilitation Fund Report – All Western Australian mines contribute to a [state rehabilitation fund](#) and report annually to government on the estimated cost of rehabilitation.

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.²

National Greenhouse and Energy Reporting (NGERS) - This is a report to the Australian federal government on Group information about greenhouse gas emissions, energy production, energy consumption and related information.³

Environment events and achievements

St Barbara’s Leonora Operations won a Gold ‘Waterwise Business’ award in 2020 (as well as previously 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. Tree planting in 2020 included over 1,000 trees on the mining lease and 2,000 mangrove seedlings in the coastal zone adjacent to the Group’s aerodrome

- 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 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.

At **Atlantic Gold (Nova Scotia, Canada)**, the environment team at the Touquoy mine has eight full-time members, all qualified professionals.

Mining in Canada is intensely regulated and there are extensive reporting requirements, with auditors visiting the Group’s Touquoy mine regularly. There are more than 20 specific environment management plans of various kinds that may require annual, quarterly, monthly and sometime weekly reporting depending on the type, recent issues, and particular activities occurring on-site. These plans include:

- 2019 Wetland Compensation Plan
- Acid Rock Drainage Management Plan
- Emergency Response Plan - Propane
- Environmental Effects Monitoring Plan for Operations
- Environmental Protection Plan
- Erosion and Sediment Control Plan
- Final Historic Tailings Management Plan
- Groundwater Contingency Plan
- Mainland Moose Management Plan
- Monitoring Program

1 Available on our website [here](#), from 2008 to 2018, [and on the regulator’s website here](#) from 2013 to present.

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

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

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- Monitoring, Evaluation and Response Plan - Quarry Development within TMF
- Reclamation Plan
- Source Test Work Plan
- Spill Contingency Plan
- Tailings Deposition Plan
- TMF Operation, Maintenance and Surveillance Manual
- Touquoy Mine Tailings Management Facility Emergency Preparedness and Response Plan
- Water Management Plan
- Wetland Protection Plan
- Wildlife Management Plan.

Development projects in Nova Scotia – planned environmental mitigation and protection.

The Group is in the process of seeking permits to develop three new mines in central-east Nova Scotia. Canada's robust environmental permitting ensures that any potential mining project has very low to no short or long-term environmental impact. The Group intends continuing with its existing record in Nova Scotia of performing beyond the prescribed regulatory requirements. Current examples include voluntary formation of an Independent Tailings Review Board and clean-up of historic mining waste.

The three new mines will function in conjunction with the current Touquoy mine, with the focus on minimising the overall processing footprint. For instance, the only planned location for cyanide gold processing is at the existing Touquoy mine, with the other mine sites planned to be simple quarries (such as at Beaver Dam) or to have onsite concentration processing only.

Where some environmental damage is unavoidable, such as with the initial construction of the mine footprint, the Group is required to create wildlife and fishing offsets in the form of reserves.

Where mining disrupts the customary land usage of the First Nations, the Group is required to provide compensation and enter into revenue sharing arrangements. The Group engages in this willingly, cognisant of the deep spiritual significance of the land to the First Nations people and of their position, enshrined in Canadian Law via treaty, as separate nations within Canada.

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 each mine.

Below are details of the two operational Tailings Storage/Management facilities the group currently operates, at Touquoy in Nova Scotia Canada and at Gwalia in Western Australia.

Atlantic Gold - Touquoy Tailings Management Facility

The Touquoy Tailings Management Facility (TMF) was designed by a leading specialist engineering firm to comply with Minerals Association Canada and regulatory requirements. It is inspected annually by an engineer of record as well as having periodic more detailed reviews, supervised by an Independent Tailings Review Board (ITRB) that includes some of the leading experts in Canada. Other engineered risk-prevention methods include telemetry, piezometers, freeboard monitoring and chemical testing, all reported to the regulator in compliance with legal requirements.

The TMF has a water treatment capability with specific processes for removing arsenic in both the processing plant and in the TMF, with almost all cyanide removed before deposition in the facility via an INCO¹ process in the processing plant. Water is released into a nearby lake (which is also the water intake source) via an effluent treatment plant and an engineered wetland.

Construction:

- Type of TMF: Downstream raise
- Rock dam with clay core and 2 filter layers
- Water Management: tailings pond, effluent treatment plant (ETP), polishing pond and engineered wetland.

Metrics:

- Elevation: 125 metres above sea level (masl)
- Current wall height: 19 m
- Projected final wall height: 24 m
- Tailings deposition rate (water volume): 8,509 m³/d
- Reclaim (water recycling) rate 8,030 m³/d
- Deposited dry density: 1.41 t/m³, below design
- Total capacity: 9.3 Mt
- Cyanide treatment – destruction via INCO sulphur dioxide treatment in processing plant

¹ Cyanide destruction process patented by Inco Ltd.

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- Arsenic treatment – two stage – initially in processing plant via oxygen reduction with ferric sulphate (~80%). At Effluent Treatment Plant (ETP), with hydrated lime to adjust pH, peroxide and ferric sulphate with a coagulant polymer, capture of precipitate with 'geo-bags'/tubes
- 94% of Touquoy water requirements are extracted from the TMF. Remaining 6% is extracted from Scraggy Lake (which is also final discharge point)
- Built to Canadian Dam Association (CDA, member of International Commission on Large Dams (ICOLD)) guidelines.
- Engineer of Record & Independent Tailings Review Board in place
- Twice annual dam safety inspections and a dam safety review in year 5
- Groundwater testing performed at multiple locations and depths, reported to regulators
- Historical tailings permanently stored within an engineered containment cell
- Potential for acid rock drainage is low
- Multiple protection plans (including Wetland, Groundwater, Wildlife) in place and audited
- A regulatory mine closure plan is in place which includes rehabilitation of the TMF.

