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ON THE COVER

Bosch's new Professional Magnetic Drill – the GBM 50-2 – is convenient, durable, highly efficient and safe. With the best price-performance ratio in its class, this tool is ideal for tough metal core drilling, twist drilling and threading metal. Its laser technology offers a fast target set-up and power supply cut-off system that prevents electric shock. The smart HMI-system enables easy serviceability and controls carbon brush wear, preventing unexpected interruptions. The product features a load indicator that prevents overheating while a magnetic field activation with high magnetic force makes accuracy easy.

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COMMENT

Being able to claim the tallest building in your country is symbolic – a psychological boost for the country and its construction industry. Building tall buildings illustrates a country's ability for complex engineering and construction innovation while it implies that it has the right skills and enough money for what is an expensive exercise.

Africa, unlike Asian and Middle Eastern countries that have nine of the world's top 10 highest skyscrapers, was a late starter in terms of constructing tall buildings. The skyscrapers in these countries were all built in the last decade and the highest, the Burj Khalifa in Dubai is a staggering 830 m high (to its tip).

The current tallest building in Africa is in South Africa – The Leonardo in Sandton. It is 234 m high (less than a third of the Burj Khalifa), has won a slew of awards for design and construction excellence and now dominates the Sandton skyline. Despite the fact that its developer, Legacy Group recently cancelled the contract with construction group Aveng in a dispute over delays, the building has surpassed The Carlton Centre in the Johannesburg CBD to claim the number one spot in the tall buildings stakes. The Carlton Centre had been the tallest building in Africa from 1973 to 2019 (223 m).

Over the next few years the top positions in Africa will look quite different. Construction of the 250 m high Mohammed

VI Tower in the Moroccan capital Rabat started last year and will be Africa's tallest skyscraper when it is completed by May 2022. The building will have 55 floors hosting a luxury hotel, offices, luxury apartments as well as an observatory at the top of the tower.

The Mohammed VI Tower's reign may be short lived though. The F Tower, to be built in the Ivory Coast city of Abidjan, will peak at 283 m. The tower, according to the architect, 'will be an architectural feat resembling an African mask'. It will, however, still only be a third of the height of the Burj Khalifa.

The Carlton Centre was the tallest building in Africa for 46 years. However, the recent and future changes in the tallest building in Africa stakes is indicative of increased activity in Africa.

Weathering a tough trough

The construction of a building such as The Leonardo creates a false sense that all is well and that there is renewed activity in the South Africa construction industry. Sadly it is not the case. The status quo of the last

few years is continuing – and will for some time. The South African construction sector is all but on its knees, exacerbated by low infrastructure spending by government. There are pockets of growth but also pockets of decline, a stagnant scenario overall. Collectively the industry is awaiting an upturn which cannot come soon enough.

While it does, *Construction World* is still the ideal vehicle for reaching the construction industry to advertise products and services. Apart from its solid reputation (having been published for the last 38 years), it offers a print issue with a circulation of 6 685, a weekly targeted newsletter that is mailed to 10 000 inboxes while our website carries daily news. Apart from these we have various brand extensions with which we serve the construction industry

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2019'S 'CONSTRUCTION MEGA CITIES'

Today, more than half of the world lives in an urban area. By 2050, this number is expected to increase to some two-thirds of the world's population, according to the United Nations. While this may lead to overcrowding in cities, and overuse of resources, it also presents companies in the construction industry with major opportunities for growth.



Dubai remains at the top of the list of 'Construction Mega Cities'.

GlobalData tracks large-scale construction projects in all sectors, and following a recent assessment of project pipelines in major cities worldwide, it has compiled a listing of 50 'Construction Mega Cities' for 2019, each having a pipeline of projects with an investment value above USD30-billion. The combined value of the project pipelines in these cities stands at USD5,3-trillion, and includes over 8 200 projects at various stages of development, from announced to execution.

From 2007 to 2025, GlobalData expects the cities' combined gross domestic product (GDP) to increase by more than USD8-trillion to USD20,4-trillion. They will be home to an estimated 527 million inhabitants, many being in China and other emerging markets that are witnessing a fast pace of urbanisation. GlobalData projects that average per capita GDP in these cities will rise from USD1 791 in 2007 to USD2 263 in 2025, in real terms.

Dubai remains at the top of the list of 'Construction Mega Cities', with total project values amounting to USD611,20-billion, ahead of London in second place (USD342,9-billion) and New York in third (USD285,2-billion), while Moscow slipped to fifth place (USD201,4-billion) when compared to the 2018 rankings. Seven new cities have made it to the 2019 list, namely Istanbul, Tokyo, Fuzhou, Zurich, Atlanta, Zhengzhou and Las Vegas. The combined value of the project pipelines for those new entrants stand at USD379,75-billion, and includes 505 projects at various stages of development. The Asia-Pacific region dominates the list, accounting for 25 of the 50 cities, and has a combined projects pipeline valued at USD2,1-trillion.

Yasmine Ghazzi, Economist at GlobalData, comments: "Of the 50 'Construction Mega Cities', 29 are considered to be in emerging

markets. The rapid growth of cities in the emerging regions reflects both above-average population and per-capita GDP growth. The population of those 29 emerging-region cities will reach an estimated 327 million by 2025, at an annual increase of 1,8% from 237 million in 2007. At the same time, GlobalData projects that the real GDP per capita (measured in real terms) in these emerging urban centers will increase by 2,4% from USD520 854 to USD820 311 between 2007 and 2025."

Ghazzi adds: "Reflecting the varied levels of economic size, there are major differences among the 50 'Construction Mega Cities' in terms of the value of the project pipelines compared to the size of the economies. Some major cities in the Middle Eastern Gulf states, namely Dubai, Doha and Kuwait City, along with Cairo, secured their spots in the top ten in terms of spending on mega projects relative to the size of their economies. The construction sectors in these cities are expected to be key drivers of economic growth in years to come. However, Dubai's economy is expected to grow by 1,3% in real terms in 2019 reflecting the completion of many infrastructure projects related to Expo 2020 Dubai."

Ghazzi continues: "Mumbai has the fastest-growing city economy owing, in part, to the government's thrust on infrastructure. Supporting continued growth, the Asian Infrastructure Investment Bank (AIIB) announced in November 2019 that it had approved an investment of USD575-million in suburban railways and renewable energy sector in Mumbai, taking to its total commitment in India to nearly USD3-billion. It will extend a long-term project loan to Mumbai Urban Transport Corporation for USD500-million, while the remaining USD75-million will be invested in Tata Cleantech Capital to boost renewable energy, power transmission and water infrastructure." ■



London is in second place.

WHAT NOW FOR THE REST OF THE STEEL INDUSTRY?

On 10 October 2019, some 900 people attended the South African Institute of Steel Construction's (SAISC'S) annual Steel Awards held at three venues simultaneously in Johannesburg, Durban and Cape Town. And they were well rewarded for their attendance as this year they were treated to a record number of highly innovative entries. What is more, the Steel Awards enjoyed unprecedented sponsor support while the entries themselves with the most diverse seen to date.

The range of building types entered was compendious and the quality and of the innovation brought to bear in many of these entries was remarkable. The Steel Awards demonstrated South Africa's ability to manufacture and construct steel structures fit for multiple purposes which in excellence match and, in certain instances exceed, anything else found in the world.

The glittering success of the steel awards stands as a stark contrast to what is happening in South Africa's steel construction industry today. The past four years the industry has shrunk, and thousands of jobs have been lost. Many of South Africa's long-standing and most successful construction companies have either closed or gone into business rescue. This we all know.

"Unless a country is successfully industrialised, it will sink back into being an economic backwater, and as a globally uncompetitive unit, will be a taker of prices," explains SAISC CEO Paolo Trincherio.

"However, our most recent Steel Awards stands as a proud example of what can be achieved in South Africa. We need to transfer some of these learnings into other areas both of industry and government unless we want to experience the peace, and poverty, of stagnancy. These learnings need to be applied not only in the steel industry but also in other South African industry sectors.

One has to look at the companies who participated in the 2019 steel awards and use what they have done as a template for running both industry and the country as a whole.

"The first attribute that the successful companies possess is courage. Innovation takes courage. It takes courage to step outside what are normally accepted bounds and to produce something exceptional. "As South Africans, we have shown many times that we are capable of great courage when it's needed," Trincherio continues.

"Periodically, we need the ability to reimagine ourselves, to step back and dispassionately and critically look at our organisations and where they're going. As an Institute, we are currently embarking on just such an exercise and would encourage industry and government to do the same to avoid South Africa's relegation to the D division," he adds.

"The companies that won awards at the 2019 SAISC event, share the characteristic of being nimble, of being agile and responsive to prevailing circumstances. Apart from the normal issues of running a business such as correct gearing ratios, effective credit control and managing cash flow, successful businesses are highly reliant on the more intangible aspect of relationships. "In business, it is about networking and connecting," explains Trincherio. "Those companies that have good relationships with their suppliers, the people who give them work, the staff and their competitors are definitely in a better position for success," he adds.

Regarding a solution to the current steel industry crisis, Trincherio explains that there is no silver bullet solution. The answer lies in doing the right thing, promptly and at the right time and doing this every day repeatedly.

"At the Institute, this is something we try to do constantly and as part of the reason why this year's Steel Awards had been



SAISC CEO,
Paolo Trincherio.

the resounding success it has been. The role of the Institute has been since 1956 promoting the use of steel in construction and contributing to their health and wealth of the industry for the good of all players. The Institute is respected for its reservoir of authoritative technical knowledge and its role as the collective voice of the steel construction industry. "However, the Institute is not a political lobbyist, and, as such, is not responsible for driving direct sales for any of its members," he elaborates. As the collective voice of the steel industry, the SAISC has been intensively communicating with the Department of Trade and Industry, among other government organisations, to find a constructive solution to the current situation.

