

Lonmin Plc

# MUCH ACHIEVED

WELL REPOSITIONED



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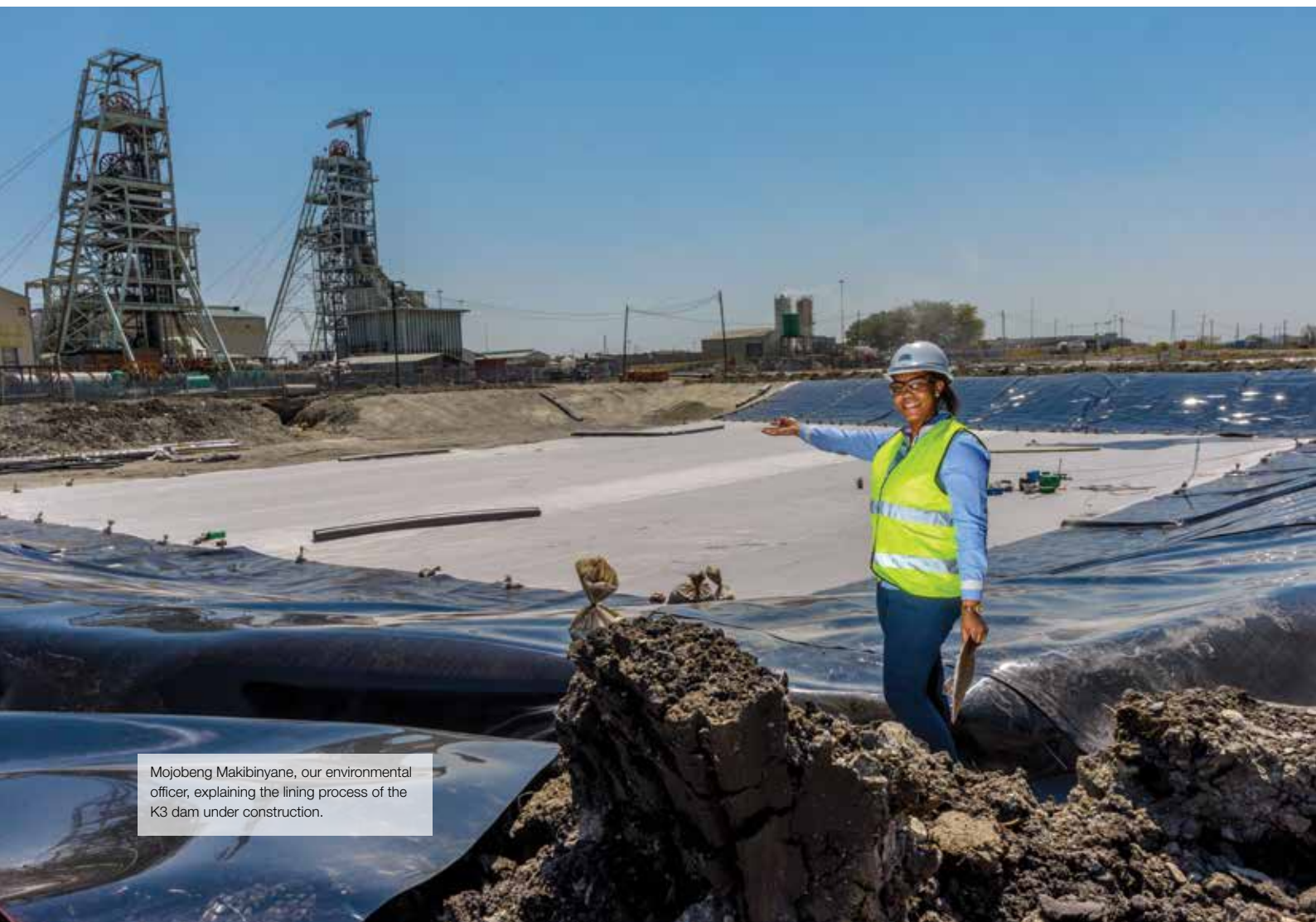
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01/

# Approach to Reporting



Mojibeng Makibinyane, our environmental officer, explaining the lining process of the K3 dam under construction.

# Approach to Reporting

## Overview

This Lonmin Plc (Lonmin, the Group or the Company) Sustainable Development Report presents information on the most material sustainability matters the Company faces and how the related opportunities are pursued and challenges addressed.

## Reporting guidelines

This report has been compiled in accordance with the GRI's<sup>1</sup> G4 core compliance and its Mining and Metals Sector Supplement. It also considers the United Nations Global Compact (UNGC)<sup>2</sup> principles and the International Council on Mining and Metals' (ICMM)<sup>3</sup> principles and reporting requirements.

Our Safety and Sustainability Policy is aligned to the ICMM principles.

## Scope and boundary

Information disclosed in this report covers the financial year from 1 October 2015 to 30 September 2016, unless otherwise stipulated. Our previous Sustainable Development Report covered the 12 months to 30 September 2015.

This report discusses information relating to Lonmin Group subsidiaries: Western Platinum (Proprietary) Limited (WPL), Eastern Platinum (Proprietary) Limited (EPL), Messina Platinum Mines Limited (MPML), and Akanani Mining (Proprietary) Limited (Akanani), including the joint ventures and exploration activities over which the Company exercised management control during the financial year.

This report is structured according to material focus area chapters that present the applicable management approach and performance data relevant to that focus area. In the interests of conciseness, certain topics are covered in our online supplementary reports and comprehensive GRI index, available at <http://sd-report.lonmin.com/2016/download-manager/>.

The disclosure of scope 1 greenhouse gas (GHG) emissions was expanded in 2016 and, for the first time, includes emissions from the Mookimoo landfill site and waste water treatment works. Apart from this, the boundary of data remains unchanged and, where possible, data is reported on a comparative basis.

## Significant changes to the Company

The reorganisation of the business announced in 2015 was concluded by the end of March 2016. There was a disruption-free reduction of 5,433 people, (details on page 42). The

closure of inefficient areas and shafts will continue as planned throughout 2017, with Hossy shaft scheduled for closure in 2017. Our Newman shaft has now ceased production from Lonmin crews. Two Generation 1 shafts, East 1 and West 1, were initially intended to be put on care and maintenance. These contractor-managed shafts were, however, subsequently allowed to continue mining following a revised contractor development plan, which made these shafts cash generative.

In line with our strategy of divesting non-core assets and maximising cash utilisation to focus on our core platinum operations, Lonmin entered into an agreement with Acacia Mining Plc to dispose of the 49% stake in the West Kenya joint venture for a cash consideration of US\$5 million.

Simon Scott stepped down as Chief Financial Officer on 16 May 2016, after five and a half years in the role, and Barrie van der Merwe was appointed as Chief Financial Officer and Director with effect from 17 May 2016. Kennedy G Bungane was appointed as a Non-executive Director of the Company with effect from 1 March 2016. Mr Bungane is Chief Executive Officer of Phembani Group (Proprietary) Limited (Phembani), which merged with Shanduka, Lonmin's black economic empowerment partner. Mr Bungane was nominated to the Board of Directors (the Board) pursuant to a contractual arrangement with Shanduka.

There were no further significant changes to the size, structure or ownership of the Company.

## Units of measurement and comparative data

All monetary amounts reflected in this report are expressed in South African Rand (R) or in US Dollars (US\$). The average cost of US\$1 during the reporting period was R14.77 (2015: R12.0). A total production of 1,440,724 Platinum Group Metal ounces (PGMOz) (2015: 1,447,364) is used to calculate intensity or efficiency ratios in the report, unless indicated otherwise. The ⓘ icon is used to indicate where data was severely affected by, and should be interpreted in the context of, the protracted 2014 strike.

## Rectifications

In 2015, page 98 "General and hazardous waste incinerated" was incorrectly reported as 277 tonnes. The correct amount is 27.7 tonnes. "Hazardous waste to landfill – other" was incorrectly reported as 12 tonnes. The correct amount is 2,122 tonnes.

In the 2015 supply chain supplementary report, the discretionary procurement spend for the year was incorrectly reported as R10.52 billion. The correct amount is R8.6 billion.



<sup>1</sup> The GRI (formerly the Global Reporting Initiative), is a global reporting guideline that provides a framework for sustainable development reporting ([www.globalreporting.org](http://www.globalreporting.org)). Lonmin's GRI index is available online at <http://sd-report.lonmin.com/2016/download-manager/>.

<sup>2</sup> The UNGC sets universal principles on labour, environment, anti-corruption and human rights ([www.unglobalcompact.org](http://www.unglobalcompact.org)).

<sup>3</sup> The ICMM is an organisation of mining, minerals and metals companies and associations committed to driving social, economic and environmental progress in the industry ([www.icmm.com](http://www.icmm.com)).

# Approach to Reporting (continued)

## Assurance

KPMG Services (Proprietary) Limited provided assurance on selected performance data in this report, in line with the International Standard on Assurance Engagements (ISAE 3000) assurance standard and the ICMM Sustainable Development Framework: Assurance Procedure as it relates to Subject Matters 1 – 4. The scope of the assurance engagement, the data assured and the statement of assurance are provided on page 118 of this report. An internal review of the safety and health material focus area for the period 1 October 2015 to 30 September 2016 was completed. The review covered the qualitative and quantitative information presented in the 2016 Sustainable Development Report, material focus area: safety and health, page 50.

Assurance provided by KPMG: Reasonable (✓RA), Limited (✓LA).

## Lonmin-specific terms and references

The terms below are used throughout the report when referring to operations and geographic areas. For ease of reference, these are:

- *Marikana*: The mining and processing activities of WPL and EPL in the North West Province
- *The Precious Metal Refinery (PMR)*: The precious metal refinery, located in Brakpan, Gauteng Province, owned by WPL
- *Limpopo operations*: The operations of Messina Platinum Mines Limited (wholly owned by WPL), located in Limpopo Province







## Suite of reports

This annual Sustainable Development Report should be read in conjunction with the Annual Report and Accounts 2016 and the online supplementary reports.

Annual Report and Accounts 2016	Sustainable Development Report 2016	Supplementary online reports
An overview of Lonmin's operating landscape. Statutory financial statements for the Company are provided with the associated audit reports	Detailed disclosure on Lonmin's material sustainable development policies, practices and performance	Additional sustainability information on topics such as supply chain, stakeholder engagement, and our GRI index
<a href="https://www.lonmin.com/investors/reports-and-presentations">https://www.lonmin.com/investors/reports-and-presentations</a>	<a href="http://sd-report.lonmin.com/2016/">http://sd-report.lonmin.com/2016/</a>	<a href="http://sd-report.lonmin.com/2016/download-manager/">http://sd-report.lonmin.com/2016/download-manager/</a>

## Navigation

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-  Assurance provided by KPMG: Reasonable (✓RA), Limited (✓LA)
-  Further information available online
-  17 Targets set for 2017 or beyond
-  Lonmin's four strategic pillars
-  Data impacted by the strike in 2014
-  KPIs as a measure in the incentive plans for remuneration of executives

## Contacts

Lonmin values feedback from stakeholders regarding our Sustainable Development Report, our approach to reporting according to the various frameworks and how we address Lonmin's material focus areas. For feedback or requests for more information on sustainable development, please contact:

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02/

# Corporate Profile



95% of our production comes from  
our operations in Marikana.

# Corporate Profile

## Our Company

Lonmin is a primary producer of Platinum Group Metals (PGMs), which are principally used in the automotive and jewellery industries. Our core operations operate under new order mining rights granted by the South African government, which remain valid until 2037 and are renewable to 2067. Our value chain includes the exploration, mining, refining and marketing of PGMs, with platinum positioned as our principal product, generating 60% to 70% of our revenue in a typical year.

### Who we are



32,793 people work at the Company – 25,296 (77%) permanent employees and 7,497 (23%) contractors



Women constitute 9% of permanent employees



Approximately 126,000<sup>1</sup> people live in the areas immediately adjacent to our operations



Platinum sales of 735,747 ounces



Shared business services offer administrative support to mining and process operations

### Mining operations



95% of our production comes from our flagship operations located at Marikana



There are 10 active shafts at Marikana, one of which is on care and maintenance, as well as opencast operations



An additional mine at the Limpopo operations is under care and maintenance













Pandora, a joint venture operation in which Lonmin has a 50% interest, contributes 5% of our annual production



Exploration in South Africa and internationally

<sup>1</sup> Based on the assumption that every employee and contractor (2014 headcount) supports 3.3 dependants based on the results of the South African Census 2011 – Statistical Release (revised) PO301.4 by Statistics South Africa.



Process operations	Where we operate
 <p>Smelter, laboratory and a base metal refinery (BMR) at Marikana</p>	 <p>Operations are based in the North West, Limpopo and Gauteng provinces of South Africa</p>
 <p>Six operational concentrators, one on care and maintenance at Marikana, and one concentrator in Limpopo</p>	 <p>We continue with exploration at the Akanani Mining (Proprietary) Limited (Akanani) project to develop a viable operation</p>
 <p>A bulk tailings treatment project is under construction</p>	 <p>Small exploration projects in Canada and Northern Ireland</p>
 <p>Precious metal refinery (PMR) at Brakpan, Gauteng</p>	 <p>Head office in Johannesburg, South Africa and a registered office of the parent company in London, United Kingdom</p>
 <p>South Africa</p>	 <p>Primary listing on the London Stock Exchange (LSE); secondary listing on the Johannesburg Stock Exchange (JSE)</p>

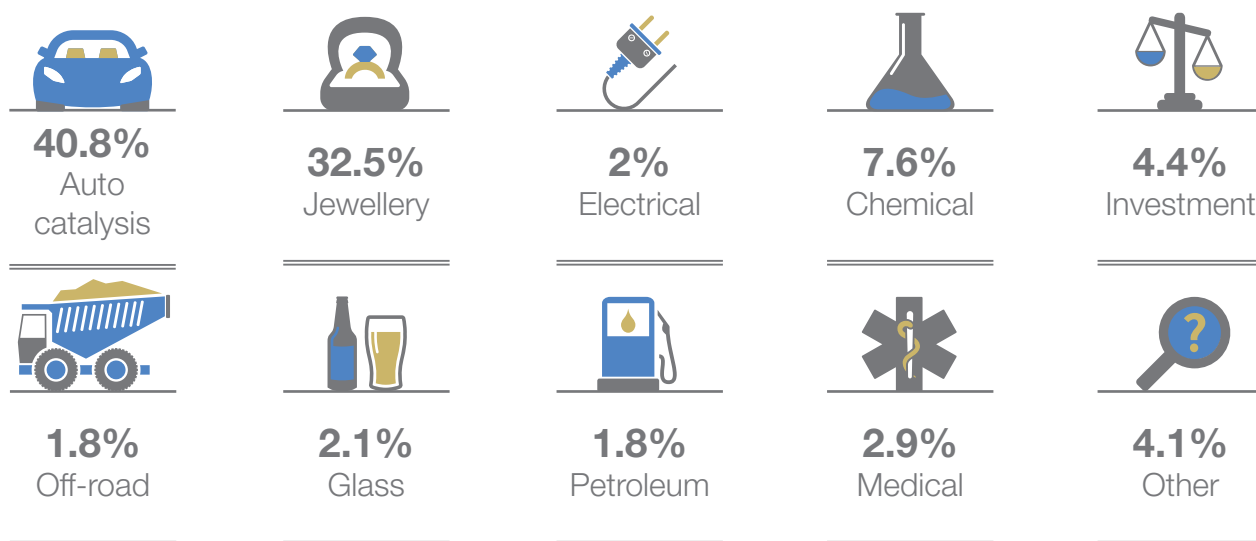
## Corporate Profile (continued)

### Platinum Group Metals (PGMs)

The PGMs mined by Lonmin include platinum, palladium, rhodium, ruthenium and iridium, of which platinum is the principal product. PGMs are durable precious metals that are valuable due to their robust catalytic and electrical properties, long life cycle and high recyclability.

The primary production of PGMs is an energy-intensive process, offset by the important roles these metals play in reducing pollutants from the combustion of fuel through technologies like catalytic converters. Mining also brings a range of socio-economic benefits, which include creating employment, socio-economic development investment, tax contributions and helping to develop local and national economies.

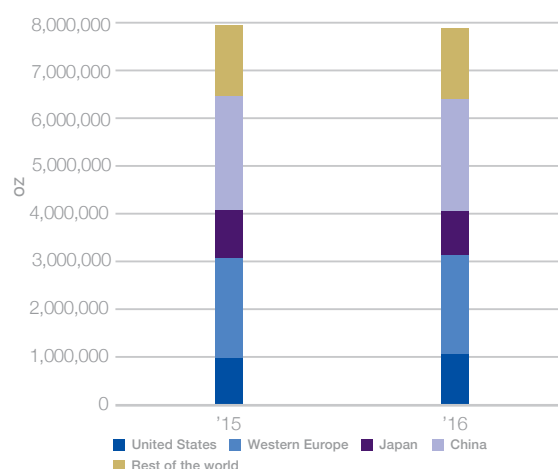
### Demand for PGMs globally<sup>1</sup>



### Lonmin PGMs refined production (ounces)

	2012	2013	2014	2015	2016
PGMs refined produced	1,349,802	1,336,109	882,094	1,447,364	1,440,724

### Global platinum demand by region (ounces)



<sup>1</sup> SFA (Oxford) estimates.

## Environmental, social and governance key statistics

Social		Environmental	
<b>Employee relations</b>		<b>15.4</b> million m <sup>3</sup> water recycled	
Employees (at 30 September 2016)	<b>25,296</b>	<b>6,344.2</b> TJ energy used	
Contractors	<b>7,497</b>	<b>1,665</b> ktCO <sub>2</sub> e GHG emitted	
HDSAs in management	<b>52.4%</b>	<b>5,888</b> tonnes of hazardous waste recycled, reused and treated	
<b>Health and safety</b>			
Lost time injury frequency rate	<b>4.97</b>		
Voluntary counselling and testing (VCT) conducted	<b>18,372</b>		
<b>Social licence to operate</b>		<b>Governance</b>	
Community members who received portable skills training <b>137</b>		<b>24</b> -hour ethics hotline	
<b>4</b> contracts awarded to Bapo Ba Mogale		<b>28</b> incidents logged through the hotline	

Refer to pages 122 and 123



# Corporate Profile (continued)

## Business model

Lonmin is one of only three integrated primary platinum producers globally

### Our aim

Our fundamental aim is to create long-term value for our shareholders and all our stakeholders as we move through the economic cycle.

### Innovative approach

We continue to seek ways to maximise value with new initiatives in the processing operations such as the smelter clean-up and the other precious metals plant, which have already resulted in the release of additional PGMs. Other projects underway, such as the bulk tailings treatment project, will improve PGM recovery rates and increase volumes of chrome production. We are utilising our excess processing capacity by sourcing new toll treatment contracts.

While there will inevitably be short-term volatility in the prices of one or more of the PGMs, we believe that the long-term fundamental economics of these metals remain highly attractive. Our strategy is to preserve cash and be able to sustainably withstand the current low price environment for the next few years.

### What we do

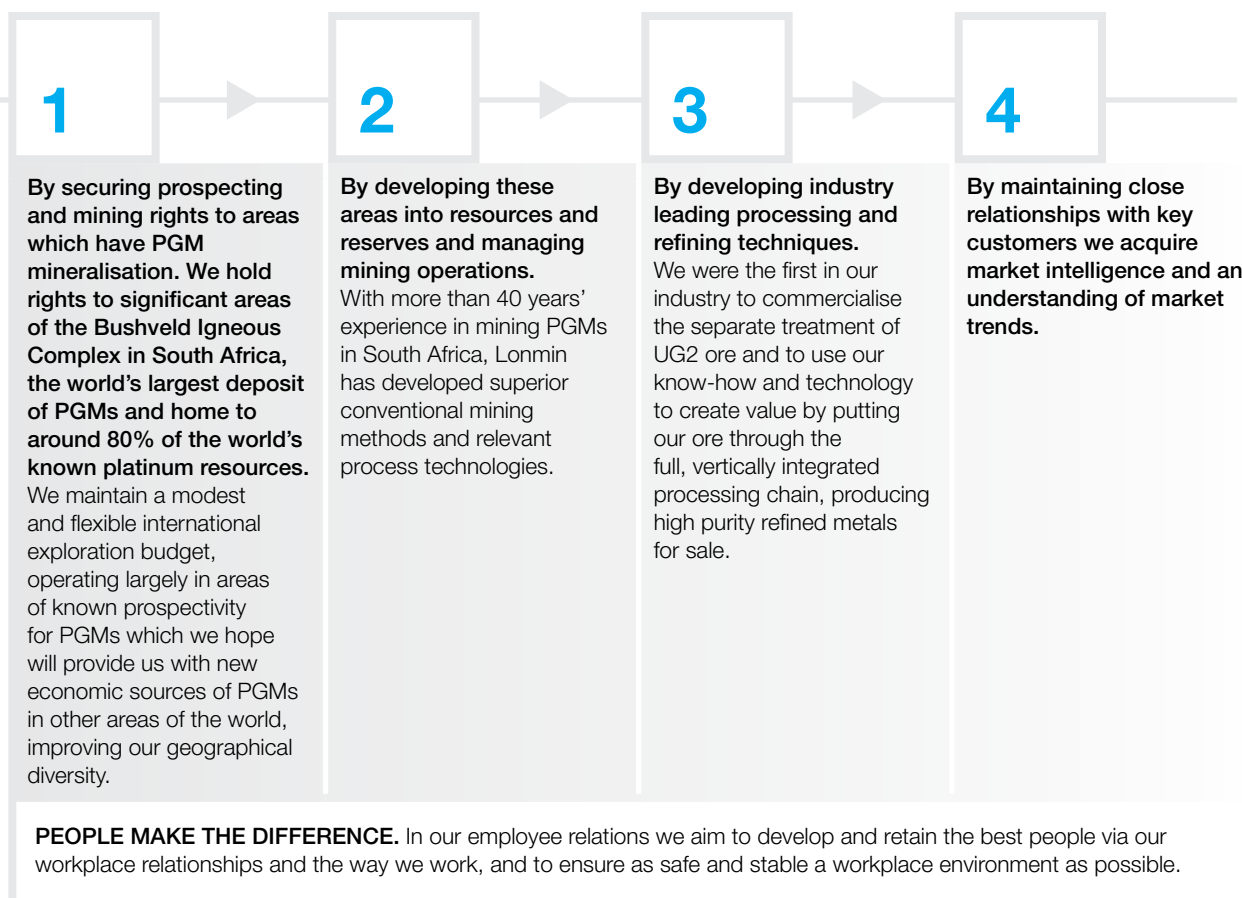
We aim to generate value from our operations in four stages:

Lonmin explores, mines, refines and markets PGMs – platinum, palladium, rhodium, iridium, ruthenium and gold.

Platinum is our principal product, and in a typical year is the source of 60% to 70% of our revenues. Palladium is our second biggest source of revenue. By-products from PGM mining include chrome, nickel, copper and cobalt.

## Preserving our values

				
<b>Governance</b> – we have created and maintain a robust internal control and reporting environment, with strong processes for risk identification and mitigation, implemented by a dynamic management team and overseen by an experienced Board of Directors.	<b>Culture</b> – we are seeking to develop a value-based culture where the behaviour of all employees, managers, Directors and others help to promote an ethical, responsible and fair approach to how we do business.	<b>Relationships</b> – we work hard at establishing relationships with a wide range of stakeholders from employees and their trade unions, through communities and local government, suppliers, contractors, customers and other business counterparties, to national government in its many guises and the providers of our funding – lending banks and our shareholders.	<b>Sustainability</b> – we believe that there is only one way to sustain success: by taking all critical risks into account when we are planning ahead. Working safely, respecting those with whom we work and protecting the environment are all part of our core processes.	<b>Transformation</b> – we embrace transformation as a business imperative. We endeavour to play our full part in addressing historic inequalities and creating the conditions in which current and future generations can succeed in creating shared purposes.

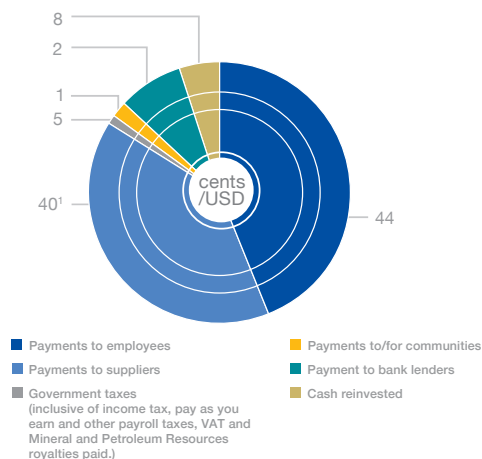


## How we spend the cash we earn

We recognise that our business requires inputs from, and has an effect on, a number of stakeholders. We see it as crucial that each group feels that their relationship with Lonmin is positive, and that they achieve some net gain, whether financial or otherwise. The analysis below shows how the US\$1.1 billion of cash earned in the financial year was distributed.

Shareholders received no dividend during the year, and none is recommended for 2016. In 2016 we met costs of 89 cents for every Dollar we earned, predominantly in South Africa. Payments for community projects and donations amounted to 1 cent per Dollar earned and we spent 2 cents per Dollar earned on interest and fees to the banks who lent us money. Further information on payments to communities is available on page 69.





### Distribution of cash inclusive of other taxes



<sup>1</sup> A significant portion is wages paid to contractors. We estimate around 60% of our costs are labour related.

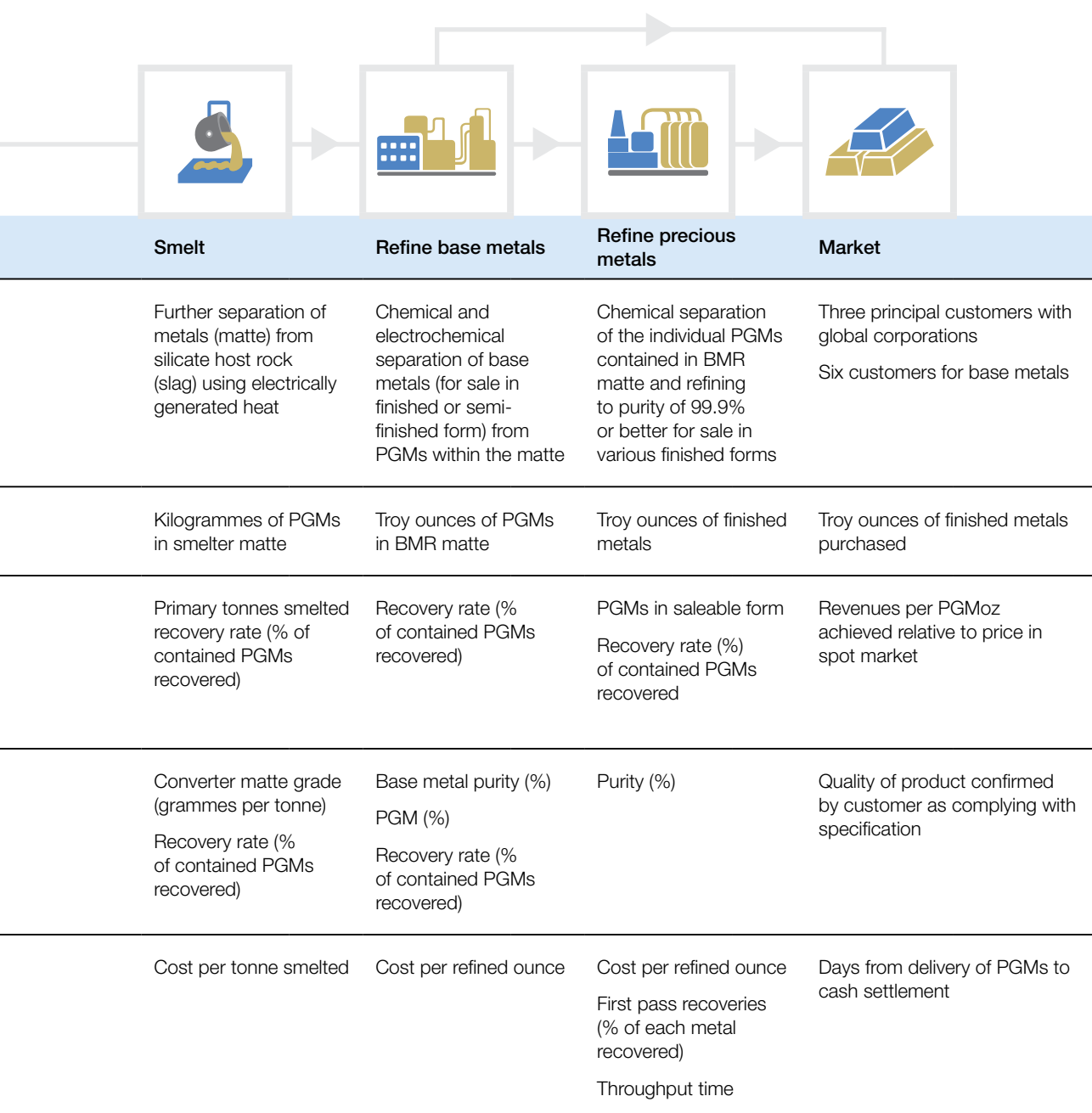
# Corporate Profile (continued)

## Our business

				
Process	Explore	Mine	Mill	Concentrate
Description	Explore for potentially economic PGM mineralisation	Underground and surface mining of two reefs, Merensky and UG2, each approximately one metre thick	Crushing ore brought to the surface to liberate contained PGMs	Separation of metalliferous particles from host rock using basic physical chemistry
Output measurement	Mineral resources (PGMoz)	Millions of tonnes	Millions of tonnes	Kilogrammes (kg) of PGMs in concentrate
Effectiveness measurement	Increase or replace mineral resources	Tonnes hoisted Ore reserves	Tonnes milled	PGMs in concentrate (kg) Recovery rate (% of contained PGMs recovered)
Quality measures	In situ PGM grade and tonnes	Underground head grade, per ore type (grammes per tonne)	Milled head grade (grammes per tonne)	Concentrate grade (grammes per tonne)
Efficiency measures	Resources converted to reserves	Cost per ounce	Cost per tonne milled	Cost per ounce recovered
Supply chain	The Company has 3,334 discretionary suppliers registered in its data base. Of these suppliers, 70% are based in South Africa (5.1% are from the GLC <sup>1</sup> ) and 30% are internationally based. The discretionary spend on suppliers during 2016 was R7.6 billion (2015: R8.6 billion).			

<sup>1</sup> GLC refers to the Greater Lonmin Community, being those communities situated close to our operations.





View the supplementary report on the supply chain at <http://sd-report.lonmin.com/2016/download-manager/>.



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# Material Focus Area<sup>1</sup>

# A Challenging Operating Environment

- > *Sustaining business in  
a challenging operating  
context*

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<sup>1</sup> An overview of the 2016 material focus areas is provided on page 32.





01 Humphrey Tlou, a cutter at the salvage yard, cutting a bin into smaller steel sections.



02 Driving efficiencies is fundamentally important to operate in the challenging environment.



03 Kamogelo Letshwiti and Siyabulela Chulayo separating waste at the salvage yard.



# A Challenging Operating Environment

## Context

South African mining companies have, for the past number of years, experienced a combination of factors that have increased the industry cost base and hindered efficient production. These factors include rising wage demands, labour unrest, low labour productivity, above-inflation electricity and water price increases and electricity supply disruptions. In the context of this persistent upward pressure on costs, the extended decline in commodity prices has compressed margins in the local mining industry and forced an increased focus on financial sustainability.

Within the margin-stressed South African mining sector, it is important to not lose sight of Lonmin's many positive attributes, relative shallow mining assets, unrivalled processing expertise and an invaluable integrated mine-to-market business.

This chapter provides an overview of the external factors impacting our business and how these are being addressed by the Company in order to remain viable for the long term.

## Market overview 2016

During the financial year, platinum and palladium prices staged a strong comeback, with platinum gaining 14% from US\$908 on 1 October to US\$1,034 by 30 September and palladium 10% from US\$659 to US\$722 over this period. This recovery helped to improve operating margins for primary producers towards the end of the year. Metal prices subsequently retraced on the back of weaker-than-expected market sentiment. Disruptions in production at mines in South Africa, and lower-than-expected recycling growth from scrapped autocatalysts, assisted to widen the fundamental market deficit compared to 2015.

Sadly, market sentiment has remained subdued such that the fundamental deficit has not translated into improved prices.

Demand has remained steady. Diesel market share has not fallen as much as some may have expected in Europe, and the rhodium prices failed to join the rally in platinum and palladium and was down 13% year-on-year.

It has been a tough year for jewellery in China with difficult retail trading conditions, lower manufacturer restocking and fewer wedding registrations. Nonetheless, lower platinum prices have motivated higher investment sales in Japan. This and the ongoing rise in demand in India and the United States recently offset the slowdown in China.

## Sales

In 2016 Lonmin sold 735,747 ounces of platinum into the market. Platinum sales contributed 65% to turnover. Palladium was the second highest contributor to the revenue basket with 334,319 ounces sold, constituting 18% of Lonmin's income. Combined sales of rhodium, ruthenium and iridium contributed a further 12.5% and gold and base metals made up the balance.

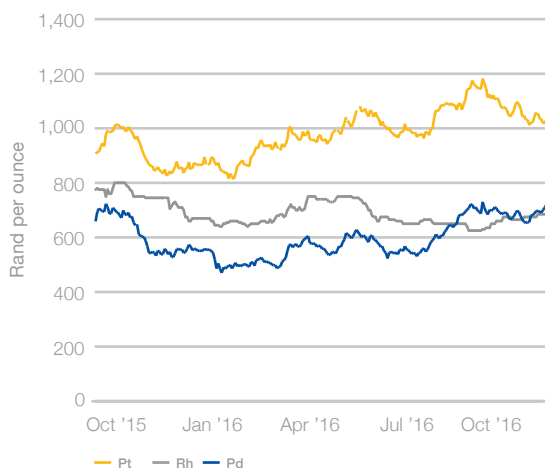
## PGM prices

During the financial year, platinum outperformed both palladium and rhodium. However, the average price of each metal was substantially lower than was seen in FY2015. Refer to the Financial Review section (page 32) of the Annual Report and Accounts for details on average prices.

Platinum in October 2015 was at \$908 per ounce, but fell to a multi-year low of \$814 per ounce on 21 January 2016, before rallying and closing at \$1,034 on 30 September 2016. The Rand started at R13.92 to the US Dollar in October 2015 and fell to a record low of R16.87 on 18 January 2016 against the US Dollar, dragging the platinum price down in US Dollar terms.

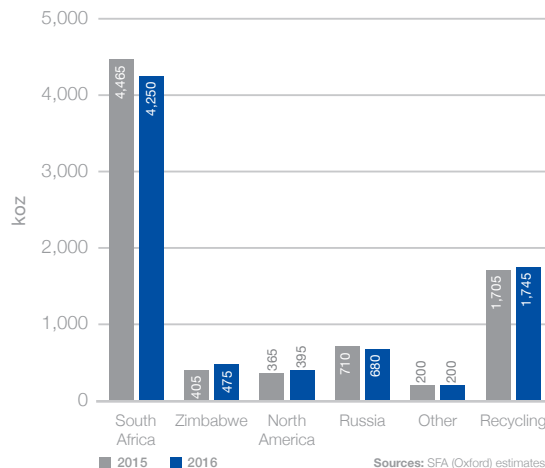
The South African economy remained weak and the average exchange rate achieved for FY2016 was R14.77 to the US Dollar.

## PGM prices (R/oz)



Source: Bloomberg

## Supply review (koz)



Source: SFA (Oxford) estimates

## Market outlook 2017

The outlook for platinum is for demand to be virtually unchanged. In Western Europe diesel's market share has been edging slightly lower, and is projected to continue to do so, but will be somewhat offset by continued growth in vehicle sales. In addition, tightening emissions legislation and increased vehicle production in emerging markets should further offset any further decline in Europe. So a stable outlook for autocatalyst demand is projected.

Global demand for jewellery is forecast to improve slightly after weakening in 2016. Solid investment demand is anticipated as bar, and coin and ETF investment are expected to be positive. Several new glass fabrication facilities in the rest of the world are set to lift platinum industrial requirements slightly next year, offsetting declining demand for nitric acid production and slower propane dehydrogenation (PDH) capacity growth in China.

Though primary producers are indicating similar production levels in 2017, there is a real risk due to the current PGM basket price for further mine closures and continued underinvestment in capital projects. We believe that, ultimately, mine closures and the sustained underinvestment in mining projects due to low prices will drive further deficits.

## Socio-political pressures

Employment opportunities, support for social infrastructure and business opportunities are some of the needs communities have. The rapid influx of people into the communities surrounding mines has increased the pressure on local physical and social infrastructure, further heightening these expectations.

We continue to engage with stakeholders to understand community needs, communicate about current community projects and highlight the Company's current reality. Various community BEE and preferential procurement transactions have been concluded to align the interests of the Company and the community.

More detail can be found in the Social Licence to Operate chapter on page 62.

## Regulatory and policy environment

The regulatory environment in the South African mining industry poses certain potential risks for a company such as Lonmin, including any changes to the country's laws and policies in connection with taxation, royalties, divestment, repatriation of capital and resource nationalism. The mining industry is regulated by an array of regulatory requirements, including the Mineral and Petroleum Resources Development Act, 2002 (MPRDA), which directly impacts our operating licence and prospecting and mining rights.

Uncertainty around mining policy, including the Mining Charter released for comment in April 2016, creates further uncertainty.

Regulatory changes could potentially have a serious financial impact on the Company. For example, the imposition of increased taxes or royalties, the obligation to sell at discounted development prices or being forced to sell product locally, could impact long-term supply agreements with existing customers.

Lonmin is committed to continually building constructive relationships with government and regulators, as they are key stakeholders in ensuring compliance with safety, health, environmental and social requirements. Interactions with government and regulators take place both through direct engagements and through industry bodies to present a unified view with our peers.

More detail can be found in the Relationships with Government chapter on page 104.

## Driving efficiencies

Various factors work against operational efficiencies, including absenteeism, labour disruptions and safety stoppages. Further to this are challenges related to our continued ability to access a sustainable and uninterrupted supply of essential inputs for the mining and processing operations, primarily electricity and water (refer to pages 87 and 90). Our commitment to *operational excellence* includes a focus on operational efficiencies, which drives the efficient use of water and electricity and minimises waste generation. (For more detail, refer to the Environment chapter on page 80.)



The restructuring, labour reorganisation and closure of high-cost shafts position the Company to continue operating in an environment of consistently low metal prices. The successful implementation of Lonmin's business plan continues to drive production increases, cost savings and a stronger balance sheet.

## Wage negotiations 2016

We concluded the wage negotiations with our majority union in October 2016 by successfully reaching a multi-year agreement. The collaborative relationship established with our representative union through the Relationship Charter and our investment in the concept of shared value established a platform for constructive engagement between the parties.

We believe that the wage increase represents an appropriate balance between the need for employees to receive a higher wage while balancing the current financial realities, as well as other socio-economic development commitments of the Company.

More detail can be found in the Employee Relationships chapter on page 36.

# A Challenging Operating Environment (continued)


## Performance indicators

We use the following 11 key performance indicators (KPIs) to measure our performance:

Relevance to strategy:

- 1 Operational excellence
- 2 Our people
- 3 Corporate strategy
- 4 Corporate citizenship

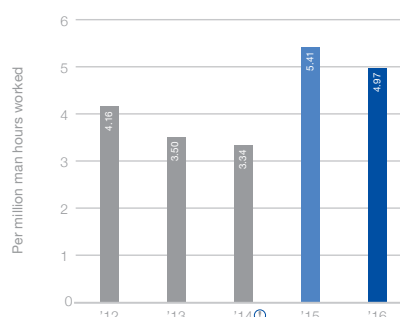
## Remuneration

Some KPIs are used as a measure in the incentive plans for the remuneration of executives. These are identified with the symbol .

The Directors' remuneration report can be found in the Annual Report and Accounts 2016 on page 85.

### Safety 1

LTIFR: 4.97



#### Definition

Lost-time injury frequency rate (LTIFR) is measured per million man hours worked and reflects all injuries sustained at work where the injured party is unable to return to work on the next shift.

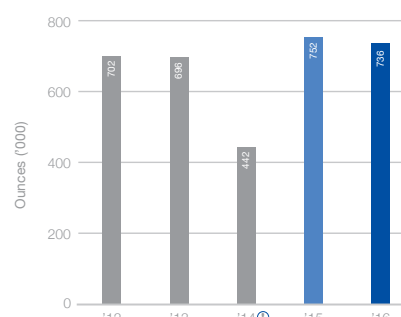
#### Comment

The LTIFR improved by 8% compared to the previous year. This was due to intensified focus on a number of safety initiatives, including visible leadership and direct employee engagement.

More detail can be found on page 50.

### Sales 1

Platinum ounces sold: 736,000



#### Definition

Platinum ounces sold are those ounces we produce either as refined ounces or recoverable ounces sold in concentrate at 99.95% purity.

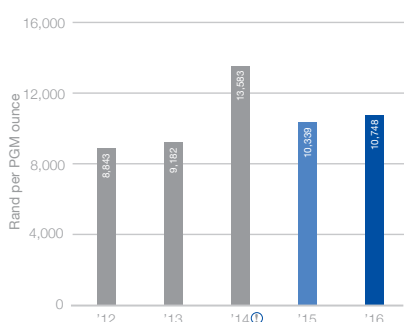
#### Comment

Platinum sales exceeded guidance of 700,000 ounces in 2016, as we benefited from the smelter clean-up initiative as well as various efficiency enhancement projects at the smelting and refining operations.

More detail can be found on pages 18 and 19 of the Annual Report and Accounts 2016.

### Unit costs 1

Cost of production per PGM ounce: R10,748



#### Definition

Cost per unit is key to being able to operate profitably through down cycles. This measure includes direct mining, concentrating, smelting and refining costs, as well as services cost including marketing cost associated with supporting the operations. Once-off (special items) and non-trading costs are excluded.

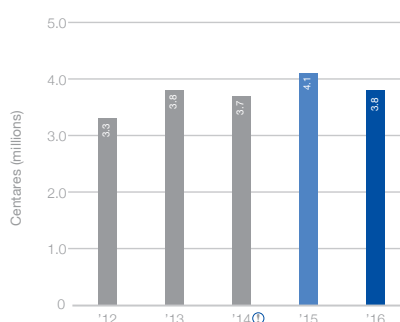
#### Comment

The unit costs achieved of R10,748 per ounce reflect an increase well below the current inflationary levels, albeit above our original guidance due to the production shortfall in mining. This was partially offset by the benefits associated with the cost containment and productivity improvement projects as they gained momentum.

More detail can be found on pages 32 to 37 of the Annual Report and Accounts 2016.

### Development 1

Immediately available ore reserves: 3.8 million centares



#### Definition

Immediately available ore reserves, in square metres or centares, excludes partially developed ore reserves in line with industry best practice.