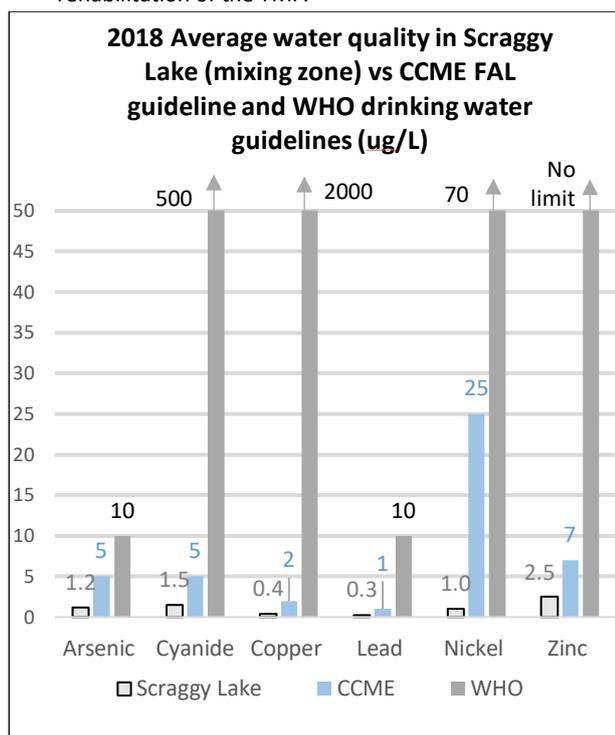


Figure 8: Average water quality in Scraggy Lake

ug/L = micro grams per litre, equivalent of 'parts per billion'.
 CCME = Canadian Council of Ministers of the Environment Freshwater Aquatic Life (FAL) guidelines.¹
 WHO = World Health Organisation Drinking water guidelines.²

¹ https://www.ccme.ca/en/resources/canadian_environmental_quality_guidelines/index.html, weak acid dissociable (WAD) cyanide

Gwalia (Leonora Operations WA)

Tailings Storage Facility 3

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: ~376 masl
- Current wall height: 30 m
- Projected final wall height: 32 m
- Tailings deposition rate: 750-850 ktpa
- Deposited density: 1.4-1.5 t/m³
- Total capacity: 30 Mt
- Perimeter: 3,000 m
- Impoundment area: ~70 ha
- Current impoundment volume: ~17.1 x 10⁶ m³
- Current mass of solids stored: ~25.6 x 10⁶ 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 2020 studies and testing were completed to improve the resilience of the active Gwalia TSF (TSF 3) to ANCOLD guidelines. An international expert also conducted an independent review of TSF 3. An additional eight

² <https://apps.who.int/iris/bitstream/handle/10665/254637/9789241549950-eng.pdf;jsessionid=18E95BF6E26ACE8850979910EA1E428?sequence=1>,

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piezometers have been installed, and works to augment the TSF will be carried out in 2020 and 2021.

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.

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 2020, 419,000 tonnes of Gwalia's tailings (54% of total tailings, 2019: 423 kt, 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. Approval is in place for an additional TSF when required.

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 as being best practice for DSTP. 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.

Atlantic Gold

Atlantic Gold (Nova Scotia, Canada) currently has one operating mine 'Touquoy' which commenced operations in 2017. Tailings are stored in a 'Tailings Management Facility' (TMF) of downstream construction. The Touquoy TMF has been built to the Minerals Association Canada /Canadian Dams Association (MAC/CDA) standard, generally thought to be one of the most conservative tailings dam regimes worldwide. An 'Independent Tailings Review Board' (ITRB) of tailings experts supervise the TMF, overseeing the work of the Engineer of Record.

The Group plans three further mines in Nova Scotia. Each of these is currently in the Federal government permitting process. A processing strategy is in place with no cyanide usage planned at any of the three new mines. See the case study in 'Our Sustainability Story' for planning around the ultra-low footprint planned at the first of these development mines, 'Beaver Dam'.

Once mining is completed at the current Touquoy mine it is anticipated that the processing circuit will switch to processing ore from the other three mines. Pending regulatory approval, tailings will then be stored in the old Touquoy mine pit. This is considered the optimum safe storage method for tailings.

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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 all mines.

The **Global Industry Tailings Standard (GITS)** was published while this report was in preparation, and is under consideration by the Group. The Group took part in the Minerals Council of Australia 'Tailings Working Group' which contributed formally to the GITS review process and we view the Standard as a positive development.

Waste Rock

The Group manages waste rock according to strict regulatory conditions at all 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

In 2020 the Group completed construction of underground infrastructure, called the Paste Aggregate Fill (PAF) plant, to allow permanent underground storage of up to 100% of waste rock. This involves underground crushing and mixing with paste-fill piped down from surface, then pumped to fill mining voids.

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.

Atlantic Gold

Waste rock at Atlantic Gold (Nova Scotia, Canada) is currently stored in a waste rock stockpile with all drainage controlled by trenches and sumps, with water pumped to the Tailings

Management Facility. When mining concludes the stockpile will be remediated with angles moderated and topsoil and vegetation added, with ongoing monitoring of boreholes in the area.

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.

All three 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 (WA) and Touquoy (NS, Canada), cyanide naturally breaks down to harmless cyanate compounds while exposed to air and sunlight in the shallow tailings storage or management facility 'ponds'. Historical (pre-St Barbara) tailings in the immediate vicinity have safe, background cyanide levels similar to that of the surrounding soil.

At Atlantic, 99% of cyanide and 80% of arsenic is removed from the tailings before it is deposited in the TMF. Water passes through an 'Effluent Treatment Plant' where the remaining arsenic is removed and the remaining cyanide dissolves in the TMF through exposure to air and sunlight. Water passes through a polishing pond and an artificial wetland before flowing into a nearby lake, which is also the water in-take for the site. Water in the TMF, lake and 22 separate boreholes is tested regularly with the results reported to and audited by, the provincial government. In three years of operation no exceedances have been noted. See page 24 for a detailed description of the Touquoy TMF.

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.¹

¹ [Guidelines for Drinking-water Quality, 4th edition, World Health Organization](#), health based guide for short-term use.

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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, PNG and Nova Scotia is consistent with the 'International Cyanide Code'. The Group is proposing to become a signatory to the Code.

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 and Touquoy in Nova Scotia, Canada.

At Simberi (PNG) and Touquoy (NS, Can.) arsenic is present at very low levels of concentration in natural erosions regionally, and therefore it is also present in sediment from the mining areas and in the tailings. The concentration of arsenic in the tailings outflows is less than one tenth of the World Health Organization guidelines for drinking-water quality¹. Arsenic is included in the testing regimes for cyanide mentioned above, with results also reported to the Government on a quarterly basis. At Touquoy arsenic in tailings is chemically treated in the Processing plant and tailings management facility, see the previous section 'Tailings' for details.

Other categories of waste

Data and commentary on several other categories of waste relating to the Gwalia (WA) mine is available in publicly available 'Annual Environment Reports'².

Water

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

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 Western Australia)

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 participating in a third five year Water Efficiency Management Plan ('WEMP'³). The plan involves minimising water usage and early detection of leaks and a self-selected target based on projected usage and planned efficiencies.

In 2020, the Group won a 'Gold Waterwise Award' from the Water Corporation, Western Australia, for its water conservation efforts in this area. This is the third such award, the earlier two in 2012 and 2013 for excellence in water usage reduction, including a 35% reduction in total water usage.

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 allocations⁴. Much of this water is treated to a near potable standard by the Group's own treatment plants for use in processing applications.

1 www.who.int/news-room/fact-sheets/detail/arsenic, 0.05 mg/l

2 Available on our website [here](#), from 2008 to 2018, [and on the regulator's website here](#) from 2013 to present.

3 [Western Australian Water Regulator website concerning its WEMP program for major water users](#)

4 Refer [Performance Data](#) section of this report

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Simberi (Papua New Guinea)

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.