A concern of the Institute is the inordinate amount of time taken to effect government initiatives. "Many businesses in the steel industry do not have the luxury of six months to wait while in new 'steel industry blueprint' is drawn up by a government department. At this stage, the need for positive change is more than urgent," he asserts. "President Cyril Ramaphosa summed the South African challenge when he said: 'In South Africa we are very good at talking, but terrible at doing.'"

In terms of doing, the SAISC is in the process of reimagining its future. "We reach out our hands to both government and to business to undertake a similar re-imagination or reinvention," says Trincherio. "We have seen the possibility for success in our celebration of steel excellence in our Steel Awards Event and now we need to find some way of extending that throughout industry," he adds.

"The SAISC sincerely wishes to partner with private and public sector organisations in whatever way possible to reach a better, more sustainable future, both of the steel industry and our nation as a whole," he concludes. ■



Josephine Dalberg is pictured with (left) Allin Dangers, Director of Sales Western Cape and (right) Werner Oelofse of Corobrik.

CELEBRATING TRANSFORMATIVE WATER USE

As a way to encourage innovative ideas that motivate social cohesion and environmentally-responsible habitation, Corobrik presents an annual first and second-place award to graduating students in the UCT Master of Landscape Architecture programme. This year, Corobrik Most Innovative Final Year Landscape Architecture Award went to Josephine Dalberg with Amber Myers taking the second-place prize at the awards' ceremony held in November.

Corobrik Commercial Director, Musa Shangase, commented on the elevated level of design reflected by this year's graduating class: "South Africa has so much architectural talent and this is evident by the extensively-researched dissertations produced this year. Through landscape architecture, we are able to bring aesthetically enhanced spaces as well as socially cohesive designs to the various communities within the country. We, at Corobrik, believe that 'better starts here' and, when it comes to landscape architecture, better starts with these award-winning ideas."

Shangase said it was also incredible to see the creative incorporation of Corobrik popular clay paver range into the designs: "The realisation of these designs is not merely about form and function; it's about creating a legacy that tell the story of our society to future generations. The durability, aesthetics and environmental benefits of Corobrik pavers ensure these legacy-defining structures will remain."

This year's winner of Corobrik Landscape Architecture Award was a thesis entitled 'A River Remembered: reconnecting to landscape, memory and resource through water routes'. It investigates the possibility of re-routing an existing concrete water channel, or *leiwater*, allowing residents from a disadvantaged community to access water for food gardens and the greening of their environment.

"The concept focuses on the historical relationships between people and the landscape," explained Dalberg. "Having always had an interest in the Cederberg area, I decided to focus on Clanwilliam

which is the area's oldest town and the gateway to the region."

The existing water channel currently bypasses an RDP community situated on the periphery of the town. This water, from the Jan Dissels River, is instead piped into the town centre where it is revealed in an open *leiwater*. Through her dissertation, Dalberg seeks to re-route this water to include the RDP community, democratising this important resource. "This will create the opportunity for developing both household and community gardens, as well as sites of social engagement between the RDP community and the town centre," concluded Dalberg.

The runner-up, Amber Myers, titled her thesis 'Perceiving Landscape: Designing for the Contemplation of Material Culture through Time'. For this interesting concept, Myers suggested constructing a coastal park and archaeological museum on the Point of Mossel Bay, using materials harvested from buildings which will be submerged by the rising ocean over time.

"The things we build, and what we build them from, say who we are," explained Myers. "The park encourages reflection on how the layers of human culture and development have changed the landscape over time, and how we can do so more responsibly in the future."

All graduating students in the UCT Master of Landscape Architecture programme are eligible for Corobrik's Most Innovative Final Year Landscape Architecture Award. This year's first-place recipient was awarded R8 000 in prize money with the runner-up taking home R6 000. ■

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CONFIDENCE UP marginally from DEPRESSED LEVELS

After dropping from 28 in the second quarter to a 20-year low of 21 in the third quarter, the RMB/BER Business Confidence Index (BCI) rose to 26 in the fourth quarter – the first improvement in two years. This outcome reflects the responses of 1 800 business executives surveyed during the first three weeks of November.

Confidence rebounded in three of the five sectors making up the BCI namely the building, manufacturing and retail trade. It declined in the new motor trade and remained essentially unchanged in the wholesale trade sector.

- Confidence among *building* contractors deteriorated from 30 to 23 in the third quarter before bouncing back to a still-low 31 in the fourth quarter. Although residential activity recovered somewhat after three quarters of extreme weakness, non-residential building activity remained ever so subdued.
- After slipping from 22 in the second quarter to 16 in the third, *manufacturing* confidence improved to 24. Despite this rebound, confidence remained extremely low, weighed down by, among other factors, continued poor production output (spread out across a variety of sub-industries), and disappointingly weak export sales.
- Although *retail* confidence jumped from 17 to 30 in the fourth quarter, it merely countered the 11-index point drop of the quarter before. Except for durable consumer goods, retail sales generally remained quite weak. However the imminent Black Friday and Christmas sales could change the fourth quarter outcome.
- As for the two sectors that showed deteriorating sentiment,

wholesale confidence dropped from 42 to an unusually low 29 in the third quarter, easing even further to 28. While sales volumes of consumer goods improved a little, those of non-consumer goods remained heavily depressed.

- *New motor trade* confidence also fell; its BCI dropped back to 17, in so doing fully reversing the five-index point improvement to 22 in the third quarter. There are few, if any, signs that the sales of new passenger vehicles have turned the corner.

Bottom line

Though the fourth quarter rebound in the RMB/BER BCI is encouraging, some realism is necessary: the improvement was a mere five index points and was not broadly-based across sectors. Moreover, at 26, the BCI remained deep in net negative terrain, with a strong majority of respondents still expressing a sense of pessimism. Indeed, at current levels, business confidence remains consistent with an economy bumbling along in near recession-like conditions.

"For us to convincingly conclude that the long and persistent downturn in the RMB/BER BCI has bottomed out will take, not one, but several quarters of improvement in sentiment driven by a consistent recovery in underlying activity. Further signs that the worst point of the slowdown in global trade is behind us, coupled with a confidence-inspiring National Budget and the successful implementation of the government's new Economic Transformation, Inclusive Growth and Competitiveness Strategy will certainly go a long way to help make this happen", said RMB Chief Economist Etienne le Roux. ■



RMB Chief Economist,
Etienne le Roux.

"Confidence rebounded in three of the five sectors making up the BCI namely the *building, manufacturing and retail trade.*"



SAICE inaugurates MARUTLA AS ITS 117th PRESIDENT

Civil engineering industry body the South African Institution of Civil Engineering (SAICE) recently inaugurated Mopilwane Fana Marutla as its 117th president at La Toscana, Montecasino. Marutla is a civil engineer with 22 years' experience, specialising in railway engineering, infrastructure design and maintenance, project management and business case development. He is Head of Business Development, Transportation at GIBB Engineering & Architecture, and previously worked for 17 years at Transnet Freight Rail.



Marutla was chairperson of SAICE's Railway & Harbour Division from 2016-17. He is an advisory board member in the Department of Civil Engineering (Technology) at the University of Johannesburg, an advisory board member in the Department of Civil Engineering at the University of Pretoria, a board member of the South African Heavy Haul Association, and a committee member of rural-development initiative the Thabampshe Development Forum. He has lectured in Railway Engineering at the University of Pretoria since 2010.

Marutla's inauguration was attended by various champions of the infrastructure industry, private and public-sector engineering executives, as well as SAICE past presidents. In his inauguration speech, Marutla emphasised the role of ethical leadership

in improving South African education, youth entrepreneurship and procurement.

Marutla proposed addressing unemployment, poor education and underrepresentation of women in STEM fields by investing heavily in youth entrepreneurship initiatives. He also spoke of the need to boost the numbers of maths and science teachers and lecturers at academic institutions. He also called for renewed commitment to the goals and vision of the National Development Plan (NDP). "A working economy is built upon quality education, infrastructure investment, production of exportable goods and the good health of the working class," said Marutla.

He echoed finance minister Tito Mboweni's pronouncements in a recent discussion document that network industries such as energy, transport, water and telecommunications underpin economic growth, productivity, and competitiveness. "These network industries face challenges of poor maintenance and delayed capital investment to support economic development," he said. "But many professionals in the STEM environment have already raised their hands and are simply waiting for government to provide policy certainty to drive this developmental agenda. Our country's huge potential is heavily under-utilised."

Marutla said corruption was a well-known impediment to infrastructure development. "Corruption and unethical procurement rob the country of the economic and social infrastructure we need for our people," he said. He also lamented the lack of compliance to procurement norms and regulations in South Africa's business culture. "Proximity to political leaders has become a new criterion for where contracts are awarded. This unfortunately not only compromises project quality, but also return on investments, which then become significantly reduced," he said.

"As we align our institutions with modern technological developments, we should do so based on ethical models of leadership. We need a nation that abides by its laws," he said. ■

An advertisement for Allied Crane Hire. It features a large yellow crane truck with a green and white striped boom, parked on a green surface. The background is a solid green color. In the top left corner, there is a yellow square logo with a green stylized crane hook. The text "ALLIED CRANE HIRE" is written in large, white, serif capital letters. Below it, the tagline "Setting the Standard!" is written in a white, cursive font. In the bottom right corner, the phone number "0800-CRANES" is written in large, bold, yellow capital letters. Below the phone number, the email address "info@alliedcranehire.co.za" and the website "www.alliedcranehire.co.za" are written in white. At the very bottom, a yellow banner with black text reads "Branches covering Sub-Saharan Africa".