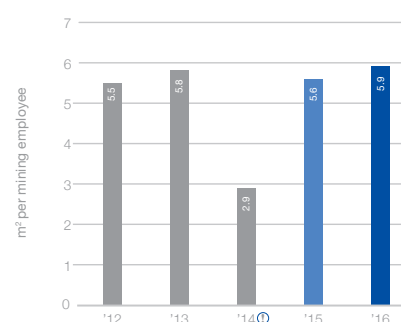
#### Comment

Our immediately available ore reserves at Generation 2 shafts at our Marikana operations remain healthy and continue to provide operational flexibility. Overall, the immediately available ore reserves decreased slightly, in line with our strategy which allowed for the orderly closure of high-cost shafts.

More detail can be found on page 39 of the Annual Report and Accounts 2016.

### Productivity 1

Generation 2 mining operations: 5.9m² per total employee



#### Definition

Square metres mined per total employee including contractors (up to shaft head excluding all central services) The KPI is focused on our Generation 2 shafts. (K3, 4B, Rowland and Saffy). Historical information has been restated to exclude Hossy which is scheduled for closure in 2017 and is now reported as part of Generation 1 shafts.

#### Comment

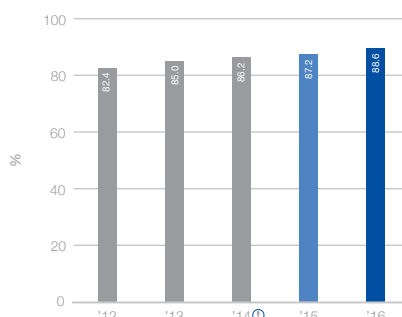
Productivity improved by 5% in 2016, largely driven by improved performances at Saffy and 4B shafts notwithstanding the production losses associated with safety stoppages. Labour reductions at all shafts, as a result of the restructuring, also contributed to the improvement. We expect that as our productivity improvement projects and safety initiatives gain further momentum during 2017, more improvements can be delivered.

More detail can be found on pages 39 and 41 of the Annual Report and Accounts 2016.



## Processing recoveries ①

PGM instantaneous recovery rate: 89.6%



### Definition

The instantaneous recovery rate is the product of the recoveries achieved at each step of the processing value chain and measures the efficiency of the recovery of metals.

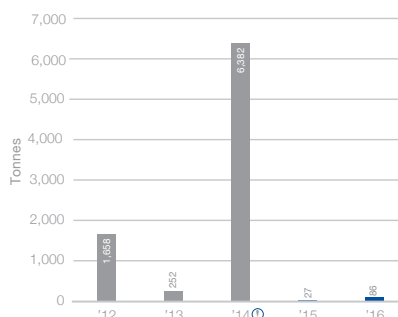
### Comment

The instantaneous recovery rate achieved in 2016 reflected further improvements versus historical performances. The smelter clean-up project supported by various optimisation and improvement plans across our processing operations delivered these exceptional results.

More detail can be found on page 41 of the Annual Report and Accounts 2016.

## Employee relations ②

Tonnes of production missed due to disruptions: 86 000



### Definition

Production tonnes missed due to social disruptions and industrial action is considered to be an indicator of the employee and social relations climate.

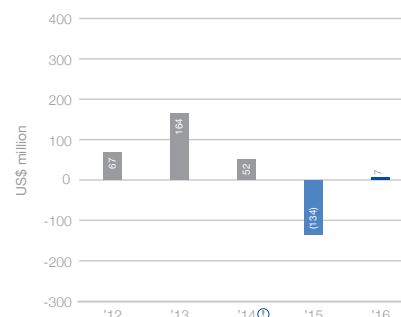
### Comment

The minimal loss of production due to social disruptions or industrial action demonstrates the continued progress made in improving relationships with employees, unions and communities.

More detail can be found on page 36.

## Underlying operating profit ③

US\$ million



### Definition

For any business the ultimate aim is to grow underlying EBIT and deliver value to shareholders. Underlying EBIT excludes the effect of once-off and non-trading items.

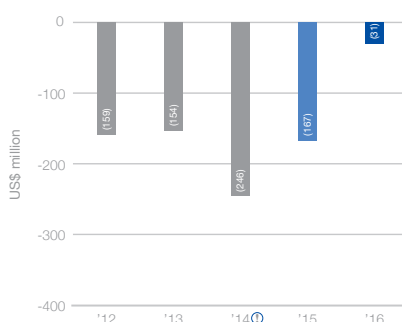
### Comment

The Company is highly geared towards metal prices and costs, which drive volatility in profitability. Notwithstanding metal prices decreasing further during 2016, the Company moved from a loss making position to generating profit in 2016 due to cost cutting. Detailed variance analysis is set out on page 32 of the Annual Report and Accounts 2016, under Financial review.

More detail can be found on pages 32 and 33 of the Annual Report and Accounts 2016.

## Free cash flow ③

US\$ (31) million



### Definition

Trading cash flow after capital expenditure and minority dividend payments.

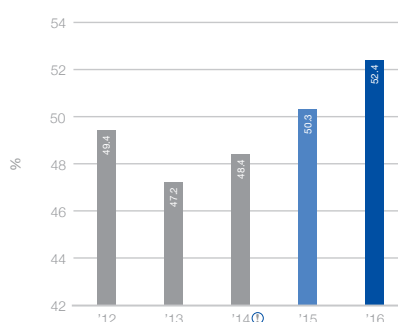
### Comment

Excluding restructuring cost and the timing of benefits associated with the reorganisation, the Company operated on a cash neutral basis after capital expenditure. Following the rights issue during the first quarter of the year, the subsequent three quarters generated cash of US\$104 million.

More detail can be found on pages 32 and 33 of the Annual Report and Accounts 2016.

## Transformation ④

HDSA management representation: 52.4%



### Definition

This KPI measures the percentage of Historically Disadvantaged South Africans (HDSAs) in management as defined by the Mining Charter.

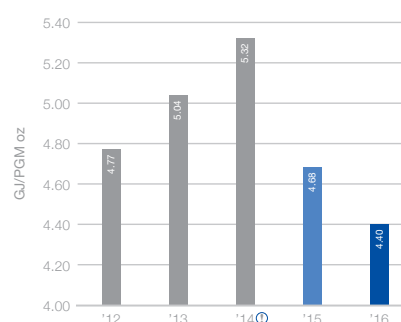
### Comment

We are pleased to report a further increase of 4.6% in our HDSA representation to 52.4%, despite the restructuring process, which remains well above the Mining Charter target of 40%.

More detail can be found on page 47.

## Energy efficiency ①

Energy consumption per ounce of PGMs produced: 4.40GJ



### Definition

Total gigajoules of direct (gas, petrol, diesel, coal) and indirect (electricity) energy consumption per ounce of PGMs produced including toll processed material.

### Comment

Continued focus on improvement initiatives in this area has resulted in the development of a pleasing downward trend.

More detail can be found on pages 90 and 91.

# A Challenging Operating Environment (continued)

Lonmin's principal risks, their impact, mitigation and change during the year, as well as the Company's viability statement, can be found on pages 20 to 27 of the Annual Report and Accounts 2016.

## Value-added statement

Through business operations, shareholdings, investments, procurement contracts and development projects, Lonmin distributes financial value to a variety of stakeholders.

US\$ million	2015	2016
<b>Net cash generated</b>		
<i>Customers, consumers and investment income</i>		
Cash received for products	1,290	<b>1,114</b>
Cash returns on investment	3	<b>6</b>
<i>Suppliers<sup>1</sup></i>		
Cash payments for materials and services purchased	(521)	<b>(460)</b>
Cost of borrowings	(27)	<b>(20)</b>
<b>Net cash flows</b>	<b>745</b>	<b>640</b>
<b>Cash distributed</b>		
Human capital (salaries and benefits)	721	<b>517</b>
Social capital <sup>2</sup>	6.8	<b>9</b>
Donations	0.6	<b>4</b>
Other community projects	6.2	<b>5</b>
Government taxes	24	<b>21</b>
Shareholders' distribution	–	<b>–</b>
Cash retained for growth	(7)	<b>93</b>
<b>Net cash distributed</b>	<b>745</b>	<b>640</b>

<sup>1</sup> Lonmin has a 30-day payment policy on services and procurement.

<sup>2</sup> Includes expenses related to the Social and Labour Plan community projects, donations and other community investments, inclusive of salary and administration costs.

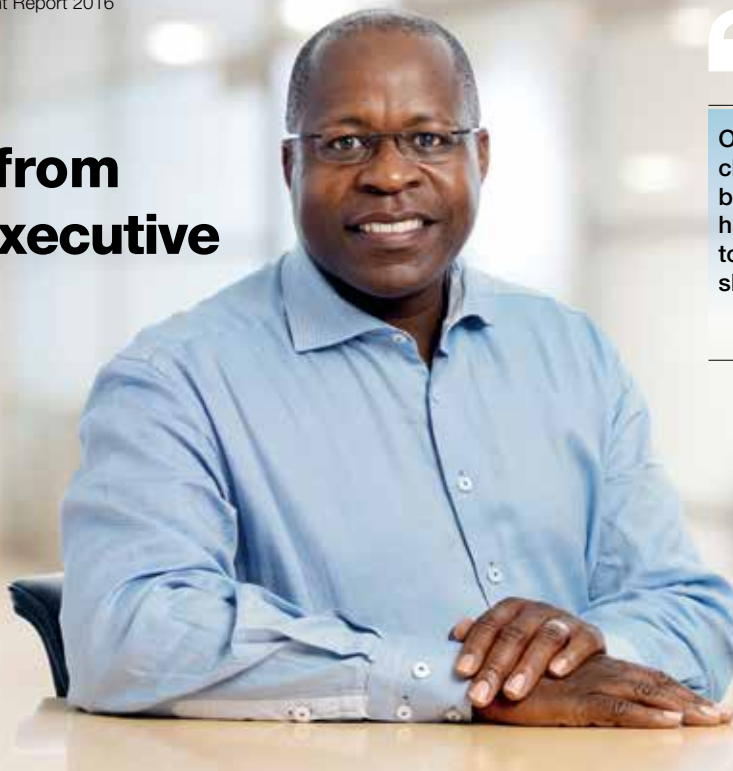
04/

# Leadership Reports



Phutiana Moses Modiba a loco operator at Saffy shaft.

## Letter from Chief Executive Officer



“

Our structural and strategic changes stabilised the business, generated cash and have opened up opportunities to maximise further shareholder value

Ben Magara  
Chief Executive Officer

”

*Ben Magara, Chief Executive reflects on 2016 and outlines the Lonmin strategy.*

### A challenging operating environment

This year has been marked by complex and competing themes, and the environment in which Lonmin operates remains challenging. With the global mining industry under pressure from weak commodity prices, South African mining companies face a range of additional stressors, some of which are unique to the country. The combination of these factors has contributed to increased costs and disruptions that negatively impact production efficiencies. These factors cover the spectrum of societal concerns and clearly demonstrate the interconnectedness of social, environmental, governance and financial value.

Lonmin's operations delivered good progress against the business plan and we expect to continue momentum to withstand the low pricing environment and improve cash generation. Costs were well managed and a reduction of R1.3 billion was achieved against the target of R700 million. Underlying operating profit increased to R124 million<sup>1</sup> from a previous year loss. The reorganisation of the business which started in 2015 was successfully completed in the first half of the year, with a reduction of 5,433 employees and contractors, and 1,426 people were successfully reskilled and redeployed into vacant, more productive roles. The successful completion of this headcount reduction as well as concluding the wage negotiations with no labour unrest were undoubted highlights. The rights issue concluded in December 2015 considerably strengthens the Company's balance sheet and provides funding certainty.

In order to further create, preserve and enhance long-term equity value, we signed a sale and purchase agreement to acquire Anglo American Platinum's (AAP) 42.5% stake in the Pandora Joint Venture post year end. This acquisition aims to consolidate the Company's position in Pandora's relatively shallow and high-grade mineral resource and provide an option for development by Eastern Platinum in both the short and longer term.

The tough decisions made last year have been difficult, but the business is now cash positive after capital expenditure, even in the current challenging operating and macro-economic conditions.

Despite an improvement in the Company's lost-time injury frequency rate for the year, we deeply regret the loss of four of our colleagues. Mr Zilindile Ndumela, Mr Goodman Mangisa, Mr Fanelekile Giyama and Mr Siphilo Makhende succumbed to injuries suffered in separate incidents at Rowland and E3 shafts in October 2015, April, May and July 2016. Post year end we regret to have suffered the loss of Mr Joao Macamo who was fatally injured at E1 shaft. We extend our deepest condolences to their families and friends.

Our strategy as discussed on page 28 remains in place and is delivering results. The primary strategic focus this year was to implement the business plan to strengthen cash flows, reduce costs and manage capital expenditure responsibly. Without a profitable business we have no future. Lonmin also faces a range of social and environmental challenges that equally cannot be neglected if we are to be able to generate value for all our stakeholders over the long term.

<sup>1</sup> Conversion factor of R14.77/US\$1.



**“The primary strategic focus this year was to implement the business plan to strengthen cash flows, reduce costs and manage capital expenditure responsibly. Without a profitable business we have no future.”**

## Stakeholder engagement

We refined our approach to engaging stakeholders to deepen our understanding of their concerns and to communicate the realities of the Company's situation. Strengthening our relationships with our employees and unions continues to be an area of focus. We engage more frequently and are building towards a common understanding of the financial constraints and realities the business faces.

The improved traction we are seeing in these relationships is evident in the relatively smooth implementation of the reorganisation and the successful completion of the wage negotiation process. Together with the President of the Association of Mineworkers and Construction Union (AMCU), I visited the 143 beneficiaries of the 1608 Memorial Trust set up for the dependant children of the Lonmin employees who died in August 2012. The visit aimed to demonstrate care and respect to these dependants and to assure them that Lonmin has committed resources to fund their education. I was also proud to see the first beneficiary of the Trust graduating from Fort Hare University in May 2016.

In the context of the safety challenges facing the mining industry, a safety Tripartite visit to our shafts attended by the Principal Inspector of Mines for the Rustenburg region, the President of AMCU (our majority union), and myself re-established the commitment and shared responsibility of all Tripartite parties to work together to achieve Zero Harm.

Extensive engagements were held during the year with BASF, a long-standing customer, to establish Lonmin's commitment and compliance with the human rights, labour, social and environmental standards in their Supplier Code of Conduct.

## Progress update

Lonmin has been through a period of intense introspection since the tragic events of August 2012 and the release of the Farlam Commission of Inquiry Report in June 2015. As a result of the conclusions we drew from these deliberations, we reviewed and updated our security policy and conducted a human rights gap analysis to identify areas for improvement in our human rights policies and procedures. We have also identified indebtedness as a burden on our employees and continue using external experts to challenge excessive rates of interest and to negotiate lower interest rates for our employees. As Lonmin, we believe in risk management and continuous improvement and learning from lessons brought by any unfortunate disruptive or tragic events with the hope that all stakeholders can take their individual and collective responsibilities to ensure that such events never happen again.

## Strengthening employee relationships

We recognise that the operating environment has become more complex resulting in a “new normal”, which is a state of increased conflict, disruption and resentment that must be continually analysed, understood and negotiated. A new model of management and leadership, with the skills to navigate these constantly changing dynamics, is required to address this. We are rolling out a leadership development programme for frontline supervisors that emphasises the capabilities required to manage the legal, safety and people management challenges posed by these changes.

Our efforts to rebuild relationships with our employees and unions were instrumental in the constructive resolution to the multi-year wage negotiations we concluded this year. The final agreed outcome represents a fair balance between the constrained financial realities of the Company and the need to ensure our employees are fairly remunerated.

Demonstrating visible felt leadership through regular shaft visits by senior management has, I believe, improved the Company's understanding of employees' particular concerns and deepened our relationship with them. With the Company now stabilised and the distractions of the local government elections and wage negotiations behind us, we have an excellent opportunity to build the organisational culture we want to see. This will be driven through our culture change initiative “The Way We Work at Lonmin” to move us away from the uncertainty of all the recent change and to build momentum towards a higher performance culture and the brighter future we see ahead.

## The housing challenge

There has been an increased focus on the housing challenges in the communities around our operations. The lack of decent housing is a problem around the country and for the mining industry as a whole. Lonmin is certainly not unique in facing this challenge. The housing challenges facing South Africa cannot be addressed unless each stakeholder plays its role and Lonmin is committed to playing its part. We are reviewing our housing strategy and working closely with the Department of Mineral Resources and local government to find a sustainable solution. I am confident that we will deliver a clear housing plan that meets government requirements and I am encouraged by the many engagements my team and I have had with the DMR minister Mr Mosebenzi Joseph Zwane and his team to find a solution that reflects the urgency and realities of Lonmin.

## Letter from Chief Executive Officer (continued)

Our employees deserve decent living standards, and should have the choice of how and where they live. We recognise that improved living conditions support employee wellbeing, which contributes to a more productive, more available, more alert, more safety-conscious workforce. The need to find a sustainable solution is therefore both a social and a business imperative.

The financial challenges the Company has negotiated in the recent past have required many difficult choices and the strategic reprioritising of spending. While housing is undoubtedly a desperate need in mining communities, so is the preservation of jobs. Financial constraints in no way affect the level of our commitment to address the housing challenge, but they do dictate the pace at which a sustainable solution can be implemented.

Lonmin's integrated human settlement strategy made progress during 2016 with the completion of 325 units in the infill apartment project. Construction by provincial government continued on the 50 hectares of serviced land donated by Lonmin in 2014.

### Promoting employee and contractor safety and health

I believe that safety is a proxy for good performance. We engage with the DMR around safety on an ongoing basis and I have a standing appointment with the Principal Inspector of the DMR after every quarterly results to discuss our business performance and, in particular, safety performance. These meetings offer context of the realities facing the Company and are very useful for Lonmin to understand the regulators' concerns and priorities.

The Principal Inspector attended the September 2016 SHE Committee of the Board meeting to be part of our highest level deliberations around safety. We believe that achieving Zero Harm requires all members of the Tripartite<sup>1</sup> alliance to share in a common vision. I remain convinced that Zero Harm is possible.

The wellbeing of our employees remains crucial and we have extended our nutrition programme from three days to five days a week in support of this. We have also implemented a project to understand and address the challenge of workplace absenteeism.

### Maintaining our social licence to operate

I am pleased that the procurement contracts finalised with the Bapo Ba Mogale communities during the year have delivered on our commitments under the 2014 BEE transaction. These contracts go beyond the initial commitment of R200 million in opportunities over an 18-month period. Four transactions were concluded during 2016 in the areas of passenger

transport, stockpile management, ore transport and the supply of personal protective equipment. These represent an opportunity of approximately R260 million a year and a total value of R1.65 billion over the next eight years. We continue to avail support to the Bapo Ba Mogale procurement company to help it entrench the structures and processes required to build a sustainable business beyond the life of these contracts.

The successful finalisation of these contracts provides a good starting point to improving the relationship between the mines and the Bapo Ba Mogale community. Internal conflict within the community shifts the focus away from the priority of ensuring that the average Bapo Ba Mogale citizen experiences the benefits of the strengthened relationship in their daily lives.

### Environmental management and opportunities

Water is our most significant environmental concern and water-related risks have been compounded by the drought across the country. We received authorisation to access water from the anthropogenic aquifers in our backfilled opencast pits and from shaft dewatering on the eastern side of our operations. While the electricity supply challenges of previous periods have eased somewhat, securing access to sufficient potable water and a stable supply of electricity for our operations remain risks.

Ongoing compliance with minimum emissions standards at the smelter complex is another environmental challenge in the context of the current financial constraints. We remain committed to demonstrating environmental stewardship by managing our impact on the natural environment in a responsible manner. Tighter emission legislation creates an opportunity to produce by-products from the calcium sulphite residue produced from the scrubbers at the smelter, which can be used in other applications such as gypsum ceiling boards. Lonmin continues to investigate opportunities to collaborate with like-minded organisations to create viable by-products that can offset the operating costs of these projects.

### Improving relationships with government

Constructive engagements with regulators and other government entities are critical to the sustainability of the Company, as is evident from the numerous examples discussed throughout this letter. To a large degree, Lonmin's priorities align with the safety, job preservation, community investment and broader developmental goals of the South African government. Effective collaboration requires not only a shared vision for the future of the industry and the country, but also a clear understanding of and commitment to the reciprocal roles and responsibilities of each party.

<sup>1</sup> Tripartite is an alliance between representatives of government, employees and mining companies.

2016 also saw high-level efforts between business and government to avoid downgrading of the country by international credit rating agencies. The five work streams and initiatives led by the Minister of Finance galvanised business and government to realise the benefits of working together for the benefit of the country. I have been extremely heartened by the positive collaboration and strong relationships established that bode well for the success and sustainability of South Africa. We also participated in the steering committee of the Courageous Conversations initiative that aims to address the most significant challenges facing the mining industry.

## Outlook

It remains my belief that in structuring Lonmin for lower PGM prices, every stakeholder has had to take some short-term pain to preserve and to share in the long-term gain of keeping the Company viable into the future. The work we have done to date has successfully repositioned the business to sustainably withstand the pressures of the current low PGM price environment. We must, however, remain focused on delivering against the business plan and make sure that we establish the ongoing sustainability of the business. When PGM prices finally turn, our current structure gives Lonmin the optionality and flexibility to benefit.

Through our membership with the International Council on Mining and Metals (ICMM) and the United Nations Global Compact (UNGC), we remain committed to collectively and continually improve our sustainable development performance.

I would like to thank all of our stakeholders, and particularly management and our employees, for your support in the hard work that has been done to return Lonmin to the right footing for the changed circumstances. I continue to be impressed by the entrepreneurial and innovative efforts of the operating teams to optimise value in the business, such as through the bulk tailings treatment project which secured funding in August 2016. We appreciate your support in what has been a challenging year, and I ask all of you to continue with your best efforts so that Lonmin can continue to deliver good results despite the persistent challenging macro-economic conditions.



**Ben Magara**  
Chief Executive Officer  
25 January 2017

# Committee Chairmen's statement

## Joint chair statement

This year has been a challenging year for the Company and for the industry as a whole. Our commitment to safe and ethical working practices remains non-negotiable.

Any fatality is intolerable, and we wish to convey our condolences to the families and friends of Mr Zilindile Ndumela, Mr Goodman Mangisa, Mr Fanelekile Giyama and Mr Siphilo Makhende who suffered fatal accidents during the reporting year. The four fatalities have been a regrettable setback in achieving our aim of Zero Harm despite the improvement during the period in Lonmin's lost time injury frequency rate.

Our dedication to sustainability goes beyond compliance – whether it be safety, health and environmental standards or the commitments within the Social and Labour Plans which include Lonmin's transformation goals.

During the year the SET Committee reviewed the strategic plans for transformation. Good progress has been made on the Company's journey of transformation in respect of the Mining Charter and the Broad-Based Black Economic Empowerment Act.

Improvement in employee housing is a key focus area, and it is pleasing to note that the infill apartment housing project is continuing as planned. We note the update made by the Presidency on the steps taken to implement the Farlam Commission recommendation of 2015. The Company's revised housing plan was submitted to the Department of Mineral Resources in October 2014 as part of the Company's Social and Labour Plans. Following engagements with and direction provided by the Department of Mineral Resources in September 2016 requiring certain revisions to Lonmin's housing plan, the Company is currently reviewing its plan and is confident that it will submit a plan that is compliant. Various community projects have been implemented such as the upgrade of roads and education school infrastructure projects.

Lonmin is reinvigorating the *ethics* programme, including a refresh of the Ethics Policy. Human rights, specifically Lonmin's Human Rights Policy and procedural framework, have been an area of particular focus.

The health and wellness programmes showed good results with an increased number of patients receiving treatment for HIV/Aids and a reduction in Aids-related deaths. Lonmin remains focused on improving the controls to prevent noise-induced hearing loss, an ongoing area of concern for the Company.

The Company continues to improve its environmental performance, and remains committed to meeting the changing environmental requirements and regulations. Plans have been put in place to improve the efficient use of water, and Lonmin is monitoring developments regarding carbon tax legislation to ensure continued compliance.

If we could project ourselves five years into the future, we would like to see Lonmin being the undisputed safest underground miner, both in terms of work-related and non-work-related fatalities and injuries. We will continue to strive to achieve the vision of Zero Harm.

Social and economic sustainability provide the Company with its licence to operate. A thriving business is what makes everything possible, and Lonmin is doing everything in its power to manage what we can control. Working together with all our stakeholders will ensure we create a positive legacy that benefits future generations.



**Len Konar**

Chairman of the SET Committee  
25 January 2017



**Jonathan Leslie**

Chairman of the SHE Committee  
25 January 2017



<b>28</b>	<b>Aligning our strategy to our operational context</b>
28	Operational excellence
29	Enhance balance sheet strength
29	Our people and relationships
30	Our corporate citizenship agenda
<b>30</b>	<b>Our sustainability approach</b>

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# Our Strategy



We successfully commissioned the other Precious Metals plant at the PMR during the year.



# Our Strategy

## Aligning our strategy to our operational context

Much has been achieved and the Company is now well positioned for an upturn and to maximise value for shareholders. In the long term, our strategy is to generate value from our mine-to-market business by utilising our value chain, especially our processing infrastructure and capabilities.

Our strategy focuses on the following four pillars which take into account our responsibilities around social and community investment:

1. Operational excellence;
2. Our people and relationships;
3. Enhance balance sheet strength; and
4. Our corporate citizenship agenda.

The end of 2015 saw the implementation of our Business Plan, the amending of our debt facilities and the undertaking of a Rights Issue to strengthen the Group's balance sheet. These actions were designed to enable the Group to operate in the low PGM pricing environment, whilst at the same time preserving its long-term value.

Delivery of the Business Plan is reported under the four pillars, but is primarily concerned with:

- removing high cost production ounces and, importantly, eliminating associated fixed and variable costs;
- reducing fixed costs by right-sizing the Group's workforce and reducing overhead costs and support services structures;
- improving operational efficiencies;
- reducing capital expenditure to the minimum required to sustain the efficient running of the Group's operations while satisfying regulatory and safety standards and limiting the number of development projects to Generation 2 shafts;
- maintaining operational and strategic flexibility through sufficient immediately available ore reserves;
- creating, preserving and enhancing long-term equity value by retaining long-term expansion opportunities; and
- continuing to improve relationships with key stakeholders.

We have positioned and will continue to reposition the business to withstand the volatile market conditions. Going forward, we continue to operate for value, not volume, generating and preserving cash to enhance our liquidity.

### Operational excellence

Our main priority remains the performance of our Marikana operations, which are some of the best in the industry in terms of quality, safety and efficiency. We believe our Marikana operations remain amongst the best hard rock narrow tabular mining operations in the Western Limb.

Profitability and returns are crucial. The Group is highly geared to the PGM pricing environment and the Rand/US Dollar exchange rate. Given the present PGM market, we believe that the priority in the short term is to make sustainable improvements in productivity and cash and bolster liquidity.

To improve cash margins, we strive to ensure that our core Generation 2 shafts reach the most efficient and profitable positions in terms of safety, costs, production and productivity as the Generation 1 shafts reach the end of their lives.

### Safety

Safety remains at the heart of all that we do. Our ambition to achieve Zero Harm starts with the safety, health and wellbeing of our employees and extends to everything we do, including minimising the environmental impact of our operations.

Our approach to safety is defined in the Lonmin Safety and Sustainable Development Policy, Sustainable Development Standards, the Fatal Risk Control Protocols and the Lonmin Mining Life Rules, a set of non-negotiable rules that target the risk areas responsible for the majority of fatal or serious accidents.

### Removing high cost production ounces

The Business Plan accelerates our core strategy of focusing on our larger Generation 2 shafts and will result in a reduction of the sales profile for the Group to approximately 650,000 to 680,000 platinum ounces for 2017 as high-cost production continues to be wound down. Our guidance has been revised upwards marginally to account for initiatives like the smelter clean-up.

The closure of inefficient areas and shafts will continue throughout 2017. As previously noted, our Hossy shaft remains on track for planned care and maintenance closure in 2017. Our Newman shaft has now ceased production from Lonmin crews. Newman is currently being mined by contractors and future extraction of the remaining ore reserves using contract mining will be assessed annually.

Two Generation 1 shafts, E1 and W1, were initially intended to be put on care and maintenance. These contractor-managed shafts were subsequently allowed to continue mining following a revised cash generative contractor development plan and more favourable terms. These shafts continue to produce profitable ounces and, as such, are expected to remain operational under the current contractor model for financial year 2017. The viability of these shafts is reassessed annually.

### Reducing fixed-cost expenses

We remain vigilant in containing our costs. Overheads and support services structures are constantly reviewed to align with the reduced sales profile. Further details are provided in the Annual Report and Accounts 2016.

## Maintaining reduced capital expenditure

Capital expenditure will be maintained at the minimum level required for the safe and efficient running of the Group's operations.

The Group continues to utilise capital portfolio optimisation tools with the aim of ensuring that capital expenditure is invested only in the most cash generative development projects available to the Group with the aim of predominantly funding capital expenditure through free cash flow generated by operating activities. Further detail is available in the Annual Report and Accounts 2016.

## Maintaining operational and strategic flexibility

We intend to maintain a clear strategic focus on the Group's mineral resources, mining and processing infrastructure at Marikana. Prior investment in this area means as at 30 September 2016 the Group had immediately available ore reserves equating to 22.4 months of mining at planned levels of production. This provides Lonmin with a competitive advantage, giving operational and strategic flexibility for a market upturn.

## Creating, preserving and enhancing long-term equity value

We seek to identify projects which add value by making use of our excess processing capacity. As part of these efforts, and in line with our focus on low cost ounces and near term cash, work is underway on the bulk tailings treatment (BTT) project.

The BTT involves the re-mining of Lonmin's Eastern Tailings Dam and the reprocessing of 26 million tonnes of tailings material at a rate of 300,000 tonnes per month. Once at steady state, the project is expected to deliver the lowest cost ounces in the Lonmin portfolio, producing about 29,000 ounces of Platinum per year or some 55,000 ounces of PGM (from tailings with a grade of 1.42 grammes per tonne with a recovery rate of 35%). The project is expected to be mined by a contractor over a seven-year period and to be commissioned and ramped up to full production during the 2018 financial year. Further detail can be found in the Annual Report and Accounts 2016.

Post year end we signed a Sale and Purchase Agreement to acquire Anglo American Platinum's (AAP) 42.5% stake in the Pandora Joint Venture. Further detail is available in the Annual Report and Accounts 2016 and on the Company's website.

## Enhance balance sheet strength

At the beginning of financial year 2016, we carried out a Rights Issue and amended debt facilities to strengthen the balance sheet.

Our stated aim at that time was to manage the business to be cash flow positive after capital expenditure whilst maintaining optionality to grow production over time when pricing improves.

We achieved this in 2016 and intend to deliver on this going forward. Our balance sheet will be managed prudently and conservatively with future capital expenditure being funded from free cash flow generated by operations.

## Our people and relationships

### Black economic empowerment (BEE)

Our BEE equity ownership is at least 26% and we strive to maintain this in line with the requirements of the Mining Charter.

### Continuing to improve relationships with key stakeholders

Our efforts to solidify and improve relations with our employees and their representative trade unions continue. We accept that building trust and strong relationships is a never-ending journey.

We continue to enhance our role as the primary source of communication by seeking to communicate directly with employees. We believe that this direct engagement, through the existing line management structures and periodic communication forums, forms part of the way we work and the basis of creating empowered, high performance teams. Through the leadership development and team effectiveness training programmes, we continue to encourage our managers to manage this direct engagement.

Management and unions continue to engage on a regular basis at different levels to ensure timely communication and resolution of issues at appropriate levels.

We also have regular engagements with our majority union, the Association of Mineworkers and Construction Union, in line with our Relationship Charter.

## Transformation

Lonmin embraces transformation as a business imperative and has made significant progress in this regard. We are committed to playing our part in addressing historic inequalities and creating the conditions in which current and future generations can succeed in creating a shared purpose. The Mining Charter requires a focus on increasing the number of Historically Disadvantaged South Africans (HDSAs) in management and the number of women in mining.

Transformation is monitored and overseen at Board level by the Social, Ethics and Transformation Committee. Transformation considerations are incorporated into recruitment, succession, skills development and talent management functions to develop an internal pipeline of HDSAs, including women. Lonmin's bursary and graduate development programmes prioritise HDSAs in order to build the future supply of appropriate candidates. Targets relating to transformation are included in the Corporate Balanced Scorecard that is used to measure performance for the incentive scheme.

# Our Strategy (continued)

## People

Our mining model is labour intensive and our people make the difference and are the vehicle by which our strategy is effected through the day-to-day operations.

The Company values the contribution made by all its employees and recognises that morale and retention remain under pressure as a result of the reorganisation and continuing cost constraints, which have limited salary increases and development opportunities.

We believe that our employees deserve decent living standards and should have a choice of how and where they want to live. These choices should allow for personal circumstances, affordable and market-related rates and integration into the broader society during their employment with us. Lonmin and its organised labour are reviewing employee living standards as part of its new human settlement strategy.

Progress against our human resources targets is measured through monthly reporting of key internal indicators as well as integrating certain targets as part of the Lonmin corporate objectives. Lonmin's human resources strategy, policies and procedures align with our operating country's labour laws and other relevant frameworks, guidelines and codes of practice. These include in South Africa, the social development requirements of the Minerals and Petroleum Resource Development Act (MPRDA) that are defined in the Company's Social and Labour Plan (SLP), the human rights provision in the International Council on Mining and Metals principles of sustainable development and the United Nations Global Compact.

The Company also reports to the Department of Mineral Resources (DMR) against the broad-based economic development requirements of the Mining Charter, which include housing and living conditions, employment equity and human resource development.

As announced in October 2013, Lonmin remains committed to spending R500 million over the five-year period to 2018 towards employee accommodation and community bulk services.

## Our corporate citizenship agenda

### Stakeholder engagement

Our business begins and ends with relationships and the quality of those relationships are central to our success and that of our stakeholders. Genuine stakeholder engagement and relationship building has allowed us to understand stakeholder expectations and to communicate on key issues transparently, consistently and in a timely manner.

## Social licence to operate

Maintaining our social licence to operate through securing the trust and acceptance of communities and stakeholders is material as they host our operations. This is achieved through:

- stakeholder engagement to ensure realistic expectations are understood and managed;
- community investment initiatives to address social issues;
- transformation initiatives to meet the government's social and economic development goals;
- ethical business practices that include a commitment to upholding human rights; and
- corporate and community partnerships.

This is very much work in process and is based on an acknowledgement that trust must be restored and communities healed.

## Human rights

Lonmin is committed to respecting the human rights of both its workforce and those who may be affected by its operations, and continues to seek to implement the United Nations Guiding Principles on Human Rights (the Guiding Principles) throughout its operations. Refer to page 77.

## Our sustainability approach

Lonmin's sustainability is entrenched in the operations and actions of the business. Our approach is informed by and aligns with the International Council on Metals and Mining's (ICMM) 10 Principles of sustainable development and considers the United Nations Global Compact (UNGC) principles.

The Lonmin's strategic pillars of *operational excellence*, *our people and relationships* and *our corporate citizenship agenda* explicitly recognise the importance of sustainability issues, including the importance of our role as a responsible corporate citizen and the critical importance of a working and trusting relationship with employees, communities and regulators. Striving for Zero Harm in safety, health and environment is a critical aspect of demonstrating operational excellence. Our fourth strategic pillar, *enhance balance sheet strength*, requires the participation of investors and other providers of financial capital, many of whom place significant emphasis on sustainable development criteria.

The sustainability approach is defined in the Lonmin Sustainable Development Standards<sup>1</sup>, and the Safety and Sustainable Development Policy<sup>2</sup> sets out our commitments towards sustainable development.

Sustainability is incorporated into the Lonmin strategy and life of business plan (LoBP), which spans in excess of 40 years, (excluding any future planned shafts), detailing operational plans to mine and process the Company's long-life mineral resources.



<sup>1</sup> Please see <http://sd-report.lonmin.com/2016/download-manager/> pdf for the 15 Lonmin Sustainable Development Standards.

<sup>2</sup> Please see page 124 for the Safety and Sustainable Development Policy.



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# Reporting According to Our Material Focus Areas



Ernest Mothoagae, a Tractor Operator, demonstrates how the proximity detection system works.

# Reporting According to Our Material Focus Areas

Supplementing Lonmin's Annual Report and Accounts 2016, this report covers the Company's most material sustainability matters. This chapter outlines how these material sustainability matters are determined.

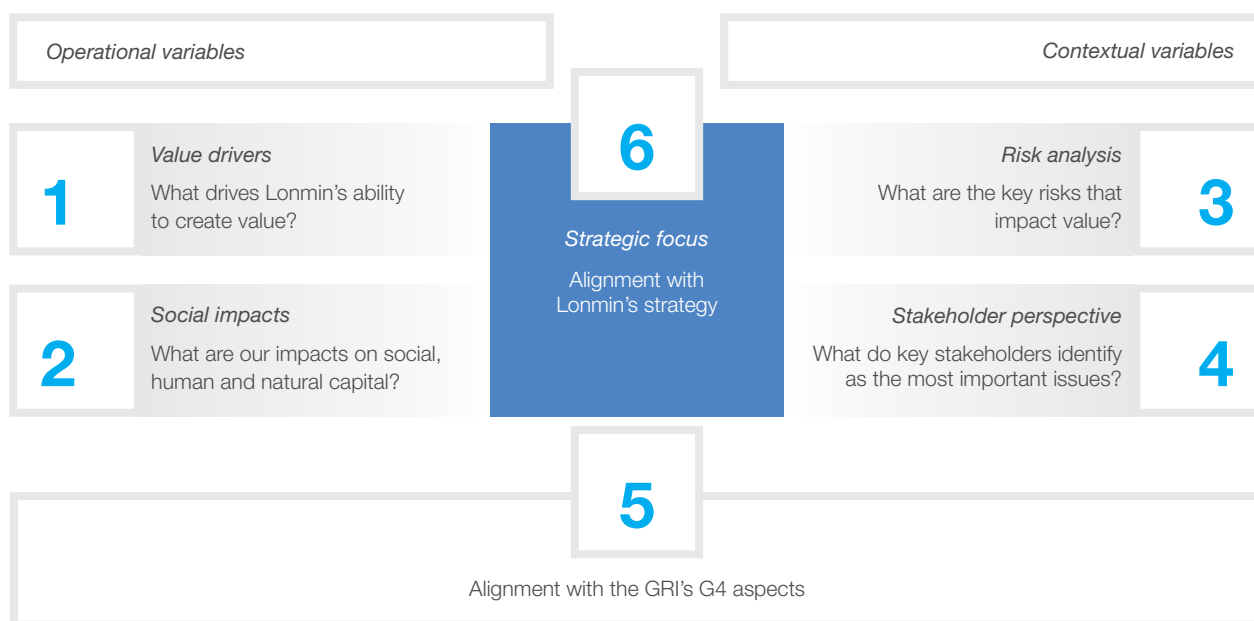
## Materiality determination process

The materiality process used to inform Lonmin's 2016 Sustainable Development Report was guided primarily by the approach to materiality outlined in the GRI's G4 Sustainability Reporting Guidelines. Recognising the importance of having a coordinated and integrated approach across Lonmin's annual reports that aligns with globally accepted standards, the materiality process also drew on the guidance provided in the International Integrated Reporting Council's (IIRC) Integrated Reporting <IR> Framework and the Corporate Reporting Dialogue.

Lonmin defines material matters as those matters that substantively affect the Company's ability to create value in the short, medium or long term and considerably influence key stakeholder decisions.

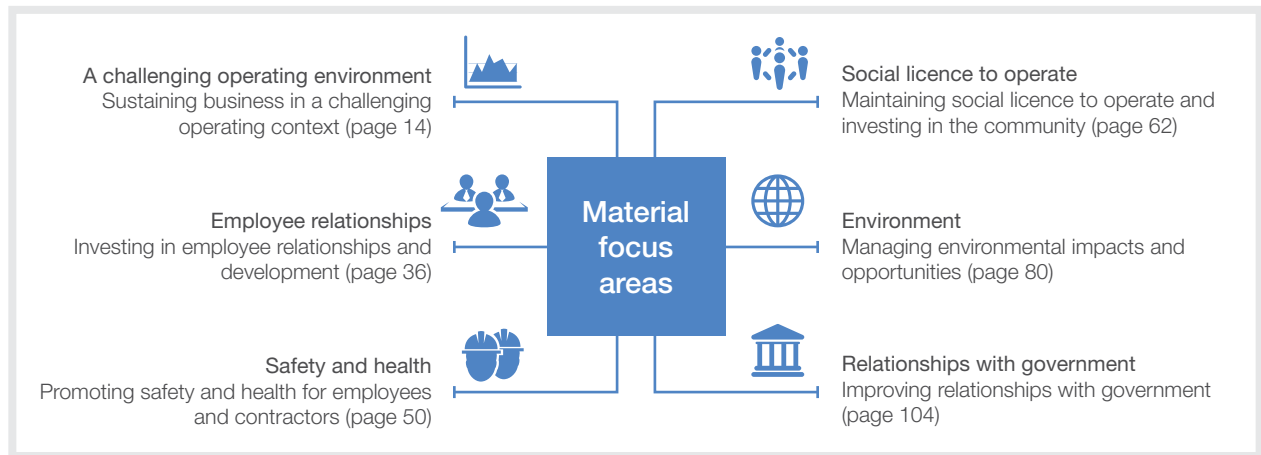
## Six-step process

An extensive materiality determination process was undertaken to establish our most material matters. The process included an analysis of internal operational variables and external factors that followed a structured six-step process, as depicted below.



Informed by the analysis, the existing five material focus areas have been retained, with some revisions to the associated set of material matters in each case, and one additional focus area, namely a challenging operating environment.





A challenging operating environment is reported as an overview section on page 16 of this report. The next four chapters outline the context, risks, stakeholders, governance and performance of the employee relationships, safety and health, social licence to operate and environment focus areas, and the final chapter consolidates Lonmin's vision for addressing these challenges in partnership with government.

## Stakeholder perspectives

Our goal is to rebuild and protect Lonmin's relationships with critical stakeholders. This requires genuine and robust stakeholder engagement, and an acknowledgement that trust and reputation are built on actions, not words. Building trust with external stakeholders and between management and employees helps to create an environment of peace and tolerance in which all stakeholders engage constructively.

Building relationships starts with a thorough understanding of stakeholder expectations and requires that we communicate key issues transparently, consistently and in a timely manner. Functional partnerships between government, organised labour and community leaders are essential to create the necessary environment for a sustainable future and realise the true meaning of "shared value for all".

Lonmin follows a risk-based approach to identify and prioritise stakeholder groups. We also perform desktop reviews, analysis of media coverage, online sources,

internal conversations and consultation sessions to improve our understanding of stakeholder views. We aim to develop and protect Lonmin's relationships with all stakeholders who have a material ability to impact Lonmin's operations and investment case.

