



WE MINE FOR  
PROGRESS

# SUSTAINABILITY REPORT

2017

HKEX: 1208 | ASX: MMG

A member of:

ICMM  
International Council  
on Mining & Metals

MINING WITH  
PRINCIPLES



# WE MINE FOR PROGRESS

At MMG, we mine for progress.

We mine to build wealth through the development of our people, the community investments we make and the value we deliver to our shareholders.

We also listen to and respect our people and invest time and resources in the communities where they live and work.

We are proud to have recently launched our new website [wemineforprogress.com](http://wemineforprogress.com), designed to highlight our people, communities and sustainability performance.

The stories on [wemineforprogress.com](http://wemineforprogress.com) will enable us to demonstrate our values, our social contribution and our commitment to responsible mining as well as better share our success with our employees and communities.

The site will offer an in-depth perspective on important issues and offer engaging content from the viewpoint of our people and our stakeholders.

Importantly, content is available in all of our operating languages including English, Chinese, Spanish, Lao and French.

We encourage you visit the site and share your feedback on the stories and information available.

Now and for the future at MMG – we mine for progress.



Learn more at  
[wemineforprogress.com](http://wemineforprogress.com)

**Front cover:** Women participating in the adult literacy program, Kinsevere.

**Inside cover:** MMG employees inspecting vegetation and local environment near Dugald River.

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## OUR VALUES



### WE THINK SAFETY FIRST

We stop and think, then act to prevent injury



### WE RESPECT EACH OTHER

We are honest, considerate and act with integrity



### WE WORK TOGETHER

We engage diverse views to achieve better outcomes



### WE DO WHAT WE SAY

We take responsibility and follow through on our commitments



### WE WANT TO BE BETTER

We always look for opportunities to improve



# ABOUT THIS REPORT

## REPORT BOUNDARY AND SCOPE

In this report, 'MMG' refers to MMG Limited and its subsidiaries, unless explicitly stated otherwise. MMG Limited is individually referred to as the 'Company'.

The report covers the activities of MMG's Group office, based in Melbourne Australia, and all of MMG's mining, exploration and associated activities. Our Hong Kong office is not included in this report due to the immaterial nature of its sustainability impacts. In 2017, ownership of our former Century assets and infrastructure (Queensland) and Golden Grove and Avebury mines (Western Australia and Tasmania respectively) were transferred outside of MMG and as such have not been scoped into this report.

All data listed in this report is from the period 1 January to 31 December 2017. Data relating to the previous reporting period has been included where it is comparable and adds useful context to the discussion. All people numbers are accurate as at 31 December 2017.

All data is reported on a 100% equity basis.

## REPORTING APPROACH

Our report is prepared in accordance with the Global Reporting Initiative's (GRI) 2013 Core Sustainability Reporting Guidelines (G4) and GRI's Mining and Metals Sector Disclosure Guidelines. It includes the G4 indicators as they relate to each of our material issues. The GRI Index can be found in the Appendix to the 2017 Sustainability Report on [www.mmg.com](http://www.mmg.com). Our water reporting is aligned with the Minerals Council of Australia's Water Accounting Framework.

Currency is reported in US dollars, unless stated otherwise.

This report has been reviewed and approved by our Disclosure Committee.

## MATERIALITY ASSESSMENT PROCESS

We periodically conduct a GRI-aligned materiality assessment to ensure we are reporting on the issues which matter most to our stakeholders.

We undertook a detailed review of our material issues in 2015. This involved a desktop review of public commentary on MMG over the previous 12 months, MMG Risk Registers, key industry association publications and interviews with both internal and external stakeholders. Issues were prioritised by importance from an internal and external perspective. An internal validation process then confirmed the top 12 issues.

In 2017, to determine material issues, feedback from internal stakeholders was combined with consideration of stakeholder expectations and the external environment. This process confirmed that our existing 12 material issues continue to represent the material risks and opportunities facing MMG. As part of this process, we also refined the definitions for two material issues, namely, Strategy and Growth and Human Rights. Refer to the Appendix for more information on the scope and boundary of these changes.

Given that MMG does not currently mine energy materials and the extent to which our operational energy requirements are met through either hydroelectricity or gas-fired power, stakeholders have not identified

greenhouse gas abatement as a material issue for our business. We acknowledge human-induced climate change and its impacts on the environment, the economy and communities. We are committed to being part of the global solution including through taking actions to reduce our operational emissions and the provision of minerals and metals required in a low-carbon future.

Our focus on energy efficiency, while driven predominantly by the economic benefits of reduced power requirements in mining and comminution, delivers a secondary benefit of greenhouse gas emission reduction. In addition to this, MMG has commitments at its Kinsevere and Las Bambas operations to support extensive reforestation of our neighbouring lands, which in turn delivers a carbon abatement outcome.

## EXTERNAL ASSURANCE

Deloitte has carried out an independent limited assurance over elements of this report, guided by the International Council on Mining and Metals (ICMM) Assurance Procedure (refer to Assurance Terms and Statement on page 62). This included assurance of our alignment with the requirements of GRI G4 core level reporting.

The limited assurance focused on three of the 12 material sustainability issues identified through our materiality assessment process. The three issues selected through a process conducted independently of MMG were:

- › Safety and health;
- › Water access and use; and
- › Community engagement.

## OUR MATERIAL ISSUES GROUPED UNDER OUR FOUR REPORTING THEMES



### WE CONTRIBUTE TO DEVELOPMENT

<b>Social development and investment</b>	Working with communities, governments and other partners to measurably support development and economic livelihoods. Includes employing local people, local procurement and investing in regional infrastructure.
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### WHO WE ARE

<b>Sovereign risk and government relationships</b>	Managing sovereign risk that impact our business and maintaining positive government relationships in the context of significant change in the political environments for our operations.
<b>Strategy and growth*</b>	The relative roles of greenfields and brownfields development in driving our growth objectives. The role of asset divestment and acquisition as a platform to underpin future growth.

### WE MINIMISE OUR IMPACT

<b>Land management and rehabilitation</b>	Managing land holdings effectively over the life of the operation, including their progressive rehabilitation and relinquishment and provisioning for closure.
<b>Social and economic impacts of mine closure</b>	Managing the impacts of mine closure on community employment and economic development. Exploring opportunities for economic transition and the ongoing use of mining-related infrastructure.
<b>Tailings and waste rock management</b>	Managing acid mine drainage and tailings infrastructure.
<b>Water access and use</b>	Recognising that water is an asset with social, economic and environmental value. Managing water access, freshwater withdrawal, water inventory and discharge quality.

### THE WAY WE WORK

<b>Safety and health</b>	Maintaining workforce safety and health.
<b>Community engagement</b>	Community engagement and participation in planning and decision-making across life-of-asset.
<b>Human rights*</b>	Managing the impacts of our operations on human rights. Includes labour, Indigenous rights and the rights of women and children.
<b>Compliance and conformance</b>	Regulatory compliance and acting responsibly across our operations, in line with our values.
<b>Corporate governance and business ethics</b>	Maintaining strong corporate governance and business ethics in the context of expanding operations in complex jurisdictions.

\* These definitions have changed since 2016. Refer to our Appendix for more information at [www.mmg.com](http://www.mmg.com).

# CHIEF EXECUTIVE OFFICER'S MESSAGE



I am pleased to present the 2017 Sustainability Report for what has been a transformational year at MMG as we delivered our latest development project, Dugald River, and established Las Bambas as one of the world's largest copper mines.

Safety, sustainability and shared progress with our stakeholders and host communities have been important priorities as we continued to deliver on our promises.

## SAFETY – OUR FIRST VALUE

At MMG, safety is our first value and highest operating priority. Nothing is more important than ensuring our employees can return home safely at the end of each day.

Tragically, in October 2017, our colleague Mr Hilario Castro at Las Bambas in Peru was fatally injured after a haul truck he was driving left the road near the Ferrobamba pit.

Just prior to the report release date, on 31 May 2018, we also reported the tragic death of Mr Kham Phathithak, an employee at MMG LXML's Sepon mine, following an incident which occurred when the vehicle he was driving was struck by a tree during powerline clearing activities.

On behalf of the entire MMG team, I extend our sympathies to Mr Castro's and Mr Kham's family, colleagues and friends.

In 2017, we made progress in reducing injury rates across the organisation. Our operations recorded a total recordable injury frequency (TRIF) of 1.17 for the full year, representing a 38% reduction on the full year 2016 TRIF of 1.90.

While this demonstrates strong achievement in some areas, we still have work to do to make our workplaces safer.

We are committed to eliminating injuries in our business and we remain focused on

understanding the root causes of all incidents in order to prevent them from happening again.

## WE MINE FOR PROGRESS

Sharing our success with our host communities and delivering sustainable benefits to the regions in which we operate is a key part of what we mean when we say that we mine for progress.

In 2017, our social development contributions focused on programs with most potential to impact the quality of life in our communities such as education, health and income security.

In November 2017, we announced the first production of zinc concentrate at Dugald River, ahead of schedule. The completion of this project marks an important milestone in the development of an operation which is set to strongly contribute to economic activity to its host community of Cloncurry, Queensland through local employment and procurement opportunities over a projected 25-year mine life.

In Laos, we extended our support for the 1000 Day Project, which recognises that the first 1000 days of a child's life are critical for future intellectual and physical development. Over the past six years we have invested approximately US\$3 million to support maternal and child health, and in 2017, we contributed to the second phase of the project which aims to distribute micronutrients to a further 270,000 children across 22 districts in rural Laos. We are proud of our partnership with UNICEF and we look forward to sharing our progress in the next phase of this flagship project (refer to case study on page 40).

On 21 June 2018, MMG agreed the sale of its interest in the Sepon mine to Chifeng Jilong Gold Mining. Chifeng is an experienced gold miner who is well suited to and focused on extending the life of Sepon through the transition from copper production to primary gold operations. I am confident that Chifeng will continue to preserve the strong history of economic and social development in Laos.

At Las Bambas, we continued to engage in dialogue with the communities located along the mineral transport corridor. Significant effort has been directed at mitigating challenges such as dust and noise management by investing directly into improving public roads near

communities and by working with the local transport authority. To date, we have invested approximately US\$230 million in improving the existing road. We have also committed US\$4 million in direct investment for the engineering of the paving of the road, as part of an agreement with Peru's Ministry of Transport and Communications (MTC), and expressed our willingness to the MTC to invest up to US\$53 million in work for taxes to pave part of the road. Our commitment to working together with both the government and communities remains unchanged as we seek to maintain dialogue and to build long-term solutions for the region (refer to case study on page 23).

## CEO SUCCESSION

In April 2018, I announced that I will step down from my role as CEO and Executive Director of MMG in order to return to Beijing and accept a senior executive position within China Minmetals Corporation (CMC), our major shareholder. Having been appointed to the role of CEO in February 2017, following eight years of close involvement in the Company including as Non-executive Director and Chairman, I am very pleased to hand over a strong Company to Geoffrey Gao. Geoffrey brings a deep understanding of the mining industry and our assets, people and strategy, having served on MMG's Board of Directors for over seven years.

MMG is a company of talented and hardworking people with a strong future. While we continue to set the bar higher in our operations, we continue to do the same beyond the mine gate as we seek to positively contribute to our communities both today and tomorrow.

Looking ahead, I am excited to continue my involvement in MMG's growth and success as I assume overall responsibility at CMC for the investment in MMG.

I thank our stakeholders and host communities for their support and I thank our people for living our values every day as we continue to mine for progress. I look forward to another successful year in 2018.

A handwritten signature in black ink, appearing to be 'J. Jiao' with a stylized flourish at the end.

**Jerry Jiao**  
Chief Executive Officer



# OUR YEAR IN REVIEW

## WE CONTRIBUTE TO DEVELOPMENT



### Social development and investment

We celebrated 10 years of food security at Kinsevere, with the Farmers' Assistance Program (FAP) helping over 20,000 villagers and supporting economic livelihoods in the region.

Construction and investment in community infrastructure across our sites, including the chapel in Manuel Seoane Corrales community at Las Bambas.

Organisational transition to the United Nations Sustainable Development Goals (SDGs).

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## WHO WE ARE



### Sovereign risk and government relationships

Ongoing work with government and regional stakeholders at Las Bambas regarding public road use and managing the impact of concentrate transport logistics on local communities. This includes road improvement, dust mitigation and social investment projects.

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### Strategy and growth

Our Dugald River operation was officially opened and first production celebrated on 8 November 2017. We paid down US\$1 billion of debt facilities in 2017, further demonstrating the financial strength of our Las Bambas operations.

Sale of our Avebury, Century and Golden Grove assets.

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## WE MINIMISE OUR IMPACT



### Land management and rehabilitation

Work with communities around Kinsevere on tree planting initiatives. To date, MMG has donated more than 85,000 trees to the region and supported the establishment of tree nurseries.

We responded to environmental incidents resulting in impact to the surrounding environment by carrying out the appropriate level of site clean-up. In 2017 this included the recovery and remediation of slurry material, following a release to the environment at Dugald River.

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### Tailings and waste rock management / Water access and use

The 2/5 Tailings Storage Facility upgrade at our Rosebery operation mitigated historical seepage and improved water management.

Kinsevere's water management strategy reviewed and presented to the Regulator with our updated licence to operate.

Participatory water monitoring with local leadership and community representatives at Las Bambas.

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## THE WAY WE WORK



### Safety and health

Tragically, one of our employees was fatally injured at Las Bambas. We improved our total recordable injury frequency (TRIF) to 1.17 per million hours worked in 2017, which represents a 38% reduction on the TRIF of 1.90 in 2016.

Implementation of fatigue detection technology, as well as a range of critical controls across our operations to combat fatigue-related incidents.

Significant reduction in altitude sickness cases at Las Bambas, with a decrease of almost 77% in 2017 from 2016.

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### Community engagement

At Kinsevere, we have worked closely with local community leaders and stakeholders to ensure the relocation of community members off our tenement has been conducted fairly.

Ongoing work to build strong relationships in the communities around Las Bambas, including building competency in the Community Relations team.

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### Human rights

Collaborative work with the Las Bambas Workers' Union, as part of the first collective agreement negotiations, to discuss issues and concerns the group may have, demonstrating respect for our employees' right to freedom of association.

Provided support for public security forces in Peru to be trained in the Voluntary Principles on Security and Human Rights (VPSHR) and alignment of all our private security contractors to the VPSHR.

Pre-employment workshops held across our sites to communicate our values and the importance of diversity and inclusion to all applicants.

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### Compliance and conformance

We submitted the third modification to our Environmental Impact Assessment (EIA) at Las Bambas, in full compliance with Peruvian legislative requirements, and have developed a Participation Plan to regularly engage with local stakeholders regarding the modification.

Kinsevere updated and received government approval for its Environment and Social Impact Assessment (ESIA) during 2017.

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### Corporate governance and business ethics

Reviewed the role and responsibilities of the Code of Conduct Committee.

Appointed Code of Conduct Contact Officers across the sites.

Prepared for the roll out of 2018 Anti-Corruption and Code of Conduct training.

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# OUR OPERATIONS

MMG has five operating sites across the globe, and employs over 14,500 employees and contractors.

## AUSTRALIA

Amount of production	2017 workforce		Economic contribution (US\$'000)		Social development spend (US\$'000)
76,165 tonnes of zinc concentrate	Total workforce		Total tax and royalties	Total capital investment	1,524
26,858 tonnes of lead concentrate	736		88,321	389,320	
2,963 tonnes of copper concentrate	% female	% national*	Total wages and benefits	Total local supply procurement	
	12	N/A	65,486	477,229	



## DEMOCRATIC REPUBLIC OF THE CONGO (DRC)

Amount of production	2017 workforce		Economic contribution (US\$'000)		Social development spend (US\$'000)
80,186 tonnes of copper cathode	Total workforce		Total tax and royalties	Total capital investment	1,010
	2,518		44,094	19,114	
	% female	% national*	Total wages and benefits	Total local supply procurement	
	10	95	15,582	193,314	



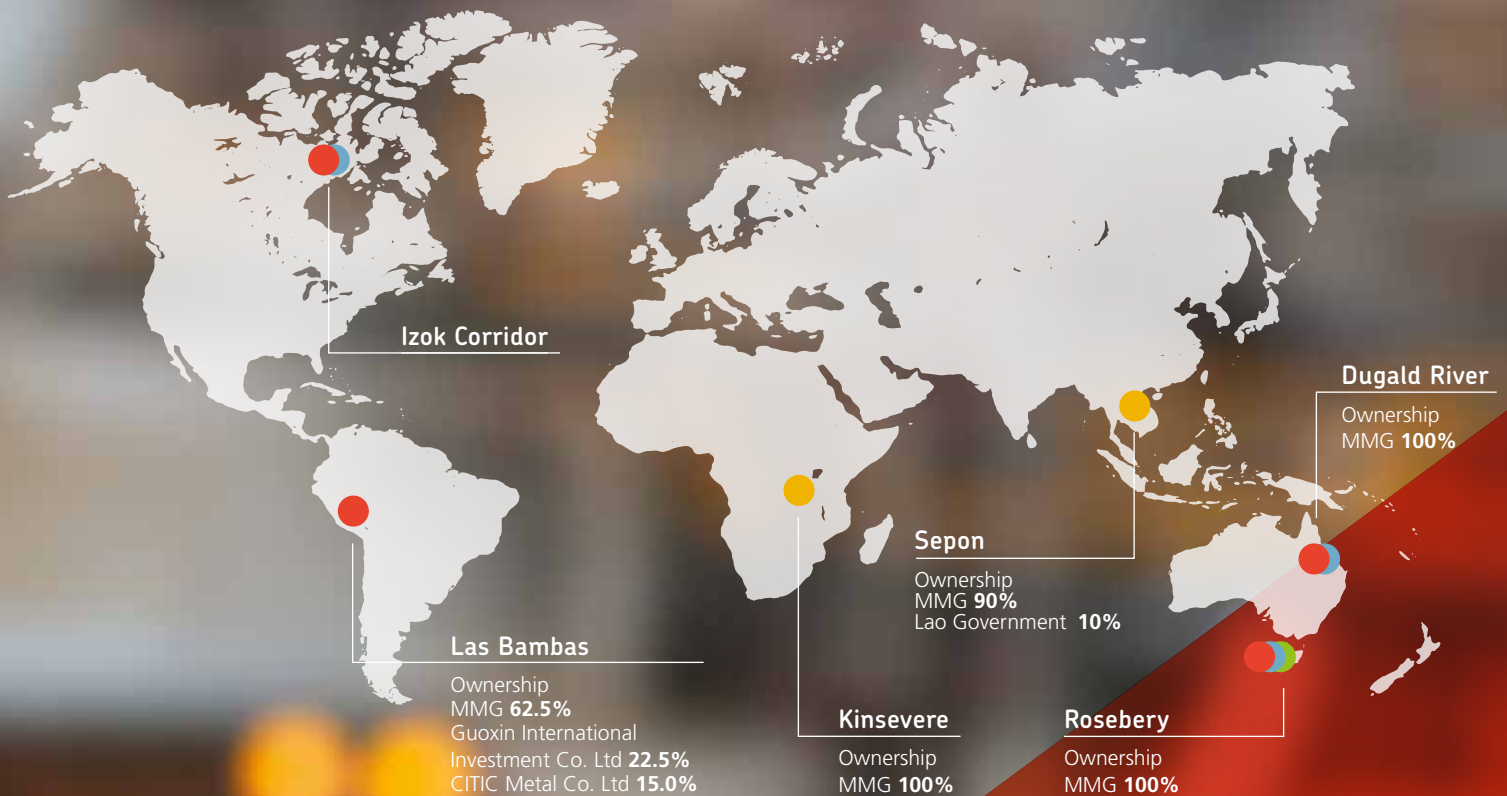


## CORPORATE

2017 workforce	% female
<b>491</b>	<b>40</b>

## EXPLORATION

2017 workforce	% female
<b>121</b>	<b>14</b>



## LAO PEOPLE'S DEMOCRATIC REPUBLIC (PDR)

Amount of production	2017 workforce		Economic contribution (US\$'000)		Social development spend (US\$'000)
<b>62,941</b> tonnes of copper cathode	Total workforce		Total tax and royalties	Total capital investment	<b>1,409</b>
	<b>2,582</b>		<b>20,106</b>	<b>23,301</b>	
	% female	% national*	Total wages and benefits	Total local supply procurement	
	<b>15</b>	<b>94</b>	<b>2,759</b>	<b>126,163</b>	



## PERU

Amount of production	2017 workforce		Economic contribution (US\$'000)		Social development spend (US\$'000)
<b>453,749</b> tonnes of copper concentrate	Total workforce		Total tax and royalties	Total capital investment	<b>14,379</b>
	<b>8,294</b>		<b>193,386</b>	<b>272,421</b>	
	% female	% national*	Total wages and benefits	Total local supply procurement	
	<b>8</b>	<b>99.31</b>	<b>38,022</b>	<b>1,096,187</b>	



Note: Workforce includes employees and contractors. Percentage of female employees has been calculated excluding contractors.