Atlantic Gold (Nova Scotia, Canada)

Water is a key focus of environmental risk management at the Group's Touquoy mine in Nova Scotia, Canada. This is focused on the protection of aquatic life in surrounding water bodies, rather than water scarcity. High rainfall and the isolated situation of the mine away from population centres and intense agriculture mean water scarcity is not a high priority.

Canadian regulators require mining companies to keep any disruption of natural waterways to an absolute minimum and methodologies to ensure this are very mature in Canadian mining. See the earlier 'Tailings' and 'Waste Rock' sections of this report for more information.

Actual intake of water at Touquoy is minimal as water recycling supplies 96% of the mine's needs, of 133 ML annually, slightly less than outflow due to rainfall on the mine area catchment.

Targets and progress

The Group is satisfied with its management of water scarcity risk.

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).

At Simberi 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.

At Atlantic, high rainfall, the positive water balance and high level of water treatment maintained by the operation ensures that water scarcity is a low risk.

CDP Forestry information

The Group has no forestry or plantation operations outside of those related to meeting closure revegetation and community obligations.

The Group has no operations in High Conservation Value areas.

The Group must rehabilitate all disturbed lands as part of closure requirements and has audited provisions on its balance sheet appropriate for this commitment.

Climate Change

St Barbara acknowledges the Paris 2015 UNFCCC agreement and seeks to make it relevant to the Group as detailed in this section. The Group presents in this report our first reduction targets and intends, at minimum, to meet its obligations to align its emission decreases with Paris 2015 compatible requirements.

St Barbara seeks to:

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

Climate risk strategy and governance

Summary

In 2020 the St Barbara Board considered risks and opportunities regarding climate change 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 (2035) 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).

Targets

The Group has reviewed previous and forecast emissions data, production and likely methodologies for aligning these with the requirements for reduction in global emissions identified in the Paris 2015 agreements.

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 Group intends to submit targets to the relevant United Nations authority, the Science Based Targets Initiative (SBTI)¹, with the commitment that the Group will at a minimum meet its obligations under the Paris 2015 agreements, including Carbon Neutrality in 2050 and a suitable intermediate reduction target. The proposed targets to be submitted to SBTI are under the targets section at the end of this topic.

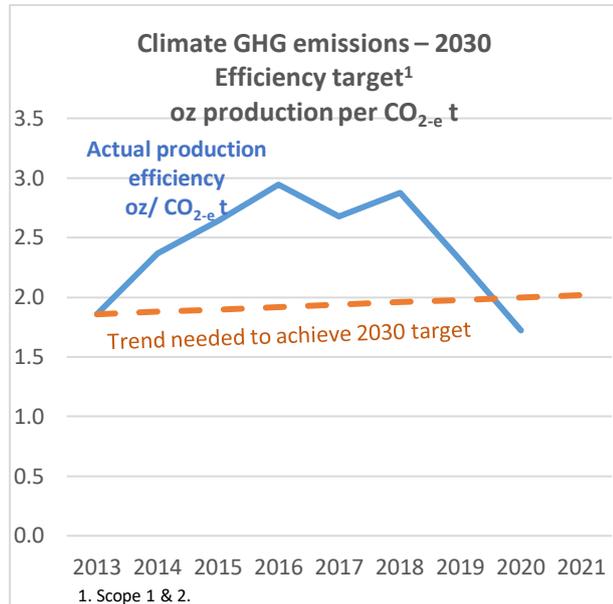


Figure 9: GHG emission efficiency target

The TCFD 'Core elements'²

Scope 3 emissions

The Group has commenced desktop studies to estimate its Scope 3 emissions. We will continue to work on this important element of climate related disclosure for inclusion in future sustainability reports.

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 [here³](#).

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.

1 <https://sciencebasedtargets.org/>

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

3 www.gold.org/goldhub/research/gold-investor/gold-investor-february-2019/golds-role-in-a-low-carbon-economy

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Geo-political and macroeconomic risk and opportunity

Gold mines are often located in developing countries with greater vulnerability to climate change. Developing 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.

Developing countries have been strong growth areas for gold consumption recently, and instability that stops or slows economic growth in these countries 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 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 specific potential impacts of climate change

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 degrees) 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 are 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 three days additional measures have been considered.

Simberi, PNG

Physical impacts

Simberi oxide mine-life currently extend to financial year 2023, but under some scenarios, [discussed](#) by the Group, mining could extend a further 10 years or longer, with a Feasibility Study currently underway to support this possibility.

Should Simberi be a viable mine after 2040 the following acute climate risk may prove relevant:

- 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.

Atlantic Gold, Nova Scotia, Canada

Physical impacts

The current projects timeline for Atlantic's current and planned mines has mining concluding in 2032. The Group has an active exploration program that may allow mining to continue in Nova Scotia past 2032.

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Should Atlantic Gold have viable mining operations in Nova Scotia after 2040:

- Extreme weather events: in the North American region are expected to be more common and severe. The Group's mining activities could be impacted by short-term outages relating to heavy rain flooding open pits and high winds impacting either power generation or transmission via grid power
- Increased forest fire activity: an increase in average temperatures could lead to increased forest fire activity in this region (per the RCPs page 12). The Group's mines are in remote area inappropriate for farming and are thus moderately wooded and vulnerable to forest fires, though this is not currently a significant issue. Possible increased rainfall may mitigate this risk.

Regulatory Impacts

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, could be impacted by commencement of carbon taxing and trading at any of its operations, or through extension of current Australian climate change mitigation initiatives such as the 'Safeguard' scheme (which does not currently impact Gwalia).

The Group's current 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, WA: 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, whereas 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, WA: renewable power

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

- Solar photo-voltaic
- Wind

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

Renewable power could be delivered via agreements with power providers, direct investment, or agreements with green funding type entities and their project agents. Solar voltaic generation presents the lowest risk in terms of investment capital, flexibility and operational complexity and would be the likely methodology.

The current anticipated 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 versus 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.

Atlantic Gold, Nova Scotia, Canada: Renewable Power

Atlantic Gold is in the process of trialling the first stages of a project to become carbon neutral by 2025. The intended methodology is the use of containerised, scalable salt-water batteries and wind power. Trials of the battery systems commenced in 2020 with charging via solar arrays. Batteries charged by wind turbines could be used to power remote sites and vehicles, as well as providing power to fixed plant operations during low wind periods.

Some significant technical challenges remain and the Group has a dedicated team looking globally for the potential innovations and technologies to overcome these.

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 Group's Operations are too remote in time versus the mine life of these operations (closing by 2035) 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.

