A Stefanutti Stocks Publication

Benchmark

Continuous pursuit of higher levels of performance

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Mechanical & Electrical business unit divisions expand footprint

Recycling dirty water for industrial & mining clients (S&P HRC)

SS-Construções (Moçambique) constructs educational facility

Water, sanitation & pipeline projects completed with zero harm

Building divisions construct multiple landmark projects

Stefanutti Stocks

excellence in execution

our vision

if you can dream it, we can construct it

our mission

excellence in execution

our values

Candour:
Frank and respectful discussions with the objective of finding positive outcomes.

Accountability:
Taking personal responsibility for one's actions and the resultant outcomes.

People relations:
The value which results in people treating one another fairly and with respect and always being mindful of the human dignity of others.

Professionalism:
The application of a competent, disciplined and meticulous approach to all aspects of business, resulting in performance of high quality and reliability.

Excellence:
A passionate mind-set that puts quality at the forefront of all business activity.

Dynamic:
Embracing openness and flexibility of mind and an energetic, pro-active solution-driven attitude.

From the **CEO**

The South African construction market remains extremely competitive due to an ongoing lack of public and private infrastructure spend. Even though business confidence levels seem to be improving in some sectors of the economy, construction activities and margins remain under pressure which makes growth in this environment challenging.

In this demanding environment we are continuously aligning our business to achieve greater synergy, optimise our available resources and to reduce costs. To this end we have combined the Structures and the Roads, Pipelines & Mining Services business units effective from 1 January 2018. This newly formed business unit is called Construction & Mining.

Due to the ongoing difficult trading conditions in the infrastructure market it was decided that Matthew Horwill will fulfil a dual managing director role for both the Civils and Coastal divisions. Matthew will be supported by Shaun Butler as the responsible director in Gauteng. Shaun will continue to manage the Geotechnical division.

Financial Results

For our year ended 28 February 2018, contract revenue has increased by R1.3 billion compared to the previous year R9,1 billion. At financial year end, goodwill of R667 million had been impaired, predominantly relating to the Stocks Limited acquisition, made in 2008. Consequently, our operating loss is R451 million. Should this impairment be excluded, the operating profit is R216 million, which is a slight improvement over the R202 million adjusted operating profit reported in the previous year.

The group's order book is currently R14,3 billion of which R4,6 billion arises from work beyond South Africa's borders.

There are potential pockets of growth in the local market which include surface mining related services, selected open-pit mining contracts, petrochemical tank farms, water and sanitation treatment plants as well as residential, warehouses and design and construct opportunities in the building sector. Cross border opportunities exist in road and bridge construction, marine and mixed-use building projects.

Project Highlights

The Construction & Mining and Mechanical & Electrical business units are participating in a number of surface mining related projects. This includes the installation of our Mechanical division's patented high-rate clarifier (S&P HRC). This system offers the mining sector an effective solution for extracting reusable waste water from the mining process. Some mining and mining infrastructure articles and case studies are detailed on pp 4-11.

Stefanutti Stocks Coastal recently completed the civil works for the much anticipated Strandfontein desalination plant in the Western Cape (p18). The division is also nearing completion on the Maydon Wharf project (p22) in Durban, where we showcased our specialist marine contracting capabilities.

Other landmark projects we are currently involved in include the construction of the prestigious International Convention Centre and an illustrious five-star hotel (p24) in Ezulwini, for the Ministry of Economic Planning and Development in Swaziland.

Constructing warehouses has become one of our Building business unit's fortes and the latest industrial facility project is detailed on pp 28-29. The KZN Building division is also constructing a landmark green-star rated mixed-use development for Nedport Developments (Pty) Ltd in Umhlanga, where the team has excelled on the safety front, with the recent achievement of 1 million Lost Time Injury Free man hours worked.

Another 'green' feather in our cap was achieved by our Construction & Mining business unit's plant division, that has successfully undertaken a field study with ExxonMobil (p12), which will, amongst other outcomes, result in a significant cost saving for our plant and equipment, and reduce our impact on the environment.

Safety

Across the group, our management and staff remain committed to enhanced health and safety policies and procedures, and together strive to constantly improve the group's safety performance. The group's Lost Time Injury Frequency Rate (LTIFR) at February 2018 was 0,11 (Feb 2017: 0,10) and the Recordable Case Rate (RCR) was 0,54 (Feb 2017: 0,70).

Further safety highlights, include the achievement of two million Lost Time Injury free man hours worked by the Electrical & Instrumentation team at Secunda (p34), as well as two recently completed water and sanitation projects where the teams also delivered sterling safety performances (pp 16-17).

Our People

With effect from 13 April 2018 we welcomed two new independent non-executive directors to our board – Ms Bharti Harie and Ms Busisiwe Silwanyana. We look forward to their valuable insights and contributions.

I would like to thank all the members of our board, our executive committee, all our management teams and employees for their continuous commitment, support and dedication in spite of challenging times. We also express our gratitude to our customers, suppliers, service providers and shareholders for their ongoing support.

God Bless.

in this issue

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We would like to thank all contributors to the publication and welcome any suggestions or articles. This publication is also available online on our website.

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Senior Appointments & Promotions

Stefanutti Stocks Construction & Mining

- Russell Crawford is now managing director of the Construction & Mining business unit - which is a combination of the two previous business units of Structures, and Roads, Pipelines & Mining Services.
- Matthew Horwill is now managing director of the two newly combined Civils divisions (Gauteng & Coastal).
- Shaun Butler, director of the Geotechnical division will assist Matthew with the management of the Gauteng operation.
- Danie Basson is responsible for the Human Resources function of the Construction & Mining business unit, effective 16 November 2017.
- Stefanutti Stocks Civils HR manager Stefan Strauss is responsible for the Stefanutti Stocks Academy within the Construction & Mining business unit, effective 16 November 2017.
- Chris Tshivhidzo has been promoted from alternate director to director, effective 1 May 2018.
- Nigel Ramiah has been appointed to director, effective 1 May 2018.

Stefanutti Stocks Construction Zambia

- Wantz Klopper has been promoted from alternate director to director, effective 1 May 2018.
- Willie Retief has been promoted to director, effective 1 May 2018.

Excavation and preparation work in the new excess reject bin.

One of the completed walls and slab in the overflow area.

SS-Construções undertakes mine infrastructure contract for Brazil's Vale S.A

Source: Nelson Rodrigues, SS-Construções (Moçambique) Lda operational director

SS-Construções (Moçambique) Lda, a member of the Stefanutti Stocks group of companies, is undertaking a mine infrastructure construction contract for Vale S.A. – a Brazilian multinational corporation engaged in the metals and mining sectors worldwide. This is the second project Stefanutti Stocks is undertaking for Vale S.A. at its Moatize Mine in Tete, Northern Mozambique.

The contract involves the concrete rehabilitation of existing reject coal bins; the construction of a new 2 000m^3 concrete bunker; as well as the construction of a laydown area with concrete retaining walls for the excess reject coal. Approximately 30 000m^3 of cut to fill is required to form the new laydown area.

Construction work began in October 2017 and is being undertaken within a fully operational area of the mine, where heavy mining equipment runs for 24 hours a day. Working around the traffic was a major consideration when planning access, safety and the protection of the new civil work. Furthermore, SS-Construções, in conjunction with the consulting engineer, implemented pro-active, practical solutions to increase and maximise production rates.

The contractual completion date is July 2018, however the efficient running of the contract could result in an earlier completion. "Thus far our programme for completion is being improved on by almost two months," says Nelson Rodrigues, SS-Construções (Moçambique) Lda operational director. "This is a testament to the hard work that the team is putting in to reach the project's objectives within trying conditions."

Vale S.A. has indicated their satisfaction with progress on site, and is currently adjudicating further work, prior to completion of the current scope, due to the accelerated effort that has been made.

E&I division undertakes Coal Tar Filtration East (CTFE)

Filter Press Project

Source: August Lipke, Stefanutti Stocks Electrical & Instrumentation business development director

Stefanutti Stocks Electrical & Instrumentation (E&I) was awarded the Coal Tar Filtration East (CTFE) Filter Press Project by Murray & Roberts. Work on site commenced in June 2017, with an anticipated completion date in August 2018.

The project scope includes the completion of electrical & instrumentation, fire & gas as well as steam-tracing construction and installation services. The works include in excess of:

- 210 000 metres of cable,
- 9 100 metres of cable racking,
- 7 800 terminations,
- 1 270 Inputs/Outputs (I/O),
- 3 200 metres of instrument tubing, and
- 3 400 metres of steam tracing.

Contracts manager Garry Naude and his team are performing well, managing resources in relation to available work fronts, and undertaking work, as and when access is available, due to mechanical and piping installation delays. The continued focus on safe operations has resulted in a current lost time injury free rate (LTIFR) of zero.

This is the second project for Murray & Roberts the E&I division has undertaken in the past year: the VOC (Volatile Organic Compound) project in Secunda entailed 115 000 metres of cable, 6 730 metres of cable racking and 2 023 of I/O.

Rehabilitating Anglo Platinum's

Amandelbult platinum mine project

Source: Marius Botes, Stefanutti Stocks Mechanical managing director

Anglo Platinum's Amandelbult platinum mine faces the challenge of ageing infrastructure, which, combined with the corrosive nature of the platinum concentrate – and many modifications over the years – means that updating and modernisation work is an ongoing requirement.

The past five years has seen Stefanutti Stocks Mechanical work on various projects at Amandelbult, and based on the contractor's performance, the mine has now commissioned Stefanutti Stocks to manage the ongoing, staged project to rehabilitate its concentrator plant.

The scope of work consists of specialised concrete repairs, as well as the replacement and upgrading of the plant in general. This is continually in progress, with ad hoc work on the concentrator being carried out as and when required. Stefanutti Stocks first carried out rehabilitation work on the UG2 plant (phases 1 and 2) and is now working on the Merensky plant.

"We are extremely proud of our safety record on this project, as well as the excellent client relationship, and repeat business, we have been awarded as a result of this," says Marius Botes, Stefanutti Stocks Mechanical managing director.

Successful CSMEIPP* project completed for

Base Titanium mine in Kenya

Source: Marius Botes, Stefanutti Stocks Mechanical managing director

Stefanutti Stocks Mechanical has undertaken the contract for the civil construction, supply and installation of structural steel, mechanical, electrical and instrumentation, piping and platework (CSMEIPP) for the Kwale Mineral Sands Phase 2 (KP2) Wet Plant upgrade project for Base Titanium in Kenya.

The project was awarded in June 2017 and scheduled for completion in April 2018.

"We offered our early involvement in the constructability planning of KP2 to our client, and seconded senior members of our team to work in Base Titanium's Australian offices," explains Marius Botes, managing director of Stefanutti Stocks Mechanical. Precision and accurate pre-planning is critical to the success of a project such KP2, and a specialised team with substantial pan-African logistical experience was engaged. "Through this early contractor involvement we were able to leverage synergies across all stakeholders – not to mention the substantial risk mitigation as well as the time and cost-savings won through improved pre-planning and alignment."

Stefanutti Stocks took the lead on this exciting multidisciplinary project which included the provision of civils, followed by the structural, mechanical, electrical, instrumentation, piping and platework. The scope of work included completing the civil works for the new plant's operational areas, including the fabrication and installation of steel work to extend the process buildings, as well as the installation of the new gravity separation units and the required piping.

"This milestone project award amply demonstrates our ability to successfully manage CSMEIPP projects on the African continent," concludes Botes.

* Civils, structural, mechanical, electrical, instrumentation, piping and platework (CSMEIPP).

Stefanutti Stocks patents

new generation S&P high rate clarifier

– an effective system for industrial and mining water clarification

Source: Garth Melly, Stefanutti Stocks Mechanical contracts manager

The original S&P Clarifier was developed in-house, by Skelton & Plummer, in 1988. Following improvements on the original design, the new generation S&P High Rate Clarifier (S&P HRC) was launched, and has been received well, for both new installations and retrofitting, by all major mining houses.

The S&P HRC was developed for dirty water treatment in gold, platinum and other base metal mines – with the objective of achieving a throughput rate four to six times higher than conventional conical settlers. The requirement for a higher throughput rate became apparent in the mining industry in the eighties, when many settlers, because of increased production, were becoming hydraulically overloaded. It was often the case that the existing infrastructure could not be extended (by blasting new and/or bigger excavations) to accommodate additional water facilities.

The HRC's popularity is largely due to its throughput rate, of up to six litres per m^2 per second, under peak flow conditions. It can be installed underground or on the surface, depending on the feed arrangements. The smaller shape and dimensions of the S&P HRC also means that installation can occur with only minor interruptions of the ongoing operations. In cases where it is used in new installations (or extensions or for deepening of shaft systems) it requires only 25 per cent of the surface area of a conventional settler.

When compared to a conventional settler with the same flow rates, the S&P HRC represents a saving (in excavation volume and related requirements for roof support, linings or similar measures) of more than 90 per cent. The smaller dimensions also result in less rock stresses, which are particularly beneficial for deep mining operations, or areas where bad ground conditions prevail.

Though the S&P HRC requires the same amount of flocculent as conventional settlers, it achieves overflow clarities of 10 ppm S.S. Due to its unique design features the S&P HRC maintains this quality of overflow water over its full throughput range, from zero to design capacity. The underflow sludge density is comparable to that of conventional settlers.

An additional feature is its capability to collect and trap, in one compartment, contaminants – such as oil, grease, plastics and general debris – that are lighter than water, and which are fed to the clarifier through the dirty water stream.

A further distinctive feature of the S&P HRC is the fact that it has no moving parts. It also accepts any feed fluctuation over a wide throughput range without adjustments. The clarifier is user friendly and does not need operator input. It is a completely bolted design, which allows hot dip galvanising of all components. This permits easy transport to the underground installation sites and effortless erection. It also guarantees a long life expectancy at very low maintenance costs.

This patented high rate clarifier is available from Stefanutti Stocks Mechanical at +27 (11) 820 4600.

