

# MODERN QUARRYING

QUARTER 2 – 2021



LIUGONG'S BIG  
**BREAKTHROUGH** INTO  
THE QUARRYING SECTOR



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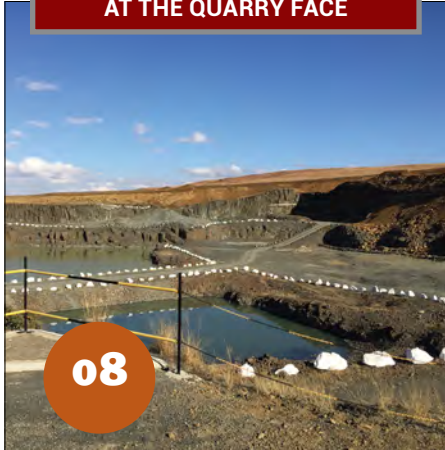
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# THE FUNDAMENTALS OF HEALTH AND SAFETY MANAGEMENT

**C**ompliance with health and safety management systems by ASPASA members has always been high and 2020, despite the challenges brought about by the COVID-19 pandemic, was no different to previous years. As revealed at the recent ISHE Awards, audited members continued to demonstrate total commitment to the industry's quest to achieve Zero Harm.

As you will see in this edition of *Modern Quarrying*, the average score for the 2020 ISHE Audit was 89,44%, which was 1,49% higher than the previous year's average score. The highest score was 97,19% and the lowest was 72,16%. The development of safety management systems and compliance with COVID-19 protocols were found to be of a very high standard, with only a few deviations at some operations.

The importance of managing health and safety has received increasing emphasis across the local industry. As a result, organisations have extended the focus on health and safety beyond the traditional emphasis

on technical safeguards and taking action reactively in response to accidents, towards a more proactive approach and focusing on management practices, procedures and policy.

Traditionally, safety has been measured using trailing indicators such as the number of accidents. In order to be able to measure safety proactively, there is a need to identify what the key leading indicators are in the quarrying industry, so that some common benchmark can be found. These lead indicators are much more likely to influence trailing indicators and should therefore be linked to control measures or the effectiveness of any safety management system. The advantages of measuring performance this way is that many different aspects can be measured concurrently, indicators can be tailored to suit local needs, and it is easy to link them to internal safety campaigns or initiatives.

At its simplest, health and safety management entails a healthy and safe workplace and working environment; the identification

of hazards and risk assessment and control; active involvement in health and safety matters by managers, supervisors and employees and the provision of occupational health and safety information and training for employees at all levels.

Central to the health and safety performances of local quarrying operations is the fact that ASPASA has over the years set a clear direction for its member operations to follow. This is complemented by an effective management structure with arrangements in place for delivering the policy. This includes the allocation of responsibilities, ensuring the competence of staff, good cooperation between individuals and groups, and communication both up and down the hierarchy.

Planning for health and safety involves setting objectives, identifying hazards and assessing risks, implementing standards of performance and developing a positive culture. Performance is measured against agreed standards to reveal when and where improvement is needed. This is done through active monitoring, before things go wrong, involving regular inspection and checking to ensure that standards are being implemented and management controls are working.

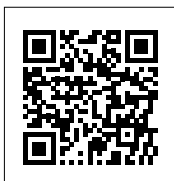
Auditing complements monitoring but focuses on the system to ensure that the policy, organisation and systems are effective. A key role of the ISHE Audit is to provide guidance and add value to the industry's quest for Zero Harm. Knowledge is shared across the industry to uplift the understanding, attitude and behaviour of all employees responsible for health and safety at operations.

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Liugong's recent successes in the mainstream mining industry are being replicated in the local quarrying sector.

## LIUGONG'S BIG BREAKTHROUGH INTO THE QUARRYING SECTOR

Having already proved itself in the arduous mining sector over the years, Liugong has recently made major strides in its quest to gain a strong foothold in the local quarrying industry. With several high-profile aggregates companies taking delivery of Liugong excavators and wheel loaders in recent times, Burgers Equipment & Spares, the sole Liugong dealer in South Africa, believes that the brand has made a major breakthrough into the sector, writes **Munesu Shoko**.

**T**hat the Liugong brand has established itself as a major force in the mainstream mining industry in South Africa is no overstatement. The tough nature of this Chinese-made product, complemented by strong backup support from Burgers Equipment & Spares, has been central to the brand's strong penetration into mining.

The brand's success, initially in the coal industry, has been followed by recent milestone deliveries into other commodities such as chrome. To provide context, a large contractor operating in coal has been running Liugong machines for the past 10 years, and to date has over 100 machines in its fleet.

In a major development for the brand in its quest to further grow its footprint in the hard rock mining sector in South Africa, Burgers Equipment & Spares last year delivered 11 856H wheel loaders to a contract mining joint venture for use in a chrome handling application. The fleet has recently been bolstered with more wheel loaders this year, which is testimony to the contractor's seal of approval for Liugong in this tough application.

These successes in the mainstream mining industry, says Tiaan Burger, MD of Burgers Equipment & Spares, are being replicated in the local quarrying industry, where Liugong fleets of excavators and wheel loaders are hard at work on some major construction material suppliers' sites.

A LiuGong excavator deployed in a quarrying application.



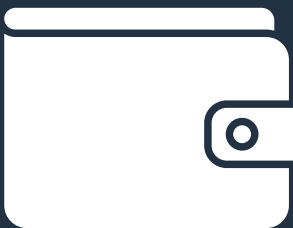
## KEY TAKEAWAYS



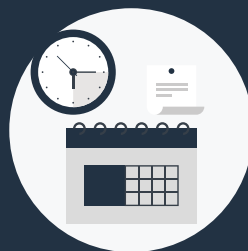
In a major breakthrough for LiuGong, Burgers Equipment & Suppliers recently delivered a fleet of two 35-t LiuGong 936E excavators and two CLG856H wheel loaders to one of the biggest quarrying groups in South Africa



Burgers Equipment & Spares has established itself as the preferred supplier for a major international construction materials group



The relationship started some three years ago when the quarrying group bought a 35-t LiuGong 936E excavator, which has already clocked more than 4 000 hours, and counting



Burgers Equipment & Spares has been running six LiuGong CLG856H wheel loaders at a quarry in Witbank, Mpumalanga for several years, where one of the machines has already clocked more than 20 000 hours



Scan QR code to watch LiuGong machines hard at work.

### Major deal

In a major breakthrough for LiuGong, Burgers Equipment & Suppliers recently delivered a fleet of two 35-t LiuGong 936E excavators and two CLG856H wheel loaders to one of the biggest quarrying groups in South Africa.

The relationship started some three years ago when the quarrying group bought a 35-t LiuGong 936E excavator, which has already clocked more than 4 000 hours, and counting. “The sale of the 35-t excavator was a foot in the door for us,” says Burger. “At the start of last year, they enquired about our wheel loaders. We sent a demo unit to their site, but COVID-19 then struck, and like anyone else, they had to put any procurement plans on hold.”



Backup support has been a major cornerstone of LiuGong's continued success in the quarrying sector.

With the 936E continuing to prove itself on this site, coupled with Burgers Equipment & Spares' excellent support, a deal for more machines was eventually struck last month. "We delivered two 936E excavators and two CLG856H wheel loaders. That's a big breakthrough for us as a dealer, and the LiuGong brand at large," says Burger, given that this quarrying group has been running a certain premium brand for decades. The recent request for new quotations is an indication that the LiuGong brand has passed the test and Burgers Equipment & Spares will eventually grow its fleet on this major quarry.

"Apart from the product, aftersales support has been a key strength for us. As a small company, we are able to provide dedicated and tailored service to the customer, which has been a big appeal to this particular customer. We service their machines every Saturday because they can't afford to stand during the week. The performance of the machines has also been beyond expectations," adds Burger.

### Success stories

The recent success follows another major coup for the brand in the sector, where Burgers Equipment & Spares has established itself as the preferred supplier for a major international construction materials

group. The company has already delivered 15 LiuGong machines to several quarries and cement plants belonging to this major construction materials group. "We are also currently doing demos on the smaller 835H wheel loader for their readymix plants, and indications are that we may be able to further grow our fleet for this company," says Burgers.

Elsewhere, Burgers Equipment & Spares has been running six LiuGong CLG856H wheel loaders at a quarry in Witbank, Mpumalanga for several years, where one of the machines has already clocked more than 20 000 hours, and counting.

### Competitive edge

Build quality of the machine might convince the customer to buy their first unit, but it's uptime, support and total cost of ownership which keep them coming back for more machines. Having confidence in a machine's backup and support, says Burger, is a vital part of every customer's purchasing decision.

Backup support has been a major cornerstone for LiuGong's continued success in the quarrying sector. For the past 10 years as a LiuGong dealer in South Africa, Burgers Equipment & Spares has invested significantly in its support infrastructure, people and parts stockholding. To provide context, the company has just opened a new facility in Douglas, in

the Northern Cape, to better support a growing pool of customers in the mining sector. That brings to four the number of branches in South Africa. Plans are underway to further grow the footprint.

