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Continuous pursuit of higher levels of performance

**VOLUME 20 | NOVEMBER 2018** 





Stefanutti Stocks celebrates thirty years in Eswatini

Marine mining infrastructure in Guinea completed

Concrete repair underway at Koeberg Nuclear Power Station

Tsogo Sun hotels completed in Zambia and Mozambique

Mechanical division builds chrome recovery plant for Anglo





# From the **CEO**

The Southern African construction market remains at an historic low, with a continued slowdown in activity and an aggressive tendering environment. Infrastructure spend has been steadily reducing over the past seven years, to the extent that construction over the past twelve months has really been insignificant. This aggressive environment will result in our operating profit tender margins remaining under pressure in the short to medium term.

The group's performance continues to reflect this difficult trading environment with our order book reducing to R12,8 billion, the lowest it has been since August 2016. Most of the work secured over the last six months has been from the mining and industrial sector. Importantly though is that, we have managed to maintain the order book beyond the borders of South Africa at 30%. This area has traditionally produced better returns for the Group. In addition to our satisfactory local operations, a good performance by our United Arab Emirates business has assisted the group to increase its headline earnings per share by 46% relative to August 2017.

Despite the negative outlook for the sector, we have nonetheless improved the operating profit compared to the first six months of last year. Furthermore, in the short term there are opportunities in the local market which include surface mining related services, selected open-pit mining contracts, urban developments, petrochemical tank farms, smaller oil and gas projects, pipelines, water and sanitation treatment plants as well as warehouses and some design and construct opportunities in the building sector.

We are cautiously optimistic that the positive investment sentiment engendered at President Ramaphosa's recent "Thuma Mina (Send Me)" investment conference will translate into better opportunities for the construction industry.

Should the Government Stimulus Package materialise, and depending on the detail relating to its implementation, this could create opportunities for various divisions within the group.

We continue to prudently consider various opportunities, cross border and further afield, in road and bridge construction, bulk pipelines, marine and mixed-use building projects.

Our multidisciplinary and geographically diversified business structure enables Stefanutti Stocks to remain a strong competitor in the markets in which it operates. With the challenges mentioned above, management constantly reviews and aligns each business unit and its respective divisions to their markets to ensure their ongoing sustainability.

#### Highlights

This year our operation in the Kingdom of Eswatini (previously known as Swaziland) celebrates its thirtieth year of contracting in the country. The company is participating in a number of highprofile projects and details of these, as well as a snapshot of their three-decade journey, can be found on page 8.

This issue also show-cases our multidisciplinary skills across a number of unique projects across Southern Africa, including Mozambique, Botswana, Zambia, the Republic of Guinea, and within most provinces of South Africa. Examples include:

- Stefanutti Stocks Civils being the only construction company in South Africa performing concrete repair work on radiationcontained buildings (see article on the refurbishment of the civil structures on Koeberg's nuclear island on page 13).
- The Mechanical division's construction of a Chrome Recovery Plant for Anglo American Platinum's Amandebult Mine (page 21).
- An inhouse joint venture between our Roads, Pipelines & Earthworks and the Coastal division completed the four-span Hammarsdale Bridge deck construction in record time (page 29).
- Stefanutti Stocks Building KZN building the iconic Durban Christian Centre structure, that includes six complex concrete

- buttresses that will support three eighty-metre long, steel-clad arches (page 34).
- Our Zambia and Mozambique operations having respectively completed Tsogo Sun Hotels (page 38 and 41).

Our committed teams across the Group are our greatest asset, and their passion for their projects is evident in many of this Benchmark's articles. The industry also acknowledges these achievements, and we're proud to be associated with the professional teams, with whom we are able to deliver on our mission of Excellence in Execution. Awards include: multiple Master Builders Association Safety awards; Stefanutti Stocks Coastal's Strandfontein Desalination Plant, which won no less than four awards in as many months (page 44), and a number of Stefanutti Stocks Building Western Cape's projects excelled at this year's Steel Awards (page 35).

#### Safety

The group's Lost Time Injury Frequency Rate (LTIFR) at September 2018 was 0.05 (Feb 2018: 0.11) and the Recordable Case Rate (RCR) was 0.31 (Feb 2018: 0, 54). This is the lowest this safety recording has ever been. More information on how our Behavioural Change Programme is making a difference can be found in the article on page 43. Behavioural change was also a key focus during our second annual safety, health and environment (SHE) conference that took place on 5 October 2018 which was well attended by our directors and SHE heads of department (article on page 42).

#### **Women in Construction**

We have introduced a new feature into the Benchmark (page 4), that focuses on some of the excellent work done by the women in our organisation. In this issue we get to know a little more about Dibuseng Mokoena, our first female production manager, working at Stefanutti Stocks' Contract Mining operation at the Chilwavhusiki Colliery in Mpumalanga. Over the next few issues we'll be profiling further women who are making their mark at Stefanutti Stocks. (Please feel free to nominate one of your colleagues.)

#### Stefanutti Stocks Board

Mafika Mkwanazi retired by rotation at the company's Annual General Meeting and did not offer himself for re-election. On behalf of the board and management I'd like to thank Mafika for his valued contributions and guidance over the years and wish him all the best for the future.

Changes in the board, that will come into effect in May/June 2019 include:

- Kevin Eborall will retire as chairman and a director with effect from 31 May 2019. Zanele Matlala, who is currently chairman of the Audit, Governance and Risk Committee, will replace Kevin as of 1 June 2019, and at the same time step down as chairman of this committee.
- I will be retiring as Stefanutti Stocks CEO as of 31 May 2019, and Russell Crawford, currently CEO Designate, will be appointed as CEO and director of the company with effect from 1 June 2019.

On behalf of our management team and our board of directors I would like to thank all our employees for your considerable efforts over this past year. Your continuous commitment and dedication in this challenging environment is recognised and valued. We are also grateful for the ongoing support to our Group from our customers, suppliers, service providers and shareholders.

Finally, I wish you and your families a peaceful and blessed break over the festive season and once again look forward to starting the New Year with a refreshed and re-energised team.







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Volume 20 of the Benchmark was compiled on behalf of Stefanutti Stocks by Gerbera Brand Management | www.gerberabm.co.za





#### Senior Appointments

## & Promotions

#### Stefanutti Stocks Building business unit

- Howard Schwegmann has been appointed as managing director of the Building business unit (taking over from Howard Jones) effective 1 June 2018.
- Donny Peterson has been promoted from alternate director to director of Stefanutti Stocks Western Cape, effective 1 September 2018.

#### Stefanutti Stocks Construction & Mining business unit

- Derek du Plessis has been promoted to managing director of the Construction & Mining business unit, effective 1 September 2018.
- Shaun White has been promoted to regional managing director for the SADC operations, effective 1 September 2018
- Thandiwe Hlatshwayo has been promoted from alternate director to director of Stefanutti Stocks Construction Swaziland (Pty) Ltd, effective 1 September 2018
- Hannes Geyser has been appointed as director of Stefanutti Stocks Swaziland (Pty) Ltd, effective 1 September 2018.





# **Women in Construction**

Meet **Dibuseng Mokoena**, Stefanutti Stocks Mining Services production manager



In this issue of the Benchmark, we meet a relative newcomer to the industry – twenty-seven-year-old Dibuseng Mokoena has worked for Stefanutti Stocks Mining Services for four years, most recently as the production manager at the Chilwavhusiku Colliery in Bronkhorstpruit.

The colliery, that is owned by Black Royalty Minerals, became fully operational towards the end of 2017, and supplies coal to customers within South Africa, as well as serving the export market. The team running the site is a young team, comprising approximately sixty per cent of females, and overseen by contracts manager Graham Ralph, who is one of Mokoena's mentors. She is currently also mentored by Marco Pasquali Stefanutti Stocks Mining Services' contracts director responsible for tailings disposal and material handling.

Mokoena, who completed her Mining Engineering degree at Wits in 2014, joined Stefanutti Stocks as a site engineer halfway through 2015. The timing was perfect as in 2016 lan Ferguson, managing director of the group's Mining Services division, introduced a two-year internship programme for mining graduates. Since joining the programme she has worked as a site engineer at the Kangala mine, where she also worked shifts as a production foreman, a pit supervisor and a production manager, shadowing the contracts manager. Since November 2017 she has been the production manager at Chilwavhusiku Colliery, and part of the team that have worked on building a greenfield site into a successful open-pit coal mine.

#### What have some of your career highlights been thus far?

"After having cold-called and sent my CV to every potential employer across a number of provinces, being called for an interview and getting a job at Stefanutti Stocks was certainly one of the most exciting days of my life. "Since then other highlights included getting my blasting ticket and being appointed as a production manager. Also, the process of winning over our client's confidence, when we moved from being a month behind on production to being ahead, and consistently exceeding Black Royalty Mineral's targets ever since.

"Another highlight is working with and learning from Graham Ralph, who keeps encouraging me to think beyond what I have learned in my text books. Seeing the mine through his more experienced eyes has really brought it, and all of its components, to life."

#### What is the most important aspect of your job?

"The planning process and then simplifying and clarifying the vision, so that everyone on the production team buys in. An important, and exciting aspect of my work is the interaction with people – I want to leave them better off than I have found them. This can mean leaving them with more knowledge or insight into our reason for doing things in a certain way, or better equipped to do their work more efficiently. It's also important to make sure that the right people are in the right positions and can contribute to our overall goal.

"A win for one is a win for all and within our site team we allow room for people to voice their ideas, and suggestions for how we can do things better. As a tight-knit team we also know that when challenged (by rain or when our client increases the targets) we can count on one another to execute the work."

#### What is the favourite part of your day at work?

"Definitely the time we spend in the pit or at the viewpoint, where we can get a good snapshot of the operation to see if our production is going according to plan, if our people are taking care of our machines, and how everybody is interacting."

#### Do you see your working within the construction industry as a unique occurrence?

"I think women in construction bring a breath of fresh air. Every individual is different, and all families have their quirks. Here I am in a





industry. If you would like to nominate someone

at your site, in your division or business unit,

please e-mail holdings@stefstocks.com.

The Stefanutti Stocks Contracts Mining Team at the Chilwavhusiku Colliery pit. From left to right are training officer Thembelihle Mkhwanazi, production manager Dibuseng Mokoena, contracts manager Graham Ralph, safety cadet Khanyisile Mnguni, pit supervisor Jabu Nxumalo, subcontractor Bennie Els from Delevex, mining engineering intern Dimakatso Makgati, safety cadet Lucky Sigudla and quality officer Zanele Mabula.

Dibuseng Mokoena in the pit at the Chilwavhusiku Colliery.



#### Stefanutti Stocks CEO receives

# SAFCEC Lifetime Achievement Award

On Monday 15 October 2018 Stefanutti Stocks CEO Willie Meyburgh was awarded the Lifetime Achievement Award for Outstanding Contribution to the Industry at the South African Forum of Civil Engineering Contractors (SAFCEC) Annual Presidential Gala Dinner. Below are excerpts from his acceptance speech:

"It is a great honour to be given an award such as this, and I accept it with humility and gratitude. It came as an unexpected surprise and I honestly do appreciate it. I would like to mention though, that I did not walk this journey alone and I therefore also accept this award on behalf of the Stefanutti Stocks team.

"I strongly believe in good company culture and values combined with team effort and team spirit: these are the most fundamental ingredients for success and I have advocated this for many years as the CEO of Stefanutti Stocks.

"The past forty-four years of my professional life have been dedicated to service to the construction industry and my country. I am passionate about the construction industry and everything that is linked to it. It has been my work and my hobby, and a great love of my life – and I receive this award with great pride. The award also symbolises the many blessings that I have received during my career.

"There was a time that I, and other CEOs of the JSE listed construction companies, were feeling a bit despondent about the future of SAFCEC – until the appointment of Webster Mfebe as CEO in January 2013. Webster is busy restoring the organisation to its former glory, and is successfully raising its profile – both in terms of relevance and credibility.

"Webster, under your leadership, among other things, we are ensured the availability of seed funding for the successful establishment of the Bargaining Council for the Civil Engineering Industry, which is now one of the most stable and successful bargaining councils in our country. You also worked very closely with the CEOs of seven listed companies to embark upon a Voluntary Rebuild Programme, and this programme is destined to add impetus to the industry's transformational initiatives.

"At Stefanutti Stocks we have always believed that no individual company can be an island and still succeed outside of the collective wisdom and leadership of an industry body like SAFCEC. Over the years

we have supported it well, and at one stage eighteen of our own employees were deployed to serve on SAFCEC committees in various branches.

"I encourage every civil construction company in South Africa to join SAFCEC as it provides a single and united voice for our industry.

"Honourable Minister Nxesi, it is not always possible to speak with you without the necessary protocol, but I would like to take advantage of your presence here tonight: As you know construction plays a pivotal role in South Africa's economic and social development. It provides the physical infrastructure that is the backbone of economic activity and is also a large-scale provider of employment opportunities.

"My plea to you Minister, is that government should at all times listen to the important and critical voice of SAFCEC. We are one of the key players that will ensure the successful implementation of the Stimulus and Recovery Package and other critical outcomes of the Jobs Summit.

"You also played an important role in setting up the VRP. My request to you this evening is to push the implementation of the planned Infrastructure Development Plan because our country and industry desperately need a catalyst to stimulate growth and employment. Many companies are currently being liquidated and many employees are getting retrenched because of a shortage of work prospects.

"As I will be retiring at the end of May 2019 I want to make use of this opportunity to bid my industry colleagues farewell and to thank them for their contribution to my wonderful life in the construction industry. Russell Crawford who is currently our CEO Designate will succeed me with effect from 1 June 2019. Russell is 'home-brewed and deeply drenched' in the culture and values of Stefanutti Stocks. I have no doubt that he will sustain the positive goodwill towards industry issues and make our company a committed and indispensable ally in the renewal and rebuilding of our industry and country.

"Before I close I want to take a moment this evening to thank my dearest wife, Marinda and my children Raynhardt , Ruben, Marené and Suné, who have all given me moral support and inspiration throughout the years and enabled me to provide a service to my company, industry and the country.

Once more, thank you SAFCEC for the award, and thank you to the Stefanutti Stocks team for your loyal support and team spirit.

God bless to you all."

#### Caption:

Willie Meyburgh (centre) pictured with his colleagues from Stefanutti Stocks. From left to right are Mike Stevenson (Stefanutti Stocks Civils contracts director), Russell Crawford (CEO designate), Vuyo Qubu (Construction & Mining business unit director) and Matthew Horwill (managing director Stefanutti Stocks Coastal).

#### Meet your CEO designate -

## Russell Crawford

Russell Crawford has worked in the construction industry for thirty-six years, and for Stefanutti Stocks for the last twenty-eight. He has held various director positions since 2000 and has been a Stefanutti Stocks Executive Committee member since 2016. As an experienced and driven construction industry professional, who has worked both in South Africa and on the African continent he has an in-depth understanding of the sector. He is also a strong proponent of developing people and nurturing a healthy organisational culture and has throughout his years of service at Stefanutti Stocks, lived by and endorsed the company culture, its values, mission and vision.

"I am a great believer in nurturing a healthy organisational culture. This is why I am passionate about the re-introduction of the Founders Mentality back into the business, as well as defining our Stefanutti Stocks Way, and our three enablers - energised and engaged employees; client relationships, and flawless execution."

#### Career path at Stefanutti Stocks

Russell joined Stefanutti & Bressan (S&B) Roads & Earthworks in Durban in 1990, where he started working as a site agent, and later a contracts manager. He moved to the Kingdom of Eswatini (previously known as Swaziland) in the same capacity and was soon promoted to general manager of S&B Civil Roads (Swaziland), a position he held until he moved back to South Africa, to work in the Gauteng-based Roads & Earthworks division.