\* % national = the percentage of the workforce with the same nationality of the country where the operations are located.

\*\* Total wages and benefits for Australia includes expenses where the act may report into but take place outside of the country.

For information on royalties and income tax, procurement and employment taxes and benefits, refer to the Our Community Tax Contribution section (pages 46-47) of this report.

# WE MINE FOR PROGRESS – OUR COMMITMENT

**We believe it's for human development that we mine. We venture where others wouldn't, standing for progress, courageously exploring, discovering and developing the earth's opportunities into better lives for the world's communities.**

MMG seeks to be the world's most respected diversified base metals company. We recognise that socio-economic development is the result of many smaller actions, which over time lead to real and lasting improvements in the lives of those touched by our operations. These opportunities arise both directly through our operations and supply chains and indirectly through our role as an economic catalyst, delivering benefits to our stakeholders: employees, mine sites, shareholders, communities, regions and countries in which we operate. At each step, we engage our stakeholders in discussions about important issues and offer them opportunities to participate in decision-making processes. Our objective is to form enduring and mutually beneficial relationships with our local stakeholders, enabling us to incorporate community concerns into mining projects and therefore making it more likely that we will receive their support for the company's ongoing presence.

Mining can be a positive catalyst for economic growth through promoting job creation, business opportunities and building greater social capital. The benefits of sustainable livelihoods are driven by a desire to realise a positive legacy for communities and regions in which we operate, as well as to harness the valuable local skill base for long-term prosperity. Over time, through building a pipeline of capability, market development and contributing to opportunities to improve livelihoods, communities are able to transition to a more sustainable regional economic model supporting post-closure community resilience.

It is the interdependence of these concepts that will help us continue to strive towards our commitment of 'we mine for progress'. MMG has prioritised three focus areas: developing our people, engaging our stakeholders and partnering for human progress, each of which is directly connected with our material issues, and will be explored in further detail throughout this report.





## DEVELOPING OUR PEOPLE

We are committed to developing our workforce, equipping them with the skills and knowledge to become leaders in their chosen fields. We believe in the importance of coaching and empowering our employees to take decisions that will establish a platform for future success.

## ENGAGING OUR STAKEHOLDERS

We consider that our communities have a right to be aware of both our impacts and management approaches and to contribute to decision-making on issues which affect their lives. We seek to engage in a way that respects the cultural context, timeliness and processes of community decision-making and to create opportunities for broader stakeholder engagement with those who have an interest in our operations.

## PARTNERING FOR HUMAN PROGRESS

We recognise the role of mining as a catalyst for economic growth, providing the opportunity for communities and regions surrounding our operations to develop sustainably. In addition to improving access and achievement around core health, education and livelihood indicators, human development recognises the importance of managing vulnerability and working collaboratively with communities to build resilience.

# WE MINE FOR PROGRESS

## OUR PEOPLE

## OUR STAKEHOLDERS

## HUMAN PROGRESS

# THE ROLE OF MINING IN SOCIETY

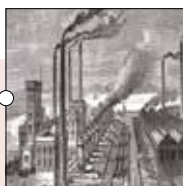
## BRONZE AND IRON AGES

Beginning as early as 4000BCE, the use of bronze became prevalent in tools and weapons. From 1500BCE onwards, ironworking largely replaced bronze and helped develop new technologies.



## 1760s

The Industrial Revolution led to significant manufacturing advancements, including new chemical manufacturing and iron production processes, the increasing use of steam power, the development of machine tools and the rise of the factory system.



## 1848

Start of the Californian Gold Rush. The rush brought about mass migration and stimulated worldwide interest in gold prospecting, leading to rushes in Australia, South Africa, Latin America and Wales.



## 1893

AusIMM founded in Adelaide. Originally known as the Australasian Institute of Mining Engineers (AIME), with founding members from Broken Hill mines and across the Australian colonies.



## 1947

The International Organisation for Standardisation (ISO) began operations, with the aim to promote worldwide proprietary, industrial and commercial standards through a global standards body.



## 1951

Establishment of the International Finance Corporation (IFC), designed to promote economic development and poverty reduction. Specifically, it introduced mechanisms to monitor investment results and transparency, including in the mining industry.



## MINING WITH PRINCIPLES

For thousands of years, minerals and metals have been a key driver of development. Starting with rudimentary bronze and iron tools through to today's advanced technology and electronics, we have become dependent on commodities. Where developing societies demand significant amounts of steel and coal to fuel growth, developed countries require more base and industrial metals to create new technologies.

Diversification of metals is essential in ensuring our societies continue to develop, and in turn ensuring ongoing global human development.

As an industry, we recognise our role in building a better society, and the ICMM's 'Mining with Principles' campaign highlights how we can continue to do so while also contributing to sustainable development and protecting our planet.

The principles are our demonstrable commitment to the importance of good practice in mining.

As our society moves towards a more sustainable energy future, some commodities are more in demand than ever before.





1983

The Brundtland Commission was established by the United Nations. The Commission was designed to unite countries in order for them to jointly pursue sustainable development goals.



1985

The first formal environment, health and safety initiative was established by the Chemistry Industry Association of Canada, in response to global environmental disasters including Bhopal and Seveso.



1992

The landmark Mabo decision was handed down, enshrining the legal doctrine of native title into Australian law. The Native Title Act came into law across Australia 1 January 1994.



2001

The International Council on Mining and Metals (ICMM) was formed, designed to improve sustainable development performance in the mining industry by bringing mining companies together.



2009

MMG was formed following CMC's acquisition of the majority of OZ Minerals' assets through CMC's subsidiary China Minmetals Nonferrous (CMN).



2015

The Sustainable Development Goals (SDGs), adopted by the United Nations General Assembly in September 2015, were designed to end poverty, protect the environment and contribute to the development and prosperity of all peoples.



## Copper

Copper has been mined and used from as early as 8000BCE, not only for its use in emerging technologies but as electrical wire, in building materials, industrial goods and antimicrobial copper surfaces, used to prevent healthcare-associated infections. It is due to its properties as a good conduit that it has become a fundamental component in electric car engines and

renewable energy systems to generate power from solar, hydro, thermal and wind energy. Even if all the world's copper was recycled there would still not be enough to meet future demand, and copper mining will play an important role in supporting future technological and medical advancements.



## Zinc

Zinc is used primarily as an anti-corrosive agent to protect other metals, most commonly steel, from corrosion. It can be found on a wide range of building materials and structures, such as bridges, car bodies and roofing, and is also used in batteries, fertilisers and dietary supplements.



### Left to right

1. ICMM Mining with Principles logo
2. Wind turbines
3. Car manufacturing and production
4. Smartphone and technology
5. Copper and zinc mining, supporting technological and sustainable development

# THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS AND MMG

On 25 September 2015, the United Nations (UN) General Assembly adopted a set of 17 goals designed to end poverty, protect the environment and contribute to the development and prosperity of all peoples. Intended to replace the Millennium Development Goals, the UN Sustainable Development Goals (SDGs) each have specific, measurable targets and indicators that are intended to be achieved on a global scale in the 15 years leading up to 2030.

To support the achievement of the SDGs in all countries, particularly developing countries, and all stakeholders, including the private sector, we recognise the role of multi-stakeholder partnerships as important vehicles for mobilising and sharing knowledge, expertise, technologies and financial resources.

## OUR ALIGNMENT WITH THE UN SDGs

In 2016, we decided to align the focus of our social development initiatives with relevant UN SDGs.

During 2017, analysis of relevant social data from each of our sites was undertaken to affirm the core areas, in which we consider we have an opportunity to support enhanced community development outcomes. Through overlaying this with regional and national development plans, a clear set of priority areas emerged. We identified there was both a strong need at the local level as well as a shared recognition from other stakeholders, including regional and national governments, for the need for action. The UN SDGs will

now be used as a central tenet in establishing a consistent monitoring and evaluation framework across MMG operations.

Recognising the benefits in focusing our efforts on those aspects of the UN SDGs where we can deliver a strong, positive contribution, MMG has chosen to focus on six specific goals where we consider we can deliver meaningful progress in our host communities over the life of our assets.



Image:  
Potable water project in  
Vang Gneng Gnai village, near Sepon.



	1. End poverty in all its forms everywhere		4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture		5. Achieve gender equality and empower all women and girls
	3. Ensure healthy lives and promote wellbeing for all at all ages		6. Ensure availability and sustainable management of water and sanitation for all

We consider that the adoption of a targeted subset of the SDGs as the overarching framework for MMG's contribution to human development will add clear business value in that it;

- > provides more granular guidance and objectives on material issues related to MMG's commitment to 'mine for progress' than is currently provided by the ICMM Principles alone;
- > establishes a common narrative with other stakeholders with whom we have a shared responsibility for development and enables us to tell a story on how we can contribute to broader regional, national and international goals;
- > supports the implementation of a monitoring and evaluation framework which enables MMG to report on the specific contribution of our operations individually, and the company collectively, to issues where there is strong global consensus; and
- > provides a platform for collaboration, and enables us to leverage greater outcomes than can be achieved alone by aligning the extensive public and private investment in human development through knowledge, skill and delivery partnerships.

## PERFORMANCE REPORTING AND THE UN SDGs

For the 2017 reporting period, our activities were aligned with our previous four pillar approach. Consequently, this report will record our performance against these targets. However, in this report we will identify each project and intervention by its primary SDG, and from next year's report we will document our performance in line with the relevant targets and indicators. We will also highlight instances of meaningful contributions made in relation to all 17 SDGs, where applicable. Further information about how we strive to deliver measurable, visible impacts in our communities through MMG's alignment with the SDGs is available on our We Mine for Progress website.



Learn more at  
[un.org/sustainabledevelopment](https://un.org/sustainabledevelopment)

# WHO WE ARE

Headquartered in Melbourne, Australia, MMG is a mid-tier, global producer of base metals including copper and zinc.

MMG is listed on the Hong Kong Stock Exchange (HKEx: 1208), with a secondary listing on the Australian Securities Exchange (ASX: MMG).

At MMG we mine to build wealth through developing our people, partnering with local communities to drive economic growth and encourage local capability and delivering benefits to our stakeholders. Working in partnership with our major shareholder, China Minmetals Corporation (CMC), our vision and objective is to work towards being valued as one of the world's top mid-tier miners by 2020

and, in the longer term, as one of the world's top miners.

We operate and develop copper, zinc and other base metals projects across Australia, the Democratic Republic of the Congo (DRC), Lao PDR and Peru. We also have exploration projects and partnerships across Australia, Africa and the Americas.

## VALUE CHAIN

Our value chain extends from the initial work to identify prospective deposits through to managing the responsible closure of operations.



## OUR GROWTH STRATEGY

At MMG our objective is to be valued as one of the world's top mid-tier miners by 2020. To do this we need to expand both our operations and our production.

Our growth strategy is to:

- › maximise the potential of our existing assets through increasing efficiency and cost savings;

- › pursue organic growth through our project pipeline and exploration strategy; and
- › pursue external growth, including targeting quality value-adding acquisitions.

We have built a strong foundation for growth on a philosophy of simplicity and efficiency. Our Operating Model and Standards are two key enablers that help us achieve this.

The support of our major shareholder, CMC, is fundamental to our success. Together, we are building a capability and reputation as China's premier international mining growth platform.

We remain committed to implementing industry-leading practices in corporate governance, safety, operational excellence and environmental management.

## CASE STUDY

In 2017, we delivered on our growth mandate by commissioning our second major mining project in two years: the Dugald River zinc operation in north-west Queensland. With the successful first full year of production achieved at Las Bambas, MMG has continued to expand annual production, year-on-year.

We streamlined our asset portfolio, completing the sale of the Avebury mine in Tasmania in July 2017. Following the Century and Golden Grove sales completed in early 2017, we have optimised our asset portfolio to focus on our core operating and growth assets. Proceeds from the sales will be used to pay down debt and reduce future financial liabilities.

We also paid down US\$1 billion of debt facilities in 2017, further demonstrating the financial strength of our new operations. Our asset portfolio now sets a strong foundation for further organic or external growth opportunities.

Fundamental to our ongoing success is maintaining strong relationships with our local communities, regulators and host nations and ensuring that local economies and communities receive tangible benefits from our operations. These relationships are critical for our – and our stakeholders’ – ongoing development and success.

We remain confident that our key commodities of copper and zinc have an attractive long-term outlook. We believe that increasing supply-side constraints will intersect with strong ongoing demand. With the strategic insight and financial support of CMC, we are well placed to be positioned as a globally significant base metals producer.

**Image:**  
MMG Executive Committee, CMC representatives and special guests at commissioning of Dugald River.



### DUGALD RIVER COMMISSIONING

On 8 November 2017, MMG celebrated the opening and first production of our Dugald River operation in north-west Queensland, Australia.

The milestone was celebrated during the official site opening with Dugald River staff as well as a number of special guests, including MMG Chairman Guo Wenqing, CEO Jerry Jiao, the Chinese Consulate-General to Australia Dr Xu Jie, as well as the State Member for Mount Isa the Hon. Robbie Katter MP, Cloncurry Mayor Greg Campbell, representatives from Native Title Holders the Kalkadoon, and other key community members.

At the event, Jerry recognised the importance of the event, taking the opportunity to thank all involved. ‘I’d like to congratulate MMG staff and contractors for their hard work in delivering the \$550 million project, under budget and ahead of schedule.’ He went on to highlight the support MMG has received from the Queensland State Government, the communities of Cloncurry and the north-west, our major shareholder China Minmetals Corporation (CMC)

and China Development Bank (CDB), who financed the project.

The Dugald River deposit was originally discovered in the 1890s. Located approximately 65km north-west of Cloncurry in Queensland, Dugald River will process an average of 1.7 million tonnes of ore to initially produce 170,000 tonnes of zinc in concentrate, plus by-products. When fully operational, the Dugald River mine will be a top-10 global zinc mine.

We delivered our first shipment of zinc concentrate from Dugald River in December 2017, two months ahead of our initial schedule. The project remains perfectly timed to meet a growing supply-demand gap, with zinc prices remaining at near decade-high levels. Once Dugald River is fully ramped up, MMG will become a world top-10 zinc miner.

#### SDG 8

Decent work and economic growth





# WHO WE ARE

## SUPPLY CHAIN

MMG sources goods through a global supply chain to satisfy the requirements of our operating sites. In 2017 we engaged with approximately 4,000 suppliers across the globe, of which approximately 90% were located in Peru, Australia, the DRC, Laos, South Africa, Thailand, Hong Kong and the USA. We purchase goods and services related predominantly to site and mining services, energy, logistics and activities associated with fixed plant and mobile assets.

We assess suppliers throughout the contract award process to ensure they are aligned with our Code of Conduct and other relevant policies and procedures.

### Supply chain management

As part of our supplier engagement and contract award process, we undertake a comprehensive assessment across a range of criteria including commercial, quality and technical capabilities. When selecting suppliers, we also assess a range of non-financial criteria including health and safety management and performance, environmental management, local capability training, social contribution and commitment to local employment.

Approximately 760 new supply contracts were entered into in 2017, with a total annual value of US\$1.3 billion. This is similar to the 2016 period during which we entered into 800 contracts with a value of US\$1.17 billion.

As part of our supplier engagement process, we also seek formal agreement from suppliers to comply with our

Code of Conduct and Anti-Corruption policies as well as other relevant Company standards, policies and procedures, including those related to human rights, health and safety and the environment.

In 2017, in partnership with approximately 60 of our key suppliers, we regularly reviewed and reported on agreed contract performance measures as well as identifying and actioning improvement opportunities.

### Our customers

We sell our products to a global customer base. The copper concentrate produced at Las Bambas is predominantly sold to customers in Asia, with China being the largest market. Las Bambas commenced producing molybdenum concentrate in 2017 and this is sold to customers in Chile and Asia. Copper cathode produced at Kinsevere and Sepon is delivered to major copper consumers in Asia and the Middle East, while zinc and lead concentrates produced at our Australian operations are mainly sold to Australian domestic smelters.

### Product stewardship

MMG supplies products that consistently meet our customers' quality expectations and are safe for people and the environment. Our Product Stewardship Standard articulates requirements, which is used to identify and manage significant risks to human health and the environment during the transportation, storage, handling and processing of our products.

We are a member of the International Zinc Association and a regional member of the International Copper Association (ICA), through which we contribute to the development of new applications for our products that are safe, efficient and beneficial to society.

## SOVEREIGN RISK AND GOVERNMENT RELATIONSHIPS

Effectively managing relationships with host governments and sovereign risks is increasingly important to the success of resource companies. Failure to identify and manage relationships, risks and opportunities can negatively impact social, operational and financial performance and limit future growth.

MMG is exposed to various levels of political, policy and regulatory, economic and other risks and uncertainties that vary depending on the location in which we work. Material risks include, but are not limited to: security and macro-economic factors; regime, policy or regulatory change; changes to licensing regimes and amendments to concessions, licences, permits and contracts. Changes in mining or investment policies, shifts in political attitudes in the jurisdictions or deterioration in business - government relationships may adversely affect the Group's operations, reputation and profitability.

Various factors including improving commodity prices, local infrastructure, budget deficits and collapse in alternative funding sources have resulted in governments seeking alternative means of increasing their income, including increases to corporate tax, value added tax and royalty rates, often coupled with

increased audit and compliance activity. This is also accompanied by governments' fiscal inability to pay tax and duty refunds owed to operating companies.

An example is the recent reforms to the national Mining Code enacted by the DRC government. As enacted, the reforms are expected to result in increased taxes, fees and other operating restrictions to mining companies.

At MMG, we take both a relationship approach and a country-level planning approach to the management of these exposures. This includes dedicated roles and structures led in country, supported by assessment of country-specific issues within our broader risk management system. This approach increases our awareness and understanding of social, economic, governance and non-technical risks and provides the relationships, analysis and policy advocacy to shape and manage responses at both operating and corporate levels.

We prioritise actions and behaviours that are valued by the communities, regions and nations in which we operate. Consistent with our core belief that 'we mine for progress', we strive to deliver sustainable benefits, in accordance with our Vision, Mission, Code of Conduct and business-wide values and standards.

## OUR PEOPLE

We are committed to building lasting partnerships with our people and ensuring we have the right people, in the right place, with the right skills, at the right time, to deliver on MMG's strategy.

