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This icon indicates where further information or supplementary reports can be found online.





## Boundary and scope of report

**Aveng recognises that it needs to be financially stable and conduct its activities in a manner supportive of sustainability to succeed in creating value for its stakeholders.**

### Reporting philosophy and approach

This sustainability overview provides our stakeholders with a view of Aveng's sustainability focus areas, impacts and the management of these, as well as the Group's performance for the financial year from 1 July 2016 to 30 June 2017.

As part of our evolving approach to corporate reporting, we have streamlined the integrated report in line with the recommendations contained in the King Code of Governance Principles for South Africa 2009 (King III) and in accordance with the International <IR> Framework.

For the 2017 financial year, a suite of reports has been made available to stakeholders, as explained in the table on page 3 for ease of reference. As Aveng continues to improve its data systems (a commitment on the safety, health and environment roadmap) and embeds appropriate responses to group sustainability risks and opportunities into core business processes and management, further reflection of the Group's integrated thinking is evident in its integrated reporting.

The 2017 sustainability overview builds on Aveng's 2016 report, with detail on performance improvement initiatives implemented during the year under review. There have been no significant changes in boundaries or scope during the reporting period. Where any restatements or changes in measurement methods have taken place, these are described in the relevant report section. The boundary of this overview is the Aveng Group as portrayed on pages 2 and 3 of the 2017 integrated report at [www.aveng.co.za](http://www.aveng.co.za), and in instances where reporting extends to other entities outside of the Group, this is disclosed in the relevant

section. Any limitations to this boundary are indicated where applicable. For instance, the reporting boundary of the environmental performance information disclosed represents approximately 90% coverage across all operating groups that currently have systems in place to generate this information.

Sustainability touches every aspect of our business and is therefore critical to our success. We are transparent about our commitments, standards and performance requirements and report annually on our progress through our sustainability overview that follows, set out in the sections outlined below:

- ▶ Safety (pages 11 to 18)
- ▶ Health (pages 19 to 24)
- ▶ Environment (pages 25 to 32)
- ▶ Reporting governance (pages 33 to 36)
- ▶ Risk management (pages 37 to 41)
- ▶ Human resources (pages 43 to 52)
- ▶ South Africa transformation (pages 56 to 60)
- ▶ Corporate social investment (pages 61 to 70).

We have provided insight into the context and focus areas in each section, and identified and correlated relevant stakeholder concerns and risks with actions Aveng executes across the Group. A review of performance against targets (where applicable) and prior periods has been provided at a group level and, where necessary, cascaded down to operating group level.

*Additional information on safety, environment and human resources is provided in the operational review in the 2017 integrated report at [www.aveng.co.za](http://www.aveng.co.za).*

Aveng is not aligned to one single sustainability reporting framework, but rather draws on multiple frameworks and guidelines, such as the Global Reporting Initiative, the Carbon Disclosure Project, the Greenhouse Gas Protocol, the Water Disclosure Project, and various other laws or requirements relevant to our operations relating to environmental and occupational health and safety matters. Our aim is to enhance our sustainability reporting guided

by ongoing reporting improvement in our reporting process. Our sustainability information has been prepared in accordance with our internally developed guidelines, which are available on request from Aveng.

### Governance

Sustainability forms part of the Board's roles and responsibilities.

The primary activities undertaken in 2017 by the social, ethics and transformation committee, risk committee and the safety, health and environment committee were as follows:

#### — Social, ethics and transformation committee

The social, ethics and transformation committee provides independent oversight by reviewing actions of the Board through an ethical lens and being accountable for specific areas within its mandate. The committee proactively reviews management actions and efforts to comply with relevant legislation and charters apply the principles of the King Code of Governance Principles (King III) and prepare for adoption of King IV. This includes the review and recommendation, for approval by the Board, of policies, strategies and plans for management implementation, to ensure that the Company and the Group comply with the generic Codes of Good Practice and the Construction Sector Code and targets aligned to the Department of Trade and Industry's B-BBEE Codes of Practice.

#### — Safety, health and environmental committee

The safety, health and environmental (SHE) committee safeguards the Aveng goal of "Home Without Harm Everyone Everyday". While the committee is content that it complied with its charter, it recognises the value of continuous improvement. The committee further underpins the importance of consistent leadership, value in the safety of people and the commitment to preventing accidents. The committee has performed well in performing its functions against its set work plan to assist and ensure the Group upholds its commitment to its value of safety and care.

## Boundary and scope of report continued

Safety remains the first item of discussion on all Board and operating group management agendas.


In the year under review, leadership engagement continued to be well demonstrated while accountability was encouraged across all levels within the Group. The SHE committee supported the SHE department's revised SHE strategy to enable and align the businesses to uphold the Group's core values and goals.

The revised strategy is mobilised through the SHE Plan on a Page to executing its safety, health and environment imperatives. The key focus areas reinforce the objectives and performance areas that serve as drivers towards realising a controlled work environment.

Focused effort continues to ensure that the identification and use of appropriate expertise, management tools and approaches are applied consistently across the Group. While improvement has been noted the Group continues to pursue continuous improvement and practical application of strategic solutions.

It is expected of leadership to proactively engage in the field with personnel conducting work in order to influence the safety culture positively and eliminate at-risk behaviours and condition.

The integrated SHE policy was revised to ensure strategic alignment and has been approved by the Board in 2017.

Refer to [www.aveng.co.za](http://www.aveng.co.za) for the full corporate governance report. 

### – Risk committee

The Board's risk committee and audit committee act as the governing bodies for the Group's combined risk management assurance model.

The risk committee oversees the activities of all three lines of defence of the combined assurance model and receives reports from the group commercial executive on the efficacy of the model, with the audit committee receiving reports from internal and external audit (third line of defence).

Given that the tender approval process is a critical process in the project lifecycle, this process remains robust with the internal Aveng committee reviewing all major bids and high-risk projects to satisfy itself that all technical, programme, commercial and project risks are adequately dealt with in the preparation of the bid. If this committee approves any tender that is rated as requiring risk committee approval, it is then presented to the Board tender committee (a sub-committee of the Board risk committee) which must satisfy itself that appropriate business processes have been followed in the preparation of the bid and that risks have been considered and appropriately transferred or mitigated prior to bid submission. Particular attention is paid to the key commercial terms. A mandate is given to the relevant operating group specifying the terms under which a contract may be accepted.

The Board risk committee reviews all group material risks, major and problematic projects with specific focus on changes in costs, commercial claims, margins and any other items of concern that occurred since the prior reporting period. Peer reviews and "breaking news" on underperforming contracts are brought to the attention of the risk committee. Concerns raised by the committee are communicated to the relevant operating groups for management actions. Lessons learnt of underperforming or highly successful projects are presented to the risk committee, thereby providing a feedback loop to enable continuous improvement in processes and project execution.

The audit committee oversees the activities of the external and internal audit functions and receives input on the adequacy of financial reporting and control mechanisms. It relies on the input of the risk committee on material risk issues that could impact the financial results.

The Aveng SHE Forum, which is chaired by the group SHE Executive and comprises all operating group SHE executives, reviews performance, launches new initiatives and

ensures that good practice and lessons are shared across the Group.

### Material SHE matters

The Aveng SHE Forum conducted workshops to determine material SHE matters, which comprise:

- ▶ Compliance with SHE legislation and other requirements
- ▶ SHE incident management
- ▶ Subcontractor management
- ▶ Climate change implications
- ▶ Employee wellbeing.


The sustainability overview was approved for release on 20 October 2017.

### Assurance

The King Code of Governance advocates that sustainability reporting and disclosure should be independently assured. The ultimate aim of governance is assurance: comfort that the Group complies with relevant legislation and good practice (compliance); confidence that there are no material control breakdowns (internal and external assurance); assurance that risks are managed (risk management); and a positive assertion that the organisation is operating with integrity and fairness (ethics management).

Refer to [www.aveng.co.za](http://www.aveng.co.za) for the full corporate governance report. 

As part of the audit committee's responsibilities, it reviewed and recommended the approval of an appropriate external assurance provider in respect of the material elements of the sustainability overview. Ernst & Young Inc. has assured selected performance information in this report.

The scope of the assurance, selected performance information and independent assurance report can be found on pages 4 to 6 of this report. 

### Suite of reports and interaction between reports

The 2017 sustainability overview complements the 2017 integrated report by providing more detailed disclosures on

## Boundary and scope of report continued

Aveng's sustainability performance. Certain topics, such as the organisational overview and business model, stakeholder engagement, risk management and material matters, as well as business strategy are disclosed in the 2017 integrated report. Throughout the sustainability overview, references are provided to show where further detail can be obtained from the suite of reports.

### Aveng 2017 suite of reports

	<b>Integrated report</b>	<b>Audited consolidated annual financial statements</b>	<b>Sustainability overview</b>	<b>Corporate governance</b>	<b>Annual general meeting documents</b>
<b>Contents</b>	Concise communication focused on Aveng's material matters, business model, strategy, performance and outlook for sustained value creation.	<ul style="list-style-type: none"> <li>▶ Audit committee report</li> <li>▶ Executive chairman's report</li> <li>▶ Directors' report</li> <li>▶ Report of the independent auditors</li> <li>▶ Audited consolidated financial statements.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Safety</li> <li>▶ Health and wellness</li> <li>▶ Environment</li> <li>▶ Reporting and governance</li> <li>▶ Risk management</li> <li>▶ Human resources</li> <li>▶ South Africa transformation</li> <li>▶ Corporate social investment</li> <li>▶ Independent assurance report on selected sustainability information.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Full corporate governance report</li> <li>▶ King III compliance register.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Our code of business conduct</li> <li>▶ Letter to shareholders</li> <li>▶ Shareholders' diary</li> <li>▶ Salient features</li> <li>▶ Commentary</li> <li>▶ Summarised audited consolidated financial statements</li> <li>▶ Notice of annual general meeting and explanation notes</li> <li>▶ Form of proxy</li> <li>▶ Notes to the form of proxy</li> <li>▶ Shareholders' analysis</li> <li>▶ Corporate information.</li> </ul>
<b>Relationship of information between suite of reports</b>	Relevant cross-references to more comprehensive information across the suite of reports.	A summarised audited consolidated set of financial statements has been extracted from the audited consolidated financial statements and included in the integrated report as an appendix.	Key elements of the above information have been incorporated into the executive and operational reviews of the integrated report.	The full corporate governance report is included in the integrated report.	This statutory information is posted to shareholders prior to the annual general meeting.
<b>Frameworks and guidelines applied</b>	<ul style="list-style-type: none"> <li>▶ King III; preparing for adoption of King IV</li> <li>▶ IIRC International</li> <li>▶ International &lt;IR&gt; Framework</li> <li>▶ Companies Act 71 of 2008 (Companies Act)</li> <li>▶ JSE Limited (JSE) Listings Requirements</li> <li>▶ Employment Equity Act.</li> </ul>	<ul style="list-style-type: none"> <li>▶ International Financial Reporting Standards (IFRS)</li> <li>▶ Companies Act</li> <li>▶ JSE Listings Requirements.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Aveng safety, health and environment and human resource policies and frameworks</li> <li>▶ Carbon Disclosure Project (CDP), Water Disclosure Project (WDP) and Greenhouse Gas (GHG) protocol</li> <li>▶ B-BBEE Codes of Good Practice</li> <li>▶ Construction Sector Charter.</li> </ul>	<ul style="list-style-type: none"> <li>▶ King III</li> <li>▶ Companies Act</li> <li>▶ JSE Listings Requirements</li> </ul>	<ul style="list-style-type: none"> <li>▶ King III</li> <li>▶ Companies Act</li> <li>▶ JSE Listings Requirements.</li> </ul>
<b>Assurance</b>	The Board, assisted by the audit committee and other sub-committees, oversees the integrated reporting process.	<ul style="list-style-type: none"> <li>▶ External audit opinions</li> </ul>	<ul style="list-style-type: none"> <li>▶ Internal audit</li> <li>▶ Limited assurance by external audit on selected metrics</li> <li>▶ BEE verification.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Internal audit</li> <li>▶ Annual Board assessments.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Internal controls</li> <li>▶ Management and governance oversight.</li> </ul>
<b>Web link</b>	<a href="http://www.aveng.co.za">www.aveng.co.za</a>				

# Independent limited assurance report

## Independent limited assurance report for selected key performance indicators in the Aveng Limited Sustainability overview

### To the directors of Aveng Limited

#### Our conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the selected key performance indicators (KPIs) as presented in the Aveng Limited (Aveng) sustainability overview for the 52-week

period ended 30 June 2017 (the report), are not prepared, in all material respects, in accordance with management’s internally defined measurement and reporting criteria.

Ernst & Young Inc. (EY) has undertaken a limited assurance engagement for the selected KPIs described in the table below and presented in the Aveng sustainability overview for the 52-week period ended 30 June 2017. This engagement was conducted by a multidisciplinary team including social, economic, environmental and assurance specialists with extensive experience in sustainability reporting.

maintenance of internal control relevant to preparation and presentation of the selected KPIs free from material misstatement, whether due to fraud or error.

#### Inherent limitations

Inherent limitations of assurance engagements include use of selective testing of the information being examined, which means that it is possible that fraud, error or non-compliance may occur and not be detected in the course of performing the engagement.

There are additional inherent risks associated with assurance engagements performed for non-financial information given the characteristics of the subject matter and associated with the compilation of source data using definitions and methods for determining, calculating and estimating such information that is developed internally by management. The absence of a significant body of established practice on which to draw, allows for the selection of different but acceptable measurement techniques, which can result in materially different measurements and can impact comparability. The precision of different measurement techniques may also vary. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgements. In particular, where the information relies on factors derived by independent third parties, our assurance work has not included examination of the derivation of those factors and other third party information.

#### Our independence and quality control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants as well as the Code of Professional Conduct for Registered Auditors issued by the Independent Regulatory Board for Auditors, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

#### Subject matter

Our limited assurance engagement was performed for the selected KPIs listed below and related performance disclosures as presented in the report.


Category	Selected KPIs
<b>Transformation</b>	1. Number of employees by designation in top, senior, middle and junior management
<b>Social and ethics</b>	2. Number of personnel trained on competition law 3. Number of personnel trained on fraud awareness
<b>Environment</b>	Carbon Footprint: 4. Scope 1 – diesel consumption 5. Scope 2 – purchased electricity
<b>Health and safety</b>	6. Injury frequency rates (all and lost-time injury frequency rate) 7. Number of confirmed cases related to noise-induced hearing loss which have been paid compensation
<b>Corporate social investment</b>	8. Corporate social investment (CSI) trust spend (R)

These selected KPIs, prepared and presented in accordance with management’s internally defined measurement and reporting criteria (management’s measurement and reporting criteria), are marked with an (A) on the relevant pages of the report where they appear.

Management’s internally developed measurement and reporting criteria for these selected KPIs are available on the glossary of terms sustainability reporting definitions report on \*.

The scope of our work was limited to the matters stated above in relation to the report, and did not include coverage of data sets or information relating to areas other than the selected KPIs, information reported outside of the report, comparisons against historical data, or management’s forward-looking statements.

#### Directors’ responsibilities

The directors are responsible for selection, preparation and presentation of the selected KPIs in the report in accordance with management’s internally developed measurement and reporting criteria. They are also responsible for determining the appropriateness of those measurement and reporting criteria in view of the intended users of the selected KPIs disclosed in the report (i.e. Aveng’s stakeholders) and for disclosing those criteria for the intended users (refer to the glossary of terms sustainability reporting definitions report on \*). Furthermore, the directors are responsible for the identification of stakeholders, stakeholder requirements and material issues; for commitments with respect to sustainability performance; for the design, implementation and

\*  <http://www.aveng.co.za/sustainability/sustainability-reports>

## Independent limited assurance report continued

In accordance with International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and other assurance and related service engagements, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Our responsibility

Our responsibility is to perform our limited assurance engagement to express our conclusion on whether anything has come to our attention that causes us to believe that the selected KPIs as presented in the report are not prepared, in all material respects, in accordance with management's internally developed measurement and reporting criteria.

We have performed our limited assurance engagement in accordance with the terms of reference for this engagement agreed with Aveng, including performing the engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform our engagement to obtain limited assurance about whether the selected KPIs as presented in the report, are free from material misstatement.

A limited assurance engagement undertaken in accordance with (ISAE) 3000 (Revised) involves assessing the suitability in the circumstances of management's internally developed measurement and reporting criteria as the basis of preparation for reporting the selected KPIs, assessing the risks of material misstatement of those selected KPIs, whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and

evaluating the overall presentation of the selected KPIs.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgement and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we:

- ▶ Reviewed Aveng's activities, processes and documents at group-level that support the assertions and claims made in the report
- ▶ Interviewed management and senior executives to obtain an understanding of the following that is relevant to the sustainability reporting process:
  - Governance and accountability of relevant sustainability issues
  - Objectives and priorities for embedding and managing sustainability expectations and the progress against these
  - The processes for reporting progress and providing internal assurance to management on sustainability issues
  - The process for determining materiality of sustainability issues
  - The control environment and information systems relevant to preparing the selected KPIs, but not for the purpose of evaluating the design of particular control activities, obtaining evidence about their implementation or testing their operating effectiveness
- ▶ Inspected supporting documentation on a sample basis

- ▶ Performed analytical procedures to evaluate the relevant data generation and reporting processes against management's measurement and reporting criteria
- ▶ Inspected documentation to corroborate the statements of management and senior executives in our interviews
- ▶ Evaluated the reasonableness and appropriateness of significant estimates and judgements made by the directors in the preparation of the selected KPIs subject to assurance, and
- ▶ Evaluated whether the selected KPIs subject to assurance as presented in the report are consistent with our overall knowledge and experience of sustainability management and performance at Aveng.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result the level of assurance obtained in our limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether the selected KPIs presented in the report have been prepared, in all material respects, in accordance with management's internally developed measurement and reporting criteria for those KPIs.

### Other matters

Information relating to prior reporting periods has not been subject to assurance procedures. Our report does not extend to any disclosures or assertions relating to future performance plans and/or strategies disclosed in the report.

The maintenance and integrity of Aveng's website is the responsibility of Aveng's management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for



## Independent limited assurance report continued

any changes to either the selected KPIs in the report or our independent assurance report that may have occurred since the initial date of presentation on the Aveng website.

### **Restriction of use and liability**

Our work has been undertaken to enable us to express a limited assurance conclusion on the matters stated above in our report provided to the directors of Aveng in accordance with the terms of our engagement, and for no other purpose. Our report is intended solely for the directors of Aveng and must not be used by any other parties.

To the fullest extent permitted by the law, we do not accept or assume liability to any party other than the directors of Aveng, for our work, for this report, or for the conclusion we have reached. We agree to the publication of this assurance report in the report for the 52-week period ended 30 June 2017, provided it is clearly understood by recipients of the report that they enjoy such receipt for information only and that we accept no duty of care to them whatsoever in respect of this report.

*Ernst & Young Inc.*

**Ernst & Young Inc.**

Director: Allister Carshagen  
Registered Auditor  
Chartered Accountant

102 Rivonia Road  
Sandton  
Johannesburg  
2196

20 October 2017



# Safety, health and environment overview

Aveng embarked on a strategy review and focused performance improvement initiative in 2017 following an assessment and analysis of safety, health and environment (SHE) performance during the 2016 financial year. Continued analysis has assisted in providing a direction in the revised SHE strategy and risk-based approach to address SHE performance and set in place improvement initiatives across the organisation.

A SHE strategic framework, which clarifies the structure and function of the group SHE office, has been adopted and implemented

at various levels throughout the operating groups. This is informed by the group SHE policy and guided by the SHE management standard as well as the SHE and reporting and governance frameworks. The strategic objectives will also be driven by the implementation of the SHE Plan on a Page at the operating groups and business units.

While industry constraints contributed to fewer man-hours worked on less projects, the number of injuries increased and this remains a key area of concern and focus for the leadership of Aveng.

### Message from the SHE committee

“The thoroughness of accident investigations and diligent implementation of preventative measures have improved. Obviously continued effort is required to ensure that all the lessons learnt stay in place. This is one of the focal points of discussions at SHE committee meetings.

“The importance of consistent leadership and respectful engagement is central to improving health and safety, and never more so than on worksites where the reality is constant change. This year Aveng backed these activities with a newly refined set of practical tools and metrics. The benefits are already evident in many workplaces and I look forward to seeing the group realise the goal of zero harm.

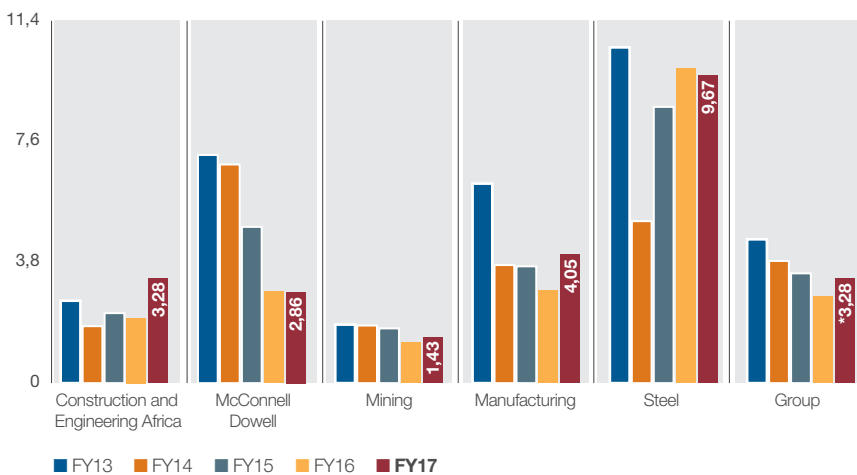
“A more directed risk-based approach is benefiting Aveng’s management of environmental issues, and these are being addressed with increasing clarity and confidence. This is evident from reporting and accounts of follow-up actions.

“Aveng’s projects are challenging and complex. During site visits, people speak with pride about what they have achieved safely.”

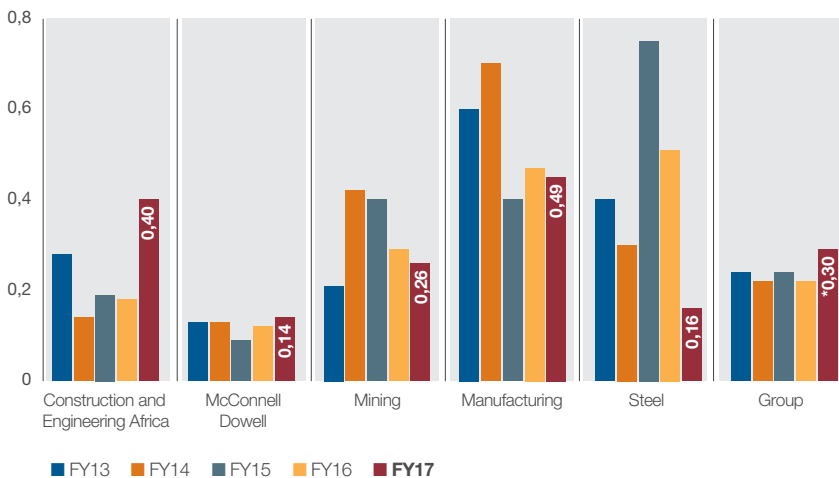
### May Hermanus

Aveng SHE committee chairperson

## All injury frequency rate (2013 – 2017)



## Lost time injury frequency rate (2013 – 2017)



\* (A) This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6).

## Safety, health and environment overview continued

Aveng operates in a diverse, complex environment and employs a large workforce. The safety of our employees is a core value that is integral to the way the Group conducts its business and will not be compromised. Employee safety and wellbeing is critical to our ability to embed a high-performance safety culture and align with our aspirational goal of “Home Without Harm Everyone Everyday”. Unacceptable safety performance is counter-productive and does not reflect the Group’s commitment to safe, controlled work environments. Further, significant safety incidents may attract regulatory sanction, with negative consequences for the Group’s reputation and its ability to procure work.