He credits his time in Eswatini as being an incredibly formative period that matured him in his personal as well as in his professional capacity. "S&B was run on a founder's mentality, with us (management) taking ownership of our path of growth. We had to be self-sufficient. We built relationships with people from all walks of life, secured and executed our own work, made sure that we got paid, and that our staff got paid. We ran all aspects of the business and would mix with a broad range of individuals - from royalty, to government ministry officials, through to our work force. In South Africa, I would never have had this kind of exposure, and it gave me an incredible grounding, also to later work in countries like Zimbabwe and Zambia. My four-year tenure certainly allowed me to hone my business and leadership skills."

2004-2006: S&B Roads & Earthworks (Gauteng) - director

2006-2007: S&B Roads & Earthworks (Gauteng) -

managing director (MD)

2008-2015: Stefanutti Stocks Roads & Earthworks

(Gautena) - MD

2016-2017: Stefanutti Stocks Roads, Pipelines & Mining

Services business unit - MD

2017-2018: Stefanutti Stocks Construction & Mining

business unit - MD

July 2018: CEO designate

Russell has been a member of the Group's Executive Committee since 2016 and has been the exco champion for the Plant Forum (since



2016); Procurement Forum (since 2016); Quality Forum (since 2017) and the ISO Transition Forum (since 2017).

#### Some career highlights

"I've been fortunate to experience various career highlights thus far, and these include strategic, financial, as well as operational ones," says Russell. "In recent years we have introduced a number of corporate culture initiatives, to support a healthy corporate culture and promote a pro-active rather than a reactive approach. These initiatives have successfully instilled ownership and accountability and our drive is yielding visible and palpable change in our company culture, as it returns to the founder's mentality on which the original success of the business was built."

Other strategic highlights include being part of the management team driving the successful geographical expansion into Africa, from where approximately thirty per cent of the group turnover stems, as well as the implementation of a selective tendering process, in order to protect the business from participating in loss-making projects.

Financially, Russell has a track record of leading profitable sites, projects and divisions as well as a business unit that has consistently met its forecast - a trend he believes his successor, Derek du Plessis, will continue to deliver on.

Russell has always been motivated by challenges, and his analytical abilities and good strategic thinking have supported the development of some core strengths which have been instrumental in contributing to the success of the divisions and business units he has led. He is an entrepreneur at heart and known to drive for results and high standards. He has worked with and been mentored by some of the original founders of the Group and has been exposed to the brand's original pioneering culture based on an ownership mindset, pride and personal accountability.

"My career path has been assisted by my mentors, as well as the many competent directors and members of staff that I have worked with - many of whom have also been with this company for a long time. We all have different skills-sets and talents that contribute to Stefanutti Stocks' longevity. As a team this has enabled us to take on difficult challenges; to make the most of every opportunity; and more often than not has resulted in the success of our endeavours.

"I'm looking forward to learning all that I can from Willie during this handover period and am committed to leading the Group through the next era of its journey."

#### Stefanutti Stocks celebrates

# thirty years of contracting in the Kingdom of Eswatini



After the successful completion of the palace Gino Stefanutti (who had seen great potential in the country and had promised King Mswati III that S&B would stay on) set about establishing a local operating company. The operation in Eswatini (previously named Swaziland) would become a template of how the company would establish its brand in Africa: it would invest in land, build offices, create infrastructure and employ and develop Eswati nationals.

The original piece of swampland that was bought in the Matsapha industrial area still remains the company's head office almost three decades later, albeit that the office and workshop infrastructure has, over the years, expanded to accommodate the contractor's growing requirements.

#### The first decade

In the early years the company participated mainly in road re-gravelling projects. It had a breakthrough with the award of the Nkomati River Bridge, which included approach earthworks on either side, and this in turn motivated the Pinetown-based earthworks division to start up an Eswatini-based earthworks operation. The company's reliability and its delivery of high-quality projects contributed to the development of strong relationships with its clients and laid a foundation for its reputation as an organised, professional contractor – and the only one in the country at the time, with the ability to undertake complex projects.

#### The second decade

At the start of the second decade of its existence the majority of the contracts undertaken by S&B in Eswatini were for national and municipal government and mainly comprised infrastructure development including gravel roads, minor road construction projects, bulk earthworks, storm water, sewage, water reticulation, an earth dam and the construction of the Sikhoye Bridge for the Ministry of Public Works and Transport.

In 2001 S&B Civils Roads undertook its first cross-border project in the form of earthworks for the new Nelspruit International Airport. Various sugar mills also provided work for S&B, in the form of warehouse construction, an ash dam, as well as infrastructure expansion. Other project highlights included phase one of the Lubombo Regional Hospital construction in Siteki for the Ministry of Economic Planning



& Development; the construction (civil and traditional building) of the Trade Fair in Manzini as well as various industrial and residential projects, as well as new and refurbishment building contracts.

During this period the Building business ran as a separate entity to the Civils Roads company and all projects that came to market, no matter the size, were tendered on. The infrastructure within Eswatini at the time meant that often material and resources had to be imported across the border from South Africa – and if something out of the ordinary was required, S&B (and its clients) would have to wait. This made proper planning crucial.

Every item of plant and equipment was owned by S&B – and managed by whomever was running the company at the time. The workshop, which originally consisted of one bay, was often a hive of activity as mechanics maintained the second-hand plant procured from South Africa. At the time there was not an abundance of spares on hand, or hardware stores that one could quickly pop into – it was therefore a priority to look after these assets.

#### The third decade

At the beginning of the third decade, the two Eswatini companies merged, in order to make the best use of their resources, and the company began operating as S&B Construction Swaziland. A few years later it rebranded to Stefanutti Stocks, in line with the name change of the group in South Africa.

In 2009 construction began on a few major projects including the much-anticipated International Airport, then known as Sikhuphe; the Mbabane blood transfusion unit, and the LUSIP tertiary distribution system. Many exciting and prestigious multidisciplinary contracts would follow as after twenty years of operating in the country the company was well established as a general contractor, with construction capabilities including:

- Transport infrastructure including airports, roads and bridges
- Road construction & rehabilitation
- Water & waste water infrastructure construction including dams and reservoirs
- Building construction including commercial, industrial and residential buildings
- Agricultural land development
- Bulk earthworks
- Design & construct project delivery

#### An in-house laboratory

A large contributor to Stefanutti Stocks' ability to efficiently and effectively produce high-quality finished structures on its construction sites - in particular the remote ones - was the establishment of an

in-house, mobile laboratory, that could test the properties of materials found on site (soil, guarry stone, clay etc.) to ensure that these would meet the engineering specifications required for the project.

The laboratory was originally established in 2009 as part of the site establishment for the Lower Usuthu Small Holder Irrigation Project (LUSIP). The investment of over half-a-million Rand was motivated by the sheer volume of the scope of work, which included the construction of sixty balancing dams across a 5 700 hectare area. After completion of the LUSIP project the laboratory proved invaluable at the US Embassy project (completed in August 2014), where concrete specifications and tolerances were stringent. It is currently based at the Biotechnology Park site, from where it provides testing services to many of the company's other contracts.

#### Recent project highlights

The third decade has offered many project highlights, including LUSIP, King Mswati III International Airport, MTN office building, various water supply schemes, Public Service Pension Fund's (PSPF) Mbabane Office Park, factory shells, US Embassy Compound, Sincephetelo Motor Vehicle Accident Fund (SMVAF), as well as the iconic International Convention Centre (ICC) and the Five-Star Hotel (FISH) currently under construction in Ezulwini.

The development of the Biotechnology Park, undertaken for the Ministry of Information Communication & Technology, forms part of the King's 2022 Vision and commenced in 2012. The Biotechnology Park comprises various lots, including:

- Lot 1 (March 2012 March 2014) site clearance, earthworks, road layer works, drainage, sewer, water, electrical works and other associated works.
- Lot 2 (April 2014 July 2015) and Lot 3 (July 2015 May 2015) included further bulk earthworks and infrastructure construction.
- The construction of the Royal Biotechnology Park Service Centre.

The infrastructure construction phase of Biotechnology Park saw Stefanutti Stocks construct all services, starting with bulk earthworks for all platforms and roads. This phase included the installation of a storm water sewer, telecommunications, electrical reticulation and water systems, followed by the construction of walkways and roads, including road markings, street lights, traffic signs and traffic lights. The final component consisted of landscaping and finishing off the platforms on which buildings will be constructed in the future. (continued on page 10)

- To commemorate its three decades in Eswatini Stefanutti Stocks Construction Swaziland has published a coffee table book: Contracting in the Kingdom of Eswatini: A celebration of thirty years of excellence in construction.
- An aerial photograph of the Sikhoye Bridge. The construction of the bridge began in January 2000 and was completed by December 2000.

  An aerial perspective of the services infrastructure project at Biotechnology Park.
- The state-of-the-art, environmentally friendly Royal Science & Technology Park Service Centre (RSTPSC) nearing completion.
- The Stefanutti Stocks Construction Swaziland's offices in Matsapha.











The Royal Science & Technology Park Service Centre (RSTPSC) is nearing completion and is a state-of-the-art, environmentally friendly building that features an insulated energy efficient façade system, solar panels and rain water harvesting and recycling system. The building will serve as the administration node for the Royal Science & Technology Park and will incorporate banks, a post office, various government bureaux as well as an auditorium and exhibition venue.

The Sincephetelo Motor Vehicle Accident Fund (SMVAF) building was completed in August 2015. Stefanutti Stocks Construction Swaziland, in joint venture with Heptagon and Kapson, constructed this multipurpose, six-storey office block with basement parking, a threestorey clinic and guardhouse. The contract included bulk earthworks, platform construction, the construction of the super-structure and building, as well as the upgrading of the Mbhilibhi Road. The project forms part of the urban renewal of the Mbabane central business district (CDB) whereby prestigious world-class buildings are being developed on underutilised municipal land. The clinic was officially christened by His Majesty King Mswati III in July 2018.

The United Nations House in Mbabane was completed for client Lang Mitchell Associates in May 2017 and saw Stefanutti Stocks Construction Swaziland construct a six-storey office building and all external works. The finished integrated reinforced concrete structure comprises a ground floor covering the "footprint" of the building and four separate five-storey towers.

The building was constructed on piled foundations, with the upper floors comprising reinforced concrete beams and slabs (ground, suspended and roof), columns and lift core walls. Aluminium shop fronts, windows and masonry walls that form the external envelope. The project included the design and installation of all services. External works included hard surfacing for vehicular access and parking, the construction of a small guard house, a substantial security wall and fencing on all sides.

The new headquarters for Swaziland Revenue Authority (SRA) will be completed by the end of 2018 and comprises a multi-storey structure of commercial offices, a semi-basement for staff and open parking for customers and visitors.

Stefanutti Stocks Construction Swaziland enjoys a long-service record, and many employees recruited in the nineties are still with the company in 2018. These include general foreman Augusta Quintella; foremen France Dlamini, Thembinkosi Shongwe and Paul Shongwe (who started as a grader operator in 1999); driver Kenneth Madonsela, as well as administration manager Joan Lesabe and buyer Themba Maziya. Sam Bhembe, who joined S&B as a clerk in 1992 retired from the company in 2016 after almost 25 years of service. Anton Salzgeber, who joined as a foreman in 1989 and who worked on many of Stefanutti Stocks' highprofile projects, sadly passed away from a heart attack on 28 September 2018. His insight, willingness to share his knowledge and mentor his colleagues, as well as his dry sense of humour will be greatly missed by all.

#### The next decade

"As the opportunities for growth have presented themselves, we've been able to thrive," says Shaun White, managing director of Stefanutti Stocks Construction Swaziland. Currently the company is constructing a number of high profile buildings and has been able to set itself apart from other builders, as there is no other contractor in the country that is able to deliver everything that Stefanutti Stocks can. "As a general contractor we take pride in completing every type of contract, no matter the discipline, and doing so well. I believe our success really comes down to our work ethic, our people, our deliverables and the quality we produce. But mostly it's down to our people ... especially those who understand the company, the country and the culture. It is important that it is these people who take this company forward into the next decade and beyond."

- The 2006 SWADE S&B team, of whom eight are still with Stefanutti Stocks in November 2018. From left to right are Anton Salzgeber (who sadly passed away in September 2018), Peter Oliver, Paul Shongwe, Bheki Shongwe, Manqoba Gamedze, Hardus du Plessis and Sabelo Dlamini. Seated in front are Champion Motsa, Velaphi Mabila and Sonnyboy Nhleko.
- United Nations House in Mbabane with its four separate five-storey towers.
- The new headquarters for Swaziland Revenue Authority (SRA) under construction.





# **Stefanutti Stocks Construction Swaziland**

determined to make a mark on the industry

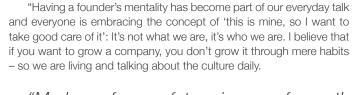
Two of the rising stars at Stefanutti Stocks Construction Swaziland are site agent Nomcebo Mamba (pictured right) and site engineer Tibuyisile Manana (pictured below), both of whom joined Stefanutti Stocks in 2014 after completing their studies.

Mamba became the first female site agent in the company, when she was promoted to run the prestigious United Nations House project, under the mentorship of company director Billy Howes. Since the completion of UN House she has been responsible for the high-profile Swaziland Revenue Authority (SRA) site that is due for completion at the end of 2018. "An integral part of my learning curve is that I am able to consult and share ideas with my managers and directors to whom we are fortunate to have easy access to," says Mamba.

Mamba also sits on the company's transformation committee which was established to create a formal space within which the Eswatini nationals working for Stefanutti Stocks Construction Swaziland are given an opportunity to influence and make an impact on the company's strategy. The committee is tasked with a number of objectives including addressing internal and external perceptions, discussing strategy, potential contracts, identifying new clients or prospective work.

"In the four years that I have been with Stefanutti Stocks the change has been rapid. More young people are being grown and more local people are being given the opportunity to participate in moving the company forward. It's exciting to be contributing to a larger picture.





"My hope for our future is one of growth where as a company we are tapping into every aspect of the industry here in Eswatini. And that we are the contractor of choice: not by favour, but because of our ability. because of our being the best at what we do, " says Mamba.

Tibuyisile Manana's grandfather France Dlamini has been working for the company since 1992. "My grandfather was so excited when he heard I had chosen construction as a career. It's a very challenging industry - but in a nice way. Each and every day, since I started as a student engineer in 2014, I learn something new: there is always growth. My future? Well in ten year's time I see myself in a contracts manager position, or perhaps at that stage I'll have worked my way up to Stefanutti Stocks contracts director!"

Manana is mentored by senior contracts manager Ryan Van Der Walt and is currently working as the site engineer at NTFONJENI Potable water Supply.





Stefanutti Stocks Coastal is nearing practical completion of the civils works contract – undertaken for the Drakenstein Municipality – for the upgrade and extension of the Wellington Waste-Water Treatment Works (WWTW) that will operate at a new hydraulic capacity of 16Ml/day (average dry weather flow). This is an increase of 10Ml/day from the previous capacity of 6Ml/day. The facility will be able to provide a full biological nutrient removal facility, allowing the removal of nitrogen, including phosphate.

The upgrade and extension to the existing WWTW comprised the following scope of works:

#### Construction of various process units and pipelines, including:

- New elevated inlet works;
- Two 15-metre diameter primary settling tanks (PSTs);
- Two 30-metre diameter secondary settling tanks (SSTs);
- Biological reactor, aerobic digester and anoxic thickener;
- UV closed-vessel disinfection and wash-water pump station;
- Sludge recycling and waste pump stations;
- Main sludge pump station and sludge rising pipeline to Paarl;
- Irrigation pipeline to golf course;
- Gravity sewer main to Pentz pump station;
- Emergency overflow pond, flow division and collection chamber and interconnecting pipework; and
- Ancillary structures, encompassing various small concrete structures including flow division and collection chambers.

