

# Benchmark

A Stefanutti Stocks Publication

Continuous pursuit of higher levels of performance

VOLUME 18 | NOVEMBER 2017



**Multiple award-winning projects**

.....  
**Technically challenging  
geotechnical contracts**

.....  
**Marine infrastructure for  
mine in Guinea**

.....  
**River arch bridge for SANRAL**

.....  
**Tilt-up technology implemented  
for warehousing projects**



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.
- **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.
- **enthusiasm:**  
A high level of positive energy and a determination to succeed.
- **dynamic:**  
Embracing openness and flexibility of mind and an energetic, pro-active solution-driven attitude.





# From the CEO

I am sure you are well aware that the South African construction market continues to remain competitive due to an ongoing lack of infrastructure spend coupled with low business confidence levels and consequently, construction activities and margins are expected to remain under pressure. Although we have seen an improvement in the group's operating profit, the trading environment still remains challenging.

Encouragingly, our contract revenue increased to R5,2 billion compared to the prior period (Aug 2016: R4,4 billion) whilst operating profit increased from R100 million in the previous year to R119 million for the period. The operating profit margin remained consistent at 2,3 %.

Our order book is currently R13,9 billion, of which R4,9 billion arises from work beyond South Africa's borders. Over the past two years the group's order book has remained relatively constant between R13 billion and R14 billion. In the short term there are potential pockets of growth which include mining surface infrastructure, marine, water and sanitation treatment plants, and residential and mixed-use building projects. In addition, in the medium term there are potential opportunities in petrochemical tank farms, roads and bridges and selected open-pit contract mining work. These will provide opportunities for all our business units, both locally and cross-border.

Local and cross border work in the mining surface-infrastructure environment is gradually improving. Stefanutti Stocks' Mechanical division is currently undertaking projects in Ghana and Kenya (p11). Our Coastal division is also working in Kenya, as well as in Guinea (p10) where the site team recently achieved 1-million Lost Time Injury Free (LTIF) man-hours.

The Building business has recently completed an impressive multi-storey development in Namibia, whilst our Mozambique division continues to deliver good results, including a number of award-winning projects (p4 and p27). Here in South Africa Stefanutti Stocks Building has completed a number of high-profile warehousing projects for Woolworths (p24) and the Shoprite Group (p30) in the Western Cape. It is also constructing a number of high-profile, high-rise projects in Gauteng, which you can read more about in the Building section.

Both our Roads & Earthworks and Mining Services divisions have produced a strong performance this year. Stefanutti Stocks Contract Mining signed a new open-pit mining agreement with Makole Resources to mine the Chilwavirusiku Colliery in Bronkhorspruit.

The civils market within which our Structures business unit operates remains extremely competitive with few large projects coming out to tender. The work that is being secured is predominantly from medium-sized projects. These comprise a number of bridges, including pedestrian bridges (p16) and the impressive Western-Cape based Olifants River arch bridge (p14) for SANRAL.

*Our teams across the business are continually being recognised for their excellence in execution, both on the quality and the safety front.*

This year two of our projects received Fulton Award Commendations (p5), and Maputo's Rani Towers continues to be acknowledged through many industry awards (p4). Other award-winning projects include the Matola Raid Monument in Mozambique (p26) and the Kasane International Airport in Botswana (p28). Well done to these teams, and to all our teams that keep the Stefanutti Stocks flag flying high.

The group's Lost Time Injury Frequency Rate (LTIFR) at August 2017 was 0,11 (Aug 2016: 0,12) and the Recordable Case Rate (RCR) was 0,67 (Aug 2016: 0,70). Other safety highlights include the Maydon Wharf Project and the Kusile Civil Works Joint Venture respectively achieving 2-million and 3-million lost time injury free man-hours, and our Building division achieving a zero LTIFR over a 12-month rolling period in September 2017 (p19).

In June of this year, we held a Group Health, Safety & Environmental conference. The event was held at Emperors Palace, and was well-

attended by management and SHE representatives from across the group (article on p35).

To increase communication with our staff, we launched two internal video channels in June this year. In the one, Stef Talks are prepared and presented by various Stefanutti Stocks employees who cover a wide range of topics including technical, SHEQ, transformation, company culture, employee information just to mention a few. In the other, YouTube the videos feature snapshots of our group's multidisciplinary project highlights. These videos are rolled out on a weekly basis and we encourage our staff to watch them.

This year, a number of employees have celebrated notable long-service milestones with us, including contracts director Clive Reucassel, who started with Stefanutti & Bressan in 1987. Interestingly, Clive was part of the team that achieved the company's first Fulton Award (p43) for the Tugela River Bridge project.

There have been a few changes to our board, with Ms Tina Eboka resigning, and Ms Nomhle Canca, Mr Bridgman Sithole and his alternate Mr Joseph Fizzle retiring by rotation. I appreciate the support and guidance given to me by these directors during their tenure. Mr John Poluta has been appointed as an alternate director to Mr Mafika Mkwana with effect from 1 September 2017.

*I would like to express my sincere thanks to all our employees, the management team and the board for their continuous commitment and dedication in this challenging environment. I'd also like to express my gratitude for the ongoing support from our customers, suppliers, service providers and shareholders.*

May you all have a blessed, peaceful and wonderful festive season. Enjoy your holidays with family and friends, and if you are travelling, please travel safely. I look forward to your safe return in the New Year - and in 2018 we will once again take on whatever challenges await us as a unified and motivated Stefanutti Stocks team.

God bless.

*Willie Mayhugh*





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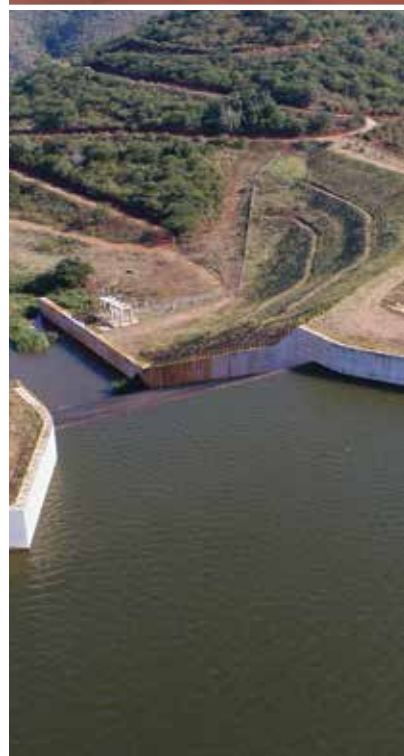
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We would like to thank all contributors to the publication and welcome any suggestions or articles. This publication is also available online on our website.



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## Senior Appointments & Promotions

#### Stefanutti Stocks Board

- John Poluta has been appointed as independent non-executive director, as alternate to Mafika Mkwanazi, effective 2 September 2017.

#### Group

- Jaco Underhay has been appointed as group SHE (safety, health and environmental) manager, effective 1 July 2017.

#### Building

- Stephen Johnston has been promoted to contracts director for the Stefanutti Stocks Building Division, effective 1 June 2017.

- Mark Stewart has been promoted to contracts director for Stefanutti Stocks Building KZN, effective 1 June 2017.
- Dawid Leonardt has been promoted to contracts director for Stefanutti Stocks Building Western Cape, effective 1 June 2017.
- Donny Petersen has been promoted to alternate commercial director for Stefanutti Stocks Building Western Cape, effective 1 June 2017.

#### Roads, Pipelines & Mining Services (RPM)

- Julian Dovey has been appointed as managing director of Stefanutti Stocks Roads, Earthworks & Pipelines, effective 1 July 2017.



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# Iconic Rani Towers

continues to rake in the awards

Source: Gerrit Odendaal, SS Construções (Moç) Lda quantity surveyor

SS Construções (Moç) Lda (SSC) completed the landmark Rani Towers in 2016. The iconic structure that comprises of luxurious residential, commercial and retail facilities has been operational for 24 months and takes pride of place in Stefanutti Stocks' portfolio. In spite of being built within a tough and often unfavourable environment, it was completed within time and budget, as well as to world-class quality standards.

Since its handover, these world-class standards have been recognised again and again, and Rani Towers has received a number of prestigious awards, including:

- Best Architectural Design at the API Summit & Expo 2017. The Expo is organised by the African Property Investment Awards (API Awards), which is one of Africa's premier real estate competitions. The event took place at the Sandton Convention Centre, South Africa in August 2017.
- Best Development of the Year 2017, also known as the "Best of the Best" Award. This event is organised by Casa Mozambique Real Estate and was held in Maputo in July 2017.
- The 2017 SAPOA (South African Property Owners Association) Innovative Excellence Award for Best International Project.

*"As the main contractor for this project, we are delighted that the structure and the efforts of our teams and consultants are being recognised," says Nelson Rodrigues, operational director of SS Construções (Moç) Lda. "We are delighted that the core team from this project are all still within our organisation, where they are working on new, challenging and rewarding projects."*







# 2017 Fulton Award

## - Commendations

**Category: Innovation in Concrete**

## PY Track Slab

### Judges' Citation:

While slab track has been constructed on a limited basis, mainly in tunnels, for some decades, its wider application on open lines has been resisted due to high construction costs. In this case, the decision to use continuous slab track over a section of track in Pretoria to address level issues at platforms and to reduce stray currents made it the first application of continuous slab track on open track in the country. The PY track slab system makes use of a number of construction innovations which are unique in the world and which reduces the cost of slab track construction to a level which is competitive with ballasted track. The most important innovation in construction of the slab is that the track fastenings are cast directly into the concrete at the time of construction with the aid of simple and extremely innovative construction jigs which also facilitate the achievement of the profiled surface.

This system also allows for labour-intensive construction and is therefore deserving of a judge's commendation in this category.

- Location: Gauteng
- Submitted by: BridgePort Consulting (Pty) Ltd
- Client: PRASA
- Main Contractor: OTEO 4 Phase JV
- Specialist Sub-Contractors: Stefanutti Stocks
- Suppliers: Nova Engineering, Geo X (Pty) Ltd, Lafarge Industries SA

**Category: Infrastructure**

## Kusile Power Station Main Civil & Completion Works

### Judges' Citation:

This large mega-project showcases concrete through its use of a large variety of different applications and various construction methods. The high quality work was achieved despite having to meet stringent and comprehensive environmental and quality requirements simultaneously with many other construction activities.

Meticulous planning, quality control, manpower and skills were required to execute single cast pours ranging from 500m<sup>3</sup> to 3 600m<sup>3</sup>, and large multiple pours simultaneously. The result was a total of over 600 000m<sup>3</sup> of concrete placed together with in excess of 5 000 precast items. This project bears testimony to expertise and excellence in the use of concrete in construction of infrastructure.

This project is deserving of a judges' commendation.

- Location: Mpumalanga
- Submitted by: Kusile Civil Works Joint Venture
- Client: Eskom Holdings SOC Limited
- Principal Agent: Black & Veatch International
- Main Contractor: Kusile Civil Works Joint Venture
- Suppliers: PPC Nelspruit, Ash Resources, 3Q Mahuma Concrete



# Geotechnically challenging project for Growthpoint

delivered to international standards

**Source: Thys Maree, Stefanutti Stocks Geotechnical site agent**

Stefanutti Stocks Geotechnical was given the opportunity by Growthpoint Properties to be part of a geotechnically challenging project, which included the design, supply and construction of lateral support, bulk earthworks as well as ground improvement for a commercial property located across the road from the main entrance of the Centurion Gautrain Station.

Centurion is well known for its challenging geology which includes dolomites and problem clays. The initial geotechnical report for this site identified three areas as a Class 8 risk dolomite area, with various unknowns, cavities and sinkholes. "When the project started in February 2017 we did extensive work to ensure that we complied with the recommended guidelines for working in a high risk dolomite area and implemented a dolomite risks management plan," says Thys Maree site agent for Stefanutti Stocks Geotechnical.

After the completion of the demolition works, and in order to ensure that the project was completed on time, Stefanutti Stocks' three main

activities of lateral support (to excavated faces), bulk earthworks and dynamic compaction, needed to be run concurrently.

"Our activities had to be coordinated daily to ensure continuity of work for all the plant and to stay on track with the tight programme," says Maree.

## Bulk Earthworks

The scope of work for the bulk earthworks required Stefanutti Stocks to excavate 17 700m<sup>3</sup> to the bulk earthworks level, as well as ensuring that all dolomite pinnacles, clay and WAD were removed to a bulk earthworks level of minus five metres. The holes were then backfilled using 23 740m<sup>3</sup> of a blend of 50 per cent selected earth filling (G6 to G8) and 50 per cent hard rock (dolomitic material). Both of these were obtained from the bulk excavations on site.

Based on the initial geotechnical report the consultants measured 6 426m<sup>3</sup> for hard rock excavation, and the bill of quantities specified



*Dynamic compaction crane on the final platform level.*



that all the hard rock dolomite pinnacles were to be removed by means of restricted blasting.

As the bulk earthworks progressed the blasting commenced. This was restricted to smaller blasts due to the proximity of the site to the Gautrain and the neighbouring buildings, sound and vibration was monitored constantly. "We soon discovered that the amount of rock on site was much more than originally expected" says Maree. "By the end of the project we had done 34 blasts to remove a total of 14 168m<sup>3</sup> of hard rock dolomite pinnacles." This almost doubled the volume of rock, which had a huge impact on the programme and Growthpoint Properties requested an acceleration of the works.

#### Dynamic Compaction

Once the area was rehabilitated and all the dolomite pinnacles, clay and WAD removed the dynamic compaction started. Dynamic compaction is achieved by dropping a 14.5 ton weight, known as a pounder, from a considerable height onto the soil, with an impact energy of 35 t.m/m<sup>3</sup> to consolidate the soil. This is done in three different phases, known as the primary, secondary and ironing phase. The secondary phase mainly achieves compaction in the intermediate layers.

The ironing phase ensures overlapping of the initial phase by compacting the shallow layers between the initial prints. This method of compaction is applied to increase the bearing capacity of the in-situ soil and to reduce settlement potential. This method also reduces the liquefaction potential of soil and increases its stiffness. By removing all the rock and problem clay to a level of minus five metres, the effect of the dynamic compaction was designed to compact the soil to a depth of eight metres.

#### Soil Improvement

This soil improvement method created a five metre thick soil mattress for the main building contractor to construct a raft foundation, followed by a nine-storey building.

As the project progressed two areas were identified as potential sink holes, and were rehabilitated as though they were actual sinkholes, using restricted dynamic compaction to avoid any possible risks.

#### Lateral Support

The lateral support undertaken at the Lakeside Development site consisted of temporary lateral support next to West Avenue. "With all the vibration from the blasting and the dynamic compaction activities on site, the lateral support had to be designed to withstand a number of tests," says Maree. "At the end of the project the wall is still intact with no significant movement."

