



SUSTAINABILITY DEVELOPMENT REPORT 2018








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SUSTAINABILITY SCORECARD

Performance as at 30 June 2018			Assmang		Assore	
<div>Safety</div> <div></div>	Fatalities	→	0 ¹	→	0	
	Lost time injuries (LTIs)	↓	11	↑	8	
	Lost time injury frequency Rate (LTIFR)	↓	0,13	↑	0,27	
	Section 54 stoppages	↑	2	↓	3	
	Medical examinations performed ²	↑	19 597	↓	4 121	
	Audiometric tests performed	↑	24 326	↓	2 585	
<div>Occupational health and wellness</div> <div></div>	Human immune-deficiency virus (HIV) screenings performed	↑	11 199	↓	1 442	
	Pulmonary tuberculosis (TB) cases	↓	6	↓	7	
	Noise induced hearing loss (NIHL) cases referred	↓	20	↓	19	
	Total number of employees ³	↓	11 821	↑	2 454	
<div>Human resources</div> <div></div>	Percentage of women in mining (WIM) (%)	↑	12	→	14	
	Percentage of historically disadvantaged South Africans (HDSAs) in management (%)	↓	61	→	63	
	Number of bursaries awarded	↓	48	↑	43	
	Percentage of payroll spent on training (%)	↑	13,9	↑	10,9	
	Total additional houses completed	↑	8	→	0	
<div>Environmental management</div> <div></div>	Water consumption (m³)	↑	10 203 604	↓	475 290	
	Total emissions (CO ₂ e)	↓	1 174 063	↑	79 589	
	Electricity use (MWh)	↓	829 372	↑	72 065	
	Waste rock (tons)	↑	60 739 143	↓	89 638	
	Tailings/slag/discard waste (tons)	↓	6 034 384	↑	819 168	
<div>Community economic development</div> <div></div>	Total spend (Rm)	↑	101,2	↑	31,5	

¹ One fatality was reported for Sakura FerroAlloys SDN BHD in which Assmang has a 54,36% shareholding.

² Includes annual, exit and pre-medicals.

³ Includes contractors.

Key

↑↓	Improvement from FY17	↑↓	Not improved from FY17	→	No movement from FY17
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ASSORE AT A GLANCE

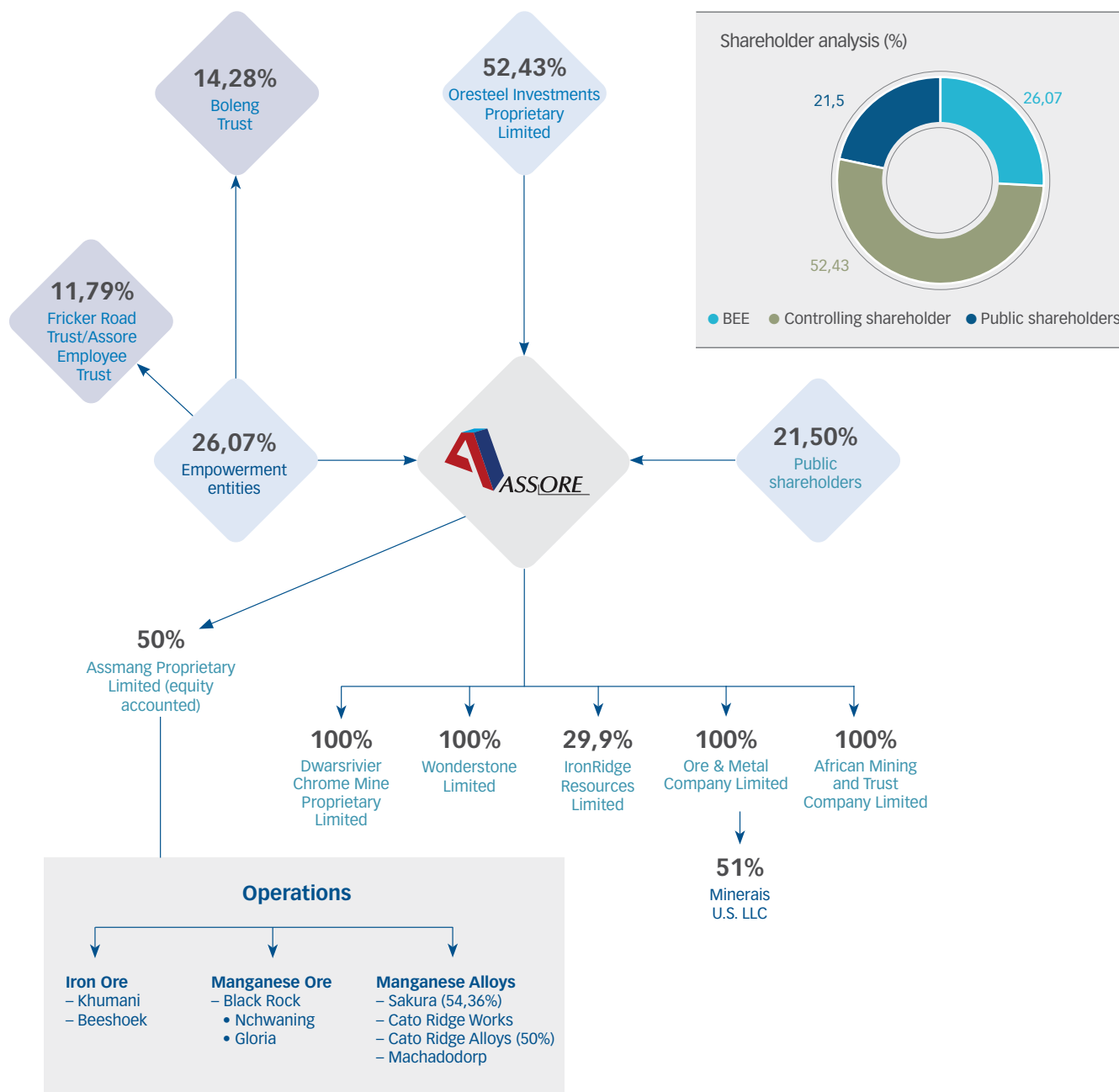
GROUP PROFILE

Assore is a mining holding company engaged principally in ventures involving base minerals and metals. The group's principal investments consist of its 50% interest in Assmang Ferrous, which it jointly controls with African Rainbow Minerals Limited (ARM) and its 100% interest in Dwarsrivier Chrome Mine Proprietary Limited (Dwarsrivier). The group, through its

various joint venture entities and subsidiary companies, is involved in mining iron, manganese and chrome ores, together with other industrial minerals and producing manganese alloys. The group is also responsible for marketing products produced by the Assore and Assmang groups, the bulk of which is exported and the remainder either used in the group's beneficiation processes or sold locally.

The company was incorporated in 1950 and its shares are listed on the JSE Securities Exchange (JSE) under "Assore" in the general mining sector. In total, 26,07% of the company's shares are controlled by two broad-based black economic empowerment (BBBEE) community trusts: the Boleng Trust (14,28%), and the Fricker Road Trust (11,79%). The group is headquartered in Johannesburg, South Africa.

GROUP STRUCTURE



ASSORE AT A GLANCE continued

WHAT WE DO AND WHERE WE OPERATE

Form	Joint venture																											
Operations	Assmang																											
Value chain contribution	Iron ore	Manganese ore and alloys																										
Sales in metric tons ('000)	17 874 (2017: 17 275)	Ore ¹ 3 177 (2017: 2 974) Alloys 378 (2017: 303)																										
Description	<p>Iron ore is mined in open cast operations at the Khumani Iron Ore Mine and at the Beeshoek Iron Ore Mine. The ore produced is sold locally and on export markets including:</p> <div><p>Sale of iron ore on a per region basis (%)</p><table><caption>Sale of iron ore on a per region basis (%)</caption><thead><tr><th>Region</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Asia</td><td>71</td></tr><tr><td>Africa and Middle East</td><td>20</td></tr><tr><td>Europe</td><td>9</td></tr></tbody></table></div> <p>Iron ore is an input material for the steel making industry.</p>	Region	Percentage (%)	Asia	71	Africa and Middle East	20	Europe	9	<p>Various grades of manganese ore are mined at Black Rock, and manganese alloys are produced at Cato Ridge Works (Cato Ridge). Cato Ridge, a joint venture with Japanese partners, produces refined ferromanganese. Feed for the Cato Ridge is derived mainly from Assmang's manganese mines. The ore and alloy produced are both sold locally and to the export market.</p> <p>Sakura Ferroalloys (Sakura), a joint venture smelting operation in Malaysia in which Assmang holds a 54,36% stake, produces high-carbon ferromanganese from ores sourced on the market. The smelting plant has been designed to allow for switching production capacity to silicomanganese. Alloy produced is sold on the export market.</p> <div><p>Manganese ore sales per region (%)</p><table><caption>Manganese ore sales per region (%)</caption><thead><tr><th>Region</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Asia</td><td>77</td></tr><tr><td>Americas</td><td>22</td></tr><tr><td>Europe</td><td>1</td></tr></tbody></table></div> <div><p>Ferromanganese sales per region (%)</p><table><caption>Ferromanganese sales per region (%)</caption><thead><tr><th>Region</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Asia</td><td>49</td></tr><tr><td>Americas</td><td>25</td></tr><tr><td>Europe</td><td>22</td></tr><tr><td>Africa and Middle East</td><td>4</td></tr></tbody></table></div>	Region	Percentage (%)	Asia	77	Americas	22	Europe	1	Region	Percentage (%)	Asia	49	Americas	25	Europe	22	Africa and Middle East	4
	Region	Percentage (%)																										
	Asia	71																										
Africa and Middle East	20																											
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Europe	22																											
Africa and Middle East	4																											
Contribution to group revenue or revenue generated ²	R15 135,3 million (2017: R16 399 million)	R12 859,6 million (2017: R10 238,1 million)																										
Attributable profit	R3 343,5 million (2017: R4 372,6 million)	R3 772,0 million (2017: R2 181,6 million)																										

¹ Excludes intra-group sales to alloy plants.

² In terms of International Financial Reporting Standards (IFRS), Assmang is accounted for on the equity accounting basis. Therefore, "revenue generated" which is state at 50% of its reported figure, as included in this analysis, does not form part of the group's reported revenue as reported in terms of IFRS.

ASSORE AT A GLANCE continued

WHAT WE DO AND WHERE WE OPERATE (CONTINUED)

Form	Subsidiary											
Operations	Dwarsrivier	Rustenburg Minerals and Zeerust										
Value chain contribution	Chrome ore											
Sales in metric tons ('000)	<div>1 557 (2017: 1 279)</div> <div>Chrome ore is mined at the Dwarsrivier Chrome Mine. Chrome ore is an input material for the steel making industry. The ore produced is sold locally and to the export market including:</div> <div><div>Sale of chrome ore on a per region basis (%)</div><div><table><thead><tr><th>Region</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Asia</td><td>89</td></tr><tr><td>United States</td><td>6</td></tr><tr><td>Europe</td><td>4</td></tr><tr><td>South Africa</td><td>1</td></tr></tbody></table></div></div> <div>The rehabilitation of selected mining areas at Rustenburg Minerals was ongoing up to January 2018. All operations relating to either mining or processing have ceased with limited rehabilitation activities ongoing at Zeerust. Sales agreements are being negotiated for the sale of Rustenburg Minerals and Zeerust respectively.</div>	Region	Percentage (%)	Asia	89	United States	6	Europe	4	South Africa	1	
Region	Percentage (%)											
Asia	89											
United States	6											
Europe	4											
South Africa	1											
Contribution to group revenue or revenue generated	<div>R3 892,8 million</div> <div>(2017: R3 410,1 million)</div>	<div>Mining and processing activity ceased</div> <div>(2017: R109,5 million)</div>										
Attributable profit	<div>R3 892,8 million</div> <div>(2017: R843,2 million)</div>	<div>Mining and processing activity ceased</div> <div>(2017: 23,4 million)</div>										

WHAT WE DO AND WHERE WE OPERATE (CONTINUED)

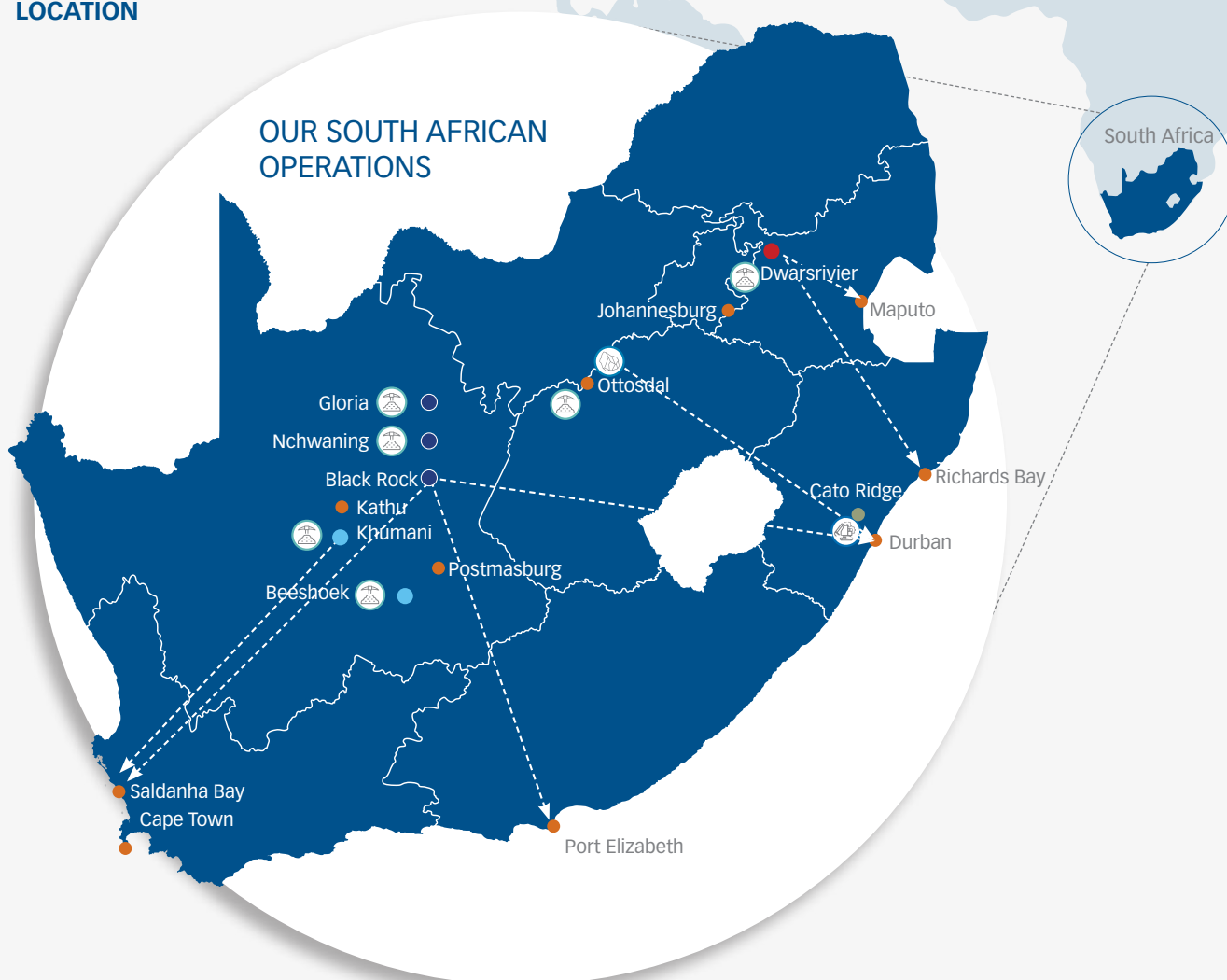
Form	Subsidiary (continued)											
Operations	Wonderstone	Ore & Metal Company Limited										
Value chain contribution	Wonderstone	Marketing and distribution										
Sales in metric tons ('000)	6 (2017: 4)	Market value of product sold approximately R27,5 billion (2017: R29,7 billion)										
Description	<p>The company mines a type of pyrophyllite which is referred to as Wonderstone for trade purposes. The bulk of the material mined is beneficiated to produce high-precision components manufactured to customers' specifications and are exported to:</p> <div><p>Sale of Wonderstone on a per region basis (%)</p><table><thead><tr><th>Region</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Asia</td><td>44</td></tr><tr><td>United States</td><td>27</td></tr><tr><td>South Africa</td><td>21</td></tr><tr><td>Europe</td><td>8</td></tr></tbody></table></div> <p>The most significant market for Wonderstone products for use in the manufacture of polycrystalline diamond (PCD) cutters for drilling in the oil and gas well industries.</p> <p>The company also supplies and installs ceramic wear linings through a subsidiary on a project basis.</p>	Region	Percentage (%)	Asia	44	United States	27	South Africa	21	Europe	8	<p>Ore & Metal Company is responsible for marketing, selling and shipping the group's products, including those produced by the Assmang Ferrous division operations.</p> <p>Strong relationships have been established with customers in Europe, North America, South America, India and the Far East.</p> <p>There were no significant changes to the supply chain in FY18.</p>
Region	Percentage (%)											
Asia	44											
United States	27											
South Africa	21											
Europe	8											
Contribution to group revenue or revenue generated	R53,4 million (2017: R81,1 million)	R831,0 million (2017: R783,2 million)										
Attributable profit	R1,43 million (2017: R5,07 million)	R409,8 million (2017: R383,8 million)										

ASSORE AT A GLANCE continued

WHAT WE DO AND WHERE WE OPERATE (CONTINUED)

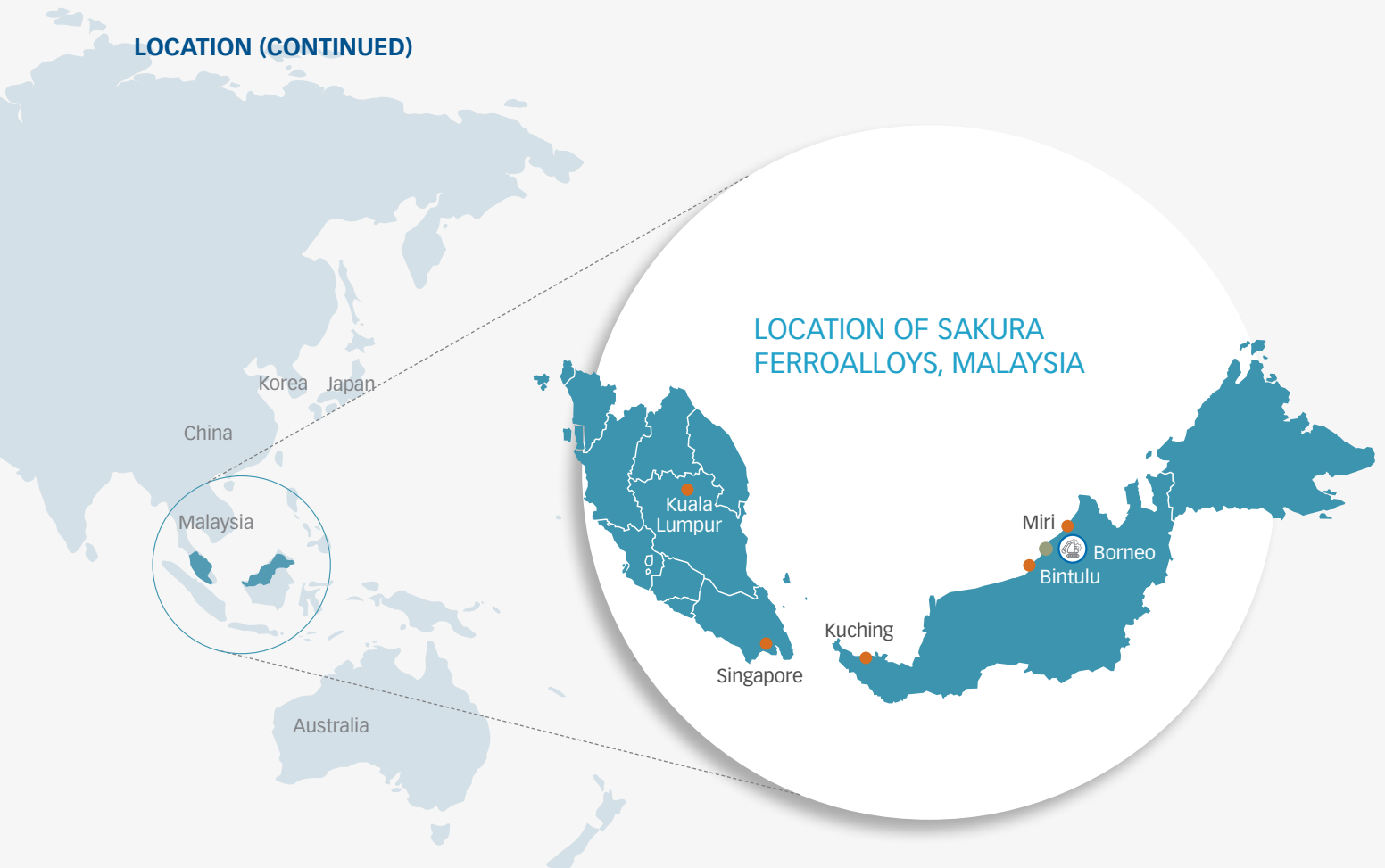
Form	Subsidiary (continued)	
Operations	African Mining and Trust	Minerais U.S. LLC
Value chain contribution	Operational and technical advice	Marketing and distribution, USA
Sales in metric tons ('000)	N/A African Mining and Trust Company Limited (AMT) is technical adviser to Assmang and other group companies and provides operational management services to group mines and plants.	N/A Minerais U.S. LLC is responsible for marketing and sales administration of the group's products in the United States of America (USA), particularly manganese alloys, and trades in various related commodities.
Contribution to group revenue or revenue generated	R488,1 million (2017: R461,4 million)	R2 444,8 million (2017: R2 364,4 million)
Attributable profit	R164,6 million (2017: R181,3 million)	R65,3 million (2017: R97,3 million)

LOCATION



ASSORE AT A GLANCE continued

LOCATION (CONTINUED)



LOCATION OF SAKURA FERROALLOYS, MALAYSIA

The group's principal investments consist of its 50% interest in Assmang, which it controls jointly with ARM and its 100% interest in Dwarsrivier. The group, through its various joint-venture entities and subsidiary companies, is involved in the mining of iron, manganese and chrome ores together with other industrial minerals and the production of manganese alloys (in South Africa and Malaysia).