To ensure that Aveng is equipped to deliver on the SHE strategy, the following initiatives were implemented:

### SHE roadmap

The SHE roadmap was developed to outline the key activities the group SHE office would focus on in 2017. The roadmap also allows for tracking and monitoring of progress with activities linked to the SHE strategy. The SHE team tracked the progress of these activities during the year.

The key focus areas of the roadmap included:

- ▶ Revise SHE policy
- ▶ Develop SHE management standard
- ▶ Revise SHE frameworks
- ▶ Develop a SHE standard and reporting and governance framework

“The commitment to applying the appropriate expertise, energy and structure to ensure that Aveng businesses are free of injury / harm has been exemplary. Results have lagged this commitment but I remain confident that the SHE programme will yield an environment free of harm.”

**Mike Kilbride**  
Aveng SHE committee member

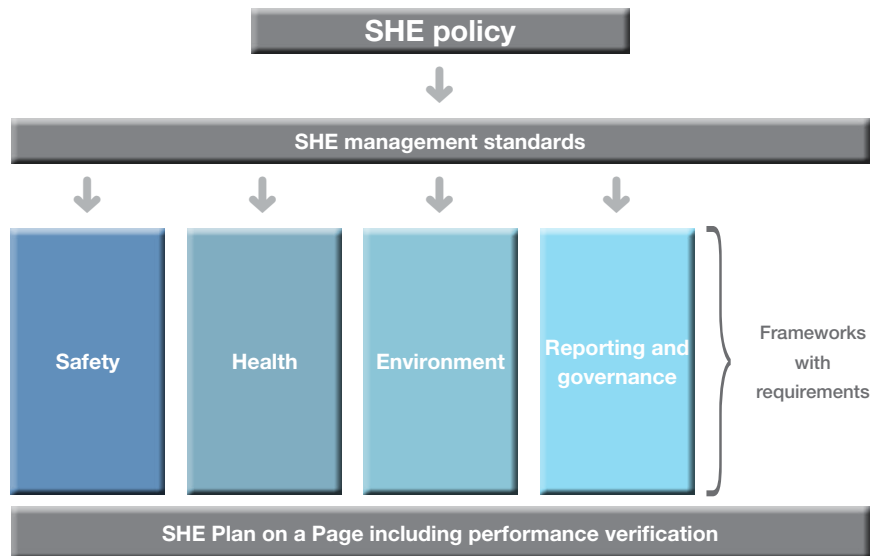
- ▶ SHE Plan on a Page
- ▶ Revised SHE risk register and risk management framework

A Safety Excellence Award was introduced for the Aveng CEO to recognise outstanding safety performance by Aveng individuals or teams. The awards are based on nominations by managing directors of operating groups and business units and are presented at monthly executive committee meetings.

### Strategic objectives

In support of the strategic framework, guidance documents have been revised and developed to ensure that strategic objectives are realised. The SHE management standard and the SHE frameworks have been developed and approved by the Aveng executive committee. The reporting and governance framework is being finalised.

The SHE Plan on a Page underpins the execution of the strategic framework and provides key focus areas under each SHE and reporting and governance element.



### SHE policy

The revised integrated safety, health and environment (SHE) policy supports strategic alignment and clear communication of the Aveng safety vision of “Home Without Harm Everyone Everyday”. The vision should become a way of life for all of the Group’s employees, suppliers, contractors and visitors who enter the Group’s premises.

While Aveng holds its leaders accountable for the adoption, communication and implementation of this policy, it also expects all employees to take responsibility for their own health and safety, and protection of the environment. Each operating group is responsible for the allocation of appropriate resources, including the provision of

training, consultation and auditing of the implementation of the policy.

This SHE policy is a summary of the Aveng SHE management standard and the SHE frameworks. The Aveng SHE Plan on a Page outlines the processes to deliver on the requirements of the policy. The Board’s SHE committee monitors compliance with the policy.

Aveng’s SHE policy is available at [www.aveng.co.za](http://www.aveng.co.za)

### SHE management standard

The Group’s SHE management standard is

## Safety, health and environment overview continued

derived from the SHE policy established by the Aveng Board. The SHE frameworks set minimum requirements for the operating groups. The SHE management standard was established to:

- ▶ Ensure that the highest standards of performance and accountability are achieved across all the Group’s operations, sites and projects
- ▶ Provide a standard for each operating group to develop and manage its own policies and procedures under the direction and supervision of leadership and management in line with the standard and the frameworks

The purpose of this standard is to provide information and guidance to Aveng stakeholders, and for them to have a clear understanding of the Aveng SHE management approach.

### SHE frameworks

The SHE frameworks were revised to ensure alignment with Aveng’s strategy and relevance to changes experienced by the business.

The revised frameworks set the minimum requirements that each operating group is required to adopt in the work environment and context in which it operates. They contain non-negotiable requisites and key focus areas that will assist the business in achieving “Home Without Harm Everyone Everyday” as a way of life.

### SHE Plan on a Page

The SHE Plan on a Page (PoP) has been developed to execute the SHE strategy and focus on improved SHE performance. The SHE PoP supports Aveng’s intent to encourage accountability and responsibility across the Group.

The operating groups have adopted and communicated the SHE PoP and aligned it to the SHE management system.

To facilitate the auditing of the SHE PoP, an assessment protocol has been developed and implemented in the operating groups. The assessment protocol allows for a gap analysis rating and an indication of measurable compliance by each of the PoP’s action items. Each operating group

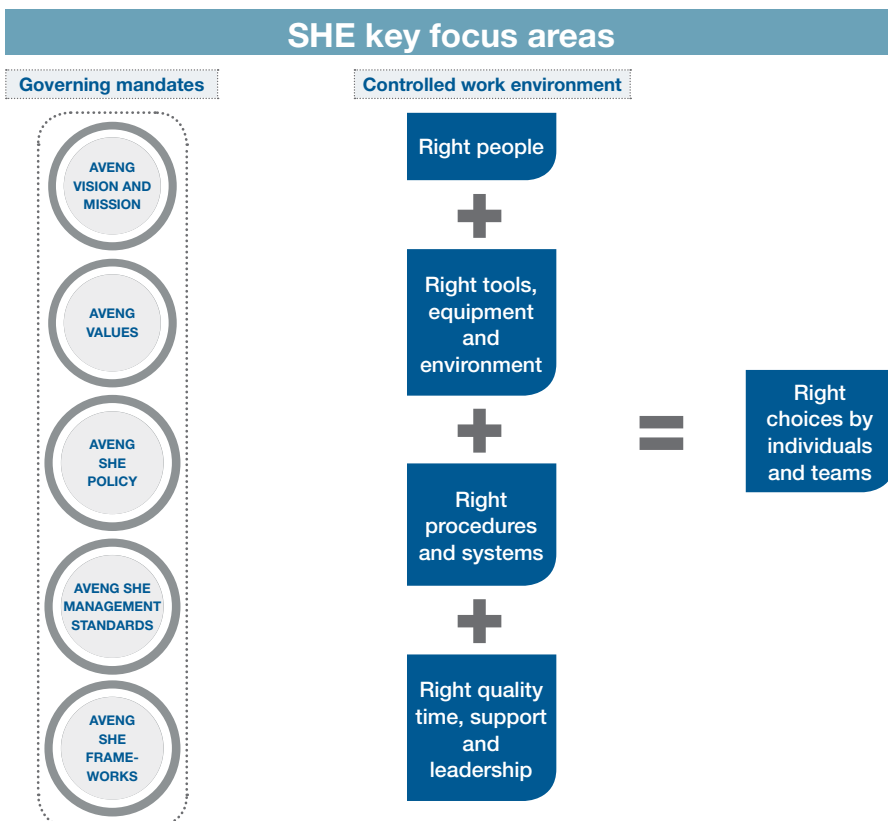
and business unit will develop an action plan to track actions and progress as well as measure improvement in the next review period.

The SHE PoP applies a risk-based approach. Each focus area identifies appropriate controls to manage associated risks. It also incorporates practical monitoring and evaluation of the effectiveness of the controls.

The Aveng SHE PoP has identified the following four focus areas as drivers to realise a safe controlled work environment:

- ▶ Right people
- ▶ Right tools and equipment
- ▶ Right procedures and systems
- ▶ Right quality time, support and leadership

These focus areas underpin the key objectives and performance areas for safety, health, environment and the reporting and governance frameworks.



“Over the past few years I have noted with pleasure a significant improvement in the level of professionalism applied to this very important component of running a business successfully. There has been considerable effort on focusing on the key issues that would lead to an improvement in performance.

“The benefits of this approach are beginning to show although, as we all acknowledge, there is always room for further improvement.”

**Mahomed Seedat**  
*Aveng SHE committee member*

## Safety, health and environment overview continued

### Focus

The following areas will be focused on in the next phase of the SHE strategy in 2018:

- ▶ Just culture – not one of fear, but one of empowerment and recognition
- ▶ Create an environment where employees feel valued and cared for
- ▶ Audits, inspections and reviews – verification of controls and standards
- ▶ Visible-felt leadership improvement – engagement, verification, recognition
- ▶ Quality of planned task observations (PTOs) – deviations to be addressed and high risks appropriately actioned
- ▶ Worker competency verification
- ▶ Line managers to take total ownership of safety – function to support
- ▶ Enforcement of lifesaving rules – consistency in consequence management
- ▶ Subcontractor improvements – rewards/penalties; single point of accountability (SPAs)
- ▶ Training supervisors in good safety leadership
- ▶ Intensify focus on, and executive visits to poorly performing sites
- ▶ CEO Safety Excellence Awards

### SHE definitions

To ensure a standard approach across the Group, a number of SHE definitions have been reviewed and refined accordingly.

- ▶ Controlled activities
  - Activities that may include fatalities, significant incidents, or lost-time injuries where Aveng can set SHE standards and systems and directly supervise and enforce their application.

- ▶ Monitored activities
  - Activities where Aveng can influence SHE standards but cannot directly supervise or enforce their application. Monitored activities include all operations other than controlled activities in which Aveng is involved. Incidents arising from monitored activities are, where possible, reported and investigated in accordance with Aveng requirements but are not directly included in Aveng SHE performance measures.
- ▶ Uncontrolled activities
  - If an activity is not controlled or monitored, it is an uncontrolled activity. Aveng does not set or influence SHE standards and systems and does not supervise SHE performance at operations during uncontrolled activities
  - Uncontrolled incidents may be reported, an investigation conducted as per actual or potential significance and the lessons learned from the incident shared as part of a learning culture within the organisation

### SHE risk management Risk-based approach

The SHE office has developed and revised risk management tools as part of continuous improvement in reporting and governance across the operating groups. The operating groups have adopted the revised risk registers, based on the risk bow-tie methodology, and continue to monitor risk performance. Operating groups continue to manage and monitor material risks and test the effectiveness of controls.

Further development of efficient processes will be conducted in 2018 to increase the maturity of SHE risk management across the operating groups.

The Group's SHE material risks register highlights SHE risks that are material to the Group.



# Safety



# Safety

Aveng’s journey towards realising its vision of “Home Without Harm Everyone Everyday” continues and safety remains a core value in the way the Group conducts its business. The importance of team work remains key for the organisation to realise this vision. Accountability is encouraged across all levels within the Group and greater effort continues to ensure that leaders are held to account for safety outcomes. To emphasise Aveng’s drive towards continuous improvement, its operating groups have strategically adopted the risk-based approach to safety within the diverse environment the Group operates in.

Aveng demonstrates its commitment to safety and care as part of its core values by encouraging and supporting ownership and responsibility across the business. The operating groups have taken on strategic initiatives to positively communicate and reinforce safety mindedness in the way business is conducted.

Aveng’s safety, health and environmental (SHE) policy was reviewed again in 2017 to incorporate the revised strategic structure and plan for safety, health and environment. The SHE strategic review established reporting and governance requirements and rolled out the strategic road map and actions through the SHE Plan on a Page. This has been communicated across all operating groups and has been adopted and introduced across all business units.

Aveng’s safety approach is further enhanced by the safety framework which details the safety requirements applicable to the operating groups. The requirements define

what each operating group should develop and implement. Apart from specific safe operating procedures, the operating groups have also developed and entrenched lifesaving rules which are non-negotiable “cardinal” rules associated with safe behaviours and safe operating standards.

The Group’s near-miss reporting and visible leadership culture remains strong and active. Increased effort and focus across different levels of management teams was driven by the operating groups to ensure safety matters are addressed as priority. Near-miss reporting continues with a steady performance improvement on recording and addressing trends that are noted through the various reporting platforms.

There has been a continued effort in conducting visible felt leadership (VFL) across the Group as part of improved SHE performance and leadership engagement. Focused VFL interventions were conducted by operating groups’ leadership and management, with an extended effort from executive committee teams. Leadership engagement was further demonstrated at identified projects as determined by SHE performance and driven by risk-based management controls, including of site visits by the group CEO.

### Strategy

The Aveng Board and SHE committee, assisted by the group SHE office, continue to provide support across the Group by providing policy direction, oversight, strategic direction through the implementation of the SHE frameworks,

and identification of risks and opportunities to improve the Group’s approach to SHE.

In 2017, Aveng strengthened its strategic response to the implementation of its safety imperatives through the SHE Plan on a Page and a SHE roadmap, which will guide the implementation of SHE strategy, including reporting on performance against the strategy.

### Key focus areas

The key SHE focus areas identified as part of this process are:

- ▶ Leadership engagement through VFL
- ▶ Reduction of injuries
- ▶ Prevention of fatalities

These safety focus areas and specific actions to manage them are discussed in more detail in the Safety Plan on a Page below. Each operating group has developed and executed initiatives to ensure these focus areas are implemented.

### SHE Plan on a Page – safety

The SHE Plan on a Page (PoP) was developed to ensure execution of the strategy, following endorsement of the PoP by the Aveng executive committee and SHE committee. The operating groups adopted and rolled out the plan, with businesses conducting gap analyses and the Group assessing SHE performance to establish a performance base. Outcomes from the assessments provided a diagnosis of performance and highlighted focus areas within the businesses, informing the next phase of the safety performance improvement.

## SHE PoP – Safety

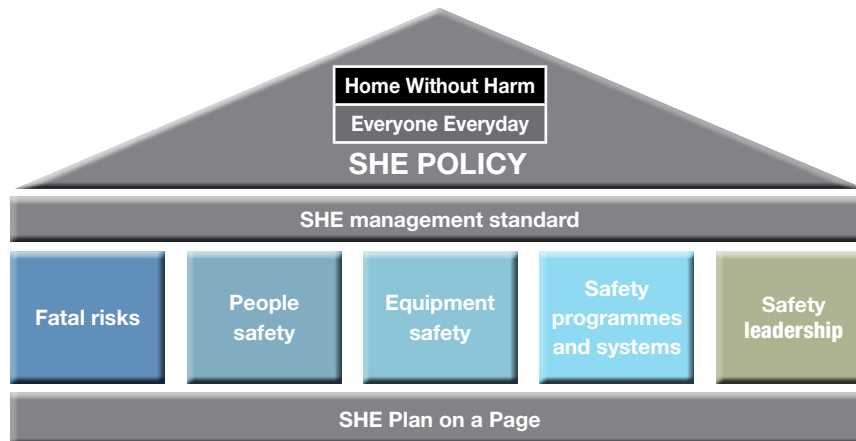
<b>Safety</b>	<b>VFL</b>	<ol style="list-style-type: none"> <li>1. Develop and implement VFL training, including behavioural interventions</li> <li>2. Implement schedule for VFL activities</li> <li>3. Conduct legal liability training</li> </ol>	<ul style="list-style-type: none"> <li>• Verify compliance to VFL schedules and KPIs</li> <li>• Verify action close out</li> <li>• Percentage compliance to VFL and legal training plans</li> </ul>
	<b>Reduce injuries</b>	<ol style="list-style-type: none"> <li>1. Correct hazard identification and implementation of controls and management of associated risks</li> <li>2. Prevent repeat incidents through accurate identification of root causes and implement lessons learnt</li> <li>3. Implement planned task observations (PTO) / planned job observations (PJO) programme</li> <li>4. Timeous, proactive reporting of incidents</li> <li>5. AIFR and LTIFR within plan</li> </ol>	<ul style="list-style-type: none"> <li>• Verify execution of risk-based controls</li> <li>• Review incident investigations, quality of outcomes and close out compliance</li> <li>• Verify quality as well as timeliness of PTOs / PJOs and close out of deviations</li> <li>• Analyse incident trends and resultant intervention plans</li> <li>• Validate AIFR and LTIFR against plan</li> </ul>
	<b>Prevent fatalities</b>	<ol style="list-style-type: none"> <li>1. Identify the fatal risks and implement preventative and mitigating controls</li> <li>2. Develop and implement lifesaving rules</li> </ol>	<ul style="list-style-type: none"> <li>• Peer and management reviews to verify control effectiveness of fatal risk control plans</li> <li>• Verify implementation of lifesaving rules</li> <li>• Verify and distribute case studies</li> </ul>

## Safety continued

### Safety framework

The Aveng safety framework defines the Group's approach to safety stewardship. The framework sets the minimum requirements that each operating group is required to adopt in the work environment in order to achieve its safety goals. It contains non-negotiable requisites that will assist in achieving "Home Without Harm Everyone Everyday" as a way of life.

The framework has five overarching pillars that form its backbone as depicted below:



The pillars set the minimum non-negotiable requirements for each operating group to contribute to a safe work culture.

**Fatal risks** – This pillar requires reporting and review of fatalities and significant incidents in order to develop comprehensive protocols to prevent recurrence.

**People safety** – Aveng supports and expects all stakeholders to be committed to, and accountable for its vision of "Home Without Harm Everyone Everyday". This should be demonstrated in the way business is conducted and leadership takes accountability for safety.

**Equipment safety** – In an industry sector that requires the use of equipment at project sites, Aveng prioritises the mitigation of risks that operators and other employees may be exposed to. Operating groups are required to take measures necessary to ensure that

equipment is suitable for the work to be carried out.

**Safety programmes and systems** – This pillar requires a systematic approach to safety management, including organisational structures, accountabilities, policies and procedures, with the intent to control risks and prevent incidents.

**Safety leadership** – Clear and visible safety leadership is a key contributor to a safe work culture. It is incumbent on Aveng management as leaders to model and reinforce the highest standards of safety management and risk control.

### 2017 safety performance

#### Overall safety performance

- ▶ Two lives were lost under direct Aveng supervision (2016: zero)
- ▶ One monitored incident\* resulting in the loss of three lives (2016: five incidents resulting in loss of eight lives)

- ▶ All injury frequency rate 3,28 (2016: 2,7)
- ▶ Lost-time injury frequency rate 0,30 (2016: 0,22)
- ▶ Resilience in near-miss reporting with 61 820 reported, of which approximately 92% were addressed (2016: 62 154; 88% addressed)\*\*
- ▶ More than 95% of Aveng operations achieved OHSAS 18001 certification (by headcount)
- ▶ 21% improvement in leadership visits by managing directors and their direct reports to 928 (2016: 729)

\* Prior to 2016 monitored incidents were not reported.

\*\* This improvement in performance is attributed to an increased focus on safety initiatives and improved reporting at site level. Business unit level senior managers and site supervisors maintained VFL visits or visiting manager reports.

Performance area	2017	2017 target	2016	2015	2014	2013
Lives lost under Aveng supervision	2	0	0	4	6	6
All injury frequency rate (A)	3,28	2,50	2,7	3,5	3,8	4,5
Lost-time injury frequency rate (A)	0,30	0,20	0,22	0,24	0,22	0,24
Number of safety leadership visits by senior management	928	915	729	903	801	995
Percentage operations with OHSAS 18001 certification (by headcount)	>95	>95	>90	70	>95	>95

(A) This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6).

## Safety continued

### Stakeholder management

Aveng has identified its main safety stakeholders as employees, clients, agents, suppliers, contractors and the authorities responsible for ensuring compliance with safety regulations. Their key safety concerns and the requirements and actions taken to address them are reported in the table below:

Stakeholder	Concern	Impact on business	Actions
<b>Employees</b>	Safe workplace No injuries to workers	Reduced productivity Low worker morale	Safety policies, systems and procedures to minimise risks are reviewed by executive management and external verification authorities
<b>Clients</b>	Injury-free operations on projects	Reputational damage	Each operating group has an experienced safety professional who provides advice and support, and conducts regular reviews
<b>Agents</b>	Compliance with 2014 Construction Regulations and OHS Act	Delays in project execution Poor relationship with clients	A reporting and learning culture is encouraged Compliance reviews and audits are conducted
<b>Authorities</b>	Compliance with legislation High accident rates in construction industry	Work stoppages Potential criminal prosecutions	Sharing of leading practices is enabled by Aveng SHE forum Aveng engages in consultative discussions about future legislative amendments and practical challenges in implementation. Engagements occur through formal structures such as SAFCEC and Master Builders of South Africa

### Employee lives lost

Two lives were lost during the 2017 financial year. One fatality occurred at the Barangaroo project in Sydney, Australia on 1 March 2017. The deceased, Timothy MacPherson, was a labour hire worker to a marine subcontractor.

The second incident occurred on 17 December 2016 when an Aveng jumbo drill operator, Johannes Qhanya, fell from the safety net between the stage sidewall to the shaft bottom at a project in Limpopo province. Johannes passed away in June after a six month period of rehabilitation.

### Lives lost beyond the control of Aveng (monitored incidents)

In 2017, one monitored incident was reported, which resulted in the loss of three lives (2016: 8) due to circumstances beyond the control of Aveng. A public road incident resulted in the loss of two personnel and a civilian, who drove into the oncoming traffic, impacting the subcontractor vehicle. These are categorised as monitored incidents in our internal records and are investigated with the same rigour as if they were under our control.

### All injury frequency rate

Aveng continues to strive for improved knowledge and monitoring of key safety indicators to create a better controlled

environment with efficient risk-based controls to ensure the safety of its people. The all injury frequency rate (AIFR) continues to be monitored for a more comprehensive understanding of safety performance. This indicator includes all work-related injuries as listed in Aveng definitions and also considers industry norms. During 2017, 1 087 (2016: 1 079) injuries on duty occurred. This resulted in an AIFR of 3,28 (2016: 2,70) which is above the improvement target of 2,50 set for the year.

### Lost-time injury frequency rate

Aveng did not meet its lost-time injury frequency rate (LTIFR) tolerance level of 0,20 and recorded 98 LTIs (2016: 89) which resulted in a LTIFR of 0,30 (2016: 0,22).

There was an increase in the number of injuries reported as well as a decrease in man-hours, hence an increase in the frequency rates during 2017.

### Safety improvement interventions

In response to the increase in injuries, the affected operating groups responded with risk-based initiatives to develop accountability for safety performance.

McConnell Dowell addressed subcontractor safety performance to improve awareness of risks and hazards. Improved leadership

engagement was delivered through focused VFL programmes.

Aveng Grinaker-LTA had safety intervention training to address high risk areas at incident-prone sites, such as working at heights and supervisor training. The operating group also implemented its lifesaving rules during the year.

Aveng Mining implemented a leadership intervention to strengthen safety performance at its projects and introduced a behavioural-based initiative to identify hazards or potential risks that could lead to incidents.

Aveng Steel revised its safe working procedures for management and introduced written standard operating procedures and planned job observations.

The group SHE office provided on-site guidance, advice and monitoring tools to assist the operating groups to meet their safety objectives. The SHE Plan on a Page and additional key performance indicators assist in monitoring trends.

The following examples demonstrate some of the outcomes of a continuous improvement campaign by Aveng operations to embed a safe work culture and care for all employees and people.



## Safety continued

### Strategy in action

#### Communicating safety rules and behaviour

Aveng Grinaker-LTA has developed and implemented safety standards called lifesaving rules as part of a process to mitigate safety risks in the construction industry that employees are exposed to daily. To ensure that these standards are understood, accepted and kept top of mind throughout the operating group, a strategy was developed to communicate them to employees.

The multi-layered communication strategy supports Aveng's vision of "Home Without Harm Everyone Everyday" and intends to ensure that the vision becomes a way of life for all of its employees, suppliers, contractors and visitors to the Group's premises. The strategy is aligned with Aveng Grinaker-LTA's Siyanda communications initiative introduced in 2014 to convey key safety, health, environment and quality management messages through regular Toolbox Talks and monthly comic strip publications.