*Stefanutti Stocks Geotechnical was faced with a number of difficult challenges over the six-month project duration, and its success was driven by the engagement of the full team - from tender, to planning and execution stages. "Our ability to accelerate the work and complete the project ahead of schedule, without any safety incidents and delivering a final product that complies to international standards, is a testament to the Geotechnical division's character and perseverance!" says Maree.*

## Dedicated team complete quality bulk earthworks project in Zambia

Source: Rulof Nortje, Stefanutti Stocks Construction Zambia site agent

Stefanutti Stocks Construction Zambia recently completed a bulk earthworks and storm water project for National Milling Corporation (NMC) in Zambia. NMC has moved its offices and storage facilities from the middle of Lusaka to Lilayi, located just outside of the city. The new warehouse and silos are now more accessible to farmers delivering their produce to NMC that produces grains and oilseed, as well as processed food.

Stefanutti Stocks' project included bulk excavation, construction of platforms as well as the construction of roads and storm water drainage for NMCs new premises. One platform will carry the mill building, and the second will carry all the silos.

The road construction was an interesting aspect of the project as the surface material in the area did not have any structural strength. To overcome this, and strengthen the surface, Stefanutti Stocks excavated approximately one metre down, and then constructed a one metre fill with 150mm G5 sub base and 150mm G2 base.

"The successful completion was achieved by a dedicated and determined team, striving to deliver nothing less than the highest quality," says Rulof Nortje, Stefanutti Stocks Construction Zambia's site agent. "Our client has expressed their great satisfaction with our performance, and we are hoping to participate in further phases of this project."

#### Caption:

An aerial perspective showing the farmland just outside Lusaka being transformed into a mill site.





# Deep pile foundations

## completed for rail-over-road bridge

Source: Marcin Szatkowski, Stefanutti Stocks Geotechnical site agent



*The piles were installed using some of the largest equipment in Stefanutti Stocks Geotechnicals fleet, which can be seen here on site.*

Stefanutti Stocks Geotechnical recently completed the contract for the construction of deep pile foundations to a road-over-rail bridge for client Power Construction on the 3,36-kilometre MR559 on the outskirts of Saldanha Bay.

### Piling

The project entailed the construction of a total of 78 temporary cased piles (1 080mm diameter) up to a depth of 35 metres. The bridge's two abutments (west and east) respectively required 34 and 36 piles, with a centre pier requiring eight piles.

Thirty-five of the overall total piles had a rake of 1:6. A further challenge to the project saw 36 of the piles with a 9.5 degree rake (1:6 rake) meaning that a 35-metre long pile deviated 5.8-metres away top to toe from the original pegged platform position to the vertical pile head. The setting out, drilling and concreting of these piles therefore required special skills, in order to meet the contract specifications and tolerances.

### Drilling

The piles were installed using some of the largest equipment in Stefanutti Stocks Geotechnical's fleet, specifically:

- A Leffer Hydraulic Oscillator BV1500HD coupled to a Bauer BG28 piling rig;
- A Casagrande 1500 Oscillator coupled to the Casagrande B250 piling rig; and
- A Kabelco 65ton crawler crane.

"The reason for utilising such powerful plant was due to the depth and geology of the piles," says Marcin Szatkowski, Stefanutti Stocks Geotechnical's site agent. Driving and extracting the casings, as well as drilling the stiff and cohesive clay is very difficult and time consuming. "The machine on its own does not have the strength to drive and extract the casings," explains Szatkowski, "and the oscillator assisted in this regard."

Piling was undertaken from a level of eight metres above sea level, with the water table four metres below ground level. Although the site is located one kilometre from the sea, sea shells were being drilled out, indicating the movement of the coastline over time. In some locations

along the coast the granite bedrock protrudes, indicating a natural upward slope of the bedrock.

The geology at the bridge location consisted mainly of the following; from zero to four metre Calcretes, four to 30-metre clays, and 30 to 35-metre granite bedrock. Although the calcrete was estimated at around 50MPa the machines easily drilled through this. The granite bedrock consisted of both soft rock and very hard rock. Stefanutti Stocks Geotechnical purchased a new MHD Bauer Multi Hammer Drill system to assist with very hard rock socket drilling.

"The MHD system increased our drilling production in the hard to very hard rock R4 and R5 classifications, making a huge difference, as we were required to drill 3,80m sockets in R4 to R5 granite," says Szatkowski. Some of the R4 rock which was tested afterwards had a compressive strength of over 100 MPa and was subsequently reclassified as R5. Once the unconfined compressive strength of rock is over 70Mpa it is classified as R5 very hard rock.

The MHD system uses a percussion drill bit with multiple hammers that break up the rock. It is a highly efficient system that was successfully used in the Chilean Mine rescue in 2010. The new asset will stand the Geotechnical division in good stead for future bridge projects of a similar nature.

### Concreting

A total of 3 145m<sup>3</sup> of concrete was placed with 233 tons of steel. The concreting was as per COLTO specifications for underwater pile placement, via a tremie system where piles are cast from the bottom up. The concrete is placed (via a tremie pipe) through the reinforcing cage to the bottom of the pile. This method pushes the concrete to the top of the pile, allowing any contaminant to be pushed to the top of the pile and eventually out at the top.

"Although we had to implement a day and night shift at a certain stage of the project to meet our contractual obligation, the project was completed on time and in accordance to specification," says Szatkowski. "Despite unforeseen challenges and the long working hours, we also maintained an excellent safety record and at the end of the project we provided our client with a quality product. Our commitment to the project deliverables laid a foundation for the development of a good working relationship with our client and the professional team."



# Clinker Silo roof slabs replaced for Afrisam Cement Factory

**Source: Thabang Ndwebi, Stefanutti Stocks Civils site manager**

Stefanutti Stocks Civils has undertaken remedial works to a clinker silo's roof slabs at Afrisam Cement's Dudfield Factory in Lichtenburg.

This civil and concrete repair project for Afrisam included demolishing the existing slabs, as well as installing new pre-cast slabs.

These new pre-cast slabs for the roof were constructed in Rustenburg and then transported to Lichtenburg, where they were installed by means of a mobile crane. This required a mobile crane that was large enough to reach around the silo, which is 64 metres high with a 34-metre diameter.

A crash deck, to hold concrete rubble and for personnel to work from, was suspended from the I-Beams of the existing silo roof slab. "When erecting the scaffolding we had to ensure all safety measures were in place, as we were not only working at heights, but also in confined and poorly lit spaces," says Thabang Ndwebi, Stefanutti Stocks Civils site manager.

After demolishing the existing concrete slabs, new channels were installed. The new pre-cast slabs were placed and waterproofed. The cracks on the silos parapet wall were also repaired.

"The team has performed well and maintained a good safety record," says Ndwebi.



*Demolishing of the existing slabs underway.*



*The large mobile crane at work.*



*One of the new pre-fabricated slabs is lowered onto the roof.*

# Specialised concrete repairs undertaken on Anglo Coal silos

**Source: Francois Vermeulen, Stefanutti Stocks Civils contracts director**

In 2016 Stefanutti Stocks Civils completed major internal and external structural repairs to four operational storage silos at Anglo Coal's Greenside Colliery in Witbank, Mpumalanga.

Stefanutti Stocks Civils used its internal resources to perform the scope of the remedial work required. A combination of reinforcing cover readings, Schmidt hammer tests, as well as surface absorption and carbonation tests enabled further analysis of both the internal and external structural integrity.

Through its findings Stefanutti Stocks was able to accurately determine the required repair method, and what would be the best repair procedure to follow.

The project scope included:

- delaminated concrete removal;
- installation of migrating corrosion inhibitors;
- placement of micro-concrete and grout;
- structural strengthening (carbon-fibre strips);
- migrating corrosion inhibitor coatings; and
- elastic waterproofing cementitious coatings.

Project quantities included:

- 39m<sup>3</sup> of concrete demolition;
- 40m<sup>3</sup> of micro-concrete repairs;
- 2 662m<sup>2</sup> of coatings;
- 132m<sup>3</sup> or 875m of carbon-fibre installation.

The project required specialised access techniques, and was completed within time and budget, and achieved a zero Lost Time Injury Frequency Rate (LTIFR).



*The three silos, at various stages of rehabilitation.*



# Bel Air Mining Project in Guinea

## reaches one million Lost Time Injury Free milestone

Source: Graham Moore, Stefanutti Stocks Coastal project manager

Stefanutti Stocks Coastal is currently developing a quarry as well as constructing a 1,4 kilometre long rock causeway and a concrete quay wall for Bel Air Mining in Guinea. Due to an incredibly tight project timeline the operation is running 24/7, thus moving at triple the pace of a normal project. The mining project celebrated reaching its 1-million Lost Time Injury Free milestone six months after the actual work commenced on site in Guinea.

The construction activities that form part of the overall scope of work include:

- Drilling and blasting of 400 000m<sup>3</sup> of dolorite rock;
- Loading and hauling the rock four kilometres to the causeway site;
- Back tipping rock to build 1,4 kilometre core rock causeway;
- Shaping core causeway to a slope of 1:1.5;
- Placing various sizes of armoured rock to protect the core;
- Pre-casting 222 concrete quay wall blocks;
- Placing 222 concrete quay wall blocks underwater;
- Casting concrete to the underside of these quay blocks;
- Casting an in-situ deck on the load-out facility;
- Installation of fenders and bollards; and
- Aids to navigation light buoys.

“The success of the project will be reached through commitment from the whole team, as well as through proper planning and ensuring that our plant and machinery is kept in good working order,” says Graham Moore, Stefanutti Stocks Coastal project manager. The harsh conditions (which include location and incessant rain) require resilience,

and the language barrier between English, French and local languages has also been challenging. “A special mention must be made of Esmond Robertson, who started on the project as site engineer and was recently promoted to site agent. He has excelled on this project, and shown maturity way beyond his years,” says Moore.

### Captions:

1. Early stages of the quay wall precast blocks.
2. Long-reach excavators shape and place various sizes of armour rock to protect the core of the quay wall.





## Mechanical division prepares for shutdown project for

# Base Titanium in Kenya

**Source: Thami Madlala, Stefanutti Stocks Mechanical project manager**

Stefanutti Stocks' Mechanical division has been awarded the supply and installation of Structural Steel, Mechanical, Platework, Piping, Electrical & Instrumentation (SMEIPP) for the Kwale Mineral Sands Phase 2 Wet Plant upgrade project for Base Titanium in Kenya. The project commenced in June 2017 and is scheduled for completion at the end of March 2018.

The installation will be carried out within an operational plant, and will be finalised during a month-long shut down period in March 2018, during which installation will be undertaken 24/7 and includes a day and night shift.

"As the project requires a shut down the months leading up to the installation will include a lot of preparation, including planning and executing our logistics to ensure all required material and equipment is delivered in advance of the March shut down," says Thami Madlala, Stefanutti Stocks Mechanical project manager. "We are looking forward to completion of the installation, and will execute a detailed, well-planned programme that will require co-ordinated activities by all contractors on the project."

## Stefanutti Stocks Mechanical participates in

# mill expansion project in Ghana

**Source: Daniel Nunes, Stefanutti Stocks Mechanical project manager - Africa**

Newmont Ghana Gold Limited has awarded the supply and installation of structural steel and plateworks, including the installation of free issue mechanical equipment for its Ahafo Mill expansion project to a Stefanutti Stocks Mechanical/Wayoe Engineering joint venture.

The expansion will increase the Ahafo Mill capacity to nearly ten-million tonnes by adding a crusher, grinding mill and leach tanks to the circuit.

This is the first project that the Mechanical division is undertaking in Ghana. Work on site will commence at the end of October 2017, with a targeted completion date of mid-September 2018.

## Consortium expanding modular plant at Sishen

**Source: Eugene Lourens, Stefanutti Stocks Mechanical contracts manager**

Anglo-American awarded the construction of its Ultra-High Dense-Medium separation (UHDMS) modular plant expansion project to a consortium consisting of Stefanutti Stocks Mechanical, Ndungane and Kameeldoring, each of which brings a different capability to the consortium.

The project commenced on 12 June 2017 and includes the supply, fabrication and installation of steel work, plate work, mechanical items and piping, as well as the supply and installation of electrical and instrumentation cables and instrumentation.

The three joint venture partners are responsible for the following scope of work:

- Ndungane:
  - Earthworks
  - Civils
- Stefanutti Stocks Mechanical:
  - Steel work
  - Flooring
  - Mechanical items
  - Piping items
- Kameeldoring:
  - Electrical & Instrumentation

In recent years Stefanutti Stocks Mechanical has participated in a number of projects at the Northern Cape Sishen Mine, including:

- Life of Mine Project (a multidisciplinary contract that saw a number of Stefanutti Stocks divisions working together);
- Sishen New HME Filling Station;
- In-Pit Crusher Demolishing; and
- Dingleton Demolishing.

*The UHDMS modular plant expansion project will see half of the plant being built as modular units. "This means that the whole building is built off-site in Cape Town, where it will also be commissioned," says Eugene Lourens, Stefanutti Stocks Mechanical contracts manager. "After it is released by Anglo-American, the building will then be disassembled and transported in large modules for easy assembly on site in Kathu."*

The plant will be commissioned in six separate shutdowns within a very tight schedule, thus the project success will depend on on-time shutdown dates, and all three disciplines of the consortium working together to achieve these dates.



# In-pit crusher project celebrates Zero Harm

Source: Lesiba Monama, Stefanutti Stocks Mechanical site manager

Stefanutti Stocks Mechanical was recently awarded a certificate of recognition from Kumba Sishen Mine in Kathu, Northern Cape, for the decommissioning and demolishing of an in-pit crusher, which was completed at the end of December 2016. The division's project site manager, Lesiba Monama and project safety officer, Henry De Klerk both received a certificate of recognition from Kumba Mine's general manager.

The Mechanical division has undertaken a number of projects for Kumba Sishen Iron Ore Company in Kathu, including:

- SEP 1B;
- 10mm Lump;
- Life of Mine;
- Sishen New HME Filling Station;
- Old South Workshop & Infrastructures Demolition; and
- Dingleton Demolishing.

The in-pit crusher project entailed the decommissioning, dismantling and salvaging of mechanical equipment, and included transporting abnormal loads from the pit area to the surface in large sections (+/- 750 tons cone crusher support structure, +/- 160 tons overhead crane). The demolition of the remaining infrastructure including steel works and approximately 5 900m<sup>3</sup> of concrete, was completed using custom-made hydraulically operated attachments that were fitted to trackless mobile excavators. The demolished material was removed so that mining activities could be undertaken in the area.

Although not much technical information, such as design drawings, was available, weight loads were calculated onsite and rigging studies carried out to ensure safe lifting operations. Where crane capacities were out of limits, tandem lifting was utilised.

During the demolition process it was discovered that the concrete quantities were almost double the amount allowed for in the contract, and a night shift crew was brought onto the project to achieve target completion date.

Night-shift work posed a high safety risk, as work was undertaken on the edges of the high, pit face walls meaning operators had limited views of the work-face. These conditions also posed challenges in terms of monitoring the cracks and face-failures that occurred as a result of the demolition.