#### Construction of various buildings, including:

- Two-storey administration building which houses offices on the ground floor, and a control room and mini lab on the first floor;
- Blower room housing the Motor Control Centre (MCC);
- Small power, electronics and HVAC for all new buildings;
- · Emergency generator building; and
- Medium voltage (MV) building.

Also included in the scope was the construction of the storm water piping network and new internal roads; flow diversions, decommissioning and demolishing of older process units; modifying existing structures, including raising the internal launder walls of the existing SSTs; refurbishing three 15-metre diameter PSTs, the effluent outfall channel to the Berg River as well as existing buildings; and the installation of fibre-optical data cable, streetlighting and landscaping.

The upgrade of the Paarl Wastewater Treatment Works: Phase 1 (Emergency Works) was also awarded to Stefanutti Stocks Coastal and permitted as a large variation order (VO). "The upgrade was executed



with remarkable success, largely due to the thorough planning by our newly promoted site agent, Jan-Hendrik Schreuder," says John Woodburn, Stefanutti Stocks Coastal contracts director.

The Wellington contract took place on a brownfield site and Stefanutti Stocks encountered numerous unforeseen challenges, which required immediate attention and solutions. "The new WWTW was being constructed between the structures of the existing WWTW and sometimes 'on-top' of the old one, which had to continue operating at all times," says Schreuder. Other unique and interesting aspects of the project included that most of the work has been done without the use of major subcontractors, and that the work undertaken facilitated the combination of old processes with new hydraulic and instrumentation processes.

"Stefanutti Stocks Coastal has an impressive portfolio of water sector projects and we were able to utilise our thorough understanding of the waste water treatment process to the benefit of the project," says Woodburn. "The project also provided a platform for our young engineers to grow as well as demonstrate their abilities."

- An overview of the Wellington Waste-Water Treatment Works.
- An aerial photograph of the two adjacent sides of the Paarl Waste-Water Treatment Works.

#### Stefanutti Stocks refurbishes civil structures on

# Koeberg's nuclear island

#### By Bernard Vermeulen, Stefanutti Stocks Civils site agent

The concrete rehabilitation of the Koeberg Nuclear Power Station in Cape Town commenced in February 2017 and entails Stefanutti Stocks Civils undertaking concrete repairs to the power station Unit's 1 and 2 fuel buildings and containment buildings in order to extend the design life and assist in reducing the impact of extreme natural and human induced events.

This project at Koeberg is one of the latest power station infrastructure refurbishments being undertaken for Eskom - other recently successfully completed projects include the Arnot chimney repair, the Camden smoke stack masonry repair and the Hendrina smoke stack refurbishment.

#### Structural integrity

One of the first components of this contract included the evaluation of the structural integrity of the buildings, and Stefanutti Stocks performed various tests, including:

- hammer testing to the external facades to identify delaminated or spalled concrete areas;
- chloride tests (as the power station is located in a marine environment):
- reinforcement cover readings (to locate rebars, measure the exact concrete cover and to compare to chloride ingress depths); and
- Schmidt hammer tests (to measure the elastic properties or hardness of the surface).



Once the extent of the damage to the structure was established the delaminated or spalled concrete was removed, to the required depth, by means of mechanical breakers, after which a migrating corrosion inhibitor was applied to the exposed concrete surfaces and left to be absorbed for ten to twelve hours. The embedded reinforcement was cleaned to a Swedish standard 2.5 using 350 bar high pressure sand blasting equipment and coated with an approved zinc rich primer. Cathodic protection anodes were installed to prevent the corrosion of the embedded reinforcement, after which a shrinkage-compensated cementitious grout was cast into all open patches and allowed to cure. Finally, after removal of the formwork, a cementitious protective coating was applied to all newly cast areas.

#### Reinforced concrete rehabilitation

Concrete is the only practical material to utilise in order to create a large permanent shield against radiation. The reasons for this is that it is inexpensive, eases construction processes, is structurally selfsupporting and is extremely durable.

Unit 1 and 2 containment buildings comprise of high density concrete, with an average wall thickness of 350mm, that acts as a final barrier to protect the public and environment against the dangers of radiation. These walls house numerous post tensioning tendons, making for a stronger structure while also reducing cracks. Approximately forty per cent of the chloride ingress, that causes the delamination of the walls, was present on the containment buildings, the remaining sixty per cent was present on the fuel building walls. The walls were scanned, and the embedded post tensioning cables were identified and marked, as any damage to the post tensioning cables could have resulted in Eskom needing to lower their daily production rates as the damaged tendons would affect the structural integrity.

The fuel buildings in the two units consist of a 2.5-metre thick wall from the ground to approximately twenty metres high. Once Stefanutti Stocks had established that the Western faces of these buildings (that face the Atlantic Ocean) were severely delaminated (more so than in the original project scope) it proposed an alternative repair method which was approved by Eskom. A self-compacting concrete mix was designed and pumped into a specially designed formwork system that was installed from ground to the twenty-metre level. This construction method allowed for a reduction in total project cost for the client and allowed Stefanutti Stocks to remain on schedule irrespective of the quantity growth. (continued on page 14)





- The concrete on the wall of Containment Unit 1 is demolished using electrical breakers.
- A zinc rich primer is applied to embedded reinforcement in the top of the Containment Building's dome roof.
- This specially designed formwork system for self-compacting concrete was utilised on the western walls of the Fuel Building.

#### **Risks**

In addition to the high safety risks that are associated with concrete rehabilitation activities and working over forty-five metres above ground level, Stefanutti Stocks was introduced to another extreme safety risk: that of radiation. All employees had to complete an intense fitness for duty (FFD) programme at Koeberg Nuclear Power Station, which included a three-day radiation training course. Every day while on duty employees have to wear radiation dosimetry to indicate the amount of ionizing radiation (measured as micro Sieverts) they are picking up. The strict radiation control measures at Koeberg and this daily monitoring has ensured that no employee has surpassed the daily limit.





#### Quality

Performance of concrete is a function of its constituents, its quality, the location and environmental loading conditions - making concrete durability a unique evaluation on its own. With reference to the durability of the concrete structures on Koeberg's Nuclear Island, immense attention had to be given to quality control and procedures, as the project is



rated as a quality level 2 for Eskom. In order to ensure compliance with this quality level, the cementitious grout proposed by Stefanutti Stocks was sent to an approved laboratory where it was tested for compressive strength, tensile strength, shrinkage cracking, durability index, oxygen permeability index, water absorptivity index and tensile pull-off bond strength.

In addition, all identified delaminated areas were mapped (with a unique identification number for traceability purposes) on a drawing of each structure. A concrete repair layout form, a concrete repair checklist, a mixing record and coating checklist was created and linked for each repair area. These documents contain information on the volume of concrete demolished, coverage of reinforcement cleaned, tonnage of additional reinforcement added, location and number of anodes installed, mixing ratio and time for each cementitious mortar mix, as well as grout test cube reference numbers.

#### **Expertise**

Although formal codes and standards for concrete repair work within South Africa have not yet been developed, the project is benefiting from the expertise, knowledge and experience of Stefanutti Stocks' on- and off-site employees. Success factors on this project include the ability to identify the critical role that the environment plays at both the macro and micro level, as well as the importance of workmanship during installations. Furthermore, the consideration and implementation of



alternate and different repair strategies by Stefanutti Stocks Civils is also contributing to the delivery of a high-quality complete repair solution.

Stefanutti Stocks Civils has maintained a flawless safety record, resulting in the company's management being invited to Koeberg to deliver a presentation on how this is achieved. To date, zero safety incidents with a total of 112 000 lost-time injury-free (LTIF) man hours worked have been achieved. The next target is 125 000 LTIF hours.

#### Localisation

At project commencement approximately ninety-six per cent of all labour and staff were appointed locally. Since February 2017 locally appointed employees have achieved the following:

One staff member was employed on a permanent basis and registered as a candidate safety officer under the South African Council for the Project and Construction Management Professions (SACPCMP). Professional registration is expected in early 2019.

- Twenty-five local employees have been permanently employed by Stefanutti Stocks.
- Two of these employees were promoted to supervisors due to their excellent performance on all levels.

#### Conclusion

Stefanutti Stocks Civils remains the only construction company within Africa performing concrete repair work on radiation contained buildings within a Nuclear Power Station. The complex environment, and the expertise offered and gained by employees working on the contract has created an incredibly valuable learning platform, in particular on the topic of the durability of repair materials and techniques.

As it enters the last six months of the contract, the focus is on maintaining its current flawless safety record as well as continuing to build on its outstanding quality track record.

- Personal radiation dosimetry worn by employees to indicate and measure the dosage of ionizing radiation.
- Reinforcement cleaning undertaken with a high pressure wash with arit entrainment.
- Ring flow test is performed on the proposed self-compacting concrete mix.
- The curved formwork is installed on the Containment Building Unit 1.
- Stefanutti Stocks' Koeberg concrete repair team.





Kusile Civil Works Joint Venture (KCWJV) consists of Stefanutti Stocks (JV leaders), Wilson Bayly Holmes Ovcon, Basil Read and Group Five. This joint venture has been responsible for the vast majority of the civil work undertaken at the power station since 2009, when the Main Civil Works contract was embarked upon.

KCWJV has remained on site since the completion of the Main Civil Works, initially to complete its obligations with respect to the Main Civils Works and subsequent to that, to construct the Completion Works. The Completion Works commenced in July 2015 and primarily entails re-accessing different areas of the project to construct surface plinths and structures that were left out during Main Civil Works to facilitate structural steel installation. Existing drainage trenches, cable trenches and manholes that had been constructed as part of the Main Civil Works were filled with sand and temporary concrete lids fitted to enable access for mechanical cranes.

"The majority of these structures are now being built in either very congested areas with high-moving traffic, underneath other contractors, at heights, in confined spaces or in a live plant," explains KCWJV project manager Mark Rencken. "Each activity we undertake therefore poses its own unique set of challenges – for which we are well prepared."

The current scope of work being undertaken includes, but is not limited to the following:

#### Air Cooled Condenser Area (Unit 1 to 6)

- Generator transformer tunnel (north)
- Duct banks
- Transformer rail foundation
- Clean and dirty drain system pipes and manholes
- Condensate polishing plant trench and sump
- Wind-cross foundations

- Busbar foundations
- Generator step-up transformer foundation
- Gas storage building and isolated plinths
- Condensate reserve tank foundation
- Elevator sump

#### Flue-gas desulphurisation area (units 1 to 6)

- Mechanical trench
- Utility trench junction roof slabs

#### Common plant area

- Miscellaneous pipe sleepers
- Fuel oil tank north foundation
- High mast lighting bases

#### Turbine generator hall area (units 4 - 6)

- Suspended slabs turbine hall, level 2.7, 9.0 and 16.0
- Exciter room

#### Auxiliary bay area (units 4 to 6)

- Suspended slabs auxiliary bay, level 3.6, 6.6, 9.0, 13,6, 16.0 and 20.6
- Levelling pads and auxiliary bay at level 0.0

#### Boiler house area (units 1 to 6)

- Drainage trenches
- Cable trenches
- Above apron slab plinths and stub columns
- Pipe support sleepers
- Suspended slabs, level 7.0, 10.3, 16.8, 48.7, and 0.0 to 7.0 (inclined)
- Manholee
- Surface drainage topping slabs
- 6.6kV transformer bay foundation
- Degrit sump
- FD and PA fan foundations
- Lift shaft roof slab and thresholds
- Submerged scraper conveyor foundation

#### Safety achievements

"Ensuring that we complete this contract with an exemplary safety record is one of our key focus areas, and we drive this process through raising constant awareness of the risks involved during our toolbox talks on site, as well as holding quarterly safety interventions, that I personally present to all staff members," says Rencken. "Currently for every 600 000 man-hours worked 1.1 hand injuries occur, which is exceptional compared to industry standards. We have achieved this by focusing our safety campaigns on hands, and the importance of preserving them."

#### Hand safety campaigns that have been run on site at Kusile include:

- Inflatable "Air Dancing Men" are displayed to raise hand awareness amongst employees.
- A Hand Awareness video is shown, and the message reinforced via a poster campaign.
- Hands and fingers are taped together to illustrate how difficult it is to eat yoghurt/chips without the full use of one's hands.
- Industrial theatre performances by Mr. Zee (standing for Zero Harm) of a piece called: "My hands, my money makers!"

The joint venture has had one lost time injury (LTI) in the last fifty-four months, from 27 January 2014 to 1 September 2018.

The 11.9-million lost time injury free hours achievement by the JV started during the Main Civil Works period rolled over to the Completion works phase. Currently the JV stands on 5,409,356 million LTI Free Man-hours.

The Completion Works phase has run for thirty-seven months, during which seven-hundred employees have worked almost seven-million-man hours, with a lost time injury frequency rate of 0.0286.

#### **Congested construction**

"The construction of the Kusile Power Station is occurring within an intricate and complex environment – one that we at KCWJV have become used to operating within, and one which newcomers

can find somewhat intimidating," says Rencken. "I believe that both younger engineers as well as the more experienced members of the team appreciate that this experience will most certainly be a career highlight – it is not every day that one gets to construct a project of this magnitude."

Section manager Paul Bauer started working at Kusile in 2012, and his exposure as part of the KCWJV team has escalated his experience of what is required to manage a 'mega project'. He is responsible for the boiler house and the flue-gas desulphurisation areas. "I think only people who have worked here will fully understand how challenging it can be to complete even the smallest of structures, due to the volume of simultaneous work areas," says Bauer. "We are all competing for space and laydown areas and the interface between contractors and logistics is the key. Nevertheless, this will certainly be a highlight of my construction career."

Jonas Mabula, also a section manager for KCWJV, started as a junior engineer with minor responsibilities back in 2012 and worked his way up to the position of section manager by April 2017. He is now responsible for the ACC, turbine, auxiliary bay, suspended slabs and station dirty dams. "On a daily basis Kusile offers us new opportunities to find solutions. It requires constant attention to safety, high level technical issues, quality, logistics," says Mabula.

#### Conclusion

As at 1 September 2018, the remaining concrete scope for the Completion Works Contract is 32 281m³," says Rencken. "We are committed to support the project needs in completing our scope of work – safely, and to the standard of quality that our client ESKOM has come to expect from KCWJV."

#### Captions:

- Work underway in one of the six boiler houses.
- Pictured is a type 7 boiler plinth.
- 3. One of the boiler drainage trenches that had to be re-accessed.
- Mark Rencken, project manager for KCWJV presents an overview of the civil construction scope of work at Kusile.
- 5. Stefanutti Stocks Construction & Mining employees who visited the site in September.



On Thursday 20 September 2018 employees of Stefanutti Stocks Construction & Mining business unit visited the Kusile Power Station. KCWJV project manager Mark Rencken presented an overview of the work the joint venture had done, and the visitors were also taken of a tour of the Power Station site.



# Geotechnical division completes piling contract at

# Vopak's Durban terminal

Source: Teboho Motaung, Stefanutti Stocks Geotechnical project manager

Stefanutti Stocks Geotechnical was appointed to undertake the piling work for the Vopak Terminal Durban (VTD) Growth 4 project in Durban Harbour's Island View Complex. The contract was undertaken for client Vopak South Africa, with FLUOR managing the project on behalf of VTD.

#### Project execution and duration

The project's kick-off date was 21 May 2018 and completion was scheduled for 17 September 2018. This was a fast-track project with very tight handover dates attached to each tank base, in order to give the follow-on contractor Stefanutti Stocks Coastal access to start the tank base construction on time. "We managed to hand over the piling works for all of the tanks bases and other structures a month earlier than scheduled," says Teboho Motaung, Stefanutti Stocks Geotechnical project manager. "This was made possible through great team work and proper planning throughout the project."