The lifesaving rules were introduced in 2017 to reinforce key safety messages within the construction operations. The following steps were taken to enhance understanding, acceptance and adoption of the standards:

- ▶ An industrial theatre show was developed to raise awareness of the safety risks in construction and the standards and critical behaviours necessary to mitigate these risks.
- ▶ In support of Aveng Grinaker-LTA's community upliftment programme, an internal communications service provider held auditions at a community school to select the actors to play the parts of well-known Siyanda characters Ben and Sizwe, and the newest member, Zinzi.
- ▶ The play was seen by all South African employees of Aveng Grinaker-LTA during a roadshow to all project sites. It started with an audio-visual message from the managing director and the MDs of each business unit in which each executive confirmed their commitment to safety and emphasised the importance of everyone making the same commitment.
- ▶ A catchy song was released during the roadshow to reinforce the messages of "STOP, LOOK, THINK before you ACT" and "Home Without Harm Everyone Everyday".



## Safety continued

### Strategy in action

#### Mitigating the risk of falling from height

During McConnell Dowell's execution of the Alford Bridge Deck in the Waterview project in Auckland, New Zealand, the project team identified the need to develop and institute a safety system to protect personnel from falling from height while working on the deck.

Initially, the team thought of installing tie off points into the deck with static lines. However, this would require workers to wear a harness full time, and work from elevated work platforms where necessary while on the bridge.

Realising that permanent bolts had to be positioned along the edge of the deck, a McConnell Dowell team member developed the idea of making temporary stanchions that could be attached to the permanent bolts and fitted with handrails, toe-boards and scrim while the temporary deck hoarding was in place, ensuring continuous protection.

When the project was completed, the temporary stanchions were easily removed and re-used at other McConnell Dowell bridge projects.

#### Safety benefits

- ▶ Eliminated the need for work from harnesses / lanyards and elevated work platforms
- ▶ Reduced likelihood of injuries to workers falling from height
- ▶ Increases efficiency of task



## Safety continued

### Reporting and learning culture

Efforts to improve near-miss reporting continued throughout the Group. In total, 61 820 near-misses were reported, approximately 92% of which were addressed at the site or at premises where they occurred, ensuring that responsibility for safety remains where it belongs at site level.

An action plan to embed SHE culture at Aveng Grinaker-LTA following a safety, health and environmental culture maturity assessment in 2015 was implemented throughout the operating group through a number of behavioural programmes specific to each business unit's safety performance.

### Ensuring executive leadership engagement with the workforce

Visible leadership visits to project sites and fixed facilities are an important leading indicator for Aveng. The general trend over the last four years has improved throughout the Group, indicating entrenchment of the visible felt leadership culture. Visits and visiting manager reports by executive and senior managers at business units are included in the operating group reports.

Executive and senior managers across the different operating groups demonstrated commitment to the safe work culture and visible leadership by meeting site visitation targets, engaging supportively with site teams and ensuring consistency in visibility.

This will remain an area of focus and improvement across the Group to ensure continued improvement in the execution of VFL and visiting manager reports (VMRs).

### Managing transport safety risks

Discussions on the need to improve support for traffic inspectorates during construction or maintenance work continued between the South African National Roads Agency Limited (SANRAL) and the South African Forum of Civil Engineering Contractors (SAFCEC).

### Managing high-consequence activities

The following initiatives were implemented to improve transport-related safety:

Aveng Grinaker-LTA provided risk-based driver training for all of its operators and employees of subcontractors and service providers, such as taxi and bus operators. The training ensures that operators

understand the plant and equipment they operate.

### Key drivers of improved safety performance

The following key drivers of safety performance are prioritised in the operating groups' safety management programmes:

- ▶ Strengthening the learning and communication culture of Aveng
- ▶ Growing a safe and just work culture across all levels
- ▶ Creating an environment where employees feel valued and cared for
- ▶ Improving transport risk management on public roads and employee and public safety
- ▶ Ensuring compliance with the 2014 Construction Regulations
- ▶ Continued entrenchment of lifesaving rules, supporting standards and critical behaviours
- ▶ Professional registration and further training of construction health and safety practitioners
- ▶ Improving accountability for safety by leaders and employees
- ▶ Improving engagement with subcontractors and to strengthen subcontractor safety management and performance.



## Safety continued

### Looking ahead

Focus areas – 2018	Desired outcomes	Actions
<b>Focus on developing a resilient learning culture</b>	Develop formal case studies and disseminate lessons learnt from significant or high-potential incidents	<ul style="list-style-type: none"> <li>▶ Encourage sharing of lessons learned through case studies from potential or actual significant incidents</li> <li>▶ Drive improvement in quality of incident investigation reports and assess effectiveness of controls</li> </ul>
<b>Entrench continued improvement in safety performance</b>	10% or greater improvement in the average two-year injury rates	<ul style="list-style-type: none"> <li>▶ Set targets for job observations by senior managers and SHE practitioners to determine adherence to standard operating procedures (SOP)</li> <li>▶ Assess continued suitability of SOP and ergonomics related to task and work environment</li> <li>▶ Assess effectiveness of controls</li> <li>▶ Assess effectiveness of improvement initiatives</li> </ul>
<b>Continued focus on demonstrating visible leadership in safety</b>	All planned leadership visits effectively completed by senior management	<ul style="list-style-type: none"> <li>▶ Continue to provide training for Aveng leaders and management on how to conduct VFLs effectively to implement learning and improve quality of engagement during site visits</li> </ul>
<b>Continued management of subcontractor and service provider safety</b>	Zero lives lost involving subcontractors and service providers	<ul style="list-style-type: none"> <li>▶ Centre-led procurement has invested in software to enable pre-qualification evaluation and on-the-job auditing of subcontractors</li> <li>▶ Improved subcontractor management, induction and training initiatives</li> <li>▶ Consistent application of all lifesaving rules</li> </ul>
<b>Management of high-consequence activities</b>	Zero lives lost involving employees, subcontractors and service providers	<ul style="list-style-type: none"> <li>▶ Improved quality of incident investigation reports and effectiveness of controls</li> <li>▶ Consistent application of all lifesaving rules</li> <li>▶ Improved leadership visibility on site</li> </ul>
<b>Management of SHE incidents</b>	Operating groups focus on implementing procedures and associated training to address SHE high-consequence activities, improve root and generic cause analysis and share lessons learnt from SHE incidents.	<ul style="list-style-type: none"> <li>▶ Revise significant incident investigation and management procedure</li> <li>▶ Encourage use of case study reporting and sharing of lessons learnt across the operating groups</li> <li>▶ Assess incident investigation technique and engagement by senior and SHE operations managers</li> </ul>
<b>Improved reporting and governance</b>	Improved data collation Improved monitoring and compliance	<ul style="list-style-type: none"> <li>▶ Improve systems and data accuracy</li> <li>▶ Ensure internal and external compliance with legal and other requirements is maintained</li> </ul>
<b>Engaging with supervisors, work force and subcontractors</b>	Zero lives lost involving employees, subcontractors and service providers Improved safety performance	<ul style="list-style-type: none"> <li>▶ Improved subcontractor management, induction and training initiatives</li> <li>▶ Consistent application of all lifesaving rules</li> </ul>



# Health



# Health

## Health

Aveng continues to improve its approach to health in line with its duty of care. The Group seeks to ensure that sound practical standards of health and wellness behaviour and performance are adopted and achieved across its operations and activities.

Aveng recognises the importance of protecting employees, contractors and other stakeholders and managing all occupational illnesses. The Group identifies all health risks associated with its work processes and implements and monitors measures to manage these risks.

Our objectives are to:

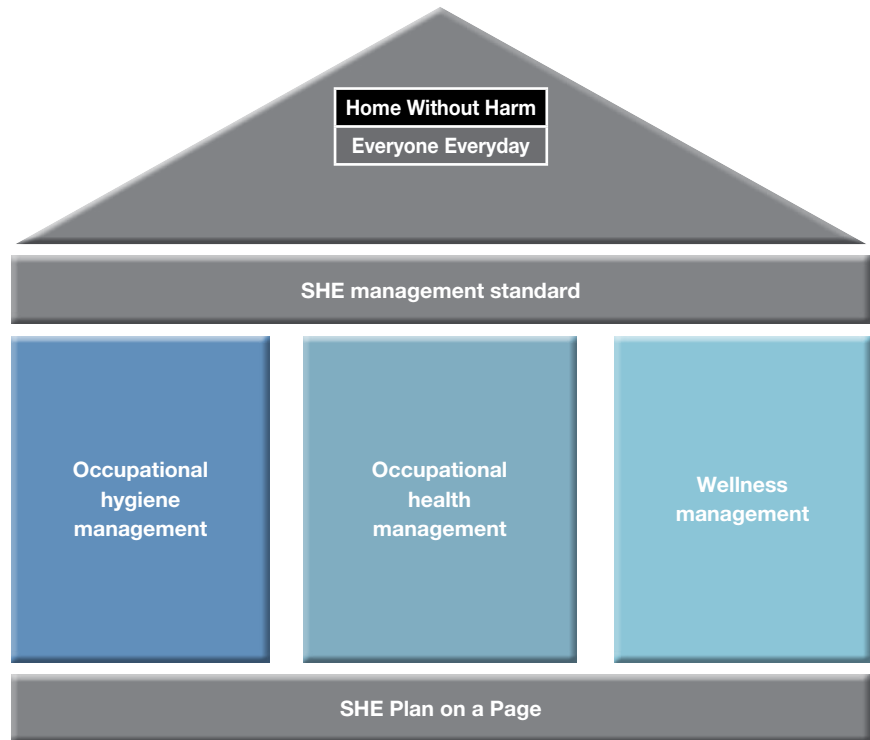
- ▶ Protect our employees, contractors and stakeholders against health-related work hazards
- ▶ Adapt work and the work environment through the correct placement of personnel based on inherent job requirements
- ▶ Contribute towards the physical and mental adjustment and social wellbeing of employees, contractors and other stakeholders
- ▶ Mitigate occupational hazards, incidents and occupational health-related diseases with early identification
- ▶ Provide a support function for employees and their families, where reasonably practicable

Aveng exercises a duty of care to protect the health of its employees, contractors and stakeholders at all times. We take 'reasonable and practical' steps to minimise harm to people when there is a direct or indirect potential for harm to their health.

Aveng is committed to driving behaviour across the organisation which ensures the safety of employees, contractors and stakeholders in the workplace and as such recognises that health and wellness are core enablers for safety.

Aveng's framework has been updated to ensure that the Group is able to meet its objectives effectively.

## Three strategic health pillars



- ▶ **Occupational hygiene management:** the key fundamentals are to assess the risk, develop risk assessments and then implement reduction plans.
- ▶ **Occupational health management:** ensures that Aveng has a risk-based medical surveillance (RBMS) programme and incorporates the emergency response, record keeping and service provider management.
- ▶ **Wellness management:** ensures that Aveng has functional programmes to manage employee assistance, fatigue, communicable disease, incapacity and disability.

Each operating group develops and manages its own health programme and procedures within the guidelines of the Group's framework.

Regular meetings between the human resources and SHE teams in the operating groups ensure that the impact of health on safety is fully understood and managed. This includes reviews of absenteeism rates, incapacity and ill health cases. Regular reviews of the health strategy are undertaken in each operating group to evaluate impact and return on investment.

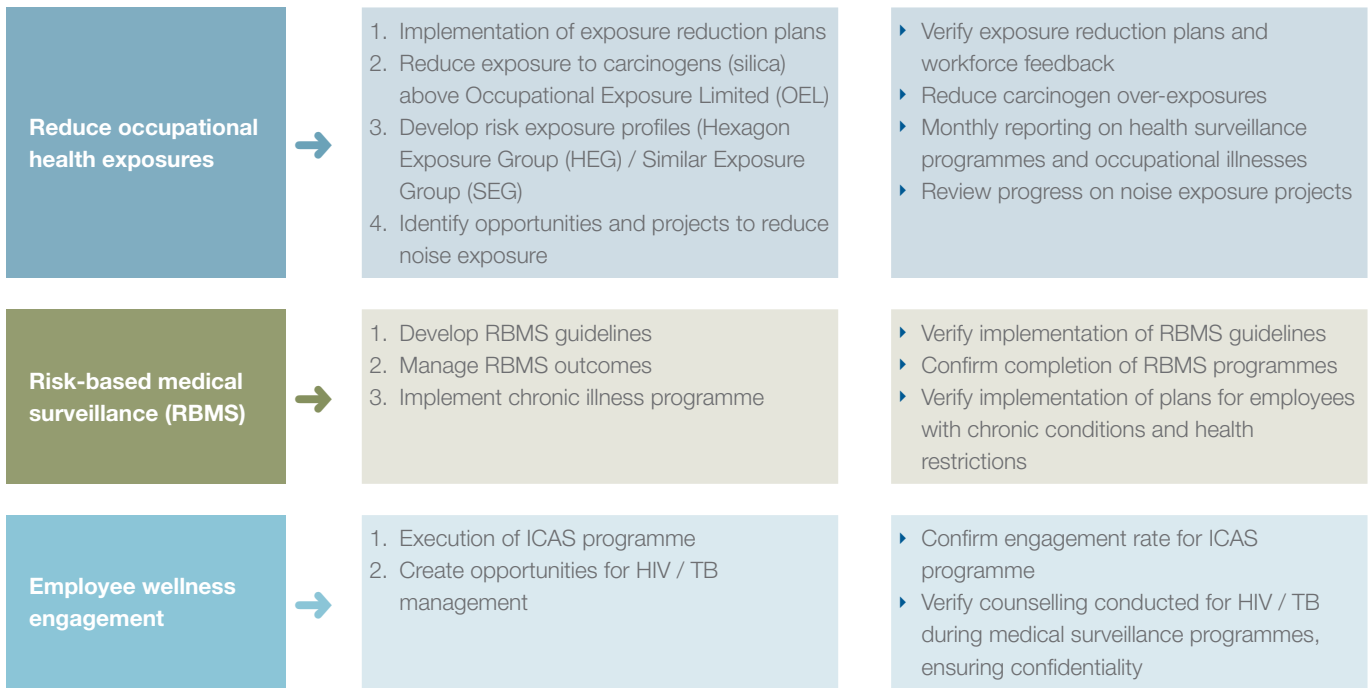
Aveng engages with its occupational health service providers to ensure that they meet legal requirements and the Group's standards to create a proactive medical surveillance programme.

## Health continued

### Key focus areas

As part of its journey to further operationalise the health framework, Aveng developed the Plan on a Page (PoP) to prioritise the following areas of focus:

#### SHE PoP – health



### 2017 salient features

Performance area	2017	2016	2015	Industry benchmark
Occupational health examinations	<b>18 850</b>	20 915	25 592	N / A
Ill health profile* (outcome of medical testing) (%)	<b>7,13</b>	10,9	6,8	30*
HIV counselling and testing (HCT)** employees	<b>2 588</b>	2 104	3 068	N / A
Noise-induced hearing loss (NIHL) <sup>(A)</sup>	<b>3</b>	25****	48	458 600***
EWP engagement rate (%) (SA operations)	<b>10,4</b>	10,8	9,3	12

<sup>(A)</sup> This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6).

\* Number of employees who have restrictions and limitations compared to medical testing conducted.

\*\* Volunteer training and testing for HIV / TB and wellness screening results have been obtained for South African operations only. While testing is conducted across South African borders the results are not easily accessible; McConnell Dowell operations do not routinely conduct HIV tests, unless a request is made by the client or country in which operations occur.

\*\*\* The WHO estimates that 18% of adult-onset hearing losses in the 20 southern most countries in Africa (AFRE region), including South Africa, might be due to NIHL in the workplace (Nelson et al., 2005b).

\*\*\*\* Revised definition for NIHL from 2016: Registered cases, without confirmed liability. 2017: Registered cases with compensation paid.

## Health continued

### Health performance

The following performance indicators were undertaken in 2017 as part of the Group's programme to manage health and wellness focus areas and challenges:

#### Occupational health

Operating groups	Total medicals completed	Unfit	Temporarily unfit	Fit with restrictions	Managed outcomes against medicals completed (%)
McConnell Dowell	592	11	0	0	1,86
Aveng Grinaker-LTA	5 959	14	93	664	12,93
Aveng Mining	6 551	45	80	31	2,38
Aveng Manufacturing	3 901	58	23	297	9,69
Aveng Steel	1 633	8	6	11	1,53
Aveng Capital Partners / Corporate	214	0	2	2	1,87
<b>Aveng Group</b>	<b>18 850</b>	<b>136</b>	<b>204</b>	<b>1 005</b>	<b>7,13</b>

\* Managed outcomes are the total of unfit, temporarily unfit and fit with restriction.

The Group conducted 18 850 occupational health examinations in 2017, compared to the previous year when 20 915 examinations were conducted. This decrease was due to lower activities and fewer personnel. Nevertheless, all Aveng operating groups have improved reporting in line with the RBMS programme as a result of their significant efforts to build internal capacity, share best practice and learnings, and enhance partnerships with service providers to acquire results of examinations. In addition, the streamlined health and wellness key performance indicators required by the Group have improved reporting.

During the year, no serious medical evacuations were conducted (2016: two). A review of all cross-border management was undertaken and the implementation of a new programme for the management of global risk and emergency medical management will be implemented in 2018.

#### Noise-induced hearing loss (NIHL)

NIHL continues to be an area of focus in the operating groups. Reducing NIHL risk will continue to be a key focus area in 2018.

This will include reviews of all current policies, procedures and baseline medical testing, occupational hygiene surveys, investigation of all potential hearing loss cases and ensuring the close-out of historic cases. An Aveng guideline will be implemented to ensure that the Group continues to monitor lead and lag indicators to guide hearing conservation initiatives, from engineering out noise at source to protecting employees from excessive noise exposure. The approach to a hearing conservation programme is that any employee exposed to noise above the noise rating limit of 85 decibels (dBA) in the workplace shall undergo medical surveillance, including audiogram tests conducted throughout the individual's work life.

#### Management of communicable and non-communicable diseases

The unique socio-economic conditions and demographic trends of work in Africa increase the risk of the Aveng workforce contracting communicable diseases and the management of both communicable and non-communicable diseases is a focus for Aveng.

A total of 2 588 (2016: 2 104) employees were tested for HIV in 2017, with 56 (2016: 69) testing positive, thus the Group's prevalence rate is 2%. Based on the estimated 17% world increase in deaths by 2030, Aveng is actively monitoring and managing its restrictions and conditions across all employee groups and ensuring monitoring plans to manage this potential risk.

Aveng will continue to encourage its construction and mining operating groups to partner with district health clinics, non-governmental organisations, the South African Business Coalition on Health and Aids, and funders, to ensure that the Group addresses the challenges of HIV / Aids and the burden of disease for our greater communities.

#### Employee wellbeing programme

An independently managed employee wellbeing programme (EWP) is available in both the South African and Australian operations. It continues to provide employees and members of their households with responsive and proactive services to assist them to be the best they can be at work and at home, in the physical, mental, psychological and financial spheres of their lives.



## Health continued

The overall engagement rate, which includes uptake of all services provided, such as onsite post-trauma debriefing and counselling, face-to-face consultations, substance abuse awareness sessions, and manager referrals amounted to 10,4% (2015: 10,8%) for South African operations, and has exceeded the target of 6%. For Australian operations, the engagement rate is 9,4% (2016: 9,4%), which is below the industry benchmark. A key focus area in 2018 will be to ensure cross-referral

between occupational health management and wellness management.

### Policy and wellness incentives and improvements

The following policies were reviewed and revised during 2017 and will continue to be implemented in 2018:

- ▶ Health framework
- ▶ Aveng RBMS guideline
- ▶ Aveng cross-border travel guideline

The operating groups have developed procedures specific to their businesses

and risk profiles to operationalise these guidelines.

Several health and health awareness campaigns were conducted by the operating groups in 2017, including:

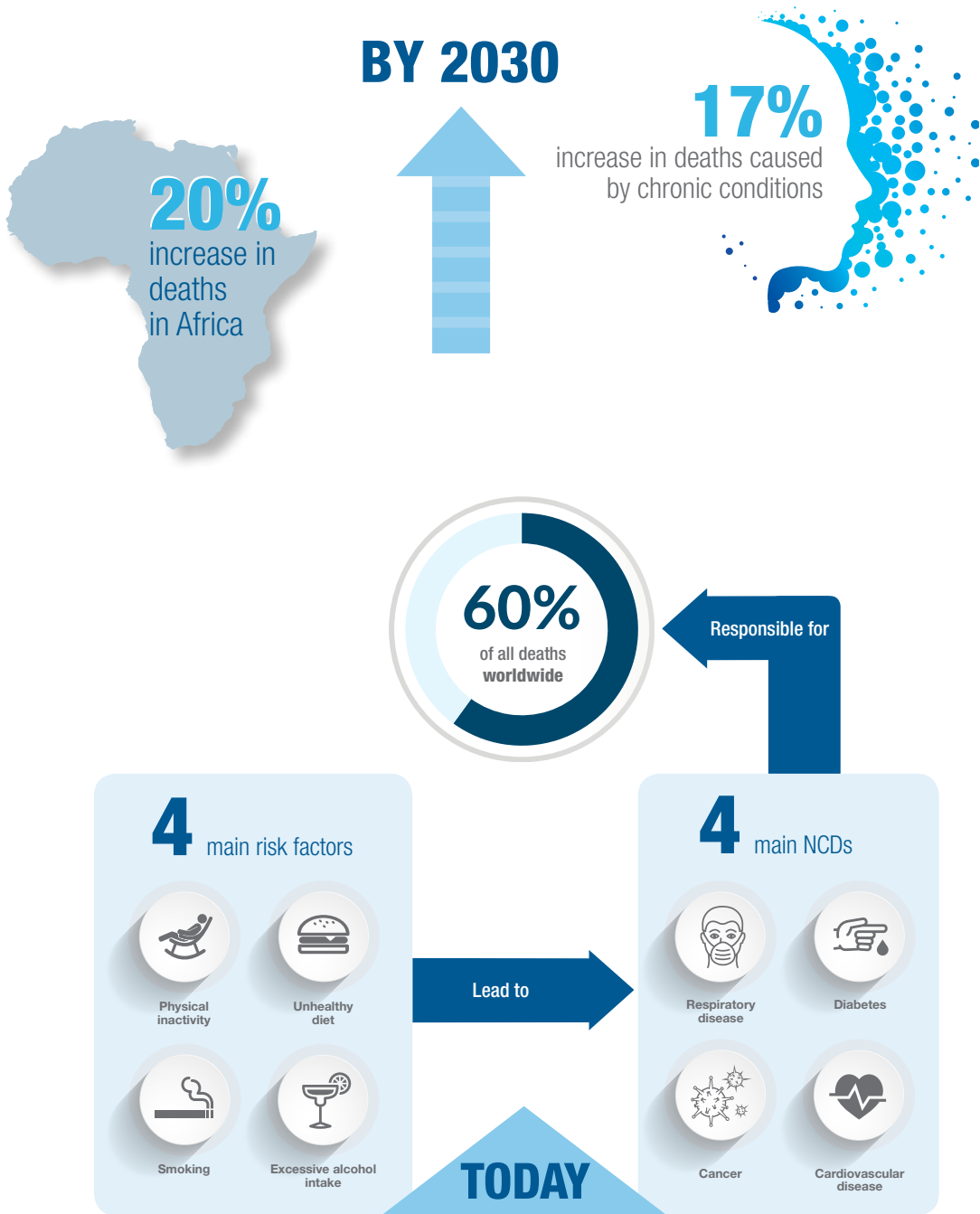
- ▶ Lifestyle disease management
- ▶ Personal hygiene awareness
- ▶ TB awareness
- ▶ World hypertension awareness
- ▶ Wellness testing days – the results of these assist in the design of our health and wellness campaigns.