Our stakeholder initiatives centre on improving communication and transparency, driving engagement to align the Company and our stakeholders with a shared vision of a sustainable and profitable Lonmin through all cycles, and minimising business interruptions. Formal engagement structures, including specialist sub-committees, have been established in the form of bilateral forums with the Bapo Ba Mogale traditional authority and surrounding communities. During engagements the most pressing community needs, such as employment, economic development, community infrastructure programmes and the SLP status, are addressed. Customers are engaged through the Company's marketing function and Lonmin interacts with customers daily, monthly and in the ordinary course of business.

The Executive Vice-President of Communications and Public Affairs is responsible for corporate communications, media, public relations and stakeholder management. For further information, refer to the supplementary report on stakeholder engagement, which includes an overview of the method and frequency of engagement, concerns raised and Lonmin's responses at <http://sd-report.lonmin.com/2016/download-manager/>.



# Reporting According to Our Material Focus Areas (continued)

## Risk analysis

### Approach

We take an integrated approach to risk management that informs the internal audit process and includes the implementation of mitigation measures, where necessary. The Company's risk management process includes a consideration of social and environmental risks, and sustainability risks make up a substantial portion of our risk profile. Sustainability risks are reviewed by the Safety, Health and Environment (SHE) and the Social, Ethics and Transformation (SET) Board Committees.

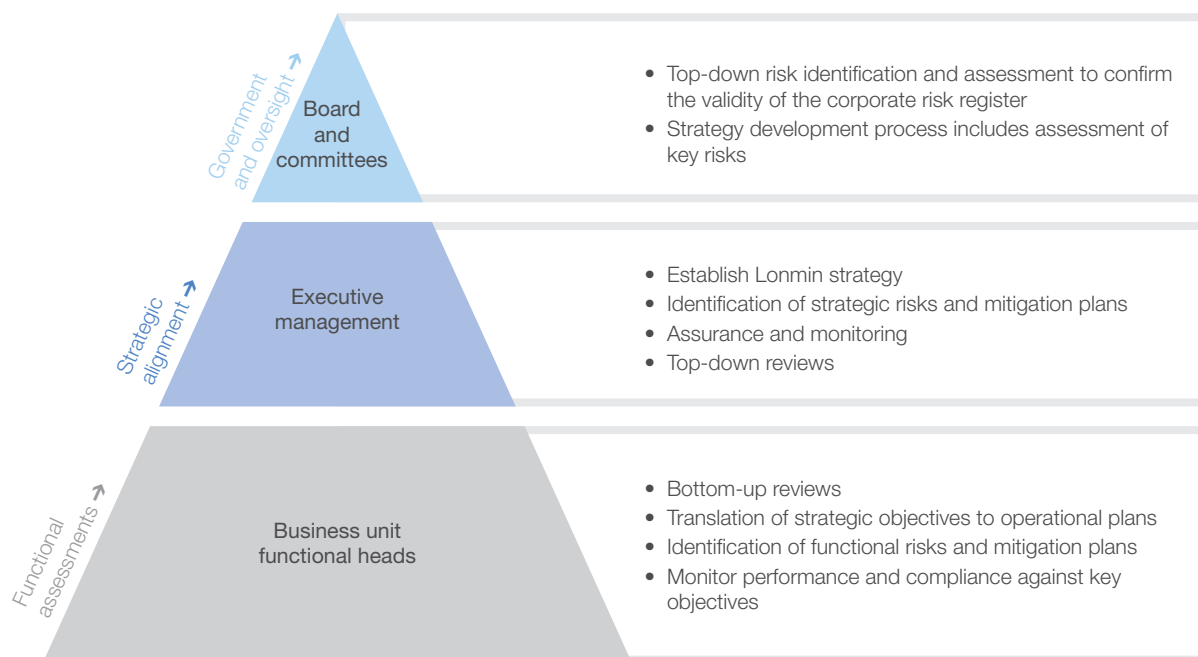
Risks are rated on a matrix scoring system based on probability of occurrence and potential severity, should they materialise. These are measured against the overall risk tolerance of the Company – the amount of risk we are willing to accept to meet our strategic objectives. The risk process marries top-down and bottom-up risk reviews that are carried out in the business and involve Executive Committee (Exco) and operational management. All senior managers are responsible for risk management and monitoring of risks. The causes and consequences of each risk are assessed and mitigation controls are developed. Where required, the internal audit department will perform internal reviews of these controls.

At an operational level, risk registers are regularly reviewed to take any operation-related risks that might occur during the

daily activities into consideration. These risk registers roll up to the corporate risk register that is updated on a three-month cycle and reviewed by Exco. During the Exco review, strategic risks are discussed that take the changing macro environment into account, as well as how the country and industry circumstances evolve. Lonmin's risk profile is benchmarked biannually with industry peers.

The risk management process was refined to improve analysis and understanding of macro-economic factors, and there was an enhanced focus on ensuring regulatory compliance as well as on the management of risks that might potentially cause operational disruption. Other additions included the grouping of risks to key business KPIs to further enhance the alignment with organisational strategy. A risk dashboard was introduced for all meetings to give a visual breakdown of key risks and mitigating strategies. This dashboard is also submitted to the Board of Directors (the Board) on a quarterly basis.

The risk management structure below shows how the risk management process integrates into, and cascades throughout, the various levels of the organisation. More detail on how we manage and mitigate risk is available on pages 20 – 25 of the Annual Report and Accounts 2016. The start of each of the material focus area chapters also includes a description of the relevant key risks, their impact and related opportunities and mitigation.



## Principal risks

The risks have been ranked on a residual basis, according to the magnitude of potential impact, probability, and taking into account the effectiveness of existing controls.

Lonmin's principal risks are addressed within the Annual Reports and Accounts 2016 as well as detailed within this report. Refer to page numbers below:

- 01** Operational execution (Refer to the Annual Report and Accounts 2016)
- 02** Price and market volatility (Refer to the Annual Report and Accounts 2016)
- 03** Employee and union relations (page 39)
- 04** Safety performance (page 54)
- 05** Community relations (page 66)
- 06** Utilities (page 84)
- 07** Changes to the political, legal, social and economic environment, including resource nationalisation (page 67)
- 08** Lack of geographical and product diversification (Refer to the Annual Report and Accounts 2016)
- 09** Loss of critical skills (page 39)

This is not an exhaustive list of all risks the Company faces. As the macro environment changes and country and industry circumstances evolve, new risks may arise, existing risks may recede or the rankings of these risks may change.



Lonmin's principal operating subsidiaries are concentrated in one geographical location.

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## Material Focus Area

# Employee Relationships

- > *Investing in employee relationships and development*





01 Alletta Diane issuing PPE to employees working at 1B/4B shaft.



02 We have completed an OPM plant this year.



03 The majority of our employees originate from the Eastern Cape and North West provinces.



# Employee Relationships

## Overview

Lonmin's mining model is labour-intensive and we recognise that sustaining strong relationships with our employees, and with their representative unions, is critical for the sustainability of our business, both in the short and long term. The importance of people is evident in the four pillars of our strategy, specifically *our people and relationships*.



We continued to focus on strengthening our relationships with our employees to create open lines of communication, particularly between supervisors/direct line management and their teams.

A new multi-year agreement was signed with AMCU which took effect on 1 July 2016. This was achieved without any strike action or labour disruptions. The wage agreement is discussed on page 44.

Succession planning was a key focus area, with a focus on identifying the pipeline of future leaders and developing a management plan. Succession is further supported by a bursary programme (2016: 66 bursars) offering students a full bursary to study in key technical fields, and a graduate programme (2016: 41 beneficiaries) that offers relevant corporate experience and exposure to other key aspects of the business.

This chapter discusses Lonmin's approach to employee engagement and development, and our performance against our objectives for the year. The content covers all operations, however, data relating to accommodation mainly applies to the North West Province operations.

## Key stakeholders



### Employees

Lonmin employed, at 30 September 2016, 25,296 permanent full-time employees, with whom we are focused on building trust and strengthening our relationships. Daily interactions between management, leaders and teams provide an opportunity to achieve this.

To assist with better communication, front-line supervisors and managers receive communication materials on a wide range of topics, regular talking points and responses to frequently asked questions to support conversations around important matters with the aim of keeping our employees informed and continuously engaged.



### Unions

The Association of Mineworkers and Construction Union (AMCU) is the majority union at our operations, as determined by the number of employees belonging to the union (2016: 81% of our full-time employees). Lonmin supports our workers' rights to choose their organised labour representatives and recognition agreements are in place to allow for freedom of association, within the confines of South African labour legislation.



### Contractors

Our complement of 7,497 contractor employees, as at 30 September 2016, makes up 23% of our workforce. Contractors are an important resource for creating and sustaining employment in and around our operations. They include transient and small-scale partnerships as well as long-term, large-scale professional relationships.

Engagements with contractors happen in the daily course of business as stipulated in formal service agreements.

## Risks and opportunities

The sustainability risks and related opportunities that apply to employee relations are discussed below, with references to the location of further information regarding their management and mitigation. The risk management approach is discussed on page 34 of this report and on page 20 of the Annual Report and Accounts 2016.

### Employee and union relations

#### Description

Optimal relations can significantly enhance operational execution and improve employer-employee relationships, whilst a breakdown in relations could result in production stoppages as well as a breakdown of trust.

The industrial relations environment has stabilised over the last 12 months as evidenced by the improved dialogue between unions and company management. Whilst the environment has remained stable, the potential for volatility remains, which could result in disruptions to operations and have a material adverse effect on the Company's financial position.

#### Impact

Various internal as well as external factors could influence the employee relations space and could lead to disruption of operations and breakdown of employer-union relations.

#### Opportunities and mitigation

To ensure open and transparent dialogue, appropriate structures have been established to enable effective employee engagement across all levels. These structures include a Future Forum which enabled the consultation process for voluntary severance as well as the Section 189 process. A relationship-building programme and charter to govern relations between unions and the company have been established. As part of enhancing employee ownership, an Employee Profit Share Scheme has been established.

### Loss of critical skills

#### Description

Due to the depressed mining sector, the risk of the loss of critical skills remains high.

#### Impact

The loss of critical skills could negatively impact safety, production and the ability to deliver against targets. In order to retain our skilled labour, we continuously review market-related remuneration packages as compared to the incentive and retention schemes offered by Lonmin. This continuous monitoring of remuneration practices and matching the packages offered by our peers in order to attract and retain employees of a suitable calibre can result in increased costs.

#### Opportunities and mitigation

Implementation of a scheme to retain key critical skills. Ongoing review and analysis of our remuneration practices in order to ensure that we remain competitive and are able to attract and retain the skills required during this challenging time. We also use counter-offers selectively in order to retain the most critical employees. The implementation of an employee value proposition which focuses on employee wellbeing.

As part of ensuring the development and retention of critical skills Individual Development Plans (IDPs), succession planning and retention strategies for scarce skills have been established. Ongoing monitoring of remuneration practices which matches Lonmin peers are monitored in an ongoing manner. Graduate development, mentorship programmes and internship programmes have also been established to ensure development of existing and future human resources capacity.

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### Further reading

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# Employee Relationships (continued)

## Accountability and governance

Lonmin's Human Resources Strategy is implemented through the human resources function, which is integrated into the Company's other business streams to enhance service delivery to our employees and to support more effective decision-making. Monthly reports on key internal human resources indicators track progress against our targets and integrate certain targets into Lonmin's corporate and operational objectives.

The strategic human resource drivers that support the effective implementation of Lonmin's strategy are:

- Employee relations – rebuilding our relationship with employees and unions
- Winning the hearts and minds of our people – ensuring visible leadership and management accessibility
- A compelling proposition for employees – culture transformation through “The Way We Work at Lonmin”
- Financial literacy and counselling
- BEE transactions – through the Employee Trust and the profit share scheme
- Housing and living conditions – focus on enabling our employees to access decent living conditions and home ownership

## Contractors

Contracted companies are required to operate sound business models that protect the basic human and constitutional rights of their employees and comply with the prevailing labour laws to facilitate an environment of productivity and development. These requirements are enforced through the Company's procurement assessment process. Contractual terms and conditions bind contracting companies to adhere to Lonmin's Sustainable Development Standards, Code of Business Ethics and the Basic Conditions of Employment Act, 75 of 1997. Contracting companies must also demonstrate how their internal processes provide and uphold fair treatment of their employees' rights.

## Grievance procedures

Formal mechanisms are in place for employees to lodge grievances, including an anonymous ethics hotline. As outlined in the corrective action procedure, employees can also request a mediation to be set up by a human resources

practitioner or line manager. Further information on human rights and ethics is available on pages 77 and 115.

During 2016, Lonmin refined its disciplinary procedure to include revised corrective action procedures that define the consequences for non-compliance with Company standards, including absenteeism and safety disciplines. This procedure is being consulted on with our majority union and will take effect once this process and any subsequent revisions have been exhausted.

## External policies, frameworks and regulations

Lonmin's Human Resources Strategy, policies and procedures comply with the requirements of South African labour laws and align with other relevant frameworks, guidelines and codes of practice where these relate to human resources. The Company's progress against the human resources requirements of the Broad-Based Socio-economic Empowerment Charter for the South African Mining Industry (the Mining Charter) are reported to the Department of Mineral Resources, including accommodation and living conditions, employment equity, transformation and human resource development.

The draft of the Mining Charter was released during the year. The revision in its current form is likely to have an impact on the Company, including as it applies to ownership, transformation, employee housing, procurement and skills development. Consultation between the industry and the Minister of Mineral Resources is ongoing.

## Approach and performance

### Employee overview

As at 30 September 2016, Lonmin employed 25,296 (2015: 26,968) people on a permanent full-time basis, of whom 79% were HDSAs. Of our full-time employees, 9.1% (2015: 8.8%) are women. Our management headcount, as at 30 September 2016, was 437 compared to 475 at 30 September 2015. We employed 7,497 (2015: 8,701) contractors; of these, 689 or 9.2% (2015: 799) contractors are women.

The decrease in headcount is predominately attributable to the reorganisation programme initiated last year, natural attrition and a greater proportion of contractors departing as part of our continued organisational optimisation initiatives.



Employment category	Paterson band	30 September 2015	Own employees as at		
			30 September 2016		
			Male	Female	Sub-total
Temporary employees	Temporary	226	63	27	90
Unskilled and defined decision-making	A-band	13,664	11,550	1,206	12,756
Semi-skilled and discretionary decision-making	B-band	8,271	8,471	301	8,772
Skilled technical and academically qualified junior management; supervisors; foremen; and superintendents	C-band	3,332	2,614	632	3,246
Professionally qualified and experienced specialists and middle management	D-band	335	218	87	305
Senior management	E-band	129	104	13	117
Top management	F-band	11	9	1	10
<b>Total</b>		26,968	23,029	2,267	25,296 <sup>1</sup>

84% of our employees are South African; the majority of our 16% foreign employees originate from Mozambique and Lesotho. Our South African workforce comes mainly from the Eastern Cape and North West provinces.

To support the increased participation of South Africans in the local resource economy, Lonmin employs locally where

possible. Training initiatives in local communities develop skills to increase the pool of local employees. Initiatives include the production cadet, the mining technical service and community engineering learnership programmes. Community education and skills development are discussed in detail in the Social Licence to Operate chapter, on pages 70 – 72 of this report.

#### Employee demographics by geographic origin at 30 September 2016

Province	Percentage of total employees		Number of employees		
	2015	2016	Male	Female	Sub-total
	%	%			
Eastern Cape	32	34	8,196	317	8,513
North West	33	32	6,572	1,570	8,142
Limpopo	1	1	236	20	256
Free State	3	3	809	35	844
Gauteng	6	5	978	164	1,142
KwaZulu-Natal	3	3	691	26	717
Mpumalanga	6	6	1,470	108	1,578
Northern Cape	0	0	0	0	0
Western Cape	0	0	10	1	11
Total foreign	16	16	4,067	26	4,093
<b>Total</b>	<b>100</b>	<b>100</b>	<b>23,029</b>	<b>2,267</b>	<b>25,296</b>

<sup>1</sup> Please take note that the reorganisation process stretched beyond the financial year scope and included the reduction of contractors.

# Employee Relationships (continued)

## Reorganisation

Lonmin has a policy in place to assist us to act in a manner that is both substantially and procedurally fair in the event that retrenchments are required.

Due to persistently low PGM prices, reorganisation was initiated in 2015 to refine the business model. At the conclusion of the reorganisation in March 2016, the restructuring had contributed to a headcount reduction of 5,433<sup>1</sup> people. 1,428 employees were reskilled and redeployed into vacant, more productive roles. Forced retrenchments were limited to 62 people. The reduction was achieved through active engagements and consultation with trade unions. That the process was completed without strike action or any operational disruptions is a tribute to the maturing relations built through the Relationship Charter between Lonmin and the unions.

Support offered to employees during the restructuring included reskilling options, a no-obligation voluntary package calculation service (which among other benefits offered two weeks' severance for every year worked), a dedicated help desk, an SMS helpline, financial support to acquire a new portable skill as a means to sustain economic participation, easy access to payroll services and financial advice from a reputable external financial adviser firm, as well as pension and provident fund service providers. The counselling service offered emotional support, and any study assistance or debts to the Company accrued during the 2014 strike were written off for those exiting the Company on a voluntary basis.

## Employee turnover

Employee turnover decreased to 7.9% in 2016 (2015: 9.1%); of this, 4.24 % was a result of the headcount reduction initiatives.

Adjusting for the headcount reductions, Lonmin's turnover rate has remained relatively low for the mining industry.

## Absenteeism

Achieving our strategic goal of *operational excellence* is critically dependent on increasing labour productivity, and particularly important given the reduced headcount at our operations.

We increased our focus on absenteeism, with an emphasis on improving our understanding of the root causes, how to address them and how best to support our employees. Absenteeism (unplanned non-availability) deteriorated to 12.7% (2015: 11.2%), amounting to 1,163,957 person days lost/shifts lost. With planned non-availability due to training or leave running at just over 10%, it is important to minimise absenteeism to support safe and productive operational performance.

A group of employees with high levels of absenteeism was identified and interviewed to gain qualitative insight into absenteeism. Follow-up actions include financial counselling, and support through our employee wellbeing service among others. We held workshops with employees and AMCU to highlight the consequences of absenteeism, both for employees and for the Company. We are now moving towards finding solutions jointly with our employees and automating the collection and analysis of absenteeism data in real time to monitor the effectiveness of joint interventions implemented.

Measures already in place to address absenteeism include linking attendance to bonus payments and the use of buffer labour crews, which is being piloted at a number of our Generation 2 shafts. The Company also piloted a project to assess the impact of daily nutritional supplements on employee wellbeing and to determine whether this has a positive impact on absenteeism.

## Employee turnover by reason – as at 30 September 2016

	2015			2016		
	Male	Female	Total	Male	Female	Total
New recruits	1,026	243	1,269	299	62	361
Resignations	(198)	(31)	(229)	(201)	(31)	(232)
Deaths (not work-related)	(226)	(7)	(233)	(192)	(3)	(195)
Deaths – employees (work-related)	(2) <sup>2</sup>	(0)	(2)	(4)	0	(4)
Dismissals	(392)	(65)	(457)	(404)	(45)	(449)
Retirements	(90)	(6)	(96)	(24)	(1)	(25)
– Retrenchments – VSP <sup>3</sup>	(1,418)	(64)	(1,482)	(938)	(87)	(1,025)
– Retrenchments				(56)	(6)	(62)
Medical repatriation	(75)	(3)	(78)	(40)	(1)	(41)
<b>Total exits</b>	<b>(2,401)</b>	<b>(176)</b>	<b>(2,577)</b>	<b>(1,859)</b>	<b>(174)</b>	<b>(2,033)</b>
<b>Net gain/(loss)</b>	<b>(1,375)</b>	<b>67</b>	<b>(1,308)</b>	<b>(1,560)</b>	<b>(112)</b>	<b>(1,672)</b>

<sup>1</sup> This figure is representative of the reorganisation process that commenced June 2015 and was completed in March 2016, thus stretching beyond the financial year scope. The figure includes contractors.

<sup>2</sup> One of the fatalities in 2015 was a contract employee and therefore will not reflect in the statistics above.

<sup>3</sup> Voluntary separation packages.

## Business improvement initiatives

The business support office continually facilitates and monitors the implementation of business improvement initiatives by line management, aimed at increasing productivity and improving performance.

Pursuant to the successful rationalisation of the workforce by 19%, we experienced an increase in productivity at our Generation 2 shafts from 5.6 square metres per person in 2015 to 5.9 square metres per person in 2016. As the disruption created by the rationalisation process settles down, we expect the mining teams to return to the long-run target levels of production. Whilst we are pleased with the implementation of our Business Plan and with our strategy to reduce high cost production in a low price environment, we have yet to fully harness the productivity gains, and mining has not been able to deliver the planned tonnes for Generation 2 shafts during the 2016 financial year for a variety of reasons, including redeployment and reskilling of employees taking longer than anticipated, absenteeism of key personnel reducing the planned blasts per month and higher incidences of safety stoppages in the first nine months of the year.

We remain focused on improving productivity and recognise that multiple challenges remain and a step change is needed to realise further improvement. In parallel with the ongoing implementation of the initiatives set out below, additional stoping crews will be deployed in order to further support the achievement of planned output, as our healthy ore reserve position allows for this.

The current initiatives being implemented to improve productivity are:

- establishing a labour skills buffer;
- addressing employee absenteeism;
- introducing a programme aimed at the empowerment of frontline supervisors; and
- implementing the Theory of Constraints framework in order to improve the optimisation of half levels at Generation 2 shafts

## Valuing our employees

We value the contribution made by all our employees and recognise that morale and retention remain under pressure as a result of the restructuring, reorganisation and continuing cost constraints, with limited salary increases and few development opportunities.

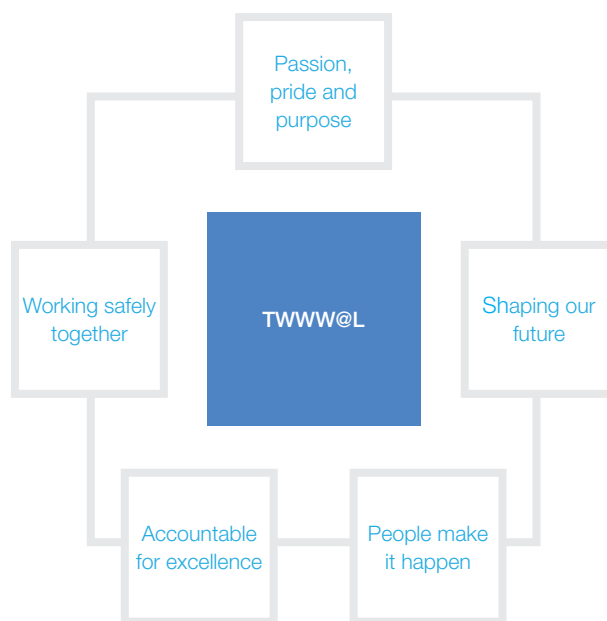
## Employee relationships

Our ability to deliver on our business plan is supported by the continued focus on communication and relationship building with our employees, further entrenching the vision of “The Way We Work at Lonmin” (TWWW@L).

Line management is encouraged to build relationships with employees directly to reduce the perceived gap between Company and employee. Lonmin believes that improving two-way communication and ensuring consistent messaging can build trust so that wherever possible, concerns can be addressed and issues resolved as they arise.

## “The Way We Work at Lonmin”

“The Way We Work at Lonmin” is a leader-led change process to develop and institutionalise a Lonmin culture that supports sustained success by establishing productive behaviour and mindsets built around work-team relationships. The initiative is based on five core concepts that aim to improve communication, entrench accountability and empower resource teams to do what is required of them.



# Employee Relationships (continued)

## Remuneration and benefits

Lonmin aims to comply with all relevant labour legislation, including the Basic Conditions of Employment Act, 75 of 1997. Our employees have access to a range of benefits, such as on-site healthcare, comprehensive life and disability insurance, which includes retirement provisions, a defined-contribution pension scheme, paid study leave, four months paid maternity leave and family responsibility leave.

Various performance-linked bonus schemes serve to incentivise employees, including production-related bonus schemes set against specific targets, in which the majority of operational employees participate. Where production bonuses are not applicable, a corporate balanced scorecard is in place to incentivise employees against a range of targets which include Company financial performance, operational performance, safety, transformation, employee relations and personal achievement. The balanced scorecard is explained further on page 92 of the Annual Report and Accounts 2016. Remuneration and benefits matters are subject to review and ratification by Lonmin's Remuneration Committee (Remco). Wages for employees falling within the bargaining units are negotiated through collective bargaining arrangements. The Company aims to pay competitive wages and monitors comparable employers for equivalent levels of work in the South African mining industry. The absolute level of earnings for employees is also an important consideration.

## Wage settlement

The Company announced, on 31 October 2016, the settlement of the negotiations with AMCU about wages and conditions of service. The three-year agreement, which is effective from 1 July 2016 to 30 June 2019, provides employees with a realistic and competitive settlement and ensures the continued sustainability of Lonmin. We are pleased that the negotiation process was concluded in a timely fashion and primarily without strike action, which was the desire of all parties involved.

The key points of the agreement are:

- Increases for category 4 – 9: R1,000 per year or 7% (whichever is greater) on basic salary
- Increases for officials (B and C band): 7% on total cost to company for each year of the agreement
- Living out allowance increases by R100 in each year of the agreement
- Allowances calculated off pensionable basic
- Rock Drill Operators' allowance increases by 6% in each year
- Holiday Leave Allowance calculated off normal basic from year two (1 July 2017)
- Medical contributions for category 4 – 9 employees will increase in January of each year. The medical aid contribution increase will be based on medical aid inflation as determined by the Board of Trustees of the medical aid. The increase is estimated to be 13.5% for 2017.

At the end of this wage agreement, a Rock Drill Operator at Lonmin will earn R12,296 (basic salary) and a guaranteed package of R19,455.

The impact of these wage agreements for this bargaining unit is an increase of 7.8% in financial year one, 8.0% in financial year two and 7.1% in financial year three or an average of 7.6% over the three-year period.

Below is an example of the basic agreed guaranteed packages for category 4 – 9 employees. These figures exclude overtime and safe production bonuses which make up a significant part of employees' wages.

## Lowest paid entry level underground employees

Date	Basic salary	Cash remuneration <sup>1</sup>	Guaranteed package
Current	8,713	11,614	13,452
1 July 2016	9,713	12,768	14,672
1 July 2017	10,713	14,126	16,199
1 July 2018	11,713	15,328	17,588

## Rock drill operators

Date	Basic salary	Cash remuneration <sup>1</sup>	Guaranteed package
Current	9,296	13,152	15,085
1 July 2016	10,296	14,363	16,368
1 July 2017	11,296	15,770	17,950
1 July 2018	12,296	17,043	19,455

Employees also have access to a range of non-financial benefits, including:

- free transport to and from shafts, plants, housing areas and bus stops for those residing in the Greater Lonmin Community (GLC);
- financial literacy and counselling; and
- an employee wellness service that provides free, confidential professional counsellors and therapists on matters of emotional, physical and financial distress.

## Profit share scheme

A profit share scheme was established to create shared ownership among employees who were not participants in the Company's existing share award schemes. The implementation of this EPSS enabled Lonmin to receive an HDSA equity accreditation of 3.8%.

<sup>1</sup> Cash remuneration is paid directly to the employee while the guaranteed package includes payments to funds on behalf of employees (e.g. provident fund).



### Financial literacy and counselling

Employee indebtedness is a concern for the mining industry as a whole and has repeatedly been identified as a debilitating burden in engagements with our employees and their unions. We revitalised a financial wellbeing programme in 2012, facilitated by an external service provider, to provide financial wellness training and support to our employees.

The financial fitness module is incorporated into the induction programme<sup>1</sup> provided to every employee on joining the Company and when returning from leave. An on-site office informs employees on how to manage their debt and reviews garnishee orders.

The financial wellness service provider also offers the following services:

- **Audits of emolument attachment orders (garnishee orders):** All emolument attachment orders issued against Lonmin employees are audited before Lonmin activates payments to the respective parties. This process helps to stop or cancel a number of irregular or illegal garnishee orders, for example where administration fees are charged above the allowed 12.5%. Since inception, this process has saved employees approximately R4 million, and stopped 473 garnishee orders.
- **Reviewing interest charged:** This assisted in reducing the outstanding balances on our employees' loans and emolument attachment orders by R2.5 million since inception. Interest charged on employee debt has halved from 19% to 8% and the total debt instalments charged to employees were reduced by over R200,000 a month.

Thus far, through this assistance, three houses and 13 cars have been saved from being repossessed.

- **Assisting employees with tax consulting services:** This service has resulted in tax savings and refunds for our employees, and was also instrumental in identifying tax scam perpetrated by bogus tax practitioners. We were able to warn our employees of the scam and provide the necessary assistance where needed of R462,000 over the last year.

#### Case study: Mr Motsh

- The financial wellness service provider met Mr Motsh in December 2015 when he visited Chris Ryce, our financial wellbeing consultant. He requested assistance because he could no longer afford his debt commitments, which were over 70% of his net salary.
- He had two personal loans which amounted to just under R200,000 in outstanding capital and R10,700 monthly repayments.
- The service provider was able to reduce his instalments from R10,700 to R3,500 by reducing interest rates under the debt counselling solution. Mr Motsh now pays only 30% of his net salary on his debt repayments.
- This ensures that he takes home nearly double the amount now, compared with when he received assistance from the service provider. This is a R7,200 additional disposable income available to spend on his living expenses and family.



David Thengimfene a loco operator working at Saffy shaft.

<sup>1</sup> Induction training is a pre-requirement and those working in core operations have to attend refresher training every 12 to 18 months.

# Employee Relationships (continued)

## Skills development

The industry shortage of critical skills is a risk to Lonmin's ability to achieve its strategic goals. The Company's employee development initiatives aim to develop the required skills in our employees to create an empowered and productive workforce.

Lonmin's total investment in employee development decreased to R156.89 million (2.3% of annual payroll) compared to R183 million in 2015 (2015: 2.6%).

While spending on developmental training remained constrained due to the focus on cost containment and cash preservation, the Company is taking the necessary steps to ensure that the skills pipeline remains appropriate to meet our forecast needs.

A programme to develop and upskill leadership and empower line managers will be rolled out. This will be followed and supported by a team intervention, which will include shaft management, from general managers to team leaders, and will be rolled out on a shaft-by-shaft basis over the next three years. These programmes will also emphasise productivity to re-establish this key attribute at pre-strike levels.

The business model arising from the organisational restructuring enabled standardisation of human resources development programmes across all sections. The ISO 9001 quality audit which took place this year covered all operations and sections. It led to a single ISO 9001 accreditation across the Company, which was secured in preparation for the Mining Qualifications Authority (MQA) audit.

## Breakdown of average training hours per employee category

Employee category	2015		2016	
	Male	Female	Male	Female
Contractors	23.6	15.4	20.43	15.12
Unskilled and defined decision-making	28.8	20.2	31.54	27.06
Semi-skilled and discretionary decision-making	23.4	23.5	26.28	12.70
Skilled technical and academically qualified, junior management, supervisors, foremen and superintendents	17.7	13.6	20.99	22.22
Professionally qualified, experienced specialists and middle management	10.6	15.9	14.01	10.36
Senior management	9.9	5.0	9.36	9.50
Top management	0.0	0.0	9.00	0.00

Lonmin trained 19,602 employees and 7,764 contractors at our training facility which is based near our operations in the North West during 2016, investing a total of 1,336,106 hours of training.

## Learnerships

Scarce technical skills in mining, processing and engineering are developed through learnerships in our mining and process operations, and engineering function. The current intake decreased due to cost containment, from 148 in 2015 to 38 in 2016.

Learnership type	Number
Mining	5
Process	0
Engineering	33
<b>Total</b>	<b>38</b>

## Core skills

The core skills programme focuses on critical competencies required by the mining and process operations. 1,609 employees received training to develop basic core skills and meet key operational standards (2015: 5,286).

## Bursaries and graduates

Lonmin's bursary and graduate programmes build the pipeline of future skills the Company needs by identifying and developing appropriate candidates. The programmes focus on students studying mining or mining-related disciplines, such as mining, electrical, mechanical, industrial or chemical engineering, metallurgy and mining technical services disciplines (for example, geology). Comprehensive bursaries are made available to promising candidates on the basis of a service binding contract after graduation, for a period equal to the number of years' study. Preference is given to HDSA candidates and those from the Greater Lonmin Community (GLC). Upon completion of their studies, bursars enter Lonmin's graduate-in-training programme.

Lonmin had 66 bursaries in place during 2016 (2015: 98). Of these, 55% are students from the GLC, 82% are HDSAs and 38% are women.

There were 41 graduates on the graduate-in-training programme during the year, which 83% are HDSAs; 31% are from the GLC; and 41% are women.

## Mentorship programme and individual development plans

Employees are encouraged to set personal goals for their current and future development through individual development plans (IDPs), which combine with a formal mentorship programme that facilitates skills transfer and knowledge sharing.

There were 104 active mentorships in 2016 (2015: 115), of which 27% are for women. For C-band and above, 671 employees (24% women) have formal IDPs in place (2015: 1,317). Our aim is to have an IDP in place for all interested employees within these bands.

## Adult education and training

The Lonmin Academy provides adult education and training (AET), previously known as adult basic education and training (ABET), including courses for pre-AET and AET levels 1 – 4. Level 4 is the equivalent of a Grade 9 qualification in the South African schooling system. 295 employees and 137 community members registered for AET courses (2015: 781). The Company's emphasis on productivity and cost efficiencies created a challenge in releasing full-time employees for training during working hours.

## Portable skills training

Employees affected by the Section 189 process were offered portable skills training. During the year, 156 people, including community members, received portable skills training (2015: 303). Fewer employees received portable skills training as the Company is in a cash-constrained environment and had to reduce training costs.

## Employment equity and diversity

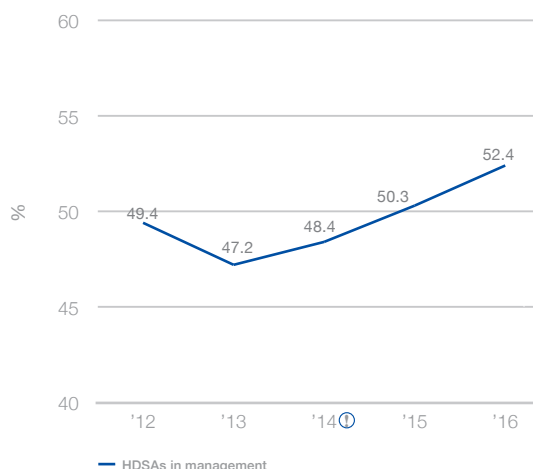
The MPRDA, which is implemented through the Mining Charter, was enacted to drive transformation in the mining industry by facilitating meaningful participation of HDSAs. Lonmin recognises transformation as a business imperative. We are committed to cultivating a workforce that reflects the diversity in our country, including that our working environment accommodates women.

## Transformation and empowerment

Transformation is monitored and overseen at Board level by the SET Committee. The Exco receives monthly reports on HDSA representation in the business. Transformation considerations are incorporated into recruitment, succession, skills development and talent management functions to develop an internal pipeline of HDSAs, including women. Our bursary and graduate development programmes prioritise HDSAs in order to build the pipeline for future supply of appropriate candidates.

HDSAs in management increased to 52.4% in 2016, which remains above the Mining Charter target of 40% at management level.

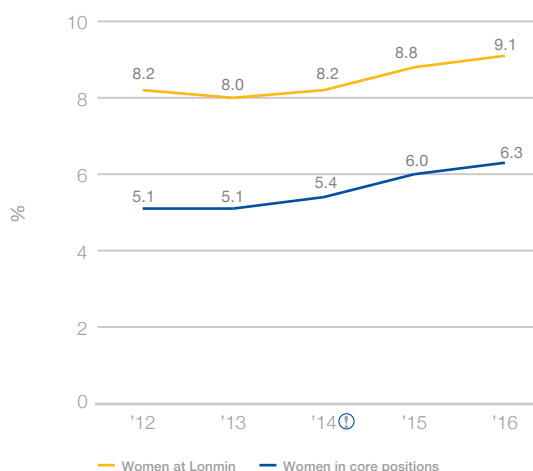
## HDSAs in management (%)



## Women in mining

We are committed to cultivating a working environment that welcomes the contribution of women in a traditionally male-dominated industry. Women comprised 9.1% of total full-time employees. 6.3% of core mining positions were occupied by women.

## Women employed on a full-time basis at Lonmin (%)



Our goal for 2017 is to continue to implement programmes that support the transformation of the Company's workforce to improve HDSA representation in management and women in mining, and to align with the requirements of the Mining Charter once it has been finalised.

The Company is piloting work clothing and personal protective equipment designed to better meet the needs of women working at the mine.

# Employee Relationships (continued)

## Employee accommodation and living conditions

### Human settlements

#### *Integrated human settlement strategy*

In recent years Lonmin's human settlements initiatives have been focused on achieving a series of sustainable, integrated housing initiatives. During this journey, the Company has come to recognise that these initiatives will require a multitude of strategic partnerships with property developers, providers of capital, lending institutions, local municipalities as well as provincial and national government. We consult regularly on this strategy with government, local authorities, employees and their representatives, whose involvement is vital.

To this end, Lonmin and its organised labour are reviewing employee living standards as part of its new human settlements strategy. We believe that our employees deserve decent living standards and should have a choice of how and where they want to live allowing for personal circumstances, affordable and market-related rates and integration into the broader society during their employment at Lonmin. To assist in achieving these important objectives, Lonmin issued a formal request for expressions of interest nationwide to partner with the Company to review the existing human settlement strategy. The reviewed strategy should realise a tactical plan that addresses employees' wishes, needs, security and affordability to ensure a fit-for-purpose and decent standard of living. This is the first step in the process of developing an appropriate strategy which will require the commitment of all stakeholders to ensure success. An element of this strategy will be an employee accommodation census to establish employee housing preference and confirm the estimated number of employees who require decent accommodation. We believe that the living conditions of our employees and their families have a direct influence on their general wellbeing and on their ability to focus and perform in their working environments. At the same time, we continue to work on collaborative projects such as the Special Presidential Package to improve infrastructure and service provision. Achieving our vision for sustainable, integrated human settlements requires careful planning, consultation and coordination between all stakeholders, including employees, communities, potential funders, developers, unions, local municipalities and all levels of government.

#### *Affordable accommodation<sup>1</sup>*

The Marikana Housing Development Company is a section 21 non-profit company that was established for the purpose of managing the 1,149 two-bedroom homes Lonmin has made available for outright purchase or on a rent-to-buy scheme since 2005. The selling price of these 45 square metre homes is R62,426, including land. To date, 369 people (2015: 325) have taken ownership of these houses. While affordability, indebtedness, and access to mortgage funding create serious challenges, marketing and education programmes are being ramped up to encourage employees to purchase the houses. Future home ownership plans are investigated as part of reviewing the employee housing strategy.

#### *Infill apartments per SLP commitments*

All 128 single-sex hostel blocks were successfully converted into renovated single and family apartment blocks at a total

cumulative cost of R387 million by end of 2014. The infill apartment project develops the areas between the existing converted blocks to utilise the space available and to access the existing installed bulk infrastructure around the converted hostels. Lonmin committed to spend R500 million over five years in terms of its SLP commitments to develop 1,240 modern apartments. The scope of the project includes sport and recreation facilities, paving and landscaping to transform the space into employee housing villages. Phase 1 of construction saw 325 units completed at Karee in 2016 at a cost of R90 million. Construction of another 168 apartments is in progress, as part of Phase 2 at a cost of R70 million. Phase 3 and Phase 4 of the apartments programme are scheduled to be rolled out in 2017 and 2018 respectively.

We continue our engagement with unions on the allocations of these units as well as the market-related rental for these units.

## Collaboration projects

These are long-term projects that rely on collaboration with multiple partners and stakeholders. The collaboration projects include Marikana Extension 2, Marikana Extension 5 and Mooinooi.

### Marikana Extension 2

Lonmin contributed 50 hectares of serviced land for development following the announcement of the Special Presidential Package initiative in 2013. This land, known as Marikana Extension 2, was donated directly to the Department of Human Settlements, the North West Public Safety and Liaison Department and Rustenburg Local Municipality. An estimated 2,658 dwellings of various typologies are expected to be constructed on the land, which will benefit community members, including Lonmin employees. At the close of phase 1 in March 2016, 292 breaking-new-ground (BNG) units had been constructed by the provincial government and 252 community residential rental units (CRUs). As agreed with the stakeholders from the provincial government and local municipality offices at the inception of the agreement, 70% of the units constructed are allocated to Lonmin category 4 – 9 employees. Phase 2 construction of scoped units is yet to commence and, at the time of publishing this report, the Company could not ascertain a clear commitment from the relevant stakeholders about when this will be completed.

### Marikana Extension 5

Feasibility studies to construct units continue on the 134 hectares of unserviced land at Marikana Extension 5. Lonmin is seeking to enter into partnerships with prospective developers in order to develop more housing units and facilitate access to decent accommodation.

### Mooinooi

Initial feasibility studies conducted by the Company have indicated that 25 hectares available for development in Mooinooi could accommodate 2,500 high density units. Rezoning and consolidation of the various serviced stands are being pursued with the Madibeng Local Municipality to partner with prospective developers for such an undertaking. Concurrent with the rezoning application we are in discussion with Madibeng to enhance the bulk services supply and infrastructure.

<sup>1</sup> In addition to these houses and converted hostel accommodation, there are 369 houses at Karee and 280 houses at Wonderkop available on a rental basis.



The request for expressions of interest for the Lonmin Employee Housing Strategy cover these initiatives.

## Union relations

We respect and support our employees' rights to collective bargaining and freedom of association, and representation. Lonmin also believes that every employee has a right to be heard.

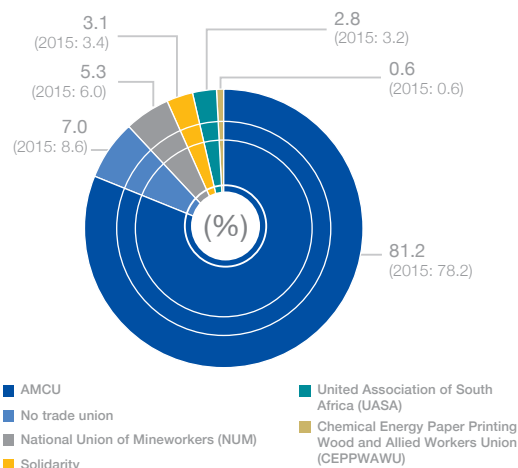
Lonmin interacts with unions on an ongoing basis and at different levels within the Company, through the various union structures and management interactions with union representatives.

Relationships with unions, while challenging, have strengthened and matured. This contributed substantially to the successful implementation of the workforce restructuring, reduced work stoppages and the successful resolution of the 2016 wage negotiations. Management interacts regularly with union representatives and the Company has invested in supporting capacity development in union structures and leadership. Changes to the Company's operating structures last year have made it important that the Company and union structures are realigned to improve communication. Monthly and quarterly meetings are held to share information on Lonmin's performance and evolving situation. Training is provided to shop stewards on legislative matters, business skills and the requirements of their roles and responsibilities.