The support from the principal, LiuGong South Africa, which is just a stone's throw away from the Burgers office, has also been instrumental in the growth of the LiuGong business in South Africa. LiuGong South Africa stocks a large inventory of machines and parts, which helps the dealer with quick turnaround times.

Burger tells *Modern Quarrying* that the company has also adopted a Continuous Improvement approach to its business, with a view to improving its offering to the customer. "With this approach, we seek to improve every process in our company by focusing on reducing waste and enhancing the activities that generate the most value for our customers," says Burger.

In line with this approach, Burgers Equipment & Spares has recently introduced a rental service. Companies within all industries, says Burger, need every competitive edge they can get. As everyone pores over their balance sheets and all aspects of the business to find advantages, many customers have been finding solace in rental than outright purchase due to their business and operating circumstances.



A key competitive edge of the LiuGong offering is that it is better priced than premium brands, yet it boasts a range of tried and tested components.

In today's economic climate, adds Burger, several capital equipment owners are looking for ways to cut costs. The popularity of equipment rentals has shot up, he says, and not far behind is the growth of remanufacturing or refurbishment. With that in mind, Burgers Equipment & Spares has just introduced an equipment repair and rebuild facility at its Kempton Park headquarters. This will help customers prolong the lifecycles of their LiuGong equipment. "Our equipment rebuild service gives LiuGong machines a second or even third life, which helps customers maximise their investments. It also boosts the residual value of the brand in the local market," says Burger.

### Tough equipment

The 35-t and 50-t excavator ranges, as well as the CLG856H wheel loader, have generated a lot of interest in the quarrying industry. The CLG856H LiuGong wheel loader is a 17 t machine with a 5 t lifting capacity and comes standard with a 3 m<sup>3</sup> bucket. The machine is equipped with a ROPS & FOPS cab, Cummins engine, Rexroth hydraulics, ZF transmission and ZF limited slip differentials.

With a 35-t operating weight, the 936E is powered by a Cummins 6C-8.3 engine with a rated net power of 174 kW (236 hp) @ 1 900 rpm and complies with EU Stage II emission standards.

Burger says a key competitive edge of the LiuGong offering is that it is better priced than premium brands, yet it boasts a range of tried and tested components that make it a competitive offering in arduous operating conditions like those found in the local mining and quarrying industries.

"The powertrain of the machines, for example, comprises Cummins engines, Kawasaki pumps and a ZF drivetrain. These are tried and tested components in the global equipment industry and are not foreign to many local customers. They are components they understand and trust, and are well equipped to service," concludes Burger. ●



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Harrismith Quarry has achieved Showplace Status for eight consecutive years.



# AFRIMAT'S HARRISMITH QUARRY SETS THE BAR HIGH

Special recognition is given to South African quarry operations that achieve Showplace Status every year – 95% and more – in ASPASA’s annual ISHE Audit. Being able to maintain that feat every year is something special, given the stringent nature of the audit and the high health and safety standards that ASPASA member operations have to maintain. In line with Afrimat’s ‘consistently delivering’ mantra, its Harrismith Quarry has achieved the status for eight consecutive years. **By Munesu Shoko.**

**W**hen talking about health and safety in general, it would be fair to cast the spotlight on South Africa, where the legacy from earlier attitudes to worker safety still resonates in the drive to continually improve safe mining and quarrying conditions. Moving into their

fifth consecutive year without a fatality, members of surface mining industry association, ASPASA, are surely leading the way as far as health and safety at operations is concerned.

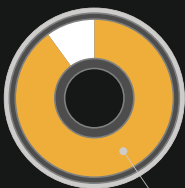
Central to this feat is ASPASA’s meticulous health and safety regime, which ensures highest standards of compliance at member operations. Some 20 years ago,



## KEY TAKEAWAYS



Afrimat's Harrismith Quarry has achieved Showplace Status (95% and more), in ASPASA's ISHE Audit for eight years running



The operation achieved a 96,17% mark, placing it third in the overall ISHE Audit for 2020

96,17%



The old adage, 'a neat workplace is a safe workplace', applies to Harrismith Quarry and has instilled a sense of pride



Afrimat follows a proactive and participative approach to health & safety management, within the boundaries of its operations and the integration thereof with surrounding areas

the association started its Health and Safety (ISHE) Audit for the industry to ensure that its members adhere to the most stringent health and safety parameters to ensure highest standards of safety at operations.

One operation that has set the bar high as far as consistently maintaining unparalleled health and safety standards is Harrismith Quarry, located in the Free State province of South Africa. Owned and operated by Afrimat, a leading open pit mining company providing industrial minerals, bulk commodities and construction materials, the quarry has achieved Showplace Status (95% and more), in ASPASA's ISHE Audit for eight years running.

The total ISHE Audit protocol covers more than 700 questions that must be answered and verified with objective evidence, where a possible total of  $\pm 3\ 900$  points are awarded. To be awarded a Showplace Status, the quarry must achieve a minimum final score of 95% on the ISHE Audit. If a quarry records a disabling injury, lost time injury, occupational disease or fatal accident during the auditing period, the audit protocol carries extreme negative marks against the operation to ensure that such a quarry cannot achieve Showplace Status.

The feasibility of establishing a quarry on the current Harrismith Quarry site was confirmed in February 1988 with the first stone produced in July 1988. The operation was started to service the Harrismith area. An existing quarry in the Qwa Qwa area existed but could not service the two growing towns of Puthajithaba and Harrismith. The Harrismith Quarry was established on a site that had previously been quarried to provide material for the construction of the Sterkfontein dam.

The operation, which mines a dolerite rock, produces several material sizes including 10 mm; 14 mm; 20 mm; 28 mm; G2; G4; G5, G6; blasted rock, overburden, primary crush, gabion stone, builders blend and crusher dust. It also supplies customers with unique specifications on request.

**What makes this operation tick?**  
ASPASA ISHE auditor Marius van Deventer says when you enter this operation, the first impression that



Harrismith Quarry follows a proactive and participative approach to health & safety management.



Entrance to Harrismith Quarry.

you get is “neat and tidy”. Then, he adds, “you meet with the mine manager, Anton Marnewick, who was a recipient of a special recognition award from ASPASA in 2017, with his clean, shining boots, together with his disciplined and professional team, and you realise that there is a special bond of teamwork keeping everybody together.”

Indeed, Anton Marnewick, quarry manager Qwa Qwa & Harrismith at Afrimat, credits teamwork as one of the cornerstones of success at Harrismith Quarry. “Buy-in from the workforce with regards to safety has been one of the recipes for our success over the years,” says Marnewick.

Accountability by every individual on site also makes health and safety compliance a breeze at Harrismith Quarry, adds Marnewick. “We strive to make employees responsible for their own safety, as well as that of others and the areas where they work,” he says. Regular training programmes have also made sure that that employees are well informed of what is required of them in terms of health and safety on site.

Other initiatives central to the operation’s Showplace Status for eight years running are regular monitoring and inspections; continuous upgrades on the plant and site to comply with changing legislation, and effective maintenance. “A premium has always been placed on neatness and

orderliness. The old adage of ‘a neat workplace is a safe workplace’ applies to Harrismith Quarry and has instilled a sense of pride,” adds Marnewick.

Van Deventer agrees: “During the 2020 ISHE Audit, I asked the manager to stop one of his dumper operators as I wanted to inspect the machine and question the operator on his pre-start checklist and operator licence. When the operator got out of his dumper, after following all the procedures of stopping his machine and making it safe to get out, I immediately noticed the shining safety boots. This is an example of a company culture of neatness and orderliness,” he says.

“Harrismith Quarry is a small operation, but the manager will immediately remind you that the risks are exactly the same as at any other operation. Everything is well maintained and kept in an orderly and safe manner. Employees are eager to share information and point out the improvements made since the previous audit. Very high standards in the development and implementation of the health & safety system are achieved through teamwork, commitment and dedication,” says Van Deventer.

#### **Afrimat’s attitude to safety**

Commenting on the company’s attitude towards safety, Letisha van den Berg, head of Health and Safety at Afrimat, says the company cares

for the wellbeing of all staff and recognises its workforce as a meaningful and important contributor towards its core.

It is the company’s policy, says Van den Berg, to use its health and safety management system to do all that is reasonably practical to prevent occupational diseases, personnel injury, damage to property, and to protect all employees, visitors, contractors, public, and interested and affected parties from foreseeable work hazards, insofar as they come into contact with the operations or are exposed to the performance within the company.

“We follow a proactive and participative approach to health & safety management, both within the boundaries of our operations and the integration thereof with surrounding areas. This means that we will endeavour to proactively identify and resolve potential health & safety risks before they manifest as accidents, incidents or compliance non-conformances,” she says.

“We ensure a healthy and safe working environment as our primary responsibility. We lead our health & safety effort by example. We furthermore believe that, in self-interest and for the collective good, every employee should participate in and contribute towards our health & safety effort. We will encourage and empower staff in appropriate ways to work together as a team to fulfil this



Traffic management on site is a crucial aspect of the safety regime on site.

responsibility,” adds Van den Berg.

The company, says Van den Berg, also strives to integrate health & safety management in routine management functions and processes. Afrimat also seeks to proactively identify and eliminate (or as a last resort, manage) all occupational health & safety related risks in the workplace.