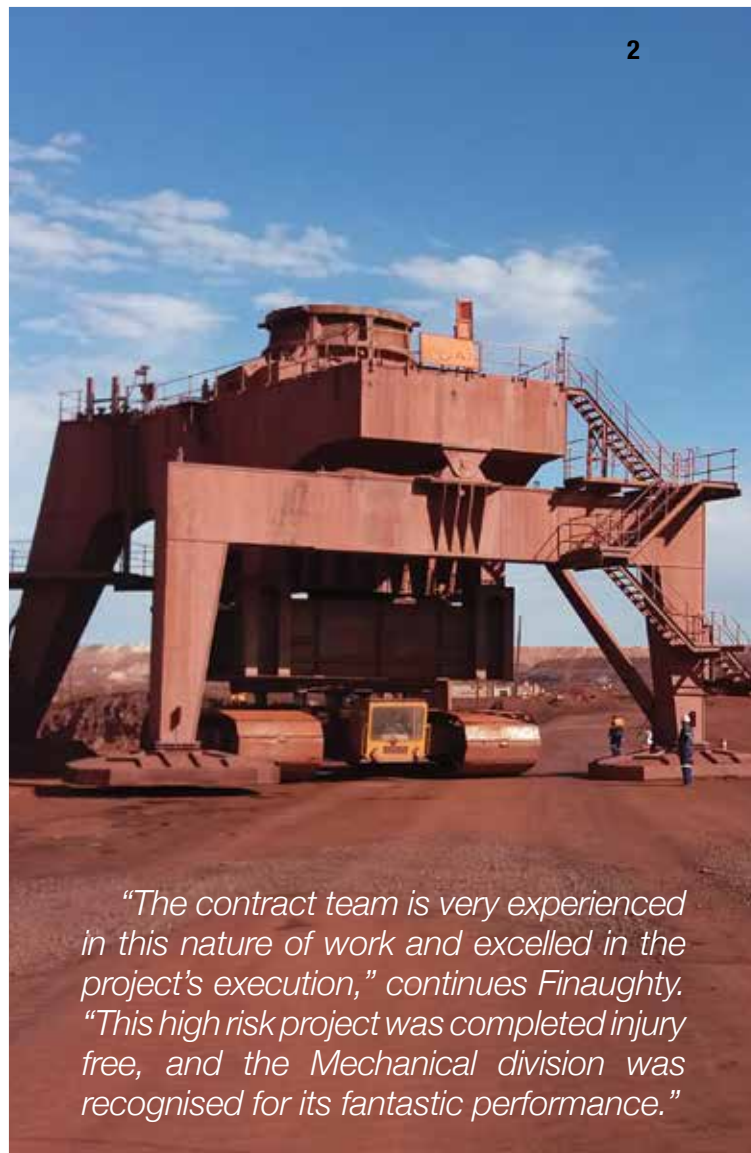
Continual risk assessments were undertaken to review conditions and to ensure that effective control measures were identified and implemented. The mitigation of unwanted events was a priority for the team.

"Prior to every shift geological and rock face inspections, to prevent fall of ground, were conducted," says Ross Finaughty, Stefanutti Stocks Mechanical SHE manager. Any face-failure and danger zones were hard barricaded to prevent unauthorised man and machine entry, until areas were made safe again.



## Captions:

1. The in-pit crusher prior to being decommissioned and demolished.
2. The primary cone crusher support structure being transported.



*"The contract team is very experienced in this nature of work and excelled in the project's execution," continues Finaughty. "This high risk project was completed injury free, and the Mechanical division was recognised for its fantastic performance."*



# Port Nolloth marine infrastructure

rehabilitated by  
Coastal division

**Source: Bulelani Mabuya, Stefanutti Stocks Coastal sub agent**

In late July 2016 a marine infrastructure refurbishment project began for the Transnet National Ports Authority, at the Northern Cape based Port Nolloth.

The scope of work for this rehabilitation project will be completed at the end of November 2017, and include:

- Removal of existing tyre fenders;
- Installation of new tyre fenders;
- Refurbishment of existing bollards;
- Concrete rehabilitation to the side faces and underside of the jetty structure; and
- Rock revetment construction.

## Water-based work

Remedial work undertaken to the underside of the jetty structure is governed by tides, therefore working hours would move in line with the low tide times, starting anywhere from 4:30am until 8:00pm. This meant working times could be anywhere between four to seven hours a day, thus operations had to be carefully planned, timed, and well-prepared for.

The underside of the jetty is accessed using a temporary access platform constructed below neap low tide level. All employees who work under the jetty structure were issued with wet suits, as most of their daily activities are conducted standing in the water.

"The team picked up production at a crucial time, and never looked back," says Bulelani Mabuya, Stefanutti Stocks Coastal site manager for the project. "The concrete breaking team achieved commendable production rates, in spite of tidal constraints which lasted between four to seven hours."

## Land-based work

The 70-metre rock revetment was completed within five months, by offloading and placing rocks using special excavator mounted thumbs welded onto an excavator boom on site.



*"Our team continues to perform exceptionally and meet our project milestones, while maintaining a good safety record with 90 000 Lost Time Injury Free hours worked to date," says Mabuya. "The good relationship we have forged between ourselves and our client has also played a critical role towards achieving the project milestones."*

## Captions:

1. An aerial view of the 70-metre long rock revetment just before completion.
2. Employees working on the temporary access platform under the jetty.
3. A side view of the jetty structure, during repairs.





# SANRAL's river arch bridge

is a masterpiece in the making

Source: Herman Coetzee, Stefanutti Stocks Coastal project manager



*View from the west highlighting the bridge span and temporary works to the second arch.*



*Bridge columns and interconnecting beams under construction.*



*An illustration of the complexity of constructing the arch beams.*



The project for the improvement of the Olifants River Crossing and associated works on the N7 for SANRAL was first featured in Volume 16 of the Benchmark (page 21).

Work on this civil and road construction project has now been underway for approximately twenty months, and once completed, will see the existing bridge over the Olifants River in the Western Cape supplemented with a second structure, built downstream and to the west of the current arch bridge. Traffic will be accommodated across the two structures, each carrying one-directional traffic to form a new dual-lane carriageway.

## Project progress as at beginning October 2017

### Structures

The minor structures including two agricultural culverts, two canal crossings and a pipe bridge culvert, have been completed, and the construction of the new and existing bridges are progressing well.

The bridge foundations, eleven piers, two arch beams, interconnecting beams and the South Abutment for the New Olifants River Bridge have been completed. The North Abutment will be completed by mid- November 2017, and the bridge deck is in progress and planned to be complete before the annual builders break in December.

For the rehabilitation of the existing bridge Stefanutti Stocks Coastal has appointed its sister division, Stefanutti Stocks Civils, to undertake the widening of the existing bridge, with a planned completion date of May 2018.

### Road Construction

The road construction element is taking place in four phases. Phase one consists of a double lane on both the northern and southern side of the river, and will be completed by the end of October 2017. Phase two, consisting of a single lane on both the north and south side, will follow after the conclusion of phase one, and is planned to be completed at the end of March 2018.

Phase three will include the northern and southern approaches, as well as the black top on the new bridge. Phase four will include the northern and existing southern approaches, as well as the black top on the existing bridge. These phases will be constructed once the new bridge is ready to be opened to traffic.

## Project challenges

### Founding Rock

"From the moment we broke soil in the valley of the Olifants River we were faced with numerous challenges," says Herman Coetzee,

Stefanutti Stocks Coastal project manager. These included dealing with water during the wet season and while constructing the spring foundations. "We also encountered unsuitable rock formations while constructing the South arch spring foundation, which resulted in design changes for the permanent and temporary works, undertaken by Aurecon and BPH Engineering respectively."

The challenges with regard to the founding rock at Pier 2 resulted in an extension of time being approved by SANRAL and Aurecon, and the project now has a new completion date of 30 September 2018.

### Arch Beams

The main challenge arose when the focus shifted to the construction of the two arch beams that span over 95 metres and are 13-metres high at the apex.

The pour of the first arch proved to be quite difficult as the beam was cast over 24 hours, with only one team led by senior supervisor Power (Modise) Sebegu. The beam was cast with two tower cranes and buckets, starting from the outside and working towards the apex. "Due to great team effort and implementing lessons we learned in the first pour, we successfully completed the second arch within a shorter duration and higher production rate," says Coetzee.

Pieter Boorsma designed the temporary support work to construct the permanent arch. The temporary support for the beams was designed with a final deflection of only 40mm during the pour. Under its own weight, the beam deflects 50mm, which is still within tolerances set in the project specifications.

Another challenge, successfully overcome, was the construction of the second beam on the same level as the first beam. The completed beams have deflections exactly as calculated.

"An unusual aspect of this project is that generally the critical path on a contract is defined by the formwork and concrete," says Coetzee. "However, the amount of reinforcing required for this particular bridge means that the reinforcing is determining the critical path."

### Safety and Quality

Based on September statistics the project has achieved 335 600 Lost Time Injury Free (LTIF) hours with a complement of 197 employees on site. This comprises of 61 Stefanutti Stock Coastal employees and 136 sub-contractors, all of whom are committed to safety as much as to delivering high quality.

As is common across all SANRAL projects, the project specifications and tolerances are extremely tight, leaving no margin for error. "By having a good, motivated and competent team on site, we have kept up with all required standards, in spite of some of the challenges crossing our path. No re-works due to concrete failures or pour compaction were required, and we are all proud of the high standard of quality we have achieved as the Stefanutti Stocks Coastal team," concludes Coetzee.



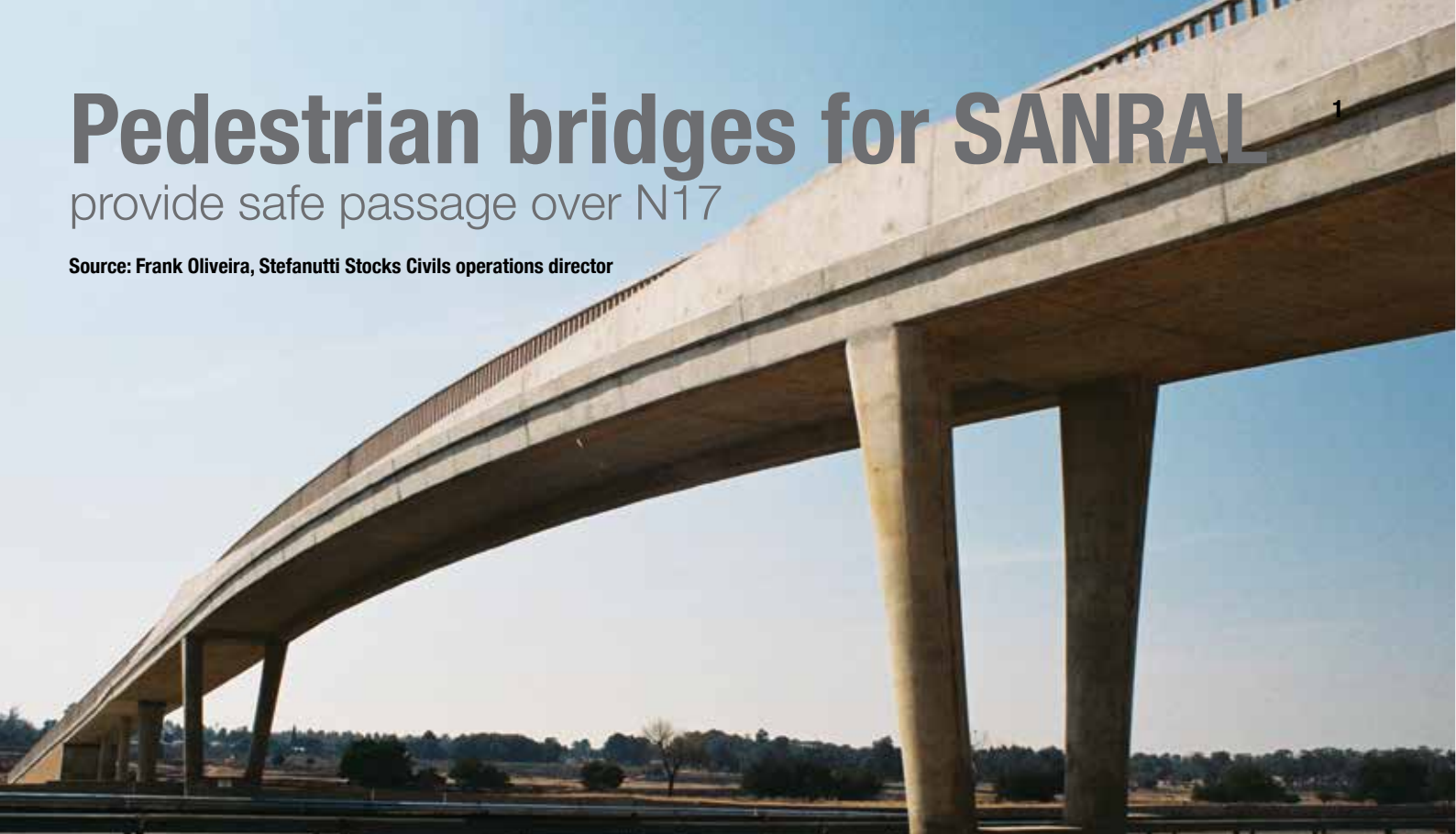
*The Stefanutti Stocks Coastal Olifants River Bridge team.*



# Pedestrian bridges for SANRAL

## provide safe passage over N17

Source: Frank Oliveira, Stefanutti Stocks Civils operations director



Stefanutti Stocks Civils was awarded the contract for the construction of three pedestrian bridges across the N17 highway by SANRAL in January 2016. The bridges were designed by engineers SMEC South Africa, and the primary purpose of the project was to provide safe walkways over the highway for local residents.

Each of the bridges are named after their specific locations, namely Ergo, Kwa-Thema and Regents Park. These areas are known for heavy pedestrian traffic, with pedestrians historically crossing the highway on foot, unfortunately often resulting in motor accidents and fatalities.

### Ergo Bridge

The Ergo Bridge is situated at kilometre 27.4 of section 2, approximately two kilometres east of the Ergo gold processing plant.

The Bridge consists of a 42-metre main span across the highway, 40 metres of adjoining back spans, 220 metres of access ramps and staircases which lead up to the main span. The bridge structure is of reinforced concrete, with post tension cables installed over the main span and back spans.

The Bridge is a particularly elegant looking structure. The soffit of the main and back spans has been formed to concave radii of approximately 400 metres, and the tops of the supporting up-stand beams have been formed to convex radii of approximately 300 metres. This results in a very sleek, aesthetically pleasing structure.

The geometry of the bridge, and to achieve the desired lines and shapes specified for the construction required complicated formwork designs. The bridge was specifically designed to match the well-beaten paths that have been created by pedestrians using this route, and crosses the highway at an angle of 63 degrees to the direction of traffic.

### Kwa-Thema Bridge

Kwa-Thema Bridge is situated a further three kilometres from Ergo Bridge, en route to Springs. Its design is similar to that of the Ergo Bridge, but it crosses the N17 highway at 90 degrees to the traffic flow. This results in a slightly shortened main span of 37 metres. It also has 35 metres of back spans and 140 metres of access ramps leading up to the main span.