At the end of September 2016, 23,520 employees (93%) were members of various organised trade unions.

A Relationship Charter is in place that outlines the Company's relationship with the majority union, including aspirations, expectations, accountability and commitments from both parties. The implementation of the terms of the Relationship Charter has enabled Lonmin to strengthen relations with trade unions through constructive and regular engagements.

## Union representation



## Recognition structures

Lonmin believes that every employee has a right to be heard without intimidation. The Association of Mineworkers and Construction Union (AMCU) is the majority union, representing 81% of full-time employees as at 30 September 2016. However, in accordance with the labour Relations Act of South Africa, AMCU has collective bargaining rights, unrestricted access to the workplace and rights to deductions, full-time shop stewards and office facilities on the Company's premises.



Lonmin's Women's Day celebrations

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53	Key stakeholders
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55	Accountability and governance
55	Approach and performance

08/

## Material Focus Area

# Safety and Health

- > *Promoting safety and health for employees and contractors*





01 The "Aziko Sper" campaign to create awareness on how to prevent finger injuries.



02 Zaharia Mogobye, Ubisse Jose Do Santos and Ernest Mothoagae demonstrating proximity detection device.



03 Andrew Saffy Memorial Hospital, Lonmin's on-site medical facility.



# Safety and Health

## Overview

Every day, more than 32,793 Lonmin employees and contractors work underground in our mines or at our concentrators, refineries and smelter. Ensuring that the necessary controls and procedures are in place to support the safety and health of our workforce is a critical element of our business strategy, and we do this through sustaining *operational excellence*, caring for *our people* and demonstrating good *corporate citizenship*. Lonmin views safety as a proxy for good performance and we believe that our goal of Zero Harm is achievable.



Health and wellness are integrally linked to quality of life, morale, productivity and safety performance. On a monthly basis, approximately 20,000 employees, contractors and community members visit Lonmin's primary health facilities. The overall health and wellness of an employee are the outcome of a host of factors, many of which arise outside the workplace. Lonmin's safety awareness and healthcare initiatives include many programmes that extend into our host communities.

Lonmin's lost time injury frequency rate (LTIFR) showed an improvement in 2016. However, there were four fatalities during the year, which we deeply regret.

This chapter provides an overview of the Company's approach to safety and health management across all Lonmin's operations. It also outlines the healthcare facilities, programmes and services available to employees.



Our smelting facilities located in the North West province.



## Key stakeholders



### Employees and contractors

Lonmin creates and maintains a safe operational culture through awareness campaigns, training and other safety, health and wellness initiatives. Our standard safety procedures require that unsafe work is stopped or not undertaken and employees and contractors are empowered to ensure that this expectation is understood and complied with. The health and wellbeing of employees are supported through access to Lonmin's comprehensive primary healthcare services, occupational healthcare programme, emergency care and wellness programmes.

Contract employees are expected to adhere to Lonmin's safety procedures and standards. The Company's healthcare facilities are available to on-site contractors, should they need to use them.

Our hospital and clinics are experiencing an increasing number of visits from spouses and children of workers with the increase in family housing units and improved employee appreciation of the benefits of a medical scheme.



### Industry associations

There are a number of industry organisations that focus on addressing safety and health concerns in the mining industry. These include the Mining Industry Occupational Safety and Health (MOSH) programmes driven by the Chamber of Mines, the International Council on Mining and Metals (ICMM), the Health Policy Committee, the Mine Health and Safety Council (MHSC), the Association of Mine Managers South Africa (AMMSA), the Chief Executive Officer Zero Harm Task Team through the Chamber of Mines, and the MHSC health and safety targets and milestones. Lonmin also participates in other industry bodies where safety and health are a key discussion point, these include the Bushveld Safety Forum, the Mine Ventilation Society of South Africa, and the North West Tripartite Forum. The doctors in the health and wellness department belong to the Medical Mining Doctors Association. Lonmin's participation in these forums exposes the Company to shared learnings, best practice and peer performance benchmarks.



### Government

Safety and health in the mining industry is regulated through the Department of Mineral Resources (DMR). The DMR inspectors conduct safety and health assessments and site inspections. Lonmin has to comply with regulatory requirements, which include safety and health. The Company engages with government, including the Department of Labour – specifically for the Precious Metal Refinery (PMR), regarding safety and health issues on a regular basis. Our hospital is regulated by the Department of Health, which also monitors our tuberculosis (TB) and HIV/Aids programmes. Pharmaceutical services are governed by the South African Pharmacy Council.

# Safety and Health (continued)

## Risks and opportunities

The sustainability risks and opportunities that relate to employee safety and health are outlined below, with references to further information regarding their management and mitigation. The risk management approach is discussed on page 34 of this report and on page 20 of the Annual Report and Accounts 2016.

### Safety performance

#### Description

A good safety performance increases employee morale and productivity and lowers costs, whilst a poor safety performance reduces productivity, damages company reputation and results in unfavourable regulatory intervention. Employee injuries and/or work stoppages due to Section 54 stoppages will impact the Company's ability to achieve production and financial targets.

#### Impact

Poor safety performance has a direct impact on the life of employees, contractors and their families and risks such as fall-of-ground, tramming, working at heights, scraping and rigging incidents, exposure to gases, fire, molten metal, electrocution and many other hazards have to be controlled to reduce and eliminate fatalities and injuries. A failure in safety processes could result in injury or loss of life, which would have tragic implications for employees, their families and communities. It would also severely disrupt operations and could result in safety stoppages which have a direct impact on people, cost and reputation. Failures in safety procedures may be caused by employees or poor management practices. The Department of Mineral Resources (DMR) could also temporarily suspend part or all of the operations under the Mine Health and Safety Act (commonly referred to as a Section 54 stoppage) and this has an impact on the working rhythm, cost and production. This suspension could potentially result in Lonmin's operating licence coming under scrutiny by the regulator.

#### Opportunities and mitigation

Safety awareness and training such as the roll-out of the Du Pont leadership programme, called the Lonmin Safety Leadership DNA programme. This programme develops individuals' safety competencies, knowledge of safety theory, how to apply it and how to practise safety management. Structured workplace coaching is also part of this programme which is conducted one-to-one to bridge individual competency gaps and to improve safety performance over time. Training has been delivered to executive and senior management, union health and safety structures and 16 "train the trainers" candidates. Safety Improvement Plans are being implemented with an enhanced focus on accident analysis and proactive preventive measures. Visible Felt Leadership (VSL) is such a proactive measure which was accelerated during the year. VSL is senior management being visible in the operational areas, confirming that safety is a core belief and showing passion to work safely. Safety audits are also conducted and include internal and external audits that measure the safety maturity of each operational business unit. Cross-site safety audits support learning across the operations and the sharing of best practices.

### Further reading

Safety at Lonmin



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### Noise and noise-induced hearing loss<sup>1</sup>

Noise remains a significant risk at Lonmin. We address exposure to high noise levels through various programmes.

#### Opportunities and mitigation

We do not procure any new equipment or machinery with a noise intensity level greater than 110dB(A). Personal protective equipment (PPE), specifically hearing protection devices, are reviewed to ensure that Lonmin uses only the most effective products to reduce exposure to noise levels of above 85dB(A).

A hearing conservation programme is in place to address noise levels in work areas, provide training, and increase awareness about NIHL and the importance of wearing hearing protection equipment.

### Further reading

Health and wellbeing



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### Disease profile with high incidence of tuberculosis and HIV/Aids<sup>1</sup>

Tuberculosis (TB) and HIV/Aids are debilitating diseases and are key focus areas for the DMR and Department of Health. HIV/Aids-related diseases remain the biggest cause of in-service deaths. Employees failing on treatment and the high incidence of TB are of concern.

#### Opportunities and mitigation

Lonmin's wellness programme aims to address the physical and emotional effects of TB and HIV/Aids. Employees and contractors have access to voluntary HIV/Aids counselling and testing (HCT), and regular initiatives aim to raise awareness about these diseases. We supply anti-retroviral treatment (ART) to HIV-positive employees and support volunteers active in the Greater Lonmin Community (GLC) who conduct home counselling and testing, and perform TB contact tracing.

### Further reading

Health and wellbeing



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<sup>1</sup> These risks are not part of Lonmin's strategic risks, but in the context of health, they are important to note.

## Accountability and governance

Lonmin's Safety and Sustainable Development Policy defines our approach to managing safety and health. The policy is endorsed by the Chief Executive Officer and aligns with ICMM's 10 Principles, International Standards Organisation (ISO) and Occupational Health and Safety Management Standard (OHSAS 18001) management system requirements. Our process operations retained their integration certification for ISO 14001, ISO 9000 and OHSAS 18001.

Ensuring a safe and healthy working environment is the responsibility of every person employed by or working at Lonmin. The Chief Executive Officer is ultimately accountable for the health, safety and wellbeing of all employees and contractors when they are on site.

The Safety, Health and Environment (SHE) Committee assists the Board of Directors (the Board) by setting aspirational standards for SHE matters and implementing a culture in which these goals are promoted and enforced.

The Executive Committee (Exco) monitors the Company's policies and practices, including those relating to safety, health and environmental matters.

Line managers are responsible for the safety of their teams. Safety performance is analysed daily and circulated to Exco and monthly to the Board.

A formal agreement that covers safety and health is in place with the majority union, the Association of Mineworkers and Construction Union (AMCU), which defines how full-time and part-time safety representatives are elected, trained and appointed. Safety and health representatives attend quarterly Health and Safety Committee meetings on behalf of employees. There were 25 full-time safety and health representatives employed throughout the operations in 2016, and 1,035 part-time safety representatives, excluding alternatives.

## External policies, frameworks and regulations

Safety and health in the South African mining industry is regulated under the Mine Health and Safety Act. The Act established the Mine Health and Safety Council (MHSC) to promote a culture of health and safety in the South African mining industry. We submit annual medical reports and quarterly occupational hygiene monitoring reports in accordance with the requirements of the Act, which include reporting on HIV/Aids and TB policies and data to the DMR and Department of Health.

Safety and health at Marikana is governed by the Mine Health and Safety Act, 29 of 1996 and at the PMR by the Occupational Health and Safety Act, 85 of 1993.

Our Safety and Sustainable Development Policy and standards align with principle 5 of the ICMM's 10 Principles of sustainable development: *Seek continual improvement of health and safety performance*. We subscribe to and measure our safety and health performance against the MHSC 2024 Milestones.

## Approach and performance

### Safety at Lonmin

Achieving our safety goals is an integral aspect of demonstrating *operational excellence* and our safety strategy is built around the belief that we can operate without accidents. Lonmin achieved a number of noteworthy safety awards and milestones during the year, including 4B/1B shaft achieving 10 million fatality-free shifts and receiving the JT Ryan Award for the fourth consecutive year, K3 achieving 6.5 million fatality-free shifts, EPC concentrator achieving four years lost time injury free, and the Assay laboratory operating 10 years without a lost-time injury. More information on our safety achievements is available in the online supplementary report at <http://sd-report.lonmin.com/2016/download-manager/>.

Our approach to safety is defined in the Lonmin Safety and Sustainable Development Policy, Sustainable Development Standards and the Fatal Risk Control Protocols supported by operational SHE procedures.

The safety strategy has three key objectives:

- Fatality prevention
- Injury prevention
- A safe high-performance operational culture

Our safety strategy focuses on proactive safety management to entrench a culture that influences safety behaviour. This approach includes safety campaigns to address high-risk activities, management-initiated safety stoppages, training safety programmes and the Lonmin Mining Safety Life Rules. The Safety Life Rules are a set of five non-negotiable rules that target the risk areas responsible for the majority of fatal or serious accidents.

Safety performance is monitored by tracking the lost time injury frequency rate (LTIFR) and reportable injury frequency rate (RIFR), among other indicators. Each Mine and Process Unit has a Chief Safety Officer to strengthen interactions between the safety function and operations, increase the effectiveness of safety audits and improve alignment with safety standards, systems and reporting.

Our goal is for every person in the business to have a personal understanding of, and respect for, the importance of safety in the workplace through entrenching safety principles in the organisation and increasing visibility on safety matters. Training on safety and health practices is delivered to all employees and contractors at induction when joining the Company and when returning from annual leave. Training includes risk awareness and controls, the standardised approach to critical tasks and procedures, information on TB, HIV/Aids and nutrition, and section 23 of the Mine Health and Safety Act, No 29 of 1996. The importance of safety and the prior day's safety performance are communicated daily to sustain awareness.

Safety awareness and training such as the roll-out of the Du Pont programme, called the Lonmin Safety Leadership DNA programme, has continued.

## Safety and Health (continued)

Training has been delivered to executive and senior management, union health and safety structures and 16 “train the trainers” coaches.

VFL is a proactive measure which has been accelerated during the year. It is practiced through a weekly cycle of safety meetings, starting with an Operations Committee meeting with the Chief Operating Officer, where general managers share serious and high potential incidents. Weekly safety presentations by mine managers and Chief Safety Officers include a review of all injuries and high potential incidents across the mine, as well as incidents and key lessons from our industry peers. Learnings from these incidents are communicated to the teams and followed up with weekly safety briefs and senior management visits. Safety performance forms part of incentive schemes at operational level.

This year, finger injuries were identified as a major contributor to lost-time injuries, which led to the Aziko Sper<sup>1</sup> campaign. This included various awareness campaigns and the roll-out of a new type of glove in an effort to reduce such injuries. Since the inception of the campaign we have seen a decrease of 14% in finger-related injuries.

Other safety focus areas for the year included Fatal Risk Control Protocols relating to fall-of-ground and scraping and rigging, the current MOSH initiatives, the roll-out of proximity detection systems, compliance audits on contractors and contractor management.

Absenteeism has a substantial impact on safety performance, as it affects the remaining crew members who have to deal with the absence of colleagues. We initiated a project to identify employees who are repeatedly absent, counsel them and establish the reasons behind poor attendance to address the issue on a comprehensive basis. This project is discussed in more detail in the Employee Relationship chapter on page 42.

In the year ahead, we will focus on continuing the implementation of the safety strategy, eliminating fatalities, reducing lost time injuries and ensuring full compliance to the Lonmin Mining Safety Life Rules. A holistic safety training intervention is planned to complement the Safety Leadership DNA programme.

### Safety performance

Despite most safety indicators showing improvement, regrettably four of our colleagues were fatally injured. Mr Zilindile Ndumela, Mr Goodman Mangisa, Mr Fanelekile Giyama and Mr Siphilo Makhende succumbed to injuries suffered in separate incidents at Rowland and E3 shafts on 26 October 2015, 6 April 2016, 7 May 2016 and 2 July 2016. Two of the incidents involved falls-of-ground and two were mud rush incidents. We deeply regret the loss of our colleagues and extend our deepest condolences to their families and friends. We remain

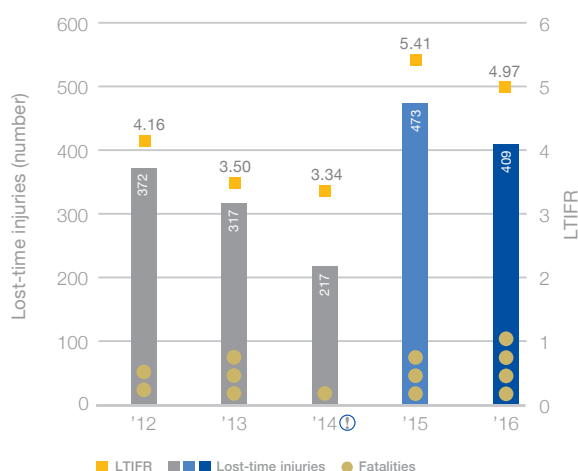
focused on addressing the root causes of safety incidents as demonstrated by the Tripartite Safety Day we held on 14 July 2016 at Rowland and E3 shafts, incorporating our key stakeholders, including the DMR and AMCU, in continuing efforts to prioritise improving safety performance. The focus on safety was reiterated to employees by our Chief Executive Officer, supported by Mr Joseph Mathunjwa, the President of AMCU and Mr Monageng Mothiba, Principal Inspector of Mines for the Rustenburg region.

Each incident was thoroughly investigated and reported to the DMR. Lessons learned from each incident were implemented into action plans and shared across operations. The early entry examination<sup>2</sup> procedure has been revised as a result of the fall-of-ground fatal accidents.

The increased focus on proactive safety management, safety culture and consequence management led to a decrease in level three safety incidents to 11, compared to 21 in 2015. Level three injuries are those that cause an irreversible disability. The LTIFR<sup>3</sup> decreased by 8% from 2015 to 4.97 per million man hours worked. Despite our LTIFR improvement year-on-year, we have not met our target to have a 15% improvement from the 2015 base rate. For 2017, we aim to achieve a LTIFR which is less than 4.14. 40% of injuries were hand and finger-related, with Rock Drill Operators, General Workers and Winch Drivers most impacted.

409<sup>4</sup> LTIs resulted in 22,668 days lost, with most of these attributable to fall-of-ground, scraping and rigging and underground track-bound mobile machinery. The severity rate, which is the total days lost to LTIs per million hours worked, decreased by 19% to 275.67 (2015: 339.38). First aid cases decreased to 89 (2015: 146) and medical treatment cases to 657 (2015: 689). We had 77 white flag days (2015: 70). These are days that mark no injuries and celebrate our belief in operating without injuries.

### Five-year performance: LTIFR



<sup>1</sup> “Aziko Sper” means there are no spares for your fingers.

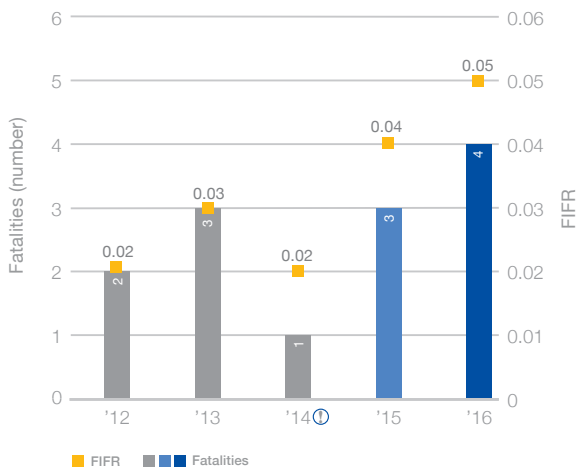
<sup>2</sup> The process that commences prior to the entry of a working area to check that all the necessary safety precautions have been taken.

<sup>3</sup> LTIFR: (LTIs (409) x 1,000,000 hours)/82,229,089.55 man hours. The LTIFR for women only is 0.32.

<sup>4</sup> Of the LTIs, 26 injured were women. Women contributed 6.36% to the total LTIFR.



## Five-year performance: Fatalities and fatal-injury frequency rate (FIFR)



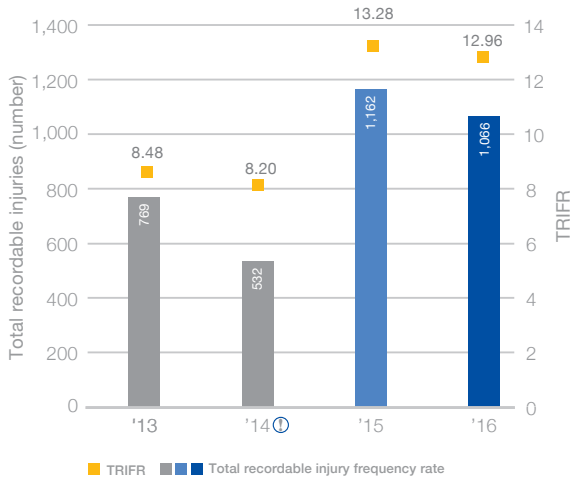
## Safety stoppages

Team members are provided with section 23<sup>2</sup> booklets and safety procedures support their right to withdraw from dangerous workplaces. Internal safety stoppages are imposed whenever the “Life Rules” are violated.

The Mine Health and Safety Act enables the DMR to impose Section 54 stoppages where a DMR inspector has reason to believe that any practice or condition at a mine endangers the health or safety of any person at the mine.

50 Section 54 stoppages were imposed at operations (2015: 36). These stoppages resulted in 164 production days lost (2015: 173) and 558,604 tonnes of production lost (2015: 770,000). Section 54 stoppages are increasingly enforced more broadly and take longer to lift in the first nine months of the year. We are experiencing a reduction in the duration and frequency of Section 54 stoppages and more localised application of these stoppages. We are encouraged that collaboration with the DMR has started to show results, as we experienced decreasing Section 54 stoppages in the fourth quarter. Not only do safety stoppages affect production, they also have a negative impact on safety routines and care must be taken to safely shut down work areas so that on their return, workers do not enter a work area that is hazardous. We continue to engage proactively with the DMR to build sound relationships and participate in various forums between industry, labour and government that discuss expectations and shared objectives on safety stoppages.

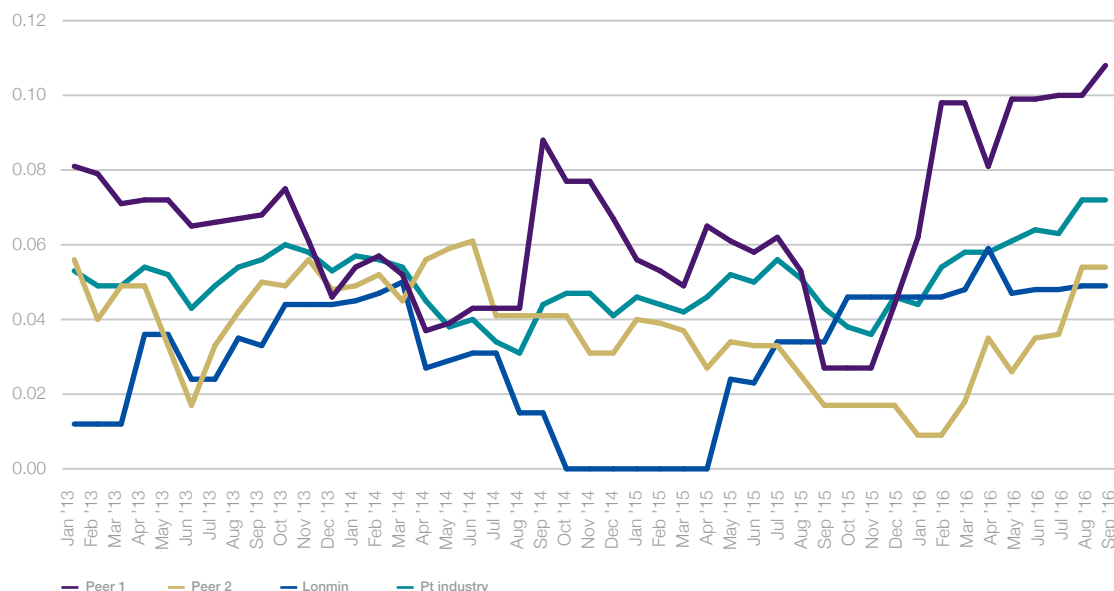
## Total recordable<sup>1</sup> injury frequency rate (TRIFR)



<sup>1</sup> These statistics reflect all fatalities, lost-time, injuries and medical treatment cases in alignment with the ICMM safety definitions.

<sup>2</sup> Section 23 of the Mine Health and Safety Act gives employees the right to withdraw from any situation or area that they deem unsafe.

## Comparison of Platinum industry – Fatality rate 12 months rolling



# Safety and Health (continued)

## Health and wellbeing

### Health strategy

The health department provides comprehensive healthcare to improve the quality of life of our employees and their families in accordance with Lonmin's safety, health and environmental strategy. Community health issues are managed through the community development department, as discussed in the Social Licence to Operate section on page 72.

The safety, health and environmental strategy is designed to support the four objectives of fatality prevention, injury prevention, safe operational culture and *operational excellence*.



Health services are accessible to employees, their dependants and community members through three clinics and a hospital at the Marikana operations, and a clinic each at the PMR in Brakpan and Limpopo operations. Community members are treated on a fee-for-service basis. Community members are assisted in emergency situations through our emergency care programme.

The health complex covers four broad areas:

- 01** Occupational health and hygiene, including risk assessment and monitoring of exposures that can be detrimental to employee health, medical surveillance, rehabilitation and functional assessment.
- 02** Primary healthcare is available on a 24-hour/365 days-a-year basis from the hospital and clinics at Marikana. This includes management of injuries and diseases such as hypertension and diabetes, and treatment of HIV/Aids and TB.
- 03** Emergency care is offered through the emergency and disaster management department, which includes Netcare 911 ambulances on site for serious injuries and illnesses that require immediate stabilisation and transportation to the hospital.
- 04** The wellness programme proactively addresses HIV/Aids and promotes health. Initiatives include peer educators, awareness campaigns, health days and talk topics. An assistance programme is also available to employees and their immediate family.

Activities during the year to raise awareness about health and wellness included monthly health talk topics, health education conducted during safety breaks, wellness days and activities around World Aids Day, Condom Week, and World TB Day. 20 new workplace peer educators were trained, bringing the total active workplace peer educators to 208, exceeding the target of 100 set in 2016.

Health customer satisfaction surveys are conducted every quarter to measure the quality of the service provided at our medical facilities. Despite the cost pressures, patient physical care has not been compromised and the customer satisfaction rating increased to an average of 87% (2015: 84%).

In the year ahead, we will focus on continuing to deliver health initiatives in the context of cost constraints, ensuring treatment protocols are kept current and maintaining awareness and health promotion initiatives.

## Employee health services

The occupational and primary healthcare services provided to employees fulfil the Company's regulatory obligations, and offer an opportunity for Lonmin to play its part in addressing some of the most serious health challenges facing South Africa.

Every employee receives regular health assessments, and R216 million was spent on employee health programmes (2015: R180 million). The total investment increased due to nutritional supplements that were issued to employees and a higher number of patients, especially anti-retroviral treated patients.

### Primary healthcare

Lonmin's primary healthcare services focus on addressing health issues that affect our employees and contractors. Chronic diseases prevalent in our workforce include HIV/Aids, hypertension, diabetes, asthma and epilepsy, the most material of which are TB and HIV/Aids.

### TB and HIV/Aids

HIV/Aids-related diseases, including TB, represent a major challenge for the mining industry and the country as a whole. These diseases have a severe impact on patients, those around them and their communities. HIV/Aids-related diseases are the biggest cause of in-service deaths at Lonmin. We are committed to supporting those affected by HIV/Aids and creating a caring environment. Our approach to addressing these diseases includes providing medical and emotional support to infected patients. These initiatives prioritise education and awareness in an effort to combat the stigma around HIV/Aids, foster respect for patients' human rights and personal dignity, and prevent new infections.

The Lonmin HIV/Aids and TB policies define the Company's approach to addressing these diseases.

Three events to raise awareness around HIV/Aids were held during the year. These awareness campaigns included access to voluntary counselling and testing (VCT) for employees and contractors. VCT is also offered at the primary healthcare and occupational health centres.

In total, 18,372 employees and contractors were tested for HIV/Aids during the year, of which 7% were positive (2015: 10%). We estimate that the prevalence of HIV/Aids infection among our workers is higher than that reflected in the testing, at about 20%, and also higher than previous actuarial modelling since HIV-positive employees that are on the treatment programme are experiencing a better quality of life and are consequently able to keep working for longer.

Lonmin offers a wellness programme to address the physical and emotional effects of HIV/Aids and the number of patients on the programme decreased by 40% from 2015, due to many of them starting on ART.

Lonmin supplies ART to HIV-positive employees and monitors patients at an estimated annual treatment cost to the Company of R7,079 per person. ARTs are provided for life, and former employees (including those who have taken voluntary separation packages or left the Company for any reason) can return every three months for consultation, monitoring and treatment collection. Lonmin provides referral letters to patients who leave the area of the operations, to enable the collection of ART from provincial clinics or hospitals, and provides them with a three-month supply of ARTs when they leave Lonmin.

Outcomes of the ART regime were positive, with a higher than 73% ART success rate. While the number of patients participating in the ART programme increased by 7.6% to 4,483, HIV/Aids-related deaths decreased to 72 (2015: 119). This decline is attributable to earlier initiation of ART, improvements in the treatment success rate, prophylactic treatment to prevent opportunistic infections such as TB, and the ongoing focus on health education and treatment adherence counselling. Following guidance from the Minister of Health, the CD4 count threshold of below 500 for ART treatment was removed. ART is now available to any patient who is ready and committed to taking the medication, and the earlier start of treatment is showing positive results.

Our target for 2016 was to reduce the rate of ART defaulters to below 3%; we achieved this target, reducing ART defaulters to 1%. We will again target to reduce the rate of ART defaulters to below 3%.

While default rates remain low, more than 20% of patients on ART are not controlled on treatment. The reasons include inconsistent taking of medicines, late initiation of treatment and non-disclosure of the condition to their spouse or partner while not practising safe sex. Counselling sessions stress the benefits of starting treatment early, taking medicine consistently and disclosing status.

### Tuberculosis

South Africa has one of the highest TB infection rates in the world. Prevalence in the mining industry is even higher

than the country infection rate. As an opportunistic infection, people infected with HIV/Aids are more prone to contracting TB, which increases the importance of monitoring and tracking the disease.

Lonmin's diagnosis, classification and treatment regimens for TB align with the South African Department of Health and DMR programme management guidelines. The TB policy outlines the responsibilities of employer and employees, treatment and fitness to work and training of employees and relevant structures. HIV-positive patients receive INH prophylaxis to prevent TB infection.

411 new cases of TB were diagnosed and treated in 2016, including 11 cases of multi-drug resistant TB, and no cases of extreme drug-resistant TB. Our cure and treatment completion rate was 86.3% (2015: 89%), superseding our 2016 target of 85%. The completion rate is supported by continuous communication between patients and the medical facilities to remind them of treatment collection, as well as early diagnosis. We will again aim to have a TB cure rate and treatment completion rate of 85% in 2017. TB patients who do not collect treatment are prevented from clocking in at work until they do so, and clinics proactively contact patients if they are absent from work for three days.

Contact tracing for every TB patient is performed at the workplace and in the communities by health workers and community volunteers, who also confirm that patients are taking treatment. These teams furthermore provide on-the-ground support and counselling to patients and their families.

TB patients who left through the voluntary separation programme and retrenchment process received referral letters for home-based care and TB follow-up, as well as three months' medication to cover their transition period. Former employees are referred to TEBA<sup>1</sup> to support completion of their treatment course and Lonmin is kept informed of the outcome of the treatment. Medically repatriated employees are also referred to TEBA for home-based care where indicated. Currently, TEBA supports and visits about 75 former on a regular basis.

### Five-year performance: TB and HIV/Aids

	2012	2013	2014	2015	2016
Diagnosed and treated TB cases	527	446	436	462	411
HIV/Aids-related deaths	104	99	97	119	72
Voluntary counselling and testing conducted	46,945	17,682	17,964	16,301	18,372
Patients on ART	2,510	3,288	3,666	4,167	4,483
Patients on the wellness programme	657	690	637	477	284

<sup>1</sup> TEBA Limited is a labour recruitment and management service provider that offers additional services to the mining industry on human resources, social and financial services during and after employment.

# Safety and Health (continued)

## Other healthcare programmes

### Chronic disease treatment

We provide care for the chronic and acute illnesses prevalent in our workforce, which include asthma, diabetes, epilepsy and hypertension. Outcomes are monitored through controlled treatment programmes and, where necessary, patients are referred to appropriate specialist care. 3,809 patients were listed on chronic disease registers other than ART (2015: 3,980). The decrease is due to employees who took voluntary separation packages and were referred to external facilities. Of these, 92% (2015: 89%) is controlled on treatment.

### Trauma and emergency care

Lonmin's primary healthcare programme includes casualty capacity for emergency cases. We have built relationships with industry peers and other hospitals to provide support in emergency situations.

Lonmin has a well-established emergency and disaster management programme associated with the Mines Rescue Services programme. Emergency preparedness training is rolled out to all our operations and bi-annual emergency drills test the effectiveness and readiness of emergency plans. The emergency and disaster management team is available 24/7 and has a good relationship and service level agreements in place with local and governmental authorities to provide backup assistance in the event of major incidents and accidents on the mine and in the GLC. The emergency department responded to a total of 312 road accidents, of which 124 road accidents took place in the vicinity of the mine property and resulted in six fatalities, three of which were Lonmin employees. 188 road accidents off-site resulted in 21 fatalities, of which six were Lonmin employees. A full comprehensive emergency preparedness audit is conducted on an annual basis to test the effectiveness of implemented training interventions and compliance to current emergency procedures.

Proto teams (a team of volunteers who are trained to fight fires underground, perform underground rescues of trapped or deceased employees and are trained as rope technicians) have responded to 10 proto incidents this year, of which five were off-mine incidents. Proto teams, together with the surface rescue teams (also volunteers), who are trained to deal with, among others, surface fires and car extrications, responded to a total of 161 calls on and off mine property.

First aid training was provided to 4,771 individuals, of which 651 were for the GLC.

Basic fire-fighting training was provided to 1,051 individuals, including employees and contractors.

### Women's health

As part of our commitment to support the increase of women in mining, a short-stay female ward consisting of two observation beds and an infant warmer is provided and antenatal care is available on-site. Due to the development

of family units, there has been an increase of 11% in women and 28% in children visiting the hospital, with 20,000 female consultations and 5,000 paediatric consultations in 2016.

### Employee wellbeing service

Lonmin provides a counselling and follow-up service to employees and their households. This includes face-to-face counselling with a therapist as required, 24-hour telephonic counselling with a qualified psychologist, life management on legal and family matters, and access to an electronic service that provides a host of health and wellness information. Contractors can make use of the facility for work-related trauma debriefing.

### Dietician

We recognise the close links between nutrition, health and wellbeing. A dietician is available to employees to provide advice regarding a healthy diet and lifestyle. A nutritional supplement programme is ongoing to assess the impact of nutritional supplements on employee wellbeing, including its potential impact on reducing absenteeism.

### Medical scheme

All employees have access to a medical scheme and can choose from a basket of schemes. The Lonmin Medical Scheme is administered by a third-party provider.

### Occupational health

Lonmin follows a risk-based approach to occupational health and hygiene, which involves a system of risk assessment and monitoring programmes. Our occupational health programme monitors all occupational diseases listed in terms of the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993, and the Occupational Diseases in Mines and Works Act, No 137 of 1991, as amended, including occupational asthma, dermatitis, platinum salt sensitivity and silicosis.

Noise is a significant occupational health risk at our operations. Comprehensive occupational health and hygiene programmes reduce the risk of hazardous exposures, support regulatory compliance, and improve workplace conditions.

### Noise-induced hearing loss

A hearing conservation programme is in place to address noise-induced hearing loss (NIHL), which includes engineering controls, administrative controls, provision of personal protective equipment and related training, and medical surveillance. A Hearing Conservation Committee reviews and investigates opportunities to reduce noise exposure and prevent NIHL. NIHL training and awareness programmes to emphasise the importance of wearing hearing protection equipment. Lonmin is also part of the industry "buy quiet" initiative that aims to influence suppliers of equipment to provide quieter alternatives.



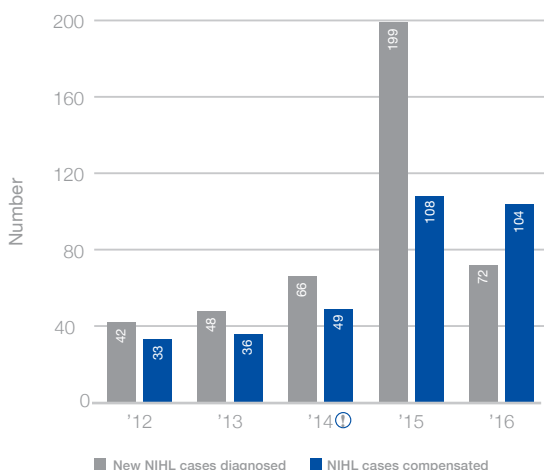
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Our hearing conservation initiatives align with the MHSC milestones for the elimination of NIHL. These Milestones include goals for the reduction of noise emitted by equipment to below 107dB(A) by December 2024. We have silenced most equipment, with only a few sources still to be silenced.

Our target for 2016 was to reduce NIHL cases diagnosed by 10% from a 2012 baseline year. This was not achieved, with 72 new cases of NIHL diagnosed. During the year, 104 cases of NIHL received compensation. All NIHL cases showing greater than 5% loss of hearing shift are investigated.

NIHL cases increased during 2015 and an investigation revealed several cases of incorrect recording of baseline hearing tests around the time of the change in legislation in 2003, which led to hearing shifts registering from the incorrect baseline. This constitutes 34% of NIHL cases reported in 2016 (2015: 41%), and similar cases will continue to be identified and reported as they emerge.

### Five-year performance: NIHL diagnosis and compensation for employees



### Other occupational healthcare programmes

#### Physical and functional work capacity fitness testing

Functional capacity testing includes work simulation assessments and aims to determine employee fitness levels, so that new employees are fit for their positions and recovering employees are fully rehabilitated prior to returning to the workplace. Employees who do not achieve the required fitness scores are referred for cardio conditioning. Those requiring further rehabilitation receive vocational rehabilitation through physiotherapy and occupational therapy, or are considered for alternative job placement.

#### Physiotherapy, occupational therapy and rehabilitation

Therapy and rehabilitation are available for employees suffering reversible trauma conditions. Patients with chronic conditions are stabilised and then undergo cardio conditioning at physiotherapy, prior to completing the functional capacity test.

We are formalising our disability management framework, which makes provision for accommodation, retraining or

alternative job placement of people with disabilities. Currently, 1.4% (360) of employees are registered as disabled (2015: 1.4%). This number includes employees with finger amputations and significant hearing or vision loss.

Physiotherapists and occupational therapists are experiencing an increased number of paediatric cases from dependants of employees, which has increased the workload for practitioners.

### Management of other occupational diseases

Occupational diseases such as platinum salt sensitivity, dermatitis and occupational asthma can arise from exposure to platinum salts during processing. We work with the International Platinum Group Metals Association (IPA), specifically to understand and manage platinum salt sensitivity better. No new cases of occupational asthma, dermatitis or platinum salt sensitivity were diagnosed.

Platinum mining is not associated with high levels of silica. Silica levels in our mines are monitored and remain below 10% of the occupational exposure limit, and well below the MHSC Milestone 2024 target. While three cases of silicosis were diagnosed during the year, these employees all had a history of employment on gold mines.

### Contractor safety and health

Lonmin's supplier contracts include terms and conditions committing them to adhere to our policies and standards, which include safety, health and environment aspects. Contractor companies are assessed by the contractor safety management department on a yearly basis, or every six months for high-risk contractors, with a particular emphasis on safety, health and environmental practices and closer scrutiny where they are working in high-risk areas or activities.

Contractors and their employees are expected to adhere to the Company's safety procedures and standards. Contractor employees undergo medical fitness assessments at the on-site contractor hub and receive induction, which includes familiarisation with Lonmin's SHE procedures.

On-site contractors have access to our healthcare facilities and all incidents requiring use of these facilities are investigated and treated on-site. These facilities provide a range of services including health and safety induction, medical surveillance, voluntary HIV/Aids VCT, treatment of injuries on duty, TB screening and treatment, and NIHL mitigation measures. Where necessary, contractors are referred to appropriate health services for further medical care.

The due diligence process when registering contractor vendors encourages them to offer medical aid to their employees.

The safety department and contractor safety management team deliver safety training to contractors to improve contractor employees' adherence to our standards. The Chief Safety Officer for Contractors works closely with the procurement department so that contractors are aware of safety requirements. High-risk contractors are allocated a single point of contact to drive proactive safety initiatives and measures. Safety audits on contractors working on-site are performed, as well as safety blitzes to continue the focus on safety issues at operations.

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09/

## Material Focus Area

# Social Licence to Operate

- > *Maintaining our social licence to operate and investing in the community*





01 The Ithuteng project in progress.



02 A five-year contract for supplying PPE was awarded to the Bapo Ba Mogale community.




03 Renovations of and building of additional classrooms at Segwaelane Primary School.



# Social Licence to Operate

## Overview


Lonmin's strategy commits us to creating benefit for all our stakeholders and defines our approach to social spending as an investment and a business imperative. We believe that success on an operational and societal level can only be achieved through multi-stakeholder commitment. Building strong and constructive relationships with the communities surrounding our operations creates a predictable and stable operating environment that supports our strategic goals over the long term. Together we have achieved a lot, but there is still much to do.

 Our goal is to demonstrate our commitment to good *corporate citizenship* through projects that support the wellbeing and development of our host communities and those affected by our operations. These projects form part of the local economic initiatives contained in our Social and Labour Plans (SLPs).



Lonmin provides ECD training to educators.

There are four broad focus areas through which we strengthen our social licence to operate:

- **Stakeholder engagement:** Regular formal and informal engagements with stakeholders in local communities, which include engagements with government representatives, allow us to understand stakeholders' expectations of Lonmin and communicate the current position and delivery status of the Company. During 2016, Lonmin invested in the development of community representative structures which facilitated improved formal engagements. More information on our stakeholder engagement is available in the online supplementary report at <http://sd-report.lonmin.com/2016/download-manager/>. 
- **Community upliftment initiatives:** Our investments in local communities target some of the most pressing socio-economic challenges facing the Greater Lonmin Community (GLC) and some labour sending areas. These include improving education and health, developing local suppliers and assistance in improving basic services and social infrastructure. Lonmin believes that education can fundamentally change lives, therefore, we invest in the education value chain – from early childhood development, school infrastructure and sport development to supporting students at tertiary level. We also train local communities, which develops the pipeline of possible future skilled employees and increases opportunities for local procurement. These same skills are transferable and can later be used for other community development projects, such as road construction. These initiatives are dealt with in detail in the rest of this chapter.
- **Corporate and community partnerships:** Addressing the challenges evident in local communities requires a broader partnership approach that includes the Company, the community, local and national government, and the various companies operating in the area.
- **Ethical business practices:** Lonmin's Code of Business Ethics commits the Company, its employees and suppliers to ethical standards of social and business practices. Ethics at Lonmin is discussed in more detail in the Governance section on page 115 and our commitment to uphold human rights and our performance in this regard is discussed on page 77.

This chapter provides an overview of the initiatives implemented in local communities, with a focus on the GLC as the majority of the Company's operations are in the North West Province.



## Key stakeholders



### Communities

Lonmin's Marikana operations are flanked on the eastern side by the Bapo Ba Mogale community. Other communities surrounding the operations include localised and transient migrant workers from across southern Africa. It is estimated that more than 126,000<sup>1</sup> people live in formal and expanding informal settlements around our operations. The difficulties in addressing the many challenges arising from informal living conditions are exacerbated by lack of basic services. While there is an imperative to employ preferentially from local community members, this must be balanced with the need to respect the rights of migrant workers to work.

At the Limpopo operation, local traditional authorities include the Mphahlele, Ledwaba, and Kekana.