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Closure – Asset Rehabilitation Obligations

With closure at current 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.

The Group's mines have potential for mine life to be extended, as is the case with all mines with open deposits.

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

Gwalia: greenhouse gas emissions – current performance and future trends

In 2020 Greenhouse gas emissions intensity on a production and revenue basis at the Gwalia mine has trended upwards for the first time after many years of improvements. This is due to the installation of additional generators to power a doubling of underground ventilation at the mine, as part of the now completed 'Gwalia Extension Project'.

Also contributing is a reduction in average 'grade' for the year of 30%, meaning simply that 30% more ore must be mined and processed for the same amount of gold.

The increase would be far larger but for 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, saves ~A\$1 million (gas variable costs only), 96,000 GJ and 5,000 CO₂t per annum.

It is anticipated that the innovative new 'Paste Aggregate Fill' underground waste crushing, mixing and pumping infrastructure will have a positive impact on emissions efficiency, with impact modelling indicating it will reduce trucking 'tonne-kilometres' (TKMs) by 18% (that is, if the waste rock is trucked to surface instead of to the PAF facility, diesel consumption for trucking would be 18% higher, about 4,000 t of CO₂). The positive impact will be mitigated somewhat by the power requirements of PAF itself, estimated at around 20-27 TJ per year, or about 3,000 t of CO₂.

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.

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 ~A\$2.3 million, 90,000 GJ and 7,000 CO₂t equiv. per annum since 2017 compared to conventional trucking.

Atlantic Gold greenhouse gas emissions – current performance and future trends

Atlantic Gold began operations in 2017 and has steadily increased in production and mining related activity. This has led to absolute increases in emissions. Grid power in Nova Scotia is 60% from coal with approximately a further 20% from other carbon-based sources. Over two thirds of the Group's Atlantic Gold emissions come from grid power.

Planning for carbon neutrality in 2025 is proceeding as described earlier in this section.

Fleet Economy

The Group has a strong focus on fleet economy, monitoring diesel litres usage per TKMs (tonne kilometres). We allow global underground truck manufacturers to test their newest and most efficient models at our Gwalia WA mine. At the manufacturers' invitation, we attend various tests of the most recent electric underground mining trucks and have an ongoing watching brief on this generally. At the Simberi mine, with the current mine plan anticipating closure in 2023, and the recently acquired Atlantic operations in Canada there is no defined fleet economy strategy aside from minimising diesel costs.

We have no absolute fleet economy targets. Our strategy is to target remaining in the top half for gold production greenhouse gas (GHG) efficiency overall, inclusive of trucking. This provides opportunity for trade-off studies between trucking and fixed plant options that replace trucking (such as the above-mentioned 'Ropecon' and 'PAF').

In financial year 2019, fleet emissions were 54 kt CO₂e (Gwalia WA, 18 kt CO₂e, 7 ML of diesel, Simberi 36 kt CO₂e, 12 ML of diesel), around 40% of the total (141 kt CO₂e) emissions. No fleet related emissions are derived from renewable sources.

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Greenhouse gas (GHG) emissions other than CO₂ and other air pollutants

The Group has not been the subject of any air pollution related complaints. All three mines are in remote, isolated settings.

In reporting, the Group converts all other greenhouse gas emission into their CO₂ equivalent according to the Australian Federal Government NGERs formula and has no specific reduction strategies for non CO₂ GHGs. On CO₂ equivalent basis, 99.7% of GHG emissions are CO₂. Less than 0.2% are methane, less than 0.2% is N₂O, 0.01% is Sulphur Hexafluoride.

The targets have been determined through consideration of guidance provided by the SBTi and alignment with the United Nations approved absolute reduction targets for Australia (a 27% reduction on 2005 levels by 2030, or 1.1% per year).

The appropriate measure for targets for the gold industry is 'production intensity' as part of a 'Sectoral Decarbonization Approach'².

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

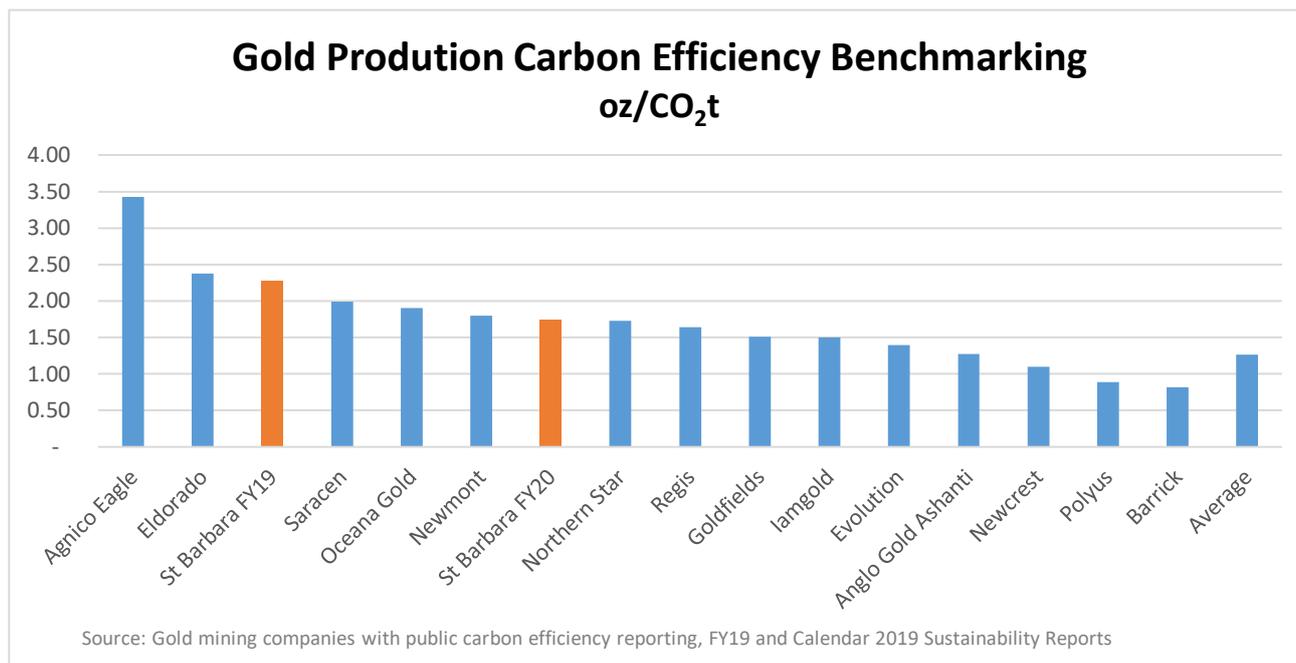


Figure 10: Gold production carbon efficiency benchmarking

Targets

The Group will increase its emission efficiency (ounces of gold / tonnes of CO₂e) by 18.4% in 2030 versus a 2013 baseline year, and achieve carbon neutrality by 2050.