“We also strive to comply with all internal health & safety standards as well as with applicable legislation; inform staff of the hazards and risks associated with their work, and provide training, equipment and support necessary for our employees to mitigate risks and perform safe, healthy and productive work. Additionally, we monitor and report our health & safety performance, working towards a goal of zero incidents, through a continuous improvement of our performances and health & safety systems,” she says.

### Managing health & safety during COVID-19

There is general consensus that COVID-19 has affected businesses in many ways and managing health and safety during the pandemic has been one of the key challenges brought about by the coronavirus. For Harrismith Quarry, however, it was business as usual in 2020. Managing health and safety on site during COVID-19, says Marnewick, is no different to managing it when there was no pandemic. “Rules are rules and should be adhered to in any circumstance,” he declares.

What was new, however, was the personal aspect and operating under the uncertainty of what the pandemic brought, he adds. Personal hygiene, social distancing and sanitising, although not foreign, were just difficult to enforce in the beginning.

“From day one, when it was decided to reopen the quarry after the lockdown, management and staff were all on board and started with all the necessary posters, social distancing signs, sanitising stations, training of the security staff, employees and transporters, among others. Pre-screening was arranged with our occupational medical practitioner and was

set up prior to starting up,” he says, adding that there were also constant updates and new procedures and documents coming through from the safety department to share with employees.

“For Afrimat, safety goes far beyond compliance and how we act. Safety is part of who we are and resonates with our company culture. The Showplace award is a result of management and staff subscribing to the Afrimat culture and living the Afrimat values,” concludes Van den Berg. ●

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Significance of good leadership is crucial in achieving sound health and safety outcomes.

# LEADERSHIP – A REQUISITE FOR H&S AND BUSINESS SUCCESS

Shane MimClendon on Unsplash

**In the midst of what is believed to be the biggest health and safety challenge in modern history, brought about by the COVID-19 pandemic, Paul Mardon, deputy general secretary: Strategy and Sustainability at Solidarity, stresses the significance of good leadership as an indispensable requirement for health and safety (H&S) and business success at large. By Munesu Shoko.**

**I**n his keynote address at the recent virtual ASPASA awards ceremony for ISHE Audits of 2020, Mardon reiterated the significance of good leadership in achieving sound health and safety outcomes.

Commenting on the value of the ASPASA awards, Mardon says the annual event underpins the industry's commitment to health and safety at work as the foundation for a contented and productive workforce as well as the sustainability of businesses. In the long run, he says, only safe production is sustainable. Business strategies that ignore this reality may be successful in the short term, but will eventually run into difficulties, he cautions.

“Our words and the awards are mere tokens of that which is at the heart of this event, namely a commitment to health and safety to ensure that every worker returns home safely every day,” says Mardon. “The value hereof is immeasurable as it relates to human lives and is indispensable for happiness, financial sustainability and economic growth.”



**Paul Mardon, deputy general secretary:  
Strategy and Sustainability at Solidarity.**

### **Importance of leadership**

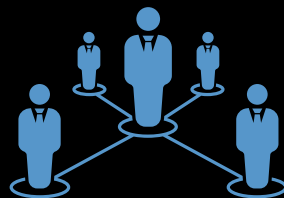
The evidence of ASPASA member operations' successes is indicative of the high level and professionalism of the leadership. According to Mardon, one of the most important principles of business is that leadership is key and essential for success. Leadership, he says, comprises two elements – ethics and effectiveness – which work together and are complimentary to each other. “Effective leadership is results driven to achieve strategic objectives and positive outcomes,” he says.

Some inevitable, secondary, but extremely important outcomes of ethical and effective leadership include a reputation for business as a good corporate citizen and market and investor confidence. “As any business

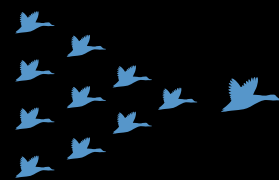
### **KEY TAKEAWAYS**



Effective leadership is results driven to achieve strategic objectives and positive outcomes



Some inevitable, secondary, but extremely important outcomes of ethical and effective leadership include a reputation for business as a good corporate citizen and market and investor confidence



The ISO 45001 standard confirms that leadership and leadership's commitment are central in the management and achievement of H&S at the workplace



The aim of a culture of interdependency leads to, among others, a sense of organisational pride by all employees, which translates, not only into healthy and safe workplaces, but also into a culture of co-ownership of the business and working together for the common good of the business and all in its employ

Dominik Vanyi on Unsplash



**An organisation can improve its OHS culture by providing clear and consistent leadership; promoting the formal and informal involvement of workers; and ensuring that controls are practical and proportionate to the risks.**

executive knows, good reputation and investor confidence are some of the most important factors for the sustainability of any business,” says Mardon.

Ethical and effective leadership, adds Mardon, also translates into no or minimal production and operating losses due to, among others, less stoppages for incidents and investigations, improved commitment by workers and better care of equipment by workers.

“Sound employee and labour relations are also positive spinoffs of ethical and effective leadership, and that in itself is a bonus. We often see the positive spinoffs that a good health and safety relationship between trade unions and the employer ultimately has on labour relations. The mutual trust in the H&S relationship serves as a good basis for developing labour relations, but please, nurture the H&S relationship – once broken, it is extremely difficult to fix again, because it is about the lives and wellness of workers,” he says.

The ISO 45001 standard confirms that leadership and leadership’s commitment are central in the management and achievement of H&S at the workplace. It recognises that an organisation can improve its Occupational Health and Safety (OHS) culture, by providing clear and consistent leadership; promoting the formal and informal involvement of workers; and ensuring that controls are practical and proportionate to the risks.

This, in turn, will lead to the achievement of the company’s operational and economic objectives and goals. “Leadership is therefore of utmost importance. Our country is unfortunately suffering from a leadership crisis. We have to deal with the realities of bad decision making and rampant corruption, which are the result of poor executive leadership and ethics,” says Mardon.

It is difficult for the mining sector to exercise control over what happens outside the sector, and that is why it’s so important to have good leadership within the sector, where a positive influence is possible, he adds.

### Interdependency

Another key factor in achieving good H&S at the workplace is to attain and foster a culture of interdependency of persons at the workplace. In such a culture, says Mardon, all employees are responsible for safety. In fact, he says, each employee accepts responsibility for their own safety and that of their colleagues, and acts as a safety leader within their sphere of influence at work.

The safety of all employees is equally important to everybody in the organisation. “The aim is to instil in each worker, from executives, management, supervisors, right down to the last person on the ground, the mindset that, firstly, the only way to do one’s job well is to do it safely – if it can’t be done safe, don’t do it; and secondly, H&S is an integral and inherent part of the job and doing the job right and well; and thirdly, H&S at the workplace cannot be achieved without working together with fellow employees,” says Mardon.

“The aim of a culture of interdependency leads to, among others, a sense of

organisational pride by all employees, which translates, not only into healthy and safe workplaces, but also into a culture of co-ownership of the business and working together for the common good of the business and all in its employ,” he says.