### Non-governmental organisations, non-profit organisations and faith-based organisations

There are many non-governmental organisations (NGOs), non-profit organisations (NPOs) and faith-based organisations active in local communities, and these organisations play a crucial role in supporting people in need through initiatives that raise awareness of various social issues. By collaborating with these stakeholders, Lonmin can more effectively address the many challenges faced by local community members. NGOs with a humanitarian and environmental mandate are increasingly active in holding companies accountable for their performance in these areas.



### Government

Lonmin works in partnership with local government so that socio-economic development initiatives are viable, sustainable and align with the National Development Plan (NDP), regional integrated development plans and other government-driven community initiatives such as Project Phakisa. Regular engagements are held with various government departments, including the departments of Basic Education, Health, Trade and Industry, Social Development, Human Settlements and Mineral Resources, as appropriate, and with provincial and local government. These engagements also provide oversight on projects implemented by the Company.

<sup>1</sup> Based on the assumption that every employee and contractor, based on 2014 headcount, supports 3.3 dependants, as per information from the South African Census 2011 – Statistical Release (revised) P0301.4 by Statistics South Africa.

# Social Licence to Operate (continued)

## Risks and opportunities

The sustainability risks and related opportunities that apply to our social licence to operate are described below, with references to further information regarding their management and mitigation. The risk management approach is discussed on page 34 of this report and on page 20 of the Annual Report and Accounts 2016.

### Community relations

#### Description

A sound relationship with surrounding communities will enhance relations and organisational reputation, whilst a failure to do so could result in disruption of operations or community unrest. Mining is conducted in areas where communities are present and the communities have various expectations of the mines, such as employment opportunities, socio-infrastructure support and business opportunities. When these expectations are not met, it may result in conflict and unrest.

#### Impact

As many of our employees live locally, any disruptions within the communities can have a direct impact upon production. The failure to deliver social upliftment projects can trigger protests or violence and corporate reputational damage can result, if the relationship with these stakeholders is not managed effectively. Lonmin has acknowledged the important role of communities as a critical stakeholder and has implemented various engagement platforms and development initiatives to ensure appropriate upliftment. Procurement has become another focus area as communities view it as an opportunity to improve their livelihood through increased income. Lonmin has identified this need and has introduced procurement opportunities for communities.

### Opportunities and mitigation

The development of a revised stakeholder strategy with emphasis on continuous engagement at all levels and communities (Bapo and non-Bapo communities) as well as involvement of the communities in the implementation of the Social and Labour Plan (SLP). Greater consultation with stakeholders which includes upliftment measures to be initiated. This approach has increased community ownership of both the challenges facing communities and the solutions provided as part of the SLP implementation plan.

As part of enhancing relations with communities, the Company has reviewed its engagement process and implemented a revised stakeholder management process. In order to improve governance and project execution of community-related investments, a procurement framework with appropriate project management office capabilities has been established.

Other aspects of community investment included the establishment of a cadette training programme as part of the Company enhancing its potential future employment capacity. Formal engagement structures have also been established in the form of bilateral forums with Bapo Ba Mogale, Madibeng and Rustenburg communities. The engagement meetings address employment, economic development, community infrastructure programmes and SLP status. The transaction with the Bapo Ba Mogale resulted in community trusts being entitled to a minimum of R5 million per annum and the provision of R1.65 billion worth of procurement contracts.

### Further reading

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## Changes to the political, legal, social and economic environment, including resource nationalism

### Description

The Company is subject to the risks associated with conducting business in South Africa, including but not limited to changes to the country's laws and policies regarding taxation, royalties, divestment, repatriation of capital and resource nationalism. The latter is a broad term that describes the situation where a government attempts to assert increased authority, control and ownership over the natural resources located in its jurisdiction.

The Mineral and Petroleum Resources Development Act (MPRDA) Amendment Bill currently remains the subject of Parliamentary debate. In particular, beneficiation is a major consideration, with the Bill proposing that the Minister be granted a discretion to declare certain minerals as strategic, that the Minister determine what percentage of strategic minerals are to be made available locally, and the developmental price at which strategic minerals are to be sold, as well as the Minister being able to determine the conditions applicable to export permits. In addition, the Davis Commission is currently looking at the tax regime with a view to determine whether additional taxes including a carbon tax should be imposed on mining companies. The mining industry is also awaiting clarity on the interpretation of the applicability of the "Once Empowered Always Empowered (OEAE)" principle. Currently, engagements are taking place on the OEAE principle and the new Mining Charter.

The Department of Mineral Resources (DMR) has also recently come under pressure to demonstrate that it is taking action

to monitor compliance with undertakings made in the SLPs submitted by mining companies. This has led to the DMR issuing section 93 notices to mining companies on a more regular basis. Lonmin has received section 93 notices in respect of its housing and living conditions obligations and continues to engage with the DMR to reach a constructive solution. In addition, the Department of Trade and Industry is attempting to legislate a policy of creating black industrialists.

### Impact

The ongoing debates in respect of resource nationalism have created policy uncertainty. If some of the issues under consideration are implemented, this could have a material adverse effect on the mining industry in South Africa. For example, profits could be negatively impacted by the imposition of additional taxes and revenue could be impacted by the sale of metals at discounted developmental prices. The obligation to sell locally could impact long-term supply agreements with our customers and give rise to concerns about security of supply from South Africa, potentially expediting the growth of the recycling industry and increasing substitution concerns.

### Opportunities and mitigation

Lonmin is participating in the Chamber of Mines process to engage the DMR with regards to concerns regarding the new Mining Charter, as well as engaging more broadly with government regarding this exposure. Appropriate governance structures in the form of Executive and Board Committees are being established to ensure ongoing reporting of progress against agreed SLP targets. Bilateral and industry level discussions with the DMR and other government agencies are ongoing.

## Further reading

Transformation through enterprise development and procurement

>

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Human rights

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## Social Licence to Operate (continued)

### Accountability and governance

 Lonmin's strategic pillar of *corporate citizenship* defines our commitment to contribute to the wellbeing and development of the communities that host and are affected by our operations. Lonmin's Relationship Charter codifies the Company's approach of partnering with communities, as does the Lonmin Safety and Sustainable Development Policy. The Social, Ethics and Transformation (SET) Committee monitors the Company's transformation and community development progress. The Executive Vice-President of Communications and Public Affairs, who reports to the Chief Executive Officer, is responsible for delivery on the Company's community development commitments.

The community development department and the enterprise development arm of the procurement department work together to identify opportunities arising from local economic development projects.

The community investment programme comprises specific community development projects that are defined in our SLPs, as well as a number of additional community upliftment projects that are conducted over and above those in our SLPs.

Purpose statements are put in place before a project is started to define objectives and deliverables.

### External policies, frameworks and regulations

Lonmin's regulatory community development projects are defined in our SLPs, which are compiled in terms of the

MPRDA, and progress against these commitments is reported regularly to the DMR. As a member of the International Council on Mining and Metals (ICMM), the Company subscribes to the ICMM's 10 Principles of sustainable development, including Principles 9 (community development) and 10 (stakeholder engagement).

Transformation, including procurement, is regulated by the Broad-Based Black Economic Empowerment Act, No 53 of 2003, and our approach is also framed by the Preferential Procurement Policy Framework Act, No 5 of 2000.

The original Mining Charter was issued in 2004 and revised in 2010, which included certain targets set to 31 December 2014. A draft revision was released in 2016.

### Approach and performance

#### Social and labour plans

SLPs define the Company's commitment to develop and implement comprehensive human resources development programmes and are required to acquire mining or prospecting rights under the MPRDA. These initiatives include local economic development programmes and employment equity plans.



We provide examination preparedness to 449 students.



### Breakdown of Rand value spent on community SLP projects:

Communities	Measurement	2012	2013	2014	2015	2016
Rand value spent on SLP community projects of Western Platinum (Proprietary) Limited (WPL) and Eastern Platinum (Proprietary) Limited (EPL)	Rand	39,743,935	38,661,225	47,672,897	62,551,677	<b>52,062,623.29</b>

### Community relations and engagement

Our local community projects are managed by the community development department. The community value proposition process was initiated by the community development department in 2012 to support Lonmin's goal of making a social investment that is sustainable and has a lasting impact beyond the life of the mines. To develop an in-depth understanding of communities' development needs, we engaged with community leaders and interested and affected parties.

Projects are incorporated into Lonmin's SLPs, which consider local municipality integrated development plans (IDPs)<sup>1</sup> and the projects identified through our community need assessment process. Project progress is monitored against SLP targets determined at the start of the projects, and reported to the SET Committee of the Board, as well as on an annual basis to the Department of Mineral Resources (DMR).

Stakeholder groups are identified on a geographic basis and on the basis of common issues of concern, and are then included in the stakeholder map. Stakeholder engagement officers interact with representatives from local communities through formalised structures, including community project meetings, ward councillor meetings and meetings with representatives of civic, religious, environmental, youth and women's groups. Community members and other stakeholders can raise complaints with the Company through these channels.

Community grievances are noted in the minutes of meetings and entered into a new tracking system. System administrators are receiving training on the tracking system, to support successful implementation.

Community development projects receive support from the project management office at Lonmin that assists with the creation of project plans, KPIs and regular reports to improve performance measurement and track delivery.

### Investing in community development

The community development strategy defines how Lonmin intends to create long-term social and economic value by:

- alleviating poverty and unemployment;
- enabling communities to participate in decision-making to achieve greater long-term control over their lives and development;
- ensuring communities are resourceful, skilled and able to take full advantage of economic opportunities; and
- enabling community businesses to become business partners of choice and contribute to the growth of Lonmin.

We invested R52 million in approved community projects that form part of WPL and EPL SLPs (2015: R62.5 million).

### Summary of expenditure of key community focus areas

	2015 (Rm)	2016 (Rm)
<b>Financial investment in communities based in South Africa<sup>2</sup></b>		
Community education programmes (in schools)	11.7	<b>10.3</b>
Skills development (mining skills, portable skills training, technical skills, and learnerships for communities)	14.0	<b>18.8</b>
Sports, arts and culture	1.9	<b>1.7</b>
Community health programmes (including nutrition programme spend)	6.5	<b>6.4</b>
Local economic development	20.0	<b>6.5</b>
Supplier development	3.8 <sup>3</sup>	<b>5.1</b>
Other infrastructure projects (waste management)	10.0	<b>10.0</b>
Other corporate social investment-related spend (career guidance, community transport and community study assistance)		<b>13</b>
Free community and employee transportation is offered through Bapotrans buses. Community members, including school learners, can use the free transport to get to and from community meetings, church events, sporting events, departmental events, training and to school from Monday to Saturday.		
<b>Total</b>		<b>71.8<sup>4</sup></b>

<sup>1</sup> IDPs map out short, medium and long-term plans for communities, including spatial planning, economic development and infrastructure development.

<sup>2</sup> This includes programmes over and above SLP projects for WPL and EPL, and excludes overheads and donations.

<sup>3</sup> Incorrectly reported in 2015, as R3.2 million.

<sup>4</sup> Excluding administration costs and donations.

# Social Licence to Operate (continued)

## Community education and skills development

Unemployment and poor education are two of the most serious challenges facing South Africa and our local communities. Lonmin's investment in projects that support education and improve skills and employability create opportunities for community members to break the cycle of poverty, contribute to the sustainable upliftment of the community, and build a pool of skilled community members for industry and nationally.

Our community education programme focuses on six key areas of education: school infrastructure development, learner support, educator support, parent support, school nutrition, and sport, arts and culture. Projects are reviewed and adjusted on a quarterly basis to keep them aligned with evolving community needs and are benchmarked against the education component of the NDP and with the Mining Qualifications Authority (MQA).

Baseline assessments are conducted before commencing projects, specifically in the case of school infrastructure projects and early childhood development (ECD) centres.

Skills development projects place increasing focus on developing entry-level skills for mining to support hiring from local communities, in line with the revised recruitment plan established on completion of the restructuring. Fifteen community members were trained according to the needs of mine technical services and absorbed into the mine during the year. A further 13 community trainees were permanently employed in the process operations.

Lonmin also provides information to contracting companies about skills that have been developed in the community for specific projects. For example, the community pool of bricklayers, welders and plumbers is being accessed in construction of the infill apartment housing project.

### Community education programme

#### School infrastructure development

Since 2007, we have provided infrastructure support to 28 schools in the GLC through additional classrooms, mobile classrooms, electricity upgrades, sporting facilities, or ablution facilities. Wherever possible, we use GLC construction companies to support the local economy. Since 2010, Lonmin has provided a total of 82 classrooms (with supporting ablution facilities) in the GLC schools.

We plan to fund the construction of a new primary school in Marikana, including sports facilities, within the next year. The school will benefit 680 learners.

Other infrastructure projects include installation of a borehole pump, renovation of the mobile classrooms at Majakaneng Primary School, palisade fencing to be installed at Marikana Combined School and around the perimeter area where the new school will be built. Fencing was upgraded at Thlapi Morue Primary School and Rakgatla High School. Ablution facilities were repaired at Kgwanape Primary School, trees cut back and rubble removed at Machadam Combined School. Borehole facilities were repaired at Nkukime Primary School and Bapo Primary School.

Renovations, additional classrooms and ablution facilities were completed at Thlapi Morue Primary School and Segwaelane Primary School. Two schools, St Catherine's Primary School and Kwanape Primary School, sustained severe damage to the roofs following a storm, and this was repaired.

#### Learner support

Lonmin provides support to learners in the GLC to improve education and pass rates.

Support programmes include:

- The Ithuteng programme for grades 9 to 12 (100 learners in 2016);
- The examination preparedness and support programme (449 students);
- The community study assistance programme, which supported 63 students enrolled for mining and non-core mining-related studies; and
- Career guidance to 2,167 learners.

The university and technical preparedness programmes were combined into the general preparedness programme, which supported 47 students identified from seven high schools in Marikana and six high schools in Limpopo who are applying for tertiary institutions or learnerships (2015: 51). The programme assists students in making a successful transition to tertiary education through either a university or an engineering learnership. School leavers on the technical preparedness programme receive support to achieve technical skills accreditation within one year of training. In 2016, the national qualification levels were increased to include N4 in the programme.

The mining-related skills programme provides skills development opportunities to local youth who have reached adult education and training (AET) level 4 (equivalent to Grade 9) and are seeking employment. 185 cadets completed the training.

We offer bursaries to promising students from the GLC. Candidates who received bursaries in the prior year continued and held 55% of the Lonmin bursaries (2015: 52%). During 2016, no new bursaries were allocated but additional funding was allocated to existing bursars for accommodation assistance. More information on our bursaries and graduates can be found on page 46.

### A strong performance by GLC high schools

Six out of the seven GLC high schools achieved an average Grade 12 pass rate above that of the national average for 2015. This is particularly noteworthy since progressed<sup>1</sup>/cohort learners were included in 2015 for the first time. Notable achievements are Mogale High School in Bapong, which improved from a 72% pass rate in 2014 to 92% in 2015. Marikana combined obtained the highest pass rate in the GLC with 94.2%, and the DBE Madibeng Office obtained first place in the North West Province. This significant achievement is a tribute to the combined efforts of a range of stakeholders, including the Department of Basic Education, the school principals and their management teams, the school governing bodies, Bapo Ba Mogale leadership, ward councillors, Ukuqonda Institute, Brainwaves, the EPS management team, parents and, most importantly, the learners.

### Educator support

Support for primary and high school educators is offered through in-class and off-site workshops. It is primarily focused on mathematics, but workshops also include technology and physical science. During 2016, 92 educators attended these workshops in the GLC and Lebowa kgomo (Limpopo). Study assistance was provided to four educators to assist them to improve their qualifications.

Access to sound ECD facilities and teaching are essential to improve educational outcomes and socio-economic development. Not all children in the GLC have access to formal education during early childhood, and are cared for in informal day-care facilities. Lonmin supports 52 (2015: 49) ECD centres by providing 171 (2015: 143) ECD educators with basic skills, enabling them to teach children the foundations required to begin their formal schooling. The programme benefits these educators and the 2,674 (2015: 2497) children in the ECD centres. A new group of 12 educators attended ECD Level 4 accredited training in 2016.

### Parent support

Career guidance workshops are provided to parents to raise awareness about career opportunities for learners and the programmes we offer. The workshops aim to motivate parents to support their children's performance.

### School nutrition programme

We understand the vital role of learner nutrition educational outcomes. Our school nutrition programme, which forms part of the community health programme, is described on page 74.

### Sport, art and culture development

The Company supports various sports tournaments and provides ad hoc assistance to individuals and teams who qualify for district, provincial and national competitions. We sponsored an annual school sports tournament in which 200 under-13 to under-17 sports teams participated in netball, soccer, volleyball and chess. Entertainment was provided by local musicians and cash prizes were awarded to the winning teams. Referees and coaches also received training.

The upgrade and construction of the Bapong Sports Fields were completed during the year. The project involved renovations and additions to an existing but disused sporting facility. Upgrades included two soccer fields, two multi-purpose courts, a water system and renovations to the ablution facilities. The facilities were handed over to the Bapo Ba Mogale traditional authority and community, who will take over management and maintenance of the facility.

### Soccer

Lonmin provides transport for several soccer teams and players in the area.

### Boxing

We support the Wonderkop Boxing Club, which attended the Elite Championship held at Durban University of Technology where team members achieved one gold medal, eight silver medals and seven bronze medals.

At the Cadet National Championships in Cape Town, team members won 24 gold medals and several received individual accolades.

### Cricket

Lonmin is sponsoring Atang Swartbooi from the GLC to participate in the World Cricket Challenge in Melbourne, Australia in December 2016.

### Basketball

Mpho Madumo, a para-athlete with an intellectual disability, from Rekgonne Bapo Special School in Bapong, was chosen to participate in the 2016 World Basketball Championships in Kerry, Republic of Ireland. We provided Mpho with kit, clothes, toiletries and luggage bags.

<sup>1</sup> Progressed learners are learners who failed Grade 11 twice but were promoted to Grade 12 without meeting the passing criteria, as directed by Department of Basic Education policy.

## Social Licence to Operate (continued)

### Arts and culture

The United Dance Club from Modderspruit was sponsored by Lonmin to participate in the World Champions World Trials Dance Competition in Cape Town.

### Skills development

Unemployment is a national concern. At 28%<sup>1</sup>, the unemployment rate in the North West province is above the South African average. Youth unemployment is a particular concern in our host communities. Lonmin's skills development programmes aim to provide school leavers with the skills required for employability in the mining industry or to generate an income through self-employment.

Training includes one-year specific skills interventions to bridge the gap created by local schools that do not offer technical curricula. Our mining-related skills development programme combines competent B mining training with interview coaching, first aid training, CV preparation and African wisdom, which provides life skills necessary for everyday life.

The Company was unfortunately not able to absorb beneficiaries of these programmes, due to the Section 189 process, cash constraints and the orderly closure of shafts which resulted in fewer vacancies, but continues to develop

valuable skills in the community that prepares for the industry recovery and upswing. Some graduates of our mine technical services programme have found employment at nearby mining companies, while others are continuing their studies.

In 2015, Lonmin provided mining-related skills training to 500 members of the Bapo Ba Mogale community as Production Generals. Initial screening for minimum requirements led to various programmes aimed at improving basic skills to support future employability. These included a three-month skills programme, support in remediating criminal records, and enrolment in an extended AET programme that supports students to achieve Level 4 AET in six months. Once these programmes have been completed, candidates who meet the minimum requirements will be enrolled in production general training. Where minimum requirements are not met, portable skills training will be provided, mainly linked to construction.

### Portable skills training

Portable skills training is provided for employees and community members who lack formal education and are seeking employment opportunities outside of the mining industry.

### Overview of skills development programmes and beneficiaries

Skills development programme	2016 progress and beneficiaries
Portable skills	137 community members received training on various portable skill programmes.
Mining-related skills programme	189 cadets (86 women) attended the training, and 185 completed.
Community AET	295 community members received AET training.
Process operation exposure programme	Programme placed on hold due to cost-containment focus. Thirteen of the 19 students who successfully completed the programme in 2015 were employed on a full-time basis in 2016.
Community learnerships	Programme placed on hold due to cost-containment focus. Continuation of current learners – in 2016, 15 community members qualified as artisans.

### Community health

Our community health programme partners with the Department of Health and other stakeholders to provide quality healthcare services to the communities of Marikana, Lebowakgomo (Limpopo) at the Precious Metals Refinery and in the Eastern Cape.

Lonmin's community health projects are derived to address the community health needs identified by the Department of Health, with input from municipal IDPs, where relevant.

These programmes form part of our SLP commitments and support community health through awareness, promotion and prevention and, where possible, infrastructure development.

Expenditure on community health initiatives amounted to R6.4 million (2015: R6.5 million).

HIV/Aids work continued in the Marikana GLC, as well as in Limpopo, Brakpan and the Eastern Cape. Municipal approval for the Brits Forensic Mortuary remains outstanding, delaying the completion of the project.

<sup>1</sup> Statistics South Africa: Statistical release P0211. The expanded unemployment rate in North West Province is 43%.



## Awareness, promotion and prevention

### HIV/Aids

We work closely with HIV/Aids NGOs and conduct joint campaigns whenever possible to align programmes in the community to reach as many people as possible. Three formal health promotion campaigns were held, which focused on HIV/Aids, TB and sexually transmitted infections (STIs). 4,152 community members were tested for HIV/Aids at an 18% positive rate. Lonmin's HIV/Aids programmes in the Marikana GLC were delivered through peer education to educate members of the community about HIV/Aids, and home-based care to assist in caring for those affected and infected.

We supported 28 (21 in the Eastern Cape and seven in Brakpan) home-based carers by supplying home-based care kits, immune booster meals and stipends for group coordinators and peer educators in Marikana. The Company also provided volunteers in-service training, home-based care kits and assistance in registering as formal carers with the Department of Health and Department of Social Development.

In consultation with the Department of Health, we shifted the focus of our HIV/Aids programme in the Marikana GLC to home HIV/Aids counselling and testing (HCT) and TB contact tracing, which are crucial in curbing the high incidence of HIV/Aids and TB in mines and communities.

### Peer educators

Peer educators are community volunteers that work closely with community clinics to disseminate information, distribute condoms and go on door-to-door campaigns to perform mobile assessments of community members.

### Home-based carers

Carers tend to patients who are too ill to leave their homes and take care of orphans and vulnerable children within their villages.

A group of 14 volunteers was recruited and trained to conduct HCT and contact tracing from seven clinics within the Marikana GLC. To date, 135 source patients have been referred by the mine hospital and 74 contacts were traced. Of these, five were found to have TB and were started on TB treatment. HCT and TB contact tracing volunteers also received referrals from the local Marikana GLC clinics, and since April 2016, they managed to screen 8,556 community members for TB, and collected 1,242 smears resulting in 109 positive tests for TB.

HIV/Aids home-based care services and peer education, as well as TB contact tracing, continued in Brakpan, Limpopo and the Eastern Cape throughout the year.

Since October 2015, 21 Eastern Cape volunteers cared for 184 patients and 55 orphaned and vulnerable children and had 45 patients on TB directly observed treatments (DOTs).

In Limpopo, peer educators managed to conduct 2,740 peer education sessions, reaching 7,519 community members from Makushoaneng, Makoeng, Dithabaneng, Makurung and Hwelereng. 83,256 male and 10,289 female condoms were distributed.

The seven Brakpan home-based carers cared for 197 patients and 41 orphaned and vulnerable children. Here, peer educators managed to hold 1,657 peer education sessions and reached 13,548 people. They distributed 60,894 male and 901 female condoms.

Health awareness campaigns at the Limpopo and Marikana communities reached 7,519 community members during 2016.

### Eastern Cape HIV/Aids volunteers

Since 2011, Lonmin has been supporting 21 peer volunteers who are active in the eight villages of the Siliindini area in the Eastern Cape, our main labour sending area. We provided the initial impetus and training for the group and continue to offer support through monthly stipends, in-service training, home-based care kits and food supplements for patients.

The Group has shown remarkable initiative in the face of the many challenges in the region, and with minimal supervision has built strong relationships with local municipalities and the Department of Health. The Group cares for the ill and the orphaned, and delivers talks at schools in the area. Food from the garden they established supports local patients and the excess is sold to fund their activities. A water tank and water pipes were donated by the Department of Agriculture, which has allowed them to expand the food garden.

Governance structures in the Group have been well established and the Group invests in team-building activities which the volunteers self-finance, including an annual trip to Durban to debrief on the previous year and plan for the year ahead.

### Health promotion

Lonmin's health promotion initiatives in the Marikana GLC aim to raise awareness among learners and out-of-school youth about sexual health, HIV/Aids, TB and substance abuse. Programmes include support for school peer educators to raise awareness about these issues and encourage young people to access health facilities, should they need to. A drama competition to showcase messages on teenage pregnancy, HIV/Aids and substance abuse was staged for all the GLC high schools.

The focus at GLC primary schools is on child protection, including issues such as child neglect/abuse, personal hygiene, human trafficking and bullying.

Meetings are also held with parents and community members to raise awareness and explain the initiatives being communicated with the youth.

A sanitary towel drive and sexuality education for grades 6 and 7 primary school learners and high school learners were initiated.

# Social Licence to Operate (continued)

## Nutrition

Nutrition and health are inextricably linked. In children, good nutrition is essential for physical and mental development. Lonmin supports orphaned and vulnerable children in the GLC and Limpopo through food centres and supporting food gardens.

The Department of Basic Education's National Schools Nutrition Programme provides meals to GLC learners. We support this programme through providing monitoring and have established six food centres in Marikana and two in Limpopo that provide meals to 533 orphaned and vulnerable children.

Community members can receive training on how to cultivate food at permaculture food gardens at four of the food centres. An annual competition encourages schools to establish the best and most productive gardens. Students are taught how to grow their own food and can share this knowledge with their families.

## Health infrastructure projects

We invest in health infrastructure projects that improve access to basic healthcare in the GLC, in partnership with the Department of Health, local government and other stakeholders.

We contributed towards repairing storm damage to the roof of the Segswaelane clinic.

## Infrastructure development

Our local economic development investments aim to create socio-economic infrastructure that provides a platform for economic development. We work closely with local and national government to support its agenda to improve basic service in the GLC.

Projects align with three main focus areas: job creation, social infrastructure and capacity building. Social infrastructure initiatives include, among others, the construction of a resources centre and auxiliaries such as furniture, information technology (IT) and other equipment required.

Capacity building initiatives aim to improve outcomes by putting in place the necessary structures for beneficiary groups and local authorities to continue to maintain the infrastructure once it is handed over to its beneficiaries. Currently, these projects are focused on capacitating the Bapo Ba Mogale community, the Rustenburg local municipality and the Madibeng municipality.

Local economic development expenditure including waste removal, amounted to R16.5 million in 2016, a 45% decrease from 2015 (R30 million). As bulk water and road upgrade projects will be transferred to the local authority for operation and maintenance, it is important that proper planning takes place; therefore, it took longer to commence with actual implementation.

## Bulk water infrastructure

Lonmin distributes five megalitres per day of bulk water to various local communities, acting as an intermediary for Rand Water. An estimated 6,500 households in the formal

settlements and 5,500 households in informal areas of Wonderkop use this water. Water is also provided to various communities from the Lonmin bulk water supply.

In 2014 and 2015, the bulk water infrastructure project focused on improving access to potable water in Wonderkop through the detection of leaks, fixing and refurbishing of broken water pipes to improve water availability. We continue to work closely with the local Water Authority, the Madibeng Local Municipality and the National Department of Water and Sanitation (DWS) to identify sustainable water solutions for host communities, including exploring alternative methods to source and store bulk water.

GIZ, the German Development Corporation, has been supporting the local municipality to build capacity, develop a water master plan for the GLC and unlock provincial DWS funding. Engineering and design work has commenced, and plans are due for delivery in 2017.

## Road infrastructure

Lonmin's road infrastructure project focuses on the upgrading of existing roads to improve access for employees living in surrounding communities and settlements. We refined the project from an upgrade of gravel roads to construction of paved roads to provide contract opportunities for local civil construction companies and short-term job opportunities for local labour. The roads are surfaced with paving blocks manufactured from the Bapong youth brick-making project. The GLC roads were upgraded in 2015, and this year plans were finalised for a service road in Bapong, and a road in Modderspruit to improve access to the school. Construction is planned to commence soon.

The brick-making facility in Bapong was recapacitated to support the road project with road pavers and curbing. The project employs an average of 30 local people and is producing products for road construction.

## Waste removal

Community-based household waste and refuse management was established in 2012 to serve local communities, promote a cleaner environment, create local jobs and support enterprise development. Staggered handover to the local municipality started in the current year and will conclude in 2018. Further planned refinements include restructuring the collection process to separate recyclables at source, and a sorting and baling centre. 37,000 households units are being serviced in the GLC.

## Lighting for public safety

We planned to install 19 high-mast lights in the Wonderkop formal and informal areas by 2015, to address a rise in crime. The Company funded and installed 11 lights and refurbished eight existing lights, which included an upgrade of power supply from rural to semi-urban supply. Ongoing illegal power connections to the lights pose a serious safety risk and no further lights are planned for Wonderkop until this challenge can be effectively addressed.

### Update on previously reported local economic development projects

Construction of a community resource centre was completed and handed over to the community in April 2016. The centre hosts youth development and recruitment, serves as an information hub for the GLC, and as an outlet for the sale of prepaid electricity, water, data and airtime. We are negotiating a service contract with an external service provider to provide auxiliary equipment and infrastructure for the resource centre. Construction of a similar facility is planned for Majakaneng.

## Transformation through enterprise development and procurement

Transformation is a priority for us, and is promoted throughout the business. The Mining Charter aims to promote transformation in the mining industry. The Mining Charter is currently under review, which will impose more onerous requirements on the industry.

### BEE equity ownership

In November 2014, Lonmin successfully completed three BEE transactions which cumulatively gave the Company an additional 8% equity empowerment. Lonmin achieved the target of 26% BEE ownership by 31 December 2014 as required by the Mining Charter. These transactions support the improvement and development of local communities and align the interests of communities, employees and shareholders.

At the beginning of financial year 2016, the Bapo community indicated that it did not have the financial resources to participate in the Rights Issue. In order to retain its BEE equity ownership at 26% following the Rights Issue, the Directors therefore concluded that it was in the best interests of shareholders for the Company to issue sufficient new shares at US\$0.000001 per share to the Bapo community in order to maintain its proportional interest in Lonmin on a post-Rights Issue basis.

The Bapo BEE shares were issued in a separate placing to the Rights Issue and the Bapo community agreed not to take up or trade its Rights. The effect of the Bapo BEE placing was to maintain the Bapo community's current minority holding of less than 3% of the shares following issue of the new shares pursuant to the Rights Issue. As the Bapo BEE shares were issued in addition to the offer of new shares under the Rights Issue, they had a minor dilutive effect on the other shareholders in Lonmin. The Bapo community agreed to accept a 10-year lock-in period with regard to the Bapo BEE shares.

### Bapo transaction

Four contracts have been awarded to the Bapo Ba Mogale (Bapo) in terms of the 2014 Bapo transaction and have been implemented. These are:

- the Yellow Equipment contract with a gross value of R45 million per annum over a five year period, totalling R225 million;
- the Ore Transport contract with a gross value of R25 million per annum and R125 million in total;

- a PPE contract worth R100 million per annum and R500 million in total; and
- a bussing contract worth R100 million per annum over an eight-year period, totalling R800 million.

The awarding of these contracts has resulted in Lonmin complying with (and exceeding by R1.45 billion) its procurement undertakings given to the Bapo. Governance within the Bapo entities that manage the above contracts remains a work in progress. Cash flows and liquidity concerns are also a focal point for the Bapo.

### Community trusts

2014 saw the establishment of two separate community trusts. Each trust holds 0.9% of the ordinary shares in Lonplats, and is entitled to dividend payments which have been mandated for upliftment projects in the respective communities. To the extent that no dividend is payable in a particular year, each community trust will be entitled to a minimum annual payment of R5 million escalating in line with Consumer Price Index each year. The first transfer of R5 million to each trust was made during the year. The funds are managed by ward councillors through a board of trustees, which is mandated to disburse funds for upliftment projects in the respective communities. The establishment of these trusts, governance structures and initial capital, could encourage other investors to contribute to enable more substantial development.

While these transactions have been successfully concluded, there has been a challenge to the transaction by a faction within the Bapo community. Lonmin continues to engage with all stakeholders to resolve the issues of concern.

### Preferential procurement

Lonmin's preferential procurement strategy requires procurement adjudication to favourably weight suppliers with broad-based black economic empowerment (B-BBEE) credentials, female representation and, where possible, GLC companies. Certain procurement areas are ring-fenced for GLC and BEE suppliers only, and only GLC companies are invited to tender for capital items.

The Mining Charter sets targets of procuring 70% of services, 50% of consumable goods and 40% of capital goods from HDSA-owned suppliers. Lonmin recognises the importance of actively involving citizens who were previously excluded from the mainstream of the economy and has far exceeded these procurement targets.

The biggest challenge we face is increasing the number of black women-owned suppliers in our vendor base. We are making an effort to address this area through various enterprise development initiatives and projects, such as the manufacturing of personal protective equipment. The procurement department works closely with the enterprise development department to develop local suppliers that show potential.

## Social Licence to Operate (continued)

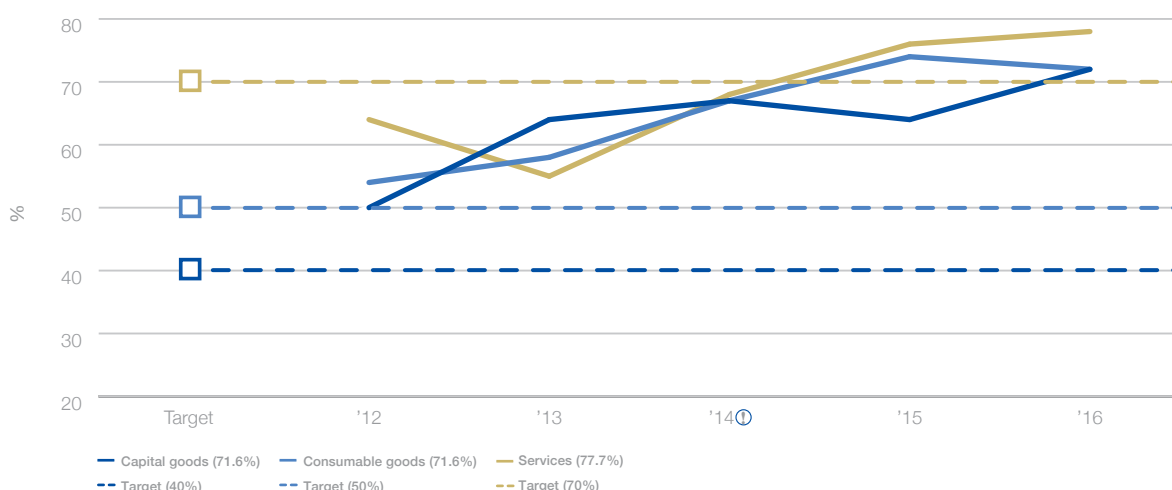
### Procurement with locally based suppliers

Locally based suppliers	2015	2016
Total value spent on local procurement	R2.8 billion	<b>R2.8 billion</b>
Amount spent with suppliers based within GLC	R634 million	<b>R 761 million</b>
Number of new suppliers registered as vendors from GLC	161	<b>11</b>

### Total spend with new vendors created

	R million	
Vendors	2015	2016
Black-owned	7.7	<b>95</b>
Non-BEE	61.3	<b>6</b>
Other	7.3	<b>16</b>

### Preferential procurement performance (%)





## Enterprise development

Our enterprise development initiatives aim to foster entrepreneurship and economic growth in local communities, and to create a sustainable pool of local BEE suppliers that will support further improvement in our preferential procurement performance. These programmes are facilitated through a small business incubation centre established in partnership with Shanduka Black Umbrellas (SBU) that creates opportunities for GLC members who want to do business with the Company.

SBU promotes entrepreneurship as a desirable economic path and provides support to 100% black-owned businesses through their first three years of existence. The programme provides training, mentorship, business plan development and access to practical resources, including office space at the Lonmin community office and IT resources. Lonmin's procurement department communicates the Company's procurement needs and SBU develops a database of robust, accredited vendors.

The critical statistics from the inception of the Mooinooi incubator include:

- Businesses in full incubation: 43
- Permanent jobs created: 431
- Temporary jobs created: 73
- Jobs created in current year: 35

Other enterprise development projects during the year are discussed below.

### Phakwe Mining Services

Phakwe Mining Services was founded in 2010 and is a black-owned company from the Bapo Ba Mogale community that employs 290 people and generates R34 million in annual turnover. Phakwe Mining Services provides underground cleaning, hauling, maintenance and vamping to Lonmin.

### Technical mentorship

Four GLC entrepreneurs within SBU are currently in mentorship relationships that provide the opportunity for skills transfer from expert individuals and suppliers to GLC entrepreneurs.

### Planet Electrical

Planet Electrical is an electrical installation and maintenance services provider, established in 2011. The company has been part of the SBU since 2013, and they are at the graduation phase of the programme. Under the management of Andrew Mokwena, the company employs 15 permanent staff members, owner included. The company provides electrical services to its clients, and one of their key clients is Lonmin. For the last quarter, the company has been awarded seven Lonmin contracts totalling R675,000. The company has also increased value with a purchase of a vehicle worth R79,000 to improve their service to their clients. Eight contractual staff had to be employed to absorb the work load from contracts received.

### Measurement Process Solution

Measurement Process Solutions joined the programme in July 2015. The company provides analytical testing services to the mining industry. Since then, the company has been

awarded projects that, among others, include supplying laboratory equipment. For the last quarter, this company received two projects from MINTEK and National Metallurgies Institute of South Africa, with net profits of R50,000 and R13,000 respectively. They also acquired machinery worth R10,500, adding to the company's net asset value.

### SEDA Platinum Incubator – jewellery collaboration

During 2015, we advanced our collaboration with SEDA Platinum Incubator (SPI) to assist in the launch of a range of corporate gifts to be made in platinum. The incubatees and trainees participated in a design competition, and the top five designs are earmarked for production during 2016. SPI, with the assistance of Lonmin, worked through the key security and safety requirements to allow them to safely and securely produce alloys from the platinum sponge Lonmin would make available. The designs could not be made during the first half of the year, due to the SPI awaiting licensing from the Precious Metals Regulator. The designs will be made in the second half of 2017.

Located in Rustenburg, North West Province, SPI is South Africa's first platinum beneficiation incubator for the design and manufacture of jewellery. It is the only dedicated incubator for PGMs beneficiation in South Africa. Its primary aim is to facilitate skills transfer and uplift HDSAs through their involvement in platinum beneficiation activities, mainly jewellery manufacturing.

## Employee volunteering and donations

Employees support various community programmes by volunteering their time. Information on employee volunteering and donations is available at <http://sd-report.lonmin.com/2016/>.



## Human rights

Lonmin's human rights policy commits us to respect the human rights of those who have interests in and are affected by our operations. The policy aligns with the human rights entrenched in the Constitution of the Republic of South Africa and has regard to the International Bill of Human Rights, which includes the United Nations Universal Declaration of Human Rights and the International Labour Organisation Declaration on Fundamental Principles and Rights at Work. The policy is also informed by the United Nations Guiding Principles on Business and Human Rights, which are a global expectation of all business enterprises for managing human rights risks linked to their business activities. The commitments contained in the policy have been incorporated into the Lonmin Sustainable Development Standards.

In order to meet our responsibility to respect human rights, we have implemented certain processes which include communicating this policy internally and externally to all of Lonmin's stakeholders. Human rights training is included in the induction programme for all employees and contractors, and is included in mandatory annual refresher training. Attendees are informed of their rights, expectations, standards and mechanisms to report grievances or incidents, which include a toll-free ethics hotline service.

# Social Licence to Operate (continued)

## Human rights performance

In August 2015, a human rights working group was established, comprising representatives from all areas of the business including risk, security, health and safety, environment, labour, community, supply chain, legal, company secretarial and communications.

Lonmin's current human rights policy was adopted by the Board in November 2015. The policy is explicitly informed by the United Nations' Guiding Principles on Human Rights, as well as the United Nations Universal Declaration of Human Rights and other international instruments. Respect for human rights is also enshrined in Lonmin's Code of Business Ethics.

Lonmin recently commissioned a gap analysis study, which was undertaken and completed during financial year 2016. This study sought to analyse Lonmin's Human Rights Policy and procedural framework in the context of the Guiding Principles and best practice in the mining industry. The findings are currently being assessed by the internal working group.

As part of the ongoing process, Lonmin is embarking on development of an internal human rights due diligence checklist to help ensure full compliance with the relevant policies and systems. A pilot study, focusing on the issue of women in mining, has been commissioned and is expected to be carried out in financial year 2017. A new human rights training programme in relation to the Guiding Principles is also scheduled to be rolled out to Lonmin's managers and executives during financial year 2017.

Incidents of human rights violations are recorded and followed up wherever possible.

Four cases of intimidation (2015: 4) and one case of discrimination (2015: 0) were reported in 2016. There were no reported incidents of forced or child labour at the operations.

## Protecting human rights through supply chain

Lonmin's general terms and conditions of contract include human rights conditions, and these are attached to all tenders, requests for quotation, vendor applications, contracts and orders. They include a requirement to comply with the Lonmin Charter, the Lonmin Code of Business Ethics and Lonmin's policies and procedures.

All new suppliers are screened against human rights criteria when registering on the vendor database. Compliance audits are conducted on request from the operations. This year, eight vendor contracts were terminated due to unethical behaviour.

## Modern Slavery Act and procurement

As stated in the Human Rights Policy, Lonmin's human rights commitment includes a prohibition on modern slavery in all its forms, including human trafficking and forced or compulsory labour. Lonmin also seeks to ensure that its counterparties conduct their own operations in line with these standards.

Lonmin's vendor approval process already requires potential suppliers to answer specific questions in relation to human rights, including whether the supplier has its own human rights policy and whether it provides human rights training to its staff. In addition, the standard terms and conditions applicable to contracts with suppliers require Lonmin's counterparties to adhere to a range of legislation relevant to human rights,

including the South African Labour Relations Act, No 66 of 1995, the Basic Conditions of Employment Act, No 75 of 1997, the Compensation for Occupational Injuries and Diseases Act, No 130 of 1993, as well as Lonmin's own Sustainable Development Standards and Code of Business Ethics. These acts and standards contain wide-ranging human rights stipulations, including health and safety at work, working hours, freedom of association, the prohibition of child labour, non-discrimination and freedom from forced labour and corporal disciplinary practices.

In addition to the above, Lonmin is currently undertaking a review of its procurement application processes, with the intention of further improving its ability to identify and exclude from its supply chain product and service providers whose operations fall short of meeting Lonmin's standards.

## Human rights and security

We appointed new leadership in the Lonmin security function, and subscribed to and are implementing the Framework for Peace and Stability in the Mining Industry (February 2013), and the Deputy President's Framework Agreement for a Sustainable Mining Industry (July 2013). The security function has shifted away from the traditional security focus on protection of assets to an integrated proactive approach to manage crime threats. The security risk management strategy is designed to take a proactive approach to understand the security threat to operations with a primary objective to mitigate interruption to operations.