How it works – three case studies

1. Thembelani Platinum Mine

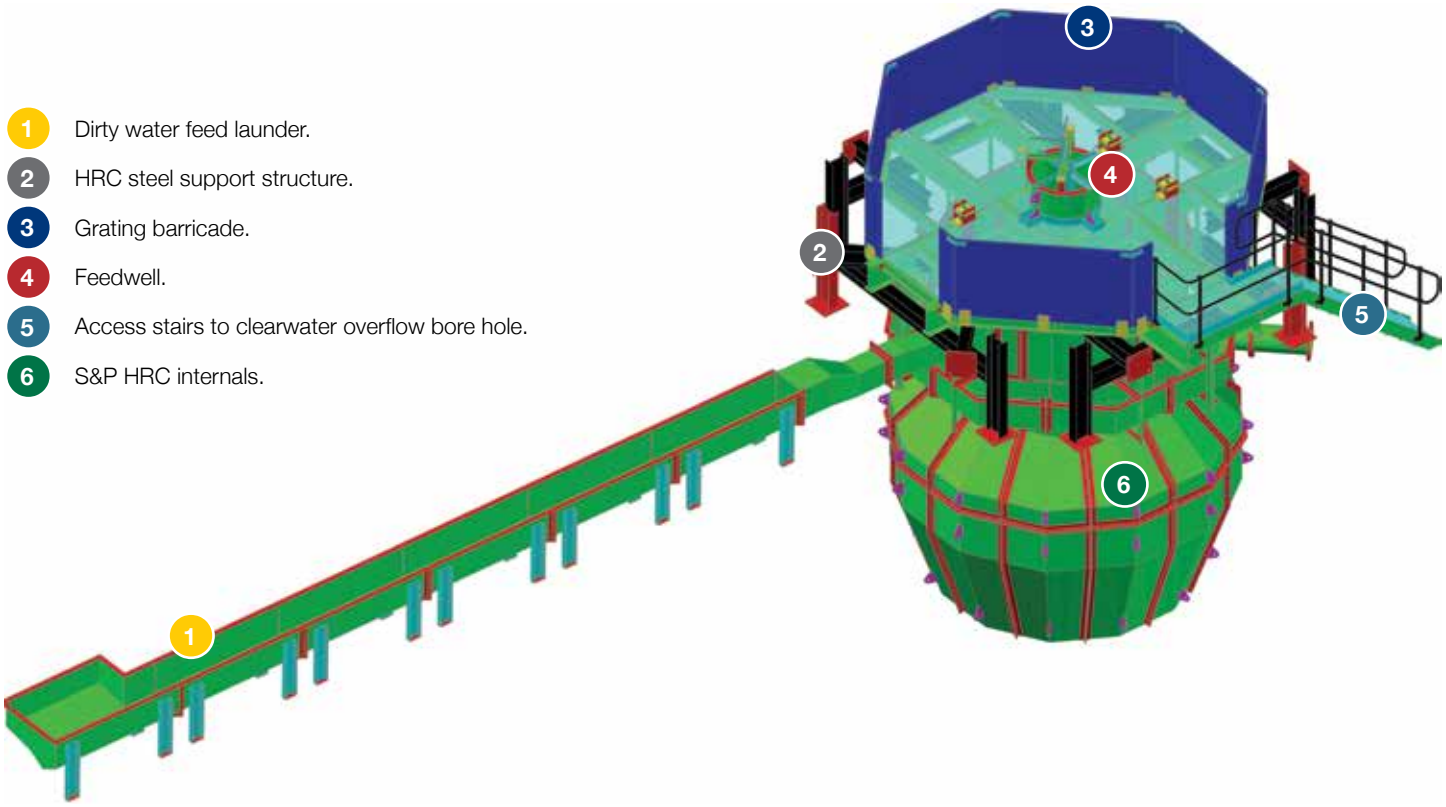
Thembelani Platinum Mine's HRC is located in an underground excavation (a hole was blasted into the footwall), hence there is no external shell to contain the water. The excavation was slyped and shotcrete was applied to form a retaining excavation/dam.

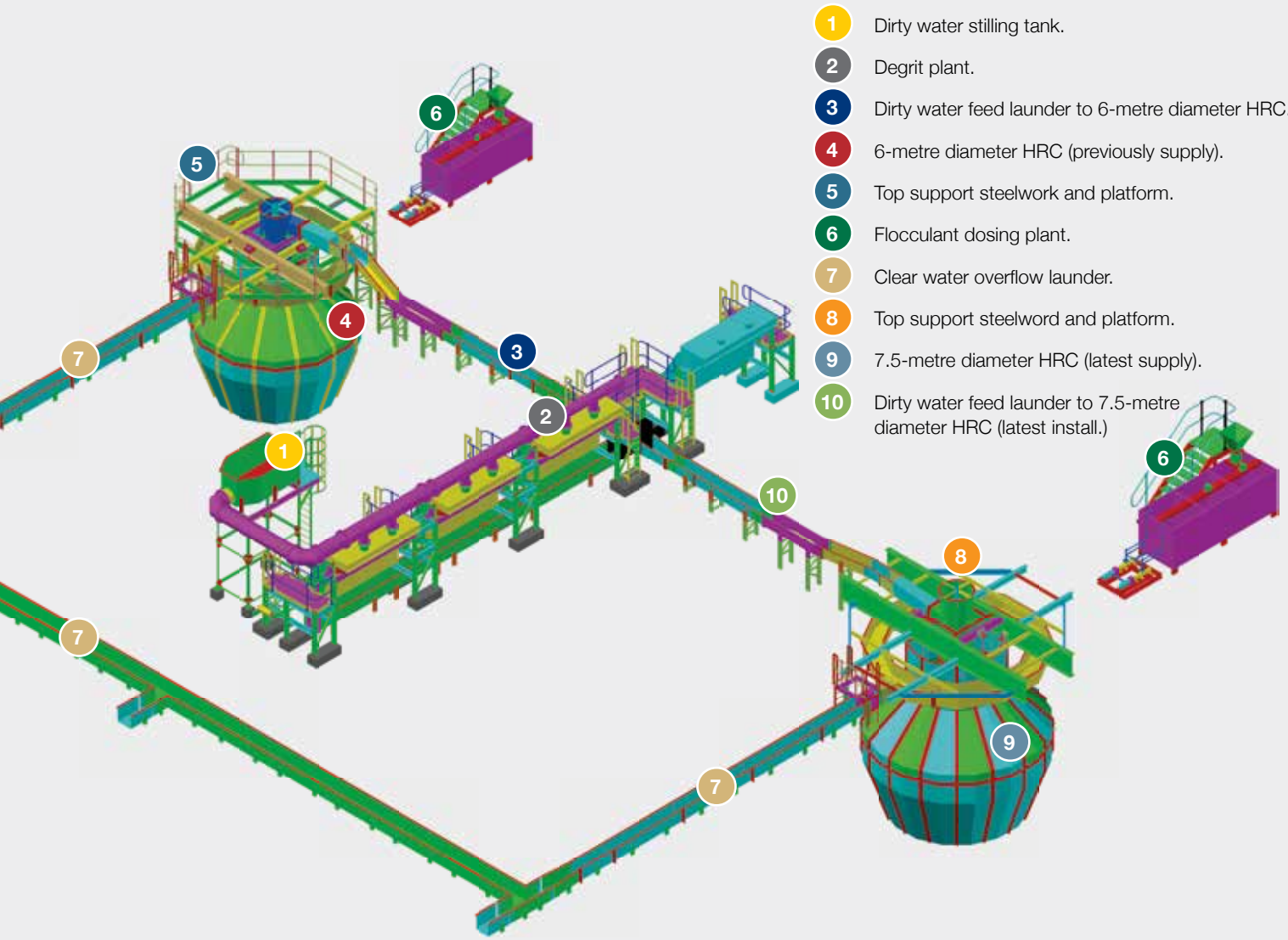
- The mine had not built a concrete retaining wall (as originally designed) therefore a steel support structure (2) was designed and installed to support the HRC during operation.
- As the HRC now rests on support steelwork, rather than a civil retaining wall, the excavation is in essence a big dam. A grating-panels barricade (3) was added as a safety feature.
- The mine's dirty water is piped into the dirty water feed launder (1), where liquid flocculent is added so that the suspended particles flock together, become heavier and sink to the bottom. The dirty water feed launder discharges into the feed well (4).
- The clean water rises to the clear water overflow launders for removal and discharging into the bore hole to be re-used.
- An access staircase (5) was required for this design, as the clear water overflow launders feed into a bore hole that takes the clean water down to the pump station to be pumped back into the system.

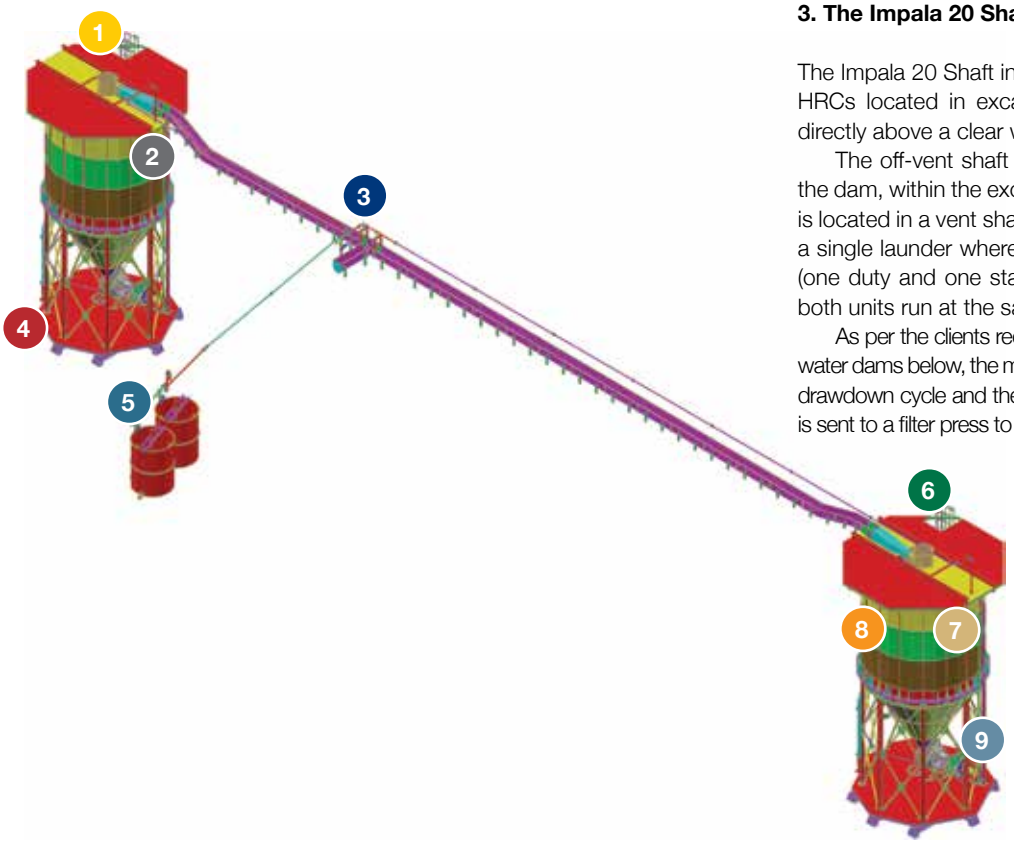
2. Gold One New Kleinfontein Gold Mine

Two S&P HRCs were installed at the Gold One New Kleinfontein Gold Mine. As New Kleinfontein is in development the water-flow rates will change during the life of the mine, therefore two clarifiers were designed. The 6-metre diameter HRC will handle the initial dirty water, with the second 7.5-metre diameter HRC handling additional mine water requirements.

- The dirty water is fed into the dirty water stilling tank (1), from where it is fed through pipes to the degrit plant.
- The degrit plant (2) consists of sieve bends with wire mesh screens to remove fibrous particles and grit (larger than 2mm) from the dirty water, so as not to clog up the HRC internals.
- The dirty water is discharged into the dirty water feed launder (3) (10), that feeds the HRCs. As the flow rate of the water exceeds the design capacity of the 6-metre HRC (4), the excess water is diverted to the 7.5-metre HRC (9), to share the load.
- Each HRC has a flocculent dosing plant (6) that doses flocculent based on the flow rate of the water going through the respective HRC. The dosing strength is controlled by a VSD on the pumps to ensure adequate flocculation per HRC and its respective flow rates.
- Both HRC's are located in excavations with civil retaining walls, hence only internals were designed. As the heavier particles settle to the underflow discharge (to be pumped away to the mud storage dams), the lighter particles float to the surface to form part of the floc bed. The clean water then flows over into the clear water launders (7) and is fed via the clear water launders to the respective clear water dams for re-use.


1 Dirty water feed launder.
2 HRC steel support structure.
3 Grating barricade.
4 Feedwell.
5 Access stairs to clearwater overflow bore hole.
6 S&P HRC internals.


1 Dirty water stilling tank.
2 Degrit plant.
3 Dirty water feed launder to 6-metre diameter HRC.
4 6-metre diameter HRC (previously supply).
5 Top support steelwork and platform.
6 Flocculant dosing plant.
7 Clear water overflow launder.
8 Top support steelword and platform.
9 7.5-metre diameter HRC (latest supply).
10 Dirty water feed launder to 7.5-metre diameter HRC (latest install.)



3. The Impala 20 Shaft

The Impala 20 Shaft installation allows for two 6.5-metre free standing HRCs located in excavations, with the off-vent shaft HRC situated directly above a clear water dam.

The off-vent shaft HRC therefore sits on a support structure over the dam, within the excavation in the footwall, while the vent shaft HRC is located in a vent shaft on a support platform. Both units are fed from a single launder where the inlet flow can be diverted to either launder (one duty and one standby). Alternatively flow can be throttled to let both units run at the same time, should flow rates require this.

As per the clients requirements, the clear water is gravity-fed to the clear water dams below, the mud is sucked out of the HRC external shell during the drawdown cycle and then pumped to the mud storage tanks, from where it is sent to a filter press to be de-watered for easier removal on the conveyors.

1. Access platform.
2. Off vent shaft HRC – freestanding unit.
3. Dirty water feed launder.
4. Support platform.
5. Mud storage tanks.
6. Access cat ladder.
7. Vent shaft HRC – freestanding unit.
8. External shell.
9. Shell support steelwork.

Minerals Processing Plant Maintenance

joint venture – a 'first' for Africa

Source: Marius Botes, Stefanutti Stocks Mechanical managing director

In a first for the pan-African mining sector, Stefanutti Stocks Mechanical – a division of the Stefanutti Stocks Mechanical & Electrical business unit – formed a joint venture (JV) with the Dawsons Group of Companies. This ground-breaking JV draws on the two companies' extensive combined industry experience to offer minerals processing plant maintenance throughout Africa.

Stefanutti Stocks Mechanical & Electrical has a decade of experience in petrochemical plant maintenance, while Dawsons has worked extensively in the Australian mining sector, and has an excellent track record for maintaining mineral processing plants for blue chip and junior mine owners.

Furthermore, Stefanutti Stocks Mechanical is a pan-African expert in the construction of structural, mechanical, electrical, instrumentation, platework and piping (SMEIPP); while Australian-based operation, the Dawsons Group of Companies, is an acknowledged international expert in the field of tailored plant maintenance, shut-down support and non-productive infrastructure maintenance.

"While we do have a solid construction and pan-African project execution track record, having top-class maintenance contracts in place, not only extracts the best life-cycle costs from the plant, but also protects the reputation for quality that we have built up over the years," says Marius Botes, managing director of Stefanutti Stocks Mechanical. It is for this reason, that Stefanutti Stocks approached Dawsons. "Dawsons is an experienced and innovative maintenance expert, with a strong emphasis on safety and quality. Both our companies also recognise the value of seamless teamwork and are interested in becoming involved in pan-African minerals processing plant maintenance."

Stefanutti Stocks is eager to create a sustainable presence in sub-Saharan Africa, something which having a reliable maintenance partner will enable. "Forming this joint venture makes great synergistic sense for both parties," says Sharon Dawson, managing director of Dawsons. "Stefanutti Stocks has the relationships, resources, in-country knowledge, infrastructure and pan-African projects experience; while we have the minerals processing plant maintenance expertise."

Dawsons has already signalled its long-term intention to invest in Africa by shipping a number of large capital equipment items to West Africa, where these will remain permanently for use on local projects.

"We are hoping that this dynamic joint venture will be a game-changer for the future of mining in Africa," concludes Botes.

Medupi Pump Station
enters completion stage

Source: Eric Mkhungo, Stefanutti Stocks Civils construction manager

Construction at Medupi's raw water pump station – a contract for Eskom being undertaken by a joint venture between Stefanutti Stocks Civils and one of its enterprise development partners, Mathomomayo Investment Holdings – is nearing completion. At this stage of the project, one can appreciate some of construction team's production achievements, as well as the quality of the work accomplished from the very first cubic metre (m^3) of concrete that was poured.

Pouring commenced immediately after rock blasting and dental cleaning on the 9 May 2016; the raft foundation was completed on 27 July 2016; and all the concrete works, including brickwork and earthworks backfilling around the structure, by mid-July 2017.

The follow-on activities, entailing various construction disciplines and expert subcontractors, commenced in mid-July 2017. These included structural steel, gantry crane installation, roof isolation, electrical works, and so forth.