GROWING A CULTURE OF SUSTAINABILITY



Atlas Copco is passionate about assisting the less fortunate through sustainable projects and, living up to this mandate, the company sponsored seven vegetable tunnels to four sites at Isaac Makawu Primary School, Setshabelo, AMCARE and Kwasa College with tomato, spinach and beetroot seedlings.

"It is a sad reality that many children and adults do not have access to a daily meal, let alone a nutritious one," shares Atlas Copco Corporate Social Responsibility Manager and Executive Assistant, Bongani Ndlovu. "We wanted to change this narrative by sponsoring vegetable tunnels to provide healthy meals and an education around the preparation, care and maintenance of vegetable tunnels."

Atlas Copco champions beneficiaries that support people affected by and living with HIV/Aids. Ndlovu points out that because it is vital for people with HIV/AIDS in particular to include a lot of vegetables in their diet, Atlas Copco decided to build one vegetable tunnel at AMCARE. This non-profit organisation founded by the

Alberton Methodist Church in 2002, provides a range of support and relief effort services and has a dedicated HIV/AIDS programme.

By growing their own vegetables, AMCARE is able to take fresh produce straight from their gardens and cost effectively incorporate these vegetables into daily meals.

"Our decision to sponsor a vegetable tunnel at Kwasa College in Daggafontein, Springs, stemmed from a phone call received by Marilyn Govender, Atlas Copco Compliance Manager, from Kwasa College requesting our assistance with infrastructure," explains Ndlovu. "Although the school which has some 204 learners already had a small garden, we felt that it would be highly beneficial and more sustainable to build a larger vegetable tunnel

that would assist Kwasa College in feeding more learners and the community around the school."

The construction of the vegetable tunnels which have a steel structure enclosed by netting, kicked off in early September 2019 with the official hand overs taking place at AMCARE and Kwasa College where Ndlovu, joined by Atlas Copco Vice President Frans van Niekerk and the Corporate Communications and SHEQ teams, donated the seedlings. Atlas Copco also handed over dungarees and gardening gloves to the school.

Expressing their gratitude for Atlas Copco's sponsorship, Marihet Infantino, General Manager at AMCARE, says that these tunnels will undoubtedly contribute to the sustainable provision of food for those in need and will also assist AMCARE in its support of the community.

"We are proud to have in some small way contributed to the upliftment of a healthier lifestyle at AMCARE and Kwasa College and we wish them a fruitful and wholesome future," concludes Ndlovu. ■

NEW CEO

Lettie Mashau was appointed by the Board of Directors of Motheo Construction Group on 9 September 2019 as the new Chief Executive Officer (CEO). Mashau has been a part of the Motheo family for 14 years. Earmarked early on as Dr. Ndlovu's successor, Mashau has been closely mentored by Dr. Ndlovu for many years. Having grown up in the township of Malamulele, Limpopo, Mashau joined Motheo Construction Group as a trainee site Quantity Surveyor in 2005, having qualified with a Diploma in Building and Civil Engineering. Showing integrity, determination and initiative in the workplace, Mashau took the opportunities offered her by Motheo with both hands.

She quickly rose through the ranks. She is now a shareholder and Director at Motheo. Prior to taking up the position as CEO, she held direct oversight of all Northern Cape, Mpumalanga, Limpopo, North West, Free State, and Pretoria operations. Mashau has served on the Motheo Board since September 2011, which oversees the company's national operations and strategic direction.

Mashau has, time and time again, raised the Motheo flag high. Her character and industry track record express the culture, ethos, and excellence that is Motheo.

The Board of Directors of Motheo Construction Group have reaffirmed their commitment to the Dr. Thandi Ndlovu Children's Foundation (www.drthandifoundation.com). Team Motheo will also

seek ways in which it can meaningfully contribute towards arresting the curse of gender-based violence in South Africa. ■



Lettie Mashau is the new CEO of Motheo Construction Group.

CESA INAUGURATES NEW PRESIDENT

At Consulting Engineers South Africa's (CESA) 66th Annual General Meeting held in Johannesburg on Wednesday, 25 November, Sugan Pillay from Zitholele Consulting was inaugurated as President of the organisation for the next two years, succeeding Neresh Pather. He accepted the position stating, "It is certainly an honour and a privilege to serve in this position".

Pillay, Managing Director of Zitholele Consulting, is registered as a professional engineer with over 20 years' experience in the design and implementation of projects that cover most facets of civil engineering; and has more recently focused on Project and Programme Management related to multi-disciplinary mega projects and infrastructure programmes. He holds a BSc. Hons in Civil Engineering as well as a Post Graduate Diploma in Civil Engineering and an MBA (cum laude).

Pillay paid tribute to outgoing CESA President, Neresh Pather saying, "Thank you to our outgoing president Neresh Pather for guiding us over the last two years through a really difficult period, one that has seen significant changes in the country and certainly in our industry." Discussing his upcoming role as President of CESA, he stated, "It is not a position that one takes lightly; and having been involved at the CESA Board level for a number of years now, I continue to appreciate the key role that CESA plays in the industry. We have been through tough times and these difficult and uncertain times are certainly not over yet, which further emphasises the role that CESA needs to play to firstly guide our industry; and very importantly to work with our clients so that as a country we achieve the best outcomes from our spend on infrastructure.



"Our theme for next year is '2020, a time for Reflection, Renewal and Regeneration', we have reconfirmed our six strategic goals, and as the leadership of CESA we are unanimous that our top priorities are firstly *advocacy, lobbying* and *engagement* with our clients, and secondly *deeper engagement* with our member companies.

Pillay previously served as Chairperson of the Gauteng South branch of CESA, as Chairperson of the Gauteng branch of the SA Road Federation, and as Chair of both the Education & Training and the Finance & Staff Committees of CESA. ■

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DEVELOPMENTS SET TO REVIVE JOBURG INNER-CITY LIVING IN 2020

The transformation of the city of Johannesburg will continue with a resurgence of life and community in its inner-city in 2020 driven by two major Divercity Urban Property Fund developments.

Residents have already started moving into the vibrant new live-work-play neighbourhood that has been created in inner Joburg as a result of two development projects, Jewel City precinct and Towers Main. Together these initiatives, which represent a substantial investment, are changing the face of Johannesburg's CBD. "The market response from retailers and residents alike has been positive beyond our expectations, which reaffirms that Towers Main and Jewel City are ideally suited for what people want from inner-city living. There is no doubt that they are going to be the best place to work and live in Joburg central," says Derrick Pautz, Atterbury Development Manager.

Divercity is a new property investment fund driven to renew and re-energise South Africa's urban centres by sculpting unique inner-city precincts. Its principal shareholders and stakeholders are Atterbury Property, Ithemba Property and Talis Property Fund.

Its cornerstone investors are RMH Property and Nedbank Property Partners. Divercity creates multifunctional, inclusive and diverse neighbourhoods with integrated commercial buildings and affordable residential accommodation.

Towers Main and Jewel City are two of its keystone projects within the Joburg inner city designed to rejuvenate their entire surrounding area as part of a wider neighbourhood development initiative. Towers Main is designed to connect with Jewel City which, in turn, connects to the vibey Maboneng.

Running all the way through the three precincts will be a pedestrian-friendly walkway that is the length of some 10 city blocks, complete with street furniture, lighting and art.

One of the city's 10 tallest buildings, surging up 140-metres, the iconic 30-storey Towers Main building in Johannesburg's ABSA Precinct is being renewed by Divercity. The significant investment is creating a unique mixed-use address that, from 2020, will help to meet the high demand for residential accommodation in the city with 520 affordably priced residential rental apartments.

ABSA, a key partner in this project, has leased back nine floors with 10 000 m² of office space in the redeveloped building. Absa commenced its move into Towers Main in December 2019, with the interior fit-out of its premises officially starting in January 2020 and its long lease

commencing in April 2020. The high-rise landmark, formerly only used for offices, has had its upper storeys converted into 20 floors of dedicated residential accommodation and recreation, which are being launched in phases. The first tenants started moving into the transformed building in December 2019 on the first levels to be complete, floors 10 to 14.

The next apartments will be released in March 2020, followed by the final release of its units in June 2020. Pautz notes, "The Towers Main redevelopment has been welcomed and received keen interest, including from Absa employees, so much so that it is already ahead of letting forecasts. The product caters directly to the needs of its market."

Adjacent to Towers Main, the iconic Jewel City redevelopment is revitalising six city blocks at the heart of the former precious gems and metals trade that have been closed to the public for decades. Remodelling existing buildings and constructing 40 000 m² of new buildings, Divercity will reopen this space to the public as a thriving, modern inner-city neighbourhood. The Jewel City mixed-use precinct includes 1 200 new residential apartments in its first phase and up to 1 000



BO'VALON MALL IN MAURITIUS OPENS

Leading property developer and investor Atterbury has successfully completed the development of the MUR800m (R340-million) Bo'Valon Mall in Mahebourg on the island paradise of Mauritius.

Bo'Valon Mall is a joint venture development between Atterbury and EnAtt. The mall takes its name for the village it is in, Beau Valon, which means 'beautiful valley'.

The year-long construction project has created a shopping centre with 10 500 m² of gross lettable area. The top-notch development brings exciting and convenient shopping to the south of Mauritius in a mall that stands proud with the very best the island has to offer.