- Fe – Iron ore
- Mn – Manganese ore
- FeMn – Ferromanganese
- Cr – Chrome ore
- Wonderstone
- Mine
- Processing plant
- Cities/towns

REPORT OVERVIEW

This sustainability report 2018 (this report) provides key stakeholders with transparent information on material sustainability topics as well as related policies, practices and performance for the 12-month period 1 July 2017 to 30 June 2018 (FY18).



REPORTING STANDARDS AND ASSURANCE

This report was informed by the GRI's (formerly Global Reporting Initiative) Sustainability Reporting Standards and its Mining Sector Supplement. The GRI Reference section, page 56, contains the references to each specific GRI Standard used to inform the disclosed material.

IBIS ESG Assurance Proprietary Limited (IBIS) performed independent external assurance in accordance with AccountAbility's AA1000AS (2008) standard to provide Type II moderate level assurance. Refer to its assurance statement on page 52. In addition, the sustainability management system controls the ongoing collection and verification of pertinent data sets, which are assured according to the processes outlined on page 52.

RESTATEMENTS AND REPORTING CHANGES

Restated information has been appropriately noted in this report. There have been no significant changes in material topics from what was reported in FY17.

The operations referred to as Wonderstone Grader Road is reported as Groupline Projects within the annual integrated report 2018 but the former naming convention continues within this report.

SCOPE AND BOUNDARY

Our report covers all the entities in which the Assore group has an interest, excluding portfolio investments. We distinguish between the Assmang and Assore operations as described in the group profile on page 2. Each operation is separately reported on to provide stakeholders with a clear understanding of the group's sustainability performance under each operation, since it applies a decentralised management model. This approach is further discussed on page 23.

The reporting boundary excludes:

IronRidge Resources Limited

a minerals exploration company with a diversified portfolio of gold, lithium, bauxite, titanium and iron ore in Africa and Australia, in which the Assore group holds a 29,9% interest.

Dakot Wear Ceramics (DWC)

Wonderstone acquired a 40% shareholding in DWC, based in Gingindlovu, KwaZulu-Natal. DWC specialises in manufacturing ceramic beads used in high-intensity stirred mills for fine and ultra-fine grinding applications as well as manufacturing ceramic components that extend the life of equipment in high-wear applications. Following a strategic review of its operations, Wonderstone divested from DWC, effective 8 June 2018.

In the FY17 report we indicated our intention to report on Sakura Ferroalloys¹ sustainability performance. Since this entity is not under Assore's operational control, we provide limited disclosure on its sustainability performance. Where Sakura Ferroalloys' sustainability information is reported, it is separately disclosed from the rest of Assmang to make sustainability performance understandable.

APPROVAL

Our board has overall accountability for this report. The board has delegated the responsibility to oversee the reporting process to its social and ethics committee (SEC). The SEC collectively reviewed the content of this report and believes it provides a fair presentation of Assore's material sustainability issues and performance for FY18. The SEC on behalf of the board approved this report on 31 October 2018.

William F Urmson

Chairman: SEC

31 October 2018

¹ The group has a 50% interest in Assmang which it jointly controls with ARM. Assmang has a 54,36% interest in Sakura Ferroalloys.

SOCIAL AND ETHICS COMMITTEE REPORT

Our fundamental goal is to generate financial returns for shareholders, investors and other providers of capital. We aim to achieve this financial imperative while being environmentally and socially responsible. This will ultimately enable us to ensure that we create mutual value for all our stakeholders.

Tiaan van Aswegen



Bill Urmson



SUSTAINABILITY CONTEXT

Our primary strategic goal is to anticipate and respond to changes in our operating environments. We also aim to align and manage our existing and available mineral reserves and production processes sustainably and in accordance with market expectations.

To manage resource depletion, we are exploring options to maximise the long-term value of our resources. We are transitioning from an approach of optimising tonnage to optimising our grade balance and cost structure.

The group seeks to optimise logistical capacities, both locally and globally, in a manner consistent with production by group operations.

This translates into five strategic objectives, namely:

1. Ongoing improvement in the group's safety record
2. Sustainable utilisation of mineral deposits
3. Optimisation of prices and tonnages sold per segment and regional concentration of customers
4. Compliance with the requirements of the broad-based socio-economic empowerment charter for the South African Mining Industry (Mining Charter), specifically those relating to black economic empowerment (BEE)
5. Expansion and replacement projects completed on time, to specification and within budget.

Each objective relates to the sustainability context of Assore either directly or indirectly in the following ways:

- Safety affects the social context of sustainability as incidents can lead to

loss of life and we believe that no one should work in unsafe conditions. We have a zero-tolerance approach to unsafe actions/conditions.

- Sustainable exploration of mineral deposits relates to the actual extraction and use of the ore reserve; how we responsibly use other natural resources, such as water, in the extraction process and mitigate the negative impacts of the extraction process, such as emission and waste; and rehabilitate land to ensure the sustainable use of natural resource for future generations.
- Optimisation of sales tonnages and pricing (goal 3 above) and efficient project management (goal 5) relate to how we engage with stakeholders, promote product stewardship and demonstrate ethics in our interactions with customers and suppliers.
- The Mining Charter connects to the social aspects of sustainability and its aims to address transformation of the industry and socioeconomic development of the surrounding communities. Through our social and labour plans (SLPs) we are partners to this process as it directly impacts our social licence to operate.

GOVERNANCE

Corporate governance and risk management enhance the sustainability of an organisation and ensure the preservation of organisational reputation, investor confidence, gaining access to capital when required, and sustainable employee motivation. We continued our transition to the King Code on Corporate Governance™ for South Africa 2016 (King IV Code) (copyright and trademarks are owned by the Institute of Directors in Southern Africa NPC and all of its rights are

reserved) during FY18 to enhance our corporate governance. Please refer to our full governance report in our integrated annual report on page 40. The details of how sustainability is governed and our sustainability management approach are outlined on page 10.

The roles of the chief executive officer (CEO) and chief financial officer (CFO) were split during the previous reporting period to outline a clear delineation of responsibilities and augment the company's performance and governance oversight. In addition, our CFO, Mr Davies, was appointed to the board on 20 February 2018.

We rolled out the Assore Code of Ethics and started providing further training to employees in relation to the new code (refer page 51). We did not incur any fines due to non-compliance with safety, health, labour or environmental laws. Furthermore, none of the whistle-blowing investigations (refer page 51) revealed instances of fraud or corruption in our third-party dealings. We complied fully with our legal obligations to report to authorities including regulations related to responsible product labelling.

Appreciation

Our appreciation goes to members of the SEC and the executive teams of the Assore and Assmang operations for their continued efforts.

We appreciate the input from and engagements with our internal and external stakeholders. Their valued contributions enable us to enhance our sustainability performance by understanding and addressing critical human resource, environmental, health, safety and community development matters.

William F Urmson
Chairman: SEC

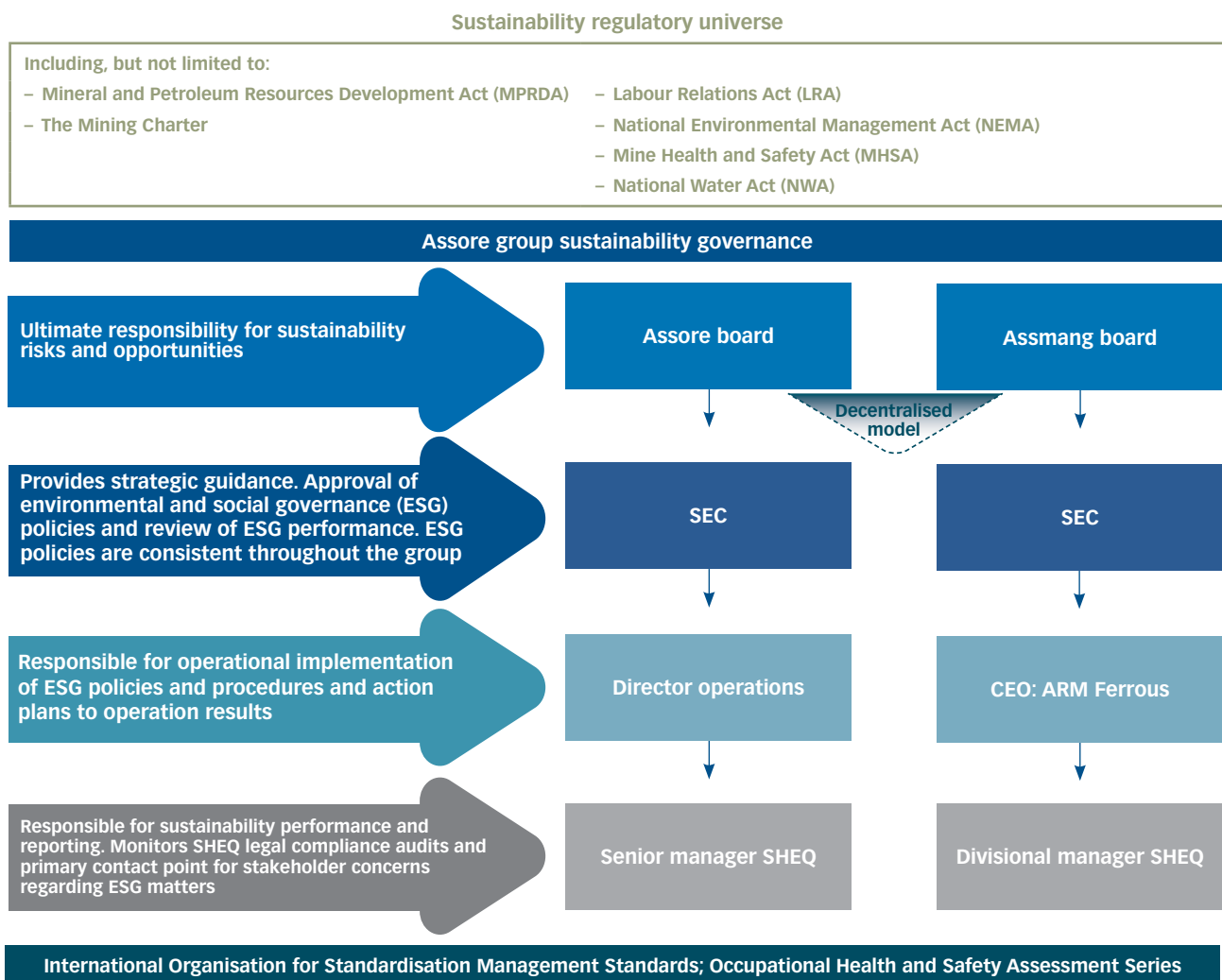
Bastiaan H van Aswegen
Director operations

SUSTAINABILITY MANAGEMENT APPROACH AND STRUCTURES

We recognise the sustainability of our business depends on our ability to be proactive and responsible, by shaping and enhancing the economic, social and environmental impacts of our business. Our sustainability efforts are morally driven and extend beyond the legal requirements of our activities. Assore's approach to sustainability is founded on a strong governance system and informed by ongoing stakeholder engagement.

We have a duty to ensure we have a net positive impact as a result of our operations and activities. This requires a responsible and sustainable approach to mining and beneficiation that focuses on minimising potentially negative impacts while maximising the positive contribution we can make to our host communities and locations.

GOVERNANCE SYSTEM



As outlined above, the boards of Assore and Assmang are ultimately responsible for establishing policy and overseeing the responsible management of sustainability risks and opportunities that are associated with the group's operations. Despite the decentralised model which we apply at Assmang and Assore operations, the policies and the standards applied are consistent.

SUSTAINABILITY MANAGEMENT APPROACH AND STRUCTURES continued

International Organisation for Standardisation (ISO) 9001 quality and ISO 14001 environmental management	<p>All Assmang operations, as well as Assore's Dwarsrivier, Wonderstone and Wonderstone Grader Road operations are certified to both the ISO 9001 and ISO 14001 management standards.</p> <p>The quality and environmental system documentation at Wonderstone and Wonderstone Grader Road has been updated to align with the new ISO 9001:2015 and the ISO 14001:2015 standards</p>
Occupational Health and Safety Assessment Series (OHSAS) 18001 health and safety management standard	<p>All Assmang operations, apart from Black Rock, are certified to OHSAS 18001. The current status of Black Rock's OHSAS certification indicates that the site has decided to wait for the transition of OHSAS 18001 to ISO 45001 instead of being certified to OHSAS 18001. Dwarsrivier is also OHSAS 18001 accredited.</p>

We conduct regular internal and external audits on the effective implementation of management systems and other legal compliance requirements.

PRODUCT STEWARDSHIP

The International Manganese Institute (IMnI) is a not-for-profit industry association representing manganese ore and alloy producers, manufacturers of metallurgical products or chemical compounds, trading houses, industry service providers, companies involved in manganese business development, universities and research organisations around the world. Founded in 1975, with headquarters in France, IMnI's mission is to provide vision and guidance to the manganese industry by promoting economic, social and environmental responsibility and sustainability to all stakeholders.

An important area of the IMnI's focus in recent years has been the revision of the International Maritime Organisation's (IMO) codes, which has implications for categorising the company's products.

To address the requirements of the revised International Maritime Solid Bulk Cargoes (IMSBC) code, test work undertaken confirmed that Assmang's manganese and iron ore fine products do not have the potential to liquefy in transit.

The 2018 IMO code book was released and featured a revised IMSBC code. The revised IMSBC code entails re-categorising silicomanganese alloy from group B cargo to group C lower-risk cargo. Group B cargo is defined as cargo possessing a chemical hazard that could give rise to a dangerous situation on a ship. Tests concluded and results submitted to IMO indicate silicomanganese does not pose such danger but stringent classification remains in the code as the IMO updates its code every two years. The 2018 code book containing the new code has been issued. However, the new code is voluntary for 2018 and will be effective on 1 January 2019.

We continue to track implementation of Registration, Evaluation and Authorisation of Chemicals (REACH) initiatives in key markets such as China, Japan, South Korea, India and Turkey which may require registration of our products. REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. This is achieved by requesting the registration of products imported into the EU greater than 1 ton to provide data on chemical composition to identify hazardous chemicals.¹

Similarly, Assore monitors changes to the requirements of the Globally Harmonised System (GHS) of hazard classification which may require modifications to product labelling and safety data sheets.²

¹ Source: http://ec.europa.eu/environment/chemicals/reach/reach_en.htm.

² https://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html.

ONGOING STAKEHOLDER ENGAGEMENT

We define our stakeholders as individuals or groups that have a legitimate or reasonable need, material interest in, or are affected by our operations.

Our sustainability depends on our ability to establish and maintain strong relationships with a diverse range of stakeholders. We create direct value for our business and strengthen our relationships with stakeholders by communicating our performance and decisions or activities that impact them. Effective engagements provide us with a clear understanding of their perspectives and requirements – this effectively enables us to make informed decisions.

Stakeholder	Typical methods and frequency of engagements
Shareholders and the investment community <ul style="list-style-type: none"> - Boleng Trust 14,28% - Fricker Road Trust 11,79% - Oresteel Investments Proprietary Limited 52,43% - Public shareholders 21,50% 	<p>Executive one-on-one sessions are held with shareholders and the investment community. Executives deliver half-year and full-year results, investor roadshows and sign off on Assore's press statements, SENS announcements and integrated annual reports published to the investor community.</p>
Industry associations <ul style="list-style-type: none"> - Minerals Council South Africa - Ferroalloy Producers Association* - International Council on Metals & Mining - International Manganese Institute* - International Chrome Development Agency - Energy Intensive Users Group* - Business Unity South Africa* <p>*Membership.</p>	<p>Executive, senior or middle management represent Assore's interests in these associations and form part of task groups of these associations aimed at strategic industry work.</p>
Employees and organised labour <ul style="list-style-type: none"> - Association of Mineworkers and Construction Union (AMCU) - National Union of Metalworkers of South Africa (NUMSA) - National Union of Mineworkers (NUM) - Solidarity 	<p>Frequent engagement with employees occurs through various levels of management. Line managers engage on an almost daily basis through methods that include:</p> <ul style="list-style-type: none"> - Employee meetings at all levels - "Toolbox talks" - Inductions - Health and safety meetings - Internal publications - Notice boards - Career path planning <p>Middle and senior management will engage with unions on collective bargaining agreements on a periodic basis.</p>

ONGOING STAKEHOLDER ENGAGEMENT continued

Accordingly, we continue to seek, develop and strengthen mutually beneficial partnerships with key stakeholders through a variety of mechanisms to support our business strategy.

Stakeholder engagement is not managed through a formal policy or framework by predetermined relationship owners. Engagements with stakeholders are either formal or informal and are conducted by head office or operational teams, as appropriate to the stakeholder. Opportunities and risks arising from the engagement will be communicated through the overall risk management process as explained on page 18.

Values derived from engagement	Summary of material issues
<p>A better understanding and increased support for strategic direction of the group are fostered when engaging with shareholders and investors. It bolsters investor confidence in leadership's ability to execute on strategy and enhances reputation.</p> <p>In addition, financial performance is better understood in the context of external factors and non-financial operational impacts affecting profitability.</p>	<ul style="list-style-type: none"> - Profitability - Regulatory compliance - Financial and non-financial risk management - Outlook for the base metals and alloys market - Performance against targets - Long-term sustainability of the business
<p>Collaborative works with industry associations promote understanding of the industry and dispel myths oftentimes associated with mining operations.</p> <p>As a collective, it is easier to isolate, analyse and respond to societal trends impacting our industry as data and resources from various association members can be pooled towards common initiatives.</p> <p>Similarly, new market and product applications are researched as a collective to ensure a sustainable industry and responses to legislative impacts on the industry are lobbied and analysed collectively. Recent examples include the proposed impacts of carbon taxes, carbon budgets and land reform.</p>	<ul style="list-style-type: none"> - Worker safety - Occupational health - Environmental issues - Carbon-related issues (including carbon tax) - Trends in national and international legislation - Logistics - Risks associated with land tenure and nationalisation
<p>Engaged employees are pivotal to the success of our business. Alignment with our strategic goals enables our employees to contribute positively to the business as well as their personal and career development. Engagement results in safer work conditions, improved labour relations, lower employee turnover and less volatility in scarce technical skillsets. Employees have a greater sense of achievement and job satisfaction resulting in lower absenteeism and increased productivity.</p>	<ul style="list-style-type: none"> - Worker safety - Occupational health - Remuneration and benefits - Conditions of service - Job security - Career development - Training - Accommodation - Transformation and employment equity

ONGOING STAKEHOLDER ENGAGEMENT continued

Stakeholder	Typical methods and frequency of engagements																		
Host communities, civil society and NGOs Dwarsrivier <table> <tr><td>Kalkfontein</td><td>Masha</td></tr> <tr><td>Kutullo</td><td>Mashishing</td></tr> <tr><td>Maepa</td><td>Ntake</td></tr> <tr><td>Malekane</td><td>Phasha</td></tr> <tr><td>Mampuru</td><td>Rantho</td></tr> <tr><td>Maphopha</td><td>Ratau</td></tr> <tr><td>Mapodile</td><td>Shaga</td></tr> <tr><td>Maseven</td><td>Stocking</td></tr> </table> Zeerust <table> <tr> <td>Masebudule</td> <td>Nietverdiend</td> </tr> </table> Rustenburg Minerals Makgophe Wonderstone Letsopa Non-governmental organisations <ul style="list-style-type: none"> Groundwork Benchmarks Foundation 	Kalkfontein	Masha	Kutullo	Mashishing	Maepa	Ntake	Malekane	Phasha	Mampuru	Rantho	Maphopha	Ratau	Mapodile	Shaga	Maseven	Stocking	Masebudule	Nietverdiend	<p>Front-line specialists engage routinely with host communities through:</p> <ul style="list-style-type: none"> Public meetings Public participation process for environmental impact assessments (EIAs) and participation in local economic development initiatives Funding of corporate social responsibility initiatives
Kalkfontein	Masha																		
Kutullo	Mashishing																		
Maepa	Ntake																		
Malekane	Phasha																		
Mampuru	Rantho																		
Maphopha	Ratau																		
Mapodile	Shaga																		
Maseven	Stocking																		
Masebudule	Nietverdiend																		
Customers <p>Assore's customers are mainly in the carbon and stainless steel production business, producing various steel products for infrastructure, residential, automotive and manufacturing applications.</p> <p>Iron ore, manganese ore, alloys and chrome ore are all important ingredients in producing iron and steel.</p>	<ul style="list-style-type: none"> Customer site visits Contract negotiations Quality management system Conference attendance Use of customer feedback to influence integrated annual report content 																		
Joint venture partners <ul style="list-style-type: none"> African Rainbow Minerals China Steel Dakot Wear Ceramics Proprietary Limited IronRidge Resources Limited Mampa Investment Holdings Sumitomo 	<p>All levels of management are involved in interactions with joint venture partners:</p> <ul style="list-style-type: none"> Representation on the Assmang board and executive committee Board meetings for individual Assore operations Active participation in industry associations 																		