### Looking ahead

Key objectives 2018	Measurable deliverables	Performance verification
<b>Reduce occupational health exposures</b>	Review all exposure reduction plans	Verification of exposure reduction plans and workforce feedback
	Reduce exposure to hazardous chemical substances i.e. Silica quartz, above Occupational Exposure Limited (OEL)	Reduction of exposure levels to below OEL
	Ensure risk profiles (HEG / SEG) are implemented for all medical examinations	Monthly reporting on health surveillance programmes and occupational illnesses
<b>Risk-based medical surveillance</b>	Identify opportunities and projects to reduce noise exposure	Review progress on hearing conservation programmes
	Maintain RBMS standard, including executive health management	<ul style="list-style-type: none"> <li>▶ Verify implementation of RBMS guidelines</li> <li>▶ Ongoing engagement with occupational medical service providers to ensure a proactive risk-based occupational health programme. This includes active monitoring of the Group's ill health profile (2016: 10% of the workforce) to ensure that employees with restrictions or limitations are managed in a proactive manner</li> </ul>
	Manage outcomes from RBMS	Confirm completion of RBMS programmes and management plans for all restrictions and conditions
<b>Employee wellness engagement</b>	Implement chronic illness programme	Verify implementation of plans for employees with chronic conditions and health restrictions
	Execute ICAS programme	<ul style="list-style-type: none"> <li>▶ Confirm engagement rate for ICAS programme</li> <li>▶ Improve management referral on ICAS programme</li> </ul>
	Create opportunities for management of communicable diseases and lifestyle diseases	Verify opportunities and counselling conducted for all communicable diseases including HIV / TB during medical surveillance programmes, ensuring confidentiality

## Health continued

### Why it is so important to change behaviour and focus on wellness



Source: Discovery Health and Wellness day Report 2017

# Environment



## Environment

Aveng continues to recognise the critical interaction it has with the environment in which it operates, the potential impact its activities and operations may have and the responsibility associated with this. The Group is committed to conducting business in a responsible and sustainable manner and continues to work systematically to improve its environmental management and overall performance. In demonstrating Aveng's journey in environmental stewardship and commitment to continuous improvement, steps have been taken to review and provide clear direction on the Group's path towards sustainable business.

Aveng focuses on selected sustainability key performance indicators (KPIs) as part of its environmental management programme, to support the collation and reporting of sustainability information within the Group in line with its duty of care.

The nature of Aveng's operations present an inherent challenge in the collation and monitoring of data due to the temporary and often remote locations of its projects. Structured efforts continue across the different operating groups to improve data collection, monitoring and reporting on the selected SHE KPIs.

Aveng, in its drive to be a leader in the delivery of infrastructure, industrial and resource solutions, recognises that the nature of its operations may impact natural resources. Accordingly, the Group is committed to operating responsibly and applying principles of continuous improvement in realising environmental stewardship. In contributing to the sustainable development agenda, Aveng values and upholds the importance of protecting the natural environment for future generations and humanity. Systems and minimum requirements continue to be explored, developed and put in place to provide guidance to the operating groups in responsibly managing their businesses within Aveng's diverse operating environments.

As part of Aveng's duty of care, consideration is given to the responsible sourcing and efficient use of materials. Aveng uses its procurement system to

collect and analyse supplier data to better understand gaps and identify areas of improvement. This will assist Aveng to improve some of the challenges it experiences in data capturing, monitoring and reporting. Further effort is still required to improve data collation and monitoring from temporary projects, which remains a challenge due to the nature, location and duration of these projects.

The Group's environmental vision is to minimise harm and maximise conservation of the environment where reasonably practicable.

### Strategy

The Group revised its integrated safety, health and environment (SHE) management policy as part of the strategic path review of SHE and provides guidance on minimum requirements and improvement initiatives. Following the SHE policy review in 2016, the Group reviewed the policy again in 2017 to align it with the SHE strategy, the Group's strategy and reinforce the Group's commitment to environmental stewardship and exercise of duty of care.

Aveng's environmental framework was reviewed against the Group's climate change response strategy and aligned to the Group's strategic journey. To ensure that the strategy is implemented and a risk-based approach is maintained, the Aveng SHE Plan on a Page (PoP) was introduced in 2017. The SHE PoP will ensure that focus areas to support compliance and continuous improvement by the operating groups are implemented.

In response to growing concerns about climate change and its impact on the availability of some natural resources like water, Aveng gives appropriate consideration to responsible sourcing and efficient use of materials.

Aveng has identified focus areas where business operations interact with, and impact, the environment. Responsible environmental stewardship will be demonstrated through the revised framework and focused actions from the PoP. Aveng further engages with organisations that drive sustainable

environmental management, i.e. Green Building Council, and delivers Green Star rated buildings. Operating groups continue to explore innovative ways to mitigate and minimise climate change impacts, like water scarcity, by improving waste management, exploring the recycling of water at sites and exploring efficient use of energy.

The high-level group climate change response strategy assisted the operating groups to identify business opportunities and risks associated with climate change and determine means of adapting to, and mitigating the effects of, climate change. It also enabled the Group to review risks and opportunities in line with business continuity and sustainability strategies. The next phase will include a review and correct placement of management plans to address material matters identified in Aveng's environmental framework.

As awareness of climate change grows, and authorities and clients demand increasingly high levels of focus on environmental matters in projects, particularly in the transport and social infrastructure sectors in Australia and New Zealand, Aveng continues to strive towards environmental stewardship and alignment with legislative requirements.

Aveng has accordingly put in place systems and minimum requirements to guide its operations and sites in the responsible management of natural environments in which they operate.

- ▶ ISO 14001 certification – upheld as part of SHE management system
- ▶ SHE policy – incorporating holistic accountability
- ▶ Environmental framework – relevant and progressive
- ▶ SHE Plan on Page – ensuring practical implementation of strategy and environmental compliance

The operating groups are required to implement and maintain environmental management systems (EMSs) to identify, manage and effectively respond to foreseeable environmental risks and opportunities. They have successfully maintained certification in line with the ISO 14001:2007 standard. External



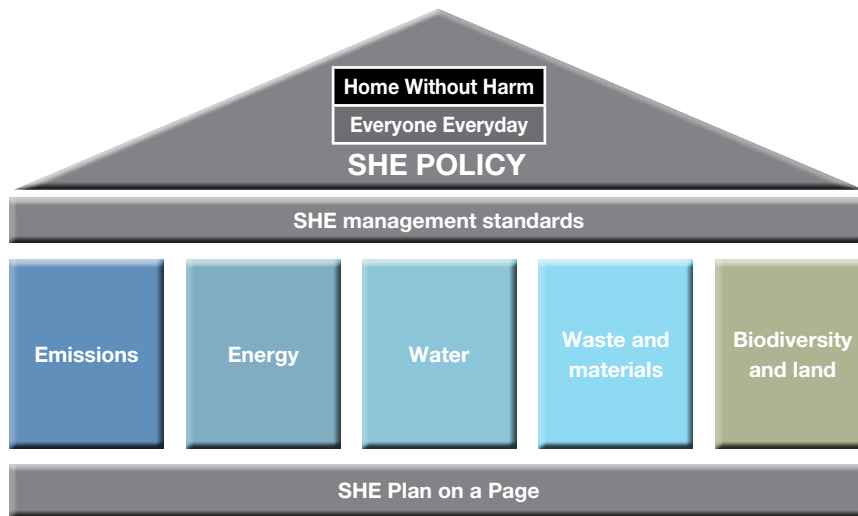
## Environment continued

verification and certification of the EMS remains an ongoing area of focus and good progress has been made in preparation for certification on the revised ISO standards requirement.

This demonstrates how Aveng’s leadership upholds and exercises the principle of duty of care to protect the environment. Aveng’s risk-based approach to the performance of its duties minimises possible impact on the environment.

### Environmental framework

The Aveng environmental framework defines the Group’s approach to environmental stewardship. The framework establishes the requirements that each operating group uses to develop and manage its own programmes and actions to contribute towards environmental goals.



Aveng’s environmental vision to minimise harm and maximise conservation of the environment, where reasonably practicable, is implemented through the pillars of the revised environmental framework as follows:

**Emissions** – Identify and implement interventions required to reduce emissions resulting from our operations (project and fixed facilities).

**Energy** – Fulfil the Group’s commitment to conduct its business in the most energy-efficient manner by developing and implementing energy efficiency practices.

**Water** – Consider and develop water management initiatives such as recycling and preservation, where possible.

**Waste and material** – Develop material procurement, use and waste management initiatives in line with applicable legislation and best practices.

**Biodiversity and land** – Develop biodiversity management initiatives in line with applicable environmental laws, to identify and manage potential environmental risks with appropriate action plans to mitigate the exposure.

### Key focus areas

The key environmental focus areas identified as part of this process are:

- ▶ Compliance with authorisations and licences
- ▶ Carbon and waste management

These focus areas and specific actions to manage them are discussed in more detail in the safety Plan on a Page (POP) below.

Aveng’s SHE PoP focuses the Group on specific environmental strategic objectives, and ensures, as an initial step, that sound compliance and governance forms the foundation for continued improvement in environmental management. Each operating group has developed initiatives to implement these focus areas.

### SHE PoP – Environment

<b>Compliance with authorisations and licences</b>	→	<ol style="list-style-type: none"> <li>1. Ensure compliance with authorisations, licences and environmental management plans (EMP)</li> <li>2. Ensure timely close out of non-compliances</li> <li>3. Develop and update monitoring plans to ensure compliance</li> <li>3. Conduct legal liability training</li> </ol>	<ul style="list-style-type: none"> <li>• Verify impact and aspect register</li> <li>• Monitor authorisations, EMPs and licences</li> <li>• Verify action plans and close out of deviations</li> <li>• Verify KPI reporting (accurate and auditable)</li> <li>• Percentage compliance with legal liability training</li> </ul>
<b>Carbon and waste management</b>	→	<ol style="list-style-type: none"> <li>1. Identify improvement objectives per operation</li> <li>2. Develop and execute plans to manage waste, diesel and electricity</li> <li>3. Develop monitoring plans to track progress</li> <li>4. Quantify cost and value of projects (finance)</li> </ol>	<ul style="list-style-type: none"> <li>• Review plans and progress reports, focusing on preventative measures</li> <li>• Monitor % compliance with plans</li> <li>• Track value of cost saving opportunities</li> </ul>

## Environment continued

Aveng will continue taking steps to improve environmental management by strengthening environmental stewardship across its operations, assessing and monitoring key areas identified in the environmental framework and implementing improvement initiatives.

The revised SHE strategy promotes improved engagement between the Group and operating groups, building a platform for sharing of knowledge and best practice among the operating groups and increasing accountability for environmental management.

In line with the Group’s strategy to strive for excellence and accountability throughout its operations, the operating groups will be responsible for the implementation of the SHE policy, environmental framework and the PoP. As a result, the corporate SHE resources are minimal and are expected to set policy, coordinate group reporting, advise, lead and orientate SHE appointees to the Aveng approach.

### Key drivers of improved environmental performance

Aveng reports on environmental key performance indicators informed by externally developed guidelines and its internally developed standards.

The Group continues to work on focus areas that drive improvement in its environmental management.

These focus areas are prioritised in the operating groups’ environmental management programmes. While some have been implemented, others are in progress. They include:

- ▶ Improving accuracy and confidence levels of data collection processes and reporting systems with the aim of setting improvement goals
- ▶ Ensuring continuous improvement in the accuracy of data reported and improving utilisation of the Group’s IT-based SHE reporting platform to improve analysis of trends and monitoring of governance matters
- ▶ Ensuring compliance with legal and other identified requirements
- ▶ Improving Aveng’s score for the Carbon Disclosure Project (CDP) and the Water Disclosure Project (WDP), which will demonstrate improved performance and progress in the sustainability journey
- ▶ Identifying and developing improvement initiatives

### 2017 environmental performance

No major environmental incidents were recorded (2016: two).

In total, 295 minor environmental incidents were reported (2016: 216). They were predominately hydrocarbon spillages which are consistent with the business scope and industry profile. The Group’s understanding of its operations’ interface with the environment and improvement in environmental management is

demonstrated by the reporting of controlled environmental incidents. Effective controls have been put in place, accompanied by efficient site responses to ensure the main type of incidents that occur, hydrocarbon spillages, remain well contained.

No fine carrying environmental regulatory notice was issued in 2017. (2016: Seven non-fine carrying notices).

An intention to Issue Notice: Dust and Noise Management was issued to an Aveng Manufacturing site. Corrective and preventative measures have been implemented as per an action plan submitted and accepted by the authorities.

### Updates

Engagement between Aveng and the South African Gauteng Department of Agriculture and Rural Development (GDARD) regarding the use of an old quarry and operation of a thermal zinc diffusion plant have drawn to a conclusion and the following steps were agreed to:

- ▶ Aveng Manufacturing is in the process of rehabilitating the quarry in Brakpan following the approval of the rehabilitation plan by GDARD.
- ▶ Aveng Manufacturing will proceed with the process of submitting a section 24G application for the thermal zinc diffusion plant operations in Germiston, as required by the authorities, to obtain an air emissions licence.

Performance area	2017	2016	2015	2014	2013
Major environmental incidents	0	2	4	5	
% operations (by headcount) with ISO 14001 certification of EMS*	>90%	>90%	70%	75%	<30%
Carbon emissions (tCO <sub>2</sub> e) total**	99 632	179 199	247 296	297 592	675 013

\* In 2017, certification was reported by headcount rather than revenue.

\*\* As a result of the Group’s adjustment in reporting approach to derive information from more reliable procurement sources such as utility bills, 2014 is the revised base year for reporting on the carbon footprint. The amendment is a result of the continuous process to improve data quality and integrity with increased scope of coverage.

Business units are encouraged to report near-miss and minor environmental incidents. The operating groups continue to improve environmental awareness.

## Environment continued

### Carbon emissions (tCO<sub>2</sub>e)

Performance area		2017	2016	2015	2014	2013
Scope 1 emissions (from combustion of diesel procured) (tCO <sub>2</sub> e)	(A)	56 571	123 549	184 626	229 713*	567 669
Scope 2 emissions (from purchased electricity) (tCO <sub>2</sub> e)	(A)	43 061	55 650	62 670	67 879*	107 344
Carbon emissions total (tCO <sub>2</sub> e)		99 632	179 199	247 296	297 592*	675 013

#### Note for carbon reporting

##### South Africa

<b>Scope 1</b>	2,6762 tonnes CO <sub>2</sub> e per kilolitre	Diesel	Diesel Emission Factor (DEFRA, 2016)
<b>Scope 2</b>	1,01 kilograms CO <sub>2</sub> e per kWh		Electricity Grid Emission Factor (Eskom, 2015)

##### McConnell Dowell

<b>Scope 1</b>	Australia	0,002721 tonnes CO <sub>2</sub> e per L	Diesel	National Greenhouse Account Factors July 2017
<b>Scope 1</b>	Other regions	0,002676 tonnes CO <sub>2</sub> e per L	Diesel	National Greenhouse Account Factors July 2017

Scope 2	Factors	Indirect (Scope 2) emission factors for consumption of purchased electricity or loss of electricity from the grid		
		State or territory	Emission factor kg CO <sub>2</sub> e/kWh	
		New South Wales and Australian Capital Territory	0,83	
		Victoria	1,08	
		Queensland	0,79	
		South Australia	0,49	
		South West Interconnected System (SWIS) in Western Australia	0,70	
		North Western Interconnected System (NWIS) in Western Australia	0,62	
		Darwin Katherine Interconnected System (DKIS) in the Northern Territory	0,59	
		Tasmania	0,14	
		Northern Territory	0,64	
		Sources: National Greenhouse and Energy Reporting (Measurement) Determination: Department of the Environment and Energy.		

\* In 2014, the Group reported carbon emissions significantly lower than in previous years. This is mainly due to the Group's adjustment in reporting approach in which information is derived from procurement sources such as utility bills. The 2013 figures are not comparable to 2014 / 2015. The change was part of the continuous improvement process to improve data quality and integrity with increased scope of coverage.

(A) This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6).

The Group's carbon and water footprints have maintained a downward trend as a result of some efficient energy and water use improvement initiatives. The reduction in the number of projects executed in 2017 also contributed to the reduced carbon and water footprint.

Consistent with its scope of business and industry profile, Aveng Mining continues to be the highest user of diesel, followed by Aveng Grinaker-LTA and Aveng Steel.

Aveng Manufacturing consumed the highest amount of electricity (17 762 638kWh),

followed by Aveng Steel and McConnell Dowell. While the direct impact of fewer projects is further observed in the reduced amount of electricity consumed, the operating groups continue to explore efficiency measures and alternatives to improve energy consumption levels. The total group figure for electricity consumed in 2017 was 44 941 140kWh, recording a reduction of approximately 20% and this equates to 43 061tCO<sub>2</sub>e (2016: 55 650).

The total amount of water consumed by the Group was 515 402 kilolitres (kL), with

Aveng Grinaker-LTA and Aveng Manufacturing consuming approximately 57% of the Group's total usage.

The total volume of diesel purchased by the Group during 2017 was 21 130kL, approximately 54% lower than the previous year, which equated to 56 571tCO<sub>2</sub>e (2016: 123 549). The amount of diesel purchased continues to decrease in line with the underperforming economy.

The Group captures actual consumption volumes based on invoices, which are auditable.

## Environment continued

### Operating group environmental performance

	Emission diesel		Emission electricity		Water purchased
	kℓ	tCO <sub>2</sub> e	kWh	tCO <sub>2</sub> e	kℓ
McConnell Dowell	3 777	10 130	7 821 421	5 570	84 812
Aveng Grinaker-LTA	5 496	14 707	954 944	964	160 129
Aveng Mining	6 745	18 051	721 830	729	6 021
Aveng Manufacturing	440	1 177	17 762 638	17 940	137 382
Aveng Steel	4 673	12 506	16 831 719	17 000	45 435
Aveng Corporate	–	–	848 588	857	81 623
<b>Aveng Group</b>	<b>21 130</b>	<b>56 571</b>	<b>44 941 140</b>	<b>43 061</b>	<b>515 402</b>

Aveng uses mainly municipal water for its operations. The Group has a wide variety of water uses, including dust suppression which forms the bulk of water use in construction, manufacturing and mining operations.

The data collation of water utilised by the Group has improved which allows the operating groups to consider and implement appropriate efficiency and reduction initiatives. Efforts to improve monitoring and tracking allow the Group to strategically plan for, and support, efficient water use.

As a result of improved data collation and reporting, water consumption in 2017 was recorded at 515 402 compared to 384 262 in 2016. Consumption levels for the Group remain above 100 000kℓ a year.

#### Stakeholder management

Aveng’s key environmental impacts include consumption of non-renewable resources (fossil fuels), energy consumption, air pollution (greenhouse gas emissions and dust fallout), soil and land contamination, waste, consumption of renewable resources, contamination of surface and ground water, historical contamination and noise pollution.

Key internal and external stakeholders with an interest in Aveng or affected by the Group’s operations include authorities responsible for environmental regulation, employees, clients, investors and communities. Aveng also plays a key role in advocacy organisations such as the Green Building Council of South Africa, the National Business Initiative and the environmental committee of the South African Forum for Civil Engineering Contractors. Their main environmental concerns, as well as opportunities and actions taken to respond to them, are reported in the table below:

Stakeholder	Concern / opportunity	Impact on the business	Action
<b>Employees</b>	<ul style="list-style-type: none"> <li>Safe workplace that poses no risk to health and the environment</li> <li>Improved environmental awareness and responsible execution of tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work stoppages</li> <li>Low employee morale</li> <li>Absenteeism due to ill health</li> <li>General awareness of environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>Maintain an environmental management system</li> <li>Conduct inspections and audits</li> <li>Awareness training</li> <li>Issue regular environmental awareness talk topics applicable to work and home</li> </ul>
<b>Communities</b>	<ul style="list-style-type: none"> <li>Direct and indirect environmental impacts</li> </ul>	<ul style="list-style-type: none"> <li>Community health and safety</li> <li>Complaints and regulatory notices</li> <li>Reputational damage</li> </ul>	<ul style="list-style-type: none"> <li>Continuous engagement with communities</li> <li>Environmental assessments / audits to identify and mitigate risks</li> <li>Where necessary, establish environmental management forums</li> </ul>
<b>Authorities</b>	<ul style="list-style-type: none"> <li>Compliance with relevant legislation and regulations</li> </ul>	<ul style="list-style-type: none"> <li>Work stoppages</li> <li>Reputational damage</li> <li>Legal sanctions (notices / fines)</li> <li>Site inspections</li> </ul>	<ul style="list-style-type: none"> <li>Maintain compliance with ISO 14001 EMS</li> <li>Measure, monitor and report against operating licence / authorisations</li> </ul>
<b>Clients</b>	<ul style="list-style-type: none"> <li>Effective environmental management</li> </ul>	<ul style="list-style-type: none"> <li>Work stoppages</li> <li>Reputational damage</li> <li>Penalties and / loss of contract</li> </ul>	<ul style="list-style-type: none"> <li>Comply with client environmental management plan and relevant legislation</li> <li>Continuous engagement with clients</li> <li>Conduct environmental due diligence and implement effective remedial actions</li> </ul>
<b>Investors</b>	<ul style="list-style-type: none"> <li>Reputational damage</li> <li>Negative impact on investor relations</li> </ul>	<ul style="list-style-type: none"> <li>Disinvestments or decision not to invest</li> </ul>	<ul style="list-style-type: none"> <li>Continue submitting water and carbon disclosure information</li> </ul>



## Environment continued

### Environmental awareness

Environmental awareness and training in environmental law and responsibilities is provided for employees and senior managers. The Board's SHE committee members remain abreast of SHE matters in the Group and follow through with scheduled comprehensive site visits.

Waste management and water recycling awareness is conducted across the Group through knowledge and information sharing, going back to basics and driving accountability at operational and individual levels.

### Environmental performance improvements

The environmental framework has established a structure for the Group to address the management of climate change challenges through adaptation and mitigation. In line with outcomes identified in the PoP, the operating groups reviewed improvement initiatives in response to possible climate change impacts on their operations.

Aveng continues to participate in the Carbon Disclosure Project (CDP) by submitting annual reports on its environmental stewardship.

In June 2015, the Group prepared and submitted its first non-public disclosure report on water, through the CDP platform, based on 2014 data.

Under the revised CDP assessment criteria and scoring, the 2016 reports were rated at B- (2015: 83%). Aveng has submitted its CDP and WDP reports for 2017, and the rating score is expected during 2018. The Group will consider the CDP assessment and scoring criteria in its environmental management efforts as part of ensuring sustainable continuous improvement in environmental management.

### Strategy in action

Improvements in environmental awareness are demonstrated by innovative initiatives introduced by the operating groups. Examples of some of these initiatives follow:

#### Aveng Mining: Eliminating waste

South Africa faces significant waste management challenges. To minimise waste Aveng Mining embarked on a "zero waste to landfill" campaign in 2015 in alignment with regulatory requirements and sustainability goals associated with waste management and Aveng's commitment to minimising environmental harm.

The campaign is conducted in partnership with waste recycling service providers and focuses on eliminating waste.

Used oil, scrap metal and other waste items such as cardboard, glass, plastic paper, polystyrene and wood pallets are supplied to a range of businesses that recycle waste materials for reuse in manufactured products. The waste items are sorted at a central location from which they are collected for reuse or composting. An electronic system records a list of waste items and matches them to potential recyclers. If there is limited demand for a waste material, our partner conducts research to establish alternative recycling sources.

Awareness campaigns are conducted to encourage employees to recycle, reduce and reuse waste at home and to develop small-scale compost sites for their gardens.



#### McConnell Dowell: Reducing environmental impacts

McConnell Dowell has demonstrated its commitment to protecting the environment and keeping environmental impacts as low as reasonably practicable at its Tuas View Basin contract in Singapore.

The contract to design and build road access at Tuas View Basin requires McConnell Dowell to construct drainage, widen roads and regrade works at four major locations, along with ground improvements and the installation of three-metre high visual and noise barriers.