Similarly to the Ergo Bridge, the deck soffits and up-stand beams have all been formed to concave and convex radii varying from 220 to 140 metres respectively. The resulting lines and shapes also deliver an aesthetically pleasing structure.

### Regents Park Bridge

Regents Park Bridge is situated at kilometre 55 of section 1 on the N17 highway and provides a valuable link for pedestrians travelling from City Deep to Regents Park.

The new Bridge is a reinforced concrete, suspension cable bridge with a 57-metre main span between the two pylons. The curved



concrete deck is suspended from suspension cables that are anchored at the two pylons on either side of the highway. These two V-shaped pylons tower 13 metres above the surrounding terrain.

The soffit of the deck has been built to a concave radius of 450 metres. The suspension cables, each with 19 strands per cable, have been installed within a 319mm diameter steel formwork tube, which has been erected over the length of the bridge to a convex radius of 88 metres. Stress bars (or hangers), bond the concrete deck to the suspension cable and have been spaced at approximately three metres apart. The suspension cable work was performed by Structural Systems Africa.

The geometry of the V-shaped pylons required that each pylon be constructed in three lifts, using self-compacting 50Mpa concrete that was pumped into the formwork moulds. The suspension cable stressing was done from the pylons and anchor blocks in stages and resulted in the concrete deck lifting progressively over the length of the main span with an overall lift of approximately 60mm in the centre.

The V-shaped pylons, combined with the curved concrete deck and inversely curved suspension cables result in an architecturally impressive structure.

"One of the features of all three bridges, is that there is no supporting column in the median of the highway," says Frank Oliveira, Stefanutti Stocks Civils operations director. "This a safety feature specified by SANRAL at the design stage as it eliminates the possibility of vehicles colliding with a column in the median, which can be quite catastrophic."

SANRAL specified that the bulk of the 3 000m<sup>3</sup> of concrete used for the bridges be 40Mpa durability (W) concrete. The concrete for all three bridges was therefore supplied by Afrisam from its Nigel and Prolecon plants. "Afrisam's previous experience with (W) concrete resulted in their being chosen as preferred supplier," says Oliveira, "and the concrete finishes achieved were excellent."

#### Traffic Accommodation

Constructing bridges over a busy four-lane highway will always present its challenges, in particular with respect to managing the traffic flow. The contract required that the bridges be built with traffic flowing in all four lanes of the highway at all times, except at specific times during the erection and lowering of temporary support works over the highway. This time was kept to the bare minimum, and fortunately no traffic accidents were caused as a result of construction activities during the course of the contract.

The Kwa-Thema and Ergo bridges were opened to pedestrians in June 2017 and the Regents Park Bridge followed in August. "These facilities are now regularly being used by local residents and as a result, we hope that our highways will be a lot safer in these areas," concludes Oliveira.

#### Captions:

1. The completed Kwa-Thema Bridge.
2. The completed Regents Park Bridge.
3. The completed Ergo Bridge.

## Pedestrian bridges for Ekurhuleni Municipality constructed using precast methodology

Source: Odilon Kongolo, Stefanutti Stocks Civils project manager

In March 2017 Stefanutti Stocks Civils commenced the construction of four pedestrian bridges, located in Tembisa, for the Ekurhuleni Metropolitan Municipality. These bridges are the first being constructed to form part of the planned Integrated Rapid Public Transport Network (IRPTN) service that will connect the nine separate towns of Gauteng's East Rand through integrating new bus networks, existing bus services, revitalised rail networks, existing minibus taxi routes and a network of cycling paths and pedestrian walkways. The bridges will provide all people with safe access to the stations, without disrupting the flow of traffic.

The bridges are composite structures made of structural concrete substructures and a superstructure made of structural steel with a concrete deck. These bridges are also one of the few, if not the first public road bridges with access lifts. Their access stairs are supported by seven unusually shaped columns originally designed to be cast in-situ, however the project team chose to construct them in precast heads and in-situ column stubs. "We used a unique precast concrete construction methodology to construct the structural concrete components, making the execution far more efficient than any other method that could have been used," says Odilon Kongolo, Stefanutti Stocks Civils project manager.

The foreman team comprising of Ariel Akeem, Ezekiel Loeto and Winston Kapp managed to pour three times more concrete than the targeted quantity. This production was achieved by integrating the traditional construction methodology of casting concrete in-situ and



the use of precast construction methodology. Good planning and communication also contributed to this achievement.

"Our aim is to complete the project before the scheduled date of 30 June 2018, maintain a Lost Time Injury Frequency Rate (LTIFR) of zero, and to hand over high quality bridges that are finished to perfection," concludes Kongolo.



# Rea Vaya Station

## construction project passes half-way mark

**Source: Chris Tshivhidzo, Stefanutti Stocks Civils contracts director**

A joint venture between Stefanutti Stocks Civils and its strategic enterprise development partner A Re Shomeng is currently underway in Johannesburg and entails the construction of ten stations, five of which are single modules, and five are double modules. The stations are located along Louis Botha Avenue, Pretoria Main Road, running all the way to Catherine Street in Sandton.

Client JDA (Johannesburg Development Agency), for whom the joint venture completed the upgrades to existing Rea Vaya BRT Stations during 2014 and 2015, have appointed a professional team, that the joint venture reports to consisting of AOS Consulting Engineers (project managers), WSP Consulting Civil Engineers, Selanya Consulting Engineers (Consulting Electrical and Mechanical Engineers), DeltaBEC (Consulting Architects) and AECOM, the consulting quantity surveyors.

An unusual aspect of this civil project is the requirement for building work, as a lot of the construction relates to architectural finishes, such as the glass structure on the sides of the station, which is not a normal building with concrete or brickwork. Other finishes include the unique totem pole pylon signage, as well as installation of tac-tiles for the visually impaired, which was not installed in previous stations.



*One of the ten Rea Vaya Bus Rapid Transit (BRT) stations, currently under construction.*

Thirty per cent of the contract value (per station) has to be spent in the local community the station will serve.

"The challenges we face within the communities is to find SMMEs that have the skill and expertise to deliver their portion of this project. Further, as these enterprises are small and struggle with cash flow, we need to work closely with them and assist with the procurement of material," says Chris Tshivhidzo, Stefanutti Stocks Civils contracts director. There are a number of different wards along the Louis Botha route, which requires that a good plan is in place on how the different communities can become involved with each project, without resulting in any community unrest. "Getting communities involved in a way that we can also show the development of these SMMEs on completion, is a further requirement on the contract," concludes Tshivhidzo.

# Rural school under construction for the

## Department of Basic Education

**Source: Ricky Ludick, Stefanutti Stocks Building Division contracts director**

The Stefanutti Stocks Building Division is currently constructing the Phoelela Special Needs School in Bulwer for the Department of Basic Education. This is the fourth school the division is building for this client with previous projects being the Ntsu Secondary School in

Bethlehem, Phephetso Secondary School in Kroonstad, and Lehutso Primary School in Sasolburg.

Building work began just outside the KwaZulu-Natal rural town in August 2016, with a targeted completion date in April 2018. "Under normal conditions we would be able to construct a school like this in 14 months," says Stefanutti Stocks Building Division contracts director Ricky Ludick. "However, the rural location, lack of infrastructure, specification to use local subcontractors (who might require training), as well as the high rainfall in the area resulted in the contract duration running over 20 months."

The project will see Stefanutti Stocks constructing a school, pupil residence and teachers' accommodation, as well as a sewer treatment plant and elevated water tank.

The project has won the Stefanutti Stocks Building internal safety competition and has a zero Lost Time Injury Frequency Rate (LTIFR).

**Caption:**

A view of the school taken from the newly erected water tower.



# Stefanutti Stocks team log 1,4 LTIF hours building luxury apartment towers for Masingita Properties

**Source: Bradley Nortje, Stefanutti Stocks Building Division contracts director**

Stefanutti Stocks Building Division commenced construction of a two-tower luxury apartment building, located in Morningside, Johannesburg for client Masingita Properties in July 2016.

Masingita Towers consists of two towers, divided by an expansion joint. The first tower has thirteen floors, and the second tower consists of 16 floors, excluding three levels of below-ground parking. The project consists of 172 luxury apartments that will range in size between 108m<sup>2</sup> to 240m<sup>2</sup> and will sell for between R4,5-million to R15-million. The development also includes a restaurant, gym, conference centre and an external podium with pool.

The logistics are by far the most challenging aspect of the project, due to the site's location, with only a 6mx50m area available for all deliveries to the project. Nevertheless the project is progressing well and at an incredible pace. The team has achieved over 1,4-million Lost Time Injury Free (LTIF) hours, and is on schedule for completion in July 2018.

**Captions:**

1. A view into a completed mock up apartment unit.
2. The completed Tower 1 structure alongside Tower 2, which has been constructed to level 14.



## Stefanutti Stocks Building Safety Highlights

**Source: Lily Coetzee, Stefanutti Stocks Building business unit SHEQ manager**

**Regional Master Builder Association (MBA) - Safety Awards**

- Masingita Towers: 3rd place, MBA North for projects between R300 and R500 million.
- Western Cape Plant Yard: 1st place, MBA Western Cape.
- Canal walk La Piazza Enclosure: 2nd place, MBA Western Cape for projects between R25 and R75 million.

**National Master Builder Association - Safety Awards**

- Kusile: 1st place for projects over R500 million.
- Park Square: 2nd place for projects between R300 and R500 million.
- Western Cape Plant Yard: 4th place.

**Other Achievements**

- Masingita Towers project achieved 1.4-million Lost Time Injury Free (LTIF).
- Houghton Hotel project achieved 1-million Lost Time Injury Free (LTIF) hours.
- KZN division reached 3-million LTI free man hours during August 2017.
- Building Division achieved a 12 month rolling period LTI free in September 2017.



# Stefanutti Stocks Namibia builds a mixed-use development for Grenada Eight Investments

Source: Kobus Ferreira, Stefanutti Stocks Namibia senior contracts manager

Concurrently with the successful completion of the Hilton Garden Inn Basement for Africa Pride Hospitality, Stefanutti Stocks Namibia was awarded the construction contract of a mixed-use building, known as 1990, in the central business district of Windhoek for an affiliated client, Grenada Eight Investments.

1990 as well as the Hilton Garden Inn-Basement form part of the large-scale city centre redevelopment known as Freedom Plaza.

The residential and commercial development consist of a total of fourteen stories, excluding roof level. This includes:

- A 9 000m<sup>2</sup> three-level basement parking area;
- A 1 400m<sup>2</sup> level of lettable retail space;
- A 1 400m<sup>2</sup> level of lettable commercial office space; and
- Nine levels of accommodation encompassing a total of 114 apartments, lofts and penthouses.

The public access road that passes the front of the building runs over the podium level of the basement. On one side the building is flanked by the currently under construction Hilton Garden Inn, and access to the site and the co-ordination thereof through the lifecycle of the contract has been challenging.

As a result of the site location and the access road, the dismantling of the tower crane was quite a highlight. "We had to back prop the complete basement, bring a 95-ton mobile crane onto a post-tensioned slab, and then support loads in excess of 35-tons per outrigger for the main lifts during dismantling," explains Kobus Ferreira, Stefanutti Stocks Namibia senior contracts manager. "These loads had to be transferred down vertically and not spread out, in order to allow access and limit restrictions to the basement that was already in use."

The positioning of the mobile crane, along with capacity constraints and general setup accuracy, made for a very interesting dismantling process, and is, according to plant agent Freddy Enerver, who has thirty-five years of experience, a process he has not seen done before in his forty years of construction experience.





The general Namibian culture and attitude is quite relaxed and laid back, and this caused some frustration as it contradicts the general requirement of building projects that are always working towards a stringent deadline. "One of our targets was to change the mindset to 'what can be done today, should be done today'," says Ferreira. "Both junior and senior employees, as well as our subcontractors have shown a real willingness to play their part in enabling us to achieve our programme milestones, and there are a number of exceptional youngsters being mentored by senior staff that form part of this team."

These include junior foremen:

- **Heinrich Uinuseb** started on the building as a junior from day one. It was his first opportunity to work on a structure and Heinrich took on the responsibility of all the columns on the project. He rose to the occasion and showed exceptional commitment to achieve his task, and once done, he moved onto the units to start with finishes. He never tired and remained dedicated and hardworking until project completion.
- **Lionel Uinuseb** has been with Stefanutti Stocks Namibia for a number of years, and worked as a tower crane operator on the adjacent HGI Building. When we completed the basement project, he was transferred to 1990. Lionel is currently employed as a waged employee, however has shown great promise across all trades, and Stefanutti Stocks hopes to further his promising career.
- **Sylvester Simon**, who was tasked with casting the fin walls and lift shafts. Sylvester managed to meet his weekly deadline with almost absolute certainty week in and week out. He provided very good quality to large fin walls that were cast at six metre intervals.
- **Josia Joshua** has been on this project from March 2017, and has impressed with his handling of the process of de-snagging. The latter is a cumbersome and highly unpopular construction task, and his willingness and endurance has been truly remarkable.

"The project has been an overall success in what can be trying conditions," says Ferreira. "We have gained valuable trust from the local consultants, and have proven that we are a dependable contractor, that takes ownership of its commitment towards delivering a quality product, on time."

#### Captions:

1. The north and west facades of 1990 viewed from the adjacent FNB building. The off shutter fin walls were cast in six-metre lifts; the off shutter balcony walls were cast using a timber finish concrete formliner imported from Germany.
2. View from the balcony shopfront into a typical duplex unit. Clients could choose from a variety of finishes, wall colours, joinery colours and tiling options.
3. A lateral view of the internal atrium and typical floor lift lobby.
4. Pictured, from left to right are our team of local junior foreman and charge hands: Heinrich Uinuseb, Lionel Uinuseb, Sylvester Simon and Josia Joshua.





## 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





# disciplinary construction group

## 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





# Cape Building division constructs yet another Woolworths distribution centre

Source: Chao Song, Stefanutti Stocks Building Western Cape site agent

*Stefanutti Stocks Building Western Cape completed the Woolworths Communications Park Distribution Centre in Montague Gardens, Cape Town on 7 September 2017.*

The scope of work on the distribution centre entailed the construction of:

- 32 000m<sup>2</sup> warehouse (the size of 4,5 soccer fields) with a 3 100m<sup>2</sup> cold room. This included:
  - 131 tilt up columns,
  - 12,2-metre high cold room ceiling, and
  - 26 dock levellers, eight dummy docks and one scissor lift.
- Two-storey, concrete and brick wall structure main office building with toilet facilities including:
  - Steel structure roof,
  - Main sub-station, and
  - Concrete water tank and pump room.
- 33 330m<sup>2</sup> concrete hardstand (the size of 4.7 soccer fields), including:
  - 8 500 HDG diamond dowels.
- One-storey entrance building, with:
  - Timber structure roof,
  - Security rooms, and
  - Equipment room and lockers.
- One-storey dispatch office, with
  - Steel structure roof.
- Gate house.
- Concrete water tank.
- Staff parking.
- Three substations.