We believe that in order to achieve the best performance outcomes, we need to embrace a diverse and inclusive approach. In this way our workforce can benefit from a broader level of experience, more diverse thinking and better decision-making. MMG seeks to recruit talented people from diverse backgrounds, particularly from the communities and regions in which we work. We are committed to supporting and encouraging our employees to develop both professionally and personally.

In 2017, MMG employed 14,743 employees and contractors, a 9% decrease from 2016. This is due to a number of factors, which included the sale of three of our operations, a reduction in workforce levels at most sites, as well as organisational restructures at both Las Bambas and our Corporate offices. While our overall contractor rate has dropped by 1% since 2016, contractors remain an important part of our business model for the execution of short and medium-term projects and to ensure flexibility in ever-changing economic environments.

Our annualised turnover (voluntary and involuntary) decreased from a combined 24% in 2016 to 20% in 2017. This was the result of continued organisational change through company-initiated restructures.

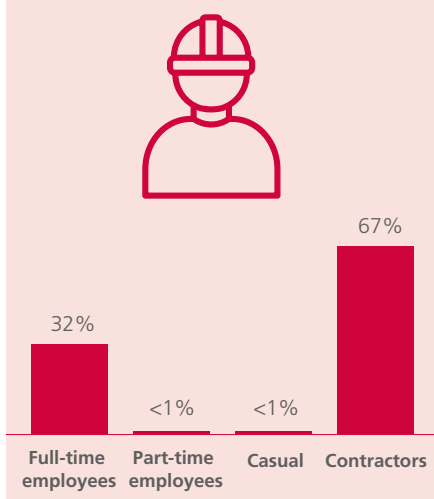
**TABLE 1: OUR PEOPLE DATA SUMMARY**

Year/Site	Full-time	Part-time	Casual	Contractors	Total
<b>2017</b>					
Dugald River	132	0	0	217	349
Kinsevere	656	0	0	1,862	2,518
Las Bambas	1,726	0	0	6,568	8,294
Rosebery	214	0.6	0	172	387
Sepon	1,457	0	62	1,063	2,582
Exploration	118	2.3	0	1	122
Corporate	458	21.0	1	12	491
<b>MMG</b>	<b>4,761</b>	<b>23.9</b>	<b>63</b>	<b>9,895</b>	<b>14,743</b>

Note: data reported as full-time equivalents.

# WHO WE ARE

**FIGURE 1: TOTAL WORKFORCE COMPOSITION IN 2017 (IN FULL-TIME EQUIVALENTS)**



## **Building an inclusive, safe and diverse work environment**

At MMG, having a clear and consistent approach to culture is critical to our growth strategy and essential to ensuring we meet our business objectives. Our culture is underpinned by our values and is a critical driver to building safe, inclusive and high-performing teams ensuring our people have the opportunity to reach their full potential. We do this by:

- > embracing difference and treating everyone with dignity, care and respect;
- > working together to create and maintain an inclusive work environment that leverages diverse thinking, skills, experience and working styles so our people reach their full potential and feel they are valued and part of the MMG team;
- > developing leaders who value and understand inclusion and build teams characterised by collaboration, innovation and efficiency; and
- > doing what we say by extending our inclusive style in all our relationships.

A new Global Inclusion and Diversity Model was implemented in 2017, which includes a focus on increasing female participation across all of our operations. We take both a global and local approach to diversity and inclusion and ensure that all activities are supported by senior management and led by our Chief Executive Officer. We have local Inclusion and Diversity committees in place in every region in which we operate. To improve gender balance at MMG, we have implemented key recruitment, retention and engagement metrics to measure our progress.

We continue to build awareness of diversity across our sites and to promote an inclusive and safe work environment for everyone. We provide people with the opportunity to develop their skills, expertise and experience to optimise their contribution to our business and to develop their careers. We deliver internal training and leadership programs to build awareness of the value of diversity and to help create an inclusive environment free of bias.

We have mental health awareness and support programs in place and provide equitable treatment training to our employees. We are guided by our Code of Conduct which shapes our culture, our behaviour and ultimately, our reputation.

We know that achieving progress when it comes to inclusion and diversity will be challenging and rewarding. Everyone must play their part. We will continue to:

- > ensure our leaders are consistently demonstrating inclusiveness;
- > deliver relevant regional initiatives such as building local workforce capability; and
- > look for new and better ways of doing things by reviewing our systems and processes to ensure they are not barriers to our progress.



## CASE STUDY



Image:  
Employees at our  
Melbourne Group office.

## OUR COMMITMENT TO DIVERSITY AND INCLUSION

MMG is focused on building female participation and the capabilities of female employees across the business, and there are key recruitment, retention and engagement metrics in place to measure our progress. In 2017, there was a 3% overall increase in hiring rates for females across our organisation, from 15% in 2016 to 18% in 2017.

In order to attract and retain more females from local communities to work at our Las Bambas operation, MMG decided to establish a Recruitment Assessment Centre which would communicate MMG's values and the importance of diversity and inclusion in MMG to all applicants, and create spaces for dialogue. Throughout the sessions, interaction and behaviour is assessed to determine alignment with company values. The Centre delivered nine training programs in 2017 and hired 20 women from local communities.

Our Australian operations have also implemented the model, with a pilot program in Rosebery seeing three of eight job positions offered going to female candidates. All three are still with the company. Dugald River has also shown positive results, with two of 10 recent operator positions being offered to women.

The change to labour legislation in the DRC in 2016 has enabled women to take on more active roles in our Kinsevere operation. Strategies are being implemented to ensure MMG's female workforce on site is provided with further training and exposure to operational roles, including mining and processing, to prepare them for any employment opportunities that may arise.

'When I first joined Kinsevere, my male colleagues were curious about my abilities, but women have showed that we have the same abilities and talents and the gender difference is no longer an issue. Now the mine has become a

more gender-neutral working area and is a popular place to work for female employees. My male colleagues make me feel comfortable and, being a mother, I know how to balance my time when I'm at work and when I'm at home with my children. I hope I can serve as an example for many women in the DRC and others who would like to work in the mining industry.' Sylvie Kayind, Mine Technician.

We have various campaigns across our sites helping us strive towards a more inclusive workforce, and will continue to work with our internal stakeholders to continue to improve for the benefit of all employees.



Learn more at  
[wemineforprogress.com](http://wemineforprogress.com)

**SDG 5**  
Gender equality



# THE WAY WE WORK

MMG's mission is to mine to create wealth for our people, host communities and stakeholders. Our commitment to sustainability is underpinned by our policies, governance structure, values, standards and our Operating Model.



**Image:**  
Chairman Mr Guo, CEO Jerry Jiao and other  
MMG employees inspecting Dugald River.



**Image:**  
MMG employee inspecting work  
being undertaken at Kinsevere.

## OUR COMMITMENT TO SUSTAINABLE DEVELOPMENT

We are committed to sustainable development through the transformation of natural capital into social capital. To us, this means mining in a way which seeks to minimise the negative impacts of our operations and maximise the benefits we can provide to our host communities and regions. This approach has been endorsed by our Board of Directors and senior management team and is executed across our company through our organisational policies and standards.

MMG's commitment to operating in line with the ICMM's 10 Sustainable Development Principles is articulated in our Safety, Security, Health, Environment and Community Policy (refer to our Appendix for the ICMM Sustainable Development Principles on [www.mmgroup.com](http://www.mmgroup.com)). Our approach to sustainable development is also guided by our:

- › Corporate Governance Policy;
- › People Policy;
- › Quality and Materials Stewardship Policy; and
- › Shareholder Communication Policy.

We are an active member of leading industry organisations, including:

- › International Council on Mining and Metals (ICMM);
- › International Zinc Association (IZA);
- › Minerals Council of Australia (MCA);

- › Society of Mineral and Energy Producers of Peru; and
- › Chamber of Mines of the DRC / Mining Progress Initiative of the DRC.

We support the Extractive Industries Transparency Initiative (EITI). In all of the jurisdictions where we work, we either engage as a reporting entity or participate in advocacy and pilot programs to encourage governments to support and adopt the EITI.

In 2018, we are introducing 12 new Sustainability Objectives for 2018–2020 that align with our material issues. These objectives are designed to be aspirational goals with specific, measurable targets assigned to them. These targets will be monitored and progress reviewed as part of the annual sustainability reporting process. We have completed our 2015–2018 Sustainability Commitments, with commentary provided on our progress against each milestone. For more information about this refer to the Objectives and Targets on pages 58–61.

## OUR STANDARDS

Our business-wide standards outline MMG's requirements in managing material risks, meeting legal requirements and external obligations, and creating and preserving competitive advantage and organisational effectiveness. Our standards are aligned with the ICMM's 10 Principles and provide the basis for achieving and maintaining sustainable operations.

Our integrated internal audit program includes focus on conformance with our standards.

Our risk management process consists of steps that effectively identify and manage material risks and enable continuous improvement in both decision-making and performance. We continue to progressively implement critical controls and verification actions for material risks across our business. Our risk management process is based on ISO 31000:2009, the international risk management standard.

## OUR OPERATING MODEL

Our Operating Model defines how we effectively organise our operations and our shared service and support functions.

A key requirement of our Operating Model is the implementation of common procedures and standard processes across operations to manage common material risks, support compliance with our external commitments and deliver and maintain competitive advantage. In this way our Operating Model enables our sites to focus on continuously improving our operational performance and our service and support hubs to focus on continuously improving that service and support to our sites.

We continuously look for opportunities to improve the work of our functions in serving our operations and strive to maximise the significant value generated by our Operating Model.



# THE WAY WE WORK

## BUSINESS ETHICS

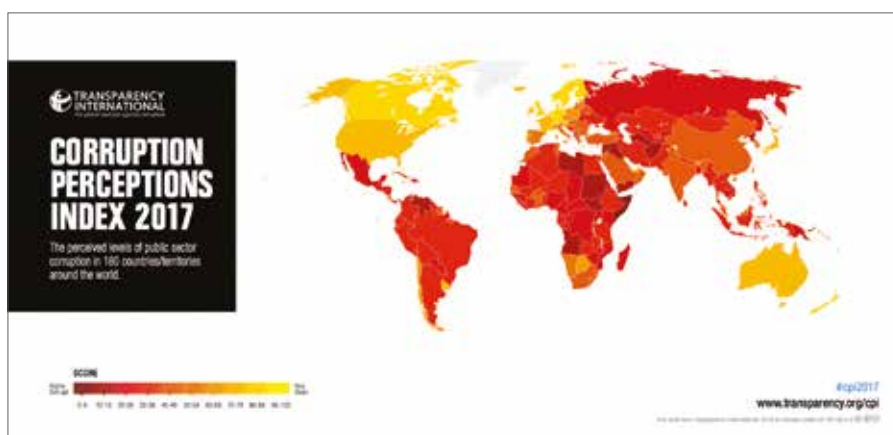
Our Values and our Code of Conduct underpin our commitment to establishing and maintaining long-term, meaningful relationships with our stakeholders, including governments and employees. We aim to act with integrity in all situations and to provide formal structures to review and respond to any potential behavioural or cultural issues as they may arise.

The MMG Code of Conduct sets out the standards of behaviour expected from all MMG employees. We expect all our employees, contractors and suppliers to integrate these standards of behaviour into their working practices.

The Code of Conduct covers areas such as conflict of interest, fraud, anti-corruption and legal compliance. Matters relating to the Code are overseen by the Code of Conduct Committee. We also engage an independent confidential whistleblower service provider which is available to all employees globally in their local language.

We recognise that some of the jurisdictions in which we work are rated poorly by the Transparency International Corruption Perceptions Index; because of this we seek to match good governance with a commitment to transparency initiatives such as the EITI.

## CORRUPTION PERCEPTIONS INDEX 2017



Note: 2017 Transparency International Corruption Perception Index rates by country in which we operate: Australia, 77 (13th/180 countries); Peru, 37 (96th/180 countries); Laos, 29 (135th/180 countries); Democratic Republic of the Congo, 21 (161st/180 countries). Available online - [www.transparency.org](http://www.transparency.org)

## CORPORATE GOVERNANCE

We are committed to maintaining a high standard of corporate governance by emphasising a quality Board, sound internal controls and transparency and accountability to all shareholders. We understand that good governance is not just a matter for the Board and that it is equally the responsibility of executive management to embed governance practices throughout the organisation. MMG has applied the principles of good corporate governance as set out in the Corporate Governance Code of the Hong Kong Listing Rules.

Our Board Audit, Remuneration, Governance and Nomination, and Risk Management committees operate under clear terms of reference. We also have a number of executive management committees: Safety, Security, Health, Environment and Community; Disclosure; Investment Review; Mineral Resources and Ore Reserves; and Code of Conduct.

All transactions between MMG and CMC subsidiaries are conducted in compliance with the Hong Kong Listing Rules and Connected Transactions Rules.

More information on our Board and executive-level committees and our Corporate Governance Statement is available on our website [www.mm.com](http://www.mm.com).



**Image:**

Transport of Las Bambas copper concentrate, Cotabambas province, Peru.

## IMPROVING CONCENTRATE LOGISTICS IN LAS BAMBAS

Copper concentrate from our Las Bambas operation travels approximately 700km to the port of Matarani in the southern Peruvian province of Arequipa. The concentrate is transported through a bimodal system of container trucks and rail, a system designed to increase safety and maximise the use of public infrastructure.

On 24 November we sent the first concentrate from the new transfer station in Pillones to Matarani, marking an important milestone in our growth and continuous improvement plans. This station is located between kilometres 138 and 139 on the Arequipa – Puno line and has two modern gantry cranes, a system of railway diversions for container interchanges, maintenance stations, a dedicated truck wash area and sleeping rooms, which will allow truck operators to rest in order to reduce the risk of fatigue-related incidents.

Throughout 2017, we focused on improving the management of the impact of concentrate transport logistics on local communities along the road through a number of initiatives:

- › reducing the community exposure to dust through the application of micro surfacing to around 60km of the road, in conjunction with the transport authority. This investment of more than US\$22 million focused on the sections of the public road in and around communities;
- › implementation of 10 monitoring stations to continuously monitor airborne dust;

- › permanent dust suppression, with more than 50 water trucks being leased from local businesses;
- › regular road maintenance under the direct supervision of Las Bambas' Engineering Department and in agreement with the competent transport authorities;
- › ongoing engagement with communities to understand their issues and concerns; and
- › the delivery of social investment projects in different communities centred on food and income security and community health and wellbeing.

Recognising the need to find a more permanent solution to the management of dust, Las Bambas also committed US\$4 million under an agreement with the Ministry of Transport and Communications (MTC) and the regional government to technical studies for paving the public road. We also expressed our willingness to the MTC to invest up to US\$53 million in work for taxes to pave part of the road. The technical studies are currently being completed, and towards the end of 2018 we anticipate the transport authority will begin asphaltting the full length of the road from Las Bambas to Espinar.

Despite our efforts to improve public roads and mitigate impacts caused by the transport of concentrate, on 6 August 2017 a group of community members blocked various points of the road in four communities in the district of Mara. The group prevented transit along the road in order to demand compensation from Las Bambas, arguing the road was constructed

on their land without appropriate compensation and for the exclusive use of the operation. It is important to note the road was constructed in the 1990s and declared a public road by the government in 2008, prior to the beginning of the construction of Las Bambas in 2012.

The community members also expressed their intent to seek compensation for easement access, for alleged damages caused during the road's construction, and alleged contamination caused by dust as a consequence of the concentrate transport.

Meetings were held over various days between representatives of Las Bambas, the Peruvian Government (MTC and the Ministry of Energy and Mines) and the involved communities, however the blockade continued.

On 16 August 2017, the Peruvian Government declared a State of Emergency in the districts of Challhuahuacho, Haquira and Mara, in Cotabambas province, Apurímac region, which lifted the blockages. The government later extended the State of Emergency but limited it to the length of the Apurímac – Cusco – Arequipa road corridor, including the 500 metres adjacent to it. The State of Emergency was lifted on 12 June 2018, and Las Bambas continues to engage with local communities and regional and national government on a regular basis to ensure that a constructive relationship is maintained during the process.

### SDG 11

Sustainable cities and communities



# THE WAY WE WORK

## COMPLIANCE AND CONFORMANCE

We strive to meet the legal and regulatory obligations in all of our operating jurisdictions, as a minimum.

The Governance and Nomination Committee is responsible for developing and reviewing the Company's policies and practices on corporate governance, the Code of Conduct and monitoring the Company's compliance with the Listing Rules and other applicable laws.

In 2017, MMG was issued with two minor safety-related fines related to administrative processes as a result of safety incidents at Las Bambas that occurred prior to MMG taking ownership of the site. Both incidents took place in 2013, and the fines are directly related to the administrative processes surrounding the incidents and the time when required documents were submitted to the Regulator, rather than to the handling of the incidents themselves.

In 2017, MMG received no fines or penalties related to environmental management at its operations. Despite this, MMG had a number of engagements with regulators on environmental issues:

- An environmental incident occurred during the testing phase prior to commissioning the Dugald River tailings pipeline causing an uncontrolled release of slurry within the mining lease. A significant program of works to recover slurry material and remediate the site was undertaken, consisting of dry, wet and manual labour recovery methods. The incident and remediation activities have been communicated to the Regulator.

- To control unplanned water discharges to the environment, Kinsevere undertook surface water management risk reduction works expanding an existing sediment pond during preparation for the wet season. The site surface water management strategy continues to be redesigned with full engagement of the community and in line with all regulatory requirements.
- Seepage discharge from Sepon's operational tailings storage facility (TSF) was identified. To manage the seepage, additional sediment ponds downstream of the seepage were constructed with pumping mechanisms back to the TSF to ensure containment of the material. The seepage was reported to the Regulator and independent studies have been undertaken to confirm the stability of the TSF and to identify long-term management plans.

## STAKEHOLDER ENGAGEMENT

MMG aspires to be valued as a trusted partner of each of our host communities. Our ambition is to develop partnerships based on regular and open dialogue, transparency and mutual respect.

We work in complex jurisdictions and across numerous cultures and geographies, often in communities with either recent or prior negative experiences with resource development. Given the social, environmental and economic impacts of our operations, communities expect to participate in decision-making and to share in the benefits of mining. We recognise that strong stakeholder engagement is required throughout the project life cycle from exploration to closure; this is critical to ensuring we make

business decisions responsive to the needs and expectations of our host communities and their governments.

We aim to partner with our communities and to build meaningful connections with our stakeholders early in the development process. We strive to maintain proactive, socially and culturally inclusive communication with stakeholders and to engage with them regarding future plans and performance. Our approach to stakeholder engagement is guided by our commitment to the ICMM 10 Principles, including the commitment to community dialogue and free, prior and informed consent (FPIC) regarding Indigenous people.

As a long-term partner in community social and economic development, we consider the need to communicate through all stages of project development and over the life of mine. We recognise that intergenerational engagement is critical to ensuring that our business responsibly manages the impacts and opportunities for both current and future generations. We also recognise the need to take account of gender-based differences in our engagement and community decision-making processes.

A matrix of our broad stakeholder groups, their areas of interest and our engagement process is available online in the 2017 Sustainability Report Appendix at [www.mmg.com](http://www.mmg.com).



## CASE STUDY



**Image:**  
MMG Community Relations employees with  
local community members near Las Bambas.

### COMMUNICATING CHANGES TO LAS BAMBAS' ENVIRONMENTAL IMPACT ASSESSMENT

Updates to mining environmental permits and plans are a normal part of operation. They provide a regulatory framework for projects to evolve over time while ensuring that they continue to operate in line with all relevant legislative requirements.