To fulfil these requirements with minimal environmental impact, McConnell Dowell has applied its goals of reducing, reusing and recycling waste in the following innovative initiatives:

#### Reusing materials

Offcut PVC piping from ECM plant installation is used as protective covers for sharp edges on recycled hoarding panels installed as walls or partitions for rest areas and cube rooms.

Offcut steel rebars were recycled into multi-layer cable hangers, trimmed with offcut rubber hosing. Designed by a senior welder and approved by the site supervisor, this initiative has been adopted across the project as a safe and environmentally friendly means of storing cabling.

Offcut GI piping is used to create flag poles to display colour coded safety and first aid flags along site hoarding. These provide visual guidance for workers and drivers.

#### Planting gardens in plastic bottles

Rather than dump used plastic drinking bottles in recycle bins, they are cut into planters and reused to create hanging gardens. Edible plants such as chillies, tomatoes, lettuce and herbs are grown in the planters, providing healthy food for workers and beautifying their work areas.

#### Recycling water

Dirty water from boot washing areas is recycled back to the vehicle washing bay and cycled through the ECM plant to conserve water.

By applying these innovative safety initiatives, McConnell Dowell is demonstrating its commitment to creating better working environments that are safer for people and the environment.

## Environment continued

### Strategy in action

#### Aveng Grinaker-LTA: Green building practices

As extensive work is conducted to deliver quality green buildings, an opportunity has been identified to improve monitoring and measuring of the usage of energy and water on site. To manage water shortages without hindering production, site management implemented the following improvement initiatives:

#### Waste water purification

The water in purification sumps is treated to ensure that it can be collected in storage tanks and reused.

#### Water recycling

Groundwater generated from the permanent subsoil drainage system is reused for construction activities on site to reduce dependence on municipal water.

The harvesting of rain water for use on site is being explored.

The Green Star requirements to obtain certain credits were not only met, but exceeded on all of Aveng Grinaker-LTA's Green Building sites.



### Looking ahead

Focus areas – 2018	Desired outcomes	Actions
Continue to improve capturing, recording and reporting of environmental KPIs	<ul style="list-style-type: none"> <li>Establish baseline data sets for carbon, energy, waste and water for the Group that will enable the setting of achievable reduction targets</li> <li>Improved data quality</li> </ul>	<ul style="list-style-type: none"> <li>Operating group SHE executives, group SHE office and an independent climate change expert conduct quality assurance on environmental data at the end of each quarter</li> </ul>
Continue to conduct energy efficiency audits at fixed facilities	<ul style="list-style-type: none"> <li>Identify and develop bespoke energy-efficient programmes at operations</li> </ul>	<ul style="list-style-type: none"> <li>Operations have identified efficiencies and are developing implementation plans</li> </ul>
Maintain ISO 14001:2010 certification coverage of operations	<ul style="list-style-type: none"> <li>Ensure that a comprehensive, structured and systematic approach to environmental management is in place for continuous improvement in environmental performance</li> </ul>	<ul style="list-style-type: none"> <li>Ensure ISO 14001 certification is maintained by all operating groups</li> </ul>
Continue to improve carbon management and performance to improve the CDP score	<ul style="list-style-type: none"> <li>Publicly declare and demonstrate management of climate change risks and opportunities at operations</li> <li>Increase energy and emissions efficiency at operations</li> </ul>	<ul style="list-style-type: none"> <li>Submit 2017 CDP information and respond to 2016 results</li> <li>Identify, prioritise and implement improvement initiatives to reduce emissions and energy intensity measures</li> </ul>
Continue responding to the WDP and improve on performance	<ul style="list-style-type: none"> <li>Publicly declare and demonstrate Aveng's approach and efforts towards managing water-related risks and impacts at the operations</li> <li>Increase energy and emissions efficiency at operations</li> </ul>	<ul style="list-style-type: none"> <li>Submit 2017 WDP information and respond to 2016 results</li> <li>Identify, prioritise and implement improvement initiatives to reduce emissions and energy intensity measures</li> </ul>
Improve learning and awareness	<ul style="list-style-type: none"> <li>Establish good understanding of caring for the environment</li> <li>Implement framework</li> <li>Establish improvement initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Increase accountability</li> <li>Improve environmental stewardship</li> <li>Drive sustainability initiatives</li> <li>Minimise harm and maximise conservation</li> </ul>
Improve reporting and governance	<ul style="list-style-type: none"> <li>Improved data quality</li> <li>Improved monitoring and compliance systems</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with SHE PoP</li> <li>Implement framework</li> </ul>

# Reporting and governance





## Reporting and governance continued

### Reporting and governance

As part of continuous improvement and alignment with the revised SHE strategy, the Group continues to monitor and review SHE reporting KPIs to allow efficient trending and analysis that will inform improvement initiatives. A reporting and governance framework is under development to provide overall guidance on reporting requirements, SHE definitions and governance requirements to ensure further enhancements.

Aveng’s IT-based SHE reporting platform allows for improved data collection and informed trend monitoring and analysis which will enable the setting of improvement goals and initiatives.

The Group’s SHE strategic improvements allow the organisation to focus on improving its score for the Carbon Disclosure Project (CDP) and the Water Disclosure Project (WDP) and realise other improvement goals and compliance requirements.

Aveng has submitted its CDP and WDP reports for 2017, and the rating score is expected during 2018. Under the revised CDP assessment criteria and scoring the 2016 reports were rated at B- (2015: 83%).

Aveng will consider the CDP assessment and scoring criteria in its environmental management efforts as part of ensuring sustainable continuous improvement in environmental management.

CDP’s assessment levels are listed below with the scoring rate:

- (i) Disclosure (rating: D- to D)
- (ii) Awareness (rating: C- to C)
- (iii) Management (rating: B- to B)
- (iv) Leadership (rating: A- to A)

### Safety and health management systems

The certification of safety and health management systems was well managed across Aveng in 2017 and good progress was made in preparation for certification on the revised ISO standards requirement.

The operating groups are required to have and maintain systems to identify, manage and effectively respond to foreseeable safety risks and they have successfully maintained certification.

Approximately 95% (by headcount) of the operating group’s safety management systems comply with externally verified health and safety systems. Standards complied with include:

- ▶ AS / NZS 4801:2001 Occupational Health and Safety Management Systems (Australia)
- ▶ BS OHSAS 18001:2007 Occupational Health and Safety Management Systems.
- ▶ Aveng Mining achieved the Integrated SHEQ System certification, the first for a mining contractor.

All operating groups are in the process of conducting gap analyses across business units in preparation for transition to the latest ISO certification requirements.

Action plans have been developed and implemented as part of the systematic management frameworks based on the OHSAS 18001 standard at these factories as an operational standard.

In 2017, 7 877 audits were raised, while 6 798 (86%) of the audit findings were addressed. This represents a slight improvement in the close-out rate, as this forms part of the focus areas to improve safety performance.

### Environmental management systems

#### ISO 14001 certification

Aveng operating groups continue to measure and monitor performance indicators such as municipal water consumption, general and hazardous waste, environmental incidents and carbon emissions. The corporate office consolidates electricity, water and diesel purchased in the financial measurement approach, where the actual invoice for key performance indicators (KPIs) is reported on and not consumption. Legal compliance matters are reported and managed, and the group legal counsel and group SHE executive provide support and guidance to affected operating groups.

Aveng aims to have environmental management systems implemented in all fixed facilities and operations. Based on headcount, >90% of the operating groups were certified in 2017. The Plant and Assets operation within Aveng Grinaker-LTA embarked on the implementation of a SHE management system and was successfully certified on the ISO 14001:2015 Standard. All other Aveng Grinaker-LTA business units maintained ISO 14001 certification.

Aveng Steel recertified all branches and factories. Aveng Manufacturing retained the certification of its South African-based business units, while its international factories and warehouses in Swaziland, Mozambique, Zambia and Zimbabwe operate on informal SHE management systems and adopted the ISO 14001 standard as an operational standard.

The third edition of ISO 14001:2015 EMS standard was released with additional requirements. Companies that are certified for ISO 14001:2004 have until 14 September 2018 to comply with the requirements of the new standard. Aveng operations reviewed the requirements and developed programmes to enable effective recertification.

### Certification performance

Operating group	Certification status	Comments
<b>McConnell Dowell</b>	100% certified	EMS maintained through surveillance audits and will endeavour to demonstrate continual improvements.
<b>Aveng Grinaker-LTA</b>	100% certified	EMS is being maintained. Surveillance audits conducted. Plant and Assets certified under ISO 2015 requirements. REHM Grinaker Construction Co. Limited (Mauritius) excluded.
<b>Aveng Mining</b>	100% certified	EMS is being maintained. Surveillance audits conducted.
<b>Aveng Manufacturing</b>	100% certified	EMS being maintained, except in international operations.
<b>Aveng Steel</b>	95% certified	EMS is being maintained. Surveillance audits conducted.



## Reporting and governance continued

### 2017 ISO certification status

Operating group	ISO 9001 – 2008	ISO 14001 – 2008	OHSAS 18001 – 2007
Aveng Grinaker-LTA	Green	Green	Green
Aveng McConnell Dowell	Green	Green	Green
Aveng Manufacturing	Green	Green	Green
Aveng Mining	Green	Green	Green
Aveng Steel	Green	Green	Green

Indicators:

Green – Certificate issued for 2017

### SHE reporting and governance

#### SHE IT tool

McConnell Dowell implemented CMO™, as the SHE database in use by all McConnell Dowell projects globally. CMO provides a means to improve data collation, even for remote projects to enter their SHE data and generate reports on SHE performance. Originally CMO was used as a basic repository for data but now it is also used for audits, including tracking and close-out of observations, and actions from incidents. CMO provides a visible workflow which highlights project efficiency in managing SHE and audit outcomes. The next step for McConnell Dowell is to utilise the risk module which is available within CMO to monitor risk across its projects.

Aveng Grinaker-LTA has gone through the process of implementing a local customised safety, health, environment and quality (SHEQ) information management system, Doc-Wize. The tool is used to capture SHE data and allow for efficient monitoring and tracking of risk issues, audit performance, incident management, compliance management and reporting. Following the development of the tool, training was conducted and rolled out across the operating group during 2017.

The Group has also developed a common reporting platform to allow for continuation in SHE data reporting and governance requirements. This platform will allow for a centralised platform to track SHE indicators and performance by the different operating groups. Efforts will continue to address

system deficiency challenges and ensure progress and improvement in the utilisation and value realisation of the platform to improve SHE data accuracy, completeness and validity, as well as reduce human errors. In addition, the tool will provide an auditable trail of data entries and amendments.

#### Compliance update

Following engagements between Aveng and the South African Gauteng Department of Agriculture and Rural Development (GDARD) regarding the use of an old quarry in Brakpan and the operation of a thermal zinc diffusion plant in Germiston, the following progress was made:

- ▶ GDARD has approved Aveng Infraset’s rehabilitation plan for the quarry and work has commenced as per the directive issued.
- ▶ Aveng Duraset has initiated the process of a section 24(G) application with regards to the Thermal Zinc Diffusion (TZD) process as per the GDARD directive. The services of an environmental consultant have been sourced to ensure timely completion and compliance in line with the directive.

#### Legislative compliance

As part of the Aveng’s compliance management processes, training of employees remains a key initiative to ensure that the Group meets its compliance obligations and improves the way it conducts its business in the interest of its stakeholders. In addition, employee compliance training is an important component of the Group’s commitment to

be an effective and sustainable integrity-based organisation. For example, the Group conducted targeted training on topics including anti-bribery, corruption and anti-trust issues.

#### Competition law training

The Group’s competition law training programme is an important tool which reinforces Aveng’s commitment to eliminating anti-competitive practices. The competition law training is conducted online and ensures that employees undergo a rigorous education and certification programme in order to comply with competition laws of all countries and regions in which they conduct business. Refresher training is conducted annually. In 2017, 611 <sup>(A)</sup> employees received competition law training.

#### Anti-corruption training

To continue promoting an ethical organisational culture within the Group, anti-corruption training was conducted across the Aveng Africa operations, by an independent, external company. The training focused on applicable anti-corruption legislation, employees’ obligations in terms of Aveng group policies and key anti-corruption learnings through examples. The training content was developed after receiving feedback from an employee survey to determine the effectiveness of the Group’s anti-corruption strategy. In total, 1 805 <sup>(A)</sup> employees received anti-corruption training.

<sup>(A)</sup> This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6).

## Reporting and governance continued

### Globally recognised SHEQ certification



Aveng Mining has been awarded a globally recognised safety, health, environment and quality (SHEQ) integrated management system certification by SGS, the world's leading inspection, verification, testing and certification authority.

This globally recognised SHEQ certification endorses Aveng Mining as one of the pioneers in ensuring best practices and it enables it to:

- ▶ create one integrated system that assists Aveng Mining to deliver SHEQ objectives more efficiently on a single training and development platform
- ▶ identify all key SHEQ risks and ensure that baseline risk assessments for all mining and engineering activities are complete and streamlined
- ▶ drive business continuity objectives across the combined open cut and underground mining operations
- ▶ establish a safety benchmark that sets Aveng Mining apart from its competitors, positioning it as a contractor of choice due to its consistently applied safety standards

The system increases efficiency and effectiveness and reduces costs by minimising the disruption caused by several external audits. It also demonstrates the commitment of Aveng Mining to enhanced performance, employee and customer satisfaction, and continuous improvement in internal control systems.

Further, the SHEQ integrated management system creates a combined SHEQ management learning database and maintains all SHEQ best practices in an embedded process that is key to preventing reoccurrences of high risk consequence events at project sites.

The implementation of the system will meet compliance requirements of the draft ISO 45001:2016 standard, ensuring that Aveng Mining remains compliant with global mining safety standards.

Aveng Mining initiated the development of the system when the Group's open cut and underground mining operations were merged in July 2015 and the system was fully developed by the end of 2016.

In August 2016, Aveng Mining implemented a gap audit to test the system at selected sites in preparation for certification and the system was certified on 2 May 2017. The fully fledged implementation of the system across Aveng Mining will take place early in 2018.

# Risk management



## Risk management

Aveng's risk policy statement and risk framework provides a guiding foundation to the risk management approach and activities of the Group.

### Policy statement

Aveng recognises that it needs financial stability and sustainability across all of its activities to succeed in creating value for its stakeholders. Fundamental to this is an acknowledgment that the successful commitment to a formal process of risk and opportunity management will improve the overall operating performance and sustainability of the Group.

Given the complexities of the environment in which Aveng operates, risk and opportunity are inherent in all our business activities, making total risk elimination almost impossible. The Aveng Group's policy is therefore focused on the effective and ongoing management of risk and opportunities where our management skills have the greatest impact on the risk and opportunity reward decisions we make, and ensuring a sustainable business model.

The Group's "three lines of defence" combined assurance model ensures the first line of defence enables early identification, quantification and assessment of risks and opportunities, followed by application of risk mitigation and opportunity measures. The second line of defence monitors the effectiveness of the management of the risks and opportunities, while the third line of defence provides independent assurance by external audit that the overall risk and opportunity management process is functioning appropriately within the Group.

Through the application of the Aveng risk framework, the Aveng Board acknowledges and commits to:

- ▶ Identifying and leveraging appropriate risk and opportunity-taking
- ▶ Training employees to implement risk and opportunity management effectively
- ▶ Striving to continually improve risk and opportunity management practices
- ▶ Ensuring that the key risks and opportunities the Group encounters as it implements its strategic objectives are identified, assessed and managed appropriately
- ▶ Ensuring that risks and opportunities are ranked and addressed according to their priority
- ▶ Implementing and maintaining an internal control system to mitigate the risks and extract opportunities
- ▶ Adopting a single framework of risk and opportunity governance across Aveng to address all key risks and opportunities

Aveng governs its activities in a manner that is commensurate with the overarching King III corporate governance principles of fairness, accountability, responsibility and transparency. Preparations to adopt King IV have started.

### Group risk framework

Aveng's risk framework represents the Group's approach to risk and opportunity management and guides the implementation of the risk and opportunity management process. The framework enables Aveng management to proactively entrench the risk and opportunity management process within their operations. It offers the foundation for embedding an appropriate risk and opportunity management culture and enables the Group to optimise its risk and opportunity management efforts. The framework ensures that risk and opportunity management arrangements are based on generally accepted risk and opportunity management practices that enhance value for all stakeholders and that management declare all pertinent risk information in a manner that avoids surprises, is proactive and enhances transparency.

Aveng's strategy is focused on facilitating growth objectives, but risk mitigation is key

to the implementation of the strategy. This entails taking advantage of opportunities and reducing earnings volatility over the long term.

Aveng has adopted the following definition of risk:

- ▶ Risk is about the uncertainty of events, including the likelihood of such events occurring and their effect, both positive and negative, on the achievement of the organisation's objectives. Risk includes uncertain events with a potential positive effect on the organisation (i.e. opportunities) not being captured or not materialising (based on International Organisation for Standardisation ISO 73: 2009)
- ▶ Each of the sectors and geographies within which Aveng operates has its own inherent risk and opportunity profile and corresponding margins, and is exposed to differing effects from both global and regional economic cycles at different times. The Group has adopted a formalised risk and opportunity management process that enables management to effectively deal with uncertainty associated with risk and opportunity, thus enhancing the ability to build long term value.

### Risk and opportunity management philosophy

Aveng's underlying philosophy is that risk and opportunity management is everyone's responsibility. Risk and opportunity management is integrated into key strategic and operational decisions, objectives and processes.

The Aveng Board and executive management team demonstrate informed risk-taking and opportunity-taking behaviour, aligned with the Group's values and observing the obligations of the Aveng Code of Business Conduct.

All employees maintain the highest ethical standards in ensuring that Aveng's business practices are conducted in a manner which, in all reasonable circumstances, is above reproach, reflecting management's commitment to integrity and ethical values.



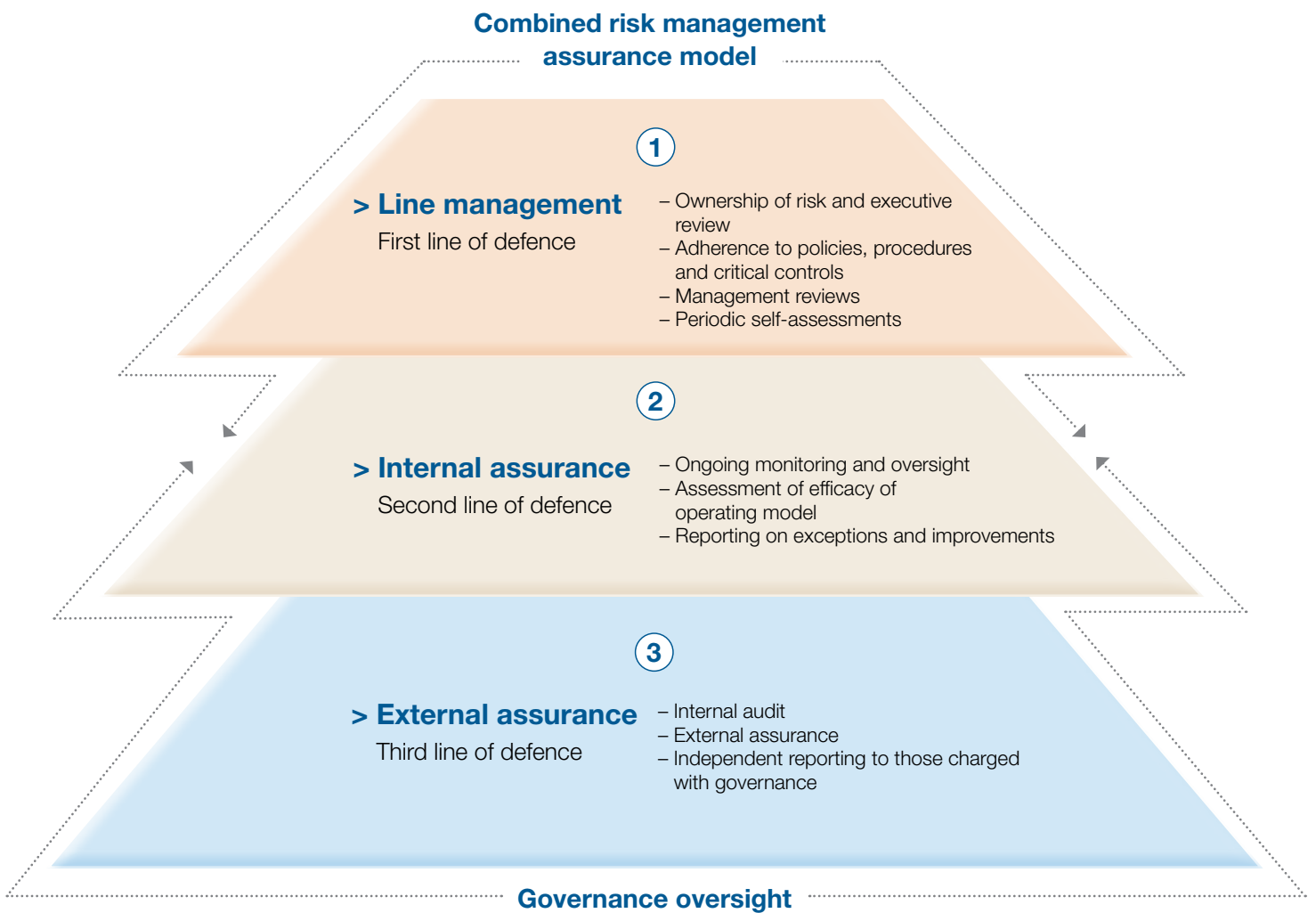
## Risk management continued

Aveng is committed to the highest standards of corporate governance and complies with the provisions of ISO 31000 (International Organisation for Standardisation 31000, 2009), and with King III (the King Code of Governance Principles and the King Report on Governance 2016 as issued by the Institute

of Directors in Southern Africa). Aveng’s approach to risk and opportunity management is not only to comply with regulatory requirements but to use risk and opportunity management to create value, enhancing the achievement of the Group’s overall objectives and ensuring a sustainable business.

### Aveng approach to risk management

In line with best practice, Aveng has adopted a three lines of defence risk management model (in terms of ISO 31000). The diagram below depicts the combined assurance model which highlights the three lines of defence philosophy.



Aveng manages and monitors risk and opportunity at the following three levels:

#### First line of defence

The first line owner of risk is accountable for the implementation and management of identified risks and opportunities. In the first line of defence, operational management has ownership, responsibility and accountability for identifying, assessing,

controlling and mitigating risks which would otherwise have an impact on the objectives of that project, business function, business unit or operating group, while maintaining effective internal controls to identify risks and opportunities as well as ensure accurate financial reporting. To ensure that the first line of defence is functional and operational, every staff member understands their roles, responsibilities and

expectations and that they have the adequate skill and expertise to undertake their required function.

#### Second line of defence

The second line position or person is responsible for monitoring the effectiveness of the management of the risks and opportunities. Senior management ensures that there is an oversight function and

## Risk management continued

monitors the effectiveness of the operating model and implementation of effective risk and opportunity management practices by operational management. This assists the risk owners in reporting adequate risk-related information up and down the organisation and facilitates risk and opportunity management processes to identify risks and opportunities and agree on and enhance improvement strategies. In addition, regulatory compliance is monitored and guidance provided on compliance requirements.

The second line's responsibility is to provide objective assurance (separate to line management) regarding the effectiveness of the management of risk by the first line and to identify and report any deficiencies not transparent through normal processes and escalate accordingly. If processes and controls are found to be inadequate it is also the second line's responsibility to ensure that adequate processes and controls are implemented.

### Third line of defence

The third line of defence is where internal and external audit provide independent assurance that the overall risk and opportunity management process is functioning properly. The internal auditing function, through a risk-based approach, provides assurance on the effectiveness of governance, risk and opportunity management and internal control to the operating groups and to the committees of the Board. This is supplemented by the external audit function, which independently verifies the accuracy of financial results and certain non-financial data.

### Risk management considerations at each level within Aveng

Aveng considers risk at various levels within its organisation. These are namely at the group level, operating group / business unit (regional) level and at project level.