#### Piling scope of works

The most suitable piling solution was Continuous Flight Auger (CFA) piles, self-drilling anchor (SDA) micro-piles were also installed, as well as 180 linear metres of sheet piling. The CFA piles were installed to average depths of eighteen metres, the SDAs to depths of fourteen metres. The diameters are listed below:

Number of piles	Pile type	Diameter
96	CFA	600mm
588	CFA	750mm
22	SDA	130mm

#### Project challenges and successes

The challenges included the actual amount of production hours possible per day, as well as getting materials delivered into the Island View complex, which is a national key point.

"The presence of other contractors mobilised on site, meant that the working areas became incredibly restricted and confined, making it difficult to execute the tasks as scheduled," says Motaung. "Nevertheless, in spite of the above the project was delivered safely, the quality of our work was good, and above all, our client is happy – a great testament to the capability of the project team that made it all possible."









Stefanutti Stocks' Mining & Construction and Mechanical & Electrical business units are undertaking the surface infrastructure construction for De Beers' Venetia Diamond Mine, located about eighty kilometres from Musina in the Limpopo province.

Worley Parsons is responsible for the engineering, procurement and construction management services on the approximately two-year long project that commenced in October 2017.

The mine is migrating from open cast to underground mining and requires the construction of main surface infrastructure including ventilation fan bases, two vent fan substations, one medium voltage (MV) substation, a production shaft (PS) winder house, a service winder house and a  $61 \text{m} \times 21 \text{m}$  workshop.

"The project is a brownfields project and we are working in an operational diamond mining environment, where the security is very tight," says Pierre van Vuuren, Stefanutti Stocks Civils site agent. De Beer's safety standards and requirements are also of an extremely high standard. In addition to the security, that impacts ease-of-access to the site, a number of contractors are working within quite a confined area which has resulted in the site being rather congested.

"Our main objective is to complete the project safely and to a high-quality standard. At the beginning of September, our performance was acknowledged through the receipt of a 200 000 lost time injury free certificate of achievement from Worley Parson," says van Vuuren.

Other highlights on site include safety officer Fritz Burger completing a mining safety officer (COMSOC 1&2) qualification, and site runner Nomsa Moeta being promoted to wage clerk.

- The 61m x 21m workshop under construction.
- A view of the Venetia Underground Project (VUP)
- A birds eye view of a production shaft (PS) winder house and the medium volt (MV) substation.





# **Anglo American** Platinum

awards chrome recovery plant construction to Stefanutti Stocks Mechanical

Source: Jakes Bosch, Stefanutti Stocks Mechanical contracts director



On 25 May 2018 Stefanutti Stocks Mechanical was awarded the Amandelbult Chrome Recovery (CRP) Plant Module 3 Project, which will see the division construct an impressive 120-metre by 100-metre chrome recovery plant (CRP) at Anglo American Platinum's Limpopobased mine.

Anglo American Platinum chose to erect a spirals plant, to recover chrome from the tailings emanating from the main platinum extraction process at its Amandelbult Mine in Limpopo. This type of plant offers an exceptionally environmentally friendly option to extracting valuable minerals from various ores, as it only uses gravity, water and limited electricity in the process.

The quantities to be treated at this tailings operation are large by any standard - consequently, the physical size of the spirals plant is also substantial and will measure seven metres wide, sixty-four metres long, with a top platform towering thirty-seven metres above the ground.

Stefanutti Stocks Mechanical's scope of work comprises the supply and installation of structural steelwork, mechanicals, platework and piping (SMPP). "Our previous experience erecting spirals plant infrastructure counted in our favour," says Jakes Bosch, SSM contracts director for the CRP project. "In 2011, we completed the chrome recovery plant at Anglo American Platinum's Waterval Smelter and have, for many years, worked at Amandelbult on successive plant rehabilitation projects."

DRA, the consulting engineers responsible for the CRP design is a company with which Stefanutti Stocks has successfully worked on many previous projects.

As with all projects of this nature, time to completion is a critical factor. The Mechanical division has, over the years, shown itself as the leading expert in bringing mining infrastructure projects, such as this one, to successful and timeous completion.

During construction of this plant, 708 ton of steelwork will be erected, 155 ton of platework fitted and fourteen kilometres of piping installed - five of which will be inside the Spiral Building itself.

Another factor that contributed to the award of this project was Stefanutti Stocks Mechanical's participation in developing local black-owned business through systems and skills transfer. "On this project we are strengthening our relationship with local company Key 360 that has been awarded a major sub-contract on the project. We continuously exploring other supply initiatives with local businesses and have placed this entire contract on Celik Engineering, Stefanutti Stocks' black empowered mechanical business," advises Bosch.

For projects such as the CRP, Stefanutti Stocks can offer its clients an ongoing minerals processing plant maintenance service, a capability which it has developed in collaboration with Australian partners and maintenance experts, the Dawsons Group.

Projects of this nature also provide many challenges. "We have spread the supply and fabrication between several companies to allow fabrication to run parallel to the plant erection, to allow us to meet the tight construction schedule," explains Bosch.

To minimise work being undertaken at the Amandelbult site, the platework is being fabricated at several off-site workshops. The platework items include major plant components such as the two rubber-lined six-metre diameter, 7.5-metre tall surge tanks that will be transported to site and installed as completed units.

Stefanutti Stocks Mechanical's years of experience and its track record of successfully completing projects like the CRP, has also resulted in the division establishing relationships with companies offering complementary services that have also contributed to its ability to bring projects to completion on time and within budget.

the current constrained environment, the fact that Anglo American Platinum has chosen us to lead on this project is a resounding testament to the effectiveness of our project planning and execution," concludes Bosch.

#### Caption:

Two members of the Stefanutti Stocks Mechanical team at work



After working in a remote location in the Republic of Guinea for just under eighteen months, Stefanutti Stocks Coastal completed the construction of an export facility for Alufer Mining. The facility was required to accommodate a conveyor line and a telestacker, that would load bauxite onto individual barges berthed along the quay wall.

Stefanutti Stocks' scope of work on the facility comprised production of rock from the quarry (located three kilometres from site), to be used for the construction of the 1200-metre causeway, the 190-metre breakwater and the 100-metre-long berthing deck on piles. The scope included the bases and sleepers to carry the telestacker and conveyor structure, as well as the supply and installation of navigational aids (marker buoys, wave rider buoy, weather station, tide gauges and a control centre) and quay furniture (including bollards, fenders and lifebuoy cabinets).

The completed causeway and breakwater consist of 740 000 tons of core material (quarry run) that create the body of the structure and 176 000 tons of armour rock that has been placed on the sides of the core, to protect it from erosion. The design of the armour rock comprised of armour 1: 0.5 to 2.3 tons, armour 2: 2.3 to 6 tons and armour 3: 3.1 to 9.3 tons. Each armour stone was individually placed in a specific order to ensure that the rocks interlocked.

The berthing structure consists of four berthing dolphins that are connected to a retaining wall by precast concrete beams. Precast deck planks have been placed on top of the beams and an *in-situ* concrete slab was cast over the planks to create a smooth deck for the telestacker. The beams were connected to the retaining wall and the dolphins via shear pins and bearing pads, thus allowing the deck to float. The floating deck accommodates any settlement in the structure.

"The founding conditions at the berthing structure site were vastly different to what we expected, which resulted in the berthing structure

having to be redesigned," says Esmond Robertson, Stefanutti Stocks Coastal site agent. The original berthing structure consisted of an 800m³ base, cast under water, with 220 precast blocks stacked on top of one another to create the quay wall. "By mid-October 2017, we had built the core out to the area where the quay wall foundations were to be built. Trial holes were dug to determine the level of the rock bed, and it was found that the rock bed was so deep that the long reach excavators could not reach it," says Robertson. "Our client called in a drilling company to conduct a thorough geotechnical investigation."

With only conceptual drawings available, the piles were ordered, the piling equipment was packed over the December break and loaded onto a ship to reach Guinea in time for the twenty-four hour piling operation to start in February 2018. "Our precast yard also had their work cut out to manufacture all the items in time to complete the berth structure by 3 August 2018," says Robertson, "and with the follow-on mechanical contractor assembling the telestacker and conveyor line while we were trying to finish off the berth, the berthing area got very congested – fortunately with good communication and careful planning, we completed on time and with no lost-time injuries."

#### Unique aspects of the project

This was the first project that Stefanutti Stocks has undertaken in Guinea. It was undertaken on a greenfield site and many of the work force stemmed from the villages in the area – for many of them it was the first time that they had ever been employed.

This site was located in the middle of the bush in a country that has very little infrastructure. Almost all materials and tools had to be imported, and the tools and equipment one would normally use were sometimes unavailable or one would have a lead time of a few weeks before they arrived in the country.

The scope of works was guite unique, as well as the short time frame within which to complete the project - which resulted in work being undertaken on site for twenty-four hours a day, seven days a week, for most of the project.

Another unique challenge was the temperature (around thirty degrees all year round) and the approximately three metres of rain in the monsoon season from June to October.

All this coupled with the long hours worked in order to meet the deadline, meant that the Stefanutti Stocks team had to be resilient, self-motivated, dynamic and at times use their ingenuity to thrive on this project. There was very little float in the programme, so any delay in an activity would affect the completion date.

#### The team

"It's impossible to successfully complete a project such as this without a strong team, the contributions of each one adding tremendous value to the overall picture," says Robertson. "The project had a difficult start, and project manager Graham Moore kept us on track from the moment he joined the team. Willie Potgieter put his valuable knowledge on blasting armour rock into play when managing the quarry and ensured that we always had enough rock to keep production rolling. "Boots" (Coenraad Saal) did a fantastic job, under very demanding circumstances, repairing the excavator buckets and we hardly lost production time while waiting for buckets to be repaired. He also did a great job welding the piles together ahead of the piling team.

"Jaco Louw, whose happy demeanour was infectious, worked across all sections on site and was always there to help with any problems. His input into the guarry, precast yard, rock work on the causeway and concrete work on the berth was immense. Thomas Allemeier, our assistant project manager used to tell me that inspecting Jaco's section of work was the highlight of the day, as his cheerful attitude would rub off on him.

"Clive Rose's technical knowledge helped in all aspects of the project and he always pushed the programme hard - we would not have finished on time without him. Gunter Johnson kept the sensitive GPS survey systems on the excavators running and added tremendous value supervising the rock work on the causeway, which was also critical to the success of the project.

"Isgak Diedericks was always available to help - even at midday on a Sunday or midnight any other day. Following a breakdown of our crawler crane, he was in charge of a challenging tandem lift, using two mobile cranes to place the 21 ton pre-cast blocks onto one of the dolphins. This was one the most stressful and memorable days on site.

"Nicolene Tolken was a mother to all of us on site, and no matter if the problem was big or small she was always there to help. Her efforts made every single expat employee's life on site easier and more pleasant.

"The lack of, or very little infrastructure in Guinea, meant that a huge amount of plant, equipment and materials had to be imported into the country and Samantha Scheepers did an exemplary job ensuring that this happened as quickly as possible.

"Fofana Laye Nfaly was the first Guinean foreman to join our team and was involved in the quarry, procurement, managing diesel and transport. He was the only foreman on site when our plant and equipment arrived from South Africa, and his background in earthworks and managing plant served us well. There were also many times on this project when Fofana came up with solutions to problems that had us scratching our heads.

"Babila Doumbouya was originally tasked with managing a shift in the quarry - a task he performed well. Once the rock work was finished he took over in the steel bending yard and ensured that we didn't run out of reinforcing steel, especially during the very busy period after the design change, when we were manufacturing all the precast units on site.

"Our foreman on the very congested causeway, Barry Alieu, ensured everybody worked safely, and that the trucks delivered the rock as efficiently as possible. He was also a fantastic translator, who often helped us to explain technical aspects of the jobs or tasks to our labour force."

#### In conclusion

Alufer Mining and the EPCM team have been very appreciative of the way in which Stefanutti Stocks team delivered its scope of work, always proactively working to solve and overcome problems. This allowed the project to achieve FOOS (first ore on ship) on time, in spite of major setbacks which could have derailed it.

A further highlight has been the positive appreciation and success of Stefanutti Stocks' Youth Development Programme, which involved a mini-apprenticeship programme for young people from the local villages, and utilised the company's in-house training programme Solid Foundations, which was very well received by Alufer Mining and the local community.

Undertaking this project in Guinea was accompanied by a very steep learning curve, and at one point, at the peak of the last rainy season, almost overwhelming. "The team in Guinea endured and thrived, and through resilience and determination proved their ability to perform in this challenging environment," says Andrew Pirrie, Stefanutti Stocks Coastal contracts director. "We're looking forward to leveraging the experience gained here and taking on new projects in Guinea, where we will continue delivering excellence in execution."

- Bauxite is loaded on to a barge moored safely at the newly constructed berth.
- Cape Verga Pearl II one of the two barges that will be used for transporting ore from the berth to the transfer ship.







Stefanutti Stocks Coastal is project managing the construction of the Point Promenade for Durban Point Development Company (Pty) Ltd – a joint venture formed between the eThekwini Municipality and UEM Sunrise, a Malaysian parastatal. The geotechnical and piling contract was sub-contracted to Stefanutti Stocks Geotechnical.

The promenade is being constructed on reclaimed land on the beach-front. Its lower level will house public amenities, a water sports club and public parking. The upper level will be a continuation of the public walkway going from Moya's Pier to the Northern Breakwater (harbour).

The project commenced in the middle of January 2018 and will run over an extremely tight programme duration of eighteen months. The piling on which the structure is founded commenced in March 2018.

"Once completed the promenade will be seven-hundred metres long. To meet the project timelines, we split the construction into two – commencing from the centre of the promenade outwards, with each direction running concurrently," says Sheldon Randall, Stefanutti Stocks Coastal's project manager for the Point Promenade. "This project encompasses almost every civil engineering discipline, combined with high-end architectural building work."

#### Ground conditions and water table

As the construction area is a reclaimed beach area there are a high number of weak pockets, approximately six metres deep. The shallow water table, at two-metres deep, affected approximately seventy per cent of the sewer trench and culverts, and a variety of other obstructions hindered the piling process.

#### **Piling**

The most feasible founding solution identified, to accommodate the loads of the promenade structure, was the Continuous Flight Auger (CFA) type pile. Due to the existing sandy soils, and the absence of bedrock, the piles were designed as shaft friction piles only.

A total of 1 055 CFA piles (including 250 x 250mm, 426 x 450mm and 379 x 600mm piles) were installed. As well as two-hundred-and-twenty-one 130mm diameter self-drilling anchor type micro-piles. "The highly variable ground conditions (different to the initial soil investigation) required additional extensive soil investigation and resulted in the piles having to be individually designed," says Marcin Szatkowski, Stefanutti Stocks Geotechnical site agent. "As the site is located on reclaimed land, bad pockets, boulders and rubble were encountered and led to the refusal of some CFA piles – due to adverse *in-situ* ground condition, we introduced the self-drilling anchor type micro-piles."

#### **Foundations**

The foundations consist of pile caps and ground beams. The pile caps are supported by two 600mm-diameter CFA piles, which accommodate the large column loads. The ground beams are supported by 450mm diameter CFA piles which accommodate the slab loads of "Level One".

#### Structure: Level One

The structural system for the "Level One" slab is a 230mm thick, suspended, reinforced concrete slab, with ground beams to reduce the spans and provide lateral bracing to the pile caps. Due to the length of the structure, expansion joints were included in the slab. "The structural system was chosen due to the low bearing-capacity and cohesionless free-running sands which are constantly affected by the fluctuating water table," explains Randall. The formwork was achieved by cement-stabilising and compacting *in-situ* material for the slab construction.

#### Structure: Level Two

The structural system for the "Level Two" slab is a 320mm-thick post-tensioned slab (bonded system) with column heads and was chosen for practical, aesthetic and economic purposes. The post-tensioned slab allows for large cantilevers, the columns are spaced at approximately 12 000mm centre-to-centre and planter boxes will be in fixed positions over the columns. Expansion joints are also included in this slab.