On 30 November 2017, Las Bambas presented its third Environmental Impact Assessment (EIA) modification. In summary, the modification seeks to update the mining plan, optimise the molybdenum circuit, enable the commencement of new drilling works, as well as implement new mine components (including tyre and contingencies storage, additional generators, entrance gates, more offices and change of use of a mine camp). All updates are to be made on the existing mine lease.

In recognising the strong expectations of local communities and key external stakeholders to be consulted on modifications to our EIA, Las Bambas prepared a Citizen Participation Plan. This was approved by the National Environmental Certification Service for Sustainable Investments (SENACE), and includes communicating on a regular basis through permanent information offices in the region, distribution of printed explanatory material on the modification, guided tours of the operation, creating focus groups to get regular feedback on the process and sharing the Executive Summary and content of the modification of the EIA to those who are interested.

By employing this plan to communicate this and future modifications, we strive to promote informed participation from

our key stakeholders and local communities and create an environment to receive feedback, queries and encourage greater engagement throughout the process. It is through constant engagement with our stakeholders around operational matters that we will continue to deliver long-term benefits for our operations and regions in which we work, and better manage the positive and negative impacts of our operations.

#### SDG 11

Sustainable cities  
and communities



# THE WAY WE WORK

## GRIEVANCE MANAGEMENT

MMG recognises that mining activities have both positive and negative impacts on communities and that these impacts can lead to significant stakeholder concerns. Accordingly, each operation has a site-specific grievance mechanism in place, aligned with the common MMG Grievance Procedure, to facilitate the timely, culturally appropriate investigation and response to grievances raised by community members. This process is non-judicial, complements existing legislative remedies and reflects our commitment to the UN Guiding Principles on Business and Human Rights. It captures the following types of stakeholder grievances:

- › grievances related to MMG's impact on stakeholders;
- › grievances related to the conduct of MMG personnel and / or contractors in local communities; and

- › grievances related to allegations of human rights abuses.

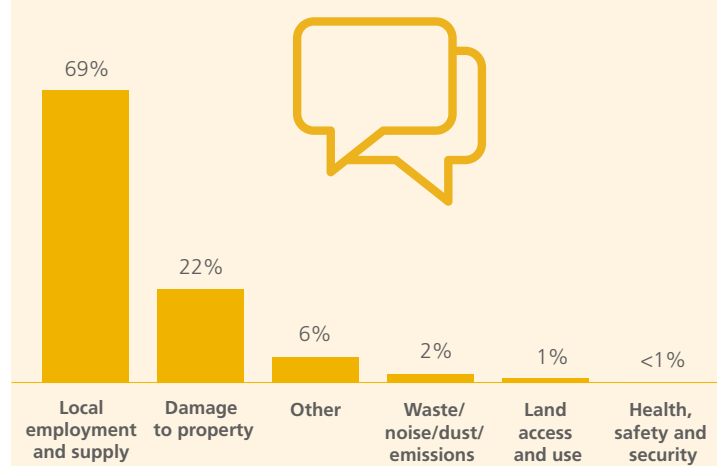
In 2017, we received 367 grievances across MMG's operations. Of these complaints, 249 – more than 67% – were related to local employment and procurement matters at our Las Bambas operation. Specifically, these grievances highlighted the clear expectations of the community regarding sharing in the economic benefits of our operation, and the complexity of managing the transition from construction to operations.

Significant grievances, which include disputes, deemed to require the immediate attention of managers or Group Office are captured in our system and escalated accordingly via notification channels and reporting processes. They are reviewed and managed in a timely and sensitive manner, with specific reference to

the MMG Risk Management Procedure and its criteria. For the 2017 period, we recorded four significant incidents related to land use, customary rights of local communities and Indigenous peoples in line with the GRI indicator definition; three of these were in Las Bambas and one was in Kinsevere. All were resolved through appropriate processes tailored to each case and engaging all affected parties.

In 2018, we are working with the Centre for Social Responsibility in Mining (CSRM) at the University of Queensland to better align criteria for community incidents and risks and their corresponding reporting processes in our Risk Management Procedure. The results and outcomes of this work will be featured in next year's Sustainability Report.

FIGURE 2: GRIEVANCES RECEIVED IN 2017 (%)



## CASE STUDY



**Images:**  
Community Affairs employee engaging with community members and local leaders as part of the grievance mechanism at Sepon.

## MANAGING GRIEVANCES THROUGH COLLABORATION

At our Sepon operation, regularly engaging with and ensuring minimal impact to our host communities is essential to maintaining our social licence to operate. Since operations began in 2003, the Community Affairs team has managed open communication channels with local stakeholders to address grievances.

Historically, the process was plagued with delays and led solely by the Community Affairs team. Delays ranged from three months to a year for complex complaints, compared to the standard 45 days. While unresolved grievances have seen a downward trend from about 17% (2016) to 12% (2017), delays persisted, depending on the nature of each case.

In 2017, Sepon took steps to improve the grievance mechanism by implementing a more inclusive and practical approach to deliver timely and effective solutions. A new procedure was introduced, designed to fill in the gaps identified through a management review. Where the previous mechanism

was short-term focused and compensation based, it has shifted to a more collaborative, long-term and operational approach designed to address the root causes of the issues. Among the changes included the establishment of an internal grievance committee comprised of operational employees and managers who work together from planning through to the implementation of solutions.

‘This new collaborative arrangement fostered ownership and accountability of our operation team leads, making our grievance process more responsive, timely, and effective,’ said Ms Lasmaydha Siregar, Manager – Sepon Transition. ‘This arrangement exemplifies a collaborative approach to a community issue. We were able to reduce the time spent on two formal complaints of similar nature by nearly half from over 300 days to 180 days.’

‘Our community is satisfied with the new grievance process. Compared to the first half of 2017, we can say that the resolution process in the second

half of the year was faster,’ said Mr Dindao, local farmer and father of eight, whose rice paddy was damaged from sediment erosion.

Sepon is committed to the continuous improvement in the wellbeing of communities surrounding our operation through ongoing monitoring and improvement of its grievance management process.

### SDG 16

Peace, justice and strong institutions





# THE WAY WE WORK

## SAFETY

At MMG our approach to safety is founded on the objective of achieving no fatalities and no harm to our people. To achieve this, our leaders are focused on:

- › developing a community that cares for one another and lives the MMG Values;
- › ensuring we only use inherently safe plant and equipment; and
- › training our people to be competent in all their tasks.

Our company Standards support this approach, with the Safe Task Management Standard and Fatal Risk Standard designed to give our workers the tools to manage safety and feel empowered to intervene on any unsafe act. These tools include procedures, work instructions, assurance processes and MMG's 'Stop and Think' mindset.

## Safety performance

Safety is our first value and we continually strive to eliminate incidents and injuries at our workplaces. Tragically, one MMG employee died in a heavy vehicle incident at Las Bambas in 2017. Mr Hilario Castro was fatally injured after the haul truck he was driving left the road near the Ferrobamba pit on Tuesday 3 October 2017. Mr Castro was found on Thursday 5 October, following a search and rescue effort which commenced immediately following the incident.

During 2017, 49 people across MMG's operations experienced injuries which required medical treatment, time away from work, or resulted in them being unable to perform their normal duties (refer to the Table 2 notes).

At the end of 2017 our total recordable injury frequency (TRIF) was 1.17 per million hours worked, which represents a 38% reduction on the TRIF of 1.90 in 2016 and a 44% improvement on the 2015 TRIF of 2.12. Our lost time injury frequency (LTIF) was 0.38 for 2017.

FIGURE 3: TRIF OVER 3 YEARS

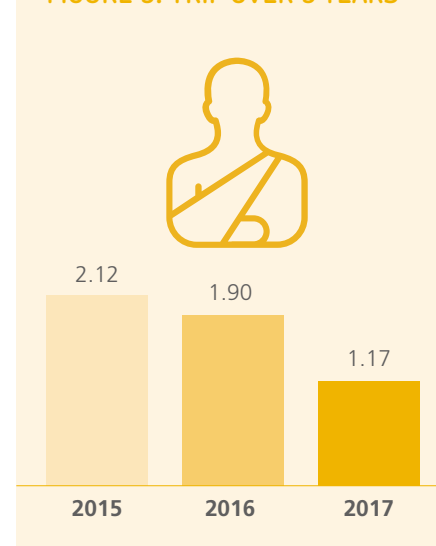


TABLE 2: TRIF AND LTIF FOR 2017

Location	TRIF		LTIF	
	2017	Trend	2017	Trend
Dugald River	6.67	▲	1.82	▲
Kinsevere	1.13	▲	0.71	▲
Las Bambas	0.85	▼	0.31	▼
Rosebery	2.72	▼	0.91	▼
Sepon	1.05	▲	0	-
Exploration	0	-	0	-
Group Office	0	-	0	-
<b>MMG</b>	<b>1.17</b>	▼	<b>0.38</b>	▼

TRIF = total recordable injury frequency per million hours worked (fatalities, lost time injuries, restricted work injuries and medical treatment injuries)

LTIF = lost time injury frequency per million hours worked.

▲ depicts an increase relative to 2016

▼ represents a decrease, and

- indicates no change relative to 2016.



**Image:**

MMG employee preparing for his shift, using SmartCap technology, at Las Bambas.

## LAS BAMBAS INTRODUCES SMARTCAP TECHNOLOGY

A study published by Caterpillar Global Mining in 2007 indicates that up to 65% of truck haulage incidents in mining operations are directly related to operator fatigue. The number of cases where fatigue was a contributor, but not the sole cause, is even higher. Fatigue results in an operator's inability to adequately manage a high-risk situation, resulting in an incident. It impairs our performance and contributes to serious incidents.

In order to combat fatigue and raise awareness about the importance of rest and adequate sleep, in 2017 MMG implemented Life by SmartCap (known locally as Guardián de Vida) at its Las Bambas operation, becoming the first mining operation in Peru to do so. This proactive technology aims to preventatively manage fatigue in operators of mine haul trucks, staff transportation buses, concentrate trucks and long-distance light vehicles.

The LifeBand headband, worn by operators, monitors their levels of fatigue and triggers an alarm if the

individual is required to take preventative action. In addition to the alarm, a prompt with the driver's risk level is displayed on the SmartCap screen installed in the vehicle. When the system detects that the operator's fatigue level has increased, an alert is sent to a remote control centre, from which further measures can be taken to protect the driver.

Implementation of SmartCap in Las Bambas began in mid-June 2017 and included:

- › collaborative development of a fatigue management procedure in line with the technology;
- › installation of over 690 SmartCap displays in all mobile equipment identified as critical and within project scope;
- › training more than 1,200 people, primarily vehicle operators and supervisors, in the use of SmartCap and its associated procedure; and
- › deployment of a communication plan to support this process.

SmartCap was installed in all mining fleet, concentrate logistics trucks, staff transportation buses and long-commute light vehicles in 2017. During the first quarter of 2018 SmartCap implementation will be fully completed at Las Bambas. This technology, together with other initiatives, will help us reduce fatigue-related incidents at our sites and deliver on our commitment to safe, injury-free workplaces for our employees and contractors.



Learn more at  
[wemineforprogress.com](http://wemineforprogress.com)

### SDG 3

Good health and wellbeing



# THE WAY WE WORK

## SAFETY PROGRAMS

Our objective is to achieve workplaces free of fatalities and injuries. We are focused on building a safety mindset in all of our employees and contractors while also ensuring that supporting behaviours, cultures and processes are in place across every area of our operations. We recognise that managing safety requires a focus on both eliminating hazards, which can cause injuries, and on managing critical controls to prevent events that can cause fatalities. We consider these to be separate yet complementary processes.

### Fatal Risk Management

Management of our fatal risks advanced in 2017 with rollout of common control designs commencing at all MMG sites. Additionally, the Risk and Control Ownership Framework has been further embedded and accountabilities to manage the risks both at the site and Group level have been established. In the fourth quarter of 2017 a mid-implementation review was commissioned and is due for completion early first quarter 2018. This review will provide specific guidance to increase implementation effectiveness globally. The review will also benchmark MMG critical controls against those of our peers.

## Safe Task Management

Safe task management is an effective implementation of a number of critical components:

1. Clear work instructions and procedures.
2. Highly competent supervisors in the areas of planning work, assigning tasks and monitoring task execution.
3. Work groups capable of accepting the assigned task to create a safe work environment and to work in accordance with the task plan.
4. All employees 'stop and think' before, during and after they commence work.
5. All employees are obliged to act and intervene when they see someone working unsafely.

In 2017 the platform to grow safe task management was established and in 2018 the efforts will continue to create a workforce that operates safely at all times and works towards our goal of zero injuries.

## LEARNING FROM SIGNIFICANT EVENTS

We believe it is possible to achieve a workplace free of injuries. We are seeking to create an organisation that openly reports significant safety events, undertakes high-quality analyses of these events and implements sustainable corrective actions to prevent recurrence. We need to excel at these activities if we are to continuously improve and eliminate workplace injuries.

Our standards and procedures collectively define the way work should be planned, assigned and executed. We believe that incidents and injuries should not occur if all the requirements of our standards and procedures are applied consistently. By exploring the gaps between the 'work as done' and the 'work as intended', we seek to understand the causes of significant incidents. We critically evaluate factors such as organisational considerations and work methods that may have contributed to the incident and identify appropriate improvements in design and implementation. In 2017 we reviewed and enhanced the significant event investigation method and released a new and improved procedure.

A key focus for 2018 is to increase our collective investigation capability and to conduct quality investigations that lead to useful and effective improvements. The outcomes from our investigations must be shared and integrated across our operations for us to reach our goal of zero fatalities and injuries.



## CASE STUDY



**Image:**  
Children receive their cartoon on 'Dangers around mine site' after awareness session, Sepon.

### SEPON CARTOONS – COMMUNITY AWARENESS OF MINE SAFETY

Safety is one of MMG's most important values and we engage multiple stakeholders to ensure our values are clearly communicated both internally and externally. Our Sepon operation has a number of near-mine communities, and with occasional unauthorised entries from local community members we needed to ensure that everyone understands the dangers that exist on a mine site. This included the two tragic community fatalities in 2016 and 2017 that occurred during incidents of trespassing on our site. In 2016, our Community Affairs and Communications teams designed mine safety awareness cartoons to give local school children education in safety awareness. The stories include dangers

found in blasting areas, around haul roads, the risks of erosions and tailings and storage dams.

To date, over 5,000 children in 16 villages have participated in the awareness sessions held by Community Affairs, with the initiative to continue into 2018. Our hope is that by engaging our stakeholders on the risks that exist on mine sites from an early age, we will help encourage a broader understanding of safety and risks, both on mine sites and in everyday situations.

**SDG 3**  
Good health and wellbeing

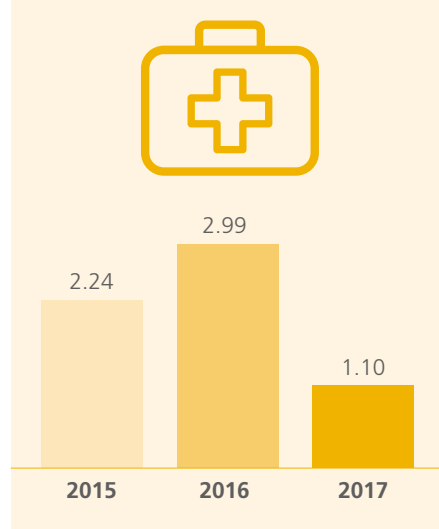


**SDG 4**  
Quality education



# THE WAY WE WORK

FIGURE 4: OCCUPATIONAL ILLNESS FREQUENCY



Note: New cases of occupational illnesses are disclosed by location, while the rate is disclosed at Group level.

## HEALTH

### Occupational exposures

The health risks in our workplaces include occupational exposure to altitude, noise, lead and vibration; and carcinogenic substances such as respirable crystalline silica, diesel particulate matter (DPM) and sulphuric acid mist. We operate in countries where the prevalence of HIV/AIDS, tuberculosis, malaria, typhoid, dengue fever and other tropical diseases is high. All of our workplaces are required to maintain and implement risk-based Exposure Management Plans.

Our medical surveillance programs help us identify health impacts at an early stage and provide information on the implementation and effectiveness of our exposure controls.

In 2017, the rate of new cases of work-related occupational illnesses at our operations was 1.10 per one million hours worked, down from 2.99 in 2016. Occupational illnesses recorded in 2017 included symptomatic cases of malaria at Kinsevere (29 cases) and low-severity altitude sickness cases at Las Bambas (17 cases). Cases of malaria contracted by local employees who live in areas where malaria is endemic are not reported in Company statistics. The reduction in altitude sickness cases in Las Bambas is correlated with the visitor altitude prevention program, implemented in late 2016 which obligates people who have not been on site in three weeks to spend 24 hours in Cusco for acclimatisation prior to travelling, as well as a reduction in external contractors visiting site; workers accustomed to working at altitude rarely show symptoms.

All Las Bambas employees and visitors undergo a medical evaluation to determine their fitness to travel to altitude. As the risk of altitude sickness is not always medically indicated, this process can only be partially successful in identifying those at risk. Visitors are monitored on their arrival in Cusco (3,350 metres above sea level) and once they arrive at Las Bambas (over 4,000 metres). This ensures that symptoms and signs of altitude sickness are promptly identified and treated.

### Wellbeing

The MMG Mental Health Framework continues to be implemented across our Australian businesses and has been expanded in 2017 to also include our overseas operations. In 2017, Rosebery participated in a pilot program of Mates in Mining and Dugald River, as an operating site, commenced internal procedures to transition from an accredited Mates in Construction to a Mates in Mining site. Our people in these operations are now better informed about suicide and mental health and empowered to act to support their colleagues' mental wellbeing. In our Melbourne office we conducted Mental Health Awareness training, information and awareness sessions for R U OK? Day and monthly support provided by Healthy Business, an external health and wellbeing firm. We continue to offer an Employee Assistance Program to support employees and their families globally.

## CASE STUDY



### CREATING CONSTRUCTIVE DIALOGUE WITH THE LAS BAMBAS WORKERS' UNION

At MMG, we respect the right to freedom of association of all our employees and see this as an opportunity to engage with a broad range of internal stakeholders. The Las Bambas Workers' Union currently has over 500 members, is made up of workers from various departments and has given the mine management team an opportunity to create a direct relationship with employees, develop respectful communication and build confidence. In order to encourage ongoing and constructive dialogue, monthly meetings are held on site to discuss issues and address any concerns the group may have. The Union is also

consulted before any significant operational change is made, and we offer ongoing support to the workers, where required.

Communication with this Union and its members has been constructive and positive and highlights the importance of engaging with employees and protecting their rights and freedoms at work.

#### SDG 16

Peace, justice  
and strong institutions





# THE WAY WE WORK

## HUMAN RIGHTS

Our activities, and those of our service providers, have the potential to impact human rights. We operate in accordance with the United Nations Universal Declaration of Human Rights, the United Nations Guiding Principles on Business and Human Rights and the United Nations Global Compact principles. In 2018, we will be considering our formal participation in the United Nations Global Compact process.

We recognise that the concept of human rights covers a broad range of interrelated issues, requiring an integrated approach across numerous business functions. At MMG, our Human Resources, Supply, Community Relations, Stakeholder Relations, Security, Exploration and Project Development functions have specific responsibilities for upholding our commitment to human rights.

For MMG, the following are the most material human rights issues:

### Freedom of association and collective bargaining

We support the right to freedom of association across our business and ensure that all our employees feel empowered to exercise this right. A significant number of our workforce agreements are collective, covering 28% of employees across the company (up from 14% in 2016). This increase is largely credited to the commissioning of Dugald River, as well as the establishment of formal agreements at Las Bambas where we engage closely with the Worker's Union to ensure representation and constant constructive dialogue (see case study on page 33).