At the end of July 2017, quantities for the 51.3mx33.1m footprint structure of the pump station included:

- Total concrete poured: 19 934m^3
- Total reinforcement fixed: 1 462 tons
- Total formwork installed: 16 703m^2

Safety and quality

During the construction phase, with various disciplines and subcontractors working side by side, as well as integrating with Eskom's other contractors, the entire team was not distracted from quality execution and maintaining a zero Lost Time Injury Free Rate (LTIFR).

The manner in which Stefanutti Stocks conducts business and meets the client's objectives was also rated "high" by Eskom in a recent customer satisfaction survey, conducted at the beginning of April 2018.

Pipework installation

During the pump station construction stage, the Eskom-selected piping subcontractor was appointed to design the 1200mm diameter inlet that would connect the raw water dams to the pump-station house. The specialised pipe – 1200mm diameter with a 100mm pipe-wall thickness, supplied with electro-fusion weld collars – that would comply with Eskom's requirements and specifications, (notwithstanding the design and permanent works life of a minimum of 50 years), could not be found in South Africa, and had to be shipped in from Austria.

The sub-contractor was appointed to install the piping through the provided concrete sleeves, by means of jacking methodology. The jacking equipment was specially designed to suit the site conditions and Eskom requirements. To connect the two raw water dams with the pump station piping works the pipes were jacked through existing 2000mm concrete sleeves for 136 metres. Austrian welders were flown in to weld the pipes and train local employees, as part of the project's skills development initiative.

The pipework installation is now underway with a planned completion of mid-June 2018. This will then be followed by final backfilling and the construction of gravel roads to be undertaken by an earthworks contractor CivEng (Pty) Ltd, also an enterprise development partner to Stefanutti Stocks Civils. Due to this additional scope of works as well as the pipework installation, the project is due for completion in November 2018.

Captions:

1. The first cubic metre (m^3) of concrete is poured immediately after rock blasting and dental cleaning on 9 May 2016.
2. A view of the pump station site before roof sheeting.
3. A view on the inside of the pump station.
4. A view of the 1 200mm diameter HDPE inlet pipe installation.

Mine infrastructure construction completed for

Foskor's mining division

Sources: Pierre van Vuuren, Stefanutti Stocks Civils site agent

In February 2018 two divisions of the Stefanutti Stocks Mining & Construction business unit completed construction of a 61-metre high decant tower, located on the edge of the Selati tailings dam at the Foskor Mine in Phalaborwa. The new decant tower feeds tailings water back to the mining plant for re-use, by means of gravity via a 740-metre long pipeline, also constructed by Stefanutti Stocks.

The contract began in October 2016 and entailed civil construction as well as a bulk earthworks and pipeline installation. Both scopes of work were completed by February 2018.

Decant tower: scope of work

The tower shaft was constructed using a slip-forming method of construction, while the control room at the top of the tower was cast *in-situ*. Stefanutti Stocks' in-house technical department assisted with the design. Slip forming commenced in April 2017 and was completed in June 2017. Following this, the control room was constructed, and all mechanical and electrical components installed.

Bulk earthworks and pipeline construction: scope of work

The project's target dates required that excavations ran 24/7 until they were successfully completed. This meant that the excavation had to be drilled and blasted at least once a week

The 740-metre long trench excavation was completed in March 2017, and cuts through an outcrop on the side of the existing dam wall. This excavation had to allow for the gravity feed pipeline, which was initially continuously falling, in spite of the natural ground level increasing to a height of 30 metres.

The excavation design allowed for a working space of ten metres on the floor of the trench, and 80-degree (1:5) side profiles. The side profiles were constantly monitored for changes in the rock composition, and certain areas of the excavation had to be considerably widened to avoid failures and unsafe conditions.

"The construction project was completed, without any safety incidents, and delivered to our client on time and within budget," says Pierre van Vuuren, Stefanutti Stocks Civils site agent. "Our combined teams ensured the project ran smoothly and efficiently, and by delivering excellent quality, made the project a success for both Foskor, and for Stefanutti Stocks."

A third division of Stefanutti Stocks' Construction & Mining business unit – Stefanutti Stocks Mining – undertakes open-pit mining operations at the mine, as well as managing and operating the Selati tailings dam for Foskor.

Caption:
The unusual shape of the tower added to the complexity of the sliding operations, particularly with respect to keeping the structure plumb in a vertical sense.

Tailings storage facility constructed for Anglo American Platinum

Source: Jan Swanepoel, Stefanutti Stocks Roads, Pipelines & Mining contracts director

Stefanutti Stocks Roads, Pipelines & Mining is currently on site at Anglo American Platinum's (AAP) tailings storage facility. It is undertaking emergency repairs to an existing, old tailings facility (the Helena Tailings Storage Facility, or HTSF), as well as constructing a new tailings facility (the Mareesburg Tailings Storage Facility, or MTSF), with associated infrastructure, at the Mototolo Mine's concentrator plant. The approximately year-long contract, due for completion in mid-June 2018, will create the infrastructure to allow the piping of the tailings from the out-of-life tailings facility to the newly constructed one.

The scope of the project includes earthworks, civils and pipelines – all being undertaken within a complex topographical environment, and stringent design requirements. A Factor of Safety (FoS) drive aims to make the environment safe and clean at both facilities, and this has included the implementation of technology that is new to South Africa. The HTSF-facility will utilise software to monitor and inform the placement of materials on the main retaining wall, while at the MTSF a Swiss-designed liner system will have fibre-optic cable (FOC) installed to detect any movement of the tailings stockpile.

Notable construction safety milestones include the achievement of 300 000 Lost Time Injury Free man hours in November 2017, and 500 000 Lost Time Injury Free man hours worked in March 2018. Both safety milestones were celebrated by an AAP hosted braai – in March. A total of 510 people (representing Stefanutti Stocks and AAP) marked the half-a-million hour achievement.

"We have received very complimentary feedback, both on our programme as well as on the quality of our work, from our client," says Jan Swanepoel, Stefanutti Stocks Roads, Pipelines & Mining contracts director. "This is down to an incredible team effort and we need to commend everyone for their contributions and efforts put into driving the success of this project."

The old Helena Tailings Storage Facility (HTSF), at which Stefanutti Stocks is undertaking emergency repairs.

An aerial perspective of the Mareesburg Tailings Storage Facility at the Mototolo Mine near Burgersfort.

Stefanutti Stocks' field study demonstrates

ExxonMobil oil supports its operational efficiencies

Source: Jerome Christian, Stefanutti Stocks Construction & Mining engineer

Stefanutti Stocks has become the first company in South Africa to have a field study performance endorsed by ExxonMobil Global Lubricants. The two companies, together with Centlube (South Africa's authorised distributor of Mobil lubricants) recently completed an optimum oil drain interval (ODI) study, with the specific objective of increasing the oil drain intervals on Stefanutti Stocks' fleet of Komatsu HD 465 rigid dump trucks.

"Improving operational efficiencies is a priority for Stefanutti Stocks," says Jerome Christian, Stefanutti Stocks Construction & Mining business unit's engineering manager. "We use approximately 230 000 litres of lubricant across our group operations annually; reducing this consumption would see us decreasing operational costs substantially, while also reducing our environmental footprint. An increase in our equipment availability would of course also increase our productivity on sites."

The multidisciplinary construction group owns a fleet of over 1 700 pieces of equipment across its operations in South Africa and sub-Saharan Africa. These are utilised by its Mining Division; Roads, Earthworks & Pipelines division; Stefanutti Stocks' local general contracting operations in Zambia, Botswana, Nigeria, Mozambique and Swaziland; as well as by its Geotechnical, Civils and Marine construction divisions.

The ODI study was conducted over a period of three months and followed a performance monitoring protocol, provided by ExxonMobil. A key focus was to assess the performance of Mobil Delvac MX 15W-40, as a preferred engine oil for Stefanutti Stocks' mixed fleet, in place of the competitor engine oil, the construction group has been using.

"We conducted regular used-oil analysis and carefully monitored the test vehicles' performance during the ODI study, and were able to increase the oil drainage intervals from 250 to 1000 operating hours," says Colin Henneberry, lubrication field engineer for ExxonMobil South Africa. "We are confident in recommending the oil used in the study, Mobil Delvac MX 15W-40, to Stefanutti Stocks – it provides high thermal and oxidation stability which results in reduced sludge buildup and deposit formation, as well as increased viscosity."

1

Sixteen of Stefanutti Stocks' HD465 fleet are now using the new Mobil lubricant. "Based on our assessments during the field test, our conservative estimate is that this particular fleet will work an additional 5.95 per cent (or 44 hours) on the Mobil Delvac MX 15W-40," says Christian.

In numbers, this translates to the following improvements, per annum:

- Safety: 608 hours (the overall hours of exposure are reduced).
- Environmental care: 17,328 litres (fewer litres of oil used).
- Productivity: R4 749 591 (revenue saving, considering both direct and indirect saving).

This field study is just one of the many examples of how Stefanutti Stocks is exploring improving its operational efficiencies, and successes like this could have far-reaching effects when rolled out across its entire equipment fleet.

An official endorsement signing event, held at Stefanutti Stocks' Johannesburg-based Plant Yard on Monday 29 January 2018, was attended by representatives from Stefanutti Stocks, Centlube and ExxonMobil, including representatives from its Africa and Middle East (AME) office in Egypt. "As a Planned Engineering Services (PES) customer, we consider Stefanutti Stocks to be our partner," says Gawad Nabil, ExxonMobil distributor markets' chief engineer for AME. "We're here to contribute to their over-arching objectives, by providing lubrication solutions that are efficient and cost-effective. We look forward to continuing to share our knowledge, expertise and successes over many years to come."

Stefanutti Stocks has a reputation for being entrepreneurial, innovative and forward-thinking, and is relentless in its efforts to increase operational efficiencies and decrease environmental impact across the group. "We are extremely proud to have been part of this effort, the first of its kind in South Africa," says Eric Blom, Stefanutti Stocks Construction & Mining business unit's plant director. "We are now looking forward to exploring new solutions and building a strong partnership with the teams at Centlube ExxonMobil."

Captions:

1. One of Stefanutti Stocks' fleet of Komatsu HD 465 rigid dump trucks, working at an open-pit contract mining project.
2. Pictured at the official endorsement signing event, at Stefanutti Stocks in Gauteng, are representatives from ExxonMobil and Stefanutti Stocks. Standing from left to right are: Gawad Nabil – AME FDS market chief engineer, ExxonMobil Egypt (S.A.E.); Ossama Sharaan – Africa Middle East chief engineer, fuels & lubricants marketing, ExxonMobil, Egypt; Vincent Cartier – South Africa cluster manager, ExxonMobil South Africa Marketing. Seated from left to right are: Colin Henneberry – lubrication field engineer, ExxonMobil South Africa Cluster and Jerome Christian – Stefanutti Stocks Construction & Mining business unit engineering manager.

Electrical & Instrumentation division implements **expansion strategy**

Source: August Lipke, Stefanutti Stocks Electrical & Instrumentation business development director

In the past Stefanutti Stocks Electrical & Instrumentation predominantly executed projects within the oil & gas and petrochemical industry, however it has recently focused on securing projects in the mining and power generation sectors, both within South Africa, and across the borders.

"Our strategy review process involved an introspection of the status of the business, focusing on our core business activities, main functions and performance," says August Lipke, Stefanutti Stocks Electrical & Instrumentation business development director. "We reviewed our client base, as well as our competitors in the industry, and then, over the course of four years we consolidated the division into a sustainable business. Our management and construction teams have been re-aligned and resized to suit the current market conditions and opportunities available to the business."

The initiatives to increase market share and enter into different market sectors requires dedicated efforts in terms of active marketing. The consolidation of marketing information and targeted projects has proven to be a successful strategy, to the extent that the E&I division is now executing projects in the mining and power generation sectors, as well as across the border. These projects include:

- Mareesburg tailings dam project – undertaken for Anglo American Platinum & Stefanutti Stocks Mining Services.
- Venetia Underground Project (VUP) – undertaken for De Beers, Worley Parsons and Stefanutti Stocks Civils.
- Tutuka Power Station – ABB South Africa and Eskom.
- Kwale Phase 2, Wet Plant – Stefanutti Stocks Mechanical.

B-BBEE compliance

The electrical and instrumentation company KLB Mkhize was acquired by Stefanutit Stocks to enhance its black empowered status, in particular within the petrochemical environment. "Empowerment has become one of the key drivers within the Sasol environment, to the extent that we were informed that future maintenance contracts will require a minimum of 51 per cent black ownership as well as 51 per cent representation," says Lipke.

The 36-month long Sasolburg Electrical and Instrumentation maintenance contract was ceded to KLB in December 2017.

1

Stefanutti Stocks Geotechnical completes bulbous base-pile installation

Source: Teboho Motaung, Stefanutti Stocks Geotechnical project manager

Since 2015 Stefanutti Stocks Geotechnical has completed various geotechnical projects associated with the upgrade of the N7 in the Western Cape, between Malmesbury and Abbotsdale. Most recently, it has completed the piling works contract for the Abbotsdale Interchange Overpass Bridge.

Stefanutti Stocks was appointed by the main contractor on the project, Triamic Construction. AECOM worked as the engineers on the project that saw the successful and on-programme installation of the bulbous base piles. The scope of work comprised the installation of forty-two 750mm diameter piles – thirty-six of which are located on the abutments, and six installed in pier positions.

The requirement on the project was that pile compression load tests had to be completed prior to the installation of the working piles, in order for the engineers to verify the estimated settlements under working and tests loads.

Stefanutti Stocks' construction on this project began in early December 2017. Work started with the installation of the test and anchor piles, in order to allow the required curing time throughout the December break, and to immediately begin with testing in the new year.

Load test summary

The designed compression working load on the piles was 3 500kN – as per the Colto specification the test load was 7 000kN and a 1 000-ton hydraulic jack was used to apply the required 700-ton load. The pile settled by 2.55mm at the working load and 6.49mm at test load: this was 35 per cent less than what the engineers had anticipated at test load.

A large contributing factor to the good test results was that the bulbous bases were formed in dense, residual granite with standard penetration test (SPT) values between 40 and 50 – which is regarded as very good material to form bulbous bases.

Project execution and scheduling

The sequence of work was agreed upon with the client and the professional team prior to commencement, and Stefanutti Stocks completed and delivered the project on time, as planned. Open communication channels between the entire team were maintained throughout the project and contributed to a highly successful project.

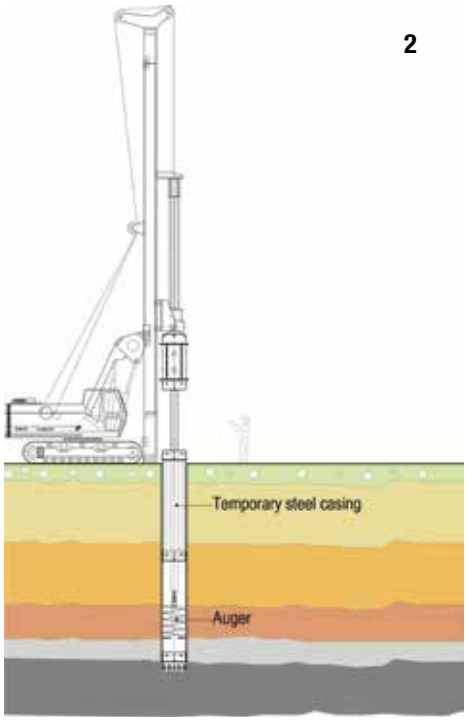
Project safety and quality

Total hours worked on the project was 6 191 with zero lost time injuries and a complement of 16 employees at peak. Our project team maintained the Stefanutti Stocks Way's principals and delivered a quality product.