The development was delivered on schedule and opened its doors on 21 November 2019 with its official inauguration ceremony taking place a week later on 27 November.

Attracting strong leasing demand, the Bo'Valon opened fully-let with nearly 50 shops, restaurants and services. Anchor tenants are Kingsavers and Espace Maison, supported by fashion brands such as GoSports, Vesti One, Quicksilver, City Sports, and others.

Its food court adds a vibrant social element to the mall and houses well-known South African brands such as Spur and Panarottis. It also includes a fun children's play area. The first-class retail mall enjoys a superb location that is easily accessible from the roads servicing Mahebourg and

Blue Bay and offers ample on-grade parking for customers.

Pieter Olivier, Development Manager at Atterbury, says, "Bo'Valon Mall is unlike anything the area has seen before. Apart from the shopping convenience, variety and leisure options it offers the local residents under one roof, I truly believe this mall has turned out exceptionally well."

Olivier adds, "This is a facility the local shoppers can be very proud of. Its development has been an immensely positive experience, and Bo'Valon Mall has been welcomed by Mahebourg locals who are delighted to have one of the best shopping destinations on the island."

The build-up to the mall's opening saw the community getting involved in an event called 'Laiss to Trace' where children made hand imprints in a strip of concrete next to the mall. The mall's opening day featured one of Mauritius's most popular artists, Zulu, performing an original song especially written for the occasion.

The development of Bo'Valon continues Atterbury's ongoing investment and confidence in Mauritius where it has established a formidable presence and track record, including the development of the landmark Bagatelle Mall of Mauritius.

This year, Atterbury is celebrating 25 years of developing prime office, industrial, retail, mixed-use and residential property across South Africa, the rest of the African continent and Europe. ■

in its second phase. The first residents have started moving into the new apartments built on its roof and those on level six of the revamped block one building this month. Level five will become available in January 2020, with a new floor of apartments being released every month after that, until the building is completed in July 2020.

The structure of the new residential building, block six, has already topped-out and its apartments are being fitted out. It will be ready for its first residents from April 2020 and completed by July 2020.

The precinct will be rich in amenities. The development's first 14 000 m² of commercial space includes Curro, which began teaching at its new high school in Jewel City from 15 January 2020. The roof of Curro's building, Block 2, includes Fives Futbol's five-a-side football fields, which will be used by the school's students during school hours and operate commercially during non-school hours. "We are delighted to announce that all retail space in the first phase of Jewel City is already fully let," reveals Pautz.

Jewel City has attracted top-tier retailers like Shoprite, Shoprite Liquor, Shoprite K'nect, Pep, Pep Cell, Clicks, MedeServe, PostNet, Chicken Licken, McDonald's and Steers and Debonairs in a combined store.

Marking the first phase of opening the long-closed doors to the Jewel City precinct, Fox Street will be reopened in January. And, making excellent construction progress, the developers confirm the precinct will be completed and live by June 2020, with the master programme for the precinct being orchestrated so that all six buildings of the first phase will be completed at the same time. ■



Ribbon cutting ceremony picture from left: Rameswar Doolub – Marketing & Communication Director at King Savers, Mahendranuth Sharma Hurreeram – Minister of National Infrastructure and Community Development, Alain Saverettiar – Director of King Savers and Frederic Tyack – CEO of Ascencia.

HAT TRICK FOR WATERFALL

At the annual 'World's Best' International Property Awards ceremony held at the iconic Savoy Hotel in London on 2 December, Waterfall Management Company was awarded Best International Mixed-use Development 2019-2020 for the Waterfall development.

It is the third consecutive year that Waterfall has achieved this international recognition, beating five of the best mixed-use developments in Asia Pacific, Dubai, Europe, the United Kingdom and America to the top spot this year – emphasising the world-class quality of this magnificent mixed-use development that continues to take shape on local soil. Over and above scooping this prestigious international accolade, Waterfall was also named Best Mixed-use Development in Africa for the sixth year running.

The International Property Awards, now in their 27th year, celebrate the very best projects and professionals in the industry worldwide, covering the regions of Asia Pacific, Africa and Arabia, Europe, USA and the Americas, as well as the UK. Over the past year, a panel of over 80 expert judges studied and assessed thousands of entries from 115 countries, focusing on design, quality, service, innovation, originality, and commitment.

Willie Vos, CEO of Waterfall Management Company, said; "Successfully rolling out a development of this scale takes careful planning and consideration, which includes the coordination of a number of companies, authorities and people. As a broader team, we are not only all passionate about being part of this world-class development, but are also eager to showcase South Africa's property talent on an international stage – which drives our appetite to enter these awards each year. I know that I speak for everyone involved in the Waterfall development when noting how proud we are to have received these top international honours yet again – it is proof that what we are doing here is really outstanding."

Waterfall Management Company is the Property and Asset Management Company of the Waterfall land. Waterfall Management Company has been working with developers and investors since 2004, to create the largest mixed-use development in Africa. Each year sees the development expand, offering more top-notch facilities

to its residents, commercial tenants, visitors and communities in the surrounding area, making Waterfall a truly remarkable city within Gauteng. It is a modern development that takes into consideration unique design aesthetics to ensure Waterfall lives up to the development's goal of offering integrated live-work-play environments that provide unsurpassed quality of life in a vibrant urban setting. The Waterfall development is presently only 34% complete, with over 1,6 million square metres of Gross Leasable Area (GLA) still to be developed. While 15 000 residents already call it home and 24 000 people work there every day, it is estimated that by completion in 2027, the development will combine 28 000 residential units housing an estimated 80 000 people, with approximately 2,5 million square metres of GLA for commercial and office space, which will accommodate a further 80 000 people.

The current estimated developed value of Waterfall is approximately R100-billion, where upon completion, the development will have created close to 85 000 job opportunities. Waterfall in its entirety is also already responsible for contributing towards the City of Johannesburg – in terms of rates and taxes – to the value of close to R300-million per year. Based on projected planning, this figure is expected to reach over R1-billion per annum by the time the development is completed.

"Being named the world's best mixed-use development for a third time in as many years, is overwhelming and very exciting for us. On behalf of the Waterfall Management Company and its shareholders, I would like to thank and congratulate everyone involved in this development, including the individual residential investors, as everyone has played a key role in contributing to this accomplishment. We are looking forward to 2020 and the further progress planned for Waterfall, where the future is very bright," concludes Vos. ■



Accepting the award are (from left) Werner van Rhyn – a Director at the Waterfall Investment Company, Willie Vos – CEO of Waterfall Management Company and Phillip Badenhorst – CFO of Waterfall Management Company.

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The key benefits

① Convenient, durable, highly efficient and safe

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② Smart HMI system

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③ Ideal for tough metal core drilling

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The unique selling points

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B LED light indicator to control carbon brushes' wear out

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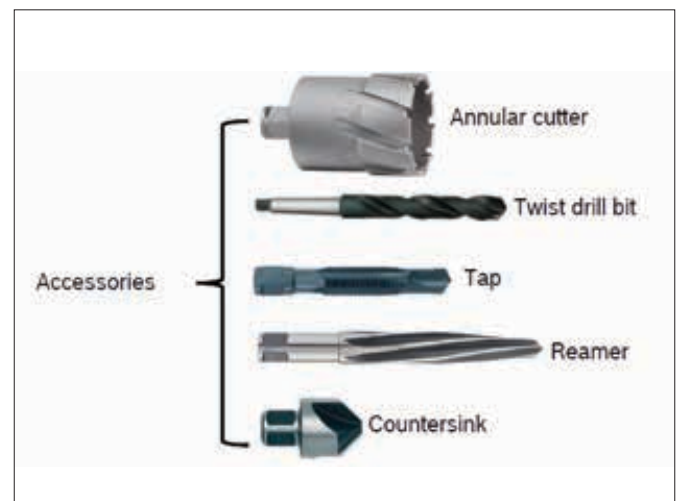
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BOOSTING IMPRESSIVE WIND FARM BUILDING REFERENCE

Concor Infrastructure has established an impressive reference base for the successful construction of wind farms across South Africa. For the Golden Valley Wind Farm situated near Bedford in the Eastern Cape, Concor Infrastructure was responsible for 43 kilometres of access roads, the bases for 48 wind turbines and their adjoining hard stands. It managed to successfully complete the project despite a six month delay at its start, labour and resource challenges as well as challenging geological conditions. *Construction World* visited the wind farm and spoke to Concor Infrastructure's Project Manager, Steven Verwey.

Clean power for two decades

The Golden Valley facility is located near the town of Bedford in the Eastern Cape and is part of the fourth round of the country's Renewable Energy Independent Power Producer Procurement (REIPPP) programme. This 120 MW project is a Biotherm Energy development, comprising 48 2,5 MW Goldwind turbines, 6,7 km of 132 kV overhead lines and a substation.

Concor Infrastructure played an important and innovative role in the construction of this renewable energy project. The fourth round projects in the REIPPP programme will have a positive impact on the economies of the surrounding local communities, while complying with international environmental and social standards. Once operational, the project will provide clean power to the South African grid for 20 years.

Wind farm civils expertise

Concor Infrastructure brought its extensive experience and expertise in civil engineering and sustainable project management to this construction project. This is the ninth wind farm it is building. Even though the project is not as remote as some of the other wind farm projects Concor Infrastructure has completed, the project had its own challenges which included timing, labour, resources and less than ideal geological conditions.

Concor Infrastructure was responsible for the construction of the bases of farm's 48 wind turbine generators, the adjoining hard stands as well as all the internal roads – this amounted to an access road network of 43 km. "Prior to building the access roads we had to remove the invasive prickly pears which we harvested to cut and

blend. This was turned into feed for the local farmers," says Verwey. This aspect of the contract was done under the auspices of Prof. H O de Waal from the University of the Free State.