### Business Ethics

The Code of Conduct sets out the standards of behaviour expected from all MMG employees. We expect all our employees, contractors and suppliers to integrate these standards of behaviour into their working practices. The Code of Conduct covers areas such as conflict of interest, fraud, anti-corruption and legal compliance. In 2017, matters relating to the Code were overseen by the Code of Conduct Committee. We also engage an independent confidential whistleblower service provider which is available to all employees globally in their local language.

### Security and human rights

We adhere to the Voluntary Principles on Security and Human Rights (VPSHR), as well as the rules of engagement and the United Nations Basic Principles on the Use of Force and Firearms by Law Enforcement Officials. In Peru, we have supported building police capability related to the VPSHR and participated in meetings regarding this process. We also ensure private and public security forces on our sites are adequately trained in the use and application of the VPSHR.

TABLE 3: % OF WORKFORCE UNDER COLLECTIVE BARGAINING AGREEMENTS

Site	% under agreements	
	2016	2017
Dugald River	0	40
Kinsevere	95	95
Las Bambas	0	33
Rosebery	46	47
Sepon	0	0
Exploration	0	0
Corporate	0	0
<b>MMG</b>	<b>14</b>	<b>28</b>



**Image:**  
Employees of JK Guzman Empresa Constructora SRL, a local construction business from Challhuahuacho community, during the construction of the Challhuahuacho bullring, Peru.

### Supply chain management

As part of our supplier engagement process we require all suppliers to protect and respect human rights in their own supply chains, as well as to formally agree to comply with our Code of Conduct and Anti-Corruption Framework as well as other relevant MMG standards, policies and procedures.

We are committed to the principles of FPIC for Indigenous peoples and are aligned with the ICMM's vision for constructive relationships between mining and metals companies and Indigenous peoples that are based on mutual respect, meaningful engagement, trust and mutual benefit. We are engaging in ongoing dialogue with global NGO networks regarding the resettlement of our Nueva Fuerabamba community at Las Bambas. Exploration activities in the Northern Territory of Australia are supported by a dedicated Community Relations team committed to FPIC principles for our tenements and broader land access. Our activities in Australia are consistent with the *Aboriginal Land Rights Act 1976* which provides for a community veto on any exploration activity.

We integrate human rights considerations into our Code of Conduct, employment processes, risk-analysis activities and formal grievance processes. We ensure

our people are confident to report instances of unacceptable conduct in the workplace without fear of intimidation or reprisal.

We have embedded the principles of human rights in our policies and standards to establish a workplace which respects diversity, where equitable treatment is expected, and where our people are free from discrimination and harassment in any form.

### MANAGING ARTISANAL AND SMALL-SCALE MINING RISKS

Artisanal and small-scale mining (ASM) is widespread in the DRC, Laos and Peru and occurs on tenements where MMG holds exploration and mining rights. It is a difficult and complex issue to manage and in many jurisdictions is either illegal or unregulated. ASM often provides people with their only form of economic opportunity and can help to alleviate poverty, increase community capital, decrease rural-urban migration and assist in diversifying local economies. However, these benefits are often offset by poor environmental practices, low levels of health and safety, the spread of disease, child and forced labour, inequitable distribution of community benefits, illegal trade and heightened security risks. Many of the

negative attributes of ASM have human rights implications.

Tragically, in 2017, there were two community fatalities at our sites related to ASM:

- Sepon: In July, a 19-year-old girl drowned while attempting to cross a flooded creek after gaining unauthorised access to the site for the recovery of malachite. Her body was found downstream after her sister notified security. Sadly, she could not be resuscitated.
- Kinsevere: In September, the son of a local village chief was shot by police in an incident involving unauthorised access to the site for malachite recovery. He passed away from his injuries a few days after the incident.

We develop and adopt appropriate strategies to mitigate risks associated with each ASM activity we encounter. In some circumstances it may not be possible for our activities and ASM to co-exist. Communication and collaboration with all stakeholders (including the miners, government, local authorities, community organisations and governing authorities) are our first steps towards developing mutually acceptable outcomes.



# WE CONTRIBUTE TO DEVELOPMENT

At MMG we mine for progress. This means contributing to progress in human development, which is best achieved through investment in community capacity to engage in economic opportunities.

These opportunities arise both directly through our operations and supply chains and indirectly through our role as an economic catalyst in partnership with communities, regions and nations.



Image:  
MMG employee assisting local community  
members in social projects at Kinsevere.





**Image:**  
Children with their teacher in  
community pre-school program at  
Nakangxe village near Sepon.

## SOCIAL DEVELOPMENT AND INVESTMENT

We are working to better define how our social development activities contribute to achieving global goals on important issues such as poverty alleviation, food security, health, education, clean water and sanitation, and the wellbeing of women and girls. We do this in a manner consistent with the UN Sustainable Development Goals (SDGs), and from 2018 onwards we will be aligned with the SDGs for reporting purposes.

In 2017 we invested US\$18.3 million in social development programs, an overall reduction of 43% on our comparable 2016 expenditure. This reflected a number of internal and external impacts:

- › The Century and Golden Grove operations were sold.
- › Social investment expenditure was reduced in line with the Sepon Life of Asset Plan, where we sought to review our existing investment against agreed sustainability criteria. The focus of activities at Sepon in 2017 was centred on engaging with the community regarding long-term planning and on ensuring existing projects remains sustainable beyond the life of mine.

- › At Las Bambas, which accounts for the largest portion of all expenditure, the reduction can be attributed to the complexity of negotiating investment agreements with communities which temporarily delayed the commencement of projects. It was also impacted by the cessation of capital works at Nueva Fuerabamba post completion of resettlement in 2016.

Our objective is to deliver maximum value to shareholders, host communities, regions and nations through increasing local employment and supply, partnering with others and strategic investment. We recognise that the success factors for social investment lie in deep and established engagement with stakeholders and clear business priorities for social development programs linked to managing operational risk.

In Las Bambas, we recognise the need to spend more time developing strong relationships with our communities and key stakeholders and the significant complexities in managing relationships during the government-declared State of Emergency, first to districts of the Cotabambas province but later limited to along the mineral transport corridor (see case study on page 23). While the State of Emergency did not impede our ability to meet with local stakeholders, the perceived power imbalance and lack of trust resulted in dialogue being delayed and agreements stalled. This includes the following:

- › The Cotabambas Development Plan: A plan developed in close consultation between the Company, local and national government and local communities involving shared investment in community and regional infrastructure, economic livelihoods and employment generating commitments as well as long-term work on education, healthcare, agricultural practices and business training.
- › Negotiating a new freshwater pipeline: This pipeline passes through the community of Manuel Seoane Corrales, and in addition to individual agreements with affected landholders, we also delivered additional projects such as the new bullring and community chapel (see case study page 42) while ensuring that the benefits of this work were distributed to local contractors.

# WE CONTRIBUTE TO DEVELOPMENT

## COMMUNITY INVESTMENT

For the 2017 reporting period, we categorised our community investment into four pillars:

1. education;
2. essentials for life;
3. health and wellbeing; and
4. securing incomes.

As a number of our operations mature, we are transitioning from helping provide essentials for life such as food, water and sanitation, to focusing on long-term economic development which does not rely solely on MMG or mining.

In 2017, the overwhelming portion of our investment was focused on securing incomes. We understand that our operations play a role as an economic catalyst and communities look to us to create opportunities for their participation in our supply chain. This is often not immediately possible due to the lack of local skills and in order to build local capability we have developed projects, such as the Las Bambas Local Entrepreneur Development Program, to achieve business readiness. This includes:

- developing essential skills such as bookkeeping and invoicing;
- helping entrepreneurs to meet specifications and requirements, for example food handling certifications, ISO standards; and

- diversifying supply chains to ensure businesses are not wholly dependent on our operations, which in turn helps promote business longevity and sustainability.

We acknowledge that a number of our operations are situated near remote communities, which have historically lacked government investment in meeting basic requirements such as healthcare, education and community infrastructure, specifically water and sanitation. To this end, our investment has often focused on meeting these funding gaps and, in some cases, has performed the role of government to ensure these communities have access to these services. However, as this is not the traditional role of a mining company and to ensure the sustainability of these initiatives beyond the life of mine, we are partnering with both governments and other parties to ensure these services will be sustainable into the future.

**TABLE 4: INVESTMENT IN SOCIAL DEVELOPMENT PROGRAMS IN 2016 AND 2017**

	2016	2017	% of MMG total investment
Century	2,199	-*	
Dugald River	26	54	<1%
Golden Grove	297	-*	
Izok Corridor	4	0	
Kinsevere	1,097	1,010	6%
Las Bambas	25,345	14,379	78%
Rosebery	588	574	3%
Sepon	2,031	1,409	8%
Exploration	0	2	<1%
Group Office	613	896	5%
<b>MMG</b>	<b>32,199</b>	<b>18,323</b>	

\* Both Century and Golden Grove were sold in early 2017.

Education plays a fundamental role in the future of the regions in which we operate. All communities recognise that quality education represents an important opportunity to build future generations. We work with partners to help develop educational opportunities at all levels and across all specialties while also maintaining a specific focus on disciplines which can lead to employment at MMG and that can contribute to sustainable community development. This includes agriculture, business development and healthcare.

## CASE STUDY



**Image:**  
Children participating in education programmes in communities around Kinsevere.

### KINSEVERE HEALTH EDUCATION CAMPAIGNS

Healthcare and education are two key cornerstones of sustainable livelihoods and long-term development, ensuring that this and future generations are best positioned to take advantage of the economic opportunities that come their way. In Kinsevere, our employees work hard to deliver on the ground campaigns and benefits to the local communities and help us meet UN SDGs 3 (good health and wellbeing) and 4 (quality education).

Amongst the many programs currently being implemented are:

- › measles immunisation campaigns, targeting more than 600 children under the age of five;
- › latrine improvement, with MMG supplying the required building materials for communities to build new latrines and improve existing ones. Our goal is to improve 320 every year;
- › World AIDS Day and HIV/AIDS community awareness campaigns,

including voluntary HIV testing and training of regional medical staff;

- › malaria awareness initiatives, which include working to empower communities to minimise morbidity and mortality rates. Special efforts are made with the most vulnerable, including pregnant women and children under five;
- › coordination with the Kipushi Health District; and
- › support of the Kinsevere Community Health Centre, which includes; delivery of a building, construction of infrastructure including an incinerator, ablution block and shade for outdoor meetings, training for medical staff, donation of medical equipment, as well as motorbikes and bicycles to enable community health workers to visit patients in numerous communities.

One key intervention we have been involved with over the past few years is around female education and health campaigns, focusing on raising the participation of young girls in school and creating awareness around child and women's rights (SDG 5 – gender

equality). Girls now account for 50% of students in primary schools, up from less than 30% a few years ago. Child marriage rates have fallen and families are now reporting cases of sexual assault to the police rather keeping them at a community level. We also promote child rights and women's rights during school events, promote International Women's Day and associated awareness activities during March. We will continue to strive towards greater access to healthcare in the communities around Kinsevere and all our operations and will work with key stakeholders to ensure progress continues

**SDG 3**  
Good health and wellbeing



**SDG 4**  
Quality education



**SDG 5**  
Gender equality





# WE CONTRIBUTE TO DEVELOPMENT

## CASE STUDY



**Image:**  
Mother and child receiving their Superkid micronutrient sachets, supported by the MMG-UNICEF 1000 Day Project.

## UPDATE – 1000 DAYS PROJECT IN LAOS

Since 2012, MMG has invested approximately US\$3 million to support maternal and child health in Laos. The 1000 Day project recognises the first 1000 days of life – from pregnancy until two years of age – as critical for intellectual and physical development. The project is reducing stunting and anaemia in children under two through community outreach, education and provision of micronutrient supplements. Stunting and anaemia are major health problems affecting around 40% of children in Laos and more than 165 million children worldwide. The impact of malnutrition is irreversible and results in impaired cognitive ability as well as reduced performance at school and work.

MMG has previously supported health outreach projects that provide health care services for ethnic minority communities in rural Laos. In 2017, we also contributed to Phase 2 of

the project that aims to distribute micronutrients in health outreach services to nearly 270,000 children across 22 districts in four rural provinces in Laos.

One component of the 1000 Days project that makes a significant impact is the Breastfeeding Education program, implemented by Lao Women Union's volunteers.

"The breastfeeding education program has been really effective in a country where mothers traditionally feed their children sticky rice. This can result in a permanent physical and cognitive impairment as a result of stunting and malnutrition," said Rebekah Kofoed, UNICEF Australia's International Programme Coordinator. "The breastfeeding program has been really successful. This initiative is important to put alongside the distribution of

sprinkles (the micronutrient supplement sachets) because it supports the whole nutrition picture for the child during their 1000 days."

This vital work between MMG, experienced partners, governments and local communities continues to bring visible health outcomes and opportunities for those in need.



Learn more at  
[wemineforprogress.com](http://wemineforprogress.com)

### SDG 3

Good health and wellbeing



### SDG 5

Gender equality



**TABLE 5: SPEND BY INVESTMENT PILLAR IN 2017**

	Education		Essentials for life		Health and wellbeing		Securing incomes		Consolidated	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Dugald River	20%	6%	-	-	80%	93%	-	2%	-	-
Izok Corridor	-	-	-	-	100%	-	-	-	-	-
Kinsevere	29%	36%	44%	<1%	6%	4%	21%	60%	-	-
Las Bambas	15%	18%	11%	4%	11%	14%	63%	64%	-	-
Rosebery	9%	11%	-	-	49%	52%	43%	38%	-	-
Sepon	8%	8%	53%	54%	19%	20%	20%	18%	-	-
Group Office*	-	-	-	-	100%	-	-	-	-	100%
<b>MMG</b>	<b>15%</b>	<b>17%</b>	<b>14%</b>	<b>7%</b>	<b>14%</b>	<b>15%</b>	<b>57%</b>	<b>56%</b>	<b>-</b>	<b>5%</b>

\* 2017 Group Office social development and investment has been consolidated across all investment pillars.

## LAND ACCESS

When we undertake a land access process, compensation and development packages offered include both compensation and benefit sharing in the form of social development initiatives. We also ensure local communities are able to participate further in the development of these initiatives through contracting local businesses and labour.

The price paid for compensation is calculated using a fair and transparent process, is compliant with government requirements and legislation and is reached in close coordination with land owners and communities. The process is then conducted using extensive consultation and independent oversight (See Kinsevere case study on page 43).

MMG acknowledges the requirements and complexity of communal title. Negotiations involving communal title often take longer and packages need to be prepared recognising both individual and community assets and benefits. We also recognise the impacts land access can have on the economic and food security of communities and we engage with them to ensure minimal interruption to their livelihoods. An example of this is undertaking land access negotiations during the fallow season thereby limiting impact on harvests.

In 2017, our activities focused on gaining access to land for exploration and feasibility studies with the Huanquire community near the future Chalcobamba pit, and the freshwater pipeline negotiations with the community of Manuel Seoane Corrales in Las Bambas, access for extension drilling at our Sepon operation and working with stakeholders around the relocation of the Kilongo community in Kinsevere.

**TABLE 6: COMPENSATION PAID (US\$'000) FOR LAND ACCESS IN 2016 AND 2017**

	2016	2017
Kinsevere	103	1,165
Las Bambas	15,871	13,614
Sepon	788	323
Exploration	43	0
<b>MMG</b>	<b>16,768</b>	<b>14,908</b>

# WE CONTRIBUTE TO DEVELOPMENT

## CASE STUDY



**Image:**  
Inauguration of chapel in the Manuel Seoane Corrales community near Las Bambas.

## CONSTRUCTION OF CHAPEL IN MANUEL SEOANE CORRALES

MMG seeks to partner with our communities to deliver social projects that are both valued at the local level and help deliver lasting social and economic development in the regions where we work.

In 2017, our Las Bambas operation worked with the local community of Manuel Seoane Corrales in the district of Challhuahuacho to deliver a new chapel. The project was financed by Las Bambas, as part of a community compensation and benefits package, and execution was carried out by local company Inversiones Vlady. The project created opportunities for local skilled and unskilled short-term labourers (including carpenters, welders, woodworkers, electricians and builders) from the community and district over the four-month construction period. The chapel includes a bell tower,

a sacristy (a room where the priest can prepare for holy sacrament) and is built in full accordance to Peruvian legislation regarding earthquake-resistant building standards.

The chapel was inaugurated with an official ceremony that included a Holy Mass, presided by Father Sergio Montoya from the district of Tambobamba and nuns from the district of Haquira. After the Mass, a commemorative plaque for the chapel of San Marcos was revealed. The community expressed their thanks to Las Bambas for the construction of the chapel that will help promote community activities and religious festivals, including the festival of the community's patron saint San Marcos, after whom the chapel is named.



Learn more at  
[wemineforprogress.com](http://wemineforprogress.com)

### SDG 11

Sustainable cities  
and communities







**Image:**  
Mpundu community leaders  
receiving compensation from  
Standard Bank agent, Kinsevere.

## ENGAGING WITH STAKEHOLDERS OVER THE KILONGO COMMUNITY RELOCATION

MMG acknowledges the impact mining operations have on population movements through employment and sustainable development opportunities and seeks to engage with our local partners to prevent negative consequences to communities and mine safety.

At our Kinsevere mine, an analysis of the communities and local stakeholders undertaken by previous owners Anvil Mining in 2006 registered Kilongo with a population of less than 1,000, with 93 households on the Kinsevere lease. At the time, the analysis concluded that these households were not of concern to the operation as they were on the northern border of the lease and not close to the future site of operations.

During the subsequent expansion of the mine, the local population swelled with people moving to the region to find employment, economic opportunities and to access the social development projects, including education, access to potable water, electricity infrastructure and assistance for farmers. The influx

also saw the population on the lease increase, with a 2016 assessment by MMG and the Kipushi Territory government staff finding over 685 people and 415 hectares of land under farming.

Concerns for the safety and security of these community members led to a decision to relocate these families to off-lease lands.

In 2017, our Kinsevere team has been working with local community members, as well as members of the provincial government, to ensure the relocation of people on the lease is handled smoothly. The process involved significant consultation and engagement with community members, explaining the process and ensuring there was mutual understanding around expectations for the relocation. Where concerns were raised by community or local government members, MMG organised reviews, finding the process compliant with Congolese law on compensation. The Kapushi administrator (APK) visited the region and conducted an independent

evaluation of assets to use as a basis to calculate compensation payments. Once the community accepted the process and compensation payments for property and farms, representatives of the Lubumbashi branch of the Standard Bank visited the community under the supervision of a Commission, made up of Kipushi representatives, delegates from the Sector of Bukanda and Grouping of Kasongo and some MMG employees, to make the payments.

As we enter the final stage of the relocation, MMG commits to continue a transparent and respectful process with our local stakeholders and to ensure that all concerns are addressed in a timely manner.

### SDG 1

No poverty



### SDG 2

Zero hunger



# WE CONTRIBUTE TO DEVELOPMENT

## COMMITMENT TO LOCAL EMPLOYMENT

We are committed to the regions where we operate. We aim to share our success with our communities by offering them local employment opportunities and investing in training and education to help local residents transition to careers in mining or related fields.

**TABLE 7: EMPLOYMENT OF NATIONALS AT OUR NON-AUSTRALIAN FACILITIES IN 2016 AND 2017 (%)**

	2016	2017
Kinsevere	95	95
Las Bambas	99.7	99.3
Sepon	94	94
Exploration	74	61

We recognise that local employee development programs are a life-of-asset commitment, particularly in host communities where education and training opportunities are limited. Local employment is a major contributor to socio-economic improvements and is the foundation of positive engagement with local communities. Over time these programs will establish and develop capability within the local workforce, reduce dependency on non-local employees and build broader community socio-economic resilience.