The security risk management process aligns with the fundamentals of ISO 31000, the international risk management standard, and the voluntary principles on security and human rights, which are human rights guidelines designed specifically for extractive sector companies.

The Security Policy and Code of Conduct were revised, improved and signed off in 2016, to include recommendations from the human rights gap analysis.

Our mandate is that the Lonmin security function does not engage with public disorder incidents, as that is the role of public order policing. Our focus is strictly on the safety of our people and the protection of our property. Work has been undertaken to drive improvements in training, education and vulnerability assessment processes and ensuring staff have appropriate equipment with applicable logistics necessary for asset protection (including crime prevention vehicles and thermal cameras). Security personnel are being trained on the legal and operational aspects of crowd management. Corporate operational procedures are in place, and there is a specialised corporate operational procedure on crowd management.

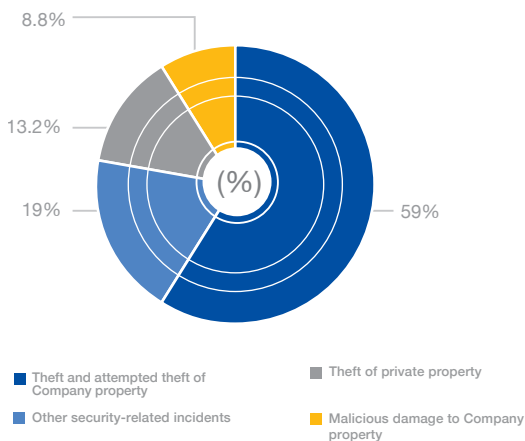
Security employees and contractors all have Private Security Industry Regulatory Authority (PSIRA) training as a minimum. The Lonmin Basic Security Training Programme includes modules on security philosophy, the Security Code of Conduct, teamwork, human rights and arrest rights.

Human rights forms part of the Basic Security Training Programme and all employees and contractors receive Lonmin's human rights training at induction. Our security risk management policy and Security Code of Conduct include fundamentals on human rights. Training on our Security Policy

and Code of Conduct, as at the end of 30 September 2016, covered 85% of security employees and 80% of contractors.

At the end of September 2016, Lonmin had 154 full-time security employees and 497 contractors.

### Recorded security incidents (%)



### Customers and human rights

BASF, a German chemicals company, has been a long-standing customer of Lonmin, purchasing PGMs primarily for use in the production of mobile emissions catalysts. Following the publication of the Farlam Report, BASF conducted a thorough assessment of Lonmin's operations and its policies related to human rights, labour and social standards, and environmental protection against BASF's Supplier Code of Conduct. The evaluation included an external audit and was conducted in accordance with the Together for Sustainability (TfS) initiative, which was founded to establish global standards for supplier evaluations and auditing to improve sustainability sourcing practices.

The audit covered a broad range of operational topics, including environment, health and safety, labour and human rights, management, and governance. The audit findings were included in an action tracker and the majority of the findings were closed out or are in the process of being addressed. BASF is providing active knowledge sharing with Lonmin in areas which are comparable to the chemical industry. Lonmin remains open and appreciative of BASF's efforts to help improve its safety preparedness and sustainability performance, and remains committed to participating in follow-up assessments by BASF.

In conclusion, Lonmin is committed to the process of continuous improvement and that, in the event of any inadvertent breach in its policies, lessons are learnt and actions taken to minimise any re-occurrence.



The stockpile management contract worth R225 million was awarded to the Bapo Ba Mogale community.

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83	Key stakeholders
84	Risks and opportunities
85	Accountability and governance
86	Approach and performance

10/

## Material Focus Area

# Environment

- > *Managing environmental impacts and opportunities*





01 Lonmin recycled 4,158 tonnes of ferrous and non-ferrous scrap during 2016 .



02 The integrated water balance assists in determining the best ways to transfer water from positive areas to water-deficit areas.



03 We held two environmental open days this year.



# Environment

## Overview



The nature of our business – mining and processing PGMs – creates an environmental impact. Our strategic commitment to *operational excellence* and ethical business practices require us to minimise the environmental footprint of our operations and, where necessary, mitigate or remediate our impacts. This is achieved by improving the efficiency with which we use input resources such as energy and water.

While the resource-intensive nature of the primary production of PGMs remains a challenge for the platinum industry, these metals play an important role in reducing pollutants through technologies including catalytic converters and fuel cells.

Access to sufficient potable water and a stable supply of electricity remain key challenges in South Africa. Lonmin continues to identify ways to reduce our reliance on Rand Water Board supplies and to optimise the efficient use of internal water sources. This is accomplished through the re-use of process water, abstraction of water from the Buffelspoort water scheme, treatment of effluent and implementation of water savings projects. The Company also transfers water from areas of surplus to areas of deficit, and follows a maintenance programme to ensure that pipelines are regularly inspected for leaks and repaired.

The administrative and financial burden of compliance with the rapidly evolving environmental regulatory framework is particularly challenging in the current cost-constrained industry environment.

Civil society increasingly focuses on holding companies to account regarding their impact on surrounding communities and the natural environment. Lonmin's environmental strategy entrenches a proactive approach to managing our long-term impact that goes beyond the need to safeguard our licence

to operate by ensuring compliance with relevant legislation. The social licence to operate is becoming an increasingly important matter for potential and existing investors, customers and other stakeholders. Regular engagements are critical to establish clear communication channels with stakeholders regarding our approach to monitoring and mitigating our environmental impacts.

Building strong partnerships with local government is crucial to effectively address the challenges faced in the communities in which we operate, including service delivery, supply of potable water, electricity and waste management.

Our strategic environmental pillars are aligned with our operational environmental pillars to meet the environmental management objectives at operational level:

- Maintaining our licence to operate – compliance with legal requirements
- Resource management and use – Integration of ISO 14001 systems across Lonmin
- Stakeholder relations
- Minimising environmental footprint and impact for sustainable closure – Implement projects to reduce our impact on the environment

This chapter provides an overview of our most important environmental risks and opportunities, how these are managed, monitored and, where possible, mitigated. Performance is reported under the environmental areas of water management, energy security and efficiency, waste management, air quality, climate change and biodiversity and land management. Most of the programmes discussed relate to our operations in the North West Province near Marikana, where the majority of our operations are located.



Resource management is a key pillar in our environmental strategy.

## Key stakeholders

### Engaging with stakeholders

A comprehensive database of interested and affected parties in and around Lonmin's operations has been compiled and we regularly engage with local communities, including before significant projects are started, as required by various regulations. Environmental Impact Assessment (EIA) regulatory processes provide for community and public participation.

Concerns regarding environmental matters can be raised through formal environmental grievance mechanisms that are in place. A dedicated phone number (014 571 2088) at the Marikana operations is routed to the emergency and disaster management call centre, where complaints and concerns are captured into the complaints register and a community complaint form. The environmental register tracks actions to be taken in response to the complaint and provides for feedback on progress with an official response generated. At the Precious Metal Refinery (PMR) in Brakpan, an intercom box allows community members to register complaints where a similar process is followed.



### Communities

Lonmin's operations and communities share environmental resources, and engagements are held regularly to communicate with community members and understand their concerns. Environmental complaints are captured on the Lonmin ISO 14001 environmental management system, investigated and responded to according to the Lonmin system procedural requirements. Environmental open days were held in Marikana and at the PMR during the year, with a focus on sharing knowledge on environmental management. Community members were encouraged to discuss their views on Lonmin's environmental performance and the challenges they face in their respective areas. These open days were attended by employees and a range of external stakeholders including government, communities, interested parties and NGOs.



### Government and regulators

Government sets environmental regulatory standards; compliance is monitored to achieve equitable access to natural resources and the responsible management of the mining industry's direct and indirect environmental impacts. Mining and other activities in South Africa are regulated by the Department of Mineral Resources (DMR), Department of Water and Sanitation (DWS) and Department of Environmental Affairs (DEA) which oversee the industry and the extraction of the country's mineral and natural resources. Regular formal engagements with regulators align expectations and outcomes, and create an enabling environment for sharing of best practices and enabling the "co-factor" (co-operation, collaboration) to be realised.



### Industry bodies and associations

The Company works closely with industry bodies and business associations, including the South African Chamber of Mines and the National Business Institute (NBI) so that our position on environmental matters is represented.

We participate in numerous water forums and associations, including those forums held with Rustenburg Local Municipality and Magalies Water on all water-related matters. Discussion points included water demand management initiatives by the mines and municipalities, and solutions to water supply in the short and medium term.

# Environment (continued)

## Risks and opportunities

The sustainability risks and opportunities related to the environment are identified below, with references to information regarding their management and mitigation. The risk management approach is discussed on page 34 of this report and on page 20 of the Annual Report and Accounts 2016.

### Utilities – Access to secure energy and water as well as the optimal use of the input resources are critical for mining operations

#### Description

The higher than inflation tariff-based increases in electricity and the Company's inability to reduce this cost any further, have impacted the operating costs of Company operations. A stable electricity environment, in terms of pricing, is critical in ensuring our long-term sustainability. Water utilisation has also been challenging, both from an infrastructure point of view as well as availability. Capacity deterioration within local municipalities is also adding to this challenge. The establishment of informal settlements resulted in communities requesting water and electricity supply as a basic need and keeps adding to the burden of local municipalities and industries for service delivery.

#### Impact

Supply constraints in respect of energy or water could impact upon our ability to operate effectively and meet our production targets. Furthermore, cost increases in respect of these utilities impact our margins. Water availability is becoming a critical component for any business to survive and still remains a basic human need.

### Opportunities and mitigation

Ongoing implementation of the electricity conservation programme as well as water optimisation through demand management. An integrated water management plan for Lonmin has been developed with the goal to reduce reliance on Rand Water as far as possible, within the operations, and to maximise the recovery and re-use of all other sources of water. Longer-term plans to treat some streams of these alternative sources to potable level to make the business more independent of Rand Water. Explore further opportunity to supply communities out of such streams. As part of ensuring optimal electricity usage, Lonmin is a member of the Eskom Energy Intensive User Group (EIUG), and conducts monthly and daily electricity consumption and reporting. Additional initiatives to ensure optimal usage is the electricity conservation programme and loadshedding contractual agreements to manage supply side constraints. As part of ensuring appropriate continuity during an outage, the Company has implemented risk-based scenario planning based on available Eskom capacity.

From a water optimisation perspective, the Company has implemented water conservation and demand management initiatives. The process as to how water is being monitored and managed is aligned with how power is being managed in the business.

### Further reading

Water management

> 86

Energy security and efficiency

> 90

### Increasing environmental regulatory requirements, legislation and amendments<sup>1</sup>

Increasing environmental legislation for mining and processing requires careful understanding and management to ensure compliance and avoid unnecessary costs. Various regulatory requirements must be complied with, and it is critical that these are understood and that appropriate measures are implemented to ensure compliance.

### Opportunities and mitigation

Proactive management of our environmental obligations demonstrates our *corporate citizenship* agenda, builds our relationships with communities and regulators, and helps us to retain our legal and social licences to operate.



### Further reading

Accountability and governance

> 85

Waste management

> 91

Climate change

> 98

<sup>1</sup> This risk is not part of Lonmin's principal risks, but is important in the context of our environment management.





Regular water use licence audits are performed.

## Accountability and governance

The Board is ultimately accountable for the Company's environmental performance through the Safety, Health and Environment (SHE) Committee, and the Executive Committee (Exco), supported by senior management at corporate and operational levels. The Exco has established a SHE sub-committee, which reviews SHE performance quarterly to identify critical concerns and opportunities, and to monitor operational safety, health and environmental performance.

Our environmental department is responsible for strategic direction in terms of environmental management and compliance, and monitors environmental performance. Line management is accountable for operational environmental compliance, supported by the environmental department. We take a precautionary approach to environmental management, aiming for compliance and continual improvement. Risks relating to sustainability, including environmental impacts, are incorporated into the Company's corporate risk registers. Reviews of these risks and their associated management plans are conducted by the relevant operational and management teams, and the results of these reviews are presented to the SHE and Risk Committees of the Board.

Lonmin's Safety and Sustainable Development Policy and the ISO 14001 system procedures define the Company's approach to environmental stewardship.

Our ISO 14001 environmental management system (EMS) is well managed and we maintained our certification through annual third-party verification. The ISO 14001 EMS is a self-regulatory tool that promotes the minimisation and management of potential environmental impacts. A range of internal and external audits are conducted to monitor and verify the integrity of the EMS and the Company's overall environmental performance. These include, among others, quarterly internal key performance indicator (KPI) audits, external EMP performance assessments, water use licence audits, Mining Charter audits, internal and external ISO 14001 audits, and environmental legal compliance audits.

As part of continuous improvement, an additional external audit was conducted to verify the internal rating system of environmental incidents against the Lonmin ISO 14001 system procedures, as well as benchmarking with other industries. All actual level 3 and above incident ratings were verified and samples were taken of the lower-level incidents that were audited against the Lonmin procedures.

A range of internal environmental indicators and targets are reported against every month to track performance on environmental matters. Reports are provided monthly to the operations, Exco and the Board, and to the Board SHE Committees, which meets quarterly to review the Company's performance on SHE matters.

Our focus on proactive engagements with important stakeholder groups including communities, regulators and internal stakeholders has strengthened relationships, emphasised the critical importance of environmental compliance and improved the Company's ability to secure approvals timeously.

# Environment (continued)

## External policies, frameworks and regulations

The primary acts that regulate Lonmin's environmental footprint/activities are the Mineral and Petroleum Resources Development Act, No 28 of 2002 (MPRDA), the National Environmental Management Act, No 107 of 1998 (NEMA), and the National Water Act, No 36 of 1998 (NWA), with numerous other relevant legislation and associated regulations. The requirements of our various mining rights include an EMP approved by the DMR.

Lonmin's approach to environmental responsibility is underpinned by:

- the International Council on Mining and Metals' (ICMM) 10 Principles of sustainable development (Principle 6: *Seek continual improvement of environmental performance* and Principle 7: *Contribute to biodiversity and integrated approaches to land use planning*) and aligned to the mandatory requirements of the ICMM position statements for climate change and protective areas; and
- the UNGC (Principle 7: *Businesses should support a precautionary approach to environmental challenges*; Principle 8: *Undertake initiatives to promote greater environmental responsibility*; and Principle 9: *Encourage the development and diffusion of environmentally friendly technologies*).

We submitted our 10th consecutive CDP (formerly the Carbon Disclosure Project) report and our third CDP water disclosure report – the second water disclosure report for public disclosure.

We had zero environmental incidents above a level 3 and five level 3 environmental incidents during 2016. Level 3 environmental incidents are those incidents that have a moderate impact on the environment, but are reversible within the lifetime of the operations. All of these incidents were related to water and reported to the regulating authorities.

Authority inspections were undertaken on our atmospheric emission licence (AEL) at the PMR and the water use licence for the Marikana operations. The review of the AEL was undertaken by the Ekurhuleni metropolitan municipality and the inspection of the Marikana water use licence was conducted by the DWS.

## Approach and performance

The following section discusses the specific approach and the 2016 performance for each material environmental area at Lonmin. These include:

- Water management (pages 86 to 89)
- Energy security and efficiency (pages 90 and 91)
- Waste management (pages 91 to 96)
- Air quality (pages 97 and 98)
- Climate change (pages 98 to 101)
- Biodiversity and land management (pages 101 to 103)

## Water management

South Africa is a water scarce country from a resource availability perspective. This is exacerbated by various challenges impacting the availability of this important and critical resource including climate change, ageing and poorly maintained infrastructure, illegal water connections, and the current drought conditions.

The drought conditions in South Africa necessitated water restrictions across the country. We support the South African government in its call for preserving and using this resource efficiently. We take a proactive approach to the management and efficient utilisation of water at our operations. Targets to reduce water consumption have been set for all business units and are tracked on a continuous basis. Deviations are investigated immediately and captured within the relevant management systems.

Demand and pressure on bulk water infrastructure in the Greater Lonmin Community (GLC) continues to increase with the growth in neighbouring towns and settlements. Demand for water is forecast to exceed current resources. With only a few remaining large-scale water resource development opportunities available, future delivery and supply of water is likely to be uncertain and costly.

Water-related risks are assessed and mitigated as part of the structured, multi-disciplinary risk assessment process, which covers all operations and some key suppliers, including the Rand Water utility as our primary water supplier. Water risks are also considered by the Audit and Risk Committee of the Board.

We distribute water through a water infrastructure network that covers a distance of approximately 30 kilometres. Water is distributed to and from the Company's various mining and processing areas. We also act as a water services intermediary by distributing water to surrounding communities.

Our water use licence amendment application for the Marikana operations was issued in June 2016. The amended licence has provided new opportunities for us to access water from additional sources to provide greater flexibility and access to water in respect of seasonal variations. These sources include the abstraction from the anthropogenic aquifers in our backfilled opencast pits. The abstraction from this resource contributes to the improvement of water quality. External audits are conducted on compliance with the water use licences. The Parliamentary Portfolio Committee on Water and Sanitation undertook an oversight visit to the North West Province. As part of the agenda, a site visit was undertaken to the Lonmin operations in addition to Lonmin presenting on Water Conservation and Demand Management Strategy.

Anthropogenic aquifer systems or aquifer storage and recharge (ASR) has a wide range of applications, most commonly the storage of surplus water in the subsurface. Water that would otherwise be lost through evaporation from dams and rivers and/or spillages during high-flow events can be stored and used during times of limited availability. Water filters into the subsurface aquifers through infiltration basins or by injection boreholes, enabling the user to store surplus water.

The South African government recognises ASR as a method to enhance aquifer conditions and developed the Artificial Recharge Strategy to introduce ASR as a water management option and provides guidance on how it can be applied in South African conditions (Department of Water Affairs, 2007).

The Water Conservation and Demand Management Strategy aims to secure access to sufficient water to supply our operations and sustain our life of business plan, optimise freshwater consumption and use process water more efficiently, and minimise contamination of ground and surface water resources around our operations, ultimately to reduce our closure liabilities. Various projects have been identified to meet the objectives with a total implementation budget of around R342 million across the project timeframes to be invested.

Lonmin's integrated water balance simulates scenarios and risk assessments to inform decisions about our water use, manage the effectiveness of the strategy, and standardise

best water practices throughout the business. The integrated water balance assists in determining the best ways to transfer water from water-positive areas to water-deficit areas within the operations, increases understanding of water flows, improves efficiency, investigates opportunities, reduces costs, and decreases potable water consumption.

Water use is regulated by the National Water Act and regulations, the Water Services Act and the National Environmental Management Act and regulations, and through approved water use licences. Our EMS manages and monitors water use and includes groundwater modelling, surface and groundwater monitoring, toxicity testing and bio-monitoring. Due to the nature of the ore and the manner in which it is processed, PGM mining and processing activities do not generate acid mine drainage.

Water use and quality monitoring is conducted on a monthly basis and reported to management. Efficiency targets are assigned to business units in terms of potable water use. Should water consumption or water quality exceedances be identified, the ISO 14001 system procedure is followed in terms of reporting, investigating and developing or reviewing action plans to address these exceedances. With the drought intensifying throughout 2016, a water protocol management code was developed using principles applied in the management of electrical energy.

Consumption of Rand Water Board water is measured across the property, trended and reported daily. Levels at containment facilities are tracked. The tracking system is designed to flag and call for a certain water conservation stage. Stages initiate alternative supply sources established through the Integrated Water Management Plan (IWMP) to balance the system.

### 2016 highlights

- Participating in the CDP water disclosure project for the third year, the second time for public disclosure.
- Strengthened relationships with key stakeholders, including the DWS.
- Developing infrastructure in support of the Water Conservation and Demand Management Strategy.
- Obtained approval for the revised water use licence for the Marikana operations, which authorises alternative sources of water for use. The licence further authorises key water uses required for the planned bulk tailings treatment project.
- Savings of Rand Water realised of up to 600m<sup>3</sup>/day at certain concentrators.

# Environment (continued)

## Performance

Lonmin's fresh water sources include Rand Water and the Buffelspoort Dam for our Marikana operations, in addition to Rand Water for the PMR. Our Limpopo operations draw water from regional well fields.

- 17** Our five-year target (to 30 September 2017) is to reduce our aggregate freshwater intake per unit of production by 15% from the 2012 baseline year. In 2016, against the 2012 baseline year, water efficiency improved by 13.0%; less water was used and production ounces delivered were higher, positively impacting our water efficiency.

The Marikana operations consume most of our freshwater profile, making up 93% (7,494,422m<sup>3</sup>) of our total freshwater consumption (8,043,792m<sup>3</sup>). Operational initiatives undertaken to reduce our freshwater footprint and improve on our re-use and recycling include the reduction of Rand Water intake at our concentrator processing plants. This was achieved by investing in relevant infrastructure to:

- direct appropriate grey water flows into these areas; and
- to install a filtration plant.

Savings of up to 600m<sup>3</sup> of Rand Water per day at the areas of implementation have been realised. The completion of additional projects in 2017 has the opportunity to increase water saving to 1,300m<sup>3</sup> per day.

## Water recycling and reuse

Water reuse and recycling is optimised by the integrated water balance. The processing plants use a closed loop reticulation system to reduce and minimise water withdrawals. There are seven waste water sewage treatment plants at Lonmin's Marikana operations from which final effluent is used for operational processes. Through the closed reticulation system, 15.4 million m<sup>3</sup> (2015: 13.4 million m<sup>3</sup>) of water was recycled and reused during 2016.

## Water emissions

Groundwater and surface water quality is monitored at numerous boreholes and surface monitoring points, against the water use licence parameters.

Water levels at high-risk containment facilities are monitored and communicated to users through a weekly environmental "robot" alert on a green-orange-red scale. In addition, an internal water demand management procedure was developed with various stages of water restrictions. Critical water levels trigger mitigation measures to eliminate environmental discharges (where water levels are high), and prompt the necessary steps to support stable operations (where water levels are low). Preventive and management procedures are in place for discharges.

Where a water discharge occurs, it is reported to the DWS. Water samples are taken at source and, if the discharge entered a stream, upstream and downstream from a discharge to determine the impacts on water quality. Internally, a flash report is generated and, based on our risk ranking tables, an incident rating is reported based on a combination of volume, quality, impact on the environment and legal requirements. Discharges are investigated and action plans put in place to reduce discharges. The theft of piping, pumps and high-density polyethylene (HDPE) liners on our properties continues to pose a serious challenge to effective water management. Corrective actions that we are implementing to address discharges include the automation of water reticulation circuits, installation of water level indicators, additional security measures and desilting of dams.

Four containment facilities were relined according to required specifications.

Five level three water discharge incidents occurred during 2016 (2015: three). All of these incidents have been reported to the regulating authorities. According to our sampling, the environmental impact of these discharges, due to the quality of the water, was limited, and none of these discharges had an impact on biodiversity, sensitive or protected water bodies.

Date	Area	Incident description
6 October 2015	Lonmin Services – K3 Waste Water Treatment Plant (WWTP)	The final effluent/storm water from the K3 WWTP discharged into the natural environment due to equipment failure.
20 November 2015	PMR	Persistent rain during the week of 16 to 19 November, led to the storm water containment area reaching full capacity and discharging into the storm water system.
10 November 2015	K3 shaft	The K3 shaft settler dam seeped into the surrounding environment due to theft of a pump.
29 June 2016	Rowland Concentrator	The slurry pipe was leaking on the outside of Rowland Concentrator and discharged into the environment due to equipment failure.
12 August 2016	Smelter	The Rowland Corner Dam discharged into the surrounding environment due to the theft of cables and damage to a pump.

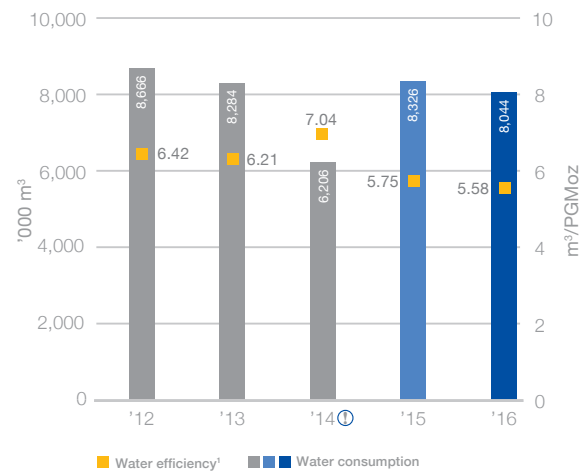


## Water and the community

Lonmin and the communities access potable water from the same source, and local municipalities use our bulk infrastructure to distribute water to the communities of Segwaelane, Oustad, Wonderkop, Marikana and Mooinooi. The Company acts as an intermediary in this role.

We work closely with local municipalities to find solutions for community water sources, including enabling and aligning local economic development in support of water infrastructure creation. We also support local municipalities and communities through the treatment of five megalitres (ML) of waste water from communities per day at waste water treatment plants and tanker discharge points. Furthermore, we provide maintenance support to the municipality services and will remove blockages when notified. As part of our environmental management inspections on our infrastructure, we also inspect municipal infrastructure related to waste water treatment.

## Freshwater consumption ('000m<sup>3</sup>) and water efficiency<sup>1</sup> (m<sup>3</sup>/PGMoz)



## Water recycling and reuse

	2012	2013	2014 <sup>1</sup>	2015	2016
Volume of water recycled and reused (million m <sup>3</sup> )	27	31	9.5 <sup>2</sup>	13.4	15.4



Lonmin recycled 15.4 million m<sup>3</sup> water during 2016.

<sup>1</sup> Water efficiency is consumption of freshwater per PGMoz produced (m<sup>3</sup> per PGMoz).

<sup>2</sup> To evaluate the reuse and recycling figures, the use of a simulation is undertaken. The dynamic model is frequently updated and refined to align to production, and actual water consumption once it becomes available. The model was refined as part of continuous improvement in 2015.

# Environment (continued)

## Energy security and efficiency

Electricity forms the majority of Lonmin's energy consumption and is used in many critical applications, including powering surface and underground ventilation fans, dewatering pumps, material handling equipment, processing plants and winder plants. Our current mining operations do not need refrigeration plants.

Given that electricity accounts for approximately 7.5% of our annual expenditure, including capital expenditure, energy efficiency initiatives are important for cost containment and business viability, and to minimise greenhouse gas (GHG) emissions. The expected above-inflation increases in electricity prices and the impact of a likely carbon tax are built into the life of business plan as part of our strategy to improve cost efficiencies.

Lonmin's energy management strategy is based on South African National Standards (SANS) 50001. While electricity supply stabilised during the year, we continue to communicate regularly with Eskom regarding agreed demand levels, power interruptions and supply constraints. Production disruptions can be minimised where we receive advance warning of electricity supply interruptions through shutting down concentrator streams so that mining production and smelter power can be kept stable.

Electricity consumption targets are established per business area and reported on monthly, with specific energy efficiency projects launched to reduce electricity consumption. During 2016, a project was launched with the objective of reducing electrical consumption by optimising the compressed air reticulation systems through the means of an operational control room. This has, for 2016, realised a saving of 12,400MWh, approximately R10 million and 12,400 tonnes in indirect CO<sub>2</sub> emissions. The project will remain in place going into 2017 and we are investigating the expansion thereof to additional areas of consumption.

Energy efficiency projects are centrally managed, tracked and reported and there is a capital budget in place to pursue strategic new technologies and various research and development initiatives.

## Performance

### Energy consumption and efficiency




We report energy efficiency performance in terms of MWh per PGMoz produced and in kWh per tonne mined. Energy consumed decreased to 6,344.2TJ, and from the 2012 baseline we have seen a decrease of 1.3%. The most significant decrease in energy consumption was a 51% reduction in the use of diesel consumption (512.0TJ in 2015 to 249.0TJ in 2016). However, our energy efficiency compared to the 2012 baseline has regressed by 7.6%. The deterioration of energy efficiency was driven by production and energy usage.

### Performance

- Total energy consumption for the year was 6,344.2TJ (2015: 6,783.0TJ), a decrease of 6.4% year-on-year.
- Energy efficiency improved year-on-year by 5.8% from 4.68GJ/PGMoz to 4.4GJ/PGMoz.
- Indirect energy (electricity) consumption was 1,571,620MWh, or 5,657.0TJ (2015: 5,835.8TJ).
- Electricity efficiency per kWh/tonnes hoisted was 153.0 (2015: 143.7).
- Direct energy: 691TJ (2015: 950TJ).

Our 30 September 2017 target set in 2012, is to improve our aggregate energy consumption per unit of production by 8% from the baseline. Our ability to achieve this target has been affected by the planned shaft closures, which impact economies of scale efficiencies. These targets are being reviewed in light of the change in our production profile and supply constraints.

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	Compressed air	Ventilation	Lighting
 R million saved	<b>R14.24</b> (2015: R17.28)	<b>R31.79</b> (2015: R25.49)	<b>R1.60</b> (2015: R1.37)
 MWh saved	<b>17,806</b> (2015: 28,122)	<b>39,743</b> (2015: 36,123)	<b>2,000</b> (2015: 1,966)
 CO <sub>2</sub> e tonnes savings	<b>17,984</b>	<b>40,140</b>	<b>2,020</b>

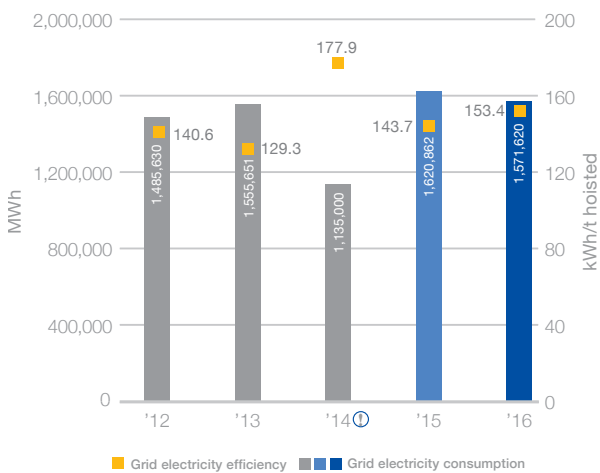
## Energy efficiency projects

During 2016, Lonmin energy efficiency projects included:

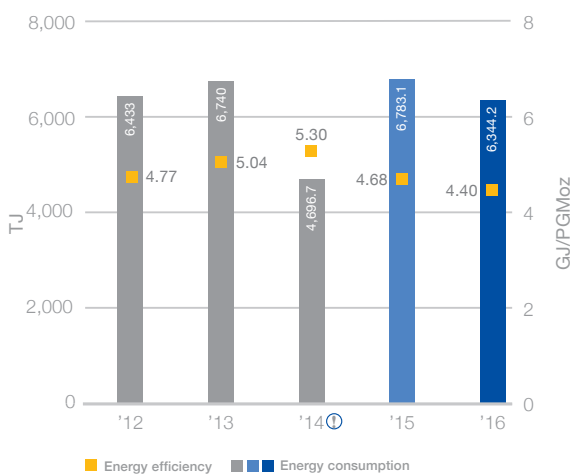
- optimising the compressed air reticulation systems through the implementation of a focused energy control room for these systems; and
- tracking the performance of our rollover projects including lighting efficiency roll-out and 45kW energy efficiency underground fans.

We continue to investigate the viability of various innovative energy efficiency projects. The fuel cell project at the Precious Metals Refinery was not viable in its current form, and is being reviewed. Another project investigated was a biomass project that proved unfeasible. While environmental approval has been received, we are still awaiting the necessary approvals to commence construction of the solar plant from the municipality and NERSA.

## Grid electricity consumption<sup>1</sup> (MWh) and efficiency (kWh/t hoisted)



## Energy consumption (TJ) and energy efficiency (GJ/PGMoz)



## Waste management

Lonmin is committed to minimising the waste generated by its operations. Mining, processing and refining of metals generate extensive amounts of general and hazardous waste that must be properly managed to avoid impacts on the natural environment and surrounding communities. Our governance planning and management programmes aim to prevent and reduce waste generation and facilitates alignment to procedures in order to prevent, reduce, and recycle wherever possible.

The Lonmin Waste Management Standard defines our approach to waste management in the business to support compliance and reduce the Company's impact on the environment. The Standard has been integrated into key performance indicator (KPI) audits and standard operating procedures across all operations.

Waste that is treated and/or disposed of is handled in a responsible way, aligned with the duty of care principle and in accordance with relevant legislation. Wherever possible, we prioritise alternatives to disposal to landfill to reduce our environmental footprint, reduce resource utilisation, minimise costs and adhere to legal requirements. We continue to research clean technology alternatives and reuse, recycling and treatment opportunities relating to our waste streams in alignment with the prohibition of various waste streams to landfill. Apart from the effort to meet compliance, we have targets to track our disposal to landfill, which provide insight at all business levels to consider research and development into promoting this endeavour.

General waste includes domestic waste, packaging, garden waste, building and demolition waste, rubber, scrap metal, wood, food waste, tyres and business waste, which includes industrial plastic. Hazardous waste consists mainly of calcium sulphite (CaSO<sub>3</sub>) and various liquid waste streams, as well as smaller amounts of other hazardous waste streams, generated by the laboratories and operational sites. Mine residue deposits such as waste rock and tailings dams are now classified through the National Environmental Management: Waste Act, No 59 of 2008 (the Waste Act) GN634 Waste Classification and Management Regulations. These regulations have created, in some instances, unrealistic requirements as the design and management requirements have been conceived for the construction, development and management of general and hazardous waste landfills only. Engagements with the DEA, DWS and DMR through the Chamber of Mines have indicated that the DWS is open to a risk-based approach on a case-by-case basis where alternative mitigation solutions to barrier systems could achieve the same objectives as the prescribed composite liner barrier system. In addition, the DEA is considering excluding waste residue deposits from the definition of waste, and this is under review with the relevant regulatory authorities. Lonmin's approach to managing this waste stream is discussed in the tailings section that follows on page 94.

Our draft IWMP, which is being reviewed, addresses the requirements of the Waste Act, regulations, norms and

<sup>1</sup> Conversion: one terajoule = 1,000 Gigajoules; one Megawatt = 0.0036 terajoules (2006 IPCC Guidelines for national Greenhouse Gas Inventories, Volume 2 Energy, Chapter 1 Introduction)

## Environment (continued)

standards and relevant waste by-laws. The draft IWMP stipulates how waste is generated, handled and transported within the activities of collection, reuse, recycling, treatment and, finally, disposal. The alignment between the draft IWMP and procedural implementation is managed through the environmental management system, and cost savings are maximised by preventing double handling of waste and by segregating waste streams to maximise separation and recovery through reuse, recycling and refurbishment.

Internal and external audits measure compliance with waste management procedures, legislation and commitments as part of the annual ISO 14001 certification process. External compliance audits are also conducted on-site at permitted and licensed waste facilities. Third-party audits are conducted on external hazardous waste facilities to support compliance, and our adherence to the requirement of duty of care of our hazardous waste from cradle to cradle/grave.

A waste recycling and separation monitoring programme is in place at the processing operations, with quarterly KPI auditing conducted and penalties imposed to drive separation practices on site. A gap assessment on waste separation monitoring was conducted at the mining operations and quarterly auditing will be rolled out to the mining operations in the year ahead. E-waste has been stored and collected separately for a number of years, with the management of final consolidation for external collection being undertaken at the information management department. We are aligning our operations to meet the prohibition of certain waste streams

to landfill and are rolling out a waste light bulb storage and collection system across the operations to collect all light bulbs for recycling of 100% of their components, which include mercury, e-waste and arsenic.

All waste stream classifications have been aligned with SANS 10234 and assessment procedures were implemented for waste disposal to landfill, as required by the Waste Classification and Management Regulations and associated norms and standards. Safety data sheets are being developed in terms of the waste classification process to provide information regarding responsible handling and management to transporters and end users. Waste procedures include different waste types, classification status and possible additional/alternative landfill sites should these be required.

Lonmin operates the only permitted general waste landfill in the Mooi-nooi/Marikana area, which provides strategically important disposal opportunities for communities, businesses and mining. To make sure that we have enough space to continue to use this strategically placed facility, we are undertaking the legal process to obtain a waste licence to extend the Mooi-nooi landfill facility to develop another 40 years of landfill capacity.

We spent over R157 million on waste management services at all of our operations in 2016. This includes the management and engineering services associated with our tailings and waste rock dumps.



## 2016 highlights

- The Lonmin Waste Management Standard and standard operating procedures provide uniformity across all operations. Monthly inspections and gap assessments of KPI audits are undertaken to ensure adherence to the uniform procedures.
- The community waste swap shop at Wonderkop in the North West continues to be a highlight and received a commendation from the North West Provincial Department of Environment. The viability of a mobile waste swap shop, to reach a number of different community areas, is being investigated.
- The Tedcor waste collection system managed by Lonmin continues to provide a daily waste collection service to 11 communities around the Marikana operations, with disposal of this waste being catered for at the Lonmin Mooi-nooi Landfill.

## Performance

### General waste

General waste is separated at the operations into its component waste streams, which include domestic waste, mixed recyclables, wood, steel and rubber. Separation occurs on-site at plants, shafts, the smelter, refineries and offices. Waste for recycling and reuse is gathered at internal transfer areas such as the salvage yards (Marikana and Limpopo operations) or the waste storage area at the PMR. Independent waste contractors collect the waste from these areas for reuse and recycling, and disposal of the residual domestic waste stream.

General waste from the Marikana operation that cannot be reused, refurbished or recycled is disposed of at the permitted Mooi-nooi GSB landfill site at the Marikana operation. The other operations use the nearest permitted municipal landfill sites. Waste collection, internal and external waste transportation, and the operation of the Mooi-nooi landfill site are performed by specialist external waste contractors. Monthly meetings are held with these contractors to support compliance with contracts and legal requirements.

## Performance

- 17,461 tonnes of general waste generated, an increase of 3% compared to 2015.
- 8,766 tonnes of general waste to landfill in 2016, 2% higher than 2015.
- 49.8% of general waste recycled or reused during the year:
  - 5,620 tonnes recycled
  - 2,956 tonnes reused
  - 119 tonnes composted

Our 30 September 2017 target is to reduce general waste to landfill by 5%, from the 2012 baseline year. General waste to landfill decreased by 15% in 2016 compared to the 2012 baseline year. We are well under way to meet this target.

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### Hazardous waste

Hazardous waste streams from our operations include  $\text{CaSO}_3$ , liquid acid and alkaline waste streams from the PMR. Our goal is to reduce hazardous waste generation through researching and developing cleaner technology mechanisms. This includes generating products rather than a waste stream, extracting water from the liquid waste stream through treatment technologies, or reusing and recycling hazardous waste materials to generate a usable product (for example, ash used to generate bricks).

$\text{CaSO}_3$  is the most significant hazardous waste stream at Lonmin's operations. It is produced as a residue from the capture and treatment of sulphur dioxide ( $\text{SO}_2$ ) emissions at the smelter.  $\text{CaSO}_3$  is disposed of at a licensed waste disposal site. We continue to research cleaner production technologies for the generation of  $\text{CaSO}_3$  that may lead to a product that can be generated rather than a waste stream from the capture and treatment process.

The specialised tailings dams on site hold an estimated 100,000 tonnes of  $\text{CaSO}_3$ . These dams were temporarily decommissioned and capped in 2012, and a seepage drainage collection system was installed to capture residual seepage to prevent environmental impacts. We are investigating ways to rework and convert the  $\text{CaSO}_3$  in these

## Environment (continued)

dams into gypsum for the production of cement and other building products. Should this not prove technically and economically viable, responsible rehabilitation and closure of the CaSO<sub>3</sub> dams will be incorporated into the permanent closure design at a later stage.

Acid and alkaline liquid waste streams are produced at the PMR. These are currently treated off-site and disposed to landfill. Our goal is to run a closed-loop system on these waste streams and we are researching ways to recycle the substantial amount of water in this waste back into the process plants to reduce municipal water use. From 2019, liquid waste to landfill will be prohibited and we are working with our waste contractors so that systems are in place to manage this requirement.

The environmental approval process for the PMR waste incinerator is under way. This is a closed-loop system project aims to ultimately achieve zero waste disposal to landfill. The project supports the application of the waste hierarchy principle promoting reduced disposal to landfill, to manage the loss of PGMs through waste streams going off-site and reduce the theft risk of PGMs.

### Performance

76,492 tonnes of hazardous waste were generated, 18% less than in 2015, of which:

- 70,603 tonnes were sent to landfill and includes:
  - 42,447 tonnes of CaSO<sub>3</sub>, a decrease of 27% on 2015;
  - 26,221 tonnes of PMR waste effluent (liquid waste); and
  - 1,941 tonnes of other hazardous waste.
- 5,888 tonnes were recycled and reused.
- 14.94 tonnes of hazardous waste were incinerated.

- 17** Our five-year target (to 30 September 2017) is to reduce hazardous waste to landfill by 5% off the 2012 baseline year. Hazardous waste to landfill showed a 10% decrease from the 2012 baseline year. An adequate best practical environmental option for diversion of hazardous waste from landfill is still pending and must be obtained and implemented to enable further reductions. The operation of the desulphurisation plant has improved, in conjunction with the decrease in production,

as well as unforeseen plant shutdowns, which has resulted in a decrease in waste generation. Minimising both atmospheric emissions and hazardous waste generation targets will require substantial investment in new technology. This remains a challenge in the context of current financial constraints, and realising our target to reduce hazardous waste to landfill will be challenging.

### Waste rock

Underground workings produce waste rock, which is non-ore bearing rock that is disposed of onto surface waste rock stockpiles, also known as mine residue stockpiles. Our opencast operations created overburden waste stockpiles, which are temporary facilities as the waste rock will be returned to the opencast pit during reinstatement and rehabilitation. There are three areas where we currently store opencast overburden waste stockpiles, including the U2 opencast pit, which is under care and maintenance, and the U10a and U10b pits, which are undergoing rehabilitation. There are nine waste rock dumps from underground mining at Lonmin's Marikana operations and one at the Limpopo operation. We continue to identify viable uses for waste rock and are investigating feasible opportunities at the Marikana operations. Waste rock is also purchased for use in road construction by surrounding municipalities, provincial road agencies, the community for construction, and other private entities. The waste rock at Limpopo is reused by various entities, transported by a community-established transport company and taken to a crusher plant off-site. In this way, 25,475m<sup>3</sup> of waste rock was reused, reducing our environmental liability and rehabilitation costs. In total, Lonmin generated 865kt of waste rock during 2016 (2015: 870.3kt), with the change mainly attributable to the orderly closure of some shafts.

### Tailings

Tailings from ore being milled at the concentrators are stored at six operational and five dormant above-ground tailings storage facilities (TSFs), all of which are lined with a thick layer of clay. Specific mandatory Codes of Practice guide how TSFs are managed and these are submitted to the DMR and the DWS's Dam Safety Office. Codes of Practice for mine residue deposits and waste rock deposits are being updated for submission in 2017.