Captions:

1. Stefanutti Stocks Geotechnical's Bauer MG48 and Manitowoc 110 ton crawler crane at work at the Abbotsdale Interchange contract.
2. Diagrammatic depiction of a typical bulbous base pile process: Drilling.
3. Diagrammatic depiction of a typical bulbous base pile process: Placing rock into borehole.
4. Diagrammatic depiction of a typical bulbous base pile process: Bulbous base formation

Diagrammatic depiction of a typical bulbous base pile process



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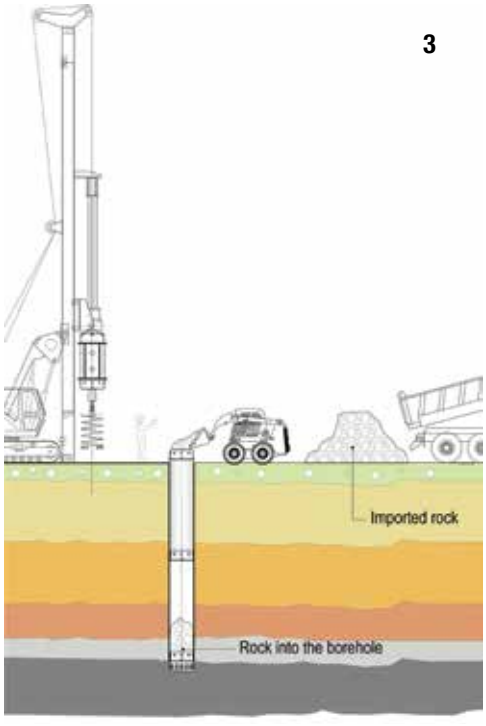

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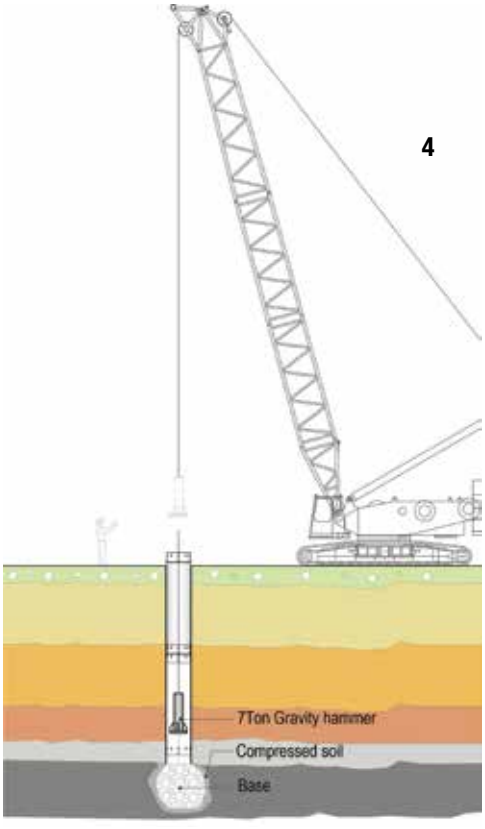


4

Geotechnical division undertakes piling to bridges in Namibia

Source: Marcin Szatkowski, Stefanutti Stocks Geotechnical site agent

Stefanutti Stocks Geotechnical is applying its wealth of experience in the construction of deep piled foundations in Namibia, where it is installing 76 permanently cased, raked oscillator piles for river bridges.

The bridges are on the outskirts of Swakopmund and form part of the upgrade of the old salt road to a new highway between Swakopmund and Walvis Bay.

The required plant and equipment were mobilised from South Africa. This road trip took about a week, followed by a set up period of about two days when Stefanutti Stocks Geotechnical's Bauer BG28 (with a BV1500 HD oscillator) and Kobelco Crawler Crane were set up and commissioned. These weigh in at just under 120 and 55 tons respectively!

The geology in the Namibian desert consists of sand, calcite, granite and boulders. All the deep pile foundations will have their sockets founded into the calcite and granite. However, to get to this rock, it was required in some cases to drill over thirty metres into the sand and through boulders, which tend to move when drilled, making drilling very difficult. "Permanently cased oscillator piling is only chosen in challenging geological conditions," says Marcin Szatkowski, Stefanutti Stocks Geotechnical site agent. Drilling deep and through boulders poses various challenges – and the experience of the site team, most recently at the rail-over-road bridge in Saldanha and river bridges at Soweto Bridge and Bushbuckridge, means they are aware and prepared to deal with conditions in terms of the methodology required to complete the piles. "The majority of the piles are not vertical – they are at 9.5 degrees due to moments imposed on the bridge. This means that on a 35-metre pile, the distance from the original pegged platform position down to the toe of the pile, is almost six metres away from the horizontal."

The bridge will cross the Swakop river, which may look dry on the surface , however, water is encountered about two metres below the dry river bed. This is also an environmentally sensitive area, thus great care needs to be taken to protect the environment.

"Materials for the project are mainly sourced from local manufacturers, and the quality of the concrete ready-mix suppliers here are on par with South African suppliers – if not better", says Szatkowski, who has been pleasantly surprised by the level of management involvement by suppliers, who constantly visit the site to make sure their product conforms to standards.

Stefanutti Stocks Geotechnical is currently working day and night on this project, to optimise the utilisation of its equipment and the contract that commenced in October 2017, is currently at 50 per cent completion.

Stefanutti Stocks Geotechnical's Bauer BG28 and Kobelco Crawler Crane working on a pier position, next to the abutment.

Sterling safety performance at

North-East Wastewater Treatment Works

Source: Wayne Stay, Stefanutti Stocks Coastal site agent

In February 2018, Stefanutti Stocks Coastal completed Phase 2 of the construction of the North-East Wastewater Treatment Works (NEWWTW) for the Mangaung Municipality. The project entailed the construction of the liquid stream and the sludge stream and included the following structures:

Liquid stream

- Two primary sedimentation tanks,
- Two secondary sedimentation tanks,
- RAS flowmeter chamber,
- Two supernatant overflow structures,
- Process pipelines, and
- Roads and landscaping.

Sludge stream

- Three gravity thickeners,
- Two primary digesters,
- Two secondary digesters,
- Two primary sludge pump stations,
- Digester feed pump station, and
- Primary digester access stairway.

At the start of the project, a target of 250 000 Lost Time Injury Free (LTIF) man hours had been set – this was achieved in November 2017. Overall, the LTI free man hours achieved for the project was 258 024.

Recent water and sanitation projects, constructed by Stefanutti Stocks Coastal, include:

Client	Project	Completion
Amatola Water	Extension to Nooitgedacht Potable WTW: Phase 3	Feb 2019
Zululand District Municipality	Usuthu Water Purification Works	Feb 2018
Mangaung Municipality	North-East Wastewater Treatment Works (NEWWTW) – pictured below.	Feb 2018
Drakenstein Municipality	Upgrading and extension of the Wellington WWTW to 16ML/day: civil works	Jun 2018
Amathole District Municipality	Xhora Water Supply Scheme	Oct 2018
Manguang Metro Municipality	Upgrading and extension of the Sterkwater WWTW: civil works (Liquid Stream)	Apr 2017
Mhlatuze Water	Nsezi Bulk Water Supply Scheme: construction of 20ML reservoir and associated bulk infrastructure	Nov 2017
Mangaung Metro Municipality	Construction of 15ML/day WWTW: civil works	Mar 2016
Ethekwini Municipality	Phoenix Bulk WTW	Aug 2016
Umgeni Water	Lower Thukela Bulk Water Scheme	Aug 2016
Umgeni Water	Imvutshane Dam	May 2015
Umgeni Water	South Coast Quarry reservoir extensions	Sep 2014
Ethekwini Municipality	Umhlanga Reservoir	2013

An aerial perspective of the completed Phase 2 North-East Wastewater Treatment Works (NEWWTW).

Usuthu Water Purification Plant

in Zululand celebrates completion with zero harm

Source: Craig Mcallister, Stefanutti Stocks Coastal site agent

A Stefanutti Stocks Coastal and ORO Projects joint venture completed the construction of the Usuthu Water Purification Plant for the Zululand District Municipality in February 2018. The plant was constructed over a 24-month period during which 538 142 man hours were worked – without any lost time injuries and a disabling injury frequency rate of zero.

The team, that achieved the sterling safety record, consisted of 117 permanent company employees, as well as a further 68 individuals employed by the ten subcontracting enterprises.

The R126-million contract comprised of the civil engineering construction of a new water treatment works with a capacity of 16Ml/day. The scope of work included:

- The civil construction of concrete water retaining structures, concrete block retaining walls, interconnecting pipework, building works and general site works.
- Supply and installation of mechanical and electrical equipment to the water purification plant.

Stefanutti Stocks Coastal established a contract participation goal (CPG) plan for the project, that would see unskilled members of the local community receive training in various trades. Over forty employees from the community, who had never worked in construction before, completed courses in working at heights, formwork, concrete and first aid, as well as receiving training as safety representatives.

A monthly health and safety campaign – "Keep your head in the game" – afforded site management as well as all employees the platform to revisit the cardinal rules of occupational health, safety and quality; as well as to discuss unsafe scenarios and reinforce safe working procedures. The entire site would stop work for the monthly event, and a translator would ensure that all present could understand and participate. "Involving everyone on site meant that all supervisors, site management and the workforce remained aware of every single task that formed part of the overall project scope, and how it needed to be completed in a safe manner," says Stefanutti Stocks' site agent Craig McAllister.

During these monthly events interaction between the workforce and supervision was encouraged. Everyone was invited to raise their observations regarding any activities that fell outside of safe operations, with the objective of identifying and implementing the correct working procedure.

"Achieving zero harm on a busy construction site is a noteworthy health and safety milestone – not only for the companies involved, but for each of the 185 individuals on site (many of whom were new to the industry), who worked towards a unified goal of zero harm," says McAllister. "Our safety culture was continually front-of-mind, and our safety pledge reinforced and ensured that our site's safety standards were met daily."

Stefanutti Stocks Coastal undertakes marine works for

desalination plant

Source: Andre van der Merwe, Stefanutti Stocks Coastal contracts manager

The pipe stringing yard, where a 300-metre long pipe string was fitted with weight collars and buoyancy bags, in preparation for being floated and towed to the installation location.

The Strandfontein desalination plant project was a fast track project undertaken for the City of Cape Town, by water treatment specialist PROXA, to augment water supply during the current drought. Stefanutti Stocks Coastal, in joint venture with TAG Diving, assisted PROXA with the marine works scope of the project. The bulk of the original scope of work was completed within a period of nine weeks and included the procurement, manufacture, installation and commissioning of the plant and materials for the Strandfontein Seawater intake line, brine line and pump station.

Through early contractor involvement Stefanutti Stocks Coastal and PROXA's design engineer, PRDW, value engineered the pipeline configuration to achieve an excellent balance between the design requirements (for the total weight and stability of the pipeline on the seabed), and the practicality of manufacturing and installing this pipeline. The outcome was a dual pipe – two 600-metre long, 500mm OD HDPE piping – installed side by side (a total 1 200m of piping) and held together by 110 evenly spaced concrete collars, each weighing 2.2 ton.

The brine line is a 144 metre long, 355mm OD HDPE piping, fixed to the side of the concrete collars with brackets. An intake screen is installed at the end of each intake pipeline at the 600-metre mark.

The project included launching the pipeline from the beach, 600 metre away from the site. The pipeline was launched in two 300-metre long strings. The first string included the 144-metre brine line. "In order for us to be able to launch, tow and sink the pipeline we required good weather – a rare occurrence in the coastal summer season," says Andre van der Merwe, Stefanutti Stocks Coastal contracts manager. The launching and towing was undertaken by a tug boat (with a 500-metre towline attached to the pipeline) and six excavators walking the pipeline into the sea. "Synchronising the six excavators and the tugboat was one of the more challenging aspects on the project, however, despite the changing weather and sea conditions we successfully launched, towed and sank the full length of the pipeline, including the intake screens."

The project was successfully completed on programme – a feat made possible by the dedicated and hardworking team, who took full ownership of their project, and worked around the clock to complete the project, and bump up the water supply in the Western Cape.

Early morning at the stringing yard, where preparations are being made to launch the pipe string (using excavators) across the beach and into the sea.

Stefanutti Stocks Coastal sub agent Bulelani Mabuya, looks on as the front excavator (of a total of six) walks the pipeline into the sea.

Bridges to provide

safe passage for pedestrians in Ekurhuleni

Source: Odilon Kongolo, Stefanutti Stocks Civils site agent

The construction of four pedestrian bridges, for the Ekurhuleni Metropolitan Municipality in Tembisa by the Stefanutti Stocks Khombanani Steel Consortium, has entered its final few months of construction. The scope of work includes the concrete and structural steel works, as well as the electrical and mechanical works. The structural concrete includes all foundations, lift shafts, access staircases, and decks.

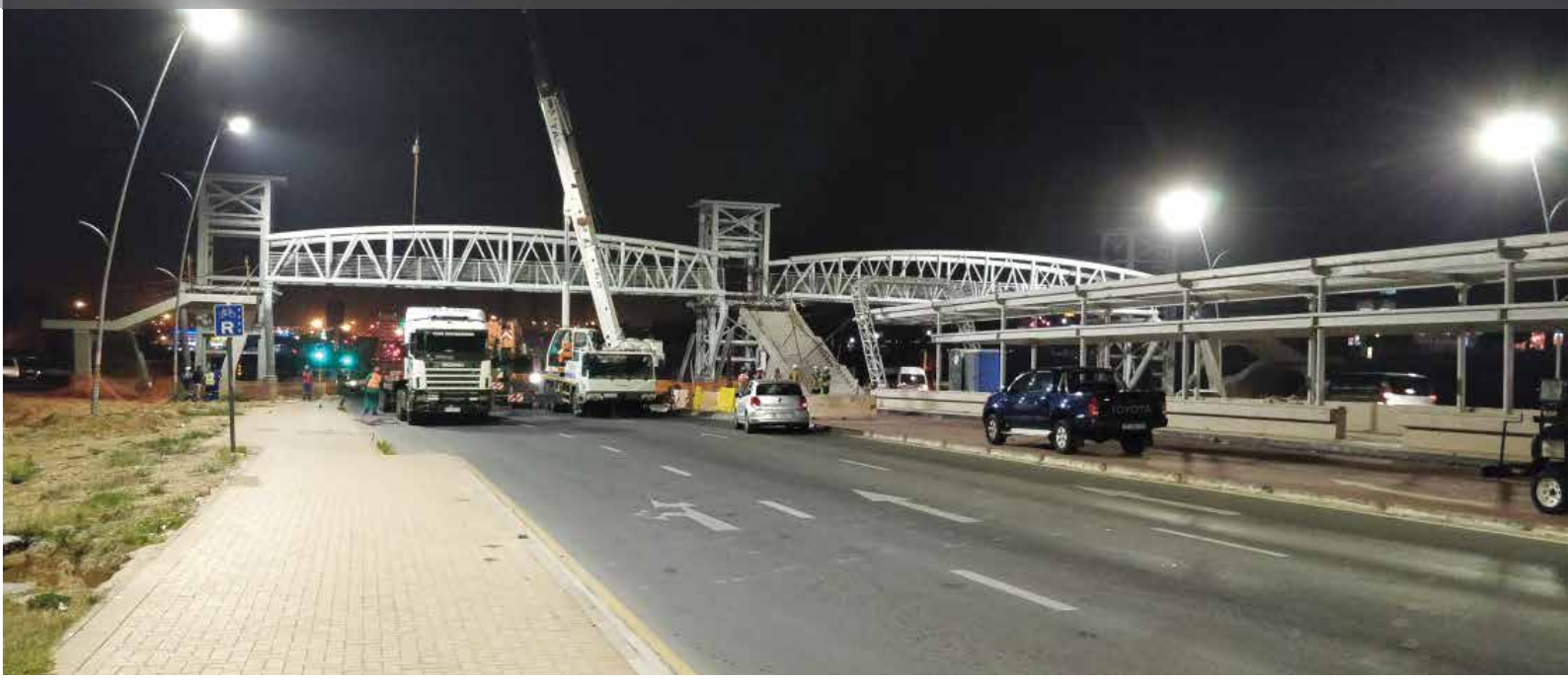
The bridges' main structures, together with the lift towers, constitute part of the structural steel works, and the lift installation and electrification forms part of the remainder of the project scope. These bridges will be among the first in South Africa to have an access lift, with a capacity of up to 15 occupants.