Due to the sale of our Century and Golden Grove operations in early 2017, we reported a significant decrease of the number of Indigenous employees working at our Australian operations. We are committed to working with Indigenous groups in all regions and our agreement with the Kalkadoon people near our Dugald River operation is focused on increasing participation.

## LOCAL SUPPLY

At MMG we are committed to supporting local suppliers to develop sustainable businesses to supply our operations, as well as other customers locally and globally.

Where possible we aim to source products and services from local suppliers who are able to meet our key selection criteria in safety, environment, quality, technical, social responsibility and commercial viability. Where gaps are identified, we assist local suppliers to meet our standards and support them in building their capability. This process enables them to take up future opportunities to grow their businesses and expand their offering to customers beyond MMG.

**TABLE 8: LOCAL PROCUREMENT SPEND IN HOST COUNTRIES IN 2017**

	Near-mine/ district level		Provincial/ State Level		National		Total spend
	(Zone 1)		(Zone 2)		(Zone 3)		
Dugald River	3	(1.0%)	70	(25%)	273	(99%)	275
Kinsevere	0	(0%)	187	(73%)	193	(75%)	257
Las Bambas	30	(2.6%)	35	(3%)	1,096	(94%)	1,169
Rosebery	4	(2.9%)	51	(39%)	132	(99.9%)	132
Sepon	4	(1.9%)	71	(31%)	126	(55%)	229
Non-operational sites	0	(0%)	0	(0%)	90	(88%)	102
<b>MMG</b>	<b>41</b>	<b>(1.9%)</b>	<b>413</b>	<b>(19%)</b>	<b>1,910</b>	<b>(88%)</b>	<b>2,163</b>

Note: Local procurement spend is based on location of the vendor we purchased product from. This does not indicate origin of manufacturer or supplier.





**Image:**  
Participant of pastures and  
fodder project in community  
near Las Bambas.

In 2017, we spent US\$2.16 billion on goods and services excluding taxes and royalties (refer to Table 8). Our sites spent US\$1.91 billion with suppliers in-country. Of this, US\$413 million was spent with suppliers in the same province or state of our operations and US\$41 million with suppliers in the immediate near-mine area.

The US\$41 million Zone 1 near-mine spend represents 1.9% of the total 2017 spend, compared to US\$50 million (2.2%) in 2016. This decrease in near-mine procurement was due to the divestment of our Golden Grove and Century sites in Australia. Las Bambas significantly increased its total near-mine spend from US\$13.3 million in 2016 to US\$30.4 million in 2017.

In 2017, Las Bambas opened the Challhuahuacho Business Development Centre, where training and technical assistance is provided to local entrepreneurs as part of the Las Bambas Local Entrepreneur Development Program. The program, which began with 13 members, currently has 250 participating local businesses and has helped them achieve some outstanding results. In total, 14 companies have received national certification in quality systems and three of these companies are on their way to ISO certification. For more information on our Las Bambas Local Entrepreneur Development Program and case studies of participating businesses, please go to [wemineforprogress.com](http://wemineforprogress.com).



# OUR COMMUNITY TAX CONTRIBUTION

As a major investor, taxpayer, employer and purchaser of local goods and services, MMG makes significant contributions to the economies of countries where we operate. For the financial year ended 31 December 2017, MMG's turnover was US\$4,143 million and it made a profit before tax of US\$744 million.

Corporate income tax is one of many types of taxation revenue collected by governments and is a direct tax levied on company profits. Other forms of indirect taxes such as value added tax, royalties paid on the extraction of minerals and taxes paid in relation to employee remuneration and benefits form part of MMG's overall fiscal contribution.

Governments also use other mechanisms to derive income from a company's activities, including a wide range of mineral royalties, taxes on employee remuneration and benefits provided and withholding taxes on the payment of interest and dividends. These additional sources of government revenue are often substantial and represent an important contribution to public finances. It is therefore essential to take these government revenue-raising mechanisms into account when assessing the extent to which a company is playing its part in funding wider civil society.

Corporate income taxes are paid on profits, not on revenues. Where a company makes little or no profit, it will generally pay less corporate income tax. Without such an approach, companies experiencing periods of low profitability would be faced with disproportionate tax demands and significant disincentives for investment. The payment of other taxes that are levied

on revenue such as mineral royalties can decrease the amount of profit a company makes and will, in turn, reduce its corporate income tax liability.

The resources sector is capital intensive and as a result has high operating costs. Governments seeking to encourage job creation and attract capital investment, such as the development and construction of mining operations, allow companies to claim tax allowances for capital expenditure and on the interest on debt raised to fund investment. The claims for capital allowances and other operating costs will initially be higher than the revenues generated by these operations as the operations ramp up to full production, resulting in low profits in the early years of operation and lower corporate income taxes paid.

## Our approach to revenue transparency

As a multinational company, with operations in Peru, DRC, Laos and Australia, MMG adheres to the highest standards of corporate governance in all matters related to tax. This includes operating under a policy of full transparency and cooperation with all tax authorities and the payment of all taxes properly due under the law wherever we operate.

Transparency on mineral revenues paid to governments is important to regulatory stability and stakeholder understanding of the responsible use of taxes and the role they play in supporting the provision of citizenship entitlements.

MMG's approach to transparency includes the disclosure of tax and royalty payments, as well as broader

social contribution detailed in annual and sustainability reports.

The following initiatives further support MMG's commitment to transparency:

- › An anti-bribery and anti-facilitation payments policy through the company's Code of Conduct.
- › Public disclosures in line with the Foreign Investment Review Board, Australian Taxation Office and Hong Kong Stock Exchange disclosure requirements, complemented by voluntary disclosure of key payments in annual sustainable development reports for MMG and Las Bambas.
- › Engagement with the Extractive Industry Transparency Initiative (EITI) requirements as a reporting entity in Peru and DRC and a participant in advocacy and pilot programs to encourage governments to support and adopt the EITI, including as an inaugural participant in the Australian EITI pilot project.
- › Membership of Transparency International Australia.
- › MMG pays taxes, royalties and other payments in accordance with the tax regulations and laws applying in the jurisdictions in which we operate.

IN US\$'000	2017	2016
Taxes and royalties	345,907	289,000
Local supply procurement*	1,910,126	1,906,500
Goods & services (excluding taxes and royalties)*	2,163,239	2,228,300
Purchase of property, plant and equipment*	666,942	771,133
Purchase of intangible assets*	38,347	17,027
Employee benefits*	388,107	326,042
Social development programs*	18,323	32,200

PERU US\$'000	2017	2016
Total tax contribution	193,386	128,016
Royalties	93,601	35,187
Income tax	7,545	4,245
Employment related taxes**	38,022	29,223
Withholding tax	54,218	59,361

LAO DPR US\$'000	2017	2016
Total tax contribution	20,106	42,443
Royalties	17,347	17,226
Income tax	-	22,136
Employment related taxes**	2,759	3,081
Withholding tax	-	-



DRC US\$'000	2017	2016
Total tax contribution	44,094	38,806
Royalties	19,672	14,123
Income tax	4,627	3,628
Employment related taxes**	15,582	15,780
Withholding tax	4,213	5,275

AUSTRALIA US\$'000	2017	2016
Total tax contribution	88,321	79,742
Royalties	22,011	20,212
Income tax	-	-
Employment related taxes**	66,310	59,529
Withholding tax	-	1

\* Items have not been subject to assurance for the 2017 reporting period

\*\* Taxes paid on behalf of or in relation to employee remuneration and benefits. Unaudited for the purpose of this report.

Note: Figures have either been drawn from the 2017 MMG Annual Report or from other sections of this Sustainability Report.

# WE MINIMISE OUR IMPACT

We are committed to minimising our environmental footprint. We maintain a focus on managing our social impacts and align our social development activities with our Life-of-Asset Plans.



Image:  
Participants in the tree nursery and tree  
planting program, Cotabambas district, Peru.





Image:  
Dugald River tailings storage facility.

## WATER ACCESS AND USE

As mining and minerals extraction are water-intensive processes, the efficient performance of our operations relies on our ability to source water of appropriate quality and quantity. We recognise the importance of our role as responsible stewards of the water we share with local communities and the environment and we look for opportunities to reduce our impacts on water resources from our sourcing and discharge activities.

The core elements of MMG's water management strategy include:

- › improve the efficiency of our water use and maximise water recycling which reduces our requirements for sourced water and assists us to manage onsite water inventories;
- › compliance with regulatory and statutory obligations;
- › protection of the environmental values of receiving environments;
- › minimise contact or process water volumes;
- › undertake water management in the most efficient and effective manner;
- › maintain the structural integrity of the water management network; and
- › promote the efficient use of water on site.

MMG is committed to strengthening our water governance and planning processes to improve water management across our sites, and support the ICMM's Position Statement on Water Stewardship.

## Water balance for 2017

We report our water inputs, outputs and diversions in line with the MCA Water Accounting Framework. In 2017, our operations managed a total of 122.2 gigalitres (GL) of water, compared with 85.5 GL in 2016. This increase is due to a combination of operational factors, primarily at our Dugald River and Las Bambas operations. In 2017, Dugald River saw increased water use in the ramp-up to operations, as well as the commissioning of the TSF, which is now impounding water and tailings.

At Las Bambas, changes in our approach to water management were driven by a desire to secure water resources on site as well as prevention of off-site discharge.

Approximately 37% of the total water managed is used for processing and related activities (44.3 GL). The remainder is diverted around the operating areas and where required, treated prior to release (refer to Table 9). The quantity of water managed as diversions often places a strain on our water management infrastructure. We strive to optimise our infrastructure to handle our peak discharge loads.

In 2017, approximately 38% (16.6 GL) of water inputs were supplied by capturing rainwater and run-off. The bulk (27.7 GL, 62%) of the remaining

water used in our operations was of high quality, either meeting or close to meeting the drinking water standard (category 1<sup>1</sup>). The water is sourced predominantly from borefields, rivers and creeks (refer to figures 5 and 6 on page 50).

During 2017, we recognised that changes to Kinsevere's water management approach were required due to changing operating conditions and a surface water management strategy for the current life of asset was discussed with the Regulator and presented within Kinsevere's updated licence to operate in 2017. A review and update of the existing site-wide water balance is underway to support the detailed design requirements for the revised surface water management strategy and to reflect current and future site conditions. The management of water in our tailings facilities is a key component of our site water management strategies. A review of these strategies is currently underway in order to identify areas for improvement, with a strong focus on reducing excess water in the TSF.

We received no community complaints or grievances in 2017 related to competing water use.

<sup>1</sup> Category 1 water is defined by the MCA Water Accounting Framework guidelines as 'Close to the drinking water standards, as it only requires minimum treatment (disinfection) to be safe for human consumption. It can be used for all purposes'.

# WE MINIMISE OUR IMPACT

TABLE 9: WATER BALANCE FOR 2017

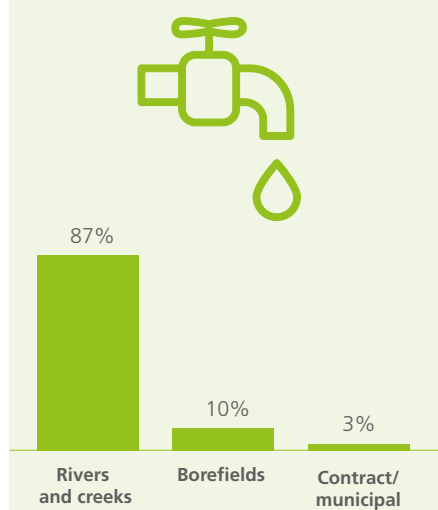
	ML			ML	
<b>DIVERTED WATER</b>	<b>77,915</b>		<b>DIVERTED WATER</b>	<b>80,375</b>	
<b>WATER INPUTS</b>	<b>44,274</b>		<b>WATER OUTPUTS</b>	<b>35,085</b>	
Precipitation and runoff	16,636	(38%)	Entrainment	17,710	(50%)
Rivers and creeks	22,631	(51%)	Evaporation	7,523	(21%)
Borefields	1,717	(4%)	Discharge to surface water	7,901	(23%)
External surface water storages	0	(0%)	Seepage	1,161	(3%)
Aquifer interception	295	(1%)	Discharge to estuary	0	(0%)
Contract/municipal	624	(1%)	Supply to third party	145	(<1%)
Entrained in ore that is processed	2,371	(5%)	Other**	646	(2%)
Third-party wastewater	-	(0%)			
<b>WATER CONSUMPTION*</b>	<b>25,778</b>				

Note: The MMG water balance excludes water used along the Las Bambas concentrate logistics route for dust suppression. This water is extracted under permit from surface water sources.

\* Water consumption describes the amount of water that was unavailable in or removed from our local catchments due to our operating activities, which include evaporation, water held in our tailings and the change in onsite water storage.

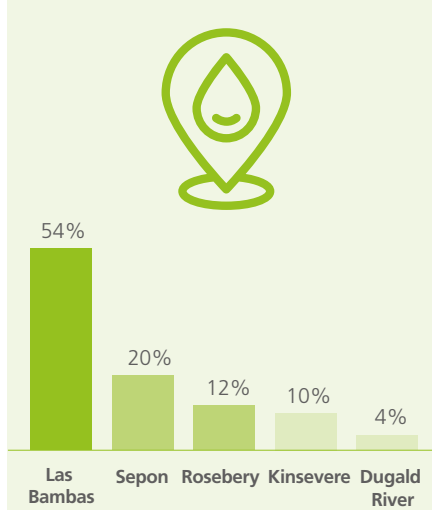
\*\* Other, totalling 646ML, is comprised of the following: Rosebery – 16ML (water entrained in concentrate); Kinsevere – 257ML (water output from exploration and miscellaneous activities); and Dugald River – 373ML (323ML for dust suppression and construction activities, as well as 50ML of evaporation from the sewerage treatment plant outflow).

FIGURE 5:  
FRESHWATER (CATEGORY 1)  
INPUTS BY SOURCE (ML) – 2017\*



\* Excludes captured rainfall/run-off

FIGURE 6:  
FRESHWATER (CATEGORY 1)  
INPUTS BY SITE (ML) – 2017\*



## Water security

Each of our site-specific water balance models predicts water inputs, use and outputs to inform our management of water-related risks. We are increasingly integrating our water balance models and our Life-of-Asset Plans to make structured investment decisions regarding infrastructure and to align water supply with processing demands.

One of the challenges at Dugald River in 2017–2018 is managing the rate of construction and ramp-up of operations under conditions of limited water availability. To plan for the identified water constraints, a review and update of the Dugald River water balance is underway.

## Water discharge

Our water balance models and management controls aim to minimise the need to treat and discharge water. We do this by diverting excess water around our operational areas and reusing process water where possible. However, some of our operations are located in environments where rainfall far exceeds evaporation and our processing areas capture more rainfall than we need for our processing requirements. At these sites, water treatment and discharge processes are necessary and done in accordance with regulatory requirements.

We released 7.9 GL of treated process water to the environment via licensed discharge points in 2017; 100% of this was category 2<sup>2</sup> water, released to surface water environments at Rosebery and Sepon.

To control unplanned water discharges to the environment and offsite, Kinsevere undertook surface water management risk reduction works expanding an existing sediment pond during preparation for the 2017–2018 wet season. Further work to improve water management controls including managing water flows with sediment using sediment ponds, silt traps and removing sediment build-up in water management infrastructure is planned for the 2018 dry season.

We have commenced ongoing participatory water monitoring with local government, leaders and community representatives in the communities around Las Bambas to strengthen understanding around the controls in place and compliance with our regulatory requirements in Peru.

Las Bambas has identified opportunities to improve its erosion and sediment controls across the mine site and parts of its infrastructure corridor to maintain water discharge quality in order to meet legal requirements. Actions taken include; flocculent use at settling basin inlets, increasing awareness across the site of the risks, and planning improvement opportunities to address topsoil management, revegetation of slopes adjacent to infrastructure and designing sediment controls taking into consideration flows and sediment type.



Image:  
MMG employee testing  
water quality at Sepon.

<sup>2</sup> Category 2 water is defined by the MCA Water Accounting Framework guidelines as 'suitable for some purposes. Treatment will be required to remove total dissolved solids and/or to adjust other parameters to be safe for human consumption and more sensitive agricultural and recreational purposes'.



# WE MINIMISE OUR IMPACT

## CASE STUDY



Image:  
2/5 tailings storage  
facility, Rosebery.

## WATER MANAGEMENT AT ROSEBERY

Our Rosebery mine has operated continuously since 1936 and has a strong commitment to responsible water management. In 2017, Rosebery undertook a significant water management project to improve the sustainability of its mining operations: the completion of the 2/5 Dam Tailings Storage Facility (TSF) Upgrade.

The 2/5 Dam is located in an area which previously held three TSFs, used to store mineralised tailings waste since the early 1950s. One of the three historical TSF facilities was capped and rehabilitated in the early 1990s while the other two were flooded with water and converted into a sewerage effluent disposal site servicing the Rosebery township.

In the 1950s, the long-term potential impacts of TSFs were not well understood, resulting in the construction of facilities prone to seepage of poor-quality water. Seepage from the 2/5 Dam precinct and other historical mining impacts within

the catchment has contributed to degradation of the lower reaches of the Stitt River. Despite a number of remediation projects over the years the facilities remained an ongoing concern in terms of potential environmental impacts.

The 2017 upgrade included:

- removal of the previous capping layer on the oldest TSF;
- installation of a rock cap and continuous liner over the entire existing tailings (and sewerage solids) surfaces to prevent water entry from new tailings deposition above; and
- drilling and installation of a continuous cement bentonite grout curtain around the east, west and northern ends of the precinct. The grout curtain installation tied into the embankment lining system to restrict the flow of seepage and groundwater, and directs the flow to the newly installed seepage collection infrastructure.

A major engineering and construction undertaking, the 2/5 TSF Upgrade project has provided Rosebery with an opportunity to mitigate historical seepage pathways into the lower Stitt River while providing a location to safely store up to five million tonnes of milled tailings. Since the completion of the project, biomonitoring of the Stitt River has shown a marked improvement in ecological condition, where fish and macroinvertebrate abundance, diversity and distribution have increased.

Rosebery remains committed to regularly reviewing the existing infrastructure to ensure the mine's operations remain sustainable and efficient, today and into the future.

### SDG 6

Clean water and sanitation



## TAILINGS AND WASTE ROCK MANAGEMENT

Our mining and processing activities generate mineral waste. In 2017, we generated 147.4 million tonnes of waste rock and 56.2 million tonnes of tailings were placed in TSFs across our operations (refer to figures 8 and 9).

Some of this mineral waste is chemically reactive, with the potential to form acid and metalliferous drainage (AMD). If not identified early and managed effectively, it can also negatively impact water quality, the success of land rehabilitation and landform stability.