Three of the ten "Level Two" deck pours have been cast to date, with each deck pour about 750m³. "The shape of the deck, which is curved in an intricate eyebrow shape, adds a beautiful aesthetic touch to the promenade," says Randall, "however, it does complicate the shuttering process somewhat."

#### Promenade shore protection

A structure comprising of sheet piling was chosen for the shore protection of the promenade. The sheeting follows the curves of the front end of the structure and was chosen because of its construction methodology, environmental conditions, soil properties, the water table, and the scour and erosion depths. The sheet piling has been driven to three different depths to accommodate for the three different erosion levels identified in a Coastal Processes Report by *PRDW* Consulting Port and Coastal Engineers.

#### **Erosion/shore protection**

The sheet piling for the erosion and shore protection (being undertaken by Stefanutti Stocks Coastal) is divided into ten zones, and comprises four-hundred-and-thirty-three piles, varying in lengths of five, ten or eleven metres. Zones three to six have the shortest piles.

"The interest amongst the media and public has been astonishing - it seems as if all of Durban (including the site team) is looking forward to enjoying these facilities once we have completed them," says Randall. "Stefanutti Stocks couldn't have asked for a better opportunity to showcase our skills set. The promenade is a future Durban landmark and an iconic structure in an area that is steeped in history and my team is extremely proud of this project."

- . The beach-facing side of the future Point Watersports Club.
- Stefanutti Stocks Geotechnical's Casagrande B170 CFA piling rig and Kabelco100t crawler crane, with the project site camp in the background.
- 3. The Stefanutti Stocks Coastal site team, from back left to right: Sheldon Randall, Bradley McNeill, Wayne Stay, Yugen Naicker, Sharm Premlall, Trevor Dube, Rahul Gangaram, Greg Gersbach and Bradley Randall. Seated, from left to right are Connie Mtetwa, Samke Ndlovu, Yaromi Gopalan, Nothando Msomi, Soma Govendor, Livingston Mqali and Shaheen Patchappen.
- An early morning start to a 750m³ "Level Two" deck pour.





#### Stefanutti Stocks - multidisc

#### **Structures**

- heavy industrial structures
- power projects
- mining infrastructure bridges
- water & waste-water treatment plants concrete rehabilitation
- Marine
- jetties
- quay walls
- breakwaters scour protection and dredging
- caissons and pre-cast structures slipways and boat ramps
- marine furniture
- design and construction revetments and shore protection

#### Geotechnical

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

#### **Roads & Earthworks**

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

- & development agricultural development

#### **Pipelines**

- large/small diameter welded steel pipe HDPE pipelines ductile pipelines oil & gas pipelines pump, mechanical & electrical installations

- in-situ concrete lining of pipelines



#### ciplinary 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

### 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

excellence in execution





# **BRT Stations in Johannesburg**

#### create multiple opportunities

Source: Moses Tlou, Stefanutti Stocks Civils sub agent

In June 2016 a joint venture between Stefanutti Stocks Civils and A Re Shomeng commenced with the contract to construct ten Rea Vaya Bus Rapid Transit (BRT) Stations for the Johannesburg Development Agency. The stations are located along Louis Botha Avenue and Pretoria Main Road, running all the way to Katherine Street in Sandton. Five stations are single modules and the other five are double modules.

Currently there are eight stations under construction. Six of these are single module stations (Hathorn, Corlett, KES, Grafton, Andries and Katherine) and two are double module stations (Lees and Clarendon).

#### The project scope includes:

- minor earthworks, kerbing and paving works;
- construction of station concrete floors with boarding platform, as well as an underground service trench and chambers at each end of all stations for back up batteries;
- the erection of the structural steel superstructure, clad with a glass façade, weather panels and roofing; and
- tiling, inclusive of tack-tiles and directional tiles for the visually-impaired.

#### **Andries Station**

Andries Station's concrete works were completed by foreman Sydney Kgatla and his team within two months, cutting half a month off the scheduled duration for concrete works per station, which is two-anda-half months. "The professional team and the client expressed their satisfaction with the production, quality and safety displayed by the concrete works team for Andries Station," says Stefanutti Stocks Civils sub agent Moses Tlou. "This is a fantastic achievement for Sydney and his team, as with each station we are required to hire new general labour from the community, meaning each station's team then goes through a new learning curve." This is also applicable to the local small, medium and micro-sized enterprises (SMME) packages.

#### **SMME** engagement

The Stefanutti Stocks A Re Shomeng JV is on target to reach the 30 per cent local expenditure. "Our safety officer Cynthia Salchow has been on the project since June 2016," says Tlou, "and she plays a vital role in training all the SMMEs to ensure their safety files are compliant with our client's requirements." Salchow also assists with the onboarding process of the SMMEs, obtaining entry medicals and workman compensation insurance. This means that the SMMEs save on the cost of acquiring the services of a safety consultant, and

also encourages the SMMEs to embrace and champion the safety standards of the JV. The project has been lost-time-injury free since June 2016.

The SMMEs also undergo skills development with Stefanutti Stocks' quantity surveyor Ayanda Fani, who trains them to understand the bill of quantities, pricing, as well as generating invoices with statements. In some cases, SMMEs are assisted financially to enable them to obtain their workmens compensation insurance.

#### Station construction

All the stations are being constructed simultaneously, thus any technical issues encountered at one station are relevant to the others. They are designed to cater for all, that is, they must offer universal access. The tiles on the station floors have a specific friction coefficient to cater for the handicapped and tack-tiles are being installed to cater for the visually impaired. "Items, like the tiling, have taken a little longer to finalise, however, the final product selected meets all the requirements and was well-worth the search," says Tlou. "We are now able to apply the experience and technical know-how gained on this project thus far to the remaining stations, that are being constructed much faster than the initial few."

- One of the completed BRT stations along Louis Botha Avenue in Johannesburg.
- The tiles being installed in the stations (by an SMME) have a friction coefficient to cater for the handicapped and tack-tiles are being installed to cater for the visually impaired.



# **SANRAL's Hammarsdale** four-span bridge deck completed in record time

Source: Thomas Venter, Stefanutti Stocks Roads & Earthworks contracts manager

Stefanutti Stocks recently erected a four-span pre-cast bridge deck over the busy N3 highway in Hammarsdale in a record time of two days per span. Each of the bridge's decks comprises twenty-three 37-ton precast beams. The beams were cast in a specialised casting yard about five kilometres from the site, and transported to site on low-bed trucks.

The original simple diamond interchange is being upgraded to a new semi parclo (partial clover leaf) freeway interchange - this new configuration was chosen to assist the heavy flow of traffic on the N3.

"The use of precast concrete beams made it possible to erect the structure with only minimal disruption to highway traffic," says Thomas

Venter, Stefanutti Stocks' contracts manager for the project. "We worked over two weekends, with each deck taking us a total of two days to complete."

The bridge forms part of a larger interchange upgrade that a joint venture between Stefanutti Stocks Roads & Earthworks and Stefanutti Stocks Coastal is undertaking for SANRAL and that is scheduled for completion by August 2019. A comprehensive overview of this transport infrastructure project will be published in the May 2019 issue of the Benchmark.

#### Caption:

An aerial perspective of the bridge.



#### Building business unit offers

# clients alternate procurement methods

Source: Howard Schwegmann, Stefanutti Stocks Building business unit managing director

The Stefanutti Stocks Building business unit and its divisions offer the traditional building market alternative procurement methods. These options include turnkey construction (design & build), equity participation (co-development) and early contractor engagement (buildability). All three offer attractive benefits to investors, developers and clients as they address or explore different solutions to ensure that a project's requirements are delivered - innovatively, cost-effectively, safely, to a high quality, and on time.

#### **Turnkey projects**

Turnkey project delivery, a popular procurement method internationally, is being chosen more frequently by South African clients and developers as well as international investors that are developing within South Africa. The cost to tender on a turnkey project is generally higher than a traditional tender, as the bidding team (including consultants and contractors) will design a buildable solution that meets all of specifications, requirements and the project scope as detailed by the client. This procurement method places the appropriate risk on the bidding team, as it is responsible for, and takes charge of ensuring the design meets the client brief, and that the design can be constructed as priced.

Examples of projects that fall under the 'design and build' procurement method, that have been undertaken by Stefanutti Stocks, include the design and construction of the SADC headquarters in Botswana; the design and construction of BMW's body-in-white assembly plant in Rosslyn near Pretoria; the Two Oceans refrigeration facility currently under construction in Cape Town; and four projects currently being undertaken for Mercedes Benz South Africa (MBSA) in East London, by joint ventures including Stefanutti Stocks Building KZN, and emerging contractors Axsys Projects, Botani and Simunyi.

#### MBSA:

- 1. An automated storage and retrieval (ASRS) project.
- Building 34's Logistics Building comprising demolition and removal of an existing building and its infrastructure, and the construction of a new 16 800m<sup>2</sup> logistics building and associated infrastructure.
- J-site logistics Building comprising construction of a new 23 000m<sup>2</sup> logistics building with good connectivity for suppliers, and

- a good connection to the assembly plant. Also part of this project is a new "Gate 2" entrance with external facilities and parking zones.
- Body Shop comprising the construction of a two-level extension covering a 45 700m² area, and a connection to the existing building.

"Put very simply, we design and construct a project based on the client's specification and requirements; the project is awarded, we construct; the client pays progressively per month and we hand over the keys on time within the agreed programme - and all of the associated risk belongs to us. We are also always looking for ways to maximise cost efficiencies on the clients' behalf," says Howard Schwegmann, managing director of the Stefanutti Stocks Building business unit. "This procurement method also creates an environment where there is less opportunity for things to go wrong - i.e. there is no split responsibility between a client, a consulting team, and the contractor."

#### **Equity participation**

An element of conflict can sometimes exist between a client, consultants and contractor, whereas in the equity participation model Stefanutti Stocks Building becomes a co-developer i.e. it takes the position of both the developer and the contractor. A contractor that is in the position of a co-developer is an asset to a development team as this scenario creates an environment wherein the issues and challenges can be seen from both points of view, and one has the ability to identify potential conflict earlier and resolve possible disputes before they arise.

"The scenario, where a contractor is part of the development team and has an equity stake is becoming more and more popular in the market," says Schwegmann. "Prior to our investing in a development, we will go through a rigorous process to ensure it is viable and feasible and see how we can enhance the overall return of the project. Having 'skin in the game' also creates an element of comfort and trust within the development team that the delivery is going to be of top quality standard."

Examples of projects that fall under this type of procurement method that have, or are being undertaken by Stefanutti Stocks include a two-





tower luxury apartment building, located in Morningside, Johannesburg with Masingita Properties; the Northern Views housing project in Pretoria; and a mixed-used development, called 1990, in Windhoek.

#### 1990 development

Stefanutti Stocks Namibia undertook the construction of a mixed-use building, known as 1990, in the central business district of Windhoek for Grenada Eight Investments. The residential and commercial development consists of a total of fourteen stories, excluding roof level. This includes:

- 9 000m<sup>2</sup> three-level basement parking area;
- 1 400m<sup>2</sup> level of lettable retail space;
- 1 400m² level of lettable commercial office space; and
- Nine levels of accommodation encompassing a total of 114 apartments, lofts and penthouses.

#### Early contractor engagement/buildability

Involving a contractor in the early stages of a project allows those who may be constructing the project to give input into its sequence and buildability. "We can leverage our construction experience to the benefit of the consulting team and the client, by engaging in the process as early as possible and assessing the design to see if there are better alternatives," says Schwegmann. "The preferred scenario would be for us to become involved at the very early stages of the design process, however if this does not occur, we can offer an alternate design or construction method and material, as part of our tender bid."

Examples of recent projects that fall under this type of procurement method include Mr Price Distribution Centre in KwaZulu-Natal, as well as Junction Mall and the Shoprite Cilmor distribution centre in the Western Cape.



#### **Shoprite Cilmor Distribution Centre**

Due to the towering columns (in excess of 20 metres) required in the construction of the distribution centre Stefanutti Stocks Building Western Cape 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 formed part of the scope of work were originally designed as concrete framed structures with brick and plaster infill panels, and these were also constructed using tilt-up. Stefanutti Stocks proposed the tilt-up methodology which impacted on both price and programme and saw production of up to four-and-a-half times faster than a conventional construction method would have taken. Further advantages included that the methodology does not require scaffolding, thus eliminating the risk of working at heights.

#### Benefits of alternative procurement methods @ a glance

		-
Turnkey projects	Equity	Early contractor engagement
Single point of responsibility	Conflicts identified and resolved early	Design alternatives explored early
All stakeholders treated as part of the team	All stakeholders treated as part of the team	All stakeholders treated as part of the team
Time saving	Partnering is encouraged	Time saving
Earlier knowledge of potential costs	Earlier knowledge of potential costs	Earlier knowledge of potential costs
Higher quality	Higher quality	Higher quality
Cost-effective	Cost-effective savings offered up front	Cost-effective savings offered up front
Encourages innovation	Encourages innovation	Encourages innovation
Risks management by those best able to manage particular risks	Risks management by those best able to manage particular risks	Risks management by those best able to manage particular risks
Lower claims and litigation	Lower claims and litigation	Teaming approach, all the stakeholders work closely together
One-stop shop	Sharing in the development risk and returns	

"Thus far, our experience in offering these alternative procurement methods and solutions has yielded positive results for all stakeholders," concludes Schwegmann. "We hope to participate in many more projects of this nature going forward and are happy to engage with clients and consultants exploring a different way of project delivery."

- An aerial perspective of the 45 700m² body shop site at the Mercedes Benz South Africa's premises in East London.
- A bird's eye view of the Shoprite Cilmor Distribution Centre, Return Centre and Refrigerated Facility.
- The 1990 mixed-use development in Windhoek.



Multiple stakeholders happy with progress at

# Western Cape's **Junction Mall**

Source: Dawid Leonhardt, Stefanutti Stocks Building Western Cape contracts director

Stefanutti Stocks Building Western Cape commenced construction of the 32 000m<sup>2</sup> Junction Mall, with the associated external works, in January 2018. The shopping centre is being built in Philippi in the Cape Flats, within an informal residential area, with associated challenges. However, through focused and dedicated efforts, the team has been able, as far as possible, to involve the community in the construction work which ensured an uninterrupted construction process as well as happy stakeholders.

"We put forward an alternative design at tender stage," says Stefanutti Stocks Building Western Cape's contracts director Dawid Leonhardt. "This incorporated precast tilt-up walls to all the perimeter facades, in lieu of conventional concrete columns, brick and plaster. This was accepted, and enabled us to close the building faster and reduce the labour-intensive wet trades, thus saving time and money as well as reducing our risks."

The project is being undertaken for Devmark, MDA and IQS, a project team that Stefanutti Stocks Building Western Cape has worked with on other projects including the V&A Waterfront, the Cilmor distribution centre, as well as the Woolworths distribution centre.

"As a team, we need to stay focused and address and resolve any ongoing concerns and challenges with regard to the community's involvement," says Leonhardt. "Whilst empowering the community where-ever possible is a priority, our focus is on ensuring that we deliver the project in accordance with the programme and to our client's expectations."

In spite of delays of approximately two months Stefanutti Stocks is still on target to deliver the project on time, and ready for the scheduled mall opening in March 2019.

- An aerial photograph of the retail development, taken earlier this year.
- The Junction Mall construction team in the site office's boardroom.





Office blocks to be constructed for

# Silver Oriole and **D'Aria Vineyards**

Source: Gabriel Kriel, Stefanutti Stocks Building Western Cape site agent

- Good progress being made at Silver Oriole's Block A office block
- The Stefanutti Stocks team that is making it

By the end of July 2018 Stefanutti Stocks Building Western Cape had established its site on the picturesque D'Aria Wine Farm in the winelands of Bellville, where it is building a new office block for new client Silver Oriole.