The construction methodology implemented makes use of precast concrete, with all major components (concrete and structural steel elements) pre-manufactured offsite, before being transported and installed on site. "The unusual, asymmetrical shapes of the precast columns, have made them more difficult and technical to install, however this method was more efficient and cost-effective for our client, than the conventional *in-situ* concrete casting," says Odilon Kongolo, Stefanutti Stocks Civils' project manager for the consortium. "The column stubs were cast *in-situ*, and the process of vertically plumbing the column stub to the suspended column head – while complying to the extremely stringent COLTO tolerances – was quite challenging."

A notable achievement on the project saw the installation of the pre-assembled 36-metre structural steel structures, which were completed with exceptional accuracy; in less than the time allowed; and without incidents or traffic interference.

"In addition to delivering high-quality work that has been properly documented to ensure a seamless handover, our target here is to complete the bridges on programme, within budget, with zero harm, and having caused as little inconvenience to the public as possible," concludes Kongolo.

The installation of the four bridges was undertaken around the clock on weekends, and occurred twice in March and once in April 2018.



Stefanutti Stocks - multidisc

Structures
- heavy industrial structures
- power projects
- mining infrastructure
- bridges
- water & waste-water treatment plants
- concrete rehabilitation

Marine
- jetties
- quay walls
- breakwaters
- scour protection and dredging
- caissons and pre-cast structures
- slipways and boat ramps
- marine furniture
- design and construction
- revetments and shore protection

Geotechnical
- geotechnical investigation & reports
- installation of different types of piles
- lateral support
- rock anchoring & shot-creting
- consolidation & other grouting
- diaphragm walls

Roads & Earthworks
- bulk earthworks
- road construction & rehabilitation
- crushing & screening
- asphalt manufacture & paving
- fibre-optic infrastructure
- dam construction
- mine infrastructure & development
- agricultural development

Pipelines
- large/small diameter welded steel pipe
- HDPE pipelines
- ductile pipelines
- oil & gas pipelines
- pump, mechanical & electrical installations
- in-situ concrete lining of pipelines

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Mining Services

contract mining
- open pit mine design, planning & optimisation
- fleet simulation & selection
- contract mining
- crushing and screening
- rehabilitation and closure

materials handling
- energy coal processing
- discard and fine coal disposal & recovery
- coal management

tailings management
- design solutions and construction management
- waste facility operations & management
- hydraulic mining and dredging
- rehabilitation & closure

Building Construction

- commercial buildings
- high-rise buildings
- industrial & service buildings
- hotels
- shopping centres
- social infrastructure
- mass housing
- township and residential developments

Mechanical & Electrical

- structural steel erection
- mechanical equipment installation
- pipe spool fabrication
- installation of process piping systems
- plant shut down & maintenance
- water treatment plants
- switchgear & motor control centre installation
- control system installation
- electrical field device installation
- field instrumentation installation
- commissioning assistance

United Arab Emirates

- general construction
- interior fit-outs & refurbishment

Stefanutti Stocks

excellence in execution

Maydon Wharf Project

- a fantastic career first for young site engineer

By: Mbangiseni Ratshivhadelo, site engineer for the reconstruction and deepening of Maydon Wharf Berths 1 to 4 and 13 to 14.

1

Introduction

I joined the Reconstruction and Deepening of Maydon Wharf Berths 1 to 4 and 13 to 14 project team in January 2015, as green as one could be right after graduating. The project was already nine months into the contract, and in full swing. One could sense the magnitude based on the numbers that were being thrown around during morning planning meetings and casual conversations with people who had been here from the beginning. These numbers would range from the contract value, to the number and tonnage of piles, to the number of Lost Time Injury Free Hours worked ... The expected high standard of quality and safety to be delivered in the project was emphasised from the onset.

To be part of this mega project has been a humbling experience – the unique designs and specialised equipment used have been "next" level, and not comparable to any other projects in South Africa. The associated pressures and the stress to deliver, make it easy to forget how enormous the project is, until such a time that one is physically away, and starts reflecting.

Growth on the project

When I arrived at Maydon Wharf, I did surveying for the first year-and-a-half. This included setting up for everything: from the temporary tubular piles for the HZ king piles guide frame; under water tubular piles guide frame; alignment of the piling rig for anchor piles; all concrete works and services as well as generating as-built for all the structures.

This exposure was key in my gaining an understanding of how all the activities tie-in together. I consider this as a good start to my grasping how important every small detail in construction is – every millimetre is critical.

My involvement since has mainly been in the construction of most of the back-of-quay civil works, and my initial surveying exposure has certainly helped. The construction of *in-situ* fender panels was probably the most challenging element, with this activity being critical to the majority of the works required to complete the project. Managing the works against the tides was always the most challenging part of the activity.

Challenges, and overcoming them

Being involved with Berth 3 and 4 from the beginning and having the opportunity for more responsibilities was very exciting and daunting in equal measure. During my time in surveying I was exposed to almost all the different activities, at different stages of the project, albeit from a slight distance. Being directly involved with the planning and execution of the works – right from the beginning – was a challenging experience at first. But, having a great team around with a mixture of different characters and levels of construction industry experience proved to be one of the assets I was happy to have at my disposal.

The planning and reviewing of 12-week look-ahead programmes every month with the project manager, construction manager, site agents and fellow site engineers was one of our tools to pick up obstacles well in advance. The different inputs, coupled with experiences, equipped me to be able to plan properly for my section of the works.

With Berth 3 and 4 being the last two of the six berths to be constructed, one would have assumed that it was going to be plain sailing, due to lessons learned during the construction of the previous four berths. It proved not to be so: though measures were put in place to mitigate the delays due to known challenges, there were always new and unforeseeable challenges that arose.

Teamwork

The quality, safety and environmental standards have always been high. There is no room for compromise when it comes to the quality

of the works, the safety with which the project is delivered, and the environment. Our team has achieved over 2 000 000 Lost Time Injury Free Hours. This is no small feat, considering the high risk of the activities and the number of people that have been involved with the project over the years. The culture of working with a great attitude towards quality, safety and environmental is second nature to the team at Maydon Wharf.

Through the years (yes, it's been years!) I've learned that one must maintain good working relationships with all the stakeholders involved in the project, from the client, suppliers to subcontractors, engineers' representative, and so forth. Working in a diverse team has been a huge plus, and made me appreciate the different qualities that everyone in the team possesses. Combining such qualities has a huge impact on the quality of the work done, without ever compromising the safety of the project.

It has been an adventure working with the labour force on a day-to-day basis, and dealing with different issues that arise and are raised by them has been enlightening. If there were disagreements, HR and IR were always available to interpret the laws and resolve any issues.

Maydon Wharf has taught me to always be on my toes and to keep planning ahead. No day passes without a challenge.

Highlights

The highlights of my time here at Maydon Wharf – starting from being a graduate, to a site surveyor (most people believed I was a surveyor by profession!) and to becoming a site engineer – are many.

Being part of the team that reached more than 2 000 000 LTIF hours further underlines the attitude towards safety on everyone's part.

The casting of *in-situ* fender panel 23A (tying in to existing cope beam in Berth 2) and 40A (tying in to Berth 5 existing cope beam) took a lot of hard work and continual modifications of the shutters, resulting in the back and forth liaison between the myself and the design engineers. Sealing and preventing water from entering the shutters seemed to be an impossible task. Even the use of underwater concrete at that point was not going to help, due to the amount of water entering the shutters. Finding the source of the leaks, using pumps and casting concrete plugs stopped water from entering the shutters, and finally casting the two *in-situ* fender panels were my greatest moments at Maydon Wharf.

Another highlight was the handing over of Berth 1 and 2 and Berth 13 and 14, and most recently the handing over of Berth 3 and 4, section 1 and 2. The latter, at which a vessel berthed within an hour of handover, is a testament to how significant this project is to the economy.

The advice and the mentorship from my senior colleagues have helped me grow personally and professionally. The completion of section 3 layer works at Berths 3 and 4 is imminent, after which the paving will follow. I am looking forward to full handover i.e. the completion of the six berths, 1 to 4 and 13 to 14. It is difficult to comprehend that we will have completed such a mammoth task, and I feel fortunate to have experienced this particular project, as my career first.

Captions:

1. An aerial view of completed construction of the cope beam, in-situ fender panel, stormwater pipes and manholes at Berth 3 and 4.
2. Berth 3 and 4 were in full use within just a few hours of handover.

Mbangiseni Ratshivhadelo on site at Maydon Wharf.

2

An aerial photograph of the construction site, showing both the ICC and the FISH. Major quantities on the FISH project will include concrete: 30 600m², rebar: 3 300 ton and brickwork: 86 300m².

Stefanutti Stocks Swaziland leads the construction of

illustrious five-star hotel

Source: Hannes Geyser, Stefanutti Stocks Swaziland contracts manager

Swaziland's Ministry of Economic Planning and Development awarded the construction of the landmark International Convention Centre (ICC), located in Ezulwini, to a joint venture between Stefanutti Stocks Swaziland, Inyatsi Construction Ltd and Kukhanya Civil Engineering Contractors. The joint venture, known as the KISS JV, was also awarded the contract to construct the prestigious five-star hotel (FISH), located adjacent to the ICC. Construction of the FISH started in July 2017, with an expected completion of December 2018.

The ICC

The multi-million ICC contract consists of the construction of a single structure, encompassing a floor area of 40 000m² across two basements, a ground floor and a first floor. The building houses an 1 800-seat theatre, an exhibition centre that houses ten smaller meeting rooms; two 700-seater and one 200-seater conference facilities (complete with translator booths); a chamber facility that can seat 1 000 delegates including 64 heads of state plus four delegates, and general seating; a restaurant; and a 3 200m² multi-purpose hall. The project commenced on 15 October 2015, and is scheduled to be completed in time to host the 2020 AU summit.

As at April 2018, the structure, roofs and wet works for the ICC are complete. Currently, the external aluminium cladding to the building is underway, as well as the structure and glazing to the 1 500m² glass roof and curtain walls. The high quality interior finishes, external bulk services and earthworks to the parking areas have commenced.

The FISH

During the course of a thirty-month construction programme the KISS joint venture will be building a structure that will change the landscape of Ezulwini. The 299 room five-star hotel (51 000m² of floor area) encompasses seven levels – a basement, a ground floor, and five accommodation levels.

The 299-room offering will include:

- 263 standard rooms (54m²)
- 20 junior suites (110m²)
- 5 executive suites (200m²)
- 6 presidential suites (300m²)
- 5 Royal suites (1 000m²)

The hotel will include a fully-fitted gym, all-day dining areas, line shops, an impressive swimming pool, as well as outside decks and tennis courts.

The Ministry of Economic Planning and Development has targeted a Silver Star LEED rating for the structure, and a fully-fledged waste-water facility also forms part of the joint venture's scope of works. LEED – or Leadership in Energy and Environmental Design – is the most widely used green building rating system in the world.

The development of the ICC and the FISH are part of the Kingdom of Swaziland's plans to position itself as a major player in hosting international and national events – including meetings, exhibitions and conferences. On paper, the scope of work belies the splendour of this five-star hotel, designed by Atrium Architects.

One of the many unique aspects of the project, is that the bathrooms for the standard rooms and junior suites, are being supplied in the form of pre-fitted bathroom pods. These are being pre-manufactured and fitted out in Italy, then shipped to Durban, from where they will travel by rail freight to Swaziland, to be installed on site by the KISS JV. The concrete structure and connections for the services are designed to receive the pods which will arrive as "plug and play" units. This means that they will arrive snagged, tested and signed off, and will merely be dropped into position, the services connected on the outside of the pods, and the bathrooms will be ready for use.

SHEQ

As at April 2018 over 275 000 Lost Time Injury Free (LTIF) man hours have been worked. The site is currently working towards certifying the Stefanutti Stocks Swaziland's quality management system in accordance with the ISO 9001:2015 standards, and the certification audit is scheduled for mid-May 2018.

"It is not every day that one can claim to be involved in a R3,5-billion building project – projects such as these are few and far between!" says Hannes Geyser, Stefanutti Stocks Swaziland contracts manager, who is also leading the KISS joint venture. "It really is an incredible honor to be trusted to lead, and to work with the team on such a prestigious mega project. A further bonus is that on a daily basis we get to view our accomplishments from the prime position of our site office – at the top of the hill overlooking the beautiful valley of Ezulwini."

Captions:

1. A pre-manufactured bathroom pod that will be built and fitted out in Italy, then shipped to Durban, travel by rail freight to Swaziland, and finally be installed on site by the KISS JV.
2. An artist's impression of the beautiful 299-room five-star hotel that is being constructed for Swaziland's Ministry of Economic Planning and Development.

Stefanutti Stocks builds concrete structures for Lifestyle Estate in Paardevlei

Source: Mike Bradshaw, Stefanutti Stocks Building Western Cape senior contracts manager

Stefanutti Stocks Building Western Cape began construction at the Paardevlei Lifestyle Estate in The Strand, in May 2017. The residential complex, that is being constructed for Balwin Properties, is located about 400 metres from the famously windy False Bay.

The project will see Stefanutti Stocks construct the 19 000m^2 basement, with concrete structures for the ten, four-storey high residential blocks that will rise out of the basement. The ten concrete blocks range between 2 980m^2 and 8 780m^2, and together with the basement, cover a total of 70 000m^2. "This complex project is providing a fantastic platform for our up-and-coming team members to grow their skills," says Mike Bradshaw, Stefanutti Stocks Building Western Cape senior contracts manager. "In particular, Taahier Salie, previously a site agent, rose to the challenge and was deservedly promoted to contract manager halfway through this project; and senior engineer, Ms Pfarosi Tshisikule, is doing a sterling job of heading up the engineering and managing the quality assurance/quality control aspects."

Stefanutti Stocks' scope of work includes:

- excavation of 91 000m^3 to below water table depth,
- installation of various lateral support solutions along the site perimeter,
- 22 300m^3 of concrete civil work, and
- construction of 4 024 columns.

The project currently sees about 750m^3 of concrete poured per week, making it essential to have a reliable concrete supplier – communication is key in ensuring that supplier Ciolli maintains the required rate of supply.

"An unusual aspect on the project is that we are not providing the follow up trades, and this means that, rather than a staged approach, we must complete snagging before the client's contractors can start," says Bradshaw.

A unique and interesting element of the project is the high number of columns, relative to the area of slab, that are being constructed. "One, of the ten blocks, has 155 columns, per floor!" says Bradshaw. "Construction of these columns was compounded by the extreme wind we experienced – on some days our four tower cranes could not operate, bringing the column and wall construction to a halt."

"We have about thirty Stefanutti Stocks staff members on site, and enjoy a good relationship with our main subcontractors, Viva Formwork and RSC Reinforcing, and the structural engineer Bau Africa," says Bradshaw. "As a team we have adopted a problem-solving approach, which has assured us of a relatively smooth project thus far and will see us through to the successful completion of our participation in the construction of the Paardevlei Lifestyle Estate."

Captions:

1. Aerial footage of phase 1 taken during the early stages of the project.
2. A view over phase 3 of the project, taken from a camera mounted on the adjacent building.

An aerial view of the completed main administration building.

Joint venture completes main administration building at **Kusile Power Station**

Source: Damien Pennefather, Stefanutti Stocks Basil Read (SSBR) joint venture contracts director

The Stefanutti Stocks Basil Read (SSBR) JV commenced construction of one of the more technically challenging buildings – Kusile Power Station's main administration building – on the overcast afternoon of 15 January 2016.