ONGOING STAKEHOLDER ENGAGEMENT continued

Values derived from engagement	Summary of material issues
<p>We recognise our commitment to the communities that host our operations as we share in their resources and look to build a skills pipeline from these communities. Engagements around rural economic development, education and infrastructure are vital in securing a social licence to operate and contributing to improving South Africa's economy.</p> <p>In remote locations where our operations are located, it is mutually beneficial to build small and medium enterprises to supply the group and in turn help build the local economy.</p>	<ul style="list-style-type: none"> - Safety and health considerations - Employment - Preferential procurement - Small and medium enterprise development - Social upliftment - Land management and environmental Issues - Mine closure and rehabilitation
<p>Customer-centric engagements increase traditional sales opportunities and allow Assore to be responsive to changing customer needs and identify key market trends.</p> <p>Every interaction allows us to enhance our reputation with customers and provides customers with the opportunity to give feedback.</p> <p>Customers are using Assore products in value chains which are constantly disrupted from a technological and sustainability perspective. Assore is challenging customers and engaging with them on their journey to being more innovative and using less raw resources.</p>	<ul style="list-style-type: none"> - Product quality - Product pricing - Development of new products - Adherence to delivery schedules - Issues related to greenhouse gas (GHG) - Product stewardship - Compliance with REACH requirements for registration and product labelling
<p>Engagement helps promote production efficiencies, resolve challenges and improve overall performance which results in increased financial benefit to both parties.</p>	<ul style="list-style-type: none"> - Profitability - Regulatory compliance - Financial and non-financial risk management - Outlook for the base metals and alloys market - Performance against targets - Long-term sustainability of the business - Roles and responsibilities within the respective joint ventures

ONGOING STAKEHOLDER ENGAGEMENT continued

Stakeholder	Typical methods and frequency of engagements	
National, provincial and municipal government <ul style="list-style-type: none"> – South African Revenue Service (SARS) – Various provincial and municipal authorities – Departments of: <ul style="list-style-type: none"> • Agriculture, Forestry and Fisheries • Education • Environmental affairs • Health • Home affairs • Labour • Mineral Resources • Rural development and land reform • Rural, environment and agricultural development • Trade and industry • Traditional affairs • Water and sanitation 	All levels of management as appropriate engage with their counterparts at government level depending on the nature of the business activity. Interactions include: <ul style="list-style-type: none"> – Statutory reporting – Inspections by government representatives – Permit applications – Legal compliance audits – Public participation process for environmental impact assessments, engagement on targeted issues 	
Parastatal service providers <ul style="list-style-type: none"> – Eskom – Transnet – Portnet 	All levels of management engage periodically with parastatal service providers depending on the nature of the transaction.	
Contractors and other service providers <ul style="list-style-type: none"> – Mining contractors – Transport companies – Construction contractors – Consultants – Healthcare providers – 7 Shipping companies – Insurance companies 	Supervisors interact daily with contractors and service providers where middle to senior level management will have less frequent interactions on a higher level, for example when new contracts are being negotiated: <ul style="list-style-type: none"> – Contract negotiations – Tender processes – Safety inductions – Health and safety meetings – Site inspections and audits – Performance reviews – ISO certification 	

ROYALTIES TO COMMUNITIES

The Batlhalerwa Traditional Council first engaged with Rustenburg Minerals for various claims for surface use rights compensation over Portions 1 and 2 of the farm Groenfontein 138 JP during 2011. Negotiations could not be finalised due to changes within the traditional council leadership structure. Council leadership are yet to provide the statutory details required for the transfer of funds. In FY18, after various attempts to reach an amicable solution, the mine approached the Department of Rural Development and Land Reform (DRDLR) to assist in reconvening the two parties for discussions. The DRDLR and Rustenburg Minerals resolved to revise the land evaluation and land lease value of land per hectare and update the initial calculations for a proposed land use agreement. Funds have been set aside based on what we considered a fair and market-related land lease value. We are confident that the matter will be resolved in due course.

ONGOING STAKEHOLDER ENGAGEMENT continued

Values derived from engagement	Summary of material issues
<p>The mining industry is highly regulated. To maintain our mining and prospecting rights as well as our social licence to operate, we need to demonstrate to national government and its various provincial and municipal authorities that we fulfil our commitments in our SLPs and comply with relevant legislation and the Mining Charter.</p> <p>Ultimately the Mining Charter drives transformation and socioeconomic development in the mining industry while SLPs aim to grow the economy and facilitate the socioeconomic development of South Africans.</p> <p>Regulatory compliance ensures that natural resources are conserved for sustainable use.</p>	<ul style="list-style-type: none"> - Employee health and safety - Regulatory compliance - Fulfilment of statutory reporting requirements - GHG-related issues - Land management - Mine closure (including adequate financial provision for rehabilitation) - Pollution prevention - Conservation of surface and groundwater resources - Workforce transformation and employment equity - Preferential procurement - Tax payment
<p>Engagement helps promote production efficiencies, resolve challenges and improve overall performance which results in increased financial benefit to both parties as Assore maintains production below a certain cost curve, moving product on time, ultimately increasing profit margins as production tons and sales increase.</p>	<ul style="list-style-type: none"> - Continuity of electricity supply - Power and freight tariffs - Availability of rail berths - Upgrade of port facilities - Negotiation of mutually beneficial contracts and service agreements
<p>Best practice advice and provision of skillsets provide business improvement opportunities which benefits Assore and provides suppliers and contractors with return business opportunities. This is possible only through engagement on how to complement the value chain and scope of requirements.</p> <p>Shared growth opportunities exist as new markets are entered based on a shared vision and risk appetite.</p>	<ul style="list-style-type: none"> - Procurement practices (including preferential procurement) - Terms and conditions of contracts (including penalties) - Regulatory compliance - Occupational health and safety - Environmental management

MATERIAL TOPICS

RISK MANAGEMENT

Our board delegates the assessment and management of the group's risk profile, which is compiled by the internal audit function, to the audit and risk committee. The audit and risk committee advise the board regarding any unresolved risk management issues.

Risk is an inherent feature of conducting business, and in the mining and smelting industries, it is exacerbated by the remoteness of location of the operations and the physical danger inherent in the day-to-day activities of these operations. We aim to ensure compliance with legislative requirements in the industry, particularly environmental management regulations. We are also impacted by exchange rate volatility and international commodity prices.

Our management of group risk is critical to the sustainability of the group and is achieved through the identification and

control by various risk management committees of all risks, including operational risks, which could adversely affect the achievement of our business objectives. Risk assessments are ongoing, and risk registers for all of our significant operations within the group are prepared and updated quarterly. Assmang has a dedicated risk management department and the CFO oversees risk management at Assore. Where required, both operations obtain assistance from specialist external consultants. We adhere to the Committee of Sponsoring Organisations of the Treadway Commission (COSO) risk management framework.

For larger business entities in the group, independent risk engineering consultants grade each operation against international risk standards for fire, security, engineering, commercial crime, contingency planning and mining, as well as environmental risk, to monitor whether current practices meet set criteria and are being maintained.

We obtain input from various risk management committees comprising representatives from senior management. The output is presented to the audit and risk committee, which is given the opportunity to comment and provide input on the tabled assessments.

Our risk management process includes an ongoing review of compliance with relevant legislation and standards in the following areas:

- Health and safety management
- Human resource management
- Environmental rehabilitation management
- Quality of products and management systems

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

ASSORE GROUP RISK PROFILE

Our group material risk profile is discussed below and more detail on mitigation can be found on page 19 of the integrated annual report. These risks are:

Risk	Description
Fluctuations in exchange rates	Since most of our sales are denominated in foreign currency, fluctuations in exchange rates (the level of the rand against the US dollar and the euro) can have a significant impact on the group's earnings.
Changes in international commodity prices	Iron ore sales are priced mostly on a quarterly or monthly basis while manganese ore is priced quarterly in advance or on a shipment-by-shipment basis. Most other commodities are priced quarterly in advance. Fluctuations in these prices can have a significant impact on the profitability of the group.
World economic growth	Since most of the group's commodities are used as inputs in the steel industry, the group's ability to continue to distribute and sell its commodities largely depends on the level of demand for steel globally, which in turn is linked to global economic growth.
South African logistical infrastructure	The available channels for the export of commodities from the mines to the ports, and the facilities in South Africa's ports, are both dependent on the level of infrastructural investment by the state through Portnet and Transnet. The level of maintenance and quality of management of the logistical facilities have a direct bearing on the group's sales volumes.
South African labour market	The labour market in South Africa has become increasingly volatile, with prolonged strikes in certain sectors, which usually carry unrealistic demands from trade unions on employers, resulting in protracted negotiations with negative effects on productivity.
Resources and Reserves	By nature, the metal content of orebodies can vary over the course of the life of mine and, depending on commodity prices, their lives can either increase or decrease, given that mining deeper becomes increasingly more costly. Customer choices and preferences, therefore, have a direct bearing on the economic lives of the deposits.
Mining Charter	The Mining Charter places requirements on the operations to meet its objectives.

MATERIAL TOPICS continued

BASIS FOR INCLUSION

Based on what is material to our business as identified through our risk management process above, and based on the principle of stakeholder inclusivity and the expectations of our stakeholders (pages 12 to 17) the following sustainability topics are considered material for inclusion in this FY18 sustainability report:

Sustainability topic	Description	Response
Safety 	<p>Safety incidents can lead to loss of life and production stoppages and can incur penalties and fines. As operations include the extraction and smelting of ore, our employees and contractors are vulnerable and it is material that we report on the safety incidents and stoppages that occur at operations.</p>	<ul style="list-style-type: none"> - Safety incidents, page 24 - Safety stoppages, page 25
Human resources 	<p>A significant portion of our employees are union members and fall under collective bargaining agreements.</p> <p>Country and industry-wide wage increase settlements continue to be more than inflation, which places continued pressure to generate efficiency gains to ensure that the cost of the operations remains on the lower end of the "cost curve". In addition, as mines age, the cost of mineral extraction increases.</p> <p>Although our relationships with employees remain stable, collective bargaining agreements in the mining sector remain a contentious matter.</p> <p>Wage negotiations are influenced by union membership and therefore we report on the union relationships and representation at each operation.</p> <p>The Mining Charter drives transformation in the mining industry and with the proposed revisions of the charter, we expect more stringent transformation targets in terms of ownership and employment equity including WIM.</p>	<ul style="list-style-type: none"> - Collective bargaining agreements, page 31 - Union representation, page 31 - Transformation, page 31 - WIM, page 31
Occupational health and wellness 	<p>Operators in the mining industry are prone to NIHL due to working near heavy machinery and blasting operations. Our employee profile being predominantly South African means a higher vulnerability to HIV/Aids and TB which are prevalent in the country. Disease impacts workforce productivity and increases absenteeism.</p> <p>Our ore profile (iron, manganese and chrome) does not pose any specific increased disease profile due to the nature of the minerals workers encounter.</p>	<ul style="list-style-type: none"> - NIHL, page 25 - HIV/Aids, page 27 - TB, page 28
Environmental impacts 	<p>Water is a scarce resource particularly in the Northern Cape. This causes long-term sustainability concerns as significant capital investment would be required if water conservation and demand cannot be managed sustainably.</p> <p>Current and prospective legislation on GHG emissions, carbon taxes, carbon budgeting and the financial implications to the cost curve are factors increasing the material impact of energy and emissions management on the business.</p> <p>Rehabilitation and closure provisions are important in an extractive industry but particularly in Assore's case where mines are in the process of being disposed of to ensure obligations are fulfilled or exceeded before transfer of ownership.</p>	<ul style="list-style-type: none"> - Water consumption, page 39 - Carbon footprint, page 36 - Scope 1 and 2 emissions, page 36 - Land management and rehabilitation, page 41
Community economic development 	<p>Continued pressure from the communities (as well as other communities) we operate in to assist in the provision of services, employment, procurement opportunities and infrastructure, has the possible consequence of creating an unstable workforce and poor reputation.</p> <p>The Mining Charter also aims to promote socioeconomic development of South Africans through the commitments imposed in SLPs on mining companies.</p>	<ul style="list-style-type: none"> - Education, page 45 - Enterprise development, page 47 - Preferential procurement, page 48
Economic impact 	<p>Our ability to make meaningful economic contributions to key stakeholders is influenced by a broad range of external factors over and above the day-to-day operational conditions. Ultimately Assore's products are exported, which attracts commodity and exchange rate risk, for use in the steel making industry which is driven by global growth patterns.</p> <p>Shareholders expect dividends, employees steady wage increases and benefits and government contribution towards taxes.</p>	<ul style="list-style-type: none"> - Leadership review, page 20

LEADERSHIP REVIEW



OPERATING CONTEXT

The macroeconomic environment, specifically regional growth rates, is a key factor which influences the demand for large infrastructure projects. Investment in infrastructure projects drives steel demand and thus the demand for our products. A significant portion of Assore's revenue is derived from the export market and therefore, the global economic context, the dollar or euro prices of our products and the rand exchange rate have a significant impact on our performance. In FY18, 86% of Assore's revenue was generated from exports.

FY18 was characterised by strong commodity prices and increased sales volumes for all products. This was driven by a positive global gross domestic product (GDP) growth rate which increased demand for our products. This was largely driven by increased demand from China which had positive GDP. China is now supplying over 50% of the world's steel. Environmental consciousness in China led to curtailments of polluting steel capacity.

Approximately 100 million tons of steel making capacity has been eliminated in China since the stricter enforcement of environmental regulations began. This had the effect of tightening the supply-demand balance in the Chinese steel market and led to higher prices and margins for the

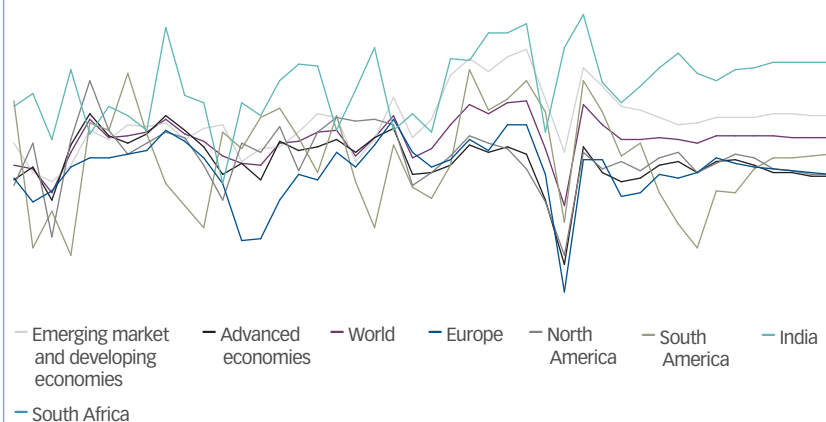
Chinese steel mills. The focus on quality driven by these environmental changes increased the demand for premium quality ores which was positive for our performance as we are well endowed with high-quality orebodies.

Commodity prices for iron ore were similar to the previous year, manganese ore and alloy prices were higher than the previous year while chrome ore prices reduced when compared with the previous year. The rand was weaker leading up to the ANC elections in December 2017. It

strengthened significantly after the elections and then weakened considerably once again in June 2018. For the year, the rand averaged 6% stronger than the prior year which offset the positive volume and commodity price impact on our earnings.

Going forward, the International Monetary Fund (IMF)¹ estimates that global GDP will be approximately 3,9%. The Far East and Indian regions are promising the highest growth rate of approximately 7%. North America (2,8%) and Europe (2,4%) are projected to experience moderate growth.

Real GDP growth (annual percentage change)



¹ Source: https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD.

The proposed changes to the Mining Charter and the prospective introduction of carbon taxes have presented some degree of operational uncertainty to our operations. We have assessed the possible implications of the Mining Charter and are working actively on measures to achieve many of the targets as laid out in the charter. The group became a member of the Minerals Council South Africa (formerly the Chamber of Mines) to play a more active role in the public policy debate where it pertains to the mining industry.

Assore is also actively lobbying against the implementation of carbon tax through its membership in various trade organisations such as Business Unity South Africa (BUSA). We believe that, given the current subdued economy, focus should rather be placed on creating an enabling environment in which access to lower carbon energy sources can be increased.

We support the implementation of a carbon budget system provided there is alignment with other legislation such as carbon tax to avoid a double taxation.

SAFETY

We are committed to the pursuit of continued, sustainable improvement in our overall safety performance. We are saddened by the fatality of a colleague which resulted from a work-related incident on 30 March 2018 at Sakura. We share our deepest condolences with the family and friends of our colleague, and deeply regret this loss.

Assmang operations showed a decrease in LTIs from 15 to 11. This continual improvement resulted in the recognition they received at the MineSafe Awards (page 25).

Wonderstone reported two LTIs related to machining and materials handling operations. Dwarsrivier reported the same number of LTIs as in FY17. At Assore operations, the rehabilitation teams at Rustenburg Minerals and Zeerust managed to conclude the rehabilitation processes without any sustained injuries.

To sustain the focus on zero harm, we introduced initiatives such as visible felt leadership and safety systems such as proximity detection and automated fire detection were installed. Wonderstone's safety management system was subjected to a complete review.

Unfortunately, no progress was made in reducing the number of section 54 notices issued to the group (FY18: five; FY17: five).

OCCUPATIONAL HEALTH AND WELLNESS

Assmang performed 17% more medical examinations and 22% more audiometric tests in FY18 due to the increased operational activity at Nchwaning 2 and Gloria. Leadership participated in wellness days to promote the focus on hearing conservation programmes, HIV and TB screenings. Cases of NIHL decreased from 66 in FY17 to 39 this year. Assore reported slight decreases in medicals performed of 4 121 (FY17: 4 215) and audiometric tests of 2 585 (FY17: 3 414).

In FY18, 11 199 people underwent HIV screening at our Assmang operations (FY17: 2 240). This was driven by the success of the wellness campaigns. Assore operations had similar screening numbers as in prior years, mostly due to the smaller mines not having their own clinics and a smaller workforce.

The number of new TB cases increased, primarily due to increased screening. However, there are generally lower numbers of new pulmonary TB since Assmang's partnering with the Northern Cape Department of Health at the Northern Cape mines and the high focus on compulsory TB screenings and campaigns.

Charles Walters



HUMAN RESOURCES

Assore welcomes Bongani Phakathi as the executive: human resources and public affairs effective 1 October 2018. The appointment was made to enhance our focus on our people through improved support and engagements with employees and communities. This will entail a new human resources strategy and performance management system for the group in future. We will also particularly focus on maximising our return on management time.

There were no significant variances reported in the operational employee numbers of 14 275 (FY17: 14 263) and employee relations remained stable in FY18. There were some movements at management level due to natural attrition. This made room for internal promotions and new appointments for lower level vacancies.

We have positive relationships with our employees and multi-year wage agreements at mines such as Wonderstone and Dwarsrivier. We continue to work on improving relationships with unions. Our engagements with unions were constrained by fractured authority structures within the unions and general misunderstanding of wage conditions presented. At Dwarsrivier, task teams were deployed to address disagreements regarding:

- Assore's R250 million housing allowance offer to employees
- Financial travel allowance to employees based on kilometre scale rate

- Medical aid contributions included in total guaranteed package
- Absenteeism without approved leave when community uprisings occur
- Introduction of employee share option plan
- Sick leave allowance as per the Basic Conditions of Employment Act

Since union representation is widely spread between different unions (refer page 31) and alignment between union structures at mining and regional level requires improvement, the finalisation of conditions is put at risk the longer parties take to resolve the matter.

We have an average of 13% for WIM across our mines and 62% HDSAs in management. The 7% reduction in WIM at Rustenburg Minerals for the reporting period was due to the reduction of employees on site with the site being non-producing and in a rehabilitation phase.

We have considered the proposed changes to the Mining Charter and the implications to employment equity and ownership to our operations. We have implemented changes at the Wonderstone Grader Road operation which is now 51% black-owned after a restructuring transaction was concluded earlier in the year.

ENVIRONMENTAL MANAGEMENT

In light of sales agreements being finalised to dispose of Rustenburg Minerals Development Company and Zeerust, Assore spent approximately R32 million in rehabilitating the mines. This figure

exceeds the amount required legally and underpins our effort to hand over good land to the future owners of the properties. Certain areas of the mined property were rehabilitated in full but the remainder of the mining right area was left in situ for the continuation of mining by the new owners. The water use licence (WUL) for Zeerust was approved during the year and the application for Rustenburg's WUL is pending.