The office block building (Block A) will comprise of a double basement and three above-ground levels, and in spite of only being in the early stages of construction, the site has already achieved Five Stars in the regional Master Builders Association audit.

By 27 July 2018 the tower crane had been erected, construction of the first bases and retaining wall footings had started gaining momentum, as well as the lift shafts. A week later the retaining walls were being cast daily, and construction of the columns had begun. "Our site braai facility had also been built, where we can host our Friday site braais, where the world is put to rights over a 'chop and a dop' - or a good glass of wine," says Gabriel Kriel, Stefanutti Stocks Building Western Cape site agent

The above usual rainfall this winter was a welcome relief from the drought, however this had implications for Stefanutti Stocks' ability to physically "get out of the ground" as a wet clay ground drains slowly

and can create total havoc on a construction site. "Thirteen days of rain in two months, but somehow our team kept its morale and fought the wet clay with enthusiasm and determination - and came out victorious," says Kriel. By 25 August and not guite two months into the project, the physical changes on site were remarkable.

"I'd like to think that our can-do, solution-based approach contributed to Stefanutti Stocks being awarded the construction of a further office block in the vineyard - office block for D'Aria Vineyards - situated one-hundred metre above Block A," continues Kriel. Block E will be a single basement with a two above-ground levels office building and will be slightly smaller than Block A. The bulk earthworks for this block commenced on 3 September and will take up the first five weeks of the programme, after which the team will start constructing bases and retaining walls, hopefully in a drier environment.

"At the end of September, we were ready to start the ground floor slabs on Block A," says Kriel. "We've set targets and are adamant to make up for the lost time caused by the rain and poor ground conditions. It is inspiring to be a part of this team!"



#### Stefanutti Stocks builds iconic church and

# wins multiple safety awards

Source: Dave Lourenco, Stefanutti Stocks Building KZN contracts manager

Stefanutti Stocks Building KZN is currently building an iconic church for the Durban Christian Centre (DCC) - Jesus Dome in Mayville, Durban. Construction commenced towards the end of May 2018 and this site has already won both the regional and national MBA safety awards in the R75- to R150-million category.

The overall structure comprises the construction of six major buttresses that will support three steel-clad arches. The peripheral splayed columns and ring beam will support the domed roof structure. The main building consists of various zones that will, once complete, house an auditorium, a grandstand, chapel, food courts, open-plan fovers, offices and ablutions. The structure that will accommodate up to three-thousand-five-hundred congregants, will be enclosed by facades of extensive glazed curtain walling and sun screens.

"The DCC Jesus Dome with its impressive arches that span eighty metres across the structure's footprint will most certainly become an iconic landmark in Durban," says Dave Lourenco, Stefanutti Stocks Building KZN contracts manager. Temporary support towers, nineteen metres high are required to support the splicing of arch segments (which weigh a total of 115 tons) during the rigging operations. The impressive and highly complex concrete buttresses that support the arches, required a unique formwork design to support the casting of the buttress columns and soffits in four planes of axis.

"The chapel gable elevation will be constructed utilising specialised circular formwork," says Lourenco. "A large crucifix void is included within the concrete gable as well as a waterfall feature cascading from the seven-metre high double-volume roof, into a unique baptism pool."



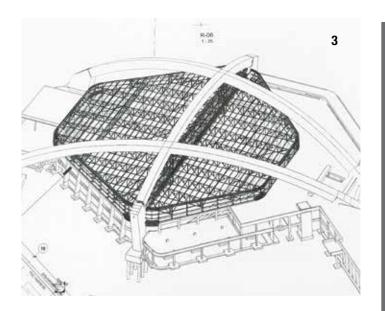
The complexity of casting several structural steel elements into the buttress columns (each weighing 4.6 ton), through a network of reinforcing bars, coupled with the 3-5mm tolerance for HD bolts, results in a structure that is demanding to construct and requires acute attention to detail and surveying.

A total of 1 075m3 of concrete was used to cast the six buttress foundations and columns. Heat sensors were also required within the concrete buttresses to monitor and control the variable core and ambient temperatures, allowing ultimate stripping time for the insulated formwork elements.

"The intricacies of this project require a highly co-ordinated team effort as well as our attention, both to detail and to the precision of the structural technicalities required. We are in the spotlight and there is certainly no room for any errors here," says Lourenco. "The Stefanutti Stocks team is incredibly enthusiastic about this project and excited and proud to have the opportunity to be involved in such a prominent and unique project."

- One of the three arches under construction.
- The DCC team with their two Master Builders South Africa safety awards.
- A drawing showing the intricate steel clad arches.





# **Building Western Cape** proud to be part of award winning teams

On 11 October 2018 the Southern African Institute of Steel Construction (SAISC) hosted its annual SAISC Steel Awards. Stefanutti Stocks Building is delighted to have been part of some of the award-winning project teams, and would like to congratulate everyone involved.

The below information was taken from the Steel Constructrion Journal YouTube channel.

# Stefanutti Stocks Building KZN wins PMR Golden Arrow Award

Contracts manager Craig Scott proudly holds the Golden Arrow Award, presented to Stefanutti Stocks Building KZN.



# Steel Awards 2018 Safintra Factory and Warehouse

**Winner: Shoprite Checkers Cilmor Distribution Centre** 

The architectural brief for the Shoprite Checkers Cilmor Distribution Centre was to deliver purpose-fit infrastructure that was aesthetically pleasing, given the facility's prominence from the adjacent freeway and surrounding neighbourhoods, while also maximising the value of the client's investment. The architectural and structural teams collaborated closely to allow function to define form, yet ensure refined aesthetics and a wow-factor to the overall appearance.

# Steel Awards 2018 GRS Metal Cladding Category

Winner: Shoprite Checkers Cilmor Distribution Centre

A unique aspect of the cladding tender for the Shoprite Checkers Cilmor Distribution Centre was the requirement that the performance of the roof cladding system be determined using the methods detailed in the cladding code being developed by the Southern African Metal cladding and Roofing Association. Global Roofing Solutions' Klip-Tite roll formed

Commendation: J-Site Logistics Building, Mercedes Benz South Africa (MBSA) expansion project

The project was awarded a commendation for the built-up roof system developed by AECOM at the approximately 21 000m<sup>3</sup> J-site Logistics Building in East London.







# Stefanutti Stocks Building Western Cape constructs production facility for

# **Pegas** Nonwovens

Source: Mathieu Carpentier, Stefanutti Stocks **Building Western Cape contracts manager** 

Towards the end of April 2018 Stefanutti Stocks Building Western Cape commenced construction of a textile manufacturing facility in Atlantis Industria, an area that is growing and envisioned to become a special economic zone that will support manufacturing in Cape Town. The new 24 390m² facility is being constructed for client Pegas Nonwoven, that has recently merged with an American nonwovens company and now falls under the name of PFN. Following the merger, it is now the world's third largest producer of nonwoven products with major production facilities in the Czech Republic, Egypt, the USA and China. Furthermore, in terms of the production technologies utilised, PFN is rated as the global leader.

The 2 375m<sup>2</sup> production hall includes a 628m<sup>2</sup> administrative office block as well as a supporting 3 265m<sup>2</sup> warehouse and outbuildings such as the council medium-voltage (MV) room (66m2), a waste shelter (200m²), transformer room and a 240m² pump room including two 9 700 litre sprinkler tanks.

The production hall is a pressurised building to ensure that dust and insects cannot impact on production. This means the area will have to be sealed throughout - escape doors will have drop seals and seals within the frames to prevent pressure loss, and there will be a special high-speed door installed that can handle the pressure requirements in the production hall.

"There are many European details, requirements and standards we need to comply with," explains Mathieu Carpentier, Stefanutti Stocks Building Western Cape contracts manager. "This makes completing details in and around the buildings more challenging, as some of them are firsts for us - as examples, the tilt and turn windows, and the doors that need to seal against dust and insects, as well as accommodate pressure."

The project is a lump-sum contract, meaning that the project may not exceed the fixed maximum value. The tilt up system has been used, with structural steel to support the roofs and side cladding consisting of insulated panels and inverted box rib (IBR) sheeting.

The production hall handover is scheduled for 25 October 2018, to allow the client's German contractor, Reicofil, to commence the installation of the machinery used to manufacture the non-woven textiles. The construction and commissioning of this equipment will take up to six months and will involve one-hundred-and-fifty containers of material, seventy of which are forty-foot long.

The next project milestone after the production hall handover will be to have the services commissioned by 23 January next year, and practical completion on 8 March 2019.

"The site achieved a Master Builders Association 5-Star rating on 14 September 2018," says Carpentier "and through hard work, precision and team work from all stakeholders, we'll continue to meet our milestones and deliver an excellent finished product to PFN."

- The early stages of construction after the tilt-up was completed and installation of structural steel had commenced.
- The early stages of the closing up of the production hall, and wet trades underway.
- An interior view from within a warehouse building after the closing up process has begun.



In June 2017 Stefanutti Stocks Botswana commenced the Airport Junction Mall project, consisting of a 15 000m<sup>2</sup> mall extension. 16 000m<sup>2</sup> retail area and basement parking. The scope of the contract included the construction of four additional shops in the existing mall, as well as a new basement parking area, located four metres away and five-metres below the existing mall in hard rock areas. The original 45 800m<sup>2</sup> mall was opened in 2012.

The mall structure, originally built by Stefanutti Stocks, consists of three-levels encompassing basement parking, ground floor and an



upper floor level covered with a structural roof. "One of our challenges was getting materials, as well as access to the upper floor levels, as the site could not accommodate tower cranes or mobile cranes on the post-tensioned slabs over the basement," explains Shaun Cross, in country manager of Stefanutti Stocks Botswana. "We could not backprop the slabs over the basement as we had to hand over this area for parking."

In addition to having to work around and accommodate an operational mall environment, the laydown areas were limited. Phase one of the project, incorporating the first half of the new extension and half of the basement parking, needed to be completed before Stefanutti Stocks could commence with the second phase of the project, which then also fell within the rainy season.

"An extension of the scope of work, without an extension of time, created additional pressure for our site team. However, we have been as accommodating as possible," says Cross. "Our team has not missed a contractual date and in spite of any challenges the project is progressing well, and we are on target to watch the paint dry for practical completion on 25 October 2018."

- An aerial photograph taken of the mall extension.
- The Airport Junction Mall site team pose for a photograph on one of the foundations.



SS Construções Mozambique completes

# StayEasy for Tsogo Sun

Source: Tim Smith, SS Construções Mozambique senior contracts manager

On 26 April 2018, after slightly more than one year of construction, SS Construções Mozambique completed the Maputo StayEasy – a Tsogo Sun hotel brand that provides budget-friendly accommodation for business professionals, groups and families travelling on a budget.

This project entailed the construction of a new, six-storey hotel building situated on the parking deck of the newly built Baia Mall shopping centre (also constructed by SS Construções Mozambique). The front of house, public facilities and back of house service and admin facilities are located on the ground floor. Each of the five floors above have twenty-five rooms, bringing the total number of rooms to one-hundred-and-twenty-five. The external facilities include a pool, lounge deck and porte-cochère (a covered porch).

The delayed start of the hotel project meant that the Baia Mall opened well before the hotel did. For safety reasons the tower crane (which normally would have been used for the hotel construction) had to be taken down before the mall opening. To solve this dilemma the structures team, lead by senior foreman Attie Blofield, completed the roof one month ahead of programme, and removed the crane in time for the mall's opening.

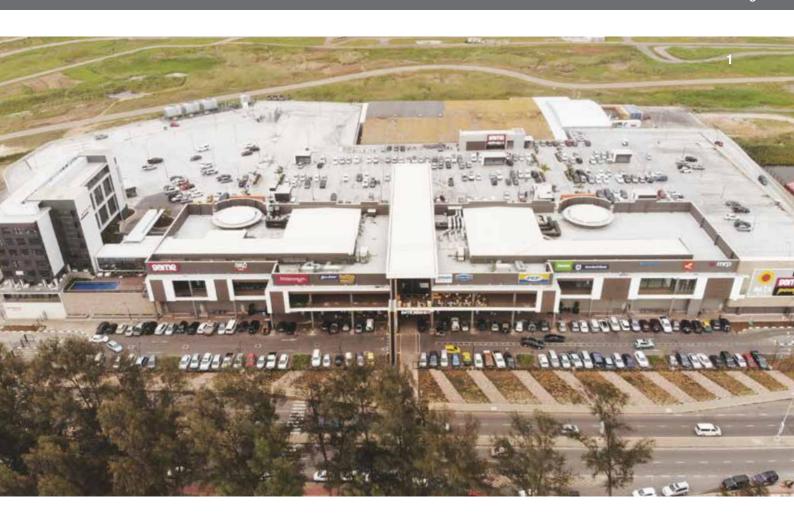
The structure and wet works trades were completed using a conventional Construction Computer Software (CCS) based bar chart programme. However, due to the repetitive nature and the large number of activities in each of the hotel rooms, the construction team switched to using a "line-of-balance" programme. This assisted site agent Steed Swanepoel, who was leading the team (that also included SS Construções Mozambique own electrical and plumbing divisions), to manage the completion and commissioning of the one-hundred-and-twenty-five rooms. This method provided a valuable record of progress and immediately highlighted any problem areas that required attention.

On completion, the client and the design team expressed their genuine satisfaction with the superior quality finished product SS-Construções' finishing teams (comprising of Johannes Leukes, Darren Fourie, John Bromwich, Lucilio Langa and James Allisson) delivered. Another point that was noted was the professional manner in which site agent Steed Swanepoel and quantity surveyor Craig Durrheim interacted with the client and professional team members.

"We are pleased to build on our relationship with Tsogo Sun by adding the StayEasy to our portfolio of hotel projects," says Tim Smith, SS Construções Mozambique senior contracts manager. In 2014 the company undertook the Southern Sun Maputo refurbishment and extension project, for which its carpentry division crafted the decks, pergolas and other exterior elements of the four-star hotel.

### Caption:

A night shot of the newly constructed StayEasy in Maputo.



# Maputo's Baia Mall

# hailed a first of its kind in Mozambique

Source: Tim Smith, SS Construções Mozambique senior contracts manager

Mozambican President Filipe Nyusi formally inaugurated the Baia Mall, located on the Maputo coast road, on Thursday 7 June 2018. The Mall which is the largest shopping centre in the country, was constructed by SS Construções Mozambique for the Baia Mall: Autodromo Gestao Imobiliaria consortium. Construction had commenced in mid-May 2016 and the 30 000m² mall was opened to the public on 15 October 2017.

Baia Mall can accommodate one-hundred shops and restaurants, as well as parking for up to nine-hundred cars. It was built against an existing 6 000m² Game store, which traded throughout the construction period. The requirement for one-hundred-and-forty car parking spaces to be provided for Game's customers at all times, resulted in the acceleration of a section of the new roof-level parking, including ramps and access roads. Once the roof parking was complete the ground-level parking area, which covers approximately twenty per cent of the project area, could be freed up and completed in time for the opening.

"A real testimony to our commitment to completing projects on time, saw us constructing the 6 000m² Premier Super-Spar from scratch - in just three-and-a-half months," says Tim Smith, senior

contracts manager for SS Construções Mozambique. "This came as a result of eleventh hour tenant negotiations and the conclusion of the design and to ensure the Mall could begin trading as planned, our teams worked twenty-four-hour shifts in the Spar area." This new mall complex is another significant landmark constructed by SS Construções in Maputo, with a high enough profile for it to be inaugurated by the country's president. "On behalf of the company I would like to thank our clients for their vision in this development and for trusting us to construct the Baia Mall, which will enrich the lives of the people of Mozambique."

- An aerial perspective of the completed mall with the hotel on the far left.
- An interior photograph of the Baia Mall.