Prior to the construction phase SSBRs execution team invested time and effort into planning the work sequence – the building consists of three double-storey blocks, and two double-storey link areas that connect each block. The drawings were closely scrutinised to identify and resolve any potential problem areas, and individual experience and expertise within the team, as well as the open communication channels created, proved to be instrumental to the success of project.

Getting started

Unfortunately the start of the building was delayed, as the area could not be accessed as planned in late November 2015.

As the box cut excavation took place during the rainy season the storm water management plans formed part of the excavation methodology. The building's footprint, which is 140 metre long by 80 metre wide and 1,5 metres deep, could easily turn into a dam after every storm.

Challenges and successes

"The unusual 'egg-like' shape of the building posed serious challenges during the structural steel manufacturing and erection phase," says Damien Pennefather, Stefanutti Stocks Basil Read (SSBR) joint venture contracts director, "and obtaining the structural steel verticality and alignment certificate gave surveyors a few sleepless nights!"

The main entrance's *in-situ* concrete access staircase, with its raking curved soffits tested the expertise of the carpenters, who through their skilful execution and attention to detail, delivered an end product that exceeded all expectations.

To achieve the construction completion date, numerous trades had to be executed in close proximity, and within a limited time frame. "Coordinating the activities of our various subcontractors was managed in our daily coordination meetings, attended by the relevant subcontractors," explains Pennefather. "The INVOCOM communication system was used with great success, and ensured every person, right down to those on the work face, knew what was expected of them every day." The joint venture ensured that the rate of progress was maintained, and in some instances even exceeded the rate required by the programme by setting clear targets, monitoring them and giving regular feedback.

Major quantities associated with the building include:

- 10 496m^3 excavation,
- 266 piles (600mm in diameter), driven cast *in-situ* up to nine metres deep,
- 4 871m^3 concrete,
- 5 690m^2 formwork (other than coffer slabs),
- 3 609m^2 formwork to coffer slabs,
- 4 103m^2 cranked "Klip-lok" roof sheeting,
- 8 109m^2 ceilings,
- 4 235 aluminium coffer ceiling tiles,
- 4 259m^2 raised access flooring,
- 395 ton of structural steel,
- 334 metres of aluminium double glazed shopfronts with Vitrex panels, up to 7.2 metres high, and
- R 3 634 337 specialised joinery work.

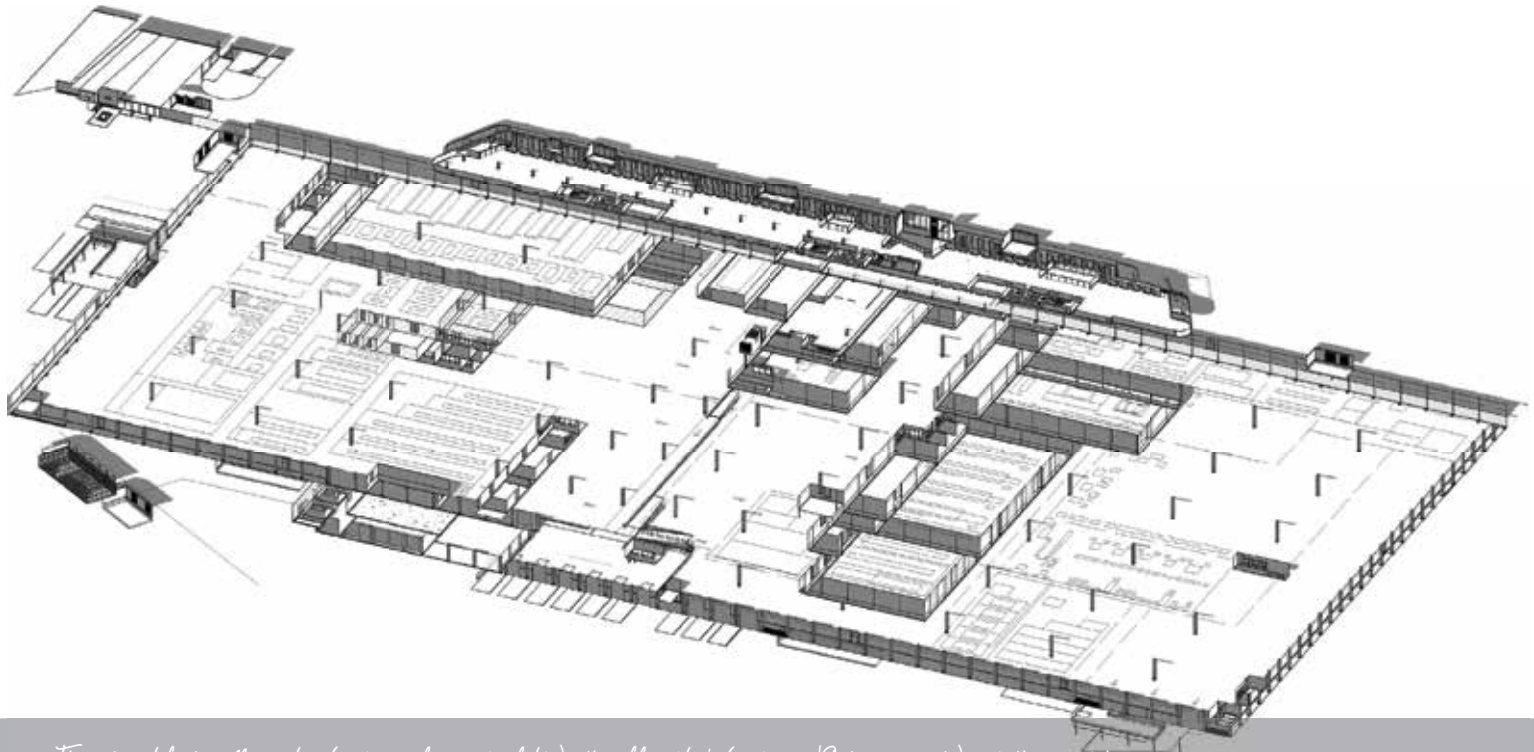
"When one takes the complicated nature of the building into account, as well as the quality of the finished product – without even one non-conformance report being issued – then this building is indeed a major achievement by the team," concludes Pennefather.

Stefanutti Stocks constructs

industrial print park for Redefine

Source: Wikus du Plessis, Stefanutti Stocks Building KZN senior site agent

An aerial view of the south western elevation of the industrial print park.



The internal factory floor plan (as big as five rugby fields), the office block (as big as 19 tennis courts) and the guard house.

Stefanutti Stocks Building KZN is currently constructing an industrial print park for its client Redefine Properties. The industrial facility, that will be used for warehousing, printing and distribution, is being purpose-built for print production brands Hirt & Carter, Triumph and Uniprint.

In recent years Stefanutti Stocks has built warehouses for Mr Price, Unilever, Malda Pack, Ellerines, SRF Flexipack, and Value Logistics. Constructing warehouses has become one of the company's fortes in the province, and it has also been able to build a network of sub-contractors that work well as part of a bigger team, to ensure that Stefanutti Stocks' unique formula and sequence is followed.

The project for Redefine Properties started with about a month-and-a-half of bulk earthworks (169 000m^3), undertaken in extremely difficult ground conditions. The prevalence of shale means that the soil has low permeability and that, whenever it rains, the subsurface becomes an aqueduct. Thus, the standing water and the almost non-existent drainage on the site effectively transforms the area into a lake.

In addition to the earthworks, the project's building construction scope included:

- 43 000m^2 warehouse (the size of 5 rugby fields);
- 5 000m^2 office block (the size of 19 tennis courts);
- 10 000m^2 external hard stands; and
- two guard houses.

921 000 bricks (equivalent to the weight of 2700 cars) will be used in the construction of these building structures, and total of 18 000m^3 of concrete will be poured during the contract – this equals the weight of 36 000 cars!

This facility is being specifically developed for tenants – Hirt & Carter, Triumph and Uniprint – with the intention that they will remain in the premises for the next twenty years. Says Wikus du Plessis, Stefanutti Stocks Building KZN senior site agent, "On this project the tenants are closely involved with the development and although some late changes in specifications were made, we have been able to respond to their needs, in order to ensure a very precise and bespoke fit out. Our warehouse construction experience has really stood us in good stead here. We can see through the issues, understand if it will work, how it could impact construction – and then we come up with solutions."

Part of the facility consists of large temperature-controlled printing rooms, in which heavy-duty printing presses (lithographic, silk screening, digital printing, and so forth) will run non-stop. The base for these machines is 20 metres long, and two metres wide, and must be finished within tolerance of four millimetres from end-to-end.

The intricate details on the office block structure are a unique and complex element that has provided some challenges in construction. There are six pods and the main entrance that will house meeting rooms and boardrooms, and will protrude from the front façade of the building. These are independent concrete structures, and the only spaces in the office buildings that will receive ceilings. All other areas are exposed concrete soffits.

"These rooms have a very high finish and require us to work very accurately to ensure the pod seamlessly ties in with the façade and the surrounding brickwork, while supporting the concrete structure around them," says Du Plessis. The pods are also individually coloured in the corporate colours of the tenants.

The print park construction is scheduled for a phased handover, with the initial phase 1, that ecompasses 25 000m^2 of factory floor space along with the office block and all external works, to be completed at end of June 2018. This is effectively a construction duration of twelve months. The remainder, i.e. phase 2, will only (due to the tenants' requirements) be completed at the end of February 2019. Rowan Stuart, Stefanutti Stocks' site agent says the industrial print park is "an extremely difficult but rewarding project with exceptional pressure. It has certainly reaffirmed the relationships with the subcontractors forged out of previous projects."

The contract, that commenced on 28 May 2017 has thus far achieved a total of about 440 000 Lost Time Injury Free man hours worked. "The strength of the entire project team is driving this project forward, and we are experiencing healthy camaraderie between all stakeholders, with a very open and non-confrontational approach to finding solutions on site," says Du Plessis. "It is very rewarding to be working in an environment like this – we're under pressure but performing well."

An architects rendition of the office block front façade, showing the pods that will protrude from the building.

Stefanutti Stocks Building KZN constructs landmark

green-star development

Source: Craig Scott, Stefanutti Stocks Building KZN contracts manager

The landmark green-star rated, mixed-use development Park Square, is currently under construction in the heart of the bustling Umhlanga Ridge. Stefanutti Stocks Building KZN, the main contractor building this retail and office development, started construction in January 2017. Its client, Nedport Developments (Pty) Ltd, is pursuing a Green Star Office Design rating as well as an As Built rating for the building. Building a structure, with the aim of achieving Green Star rating, requires a different approach to the construction process particularly with regard to waste management.

This twelve-storey development consists of five blocks that are arranged around a public square. The ground floor comprises a retail component, with the remaining floors consisting of office space. The total project floor areas comprise of:

- A gross floor area of 40 000m^2 comprising of
  - commercial office are of 36 000m^2
  - retail area of 4 000m^2
- A car parking area covering 34 682m^2

Park Square consists of a concrete framed building with brick infill in parts and glazed curtain walls. Unique architectural design incorporates extensive off-shutter concrete work, as well as a raking deck and raking circular columns at the entrance to the Nedbank lobby. Park Square's architects are MAP Architects, with all engineering disciplines for the project being undertaken by ARUP Durban.

Its construction methodology considers the nine environmental impact categories specified by Green Star SA and by which the project will be rated. These are:

- Management;
- Indoor environment quality;
- Energy;
- Transport;
- Water;
- Materials;
- Land use and ecology;
- Emissions; and
- Innovation.

The Park Square team has come up with an initiative "Create with Waste" which encourages upcycling of construction waste in the project in innovative ways. The project will feature in Stefanutti Stocks' annual sustainability publication Sizimisele, as an environmental case study, in which the environmental impact categories will be explored in more detail.

In February 2018, the Park Square building was awarded a four-star Green Star SA – Design rating. The As Built submission will be considered after project completion, which is anticipated to be November 2018. The Green Star SA – Office As Built certification assess the same design initiatives, but the validation documentation differs in that it is retrospective and therefore assesses that which is relevant to the construction of the building.

"We have collaborated closely with our client and the professional team, right from the design stages, in order to be able to deliver on Nedport's vision for Park Square," says Craig Scott, Stefanutti Stocks Building KZN contracts manager. "One of our greatest assets is our skilled and motivated team, which includes our subcontractors, a lot of whom we have worked with many times before. We are all passionate about delivering this landmark – within programme and budget, to high quality and safety standards, and in an environmentally friendly way."

In the last week of April, the Park Square team achieved 1 000 000 man hours without a Lost Time Injury – a further testament to the team's commitment to exceeding expectations. (see article on page 33).

An artist's impression of the Park Square development.

An artist's impression of the Park Square development.

SS-Construções awarded a further construction phase at the

Aga Khan Academy

Source: Nuno Dias, SS-Construções (Moçambique) Lda senior contracts manager

In late November 2017, SS Construções (Moç) Lda completed the construction of the Aga Khan Academy junior school, junior library, basketball court and a sub-station. This educational facility, located on a 22-hectare site in Matola, will initially cater for up to 750 pupils, however the site-wide infrastructure has been designed to support the expansion of the teaching and accommodation facilities, to cater for up to 1 200 pupils.

In March 2018 SS Construções commenced a second contracting phase – incorporating the construction of two student residences and ancillary works – due for completion at the end of November 2018. The scope of work relating to the construction of the three-level residence buildings includes earthworks, as well as the construction of the water tank building.

During the project's planning phase, the decision was made to construct both residences at the same time, and a dedicated construction team was allocated to each of the buildings.

The contract includes the supply and construction of a unique metallic roof structure, the complex design of which includes hidden gutters and detailed ceilings. The drawings needed to be prepared prior to manufacture, and there was no margin for error.

"We are pleased for the opportunity to continue our working relationship with the Aga Khan Development Foundation, and constantly endeavour to meet their budgetary constraints, without compromising on quality," says Nuno Dias, SS-Construções (Moçambique) Lda senior contracts manager. "We are currently negotiating a further phase, and would be delighted to be involved in all construction phases of the Academy."

Captions:

1. An aerial perspective of the Aga Khan Academy junior school, junior library, basketball court and a power station, completed by SS-Construções in November 2017.
2. Pictured is the future site of the Phase 2 buildings, which had to be excavated up to a depth of three-metres. The inconsistent quality/density of the soil means that these excavations will be refilled and compacted layer by layer.

Stefanutti Stocks celebrates twenty-nine years of **construction in Botswana**

Source: Shaun Cross, Stefanutti Stocks Botswana managing director

As Stefanutti Stocks nears the end of its third decade in Botswana, it is proud of its association with illustrious clients and industry stakeholders, from both the public and private sector. The company has participated in the construction of much of the country's infrastructure – of which a number of structures form part of Botswana's heritage and will stand as monuments for future generations to see.

Since commencing operations in Botswana in 1989, Stefanutti Stocks has completed numerous contracts for clients from multiple sectors. Work undertaken includes expansion projects on diamond and nickel mines, road works, a large water and effluent treatment facility in Francistown, as well as numerous building contracts, such as the Hukuntsi Primary Hospital, Department of Supplies; the Rural Administrative Centre in Letlakeng, Otse Police College in Gaborone, Botswana Bureau of Standards, the Health Science Building in Lobatsi and the prestigious Maun Hospital. This 271-bed, 26 000m^2 healthcare facility includes a unique air-conditioning system that cools the structural mass of the building rather than just the air within it.