There are some legacy environmental challenges we are addressing:

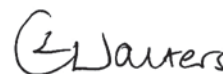
- At Rustenburg Minerals, conditions stipulated in the phase one heritage impact assessment were not fully adhered to when sensitive heritage sites were disturbed. We confirmed the heritage sites are low-impact heritage sites and are in the process of compiling the required heritage management plan which will be submitted to the new land owners.
- Historical groundwater pollution caused by nitrates found in groundwater introduced by explosives used in mining activity and pit latrines in rural communities. At Dwarsrivier we commissioned a water treatment project which will ultimately treat contaminated groundwater for use as process water. Read more on page 43.

COMMUNITY ECONOMIC DEVELOPMENT (CED)

Our total CED expenditure increased by 37% from R97,1 million to R132,7 million in FY18. The increase in CED spend was mainly driven by Black Rock that spent R33,1 million on community infrastructure. More detail provided on page 45.

The DMR's revised Mining Charter (the charter), was gazetted on 27 September 2018 and focuses on empowerment targets and benefits for mining communities. Any new mining right granted after this date is required to contain a minimum of 30% BBBEE shareholding. The charter requires companies to provide plans for achieving employment equity at management level and preferential procurement from BBBEE supplied, in accordance with the predetermined criteria set out in such plans. We are assessing the charter and we aim to continuously comply.

In closing, I wish to assure all interested parties of our commitment to ongoing improvements across all our activities such that the group continues to optimise the benefits of its activities and operations for all its stakeholders.



Charles Walters
CEO



SAFETY

Zero harm, becoming better, where everyone goes home unharmed.

Due to the complex nature of our operations, safety is a concern and we therefore strive to reduce and eliminate injuries. Employees and contractors are key stakeholders and we continuously strive to improve their wellbeing and awareness of safety issues. A direct correlation exists between safety performance and operational performance as safety affects productivity, efficiency and profitability.

APPROACH

We follow a decentralised management structure wherein each operation has a unique approach to safety. Despite the decentralised structure, we aim to ensure compliance with the regulations of the Mine Health and Safety Act (MHSA) and Occupational Health and Safety Act (OHSA) at all operations.

Our safety approach is based on hazard identification and risk assessment of each situation. Hazards and risks are identified, evaluated and proactively managed by establishing controls and other risk reduction activities. The prevailing legislation, section 23 of the MHSA, allows for employees to remove themselves from hazardous or unsafe work conditions at any time without risk of reprisal.

We strive to embed our robust and proactive safety culture in all our employees and contractors. We believe safety is the responsibility of every person and we promote a culture of safety which extends beyond our working hours.

The CEO, through the operational executives, is responsible for implementing governance systems to monitor the implementation of health and safety systems at each operation. They delegate the implementation, review and maintenance of these safety systems to the senior general manager or general manager and their respective management teams. The senior general

manager or general manager and their management teams are responsible for ensuring compliance with the requirements of the MHSA and OHSA. Our decentralised approach entails developing and implementing tailored health and safety systems for each operation.

We have common safety procedures which apply across all operations:

- Safety policies and strategies are embedded into our working practices through continually retraining the workforce and health and safety awareness campaigns
- Employees are represented on health and safety committees
- All employees and contractor employees undergo safety induction
- Each operation and task is subjected to a baseline risk assessment
- Risk assessments are continuously reviewed to inform updates to systems, training and controls
- Safety toolbox talks are held daily before each shift
- Compliance is assessed and areas for improvement identified through annual internal and external audits. These

audits focus on operating procedures and safety practices, external legal compliance and certification (OHSAS 18001, ISO 9001 and ISO 14001). The corporate office also facilitates external safety, health and environmental (SHE) legal compliance audits every second year and

- LTIs and near misses are reported to senior management teams and to the SECs to facilitate follow ups and remediation

Dwarsrivier belongs to associations such as the Association of Mine Managers South Africa (AMMSA) and formed tripartite forums to address safety issues. Non-conformances are logged in Isometrix, a reporting tool commonly used in safety reporting.

The group (through its ARM association) is represented on the International Council on Mining and Metals (ICMM) and is a member of the International Chrome Development Association (ICDA), organisations which address safety issues in the industry, among others.

PERFORMANCE

Assmang	Assore
0¹ (2017: 0) fatalities	0 (2017: 0) fatalities
11 (2017: 15) LTIs	8 (2017: 7) LTIs
0,13 (2017: 0,17) LTIFR	0,27 (2017: 0,25) LTIFR
2 (2017: 1) section 54 notices	3 (2017: 4) section 54 notices

¹ One fatality was reported for Sakura FerroAlloys SDN BHD in which Assmang has a 54,36% shareholding.

Safety incidents

The LTIs and LTIFRs of Assmang and Assore operations are listed below.

Assmang operations showed a decrease in LTIs from 15 to 11. Beeshoek, Black Rock and Cato Ridge showed a decrease in the number of incidents from those in prior years, while Machadodorp Works once again had no reported incidents. Black Rock reached a six million fatality-free shifts status on 17 January 2018 and Khumani two million fatality-free shifts on 12 April 2018.

Mixed results were achieved at Assore operations with an overall increase to eight in reportable incidents in FY18. Incidents were caused by fall of ground injuries and a serious machine-related injury where an employee lost a portion of a limb. There were some minor smoke inhalation incidents as well. Dwarsrivier obtained four million fatality-free shifts as at August 2017.

The required risk assessments were reviewed and revised after the above incidents and control measures put in place to deter any incidents from reoccurring.

Our Sakura operations had one fatality, one LTI incident and an LTIFR of 0,26. Assmang's executives provided support and assisted in the investigation of the fatality.

In FY18, the installation of proximity detection systems (PDS) progressed, automated fire detection systems were installed and implemented at some operations, and additional fire suppression systems are earmarked for FY2019 installation. This will control man machinery interaction, enable early detection of fires and minimise the spread of fires. The capital for a crawl and stops machine at Dwarsrivier has been approved for FY2019 which is one of the innovations we are introducing to ensure safer mining operations.

LTIs

Operation

	2018
Beeshoek	1
Khumani	3
Black Rock	7
Cato Ridge	0
Dwarsrivier	—
Machadodorp Works	0
Total Assmang	11
Dwarsrivier	5
Wonderstone	2
Wonderstone Grader Road	1
Rustenburg Minerals	0
Zeerust	0
Total Assore	8

LTIFRs¹

Operation

	2018
Beeshoek	0,07
Khumani	0,10
Black Rock	0,20
Cato Ridge	0,00
Dwarsrivier	—
Machadodorp Works	0,00
Total Assmang	0,13
Dwarsrivier	0,19
Wonderstone	2,44
Wonderstone Grader Road	1,24
Rustenburg Minerals	0,00
Zeerust	0,00
Total Assore	0,27

	2017	2016	2015
Beeshoek	2	1	1
Khumani	3	5	10
Black Rock	9	13	14
Cato Ridge	1	1	3
Dwarsrivier	—	4	4
Machadodorp Works	0	1	0
Total Assmang	15	25	32
Dwarsrivier	5	—	—
Wonderstone	0	1	4
Wonderstone Grader Road	0	0	0
Rustenburg Minerals	2	13	12
Zeerust	0	0	2
Total Assore	7	14	18

	2017	2016	2015
Beeshoek	0,15	0,07	0,07
Khumani	0,10	0,17	0,29
Black Rock	0,24	0,35	0,35
Cato Ridge	0,19	0,17	0,38
Dwarsrivier	—	0,17	0,18
Machadodorp Works	0,00	0,55	0,00
Total Assmang	0,17	0,22	0,26
Dwarsrivier	0,20	—	—
Wonderstone	0,00	0,99	3,97
Wonderstone Grader Road	0,00	0,00	0,00
Rustenburg Minerals	1,14	2,66	1,62
Zeerust	0,00	0,00	1,49
Total Assore	0,25	1,99	1,72

¹ LTIFR calculated on a basis of 200 000 hours. Figures include contractors and workers who are not employees but whose work and/or workplace are controlled by the organisation.

Safety stoppages

No prohibition notices in terms of the OHSA were issued for either Assmang or Assore operations during FY18. The tables below illustrate the section 54 and 55 notices issued in terms of the MHSA and shifts lost due to these safety stoppages. Unfortunately, no decreases were realised in the overall/combined number of notices issued to the group from the prior year.

Section 54 notices issued

Operations	2018	2017	2016	2015
Assmang	2	1	6	6
Assore	3	4	3	3

Shifts lost due to section 54 notices

Operations	2018	2017	2016	2015
Assmang	3	0	11	23
Assore	5	15	1	33

Section 55 notices issued

Operations	2018	2017	2016	2015
Assmang	1	0	1	2
Assore	7	8	9	2

Shifts lost due to section 55 notices

Operations	2018	2017	2016	2015
Assmang	0	0	0	0
Assore	0	0	0	0

CASE STUDY FEATURES

MineSafe Awards

During September 2017, Assmang received the following awards at the MineSafe 2017 conference:

- **Black Rock** was awarded the JT Ryan Trophy for the best safety performance at an underground mine and won second place for environmental performance
- **Beeshoek** won first place for best-in-class safety performance at a base metal mine and second place for year-on-year safety improvement
- **Khumani** won the award in the health and wellness category for its paper “wellness peer educators create positive health behaviour impact in the workplace”



JT Ryan Trophy



OCCUPATIONAL HEALTH AND WELLNESS

We proactively support our employees by improving their health and reducing their levels of stress through our all-inclusive health and wellness approach. Our efforts to enhance occupational health and wellness ultimately assist us to improve our efficiencies which contribute to improved results.

NIHL, HIV/Aids, pulmonary TB, chronic diseases and general employee wellness are some of the occupational and primary health concerns which affect our employees. Even though many of these health concerns do not arise from workplace exposure, they have the potential to directly impact our workforce. In addition to jeopardising our employees' quality of life, these health concerns affect our hiring pool and increase absenteeism and productivity.

The inadequate level of health infrastructure and facilities provided by municipalities and provincial government in some of our operating areas also increases our moral responsibility to support host communities by assisting with the provision of some essential services.

APPROACH

Our management approach to occupational health and wellness is driven by our commitment to employee health and wellness, legislation, international standards and industry best practice. Our occupational health and wellness approach is similar to our safety approach.

The SEC monitors and reviews policies, processes and performance related to health and wellness across our operations. Senior operational managers are responsible for the implementation of health and wellness policies and discuss performance during formal and informal review meetings which take place throughout the year and are reported to operational executives.

Safety and health risk management processes ensure that health risks are identified and analysed. It also serves to ensure, as a minimum, compliance to prescribed legislation. We rely on input from various stakeholders to establish appropriate controls and procedures which support the safety and wellbeing of our workforce.

The reporting of occupational health and wellness performance is aligned with the requirements of the Department of Labour, DMR, and the Mine Health and Safety Council (MHSC). Adherence to legislation and company policies and standards is assured through external legal compliance audits which are conducted at least biennially at all operations.

Assmang's operations and Dwarsrivier have integrated policies on HIV, TB and sexually transmitted infections (STIs) as required by the National Strategic Plan 2012 – 2016 and the Mining Charter.

At Assmang operations, all operations have a site clinic providing primary healthcare services to employees and contractors. At Assore operations, Rustenburg Minerals had a clinic which offered basic occupational medical services but this was closed due to downscaling of operations. Medicals were thereafter subcontracted to an external provider. Dwarsrivier continued to offer primary healthcare services. We refer employees who require more than basic occupational healthcare services to the local hospital for further treatment when required. We proactively manage employees according to their health and wellness to ensure that they are suitably placed to occupy the right positions to perform their duties and responsibilities.

We ensure the quality of our health and wellness services by performing risk assessments, internal and external audits and management system certifications. The assessments enable us to identify the risks, develop and implement mitigating controls and monitor the risks. The

occupational health programme design is based on risk assessments. Health risk assessments include an assessment of personnel exposure as well as identification of controls required to mitigate these risks. Occupational medical monitoring programmes are designed to specifically consider the level of exposure and risk arising from each occupation – this results in medical monitoring that varies in frequency and content, depending on the occupation and the linked risk profile. This programme includes all employees and contractors. These are mandatory requirements, with employee and contractor site access being dependent on a valid certificate of fitness issued by a qualified medical practitioner.

Dwarsrivier and Assmang's operations, apart from Black Rock, are certified to OHSAS 18001. Black Rock decided to wait for the transition of OHSAS 18001 to ISO 45001. It has undergone the pre-certification assessment and is preparing for the certification which will take place in November 2018. Khumani and Beeshoek are certified in terms of the South African National Standard (SANS 16001:2013) disease and wellness management programme. All workers and contractors at mining operations are covered by these health management systems.

Our worker participation, consultation and communication on occupational health and safety follow an integrated approach. Committees are established on site, engagements with unions and induction programmes cover health-related risks and related company procedures on addressing any health risks.

Occupational healthcare and wellness services

Occupational healthcare services aim to address health and hygiene risks and hazards related to the working environment, e.g. NIHL.

Primary healthcare

Primary healthcare refers to treatment for chronic diseases prevalent in our workforce such as TB and HIV/Aids. These diseases have the potential to negatively impact our patients and the communities in which we operate.

OCCUPATIONAL HEALTH AND WELLNESS continued

PERFORMANCE Wellness

Community wellness initiatives included:

- Donation of three wheelchairs and 53 blankets to Ga-Mampuru Rehlahleng Special School
- Maseven Clinic was given three wheelchairs
- The annual Princess and Boys 2 Men Project aimed at addressing teenage pregnancy, sex, puberty, both male and female health and education. Dwarsrivier received an SA Chrome Industry Award in the Corporate Social Investment Category for the Princess Project
- A Young Women Empowerment function prepared girls from the Realeka Secondary School to defend themselves, both mentally and physically, in a self-defence class as part of creating awareness and empowering women in the Letsopa community
- On 18 November 2017, the Kitso Ya Boleng Bridging School (KYB) hosted a cancer awareness tea which aimed to raise awareness about breast cancer
- Dwarsrivier had the following initiatives:
 - Three TB prevention campaign days and participated in international TB day by sharing of information on the prevention and treatment of the disease
 - A weight loss competition was held during May to August 2018 to improve general health with an information day sharing tips for effective weight loss
 - Mental illness awareness was addressed during a campaign held in July 2018

- Participation in breast cancer awareness month included several awareness sessions at the mine
- Three sessions and a commemoration message on HIV/Aids awareness during December 2018

HIV/Aids

The counselling and voluntary testing (CVT) policy mandates compulsory HIV counselling as part of any medical surveillance and STI screening. In FY18, 11 199 employees opted to be tested for HIV/Aids at Assmang operations (FY17: 2 240) and 56 new cases of HIV-positive patients were identified (FY17: 112).

In FY18, 1 442 employees at Assore operations underwent HIV/Aids screening (FY17: 1 451 restated) and 23 new cases were recorded (FY17: 13 restated).

Antiretroviral (ARV) treatment is funded by individual employees' medical aid schemes and through government's ARV programmes for contractor employees. The treatment is distributed through general practitioners and/or local government clinics. The following number of employees received ARV treatment during FY18:

Employees on ARV treatment

	2018	2017
Dwarsrivier	77	19
Rustenburg	0	1
Zeerust	0	1
Wonderstone	—	1

In total, 77 employees received ARV treatment at Dwarsrivier during FY18, 39 permanent employees and 38 contractor employees. All ARV treatments are collected from the individual general practitioners, hospitals and local clinics. The Dwarsrivier onsite clinic does not roll out ARV.

According to Statistics SA, South Africa's HIV prevalence rate is 13%¹. The table below explains the HIV prevalence rate at Assmang and Assore operations to be lower than the national average at all operations except Cato Ridge. The table also illustrates prevalence rates to be lower than the provincial and district averages as sourced from various medical aids and national government. Unfortunately, prevalence rates are not regularly updated and published by national government.

No HIV testing took place at Wonderstone during the reporting period. Rustenburg Minerals and Zeerust had less screening than FY17 due to a smaller workforce as environmental rehabilitation is in progress. The rest of the mining operations, most notably Black Rock, had an increase in the number of employees and contractors attending screenings. Black Rock started several new projects and as new projects commence, new employees and contractors are invited for screen testing as part of onboard medicals and "know your status" campaigns.

¹ <http://www.statssa.gov.za/publications/P0302/P03022018.pdf>. Mid-year 2018 results.

HIV prevalence rate per operation

Operations	Operational prevalence	HIV prevalence	Source	Provincial prevalence Source: Department of Health (DoH)	2013/14	2014/15	District prevalence		
							Source: DoH	2012/13	2013/14
Assmang									
	Khumani	3,7%	UGM Wellness	Northern Cape	17,5%	17,5%	JT Gaetsewe	14,8%	23,2%
	Beeshoek	6,7%	Life Occupational	Northern Cape	17,5%	17,5%	Siyanda	14,3%	14,3%
	Black Rock	3,6%	Virtue Life	Northern Cape	17,5%	17,5%	JT Gaetsewe	14,8%	23,2%
	Cato Ridge	20%	ILIFU (2014 survey)	KwaZulu-Natal	37,4%	37,4%	Ethekwini	39%	39%
	Machadodorp Works	9,4%	HCT campaign done by DOH (2014 survey)	Mpumalanga	35,6%	35,6%	Nkangala	32,1%	32,1%
Assore									
	Dwarsrivier	1,0%	Careways	Limpopo	22,3%	16,3%	Sekhukhune	23%	23%
	Wonderstone	0%	Discovery Health	North West	29,5%	29,7%	Ngaka Modiri Molema	25,9%	22,3%
	Rustenburg								
	Minerals	1,7%	Discovery Health	North West	29,5%	29,7%	Bojanala	29,3%	31,5%
	Zeerust	0%	Discovery Health	North West	29,5%	29,7%	Ngaka Modiri Molema	25,9%	22,3%

OCCUPATIONAL HEALTH AND WELLNESS continued

Tuberculosis (TB)

The World Health Organisation (WHO) has listed South Africa in its Global Tuberculosis Report 2018 in its top 20 TB burdened countries based on the absolute number of cases and incidents globally.

Most South Africans infected with TB bacteria have latent TB rather than active TB disease. The disease is most prevalent in certain social conditions which prevail in South Africa as described in the WHO report. Experts, including the minister of health, have stated that TB in South Africa is most prevalent in prisons and in the mining industry².

Assore is committed to TB screening and we have a standard TB reporting process. As stipulated by the DMR and the DoH, the process includes workplace investigations and compulsory TB screening for those in contact with TB-infected employees at the workplace.

Assore and Assmang's TB management programmes also include the DMR's requirements for monitoring TB, multi-drug resistant TB (MDR TB), and extreme drug resistant TB (XDR TB).

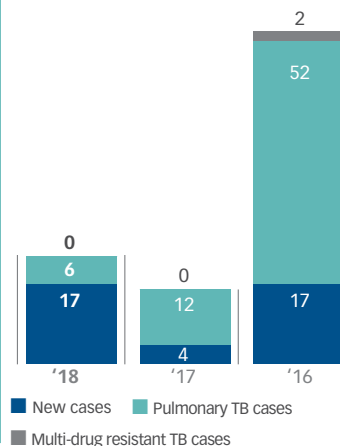
Khumani and Beeshoek have nurses on site who solely work on TB management. They have also committed to a memorandum of understanding (MoU) with the DoH which outlines the identification, treatment, monitoring and management of transfer-in TB patients.

At all operations, where cases of MDR TB exist, these are admitted to special MDR hospitals for further management as required by the DoH. There were no such cases in FY18 and previously identified cases were confirmed as successfully treated.

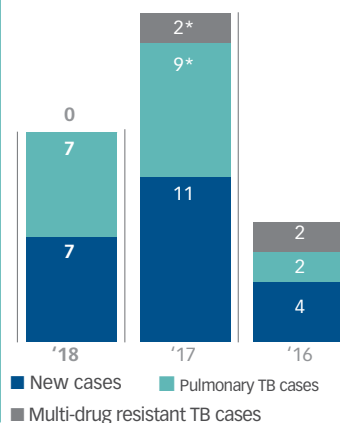
¹ http://www.who.int/tb/publications/global_report/gtbr2018_annex2.pdf?ua=1.

² Source: Chamber of mines.

Assmang TB statistics



Assore TB statistics



* Restated.

Noise induced hearing loss (NIHL)

We are committed to adhering to the DMR's target of eliminating incidents of NIHL in the workplace at all operations. Hearing conservation programmes to prevent NIHL are key elements of the occupational health management programme.

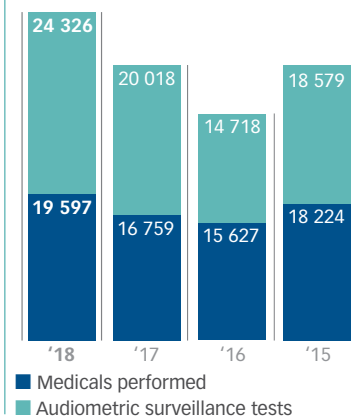
Several hearing conservation programmes have been employed across our operations to manage occupational noise exposure. These comprise noise reduction strategies such as monitoring occupational noise levels and issuing personal protective equipment (PPE). Disciplinary action is taken against employees who are observed not wearing hearing protection in designated noise areas. We also conduct

mandatory audiometric testing as part of our routine medical surveillance.