"Concor Infrastructure was responsible for all blasting, cut and fill. The access road network also has a significant gradient," adds Verwey.

A major challenge

"The project commenced in October 2018, and although some delays were experienced due to final approval of the foundation design, the civil portion of this technically and geologically challenging project will be delivered within schedule and within budget.

"Challenges were met head on, and although some of the milestone dates were not met due to the approval delay, Concor will still meet the completion date. What is also significant is that Concor Infrastructure has not delayed any of the interfacing six contractors – which is quite an achievement given the sixth month initial delay," says Verwey.

Steepest gradient for a wind farm

The Golden Valley Wind Farm required the services of a skilled and experienced contractor as it is situated in an area that is geographically challenging. A significant percentage of access roads on the project have steep gradients.

Verwey says the project's biggest innovation was the adaptation of the engineering design to optimise it for the steep incline of many of the access roads. "This was a cost, time and quantity saving," he says.

Concrete: a crucial part

"On other wind farm projects Concor Infrastructure was responsible for its own concrete mixes, but for this project we are using Scribante Concrete as a subcontractor to supply us with readymix concrete as it already had a permit to mine the material – primarily supercrush – needed for the bases on the site," Verwey explains.

"Base pours can take up to 12 hours to complete, and our teams start before sunrise, typically at 3:30," Verwey adds.

"Consistent workability and high performance of large volumes of concrete are required to avoid the risk of any delays or operational complications," adds Verwey.

"In addition," says Verwey, "the geology of the area made the project technically challenging as it consists of mudstone and shale with pockets of dolerite. The biggest challenge with the foundations is that it is a material that breaks out in fragments. Before the blinding is poured one ideally wants a smooth surface as this minimises the amount of concrete needed." Concrete blinding is the process of pouring a thin layer of concrete over the foundation itself. The purpose of this is to seal in underlying material and prevent dirt and mud from interfering with the structure.

"The fragmentation caused an increase of 20% for the blinding needs with the average blinding well over 100 m³. Careful excavation and blinding as soon as possible mitigated this," says Verwey.

The project has a lab staffed by Concor Infrastructure and performs full soil and concrete testing. All the required concrete density and strength tests for the foundations as well as the strength tests of the hard stands are done here. Correlations testing is done through an independent lab. "Critical testing of the performance of the wind farm's bases underpinned the quality being delivered," says Verwey.

Leaving a sustainable project behind

Concor Infrastructure was able to promote local employment and skills development in the area by sourcing the labour from the four surrounding towns of Adelaide, Bedford, Cookhouse and Somerset East. The support of local employment and upliftment is in line with Concor Infrastructure's skills development strategy. These workers needed specialised induction and training and will facilitate the sustainable development of the community.

Verwey says the skills transfer on this project was also one of the challenges. "The project employed 212 people and 180 local jobs were created," he says. Extremely careful planning and a focus on ongoing skills development and training in both competency and safety allowed the contractor to not only adhere to the construction

programme and to catch up the six months it had lost at the design stages, but also ensure optimum safety on site.

Transportation to and from the Golden Valley Wind Farm could have posed a challenge, but forward thinking Concor Infrastructure drove the formation of a taxi forum between the four towns. This forum is governed by safety while there are penalties for being late. With the forum, Concor Infrastructure managed to build discipline into the taxi structure and Verwey says it has gone a long way to prevent delays on the project. ■



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Left: Scribante Concrete supplied the project with readymix concrete as it already had a permit to mine the material – primarily supercrush – needed for the bases on the site. Right: Concor Infrastructure was responsible for 43 kilometres of access roads, the bases for 48 wind turbines and their adjoining hard stands.

DESIGNERS AND ARCHITECTS HAVE A SUSTAINABILITY RESPONSIBILITY

The fact that South Africa and Nigeria are the biggest contributors to greenhouse gas emissions, while the continent as a whole barely accounts for 5%, places a major responsibility on designers and architects to be environmentally responsible.

However, convincing clients of the imperatives of sustainability is a balancing act between the often high upfront initial costs, versus the long-term operational savings, and having a healthy and productive workforce that caters for the wellbeing of employees.

Striking this balance is the difficult task of Marli Swanepoel, Head of Sustainability at the Paragon Group. The group focuses on both interior architecture (Paragon Interface) and base design (Paragon Architects). Swanepoel explains that regulatory standards such as SANS 10400-XA, which pertains to energy efficiency, represents the minimum number of boxes that need to be ticked in terms of sustainability.

However, Paragon always strives to remain ahead of the curve. Here the aim is to achieve a Green Star rated design as certified by the Green Building Council of South Africa (GBCSA), which is an internationally-recognised and trusted quality certification for the design, construction, and operation of buildings, interiors, and fit-outs. What gives the Paragon Group a competitive edge in the market is that it is able to incorporate sustainability into both the exterior and interior design. With those projects where it is only responsible for the interior, such as the award-winning Discovery Place in Sandton, it is able to deploy the latest trends and developments in workplace design, and how this impacts on employee well-being.

"At Paragon, we always strive to challenge the conventional way of doing architecture. This not only ensures responsible design, but it motivates us and keeps us excited about what we do as professionals. It is important that our projects take into account their surrounding environments, especially with the trend towards designing multi-building precincts, where the interconnectivity between all of the different buildings, including all of the communal spaces and facilities, is critical," Swanepoel comments.

Sustainability is not only about 'green' buildings, but encourages out-of-the-box thinking. "It means taking the latest technologies and exploring the opportunities these represent in terms of design, and how we interrogate on way of working, and possibly do things differently to enhance our place in the world."

With the South African construction industry in the doldrums, sustainability is still perceived as adding onto the final price tag. "Sustainable buildings do have financial implications," Swanepoel acknowledges. This is especially true if technology such as photovoltaic systems is incorporated.

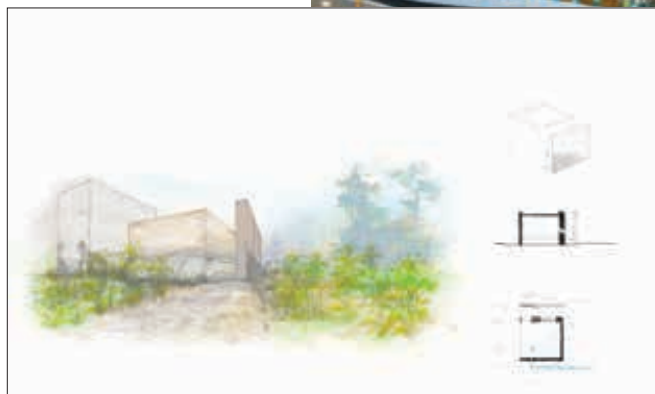
However, cost can be mitigated by adopting first design principles, such as building orientation, natural ventilation, and daylighting. "That will not necessarily result in a Green Star rated building, but it is still a responsible design."

Therefore the Paragon Group always engages its clients in a discussion about maximising their total cost of investment, and the importance of reduced operating costs in the long run, which is critical given the water and power shortages

facing South Africa at present. "It is also a challenge if the client only has a small budget, or if sustainability is simply not a priority for that particular client. However, as a country and as an industry, I do think we are starting to move in the right direction."

Swanepoel points to neighbouring countries such as Namibia and Botswana boasting their first Green Star rated buildings, which bodes well for the rest of Africa. "Admittedly, sustainability as a driver has had a minimal impact on the continent to date. There are some wonderful examples, but it has yet to kick off as a major trend." With the Paragon Group increasingly involved in Africa, it is slowly starting to introduce best practice in sustainability to the rest of the continent. Back home, Swanepoel is currently in the design phase for a major new healing centre project that is anticipated to break ground this year, and which will be built in phases. The aim of the project is to introduce people to a responsible and mindful way of living, and hence will include sustainable elements such as a permaculture farm, a wellness centre, and a restaurant focusing on farm-to-plate food.

"We are taking all of these exciting concepts and implementing them in a very real way. It will be interesting to see how we can take what we learn from this project as a practice, and use it to influence us all to become better designers," Swanepoel concludes. ■



Left: The healing centre will include sustainable elements such as a permaculture farm.
Right: Paragon Interface designed the award-winning interior at Discovery Place.

FACE BRICKS FORM PART OF NEW PUBLIC LIBRARY

Photo credit: David Dettman



The South African government has prioritised education as part of the National Development Plan, and an integral part of learning process is access to information through dedicated spaces for learning. The construction of the Eastern Cape's Mcebisi Michael Msizi Public Library works towards this mandate, with the clever use of Corobrik's Firelight Satin face bricks a mutually aesthetic and economically-sound choice.

Funded by the Eastern Cape's provincial Department of Sports Recreation Arts and Culture and Public Works as implementing agent, the library was opened to the public this year. Musa Shangase, Commercial Director at Corobrik, said the long-standing partnership between Corobrik and government had resulted in many iconic buildings, such as this, which were enhancing the lives of South Africans everywhere.

"The Mcebisi Michael Msizi Public Library is another captivating example of what can be achieved when using quality products and an innovative design," said Shangase. "This Eastern Cape community will benefit from the town's first dedicated, modern library building which has been constructed to maximise on the natural temperature regulators while working into the surrounding aesthetic. The inclusion of Corobrik's durable face brick range means that generations to come will get to enjoy full use of this facility."

The library – which is a recipient of the SAIA-EC Regional Commendation – forms part of the municipal precinct of buildings situated along Keet Street, with dramatic views of the Langkloof Mountains. The building consists of two parts; the public library with accompanying administrative and service areas, and a small public conference component with ablutions.