It has also completed multiple retail and leisure facilities and landmark high-rise commercial buildings such as the SADC headquarters in Gaborone, and was the proponent of the first office-accommodation public private partnership in Botswana (which commenced in 2007). The company has contributed towards transport infrastructure construction, and has constructed two airports, including the expansion of the infrastructure at the country's largest airport, Sir Seretse Khama International Airport.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Further project highlights

- Blue Stores Warehouse (Debswana Diamond Mine)
- Staff Houses, Toteng (Discovery Metals)
- Shopping Centre (Black Window Pty Ltd)
- New MASCOM Innovation Centre (MASCOM)
- BIFM House renovation and additions (Khumo Properties Asset Management)
- Upgrade of Sir Seretse Khama Monument and paving of ceremonial parade ground (Ministry of Works & Transport)
- Ombudsman and Lands Tribunal office accommodation (Ministry of Works and Transport)
- Ministry of Health headquarters (Ministry of Works and Transport)
- New Botswana Power Corporation Customer Service Centre (Botswana Power Corporation)

Skills development

In 2016 Stefanutti Stocks Botswana introduced construction-related skills development programmes, targeted at up-skilling its employees and the residents of Botswana who are suitable candidates for working within the industry. These programmes incorporate plant simulator training as well as artisan training, both of which have been registered with the South African Qualifications Authority (SAQA).

Recent accolades

The flagship Fairscape Precinct in Gaborone, which includes a 15-storey tower with a diagrid façade that forms the perimeter support of the structure, won a Fulton Award for excellence in the use of concrete – for a building structure greater than R100-million – in 2015.

The company's commitment to excellence has further been acknowledged at the Kasane International Airport, where it constructed a new 6 400m^2 terminal building, as well as revamping existing airport infrastructure. These accolades include a 1st place from the South African Institution of Civil Engineering (SAICE) and being named overall winner of the Metal Cladding category by the South African Institution of Steel Construction (SAISC). Furthermore, Stefanutti Stocks Botswana was also awarded the PMR Golden Arrow award for construction in Botswana.

With just one year to go before celebrating its thirtieth anniversary, the construction company is looking forward to exceeding the expectations of many more clients, while it continues to construct their dreams.

Captions:
1. An aerial photograph of the ground-breaking Maun Hospital.
2. The inside of the award-winning Kasane International Airport terminal.
3. The Fulton award-winning Fairscapes Precinct.

Park Square team achieves

one-million Lost Time Injury Free man hours

Source: Dallas Pakkiri, Stefanutti Stocks Building KZN safety manager

In 2017 Stefanutti Stocks Building KZN, on the project known as Park Square, won the regional Master Builders Association (MBA) categories for Best Housekeeping and Best Scaffolding. The site was also named the overall regional winner for its category, and placed second in the national MBA awards. By the end March 2018 the Park Square project had reached a safety milestone of 978 509 Lost Time Injury Free (LTIF) man hours, and by the last week of April this achievement rose to the coveted one-million Lost Time Injury Free man hours worked! This achievement was driven by each of the 588 employees on site, all of whom are committed to safety, as much as they are to deliver a high-quality building.

"Our site is audited weekly by COMPRAC, Nedport Developments (Pty) Ltd safety consultants, to ensure we continue to comply and maintain high safety standards," says Dallas Pakkiri, Stefanutti Stocks Building KZN safety manager. "Strong leadership and management combined with a motivated and competent team on site, has ensured that we meet all the required standards, in spite of the many challenges crossing our path." Construction challenges specific to this site include construction taking place in a built-up and high-traffic area, traffic management, no access to site, no loading zones and no laydown areas.

"For some construction activities we needed to close the roads, which meant we had to apply for permits to the management association responsible for the Umhlanga Ridge precinct, prior to for example pouring concrete," explains Pakkiri. "We always endeavour to keep the impact of our construction activities to a minimum and are happy to report zero traffic accidents or injuries." To assist with traffic management during the road closures additional flagmen from the local community were hired and trained; on occasion the traffic had to be diverted to just one lane, and sometimes the concrete pours would start as early as 4 am. Additional safety measures included the erection of perimeter scaffolding and hoarding around the entire building footprint and backed up with shade cloth to prevent any objects falling onto the busy roads or passing pedestrians.

As the Park Square development is a green rated building project, many environmental measures were put in place to ensure construction compliance, which included putting together a dedicated team for the task. The project has been divided into four zones – each of which are managed by a site agent, a general foreman, a foreman, a safety officer, a safety representative, a first aider and an emergency coordinator. Each zone has its own tower cranes and additional riggers were trained so that at any given time, each crane would have two riggers available. "We take our commitment to zero harm extremely seriously at Stefanutti Stocks, as such the Park Square site team extended safety training to our subcontractors," says Pakkiri. "We trained their employees in safety-related skills, as safety representatives, first aiders, scaffolding erectors, inspectors, banksmen, riggers and in environmental awareness."

The client, Nedport Developments (Pty) Ltd was instrumental in motivating and recognising the Stefanutti Stocks' Park Square team. When the site reached its first milestone of 250 000 LTIF man hours all employees were issued with UVEX tinted safety glasses, a sun visor and were invited to a celebratory braai. The milestone of 500 000 LTIF free hours was also celebrated with a braai as well as T-shirts sponsored by the client, and a 'thank you' address delivered by client representative, Samantha Stewart. The one-million LTIF man hours will be marked by a braai on 11 May, at which acknowledgement gifts will be distributed to all staff.

"We are so proud to have reached the one-million LTIF man hour mark and to be flying the company safety flag high," concludes Pakkiri. "Our team is dedicated to continue operating in this way, and it is after all a big part of the Stefanutti Stocks Way."

Captions:
1. Construction underway at the Park Square construction site.
2. A rare off-duty occasion enjoyed by the team (some of whom are pictured here) to celebrate the achievement of another safety milestone.

Project for Bidvest receives a

five-star grading from Master Builders Association

Source: Commert Harban, Stefanutti Stocks Building Western Cape safety manager

In November 2017 the "Plumblink multi-tenant warehouse" project – where Stefanutti Stocks Building Western Cape constructed two new warehouse facilities including office blocks for Bidvest Properties (Pty) Ltd – received a five-star grading award from the Master Builders Association (MBA).

The combined gross area of the facility is 11 090m^2, and in addition to building the structures, Stefanutti Stocks' contract also included the installation of services, as well as construction of a retaining wall, steps, paving and landscaping work. A total number of 2 754 people including subcontractors were on site at the peak of the project, that ran for a total of nine months (05-07-2017 to 31-03-2018) and was completed with a Lost Time Injury Frequency Rate (LTIFR) of zero.

"The MBA conducts annual health and safety audits to establish the star grading of its members' sites and any score above 90% is awarded five stars – the Bidvest-Plumblink project achieved a total of 93%,"says safety manager for Stefanutti Stocks Building Western Cape Commert Harban. "We are very pleased to have achieved the five-star grading from MBA, and to have completed the project with zero harm."

A further affirmation of Stefanutti Stocks Building Western Cape sterling safety performance saw the division win the national Stefanutti Stocks Building safety competition in December 2017. Two projects per each of the building divisions across South Africa are audited on a monthly basis. Based on the assessments and results obtained at Paardevlei Lifestyle Project (see article on page 26) and the Bidvest-Plumblink project, the Western Cape building division was named overall winner for December 2017.

Electrical & Instrumentation achieves

two-million LTIFR man hours

at Secunda's maintenance contract

Source: August Lipke, Stefanutti Stocks Electrical & Instrumentation business development director

The Stefanutti Stocks Electrical & Instrumentation (E&I) Maintenance team in Secunda has once again proven that consistency in performance is of the utmost importance. The client acknowledged the team for its outstanding performance during the 2017 financial year end and shutdown period. The most recent milestone is the achievement of two-million Lost Time Injury Free (LTIF) hours.

Stefanutti Stocks Mining participates in Exxaro CEO Sustainability Summit

Source: Clifford Turner, Stefanutti Stocks Mining Services contracts manager

Stefanutti Stocks Mining Services' Material Handling division manages and operates the co-disposal facilities at three of Exxaro Coal Central's mines – Dorstfontein East, Dorstfontein West and Forzando North Coal Mine. Representatives from the division were invited to attend the Annual Exxaro CEO Sustainability Summit, hosted by Exxaro Coal Central on Friday 2 March at the Dorstfontein West Coal Mine.

Mrs. Mandima Nengovhela, Exxaro Coal Central's human resource manager, opened the event with a prayer, followed by a number of guest speakers from Exxaro's management teams, including Exxaro Resources chief executive Mr. Mxolisi Mgojo and Mrs. Joanne Yawich, chief executive officer of the National Business Initiative.

Master of Ceremonies, Mr. Myan Subrayan, navigated the audience through a full programme, keeping his audience entertained through anecdotes, jokes and witty introductions to the next programme items.

The addresses by the Exxaro management teams were followed by an industrial theatre piece, performed by Sound Headquarters. This thought-provoking performance preceded an audio-visual display – presented by Business Science Corporation – showing how interactive simulation can contribute to employee safety training.

Next on the programme were guest speakers, Dr. Victor Ramathesele (an expert on primary health care) and Mr. Mthokozisi Zondi, Department of Mineral Resources health and safety representative. The labour organisations – the National Union of Mineworkers, Solidarity, UASA and AMCU – also relayed their messages of support.

As the formalities drew to a close, Dr. Nombasa Tsenqwa, executive head of Coal Operations presented the safety pledge, which was later signed by all present. Dr. Con Fauconnier, chairperson of the Sustainability Risk and Compliance Committee, closed proceedings with final words of encouragement

"The event was extremely thorough and well organised, with a programme brimming with relevant and compelling topics. It was truly five star – from the presentations, through to the catering – and we enjoyed participating immensely," says Clifford Turner, Stefanutti Stocks Mining Services contracts manager.

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Captions:

1. Exxaro management takes to the stage with Dr. Nombasa Tsengwa, Exxaro's executive head of coal operations, sharing the Safety Pledge with attendees.
2. Standing behind a banner with the Stefanutti Stocks' vision "if you can dream it, we can construct it" are, from left to right: safety officer Raymond Welding, site manager Vale Lombard, Exxaro Coal Central's business unit manager Daniel Stapelberg, Marco Pasquali Stefanutti Stocks contracts director, safety manager Stanley Uledi and contracts manager Clifford Turner.

Building Western Cape supports

charity on the sports field

Source: Jacqueline Pryra, Stefanutti Stocks Building Western Cape personal assistant

A Stefanutti Stocks Building Western Cape football team participated in a charity event hosted by Africa Tikkun at the Milnerton High School on 8 April 2018.

Africa Tikkun is a non-profit company (NPO) that supports young South Africans to become economically empowered. Their model sees them develop children from a young age through to young adulthood, and helps them transition into the world of work. The NPO partnered with event organisers Active Events in organising this fundraising soccer tournament in Cape Town in April 2018.

“Our participation in the event was great for our team spirit, and these sporting events certainly build our camaraderie, both off and on the construction site," says team captain and Stefanutti Stocks Building Western Cape's contracts manager Mathieu Carpentier. “We were happy to be part of a worthwhile event, and certainly hope that Afrika Tikkun will be able to impact many young lives going forward.”

Caption:
Representing Stefanutti Stocks Building Western Cape are, standing from left to right: Eric Thomson, Sakhele Dlanglamandla, Vuyo Xintolo and Selwyn Naidoo. Seated, from left to right are Mujaheed Martins, Mathieu Carpentier and Brent Viljoen.

Financial controller from Stefanutti Stocks Coastal finishes

third in European Masters

Source: Janette Jeeves, Stefanutti Stocks Coastal executive secretary

Taren Gaia, Stefanutti Stocks Coastal financial controller donned her competition dancing shoes again this March, to participate in the European Masters, held 23-25 March 2018 in Ballybofer, Ireland. The event is a major qualifier before the World Championships, and Taren danced three dances in the Advanced Open Divisions, coming 3rd overall.

“We’re so proud of our star performer,” says Janette Jeeves, Stefanutti Stocks Coastal executive secretary, “and naturally we will be rooting for her in the World Champs!”

Caption:
Taren Gaia performing the "Dancing in the Nightclub" category at the European Masters in Ireland.

SS-Construções builds

team spirit on the sports field

Source: Katia Sousa, SS-Construções (Moçambique) Lda personal assistant

On 18 November 2017 SS Construções held its first company soccer tournament at the soccer field that it had constructed, as part of social upliftment project and donated to the local community, in November 2016.

Six teams, from various sites and/or business divisions participated. They were:

1. Aga Khan Team
2. Office Building and Yard Team
3. Stay Easy Hotel Team
4. Baia Mall Team
5. Plumbing DepartmentTeam
6. Anadarko Team

It was a fun-filled day with a lot of positive energy, good food and high spirits – both on the field and off. The teams played with conviction and enthusiasm, also using the opportunity to meet and mingle with their colleagues from other sites and divisions.

The team representing Baia Mall fought hard to win the coveted first prize, with the Office Building and Yard Team coming into second place. “We also awarded a trophy to the best player and medals were given to the teams who came first and second,” says Katia Sousa, SS-Construções (Moçambique) Lda personal assistant to the managing director. “The event was very popular, and we are hoping to turn it into an annual event in future. ”

Captions:

1. Municipality Soccer Field in Zimpeto.
2. Contracts manager, Tim Smith (manager of the winning team) with Vasco Macivane (captain of the winning team).
3. The Stadium bench filled with supporters.
4. The Stay Easy and the Anadarko teams.
5. Te Baia Mall and the Aga Khan teams.

Stefanutti Stocks excels at the SAFCEC sports day

Stefanutti Stocks participated in the South African Forum of Civil Engineering Contractors (SAFCEC) annual sports day, held at the Edenvale Sports Club on 20 April 2018. Fourty-two employees from the group showed that they were as competitive on the field as they are in the construction environment!

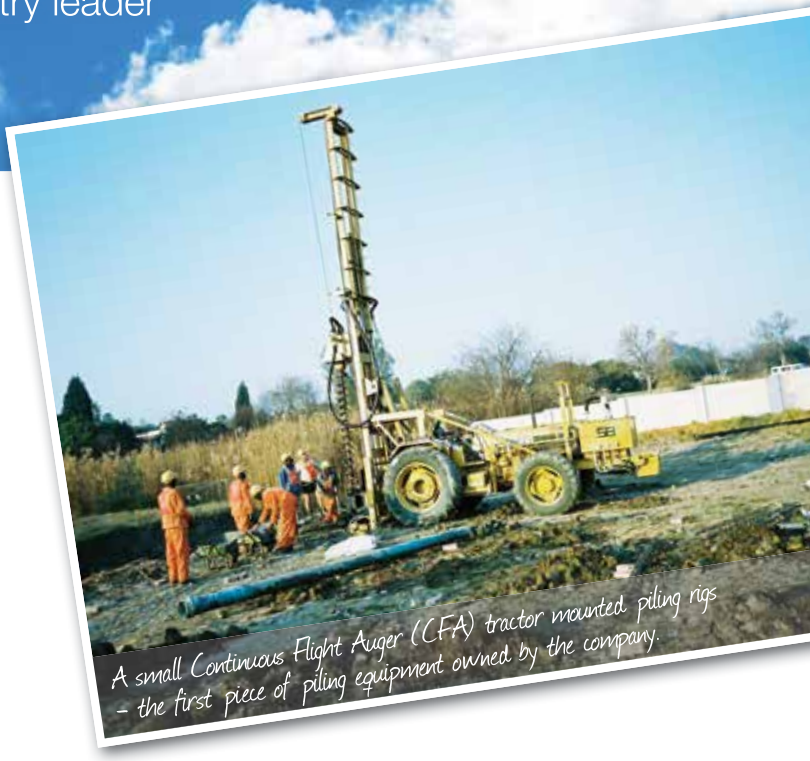
Stefanutti Stocks took first place in both the soccer and netball events. In the 14km mountain bike challenge, Stefanutti Stocks Civils director Chris Tshivhidzo finished in second place, followed into third by his colleague from the Building business unit, quantity surveyor Warren Kaufmann.