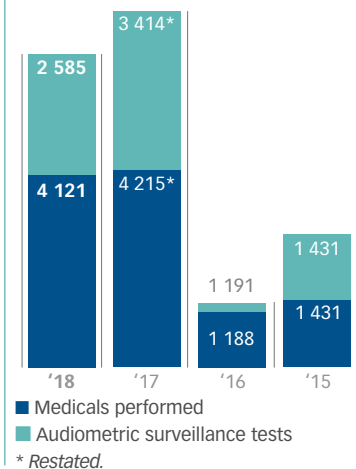
Hearing conservation programmes which include engineering controls are continuously prioritised at all Assmang and Assore operations. In FY18, 26 911 tests were conducted, including both employees and contractors (FY17: 23 432) audiometric. In FY18, 39 of these cases were referred for further investigation (FY17: 66).

Occupational health surveillance

Assmang occupational health surveillance



Assore occupational health surveillance

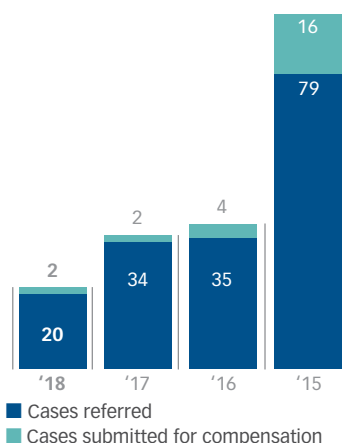


* Restated.

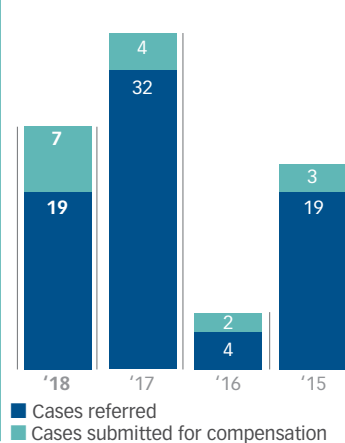
Contractors and non-permanent or temporary worker numbers are included in the tables above.

OCCUPATIONAL HEALTH AND WELLNESS continued

Assmang number of cases referred and submitted for compensation



Assore number of cases referred and submitted for compensation



Sakura recorded 533 medicals performed, 257 audiometric surveillance tests performed and two cases of NIHL referred.

CASE STUDY FEATURES

Ga-Malekana annual health awareness campaign

Dwarsrivier, in partnership with Bophelong Health Centre, held the annual health awareness campaign at Ga-Malekana on 21 March 2018. The event coincided with the official opening of Bophelong Health Centre and the annual Human Right Day celebrations taking place countrywide.

The event started with an early 10 kilometre fun run and aerobics. People of all ages from the community participated, with one person in particular capturing the hearts of many attendees. Kgoshi Malekana completed the 10 kilometre fun run and participated in the aerobics from start to finish. The event then continued with a soccer tournament where eight local high schools participated. This was not just sports, as community members were for the first time granted an opportunity to use the Bophelong Health Centre where they did oral and eye screening as well as HCT.

Ngwaabe home-based care facility

Dwarsrivier officially handed over a state-of-the-art home-based care facility in Ngwaabe on 15 June 2018. A variety of stakeholders from the community, traditional leadership, caregivers and the Fetakgomo Tubatse municipality attended the handover. The home provides at-home care and love to those who are ill, ageing and orphaned.

Dwarsrivier constructed a building, designed with wheelchair accessibility, offices, a boardroom, a dedicated traditional healer building as well as ablution facilities. Offices were fitted with furniture and air conditioning. The property was fenced off with palisade fencing with dedicated gates providing access and can be locked overnight. Sturdy security gates were also installed at the entrances to the building and burglar bars fitted in front of the windows. Water infrastructure in the form of a borehole was drilled and installed on the premises.

They also delivered five wheelchairs, care bags to the caregivers and other gifts to those forming part of the Ngwaabe home-based care facility.





HUMAN RESOURCES

Our employees are a pivotal input into our business model. We recognise that the effectiveness, productivity and morale of our employees determine the sustainability of our group. We aim to establish strong relationships with the 14 275 employees at our operations.

We maintain our social licence to operate by ensuring that we develop our employees, provide housing and employee benefits, and manage conflicts effectively.

APPROACH

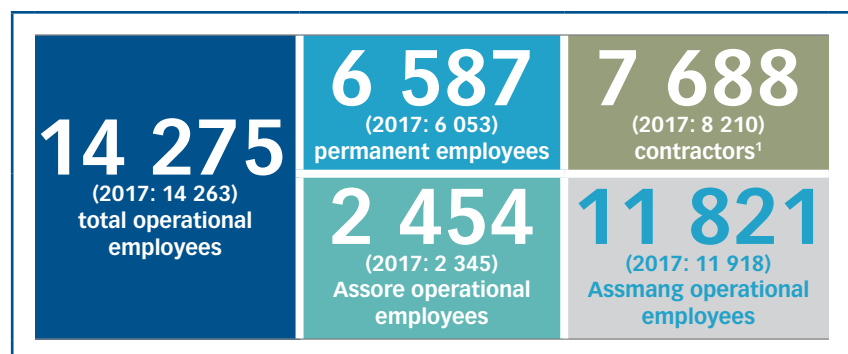
The human resources executive oversees our human resource strategy and reports directly to the CEO. Objectives are established and must be achieved on a monthly, quarterly and annual basis. Our remuneration committee reviews remuneration and performance benefits on an annual basis and in FY2019, a revised performance management process will be introduced. The group's human resource function operates on centralised and decentralised models. We aim to align and comply with national and international codes of people management and good governance, such as the International Labour Organisation's conventions and articles. The Mining Charter gazetted on 27 September 2018 also intends to facilitate the entry of HDSAs into the mining industry through employment equity.

We strive to employ the right people in the correct positions and to ensure that the appropriate systems, policies and procedures are in place to ensure effective management. Creating a diverse workplace which attracts employees with the best talent and enables them to reach their full potential is our goal. Our focus on human resources entails promoting health and safety, ensuring fair, ethical work practices and investing in our employees' skills and capabilities. Our people policies promote equality and eliminate unfair discrimination based on gender, race, religion, age, disability and sexual orientation.

Grievance procedures and quality management systems are in place to guide the operations.

PERFORMANCE Workforce composition

We concentrate on creating jobs within the communities in which we operate. Despite having authorisation from the Malaysian government to have an employee complement comprising 54% foreign skills, approximately 89% of our workforce comprises local citizens.

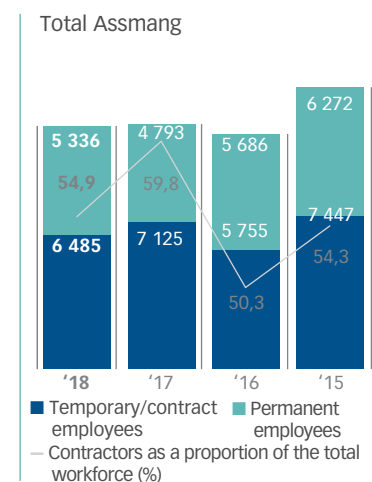


¹ Contractors accounted for 49% at Assore's workforce and 54,9% at Assmang.

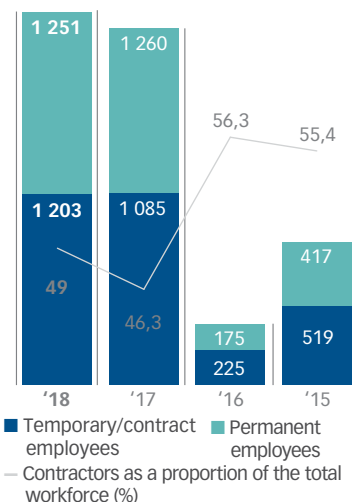
At Rustenburg Minerals and Zeerust, only rehabilitation crews remain, dedicated to conclude the last mine closure and rehabilitation tasks. Our employee retention at Dwarsrivier deteriorated due to increased resignations of D level employees. Vacancies were filled by promotion of C level employees and new employees recruited in turn for the C level vacancies.

Our Sakura operations had a total workforce of 475 employees (permanent: 228; contractors 247) in FY18.

Workforce composition



Total Assore



Transformation

Our human resources strategy covers transformation principles which aim to support the representation of HDSAs, with an emphasis on black women, into our workforce.

HUMAN RESOURCES continued

Furthermore, Assore promotes the economic inclusion of all South Africans. We particularly seek empowerment in the mining industry, by identifying and developing business opportunities for BBBEE suppliers at all our operations. Further details are available on page 48 of our 2018 integrated annual report. In line with the BBBEE compliance strategy, we aim to give preference to women-owned companies.

Dwarsrivier exceeded the target of 10% WIM (current Mining Charter) for several years and at close of FY18 achieved 14% WIM. Wonderstone and Beeshoek are performing equally well although Beeshoek has not yet reached the 14% target level as suggested in the proposed new Mining Charter. Black Rock, Khumani and Machadodorp Works are yet to achieve the original 10% target level. The WIM and HDSA representation on the board and at senior level remains a challenge due to low turnover at these levels within the industry.

Employment equity: WIM (%)

Operation	2018	2017	2016	2015
Beeshoek	12	13	9	8
Khumani	7	15	5	7
Black Rock	9	6	4	3
Dwarsrivier	14	13	13	13
Wonderstone	19	22	25	26
Rustenburg Minerals	0	0	0	15
Zeerust	0	0	0	0

HDSAs in management (%)

Operation	2018	2017	2016	2015
Beeshoek	91	89	62	57
Khumani	88	86	57	56
Black Rock	90	89	54	46
Cato Ridge	93	93	50	50
Machadodorp Works	71	80	33	39
Dwarsrivier	64	61	66	59
Wonderstone	43	42	30	24
Rustenburg Minerals	43	50	29	48
Zeerust	17	14	0	15

Labour relations

Our labour relations remained largely stable throughout the year and we had no retrenchment proceedings during the year. Assmang operations lost four days due to strike action experienced across our operations.

No significant employee grievances were lodged during the year and grievances involving employees through the whistle-blowing process are discussed on page 51.

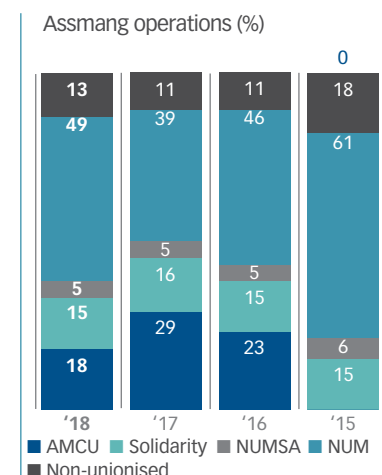
Union representation

We recognise the right to collective bargaining. 84% of our workforce is covered by collective bargaining agreements. Wage negotiations at Wonderstone were constructive and concluded successfully. We are engaging

with unions at our Dwarsrivier operations to address outstanding issues surrounding the home ownership scheme, medical aid contribution inclusions, transportation allowances and leave arrangements. We have appointed task teams to engage with unions regarding outstanding matters.

In FY18, total union membership at Assmang and Assore operations were 87% and 86% respectively. In general, the working relationship with the unions remain challenging with regular structure and representation changes within the union impacting progress made on negotiations but overall no significant union relationship breakdowns were experienced in FY18.

Union representation



Training and development

Our skills development programmes comprise internal and external initiatives, such as adult basic education and training (ABET) courses, training courses, learnerships, internal and external bursaries and study assistance. Our investment in these programmes is motivated by our commitment to enhancing our employee value proposition and facilitating continuous improvement in productivity and safety performance. This is a material topic and literacy levels have increased in FY18, only Dwarsrivier and Wonderstone at below 100% literacy levels. All employees at Sakura are literate.

HUMAN RESOURCES continued

Payroll spent on training (%)

Operation	2018	2017	2016	2015
Assmang	13,9	7,5	8,7	9,4
Assore	10,9	4,5	4,0	6,0

Number of bursaries awarded

Operation	2018	2017	2016	2015
Assmang	48	164	169	285
Assore	43	5	4	17

Number of learners in learnership programme

Operation	2018	2017	2016	2015
Assmang	70	77	137	143
Assore	35	35	11	1

Literate workforce (%)

Assmang operations	2018	2017	2016	2015
Beeshoek	100	100	95	96
Khumani	100	99	100	98
Black Rock	100	99	100	99
Cato Ridge	100	100	100	100
Machadodorp Works	100	100	100	100

Literate workforce (%)

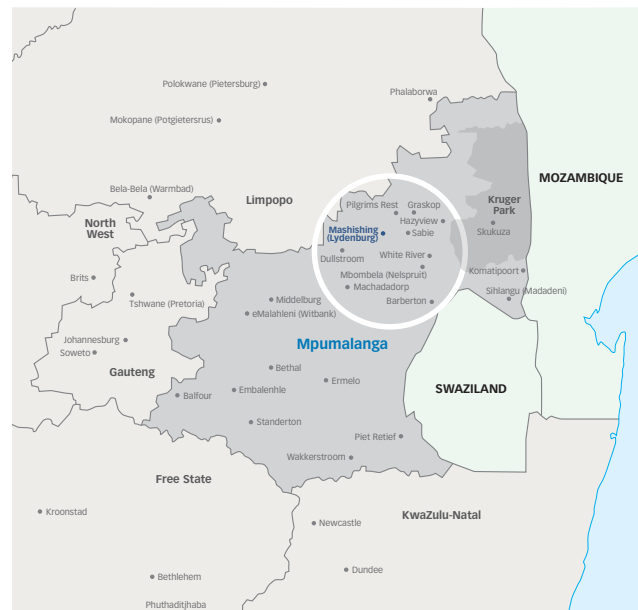
Assore operations	2018	2017	2016	2015
Dwarsrivier	94	94	94	91
Wonderstone	93	93	71	76
Wonderstone Grader Road	100	100	100	96
Rustenburg Minerals	100	100	84	73
Zeerust	100	100	60	81

Housing

Map of Northern Cape showing Kathu, Kuruman, Postmasburg



Map of Mpumalanga showing Mashishing (Lydenburg)



HUMAN RESOURCES continued

Our housing strategy and policy are aligned to government policy. We provide and ensure that every employee has access to accommodation which meets the standard outlined by the relevant legislation. On average, 74% of Dwarsrivier's employees live in brick and mortar housing structures and in general the mining communities closest to our mines have sufficient available affordable housing options.

We facilitate processes that promote the ownership of affordable housing

by employees at our operations. Our support also extends to initiatives that provide housing for people residing and working in mining towns. This includes prioritising mining towns with great prospects for mining.

Northern Cape

Assmang's property development and housing finance unit assists in providing housing for employees in specific local communities in the Northern Cape. We provide accommodation through rental

arrangements and housing subsidies. The housing portfolio consists of:

- Kathu: During the last financial year one additional house was completed in Kathu. A total of 965 houses have been constructed to date
- Kuruman: No additional houses were constructed in Kuruman during the year. A total of 196 houses have been constructed to date
- Postmasburg: During the financial year, seven additional houses were constructed in Postmasburg. A total of 357 houses have been constructed to date

Assmang Northern Cape employee housing status

	Extension 3 Kathu	Uitkoms Kathu	Rooisand Kathu	Kuruman	Postmasburg	Total
2018						
Houses completed	327	105	533	196	357	1 518
Sold	300	91	397	111	234	1 133
Rental units	27	14	136	85	123	385
Under construction	0	0	0	0	0	0
2017						
Houses completed	327	105	532	196	350	1 510
Sold	301	93	395	114	230	1 133
Rental units	26	12	137	82	120	377
Under construction	0	0	0	0	7	7
2016						
Houses completed	327	104	532	196	344	1 536
Sold	298	95	396	108	226	1 123
Rental units	29	9	136	88	118	413
Under construction	0	1	0	0	9	10
2015						
Houses completed	327	96	515	181	308	1 427
Sold	301	87	384	98	208	1 078
Rental units	26	9	131	83	100	349
Under construction	0	9	17	14	32	72

HUMAN RESOURCES continued

Limpopo

Dwarsrivier does not have a home ownership scheme in place as yet. An offer to employees through the collective bargaining scheme is in place for all mine employees to obtain up to R250 000 in home ownership assistance from the mine over the next seven-year period.

The mine provides accommodation for its employees with scarce and critical skills. This has assisted us in attracting and retaining employees. The accommodation is in Mashishing (Lydenburg), situated in Mpumalanga, which is approximately 60 kilometres from the mine situated in Limpopo. The mine is leasing 40 accommodation units (houses and rental units) and owns 87 accommodation units (houses and rental units).

While discussions are ongoing, we are providing a housing allowance to employees who are not accommodated in company-provided accommodation. This arrangement is temporary, and we have vacant stands which we intend to develop once the home ownership scheme is finalised and implemented.

Assore Limpopo employee housing status

	Circle View Estate	Kuit Park	The Heads	Lydenburg CBD	Sterkspruit Estate	Total
2018						
Houses completed	33	36	2	8	8	87
Sold	0	0	0	0	0	0
Rental units	0	0	8	1	31	40
Under construction	0	2	0	0	0	2
2017						
Houses completed	33	36	2	8	8	87
Sold	0	0	0	0	0	0
Rental units	0	0	7	2	30	39
Under construction	0	2	0	1	0	3

BURSARY CASE STUDY FEATURES

Elizabeth Moleele

Elizabeth Moleele is a gentle spirit truly dedicated to her studies. She is currently in her second year at Sefako Makgatho University, pursuing a degree in medicine. Elizabeth exceeded all expectations, growing from strength to strength, personally as well as in her academics. She is driven but a natural nurturer and would make a wonderful medical practitioner. Elizabeth is a former tertiary education preparatory programme (TEPP) student; she graduated from the programme at the end of 2016. Elizabeth has since received a bursary from the Boleng Trust for both 2017 and 2018.



Molusi Potso

Molusi Potso was a TEPP graduate of 2016. He is currently in his second year studying mathematical sciences in mathematics and mathematical statistics at the University of Johannesburg. Potso sees himself doing his honours in statistics. Even though it is one of his toughest subjects, he is ready to take on the challenge. With his perseverance and go-getter attitude he is sure to accomplish anything he puts his mind to. Potso was awarded a bursary from the Boleng Trust for both 2017 and 2018.





ENVIRONMENTAL IMPACTS

Assore embeds robust environmental management systems and principles at all levels of the organisation. We undertake the responsibility to conserve all environments which host our operations.

The extraction of non-renewable resources is necessary for economic growth and raising the standard of living for all people, especially in developing economies. However, the impacts of mining activities on the environment are a key concern for sustainable long-term value creation.

It is therefore important to ensure that all environmental impacts are managed responsibly due to their impact on key business drivers, such as operational efficiency and reputation. This will enable Assore to uphold its social licence to operate.

APPROACH

The operational executives oversee the implementation of functional, suitable environmental management systems at each operation. The implementation, review and maintenance of these systems are delegated to the general managers and their respective management teams. The general managers are also responsible for ensuring legal compliance with the relevant legislation.

Internal and external audits are conducted to assess levels of compliance and identify improvement areas. The audits primarily focus on operating procedures, environmental practices, external legal compliance and certification audits (ISO 14001). Assore is also subjected to annual external environmental legal compliance audits by parties such as the Department of Environmental Affairs (DEA) where necessary.

At site level, aspects and impacts are identified as per-process flow activities, facilities, products and services. Pre-mitigation and post-mitigation impact assessments are done based on the resultant impact rating. In instances where an impact is regarded as significant according to the risk matrix, we develop and implement a management plan to mitigate the impact to an acceptable level. Our impact assessment also monitors and assesses the existing controls according to the frequency determined by the impact profile. We conduct mini-impact assessments and use them as issue-based impact assessments for new activities,

facilities, products and services, and on all infrequent activities.

We rely on continual training and environmental awareness campaigns to embed our environmental policies and strategies into our working practices.

During FY18, Wonderstone Grader Road and Dwarsrivier successfully transitioned to the new ISO14001:2015 standard successfully and Wonderstone Grader Road subsequently received certification from TUV Rheinland and Dwarsrivier from DQS Management Systems Solutions, both internationally recognised certification bodies.

PERFORMANCE

No fines or penalties due to non-compliance with environmental laws and regulations were imposed at either the Assmang or Assore operations during the financial year. No cases of non-compliance were brought by stakeholders through the grievance mechanism systems. Information on water discharges was reported in line with legislative requirements and can be found on page 39.

Several environmental approvals on key expansion projects were received from the relevant authorities during the financial year, which Assore views as a reflection of the trust authorities have in Assore's commitment to engage and comply responsibly on environmental matters.

Energy consumption and carbon emissions

Assore aims to reduce energy usage and the generation of GHGs. We have been measuring its GHG emissions since FY2009 to inform the development of our energy and emissions management strategy. In FY18, we continued to enhance the reliability of our energy consumption data and energy intensity measurement. This information will form the basis of our carbon budget and assist us in aligning with South Africa's proposed environmental legislation on carbon budgeting. We are working towards establishing a reliable baseline for Assore and Assmang. We also aim to develop an

understanding of realistic reduction opportunities prior to setting performance objectives and emission targets aligned with each group's strategy for energy efficiency and emissions reduction.

Carbon footprint

The GHG Protocol – Corporate Standard – and ISO 14064, require GHG emissions to be reported under three categories:

- Scope 1: Direct GHG emissions which occur from sources either owned or controlled by the company (e.g. emissions resulting from diesel consumption by mine vehicle fleets, consumption of reductants in furnaces and burning of liquid petroleum gas)
- Scope 2: GHG emissions from generating purchased electricity consumed by the company. This is purchased from Eskom, whose power is predominantly generated by coal fired power stations
- Scope 3: GHG emissions that are a consequence of the company's activities but occur from sources not owned or controlled by the company (e.g. product transportation and business travel) which are not reported on in this document

Assore has been submitting a carbon disclosure project (CDP) report annually since FY12. In FY18, however, management took the decision to discontinue participation in the CDP although data will continue to be monitored and reported on internally and through this report.