In order to work efficiently and effectively, Stefanutti Stocks Building Western Cape divided the entire site into three teams that traded as three separate projects. Each team, namely the Warehouse Team, Ancillary Building Team and the External & Hardstand Concrete Team, prepared its own short-term programme and was responsible for the complete management of the respective area. "The process sounds complex, but it actually made a large project much more manageable, with each team leader taking ownership of their own project (Section and Area) and receiving information only pertaining to their section," explains Stefanutti Stocks Building Western Cape site agent Chao Song.

All section supervisors/managers, including quantity surveyors and safety officers, would attend morning meetings to discuss health and safety, daily tasks, challenges and resources, as well as to share information and address any queries. All general foremen attended weekly sub-contractor meetings to plan and discuss sub-contractors' progress and work.

There were a number of unusual aspects on the project, including the measures implemented to minimise potential disruptions. These included the design of an acoustic wall to block the noise on the site boundaries as well as only casting the surface bed during the night, to avoid traffic and ensure a continuous concrete supply. One of the biggest challenges was casting the 32 000m<sup>3</sup> of concrete to the internal warehouse surface bed floor, which was done over sixteen days during a night shift," says contracts manager Winslow Hare. "We invited the south-side neighbors to site, where I explained the casting process and potential noise to them, and they were very understanding and pleased to have been consulted."



The surface bed was cast using a special Cosinus Slide Joint - a method designed for big area concrete panels and implemented for only the second time in South Africa.

The concrete mix design needed to be tested (compression, shrinkage and flexure) and approved for the hardstand, Xypex and surface bed concrete, by the engineer.

"Further unusual aspects included the wind load design to the cold room panel layout and its fixing method, as well as the roof sheets fixing method, with the roofing material supplier (SAFINTRA) conducting monthly inspections of the roof sheeting," says Song. "We also had the additional challenge of a serious water shortage in Cape Town, which necessitated changes to the engineer's design, and has seen us collecting 75% of the total hard stand surface water to the water pond for irrigation purposes."

*The tight programme also required high production rates. This included having to cast a daily minimum of four, in excess of 15-metre high tilt-up concrete columns with off-shutter concrete finishes from Monday to Saturday. The columns were cast on the ground and tilted up using a 220 ton mobile crane. "This*

*tilt-up method has been successfully used at several of our warehouse projects in the Western Cape and saves a great deal of time," says Song.*

The tight programme extended to the external hardstand concrete. "We only received the accelerated shrinkage result on the concrete beam from the University of Cape Town lab 28 days after the mix design was completed," says Song. The engineer would only allow the hardstand concrete to be cast after they had checked and approved the shrinkage result. Coupled with sixteen days of rain, and the casting team found themselves short of almost a month and a half of their original hardstand concrete programme. "Our hardstand concrete team doubled its casting team, as well as increasing the daily cast area, and managed to finish the hardstand concrete on time!"

*All three internally allocated projects of the contract were completed on time, within budget, and with a zero Lost Time Injury Frequency Rate (LTIFR), achieving 562 915 injury free man hours after practical completion.*



*In September 2017 the Pietermaritzburg-based Westgate Aloe Ridge housing development, constructed by Stefanutti Stocks for Capital City Housing, received the prestigious Govan Mbeki Award for Best Social Housing Project. The social housing project covers an area of 40 000m<sup>2</sup>, comprises of 952 residential flats, and has been constructed to provide the very low income groups that are residing in the Pietermaritzburg area with access to rental units.*



# Innovative monument wins international property development award

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



In 2016 the Matola Raid Monument and Interpretive Centre, constructed by SS Construções Moçambique Lda in October 2012, received the prestigious international development award from the South African Property Owners Association (SAPOA). The award recognised this historically important structure and the team that were responsible for creating it, for excellence in innovation.

The Matola Raid monument and interpretive centre is located in the southern city of Matola. This ambitious and architecturally challenging project is an important project for both Mozambique and South Africa, and was officially opened by Mozambican and South African presidents, Filipe Nyusi and Jacob Zuma, on 11 September 2015.

The monument commemorates the 1981 South African commando raid of three houses used by Umkhonto We Sizwe, and resulted in the death of thirteen freedom fighters. The structures symbolise different elements of the raid, each aiming to tell part of the story of the fateful day in January 1981.

## The Monument

Three Red Obelisks are symbolic of the three houses that were raided and are orientated in the direction of these houses and placed on radiating lines towards their location.

A stainless steel Wreath Wall has a reverse cut of the outline of the maps of South Africa and Mozambique. This allows a shadow to be cast, in a perfect outline at 12:00 on 31 January each year, over the concrete cenotaph below.

The pathway through the monument is used by the community daily and respectfully deviates around the three Obelisks. The edge of this pathway is defined by the "frontline wall" which honours the states that stood in opposition to the South African Government during the struggle.

## Interpretive Centre

The Interpretive Centre is orientated East to West, with the evening raid associated to the sunset in the west, and the emergence of a free South Africa symbolically represented by the sunrise to the east. Inside the centre a sloping ramp leads down into the darkened exhibition hall invoking the memory of the descent of the freedom fighters underground, while the exit ramp emerges upward into the light and into the new South Africa.

The 'slashed' sun screen represents the explosions in the houses during the raid, and allows flashes of light into the building in deliberately unstructured patterns.

The first floor of the interpretive centre is intended to serve the community affected by the raid, and provides a place for internet workstations that can be used by pupils.

"We are very proud to be associated with this landmark project," says Nuno Dias, SS Construções (Moç) Lda senior contracts manager, "and are of course delighted to be part of the team that was acknowledged through the SAPOA award."

## Captions:

1. The Interpretive Centre with its 'slashed' sun screen that allows flashes of light into the building in a deliberately unstructured pattern.
2. The exhibition hall inside the Interpretive Centre, where visitors can immerse themselves in the story of the raid.
3. The three red obelisks are symbolic of the three houses that were raided during the Matola Raid.

Stefanutti Stocks builds school for

# Aga Khan Development Foundation

Source: Carlos Ferreira, SS Construções (Moç) Lda, contracts manager



SS Construções (Moç) Lda is currently constructing the first phase of the Aga Khan Academy located on a 22-hectare site in Matola. The project is on schedule to be completed by end of November 2017.

The Academy is being funded by the Aga Khan Development Foundation and will provide international standards of schooling to its scholars. Students will be recruited based on merit, and those that have the financial resources will pay fees, that are vital for the sustainability of the project.

*“Our client, a non-profit organisation, had a limited budget to spend on this phase, and we were continuously searching for solutions to keep costs at a minimum,” says SS Construções (Moç) Lda, contracts manager Carlos Ferreira. One of these solutions included an alternative to the Glass Fibre Reinforced Concrete (GFRC) specified for all external windows and doors. “As this was not available*

*locally or in South Africa, and would have been extremely costly to source, we presented an alternative solution with concrete surrounds, which our client accepted,” says Ferreira.*

The first phase includes the junior school, junior library, basketball court and the power station and it is foreseen that the educational facility will initially cater for up to 750 pupils. The site-wide infrastructure has been designed to support the expansion of the teaching and accommodation facilities, to cater for up to 1200 pupils.

#### Caption:

Visible from the air is the Junior School, Junior Library and the Courtyard. The Junior School includes 2 classrooms for each year up to year 6 and has two wooden pergolas on the North of Block 1, and four on the south of Block 2.

The Junior Library covers an area of 850m<sup>2</sup> and includes a multimedia suite, offices and a 370m<sup>2</sup> open area for study.

The Courtyard includes round concrete benches surrounded with concrete pavers and a 12m diameter World Map.





# Kasane International Airport

## team produces awarding winning transport facility

Source: Jacques D Wilbers, Stefanutti Stocks Botswana contracts manager

In the small remote town of Kasane on the North-Eastern border of Botswana, the highly-anticipated opening of Kasane International Airport's new terminal building was attended by excited crowds of locals and international visitors. The new 6 400m<sup>2</sup> terminal building, designed and constructed by a team consisting of AECOM and Stefanutti Stocks Botswana, was under construction for thirty months. It was handed over to Civil Aviation Authority of Botswana (CAAB) on 27 June 2017, ready to commence operations and welcome passengers of South African Airways and Air Botswana, the two airlines that service the airport.

Shortly after the handover, the revamping phase of the project, scheduled to be completed mid-November 2017, commenced. This phase includes:

- Revamping the 1 500m<sup>2</sup> terminal, air-side and land-side gate houses, as well as the technical block;
- Refurbishing the existing ATC tower; and
- Extending the fire station.

"The team, consisting of AECOM & Stefanutti Stocks, has risen to the challenge of constructing a first-world airport terminal building in an area that is essentially in the heart of the African bush," says Stefanutti Stocks Botswana contracts manager Jacques Wilbers. "The quality of our work and finishes are of an exceptionally high standard, and this was acknowledged by a number of prestigious awards."

These accolades include:

- The South African Institution of Civil Engineering (SAICE) awarded the Kasane Airport 1st place in the category Most Outstanding Project (Project Management and Construction).
- The South African Institution of Steel Construction (SAISC) named Kasane Airport overall winner in the Metal Cladding category.

"On top of the list, and an achievement we are exceptionally proud of," continues Wilbers, "is the fact that the Kasane team has worked more than 1,7-million lost time injury free (LTIF) hours on site to date. This is a number we are building on daily."

### Captions:

1. The award-winning team pictured at the new terminal building are, from left to right: Dan Tsele, Emmanuel Boloseng, Oabile Pilane, Jacques Wilbers, Cobus Le Roux, Tony Bothma, Spike Kopano, Solomon Ditsele, Dichaba Romontsho and Jerry Verghese.
2. A photograph of the framed SAICE Award.
3. The main entrance (land-side) to the new terminal building.
4. The main concourse inside the newly constructed 6 400m<sup>2</sup> terminal building.





# Houghton Hotel

## receives five-star Master Builder Association grading

**Source: Stephen Johnston, Stefanutti Stocks Building Division contracts director**

Stefanutti Stocks Building Division is currently constructing the 60 000m<sup>2</sup> Houghton Hotel at Houghton Estate in Johannesburg. The facility consists of 97 residential apartments, sixty hotel apartments as well as conferencing and restaurant facilities.

Client Seven & Twelve on Houghton began developing the Houghton Estate over ten years ago, however construction was abandoned for a few years until some funding challenges could be resolved. The project was carved up into smaller and more manageable phases that have been completed over the last six years. Stefanutti Stocks is now completing the final phase of the development, which will also serve as the link between the already completed phases.

As it is the final phase, time restrictions have been implemented on construction, so as to keep the disturbances to the existing residents to a minimum. Any lost time cannot be made up by working overtime, therefore additional resources are placed when needed to ensure that targets are met.

The construction area covers a total floor area of 60 000m<sup>2</sup> and the 97 residential apartments range between 60 and 600m<sup>2</sup>. Some of these high-end residential units are accessed by an elevator that opens directly into the apartment. The completion of these apartments has begun and handover inspections are being conducted with the project team.



"Meticulous planning and sequencing is required to ensure the timely delivery of the extremely upmarket high-end finishes in the apartments and hotel rooms," says Stephen Johnston, Stefanutti Stocks Building Division contracts director. "It has also served as a fantastic learning ground for the team, including our Stefanutti Stocks bursary student Josile Sekatane, who recently graduated and now holds a B-Tech: Civil Engineer: Structural."

The project is running on schedule for completion in August 2018, and is being closely and continuously monitored. It received a five-star Master Builder Association (MBA) grading as well as winning a SHEQ Excellence award in May 2017.

**Caption:**

The structure consists of 25 000m<sup>3</sup> of concrete, with 3 000 tons reinforcing and 4.5 million bricks.





# Shoprite's hi-tech, world-class distribution centre completed amidst much fanfare

**Sources:** Mauro Donato, Stefanutti Stocks Building Western Cape managing director  
 Mike Bradshaw, Stefanutti Stocks Building Western Cape senior contracts manager Phase 1  
 James Slabbert, Stefanutti Stocks Building Western Cape contracts manager Phase 2



*On 5 October 2017 Stefanutti Stocks Building Western Cape hosted a roof-wetting event at Shoprite Group's new Cilmor Distribution Centre, attended by all stakeholders in the project.*

*The Distribution Centre (DC), located in Brackenfell, Cape Town is described by the Shoprite Group as one of the most technologically advanced distribution centres on the African continent. "When designing the facility we applied world-class logistics practice and focused on creating solutions that would help us manage store inventories and reduce their storage requirements," says Pieter Engelbrecht, Shoprite chief executive officer. "The Cilmor DC consolidates the activities of five different distribution centres and about 500 suppliers, and it is anticipated that about 20 000 products will be stored here."*

*Stefanutti Stocks has previously constructed distribution centres, including for Shoprite, and was able to use their previous experience as well as innovative methods to the advantage of the project.*

## Tilt-up Technology

Due to the tall columns (in excess of 20 metres) required in the construction of the distribution centre Stefanutti Stocks proposed the tilt-up route from tender stage. This entails constructing the columns on the ground and then lifting them into place with a crane, instead of the traditional way of forming them vertically with formwork. The two safety stores that were part of Phase 1's scope of work were originally designed as concrete framed structures with brick and plaster infill panels, and these were also constructed using tilt-up. "Our proposal to use this methodology at tender stage gave us an edge not only on price but also gave us a big advantage on programme and essentially simplified our lives," says Mauro Donato, Stefanutti Stocks Building Western Cape managing director.

"When I compare the speed at which we constructed the columns on this project with previous projects where we did not use the tilt-up

option, we were, on a good day working up to four-and-a-half times faster and coming in cheaper," continues Donato. Further advantages include that the methodology does not require scaffolding, thus eliminating the risk of working at heights. "The holding down bolts get cast-in on the ground, the site is less congested and there is more survey control to ensure getting the holding bolts exactly into the correct position, therefore allowing for a seamless structural steel installation, which the programme required."

## Construction Scope

### Phase 1 comprised of the construction of:

- 76 162m<sup>2</sup> dry goods warehouse;
- Two safety stores;



- 13 419m<sup>2</sup> returns centre warehouse (ERTC) and office block;
- Dispatch and receiving office;
- Truck workshop, wash and refuelling;
- Generator and transformer rooms;
- Guard house and entry facilities;
- Two retention ponds;
- Irrigation and water treatment plant;
- 40 000m<sup>2</sup> concrete hardstands;
- 42 000m<sup>2</sup> interlocking pavers;
- Extensive network of asphalt roads including two parking areas; and
- Extensive landscaping and irrigation.

#### Phase 2 comprised of:

- 19 000m<sup>2</sup> refrigerated facility:
  - 2 000m<sup>2</sup> ambient temperature;
  - 14 000m<sup>2</sup> +1 deg C;
  - 3 000m<sup>2</sup> - 27 deg C;
- Double-storey perishable office;
- Triple-storey CFS office; and
- Plant building.