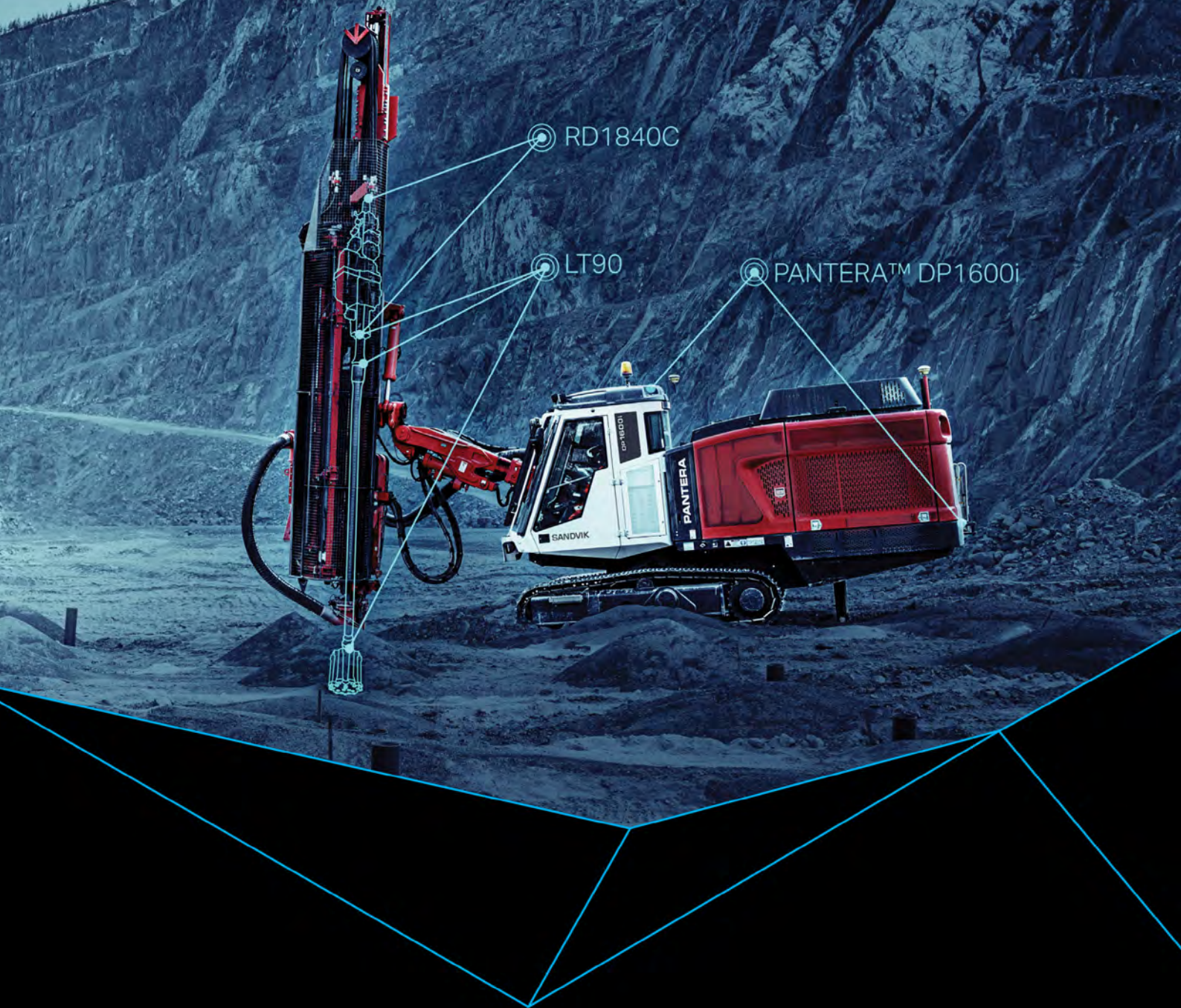
### Big rewards

Embracing a safety culture at traditionally hazardous working environments, such as mining, is extremely hard work and quite challenging, especially in view of the cost of production and regulatory challenges in this industry.

“However, the achievement of a health and safety culture by all workers on all levels is very rewarding. Not only in terms of reputational benefits, reduced input costs and increased production and profit, but also in terms of the general wellness of workers and their families – and even improved trust and labour relations,” says Mardon.

The establishment of a safety culture is undeniable proof of safety leadership, ultimately allowing more workers to return home safe to their families every day, and for company owners and shareholders to have greater confidence that business performance is being driven for the positive.

“The embracing of safety leadership as a strategic business value is, therefore, an imperative. It is necessary for and core to good governance, exemplary business practices and ultimately, it is a necessary human value,” concludes Mardon. ●



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# ENABLING HIGH-CAPACITY SCREENING

With crushing and screening contractors seeking to process high volumes at maximum efficiency, selecting a high-capacity screen that can handle the job is vital. To ensure effective screening of large volumes, Kleemann now offers two new mobile classifying screens with a feed capacity of up to 750 t/h. By **Munesu Shoko**.

**T**he MOBISCREEN MS 1202 and MS 1203, available from Wirtgen Group Southern Africa, come with two or three screen decks and have screening surface areas of 12 m<sup>2</sup> in the upper and middle deck and 11 m<sup>2</sup> in the lower deck. They thus make hourly outputs of up to 750 t possible.

But what else does it come down to with such screening plants apart from a high maximum output? “To achieve these high outputs, the material flow must be well designed. Kleemann has thus generously dimensioned the feed hopper with a holding volume of 10 m<sup>3</sup>, explains Aiko Fischer, product manager for screening plants at Kleemann.

This makes feeding both with a crushing plant and a large wheel loader possible. Despite discontinuous feeding by the wheel loader, the large hopper volume ensures continuous material supply to the screen. Correspondingly wide feeding and discharge conveyors guarantee an unobstructed material flow over the screen. The high-torque diesel engine also ensures that the plant does not ‘run out of steam’.

## Setting options for top product quality

“Apart from the pure performance data, we should not forget the most important thing: the adjustability of screening angle and amplitude to the different feed materials and their properties. Besides the selection of the suitable screen surface, the correct selection of these parameters ultimately decides the screening performance and product quality,” continues Fischer.

Both screens can be combined very well with the crushing plants from the Kleemann EVO series and the PRO series. “The smaller the separating cut and the higher the required final product quality, the larger the screening surface must be. It’s really quite simple,” adds Fischer.

## Efficient drives

As with other screening plants in the MOBISCREEN series, the MS 1202/MS 1203 are driven by efficient and powerful hydraulic power units. The



Dual Power option also allows the screens to be driven by electric power only, which further increases the efficiency and reduces the load on the environment by decreased noise and exhaust gas emissions.

For flexible application, Kleemann offers a large selection of screen surfaces with different mesh shapes – square, rectangular or harp-shaped – as well as the correct characteristic,



The MOBISCREEN MS 1202 and MS 1203 come with two or three screen decks and have screening surface areas of 12 m<sup>2</sup> in the upper and middle deck and 11 m<sup>2</sup> in the lower deck.

To achieve high outputs, the material flow must be well designed.



for example, steel or plastic. To ensure that this flexibility relates not only to the screen applications but also to the different job sites, good transport properties and fast set-up and dismantling times are very important. This is also an advantage of the MS 1202/MS 1203 as one of the largest mobile screening plants in the world that can be transported in one piece.

## KEY TAKEAWAYS



The MOBISCREEN MS 1202 and MS 1203, available from Wirtgen Group Southern Africa, come with two or three screen decks and have screening surface areas of 12 m<sup>2</sup> in the upper and middle deck and 11 m<sup>2</sup> in the lower deck



Kleemann has generously dimensioned the feed hopper with a holding volume of 10 m<sup>3</sup>



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The EUROTEST-certified "Lock & Turn" system provides the highest level of safety during rotor ledge change at the mobile impact crusher and when releasing bridging.

### Safety and ergonomics play a major role at KLEEMANN

The operation of large machines is often associated with an increased danger potential. This also applies to crushing and screening plants, where large pieces of rock are crushed to small grains by immense forces. This is why personal protection is the highest priority at KLEEMANN.

However, safety must not impede the operator but must be integrated unnoticeably in the work process. As the complexity of modern plants increases, parallel to this the KLEEMANN development team ensures that operation and maintenance remain as simple as possible – and without long-drawn-out instructions.

### Intuitive machine control system

The control system is the interface between human and machine. The entire PRO line and the MOBIREX MR 130 Z EVO2 impact crusher can be comfortably operated via the intuitive SPECTIVE control concept. The 12" touch panel simplifies work as all functions are visible at a glance and clear symbols point the way.

The user interface is not affected by dust, is splash-proof and can be easily read in difficult lighting conditions. Simple menu guidance guarantees that only the information which is currently required is displayed on each page. This concept makes it

possible to use the crushing plant properly in a simple manner and fully utilise its functions.

### High operating convenience

In everyday operation, however, not only a simple control system is important but also easy access to the machine. Thanks to the well-thought-out machinery design, all areas relevant to service are easily accessible.

For example, it is possible to refuel the MOBICONE MCO 11 PRO cone crusher comfortably from the ground and the prescreen coverings for the MOBIREX MR 110 and 130 Z EVO2 impact crushers can be easily changed via an extra platform. Other service work on the machine can also be completed quickly and comfortably thanks to the good accessibility.

### Award-winning safety system Lock & Turn

The EUROTEST-certified "Lock & Turn" system provides the highest level of safety during rotor ledge change at the mobile impact crusher and when releasing bridging. Special keys are used here in combination with the machine control system that only permit work in danger areas when they are locked. Only then can the operator open service flaps or move and exchange components. If the user wants to work on another area, the keys must be removed, which automatically blocks the area worked

on previously.

A real highlight in this system with regard to safety and convenience is the rotating device of the rotor. It allows the rotor of the crusher to be turned and blocked manually via a gear unit in any position from the outside. The exchange of rotor ledges and the elimination of bridging can be carried out even more safely.

### Low-noise work close to the machine

The new option package for noise reduction ensures comfortable and safe work close to the impact crusher. Noise protection flaps mounted on the side at the same height as the engine deflect sound upwards. These flaps are folded in for transporting the plant and therefore have no influence on the transport width.

The bottom of the unit is also sealed off from noise. The volume perceived by the user is thus reduced by six decibels. A reduction of three decibels has the effect of halving the amount of noise perceived by the human ear. This not only allows noise-reduced work for operators in a significantly smaller radius around the machine, but also protects the environment and makes the use of the plants in urban areas possible. For this solution, KLEEMANN received the Baden-Württemberg Environmental Technology Award in 2019.

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Scan QR code to watch Volvo Trucks SA's digital launch of the new range



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The new Volvo FMX features the heaviest addition to Volvo's chassis range.

## HAULING INCREASED PAYLOADS

**As quarries and aggregate resellers seek to run productive and profitable operations in a tough business environment, Volvo Trucks South Africa is introducing its all-new Volvo FMX with increased payloads and innovative safety features. With increased front axle loads of up to 20 tonnes and a 38-tonne bogie, the new Volvo FMX is built for demanding assignments, writes Munesu Shoko.**

**T**ransporting processed aggregates from the stockpiles to the construction site or concrete batching plants is an important application which demands greater uptime. Quarry owners and their reseller counterparts are facing ever-increasing demands to improve in areas such as cost efficiency, safety and productivity, and the new Volvo FMX, recently introduced locally by Volvo Trucks South Africa, ticks all these boxes.