Operations have also been registered with the Department of Environmental Affairs (DEA) for reporting of GHG emissions into the National Atmospheric Emissions Inventory System (NAEIS) system as per the current regulatory requirements. GHG emissions data was subjected to an independent external audit in line with the GHG Protocol and ISAE 3000 auditing standard.

We aim to mitigate the risks related to carbon taxation by increasing the monitoring of energy and electricity consumption, and through the implementation of reduction initiatives.

ENVIRONMENTAL IMPACTS continued

Scope 1 and 2 emissions

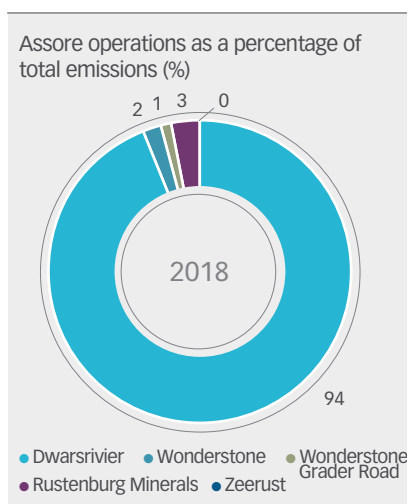
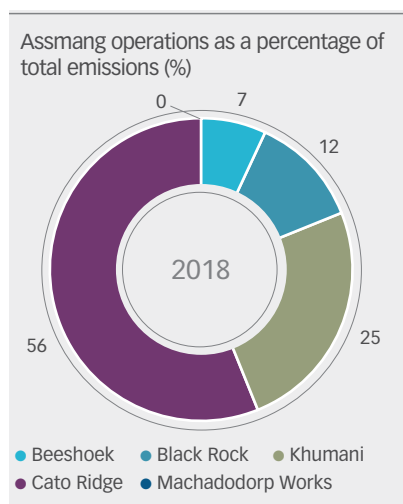
In FY18, our total emissions decreased by 3% to 1 253 652 CO₂e. Total emissions at the Assmang operations declined by 4% while Assore's increased by 6%. Assmang comprises over 94% of the group's carbon footprint. Assmang has initiatives in place to drive energy efficiency and reduction, and we are exploring further reduction initiatives. These initiatives include actions to mitigate the risk of rising energy prices (electricity, diesel and gas) through the implementation of several programmes that reduce carbon footprint, such as battery powered vehicles, LED lighting and installation of a solar photovoltaic plant at Khumani. The plant, installed during 2018, harvested 119 145,6 kWh and saved the company R98 891.

Scope 1 and 2 emissions in CO₂e tonnes

	Scope 1 tons (CO ₂ e)	Scope 2 tons (CO ₂ e)	Total emissions (CO ₂ e)
2018			
Assmang operations	369 573	804 490	1 174 063
Assore operations	8 254	71 335	79 589
2017			
Assmang operations	349 419*	866 660	1 216 079*
Assore operations	10 046	64 771	74 817
2016			
Assmang operations	344 413*	887 274	1 231 687*
Assore operations	7 617	8 972	16 590
2015			
Assmang operations	533 014	1 094 366	1 627 380
Assore operations	13 019	15 114	28 133

*Restated.

Operations as a percentage of total emissions



ENVIRONMENTAL IMPACTS continued

Operations emissions

	2018		2017		2016	
	Scope 1 CO ₂ e	Scope 2 CO ₂ e	Scope 1 CO ₂ e	Scope 2 CO ₂ e	Scope 1 CO ₂ e	Scope 2 CO ₂ e
Assmang operations						
Beeshoek	42 774	37 599	37 791*	34 588	38 438	35 984
Black Rock	18 438	122 018	15 895*	120 440	14 426	109 120
Dwarsrivier	0	0	0	0	5 738	58 704
Khumani	106 065	183 778	84 921*	203 962	90 656	202 132
Cato Ridge	201 632	450 006	209 552	495 694	193 243	478 024
Machadodorp Works	664	11 089	1 260*	11 976	1 912	3 310
Scope totals	369 573	804 490	349 419*	866 660	344 413*	887 274
Operations total	1 174 063		1 216 079*		1 231 687*	
Assore operations						
Dwarsrivier	6 719	68 291	5 608	59 611	0	0
Wonderstone	496	1 315	628	1 361	656	1 482
Wonderstone Grader Road	224	143	186	139	195	143
Rustenburg Minerals	815	1 426	3 624	3 471	6 127	6 863
Zeerust	0	160	0	189	639	485
Scope totals	8 254	71 335	10 046	64 771	7 617	8 973
Operations total	79 589		74 817		16 590	

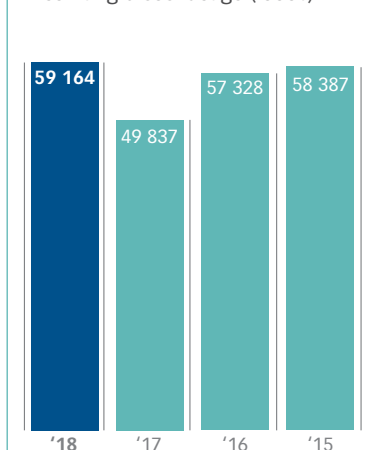
*Restated.

Energy usage

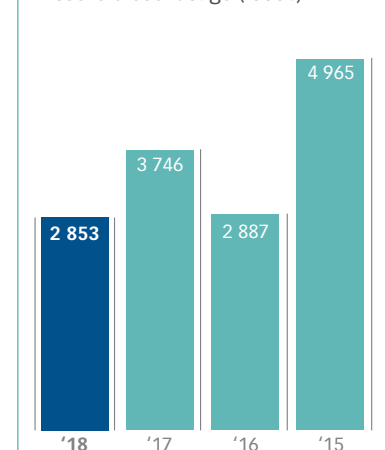
All sources of energy come from non-renewable energy sources such as diesel and electricity provided through Eskom's coal fired power stations. Assore does not currently generate our own sources of energy sold back into the grid.

Diesel usage at Assore decreased by 24% mainly due to the rehabilitation and no operational activities of the Rustenburg Minerals and Zeerust. Dwarsrivier recorded a 13% increase in diesel use owing to increase production activity while Rustenburg Minerals recorded an 80% diesel use decrease. Assmang's diesel usage increased by 18% due to increased production. All Assmang operations (excluding Machadodorp Works and Cato Ridge) reported an increase in diesel consumption. Machadodorp Works had less activity and less usage because a portion of the plant is on care and maintenance.

Assmang diesel usage ('000ℓ)



Assore diesel usage ('000ℓ)



Overall electricity usage remained stable for the group with Assmang decreasing electricity usage by 5% but equally Assore increasing usage by 4%. Beeshoek, Black Rock and Dwarsrivier contributed to the increased usage while Khumani, Cato Ridge, Machadodorp Works, Wonderstone, Wonderstone Grader Road, Rustenburg Minerals and Zeerust contributed to a decrease in electricity usage. The variances in electricity consumption are largely production driven and efficiencies from energy-saving initiatives are yet to be realised on a large scale.

ENVIRONMENTAL IMPACTS continued

As part of Dwarsrivier electricity efficiency drive, we have installed over 2 000 energy-saving lights over the past two years. Another initiative at Dwarsrivier is the planned move of its main surface workshops to underground workshops. This will place the machines in closer proximity to the working area and reduce travelling distance and time. This is expected to have a positive impact on diesel usage at the mine.

We have employed dedicated environmental consultants to assist with further measurement of energy performance metrics on direct and indirect energy intensity indicators at the Dwarsrivier and Rustenburg Minerals mines. Energy consumption is expressed in relation to tons mined.

Assore direct and indirect energy intensity indicators

	Direct energy intensity (GJ) – tons mined/processed			Indirect energy (electricity) intensity (GJ) – tons mined/processed			Indirect energy (electricity) intensity (MWh) – tons mined/processed		
	Rustenburg			Rustenburg			Rustenburg		
	Dwarsrivier	Minerals	Zeerust*	Dwarsrivier	Minerals	Zeerust*	Dwarsrivier	Minerals	Zeerust*
2018	0,0320	0		0,099	0		0,0274	0	
2017	0,0512	2,81		0,165	0,769		0,0458	0,214	
2016		0,47	2,12		0,15	0,46		0,042	0,13

* Zeerust's intensity figures per ton processed and not tons mined included in the previous financial year.

Electricity usage (MWh)

Operation	2018	2017	2016	2015
Beeshoek	38 762	34 937	35 627	38 396
Khumani	189 462	206 023	200 131	186 112
Black Rock	125 792	121 656	108 039	105 739
Cato Ridge	463 924	500 701	473 292	608 273
Dwarsrivier	—	—	58 122	56 218
Machadodorp Works	11 432	12 097	12 171	169 480
Assmang operations total	829 372	875 415	887 383	1 164 218
Dwarsrivier	68 990	63 742	—	—
Wonderstone	1 328	1 456	1 585	2 168
Wonderstone Grader Road	145	149	152	146
Rustenburg Minerals	1 441	3 712	7 339	10 617
Zeerust	161	202	518	3 232
Assore operations total	72 065	69 261	9 594	16 163

Water management

We aim to mitigate our impact on water. We particularly target operations located in catchment areas challenged by declining water quality and quantity. All operations undertake extensive surface and groundwater quality monitoring programmes to ensure compliance with their WULs and other environmental legislation. Zeerust Mine was awarded a WUL in FY18 and Rustenburg Minerals' application is pending approval from authorities.

We engage with the catchment management authorities in areas where we operate. Most of our mines are in arid regions, thus, ensuring a reliable water supply to sustain mining and processing is an ongoing challenge. Furthermore, we constantly seek to identify and implement opportunities to improve water efficiencies across all operations.

As explained in the risk analysis on page 19, water security in the Northern Cape is a material risk to us. Water availability has been affected by changing rainfall patterns and deterioration in the integrity of water distribution infrastructures. Assmang and Assore ensure responsibility by managing water use on all operations in line with their WUL and environmental management programme (EMPr) requirements.

ENVIRONMENTAL IMPACTS continued

The Dwarsrivier Water Conservation and Demand Management Plan (WCDMP) implemented early in FY17 delivered a 26,61% year-on-year reduction in water abstracted from groundwater resources. We intend to apply learnings and successes from plans like the WCDMP across group operations as we learn more. Another such initiative is the water treatment initiative, page 43, where water is treated and reused rather than extracted from groundwater, securing potable water supply in the long term.

There was a 9% increase in surface water usage at Dwarsrivier due to increased work activity at the mine while the use of groundwater reduced by 26,61% with North Shaft migrating from groundwater to surface water use and other water recycling opportunities. Overall water consumption decreased by 65%.

Wonderstone's consumption decreased by 7% due to a decline in production activity due to impacted economic conditions. Similarly, Wonderstone Grader Road's workshop production decreased, although increased water reduction campaigns assisted in an ultimate reduction of 57% in consumption. Zeerust's 63% reduction is due to rehabilitation and lack of operational activities. Rehabilitation and restoration of vegetation require large quantities of water. Although Rustenburg Minerals is also in a non-operational phase, it reported a 70% increase in consumption due to calcification of meters on site rendering incorrect readings during the previous financial year (the meters were replaced during FY18) during the rehabilitation phase.

Beeshoek's water consumption decreased by 10% due to supply shortages from boreholes which normally supply water. At

Machadodorp Works, there was a 30% decrease in water consumption since no water is being abstracted from Leeuwspruit. Clean water is being recharged with rain water while more recycled water is being used in the plant due to the cleaning of Dam 1. The rest of Assmang's mines showed increases in water consumption, most notably Black Rock, with an increase of 39% year on year due to an increase in the number of project expansions and new projects commissioned at the mine.

Our primary water stress areas are the Northern Cape operations (Beeshoek and Black Rock). Rustenburg Minerals, Zeerust and Wonderstone in the North West as well as Dwarsrivier in Limpopo are also located in arid regions.

Water consumption per operation (m³)

Operation	2018	2017	2016	2015
Beeshoek	4 110 562	4 552 211	5 023 349	5 237 869
Khumani	4 433 545	3 999 709	4 634 128	3 647 534
Black Rock	1 400 366	1 008 977	1 129 808	877 478
Cato Ridge	239 013	222 329	242 051	322 400
Dwarsrivier	—	—	449 792	639 268
Machadodorp Works	20 119	28 675	34 599	105 799
Assmang operations total	10 203 604	9 811 901	11 513 727	10 830 348
Dwarsrivier	161 583	463 088	—	—
Wonderstone	30 743	33 178	29 669	30 622
Wonderstone Grader Road	644	1 496	666	1 523
Rustenburg Minerals	247 376	145 197	251 870	233 277
Zeerust	34 944	93 986	156 644	222 690
Assore operations total	475 290	736 945	438 849	488 112

*Restated.

Note: 1 mega litre = 1 000m³

Discharges are undertaken in accordance with permit conditions and after periods of extreme precipitation. The smelters have lined slag dumps in place to guard against groundwater contamination. At Dwarsrivier, two water discharge incidents were reported to the authorities and four at Black Rock in line with WUL requirements. All incidents related to the discharge of process water into the environment. In both cases a comprehensive investigation was conducted, and details are provided below:

Operation	Area affected	Incident description	Volume of discharge (m³)
Dwarsrivier	Veld	Instrumentation failure	5 000
	Veld	Water balance control	15 000
Black Rock	Village	Irrigation	20 440
Black Rock	Village	Irrigation	16 177
Black Rock	Village	Irrigation	13 362
Black Rock	Village	Irrigation	8 453

ENVIRONMENTAL IMPACTS continued

Waste management

Our most significant waste streams are Waste rock and process waste (including tailings and discard waste from the mines and slag from smelter operations). Waste inventories at all Assmang operations outline the source, volume and the type of waste generated by each process at the operation and its disposal method.

All Assmang operations as well as Dwarsrivier are registered on the South African Waste Information System (SAWIS). They prepare monthly reports which outline the volume and type of waste generated and disposed.

Waste such as used oil is primarily recycled through third-party service providers at Assmang. Registered waste disposal facilities recycle other hazardous waste such as oil-contaminated material and used filters. These facilities issue safe disposal certificates for this material.

Waste rock produced at Beeshoek and Khumani increased by 24% and 16% respectively, while Black Rock reported a 100% increase in waste rock materials in FY18. The variances at all sites are mainly due to increased production resulting from expansion projects on site. Black Rock also reported no waste rock during the FY17. At Assore, hazardous waste materials such as used oil, ball mill grease, contaminated soil, used oil rags, oil-contaminated sawdust and fluorescent tubes are removed from site by third-party service providers. Recycling companies remove steel offcuts while print cartridges and used batteries are disposed of by the suppliers who we return them to.

At Dwarsrivier, discard waste rock and tailings volumes increased in line with production increases at the mine. The mine recycles more than 48% of waste produced. We have a dedicated team on site responsible for waste separation and recycling. The mine also has a strategic mine residue management committee

which focuses on long-term mine residue management. The committee aims to investigate environmentally responsible mechanisms for disposal, reuse and recycling of mine residue.

As Rustenburg Minerals went into final stages of rehabilitation, a 100% reduction in waste rock is reported year on year due to low production on site. Waste rock generated at Wonderstone increased by 147% due to the removing of overburden material on site prior to actual product mining in areas where new mining activities were underway.

No significant variances were noted in the tailings and slag tons waste produced by our operations. Only Khumani recorded a 12% decrease in tailings.

Cato Ridge reported a significant increase in slag reprocessing. Slag is recycled and demand for the product is market dependent. During FY18 demand for the product increased in the aggregate industry.

Waste generated by operations (tons)

Operation	2018		2017		2016		2015	
	Waste rock	Tailings/ slag/ discard waste	Waste rock	Tailings/ slag/ discard waste	Waste rock	Tailings/ slag/ discard waste	Waste rock	Tailings/ slag/ discard waste
Beeshoek	17 070 231	930 637	13 782 817*	950 135	22 790 147	1 003 885	30 378 392	903 037
Khumani	43 505 469	4 735 253	37 524 588*	5 354 262	34 287 143	2 953 102	26 370 969	2 627 668
Black Rock	163 443	188 015	0*	185 926*	381 939	60 066	236 096	137 521
Cato Ridge	N/A	180 479	N/A	93 953*	N/A	93 953	N/A	119 411
Dwarsrivier	–	–	–	–	0	711 081	0	647 751
Machadodorp Works	N/A	0	N/A	0	N/A	0	N/A	33 389
Assmang total	60 739 143	6 034 384	51 307 405*	6 584 276*	57 459 229	4 822 087	56 985 457	4 468 777
Dwarsrivier	0	819 168	0	761 974	–	–	–	–
Wonderstone	89 638	N/A	36 236	N/A	45 320	N/A	55 044	N/A
Rustenburg Minerals	0	0	98 359	21 178	1 985 874	67 629	2 233 021	46 435
Zeerust	0	0	0	0	0	0	1 475 737	53 948
Assore total	89 638	819 168	134 595	783 152	2 031 194	67 629	3 763 802	100 383

* Restated.

Cato Ridge slag (tons per year)

Operation	2018	2017	2016	2015
Cato Ridge	93 953	90 748	304 127	334 262

ENVIRONMENTAL IMPACTS continued

Land management and rehabilitation

All of our operational sites have updated rehabilitation and closure plans in place. These plans inform the financial quantum required for the eventual rehabilitation and closure of each site at the end of its operational life. Rustenburg Minerals and Zeerust were in the process of being sold to third-party mining companies that will continue mining operations on both sites. Both sites were rehabilitated by means of rollover rehabilitation for all areas that will not be mined again. The remainder of the mineable areas were made safe and left open for future mining.

The financial rehabilitation provisions are calculated by independent experts in line with the Minerals and Petroleum Resources Development Act (MPRDA) requirements and constitute our single largest environmental liability.

All Assmang and Assore sites comply with current legislation pertaining to the calculation of environmental liabilities and provision.

The total liability at year-end for Assmang operations amounted to R985 782 million (FY17: R964 806 million) and R168 686 million for Assore operations (FY17: R122 941 million). As reported, the rehabilitation at Rustenburg Minerals and Zeerust is largely concluded and at Rustenburg Minerals the DMR (environmental division) signed off on the rehabilitation done during the reporting period.

Rehabilitation and closure provision

Operation	2018			2017		
	Total liability R'000	Environ- mental fund R'000	Guarantees in place R'000	Total liability R'000	Environ- mental fund R'000	Guarantees in place R'000
Beeshoek	136 273	88 123	51 359	128 477	81 285*	51 359*
Khumani	324 754	93 961	254 566	308 267	76 893*	254 566*
Black Rock	204 441	77 258	158 062	207 747	71 312*	158 062*
Dwarsrivier	—	—	—	—	—	—
Assmang operations sub-total	665 468	259 342	463 987	644 491	229 489*	463 986*
Alloy operations						
Cato Ridge	117 156	0	0	117 156	0	0
Machadodorp Works	203 158	0	0	203 158	0	0
Assmang operations total	985 782	259 342	463 987	964 806	229 489	463 986
Dwarsrivier	152 490	0	102 393	102 393	0	44 500
Wonderstone	4 086	0	4 500	3 855	0	4 500
Rustenburg Minerals	10 142	0	18 000	14 837	0	18 000
Zeerust	1 968	0	3 500	1 856	0	4 500
Assore operations total	168 686	0	128 393	122 941	0	71 500

*Restated.

Note that closure and rehabilitation liabilities are reported on a 100% basis.

ENVIRONMENTAL IMPACTS continued

Operation	2016			2015		
	Total liability R'000	Environ- mental fund R'000	Guarantees in place R'000	Total liability R'000	Environ- mental fund R'000	Guarantees in place R'000
Beeshoek	128 322	75 435	51 359	119 273	70 372	51 009
Khumani	307 228	71 354	254 566	320 784	66 518	254 266
Black Rock	231 009	64 001	158 062	209 506	59 664	149 842
Dwarsrivier	89 289	9 836	39 363	48 533	9 169	39 363
Assmang operations sub-total	755 848	220 626	503 350	698 096	205 678	494 480
Alloy operations						
Cato Ridge	132 722	0	0	119 705	0	0
Machadodorp Works	203 158	0	0	204 095	0	0
Assmang operations total	756 184	220 626	503 350	698 420	205 678	494 480
Dwarsrivier	—	—	—	—	—	—
Wonderstone	3 636	0	4 500	3 605	0	4 500
Rustenburg Minerals	14 241	0	18 000	15 987	0	13 000
Zeerust	1 751	0	3 500	3 452	0	3 500
Assore operations total	19 628	0	26 000	23 044	0	21 000

Biodiversity and invader species management plans are in place at Dwarsrivier. We rely on these plans to inform land use management practices and post-operational land use alternatives. Plans are continually implemented and internally audited.

At Khumani we in the process of registering a portion of land as a nature conservancy. In FY17 we had successful engagements with the National Department of Nature Conservation as well as the National DEA to progress approval of the agreement. Fencing and invader plant control commenced which we expect to be finalised in due course.