## Phase 1

Phase 1 commenced in January 2016 and achieved practical completion on 31 March 2017. All seven contractual dates were achieved on time and the project reached works completion only six weeks later on 19 May 2017 - which on a project of this magnitude is a substantial achievement.

The dry goods warehouse has a total of 204 columns, standing up to 21-metres high. To enable the necessary fire resistance to the safety store area its walls were constructed using 48 panels also cast on site adjacent to their final position. The returns centre includes 41 tilt-up columns with the tallest being 23-metres high.

Both facilities have high-quality, highly-accurate concrete floors. The 1 000m<sup>2</sup> fibre-reinforced surface beds panels (with imported Cosinus Joints) were cast at a daily rate of 2 000m<sup>2</sup> and at night to ensure continuity of concrete supply.

The facilities also both have large curved roofs, in some places with roof sheeting in excess of 90-metres. The phase saw a total of 100 000m<sup>2</sup> of roof sheeting installed.

"There were many highlights in this phase," says Mike Bradshaw, Stefanutti Stocks Building Western Cape senior contracts manager for Phase 1, "including our meeting each of our contractual dates, as well as achieving 1-million Lost Time Injury Free (LTIF) man hours."

## Phase 2

Phase 2 commenced in October 2016 and is on track to achieve practical completion on 25 October 2017. All three contractual dates were achieved on time.

The biggest challenge in this phase was to ensure the sub-contractor undertaking the refrigeration completed and commissioned the facility before the racking commenced. In order to commission the facility the warehouse had to be fully insulated to ensure the correct temperatures and airflows were achieved. "The greatest satisfaction of Phase 2 was that the commissioning of systems commenced on time at the end of September 2017, and the cooling down of the refrigerated facilities temperature started thereafter," says James Slabbert Stefanutti Stocks' contracts manager for Phase 2. "It's also interesting to note that the refrigeration equipment and piping equated to 25 per cent of the contract value."

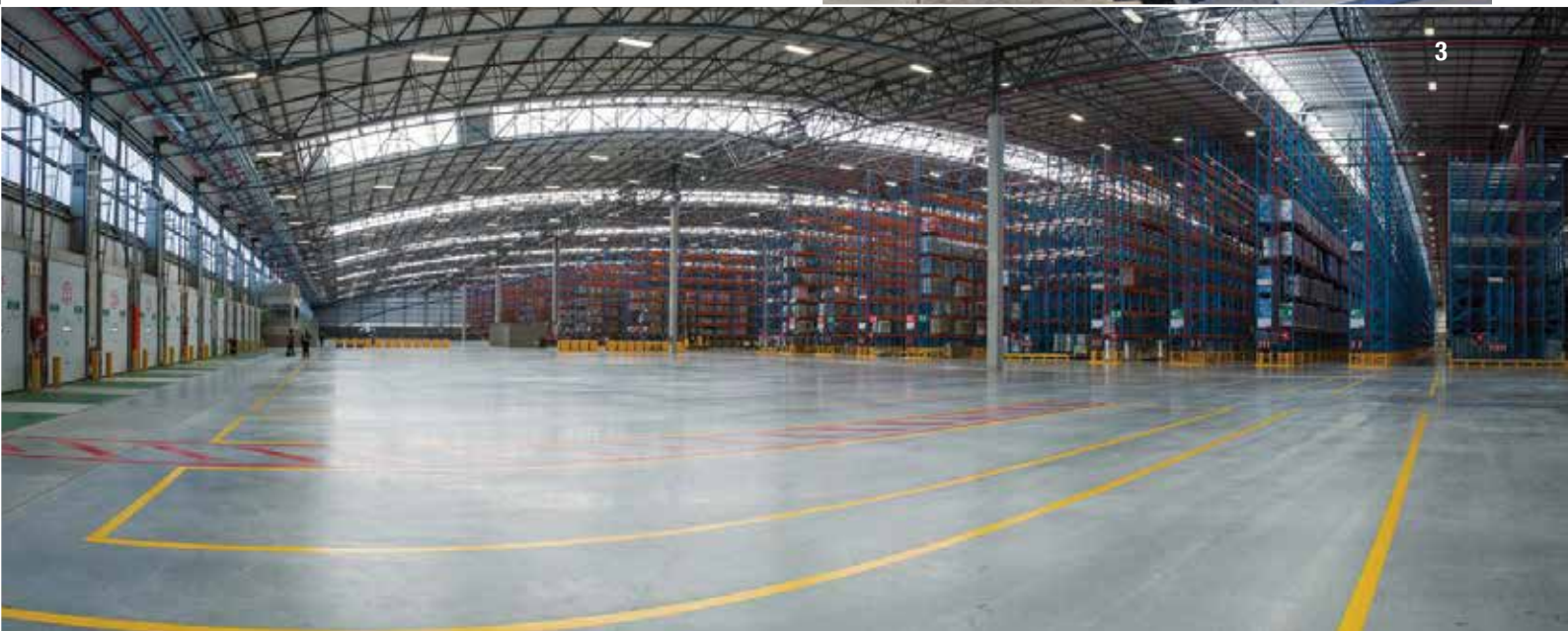
#### Quantities on this phase included:

- 500 tons of structural steel for the roof;
- 15 000m<sup>3</sup> of concrete;
- 40 000m<sup>2</sup> of insulated panels (equivalent to eight rugby fields);
- 60 smoke ventilators installed on the roof; and
- 38 MT cooler fans installed inside the facility.

"The on-time commissioning, combined with the fact that Shoprite is very happy with the work undertaken by Stefanutti Stocks, and that we have delivered yet another project on time, has made us very proud to be able to include the Cilmor Distribution Centre on our construction portfolio," concludes Slabbert.

#### Captions:

1. A bird's eye view the Distribution Centre, Return Centre and Refrigerated Facility.
2. An overhead view of the dry goods warehouse.
3. An inside view of the dry goods warehouse - size-wise it is equal to 14 rugby fields!





# New North-East Wastewater

## Treatment Works (NEWWTW) ahead of schedule

Source: Wayne Stay, Stefanutti Stocks Coastal site agent



The site team standing in front of their site office. Pictured from left to right are John Woodburn (contracts director), Sharm Premalall (senior foreman), JP Pretorius (foreman), Htumleng Sedlaelo (site engineer), Thandeka Dubel (clerk), Wayne Stay (site agent), Carlos Werner (safety officer), and sub-agents Mark Mugisha and Resham Doorgaparsad.



Gravity thickener tanks.



An aerial of the New North-East Wastewater Treatment Works site with the two primary digesters in the foreground.

The construction of the North-East Wastewater Treatment Works (NEWWTW) for the Mangaung Municipality began mid-2013 and has progressed significantly since then. Currently the NEWWTW is 80 per cent into Phase 2, which entails the construction of the liquid stream and the sludge stream.

The new NEWWTW has become a flagship project for the Mangaung Metropolitan Municipality. Currently the plant's hydraulic capacity is at 15ML-per-day, however once the sludge stream is completed the plant will be able to run at its maximum capacity and produce more treated water.

Phase 2's scope of work includes an entirely new sludge stream in addition to the existing liquid stream, and will see the following structures constructed:

- 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.

Phase 2 commenced in May 2016 and has been managed by a young enthusiastic team that has developed an excellent working culture and displayed exceptional levels of workmanship and quality. "The culture and work ethic of the team has been at the root of the project's success," says Wayne Stay, Stefanutti Stocks Coastal site agent. The benchmark structures of this site are the two primary digesters, each 24 metres in diameter with an overall height of 18 metres.

These primary digesters and various other structures have been constructed systematically by a diligent Stefanutti Stocks Coastal team, guided by senior foreman Sharm Premalall. "We are pleased to be able to report that we are, specifically on the primary digesters, ahead of target and all credit to Sharm and his support team who have planned, and executed the construction process of these structures, using clever prefab techniques, excellently," says Stay. "The team here at NEWWTW not only has the project's best interests at heart, but constantly strives to keep the Stefanutti Stocks flag flying high!"

To date the project has achieved 200 000 Lost Time Injury Free (LTIF) man hours. These high standards are common across all of Stefanutti Stocks' projects, and the team maintains a high standard of housekeeping with quality of the highest standard. The project is due for completion in February 2018.



# Environmental impacts are a key focus of Imvutshane Dam project

By Lourens Prinsloo, Stefanutti Stocks environmental and quality manager

*The environmental consequences of large dams are numerous and varied, and include direct and indirect impacts to the biological, chemical and physical properties of rivers and riparian (or “stream-side”) environments.*

The movement patterns of aquatic organisms are fragmented. A dam also traps sediments that are critical for maintaining physical processes and habitats downstream of it. Another significant and obvious impact is the transformation of the dam basin, as water displaces terrestrial ecosystems and transforms them into aquatic habitats.

The indirect impacts that are often not considered extend to the potential social and heritage impacts. For example the location of a dam can cut communities off from one another or displace people located too close to the dam's flood lines. Community gardens, sport fields and graves can also be impacted, due to their location in relation to the proposed dam.

During the construction of the Imvutshane Dam in rural Maphumulo, KwaZulu-Natal (30 km north-west of KwaDukuza) all of

the above impacts had to be overcome. The design made provision for a controllable bottom release valve designed to accommodate the free movement of eels in and out of the system. The construction of a rough concrete surface on the dam spillway ensured the hydrological signatures were maintained as far as practicable.

Stefanutti Stocks' project team relocated the indigenous vegetation and moved the graves located in the dam basin. A new sports field and a community garden were also built, and the families that were negatively impacted by the dam received new houses that were constructed closer to their families and friends.

The construction of the 3.1-million-m<sup>3</sup> Imvutshane Dam has transformed the area from a relatively low biodiverse area into a flourishing aquatic ecosystem.

The dam's first spill was celebrated on 22 May 2017. It is well-known fact that fish are a good indicator of the health of a dam, and during the event numerous fish were seen thriving in the waters! The dam will also create a dependable source of safe drinking water and go a long way to ending water scarcity during winter seasons and droughts in the region.

#### Captions:

1. Imvutshane Dam's new intake tower.
2. Various stakeholders in the project, photographed at the official first spill event of the Imvutshane Dam.





## Stefanutti Stocks Structures

# Safety Highlights

- Kusile Civil Works Joint Venture (KOW JV) reached 3-million lost time injury free (LTIF) man-hours.
- The Maydon Wharf Project reached 2-million LTIF man-hours in March 2017.
- Stefanutti Stocks Structures and Building Plant yard reached 500 000 LTIF man-hours.
- Usuthu Water Purification Plant reached 400 000 LTIF man-hours.
- North-East Wastewater Treatment Works reached 200 000 LTIF man-hours.

## Maydon Wharf project reaches 2-million LTIF man-hours worked

On 1 March 2017 the Stefanutti Stocks Axsys Joint Venture (SS Axsys JV) celebrated the achievement of 2-million LTIF man-hours worked at the Maydon Wharf Project at the Durban harbour. "This safety milestone could not have been achieved without an enormous amount of hard work and effort from everyone involved in the project including our client Transnet, our project directors, site management and supervisors, and the entire work force and subcontractors," says Reginald Naidoo, SHE manager for the SS Axsys JV.

*"As ever we remain committed to providing continual training; preventative programs; communication of safe work practices; sharing of lessons learned from observations and incidents; and good site safety vigilance, so that everyone works safely every day."*

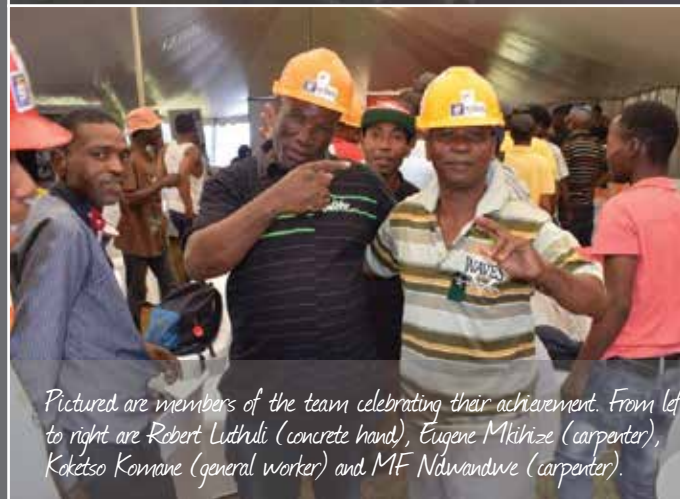
The milestone was celebrated on 31 March 2017 at the Stella Soccer Club in Durban. In addition to all project employees the event was also attended by senior management from Transnet Group Capital, Stefanutti Stocks Coastal and Axsys Projects.



*Transnet's project manager Shane Perumal discusses the significance of safety with Andrew Pirrie (SS Axsys JV contracts director) and managing director of the Stefanutti Stocks Coastal division, Matthew Horwill.*



*Reginald Naidoo, the joint venture's HSE manager and contracts director Andrew Pirrie proudly holding the Certificate of Achievement.*



*Pictured are members of the team celebrating their achievement. From left to right are Robert Luthuli (concrete hand), Eugene Mkhize (carpenter), Koketso Konnae (general worker) and MF Ndlovu (carpenter).*

*"The safety conference is the first time in Stefanutti Stocks' history that all senior management, including operational directors and site-based safety personnel got together in one room to discuss SHE," says Vince Olley, managing director of the M&E business unit and chairperson of the SHE forum. "We were able to interrogate one another, to discuss what the SHE forum was doing, and quite specifically explore the impact of leadership engagement. By getting our organisation's leaders to visit our sites, they are much closer to the issues and can play a role in contributing to our safety record, as well as our excellence in execution."*



# First group safety conference aims to “Change your heart, Change your mind”

Source: Jaco Underhay, Stefanutti Stocks Group SHE manager

On 2 June 2017 Stefanutti Stocks held its first ever group-wide safety, health & environment (SHE) conference at Emperors Palace, close to the OR Tambo International Airport. Ninety-four delegates attended the conference, comprising of SHE professionals across the group (including divisional and business unit SHE managers) as well as the group EXCO and operational directors.

“The objective of the conference was to get all leadership in one room and present our strategic direction first hand,” says Jaco Underhay, Stefanutti Stocks group safety, health and environment (SHE) manager, and organiser of the event. It also offered SHE professionals an opportunity to meet, interact and network with their peers and the Stefanutti Stocks leadership.

“We chose the theme ‘Change your Heart, Change your Mind’ to illustrate what a large part the heart plays in decision making,” explains Underhay. “Many people think of an organ that pumps blood through our bodies when they refer to the heart of the person. We wanted to make our leadership aware that the heart is part of the brain, and invited Industrial Psychologist Jacqueline Bosman to explain this.”

Dr Bosman is a well-respected and experienced industrial psychologist who left Sasol in 2016 to go into private practice, after working there for ten years, ultimately in the capacity of the Head of the Behavioural Safety Department. Although she is now in private practice she still presents at numerous conferences around South Africa, where the focus is on

employee well-being. She spoke on the topic of Behavioural Based Interventions at the Stefanutti Stocks SHE conference.