Marcus Hörberg, vice president of Volvo Group Southern Africa, says some tasks need to run smoothly even when the conditions are challenging. "The Volvo FMX is Volvo Trucks' most robust construction truck to date and it will make the toughest assignments easier – whether there's a road or not," says Hörberg. "The range is tailor-made to our customers' business requirements, and the demanding local conditions it will be up against."

"With the launch of the new Volvo FMX, we are supporting these customers by creating robust trucks and innovative services to assist in making their operations easier, safer and more profitable," states Hörberg.

### Raising productivity

The new Volvo FMX features the heaviest addition in Volvo's chassis range – a 38-tonne bogie that allows for a gross combination weight (GCW) of up to 150 tonnes. In addition, the front air suspension option has been updated, allowing for front axle loads of up to 10 tonnes, or 20 tonnes for double front axles.

For trucks with a steered tag or pusher axle, the steering angles have been increased, resulting in better manoeuvrability and reduced tyre wear. All these improvements add up to greater productivity and cost efficiencies for construction transportation tasks.

### Safety features abound

The new Volvo FMX comes with the option of Adaptive Cruise Control (ACC) that now works at all speeds down to zero km/h. Further safety enhancing features on the Volvo FMX include Downhill Cruise Control, which sets a maximum speed to help prevent unwanted acceleration when travelling downhill.

The Electronically controlled Brake System (EBS), which is a prerequisite for safety features such as Forward

The new FMX truck can carry more payload and manoeuvre more easily.



Scan QR code to learn about the key features and benefits of the new FMX



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Collision Warning with Emergency Brake and Electronic Stability Control, is now standard on the new truck. Volvo Dynamic Steering, with the safety systems Lane Keeping Assist and Stability Assist, is also available as an option.

For particularly rough applications like mining and quarrying, the Volvo FMX comes with an optional steel roof hatch with an emergency exit handle that removes the entire hatch.

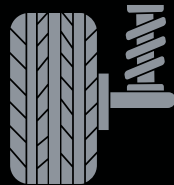
“By designing the robust new FMX truck that can carry more payload and manoeuvre more easily, while keeping the driver safe and comfortable, Volvo Trucks can help increase both productivity and profitability in the construction and quarrying industries,” says Hörberg.

“Whether a fleet is operating on or off road, you will need a chassis that’s built to handle a lot of action

## KEY TAKEAWAYS



The new Volvo FMX features the heaviest addition to Volvo’s chassis range – a 38-tonne bogie that allows for a gross combination weight of up to 150 tonnes



The front air suspension option has been updated, allowing for front axle loads of up to 10 tonnes, or 20 tonnes for double front axles



By designing the robust new FMX truck that can carry more payload and manoeuvre more easily, while keeping the driver safe and comfortable, Volvo Trucks can help increase both productivity and profitability in the construction and quarrying industries



With uptime more critical than ever, Volvo Trucks offers the support and service fleet owners require in these demanding times

on a daily basis,” adds Hörberg. “With the new FMX, Volvo Trucks will tailor chassis to support a customer’s success, using components and systems that are guaranteed to work reliably for many years to come.”

### More uptime

Uptime is more critical than ever, so Volvo Trucks offers the support and



The Volvo FMX is Volvo Trucks' most robust construction truck to date and it will make the toughest assignments easier.



The new Volvo FMX is designed to give a superior combination of agility and durability.

service fleet owners require in these demanding times. This includes real time, around-the-clock monitoring. It allows Volvo Trucks to detect, diagnose and treat faults before they become problems.

“The new FMX is the perfect example of how Volvo Trucks turns innovation into real-life progress. And pushing progress into a new way to build tomorrow,” says Hörberg.

### Driver in focus

The new Volvo FMX is built on an entirely new cab platform, based on Volvo's long and successful experience of delivering robust and functional construction trucks.

“The new Volvo FMX is designed to give a superior combination of agility and durability,” explains Eric Parry, product manager of Volvo Trucks South Africa. “The completely new cab includes a front section with easily replaceable sturdy parts, headlamp protectors and new V-shaped LED headlamps. To make it easy for drivers to enter or exit, we've designed new anti-slip footsteps.”

The new Volvo FMX comes with increased space in the day cab and storage of up to 800 litres. Where the FMX operates, visibility is of utmost importance. For this reason, Volvo Trucks designed the FMX so drivers get improved visibility thanks to a lowered door line and new rear view mirrors. The visibility is further improved by adding a camera on the passenger side which provides a complementary view of the side of the truck.

The interior is characterised by a new robust and dust resistant dashboard with more storage space, new colours and a modern cluster. It includes a dynamic 12-inch high-resolution instrument display with a user-friendly

interface allowing the driver to immediately see relevant information and select up to four different screen views, depending on the driving situation. The instrument display comes ready for future updates and connected services.

A 9-inch side display provides infotainment, navigation support, transport information and camera monitoring. The display, that is easy to reach, allows the driver to interact in numerous ways: with the intuitively positioned buttons on the steering wheel, through voice control, or directly via the touchscreen and display control panel.

The new FMX also comes equipped with a new traction control panel that helps the driver easily and quickly handle potentially dangerous situations, both on and off the road. The driver can gain more traction by engaging the differential locks in an easy way, by turning a knob, viewing the traction status on the instrument display at the same time. On Volvo FMX in 4×4, 6×6, 8×6 and 10×6 configuration – this feature automatically engages the front axle at the exact moment it is needed, and disengages it when the driver doesn't.

The driven front drive axle is positioned to give the truck a better approach angle. It's designed to be strong and streamlined. The parallel rod behind the axle beam is integrated, making the sturdy axle casing the lowest point of the vehicle and significantly improving ground clearance when fully loaded.

A new steering wheel with a neck tilt option offers the driver a more ergonomic driving position.

The innovative sleeper cab on the new Volvo FMX comes with improved storage possibilities, including a large storage compartment underneath the raised bed and an upper rear storage with LED lighting panels in the compartment dividers.

Cab comfort is further enhanced through improved insulation that helps keep out cold, heat and noise. Moving from the seat to the bed is easier than ever with the new slimmer, ergonomically designed I-Shift gear selector. ●

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# EXHIBITING HIGH LEVELS OF HEALTH & SAFETY COMPLIANCE

**Although less than half of ASPASA members took part in the 2020 ISHE Audit due to COVID-19 restrictions, the overall achievements were outstanding, with audited members showing high levels of health and safety compliance in difficult operating conditions, writes Munesu Shoko.**

**L**ast year started off with high expectations of outstanding performances in ASPASA's ISHE Audits for the year. Unfortunately, audits came to an abrupt stop towards the end of March 2020 due to the COVID-19 influenced national lockdown.

Nico Pienaar, director of ASPASA, reports that only 17 ISHE Audits were done prior to the lockdown and most of the mines audited achieved good scores, which again showed their commitment to continuous improvement and maintaining high health and safety standards on their sites to keep employees safe and healthy.

"The audits were only resumed under Alert Level 2 of the national lockdown with a couple done towards the end of August 2020. The bulk of the remaining audits were done on original schedules from mid-September to the end of the auditing cycle," says Pienaar. In total, only 48 ISHE Audits were conducted for the year as most of the members unfortunately opted not to be audited due to COVID-19.

ASPASA ISHE auditor Marius van Deventer says 2020 will be remembered as the most difficult year to do the ASPASA ISHE Audits. Nonetheless, ASPASA members maintained very high standards on their sites. The enforcement of strict COVID-19 protocols also showed that the industry was ready to mitigate what is believed to be the biggest health and safety challenge in modern history.

"Numerous success stories can be documented where teamwork made the difference to health and safety achievements at specific quarries. These changes can only be effective in a top-down approach where the right example is set, and correct resources provided for employees to follow and implement. There are still challenges to be tackled for full compliance, but these can only be achieved through dedicated teamwork to add value and ensure the health and safety of every employee at all times," says Van Deventer.