# Zambian **Breweries**

# expands its Ndola infrastructure

By Damien Pennefather, Stefanutti Stocks Construction (Zambia) senior project manager

Stefanutti Stocks Construction (Zambia) is currently executing the second phase of an expansion project for Zambian Breweries in Ndola - the country's second largest city that is located in the Copperbelt Province and near to the Congo Border.

The project includes the construction of a canteen, clinic and a change house building, an extension to the existing warehouse, a new chemical store, a waste area and several concrete hardstands. The scope of work also includes the demolition of all obsolete structures.

"This project began in March 2018 on a fast track programme that was aiming for a completion by August 2018," says Damien Pennefather, senior project manager for Stefanutti Stocks Construction (Zambia). "A six-month turnaround on a project of this nature is a tall order for any contractor, when one considers that about two-hundred tons of structural steel needed to be shop-detailed, approved, fabricated and erected within that period, in quite a remote part of Zambia. Nevertheless, we are doing what it takes, to deliver on our client's expectation."

The project has been challenged by a number of factors, including design changes, sometimes even after the work had been completed. Stefanutti Stocks was able to secure additional work for the Zambian Breweries, in the form of the construction of a new caustic tank bund area, Fermentation Vessel (FV), Bright Beer Tank (BBT) and the de-aerated water (DAW) tank farm bases as well as new offices for the warehouse extension. Furthermore, a number of site instructions were received, including the relocation of the crate crusher installation, the removal of the existing warehouse's side cladding, the installation of a man/machine interface handrail network, as well as the refurbishment of the administration building.

#### **Training**

"At the beginning of the project we had the opportunity to organise some refresher training for our shutter hands and subcontractors, and this was provided by the Stefanutti Stocks Academy," says Pennefather. "At the same time we capitalised on the trainers' visit, by upskilling our operators – many of whom are now certified to operate more than just one machine - this is a benefit to any project."

Safety, as always, is of paramount importance and in June, Mr Zee (Stefanutti Stocks' industrial safety theatre) helped to promote Stefanutti Stocks' safety culture in a way not seen before in Zambia. "His visit was welcomed by all, and made a lasting impression on our work force and our client, who complimented us on the initiative," says Pennefather.

The canteen, change house and clinic buildings were handed over in September, with the warehouse extension in mid-October. "We're particularly impressed with the local roofing contractor, whose professional approach is contributing to the project's success. The pressure is on and working every Saturday and Sunday is the order of the day at the moment - but with the end in sight we are focused on getting the job done," concludes Pennefather.

- The Stefanutti Stocks team at the Zambian Breweries. Standing, from left to right, are: junior foreman Fidellis, safety officer Romon, site agent Hein, project manager Damien, finishing foreman John and quantity surveyor Boniface. Kneeling are, from left to right: site engineer Kelvin, foreman Shorty, junior foreman Teddy, finishing foreman Clemence and site clerk Raphael.
- The extension to the warehouse.
- The completed canteen, ablution, clinic and beer garden.









# **Zambia's National Pension Scheme Authority**

development completes on a high note

Source: Willie Retief, Stefanutti Stocks Construction Zambia director

Stefanutti Stocks Construction Zambia recently completed the construction of the three-star, one-hundred-and-thirty room Garden Court Kitwe, a 200-seater conference facility and two office blocks in a development on the corner of Freedom and Independence avenues in Kitwe. The project was handed over to the National Pension Scheme Authority (NAPSA) and hotel operator Tsogo Sun on 1 September 2018, two months ahead of programme.

The structures were built in a swamp area with a high water table and it was necessary to bring in thousands of tons of dump rock before construction could start. "Dump rock is a scarce commodity here, and all the villages in the area were collecting dump rock from old sites in the bush," says Willie Retief, Stefanutti Stocks Construction Zambia director. "Kitwe is also well-known for its daily rainfall during the fourmonth-long rainy season, with a daily downpour of between fifty to eighty millimetres not being unusual - and of course this added to the swamp-like conditions on site."

The local workforce was mostly unskilled but eager to learn and hardworking. "This contributed to our ability to complete the project ahead of programme, and we established a Stefanutti Stocks training facility that was incredibly successfully and enabled us to do almost ninety per cent of the trades in-house," says Retief.

High quality finishes were required to ensure continuity across Tsogo Sun's Garden Court brand. The finishing material was brought into the country, however, the ferry was not always working, and delays of up to two weeks at the border were not uncommon.

The team, comprising project managers SIP, hotel architects Robert Silke and office block architect Isi Martinez, all played a major role in successfully completing the project. "Our positive approach, committed employees and the team's combined effort, resulted in our finishing the project two months ahead of programme," says Willie Retief, Stefanutti Stocks Construction Zambia director. "We are currently negotiating a further project with NAPSA and are looking forward to building a long-term relationship with them."

- The front of the completed Garden Court Kitwe.
- The exterior of the completed hotel, conference centre and office blocks.
- The hotel staff were treated to a surprise visit and a photo opportunity with President Edgar Lungu.







# **Annual SHE** conference

# delivers ample food for thought

Source: Jaco Underhay, Stefanutti Stocks Group SHE manager

Stefanutti Stocks' second annual safety, health and environment (SHE) conference took place on Friday 5 October 2018 in Gauteng. It was attended by seventy-three delegates comprising managing directors, directors and all safety and environmental department heads from the group's operations both in South Africa and internationally.

The main theme of the day was behaviour-based safety programmes within the Group, and the conference agenda included four guest speakers, all of whom offered interesting thoughts and insights about various topics relevant to the current SHE climate. These included Dr JP du Preez and colleagues from Success Strategies, who spoke on Cultural Social Influence on Organisations (Behaviour); Jason McNeil the chief operating officer from Interwaste, who spoke on Waste Management in the industry, Ernst van Biljon, who was previously a public prosecutor and brought in a legal perspective; and Norman Wright from the Quadriplegic Association of South Africa, who spoke on Life Changing Experiences.

"When we look for guest speakers our aim is to find unusual people with unusual stories, to make sure that we can motivate and capture the attention of our conference delegates," says Jaco Underhay, Stefanutti Stocks Group SHE manager. "Each of the speakers offered unique perspectives and covered topics that we all need to think about, from completely different angles."

The talk on Cultural Social Influence on Organisations focused on the importance of language in a business culture, and the assumptions one makes, that people from different backgrounds will perceive things in the same way that one does. This included pointers on bridging cultural and language barriers, and how active engagement, often face-to-face, can yield good results in a working environment. These principles are also in line with Stefanutti Stocks' behaviour-based programmes.

The talk on Waste Management in the Industry included interesting facts on waste disposal and industry trends in South Africa, including legislation change that may see the introduction of a landfill tax of R150 per ton for construction rubble, or a ban on construction rubble being dumped at landfill sites. "With the amount of construction rubble that we generate, there is a real business case for us to consider – are we going to recycle or use our rubble as backfill or is there an opportunity for our construction rubble to become a commodity ...?" says Underhay.

Lawyer Ernst van Biljon opened his address by saying that he used to prosecute hardened criminals before his profile was changed and he began to prosecute health and safety violators. "I started prosecuting people like you," he said, and everyone sat up and paid attention. He spoke on how he has prosecuted, fined, and sent to jail people who are in charge of businesses and who make decisions on behalf of businesses. He reminded everyone present that one can be held accountable and liable in one's personal capacity for the decisions one makes in one's professional capacity. "Ernst gave real life examples,





making his talk even more compelling," says Underhay. "Feedback from many people was that this was the talk of the day."

The fourth guest speaker was Norman Wright from QASA, who is still recovering and unable to walk after a serious accident. His personal narrative, as well as his relating of other serious accidents and their outcomes, brought home the fact that a mere few seconds can be life-changing. His key messages included 'buckle up', the importance of securing all loose items in the car as well as the importance of not texting and driving. In closing he echoed QASA's plea to society: "We don't want more members!"

The conference also included a slot for feedback on Stefanutti Stocks' occupational health and safety forum, that has achieved about ninety per cent of its objectives. "Our programmes are currently running so effectively that we have been able to scale our forum meetings down to being held bi-monthly," says Underhay. "Nevertheless, we will continue to constantly measure, monitor and maintain these programmes, to ensure they continue to be embraced."

The event officially concluded at 15h30 and was followed by the opportunity for some socialising and networking. Overall feedback on Stefanutti Stocks' second SHE conference was very positive, and delegates left for the weekend, with plenty of food for thought.

## Captions:

- Stefanutti Stocks CEO Willie Meyburgh opens the conference.
- Mnyamezeli Daniel Sambo from Success Strategies talks about leadership attitude.
- Ernst van Biljon doing a role-play court session with the audience.
- Bernaas Swanepoel from Success Strategies engages the audience.

# Behavioural change drives

# **Stefanutti** Stocks' safety culture

Source: Jaco Underhay, Stefanutti Stocks Group SHE manager

Having a behaviour-based SHE programme in place is becoming Behavioural Change Programme in-house and began implementing it in March 2018. The programme was originally put together by a committee of representatives from divisions within the group, that were undertaking projects at SASOL, however, the programme has since been adopted by

the Group and is being implemented across all of its operations.

All of Stefanutti Stocks' stakeholders – including employees of all levels, and subcontractors – are encouraged to participate and buy into the Behavioural Change Programme. This peer-based programme encourages people to hold one another accountable, and currently encompasses four levels of observer participation - Leadership Engagement and Visible Felt Leadership for the management tier, Site Safety Observations catering for site-based personnel and peer-to-peer observations for other levels of employees, such as artisans, operators and craft (general workers).

"When I started my career twenty years ago, the main concern in the industry was enforcing compliance," says Jaco Underhay, Stefanutti Stocks Group SHE manager. "Over the years the trends have moved more and more towards behavioural change and today we focus on creating a culture of ownership, accountability and compassion. Our initiatives and interventions have resulted in people making good decisions - in fact, we have exceeded the benchmarks we have set for both our lost-time injuryfree rate and recordable incident rate thus far during this financial year."

	2017/18 actual	2018/19 benchmark	2018/19 actual (to date)
LTIFR	0.12	0.1	0.05
RCR	0.7	0.5	0.3

Underhay credits three factors as key contributors to Stefanutti Stocks' strong performance in this sphere. Firstly, that of bringing accountability into the values of the business, and this principle is actively being applied, in that management is in fact holding people accountable for their behaviour. Secondly, the leadership engagement by top management and thirdly, the safety departments are focused on managing and investigating any incidents effectively in order to gain a clear insight of what went wrong, where, in the chain of events.

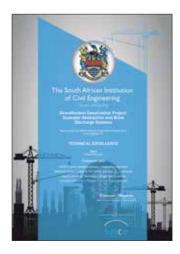
"We have done exceptionally well across the group to achieve these figures. It has been the strongest performance the group has achieved to date, and I'm sure we can continue to improve on an already excellent performance," concludes Underhay.

# Strandfontein Desalination Project wins

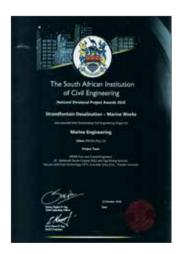
# multiple SAICE awards

Source: Lumka September, Stefanutti Stocks Coastal site engineer B









The Strandfontein Desalination Project (undertaken for PROXA) has won a number of SAICE awards this year, including a Technical Excellence Award for the Western Cape branch followed by a Best Project Award for the SAICE Western Cape region. Site engineer Lumka September prepared and presented a comprehensive overview of the project, which was very well received by the engineering community, at the regional awards event.

Following this win, the project was then submitted for consideration in the SAICE National Divisional Project Awards held on 12 October 2018. It was awarded the Most Outstanding Civil Engineering Project for Marine Engineering, and also received a Highly Commended Award in the Technical Excellence Category.

### **Technical Excellence**

Through early contractor involvement the Stefanutti Stocks Coastal TAG Diving joint venture and PROXA's design engineer, PRDW, value engineered the pipe-line configuration to achieve an excellent balance between the design requirements (for the total weight and stability of the pipeline on the seabed), and the practicality of manufacturing and installing this pipeline.

- 1. Site engineers Lumka September and Aafreen Fernandez with the regional award.
- Pictured at the award ceremony in May are a few of the team members. From left to right: Sahil Patel (PRDW), Christophe Baret (PRDW), Andre van der Merwe from Stefanutti Stocks Coastal, Lumka September from Stefanutti Stocks Coastal, Mike Jessop (Tag Diving Services), Kenneth Pedersen (PRDW) and Richard Wegener (PRDW).





# A trip down memory lane - Mechanical & Electrical business unit

Stefanutti Stocks' Mechanical & Electrical business unit has a history that dates all the way back to 1983. Harry Skelton, Colin Plummer, Richard Leitao, Aubrey Michel, Ian Wright and Roy Dukes left Group Five to set up a company called Skelton & Plummer (S&P), that would specialise in mechanical, electrical and instrumentation construction work for industrial, mining, manufacturing, and petrochemical clients. As with many start-ups they had a few wins, however the first few months of operation were touch and go with many a breath held in anticipation of clients' making payment.

Early project highlights included piping and mechanical work for the ERGO CIP Plant in Springs, which helped put them on the map and resulted in further project awards from Goldfields. In 1985, S&P was awarded the project management and design of the new Rand Refinery and established an in-house design division to deal with all the civil, mechanical and electrical design elements of this and future projects. In 1988 it formed a plant suppliers division and started developing the S&P high-rate clarifier (S&P HRC) - a solution that still remains very successful and popular thirty years later.

By the mid-nineties S&P was working for most of the mining houses in South Africa. During the latter part of this busy decade its path first crossed with Stefanutti and Bressan (S&B), when it awarded a small pipeline base contract to S&B, a relative newcomer to the Gauteng market.

In 2001 Eddcor Electrical & Instrumentation Projects was formed to grow S&P's electrical and instrumentation activities. Some of its first projects included the Mozal expansion project in Mozambique and the electrical installation of 1 600m 7.2KV 70mmÇ XLPE 3 core cable at Hernic Ferrochrome.

S&P was well known in the industry for its unwavering commitment to company policies concerning quality, health and safety, the environment, road safety, employment equity and skills development. This reputation, and a desire to gain a foothold in the mechanical





and electrical construction field, motivated an approach by S&B that was interested in acquiring both S&P and Eddcor. By January 2008 the construction group (which shortly thereafter was rebranded as Stefanutti Stocks) had acquired a majority shareholding and by March 2010 the total buyout was completed.

In the years that have passed since, a few more acquisitions have been made, including the purchase of Apollo Electrical and Instrumentation in 2010, followed by Energotech Electrical & Instrumentation in 2013. These two businesses merged within Stefanutti Stocks Electrical & Instrumentation.

The Mechanical and Electrical business unit was further strengthened when an Oil & Gas division was established in June 2012. This division specialises in pipe spool fabrication, structural steel installation, mechanical, piping, scaffolding, painting and insulation in the oil and gas sector.

The divisions that fall under the Stefanutti Stocks Mechanical & Electrical business unit have maintained the same commitment to excellence that was integral in its founders, and that is an integral element of the Stefanutti Stocks Way of doing business.

- The modest Zonderende site office.
  The Middleburg Steel and Alloys project where S&P constructed and installed
- An automatic gravity sand filter, S&P HRC and mud solidification plant that formed part of a turnkey project at East Driefontmein's shaft No. 5.
- A certificate of commendation from Anglo Platinum for the Waterval project.



# Stefanutti Stocks

# remains on top of its game!

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

Stefanutti Stocks once again took part in the annual Corporate Games held in Cape Town. They participated in Division 3, along with other companies that had entered between nineteen to fifty people. In terms of overall medals, they finished in fifth position with sixteen medals, not fairing too badly against much larger teams in other divisions.