The Group will seek formal recognition of these targets by the United Nations responsible agency, the Science Based Targets Initiative (SBTi)¹.

reduce in line with global requirements for emission reductions. An important element is that globally all producers 'converge' to a best practice level, described as 'economic intensity contraction'³.

The Group has grown considerably in recent times, so an absolute emissions reduction target is inappropriate. The Group's emission efficiency in 2013 was 1.86 ounces of gold per tonne of CO₂e. The 2030 target intensity rate is 2.20 oz/CO₂t.

The Group remains content with its current GHG emission performance, in the top half of a group of 15 gold mining companies that publicly declare their emissions sufficiently to calculate production GHG emission efficiency.

CDP Climate information

The group has participated in CDP climate since 2017, scoring 'D' for disclosure.

1 <https://sciencebasedtargets.org/>

2 Science-Based Target Setting Manual, page 19 (<https://sciencebasedtargets.org/wp-content/uploads/2017/04/SBTi-manual.pdf>)

3 Ibid, page 21

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Risk management procedures for climate change are reviewed three times per year.

Climate change risk and opportunities are identified and assessed in the enterprise wide risk management system.

The enterprise wide risk management system defines equivalency levels for financial, compliance, environment and reputation impacts.

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

The Group risk management procedures monitor risks greater than six years into the future.

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Performance Data

	Notes	FY18	FY19	FY20	Target
Governance & Economic Performance					
Governance					
Governance performance reported in Annual Report and Corporate Governance Statement (CGS).		Annual Report CGS	Annual Report CGS	Annual Report CGS	
Selected key indicator of Governance Performance:					
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	\$0.3 M	\$0.3 M	\$0.3 M	n/a
Whistle-blower complaints		1	0	1	n/a
Economic Performance					
Economic performance reported in Annual Report.		Annual Report	Annual Report	Annual Report	
Selected key indicator of Economic Performance:					
Earnings per share (basic, underlying)		\$0.39	\$0.27	\$0.16	n/a
People					
Diversity –reported in Corporate Governance Statement					
Diversity performance reported in Corporate Governance Statement.		CGS	CGS	CGS	
Selected key indicator of Diversity Performance:					
Proportion of women employed (Australia)		24%	25%	26%	30% by 2022
Proportion of women employed (PNG)		14%	15%	15%	15% by 2020
Indigenous Employees at Leonora Operations		3.6%	3.4%	3.2%	5% by 2022
Overall Gender Pay Gap	3	14%	12%	15%	8% by 2022
Nil gender pay gap for 'like-for-like' roles	4	nil	nil	nil	maintain nil
% women in entire workforce		16%	14%	19%	
% women in 'management'		17%	24%	18%	
Employee and Contractor numbers					
Australia	Employees	229	242	261	n/a
	Contractors	397	520	485	
	Total	626	762	746	
Papua New Guinea	Employees	762	770	746	
	Contractors	483	470	428	
	Total	1,245	1,240	1,174	

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), 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.

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	Notes	FY18	FY19	FY20	Target
Canada	Employees	NA	272	318	
	Contractors	NA	7	1	
	Total	NA	279	319	
Total	Employees	991	1,284	1,325	
	Contractors	880	997	914	
	Total	1,871	2,281	2,239	
PNG employment participation					
Nationality	PNG - Simberi and local islanders	54%	52%	57%	
	PNG - Other	43%	44%	38%	
	Non - PNG (expatriates)	3%	4%	5%	Remain under 5%

People (continued)

Employee turnover					
Australia		7.2%	16.1%	13.3%	Remain under benchmark
Australia Mining average for comparison	1	9.8%	13.8%	14.1%	
Papua New Guinea		7.0%	4.6%	5.7%	
Canada		-	-	10.0%	
Total turnover		7.0	7.2	8.3%	

Maternity/Paternity leave, return to work, last 3 years total	Total 3 years FY18 to FY20			
	# took parental leave	% returned to work	% retained 12 months after returning	Target % returned to work by 2022
Australia %, # maternity leave	10	100% (10)	80% (8)	80%
Australia %, # paternity leave	19	100% (19)	89% (17)	80%
PNG %, # maternity leave	29	97% (28)	79% (23)	80%
PNG %, # paternity leave,	0	0%	0%	No target
Canada %, # maternity leave	5	20% (1)	20% (1)	80%
Canada %, # paternity leave	4	100% (4)	75% (3)	100%
Overall	67	93% (62)	78% (52)	80%

Employee Training & Development, average hours per person p.a.	2	FY18	FY19	FY20
Australia overall		25	21	18
Australia: Women		24	22	17
Australia: Men		25	20	18
Papua New Guinea overall		31	37	23
PNG: Women		38	44	18
PNG: Men		29	34	24
Overall		29	34	22
Overall: Women		33	36	18
Overall: Men		28	30	23
Employee Training & Development spend average A\$ per person p.a.	3			
Australia overall		1,804	1,568	1,326

- 1 The Mackie 'Australian Resources Industry Turnover Analysis TA (RITA)' Report – Jan 2020 figures. RITA report has 32 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. No data for Canadian operations is available in FY20.
- 3 Does not include Study Assistance, Study leave hours and contains an approximate consideration for annual hours spent in online compliance training. FY20 amounts are estimates based on hours and previous years per hour averages.

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	Notes	FY18	FY19	FY20	Target
Australia: Women		1,749	1,645	1,255	
Australia: Men		1,822	1,542	1,350	
Papua New Guinea overall		802	589	477	
PNG: Women		890	644	343	
PNG: Men		773	571	521	
Overall		1065	841	704	
Overall: Women		1,104	967	43	
Overall: Men		1,055	810	744	
Employee engagement survey					
% of employees who responded	1	83%	77%	64%	70%
% favourable responses	2	83%	73%	71%	64%
Performance and development reviews, % of employees receiving					
Australia %		100%	100%	100%	100%
PNG% management and supervisory staff		100%	100%	100%	100%
PNG% overall	3	16%	16%	19%	No target
Canada %		n/a	n/a	100%	100%
Overall %		35%	35%	54%	No target
Economic contribution					
Income tax paid					
	A\$M				
Australia		39	61	21	n/a
Papua New Guinea	4	0	0	0	
Canada		n/a	n/a	0	
Total Group income tax paid		39	61	21	
Wage/Salary taxes (paid by Group on behalf of direct employees)					
	A\$M				
Australia		13	14	14	n/a
Papua New Guinea		7	7	8	
Canada		n/a	n/a	7	
Total		20	22	30	
Royalties paid to gov't and communities (excluding corporate royalties)					
	A\$M				
Australia		11	10	10	n/a
Papua New Guinea		5	6	6	
Canada		n/a	n/a	4	
Total royalties paid		16	16	20	
Other Taxes/Duties paid					
	A\$M				
Australia	5	1.3	(0.1)	0.1	n/a
Papua New Guinea		0.2	0.3	0.2	
Canada		n/a	n/a	0	
Total taxes / duties paid		1.5	0.1	0.3	
Total taxation and royalties (excluding corporate royalties)					
	A\$M				
Australia		65	85	45	n/a
Papua New Guinea		12	13	15	