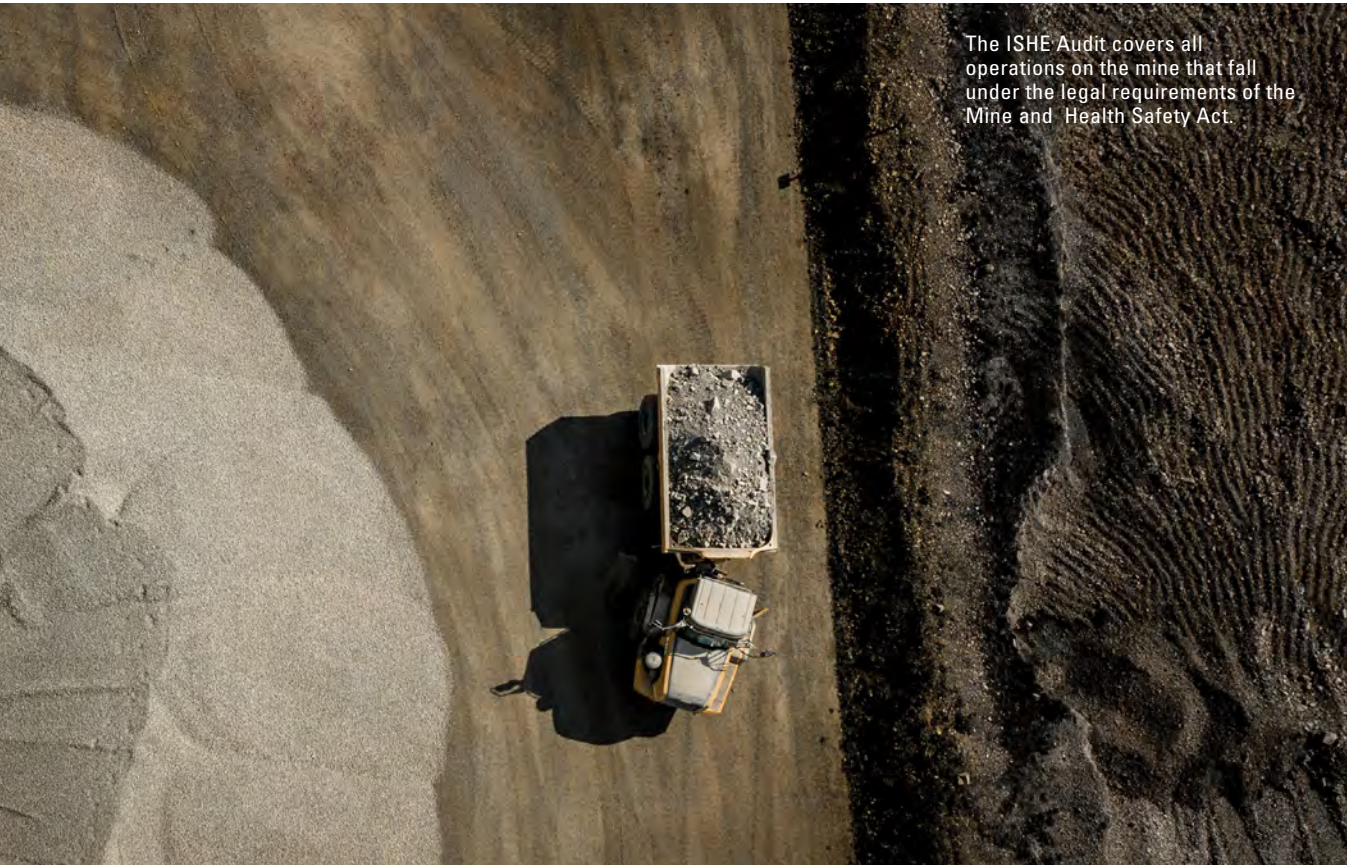


The ISHE Audit is based on legal requirements, but also included are industry requirements and leading practices. The main objective of the ISHE Audit therefore is to ensure legal compliance of all members and to ensure that the health and safety of employees is protected through a safe and healthy, standardised way of doing their jobs.

"A health and safety audit is an expert assessment of an organisation's health and safety policies, systems and procedures. Primarily, audits enable you to protect employees and customers from harm. But ultimately a correctly conducted audit can also safeguard the very existence of the company," says Van Deventer.

The ISHE Audits are thus not only about points and receiving a good score, he adds, but members want to benchmark, firstly against themselves, and then against others in the industry. Over the years the awards have become a means to acknowledge those operations and employees identified for outstanding performances and giving credit for hard work.

"The 'competition' for top honours is always tough and will become even tougher now that an 'independent' operation (Midmar Crushers) took the top honours. Independent operations always felt that it was unfair to compete on the same level against corporate members as they have the knowledge and resources that independent operations don't. However, members should be reminded that the audit is based on legal requirements that are applicable to every operation," says Van Deventer.



The ISHE Audit covers all operations on the mine that fall under the legal requirements of the Mine and Health Safety Act.

**Audit scope**

The ISHE Audit covers all operations on the mine that fall under the legal requirements of the Mine Health and Safety Act and applicable regulations. The audit protocol was developed some 14 years ago and is frequently revised in line with new legal requirements and industry standards.

The audit protocol was reviewed ahead of the 2020 audit, but then again revised during the lockdown period to include the requirements for mines as promulgated under the Disaster Management Act to stop and/or minimise the spread of the coronavirus. The DMRE subsequently also published a Guideline for a Mandatory Code of Practices for the Mitigation and Management of COVID-19 Outbreak.

The audit starts off with an introduction meeting where experiences and findings of the year are shared with those attending the audit, as well as the consistent process to be followed for the day of the audit. All COVID-19 protocols had to be followed and therefore attendance to audit meetings was minimised to just two or three persons to ensure social distancing.

This is followed by a thorough

**KEY TAKEAWAYS**



Despite the COVID-19 challenges, ASPASA members managed to maintain high standards of health and safety compliance in 2020



Only 48 ISHE Audits were conducted for the year as most of the members unfortunately opted not to be audited due to COVID-19



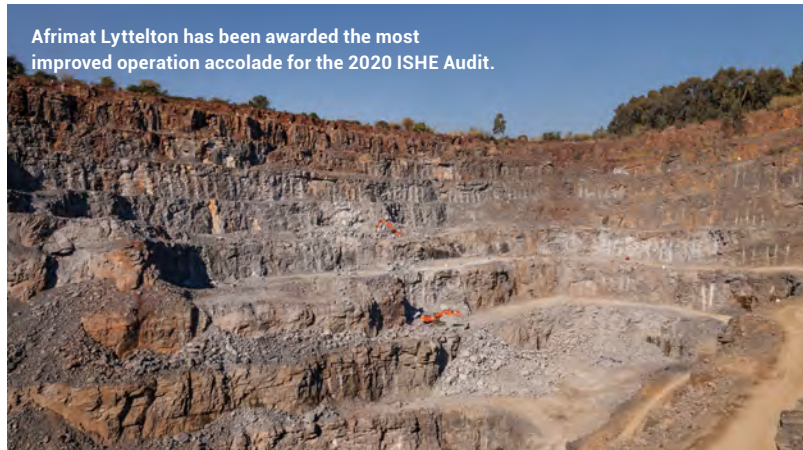
Midmar Crushers, with an audit score of 97,19%, was the Top Performer for 2020



The average score of all ISHE Audits for 2020 is 89,44%, with a highest score of 97,19% and lowest of 72,16%



A key role of the audit process is to provide guidance and add value to the industry's quest for Zero Harm.



Afrimat Lyttelton has been awarded the most improved operation accolade for the 2020 ISHE Audit.

the latter part of the 2020 audits due to COVID-19 protocols.

The final session of the audit is to scrutinise the documented health and safety system to the requirements of the ISHE Audit protocol. Members are requested to have these documents available in electronic format where possible, to minimise the physical handling of files, documents and paperwork.

“A key role of the entire audit process is to provide guidance and add value to the industry’s quest for Zero Harm. Knowledge and experience is shared right across the industry to uplift the understanding, attitude and behaviour of all employees responsible for health and safety,” says Van Deventer.

#### 2020 ISHE awards

- Top Performer: Midmar Crushers
- Consistency in achieving Showplace for 5 years or more: Afrimat Harrismith (8 years)
- Most improved operation: Afrimat Centurion

#### Health & Safety Management Awards for outstanding commitment

- Mariska Robberts – Eskay Crushers
- Trudie Els – Afrimat Glen Douglas

#### Health & Safety Officers of the year

- Laurencia Maphumulo – Midmar Crushers
- Carlton Mowana – Afrimat Centurion
- Ighardt van Lingen – Afrimat Marble Hall
- Lucretia van Rensburg – Afrisam Western Cape
- Sello Ferland – Afrisam Northern Region

#### Special Recognition Health & Safety

- Carlos Paulo – Afrimat Palmiet
- Eric Dangaca – Afrimat Brewelskloof
- John Mathebula – Afrisam Eikenhof

#### Health & Safety Service Provider Excellence

NOSHCON – Paul Chamen & Ronelle Affinand

#### Key findings

The development, implementation and compliance of the health and safety management systems of ASPASA members have always been of a high standard and 2020 was no different. Total commitment is required in the quest for Zero Harm, and ASPASA members audited during 2020 demonstrated this, says Van Deventer.

Midmar Crushers, with an audit score of 97,19%, was the Top Performer for 2020. The quarry previously won several awards as a Top Independent Performer, but now outscored even corporate members to take the top position.

The ISHE Audit outcomes and findings can obviously be divided into two different timelines for 2020: pre-COVID-19 lockdown and post Level 2 audits. Most of the audits done early in the year showed good performances and compliance to requirements, with several operations achieving Showplace Status.

and in-depth inspection of the facilities on the mine where most of the day is spent. Own legal registers, inspections, pre-start checklists, licences to operate machines, isolation records, among other documents, are scrutinised during the site inspection. The auditor has in-depth knowledge of the legal requirements of technical, plant, machinery and mining area requirements and these are evaluated for legal compliance.