This year the runners excelled, earning a total of thirty points, that saw Stefanutti Stocks finish in fourth team position. Gabriel Kriel finished first in his category in the ten kilometre run; Lufuno Ndou finished eighth in the same category; Shaniley September finished second in her category in the five kilometre run; Eric Thomson came in third in his category the five kilometre men, Mathieu Carpentier won his category in the men's five kilometre run.

The Action Netball team finished third overall, and Stefanutti Stocks football team once again walked away with the spoils, winning the soccer category for the fourth year running, also scoring the team an invite to participate for free in the 2019 Cape Town event.

Football team captain Nigel Ramiah is proud of the team's achievements: "We've had a good winning streak these past four years - not only in the Corporate Games which we won twice in Cape Town and twice in Johannesburg, but also for the Choc tournament, which we've also won for the fourth time in a row." The team certainly does seem unstoppable!

- Stefanutti Stocks at the starting blocks. Let the Games begin!
- Gabriel Kriel finishing first in his category.
- Sporting their running medals are, from left to right: Shaniley September, Gabriel Kriel and Eric Thomson.
- The Action Netball team. Standing, from left to right, are: Tiaan van der Merwe, Mathieu Carpentier (photo bomber), Margie Dixon, Ayanda Nyobolo and Dawid Leonhardt. In the front, from left to right are Anela Piliso, Ashleigh Liederman, Lauren Visagie and Donny Petersen.
- The unbeaten Stefanutti Stocks Football team.
- Stefanutti Stocks shows some team spirit!











# Stefanutti Stocks are "Fives Football Thursday League"

# Champions

By Ofentse Woco, Stefanutti Stocks Building Western Cape quantity surveyor

After leaving the Fives Football's third division to join the second division, we were not too sure what to expect from the higher division. The suspense and energy levels were high, but strangely enough this fuelled our confidence as well - we also knew that we had put together a very good team.

Our team (photograph at the top of the page) captained by Vuyo Xintolo included (from Stefanutti Stocks) Steve Nell, Vuyo Xintolo, Sakhele Dlangamandla, Furlow Okkers, Nazeem Ahmed, student Culumanco Ngongo and myself, Ofentse Woco. An external contingent, consisting of friends of some of our team members included Chadwin, Scara, Kgotso, Siseko and Duran.

Team Stefanutti Stocks got off to a rocky start in the first quarter of the league, as we were still trying to get to know one another again, after a two-week break. At one point, not quite halfway through, we found ourselves lying fifth in the league. However, after what felt like scoring countless goals, we managed to work our way to the second position overall.

Our team's flair, as well as our players' commitment to playing a good game, began attracting fans and supporters who started attending and watching our games on a more regular basis. In the second half of the league the pressure was on as every team was gunning for first position. We were consistent and managed to win our games by a point or two keeping our second place and cool heads in spite of the drama surrounding us. In our second last league game, the leaders beat us by six goals to two. Our morale was dented, but our confidence was not broken - we had the fans to think about!

We arrived at the final to play the same team that had beaten us previously, and managed to turn the tables, scoring an impressive six goals to their four. Stefanutti Stocks Building Western Cape's team finished as the champions of the "Fives Football Thursday League"!

# Stefanutti Stocks encourages its remarkable women to be

# bold for change

By Marzelle Strey, Stefanutti Stocks Civils HR admin manager

On Wednesday 8 August 2018 Stefanutti Stocks hosted special events in Gauteng, Durban and Cape Town, to mark Women's Day. The theme for this event was #BeBoldForChange.

The average woman wears so many different hats and being bold plays a big part in their ability to achieve it all. Daily we are bombarded with quotes, saying that we can do and be everything we set our mind to. However, to achieve all these things requires some boldness. The definition of boldness is "a willingness to take risks; confident and courageous". The interesting thing about this definition is that it is not tied to a gender!

Once we had decided on our theme we started planning on how we could create a space where the remarkable women of Stefanutti Stocks would be able to get out of their comfort zones, be courageous and also have fun while doing so. The idea to have a painting day was born, as we felt that creativity is something women of all ethnic groups share, although sometimes they do need to be pushed a little to explore their creative sides.

On the day, the ladies were welcomed by the sight of tables with blank canvasses, paint and paint brushes in the venue and we could hear some uncertain voices saying: "are we painting?", "I can't paint!", "I'm not creative at all ..." And of course, a few nervous laughs.

### Feedback from Gauteng's event

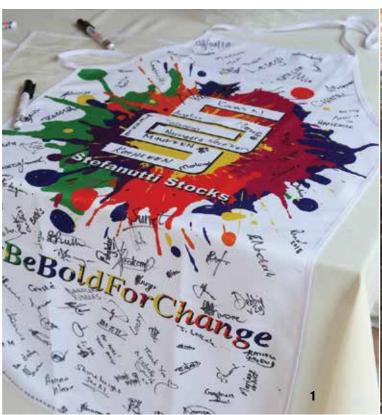
Everyone was calmed down by Michelle Saville from Come paint with us, who assured everyone that they would be able to paint a picture in front of her and turn it into a perfect, personal work of art. Michelle guided us stepby-step on how to paint our pictures, also walking around and assisting where required, demonstrating painting techniques and skills. She managed to get the best out of each one there, even those that never thought they would be able to make something from a blank canvas. I think some of the ladies were amazed by what they achieved by stepping out of their comfort zone and discovering a creative side they had not known existed.

Motivational speaker and artist, Clarice Pieterse also joined us on the day and entertained us with her beautiful voice and her musical skills on the Ukelele. She too emphasised the importance of embracing who we are as women and to be authentic and bold. She challenged all present to turn to the person sitting next to them and give her a compliment (even if she was a stranger). By doing this one creates a sense of belonging and a shared experience with the next person.

It is so important to have events like this, where female employees can get together, share stories, inspire each other and get to know one another better. It is also important for us to take time and to "recharge" in order to be able to wear the many hats we do. What made this event even more special was the revelation some felt after being challenged to step outside of their comfort zones: discovering that one can achieve whatever one sets one's mind to do and with the motivation and support from your fellow female employees we can achieve even more.

An event like this takes time and planning and could have not been done without help. Debbie Kannemeyer and I planned the event, with the assistance of a few ladies including Rohanna Cockrell who arranged the scarfs for the gift bags and Wilna Ivanov, Tania Joubert and Zelda Steenkamp who helped to pack 150 gift bags and place them on the tables at the venue. Each lady was spoiled with a beautiful Stefanutti Stocks branded apron, a scarf and a small bottle of Fairy Dust carrying the message "Leave a little sparkle wherever you go".

- A Stefanutti Stocks apron signed by all the ladies and presented to Russell Crawford. Cape Town (representing Stefanutti Stocks Coastal) artists in the making show off their paintings.
- (3-7) Gauteng's artists in the making show off their paintings.















# Stefanutti Stocks Coastal celebrates

# heritage day

By Yashika Seejeram, Stefanutti Stocks Coastal divisional HR manager

This year we marked Heritage Day on 22 September 2018 with enormous enthusiasm, brightly coloured outfits and mouth-watering aromas of a delicious multi-cultural menu. Employees arrived at work in their traditional outfits and brought along treats and food from their various cultural backgrounds, to share and experience with everyone. It was certainly a culinary adventure as food ranging from koeksisters to walkie-talkies (chicken feet) to curry was displayed and tasted by the courageous culinary explorers. It's a day we would love to repeat again next year.

- A fashion extravaganza! From left to right are Boitumelo Masetle, Fikile Mathonsi, Shantal Chinnia, Nolwazi Thabethe and Cynthia Ndevu.
- Stefanutti Stocks staff embark on some culinary exploration.







Stefanutti Stocks is the discard contractor at the Dorstfontein East and at the Forzando North coal mines, both of which are part of Exxaro Coal Central (ECC). "On 18 July 2018, as part of our sites' corporate social responsibility and to mark Nelson Mandela Day, we joined Exxaro's team at the Impilo Primary School near Kriel, and later at Friedman Primary School near Bethal," says Clifford Turner, Stefanutti Stocks Mining Services contracts manager.

The proceedings included brief introductory speeches by Dorstfontein East's mine manager Mr David Kaboe, as well as ECC planning and development manager, Mr Gunn Ndabele (at the Impilo School) and Forzando North's mine manager Mr Deon Du Plooy (at the Friedman School).

The children were gifted with scarfs and beanies supplied by ECC and treated to cups of soup and oranges supplied by the team representing Stefanutti Stocks Materials Handling that included contracts director Marco Pasquali, operations manager Riaan Le Roux, Dorstfontein East's site manager Raymond Welding and Forzando site manager Johannes Mbokane. "We were proud to have been included in the initiative, that sought to improve the well-being of these children at both schools," concludes Turner.

#### Caption:

Pupils at the Impilo Primary School line up to receive oranges and soup.



Stefanutti Stocks Material Handling, based in Middelburg, has sponsored Middelburg High School's First Golf Team with golf shirts and golf bags. The golf bags will remain the property of the school and will be used each year by the reigning first team. Some of the team's achievements include that it qualified to play in the Mpumalanga region's SA Schools tournament held at Devondale Golf Estate in Stellenbosch in August. Players Evert Buurman and Zane Nel were selected to play in the Mpumalanga IPT Schools tournament; Evert Buurman was also selected for the Mpumalanga U19 team that will

compete in the SAGA Nomads Tournament, to be played at the Benoni Country Club in December 2018. "We wish the team all the best, and hope that they will continue to excel in their sport," says Clifford Turner, Stefanutti Stocks Mining Services contracts manager.

Proudly standing with the school's new golfing kit are, from left to right: Zane Nel, Evert Buurman, Darren Neyt and Arno Kruger. In the back row, from left to right are Clifford Turner (contracts manager), Riaan Le Roux (operations manager) and Marco Pasquali (contracts director).

# The Stefanutti Stocks Group

# mobilises against cancer

"Many of us, both in our personal and professional lives, have at some stage crossed paths with someone whose life has been affected by cancer," says Willie Meyburgh, Stefanutti Stocks CEO. "In addition to supporting cancer awareness initiatives and participating in campaigns during the months of October and November, we will continue working towards raising both money and awareness all-year around. Throughout the year you will see our newly branded Pink Drive AXOR on the South African roads, encouraging people to learn

"Furthermore, all the revenue earned by the Pink Drive truck, whilst engaged in its normal work for the company, will be donated to dedicated cancer awareness programmes."

As part of Stefanutti Stocks' Pink Drive campaign, these pink bracelets, bearing the Stefanutti Stocks mission, will be distributed to all of the women working for the group.







# Construction & Mining Business Unit

Managing director: Derek du Plessis

Tel: +27 11 552 4200

### Divisions:

### Roads, Earthworks & Pipelines

South Africa - managing director: Julian Dovey

Tel: +27 11 552 4200

E-mail: earthworks@stefstocks.com

#### Capabilities:

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

### **Mining Services**

Managing director: Ian Ferguson

Contract Mining - contracts director: Freddie Strydom Tailings Management - contracts director: Marco Pasquali Materials Handling - contracts director: Marco Pasquali

Tel: +27 11 552 4200

E-mail: miningservices@stefstocks.com

# 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

General manager: Shaun Cross

Tel: +267 397 4773

# Stefanutti Stocks SWAZILAND

Managing director: TBC

Tel: +268 518 5006 Stefanutti Stocks ZAMBIA

# Managing director: TBC

Tel: +260 211 285623/4

## Stefanutti Stocks WEST AFRICA

Managing director: Michael Welsch

Tel: +27 83 444 5075

General contracting capabilties:

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

#### Stefanutti Stocks Civil & Coastal

Managing director: Matthew Horwill Durban office: +27 31 700 1416 Johannesburg office: +27 11 571 4300 Cape Town office: +27 21 386 2610

- Heavy industrial plants, i.e. mining infrastructure, process plants, factories.
- Various power generating facilities.
- Marine construction.

Capabilities:

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

### Stefanutti Stocks Geotechnical

Director: Shaun Butler - Tel: +27 11 571 4300

Capabilities:

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

# Mechanical & Electrical **Business Unit**

Managing director: Vince Olley

Tel: +27 11 820 4600

# Divisions:

# Mechanical & Piping - Mining Infrastructure:

Managing director: Marius Botes

Tel: +27 11 820 4600

Capabilities:

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

### **Electrical & Instrumentation:**

Managing director: Marius Botes

Tel: +27 11 820 4600

Capabilities:

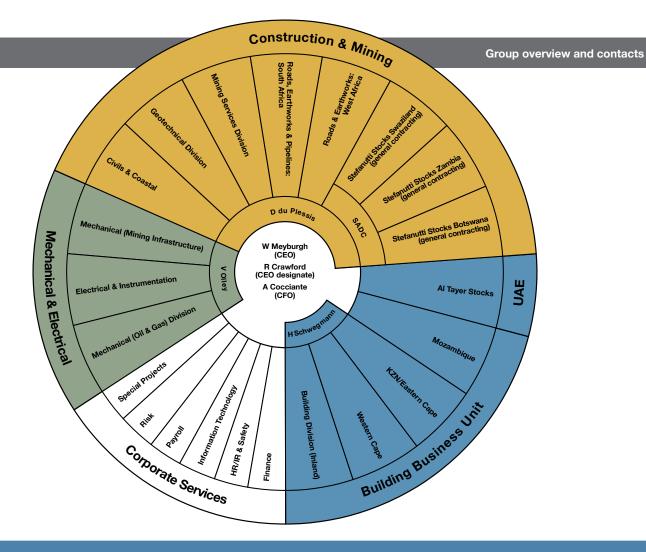
- Electrical supply, installation and commissioning.
- Instrumentation supply, installation and commissioning.
- Maintenance.
- Sub-stations and switchyards.

# 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 Schwegmann

Tel: +27 11 820 4600

E-mail: building@stefstocks.com

Capabilities:

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

### Divisions:

### **Building Division**

Managing director: Dietmar Scriba

Tel: +27 11 820 4600

# **Building Western Cape**

Managing director: Mauro Donato

Tel: +27 21 386 6336

# **Building KZN/Eastern Cape**

Managing director: John Dorning

Tel: +27 31 700 1416

## **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

# **United Arab Emirates**

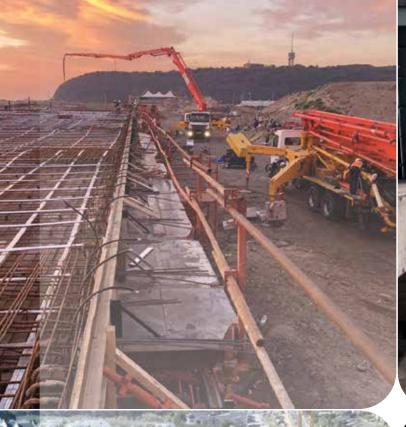
## **Al Tayer Stocks**

CEO: Jorge Areosa Tel: +971 4 503 4888

Capabilities:

- Interior fit out and refurbishment.
- General construction.
- Residential buildings.
- Retail developments.
- Office accommodation. Hotel construction.
- Leisure facilities.

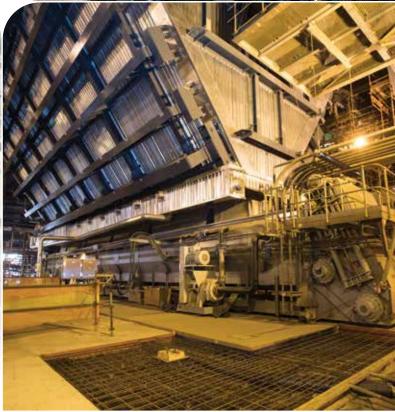








Our divisions undertake multidisciplinary construction contracts for the following sectors: Building; Bulk Earthworks & Geotechnical; Energy Generation; Industrial Plants, Oil & Gas; Contract Mining & Mining Infrastructure; Transport Infrastructure; and Water, Sanitation & Pipelines.



# if you can dream it, we can construct it



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