As reported in the leadership review, the situation at Rustenburg Minerals regarding low-impact heritage sites, which were disturbed during mining operations, is

being addressed in a heritage management plan. The buyers of the property are aware of the situation and that the plan will be submitted to them once complete.

The area around Steelpoort at our Dwarsrivier operation was declared an environmentally critical, biodiverse-sensitive area in terms of the National Environmental Management: Biodiversity Act 10 of 2004. This status change required completion of environmental impact assessments not previously completed as it was not required prior to the status change. The site was unaware of the status change as no notification was published in the Government Gazette as is usually the case, instead it was unusually published online. Management has already implemented immediate corrective action and is engaging with relevant authorities.

EIAs conducted in areas immediately adjacent to the area in question have not highlighted any significant, unmanageable environmental risks. We are therefore confident that Assore will manage the impacts outlined in a sensitive area EIA.

Dwarsrivier commissioned a topsoil balance study along with a soil classification and land use study. The information obtained from these reports is used for project planning and site selection. We apply findings from our studies across our operations as far as possible to generate synergies. Rehabilitation sites saw growth of *flora* and *fauna*, and gabions installed at inclined areas with water channelling systems reduced soil erosion. In addition, fire break systems prevented any fire outbreaks.

CASE STUDY FEATURES

Dwarsrivier water management

Dwarsrivier recognises water as a scarce resource. As such, water conservation and demand management are seen as key management activities. Securing long-term availability of water and managing water quality are strategically important for the sustainability of the mine. We designed and operate water resources on the principles of optimal water use and conservation as set out in the Mining Best Practice Guidelines. This is achieved by managing a closed water balance aimed at zero discharge and minimal abstraction through the WCDMP

To achieve this goal, we successfully commissioned the first phase of our new water treatment facility. The facility is designed to treat dewatering water from the underground operations at a rate of 450 m³ water per day.

The first phase of the project involved testing the biological treatment of nitrate which is introduced into the water through ammonium nitrate in blasting activities.



Phase two of the project is currently underway and will target various other elements in the water with the primary objective of delivering potable water. The treatment facility will assist us in effectively managing its water balance, reducing potential environmental contaminants in the system, and securing a long-term supply of high-quality water for water-sensitive processes and domestic use. On a year-on-year comparative basis, the water abstraction from the river system remained largely unchanged and increased in line with production increases. However, we achieved a reduction of 26,61% in the volume of water abstracted from groundwater resources.

Dwarsrivier recognises that significant strides are required to fully achieve the principles of zero discharge and optimal use, and as such, several projects were initiated in the recent past and are at various stages of development. Having proven the viability of biological treatment of nitrates at the mine, several opportunities for proactive management exist. Targeting potential sources of nitrate water contamination to lower the post-closure liability associated with mine environmental remediation is one of these opportunities currently under investigation

Biodiversity awareness initiative

Dwarsrivier launched a biodiversity awareness initiative in early 2017. The initiative aims to increase the level of awareness and understanding among Dwarsrivier employees and contractors of the unique biodiversity at the mine. We believe that increased awareness and understanding will result in improved biodiversity management at the mine and long-term environmental sustainability.

The awareness initiative is driven through three main communication and training mediums. The first uses monthly awareness topics called "talk topics". These talk topics are distributed throughout the mine and placed at various strategic notice boards. Information communicated ranges from general biodiversity information to competitions and other smaller initiatives (e.g. tree planting initiatives).



The second medium of communication consists of permanent biodiversity awareness signage and notices placed at main entrances to the mine. These communicate the Critical Biodiversity Area (CBA) status of the mine as well as general rules and regulations aimed at protecting biodiversity at the mine. In the near future the mine will also install "sensitivity maps" to communicate areas of particular biodiversity importance at the mine. These areas will be deemed "no-go" zones.

The third component of the initiative focuses on formal training. This is targeted at senior management and employees involved in "greenfield" projects. For this component the mine uses an external training provider to give legal liability training to senior management which covers the implications of the CBA classification. In addition, all employees and contractors working on "greenfield" projects (projects where vegetation clearance is required) receive biodiversity awareness training by an external environmental control officer (ECO) before such projects commence.

The formal awareness initiative will run until early 2019, but many of the elements introduced will remain in place as a permanent control measure at the mine (for example the signs and notices, and the ECO training requirements).



COMMUNITY ECONOMIC DEVELOPMENT¹

We are dedicated to addressing the various socioeconomic challenges across all our operations through CED initiatives.

CED not only bridges the gap between mining operations and communities within which we operate but strengthens the relationships between us. It is of great importance that we positively impact the lives of our employees and the lives of their families and local communities. This is the premise of CED and we aim to contribute through sustainable projects aimed at infrastructure development, education and supplier development.

MANAGEMENT APPROACH

At Assmang and Assore board level, the respective SECs oversee the implementation of CED projects. The SECs are guided by the principle of responsible citizenship and effective stakeholder engagement in King IV.

Responsibility for implementation of CED projects, including our commitments noted in our SLPs, is delegated to the CEO. The operationalisation of the projects at various operations is as follows:

Assmang	A social enterprise development department executes projects and reports to the supply chain manager.
Assore	A CED department with dedicated field officers in skills development, corporate social investment (CSI), enterprise development (ED), supplier development (SD), reports to the senior manager CED.

Senior managers are also responsible for the legal compliance aspects of social and economic development. Assore reports transparently and effectively to a range of stakeholders such as government departments and communities. The key stakeholders we report to include the DMR in terms of SLPs, the Mining Qualifications Authority (MQA) with respect to skills development and the Department of Trade and Industry (dti) in terms of the dti codes of good practice (which focus mainly on issues related to BBBEE). Internal reporting to the SEC is performed biennially.

Annual SLP and MQA update reports are submitted to the DMR. The DMR also performs *ad hoc* audits of the SLP. Legal compliance audits which also include the SLP are performed biannually.

Our CED programme is structured to encompass aspects of CSI, SED, ED and SD. These four activities are aimed at directing resources to contribute to the upliftment of communities and the economy in the

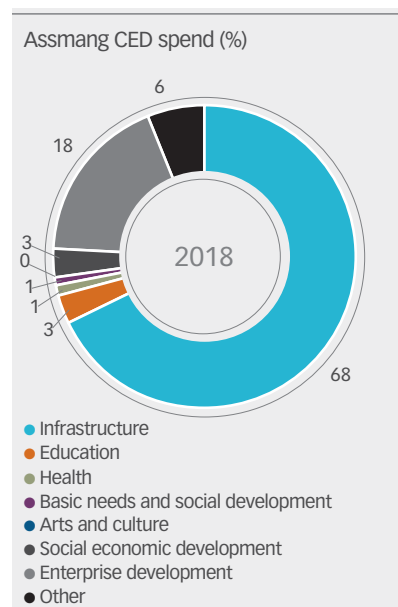
communities we operate in. Activities as they relate to projects within SLPs are mainly funded by the chairman's fund, as well as operational funds for both Assmang and Assore. CED activity outside of the SLP scope is generally funded by the Boleng Trust.

PERFORMANCE

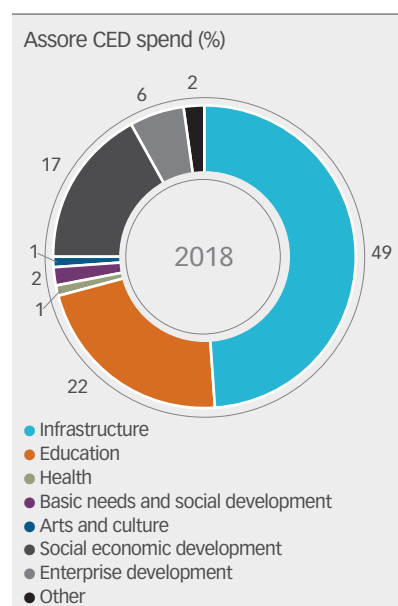
Focus of funding

Assmang's CED spend increased by 46% to R101,2 million (FY17: R69,5 million) and at Assore operations, a 14% increase in CED expenditure to R31,5 million (FY17: R27,6 million) was realised.

The R68,6 million (FY17: R47,6 million) investment in infrastructure development funding was the most significant proportion of spend at Assmang operations. In total, R18,1 million (FY17: R12,9 million) was spent on ED as the second largest focus area for funding. Other funding at 6% consisted of various CSI projects supported and local ED.

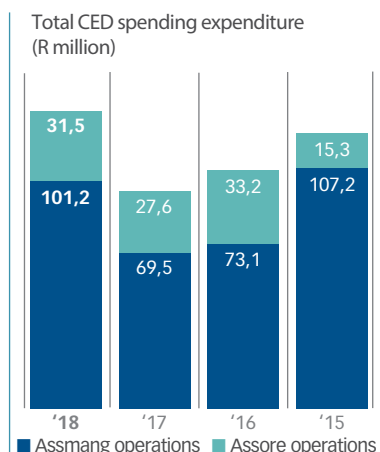


Also, at Assore operations infrastructure was the priority funding area with R15,6 million spent in FY18 (FY17: R15,5 million). Education received 22% of total contribution with R6,9 million being contributed which increased from R5,8 million spent in the prior year. SED contribution increased significantly from R0,2 million to R5,4 million.



¹ Includes CSI, SED and ED.

COMMUNITY ECONOMIC DEVELOPMENT continued



Education

We focus on addressing the educational needs from early childhood development (ECD) level through to tertiary level.

ECD research states that 90% of brain growth and development takes place before the age of five. Research also indicates that children whose development is nurtured early in life are more likely to be:

- Successful in school, have fewer learning disabilities and be more likely to finish high school and seek further education or training
- More productive in the workforce, hold better jobs, own their own homes
- Healthier throughout their lives, physically and mentally, with a lower risk of heart disease, Type II diabetes, obesity, depression and substance abuse

In the Global Competitiveness Report¹ 2017 – 2018, the World Economic Forum ranked the South African quality of primary education as 116th out of 137 surveyed countries globally and on higher education as an overall pillar the country ranked 85th. Trends year on year indicated almost none to slight improvement emphasising the need for continued support from the private sector towards education of youth to secure a future supply of skilled employees. Math and science skills ranked poorly at 128th out of 137 countries which reiterates government initiatives to grow competencies in these identified areas.

¹ <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>.

Against this backdrop, Assore has established the following initiatives and provided the following support in FY18:

ECD

ECD workshops	ECD workshops are held with teachers. The workshops were delivered at 12 centres with 22 practitioners in Limpopo and 11 centres with 13 practitioners in the North West.
	The workshops focused on illustrating how to better incorporate teaching materials into teaching modules, improving the learning experience, making it more fun and creative. The teachers were provided with a box of materials after every project to apply to their classrooms as resources remain a challenge.
Stationery project	We donated tables, chairs and backpacks with colouring books and crayons to a crèche in Limpopo. The children attended a discussion on water awareness and water-saving initiatives. Children participated actively in both sessions and positive feedback was received on the initiative.
Winter warmers	Approximately 700 children from the 12 ECD crèches were gifted with juice, biscuits as well as a lovely winter warmer blanket that could be folded and made into a pillow. Most of the children in the ECD centres do not have blankets for their afternoon naps.
Christmas project	A Christmas party was held for 77 orphans and vulnerable children of Deben, as identified by the local clinic. Assmang operation's SED department assisted in handing out Christmas gifts containing basic toiletries, while the children enjoyed a meal. Dwarsrivier conducted a similar project visiting 11 ECD centres distributing Christmas hampers and toys to more than 400 children.

COMMUNITY ECONOMIC DEVELOPMENT continued

Primary education initiatives

Mobile libraries	<p>Reading is an essential skill needed in education and to help improve this, Dwarsrivier and the Boleng Trust donated seven mobile libraries last year.</p> <p>Assistance was given to Masago Primary School, Ngwanathulare Primary School, Kgoboko Primary School, Mante Primary School, Makopole II Secondary School, Papong Primary School and Mmahlagare Combined to start a library and to assist teachers with libraries already running. To assist and encourage learners and teachers to make use of the mobile libraries, a competition was launched. The competitions encourage children to read, research, create and apply their own understanding of what they have read or researched. Competitions were held throughout the year to ensure progress was made and a visible impact could be seen.</p>
School shoes initiative	Dwarsrivier and the Boleng Trust donated shoes to school children across various grades who either have no school shoes or have shoes in bad condition. We also delivered school clothes and back packs for the children as most of them had none. The schools benefiting from the initiative were Maphopha Primary School (30 pairs), Tibamoshito Primary School (30 pairs), Masha Primary School (43 pairs) and Malekane Primary School (25 pairs). A total of 128 pairs of shoes and socks were delivered to the different schools.
Natanja Christian School	The Natanja Christian School is another education-driven project supported by the company and funded by the company's chairman fund. The school received a new building equipped with ample classrooms, a science laboratory, a computer laboratory, a consumer studies kitchen, an administration block and a hall to cater to its growing student numbers. A sports facility is being constructed for the use of the school and the wider community.

Secondary education initiatives

Bursaries	Two bursaries were awarded to high-performing children.
Eastern Limb HRD Forum Career Expo	Approximately 6 000 learners from schools all over the area attended the annual event. Learners had the opportunity to learn about possible bursary and apprenticeship or learnership opportunities with Dwarsrivier. Stalls and exhibitions of about 24 participants that included Eastern Limb Mines and mining-related industries, government agencies, SETAs, the MQA provided learners insight into mining career opportunities and requirements.
Boys Matter career day	Dwarsrivier in partnership with the Boys Matter Foundation (BMF) hosted a corporate career-focused day for Grade 12 learners in the Ngwaabe and Jane Furse areas. Approximately 1 300 learners from schools in the vicinity attended. Representatives from Dwarsrivier, Eskom, HWMC Emergency Medical Service, Manthosi Training and Consulting and the South African Police Service spoke to the learners about possible careers in their industries.
Career assessments	<p>The career assessments have made a positive impact and feedback was positive. However, we encountered challenges with the learners' level of English comprehension. Therefore, we amended and provided an in-depth tutorial to enable them to understand and answer the career assessments appropriately.</p> <p>The shortfall in English skills is a noticeable trend in several schools we have worked with. We see this as an opportunity to expand education initiatives to include English comprehension intervention programmes.</p>
Sanitary solutions	<p>This Assore project supplied 4 214 female learners and teachers with sanitary products, SHEBINS and waste collection services. We worked to address cultural taboos related to disposal of female sanitary products and practical challenges where ladies do not have undergarments to use the sanitary products provided.</p> <p>A similar project at Assmang reached 72 schools and 9 400 learners within the John Taolo Gaetsewe district municipality.</p>
Waterwise project	This was a CSI project where every child received a water tank that fits into a wheelbarrow. We have had a challenge with people carting water to their houses in our waste management project wheely bins. To address this, we provided the water transportation tanks so that our wheely bins can once again be used for their intended purpose. Together with the tanks we did a water conservation intervention project seeing that water is a scarce commodity in our country, especially in Letsopa.
Partners for Possibility (PfP)	PfP is a leadership development programme for school principals where they are supported by a business leader within the community hosted by the Assmang operations targeted at 10 schools set to run over 54 weeks. The first information session took place on 6 February 2018 and the second on 8 March 2018.

COMMUNITY ECONOMIC DEVELOPMENT continued

Tertiary education initiatives

Bursaries	<p>Bursaries which include accommodation, food and books were awarded to tertiary education students. Some bursaries extend over several years and more bursaries are awarded annually.</p> <ul style="list-style-type: none"> - Dwarsrivier Mine offered nine bursaries in mining-related fields. This makes it a total of 19 bursaries offered by Dwarsrivier. An additional nine learnerships (external), 11 learnerships (internal) and 16 internships were awarded. - As part of future initiatives, the bursary scheme will be extended in partnership with Sondela Hospitality Academy to include bursaries to 10 community members for a three-year hospitality internship. - Three new bursaries awarded to students were part of the Khumani Youth Development Programme in the areas of dentistry, Bachelor of Education in Senior Phase and Further Education and Training (FET) in teaching and Bachelor of Commerce in Accounting
Tertiary education preparatory programme (TEPP)	<p>The TEPP had an intake of 30 students (FY17: 20) during the year.</p> <p>This programme assists to bridge the gap between high school and university by equipping deserving students with the necessary knowledge, skills, values and attitudes to succeed with their tertiary studies. Students on the programme have progressed positively. The outcomes have been positive and some students have completed the programme and are now studying at tertiary institutions. The previous TEPP students who are currently at tertiary education institution have formed part of our graduate development programme where they are monitored throughout their studies.</p>
Boleng Trust bursaries	<p>The following Boleng Trust bursaries were awarded during the financial year:</p> <ul style="list-style-type: none"> - Elizabeth Moleele – Medicine - Molusi Potso – Mathematical Sciences in mathematics and mathematical statistics - Baby Refentse Seriteng – BCom Law - Darlington Mogaki – BSc Financial Mathematics - Tebogo Phala – Chemical Engineering

Entrepreneurship and enterprise development initiatives

Entrepreneurship and enterprise development create new companies, open new markets and nurture new skills, thereby promoting socioeconomic development. Our entrepreneurship and initiatives include:

Initiatives	
<p>A business development enterprise programme initiated by Rustenburg Minerals aimed at improving entrepreneurs' chances of accessing funds and markets by delivering business training, facilitating business registrations and assisting with business compliance certificates. The programme involves the development of a model called "the six-stage business restoration practice" which comprises two phases: Organising the business, which takes six months; and mentoring, monitoring and reporting, which takes 12 months.</p>	<p>The Wonderstone operation has a candle making project independently run by five ladies. The business is growing in stature and continues to increase its bulk orders while enhancing its level of quality. The business also expanded its market by supplying into other provinces.</p>
<p>Dwarsrivier has established the following SMME incubators:</p> <ul style="list-style-type: none"> - Group of 17: Office cleaning - Malebaneng: Canteen - Baleseng: Spillage cleaning - Phuti Tsoga: Construction - Bokone Bowa: Vegetation 	<p>Assmang supported Malgas Holdings, a 100% black-owned supplier with cash flow by funding all medicals, inductions for employees, procured tools, transportation of machinery, rental of site offices to service a three-year screening and crushing contract at King & Bruce to the value of R150 million.</p>
<p>Approximately 57 informal traders will benefit from the Kuruman Small, Medium and Micro-sized Enterprises (SMME) Village. Assmang operations committed R10 million for the construction of 57 SMME shops where local SMMEs can operate their businesses. Each SMME will be enrolled in a training programme on business management. In total, 54 temporary jobs were created for local people including four local sub-contractors during construction of the village which is completed.</p>	<p>Waste management at Wonderstone was started to assist with initiating a waste management system in Letsopa. We started this project because there are no services in Ottosdal and Letsopa due to the bankrupt municipality. Project extension depends on the municipal input in terms of providing stipends for the workers. The municipality approved another six months of stipends and thus we aim to assist the project for that term. We are looking for opportunities to assist workers in establishing a buyback centre to help develop the landfill site.</p>
	<p>Assmang hosted a My Scope Training event to 40 SMME attendees where participants were exposed to web-based marketing tools, free online technologies and free applications for website design with the aim of ensuring their businesses can be marketed effectively.</p>

COMMUNITY ECONOMIC DEVELOPMENT continued

Infrastructure development initiatives

Some of the major infrastructure projects, which we acquired through its share in the Assmang operations fund, include R17,9 million invested in assisting 325 households from the Olifantshoek area with water and sanitation development. The project is progressing well and is expected to be completed in FY2019.

Khumani completed the upgrade of Kathu Road (Frikkie Meyer Road). The project cost R9,7 million and will have a positive impact on the municipality and community members as road safety conditions will increase.

Preferential procurement

Assore is committed to bringing HDSAs into mainstream economy and specifically the mining industry by identifying and developing business opportunities and making them available to BBBEE suppliers at all its operations and activities. Assore adopted a policy of precluding vendors who do not have valid empowerment credentials from supplying goods and services to its operations.

In FY18, increases in levels 1, 8 and 9 expenditures at Assmang had a positive effect. Dwarsrivier's percentage of BBBEE expenditure increased due to capital

expenditure doubling from FY17 and an increase in logistics expenditure with local HDSA transporters.

Aggregate BBBEE expenditure at Rustenburg Minerals and Zeerust declined due to these mines ceasing production, while BBBEE expenditure at Wonderstone declined due to once-off purchases made from suppliers who are not empowered. The BBBEE expenditure at African Mining and Trust increased due to expenditure incurred for the refurbishment of Assore's head offices.

The table below presents a summary of the percentage BBBEE procurement measured against total discretionary procurement:

	Total discretionary procurement¹ R'million	Aggregate BBBEE expenditure² R'million	Aggregate BBBEE³ (%)
2018			
Assmang	10 824,6	10 544,6	97,41
Dwarsrivier	1 710,5	1 450,2	84,8
Wonderstone	65,5	53,2	81,2
Rustenburg Minerals	20,3	11,6	57,3
Zeerust	2,5	2,0	80,5
African Mining and Trust	143,6	155,5	108,3
2017			
Assmang	10 774,2	9 505,4	88,2
Dwarsrivier	1 219,3	900,7	73,9
Wonderstone	67,9	59,5	87,7
Rustenburg Minerals	65,3	42,6	65,3
Zeerust	2,5	2,5	100,1
African Mining and Trust	91,2	95,5	104,7

¹ Total discretionary procurement is defined as total procurement less procurement effected through related entities (inter-company transactions) and procurement from state-owned entities.