### Aveng group level

#### Strategic risk

At an Aveng group level, strategic (emerging) risks and opportunities are considered and are those that affect or are created by Aveng's strategy and its strategic objectives. Strategic risks and opportunities are not business unit or project specific but impact the entire organisation. They typically have a low likelihood of occurring, but have a significant impact that can threaten the

survival of the organisation. The mitigation of strategic risks and opportunities tends to be complex and the understanding of these risks and opportunities provides input to the Group's strategic planning exercise, with the preferred option to mitigate identified strategic risks or take advantage of strategic opportunities. The process of strategic risk and opportunity management is depicted below:



As the first line of defence, Aveng senior management is responsible for identifying the key strategic risks and opportunities and developing mitigating actions and suitable controls.

### Operating group and business unit (region) level

#### Strategic risk

The strategic risks considered here are key to the operating group and business unit specific strategic plans for each business sector with its objectives aligned to the group strategy. These risks impact the operating group's ability to execute its

strategies and achievement of its objectives. These are critical to the operating groups and any risks that flow from a chosen strategy are monitored and managed on an ongoing basis through the risk and opportunity management process.

### Business function risk

For operating groups (and their business units) risk is not only viewed as the management of a specific event, but also as management of critical functions in the business, which effectively reduce risk. The operating groups ensure that their critical business policies, procedures and

## Risk management continued

processes and the essential items of control within those policies and procedures are implemented and appropriately managed, by either the site, project or factory team. The assurance processes ensure that effective management of the policies and procedures is occurring and if this process shows non-adherence to the policies and procedures, management is in the position to take appropriate actions.

In summary, the high-level assurance process is as follows:

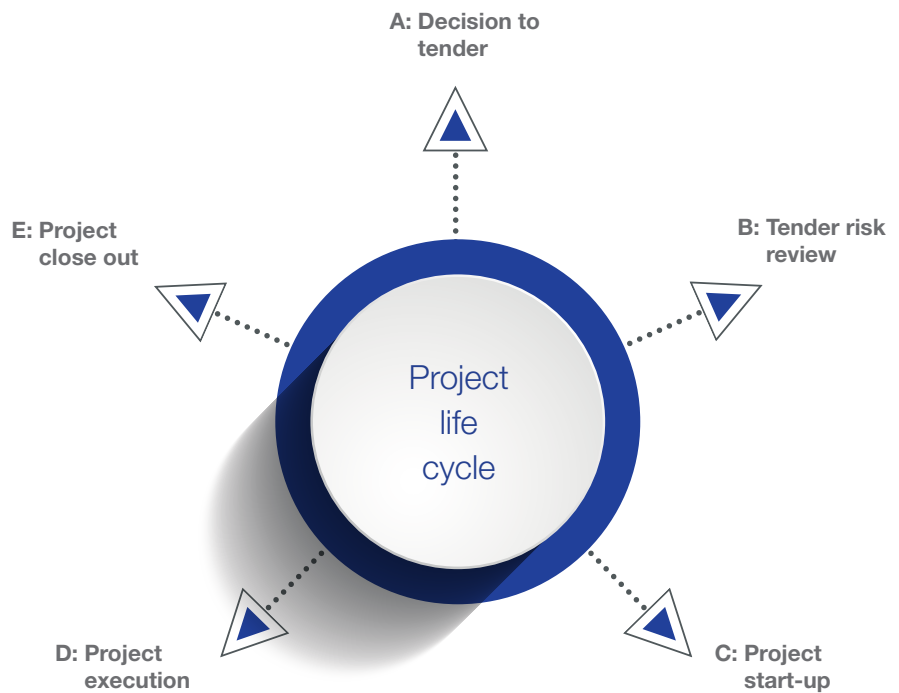
- ▶ Ensure that the relevant policies and procedures with applicable controlled documents are in place
- ▶ Identify the first line of defence for each policy and procedure and describe how these critical functions should be managed. The first line of defence must adhere to the critical controls of compliance within the policy and procedure. Employees need to be aware of these requirements with clear roles and responsibilities taking cognisance of the policies, procedures and critical controls
- ▶ Management is required to review and assure themselves that the policies, procedures and critical controls are implemented and adhered to. This includes, but is not limited to, monthly oversight and peer reviews of control on critical functions around the first line of defence
- ▶ Internal audit must review and report on compliance with critical functions by auditing the implementation of the first line of defence, and where appropriate issue recommendations for possible improvements on business processes and procedures
- ▶ If the assurance process indicates that adherence is not being adequately achieved, management is required to implement remedial action to manage this risk

### Aveng project risk life cycle management

Given the importance of turnover and the inherent risks associated with the operating environments of Aveng’s engineering and construction-related businesses, the management of project life cycle risk is critically important to the Group’s ongoing sustainability.

At project level, each operation ensures that project-related risks and opportunities are appropriately managed; and are in line with

the project life cycle risk processes defined below. These projects usually include arrangements where a group entity is the sole contractor, or where the group entity is in joint venture (JV) with another entity or where the group entity forms part of a consortium or an alliance. Each type of project exposes the Group to a unique set of circumstances and project life cycle risks are appropriately managed within the business at five distinct project phases as illustrated in the diagram below:



### Risk reporting

While Aveng has defined minimum formal reporting requirements, proactive risk and opportunity management occurs daily. Key risks that are identified are elevated to the next reporting level as soon as someone becomes aware of them, including appropriate responses which need to be implemented. This focuses the attention of senior management on key risks affecting the business objectives.





*Sishen Solar Farm, Northern Cape*



# Human resources



## Human resources

Human resource management in Aveng seeks to enable effective processes to attract, develop, performance-manage, reward and retain high-performing employees. An important part of this involves equipping managers with the skills and capability to effectively engage with employees to ensure clear accountabilities and line of sight between organisational objectives and the outputs required of each employee to meet Aveng’s overall strategic objectives.

### Key focus areas

Following on from 2016, the Aveng human resources function focused on reviewing organisational capability and implementing the necessary interventions to ensure the organisation realises the *recover and stabilise* phase of the Group’s strategy and is positioned for sustainable growth. Key actions include:

- ▶ Ensuring we have the right people in the right positions with the right skills and capability in all critical roles through:
  - Assessing the capability of all managers in critical roles to determine cognitive and behavioural compatibility to their current roles and their potential for upward mobility
  - The development of leadership skills through in-house, tailor-made leadership programmes for junior and middle managers and local and international flagship leadership programmes for executives
  - Relevant technical and non-technical skills development programmes
- ▶ Continuing to entrench a high-performance culture premised on every employee assuming personal accountability for the organisation’s performance
- ▶ Regular employee engagement through formal and informal engagement sessions to ensure employees are informed and aligned to the organisation’s strategy and to improve engagement and commitment
- ▶ Reviewing the organisation’s succession bench strength in all key and critical positions
- ▶ Ensuring human resource basics are in place and that key people-related metrics are measured and monitored, with corrective action taken proactively, where necessary
- ▶ Reviewing progress towards achieving employment equity (EE) targets with action plans to address shortfalls.

The table below details the progress made across specific key human resource activities in 2017:

### Salient features

Performance area	Target	2017	2016	2015	2014	2013
<b>Implementing an integrated talent management and succession planning model</b>	▶ Mission-critical and key management positions identified and incumbents assessed	●	●	●	◐	◐
	▶ Talent identified, trained and developed to move into key and mission-critical positions as they become available	◐	◐	◐	◐	◐
	▶ The identification and development of historically disadvantaged South African candidates for middle and senior management positions prioritised.	◐	◐	◐	◐	◐
<b>Measuring and managing performance</b>	▶ Formal, standardised performance contracts in place for all junior, middle and senior managers with improved quality of performance reviews	◐	●	●	◐	◐
	▶ Individual development plans in place	◐	●	●	◐	◐
<b>Employee relations strategy</b>	▶ Informed, engaged and committed employees	●	●	◐	◐	◐
	▶ Reduction in propensity for unprocedural strikes	●	●	◐	◐	◐
<b>Implementing a high-performance culture</b>	▶ Culture enablers fully understood and embedded into the Aveng culture	◐	◐	◐	◐	◐
<b>Optimising the organisation / flattening levels</b>	▶ A high-performing workforce with clearly understood roles and accountabilities within a flatter organisation	◐	●	●	◐	◐
<b>Human resource systems capability</b>	▶ An integrated human resource information system (SAP HCM) providing accurate people management information and a B-BBEE reporting and analysing tool (Mpowered B-BBEE toolkit) implemented	●	●	●	●	◐
<b>Targeted training and development</b>	▶ Integrated training interventions focused on the development gaps identified through succession plans, performance management reviews and psychometric assessments	●	●	●	◐	◐

Not implemented
  Not fully implemented
  Implemented with further work required
  Fully implemented

## Human resources continued

### Human resource impacts and management

Aveng has identified its main human resource stakeholders and continuously engages with them through various formal and informal methods. Our progress during 2017 is detailed below:

Stakeholder	Concern / opportunity	Impact on Aveng if not addressed	2017
<p><b>Employees</b>  <b>Southern Africa and rest of the world operations</b></p> <ul style="list-style-type: none"> <li>▶ Salaried 3 497</li> <li>▶ Waged 8 861</li> </ul> <p><b>Australasia operation</b></p> <ul style="list-style-type: none"> <li>▶ Overhead 409</li> <li>▶ Project staff 1 570</li> <li>▶ Waged 1 158</li> </ul>	<ul style="list-style-type: none"> <li>▶ Alignment of employees with the strategy of the organisation and the desired organisational culture and values</li> </ul>	<ul style="list-style-type: none"> <li>▶ Sub-optimal performance and failure to meet targets</li> <li>▶ Labour disruption</li> <li>▶ Misaligned organisation</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cross-functional work streams on each of the key strategy pillars established</li> <li>▶ Ongoing CEO and MD roundtable engagements</li> <li>▶ Ongoing induction programmes to onboard new employees</li> <li>▶ Ongoing in-house employee communication</li> </ul>
<p><b>Organised labour</b></p> <ul style="list-style-type: none"> <li>▶ NUM, NUMSA, UASA, AMCU and Solidarity in South Africa</li> <li>▶ AWU and CFMEU in Australia</li> </ul>	<ul style="list-style-type: none"> <li>▶ Quality / consistency of engagement with unionised and non-unionised labour</li> </ul>	<ul style="list-style-type: none"> <li>▶ Tough labour relations environment</li> <li>▶ High propensity for labour disruption</li> <li>▶ Emergence of new union federations</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ongoing engagement with employees and organised labour</li> <li>▶ Direct regular communication with employees</li> </ul>
<p><b>Managers</b></p>	<ul style="list-style-type: none"> <li>▶ Ownership and accountability for performance in area of responsibility</li> <li>▶ Effective succession planning to ensure business continuity</li> </ul>	<ul style="list-style-type: none"> <li>▶ Sub-optimal business performance and failure to meet performance objectives</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ongoing measurement of performance and succession plans</li> <li>▶ An in-depth capability review of management conducted across projects, commercial and top three layers of leadership in the organisation</li> <li>▶ Various routine actions, including coaching and management development programmes</li> </ul>
<p><b>Service providers</b></p>	<ul style="list-style-type: none"> <li>▶ Alignment of service providers with the Aveng strategy, employment conditions, and values</li> </ul>	<ul style="list-style-type: none"> <li>▶ Could result in sub-optimal performance and failure to meet targets</li> <li>▶ Standards not maintained</li> <li>▶ Dysfunctional, unsustainable relationships with suppliers</li> <li>▶ Non-compliance with legislation</li> </ul>	<ul style="list-style-type: none"> <li>▶ Ongoing engagement with service providers to ensure their alignment with Aveng policy, values and applicable legislation</li> </ul>
<p><b>Regulatory bodies relating to labour</b></p>	<ul style="list-style-type: none"> <li>▶ Compliance with legislation</li> </ul>	<ul style="list-style-type: none"> <li>▶ Reputational and / or financial risk</li> </ul>	<p>Ongoing reviews to ensure compliance with applicable legislation / codes</p>

## Human resources continued

### Human resources performance Talent and succession planning

During the current difficult business environment, effective talent and succession management are essential to long term organisational sustainability and success. Aveng continues to invest in the management of talent in key business roles, the development of future leadership capacity and the retention of high-performing talent.

During 2017, an in-depth capability review was conducted to assess the capability and competence of key management across the organisation, including project management capability, commercial capability and key and critical staff within the top three layers of the organisation. Safety, health and environment and finance capability across all Aveng operations globally was also assessed. Assessment batteries formed an integral part of capability reviews, along with other factors such as business and individual performance.

A number of interventions were implemented, including coaching, leadership development programmes and poor performance interventions, where required, to address identified shortfalls.

Talent management interventions were also implemented across McConnell Dowell operations allowing for a single measurement methodology for Aveng globally.

There was an improvement in the succession pipeline in 2017, with increases of 23% to 24% in ready now successors and 47% to 56% in ready later successors (one to four-year succession), compared to 2016. Significantly, there was a 52% increase in the succession pipeline of historically disadvantaged South African (HDSA) successors (three to four-year pipeline). Gaps across the overall succession pipeline are being mitigated by an investment in sourcing technology to assist in identifying an external pool of future possible candidates to fill these gaps. 215 emerging talent candidates have been identified across Aveng and are being developed into future successors, mainly across technical positions.

There was no significant loss of key and critical talent during 2017. Through the consistent measurement of key metrics, it is evident that Aveng is retaining more key and critical talent than in previous years as a result of the integration of a number of interventions to keep employees engaged in the workplace. Aveng is also retaining most of its HDSA talent. Talent retention is an enabler in the achievement of our EE targets, but more work is required in this regard.

### Performance management

The key and continued focus during this reporting period has been on driving accountability for business performance to the lowest levels in the organisation. Continuous operational reviews and the alignment of individual key performance indicators (KPIs) to organisational KPIs has supported employee accountability for delivering the desired results. In instances where this is not evident, specific corrective action is implemented, either through coaching and mentoring or performance enhancement programmes, where necessary.

Tier one performance tracking and progress is measured at executive committee and Board level to ensure performance is proactively and continuously measured and tracked. There has been an ongoing improvement in the alignment of performance ratings to organisational performance through effective target-setting.

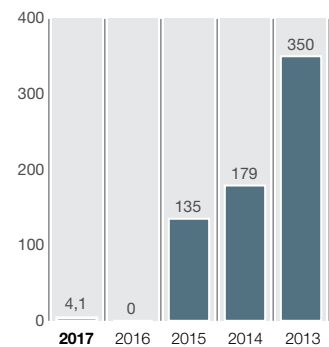
*Additional information is available in the remuneration report in the 2017 integrated report at [www.aveng.co.za](http://www.aveng.co.za)*

### Employee relations Impact of labour disruption

There has been a significant reduction in internal and industry-related strikes. From 2013 to 2017 Aveng's strike-related costs declined from R350 million to R4,1 million. This improvement is attributed to the Group's ongoing engagement with employees and unions, effective longer term wage agreements and the prevailing tough economic climate, where job security is paramount.

The graph below details the significant reduction in costs associated with strike action.

### Cost impact of strike action on net operating earnings (Rm)



The employee relations climate within McConnell Dowell has remained stable, with no notable incidents during this reporting period.

### Organisation optimisation

In response to worsening market conditions over the past five years, Aveng has reviewed its portfolio and business offering and consolidated business units to remain competitive within a leaner organisational structure. This has resulted in a headcount reduction of 10 499 employees (40%) across South African and McConnell Dowell operations between 2013 and 2017. No significant critical skills were lost during ongoing business reorganisation processes.

In line with the review of business performance and strengthening of management capability, the following key appointments were made across Aveng during 2017:

### South African operations

- ▶ Group strategy and investor relations executive
- ▶ Managing director, Aveng Duraset
- ▶ Managing director, Aveng Infracore
- ▶ General manager, Aveng Rail
- ▶ Managing director, Aveng Grinaker-LTA Mechanical and Electrical
- ▶ Managing director, Aveng Grinaker-LTA Water
- ▶ General manager, Aveng Grinaker-LTA Plants & Assets



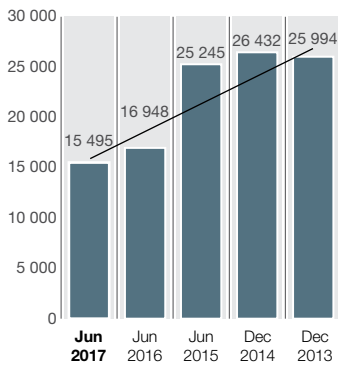
## Human resources continued

- ▶ Financial director, Aveng Steel
- ▶ Sales and marketing executive, Aveng Manufacturing
- ▶ Technical executive, Aveng Manufacturing

### McConnell Dowell operations

- ▶ Executive general manager, new business and strategy
- ▶ Group manager, Marine
- ▶ Managing director, New Zealand & Pacific
- ▶ Managing director, Southeast Asia
- ▶ General manager, new business and strategy Australia
- ▶ Operations manager, Southeast Asia
- ▶ Operations manager, Australia

### Aveng total headcount: 2013 – 2017



### Human capital systems and metrics

Since the successful completion of the SAP HCM project in March 2015, the maturity of human resource capability has increased significantly. A number of key metrics that consistently measure people performance and productivity have been implemented. Some of the successes realised include payroll standardisation, the effective management of absence, sick leave and headcount management, enabling operating groups to make informed decisions about people management. The maturity of its systems has enabled the Group to integrate processes such as talent management,

performance management and succession planning into one integrated and seamless process. This integration has strengthened informed management decision-making in the development and appointment of key talent.

Additional work is required to integrate McConnell Dowell’s metrics into the system to provide group-wide employee metrics on one platform.

### Learning and development South African operations

The development and upskilling of employees across Aveng, especially in the Group’s key skills categories, is fundamental to ensuring a high-performing organisation. During 2017, the Group maintained its focus on leadership development interventions for key supervisory, first-line and middle managers, and executive development interventions for senior executives.

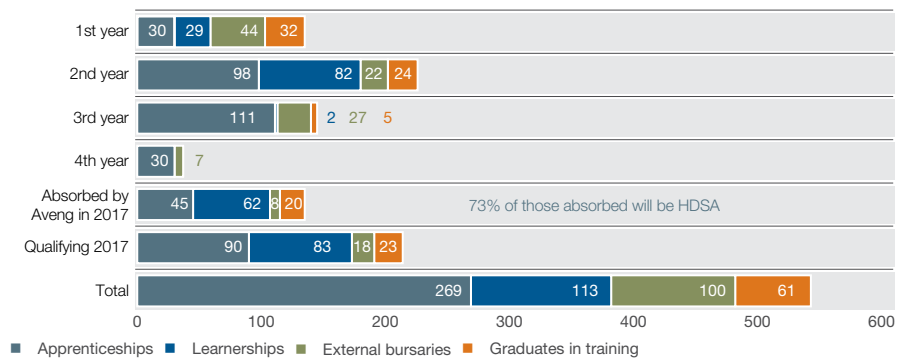
### Technical training highlights

Aveng continues to run one of the most extensive technical training offerings in South Africa. Various Aveng training schools offer accredited training, apprenticeship and learnership programmes, covering trades such as welding, fitting and turning, lifting equipment training, rock breaking, diesel mechanics and construction-related programmes.

A total of 543 learners and students are currently enrolled on various formal learning programmes across Aveng (South Africa). Of the 543, 88% are black and 26% are female.

The graph below details the enrolment of learners and students in formal learning programmes across Aveng (South Africa) during 2017:

### Learning programme pipeline and skills absorption tracking



**Of the 214 learners completing their training across a range of programmes in 2017, 135 (63%) will be absorbed into permanent positions at Aveng (45 apprentices, 62 learners, eight bursars and 20 graduates). Steps are being taken to market those not absorbed with potential other employers, including JV partners and suppliers.**

## Human resources continued

### Technical training programmes

#### Apprenticeships

Aveng's South African operations continue to develop artisans for future career opportunities across the Group. In 2017, 269 apprentices were trained in a number of disciplines, such as earthmoving equipment, electrician, fitting and turning, millwright, tool, jig and dye maker and tool setter. In alignment with Aveng's transformation commitments, 91% of the 269 apprentices are black and 13% are female, while 62% are from Aveng Mining, 19% from Aveng Grinaker-LTA, 13% from Aveng Manufacturing and 5% from Aveng Steel.

#### Learnerships

Through its learnership programmes, Aveng develops pools of critical skills required by industry, while generating employment for historically disadvantaged individuals. A total of 113 learners are currently enrolled in learnership programmes across Aveng, 96% of whom are black and 35% female.

#### Graduate development and bursaries

Aveng runs one of the largest bursary programmes in its sector. There are 61 graduates across Aveng's South African operations, 92% of whom are black and 37% female. Aveng currently provides

bursaries to 100 external students across various disciplines. Of the 100 bursars, 74% are black and 21% female.

Included in the bursary intake for 2017, are three first year engineering students from the Aveng Kutlwanong Rebone Centre, an Aveng Community Investment Trust initiative.

The 2017 bursary students are registered to complete a relevant degree qualification in engineering and will be absorbed by Aveng Manufacturing and Aveng Mining. The bursaries were awarded during a graduation ceremony at the Rebone centre in February 2017.

Technical training programme	Aveng Grinaker-LTA	Aveng Manufacturing	Aveng Mining	Aveng Steel
<b>1 Apprenticeships</b>				
Earthmoving and diesel mechanics	7	5	111	
Electrician		3	11	
Millwright		5	2	12
Boilermakers			13	1
General fitters	3	9	9	1
Auto electricians			18	
Pipe fitters	11			
Riggers	4		4	
Welders	27			
Fitting and turning / tool, jig and dye maker / tool setter / pattern making / control and instrumentation		11		
<b>Total apprenticeships</b>	<b>52</b>	<b>35</b>	<b>168</b>	<b>14</b>
<b>2 Learnerships</b> (including rock breaking, mining, construction, building, roadworks, manufacturing and assembly as key learnerships)	<b>40</b>	<b>16</b>	<b>51</b>	<b>6</b>
<b>3 Graduates in training</b> (including civil, electrical, mechanical and mining engineering and project management as key programmes)	<b>34</b>	<b>17</b>	<b>6</b>	<b>4</b>
<b>4 Bursars</b> (engineering and project management-related study disciplines as a feeder to the graduate in training programme)	<b>44</b>	<b>54</b>	<b>2</b>	<b>-</b>
<b>Total apprenticeships and learnerships</b>	<b>170</b>	<b>122</b>	<b>227</b>	<b>24</b>
<b>Total in training</b>		<b>543</b>		

## Human resources continued

### Training highlights (South African operations)



#### Aveng Grinaker-LTA

##### Construction Industry Partnership (CIP)

Aveng Grinaker-LTA is a member of the CIP, an initiative of the National Business Initiative to address key obstacles in the pipeline of technical skills for the construction sector. One of the objectives of the CIP was to test a model of post-NCV training that can create pathways to a successful trade and occupation specific qualification. As part of this initiative, Aveng Grinaker-LTA trained 15 bricklayers, all of whom have all been enrolled to complete qualifications at various technical colleges. These learners were placed on Aveng Grinaker-LTA building sites for experiential learning for nine months.

##### Go-for-Gold Secondary School Programme

Aveng Grinaker-LTA is sponsoring eight students on the Go-for-Gold programme, focusing on improving maths, science and life skills of Grade 11 and 12 students. In January 2017, two students (one black male and one black female) who graduated from phase 1 of the programme in 2016, were permanently employed by Aveng. On completion of one year of workplace learning (phase 2), they will be awarded bursaries for tertiary studies (phase 3) in 2018.

##### Graduate Development Programme (GDP)

12 graduates joined the GDP in January 2017 and completed two blocks of structured course work during 2017. Eight employees who joined the GDP in 2016 moved on to the professional mentorship programme in 2017.



#### Aveng Manufacturing

##### Business Administration Services Learnership (NQF L4)

The 2016 learnership for unemployed youth living with disability has been successful, with all seven females (two coloured and five black) enrolled on the Business Administration Services learnership attaining their qualifications. During 2017, five of the learners were appointed to formal internship programmes in Aveng Manufacturing business units. 10 new learners (five black females and five black males) enrolled for the 2017 programme. The learnership programme for youth living with disability remains one of Aveng Manufacturing's flagship programmes and beneficiaries will receive continued support to ensure success with their studies.