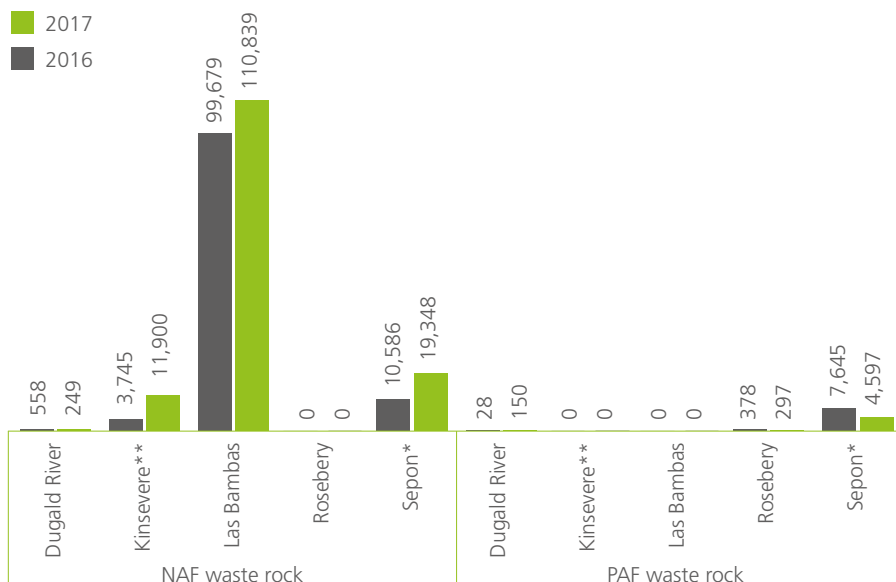
In implementing our mineral waste controls we focus on characterising mineral waste and managing its storage to limit environmental impact and minimise operating and closure costs.

Geochemical characterisation studies inform site specific definitions for potentially acid forming (PAF) waste rock and non-acid forming (NAF) waste rock. These definitions enable block models and mine plans to identify, schedule and appropriately encapsulate PAF waste rock to mitigate the generation of AMD and hence reduce closure liabilities. Definitions can be validated through assay results during grade control.

In 2017, updated studies and geological information allowed a refined definition of PAF waste rock at Kinsevere to be developed, enhancing the existing operational controls as deeper ore is accessed.

Similarly, given Sepon's extensive geochemical database, Sepon also amended their PAF definition in 2017, which has been considered in the final years of the asset and into closure.

FIGURE 7: WASTE ROCK GENERATED IN 2016 AND 2017 ('000 TONNES)



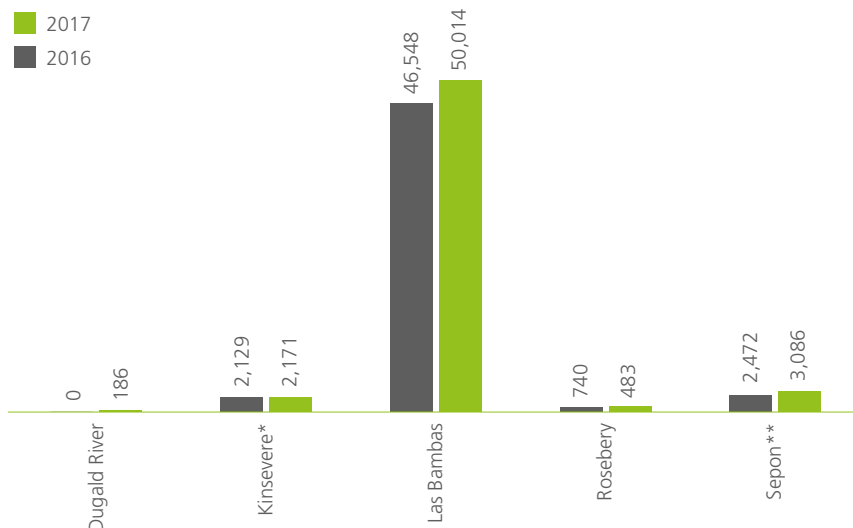
NAF = Non-acid forming waste rock.

PAF = potentially acid forming or unsegregated waste rock.

\* NAF waste rock generation at Sepon increased in 2017 as more ore was processed to offset lower grades.

\*\* NAF waste rock generation at Kinsevere increased in 2017 due to the expansion of the Mash and Kinsevere Hill pits.

FIGURE 8: TAILINGS GENERATED IN 2016 AND 2017 ('000 TONNES)



\* Dugald River commenced production in late 2017.

\*\* Increased tailings were generated at Sepon as the amount of ore processed was increased to offset lower grades.

# WE MINIMISE OUR IMPACT

## Waste rock stockpiles and dumps

We manage waste rock by:

- › using it as underground mine backfill or in tailings storage facility construction (if it meets design requirements);
- › stockpiling it where there is potential to extract metal value in the future; and/or
- › placing it in surface waste rock dump landforms.

We aim to minimise the amount of waste rock in surface landforms at closure. While some operations will be required to design closure strategies to manage historical legacies associated with waste rock placement, Life-of-Asset planning for Rosebery indicates that for the remainder of its current life all waste rock will remain underground as part of the mining process. New waste dumps required at Kinsevere and Las Bambas are being designed for closure from the outset.

## Tailings storage

Our Critical Controls for managing the risk of tailings dam failure focus on the design, construction and ongoing management of operating and non-operating TSFs and are in line with the Australian National Committee on Large Dams (ANCOLD) guidelines as well as local governance requirements. We monitor the implementation of these controls to provide management with assurance that the right actions are occurring over time.

Since December 2015, we have been contributing to the ICMM's global review of TSF standards and governance, critical control strategies, and emergency preparedness approaches.

In late 2016, we reviewed our governance structure for tailings dam risk management and have identified critical controls for fatal risks. These were rolled out to sites in 2017 as part of our continuous improvement process including the implementation of management assurance reviews.

Seepage discharge from Sepon's operational TSF was identified in December 2016, due to the higher water pond surface elevation (associated with the ongoing filling of the facility). This has led to hydrological breakout through the weathered bedrock along the crests of the natural containment topography. To manage the seepage, additional sediment ponds downstream of the seepage were constructed with pump-back to the TSF to provide containment of the material. The seepage was

reported to the Regulator, followed by a recent presentation to the Regulator of the proposed long-term seepage solution. The longer-term solution is based on a seepage study assessment and requires deposition of tailings into the TSF gullies, reducing water volume on the TSF, and maintaining an effective inspection regime of the facility.

The biomonitoring program at Rosebery recorded fish and macroinvertebrates in the Stitt River for the first time since 2003. Initial indications are that this may be related to the improved seepage management measures constructed as part of the 2/5 tailings dam works (see the case study on page 52 for more information).

An environmental incident occurred during the wet commissioning and testing of the of the Dugald River tailings pipeline causing an uncontrolled release of slurry within the mining lease covering disturbed and undisturbed areas and a local waterway. A significant program of works to recover the slurry material and remediate the site was undertaken, consisting of dry, wet and manual recovery methods. The incident and remediation activities have been communicated to the Regulator.

We have built on the effective use of an external Dam Review Committee at Las Bambas by establishing one at each of our sites to ensure each TSF is designed, operated and maintained in accordance with accepted engineering practices and principles.





**Image:**  
MMG employees inspect local vegetation around mine site, Kinsevere.

## LAND MANAGEMENT AND REHABILITATION

Effective land management and site rehabilitation are important priorities throughout the mining life cycle, from exploration through to site relinquishment. Public health and safety, construction, operation and post-closure environmental impacts and adverse socio-economic impacts are concerns which need to be addressed collaboratively with our stakeholders through updates or additions to site licences to operate, tracking compliance with our site licences to operate and the closure planning and execution process. At MMG the closure planning process starts during mine development and is integrated into life-of-asset management.

Our operations implement land, biodiversity and cultural heritage management controls to minimise the impact associated with the land disturbances necessary for exploration and mining activities. In managing land disturbance we balance other social and ecological needs and seek to preserve biodiversity, ecosystem and cultural heritage values.

Our sites implement land clearance and disturbance processes to manage authorised land disturbance aligned with our site licences to operate. Where the required land disturbance is not addressed in site licences, processes are in place to seek approval. As an example of this, our Kinsevere operation updated and received government approval for its Environment and Social Impact Assessment (ESIA) during 2017. This was to cover some development activities, existing practices and

activities undertaken as part of operational ramp-up including extension and associated bush clearance to existing black shale and NAF waste rock dumps, changes to topsoil stockpile locations, and construction of a new truck maintenance workshop.

Minor progressive annual rehabilitation is undertaken by our operations as disturbed areas are largely limited to operational areas which are in use, or will be used in the future. Our exploration activities have specific processes in place to close out the small areas disturbed during exploration drilling campaigns. We do not set annual rehabilitation targets but we do build allowances into our closure plans and budgets where there are opportunities to rehabilitate areas that are no longer required for operational purposes. Las Bambas, Kinsevere, Rosebery and Dugald River have established mitigation management measures for identified flora and fauna species requiring ongoing investment in terms of resources including monitoring by specialists, seed collection, seed propagation and laboratory testing. Our operations seek to minimise their impact on the environment and the community from open areas of disturbed land by implementing their management controls. This includes managing drainage, erosion, weeds and invasive flora, priority flora and fauna, controlling dust, and may include temporary revegetation.

We start planning physical closure (landform management) well in advance. During the early stages we invest in gathering information on which to base environmentally sound, cost-effective decisions. As an example,

project expansion studies for Kinsevere have conducted pit lake assessments to understand water quality and water pathways during closure.

All of our operations have closure plans, which vary in maturity depending on the stage of mine life. The plans are tailored for each stage of the mining life cycle, and direct resources to those operations closest to the end of production. Costs and schedules for closure execution are integrated with life-of-asset plans and revised annually. For information on our financial provisions for closure, please refer to MMG's 2017 Annual Report.

Our approach to closure planning, where our operations are within five years from closure, includes initially understanding the closure hazards and inherent risks associated with doing nothing, the base case. Where the base case does not meet legal objectives and closure objectives, we develop mitigation options and undertake formal options assessments to identify the most appropriate go-forward scenario. Detailed design is then undertaken on the go-forward option. As part of the process we engage and agree with stakeholders on the management approach most likely to achieve preferred future land uses and closure criteria.

We integrate closure considerations into landform placement and design decisions early to minimise future modifications and create final landforms suitable for closure. We have applied this philosophy to new or modifications to our TSF and waste rock dump design and placement at Rosebery, Las Bambas and Kinsevere.

# WE MINIMISE OUR IMPACT

During 2017, the specific studies progressed included:

- › closure design for the Bobadil TSF at Rosebery;
- › scoping study for the Hercules legacy site;
- › infrastructure demolition cost estimate and TSF cover trial designs at Dugald River;
- › geochemical characterisation, pit lake modelling and waste rock dump landform design at Kinsevere;
- › revised closure plan for Las Bambas; and
- › a pre-feasibility closure study for the Sepon site.

Rehabilitation and closure planning advice was also provided to New Century Resources, as part of ongoing support to the new owners post the site divestment.

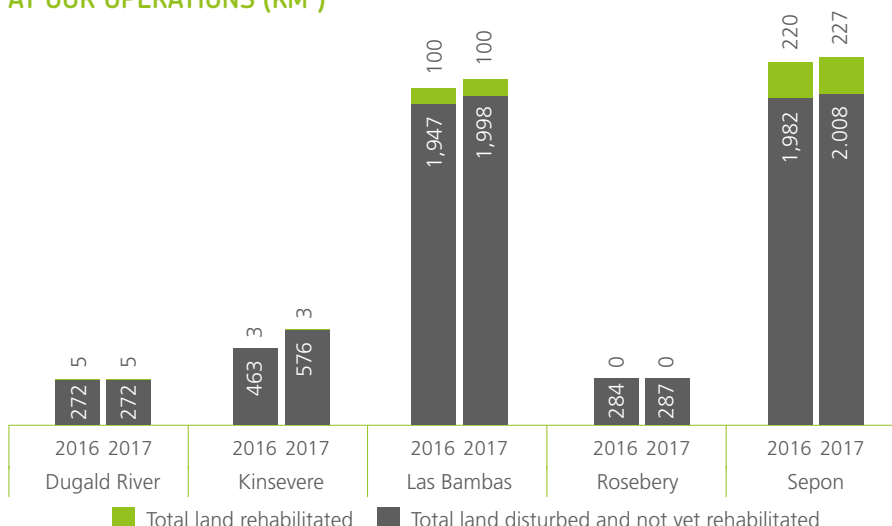
## MANAGING THE SOCIAL AND ECONOMIC IMPACTS OF MINE CLOSURE

We aim to manage the impacts of mine closure on employees, host communities and economic development through our workforce transition strategies and the social development programs we implement during operations. By aligning our social development programs with our life-of-asset plans, we are focusing on longer-term economic development which is not reliant on mining and can be sustained post-closure (refer to the Social Development and Investment section on pages 36-45).

**TABLE 10: AREA OF LAND MANAGED AT END OF 2017**

<b>Area of land managed at end of 2017</b>	<b>28,474</b>	<b>km<sup>2</sup></b>	<b>(99% held for exploration)</b>
<b>Area of land managed by our operating sites and advanced projects at end of 2017</b>	<b>364</b>	<b>km<sup>2</sup></b>	
<b>Area disturbed and not yet rehabilitated at end of 2016 (opening balance)</b>	<b>83.1</b>	<b>km<sup>2</sup></b>	
New disturbance in 2017	2.00	km <sup>2</sup>	(57% for mining extension activities at Kinsevere)
Disturbed areas rehabilitated in 2017	0.0766	km <sup>2</sup>	(All rehabilitation activity occurred at Sepon)
Rehabilitated areas redisturbed in 2017	0	km <sup>2</sup>	
<b>Area disturbed and not yet rehabilitated at end of 2017 (closing balance)</b>	<b>51.6</b>	<b>km<sup>2</sup></b>	(Closing balance is significantly lower than the opening balance due to relinquishment of the Century and Golden Grove mine leases)

**FIGURE 9: CUMULATIVE LAND DISTURBANCE AND REHABILITATION AT OUR OPERATIONS (KM<sup>2</sup>)**





**Image:**  
MMG employee with the  
purple-necked rock-wallaby  
near Dugald River.

## BIODIVERSITY AND LAND MANAGEMENT AT MMG

Land management and biodiversity monitoring are important activities to demonstrate that mine operations are not significantly harming local flora and fauna populations. Across our business we have a number of initiatives that enable us to focus on biodiversity, ensuring that we have a positive impact on our local environments:

- › In Dugald River, current monitoring focuses on two threatened species which are known to inhabit the surrounding Knapdale Ranges: the purple-necked rock-wallaby and Carpentarian pseudantechinus (a small carnivorous mouse-like marsupial). Sightings of the two species have been increasing and populations are strong. An exciting new chapter in our biodiversity monitoring programme will commence in 2018 when, funded by MMG, EcoSmart Ecology will undertake research on the Carpentarian pseudantechinus in collaboration with Sunshine Coast University and Queensland University

of Technology. This will be the first broad-area dedicated study on the species and we hope to find they are more abundant and widespread than traditionally thought.

- › Since 2011, MMG has planted more than 85,000 trees in the villages surrounding our Kinsevere operation. This project continued in 2017, with donations of seedlings to local communities, an event held on National Tree Day and ongoing work to support community tree nurseries, which raise seedlings of the redwood tree native to the Miombo forest and the moringa plant.
- › Kinsevere also welcomed the Lubumbashi 2030 project delegation in December, a project funded by the European Union with the mission to safeguard the local environment. The delegation, which included representatives from Gécamines, TFM, Vodacom, Chamber of Commerce (FEC) and University of Lubumbashi, visited a number of local initiatives.

- › The upgrade project carried out on the 2/5 Dam Tailings Storage Facility (TSF) at our Rosebery operation in 2017, not only worked to prevent seepage, but biomonitoring of the Stitt River has shown a marked improvement in ecological condition. Fish and other macroinvertebrates have been found and their diversity and distribution continues to grow. This initiative to improve historical seepage issues and correctly manage the local waterways helped to promote the biodiversity of the western Tasmanian environment.

Through these projects and future initiatives we hope to continue delivering lasting positive legacies in the regions in which we work.

### SDG 14

Life below water



### SDG 15

Life on land






# OUR PERFORMANCE 2015–2018 OBJECTIVES AND TARGETS

With the reporting period for the 2015–2018 objectives and targets wrapping up, our overall performance against each of the eight objectives is detailed below.

OBJECTIVES	2015-2018 TARGETS	PROGRESS TO DATE	
<b>1</b> Deliver a low-cost, high-performing organisation, with a culture characterised by our values.	<ul style="list-style-type: none"> <li>MMG values reflected in our People and Culture Survey results.</li> <li>MMG Operating Model embedded at all sites and offices.</li> <li>Human Resources information systems embedded across all operations.</li> </ul>	<p>People and Culture surveys are conducted every two years at all sites and have measured employee engagement and satisfaction. The People and Culture surveys have included questions to measure alignment with the MMG values. People and Culture action plans are in place to address improvement areas.</p> <p>Roles and responsibilities are structured in accordance with our Operating Model principles. Reviews are undertaken at all sites and Group Office to align organisational structure and way of working more closely with the Operating Model.</p> <p>Authorised Human Resource Information Systems are in place at all sites and services are delivered by support hubs in all regions.</p>	
<b>2</b> Our people understand and demonstrate our Success Through Every Person (STEP) program and apply the key principles and learnings in all business interactions.	<ul style="list-style-type: none"> <li>100% of those in leadership roles have been given access to MMG leadership development training programs within three months of joining MMG.</li> </ul>	80% of MMG leaders have completed or are enrolled in the STEP for Leaders program.	
<b>3</b> All our people (including contractors) are competent and motivated to work safely and are supported by visible leadership and effective systems and processes.	<ul style="list-style-type: none"> <li>A year-on-year reduction in annual TRIF across MMG and at each site.</li> </ul>	<p>MMG has achieved an annual reduction in TRIF from 2.28 in 2014 to 1.17 in 2017.</p> <p>All operating sites achieved a year-on-year reduction in TRIF over the period, with the exception of Kinsevere and Dugald River, where TRIF increased from 0.49 and 6.44 in 2016 to 1.13 and 6.67 in 2017 respectively. The increase in Kinsevere resulted from two vehicle incidents involving multiple injuries; controls have since been implemented and verified as effective to prevent such incidents from re-occurring.</p> <p>MMG has also worked to progressively implement both the Fatal Risk Standard, which describes critical controls for the management of 12 fatal risks, as well as injury prevention through the implementation of the Safe Task Management Standard.</p>	
<b>4</b> Exposure Management Plans are based on a comprehensive understanding of exposure potential and a practical application of the hierarchy of controls, which keep exposures within acceptable limits.	<ul style="list-style-type: none"> <li>Baseline exposure monitoring programs completed at all sites.</li> <li>Exposure Management Plans implemented at all sites.</li> <li>A year-on-year reduction in occupational exposure profile at all sites relative to a 2015 baseline.</li> </ul>	<p>Baseline monitoring plans have been completed at all sites to identify health risks and controls. Exposure management plan implementation remains a business focus, however, controls have been developed for fatal exposures and site-specific material occupational health risks.</p> <p>Control verification and the investigation of any actual or potential OEL exceedences provide greater confidence that our people are adequately protected.</p> <p>We continue to work to reduce occupational exposure and progress the implementation of engineering controls to reduce reliance on personal protection equipment.</p>	

OBJECTIVES	2015-2018 TARGETS	PROGRESS TO DATE	
<b>5</b> Closure planning is inclusive, knowledge-based and meets stakeholder expectations.	> Closure Plans have stakeholder-agreed closure criteria in place at all operations within five years of closure.	Based on the 2017 Life-of-Asset Plan, copper production at LXML Sepon will end in 2020. The site is now within five years of closure. Preliminary closure criteria were included in the 2015 Sepon Mine Closure Plan which was issued to stakeholders for consultation through the Sepon Mine Closure Committee (SMCC). Members of the Sepon Mine Closure Committee endorsed the Mine Closure Plan and it was approved by the government regulator in 2016.  Closure criteria will continue to be reviewed as the mine closure strategy for the site develops and consultation will continue through the SMCC.	
<b>6</b> Interactions respect our host communities and their values, beliefs, culture and heritage.  Open, transparent, community-supported grievance mechanisms close-out disputes to the satisfaction of all parties.  Community investments provide sustainable advancement to the social and economic development of our host communities.	> Be an accepted participant in the Voluntary Principles on Security and Human Rights (VPSHR) Initiative.  > Resolution of all complaints/grievances according to site procedures.  > Community Investment Plans target community stakeholder agreed Quality of Life indicators at all sites.	MMG participated in the 2017 meeting of the VPSHR Initiative and is moving towards formal application to join the Initiative.  The majority of grievances were closed out in line with site procedures.  Community investment plans have been implemented aligned to the UN SDGs at Las Bambas, Sepon and Dugald River.	
<b>7</b> Mineral Waste Management Plans are based on a comprehensive knowledge of the geochemical characteristics of waste and construction materials.  Water Management Plans are catchment-based.	> Mineral Waste and Water Management Plans implemented at all sites.	Mineral Waste Management Plans and Water Management Plans have been developed for all sites and are progressively being implemented.	
<b>8</b> Critical controls for material operational risk events are identified, implemented and verified.	> Critical control verification reporting to management in place for all material risks at all sites.	Comprehensive site-based risk assessments have been completed and critical controls identified and implemented. In response to this process, the business has adopted a process safety approach to mitigate catastrophic process failures for key plant and equipment (eg. solvent extraction plant, pressure oxidation and oxygen plants).  Control effectiveness is periodically assessed in line with agreed assurance plans and findings are systematically closed and considered in control redesign.	