² Aggregate BBBEE expenditure is recognised based on the respective recognition levels of the suppliers, in accordance with the codes published by the dti.

³ Expenditure of levels 1 to 3 suppliers is recognised at more than 100% in terms of the dti codes.

COMMUNITY ECONOMIC DEVELOPMENT continued

CASE STUDY FEATURES

Dwarsrivier Athletics Club

The Dwarsrivier Athletic Club was established to support and improve sporting development in the area. Sport is one of the ways in which communities can unite and create a better future. Therefore, Dwarsrivier invested in sports development and supports the athletes from the Dwarsrivier Athletics Club in chasing their dreams at the Comrades annually. The runners were supported with transport and accommodation and were also supported at the race by a backup crew from Dwarsrivier who encouraged them along the way. Dwarsrivier athletes did not disappoint, with Aron Tumelo Maroga, aged 29, finishing in 06:56:48 (silver). Aron was the first to finish in the team and finished 194th of 19 059 starters in the race.



Wonderstone candle making project

Wonderstone funds a candle making project which has five beneficiaries. The project currently supplies several churches and stores in Ottosdal.

The beneficiaries were trained and mentored by the South African Institute of Entrepreneurship to improve their business acumen, grow their customer bases and improve their marketing strategy. Additionally, new marketing equipment in the form of gazebos, banners and tear drop flags were acquired. The project has been busy with bulk orders from new clients, contributing to their income.

The project has managed to make a few renovations to their shop to make it more relevant and comfortable for working. They also received new manufacturing equipment that is more durable and efficient to increase production of raw materials in the form of wax and wick for the year. The project is being monitored and mentored monthly by the CED department.



GOVERNANCE

Strong corporate governance is an essential part of minimising the risks faced by the group. Corporate governance and risk management not only enhance sustainability of the group, but are essential to preserving organisational reputation, investor confidence, access to capital when required and sustainable employee motivation

Ethics

Ethical issues are managed by way of executive involvement in day-to-day management processes

The group has recently adopted a code of ethics



3 BBBEE DIRECTORS

4 meetings

Committed to principles

- Corporate discipline
- Transparency
- Independence
- Accountability
- Fairness
- Employment equity
- Social responsibility

Board of directors – composition

10 directors

5 executives

5 non-executive and independent

2 female

Key roles and functions



CEO

The CEO assumes ultimate

responsibility for all executive issues

CFO

The CFO assumes responsibility for the group's financial position and related issues

Lead independent director

The lead independent director provides leadership to the independent directors, and liaises with the CEO on behalf of the independent directors

100% attendance by members



Committees

Audit and Risk

Monitors the risk profile, reviews and approves financial statements and monitors, supervises and facilitates the work performed by independence of internal and external auditors

3 non-executive and independent

4 meetings

100% attendance by members

Social and Ethics

Monitors the group's activities relating to any relevant legislation affecting the group's activities and prevailing codes of best practice

2 non-executive and independent

2 executives

2 meetings

100% attendance by members

Remuneration

Recommendations on the broad framework and cost of executive remuneration are made annually to the committee for approval

2 non-executive and independent

1 executive

3 decisions made by round robin resolutions

GOVERNANCE AND MANAGEMENT OF ETHICS

We manage ethical issues through executive involvement in day-to-day management processes of the group, and by senior management interaction with employees at all levels. This enables us to ensure the maintenance of high ethical standards and to meet the board expectations. Issues that cannot be resolved by line management are addressed by way of oversight by the Assore SEC. We recently adopted a code of conduct, as approved by the SEC and the board, and all employees are required to be trained in the application of this code.

The Assore Code of Ethics was rolled out across our operations during FY18. It was conducted by way of externally facilitated online training, testing and certification for all employees. Further to this, we operate a whistle-blower hotline within the group, which allows for complete anonymity where the complainant wishes to remain unidentifiable. The whistle-blower hotline was started in November 2017. This facility is also externally facilitated.

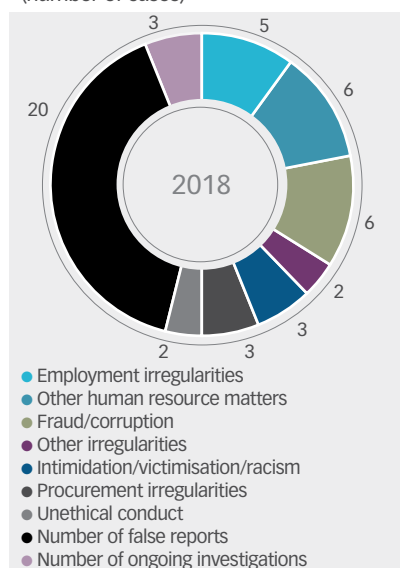
In FY18, 16 governance incidents were reported at Assore operations. In total, 12 cases were investigated internally, and allegations were found to be unsubstantiated. Four cases in relation to Dwarsrivier were referred to a forensic auditing company.

Our management consult internally with the relevant subject matter experts to ensure that we abide by all relevant laws. We encourage employees to advise their managers of possible areas of legal and

ethical areas of exposure. External consultation is made by senior management, where internal skills are insufficient or compromised, in an effort to ensure compliance in these respects by the group.

During the year several cases were reported through these channels. The 27 Assmang cases, three ongoing as at reporting date, relate mainly to the following type of incidents:

Assmang nature of cases reported* (number of cases)

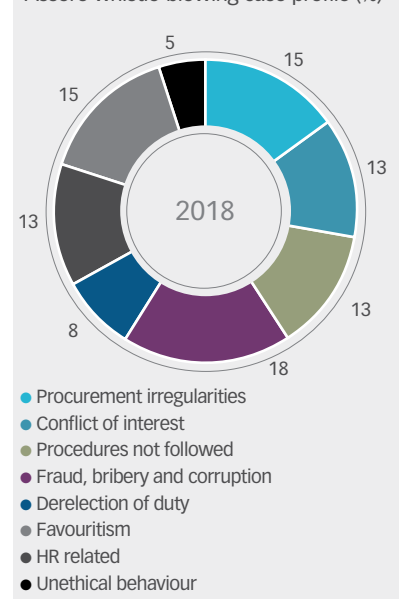


*Excludes feedback requests.

Of the Assmang cases investigated 20 cases were found to be unsubstantiated.

The internal investigations concluded and found all allegations to be unsubstantiated. The nature of these cases were as follows:

Assore whistle-blowing case profile (%)



The board is satisfied that management has sufficient experience to ensure our operations comply with the relevant laws, rules, codes and standards. Meeting these requirements would enable us to avoid material risks. Furthermore, senior management consults with external legal counsel in unfamiliar and complex areas.

INDEPENDENT ASSURANCE REPORT TO THE MANAGEMENT AND STAKEHOLDERS OF ASSORE LIMITED

INTRODUCTION

IBIS ESG Assurance (Pty) Ltd (IBIS) was appointed by Assore Limited (Assore) to conduct an independent third-party assurance engagement in relation to selected sustainability information in Assore's sustainability report for the year ending 30 June 2018 (the report). IBIS is an independent and licensed provider of sustainability assurance services. The assurance team was led by Petrus Gildenhuys with support from consultants Adam Sutton-Pryce and Jigisha Mandalia from IBIS. Petrus is a Lead Certified Sustainability Assurance Practitioner (LCSAP) with more than 20 years' experience in sustainability performance measurement involving both advisory and assurance work.

ASSURANCE STANDARD APPLIED

This assurance engagement was performed in accordance with AccountAbility's AA1000AS (2008) standard and was conducted to meet the AA1000AS Type II moderate level requirements.

RESPECTIVE RESPONSIBILITIES AND IBIS' INDEPENDENCE

Assore is responsible for preparing the report and for the collection and presentation of sustainability information within the report. Assore was also responsible for maintaining adequate records and internal controls that supported the reporting process during the reporting period.

IBIS' responsibility is to the management of Assore alone and in accordance with the terms of reference agreed to with Assore. IBIS applies a strict independence policy and confirms its impartiality to Assore in delivering the assurance engagement. This assurance engagement is the third sustainability assurance engagement conducted for Assore by IBIS.

ASSURANCE OBJECTIVES

The purpose of the assurance engagement was to provide the management of Assore and its stakeholders with an independent moderate level assurance opinion on whether the report meets the following objectives:

- Adherence to the AA1000APS (2008) AccountAbility principles of inclusivity, materiality and responsiveness.
- Fair presentation of the following selected disclosures in the report:
 - Total number of work-related fatalities (page 23).
 - Total number of lost-time injuries (LTIs) (page 24).
 - Lost-time injury frequency rate (LTIFR) (page 24).
 - Electricity consumption in MWh (page 38).
 - Total fuels consumed (page 37).
 - Total volume of water abstracted (page 39).
 - Total volume of water discharged from sites (page 39).
 - Amount of CSI and LED spend (page 45).

WORK PERFORMED BY IBIS

IBIS performed the assurance engagement in accordance with the AccountAbility AA1000AS (2008) Type II requirements.

The following suitable assessment criteria were used in undertaking the work:

- AA1000APS (2008) (AccountAbility Principles Standard) published criteria for inclusivity, materiality and responsiveness respectively.
- The completeness, accuracy and validity of reported data.
- Our assurance methodology included:
 - Interviews with relevant functional managers to understand and test the processes in place for adherence to the AA1000APS stakeholder engagement principles and disclosure of the selected KPIs in the assurance scope.
 - Site visit to the Dwarsrivier operation, which involved testing, on a sample basis, the measurement, collection, aggregation and reporting of the selected sustainability information.

- Inspection and corroboration of supporting evidence to evaluate the data generation and reporting processes against the assurance criteria.
- Reporting the assurance observations to management as they arose to provide an opportunity for corrective action prior to completion of the assurance process.
- Assessing the presentation of information relevant to the scope of work in the report to ensure consistency with the assurance observations.

ENGAGEMENT LIMITATIONS

IBIS planned and performed the work to obtain all the information and explanations believed necessary to provide a basis for the assurance conclusions for a moderate assurance level in accordance with AA1000AS (2008).

The procedures performed in a moderate assurance engagement vary in nature from, and are less in extent than for, a high assurance engagement. As a result, the level of assurance obtained for a moderate assurance engagement is lower than for high assurance as per AA1000AS (2008).

ASSURANCE CONCLUSION

In our opinion, based on the work undertaken for moderate assurance as described, we conclude that the subject matters in the scope of this assurance engagement have been prepared in accordance with the defined boundaries and reporting criteria, and are free from material misstatement in respect of:

- Assore's adherence to the AA1000APS principles of inclusivity, materiality and responsiveness.
- The selected disclosures identified under assurance objectives above and as presented in the published report.

KEY OBSERVATIONS AND RECOMMENDATIONS

Based on the work set out above, and without affecting the assurance conclusions, the key observations and recommendations for improvement are as follows:

In relation to the inclusivity principle

Stakeholder groups have been mapped out and general means of engagement identified pointing to a level of stakeholder inclusivity and the acknowledgement of stakeholders' interests in Assore. However, Assore has not yet formalised its stakeholder engagement processes through a formal policy or framework with predetermined relationship owners.

It is recommended that Assore prioritises steps towards rolling out a stakeholder engagement process that will result in purposeful action planning and monitoring of stakeholder engagement across the group.

In relation to the materiality principle

Assore has maintained due process in identifying its material issues influencing its decisions, actions, performance and stakeholders.

The report presents material topics identified through the group risk management process as well as the expectations of stakeholders and includes the basis for inclusion.

In relation to the responsiveness principle

Assore's responses to stakeholder issues observed across different stakeholder groups, at both corporate and operational levels, indicates a level of accountability to issues raised.

Once a formal stakeholder engagement process is implemented, the focus should be on consistent recordkeeping of its key responses to stakeholders across the group, that will improve analyses and responsiveness going forward.

In relation to the selected disclosures

The general control environment for sustainability information reviewed as part of the scope of assurance has improved from the previous year. Assore is commended for the development of a reporting guideline that covers the definitions, reporting mechanisms, responsibilities, controls and audit trail requirements for sustainability information. The guideline will be implemented across the group during FY2019.

A comprehensive management report detailing specific findings and recommendations for continued sustainability reporting improvement has been submitted to Assore management for consideration.



Petrus Gildenhuys

Director, IBIS ESG Assurance (Pty) Ltd
Johannesburg, 1 November 2018



AA1000

Licensed Assurance Provider
000-156

The assurance statement provides no assurance on the maintenance and integrity of sustainability information on the website, including controls used to maintain this. These matters are the responsibility of Assore.

GLOSSARY

ABET	Adult basic education and training
AIDS	Acquired immune deficiency syndrome
AMCU	Association of Mineworkers and Construction Union
AMT	African Mining and Trust Company Limited
ARM	African Rainbow Minerals
ARV	Antiretroviral
Assmang	Assmang Proprietary Limited
Assore	Assore Limited
BBBEE	Broad-based black economic empowerment
Beeshoek	Beeshoek Iron Ore Mine
Black Rock	Black Rock Manganese Ore Mine
Cato Ridge	Cato Ridge Works
CDP	Carbon Disclosure Project
CED	Community economic development
CO₂e	Carbon dioxide equivalent
CSI	Corporate social investment
CVT	Counselling and voluntary testing
DEA	Department of Environmental Affairs
DEDET	Department of Economic Development, Environment and Tourism
DMR	Department of Mineral Resources
DoH	Department of Health
dti	Department of Trade and Industry
Dwarsrivier	Dwarsrivier Chrome Mine
ECD	Early childhood development
ED	Economic development
EIA	Environmental impact assessment
EIUG	Energy intensive users group
EMP	Environmental management plan
EMPr	Environmental management programme
ESG	Environmental and social governance
GDP	Gross domestic product
GHG	Greenhouse gas
GHS	Globally Harmonised System
GRI	Global Reporting Initiative
HDSA	Historically disadvantaged South African
HIV	Human immuno-deficiency virus
ICDA	International Chrome Development Association
ICMM	International Council on Mining and Metals
IMnI	International Manganese Institute
IMO	International Maritime Organisation
ISAE	International Standard on Assurance Engagements
ISO	International Organisation for Standardisation
Khumani	Khumani Iron Ore Mine
LED	Light emitting diode
LTI	A lost time injury is any work-related injury that results in a worker being unable to perform their normal duty or similar work on the calendar day following the day of the injury

GLOSSARY continued

LTIFR	The lost time injury frequency rate indicates the number of injuries per 100 employees per 200 000 hours (based on the calculation that 200 000 hours is the hours worked by 100 employees for 50 weeks per annum at 40 hours per week)
m³	Cubic metre
MDR TB	Multi-drug resistant tuberculosis
MHSA	Mine Health and Safety Act
MPRDA	Mineral and Petroleum Resources Development Act
MoU	Memorandum of understanding
MQA	Mining Qualifications Authority
MW	Megawatt
MWh	Megawatt hour
NIHL	Noise induced hearing loss
NUM	National Union of Mineworkers
NUMSA	National Union of Metalworkers of South Africa
OHES	Occupational health, environment and safety
OHS Act	Occupational Health and Safety Act
Ore & Metal	Ore & Metal Company Limited
PDS	Proximity detection system
PPE	Personal protective equipment
Prohibition notice	This is issued in terms of the Occupational Health and Safety Act when serious hazards are found by a safety inspector. The notice can prohibit the use of certain machines, equipment, hazardous substances or processes; or prohibit certain actions until the hazardous situation is shown to have been remediated
REACH	Registration, Evaluation and Authorisation of Chemicals
Rustenburg Minerals	Rustenburg Minerals Development Company Proprietary Limited
SAWIS	South African Waste Information System
SEC	Social and ethics committee
Section 54 notice	This is issued in terms of the Mine Health Safety Act when an inspector has reason to believe that any occurrence, practice or condition at a mine endangers or may endanger the health or safety of any person at the mine, the inspector may give any instruction necessary to protect the health and safety of persons at the mine
Section 55 notice	As above
SED	Social economic development
SENS	Stock Exchange News Services
SHEQ	Safety, health, environment and quality
SLP	Social and labour plan
STI	Sexually transmitted infection
TB	Tuberculosis
TEPP	Tertiary education preparatory programme
TMM	Trackless Mobile Machinery
TVET	Technical & Vocational Education and Training
VSP	Voluntary Severance Packages
WIM	Women in mining
Wonderstone	Wonderstone Mine Limited
WUL	Water use licence
Zeerust	Zeerust Chrome Mines Limited

GRI REFERENCES



Chapter	GRI disclosure references
Assore at a glance	<p>This chapter material reference: GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Name (1) - Activities, brands, products, and services (2) - Location of headquarters (3) - Location of operations (4) - Ownership and legal form (5) - Markets served (6) - Scale (7) - Supply chain (9) - Significant changes to the organisation and its supply chain (10)
Report overview	<p>This chapter material reference: GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Name (1) - Highest governance body's role in sustainability reporting (32) - Defining report content and topic boundaries (46) - Restatements of information (48) - Changes in reporting (49) - Reporting period (50) - Date of most recent report (51) - Reporting cycle (52) - Claims of reporting in accordance with the GRI Standards (54) - Assurance (56)
Social and ethics committee (SEC) report	<p>This chapter material reference: GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Statement from senior decision-maker (14)
Sustainability management approach and structures	<p>This chapter material reference: GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - External initiatives (12) - Membership of associations (13) - Governance structure (18) - Executive-level responsibility for economic, environmental, and social topics (20) - Consulting stakeholders on economic, environmental, and social topics (21) - List of stakeholder groups (40) - Identifying and selecting stakeholders (42) - Approach to stakeholder engagement (43) - Key topics and concerns raised (44)
Material topics	<p>This chapter material reference: GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Precautionary principle or approach (11) - Key impacts, risks, and opportunities (15) - Identifying and managing economic, environmental, and social impacts (29) - Effectiveness of risk management processes (30) - Frequency of review economic, environmental, and social topics (31) - Defining report content and topic boundaries (46) - List of material topics (47)
Safety	<p>This chapter material reference: GRI 103: Management Approach 2016:</p> <ul style="list-style-type: none"> - Explanation of the material topic and its boundary (1) - The management approach and its components (2) - Evaluation of the management approach (3) <p>GRI 403: Occupational Health and Safety 2018</p> <ul style="list-style-type: none"> - Hazard identification, risk assessment, and incident investigation (2) - Prevention and mitigation of occupational health and safety impacts directly linked by business relationships (7) - Work-related injuries (9)

GRI REFERENCES continued



Chapter	GRI disclosure references
Occupational health and wellness	<p>This chapter material reference:</p> <p>GRI 103: Management Approach 2016:</p> <ul style="list-style-type: none"> - Explanation of the material topic and its boundary (1) - The management approach and its components (2) - Evaluation of the management approach (3) <p>GRI 403: Occupational Health and Safety 2018</p> <ul style="list-style-type: none"> - Occupational health and safety management system (1) - Hazard identification, risk assessment, and incident investigation (2) - Occupational health services (3) - Worker participation, consultation, and communication on occupational health and safety (4) - Worker training on occupational health and safety (5) - Promotion of worker health (6) - Work-related ill health (10)
Human resources	<p>This chapter material reference:</p> <p>GRI 103: Management Approach 2016:</p> <ul style="list-style-type: none"> - Explanation of the material topic and its boundary (1) - The management approach and its components (2) - Evaluation of the management approach (3) <p>GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Information on employees and other workers (8) <p>GRI 203: Indirect Economic Impacts 2016:</p> <ul style="list-style-type: none"> - Significant indirect economic impacts (2) <p>GRI 404: Training and Education 2016:</p> <ul style="list-style-type: none"> - Average hours of training per year per employee (1)
Environmental impacts	<p>This chapter material reference:</p> <p>GRI 103: Management Approach 2016:</p> <ul style="list-style-type: none"> - Explanation of the material topic and its boundary (1) - The management approach and its components (2) - Evaluation of the management approach (3) <p>GRI 302: Energy 2016:</p> <ul style="list-style-type: none"> - Energy consumption within the organisation (1) <p>GRI 303: Water and Effluents 2018:</p> <ul style="list-style-type: none"> - Water discharge (4) - Water consumption (5) <p>GRI 304: Biodiversity 2016:</p> <ul style="list-style-type: none"> - Significant impacts of activities, products, and services on biodiversity (2) <p>GRI 305: Emissions 2016:</p> <ul style="list-style-type: none"> - Direct (Scope 1) GHG emissions (1) - Energy indirect (Scope 2) GHG emissions (2) <p>GRI 306: Effluents and Waste 2016:</p> <ul style="list-style-type: none"> - Waste by type and disposal method (2) <p>GRI 307: Environmental Compliance 2016:</p> <ul style="list-style-type: none"> - Non-compliance with environmental laws and regulations (1)
CED	<p>This chapter material reference:</p> <p>GRI 103: Management Approach 2016:</p> <ul style="list-style-type: none"> - Explanation of the material topic and its boundary (1) - The management approach and its components (2) - Evaluation of the management approach (3) <p>GRI 203: Indirect economic impacts 2016:</p> <ul style="list-style-type: none"> - Infrastructure investments and services supported (1) - Significant indirect economic impacts (2)
Governance	<p>This chapter material reference:</p> <p>GRI 102: General Disclosures 2016:</p> <ul style="list-style-type: none"> - Values, principles, standards, and norms of behaviour (16) - Mechanisms for advice and concerns about ethics (17) - Governance structure (18)

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