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

5 Differs to amount in previous years by approximately \$3M each year as Fuel credit tax now included.

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	Notes	FY18	FY19	FY20	Target
Canada		n/a	n/a	11	
Total		77	99	71	
Total as % of Net Profit After Tax		34%	68%	56%	
Community Expenditure	A\$M				
PNG community expenditure	.1	2.3	1.4	2.8	n/a
PNG expenditure with Landowner associated companies	.2	6.6	7.0	9.1	
Australian sponsorships, in kind support		0.1	0.1	0.3	
Canadian sponsorships, in kind support		n/a	n/a	0.04	
Health and Safety					
Total recordable injury frequency rate (TRIFR)	.3				Target
Australia		4.8	11.0	6.8	3.4
Papua New Guinea		1.2	1.7	0.7	1.1
Canada		n/a	n/a	4.4	7.3
Total		2.1	5.0	3.0	2.3
Recordable injuries					
Australia		6	18	10	N/A
Papua New Guinea		3	5	2	
Canada		n/a	n/a	4	
Total		9	23	16	
Lost time injury frequency rate (LTIFR, 'serious injury rate', not used in Group targets, provided for information)	4				
Australia		0	1.4	0	N/A
Papua New Guinea		0.8	0.7	0.4	
Canada		n/a	n/a	1.4	
Total (includes exploration)		0.5	1.1	0.4	
Benchmark (Underground mines, Western Australia)	.5	2.9	1.9	N/A	
Fatalities					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Canada		n/a	n/a	0	0
Total		0	0	0	0
Health and Safety Fines & Penalties					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Canada		n/a	n/a	0	0
Total		0	0	0	0

1 Cost of Community Clinic and support functions. Converted from US\$ at exchange rates shown at the end of the Performance Data table.

2 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.

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

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

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

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	Notes	FY18	FY19	FY20	Target
Environment	.1				
Total Incidents	.2				
Australia		10	14	6	No target
Papua New Guinea		29	53	34	
Canada	.3	n/a	n/a	12	
Reportable Incidents	.4				
Australia		2	2	2	No target
Papua New Guinea		8	0	2	
Canada		7	9	2	
Canada 'non compliances'		2	2	2	
Significant Incidents	.5				
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Canada		0	0	0	0
Environmental Fines & Penalties					
Australia		0	0	0	0
Papua New Guinea		0	0	0	0
Canada		0	0	0	0
Total		0	0	0	0
Disturbed Land (Hectares)					
Australia				1260	No target
Papua New Guinea				248	
Canada				268	
Water use Leonora Western Australia mega litres (ML)					
Potable	.6	43	38	46	35
Non-potable	.7	1,032	984	939	Below allocation
% of Allocation Utilised		23%	22%	19%	
Non-potable recycling		Not calc	80%	113%	

- 1 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.
- 2 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.

- 3 For 5 months only.
- 4 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.
- 5 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.
- 6 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.
- 7 Non-potable water at Leonora is usually saline, unfit for domestic or agricultural use and comes from boreholes or is pumped from the underground mine. The mine has an allocation associated with earlier operations.

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	Notes	FY18	FY19	FY20	Target
Water use Simberi (PNG) mega litres (Ml)					
Potable and non-potable	.1	Not calc	Not calc	6,555	
Recycling		Not calc	Not calc	54%	
Grey water discharge (via DSTP)		Not calc	Not calc	42	<114
Water use Touquoy (Canada) mega litres (Ml)					
Water usage		2,197	3,018	3,336	
Recycling		95%	95%	96%	
Water drawn from environment		115	152	143	
Treated water discharged		132	2,243	1,165	

Climate

Absolute GHG Emissions Australia kilo tonnes (kt) CO₂ equiv					
Scope 1 emissions	2	64	68	80	
Scope 2 emissions		1	1	1	
Absolute GHG Emissions PNG kilo tonnes (kt) CO₂					
Scope 1 emissions	3	77	75	82	
Scope 2 emissions		0	0	0	
Absolute GHG Emissions Canada kilo tonnes (kt) CO₂					
Scope 1 emissions		-	12	13	
Scope 2 emissions		-	42	44	
Absolute Energy Usage, tera joules (TJ)					
Australia, all sources	4	1,348	1,474	1,734	
PNG, all sources	5	976	958	1,046	
Canada, all sources	6	-	307	341	
Production GHG Emissions Intensity – tons of CO₂ per ounce					
Australia, scope 1 & 2		0.24	0.31	0.47	
Papua New Guinea, scope 1 & 2		0.57	0.53	0.81	
Canada, scope 1 & 2			0.51	0.54	
Production GHG Emissions Efficiency – Ounces per ton of CO₂					
Australia, scope 1 & 2		4.22	3.25	2.11	
Papua New Guinea, scope 1 & 2		1.76	1.89	1.24	
Canada, scope 1 & 2			1.71	1.86	
Revenue GHG Emissions Intensity tons of CO₂ per US\$000 revenue					
Australia, scope 1 & 2		0.18	0.21	0.33	
Papua New Guinea, scope 1 & 2		0.44	0.42	0.55	
Canada, scope 1 & 2			0.48	0.38	
Revenue GHG Emissions Efficiency US\$000 revenue per ton of CO₂					
Australia, scope 1 & 2		5.52	4.75	3.01	
Papua New Guinea, scope 1 & 2		2.29	2.38	1.83	
Canada, scope 1 & 2			2.16	2.66	

- 1 FY19 Estimate from one quarter (3 months) sample size. 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.
- 2 2020 is estimate only pending formal NGRS report subsequent to this report
- 3 Estimates from fuel and lubricants purchases
- 4 2020 is estimate only pending formal NGRS report subsequent to this report
- 5 Estimate factor applied to generate total energy used from net energy used.
- 6 Note use of grid power gives our Canadian operations a much lower energy use as it includes only a direct kWh to GJ calculation and does not account for energy used in transmission and generation, as is the case at the other operations.