**KEY:**  Milestone met or substantially met  Progressed  Milestone not met

# 2018–2020 OBJECTIVES AND TARGETS

For the 2018–2020 period we have aligned our key material issues, as identified by our stakeholders, with objectives and targets. These 12 objectives are designed to be aspirational goals with specific, measurable targets assigned to them. The targets will be monitored and progress tracked in this report on a yearly basis. This will ensure our work is constantly aligned with the issues that matter most to our business, our stakeholders and the regions in which we work.

OBJECTIVES	TARGETS
<b>1 Safety and health</b> We are committed to ensuring that our employees go home from work in the same physical and mental health every day.	<ul style="list-style-type: none"> <li>› 100% implementation of fatal risk controls at all sites.</li> <li>› Full implementation of our Safe Task Management approach.</li> </ul>
<b>2 Sovereign risk and government relationships</b> Constructive relationships with our partners in national, regional and local governments enable us to proactively manage sovereign risk and change.	<ul style="list-style-type: none"> <li>› Develop or maintain relationships with key government and department stakeholders in the regions in which we operate.</li> <li>› Actively engage in the political process to inform government decision-making on material issues to MMG.</li> <li>› Contribute to the relevant public policy debates to develop and enhance human capability in the regions in which we operate.</li> </ul>
<b>3 Strategy and growth</b> Consistent performance enables us to grow a pipeline of development projects by exploration or acquisition.	<ul style="list-style-type: none"> <li>› Deliver our growth strategy and become a top mid-tier miner by 2020.</li> </ul>
<b>4 Land management and rehabilitation</b> We effectively manage our land holdings over the life of the operation and seek to protect future land use options.	<ul style="list-style-type: none"> <li>› Mitigation Management Plans and Biodiversity Offset Management Plans are developed, implemented and verification processes are in place to track control effectiveness – where these plans are required across the Group (not all sites).</li> <li>› Mitigation hierarchy embedded within the site land clearance and disturbance processes across MMG.</li> </ul>
<b>5 Social and economic impacts of mine closure</b> We seek to diversify the local economic base of our communities to manage the impacts of mine closure on community employment and economic development.	<ul style="list-style-type: none"> <li>› End of life land use planning commenced for all sites within five years of closure.</li> <li>› Social impacts of closure integrated into Life of Asset planning and social investment strategies.</li> </ul>
<b>6 Tailings and waste rock management</b> We effectively manage the safety and environmental risks of tailings infrastructure and acid and metalliferous mine drainage.	<ul style="list-style-type: none"> <li>› NAF and PAF criteria is agreed for all sites and a process established to validate criteria.</li> <li>› Implementation of independent Dam Review Committees, engineers of record, and independent third-party reviews at all sites.</li> <li>› Review all site dams by year end.</li> </ul>



OBJECTIVES		TARGETS
<b>7</b>	<b>Water access and use</b> We effectively manage our water intake, inventory and discharge to minimise our impacts on other users within the catchment including upstream and downstream communities and the environment.	<ul style="list-style-type: none"> <li>› Trigger Action Response Plans (TARPs) developed and implemented across all sites.</li> <li>› Updated and calibrated site-wide water balance model and water management plan to optimise water management/consumption for each site.</li> </ul>
<b>8</b>	<b>Social development and investment</b> Our activities and investments measurably support development and economic livelihoods in the communities and regions in which we work.	<ul style="list-style-type: none"> <li>› Investment strategies at sites aligned to regional and national social objectives.</li> <li>› Investments deliver measurable positive impact against UN SDGs 1–6 indicators.</li> </ul>
<b>9</b>	<b>Community engagement</b> We effectively engage communities and local leadership and encourage participatory planning and decision-making for our Life-of-Asset.	<ul style="list-style-type: none"> <li>› Affected communities effectively engaged in material project modifications, extensions and expansions.</li> <li>› Application of FPIC in line with the requirements of the ICMM Position Statement on Indigenous Peoples.</li> </ul>
<b>10</b>	<b>Compliance and conformance</b> We are committed to environmental regulatory compliance and to operating in alignment with our organisational values.	<ul style="list-style-type: none"> <li>› No environmental non-compliances identified by third party.</li> <li>› No repeat significant environmental events (as per MMG definition of significant).</li> <li>› Establish a mandatory annual environmental audit that fulfils environmental regulatory requirements and provides annual assurance on status of compliance.</li> </ul>
<b>11</b>	<b>Corporate governance and business ethics</b> Our business ethics underpin the way we work as we grow and develop our operations in complex jurisdictions.	<ul style="list-style-type: none"> <li>› Full compliance with all applicable obligations under HKEx listing requirements.</li> <li>› 100% of relevant MMG employees trained in anti-bribery and corruption policies and obligations.</li> </ul>
<b>12</b>	<b>Human rights</b> We recognise, respect and will remedy the impacts of our operations on the human rights of our employees and the communities in which we work.	<ul style="list-style-type: none"> <li>› Accepted as participants in the VPSHR Initiative.</li> <li>› Grievance management processes at all sites compliant with UN Guiding Principles on Business and Human Rights.</li> <li>› Ensure that all complaints relating to the ILO's four fundamental principles and rights at work, namely freedom of association, forced labour, child labour and discrimination, are reviewed and improvements or action taken where required.</li> </ul>

# ASSURANCE TERMS AND STATEMENT



## INDEPENDENT LIMITED ASSURANCE REPORT

### TO THE MANAGEMENT AND DIRECTORS OF MMG LIMITED ON THE 2017 SUSTAINABILITY REPORT

We have undertaken a limited assurance engagement on the subject matter, defined below within the Subject Matter and Reporting Criteria section (the 'Subject Matter'), and presented in MMG Limited's ('MMG') 2017 Sustainability Report for the year ended 31 December 2017.

#### SUBJECT MATTER AND REPORTING CRITERIA

The Subject Matter has been assessed against the criteria prescribed in the International Council of Mining and Metals ('ICMM') *Sustainable Development Framework Assurance Procedure* and MMG's 2017 Taxes and Community Contribution Basis of Preparation ('MMG Taxes and Community Contribution Basis of Preparation'), collectively the 'Reporting Criteria'.

The Subject Matter and Reporting Criteria for our limited assurance engagement for the year ended 31 December 2017, for the reported boundary, was ICMM Subject Matters 1 to 5 and agreed selection of 2017 Tax and Community Contribution Performance Indicators, as described in the table below.

For the purposes of this engagement, the specific Subject Matter and Criteria were defined as follows:

#### A. ICMM SUBJECT MATTERS 1-5

Area	ICMM Subject Matter	Criteria (and location in MMG's 2017 Sustainability Report)
ICMM Subject Matter 1	The alignment of MMG's sustainability policies to ICMM's 10 Sustainable Development ('SD') Principles and mandatory requirements set out in ICMM Position Statements	MMG's reported alignment of its sustainability policies to ICMM's 10 SD Principles and mandatory requirements set out in ICMM Position Statements (refer to the Appendix on <a href="http://www.mmg.com">www.mmg.com</a> )
ICMM Subject Matter 2	MMG's material sustainability risks and opportunities based on its own review of the business and the views and expectations of stakeholders	MMG's description of the process for identifying material issues and the Global Reporting Initiative ('GRI') definition of completeness per the G4 Sustainability Reporting Guidelines
ICMM Subject Matter 3	<p>The existence and status of implementation of systems and approaches used by MMG to manage a selection of material sustainability risks and opportunities (selected through a random double-blind process) including:</p> <p>&gt; <b>Water access and use</b></p> <p>G4-EN22: Total water discharge by quality and destination</p> <p>&gt; <b>Community engagement</b></p> <p>G4-MM6/MM7: Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous peoples; and the extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous peoples, and the outcomes</p>	MMG's description of the systems and approaches to manage the selected material sustainability risks and opportunities

Area	ICMM Subject Matter	Criteria (and location in MMG's 2017 Sustainability Report)
	<p>› <b>Safety and health</b></p> <p>G4-LA6: Type of injury and rates of injury, occupational diseases, lost days and total number of work-related fatalities by region (and gender)</p>	
ICMM Subject Matter 4	MMG's reported performance during the 1 January 2017 to 31 December 2017 reporting period for the material sustainability risks and opportunities identified in Subject Matter 3 above	<p>Performance information criteria disclosed by MMG for each indicator including:</p> <ul style="list-style-type: none"> <li>› G4-EN22: Total water discharge by quality and destination (page 50 and Appendix pages 11 and 12)</li> <li>› G4-MM6/MM7: Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous peoples; and the extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous peoples, and the outcomes (page 26 and Appendix page 14)</li> <li>› G4-LA6: Type of injury and rates of injury, occupational diseases, lost days and total number of work-related fatalities by region (and gender) (pages 28 and 32 and Appendix page 12)</li> </ul>
ICMM Subject Matter 5	MMG's self-declared application level of the GRI G4 Sustainability Reporting Guidelines	GRI G4 "in accordance" Core criteria

## B. TAXES AND COMMUNITY CONTRIBUTION PERFORMANCE INDICATORS

### Agreed Performance Indicators

- › Total income tax paid in Australia, Laos, Peru, Democratic Republic of the Congo ('DRC') (US\$'000)
- › Total withholding tax paid in Australia, Laos, Peru, DRC (US\$'000)
- › Total Royalties paid in Australia, Laos, Peru, DRC (US\$'000)

### THE SUBJECT MATTER DID NOT INCLUDE:

- › Data sets, statements, information, systems or approaches other than the Subject Matter
- › Management's forward looking statements
- › Any comparisons made against historical data.

### MANAGEMENT AND DIRECTORS' RESPONSIBILITY FOR THE SUBJECT MATTER

Management and Directors of MMG are responsible for:

- › Ensuring that the Subject Matter in the 2017 Sustainability Report is prepared and presented in accordance with the Reporting Criteria
- › Confirming the measurement or evaluation of the underlying Subject Matter against the applicable Reporting Criteria, including that all relevant matters are reflected in the Subject Matter information
- › Designing, establishing and maintaining internal controls to ensure that the Subject Matter in the 2017 Sustainability Report is prepared and presented in accordance with the Reporting Criteria.



# ASSURANCE TERMS AND STATEMENT

## ASSURANCE PRACTITIONER'S INDEPENDENCE AND QUALITY CONTROL

We have complied with the independence and other relevant ethical requirements relating to assurance engagements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Auditing Standard ASQC 1 *Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements*, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## ASSURANCE PRACTITIONER'S RESPONSIBILITY

Our responsibility is to express a limited assurance conclusion on the Subject Matter based on the procedures we have performed and the evidence we have obtained.

We conducted our limited assurance engagement in accordance with Australian Standards on Assurance Engagements ASAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* ('ASAE 3000'), issued by the Australian Auditing and Assurance Standards Board in order to express a conclusion whether, based on the procedures performed and the evidence obtained, anything has come to our attention that causes us to believe that the Subject Matter has not been properly prepared and presented in all material respects in accordance with the Reporting Criteria. That standard requires that we plan and perform this engagement to obtain limited assurance about whether the Subject Matter is free from material misstatement.

A limited assurance engagement in accordance with ASAE 3000 involves identifying areas where a material misstatement of the Subject Matter information is likely to arise, addressing the areas identified and considering the process used to prepare the Subject Matter in the 2017 Sustainability Report. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgement and consisted primarily of:

### A. ICMM SUBJECT MATTERS 1-5

- › Making enquiries of management to obtain an understanding of the overall governance and internal control environment, risk management, materiality assessment and stakeholder engagement processes relevant to the identification, management and reporting of sustainability issues and selected performance indicators
- › Sample testing of reported data, performance statements, claims and case studies included in the Subject Matter against supporting source information and MMG's reported boundary. This included procedures conducted on site at MMG's Rosebery mine
- › Sample testing as to whether the methods for collating and calculating data for the selected Performance Indicators were aligned with the stated Criteria
- › Reading selected management information and documentation supporting assertions made in the Subject Matter
- › Reading selected MMG policies and standards and assessing alignment with ICMM's 10 Sustainable Development Principles, and other mandatory requirements as set out in ICMM's Position Statements
- › Performing a comparison of the content of MMG's 2017 Sustainability Report and Reporting Appendix against the 'in accordance' Core criteria option requirements of the GRI G4 Sustainability Reporting Guidelines.

### B. TAXES AND COMMUNITY CONTRIBUTION PERFORMANCE INDICATORS

- › Making enquiries of management to understand and evaluate the appropriateness of MMG's Tax and Community Contribution Basis of Preparation used and related disclosures made by MMG

› In respect of the agreed Selected Tax and Community Contribution Performance Indicators:

- Interviewing key data owners responsible for the Selected Tax and Community Contribution Performance Indicators to understand the compilation, calculation and review processes
- Analysing and inspecting on a sample basis, the key systems, processes, procedures and controls relating to the collation, validation, presentation and approval process of Selected Tax and Community Contribution included in the 2017 Sustainability Report, including assessing evidence for a sample of transactions or events, where applicable
- Based on our understanding, using analytical procedures to identify and discuss any unusual payments included in the 2017 Sustainability Report
- Reconciling the underlying records to the 2017 Sustainability Report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express an opinion providing reasonable assurance about whether the Subject Matter has been properly prepared and presented, in all material respects, in accordance with Reporting Criteria.

## INHERENT LIMITATIONS

There is an unavoidable risk that work planned and executed in accordance with the ASAE 3000 may not detect a fraud, error or non-compliance with laws and regulations, where there has been concealment through collusion, forgery and other illegal acts. MMG acknowledges that we may not detect fraud, error or non-compliance where there has been concealment, forgery or other illegal acts. In all other circumstances, MMG relies on Deloitte to identify material errors as part of the assurance engagement. However, we will communicate to you, as appropriate, any such matters that come to our attention.

While our limited assurance engagement considered the effectiveness of MMG's internal controls relevant to the preparation of the Subject Matter when determining the nature and extent of our procedures, our limited assurance engagement was not designed to provide assurance on internal controls over the preparation of the Sustainability Report and the Subject Matter, respectively.

## LIMITATIONS OF USE

Our assurance report has been prepared solely for the Management and Directors of MMG in accordance with our engagement letter dated 19 December 2017 and variation dated 23 March 2018, respectively. We disclaim any assumption of responsibility for any reliance on this report, to any person other than the Management and Directors of MMG or for any purpose other than that for which it was prepared. We accept no responsibility to any person or entity, apart from MMG, that is provided with, or obtains a copy of our report, without our written agreement. No other person or entity is entitled to rely, in any manner, or for any purpose, on this report.

## MATTERS RELATING TO ELECTRONIC PRESENTATION OF INFORMATION

Our limited assurance engagement included web-based information that was available via web links as of the date of this statement. We provide no assurance over changes to the content of the 2017 Sustainability Report after the date of this assurance statement.

## CONCLUSION

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Subject Matter has not been properly prepared and presented, in all material respects, in accordance with the Reporting Criteria for the year ended 31 December 2017.

*Deloitte Touche Tohmatsu*

DELOITTE TOUCHE TOHMATSU



Samantha Jones  
Partner  
Sydney, 10 July 2018

# GLOSSARY

## ACRONYMS

AIME	Australasian Institute of Mining Engineers
AMD	acid and metalliferous drainage
ANCOLD	Australian National Committee on Large Dams
ASM	artisanal and small-scale mining
ASX	Australian Securities Exchange
AusIMM	Australasian Institute of Mining and Metallurgy
CDB	China Development Bank
CEO	Chief Executive Officer
CMC	China Minmetals Corporation
CMN	China Minmetals Nonferrous
CSRMM	Centre for Social Responsibility in Mining
DPM	diesel particulate matter
DRC	Democratic Republic of the Congo
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
ESIA	Environment and Social Impact Assessment
FPIC	free, prior and informed consent
GL	gigalitres
GRI	Global Reporting Initiative
HKEx	Hong Kong Stock Exchange
ICA	International Copper Association
ICMM	International Council on Mining and Metals

IFC	International Finance Corporation
ILO	International Labour Organisation
ISO	International Organisation for Standardisation
IZA	International Zinc Association
LXML	Lane Xang Minerals Limited Sepon
MCA	Minerals Council of Australia
MMG	MMG Limited
MTC	Ministry of Transport and Communications
NAF	non-acid forming waste rock
OEL	occupational exposure limit
PAF	potentially acid forming waste rock
PDR	People's Democratic Republic
SDG	Sustainable Development Goal
SENACE	National Environmental Certification Service for Sustainable Investments
SMCC	Sepon Mine Closure Committee
TARP	Trigger Action Response Plans
TRIF	total recordable injury frequency
TSF	tailings storage facility
UNICEF	United Nations International Children's Emergency Fund
VPSHR	Voluntary Principles on Security and Human Rights

## DEFINITIONS

**acid and metalliferous drainage / acid mine drainage (AMD):** AMD is created when rocks that contain naturally occurring sulphide minerals are disturbed and exposed to air and water. This accelerates the natural weathering process and may lead to the release of low pH (acidic) or neutral drainage water with elevated salinity and metals concentrations. If not responsibly managed, AMD can impact the revegetation of mining wastes, and degrade surface and groundwater quality. Waste rock with the potential to form AMD is termed 'potentially acid forming' or PAF waste rock.

**artisanal and small-scale mining:** Artisanal mining is often characterised as mining practised by individuals, groups or communities, often informally (illegally), using low technology or mechanisation. It can be highly organised, involving many people in different roles and hierarchies.

**life-of-asset plan:** A strategic planning process which looks to optimise the value derived from an operation over its life cycle.

**diesel particulate matter\*:** A complex mixture of gases, vapours, liquid aerosols and particulate substances. The particulate is often referred to as 'soot' and is generally the only visible part of the DPM. These substances are the products of the combustion process. Gases and vapours such as nitrogen, oxygen, water vapour and carbon dioxide also occur along with hazardous chemicals such as nitrous oxide, nitrogen dioxide, sulphur dioxide, carbon monoxide and poly aromatic hydrocarbons (PAHs).

\* SafeWork Australia. <https://www.safeworkaustralia.gov.au/system/files/documents/1702/guidance-managing-risks-exposure-diesel-exhaust-in-the-workplace.docx>



# OUR CONTACTS

We welcome your comments on this report. Please contact us with your feedback or suggestions.

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