##### Manufacturing and Assembly Operations learnership (NQF L4)

Aveng Manufacturing implemented a Manufacturing and Assembly Operations learnership programme for 10 supervisors and team leaders (all African male) at the Aveng Infraset Brakpan factory. All nominated candidates underwent a Recognition of Prior Learning (RPL). The RPL process and learnership programme was concluded in August 2017.

As a way of contributing to communities in which we operate, Aveng Duraset sponsored 10 learners (nine black males and one black female) from Westonaria (adjacent to the Aveng Duraset Westonaria factory) in 2017. The Manufacturing and Assembly Operations learnership programme is offered as part of the commitment made to the Westonaria Unemployed Residents (WUR) to uplift the Westonaria community.

##### Profit Improvement Project (PIP)

Aveng Manufacturing implemented an initiative to improve profit performance by maximising efficiencies and increasing sales. A core element of the project was to increase the competency levels of employees with comprehensive training and development. By March 2017, more than one hundred employees from Aveng Manufacturing had been trained in continuous improvement, sales effectiveness and process efficiency.

##### Partnerships – Co-funded learners by CHIETA

In December 2016, Aveng Manufacturing signed a letter of commitment with the South African Council for Graduates Cooperative (SACGC) to host 15 learners in different engineering disciplines that would be funded by the Chemical Industries Education and Training Authority (CHIETA). Aveng Manufacturing is currently hosting six experiential learners in electrical engineering. This initiative will assist the operating group to attain skills development and employment equity objectives.



#### Aveng Steel

##### Foundational Leadership Programme

During 2017, 28 employees from Aveng Trident Steel were enrolled for a Foundational Leadership Programme to strengthen the skills and competencies required at first-line management level, including understanding the role of a supervisor, leadership skills, communication skills, planning and implementing work, interpersonal skills and understanding risk and safety. The eight-month programme has an intake of 19 males (68%) and nine females (32%). Of the 28 students, 71% are from previously disadvantaged groups.

##### Learnerships for previously disadvantaged, unemployed and disabled groups

During 2017, Aveng Steel implemented three learnerships to upskill employees from previously disadvantaged and unemployed backgrounds.

- ▶ National Certificate: Production Technology NQF 3 – the 2017 intake comprised six males (55%) and five females (45%) with 100% representation from previously disadvantaged groups
- ▶ National Certificate: Business Administration NQF 3 – the 2017 intake comprised 11 females, all disabled, unemployed and from previously disadvantaged groups
- ▶ National Certificate: Business Administration NQF 3 – the 2017 intake comprised four males (33%) and eight females (67%) with 100% representation from previously disadvantaged groups.

## Human resources continued



### Aveng Mining

#### Aveng Mining Accreditation

Aveng Mining provides a number of technical training qualifications and accreditations. Various programmes are delivered to employees and customers. To provide quality training, the Aveng Mining Training Centre has achieved the following accreditations:

Underground Mining re-accreditation – Boshhoek Training Centre, Rustenburg	MQA three-year full accreditation, expiring March 2020
Engineering Training Centre re-accreditation – Aveng Park	National Artisan Moderation Body (NAMB) awarded three-year full accreditation, expiring March 2020
Engineering Training Centre Trade Test Centre accreditation – Aveng Park	The Quality Council of Trade and Occupations (QCTO) full three-year accreditation, expiring March 2020
Opencast Mining re-accreditation – Khatu	MQA three-year full accreditation, expiring March 2020
Underground Mining re-accreditation site extension – Platreef Mine	Three-year extension in progress



### McConnell Dowell

In New Zealand, McConnell Dowell was the first construction company to set up a fully accredited Private Training Establishment (PTE). Through it, the majority of training is provided in-house, enabling McConnell Dowell to deliver high-quality, consistent and effective learning that also meets internal requirements.

By investing in quality education for its people McConnell Dowell improves their ability to deliver to clients. Using experienced in-house trainers and assessors who are familiar with industry requirements and the company's systems and processes, the PTE delivers all McConnell Dowell's health and safety critical training, as well as leadership programmes, a graduate programme for civil engineers, apprenticeships and numerous soft skills such as presentation and communication skills, negotiation and objective writing. The PTE is extended to subcontractors and clients and is now an accredited ConstructSafe Testing Centre – which means McConnell Dowell can administer the ConstructSafe testing, a national standard developed by the Construction Safety Council (CSC), New Zealand's health and safety body for the construction industry.

Unit standard-based health and safety courses are based on the New Zealand Qualifications Authority (NZQA) framework, and lead towards accredited qualifications.

Following its first external evaluation review by NZQA, the PTE was deemed 'Excellent' in its ability to measure the value of learning outcomes and support staff in their learning. With a high proportion of employees who speak English as a second language, or have low levels of numeracy and literacy, these skills are also embedded in the learning material, with the aim of ensuring students can understand the material.

To date, 100% of McConnell Dowell students have achieved their unit standards and had their credits reported to NZQA. As a result, Individual Development Plan (IDP) goals are met, project training requirements are achieved, compliance and regulatory training requirements are met and performance outcomes that support McConnell Dowell's goal of Zero Harm every day are realised.

#### iKhule incubator programme (collaboration between Aveng and the DTI)

Aveng and the DTI entered into an agreement in 2016 to offer a construction incubator programme to develop construction entrepreneurs. The programme is co-funded by the DTI and Aveng and costs up to R30 million over a three-year period. It will not only develop small to medium construction businesses, but will also benefit Aveng in collaborating with these businesses for future work. 20 incubatee companies (21 people) have been selected to participate in this programme. Of the 21, 100% are historically disadvantaged South Africans, 33% are classified as black youth (35 years and under) and 29% are black women. Further to this, 60 people were identified and trained for possible employment by these businesses. Five retrenched employees were given preference during the selection process. Subsequent to completing the NQF level 4 Supervision of Construction Processes as well as the NQF level 2 Entrepreneurship programmes, incubatees are currently being integrated into the Aveng Group's supply chain. Opportunities have been identified and tenders submitted. Several incubatees have been awarded business and are actively engaged.

More detail on the iKhule programme is available in the transformation report in this sustainability overview. [➔](#)



## Human resources continued



### Leadership and executive development Leading in Aveng programme

Aveng is committed to developing its managers and leaders as part of its mission to develop an effective and high-performance organisation. Continuing to strengthen leadership capability through the appointment, training and development of strong leaders across all operating groups is a core focus of the Group's development interventions. Aveng continued to offer its premier leadership development programme, Leading in Aveng (LIA) in 2017. This is a fully accredited Advanced Diploma

in Organisational Leadership (NQF Level 7) programme for first-line supervisors, middle managers and senior managers. 46 delegates from across the South African operating groups participated in the 2017 programme.

### LIA 2015 – graduation ceremony

A 2015 graduation ceremony took place on 31 August 2016, with 50 students attending the ceremony together with Aveng executives and senior managers. The graduates were addressed by Kobus Verster, then Aveng CEO who expressed his expectations of the graduates as they return to their respective workplaces.

To successfully graduate, the participants were deployed into work groups and given a real-life Aveng topic to research and develop a presentation with key findings and recommendations which they subsequently presented to the Aveng executive committee.

Of the 59 students who successfully attained their Advanced Diploma in Organisational Leadership, 54% passed with distinction. During the ceremony, several awards were made including a top student award, best group assignment and best individual assignment.

### LIA graduation group 2015



LIA Top Student Award 2015:  
Celeste de Klerk



Best Group Assignment 2015 –  
Mokolo Water Augmentation Project Review



Best Individual Assignment 2015:  
Thobeka Ntshiza

The LIA 2016 graduation took place in August 2017.

## Human resources continued

### Executive development programme

In 2016, two senior executives from Aveng Grinaker-LTA and the corporate office were nominated to attend the executive programme (TEP) at the Darden School of Business, University of Virginia in the USA. This programme runs over three weeks and is designed to expose executives to leading and latest global best practices in business leadership. The programme offers senior leaders a holistic leadership experience to gain new knowledge, insights and skills, and to challenge current ways of thinking. Another two executives from Aveng Mining and McConnell Dowell attended the programme which commenced in June 2017.

### Looking ahead

Focus areas – 2018	Desired outcomes / actions
<b>Continue to implement the transformation / localisation strategy</b>	<ul style="list-style-type: none"> <li>▶ Achieve transformation / localisation strategies set by each operating group</li> <li>▶ Meet the targets set for appointing key black talent into identified positions as part of the employment equity plan and Aveng succession plan</li> <li>▶ Set specific critical talent retention targets</li> </ul>
<b>Entrench the employee relations strategy to reduce / eliminate strike impact</b>	<ul style="list-style-type: none"> <li>▶ Continue with CEO / MD roundtable engagements and cascade to lower management levels</li> <li>▶ Continue engaging employees and unions on business realities, challenges and their role in contributing to the business turnaround</li> </ul>
<b>Continue to drive the Aveng culture strategy</b>	<ul style="list-style-type: none"> <li>▶ Continue to drive a culture of employee participation through roundtable and employee engagement sessions</li> <li>▶ Continue to instil the desired management behaviours through formal performance reviews</li> <li>▶ Continue to exercise rigour in the placement of people into senior positions aligned to desired behaviours</li> <li>▶ Cascade the organisation's strategy across all levels ensuring consistent messaging</li> </ul>
<b>Embed the succession planning model</b>	<ul style="list-style-type: none"> <li>▶ Ensure retention of critical talent</li> <li>▶ Develop identified emerging talent</li> <li>▶ Ensure achievement of employment equity targets and goals through incentivisation</li> <li>▶ Fully integrate McConnell Dowell succession planning and talent interventions into Aveng</li> </ul>
<b>Continue driving a high-performance culture</b>	<ul style="list-style-type: none"> <li>▶ Continue to drive the employee value proposition</li> <li>▶ Decisively address repeat poor performance</li> <li>▶ Continue employee engagement sessions</li> <li>▶ Implement actions from employee roundtable sessions</li> <li>▶ Recognise and develop high-performing employees</li> </ul>

# Transformation





## Transformation

Aveng's South African operations remained focused on implementing authentic, meaningful, and sustainable transformation during 2017. Aveng's commitment to transformation is premised on the notion that it is 'the right thing to do'.

Transformation remains a key element of Aveng's strategy and underpins its sustainability pillar. The Group remains resolute in its compliance with the spirit and intent of the principles of broad-based black economic empowerment (B-BBEE) and currently measures its transformation progress against the Revised Codes of Good Practice. The Group will revert to the revised Construction Charter once it is gazetted.

Aveng's South African operations have a Level 3 B-BBEE status, valid until 18 October 2017 and measured against the 2013 Revised Codes of Good Practice. The Group's 2015 Level 2 rating was measured against the now repealed Construction Sector Charter.

The group transformation function is empowered to enable and support the operating businesses to effect change and impact performance in all elements of the transformation scorecard.

Preparations for compliance with the proposed Construction Sector Charter are firmly entrenched in business practices, and the transition to the charter presents no inherent risk to the Group.

Aveng has combined the group procurement and group transformation functions under the leadership of Dr Poobie Pillay. This enables the Group to leverage the inherent synergies between procurement and transformation and the integration of transformation into procurement decision-making.

### Key focus areas

Aveng consistently reviews its performance outcomes against the belief that transformation should not be measured by the achievement of targets on the scorecard, but rather by the greater economic and social impact that the Group can achieve, while also deriving strategic advantage.

Against this backdrop, the key issues supported across South African operations are:

- ▶ Increased black and black women ownership emanating from the sale of majority stakes in the construction and steel businesses

- ▶ Improved B-BBEE understanding, performance and compliance with the management control targets as measured against the national economically active population
- ▶ Increased emphasis on identifying, recruiting, training and retaining black professionals, with increased emphasis on black women and people with disabilities
- ▶ Ongoing support for socio-economic development (SED) initiatives. While current initiatives have focused on mathematics and science education, the Group will increase its focus on community development and localised transformation in the communities within which it operates going forward
- ▶ Creation of opportunities and access to Aveng's procurement expenditure for black-owned and black women-owned exempted micro enterprises and qualifying small enterprises in line with the Group's strategy
- ▶ Enhancement and fostering of strategic relationships with key stakeholders.

### 2016 Salient features

The performance of Aveng against strategic objectives defined in the Group's three-year transformation plan is outlined below.

## Performance of Aveng (Africa) Proprietary Limited against the Revised Codes of Good Practice

### Broad-based black economic empowerment scorecard\*

Scorecard elements	Aveng Africa 2016	Aveng Africa 2015	Aveng Africa 2014	Comparison to prior year
Ownership	23,04*	24	24	
Management control (MC)	9,35	10	9,26	New Codes
Employment equity	NA	4,32	3,95	Included in MC
Skills development	13,02	13,17	10,78	
Preferential procurement (ESD)	40,69	20	20	New Codes
Enterprise development	NA	15	15	Included in ESD
Socio-economic development	5	5	5	
<b>Total</b>	<b>91,1</b>	<b>91,49</b>	<b>87,99</b>	
<b>Rating</b>	<b>3**</b>	<b>2</b>	<b>2</b>	

\* Headcount and ownership verified at time of verification during October 2015.

\*\* The decline in Aveng's performance in 2016 to level 3 is due mainly to the change from the Construction Sector Charter to the Revised Codes of Good Practice.

For a copy of the Aveng B-BBEE certificate, go to: [www.aveng.co.za](http://www.aveng.co.za). The current certificate is valid until 18 October 2017. 



## Transformation continued

### Transformation impacts and management

Aveng continues to focus on collaborating efficiently with its stakeholders to understand, respond to, and improve on key material issues that matter to them. These key transformation stakeholders include employees, clients, contractors, suppliers and the authorities that govern the Group's compliance with employment equity and B-BBEE legislation. Their key concerns or requirements, and the actions Aveng has taken to address them, are reported in the table below:

Stakeholder	Concern / opportunity	Impact on the business	Actions
<b>Department of Trade and Industry and Construction Sector Charter Council</b>	Compliance with B-BBEE Codes of Good Practice and construction charter targets	Impacts our ability to contribute to broader economic and social objectives  Ability to conduct business sustainability	<ul style="list-style-type: none"> <li>▶ Submission and engagement on draft regulations</li> <li>▶ Engagement through industry consultative bodies</li> <li>▶ Partnering on enterprise-development programmes in construction-related activities (iKhule Business Incubator)</li> </ul>
<b>Department of Labour</b>	Compliance with employment equity (EE) statutory requirements	Reputational risk of non-compliance and penalties when EE targets not met	<ul style="list-style-type: none"> <li>▶ Quarterly EE committee meetings</li> <li>▶ Prioritising appointment and development of PDI candidates</li> <li>▶ EE compliance audits</li> <li>▶ Participation in EE Commission stakeholder engagement forums</li> <li>▶ Department of Labour annual EE roadshows</li> <li>▶ Ongoing regular stakeholder engagements</li> </ul>
<b>Suppliers</b>	Compliance with B-BBEE Codes of Good Practice and Construction Sector Charter targets and retaining empowering supplier status	Lower preferential procurement scoring as suppliers may drop levels under the new codes or charter	<ul style="list-style-type: none"> <li>▶ Suppliers considered high-risk have been consulted, trained and are being monitored to ensure minimal impact on group B-BBEE scores</li> <li>▶ All procurement processes are aligned to ensure that B-BBEE due diligence is conducted before appointing suppliers</li> </ul>
<b>Employees</b>	Employee engagement on transformation related matters	<ul style="list-style-type: none"> <li>▶ Inability to attract and retain diverse talent</li> <li>▶ Inability to build skills in line with future business growth</li> <li>▶ High skilled labour turnover</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide career development opportunities</li> <li>▶ Ongoing CEO and MD roundtable engagements</li> <li>▶ Anonymous employee tip-off hotline</li> <li>▶ Ongoing transformation awareness programme</li> <li>▶ Operating group EE and SD committee representation</li> </ul>

## Transformation continued

### Transformation monitoring and performance

The development, implementation, monitoring and evaluation of Aveng's transformation strategy remains a core function of the employment equity, skills development and transformation working committees. The Group invests in appropriate training interventions to ensure that committee members have the capacity to engage on critical issues relating to race, gender, disability, employee development, workplace barriers and culture. These committees ensure compliance with the requirements of the Employment Equity, Skills Development and Broad-based Black Economic Empowerment Acts. Our goal is to create an environment of inclusion and acceptance, where everyone is treated fairly, equally and without discrimination. Employees across all occupational levels have undergone diversity training to foster conducive working environments for all employees. Aveng is aware that its gender

balance remains a challenge, however, this is steadily improving with women representing 15% of Aveng's population and 12% of the Group's most senior managers in 2017.

### Ownership

Aveng's empowered ownership status at the last audit was 67,88% black-owned with 19,38% black women ownership. Black and black women ownership will increase in 2018 as a result of the sale of controlling interests in the steel and construction businesses to a majority black women-owned company.

### Management control

Aveng is committed to increasing the diversity of its workforce to reflect the country's national economically active population. The economic downturn has required ongoing adaptation and restructuring of the Group which has contributed to the reduction in overall

headcount of 10 499 since 2013. Aveng's core focus remains the retention of critical skills that are required to manage and grow its business operations. Diversity and inclusion are integral parts of the Group's transformation and human resources strategies and processes. At June 2017, Aveng employed 12 358 people in South Africa, 86% of whom were black employees, 12% black women and 0,80% people with disabilities. Black employees with disabilities have increased to 0,31% of the South African office-based workforce. Aveng continues to create awareness of the importance of people with disabilities as a core component of the Group's diversity commitment. This is done by means of ongoing declaration campaigns and sensitisation workshops on disability matters. Reasonable accommodation guidelines have been developed to ensure that managers are better informed and equipped to provide for employees with disabilities.

**Table 1: Aveng (Africa) workforce profile (2017)\***

Occupational levels	Male				Female				Foreign Nationals		Grand total
	African	Coloured	Indian	White	African	Coloured	Indian	White	Male	Female	
Top management (A)**	2	0	1	6	0	0	0	0	0	0	9
Senior management (A)**	10	6	19	109	6	1	0	8	10	0	169
Professionally qualified (A)	142	81	72	535	42	7	14	88	27	5	1 013
Skilled technical (A)	921	154	57	534	182	50	38	219	54	7	2 216
Semi-skilled	3 872	339	58	176	518	64	18	116	173	6	5 340
Unskilled	2 456	84	29	34	340	28	1	8	123	1	3 104
<b>Total permanent</b>	<b>7 403</b>	<b>664</b>	<b>236</b>	<b>1 394</b>	<b>1 088</b>	<b>150</b>	<b>71</b>	<b>439</b>	<b>387</b>	<b>19</b>	<b>11 851</b>
Temporary employees	53	17	3	20	14	5	1	10	1	0	124
<b>Grand total</b>	<b>7 456</b>	<b>681</b>	<b>239</b>	<b>1 414</b>	<b>1 102</b>	<b>155</b>	<b>72</b>	<b>449</b>	<b>388</b>	<b>19</b>	<b>11 975</b>

(A) This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 to 6). 

\* Summary of workforce profiles submitted to the Department of Labour in October 2016 in terms of the Employment Equity Act.

\*\* An error in the workforce profile was detected for the 2015 reporting period wherein a foreign senior manager was incorrectly reported as top management. This administrative error has been rectified.

During 2017, Aveng continued to implement greater diversity at management levels as shown in the following table:

### Transformation performance at management level

2017	Managers (number)	Black employees (%)	Black women employees (%)
Senior managers	186	15,07	4,5
Middle managers	1 071	25,98	6,34
Junior managers	2 448	59,61	11,66

## Transformation continued

Representation at senior management level, measured against the revised codes is 15,07% (EAP penalties applied) compared to 38,95% measured against the old construction codes. The Group remains focused on addressing the under-representation of black people, particularly African and coloured people relative to their economically active population (EAP) ratios.

At middle management level, Aveng had a 10,95% regression in the number of black people from 36,93% in 2016 to 25,98% in 2017. The Group has continued to create a diverse leadership pipeline at junior management level. As a result of skills and leadership development programmes implemented in all of the operating groups, 59,61% of the Group's 2 448 junior managers are black, with 11,66% being black women. As women remain under-represented at all management levels, a particular focus will be placed on greater female representation across all races going forward.


### Skills development

Aveng recognises that skills development is an imperative at all levels and the Group is committed to investing in its employees to ensure that they have the skills required to perform at their full potential. While the Group complies with relevant training and skills development legislation, its investment in people goes beyond adherence to such legislation. Aveng is committed to continuous personal development.

Aveng's skills development strategy focuses on formal structured programmes that enable performance and career progression for all of its employees, with an increased focus on black people. Enrolments in training interventions are aligned with the Group's transformation objectives.

Structured internships, apprenticeships and learnerships in a number of fields, including business administration, engineering and

construction, continue to be implemented within Aveng. These programmes are aimed at developing the technical skills that afford participants real opportunities in the workplace. The programmes are targeted at Aveng employees and unemployed learners. The Group's business administration learnership programme provides experiential learning opportunities to people with disabilities with the aim of absorbing successful learners into permanent roles. Aveng's investment in training for people with disabilities accounted for 0,04% of total training expenditure.

*Additional information on skills development is provided in the human resources report in this sustainability overview.* 

### Preferential procurement

R4,18 billion to black-owned companies	R1,19 billion to black women-owned companies
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Notwithstanding the challenges associated with declines in supplier ratings, as measured under the Revised Codes of Good Practice, Aveng scored 40,69 for the enterprise and supplier development (ESD) element, obtaining full points for supplier development and 22,14 of the 25 preferential procurement points on offer.

The Group expects to retain a high level of compliance during the October 2017 audit and continues to create opportunities for exempted micro-enterprises (EMEs) and qualifying small enterprises (QSEs) as well as black-owned and black women-owned companies in its procurement activities. Central to the Group's ESD strategy is:

- ▶ A dedicated enterprise and supplier development manager driving ESD strategy across the Group
- ▶ Increased due diligence of B-BBEE requirements at all levels of procurement activity with ongoing monitoring and reporting

- ▶ Increased accountability by procurement officials throughout the Group, including KPI targets at all levels
- ▶ Reduced expenditure on poorly empowered or non-empowered suppliers at centre-led procurement and business unit levels
- ▶ Ongoing entry into strategic supply contracts at a group level with highly empowered suppliers
- ▶ Ongoing entry into three-year commercial supply contracts with qualifying black-owned and black women-owned EMEs and QSEs to assist emerging businesses to become sustainable
- ▶ Increased focus on expenditure with suppliers based in rural and underdeveloped areas, people with disabilities, and youth
- ▶ Communicating the transformation and procurement strategy to major and high-risk suppliers
- ▶ Providing training to high-risk suppliers on the revised codes and assisting with the transformation of their businesses
- ▶ Ongoing training for all senior decision-makers and influencers on the impact of ESD and its strategic imperative for the Group
- ▶ Providing detailed strategic and implementation guidelines for functional staff.

Monitoring and reporting of ESD performance remains vested with the group transformation and procurement executive.

### Enterprise development

Aveng has 120 ESD beneficiaries in its programme to create long term sustainability for emerging black-owned and black women-owned businesses. The Group's flagship enterprise development initiative remains the iKhule Construction Incubator, undertaken in partnership with the DTI, which has 20 emerging construction companies receiving theoretical and practical construction-

## Transformation continued

related training. 40% of iKhule beneficiaries are youth, and 30% are black women. Aveng has used country-wide networking interventions to identify emerging businesses and facilitate access to its procurement expenditure. Over R256 million

was spent with first time emerging businesses during 2017. Enterprise development initiatives are key to improvement in preferential procurement performance, and the Group has continued with its development programme which

identifies rural based companies, emerging entrepreneurs, and start-ups and prepares them to participate in its procurement activities.