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	Notes	FY18	FY19	FY20	Target
Consolidated GHG Emissions results (Scope 1 and 2)					
Absolute GHG emissions (kt) CO ₂		140	197	220	
CO ₂ tons per US\$000 revenue		0.26	0.32	0.40	
CO ₂ tons per ounce		0.35	0.43	0.58	
US\$000 revenue per ton of CO ₂		3.81	3.13	2.48	
Ounces per ton of CO ₂		2.87	2.31	1.72	2.20 by 2030
Self-generation of electricity (GWh)					
Australia		72	74	96	
Papua New Guinea	1	56	54	55	
Canada		-	-	-	
Total		128	128	151	
Grid Power (GWh)					
Australia		2	2	2	
Papua New Guinea		-	-	-	
Canada		-	41	43	
Total			43	45	
Renewable power (GWh)					
Australia		1	1	1	
Papua New Guinea		-	-	-	
Canada		-	-	-	
Total		1	1	1	
Gwalia (WA) Tailings					
Absolute tons (dry, kt)		679	652	771	No target
# Leakage/spills to environment		0	0	0	0
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%
Simberi (PNG) Tailings					
Absolute tons (dry, kt)		3,586	3,072	3,314	No target
# Leaks/spills to environment		0	0	0	0
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%
Touquoy (Canada) Tailings					
Absolute tons (dry, kt)		1,332	2,299	2,588	No target
# Leaks/spills to environment		0	0	0	0
% of tailings disposed according to licenced responsible methodologies		100%	100%	100%	100%
Gwalia (WA) waste rock – absolute and target					
Absolute tons (Mt)		0.3	0.4	0.3	No target
% stored furthering rehab obligations or underground		100%	100%	100%	100%
Simberi (PNG) waste rock– absolute and target					
Absolute tons (Mt)		9.4	8.9	8.6	No target
% stored disposed according to licenced responsible methodologies		100%	100%	100%	100%
Touquoy (Canada) waste rock– absolute and target					
Absolute tons (Mt)		N/A	N/A	3.5	No target
% stored disposed according to licenced responsible methodologies		N/A	N/A	100%	100%

1 Estimates based on power capacity times utilisation

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	Notes	FY18	FY19	FY20	Target
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		0.7751	0.7153	0.6709	n/a
PGK / A\$ - average for year		2.4995	2.4378	2.3513	n/a

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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:

- 2020 [Annual Report](#) (AR in table below),
- [Corporate Governance Statement](#) (CGS in table below) and
- website (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 ¹	GRI Core ²	Item	Disclosure	UNGC ³
	●	Organisational profile		
102-1	●	Name of the organisation	St Barbara Limited	
102-2	●	Activities, brands, products, and services	Annual Report , Principal activities (p2)	
102-3	●	Location of headquarters	Annual Report , Registered Office (back cover)	
102-4	●	Location of operations	Annual Report , St Barbara at a glance (p2)	
102-5	●	Ownership	Annual Report , Shareholder information (p92-93)	
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	Annual Report , Directors' Report (p3)	
102-8	●	Information on employees and other workers	Sustainability Report, Performance Data	
102-9	●	Supply chain	Annual Report , Directors' Report (p4, p11)	
102-10	●	Significant changes to the organisation and its supply chain	Annual Report , Directors' Report (p4, p11)	
102-11	●	Precautionary Principle or approach	Environmental Policy	7
102-12	●	External initiatives	stbarbara.com.au/profile/recognition/	
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 The Mining Association of Nova Scotia (MANS) The Group is seeking members in the Minerals Association Canada (MAC)	

1 GRI disclosure standard, www.globalreporting.org

2 Disclosure required to comply with GRI Standards core reporting option, www.globalreporting.org

3 UN Global Compact Principle

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GRI Ref ¹	GRI Core ²	Item	Disclosure	UNGC ³
2. Strategy				
102-14	●	Statement from senior decision maker	Sustainability Story, Letter from MD & CEO	
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): https://stbarbara.com.au/sustainability/our-environment/ Risks: <u>Annual Report</u> , Material business risks (p10-13) Opportunities: <u>Annual Report</u> , Business strategy and future prospects (p10-11)	8, 9
3. Ethics and integrity				
102-16	●	Values, principles, standards, and norms of behaviour	Corporate Governance Statement , Principle 3: Act ethically and responsibly Code of Conduct, stbarbara.com.au/about_us/governance	
102-17		Mechanisms for advice and concerns about ethics	Board Charter, 6. Independent Advice, stbarbara.com.au/about_us/governance Whistleblower Policy, stbarbara.com.au/about_us/governance	10
4. Governance				
102-18	●	Governance structure	Corporate Governance Statement , stbarbara.com.au/about_us/governance	10
102-19		Delegating authority	High level delegation set out in Board Charter Detailed delegation not published externally	
102-20		Executive level responsibility for economic, environmental, and social topics	Board and Committee Charters stbarbara.com.au/about_us/governance	
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	Corporate Governance Statement , Principle 2: Structure the Board to add value	
102-23		Chair of the highest governance body	Annual Report , Directors' Report (p15)	
102-24		Nominating and selecting the highest governance body	Constitution, https://stbarbara.com.au/about-us/governance/	
102-25		Conflicts of interest	Conflict of Interest and Related Parties Policy, stbarbara.com.au/about_us/governance	
102-26		Role of highest governance body in setting purpose, values, and strategy	Board charter stbarbara.com.au/about_us/governance	
102-27		Collective knowledge of highest governance body	Annual Report , Directors' Report (p15-18) Corporate Governance Statement , Principle 2: Structure the Board to add value	
102-28		Evaluating the highest governance body's performance	Board performance review, reported in Corporate Governance Statement , 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 stbarbara.com.au/about_us/governance	

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GRI Ref ¹	GRI Core ²	Item	Disclosure	UNGC ³
102-30		Effectiveness of risk management processes	Corporate Governance Statement , Principle 7: Recognise and manage risk	
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	Annual Report , Remuneration report (p20-43)	
102-36		Process for determining remuneration	Annual Report , Remuneration report (p20-43)	
102-37		Stakeholders' involvement in remuneration	Annual Report , Remuneration report (p20-43)	
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	
5. Stakeholder engagement				
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	
6. Reporting practice				
102-45	●	Entities included in the consolidated financial statements	Annual Report , Note 17 Controlled Entities (p73)	
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	2019 GHG emissions at Leonora 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 2019 to 30 June 2020	
102-51	●	Date of most recent report	13 September 2019	

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GRI Ref ¹	GRI Core ²	Item	Disclosure	UNGC ³
102-52	●	Reporting cycle	Annual, released in conjunction with <u>Annual Report</u>	
102-53	●	Contact point for questions regarding the report	Company Secretary, company.secretary@stbarbara.com.au https://stbarbara.com.au/contact/	
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' (p81-85) Certain other information is assured by external providers, as noted in this report	