Discussions with employees in the workplace were obviously difficult during

## ISHE Audit results for 2020

1	Midmar Crushers	97,19
2	Lafarge Qala Quarry	96,18
3	Afrimat Harrismith	96,17
4	Afrisam Peninsula	95,71
5	Afrimat Scottburgh Quarries	95,51
6	Blurock Quarry (Pty) Ltd	95,51
7	Afrimat Lyttelton Dolomite Mine	95,28
8	Afrisam Rooikraal	95,09
9	Afrisam Rheeboek	95,00
10	Afrimat Marble Hall	94,77
11	Raumix Rossllyn Quarry	94,57
12	Raumix Rossway Quarry	94,12
13	Afrisam Eikenhof	94,05
14	Eskay Crushers	93,86
15	Afrimat Umfolozi	93,68
16	Afrimat Glen Douglas Mine	93,61
17	South Coast Crushers (Pty) Ltd - Margate	93,30
18	Afrimat Vryheid	93,13
19	Afrimat Hluhluwe	92,89
20	Afrisam Ferro	92,83
21	Afrimat Brewelskloof	92,46
22	Afrimat Dingwell Nelspruit	92,41
23	Afrimat Palmiet	92,37
24	Afrimat Rietfontein	92,20
25	Afrimat De Kop	92,19
26	Lafarge Tygerberg	92,03
27	Afrimat Qwa Qwa	90,75
28	Afrimat Dundee	89,78
29	Afrimat Bethlehem	89,16
30	Afrisam Jukskei	88,25
31	Afrimat Maritzburg	88,06
32	Lafarge Saldanha	87,24
33	Lafarge Peak	87,23
34	Afrimat Hartbeesfontein	87,12
35	Silica Quartz (PTY) Ltd	86,83
36	Afrimat Kliprug	86,49
37	Afrimat Aggregates Eastern Cape Denver Quarry	85,91
38	Labucon Resources - Krokodil Sand	84,60
39	Portland Quarry	84,59
40	Marlin Granite Minaco Quarry	83,23
41	Sterkspruit Aggregates (Pty) Ltd	82,83
42	Trichardt Crushers	82,62
43	Tshwane Aggregates	80,78
44	O M V (Pty) Ltd Stilfontein	79,22
45	Nokeng Mine	78,46
46	Ciulli Bros Gran Sasso Quarry	77,73
47	Argent Industrial Megamix Quarries	73,57
48	Marlin Granite Springbok Quarry	72,16

During a time of uncertainty and psychological effects on employees, Van Deventer says health and safety standards unfortunately dropped at some mines and no new efforts were made to improve on previous findings. Some unforeseen incidents and accidents were also recorded during this time due to the lack of focus on day-to-day activities and extra emphasis on COVID-19. No major accidents were, however, recorded during the period.

The average score obtained for 2020 is 1,49% higher than the previous year's score, showing some good improvements under strenuous conditions. The

average score of all ISHE Audits for 2020 is 89,44% with the highest score of 97,19% and lowest of 72,16%. A total of nine operations achieved Showplace Status (95%+), with 18 others achieving 5 Shield Status (90 – 95%).

### Recommendations

“The COVID-19 pandemic created chaos worldwide and even local operations were not spared. Business and livelihoods have been affected and operations needed to find new ways of driving their health and safety programmes to ensure legal compliance. The COVID-19 protocols are well established by now and known by everybody, and there is need to refocus and carry on with the health and safety campaigns,” says Van Deventer.

He adds that COVID-19 is still going to be with us for some time and operations need to find ways of carrying on with the ASPASA ISHE Audits at all member operations. “Feedback from some members that were not audited is that they felt left out, lost focus and needed to get back onboard to be legally compliant, share information and get assistance in their drive towards Zero Harm,” he says.

Van Deventer says employees need to understand why health and safety programmes are developed, checklists should be fully and correctly completed every day, why isolation records and permits need to be signed off before a plant or machine can be started after maintenance work, what the benefits of planned task observations and near miss reporting are and the correct way of doing accident and incident investigations to get to the root cause by not focussing on an individual but rather on the problem. These are all human factors that must be addressed to change the safety culture at workplaces, he says.

“Every operation needs to find a way within the culture of the company and the local environment to set up proactive programmes within the core values of the organisation, to change health and safety into positive attributes for all employees to benefit from,” concludes Van Deventer. ●



With a 97,19% score, Midmar Crushers is the Top Performer in ASPASA's 2020 ISHE Audit.

# CONTINUOUS IMPROVEMENT PAYS DIVIDENDS

Having previously scooped the Top Independent Performer award three times in the past five years in ASPASA's annual ISHE Audit, Midmar Crushers has risen to the summit of the South African quarrying industry's health and safety compliance regime following its crowning as the overall Top Performer in the association's 2020 audit. The achievement is testimony to the Midmar Group's continuous improvement approach over the years, writes **Munesu Shoko**.

**O**ver time, companies learn internally how to work in an organised, efficient manner, identify opportunities and make changes accordingly. They also learn how to pinpoint areas where value is added and where it is absent, and evolve over time. That, in a nutshell, is a continuous improvement approach, which can assist businesses to operate on a higher level.

This approach has truly been adopted and demonstrated at Midmar Crushers. The family-owned quarry operation has been part of the ASPASA audit process in 2008 and has been selected as the top independent quarry in either the Environmental (About Face) or Health & Safety (ISHE) audit for seven years. In 2016, however, the operation was named the Top Independent Performer in both categories.

Over the past five years, explains ASPASA ISHE auditor Marius van Deventer, Midmar Crushers was awarded the top independent performer three times, finishing twice in third overall place and once in seventh place over the same period. Since entering the ISHE Audit, the operation has achieved Showplace Status (audit scores of 95% and

more) five times. The quarry's average score since 2008 is 93,32%, an achievement Van Deventer calls "truly an extraordinary health & safety performance to be proud of".

Commenting on Midmar Crushers' latest achievement, Van Deventer says management at the operation didn't necessarily do anything drastically different this time around, but it was a matter of "doing things better on a consistent basis over the years".

## Winning recipe

Management at Midmar Crushers, says Van Deventer, has over the years continued to source the right skills and service providers to add value to the different parts of the business. For example, he says, a couple of years ago, Noshcon (Paul Chapman and Ronelle Affinand) was contracted to join the team as the occupational health and safety consultant. Together with management at Midmar Crushers, they have reassessed risks and developed a sustainable documentation system, thus ensuring high levels of legal compliance.

"Perseverance in every aspect of their business is a



Midmar Crushers has over the years invested in several capital projects to improve processes on site.

## KEY TAKEAWAYS



Midmar Crushers has scooped the Top Performer award in ASPASA's 2020 ISHE Audit



Perseverance and continuous improvement are winning recipes for Midmar Crushers



Focusing on more effective teamwork has been another key to the success of Midmar Crushers



Onsite training has been essential in assisting the team to fully understand the context of their work and to ensure that effective teamwork is realised

winning recipe for Midmar Crushers. Teamwork has also been central to the operation's success, with everyone pulling in the same direction to close gaps identified from previous audit findings. Closing gaps, however, is half the battle won; ensuring that sustainable corrective actions are put in place and followed up through planned task observations ensures that negative previous audit findings don't repeat themselves," says Van Deventer.

The same view is expressed by quarry manager Gary Botha, who says that throughout its 25-year existence, the operation has developed and persevered through the good and challenging times. "Being awarded the Top Performer award for the 2020 ISHE Audit is a huge achievement for the entire Midmar team as we are striving for continual improvement through our health & safety and environmental compliance to ensure safety for all individuals on site. Our business philosophy, "Effecting change through positive contact", is a true reflection of what we do on a daily basis," says Botha.

### Key initiatives



A fleet of haulers used at the quarry.



From left: Derryn Fourie (director), Gary Botha (quarry manager), Laurencia Maphumulo (H&S award winner) and Bronwyn Moore (GM).

Focusing on effective teamwork has been the key to the success of Midmar Crushers, says Bronwyn Moore, GM of Midmar Group. Working as a “well-oiled machine” paves the way forward, while respect and integrity on all levels of interaction are the foundational values required, she says. As part of this initiative, onsite training has been essential in assisting the team to fully understand the context of their work and to ensure that effective teamwork is realised.

“Health and safety are important not only in the work environment but even in our personal lives too. Regular training is done with the entire Midmar Crushers team as we deem it imperative to keep these topics top of mind. External training service providers train the team on site and equip them with powerful motivating tools such as DVDs, newspapers, magazines and real-life articles that the team can relate to with regards to all aspects of health, caring for the environment, safety hazards in the workplace, as well as relevant issues in personal environments,” explains Moore.

Moore, however, believes that

to be successful in these sorts of initiatives, there is a need to have both strong leadership and management capabilities. “Leadership is about getting individuals to comprehend and believe in the vision of the company and to work together on achieving goals, while management is more about administering and making sure the day-to-day activities are happening as they should,” she says.

Leadership and management must go hand in hand, she stresses. “They are not the same thing, but they are bound together and complementary to one-another. Any effort to separate the two within an organisation is likely to be disruptive. For any company to be successful, it needs management that can plan, organise and coordinate its staff, while also inspiring and motivating them to perform to the best of their ability,” says Moore.