The library consists of children's reading areas; study areas; breakaway rooms; reading spaces in an open-air courtyard; a dedicated area for online research and computers; and the conference room.

Debbie Wintermeyer, architect at The Workplace Agency, explained that the design of the Mcebisi Michael Msizi Public Library ensured the approximately 650 m² building remained modest in scale and expression, while still maintaining integrity and status as an important municipal building.

"We wanted to create a community precinct for Mcebisi Michael Msizi with facilities located off an open foyer area, that was simple to use, multifunctional and crafted in response to the beautiful natural surroundings," explained Wintermeyer. "We also incorporated a small courtyard and front arrival foyer into the plans as a way to increase usable spaces."

She said that Corobrik's Firelight Satin face bricks were used with flush joints tinted red, alongside Corobrik's bullnose bricks: "We wanted to express the main library area as a brick building inside and out, with the smaller meeting room and bathrooms plastered. The Firelight Satin face brick was chosen for its consistent colour and shape and used with the red-tinted flush joints, gave a slick, sheer appearance on completion."

The library's interior main space was constructed in a variety of scales, ranging from the large face brick buttressed back wall and clerestory windows, to the low, intimate study nooks and children's section in the north. The material palette was kept to a minimum, with expressed steel frame and the face bricks the primaries in the rugged framework.

"The Firelight Satin face brick was used inside and out the library, with minimal brick detailing in the form of roller-course lintels, bullnose brick coping at the top of walls and squint bricks at the window reveals. We are particularly proud of the face brick buttress wall with its clerestory lighting over the top and the buttresses with bookshelves in between."

Adding a truly unique touch to the building's design, The Trinity Session (a contemporary art production team) ran a public art programme whereby local schoolchildren were given the opportunity to express themselves artistically – the evidence of which can be seen on the building's main entrance. ■

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MBABANE HILTON GARDEN INN WINS AT API AWARDS 2019

The Mbabane Hilton Garden Inn in Eswatini, designed by Paragon Group, was declared the winner in the Best Hotel Development category at the annual Africa Property Investment (API) Awards 2019, held in October at a gala dinner during the API Summit in Johannesburg. The project was implemented in conjunction with Steve Hall Development Consultants as local partner architects.

The API Awards have become a critical benchmark for measuring success for the property industry, affording peer recognition for the world-class work and services being undertaken by design and development companies across Africa. The award is especially significant in that it is one of Paragon Group's first projects for an international hotel chain, Director Henning Rasmuss highlights. It also adds to the project's accolades to date, which include the SAPOA Award 2019 for Innovative Excellence for an International Development.

"The building is already a popular destination for Instagram-savvy Eswatini, and is the background image of choice in many a posted selfie. It has become a talking point, and is seen as a benchmark for what can be achieved in commercial architecture in this African capital city," Rasmuss comments.

On 15 October, King Mswati III of Eswatini opened the building in an engaging and personal ceremony that included a full tour of all the facilities for himself and his royal entourage, and the sharing of many a personal anecdote. "Praise singers accompanied the King, adding colour and appropriate gravitas to what was a joy-filled occasion," Rasmuss elaborates.

The design brief for the 124-room, eight-storey development in the heart of the capital was to create an iconic building for Hilton's entry into Swaziland. The main feature is the performance-rated façade design with undulating and varying sized windows, depending on the orientation. There is also a huge landscaped pool deck on the first floor, with trees and indigenous planting to cool the building down.

Situated up against a hill to the south of the city centre, the building and its landscape deck provide unobstructed views across the valley towards the city. This prominent location, combined with the unique design, gives the hotel a notable presence unique in the urban context of Mbabane. The façade lines mimic the undulating natural landscape of the national capital city.

The main spaces of the hotel create vertical separation and privacy between public and private or guest amenities. The iconic tower portion of the building, with its swooping and undulating feature façade, is architecturally differentiated from the base of the building, and is dedicated solely to hotel guestrooms and hotel facilities.

Public areas on the ground floor include a reception, restaurant, bar, lounge, and conferencing facilities comprising four meeting



rooms of varying sizes, with two of the larger rooms separated by sliding-folding doors with the flexibility to become a single large conference room. An additional extension to the conference component of the hotel is already under construction, immediately upon opening, in order to cater for proven demand, Rasmuss reveals.

Reception and the main hotel entrance are located adjacent to the on-grade, on-site guest parking, where guests are greeted with a generous porte-cochère entry. The main guest parking is located to the rear of the site, while additional parking is provided in an existing parkade close by.

The entrance to the building is immediately adjacent to a full-height internal atrium that forms the central and primary focus space of the building, overlooked by all the guest-room corridors. The central atrium, which houses the restaurant, bar, lounge, and conference break-out facilities, also features large sculptural skylights that direct natural daylight deep into the building.

The guestrooms are all accessed via full-height glass scenic lifts leading from the ground-floor lobby. Guest amenities are housed at the first floor, and include a guest laundry and fitness centre that looks out onto the landscaped pool deck, a dedicated guest amenity with a lap pool, low-level children's swim area and garden.

Completed in April this year for the Buna Group, on behalf of the Swaziland Public Service Pensions Fund (SPSPF), the main contractor was a joint venture between Aveng Grinaker-LTA with Du-Van Developments and Roots Construction, known as the ADR JV. ■

Largest student housing DEVELOPMENT IN SA



The largest student housing project ever undertaken by a South African public university is currently under development at the University of Fort Hare (UFH). Funded by the Department of Higher Education and Training, the Development Bank of Southern Africa and the European Union, phase two of the project, valued at R400-million, is set for completion in October 2020. The new residences will help ease the housing crisis at UFH and create a student community conducive to academic success.

"Lack of accommodation is one of the biggest challenges we face at the University of Fort Hare. Most of our students come from rural areas and do not have accommodation options when they arrive here. Currently, our residences are barely able to accommodate 50% of our student population on our Alice campus. Our aim with this project is to house 65% of our students on this campus," says Vice-Chancellor of UFH, Professor Sakhela Buhlungu.

Developed by student accommodation group STAG African, the student village includes a new student centre and a dedicated postgraduate accommodation block. Phase one of the project, completed in 2014, saw 610 beds made available to the university. Completion of phase two, will bring the total number of beds handed over to 2 047, giving UFH the highest ratio of students to beds in the country. "Good student accommodation is about more than just beds. Our vision for this development goes beyond providing accommodation; we want to create a sense of community and a feeling of belonging," says co-founder of STAG African, John Schooling.

Earlier this year, government acknowledged that an additional 300 000 beds are required to accommodate the nation's students. The student housing crisis is a result of a growth in demand for higher education in recent years. The lack of accommodation has been directly linked to higher failure and dropout rates for first year students. Studies confirm that students who live on-campus have a 25% greater chance of passing than students who are not residents on campus. "When a student is placed in temporary accommodation or is required to stay in accommodation that is unsafe, overcrowded and unhygienic, it's no surprise when they can't cope," says Schooling. "We need to create the right conditions for academic success, and that starts with providing good accommodation. Once we do that, students can focus on achieving the results they need to be successful."

STAG is in the process of funding the development of student housing all over Africa, including 34 000 beds at universities in Kenya, 4 700 in Malawi, 5 400 in Zambia and 3 000 in Lesotho. The company was established on the principle that university residences are social communities, and that their design can advance or detract from academic and societal goals.■

CITY OF CAPE TOWN APPROVES HARBOUR ARCH

The Amdec Group, South Africa's leading developers of New Urban lifestyles, has been buoyed by the outcome of the Municipal Planning Tribunal meeting held on Thursday 24 October 2019, where its R14-billion Harbour Arch mixed-use precinct was approved.

James Wilson, CEO of the Amdec Group, said immediately after the meeting, "This is a big day for Cape Town and a big day for the Amdec Group. We are overjoyed at the City of Cape Town's decision to support Harbour Arch, and we have no doubt that this project holds tremendous promise for the Mother City. Harbour Arch will create jobs and opportunities, boost investor confidence both locally and abroad, bolster our city's economy and benefit the Western Cape province as a whole."

Within the context of the burgeoning Cape Town CBD, Harbour Arch occupies a strategic position at the convergence of major access roads, with easy entry points to and from the N1 and N2 highways.

Harbour Arch is set to be built on a 5,8-hectare site, with 198 000 m² of usable space and six individual towers. The site will also be home to two new hotels, to be operated by Marriott International, long-standing partners of the Amdec Group and the world's largest hospitality group.

Harbour Arch will create a world-class New Urban precinct, delivering multiple lifestyle benefits and creating a highly sought-after place to live, work and relax for residents and visitors to Cape Town. It will further entrench its position as one of the world's great cities, regularly voted one of the most desirable places to visit and live.

Harbour Arch represents a massive private sector investment into the city, estimated to create at least 13 000 construction jobs. Its credentials are further strengthened by the involvement of a reputable and committed developer.

The Amdec Group are experts at mixed-use developments. They have the vision, capital and expertise to develop on this scale. Their 30-year track record in the industry has built a reputation as the pre-eminent developers of mixed-use precincts in South Africa. They are the majority shareholder and operators of the award-winning Melrose Arch in Johannesburg, a world-class development that is a blueprint for mixed-use precincts.

The Amdec Group retains majority ownership and management control of its large-scale developments. They are known for appointing professional teams of exceptional individuals and world-class building contractors.