“In Dr Bosman’s presentation to us she explained how the brain functions and how employees perceive certain things we do, or do not do,” says Underhay. “To change a person’s behaviour you need to affect or influence the heart, which is the limbic system of the brain, in the correct way.” How one does this is at the heart of the Behavioural Change Programmes (BCP) that Stefanutti Stocks is implementing as part of its overall SHE strategy. “This is also an essential element of our Leadership Engagement programme, as the manner we engage our workforce is critical to affect change where change is required.”

When one speaks about winning employees’ hearts and minds, what one is actually referring to is two portions of the brain – the prefrontal cortex (PFC) and the limbic system. If one is trying to change behaviour (heart) and conduct (mind) one needs to influence both the WHAT is being done (PFC) and the HOW it is being done (limbic).

The second guest speaker, Professor John Smallwood, a past-president and councillor of the South African Institute of Building (SAIB) addressed the topic of Industry Safety Compliance. His entertaining and informative presentation spoke about the cost to Health and Safety Management within an organisation, and gave attendees plenty of food for thought.

Stefanutti Stocks Occupational Health Safety & Environmental (OHSE) forum members were all present on the day, and delegates had the opportunity to address questions to them, in order to understand the basis of the SHE objectives and targets presented on the day. Other presentations included:

- Leadership Engagement: forms and processes, by Vince Olley (managing director of the Mechanical & Electrical business unit and OHSE forum chairperson).
- Incident Management and S&S Reporting, by Frank Bennetts (Structures business unit safety manager) and Clare Kramer (RPM business unit safety manager).
- Group OHS and Environmental Forum Objectives and Targets 2017 by Jaco Underhay, group SHE manager.
- Group Sustainability Reporting by Mike Sikhakhane, Group HR executive.
- ISO Transition, by Werner Jerling (managing director of the Structures business unit and Quality forum chairperson).

“I think the most important aspect of the leadership attitude is that they acknowledge SHE as an integral part of business and that an excellent safety record means we treat our employees right but also enables us to excel in business. It is also a key consideration for clients when they are considering our tender proposals” says Underhay.

This conference is another building block in a continuous process of Stefanutti Stocks achieving its mission of excellence in execution in the SHE arena. “When we have good safety records, the danger is always that we can become complacent, and preventing this is the responsibility of the entire organisation, from top leadership right through to general worker on site,” concludes Underhay.

*“The event saw all of the Group’s operational directorship attend, which is affirmation that our top line management takes SHE very seriously,” says Vuyo Qubu, Stefanutti Stocks Structures director and member of the SHE forum. “There were some incredibly valuable presentations by industry experts who legitimised a lot of the SHE forum’s recommendations on how we can enhance our safety culture at Stefanutti Stocks. It was an incredibly productive day where participation and interaction was encouraged.”*





# Hundreds of RPM Cupcakes donated to Cupcake of Hope for Kids with Cancer

**Source: Debbi Kannemeyer, Stefanutti Stocks Roads, Earthworks & Pipelines (REP) commercial administrator**

Cupcakes of Hope is a non-profit company, established in 2012, with the mission to create awareness of early warning signs, and to support families who have been affected by and are struggling with childhood cancers.

Cupcakes of Hope's biggest annual fundraiser, the National Cupcake Day took place on 30 September, at the end of Childhood Cancer Awareness month. National Cupcake Day is hosted at malls across South Africa and in 2016 they managed to raise R1.8-million through this initiative.

RPM's involvement in the initiative was motivated by a 'Save the Week' e-mail sent on 18 September 2017. Lee-Ann Koen, Yolandi Meyer and Desandra Naicker wasted no time rounding up cupcake pledges. They did such a good job that the level of support flooding in required more resources. "We offered staff the option to buy and donate 12 muffins (no topper) for R25," says Desandra Naicker. "When this e-mail to staff went out, we went from 600 pledged cupcakes to over 1200!"

With only seven days to go, the plan was for Ankia Kieser to bake the muffins, Tanya Wagener to hand-make custom construction toppers, and to recruit as many people to put the two together.

On Friday the 29 September 1 422 cupcakes, 1200 construction toppers and five 1-litre tubs of chocolate icing arrived at RPM's Spa Franco boardroom, which had been booked for the day for muffin assembly.

The business unit, at all levels, really came together in support of this cause. "Catherine Monyepao, who works as a tea lady at RPM handed me her R25 saying that this was all she had. The incredible thing is that this would buy 12 cupcakes, each of which would be sold for R10, thus raising R120 for Kids with Cancer," says Debbi Kannemeyer, Stefanutti Stocks REP's commercial administrator. "Everyone's contribution is priceless!"

RPM support extended beyond donating, baking, pledging, buying, assembling, boxing, and stacking 1 422 custom RPM cupcakes. "Our management was so impressed by the fervour with which we supported the cause that they chipped in with a R6 000 donation! I am proud to be part of this amazing team, and it is always a phenomenal privilege to help where we can."

## Captions:

1. Team huddle before the magic begins! Completed in just three hours, at a rate of eight cupcakes a minute! From left to right are Juanita Roberts, Tracey Vermeulen, Betsie Roux, Tanya and Abby Wagener (toppers angel and her daughter), Desandra Naicker, Cindy Theart and Gordon Koaho.
2. Pinky Mthembu gently packs an RPM cupcake. Over 100 boxes were packed on the day!
3. Desandra Naicker adding the finishing touches to a batch of 12 cupcakes, ready to be sealed and stacked.
4. On your marks, get set, ASSEMBLE! From left to right are Silvana Egger-Carraggi, Natasha Edwards, Desandra Naicker, Candice Munisamy, Tracey Vermeulen, Juanita Roberts, Constance Malatjie and Yolandi Meyer.
5. Showing off 24 deliciously fresh and finished RPM cupcakes are Juanita Roberts (left) and Silvana Egger-Carraggi.







excellence in execution  
on the football pitch

Source: Nigel Ramiah, Stefanutti Stocks Roads, Earthworks & Pipelines operations manager

“We have had a fantastic footballing year, with our indoor football team bringing home a number of convincing victories!” says Nigel Ramiah, Stefanutti Stocks Roads, Earthworks & Pipelines operations manager. Stefanutti Stocks’ first team is named StefStocks, and it has certainly been making its mark in the indoor tournaments.

In July 2017, Stefanutti Stocks won the Sorbet Man Football Tournament, where the team was one of 28 who entered. In September 2017, StefStocks went on to win the CHOC Tournament, in which 96 teams participated. This annual event aims to raise awareness for the Childhood Cancer Foundation, and has been supported by Stefanutti Stocks in Gauteng for a number of years. “StefStocks is the only team to

have won CHOC three times, and this year we did so without conceding a single goal in 12 games played,” says proud team captain Ramiah.

In September the team travelled to Cape Town, courtesy of Stefanutti Stocks. As winners of the 2016 Corporate Games in Johannesburg, they were invited to participate against 24 other football teams in the Cape Town Corporate Games. They returned home to Gauteng as victors, and in October defended their Johannesburg title, playing as one of 22 teams. “We played to win, and our strategy paid off,” says Ramiah. “As Corporate Games winners for both Johannesburg and Cape Town, we have now qualified to play in any Corporate Games around the world - if we do get to go, it will be very difficult to choose a country!”

Still on the football calendar this year are the Hospice Tournament on 11 November, and the annual Gino Stefanutti Soccer Challenge. This will take place on 18 November 2017, and will see teams from across the group vying for the coveted Gino Stefanutti trophy.

**Caption:**  
The victorious StefStocks team with their medals. In the front, from left to right are Jack Mokgese, Longile Mokwebo, Dusamani Phiri, Sibusisi Makhoba and Mlungisi Cele. Standing, from left to right are Ben Nene, Justin Mamuremi, Skhumbuzo Zwane, Ishmael Mokwebo and Nigel Ramiah.





# Coastal celebrates Women's Day with Mad Hatter High Tea

Source: Alri Willemse, Stefanutti Stocks Coastal divisional HR manager

The ladies from the Stefanutti Stocks Coastal division celebrated this year's Women's Day with a formal Mad Hatter High Tea at The Dubois in Waterfall. Hats were compulsory and the women did not disappoint with their choices of colourful headwear. Quantity surveyor Yaromi Gopalan was awarded the prize for the "Funniest Hat" and Stefanutti Stocks buyer Bev Botha received the "Most Original Hat" Award. Both ladies won a large hamper of spa pamper products.

In addition to the high tea, and a few well-deserved hours off work, the women were treated to a food demonstration, presented by Meryl's School of Cooking. The outing was concluded with sub-agent Akhona Ntshinka reading a beautiful poem to all present.

I am not defined by the colour of my skin  
Nor by the colour you are and I'm not.  
I am not defined by the mistakes I have made,  
Nor by those who have done me wrong in the past.  
I am not defined by the shape of my body, nor by the shape you  
are and I'm not.  
I am not defined by what other people think of me,  
Nor by what they don't think of me.  
By definition of myself  
I am an individual  
Proud to be me  
As there is no other like me.  
Mistakes have made me wiser  
Pain has made me stronger  
Persistence lingers in every fibre of my being  
I am woman, I am triumphantly me!  
*by Nicola Pillay*

## Structures business unit celebrates the remarkable Women at Stefanutti Stocks

On Friday 4 August 2017 Stefanutti Stocks Structures hosted a special event, at Le Chateau Guest House & Conference Centre, to mark Women's Day. The luncheon was attended by 60 women from the Structures business unit and Corporate Services. The guests were treated to a delicious lunch, a queen protea, and an address by motivational speaker Melinda Bam, who had the room enthralled by her honest, unapologetic and at times emotional inspirational message.

The celebration was organised by Marzelle Strey, Stefanutti Stocks Structures HR administration manager, who shared her thoughts about the value of such an event to Stefanutti Stocks and its female employees. "Women's Day has been celebrated in South Africa for over 56 years and acknowledges the bravery, courage and strength of women across our country. We felt it was important to acknowledge the women working at Stefanutti Stocks, by hosting them at an event, where their well-being was a key focus."

**Q: Marzelle, how did you come up with the theme - "I am - what defines me."**

A: This event had to speak to the heart of every woman attending and give her the opportunity to reflect on who she is and what defines her as a woman. Most of us are mothers and/or wives, and work full day jobs while also having to take care of our families. In all this "busyness" we can lose track of who we are and what defines us.

In her address Melinda asked us to shout out some words that define us, and it was amazing to hear some of the ladies saying phrases like "I am worthy", "I am loved", "I am powerful" and "I am beautiful". Her message about the values of hope, equality, respect and collaboration fell on hearing ears.







**Q: Was it a success, and would you do it again?**

A: When I started arranging this Women's Day event, my goal was to create a memorable and inspirational day for all the women attending. I can honestly say there were some truly inspirational moments, and, in my opinion and from the feedback I've received, I believe it was a success, it is something I would definitely do again!

**Q: Any other thoughts?**

A: Hopefully this will be the start of a new tradition within Stefanutti Stocks Structures, and create a new standard for celebrating women in the Construction Industry. Remember that "Persistence lingers in every fibre of my being, I am woman, I am triumphantly me!"

*"It's important to have events like this, where female employees can share their stories and inspire one another. They are also in keeping with the company's philosophy to develop a transformed and diverse organisation. My highlight was listening to our guest speaker, and realising that regardless of your race, we women face many of the same challenges. Women have to work twice as hard as the average male. The distinction is in your ambition. I also learnt that ambition is driven by exposure, the more you are exposed the more you want to achieve. Lastly, I learnt that we should never limit ourselves and everything we experience in our lives is preparing us for the next best thing."*

*Nthabeleng Tsotsotso, Stefanutti Stocks Corporate Services senior accountant*

*"The key message I took away was that women need to look after women, not only to be nurturing families all the time. It's important to take time out for yourself. I really enjoyed the guest speaker, Melinda Bam, who spoke from her heart."*

*Alison Redmond, Stefanutti Stocks Civils executive secretary*

*"This event is the best thing the company could have done to mark Women's Day. It gave us a perspective of who we are and the impact we have in society. A key message I took from the day was that we are as capable as the men and a critical link in life. It was wonderful to see how everyone clicked, and I enjoyed the realness and open emotions. I would most*



*definitely want to see more of these events organised. Next time I would love to mingle and move around more to get to know the rest of my colleagues better."*

*Martie Louw, Structures business unit senior buyer*

**Captions**

1. Stefanutti Stocks' remarkable women at Le Chateau Guest House & Conference Centre.
2. Marzelle Strey, who organised the event with Melinda Bam, motivational speaker and Miss South Africa 2011.
3. Priscilla Siluma, a junior buyer at Stefanutti Stocks Structures with colleague, senior buyer, Marti Louw.



# Year of the Run

## off to a blazing start

Thirty-year old Gabriel Kriel has worked for Stefanutti Stocks since 2010 - first in Botswana, then in East London, and now at the Western Cape Building division. About four years ago he started participating in endurance sport events including Ironman, Half Ironman and the International Triathlon Union (ITU) World Championships. He recently decided to take on what he calls his "Year of the Run", in which he will over the course of one year complete South Africa's toughest endurance running races.

"My goal is to run the toughest single-stage races on the endurance running calendar," says Kriel. "The distances range from 100km to 400km, with your time starting from the moment you start until you cross the finish line. Any sleeping or resting is recorded as your race time, so I'll be doing as little of that as possible!"

Kriel's first race, Cederberg 100km, took place on 17 October, and he finished in an incredible second place! "Racing 100km over mountains, self-navigation and self-supporting really tests your body and mind. The total amount of climbing amounted to 5 500 metres of vertical gain, and after the first two 7-kilometre climbs in extreme conditions with poor visibility due to the mist, rain and wind, I was exhausted. With these events, wanting to give up is inevitable at some stage, and not more than a third of the field finished this race. I had to vasbyt to finish."

### Year of the Run: Race Calendar

- October 2017: Cederberg 100
- November 2017: Skyrun 100
- December 2017: UTCT 100
- March 2018: Addo 100 Mile
- April 2018: Munga 400
- June 2018: Comrades (optional)
- July 2018: Washie 100 Mile (optional)
- August 2018: Magalies 50
- September 2018: Karkloof 100 Mile

Training for these events, takes a lot of time. Kriel leaves the house around 4am each morning, while his wife and two children are still fast asleep. His preparation includes lots of running, and training in mountains, as well as preparing himself nutritionally, spiritually and emotionally. The actual races form a large part of the training and the time between races is for recovery, speed work and skills work. "I spend so much of my training in solitude, which gives me plenty of time to spend with God and prepare my mind and emotions. When race day comes, I know what to expect and how to react."

Kriel's next race, Sky Run 100km, will be at high altitude in the mountains of Lady Grey on 17 November. Follow him on Facebook at GODmanLIFE.