The table below sets out the number of suppliers and enterprise development beneficiaries trained in 2017:

Region	Gauteng	Limpopo	KwaZulu-Natal	Eastern Cape	Western Cape	Total trained
Ethics in procurement	25	36		1		<b>62</b>
New Construction Charter	285	33	74	61	45	<b>498</b>
Strategy and entrepreneurship	82	37	10	23	10	<b>162</b>
Inbound marketing and disruptive technology	67	33	9	21	11	<b>141</b>
Crucial conversations	60		13	30	10	<b>113</b>
Information and networking sessions	93					<b>93</b>
Customer service		36				<b>36</b>
Change management		42				<b>42</b>
Law of contract		42				<b>42</b>
Leadership		42				<b>42</b>
Negotiation skills		42				<b>42</b>
Environmental initiatives in construction	20					<b>20</b>
Quality improvement	20					<b>20</b>
Production and cost control	20					<b>20</b>
Construction drawings and specifications	20					<b>20</b>
Health and safety in construction	20					<b>20</b>



## Transformation continued




*ESD remains key to creating a more inclusive economy and reducing unemployment. Aveng will continue its vigorous drive to assist emerging micro-enterprises to access its procurement expenditure.*

### Socio-economic development

Creating access to quality education remains a challenge in South Africa. Aveng focuses its socio-economic development (SED) initiatives and contributions to broaden access to quality education through mathematics and science programmes for marginalised South Africans, particularly in rural areas. This will remain the key area of focus for our corporate social investment (CSI). Aveng’s CSI efforts are facilitated through the Aveng Community Investment Trust which provides structures for governance, financial accountability, monitoring and reporting. In 2017, the Trust invested R6 816 642 in education-related CSI initiatives and the 625 beneficiaries of this investment were underprivileged black youth.

Leadership in social responsibility requires a willingness to invest significantly in the development of South African communities. Our continued commitment to investing in the development of all South Africans means that we consistently achieve maximum recognition under the construction charter and revised codes respectively for our SED efforts. In 2017 we exceeded the compliance requirement, investing R8 461 925,79 in SED projects across our focus areas, which include education, skills development, enterprise development, community infrastructure, environment management and client-driven SED programmes.

*For additional detailed information about the flagship projects, refer to the corporate social investment report in this sustainability overview.* 

## Transformation continued

### Looking ahead

Focus areas – 2018	Desired outcomes
<p><b>Understand, align and implement Construction Sector Charter</b></p>	<ul style="list-style-type: none"> <li>▶ Revise internal compliance targets to align with new charter codes</li> <li>▶ Implement interventions to ensure that requirements for priority elements are met</li> <li>▶ Increase transformation awareness and accountability at all levels of Aveng through service level agreements with business units</li> <li>▶ Continue to drive transformation initiatives within the Group through workplace transformation forums or committees</li> </ul>
<p><b>Create opportunities for gender equity</b></p>	<ul style="list-style-type: none"> <li>▶ Focus on recruiting according to EE plans to drive female representation targets</li> <li>▶ Continue to advance gender representation through workplace transformation committees</li> <li>▶ Increase and retain female employees in senior and technical roles</li> <li>▶ Aveng group transformation department will continue to raise awareness among all employees to encourage an inclusive culture</li> </ul>
<p><b>Skills development</b></p>	<ul style="list-style-type: none"> <li>▶ Implement strategies for development of unemployed youth which will benefit the business in the short, medium and long term</li> <li>▶ Focus on recruitment and skills development interventions and initiatives based on EE plan to realise EE targets</li> <li>▶ Conduct structured skills committee workshops to enable skills committee to manage workplace skills plans process in a progressive manner</li> </ul>
<p><b>Enterprise and supplier development</b></p>	<ul style="list-style-type: none"> <li>▶ Increase focus on developing black and black women-owned emerging businesses via the iKhule initiative</li> <li>▶ Increase access to procurement activities for youth, disabled, rural and women-owned enterprises</li> <li>▶ Continue efforts to inform, and address high-risk suppliers via ongoing engagement and information</li> </ul>
<p><b>Socio-economic development (SED)</b></p>	<ul style="list-style-type: none"> <li>▶ Integrate Aveng’s key SED strategic pillars and programmes in newly acquired projects. Collaborate with internal and external stakeholders to drive key strategic SED initiatives</li> </ul>

# Corporate social investment





## Corporate social investment

Aveng has a vested interest in the welfare of its employees, communities and local economies in which it operates and embraces its responsibility to play a meaningful role in their socio-economic development. Aveng’s approach to corporate social investment (CSI) and socio-economic development (SED) is aligned with the Group’s skills requirements and complies with legislation, codes of good practice and business practices that support socio-economic growth and development in a sustainable manner.

South Africa faces significant skills shortages in construction, engineering and manufacturing-related technical disciplines. By investing CSI funds in sound educational and skills training initiatives, Aveng is working to break the cycle of poverty by developing a generation of skilled individuals who can be productively employed in the sectors in which the Group operates.

Aveng commits a portion of its earnings to the economic and social development of communities through the Aveng Community Investment Trust (the Trust). Established in 2005, the Trust is a registered public benefit company governed by a board of trustees. It subscribes to the King Report on Corporate Governance for South Africa (King III) that recognises the role of companies in social transformation.

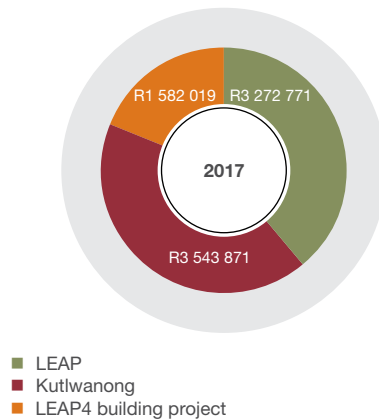
### Aveng continues to commit 1% of headline earnings to CSI

Since its inception, the Trust has had a sustainable impact in the delivery of maths and science tuition at secondary school level, artisan training and development, and the development and renovation of building facilities for schools and communities.

Although Aveng did not achieve a profit in 2017, the Group continued to exceed the legislated expenditure requirements for scorecard ratings during the period under review and remains a leading SED contributor in its sector.

Despite the difficult operating environment, Aveng remains committed to the Trust’s two flagship projects, and provided funding of R6,8 million (2016: R12,3 million) for the Kutlwanong Rebone Centre in Limpopo and the LEAP4 Science and Maths school in Diepsloot. In addition, the Aveng Board approved a donation of R8 million from Aveng towards a project to build a new LEAP4 school. Building costs incurred in the project amounted to R1,58 million in 2017.

### Investment split



### Key focus areas

Aveng has identified the need to strengthen the alignment of CSI and SED with its business objectives. The Trust prioritises this focus area in the operating group’s CSI and SED management by:

- ▶ ensuring greater collaboration between operating groups and the Trust to maximise impact with limited available funding
- ▶ ensuring operating groups use budgeted SED and CSI funds to meet their contractual obligations to clients and invest strategically and effectively in areas of operation
- ▶ ensuring CSI activities meet SED requirements of the B-BBEE Codes of Good Practice
- ▶ ongoing monitoring and reporting mechanisms for social investment across Aveng
- ▶ managing and monitoring Aveng’s presence and participation in the flagship projects.

**“The Aveng Community Investment Trust believes that its investment in maths and science excellence at secondary school level is its most effective way of delivering positive and meaningful socio-economic development. It allows Aveng to contribute towards employment creation by increasing the pool of relevant engineering and technical skills, while simultaneously benefiting disadvantaged communities, our industry and the South African economy at large.”**

**Solly Letsoalo**  
*Chairperson: Aveng Community Investment Trust*



## Corporate social investment continued

### Trust expenditure

Despite the tough trading conditions experienced in recent years which have negatively impacted funds available for CSI, Aveng has continued to financially support its two CSI flagship projects.

Scorecard elements	2017	2016	2015
Consulting fees	R769 788	R518 496	–
Kutlwanong Rebone Centre and LEAP4 school	R6 816 642	R12 277 020	R11 860 000
LEAP4 building project	R1 582 019	–	–
<b>Total</b>	<b>(A) R9 168 449</b>	<b>R12 795 516</b>	<b>R11 860 000</b>

(A) This item was the subject of the limited assurance engagement performed by EY (refer to assurance report on pages 4 and 5).

### CSI impacts and management

Aveng has identified its main CSI and SED stakeholders as CSI projects and beneficiaries, clients, the authorities that govern Aveng’s compliance with B-BBEE regulations and the trustees. Their key concerns or requirements, and actions taken to address them, are reported in the table below:

Stakeholder	Concern / opportunity	Impact on the business	Actions
<b>CSI projects and beneficiaries</b>	Funding constraints	<ul style="list-style-type: none"> <li>▶ Lower positive impact on communities</li> <li>▶ B-BBEE rating</li> <li>▶ Potential threat to securing work</li> <li>▶ Investment not delivering sustainable empowerment</li> <li>▶ Reputational risk</li> </ul>	<ul style="list-style-type: none"> <li>▶ Improved collaboration with operating groups to align all funding to focus areas</li> <li>▶ Making best use of ‘in kind’ and ‘in time’ contributions to support cash investments in projects</li> <li>▶ Ensuring funding is invested in projects that qualify as SED</li> </ul>
<b>Clients</b>	CSI contractual obligations	<ul style="list-style-type: none"> <li>▶ Fines for not meeting contractual obligations</li> <li>▶ Potential threat of losing business from clients</li> <li>▶ Risk of reputational damage by clients and communities where Aveng operates</li> </ul>	<ul style="list-style-type: none"> <li>▶ Improved planning by operating groups to identify contractual obligations in advance, and budget for projects to meet these requirements</li> <li>▶ Greater collaboration between the Trust and operating groups to leverage their efforts and investments</li> <li>▶ Alignment between the Trust and business needs</li> </ul>
<b>Regulatory authorities</b>	Compliance with SED requirements of the revised B-BBEE codes	<ul style="list-style-type: none"> <li>▶ Risk of losing SED points for B-BBEE scorecard rating</li> <li>▶ Reputational damage leading to loss of government contracts for not contributing to sustainable SED and community upliftment of host communities</li> </ul>	<ul style="list-style-type: none"> <li>▶ Improved planning, systems and processes across the company to ensure compliance</li> </ul>

## Corporate social investment continued

### Highlights: Aveng Community Investment Trust Flagship projects

The Trust invested R6 816 642 in its two flagship projects, the Kutlwanong Rebone Centre based in Glencowie, Limpopo and the LEAP4 school in Diepsloot, Gauteng. Both projects function in the Trust’s focus area of maths and science education at secondary school level.

**LEAP** is a model of constructive intervention in the education sector, having established six schools in disadvantaged areas across the country. The school offers learners rigorous academic intervention with a focus on maths, science and leadership skills. The ultimate goal is for learners to achieve good enough matric results to access relevant technical academic programmes in leading tertiary institutions. The school has emerged

as a top performing school over the past three years and the Trust has fully funded the LEAP4 school since its inception.

**Kutlwanong** is a non-profit organisation that aims to improve performance of high school mathematics and science learners from disadvantaged areas. The project aims to facilitate the tertiary education entrance and successful bursary application of as many learners as possible. The organisation has centres across South Africa and has achieved consistently outstanding results since it was launched in 2005. The Trust fully funds the Aveng Kutlwanong Rebone Centre at which 480 learners benefit from this support. It is among the top three performing Kutlwanong centres nationwide and has received recognition from the Department of Education for consistently producing exemplary matric results well

above the national average. It is also worth noting that the Aveng Kutlwanong Rebone Centre is situated in Limpopo, which has the worst educational performance in South Africa, yet it has delivered exceptional results comparable with the best in the country.

**“This year’s matric results are commendable and are testament to the hard work of the learners and educators who dedicated many hours towards the pursuit of educational excellence.”**

**Tumelo Mabitsela**  
CEO: Kutlwanong Centre

### Performance of Kutlwanong Rebone Centre and LEAP4 Diepsloot school

Project	2017 investment	Beneficiaries	Performance
LEAP4 school Diepsloot, Gauteng	R3 272 771	187 grade 8 to 12 learners	2017 Matric highlights: <ul style="list-style-type: none"> <li>▶ 29 learners wrote</li> <li>▶ 26 students achieved Bachelor passes</li> <li>▶ 84% Maths pass rate</li> <li>▶ 80% Science pass rate</li> <li>▶ 90% of the learners achieved Bachelor degree passes and 7% attained higher Diploma passes</li> <li>▶ 21 distinctions were achieved, collectively</li> </ul>
Kutlwanong Rebone Centre, Glencowie, Limpopo	R3 543 871	438 grade 10, 11 and 12 learners	2017 Matric highlights: <ul style="list-style-type: none"> <li>▶ 144 learners wrote</li> <li>▶ 100% pass rate achieved</li> <li>▶ 93% achieved Bachelor passes</li> <li>▶ 99% Science pass rate</li> <li>▶ 100% Maths pass rate</li> <li>▶ 14% achieved Diploma passes</li> </ul>
<b>Total</b>	R6 816 642		

## Corporate social investment continued

### LEAP4 school building project

The current LEAP4 school is housed in the Methodist Church precinct on the outskirts of Diepsloot, Johannesburg. The school shares premises with a Methodist Church crèche, which is not ideal for LEAP's Grade 10, 11 and 12 learners due to high noise levels. The Aveng Community Investment Trust has therefore decided to build a school building for LEAP4. Land was secured and site development commenced in June 2016 with construction due to be completed in 2018.


The new school building will be housed within the fully secured Methodist Church precinct in Diepsloot and was designed by renowned architect, Roger Davies. The building is a hybrid model which combines conventional building techniques with rammed earth methodology. This innovative approach, which adheres to green building principles and incorporates authentic indigenous design, should generate positive publicity. The Trust is leveraging this investment by training a number of unemployed people from the community in building techniques to ensure that there is meaningful skills development and skills transfer during the building project. The rammed earth building approach is economical, environmentally friendly and enables community participation in the building process.

A community hall in the building will facilitate broader community participation and benefit. The LEAP4 school has a strong working relationship with the local community, local government and the Department of Education. This project could serve as a model for business, government and community collaboration in the delivery of school infrastructure, while enabling community skills development.

In 2016, the Aveng Board approved a donation of R8 million from Aveng towards the building of this school, which will cover the costs of architectural drawings, day to day project management, community skills

development, labour, artisan training, transport, security and logistics. LEAP and the Methodist Church have funded the R1,1 million cost of site development work. Building materials cost R4,8 million and the Trust secured valuable materials donations and funding from Aveng's operating groups and major suppliers.

The Trust has engaged extensively with community members to inform them of the building project, its positive impact on the learners' education environment and the wider impact on the community.

For more details on the status of the LEAP building project, visit the Aveng Community Investment Trust site on [www.aveng.co.za/sustainability-overview](http://www.aveng.co.za/sustainability-overview). 



### Prize-giving ceremony at Kutlwanong Rebone Centre

The Trust hosts an annual prize-giving ceremony to recognise sterling matric results from the Aveng Kutlwanong Rebone Centre. The 2017 ceremony was hosted on 2 February 2017 where students were acknowledged for their achievements, hard work and dedication.



## Corporate social investment continued

### Bursars

Aveng’s tertiary and education support embodies the Group’s commitment to building a steady stream of qualified professionals that will serve the infrastructure industry in the South African economy. During 2017 Aveng Manufacturing awarded three Aveng Kutlwanong Rebone Centre learners bursaries to further their studies in mechanical engineering and civil engineering. The funding allocated to these bursars amounts to R231 149.



### Bursar engagement

The Trust values regular engagement with its beneficiaries. In 2017 the Trust and the Aveng HR team worked with the Kutlwanong bursary students to review their bursar experience and offer opportunities for vacation work and internships at Aveng. During the meeting the Aveng team addressed the bursar’s concerns, challenges and expectations.

### Career day: Aveng employees offer guidance and support

LEAP schools based in Gauteng, in partnership with Aveng, hosted a career day at the Aveng-sponsored LEAP school in Diepsloot. The event was attended by LEAP school learners who interacted with Aveng and Nedbank representatives about opportunities and requirements for bursaries and internships at both companies. A number of Aveng employees participated, giving advice and guidance to the learners.



**“This career day was a fantastic opportunity for me to inspire students with my own experiences.”**

**Mthunzi Mdhuli**  
Systems technician for Aveng ACS

### Impact beyond the Trust’s flagship projects

Aveng’s operating groups support the Group’s commitment to community upliftment and have adopted a group SED framework as a guideline for providing CSI and SED support to the communities in which they operate. They identify opportunities to support and invest in local communities. Employee participation increased during 2017. Participation in projects ranged from voluntary contributions to donations to support various initiatives.

### Aveng Grinaker-LTA

In July 2016, Aveng Grinaker-LTA – working with the Executive Mayor of Victor Khanye Municipality, Cllr Eva Makhabane, the management team of Eskom Kusile Power Station, Tamukelo Business Enterprise, Lamavuso Transport, Mphakathi Transport and Esor Construction – provided assistance to the community of Victor Khanye in Delmas after a massive storm wreaked havoc in the region. The storm damaged 89 homes, leaving many homeless, destitute and without basic necessities. Aveng Grinaker-LTA donated 200 blankets, mattresses and food parcels to the destitute community members.



**“Thank you very much for the kind, valuable gift. It will give my mother financial relief. I truly feel very privileged and honoured for this opportunity. Thank you for believing in me, investing in me, and helping me to realise my dream. It means so much to me. I will keep Aveng informed on my progress. Maybe one day in the future I will be one of Aveng’s mechanical engineers. I am very grateful.”**

**Precious Kgwete**  
Mechanical engineering bursar at Wits University

More detailed information on Aveng’s bursary support scheme is available in the human resources report in this sustainability overview.



## Corporate social investment continued

Aveng Grinaker-LTA supports a number of other community projects including fundraising of R60 000 for the LEAP4 school building project in Diepsloot and donations for stationery and other items for LEAP4 schools and Sparrow Schools in Melville.



“We strive each day to make our community a better place with our commitment to helping others.”

**Wilna Perry**

*Site administrator at Aveng Grinaker-LTA*

**Aveng Mining**

Aveng Mining renovated the ceiling of the school hall at Gamaraga High School in Deben in the Northern Cape which had been damaged by strong winds. Previously, Aveng Mining donated garbage bins to keep the school neat and tidy and plans to renovate the ablution facilities, which are in a poor condition.

“It is our duty to contribute to the social upliftment of the communities close to our operations.”

**Stephan Griesel**

*General manager at Aveng Moolmans*

“We have limited financial means to maintain the school infrastructure and we are grateful to Aveng Moolmans for all their assistance in creating a conducive learning environment for our learners.”

**Mrs Nollie van Niekerk**

*Principal of the school*



**Aveng Steel**

Aveng Steel hosted 80 female learners from various schools in the neighbouring communities at its Roodekop plant as part of the South African government and Cell C’s ‘Take a Girl Child to Work Day’ initiative. The young women were introduced to the steel industry and informed of different career paths to assist them in their career choices.

“The project was a huge success and we received positive feedback from the learners who found their visit informative.”

**Noni Mokgethi**

*Executive secretary at Aveng Steel*



Aveng Steel also participated in Reach for a Dream Foundation’s annual Slipper Day campaign, raising funds to make more dreams a reality for children fighting life-threatening illnesses.

## Corporate social investment continued

### Aveng Manufacturing

The Aveng Manufacturing business unit, Aveng Rail, joined forces with local authorities, parents and young volunteers to renovate the 76-year old Rosmead Central Primary School in Claremont, Cape Town. The school is situated close to Aveng Rail's railway line project and serves communities located in the broader Cape Flats, Langa, Nyanga, Gugulethu, Crossroads, Kayelitsha and Mitchell's Plain township areas.

In the spirit of Mandela Day, Aveng Manufacturing business unit, Aveng Infraset, together with the Hot91.9 FM's Wings of Change team and a few other companies built a house for a mother and her son in Witpoortjie, Krugersdorp. Aveng Infraset donated 1 776 roof tiles and 45m<sup>2</sup> of paving towards the house, and a number of Aveng Infraset employees volunteered assistance in building the house and ensuring that the project was completed successfully. Prior to receiving the house, the beneficiaries lived in a one-roomed shack without electricity, running water or a toilet. Sihle, the child, has kidney failure and asthma and often requires dialysis which should be performed in a hygienic and sterile environment.



Aveng ACS employees raised funds to assist colleagues who had been impacted by the economic downturn. Twenty families received non-perishable food items and personal hygiene and cleaning materials as a result of this initiative.

## Corporate social investment continued

### Employees contribute to goodwill initiatives

Aveng employees are encouraged to support local charitable and community organisations and their involvement forms part of the Group's commitment to enrich the lives of those less fortunate members of communities in which we operate. Aveng head office employees were involved in the following initiatives in 2017:



**National Tekkie Tax Day** – R4 000 raised.



**Knysna Fire Victims** – Employees from Aveng Grinaker-LTA, Aveng Mining, Aveng Steel and Aveng Corporate donated goods and supplies which were delivered to NGOs in Knysna.



**Santa Shoebox project** – Aveng's IT department donated 18 shoeboxes in December 2016.



**National Council for Persons with Physical Disabilities in South Africa** – R5 000 contributed during Casual Day in 2016.

### Socio-economic development

Aveng's integrated SED strategy focuses on six pillars namely education, skills development, enterprise development, community infrastructure, environmental management and client driven SED. It aims to advance Aveng's B-BBEE transformation objectives for development through collaborative and mutually beneficial partnerships that enable sustainable access to economic opportunities for communities.

### Key focus areas

Aveng has identified the need to strengthen the alignment of CSI / SED to its business objectives as a key focus area. The Group prioritises this focus area in the Aveng integrated SED strategy. Key focus areas include:

- ▶ Improved collaboration within operating groups to maximise impact with limited funding available
- ▶ Ensuring operating groups use budgeted SED funds to meet the contractual

obligations of clients and invest strategically in areas of operation

- ▶ Ensuring CSI activities meet SED requirements of the B-BBEE Codes of Good Practice
- ▶ Ongoing monitoring and reporting mechanisms for social investments across Aveng
- ▶ Making the best use of 'in kind' and 'in time' contributions to support cash investments into projects
- ▶ Increasing Aveng's presence at the Trust's two flagship projects

## Corporate social investment continued

### Looking ahead

Focus areas – 2018	Desired outcomes
<p><b>LEAP4 school building project</b></p>	<ul style="list-style-type: none"> <li>▶ Construction of a new school facility that will enrich the learning experience through an enhanced environment for learners</li> <li>▶ Construction of a community hall in the school so that it can further cement its role as a key anchor in the Diepsloot community and maximise Aveng’s impact on the broader community of Diepsloot</li> <li>▶ Provide an opportunity for roughly 30 unemployed people from the Diepsloot community to receive accredited training on site and beyond</li> </ul>
<p><b>LEAP4 School, Diepsloot, Gauteng</b></p>	<ul style="list-style-type: none"> <li>▶ Focused approach on teacher training to ensure optimal maths and science results for learners</li> <li>▶ Stronger focus on career development</li> <li>▶ Identification of bursar students for tertiary study</li> <li>▶ Identification of a co-sponsor to ensure sustainability and expansion of the school</li> </ul>
<p><b>Kutlwanong Rebone Centre, Glencowie, Limpopo</b></p>	<ul style="list-style-type: none"> <li>▶ Ongoing success of current model which is delivering top calibre results</li> <li>▶ Exploration of co-sponsorship opportunities to sustain the impact across 26 feeder schools in the district and expand it, over time, if additional resources can be secured</li> <li>▶ Ongoing monitoring and development of bursar students</li> </ul>
<p><b>Socio-economic development (SED)</b></p>	<ul style="list-style-type: none"> <li>▶ Ongoing support for SED initiatives</li> <li>▶ While the current initiatives have focused on maths and science education, the Group will increase its focus on community development and localised transformation in the communities in which it operates</li> <li>▶ Focus on the five strategic SED pillars:                         <ul style="list-style-type: none"> <li>– education</li> <li>– skills development</li> <li>– enterprise development</li> <li>– community infrastructure</li> <li>– environmental management</li> </ul> </li> <li>▶ Client-driven SED</li> </ul>





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