### Capital projects

For Midmar Crushers to be at the top, the Midmar Group has over the years invested in several capital projects to improve processes. There has been continual improvement year on year,

says Moore. For example, the crushing plant office, with a good view of the crushing plant, has been built in order to remove employees from the frontline of exposure and place them in a safe working environment. The office is equipped with technology that makes crushing user-friendly. Midmar has also recently installed a bigger jaw crusher (Sandvik CJ211) in the main plant to maximise utilisation of the entire plant.

“Walkways using gabion baskets have been created strategically to minimise man-to-machinery contact as part of the traffic flow process,” she says. “Signage has been strategically placed around Midmar Crushers to guide and control the flow of machinery, staff and visitors and to promote keeping the site clean and tidy.”

### Rising above COVID-19 challenges

Managing health & safety during a pandemic such as COVID-19 has been a challenge for many operations. Moore alludes to the fact that COVID-19 has been a big challenge around the world and has brought about enormous devastation on the economy and the population. How did Midmar Crushers manage to deal with the challenges brought about by the pandemic?

“After the initial lockdown we started returning to work with an adjusted ‘normal’ which was unpredictable and required flexibility and rapid response. We had decided as a team to face it head-on and accept it as a new reality. Learning and sharing on a daily basis about the challenges and new information received from around the world was at times very difficult,” she says.

Regulations implemented by the Department of Mineral Resources and Energy (DMRE) and the guidelines set down in the National Disaster Management Act, created extra work in the implementation of new policies, procedures, training and checklists, to name a few. “We, however, persevered and ensured all were implemented and continue to be implemented to safeguard the safety of all individuals who work at or visit our quarry,” concludes Moore. ●

## Global construction industry set to grow by 5,2% in 2021

Following the historic collapse in construction activity in 2020 amid the severe disruption caused by restrictions imposed to contain the spread of COVID-19, the construction industry is set to grow by 5,2% in 2021, according to GlobalData, a leading data and analytics company. Output in 2021 will be 2,5% higher than the 2019 level.

Although recovering from the COVID-19 crisis, the global industry has borne a huge cost in terms of foregone revenue; compared to GlobalData's pre-COVID-19 predictions for construction output value, the output total in 2020–2021 is close to US\$1.1 trillion lower than it would otherwise have been.

According to GlobalData's report, Global Construction Outlook to 2025, Q1 2021 Update, there is still great uncertainty over how the COVID-19 crisis will play out. On the one hand, positive news is stemming from the successful rollout of vaccines in many markets. On the other hand, there are concerns over the reports of new variants and challenges in getting vaccines supplies to developing markets.

However, the forecast for the global construction output is predicated on the



The construction industry is set to grow by 5,2% in 2021, according to GlobalData.

assumption that governments and public health authorities will not reintroduce strict lockdown policies and that construction sites will be able to continue to operate with minimal disruption.

Danny Richards, lead economist at GlobalData, comments: "In markets where the construction industry has managed to return to relatively normal level of operations since the crisis engulfed the world in Q2 2020, activity has rebounded positively, with signs that in some markets there has been a marked effort to get projects back on track quickly."

The recovery in many markets in late 2020 surprised on the upside. This means the full-year outturn in 2020 was not as bad as previously expected

– GlobalData estimates that global output contracted by 2.5% last year (compared to the previous estimate of 2,9%), and excluding China, the contraction stood at 5,1%.

Richards continues: "With activity levels trending upwards in the absence of restrictions on site works, there are likely to be record high rates of year-on-year (Y-o-Y) growth in major markets in the coming quarters, given the comparison to periods last year when construction sites were closed or when activity was severely disrupted. There are also positive signs for the coming quarters when assessing leading indicators, such as building permits approvals." ●

## Global raw materials shortages erode cement and concrete additive supplies

With demand soaring from a revived post COVID-19 environment internationally, South African concrete and cement additive suppliers are under severe production pressures due to the global shortage of many primary chemical industry raw materials essential to produce concrete and cement admixtures, says Norman Seymore, CEO of the CHRYSO Southern Africa Group and vice-president of CHRYSO internationally.

Admixtures and additives – key components of the concrete mix – play a vital role in enhancing concrete performance in terms of strength, durability, material costs, as well as general site productivity. A national leader in the construction chemicals industry, CHRYSO Southern Africa has three major plants (in Boksburg, Durban and Cape Town) producing admixtures and additives that service the cement, ready-mix concrete,

precast concrete, new construction, and mining industries. a.b.e. Construction Chemicals is a subsidiary of the CHRYSO SA Group.

Seymore warns: "This crippling shortage of vital raw materials will not resolve itself overnight. In fact, we fear that the supply and cost constraints are expected to continue for the foreseeable future."

He says the severe shortage of raw materials was caused by a combination of several factors totally beyond CHRYSO's control. Included are:

Extremely cold weather conditions in the USA in February this year, which caused production interruptions and force majeure setbacks for many players in the petrochemical industry;

A severe industrial accident at a major chemical company in Europe which led to a chain of force majeure declarations, slowdowns, and even shutdowns of several chemical production units; and

Scheduled maintenance shutdowns of several key chemical production units throughout the world which negatively impacted global raw material production capacity.

"The strong rebound in activity in several sectors of the global construction and ancillary industries since the beginning of 2021 has generated strong demand for key raw materials.

"The current raw material cost surge has no connection to the usual market indicators and mechanisms. CHRYSO is currently experiencing the consequences of this strong imbalance between supply and demand at a global level. However, we are doing everything possible to maintain continuity of supply of our products. But the situation will take some time to resolve and cost constraints are expected to continue for the foreseeable future," concludes Seymore. ●

# DISTILLATE FUEL REFUND SYSTEM REFORM – THE WAIT MAY SOON BE OVER

Recently released proposed draft amendments to the diesel refund scheme clarify certain aspects of the scheme, but it remains to be seen whether they will ease some of its more onerous requirements. By Rudi Katzke and Kagiso Nonyane from Webber Wentzel.

The diesel refund scheme came into existence as an attempt by the State to stimulate and support activity in the primary production industries (mainly agriculture, mining, forestry and fishing). It does so by providing for the refund of a portion of the levies imposed on distillate fuel utilised in those activities, if the relevant requirements are met.

The draft rule and schedule amendments to the diesel refund scheme were released for comment on 9 February 2021 (the Draft Amendments).

For several years, industry and National Treasury have discussed reforming the diesel refund scheme. Some of the suggestions for reform were already dealt with in February 2017, when National Treasury and the South African Revenue Service (SARS) issued a discussion paper for public comment on a review of the diesel fuel tax refund system (the Discussion Paper).

## Proposed changes

The Discussion Paper proposed several changes, including:

- a shift in emphasis from the “qualifying user” in the current scheme to a preliminary list of “qualifying primary production activities”;
- all diesel-powered equipment and vehicles to be formally placed on record with SARS;
- that all transport activities from the place of primary production (e.g. the farm), as well as any processing activities, be excluded; and
- the publication of updated logbook templates which would reflect the specific needs and circumstances of each industry.

Some of the significant changes proposed in the Draft Amendments include:

- the inclusion of “wet contractors” in the definition of a “user”. This proposed amendment will permit contractors who are contracted on a wet basis to also claim diesel refunds of

their own. In contrast, a “dry contractor” is now specifically excluded from the definition of a “user”, presumably because it would be entitled to register as a diesel refund user in its own right (as contemplated in section 75(1A)(b) of the Customs and Excise Act, 1964). This seems to be in line with the proposal made in the Discussion Paper to shift the emphasis to “qualifying primary production activities” instead of “qualifying users”.

- The current diesel refund system stipulates that diesel refunds may only be claimed when the user either uses the diesel itself to carry out qualifying activities, or supplies it to a contractor to carry out those activities on the user’s behalf (i.e. “dry contracting”). When diesel is obtained by the contractor itself (“wet contracting”), diesel refund claims are disallowed.
- the requirement that a “user” must register with SARS as a diesel refund user and create a registration profile on the new electronic communication system on SARS’ website. The “user” will, among other requirements, have to register all of its equipment and vehicles used in primary production, as well as its fuel storage facilities.
- The user will only have to substantiate the dispensation and receipt of the distillate fuel to the extent that the equipment, machinery or vehicles were used solely for purposes of primary production activities. However, to the extent that equipment, machinery or vehicles are used for dual purposes, users would still have to keep usage logbooks of the dispensed distillate fuel.
- the transport of agricultural requirements or labourers to or from an agricultural property is specifically excluded in the Draft Amendments. The transportation of mining requirements or labourers to mining sites is also excluded, but the transportation of labourers from the mining site is not specifically dealt with.

## Logbook requirements

Over the years, SARS’ interpretation of the logbook requirements has placed onerous burdens on users of distillate fuel. The template logbooks referred to in the Draft Amendments have not yet been published on SARS’ website, so it is not yet clear whether SARS’ strict approach will persist.

Although website links are provided in the Draft Amendments, the templates do not yet appear on the relevant page of SARS’ website. It will be interesting to see, in light of the template logbooks, whether SARS has adequately considered the specific needs of the various industries and the difficulties that users face in various sectors to obtain some of the information SARS requires under the current diesel refund scheme.

The Draft Amendments are published on SARS’ website and were open for public comment until 24 March 2021.



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