Work at Harbour Arch is set to get underway imminently.■

- R140-billion development
- At least 13 000 construction jobs
- 5,8 hectare site to be developed
- 198 000 m² of usable space
- R2,4-billion increase in household income for Cape Town
- R90-million infrastructure upgrade for the City of Cape Town
- Perpetual income (taxes and utilities) and wider economic spin-offs for the City of Cape Town
- Residential use brings great positives to Foreshore
- Two new hotels within the precinct



The Bolton's residential CONVERSION IN ROSEBANK

The development of Emira Property Fund's residential conversion, The Bolton, in Rosebank is complete after a two-year project, and its stylish apartments are already more than 95% let.

At the end of this two-year project, Emira is pleased with the results of its first foray into residential property. Ulana van Biljon, COO of Emira "The Bolton is certainly living up to our expectations for this landmark conversion. The letting, rental levels and overall management are doing well. By partnering on the project with leaders in the field, its ongoing success is ensured."

The chic urban lifestyle offered by The Bolton is the result of Emira's value-enhancing conversion of two Rosebank office property assets, which were consolidated into one and which Sasol occupied for many years. The JSE-listed REIT co-invests with respected hands-on specialists in their fields, and in the case of The Bolton residential conversion, Emira's partner the Feenstra Group added its residential development and property management expertise to the project. The conversion into residential apartments came with a unique set of challenges, especially as work had to be designed around the constraints of existing structures. The phased construction programme also called for flexibility to minimise any unnecessary disruption to tenants as they started moving in and until the dust settled. The Bolton stands out from other residential accommodation in Rosebank, offering all the amenities – swimming pool, cinema, meeting rooms, free WiFi and more – but with smaller units that come at more palatable rentals for many.

"The Bolton has resonated well with its target market of young professionals, by actively marketing the apartments on digital and social media, it earned strong interest and demand. It has attracted residents mainly in their early 30s from a range of professions from advocates and accountants to medical and health professionals, bankers and business owners," confirms Van Biljon.

There are also a limited number of furnished, serviced units at The Bolton, specifically for corporate tenants in the area, which are

proving popular. Undoubtedly, The Bolton's appeal also comes from its excellent proximity to a wide range of places of work and retail, commuter routes, the Rosebank Gautrain Station and amenities.

Its on-site advantages are boosted by Rosebank being an attractive area to live in, with its vibrant shopping and socialising places. "The Bolton is an ideal residential investment for Emira's criteria, it has the right location, the right size and the right market, and is proving to be a good investment that enhances Emira's residential property investments," notes Van Biljon.

Emira's latest set of results pin its residential rental property holding at 5,7% of its total assets, including The Bolton and its 34,9% stake in JSE Alt-X listed Transcend Residential Property Fund.

Based on the success of The Bolton, van Biljon confirms that it will consider similar investment opportunities as it is part of a diversified property portfolio strategy. "We continually evaluate our office buildings for value-add opportunities, including alternative uses and conversions, and to the extent that they meet our criteria then we will pursue accordingly," she says.

Emira is a medium-cap diversified JSE-listed SA REIT that is invested in a quality, balanced portfolio of office, retail, industrial and residential properties. At 30 June 2019, its directly held assets comprised 80 properties valued at R10,9-billion. It also invests indirectly in 22 lower LSM shopping centres valued at R1,15-billion through its exposure to Enyuka Property Fund. It also has a 34,9% holding in JSE AltX-listed Transcend Residential Property Fund.

Emira is internationally diversified through its investment in ASX-listed Growthpoint Properties Australia (GOZ) valued at R759,7-million, and its equity investments in nine grocery-anchored open-air convenience shopping centres with a combined value of USD75,9-million through its USA subsidiary. ■

HEALTH & SAFETY: KEY DRIVERS

Health and safety are key drivers for Concor Buildings at the construction of Oxford Parks Phase I which is due for completion in stages during 2020. This project comprises the construction of four mixed-use premium office and retail buildings, and a fifth building which will house a hotel.

Accommodating the workforce and all subcontractors required for the simultaneous construction of the various structures, means that there can be no compromise on health and safety.

Godfrey Baloyi, Concor Buildings HSE practitioner on site, explains that Concor's internal health and safety policies are applied in line with those of ComPrac Holdings who has been appointed health and safety compliance consultant.

As part of the stringent safety requirements, Baloyi audits and ensures that the safety files of all subcontractors are aligned with those of Concor Buildings. All site staff undergo an initial safety induction before they can commence their duties, and issues of concern are addressed at weekly toolbox talks. Daily planning and safety meetings confirm the priority given to health and safety on site.

Safety is enforced through a policy of Visible Felt Leadership (VFL). The implementation of this policy is a two-way approach. When a potential health or safety infringement or a life-threatening situation is observed, activity is stopped immediately, and corrective coaching is given.

Major incident prevention (MIP) is the second approach. To this end, foremen and section leaders are required to check that the site is safe, while the contract manager ensures that all documentation relating to competence and certification are in place in terms of the OSH Act.

Bennie de Koker, Concor Buildings HSE Manager, says that in the past safety on site was the responsibility of safety officers only. "Today, safety is fortunately no longer seen in isolation, but as a collaborative effort on the part of everyone on site. Continuous coaching and awareness campaigns are critical."

A new innovative concept has been introduced on this site by Concor Buildings. "Understanding the impact of visuals, workers are shown a picture and are asked to identify unsafe or potentially hazardous practices and to suggest corrective action," De Koker says. "This method of interactive discussion is proving to have great impact when used in conjunction with traditional safety instructions."

De Koker and Baloyi jointly have more than 30 years of experience and both are registered Construction Health and Safety Professionals with The South African Council for the Project and Construction Management Professions (SACPCMP), attesting to Concor's commitment to observing safe practices. ■



From left: Godfrey Baloyi, Concor Buildings HSE practitioner and Bennie de Koker, Concor Buildings HSE manager.



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MELROSE ARCH extension demolitions



ICON Earthworks, part of the ICON Group, is well on track to complete the demolition of a number of older buildings to make way for the expansion of the Melrose Arch Precinct.

The R2,5-million contract for the demolition of four buildings was awarded to the ICON Group by Amdec Property Developments at the end of November 2019 for completion in March 2020. ICON is the principle contractor for the demolition, safety and community management for the project. The contract includes the demolition and removal from site of four multi-story apartment blocks situated in the densely populated area of Corlett Drive. The buildings being demolished are up to 50 years old and the form and function of these buildings have not kept pace with modern trends and lifestyles.

The area that is being demolished is making way for a super basement under Melrose Arch as well as the construction of a mixed-use building on the site. "Aside from the usual fierce pricing competition for projects such as these, we believe that owning our own equipment gives us a distinct advantage", says Wayne Neary, Managing Director of the ICON Group. "In addition to this our focus on sustainable construction practices sets us apart, all of the building material that we salvage from this site will be crushed as

aggregate to be used on another site. ICON's latest hammers and crushers will be used for this purpose.

"Traditionally rubble from this type of demolition is spoilt into a landfill or dump sites. ICON is providing Amdec Property Developments with double sustainability savings through the re-use of the crushed building material, meaning that they do not need to import natural aggregate from a quarry, dramatically reducing the carbon footprint of the project", states Neary.

The biggest challenge for this project is working in close proximity to high density buildings in high foot and vehicular traffic zones. In addition to stringent safety measures, ICON has to be conscious in terms of both dust as well as noise levels. Measures to mitigate this includes the use of dust suppression technologies like water tankers and being noise conscious by adjusting working times and hours. ■



Wayne Neary, Managing Director of the ICON Group.

ABOUT ICON GROUP

The ICON Group, established over 30 years ago, is the trusted provider of bulk earthworks, demolitions and other related civil engineering and construction services that are needed to get a commercial, industrial or mining site into an ideal state of build readiness. The ICON Group has an unrivalled reputation for delivering on specification and well within the deadlines provided.

POWERING AFRICA – A LOCAL PERSPECTIVE

Africa has long been touted as the next rising global giant with more than half of the global population growth between now and 2050 expected to come from the continent. Africa is also experiencing a steady increase in economic activity, albeit from a relatively low base. The World Bank is expecting sub-Saharan Africa to grow at an average of 3,6% in 2019 – 20, up from 3,1% the previous year.

Several of the fastest growing economies in the world are currently in Africa with countries such as Ethiopia (8,5%), Rwanda (7,8%) and Ghana (7,6%) leading the charge.

The continent is indeed endowed with an abundance of growth potential underpinned by its fast-growing human capital, vast natural

resources, immense geographical and bio diversity, relatively low levels of urbanisation and the liberalisation of a Pan African market.

In 2018 the African Continental Free Trade Agreement came into force and by June 2019 a total of 54 African states had signed the agreement. Despite the immense potential and progress made, the

continent still struggles to catch up with its huge infrastructure backlog. World Bank data indicates that the electricity access rate across the continent has for example increased from 26% in 2000 to 45% in 2017.

Despite the progress it still constitutes a huge backlog compared to the world average that now stands at 90%. Through programs such as Power Africa, launched by US President Barack Obama in Tanzania during his tour to Africa in 2013, the continent is however starting to turn the tide. Price Waterhouse Cooper estimates that by 2025 the annual expenditure on electricity production and distribution across the continent's seven main economies would have increased to more than USD50-billion.