# Five-a-side Soccer

## Tournament awakens Stefanutti Stocks' competitive streak

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

# Western Cape division gets behind the wheel at Corporate Games 2017

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

The Corporate Games was founded in 1988 and is the world's largest multi-sport, team-building festival for everyone, regardless of their age, ability or level of fitness. The games came to Cape Town in 2012 and in 2016 Stefanutti Stocks Building Western Cape entered for the first time. Its employees participated in the mountain biking as well as the trail running events, of which site agent Gabriel Kriel won the 10km run by an impressive 10 minutes.

"This year we asked staff to vote to participate in an event, and karting, which allows for more staff to take part, was chosen," says Jacqueline Pryra, Stefanutti Stocks Building Western Cape personal assistant. "The games really are fantastic for team building, to build company morale, as well as to meet the families of colleagues who always come along to lend their support!"

On 9 September 2017, Stefanutti Stocks did not disappoint, and finished fourth overall in the team karting event. Tiaan Van der Merwe, petrol head by night and Building Science student by day, raced to an impressive second place in the 2903 KTG G/PRIX MENS' OPEN. Tiaan commented that "the karting event was a day filled with fun and



Stefanutti Stocks Building Western Cape's annual soccer tournament took place on 29 September 2017, at Fives Century City. The new venue meant smaller teams, a faster game, more energy and even more excitement! "Soccer and the fun that goes with it is not only great for team building, but has also made this event a firm favourite with our site teams, with many of the same individuals joining the fun every year," says Stefanutti Stocks Building Western Cape personal assistant Jacqueline Pryra.

This year for the first time teams outside of Stefanutti Stocks were invited, and Technical Finishes entered a team as well as sponsoring the cool drinks for the day. "Another one of our suppliers, Goscor, sponsored the team kits and gifts for the winners," says Pryra. "This gesture was really appreciated, particularly by those who got to walk away with the fabulous sports bags containing a selection of refreshments."

A total of eight teams participated, representing various sites across the Western Cape. The included La Piazza, Cilmor Plumbink, Plant Yard, Technical Finishes, Woolworths - Team 1 and Team 2, and Paardevlei Team 1 and Team 2.

The team from La Piazza went on to win the tournament, with the Cilmor Plumbink team coming in second, but certainly leading as the team with the most spirit! "I have participated in the WC football tournaments for eleven years, but this one was by far the best - for the players and for the fans," says winning captain Mathieu Carpenter. "Of course the cherry on top of our day, was to be a part of the winning La Piazza team!"

**Captions:**

1. The winning La Piazza team.
2. The most spirited team, representing the Cilmor Plumbink site.



excitement - and, of course, fierce competition between corporates. It was definitely a highlight of my year, and was great to see the Stefanutti Stocks family support and motivate each other."

Junior quantity surveyors Zerina Dalwie and Lauren Visagie finished respectively in fifth and sixth place in the 2902 KTG G/PRIX WOM OPEN.

"The smiling faces on the day told the story of how much fun everyone had," says Pryra. "Next year we would love to increase the number of staff participating in the games, and hope to enter different types of events. We have a year to train!"





# Payroll administrator finishes top of her class

In 2016 Stefanutti Stocks Corporate Services enrolled four of its payroll administrators at the Payroll Education College to complete the two-year Payroll Diploma Course. "We wanted to offer our administrators the opportunity to have a formal qualification and a deeper understanding of their tasks," says Jaco Van Der Westhuizen, Stefanutti Stocks Group remuneration & benefits manager, "and all the candidates welcomed the opportunity to participate."

*Some of the administrators, including Janeill Kruger who has been working for Stefanutti Stocks since 2011 elected to complete the two-year course in just one. Not only did she complete the course in a year, whilst still working full-time, she also finished as the top student in her year!*

**Q: Janeill, what is your educational background?**

A: I have a Matric, and before completing this course, I had not enrolled in any other tertiary education.

**Q: Did you enjoy the Payroll Diploma Course?**

A: I enjoyed it very much, as we learnt something new all the time.

**Q: How long was the course? And how intense?**

A: The Payroll Diploma is a two-year diploma, but some of my colleagues and I decided to finish it in one year. It did mean that we had more work and had to put in more hours, but it paid off in the end! The key was to stay focused at all times, as well as maintain intense concentration throughout the entire course.

The intensity of the course is very hard to answer, as one person's definition of intense may be the same as another person's 'relaxed'. I found it intense at times but my experience as a payroll administrator certainly assisted me during my studies.

**Q: Was it easy to juggle work and studies?**

A: Not really. Getting the balance can be quite tricky, but I managed to find a middle ground between the two.



**Q: Has the diploma changed the way you approach your work?**

A: Yes, it has. I've implemented quite a lot of what we learned in my day-to-day tasks as an administrator.

**Q: Did you expect to come top of the class?**

A: I definitely didn't, in fact I'm still in shock, but we all hope to excel in the things that we do, especially when we try to do our very best.

**Q: Has it inspired you in any way?**

A: It has made me more passionate about my work.

**Q: Would you recommend a formal qualification to your peers?**

A: I found it very educational and believe studying will only assist us in our daily tasks. I would most definitely recommend it.

**Caption:**

Pictured is Janeill Kruger with her trophy for "Top Student 2016".

# Stepping up the wardrobe in KZN

**Source: Janette Jeeves, Stefanutti Stocks Coastal executive secretary**

"Stefanutti Stocks has always been proud of its corporate identity and image, and we've always encouraged our staff to look their best - both in the office and on site," says Janette Jeeves, Stefanutti Stocks Coastal executive secretary. "Our branded clothing not only creates a sense of belonging and unity, it also helps us to portray the professionalism we are constantly aspiring to. Dressing for success is just another part of our achieving excellence in execution."

**Caption:**

Proudly sporting the latest corporate wear are, from left to right: Beryl Nxumalo (admin clerk), Janette Jeeves (executive secretary) and Laura Boik (accountant).





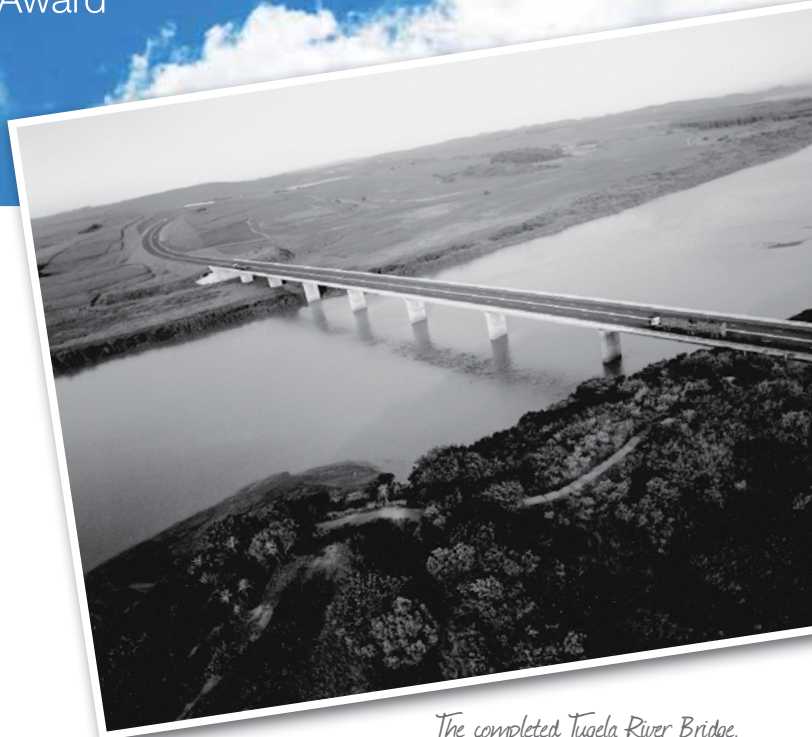
# A trip down memory lane

Excellence in Execution - our first Fulton Award

Stefanutti Stocks has a well-earned reputation in the industry as a company that considers the build-ability and design of the structures that it tenders on. The Tugela River Bridge project, in the early nineties (1993), was perhaps the first large project, for which the company (then known as Stefanutti & Bressan) prepared an alternative design, which was submitted with its tender.

The bridge was originally designed as a four-lane divided carriageway with two separate 11.4m- wide bridge decks. Stefanutti & Bressan (S&B) submitted a tender with an alternative single structure design, and the contract was awarded based on this design.

The Tugela River Bridge construction went on to win the prestigious Fulton Award for Excellence in the Use of Concrete in 1994. At that point in time this structure was the largest incrementally launched concrete box structure in the southern hemisphere. Its deck is 452m long, 20.75m wide and 4m deep. Its spans comprise of one of 23m, one of 49.5m, six of 56.25m and one of 42m. Its final launch mass totalled 165 000 ton.



*The completed Tugela River Bridge.*

Clive Reucassel, who recently celebrated his thirtieth year with the company, was the contracts manager for the Tugela Bridge project. He had been recruited as a site agent by Gino Stefanutti and joined shortly before the 1987 floods, a time when S&B was rebuilding much

of the flood-damaged infrastructure, including the reconstruction of the Umdloti River Bridge.

In 1989 Clive was promoted to contracts manager and pioneered the company's move into Swaziland, while constructing the Palace for the King of Swaziland. His next major project after the Palace, was the 1993 Tugela River Bridge construction. "There have been many landmark projects in my career prior to, and since the Tugela Bridge contract," he says, "but as the first award-winning project for the company and I, it will always occupy a special place in my project portfolio."

Over the last three decades Clive has been involved with numerous bridge, marine and heavy industrial projects for large corporates and multinational companies. He has led multiple Stefanutti Stocks Coastal joint ventures, as well as numerous incrementally launched bridge projects for the KZN-based division. These include two bridge decks for the Khangela Bridge; the King Shaka International Airport interchange structures which included the iconic incrementally launched bridge over the N2 freeway; and the challenging Brakspruit Bridge in Hoedspruit for Transnet that won the prestigious "Transnet Capital Projects – Project of the Year in 2011".

"Receiving industry awards for our projects is a confirmation of our ability to deliver technically challenging projects to the highest quality," says Clive. "I'd like to think the quality of all of our finished projects are worthy of awards, as we always endeavour to deliver world-class standards."

His team has recently completed the construction of the Lower Thukela Water Treatment Works at Mandini, which is currently one of the largest water and waste water treatment plants under construction for Umgeni Water.



*Pictured at Clive's 30-year long-service celebration are, from left to right: Custodio Calaba, Prem Naidu, Clive Reucassel, John Jackson, Sunny Singh and Derek Salzmann.*



## Roads, Pipelines & Mining Services Business Unit

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

### Divisions:

#### **Stefanutti Stocks 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.

#### **Stefanutti Stocks 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 capabilities:

- 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.

## Structures Business Unit

Managing director: Werner Jerling

Tel: +27 11 571 4300

Email: structures@stefstocks.com

#### Capabilities:

- Heavy industrial plants, i.e. mining infrastructure, process plants, factories.
- Various power generating facilities.
- Marine construction.
- Geotechnical investigation, lateral support and construction of various piled foundations.
- 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.

### Divisions:

**Civils:** Managing director: Mark Stannard - Tel: +27 11 571 4300

**Coastal:** Managing director: Matthew Horwill - Tel: +27 31 700 1416

Cape Town offices: Tel: +27 21 386 2610

**Geotechnical:** Managing director: Shaun Butler - Tel: +27 11 571 4300

## 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:**

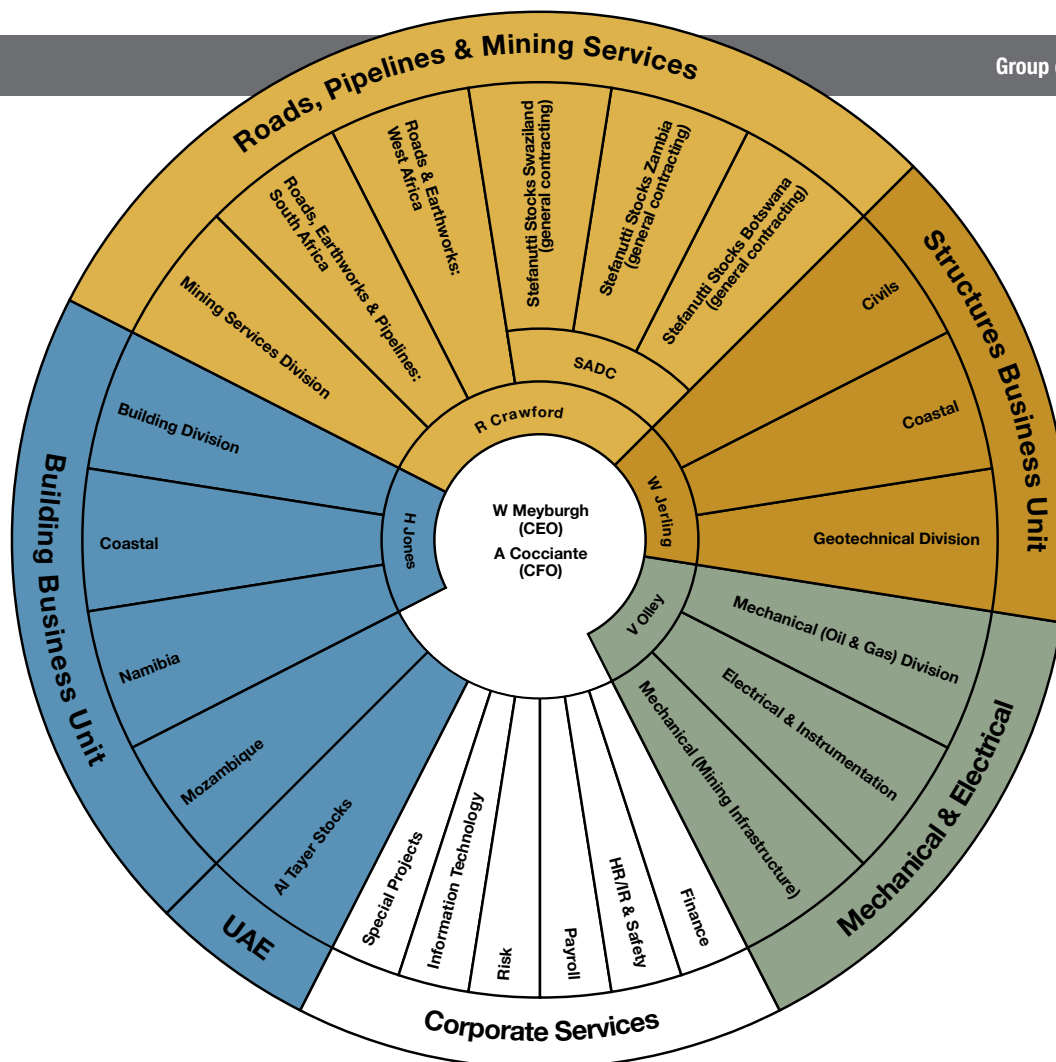
Managing director: Jose Faria

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](mailto: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: Liqhobong Diamond Mine, Lesotho. Kusile Power Station, RSA. Rani Towers, Mozambique. Lower Thukela Waste Water Treatment Works, RSA.

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**we** can construct it



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excellence **in** execution