Captions:

1. Chris Tshivhidzo, proud of his second place in the 14km mountain bike challenge.
2. The victorious Stefanutti Stocks netball team, from left to right (seated) are Priscilla, Mapule, Katleho and Thobile. Standing are Phindile, Babalwa, Nokwazi, Palesa, Monica, Sylvia, Lerato, Prudence and Ayanda.
3. Warren Kaufmann, who came third in the 14km mountain bike challenge.
4. The unbeatable Stefanutti Stocks football team.

A trip down memory lane

– from geotechnical small player to industry leader



A small Continuous Flight Auger (CFA) tractor mounted piling rigs – the first piece of piling equipment owned by the company.

Stefanutti & Bressan (S&B) first entered the piling sector as early as 1996, when the company began undertaking piling projects in Durban and coastal areas. One of its first projects was for the KwaZulu-Natal's La Palma Terraces in La Lucia, where it utilised a small Continuous Flight Auger (CFA) tractor mounted piling rigs. These tractor rigs, with their six-metre masts, were capable of forming piles to a maximum of 450mm in diameter and (by adding flight to the mast) up to ten metres deep.

Over the years Stefanutti Stocks' ability to invest and purchase modern equipment contributed to it being able to offer a more comprehensive range of services. Its capabilities expanded to include a broader range of pile types in all possible soil conditions, lateral support and compaction grouting projects.

A contract for the PFG glass factory in Springs – a project that consisted of bulk earthworks, lateral support and piling – was one of the company's first major contracts in the Gauteng area. Other project highlights included the award, by Bombela Civils Joint Venture, of several Gautrain contracts to Stefanutti Stocks Geotechnical in 2008. This included six lateral support sites along the route; the lateral support for the Gautrain Station Rosebank entrances (both of which required contiguous piled walls with anchors and shotcrete arches); and the consolidation grouting of 49 pier positions in Centurion.

The piling project to the Kusile Power Station saw Stefanutti Stocks Geotechnical, leading the 50/50 joint venture. The ground conditions at the power station necessitated extensive piling including the casting of some auger in-situ piles – 1.8 metres in diameter and up to 25 metres deep.

As basement developments in upmarket areas like Sandton, Menlyn, Brooklyn and Rosebank increased, Stefanutti Stocks participated in a number of high profile lateral support projects, including at Sandton City, and a number of Menlyn Maine office blocks as well as a couple of developments in Windhoek, Namibia.

The company's expertise expanded to include the design and supply contract for deep foundations to transport infrastructure, mixed-use office accommodation and bridge foundations across Africa. In the last two years it has undertaken deep-pile foundations for bridges in Namibia, Western Cape and Mpumalanga.

Since it first started operating over twenty years ago, the new plant, equipment and technology, as well as its piling rigs with torque in excess of 28-ton metre, has seen production rates double (at least!).

In comparison to the humble first CFA tractor piling rigs, with their capacity of piling up to ten metres deep, the company's plant now includes a fleet of powerful geotechnical and piling equipment, that enables it to do CFA piles of 900mm in diameter and up to 25 metres deep in one go.

Who knows what the next two decades will bring?

The increasing geotechnical fleet, circa 2010.

One of Stefanutti Stocks' large rigs – capable of forming CFA piles of 900mm in diameter and up to 25 metres.

Construction & Mining

Managing director: Russell Crawford
Tel: +27 11 552 4200

Divisions:

Roads, Earthworks & Pipelines
Tel: +27 11 552 4200
E-mail: earthworks@stefstocks.com
South Africa - managing director: Julian Dovey
Capabilities:

- Bulk Earthworks.
- Road construction and rehabilitation.
- Crushing and screening.
- Asphalt manufacture and paving.
- Fibre-optic infrastructure.
- Dam construction.
- Mine infrastructure and development.
- Township infrastructure.
- Asphalt paving manufacture.
- Chip and spray seals of bituminous products.
- Slurry seals.
- Demolition.
- Directional drilling.
- Landfill construction and blasting.
- Large/small diameter welded steel pipe.
- HDPE pipelines.
- Ductile pipelines.
- Oil & gas pipelines.
- Pump, mechanical & electrical installations.
- *In-situ* concrete lining of pipelines.

Mining Services
Tel: +27 11 552 4200
E-mail: miningservices@stefstocks.com
Managing director: Ian Ferguson
Contract Mining - contracts director: Freddie Strydom
Tailings Management - contracts director: Marco Pasquali
Materials Handling - contracts director: Marco Pasquali
Capabilities:

- Design and construction.
- Operations & management of tailing facilities.
- Hydraulic mining.
- Open pit contract mining.
- Mine development and planning service.
- Materials handling.
- Crushing and screening.

General Contractors:

Stefanutti Stocks BOTSWANA
Tel: +267 397 4773
General manager: Shaun Cross
Stefanutti Stocks SWAZILAND
Tel: +268 518 5006
Managing director: Shaun White
Stefanutti Stocks ZAMBIA
Tel: +260 211 285623/4
Managing director: Derek du Plessis
Stefanutti Stocks WEST AFRICA
Tel: +27 83 444 5075
Managing director: Michael Welsch
General contracting capabilties:

- Civil works including water treatment works, reservoirs, bridges, among others.
- Airports.
- Commercial, light industrial (eg factory shells) and heavy industrial (eg. sugar mill infrastructure) buildings.
- Agricultural land development.
- Bulk earthworks.
- Road construction & rehabilitation.
- Dam construction.

Stefanutti Stocks Civil & Coastal
Managing director: Matthew Horwill
Durban office: +27 31 700 1416
Johannesburg office: +27 11 571 4300
Cape Town office: +27 21 386 2610
Capabilities:

- Heavy industrial plants, i.e. mining infrastructure, process plants, factories.
- Various power generating facilities.
- Marine construction.
- Dams, concrete canals and reservoirs.
- Slipforming, hydraulic lifting and incremental launching of structures.
- Construction of a broad range of bridge types.
- Effluent, water- and waste-water treatment plants.
- Precast and hybrid concrete structure construction.
- Concrete and general structural rehabilitation, concrete repair and waterproofing.
- Emergency construction and shut-down projects.
- Pre-construction engineering support and assistance.
- Various construction execution models, including:
  - Conventional tendering;
  - Multidisciplinary, design and construct;
  - LSTK and EPC contracts;
  - Collaborative project execution; and
  - Management contracting.

Stefanutti Stocks Geotechnical
Director: Shaun Butler - Tel: +27 11 571 4300
Capabilities:

- Geotechnical investigation, lateral support and construction of various piled foundations.

Mechanical & Electrical Business Unit

Managing director: Vince Olley
Tel: +27 11 820 4600

Divisions:

Mechanical & Piping - Mining Infrastructure:
Managing director: Marius Botes
Tel: +27 11 820 4600
Capabilities:

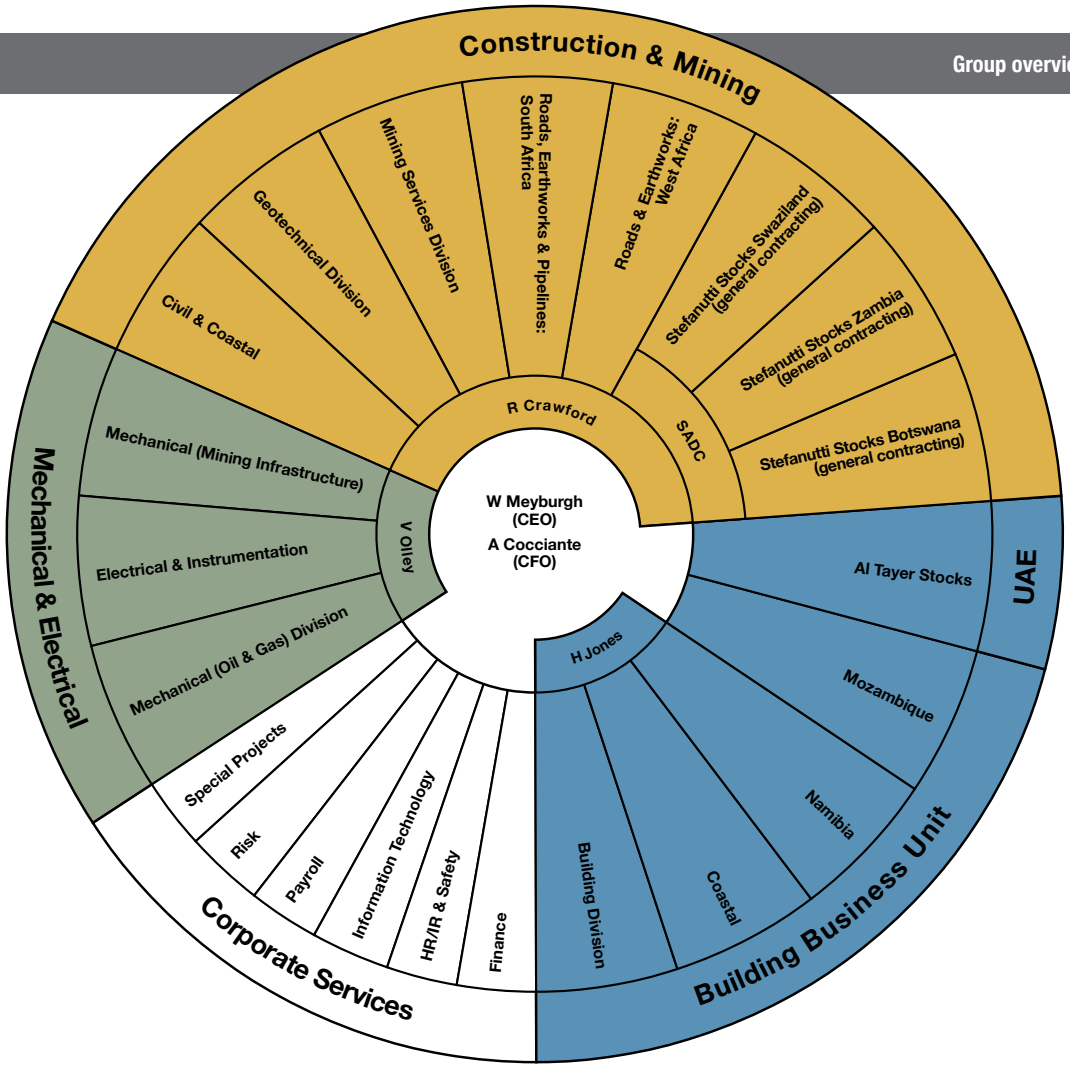
- Supply, fabrication and erection of steelwork, plate work, tanks and conveyors (on-surface & underground).
- Supply, installation and corrosion protection of piping including overland lines, pump stations, plant piping and high & low pressure lines (on-surface & underground).
- Installation of mechanical equipment including pumps, thickeners, flotation cells and stacker reclaimers.
- Supply and installation of patented high rate clarifier and sand filters.

Electrical & Instrumentation:
Managing director: Leon Kapp
Tel: +27 11 820 4600
Capabilities:

- Electrical supply, installation and commissioning.
- Instrumentation supply, installation and commissioning.
- Maintenance.
- Sub-stations and switchyards.

Mechanical & Piping - Oil & Gas:
Managing director: Jose Faria
Tel: +27 11 820 4600
Capabilities:

- Structural steel erection.
- Mechanical equipment installation.
- Pipe-spool fabrication.
- Installation of process piping systems.
- Shut down & maintenance.
- Painting, insulation and scaffolding.



Building Business Unit

Managing director: Howard Jones
Tel: +27 11 820 4600
E-mail: building@stefstocks.com
Capabilities:

- Commercial buildings.
- High-rise buildings.
- Industrial & service buildings.
- Property development facilitation.
- Hotels.
- Healthcare facilities.
- Shopping centres.
- Township and residential developments.
- Mass housing, low-cost/affordable housing.
- Community Residential Units (CRU) and co-operatives.
- Social infrastructure.
- Specialist fit-out.

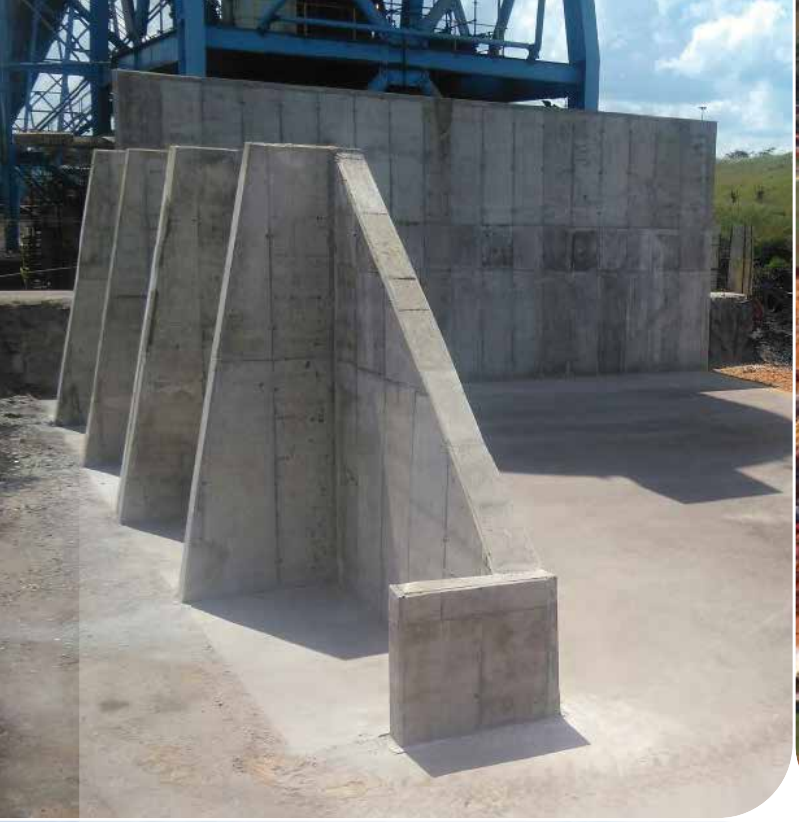
Divisions:

Building Africa (SADC)
Mozambique - managing director: Lucas Labuschagne
Tel: +258 21 471 604/5/6
Namibia - general manager: Stefan Bothma
Tel: +264 64 405 041
Building Coastal (Western Cape, Eastern Cape, KZN)
Managing director: Howard Schwegmann
Tel: +27 31 700 1416
Kwa-Zulu Natal - managing director: John Dorning
Tel: +27 31 700 1416
Western Cape - managing director: Mauro Donato
Tel: +27 21 386 6336
Building Division
Managing director: Dietmar Scriba
Tel: +27 11 820 4600

United Arab Emirates

Al Tayer Stocks
CEO: Jorge Areosa
Tel: +971 4 503 4888

Al Tayer Stocks is an interior-contracting and niche building firm that provides turnkey contracting solutions in the UAE. It undertakes contracts for a wide variety of blue chip clients for the retail, residential, office accommodation and hotel and leisure industries.



Multidisciplinary construction group **Stefanutti Stocks** undertakes projects across South Africa, sub-Saharan Africa and the United Arab Emirates. We are committed to achieving nothing less than our mission of **excellence in execution** across all of our projects.

Our divisions undertake multidisciplinary construction contracts for the following sectors: Building; Bulk Earthworks & Geotechnical; Energy Generation; Industrial Plants, Oil & Gas; Contract Mining & Mining Infrastructure; Transport Infrastructure; and Water, Sanitation & Pipelines.

From top left to bottom right: Mine Infrastructure construction at Moatize Mine in Tete, Northern Mozambique; Five-star hotel construction, Swaziland; Barberton Mine Tailings Disposal, Mpumalanga; Maydon Wharf, KZN,

if you can dream it, we can construct it

Stefanutti Stocks

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excellence in execution