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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. ¹	GRI Core met ²	Item	Discussion	UNGC ³
201	Yes	Economic Performance	<p>The Group discloses the following material issues:</p> <ol style="list-style-type: none"> 1. Direct Economic value generated 2. Financial implications and other risks and opportunities due to climate change <p>The following issues are not considered material to the Group and are not disclosed:</p> <ol style="list-style-type: none"> 3. The Group does not have exposure to defined benefit plans 4. The Group does not receive any financial assistance from government (other than generally available tax deductions) 	10 7,8,9 10
		Mining & Metals Supplement area G4EC1	<ul style="list-style-type: none"> • Report countries of operation that are either candidate to or compliant with the Extractive Industries Transparency Initiative (EITI) – disclosed • Payments to local communities as part of land use agreements, not including land purchases. – disclosed, royalties, spending with local community companies 	
202	No	Market Presence, Mining & Metals Supplement area G4EC6	In significant locations of operation, report proportion of the facility's total workforce from the local community – 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"> 1. Energy Consumption within the organisation - disclosed 2. Energy consumption outside the organisation – not disclosed 3. Energy Intensity – disclosed 4. Reduction of Energy Consumption – disclosed 5. Energy requirements of products and services – not disclosed <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

2 Disclosure required to comply with GRI Standards core reporting option, www.globalreporting.org

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

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GRI Ref ¹	GRI Core met ²	Item	Discussion	UNGC ³
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: https://stbarbara.com.au/sustainability/our-environment/ Neither Leonora Western Australia, Simberi PNG, or Touquoy, Canada 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: https://stbarbara.com.au/sustainability/our-environment/ 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: https://stbarbara.com.au/sustainability/our-environment/	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 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

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GRI Ref ¹	GRI Core met ²	Item	Discussion	UNGC ³
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 and Canada 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
414	Yes	Supplier social assessment	Various percentages, due diligence methodology all described.	3, 4, 5, 6, 10
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: https://stbarbara.com.au/sustainability/our-environment/	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

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GRI Ref ¹	GRI Core met ²	Item	Discussion	UNGC ³
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 our Australian, Canadian 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 lockouts exceeding one week's duration</i> – Though also important, the Group holds this area to be of low materiality. No strikes or lockouts 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, Canadian 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. <i>MM5 Operations adjacent to indigenous people's territories</i> . This area is considered immaterial for the same reasons as stated in 411 above. 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, Papua New Guinea and Canada 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, its contracting with local community companies and its grievance/complaint function in this report. In Touquoy, Canada, nearly all employees live locally. As a newly acquired operation the Company is reviewing all procurement arrangements with engagement of local businesses an important consideration.	1,2,3,6

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GRI Ref ¹	GRI Core met ²	Item	Discussion	UNGC ³
		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
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

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UN Global Compact - Communication on Progress¹

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

Issue Area	Ten Global Compact Principle	Implementation and measurement
Human Rights	Principle 1 - Businesses should support and respect the protection of internationally proclaimed human rights	Company policies and charters , especially: <ul style="list-style-type: none"> • Code of Conduct • Community Relations Policy • Health and Safety Policy • Modern Slavery Policy 2020 Sustainability Report [this document] ‘Health and Safety’, ‘Social and Communities’ sections and related data table components
	Principle 2 - Businesses should make sure that they are not complicit in human rights abuses	
Labour	Principle 3 - Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	Company policies and charters , especially: <ul style="list-style-type: none"> • Code of Conduct • Diversity and Inclusion Policy • Equal Opportunity Policy • Health and Safety Policy • Modern Slavery Policy • Workplace Behaviour Policy • Supply chain code of conduct 2020 Sustainability Report [this document] ‘People’ and related data table components.
	Principle 4 - Businesses should uphold the elimination of all forms of forced and compulsory labour	
	Principle 5 - Businesses should uphold the effective abolition of child labour	
	Principle 6 - Businesses should uphold the elimination of discrimination in respect of employment and occupation	
Environmental	Principle 7 - Businesses should support a precautionary approach to environmental challenges	Company policies and charters , especially: <ul style="list-style-type: none"> • Environment Policy 2020 Sustainability Report [this document] ‘Environment’ section (sub-sections, ‘Waste’, ‘Climate Change’ and ‘Water’).
	Principle 8 - Businesses should undertake initiatives to promote greater environmental responsibility	
	Principle 9 - Businesses should encourage the development and diffusion of environmentally friendly technologies	
Anti-Corruption	Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery	Company policies and charters , especially: <ul style="list-style-type: none"> • Anti-Bribery and Corruption Policy • Audit and Risk committee charter • Code of Conduct • Conflict of Interest and Related Parties Policy • Donations, Sponsorships, Community Programs Policy • Modern Slavery Policy • Whistleblower Policy • Supply chain code of conduct 2020 Sustainability Report [this document] ‘Governance’ section and related ‘Governance and Economic results’ data table component

¹ www.unglobalcompact.org/

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Glossary	ref
Annual Report / AR	St Barbara Limited Annual Report 2020
CDP	Carbon Disclosure Project, www.cdp.net/en
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	St Barbara Limited ASX Appendix 4G and Corporate Governance Statement 2020
EITI	Extractive Industries Transparency Initiative, https://eiti.org/
ESG	Environmental, social, governance
GHG	Green-house gas
GRI	Global Reporting Initiative, www.globalreporting.org
HSEC	Health, Safety, Environment and Community
LTIFR	Lost Time Injury Frequency Rate (number of lost-time injuries per million hours worked on a rolling 12-month basis)
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, www.minerals.org.au/
NGO	non-governmental organisation
PPE	Personal protective equipment
RCP	Representative Concentration Pathways, UN climate scenarios, the basis for companies to model the effects of climate change, www.environment.gov.au/climate-change/publications/fact-sheet-rcps
stakeholder	2 “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 “ Note 1: Stakeholders include entities or individuals whose rights under law or international conventions provide them with legitimate claims vis-à-vis the organisation. 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).
sustainability / sustainable development	2 “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” Note 1: Sustainable development encompasses three dimensions: economic, environmental and social. Note 2: Sustainable development refers to broader environmental and societal interests, rather than to the interests of specific organisations. Note 3: In the GRI Standards, the terms ‘sustainability’ and ‘sustainable development’ are used interchangeably.
Sustainability Report	This report.
TCFD	Task Force on Climate-related Financial Disclosures, https://www.fsb-tcdf.org/
TRIFR	Total Recordable Injury Frequency Rate (number of injuries per million hours worked on a rolling 12-month basis)
UNGC	United Nations Global Compact, www.unglobalcompact.org/

End of Sustainability Report

1 United Nations Framework Convention on Climate Change, 1992
https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf

2 Definitions from GRI Standards Glossary 2016, www.globalreporting.org

2020 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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T C Netscher Non-Executive Chairman
C A Jetson Managing Director & CEO
S G Dean Non-Executive Director
K J Gleeson Non-Executive Director
S E Loader Non-Executive Director
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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