The TSFs are managed by specialist tailings contractors, who are on-site continuously to monitor TSF integrity, stability and functionality. All sites are grassed on perimeter walls and the dormant tailings dams are grassed on top to reduce dust generation and erosion. Tailings dams have irrigation systems to suppress dust, and chemical dust suppression is undertaken at TSF 6. Specialist engineers conduct quarterly inspections to monitor compliance with regulations.

10,222kt of tailings were generated (2015: 11,636kt) and deposited onto the six functional TSFs.

We continually face challenges with the fencing in of large facilities such as TSFs, as fencing structures are stolen or disassembled almost on a daily basis. This leaves Lonmin exposed to illegal access by people and animals, to the detriment of side slope rehabilitation and stability, theft of piping and equipment, and safety of people and animals. Our security department is investigating sustainable solutions to address this challenge. In June 2016, funding was secured for a bulk tailings treatment project that will add 29,000oz of low-cost platinum to production annually. The Eastern Platinum Tailings Dam will be hydraulically mined and the slurry processed to recover chromite and PGMs. We have applied for the required environmental authorisations to support the project.

### Land contamination

An internal land contamination inventory of all areas potentially contaminated has been compiled. The assessment of contaminated areas is done on a phased approach, to determine and confirm whether these meet the requirements set out in Part 8 of the Waste Act. None of the areas assessed have shown contamination levels which require registration on the DEA's contaminated land inventory.

A basic assessment application was submitted to the DEA in 2012 on the remediation of contaminated land at the PMR. Changes to the Waste Act invalidated the basic assessment submission before approval was finalised, and a remediation order was issued to Lonmin for this application. In response to the remediation order, our groundwater monitoring programme was updated and expanded, including the sinking of additional boreholes. All boreholes undergo the same sampling and analysis as required by the remediation order. A borehole census was undertaken in and around the PMR facility, with no sensitive receptors identified. Annual water quality monitoring reports are submitted to the DEA together with the required risk assessment. We continuously monitor water quality to determine trends and plume movement. To facilitate the requirements of the remediation order,

Lonmin has completed detailed designs for the construction of two storm water containment dams, which will act as a barrier/capping system over the contaminated area to prevent any moisture from coming into contact with the source and to reduce the plume movement. The legal authorisation process to license these dams will start in 2017, together with detailed designs for the cut-off trench, which will be constructed to contain and allow for abstraction of seepage from the contaminated area.

### Community waste management

We have various waste management initiatives in place to address the lack of service delivery, illegal dumping and littering in local communities. These include various clean-up campaigns and the Tedcor waste collection project, which collects waste from 11 different areas and resulted in 4,137 tonnes of waste being removed from local communities in the past year.

We are collaborating with the Rustenburg local municipality by providing land for the construction of a waste transfer station, which will support the local community through improved municipal service delivery and job creation. The project includes a waste buy-back centre, where the community can exchange valuable waste for cash/tokens for specific recyclables.

Our focus for 2017 will be on:

- 01 rolling out the waste bulb removal project;
- 02 finalising all material safety data sheets for waste streams;
- 03 changing operational systems in line with landfill assessments undertaken;
- 04 securing the waste licence for the Mooinooi landfill and developing the first new waste cell;
- 05 finalising trials around the PMR liquid waste treatment projects;
- 06 getting implementation ready for the remediation of contamination and upgrading of the stormwater management system at the PMR;
- 07 starting the Eastern Platinum (Proprietary) Limited (EPL) bulk tailings treatment project; and
- 08 preparing a waste rock reuse strategy for the Marikana operations.

# Environment (continued)

## Summary of waste streams

Material (tonnes)	2015	2016
General waste to landfill	8,585	8,766
Hazardous waste to landfill	86,881	70,603
General and hazardous waste incinerated	27.7 <sup>1</sup>	14.94
Hazardous waste recycled, reused and treated	3,404	5,888
Tailings (kt)	11,636	10,222
Waste rock (kt)	870	865

## General waste materials recycled and re-used

Recycled (tonnes)	2015	2016
Ferrous and non-ferrous scrap <sup>2</sup>	4,360	4,158
Paper (and mixed-domestic recyclables)	30	23.7
Rubber	1,801	1,154
Plastics	89	188
Tyres	219	96.6
Garden waste	120	119
<b>Reused (tonnes)</b>		
Recovered steel	138	160
Food	33	25
Wood	1,219	2,766
Plastic	1	5.3

## Hazardous waste materials disposed to landfill, recycled and treated

Hazardous waste (tonnes)	2015	2016
Hazardous waste sent to landfill (CaSO <sub>3</sub> )	58,166	42,447
PMR effluent	26,593	26,221
Other	2,122 <sup>3</sup>	1,941
<b>Recycled (tonnes)</b>		
Oil	70	45.3
E-waste	8	23.9
PMR effluent (acidic waste)	1,334	4,002
Batteries and cartridges	39	68.2
<b>Reused (tonnes)</b>		
Ash	1,952	1,748

<sup>1</sup> Incorrectly reported in 2015 as 277 tonnes, however, total hazardous waste to landfill was correctly reported.

<sup>2</sup> In previous reports, metal liners with steel balls and concentrator scraps and scraps were presented as separate line items. These amounts are not included in the total ferrous and non-ferrous scrap amount.

<sup>3</sup> Incorrectly reported in 2015 as 12 tonnes.



## Air quality

Lonmin acknowledges its responsibility to continuously manage and minimise the impact of emissions from our operations on ambient air quality. The National Environment Management: Air Quality Act, No 39 of 2004 (Air Quality Act) regulates air quality in South Africa through AELs and focuses on both source and impact on the ambient environment. Amendments to the five-year AELs at the smelter, base metals refinery, precious metals refinery and assay laboratory were approved during the year.

Lonmin's Environmental Management Strategy addresses air quality management, and emissions to the atmosphere are minimised through the use of air pollution control equipment installed at our processing facilities. The EMPRs, incorporated into the ISO 14001 environmental management system, details air quality objectives and requirements including emissions and ambient air quality monitoring. Effective management and compliance are monitored through internal (quarterly KPI audits) and external audits, emissions verification audits, emissions reduction management plans and independent ISO 14001 certification audits.

A reduction of emissions by 2020 is required in terms of the Air Quality Act. This reduction is applicable to certain of the processing activities and the associated emissions. Achieving these standards will require significant capital investment to reduce emissions for the activity and pollutant. We have made good progress in the identification of requirements to enable our relevant processing activities to achieve the required reductions.

A workshop with a specific focus on air quality matters was held with the community in proximity to the PMR operations in Brakpan. This originated from the matters raised at the open day and other engagements. The workshop has set the platform for constructive engagement.

## Performance

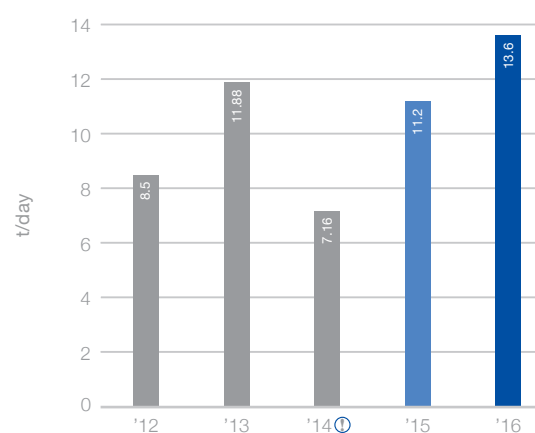
### Emissions management

Sulphur dioxide (SO<sub>2</sub>), particulate matter (PM) and nitrogen dioxide (NO<sub>x</sub>) are the three pollutants regulated for the activities at our smelter. SO<sub>2</sub> emissions are minimised through air pollution control equipment, including the completed fugitive capture system. The chemical process used to remove the SO<sub>2</sub> generates CaSO<sub>3</sub>, which is a hazardous waste stream. We continue to research alternative technology that could generate a by-product rather than a waste stream.

Various chemicals are used in the processes at the PMR that extract and refine PGMs, which result in emission of chlorine gas (CL<sub>2</sub>), hydrochloric acid (HCl), nitrogen trihydrogen (NH<sub>3</sub>), PM, NO<sub>x</sub> and SO<sub>2</sub>. A series of air pollution control equipment is in place to scrub and control emissions of these gases prior to release to the main stack. Waste effluent generated from the scrubbers is stored in effluent tanks and removed by a service provider to a permitted landfill site. Various research and development projects are in place at the PMR to reduce effluent, beneficiate waste, and recover and recycle water back to the process.

The laboratory is regulated for particulate matter and lead. Scrubbing systems and baghouses are in place to minimise atmospheric emissions.

### SO<sub>2</sub> emissions (t/day) for the smelter facility



### Performance

- SO<sub>2</sub> emissions averaged 13.6 tonnes/day, an increase from 2015 due to test work being conducted on the optimisation of lime consumption, to reach AEL limits, as well as lower availability on the regeneration thickener.
- Yearly average SO<sub>2</sub> concentration for the Sulphur Fixation Plant stack was 1,424 mg/Nm<sup>3</sup> for the smelter operations.

# Environment (continued)

## Total suspended particles and emissions management

Total suspended particles (TSPs) arise from wind erosion of tailings dams, stack emissions, general mining activities such as drilling and blasting, materials handling, crushing and screening and from vehicle movement on paved and unpaved roads. Ambient dust levels are monitored in and around our operations. These results are submitted to our relevant authorities and communicated to our communities during the environmental open day held at Marikana.

TSP and dust suppression is managed through a range of measures. These include vegetation growth on the sidewalls of all tailings dams and surfaces of dormant tailings dams; chemical and water suppression on the surfaces of operational tailings dams and unpaved roads (grey water is recycled and reused in the process); sweeping of tarred/surfaced roads; and suppression systems at materials handling and crushing facilities. Theft of components from the irrigation systems on the tailings facilities is an ongoing challenge and a project is underway to look at additional measures to protect infrastructure. Particulate matter emissions at the various processing activities are minimised by the air pollution control equipment in place to reduce atmospheric emissions.

Other emissions, including those classified as ozone-depleting substances (ODS), persistent organic pollutants, volatile organic compounds and hazardous emissions are present at our operations, although to a much lesser extent. Our procurement systems select only new equipment that does not use ODS and a phase out plan has been initiated to remove equipment containing ODS.

The Waterberg-Bojanala Air Quality Plan was promulgated in December 2015, and Lonmin's Marikana operations fall within this priority area. The Company participated in the multi-stakeholder team that developed the plan and is now participating in its execution. Lonmin also participates in the Highveld Priority Area multi-reference stakeholder group.

## Climate change

2015 was a decisive year in terms of the international climate change negotiations. In December 2015, the 21st Conference of the Parties (COP21) occurred in Paris with the outcome of the Paris Agreement, which takes a significant step towards a lower-carbon world. For the first time, virtually every country is required to reduce its GHG emissions and set out their plans to avert climate change. For the agreement to have legal force, it must be ratified by at least 55 of the 195 countries that adopted it and these countries must represent 55% of all global emissions. As at 4 September 2016, 25 countries including the USA and China had ratified the agreement, representing 40% of global emissions.

Climate change poses a range of risks and opportunities to the mining industry. Physical risks that could have an effect on our operations include changes in weather patterns (i.e. extreme drought/flood/precipitation/temperature) which in turn may lead to water shortages, water discharges, increased operating costs, negative effects on local communities, impacts on the supply chain and biodiversity loss. The issue of water scarcity is likely to be further exacerbated by climate change and may lead to operational closures and downtime where water is not available in sufficient quantities to sustain the operations.

Regulatory risk from climate change relates to the pending implementation of the national carbon tax scheme in South Africa. Given the current draft policy documentation, Lonmin's carbon tax projections range from approximately R84 million, increasing at 10% per annum until 2021. Our approach to managing this risk rests on improving our operational energy efficiencies and reviewing the business case behind renewable energy generation.

Lonmin's business strategy addresses climate change through various mitigation and adaptation initiatives, including energy efficiency and energy security projects, seizing opportunities in PGM marketing, investment in fuel cell technology, feasible renewable energy to reduce emissions and water conservation and demand management. The main aspects of climate change are addressed in the *operational excellence* strategic pillar through resource management of energy efficiency initiatives that reduce energy requirements and subsequent emissions and water management through our Water Conservation and Demand Management Strategy.

Lonmin's most significant source of GHG emissions relates to the impact of our indirect emissions (scope 2) footprint arising from the use of electricity from a predominately coal-based power generation system. Our primary GHG reduction initiatives are linked to our energy efficiency projects.

We participate in the CDP for both climate change and water, in which companies voluntarily disclose on the relevant matters. Targets are in place to reduce energy consumption and minimise GHG emissions. Lonmin's primary product – PGMs – play an important role in managing GHG emissions through technologies such as catalytic converters and fuel cells.

### Performance

- The carbon footprint for 2016 scope 1 and 2 was 1,660,484tCO<sub>2</sub>e.
- Emissions arising from electricity consumption comprise 95.9% of the total carbon footprint.
- GHG efficiency for 2016 is 1.146tCO<sub>2</sub>e/PGMoz.

## Carbon tax

Lonmin recognises that GHG emission reduction is necessary as part of the transition to a low-carbon economy. However, it is important that the risks arising from this transition are managed and implemented within a sustainable framework. We all agree that business as usual is not an option and that carbon pricing is a way to effect meaningful change.

The carbon tax regime as currently proposed will affect Lonmin both as a direct cost of carbon tax on scope 1 emissions and as a pass-through cost on scope 2

emissions (although National Treasury has stated that the scope 2 pass-through will be avoided in the first phase up to 2020). The Carbon Tax Bill was published in November 2015, and the comment period ended on 15 December 2015. Lonmin provided comment on the Bill through its association with the Chamber of Mines. The process of preparing the Company's operations for mandatory GHG reporting aligned to South African guidelines is underway. Forecasts of the likely impact of a carbon tax are built into the life of business plan as part of our strategy to improve cost efficiencies.

### Developments in carbon regulation

The world is inexorably moving towards GHG emissions reductions and is transitioning to a lower-carbon economy. COP21 in Paris in December 2015 is seen to have been a success and a very significant step towards this lower-carbon world.

In light of the strong agreement at COP21 on the need to reduce emissions, the inadequacy of current global plans to achieve an average 2°C maximum rise, and the realities of the South African economy's high carbon intensity, it must be assumed that pressure to reduce emissions within South Africa can only increase.

There have been two important developments on emissions reduction in South Africa carbon taxation and carbon budgeting.

Firstly, National Treasury issued a discussion paper on carbon taxation in 2010. National Treasury originally proposed to implement a carbon tax on emissions from January 2015, but has since delayed this until 2017. Several issues are still being discussed with industry, such as the extent of tax-free allowances and the possibility of companies buying carbon offsets from other companies.

Secondly, the Department of Environmental Affairs (DEA), in its capacity as generator and custodian of the National Climate Change Response, has been developing proposals for carbon budgeting since mid-2013. The DEA's approach is to allocate carbon budgets to individual companies and to require them to submit mitigation plans for future reductions (pollution prevention plans). The DEA will also require companies to report their GHG emissions on an annual basis.

Industry believes that many principles should be used to guide South Africa's carbon policy. Some of the more important points are: the effectiveness of reduction initiatives – how much emissions will be reduced, with what certainty and at what cost; how costs are distributed across society and the economy as a whole; the impact on trade competitiveness of South African companies in relation to their competitors; and policy certainty.



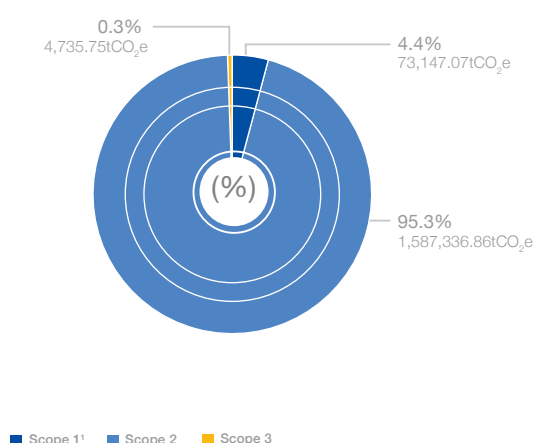
Electricity consumption comprises 95.9% of the total carbon footprint.

# Environment (continued)

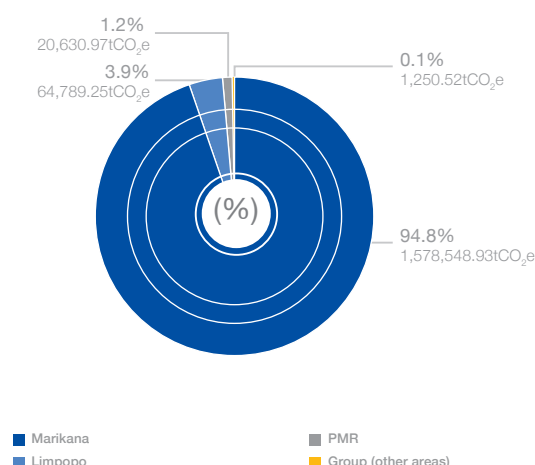
## Meeting reduction targets

- 17** Our target is to reduce scope 1 and 2 GHG emissions by 4% by 2017 from a 2012 baseline year. In 2016, absolute GHG tonnes of CO<sub>2</sub> increased by 5.9% against the 2012 baseline for scope 1 and 2 emissions. However, GHG efficiency has improved by 5.4% from 1.212tCO<sub>2</sub>e/PGMoz in 2015 to 1.146tCO<sub>2</sub>e/PGMoz. In total, Lonmin emitted 1,665ktCO<sub>2</sub>e (2015: 1,758ktCO<sub>2</sub>e). The reporting scope of emissions increased this year to include scope 1 emissions from the Mooi-nooi landfill site and waste water treatment works at the Marikana operations. These sources accounted for 0.5% of the 2016 carbon profile, but are not yet included in the target and performance.

## Carbon footprint scope 1, 2 and 3 contributions (%)



## GHG by location (%)



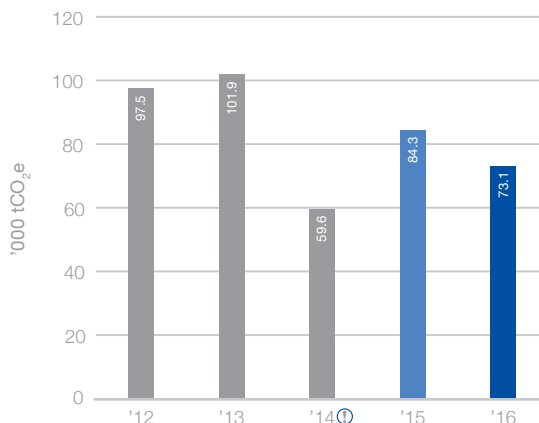
GHG emission category	Emissions 2016 (tonnes CO <sub>2</sub> e)	Calculation
<b>Scope 1<sup>1</sup>:</b> Direct emissions from operations that are owned or controlled by Lonmin: <ul style="list-style-type: none"> <li>Mobile combustion (19,646.3tCO<sub>2</sub>e)</li> <li>Stationary combustion (38,062.4tCO<sub>2</sub>e)</li> <li>Explosives (5,868.83tCO<sub>2</sub>e)</li> <li>Non-combustion product use (248.83tCO<sub>2</sub>e)</li> <li>Disposal of waste to landfill (Lonmin operated and owned) (9,200.10tCO<sub>2</sub>e)<sup>1</sup></li> <li>Waste water treatment works (Lonmin operated and owned) (120.54tCO<sub>2</sub>e)<sup>1</sup></li> </ul>	73,147.07	GHG protocol: Corporate Accounting and Reporting Standard
<b>Scope 2:</b> Energy indirect emissions from electricity: Electricity (1,587,336.86tCO <sub>2</sub> e)	1,587,336.86	GHG protocol: Corporate Accounting and Reporting Standard
<b>Scope 3:</b> All indirect emissions that occur outside of Lonmin, upstream and downstream: <ul style="list-style-type: none"> <li>Category 1: Purchased goods and services (95.14tCO<sub>2</sub>e)</li> <li>Category 4: Upstream transportation and distribution (1,246.61tCO<sub>2</sub>e)</li> <li>Category 6: Business travel (1,250.52tCO<sub>2</sub>e)</li> <li>Category 7: Employee commuting (2,143.4tCO<sub>2</sub>e)</li> </ul>	4,735.75	GHG protocol: Corporate Value Chain Accounting and Reporting Standard for the reporting of Scope 3 emissions
<b>Total carbon footprint</b>	<b>1,665,219.69</b>	

**i** Detail on GHG and climate change assessment can be found in the CDP submission online at <https://www.cdp.net/en/responses?utf8=E2%9C%93&queries%5Bname%5D=Lonmin>.

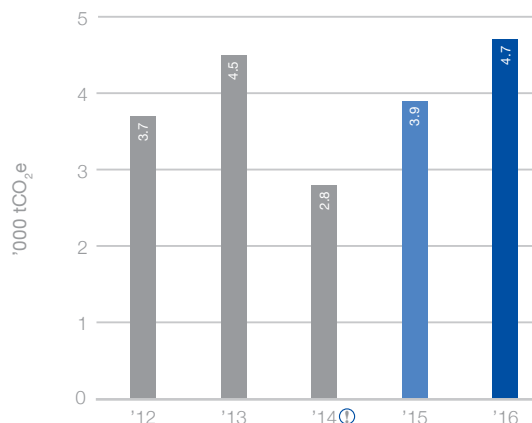
<sup>1</sup> Disposal of waste to landfill and waste water treatment works GHG emissions were added to scope 1 during 2016.



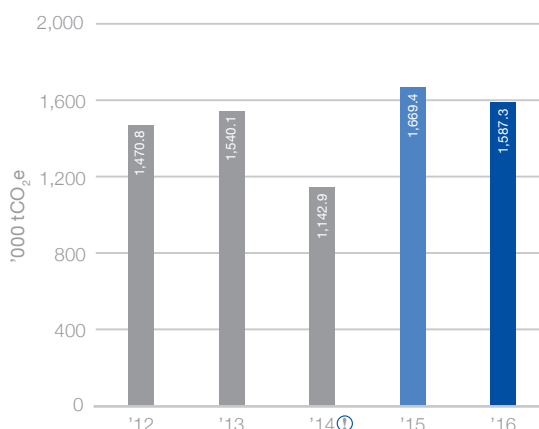
### Total scope 1<sup>1</sup> GHG emissions (<sup>'000 tonnes CO<sub>2</sub>e</sup>)



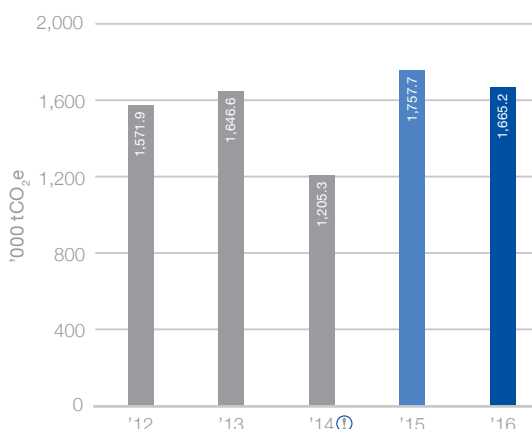
### Total scope 3 GHG emissions (<sup>'000 tonnes CO<sub>2</sub>e</sup>)



### Total scope 2 GHG emissions (<sup>'000 tonnes CO<sub>2</sub>e</sup>)



### Total GHG emissions (<sup>'000 tonnes CO<sub>2</sub>e</sup>)



The main initiatives in 2017 will centre around preparing the business for mandatory reporting of GHG emissions and assisting communities to address water issues arising from climate change.

## Biodiversity and land management

The Marikana Thornveld is listed as a vulnerable ecosystem under the National Environmental Management: Biodiversity Act, No 10 of 2004. While Lonmin's Marikana operations are located within this ecosystem, none of the operations are located in high biodiversity-sensitive areas, although a number of protected/threatened species are likely to be found at our operations.

The ecosystem vulnerability of the operational area is not only impacted by mining and related activities, but by various other influences such as human settlement, is poor

agricultural practices, industry and business. We therefore view biodiversity as a material aspect, because rehabilitation is a key regulatory and financial requirement for the Company. Biodiversity is also linked to annual closure liabilities and biodiversity and ecosystem services integrity is material for sustainability of the natural environment and for our stakeholders.

The updated biodiversity action plan (BAP) for the Marikana operations covers all mining operations and meets the requirements of the relevant legislation, regional and national conservation plans, and the Mining and Biodiversity Guidelines. Our approach to biodiversity management aligns with the ICMM 10 Principles and its position statement on mining and protected areas, as well as with the DMR Biodiversity Guidelines.

<sup>1</sup> Disposal of waste to landfill and waste water treatment works GHG have been added to scope 1 during 2016.

## Environment (continued)

Biodiversity impact assessments are performed with any biodiversity risks identified. These risks are incorporated into operational risk registers, with action plans in place to address potential risks. The Lonmin Biodiversity and Land Management Standard sets out our approach to biodiversity management and is supported by standard operating procedures.

Specialised software supports the Marikana BAP by modelling key parameters and a BAP GIS tool allows for rapid evaluation and identification of risks to biodiversity of proposed infrastructure development management and monitoring decisions and compliance risks. This tool helps to identify variables including the potential buffering quality of existing wetlands and associated vegetation, the richness and abundance of faunal habitats, ecological degradation, and the location of red data and protected species observed on-site.

Where protected/threatened flora or fauna such as gladioli, bees and snakes are found at our operations, strategies are in place to transplant and/or relocate them.

We are committed to the development of a plan to achieve no net loss to biodiversity and are investigating how this can be achieved within the plan and operational procedures, which are aligned to our BAP.

### 2016 highlights

- Obtained conservation permits for various projects around the mines for the relocation of protected plants.
- Removed and relocated more than 3,000 protected plant species this year.
- Focused on various communication and awareness initiatives across the mines regarding protected and red data species.
- Clearing of alien invasive species continued in collaboration with the government's Working for Water project, the Kusuala Green and Biodiversity project and the GLC, creating 50 jobs for local community members.

### Performance

#### Biodiversity composition



An overview of biodiversity composition at our operations is available online at <http://sd-report.lonmin.com/2016/>. This includes a register of protected species (Schedule 11 of the Nature Conservation Ordinance of Transvaal, No 1 of 1983), a list of plants and animals on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species sighted at our operations over the past 10 years and expected to be located in this area; and the conservation status of these species.

#### Heritage management

Over 165 heritage sites have been identified around the Lonmin Marikana operations, including iron age sites, archaeological artefacts, graves and old building structures. Where possible, heritage sites are identified within Lonmin's mining right area, and where the need arises, we engage with local communities

to understand their significance and follow the requirements of the Heritage Act, should these sites be impacted. Newly identified sites, including graves located on our mining right, are added to the heritage inventory. Any sites which are close to our operations or have the potential to be impacted by our operations are demarcated and fenced off. Lonmin respects the cultural heritage of the communities in which we operate and allows families of ancestors buried in and around our operations to hold cleansing and remembrance ceremonies on site.

#### Closure

Lonmin's mine closure strategy and risk-based closure and rehabilitation assessment have identified risks for closure and considered this in relation to the closure strategies currently under review. The review will culminate in an updated and consolidated closure and rehabilitation strategy, aligned to the new Financial Provision Regulations now regulated through the NEMA. The DEA published draft amendments to the regulations on 9 September 2016, in an attempt to address the major uncertainty brought by these regulations. Lonmin will still adhere to the regulations and the clarification note provided by the DEA in the development of the strategy and various supporting documents to quantify the financial provision. To create a holistic strategy, we will align it with the Rehabilitation Strategy Implementation Plan (RSIP) as is required under our water use licence.

In addition to the Social and Labour Plans (SLPs) that are in place to deliver on various needs identified in surrounding communities, we are also investigating the incorporation of social closure planning into the environmental closure planning for holistic sustainable closure where long-term community economic viability will be a reality. During the operational phase of the mine, progressive rehabilitation and social closure, objectives and projects are set and systematically applied as per our closure strategies, which are reviewed on an ongoing basis.

Our annual closure cost assessments to calculate the liability quantum include a detailed inventory of areas that require decommissioning, remediation or rehabilitation and provide information of how this is quantified. Lonmin's unscheduled and scheduled closure cost assessments for each mining and prospecting right are undertaken by independent specialists on an annual basis. Reports on these assessments are submitted to the DMR for verification. Any shortfall required in financial provision is made primarily through the issuing of bank guarantees, or transfers to the Lonmin Platinum Pollution and Rehabilitation Trust Fund. In addition, the full costing of unscheduled closure, which includes the environmental liability associated with all our assets, remediation and rehabilitation required, is included in Lonmin's annual financial statements, available at <https://www.lonmin.com/investors/reports-and-presentations>.



#### Land management governance

Internal and external audits verify compliance with land management legislation, Environmental Management Plan (EMP) performance assessment commitments and ISO 14001 requirements. Activities during prospecting and exploration are managed through the Environmental Drilling Standard

with regard to on-site operational environmental requirements and rehabilitation. Where third parties have access to parts of our operations through their mining rights, they are held to our standards.

Audits of the rehabilitated opencast areas are conducted to quantify where rehabilitation is lacking or only partially undertaken, the success of rehabilitation, and where further repair and maintenance is required on these rehabilitated areas. A rehabilitation, repair and maintenance plan is developed to address the findings. A challenge we are managing is the various opposing land uses in and around

our operations. This has led to the encroachment of animals from communities onto our opencast rehabilitated areas. Overgrazing denudes vegetation which can cause erosion, release of unstable sediments onto water courses, and erosion topsoil, exposing overburden waste rock from the opencast operations. As there are no methodical animal grazing practices, certain of these areas are left with very little to no potential for recovery. Lonmin continues to engage with the community regarding this matter, but will be developing an animal management plan to establish a symbiotic relationship to address this matter.

Land under Lonmin management	Hectares
Total land managed	25,112
Total area in use for Company activities in North West, Limpopo and Gauteng	22,375
Total area disturbed by opencast activities in North West	Merensky reef – 244 UG2 reef – 485
Area rehabilitated to date	310
Area disturbed but not yet rehabilitated	419
Total area covered by waste rock (surface – overburden)	99
Total area covered by waste rock (from underground)	65
Total area covered by tailings	1,075

In the year ahead, we will progress our no net loss initiatives, continue rehabilitation and repair on the open pit areas, implement aesthetic improvements at E3 facilities to reduce their visibility to nearby communities, enhance our closure

planning, implement a waste rock removal strategy and related contracts. We will also implement the requirements of the new Financial Provision Regulations and establish an animal grazing management plan with animal owners.



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11/

# Material Focus Area

# Relationships with Government

> *Improving relationships  
with government*

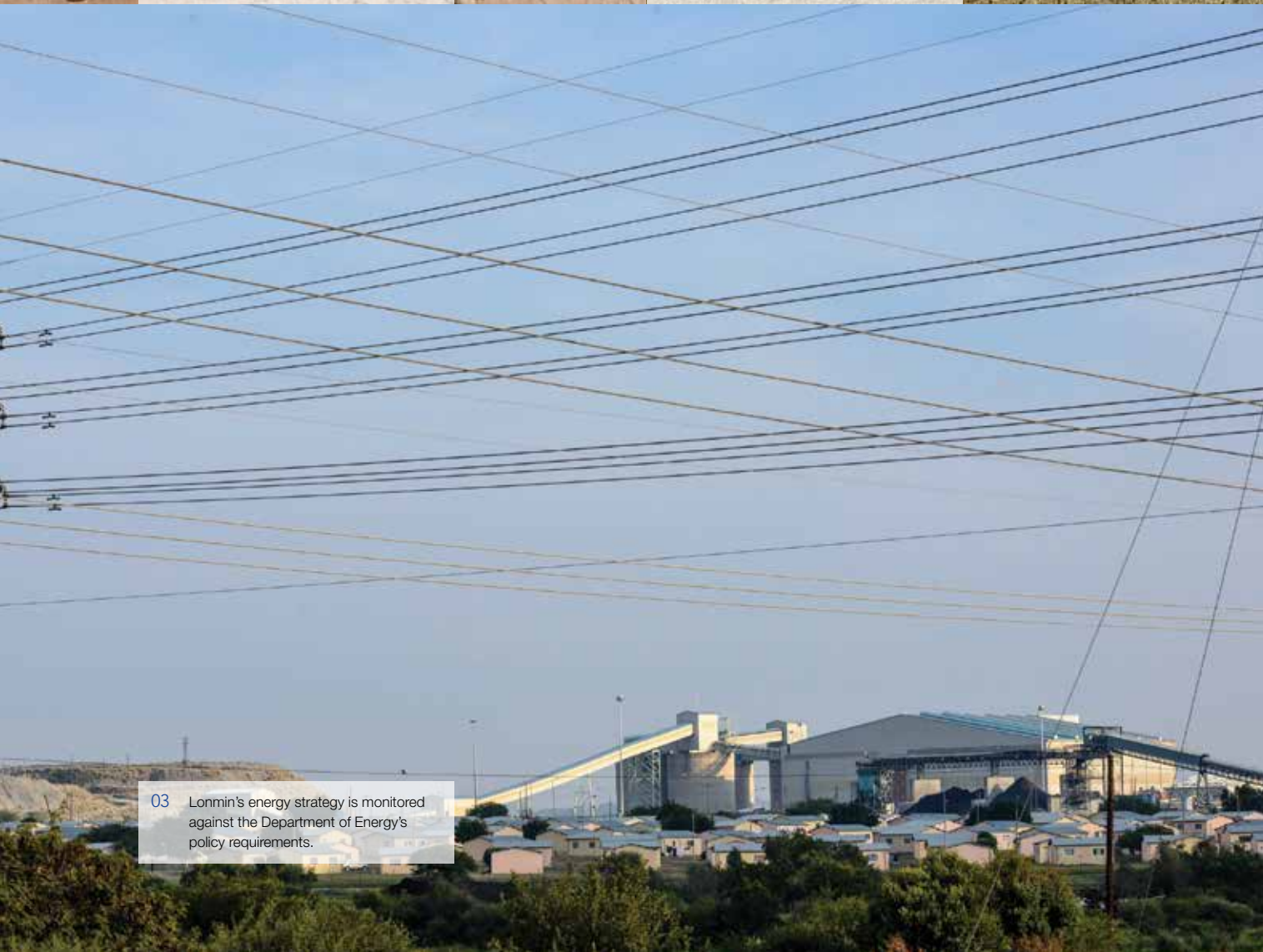




01 Construction of 168 apartments is in progress.



02 Lonmin treats 5Ml of waste water from communities per day.



03 Lonmin's energy strategy is monitored against the Department of Energy's policy requirements.

# Relationships with Government

## Overview

Government is a key stakeholder for Lonmin, and ensuring a constructive relationship at local (municipal), provincial and national level is critical for the Company to operate effectively. Mining and beneficiation are highly regulated industries and most aspects of the Company's activities require close interaction with regulators, including in the areas of safety, health and wellness, environment and transformation.

The challenges facing Lonmin and the industry include many that arise from the broader systemic societal issues of South Africa. These challenges can only be addressed through solutions that involve a multi-stakeholder process and effective collaboration from government. A good working relationship with the South African government is therefore important, not only because our operating assets are located entirely in South Africa, but also due to our vision of shared value for all.

We are committed to driving sustainable change in those areas we can directly affect. However, the responsibility for broader change and development is shared with government at all levels. Government's role as a regulator and socio-political leader creates the environment for business and development to thrive or die.

## Employee and government relations

We acknowledge our responsibility to support development in local communities and drive the solution to reasonable accommodation, but this is only possible where the business is able to generate sufficient returns and through a collaborative partnership with government.

Mining companies are obliged by the Broad-based Socio-economic Empowerment Charter for the South African Mining Industry (the Mining Charter) to assist their employees in improving living conditions. Lonmin complied with the Mining Charter requirements regarding hostel conversion, and donated 50 hectares of serviced land to the Provincial Human Settlements Department. Government has constructed housing for rent on this land (Marikana Extension 2), some of which is allocated to Lonmin employees.

## Safety, health and government relations

Government, through the DMR, is invested, like Lonmin, in driving an improved attitude towards safety and a safety culture. This is done through imposing Section 54 stoppages under the South African Mine Health and Safety Act, No 29 of 1996 (Mine Health and Safety Act). We strive to build strong relationships with regulators and participate in industry-wide safety initiatives. Legislative changes in the Mine Health and Safety Act were promulgated during the year, which have a cost implication. These changes relate to management of explosives, vehicles to be fitted with detection systems, and the frequency of rock engineers' audit cycles. Our community health initiatives support government priorities through awareness and outreach programmes, particularly in the areas of tuberculosis (TB) and HIV/Aids. More information regarding these initiatives is available in the Safety and Health chapter on page 50.

## Social licence to operate and government relations

The five-year Social and Labour Plans (SLPs) set up in terms of the Mineral and Petroleum Resources Development Act, No 28 of 2002 (MPRDA) focus on transformation and socio-economic development initiatives that aim to improve the socio-economic conditions of employees and communities. More information is available in the Social Licence to Operate chapter on page 62.

## Environmental matters and government relations

More than 50 environment-related licences, authorisations and permits apply to Lonmin's daily activities. Maintaining strong relationships with government supports the practical implementation of environmental policies in a spirit of collaboration and acknowledgement of the Company's specific context and challenges. Details of Lonmin's legal obligations under the various environmental regulations that apply to the Company's operations are available in the Environment chapter on page 80.

## Engaging with government

Our representatives engage with government at the levels relevant to the nature of the engagement. For example, engagements with the DMR's safety inspectors will involve operational safety representatives, but engagements regarding Mining Charter compliance are the responsibility of the Executive Vice-President for Human Resources and Executive Vice-President for Communications and Public Affairs.

Engagements to address potential capacity constraints in local government are an important early stage in local community infrastructure projects. Stakeholder engagements with government in the months leading up to the local government elections in August 2016 were challenged by the inevitable focus on upcoming polls. Since the elections, the new ward council structures are being put in place, and we will work with these structures.

During the course of business, Lonmin engages with all three tiers of government directly and also through various business and industry organisations such as the South African Chamber of Mines and the National Business Institute (NBI) so that the Company's positions on matters of importance are represented at the correct level of responsibility. We also participate in initiatives such as the Mining Phakisa and the Peace Accord that aim to align the interests of the mining industry, regulators, labour and communities.

## Driving compliance

A broad range of laws, government policies, guidelines and frameworks apply to the mining industry. Lonmin engages with representatives from many government departments on a regular basis to manage and demonstrate commitment, implementation and compliance with these requirements.



## Review of Mining Charter obligations

Mining rights are issued in terms of the MPRDA and measured against targets set in the Broad-based Socio-economic Empowerment Charter for the South African Mining Industry (the Mining Charter). The Revised 2010 Mining Charter set targets to 2014, and these apply until replaced by the next revision.

The Mining Charter targets drive transformation and socio-economic development in the mining industry across nine areas. These include promoting meaningful economic partnership by Historically Disadvantaged South Africans (HDSAs) in the industry through mine ownership, employment equity, skills development, preferential procurement and enterprise development provisions. It further includes provisions aimed at improving housing and living conditions for mineworkers and promoting community development. Sustainable development commitments include environmental management compliance, health and safety, and capacity and skills aspects. The Mining Charter also aims to promote local beneficiation in line with government's mineral beneficiation strategy.

The draft of the reviewed Mining Charter was released in April 2016, and is being discussed by industry stakeholders. Elements of the proposed Charter as it currently stands will have a substantial impact on mining companies. However, the legal process before publication and the ongoing dialogue between industry and government continues.

## Social and Labour Plans (SLPs)

SLPs commit a mining company to a five-year plan of projects designed to address key socio-economic challenges in local communities. These projects are identified and planned in close collaboration with community stakeholders and local, regional and national government. Many of the projects support government's social development agenda, the National Development Plan (NDP) and municipal integrated development plans (IDPs). Mining companies must submit their SLPs to the DMR, and delivery on projects is required to retain their legal and social licence to operate.

## Mining and prospecting rights

Lonmin's primary legal licence to operate is its mining rights issued in terms of the MPRDA. Our new order mining rights for core operations continue to 2037 and are then renewable to 2067. Retention of these mining rights is linked to continued compliance with the requirements of the MPRDA, including substantially meeting the targets set by the Mining Charter and the Environmental Management Programme commitments.

Various other licences apply to specific areas within our operations, such as our water use licences, atmospheric emissions licences and waste licences.

These initiatives help Lonmin to comply with the requirements of its operating and legal licences, and compliance is assured by regular internal and external audits. As importantly, the Company is committed to retaining its social licence to operate through the initiatives described in the chapter starting on page 62.

## Government priorities

Lonmin is committed to investing in initiatives that align with South Africa's developmental goals to contribute to a better future for all. Our socio-economic development projects are derived in collaboration with government and, wherever possible, are designed to support the country's broader overarching goals.

## The Framework Agreement for a Sustainable Mining Industry

Lonmin is a signatory to the July 2013 Framework Agreement for a Sustainable Mining Industry, also known as the Peace Accord. This agreement between government, labour and business, defines the roles of each party and outlines their commitments. The Peace Accord aims to support improved working and living conditions for mine workers, and accelerate transformation to redress the historical imbalances, legacies and inequalities in the mining industry.

Lonmin's commitment to transformation and its investment in improving accommodation and contributing to the socio-economic development of local and labour-sending communities align with the goals of the Peace Accord.

## The National Development Plan (NDP)

The NDP defines the South African government's goals to eliminate poverty and reduce inequality by 2030, prioritising employment through faster economic growth and improving the quality of education, skills development and innovation. Lonmin supports the NDP and is committed to playing its part in achieving its goals. Our socio-economic development initiatives aim to address the most pressing community needs, which generally align with the NDP.

Project Phakisa for mining was announced last year to fast-track the issues highlighted by the NDP. It is a government initiative that aims to accelerate the delivery of some of the development priorities for the mining industry and local communities.

## Local infrastructure development plans (IDPs)

Local infrastructure development forms the basis of many of our community development initiatives. The Mining Charter stipulates that infrastructure development in terms of an SLP must align with regional and municipal IDPs.

## Beneficiation

Beneficiation is incorporated into the MPRDA Amendment Bill, which has yet to be signed into law. The Bill grants the Minister of Mineral Resources wide powers, including the discretion to declare certain minerals as strategic, determine what percentage of strategic minerals are to be made available locally, set the developmental price at which strategic minerals are to be sold and decide the conditions applicable to export permits. We are supportive of the underlying intention of local beneficiation, and it is important that the legislation as finally enacted achieves these intentions without undermining the competitiveness of the local mining industry.

## Relationships with Government (continued)

We continue to investigate ways to maximise platinum beneficiation, and are actively involved in the SEDA Platinum Incubator (SPI) in the North West. The SPI's mandate has expanded beyond the jewellery industry. Lonmin is working with a consortium of academic institutions and private companies to establish a 3D platinum printing incubation service for South Africa's additive manufacturing sector. (Refer to <https://youtu.be/9sU6X1rC0I>)



### Key government departments

We interact with various government departments at local, provincial and national level to address regulatory compliance and monitoring requirements. Community infrastructure projects must be coordinated and aligned with local, provincial and national priorities to avoid project delays that hinder social delivery. The most important of these government departments are discussed in the table below.

**DMR**

#### Department of Mineral Resources

South Africa's mineral and mining resources are regulated by the Department of Mineral Resources (DMR), with the objective of ensuring their optimal use and benefits to the economy. The DMR monitors and regulates mine safety, health and environment, social performance and transformation.

##### Lonmin and the DMR

- Lonmin's legal licence to operate is regulated by the DMR.
- SLPs are submitted to the DMR for approval on a five-year basis.
- Environmental management plans (EMPs) are a mandatory requirement to operate.
- Performance against EMPs is regularly submitted to the DMR.
- Environmental impact assessments (EIAs) and EMPs are submitted for the operation of listed activities and relevant activities, required under NEMA, but managed through the DMR.
- Occupational health and safety performance is regulated and monitored by the Mine Health and Safety Inspectorate.
- Transformation and empowerment performance is measured against the requirements of the Mining Charter.

**DoL**

#### Department of Labour

The Department of Labour (DoL) regulates labour relations in South Africa with the objective of reducing unemployment, poverty, inequality and protecting human rights.

##### Lonmin and the DoL

- All employee contracts comply with labour relations legislation for fair and equitable terms and conditions of employment.
- All employees have the right to collective bargaining and negotiations can be facilitated through the Commission for Conciliation, Mediation and Arbitration (CCMA).
- Employee development in the mining industry is facilitated and promoted by The Mining Qualifications Authority (MQA). Lonmin works closely with the MQA to improve and promote training.



**dti**

## Department of Trade and Industry

The Department of Trade and Industry (dti) enables structural economic transformation by facilitating investment in trade and enterprise development. The department administers broad-based black economic empowerment (B-BBEE).

### Lonmin and the dti

- We promote and support small, medium and micro-sized enterprises (SMMEs) in the GLC.
- Promotion of transformation in the workforce.
- Procurement contracts based on B-BBEE status verification form part of the broader preferential procurement framework.

**DoH**

## Department of Health

The Department of Health (DoH) ensures that all South Africans can enjoy their basic right of access to healthcare.

### Lonmin and the DoH

- Regular monitoring and reporting against compliance requirements in the provision of occupational and primary healthcare at our clinics and hospital.
- Ongoing awareness, voluntary counselling and testing campaigns, and contact tracing for HIV/Aids and tuberculosis (TB).

**DBE**

## Department of Basic Education

The Department of Basic Education (DBE) administers, maintains and regulates a sustainable education system in which all South Africans have access to life-long learning and training.

### Lonmin and the DBE

- Monitoring of school administration in the GLC.
- Support of school infrastructure projects.
- Provision of a daily meal to schools in the GLC through the National School Nutrition Project.

**DEA**

## Department of Environmental Affairs

The Department of Environmental Affairs (DEA) is responsible for the protection of the environment and conservation of natural resources, including sustainable development and the equitable distribution of the benefits derived from natural resources.

### Lonmin and the DEA

- EIAs are submitted for non-mining-related listed activities and relevant activities.
- Lonmin's legal licence to operate is framed by compliance to and implementation of various environmental acts underpinned by the National Environmental Management Act (NEMA) pertaining to waste, air, biodiversity and land.

## Relationships with Government (continued)

**DWS**

### Department of Water and Sanitation

The Department of Water and Sanitation (DWS) formulates and implements policy governing water in South Africa. It has an overriding mandate for the provision of water services by local government.

#### Lonmin and the DWS

- Matters pertaining to our water use licence.
- Efficient water use and sustainability.
- Bulk infrastructure projects as part of human settlements plan to address accommodation in the GLC.

**DoE**

### Department of Energy

The Department of Energy (DoE) is responsible for the transformation and sustainability of the energy sector through various regulations.

#### Lonmin and the DoE

- Lonmin's energy management strategy is regulated and monitored against the DoE's policy requirements.

**DRDLR**

### Department of Rural Development and Land Reform

This department is responsible for the social and economic development of rural South Africa and land reform.

#### Lonmin and the DRDLR

- The BEE transaction with local communities, discussed on page 75, was authorised by the Minister of Rural Development and Land Reform because all mineral rights are owned by government.
- Lonmin's community development strategy has to align with the NDP.
- All development plans at local and provincial government level must find expression in the IDPs, which we aim to achieve through our SLPs.

**DSD**

### Department of Social Development

The Department of Social Development (DSD) aims to reduce poverty and promote social integration through providing social protection and social welfare services.

#### Lonmin and the DSD

- Several of Lonmin's socio-economic development initiatives are delivered in co-operation with the DSD, specifically those that support orphans and vulnerable children and community health initiatives.

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# Governance





Site supervisor, Charles Mooi  
at the BMR pollution control dam  
under construction.

# Governance

## Governance for sustainable development

Lonmin's corporate governance is built on its corporate values and the Lonmin Code of Business Ethics. The Board is guided by accountability, Lonmin's values and a responsible leadership ethos to oversee the Company's impact on the environment and society.

Lonmin Plc is a Company incorporated in England and Wales. The Company's principal business activities are its operations based in South Africa. Lonmin Plc has a primary listing on the London Stock Exchange (LSE) and a secondary listing on the Johannesburg Stock Exchange (JSE) Securities Exchange. The Company therefore adheres to the UK Corporate Governance Code and its supporting guidance

-  ([www.frc.org.uk](http://www.frc.org.uk)). Lonmin's share register of majority shareholders (3% or more) can be found at
-  <https://www.lonmin.com>.

The Board is the custodian of the Company's strategic aims, vision and values. It provides entrepreneurial leadership to management within a framework of prudent controls which enables risk to be assessed and managed appropriately. It assesses whether the necessary financial and human resources are, and will continue to be, in place to enable the Company to meet its objectives and ensure that it takes full account of safety, environmental and social factors.

At 30 September 2016, the Board consists of nine members, including the Chairman, five Non-executive Directors (four of whom are independent) and three Executive Directors. Lonmin currently has one female member on the Board, and two of the Directors are Historically Disadvantaged South Africans. Board appointments are made on merit against objective criteria that include skills, experience and personal attributes, including independence of mind.

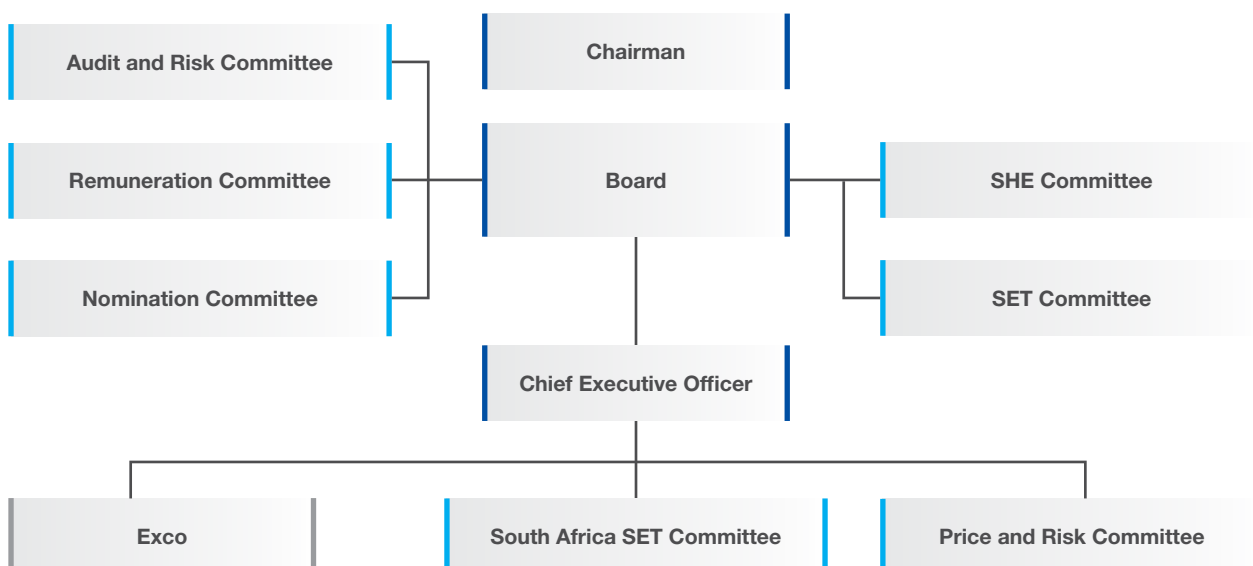
Detailed information regarding the Board is available on pages 58 to 66 and pages 83 to 113 of the Annual Report and Accounts 2016.

A comprehensive effectiveness review of the Board, its committees and individual Directors was conducted in the year under review. The review was facilitated by Helen Pitcher of Advanced Boardroom Excellence, who has no other connection with the Company save for this appointment. The effectiveness review involved one-on-one interviews with each Director, the Company Secretary, Assistant Company Secretary and members of the Executive Committee (Exco). In addition, Mrs Pitcher and her colleagues observed several Board and committee meetings, both in the United Kingdom and South Africa, reviewed the material provided by management to the Board and its committees during the course of the year and assessed a range of documents relating to the operation of the Board and its committees, such as the schedule of matters reserved to the Board, the Board's annual workplan and terms of reference and annual workplans for each Committee.

Our Annual Report and Accounts 2016 provides details of:

- how Board members are selected (page 63);
- how we communicate with our shareholders and formally report; and
- the details of our Annual General Meeting (AGM) (page 69).

The Board delegates some of its functions and authority to committees without delegating its ultimate responsibility for the governance of the Company. In addition to the committees recommended in the UK Corporate Governance Code, the Board has established two other committees to specifically oversee safety and social responsibility matters, the Safety, Health and Environment (SHE) Committee and the Social, Ethics and Transformation (SET) Committee. As with any business, power is also delegated from the Board to the Chief Executive Officer, and through him to the management team via a documented delegation of authority, setting out the responsibilities, decision-making and approval powers of managers at different levels of the enterprise.





More detailed information on these committees, including a full discussion of the Company's remuneration policy, can be found in the committee reports in the Annual Report and Accounts 2016.

The interaction between the Board, its committees and the management of the Company can be summarised as follows:

## The Social, Ethics and Transformation Committee

Lonmin's SET Committee oversees the Company's strategy and performance in addressing transformation, empowerment and other social and ethics issues prescribed in South African legislation. The Committee also oversees Lonmin's inclusive stakeholder engagement and the process of addressing all stakeholder issues. The Committee met four times during the year and the following work was undertaken:

<p><b>Social</b></p>	<ul style="list-style-type: none"> <li>• Reviewed reports on commitments made in the Social and Labour Plans and requirements of Mining Charter and provided feedback to management</li> <li>• Reviewed strategic plans for transformation programme and remedial actions</li> <li>• Reviewed progress against our accommodation strategy, including in-depth reviews of the housing and living conditions of our employees, and our community infrastructure investment projects. Committee members also went on a number of site visits to assess progress in the construction of our infill apartments</li> <li>• Received an update on progress made against procurement commitments made to the Bapo Ba Mogale community</li> </ul>
<p><b>Ethics</b></p>	<ul style="list-style-type: none"> <li>• Received an update on the compliance review of the Human Rights Policy</li> </ul>
<p><b>Transformation</b></p>	<ul style="list-style-type: none"> <li>• Reviewed the funding and terms of the 1608 Education Trust including appointment of trustees and administrator</li> <li>• Reviewed reports on Social and Labour Plans and Mining Charter, and provided feedback to management</li> </ul>
<p><b>Governance, regulatory and reporting</b></p>	<ul style="list-style-type: none"> <li>• Reviewed changes to the Mining Charter Scorecard</li> <li>• Reviewed changes to local and international regulations and new legislation, including Mining Charter III and amendments to the Mineral and Petroleum Resources Development Act</li> <li>• Monitored status of the Once Empowered Always Empowered litigation brought by the Chamber of Mines</li> <li>• Reviewed the Committee's report within the 2015 Annual Report and recommended approval to the Board</li> <li>• Considered feedback from external auditors following their assurance review of selected data in the FY2015 annual report and FY2015 Sustainable Development Report</li> <li>• Considered and approved the appointment of KPMG as the assurance provider for the 2016 Sustainable Development Report</li> <li>• Reviewed the Committee's Annual Workplan, Terms of Reference and Committee objectives for 2016</li> <li>• Reviewed the Amnesty International report on housing conditions at Marikana</li> </ul>

# Governance (continued)

## The Safety, Health and Environment Committee

In addition to overseeing the areas of safety, health and the environment, Lonmin's SHE Committee assists the Board in meeting the commitments of the Sustainable Development Policy. The Committee sets aspirational standards, implements an appropriate culture, ensures robust and independent assurance, and provides advice to the Board on SHE compliance with legal requirements. The Committee meets quarterly and met four times during the year. The following work was undertaken:

<p><b>Safety</b></p>	<ul style="list-style-type: none"> <li>• Received reports from accountable managers on four fatalities during FY2016 and all serious safety incidents, including a detailed analysis of factors contributing to the safety incident and the corrective and preventative measures taken to prevent recurrence</li> <li>• Reviewed reports on key safety indicators and trends</li> <li>• Reviewed Company security and firearm procedures                             <ul style="list-style-type: none"> <li>– Reviewed progress and implementation of a strategic plan to improve safety and long-term safety initiatives</li> <li>– Received reports on the Du Pont Initiative Safety Leadership and Behaviour Survey</li> <li>– Reviewed material regulatory compliance</li> </ul> </li> </ul>
<p><b>Health</b></p>	<ul style="list-style-type: none"> <li>• Reviewed reports on health and community indicators and trends</li> <li>• Participated in a Health Deep Dive, including a report on the health impact following a five-month strike</li> </ul>
<p><b>Environment</b></p>	<ul style="list-style-type: none"> <li>• Received reports from accountable managers on all serious environmental incidents, including a detailed analysis of factors contributing to the incident and the corrective and preventative measures taken to prevent recurrence</li> <li>• Reviewed reports on key environmental indicators and trends</li> <li>• Reviewed progress reports on various environmental initiatives with focus on water security and energy management</li> <li>• Participated in an Environment Deep Dive with a focus on emission regulations and rehabilitation legislation</li> <li>• Reviewed reports on complaints by the regulator and third parties</li> </ul>
<p><b>Governance, regulatory and reporting</b></p>	<ul style="list-style-type: none"> <li>• Reviewed changes to local and international safety, health and environmental regulations</li> <li>• Reviewed the Committee's report within the 2015 Annual Report and recommended approval to the Board</li> <li>• Considered feedback from external auditors following their assurance review of selected data in the FY2015 annual report and FY2015 Sustainable Development Report</li> <li>• Considered and approved the appointment of KPMG as the assurance provider for the FY2015 Sustainable Development Report</li> <li>• Reviewed the Committee's Annual Workplan, Terms of Reference and Committee objectives for 2016</li> </ul>

## Ethics

Lonmin's Code of Business Ethics commits the Company to the highest standards of social and business practices and requires that employees and contractors share this commitment, formalising Lonmin's ethical approach to conducting, managing and regulating all of its business dealings. The Lonmin Code of Business Ethics can be accessed online at [www.lonmin.com/about-us/business-conduct](http://www.lonmin.com/about-us/business-conduct).



The SET Committee oversees the Group's activities in social and ethics matters, to state policies in relation to combating corruption and bribery. Lonmin aspires to embed an ethical culture in the Company through its corporate values and by leading in a way that demonstrates an ethical tone from the top of the organisation.

The Code of Business Ethics defines Lonmin's stance on conflicts of interest, anti-competitive behaviour, lobbying and relationships with government, bribery, insider trading, the receipt of gifts and donations, whistle-blowing and reporting of corruption or unethical behaviour.

Ethics training is included in induction training, which employees and contractors receive as a pre-requirement to employment. Those employees and contractors in core operations also receive refresher induction training when returning from leave.

Where allegations of misconduct are received, corruption audits are conducted by the internal audit department on the relevant business units. A 24-hour ethics hotline is available to all employees, contractors and community members to anonymously report ethical grievances through formal Company channels. The hotline is operated by an independent third party and the call logging process is designed to protect individual rights, defend whistle-blower anonymity and encourage the true spirit of whistle-blowing. Each call is logged and addressed to the relevant investigations unit, which takes appropriate steps to determine culpability and instate disciplinary action where required.

Consequences for those found guilty of contravening the Code of Business Ethics include dismissal, contract termination and/or legal action.

The main areas of concern investigated relate to vendor fraud and job selling by external syndicates. The Company is in the process of drafting a policy on BEE fronting to address certain allegations in this regard. Furthermore, a cautionary is included in advertisements for job vacancies, which states that Lonmin

does not endorse or tolerate unethical or fraudulent behaviour, bribery, insider trading, corruption or job selling, and that such behaviour will be reported to the relevant authorities.

In the year ahead, the internal audit department will continue to raise awareness around fraud and the ethics hotline, focus on preventive controls and deal with violations of the Code of Business Ethics appropriately.

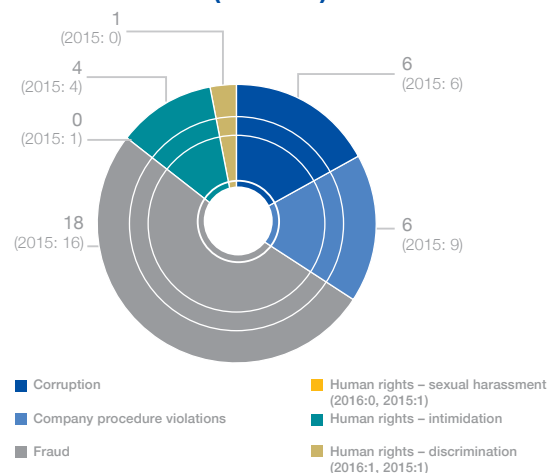
## Performance

120 cases of alleged unethical behaviour were investigated in 2016, consisting of 32 cases carried forward from 2015 and 88 cases reported in the current year. All reported cases are investigated according to a formal Code of Conduct for Security and Investigations.

Of these cases, 27 are still under review, 58 were unfounded, and 35 were concluded having confirmed inappropriate behaviour. The following disciplinary action has resulted from the 35<sup>1</sup> cases investigated and concluded in the year:

- 14 cases resulted in dismissals and/or final warnings
- eight vendor contracts were terminated
- two employees were disciplined
- two cases were settled with vendors
- 10 cases were referred to a third party; and
- nine employees resigned prior to conclusion of disciplinary action.

### Unethical behaviour cases investigated and concluded (number)



	2015	2016
Number of incidents of sexual harassment investigated	1	1
Number of whistle-blowing incidents logged through hotline	33	28
Number of cases of unethical behaviour reported through other channels (excluding hotline)	71	60
Percentage of business units analysed for corruption risks	100%	100%

<sup>1</sup> Refer to pie chart: Unethical behaviour cases investigated and conducted.

# Governance (continued)

## Membership organisations

Lonmin participates in various local and international bodies that uphold corporate ethical responsibility and sustainable business practices, and we align our conduct with their recommendations and requirements. This includes voluntary membership in various external organisations, initiatives and social charters, including active participation in national and international mining organisations. Those of strategic importance are listed below.

<b>CDP</b>	Lonmin submitted a CDP report disclosing our carbon emissions for the 10th consecutive year in 2016, based on our carbon emissions for financial year 2015. The CDP (formerly the Carbon Disclosure Project) is an international, not-for-profit organisation that provides a global system for the measurement, disclosure, management and sharing of vital environmental information. In 2016, the Company also submitted a CDP water disclosure report for the third time; the second time for public disclosure.
<b>Chamber of Mines</b>	Lonmin's representation on the Chamber of Mines' Chief Executive Officer Forum allows it to share in experiences good and bad, successful strategies and leading practices that support safety improvements.
<b>EITI</b>	The Extractive Industries Transparency Initiative (EITI) is a global standard that promotes openness and accountable management of revenues from natural resources. Lonmin supports the EITI through our membership of the ICMM. The Company pays tax fully and properly in all jurisdictions in which it operates as a matter of policy.
<b>ICMM</b>	The goal of the International Council on Mining and Metals (ICMM) is to improve sustainable development performance in the mining and metals industry. Lonmin is a member and active contributor of the ICMM, shares information with industry peers about our programmes to encourage mutual learning and is indirectly involved in environmental advocacy on issues. Our 15 Sustainable Development Standards align with the ICMM's 10 principles and the requirements set out in the Position Statements. External assurance of our Sustainable Development Report is in line with the ICMM's Sustainable Development Framework: Assurance Procedure relating to subject matters 1 to 4.
<b>IPA</b>	Lonmin is a member of the International Platinum Group Metals Association (IPA), a non-profit association that represents mining, production and fabrication companies in the PGM industry. The organisation acts as a platform for discussion and information exchange between member companies and the outside world, and serves as an early warning system for the industry by monitoring legislation and industry-related topics.
<b>PJDA</b>	Lonmin is a member of the Platinum Jewellery Development Association (PJDA). The aim of this body is to promote the platinum brand within the jewellery market worldwide.
<b>SPI</b>	Lonmin is a sponsor of the SEDA Platinum Incubator (SPI) and an active board participant.
<b>UNGC</b>	The United Nations Global Compact (UNGC) is a strategic policy initiative to help business align with 10 universally accepted principles in the areas of human rights, labour, environment and anti-corruption. Lonmin recognises the importance of these principles and endorses them across the various areas of our business.
<b>WPIC</b>	Lonmin is a member of the World Platinum Investment Counsel (WPIC). The core focus of this body is to promote the understanding of platinum in the investment market.



## Assurance

Lonmin's Audit and Risk Committee is responsible for oversight of internal audit and external assurance procedures to support the integrity of our measurement and data management systems. These procedures set out the internal management and controls of key risks, and enhance the reliability of information used by investors and other stakeholders. Further detail can be found in the Audit and Risk Committee report in the Annual Report and Accounts 2016.

### Internal audit

The internal audit department is responsible for providing objective assurance on risks and key internal controls in alignment with the risk management framework. The in-house auditors are supported by the South African arm of PwC, who provide specialist services in connection with matters that would be inefficient to resource internally. Management uses the findings and recommendations from internal audit to devise and implement corrective action plans that are

monitored and reported to the Audit and Risk Committee of the Board.

This year, an internal review of the health and safety material focus area for the period 1 October 2015 to 30 September 2016 was completed. The review covered the qualitative and quantitative information presented in this report's safety and health chapter.

### External assurance

Certain aspects and indicators in our sustainable development reporting have been externally assured to provide the reader with an objective and impartial opinion over the balance and legitimacy of the performance data. This annual external assurance of our safety, health and environmental and social indicators is obtained to align with the ICMM's 10 Principles of sustainable development and best practice. The SHE and SET Committees of the Board consider and approve the indicators that receive external assurance.



Mrs Eunice Motlasedi the principal of Majakaneng Primary School, standing with students in front of renovated mobile classrooms.

# Governance (continued)

## Independent assurance provider's report to the Directors of Lonmin Plc Report on selected key performance statistics

We have undertaken an assurance engagement on selected key performance statistics, as described below and presented in the 2016 Sustainable Development Report for Lonmin plc (Lonmin) for the year ended 30 September 2016 (the Report). This engagement was conducted by a multi-disciplinary team of health, safety, social, environmental and assurance specialists with relevant experience in sustainability reporting.

### Subject matter and related assurance

The subject matter of our engagement and related assurance is set out in the tables below:

#### Subject matter (a) and (b):

Selected performance data presented in compliance with Subject Matter 4 of the International Council on Mining and Metals' (ICMM) Sustainable Development Framework: Assurance Procedure (ICMM Assurance Procedure), and prepared in accordance with the Global Reporting Initiative (GRI) G4 Guidelines: (Key Performance Statistics Annexure on pages 122 to 123 of the Report)			Unit	Boundary
<b>(a) Reasonable assurance (RA)</b>				
Employee and contractor lost time injury frequency rate (LTIFR)			Ratio	Total mine
<b>(b) Limited assurance (LA)</b>				
Number of new cases of noise induced hearing loss (NIHL) diagnosed			No of cases	Total mine
Number of new cases of TB diagnosed and treated			No of cases	Total mine
Total fresh water consumption			m <sup>3</sup>	Total mine
Direct and indirect energy			TJ	Total mine
Scope 1 and 2 Greenhouse Gas (GHG) emissions as per defined boundary			tCO <sub>2</sub> e	Total mine

#### Subject matter (c):

Selected Mining Charter elements prepared in compliance with the Broad-Based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry (BBSEEC) (2002) and related Scorecard (2004) (Key Performance Statistics Annexure on pages 122 to 123 of the Report)			Unit	Boundary
<b>(c) Limited assurance (LA)</b>				
Number of infill apartments successfully constructed at Karee (bachelor units)			No of units	Total mine
Number of infill apartments successfully constructed at Karee (family units)			No of units	Total mine
Project spend in South African Rand against approved project budget (Health, Education, Social Infrastructure)			Rand value	WPL and EPL

#### Subject matter (d):

Selected Mining Charter elements prepared in compliance with the Amendment to the BBSEEC (2010) and related Scorecard (2010)			Unit	Boundary
<b>(d) Limited assurance (LA)</b>				
Total Percentage HDSA (excluding white females)				
<ul style="list-style-type: none"> <li>Exco</li> <li>Senior management</li> <li>Mid management</li> <li>Junior management</li> </ul>			% HDSA	WPL and EPL
HRD expenditure as percentage of total annual payroll (excluding Mandatory Skills Development Levies)			% HRD spend	WPL and EPL/ Total Lonmin (% split applied)

Boundary key	
WPL and EPL	WPL and EPL information only presented separately as WPL and EPL
Total Lonmin	The information cannot be split between WPL and EPL, therefore the number reported is for total Lonmin
Total Lonmin (% split applied)	The information is recorded as total Lonmin and a percentage (%) split is applied in order to report for the WPL portion. This is calculated by the number of employees WPL contributes to the total employees at Lonmin
Total mine	Denotes consolidated data for Lonmin Plc, including WPL, EPL, Pandora JV, head office and Limpopo operations

## Directors' responsibilities

The Directors are responsible for the selection, preparation and presentation of the selected key performance statistics in accordance with the accompanying Lonmin reporting criteria. This responsibility includes the identification of stakeholders and stakeholder requirements, material issues, commitments with respect to sustainability performance and design, implementation and maintenance of internal controls relevant to the preparation of the Report that is free from material misstatement, whether due to fraud or error.

## Our independence and quality control

We have complied with the independence and all other ethical requirements of the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

KPMG Services (Proprietary) Limited applies the International Standard on Quality Control 1, 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.

## Our responsibility

Our responsibility is to express an assurance opinion and conclusion on the selected key performance statistics based on the work we have performed and the evidence we have obtained. We have conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform our engagement to obtain reasonable or limited assurance about whether the selected key performance statistics are free from material misstatement.

An assurance engagement in accordance with ISAE 3000 (Revised) involves assessing the suitability in the circumstances of Lonmin's use of its reporting criteria, as a basis of preparation for the selected key performance statistics and performing procedures to obtain evidence about the quantification of the selected key performance statistics and related disclosures. The nature, timing and extent of procedures selected depend on the practitioner's judgement, including the assessment of

the risks of material misstatement, whether due to fraud or error. In making those risk assessments we considered internal controls relevant to Lonmin's preparation of the selected key performance statistics. The procedures we performed were based on our professional judgement and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the selected key performance statistics set out in section (a) of the subject matter and related assurance paragraph on the previous page.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. Given the circumstances of our limited assurance engagement on the selected key performance statistics set out in section (b), (c) and (d) of the subject matter and related assurance paragraph above, in performing the procedures listed above we:

- interviewed management and senior executives to obtain an understanding of the internal control environment, risk assessment process and information systems relevant to the sustainability reporting process;
- inspected documentation to corroborate the statements of management and senior executives in our interviews;
- tested the processes and systems to generate, collate, aggregate, monitor and report the selected key performance statistics;
- performed a controls walkthrough;
- inspected supporting documentation and performing analytical procedures on a sample basis to evaluate the data generation and reporting processes against the reporting criteria;
- undertook site visits to Lonmin's Marikana operations (which represents the most material contribution to the selected key performance statistics); and
- evaluated whether the selected key performance statistics presented in the Report are consistent with our overall knowledge and experience of sustainability management and performance at Lonmin.

## Governance (continued)

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result, 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 a reasonable assurance opinion about whether the selected key performance statistics set out in section (b), (c) and (d) of the subject matter and related assurance paragraph on page 118 have been prepared, in all material respects, in accordance with the relevant criteria.

### Reasonable assurance opinion and limited assurance conclusion

In relation to the Report for the year ended 30 September 2016:

*(a) For the selected key performance statistic on which we are required to express reasonable assurance*

In our opinion, the selected key performance statistic set out in section (a) of the subject matter and related assurance paragraph is prepared, in all material respects, in accordance with the accompanying Lonmin reporting criteria.

*(b) For the selected key performance statistics on which we are required to express limited assurance*

Based on our work performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the selected key performance statistics set out in section (b), (c) and (d) of the subject matter and related assurance paragraph are not prepared, in all material respects, in accordance with the accompanying Lonmin reporting criteria.

### Report on the ICMM Assurance Procedure

We are required to report our findings on the International Council on Mining and Metals' (ICMM) Sustainable Development (SD) Framework: Assurance Procedure (ICMM Assurance Procedure) in respect of:

1. the alignment of Lonmin's sustainability policies to the ICMM 10 SD Principles and any mandatory requirements set out in ICMM Position Statements (ICMM Subject Matter 1);
2. the reporting of Lonmin's material sustainable development risks and opportunities based on a review of its business and the views and expectations of its stakeholders (ICMM Subject Matter 2); and
3. the implementation of systems and approaches that Lonmin is using to manage its material safety risks and opportunities (ICMM Subject Matter 3).

### Directors' responsibilities

The Directors are responsible for:

- the alignment of Lonmin's sustainability policies to the ICMM 10 SD Principles and any mandatory requirements set out in the ICMM Position Statements;
- the reporting of Lonmin's material sustainable development risks and opportunities based on a review of its business and the views and expectations of its stakeholders; and

- the implementation of systems and approaches that Lonmin is using to manage its material safety risks and opportunities.

### Our responsibility

Our engagement included reporting on the ICMM Assurance Procedure in respect of 1, 2 and 3 above based on the knowledge obtained in our evidence gathering procedures in our assurance engagement on the subject matters in (a) and (b) set out in our report on selected key performance statistics on the previous page.

### Findings

Based on our evidence gathering procedures in our assurance engagement for the year ended 30 September 2016 on the subject matter in (a) and (b) set out in our report on selected key performance statistics, nothing has come to our attention that causes us to believe that:

1. Lonmin's sustainability policies are not aligned with the ICMM 10 SD Principles and any mandatory requirements set out in ICMM Position Statements;
2. Lonmin has not reported material sustainable development risks and opportunities based on a review of its business and the views and expectations of its stakeholders; and
3. Lonmin has not implemented systems and approaches to manage its material safety risks and opportunities.

### Other matters

The maintenance and integrity of the Lonmin website is the responsibility of Lonmin management. Our procedures did not involve consideration of these matters and accordingly, we accept no responsibility for any changes to either the information in the Report or our independent assurance report that may have occurred since the initial date of presentation on the Lonmin website.

### Restriction of liability

Our work has been undertaken to enable us to express the opinion and conclusion on the subject matters in (a) and (b) in our report on selected key performance statistics together with findings on 1, 2 and 3 in our report on the ICMM Assurance Procedure to the Directors of Lonmin in accordance with the terms of our engagement, and for no other purpose. We do not accept or assume liability to any party other than Lonmin, for our work, for this Report, or for the conclusions we have reached.



**KPMG Services Proprietary Limited**

**Per PD Naidoo**

Director  
Johannesburg  
25 January 2017

KPMG Crescent  
85 Empire Road  
Parktown  
Johannesburg  
2193





## The Sixteen-Eight Memorial Trust

The Memorial Trust was founded in 2012 by Lonmin and its partner Shanduka Resources to fund the education needs of the dependant children of the Lonmin employees who died during the violence of 10 to 16 August 2012. The Trust Fund has 141 beneficiaries of which 115 children are in primary and secondary schools (including seven in crèche), 13 are in tertiary institutions, six are older and have completed their schooling and seven are babies or toddlers. The Trust, which was registered by the Master of the High Court in South Africa on 11 January 2013, was capitalised at R5 million through seed capital from Lonmin and Shanduka. It has since grown to over R6 million thanks to the R1 million contribution from Glencore PLC formerly Xstrata Plc.

The Trust Fund approved applications of R3.5 million for the education of its beneficiaries in 2016 (2015: R1.4 million).

### Beneficiary analysis per gender and age

Number of beneficiaries	Female	Male	Age 1 – 10	Age 11 – 20	Age 21+
141	67	74	47	69	25

The Trust Fund provides for the payment of education costs relating to:

- Education assistance which is defined as the cost of attending a government public school or other education facility. Assistance includes registration costs, school fees, cost of books, uniform, transport allowance and other direct education costs which the trustees may consider relevant
- Extramural activities such as sport and excursions
- Boarding fees

The bank account to which donations can be made is:

**Branch name:** The Standard Bank of South Africa Limited (Sandton Branch, Johannesburg, South Africa)  
**Branch code:** 01-9205  
**Trust current account:** 42 099 362 2  
**A/C name:** Sixteen-Eight Memorial  
**Swift code:** SBZAJJ

# Annexures






## Environmental, social and governance key performance statistics



	Measurement	2012	2013	2014	2015	2016
<b>Corporate profile: Production</b>						
PGMs produced	oz	1,349,802	1,336,109	882,094	1,447,364	<b>1,440,724</b>
<b>Material focus area: Employee relationships</b>						
Employees	Number	28,230	28,379	28,276	26,968	<b>25,296</b>
Contractors	Number	8,293	10,042	10,016	8,701	<b>7,497</b>
Historically Disadvantaged South Africans (HDSAs), including white women, employed in management	Percentage	49.4	47.2	48.4	50.3	<b>52.4</b>
Women employed in mining <sup>1</sup>	Percentage	5.11	5.09	5.35	6	<b>6.3</b>
Women employed at the mine <sup>2</sup>	Percentage	8.15	8	8.18	8.8	<b>9.1</b>
Employee turnover rate	Percentage	6.17	6.1	5.0	9.1	<b>7.9</b>
Employees belonging to organised trade unions	Percentage	80.8	87.7	88.6	91.4	<b>93</b>
People registered for adult education and training (AET)	Number	942	954	473	781	<b>691</b>
People on the graduate programme	Number	27	35	34	39	<b>41</b>
People on the learnership programme	Number	248	181	144	148	<b>38</b>
People on the bursary programme	Number	98	86	89	98	<b>66</b>
Employees with mentorship agreements	Number	160	63	75	115	<b>104</b>
Human resource development (HRD) expenditure as % of annual payroll	Percentage	3.6	3.2	3.3	2.6	<b>2.3</b>
Total HRD spend in financial year	Rand	200 million	202 million	172 million	182 million	<b>156 million</b>
<b>Material focus area: Safety and health</b>						
Fatalities	Number	2	3	1	3	<b>4</b>
Lost time injury frequency rate (LTIFR)	Rate <sup>3</sup>	4.16	3.50	3.34	5.41	<b>4.97</b> ✓ <i>LA</i>
Level 3 safety incidents	Number	16	21	12	21	<b>11</b>
Lost-time injuries (LTIs)	Number	372	317	217	473	<b>409</b>
Section 54 stoppages	Number	37	18	20	36	<b>50</b>
New noise-induced hearing loss (NIHL) cases diagnosed	Number	42	48	66	199	<b>72</b> ✓ <i>LA</i>
NIHL cases compensated	Number	33	36	49	108	<b>104</b>
Diagnosed and treated tuberculosis (TB) cases	Number	527	446	436	462	<b>411</b> ✓ <i>LA</i>
HIV/Aids-related deaths	Number	104	99	97	119	<b>72</b>
Voluntary counselling and testing conducted (VCT)	Number	46,9456	17,682	17,964	16,301	<b>18,372</b>
Patients on anti-retroviral treatment (ART)	Number	2,510	3,288	3,666	4,167	<b>4,483</b>
Patients on the wellness programme	Number	657	690	637	477	<b>284</b>

<sup>1</sup> Women employed in mining represent those employed in core mining operations.

<sup>2</sup> Women employed at the mine represent all women employed at our operations.

<sup>3</sup> Injuries per million hours worked.

Measurement	2012	2013	2014 	2015	2016
<b>Material focus area: Social licence to operate</b>					
Community members receiving/offered portable skills training	Number	176	154	158	138
Rand value spent on approved Social and Labour Plans (SLP) for WPL and EPL	Rand	39,743,935	38,661,225	47,672,897	62,551,667
					<b>52,062,623 </b>
<b>Material focus area: Environment</b>					
Total fresh water intake	m <sup>3</sup>	8,667,896	8,284,039	6,206,167	8,326,566
					<b>8,043,792 </b>
Total fresh water intake efficiency	m <sup>3</sup> /PGMoz	6.42	6.20	7.04	5.8
					<b>5.58</b>
Electricity	MWh	1,485,630	1,555,651	1,135,000	1,620,862
					<b>1,571,620</b>
Electricity efficiency	MWh/PGMoz	1.10	1.16	1.28	1.12
					<b>1.09</b>
Energy	Terajoules	6,433	6,740	4,696.7	6,783.1
					<b>6,344.2 </b>
Energy efficiency	GJ/PGMoz	4.77	5.04	5.32	4.68
					<b>4.40</b>
Greenhouse gas (GHG) emissions	KtCO <sub>2</sub> e	1,572	1,646	1,205	1,758
					<b>1,665 </b>
GHG efficiency	tCO <sub>2</sub> e/PGMoz	1.16	1.23 <sup>1</sup>	1.4	1.2
					<b>1.1</b>
Tailings disposed to tailings facilities	Kilotonnes	10,666	11,661 <sup>2</sup>	6,006	11,636
					<b>10,222</b>
Waste rock disposed to rock dumps	Kilotonnes	1,482	996	85	870
					<b>865</b>
Hazardous waste disposed of to landfill	Tonnes	77,826	71,336	40,097	86,881
					<b>70,603</b>
General waste to landfill	Tonnes	10,271	9,577	5,460	8,585
					<b>8,766</b>
Average sulphur dioxide (SO <sub>2</sub> ) emissions	Tonnes/day	8.5	11.9	7.16	11.2
					<b>13.6</b>

 Assurance provided by KPMG: Reasonable () Limited ()

<sup>1</sup> In the 2013 Sustainable Development Report incorrectly referred to kilotonnes CO<sub>2</sub>e/PGMoz; the measurement unit which aligns to the units reflected is tCO<sub>2</sub>e/PGMoz.

<sup>2</sup> In the 2013 Sustainable Development Report incorrectly referred to tonnes; the measurement unit which aligns to the units reflected is kilotonnes.

# Annexures (continued)

## Safety and Sustainable Development Policy

### SAFETY AND SUSTAINABLE DEVELOPMENT POLICY



We are Lonmin, a primary producer of Platinum Group Metals. We create value by the discovery, acquisition, development and marketing of minerals and metals.

We respect the communities and nations that host our operations and conduct business in a sustainable, socially and environmentally responsible way.

To honour our Charter, and to create sustainable value for our stakeholders, Lonmin is committed to improving the quality of life of current and future generations through the integration of economic prosperity, social development and environmental protection by:

Honouring our health and safety values and sustaining an environment that promotes the safety, health and wellbeing of our employees and their families, contractors and the communities where we operate.

Providing adequate and appropriate resources to implement effective management systems and risk management based on valid data and sound science, during all phases of our operations to ensure the reduction of risks and the adoption of best practices.

Respecting and valuing the fundamental human rights, cultural heritage and indigenous traditions of our employees, communities and other stakeholders where we operate.

Integrating safety and sustainability development into the decision making process during all phases of our operations.

Upholding ethical business practices, sound corporate governance and transparency, while meeting or exceeding applicable legislation, standards and other requirements.

Implementing the principle of equal opportunity and equity while maintaining an appropriate skilled and diverse workforce.

Empowering our host communities and improving their quality of life by contributing to their long term social, economic and institutional development and promoting the beneficiation of our minerals.

Implementing effective material stewardship to manage the lifecycle of our products on a socially and environmentally responsible manner.

Promoting the sustainable use of natural resources and the reduction, re-use and recycling of waste.

Preventing pollution and environmental degradation in order to reduce our impact on the environment and the communities where we operate.

Responding to climate change and driving the reduction of greenhouse gases by adopting best practice technology, alternative energy sources, improved control systems and management practices.

Promoting integrated land use management and biodiversity conservation by applying a precautionary approach during all phases of our operations, including mine closure.

Maintaining transparent and ongoing consultative relationships with all stakeholders and incorporating this engagement into the decision making process.

Fostering the commitment of all employees and contractors to this policy through training and awareness programmes.

Seeking continual improvement to achieve a high level of performance through a framework of setting and reviewing our policy, objectives and targets.

Reporting publicly our sustainable development performance in accordance with ICMM Sustainable Development Framework and utilising the guidance of the Global Reporting Initiative Sustainable Reporting Guidelines.

A handwritten signature in black ink, appearing to read "Ben Magara".

**Ben Magara**

**Chief Executive Officer**

**August 2014**



# Lonmin Charter

We are Lonmin, a primary producer of Platinum Group Metals. We create value by the discovery, acquisition, development and marketing of minerals and metals.

We respect the communities and nations that host our operations and conduct business in a sustainable, socially and environmentally responsible way.

## Mission

To grow and build our portfolio of high quality assets

To deliver the requirements of the South African Broad-based Socio-economic Economic Charter and we welcome the opportunity to transform our business

To build a values-based culture, which is founded on safe work, continuous improvement, common standards and procedures, community involvement and one that rewards employees for high performance.

## We are successful when

- our employees live and work safely and experience the personal satisfaction that comes with high performance and recognition;
- our shareholders are realising a superior total return on their investment and support our corporate sustainability values;

- the communities in which we operate value our relationships; and
- we are meeting our commitments to all business partners and our suppliers, contractors, partners and customers support our Charter.

## Our values

- Zero Harm – We are committed to Zero Harm to people and the environment.
- Integrity, honesty and trust – We are committed ethical people who do what we say we will do.
- Transparency – Open, honest communication and free sharing of information.
- Respect for each other – Embracing our diversity enriched by openness, sharing, trust, teamwork and involvement.
- High performance – Stretching our individual and team capabilities to achieve innovative and superior outcomes.
- Employee self-worth – To enhance the quality of life for our employees and their families.



**Brian Beamish**  
Chairman



**Ben Magara**  
Chief Executive Officer

[www.lonmin.com](http://www.lonmin.com)

## Lonmin Plc

Registered in England, Company Number 103002

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