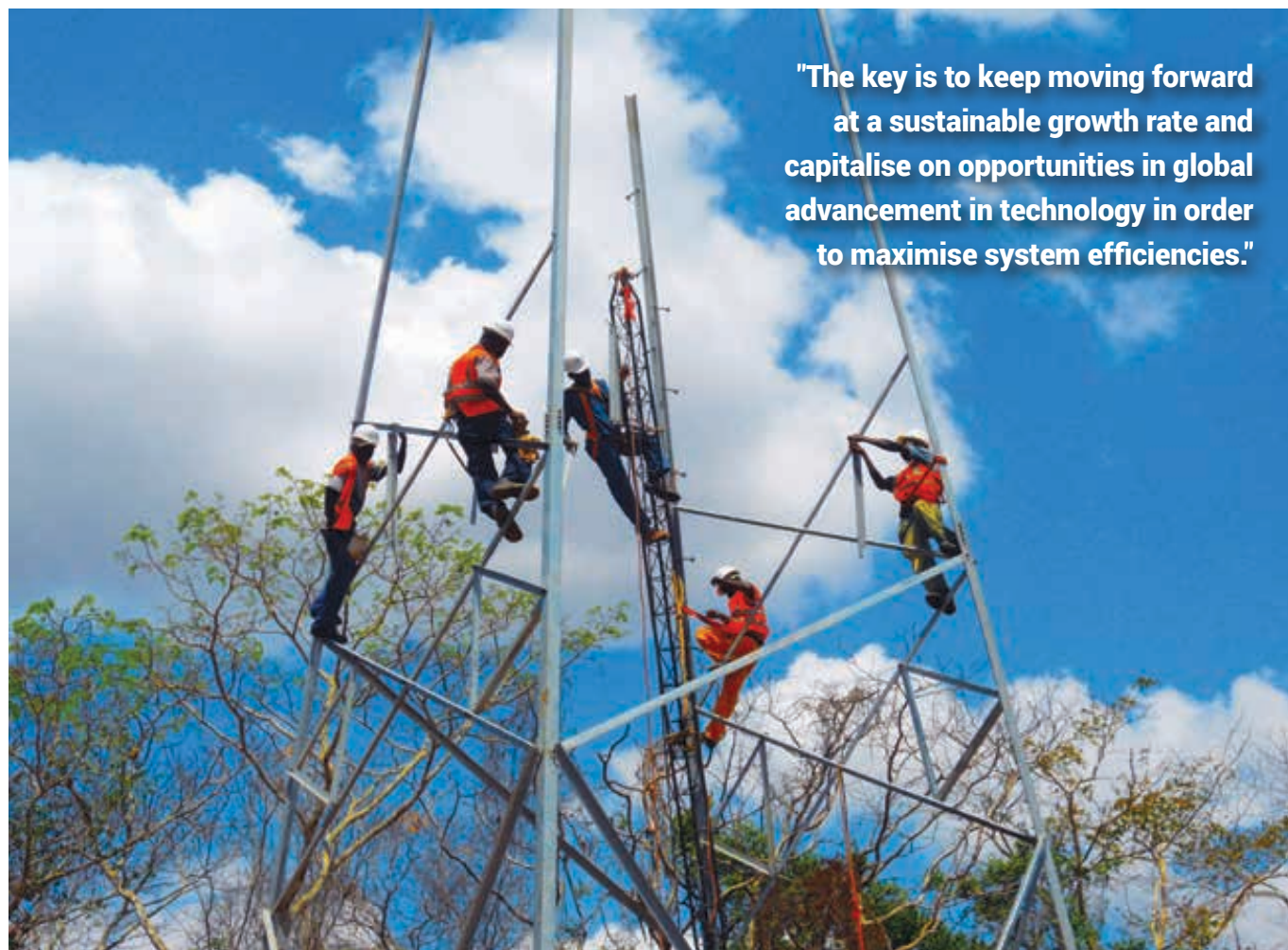
The focus on electrical energy provision is driven by both a social and economic imperative. At a social level access to reliable sustainable electrical power has a profound impact on quality of life, improving basic health, increasing opportunities for advancing education, providing access to economic participation and in general alleviating poverty. In a modern world, from an economic perspective, reliable sustainable electrical power is also critical for development and growth of economic value across all industries.

Not only is there a need for new electrical production and distribution networks across the continent, given the economic and population growth, there is also huge reinvestment required in upgrading of existing infrastructure. World Bank data from 2018 indicates that sub-Saharan Africa is experiencing an annual urban population growth rate of 4.1%, more than double the global average (1.9%). This rapid urbanisation growth places a strain on existing infrastructure that is on average aging rapidly throughout the continent. In order to address the challenges and capitalise on opportunities many governments across the continent are

restructuring their historic vertically integrated utilities, allowing Independent Private Producers to participate in their power markets.

Countries like Nigeria, South Africa, Ghana, Uganda and Zambia have all benefited hugely from large scale private investment programmes in power production and distribution systems in recent years. The continent is seeing growth in utility scale renewable energy production (mostly solar and wind), distributed small scale generation, mini/micro grid solutions, as well as large scale transmission networks. Power transmission across the continent is now well coordinated through five Regional Power Pools (COMELEC, WAPP, SAPP, EAPP, CAPP) working hard to ensure that regional power generation and consumption is matched. The power landscape in Africa has seen significant progress over the past decade. The opportunity presented for further growth is clear. The balance between social expenditure and investment in economic infrastructure remains a challenge for a relatively poor continent that has to carefully manage its debt levels.

The key is to keep moving forward at a sustainable growth rate and capitalise on opportunities in global advancement in technology in order to maximise system efficiencies. One such a technology gaining rapid penetration across the African continent is solar energy, both at utility and end user scale. As the African energy sector develops it finds new paths to maturity that does not necessarily follow the conventional ways, leapfrogging developmental steps previously deemed indispensable. Backed by rapid deployment and advances in the telecommunications industry the electricity sector is now capitalising on technological advancements and one could argue that the electricity industry in Africa will advance more rapidly in years to come, both in conventional and non-conventional ways. ■



"The key is to keep moving forward at a sustainable growth rate and capitalise on opportunities in global advancement in technology in order to maximise system efficiencies."

A PERFECT LIFT (AND FIT)

Global tower crane leader Potain appointed Gauteng-based Crane & Hoist Equipment SA in 2019 as its official distributor in South Africa, Namibia, Botswana, Mozambique, Lesotho and Swaziland. *Construction World* recently met up with Crane & Hoist Equipment's management as well as David Semple, Senior Vice-President of Manitowoc (the owner of Potain tower cranes).

A natural fit

Crane & Hoist Equipment was formed in 2017 by a management team that together have over 40 years of experience in the tower crane sector. This team includes Managing Director Brenden Crous, Sales Director Louw Smit and Operations Director Danie Roos. The staff includes two Potain-certified master technicians, accredited lifting machine inspectors, and qualified riggers and electricians.

"The 17 people that make up Crane & Hoist Equipment SA have been handpicked," says Crous. "The management and staff of our business have a long relationship with Potain products, which we leverage to the benefit of our customers."

"For us," adds Semple, "choosing Crane & Hoist SA as our local distributor, was a natural transition from our respected previous distributor – with whom we had a relationship with spanning many years – to a small company with the same people we had been dealing with previously. They know our range, products and technology while they also know the local markets."

"We are certainly very proud to have this close partnership with a world player of this stature," says Crous.

Crane & Hoist is registered with the Department of Labour and ECSA. "We assist clients with project planning and tower crane layout through computer-aided design (CAD). Clients can therefore select a layout of what works best for them," says Crous.

He highlights that Crane & Hoist



From left: Sales Director Louw Smit, David Semple – Senior Vice-President of Manitowoc (the owner of Potain tower cranes), Wilhelm du Plessis (Construction World) and Managing Director, Brenden Crous.

Equipment SA will make it easier for customers to source original spares. The company's direct sourcing from Potain in France will also make its pricing to customers more competitive. The company keeps fast moving items in stock locally. "If a more serious breakdown occurs, we can get parts on import from Potain within three days," says Louw.

Leveraging nine decades of expertise

"Potain has been in business since 1928, so it has been designing and building tower cranes for 90 years. We are the world leading brand of tower cranes. Over these

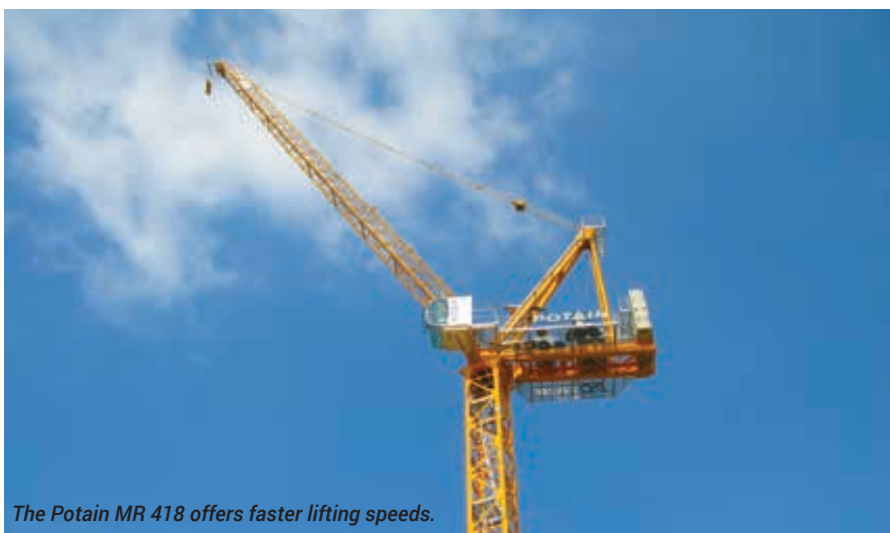
nine decades we have refined the aspects that make our products a solid asset as cranes are long-term investments; assets that can be used on various job sites. We are by no means the only ones with that level of reliability and quality but have managed, over the years, to grow our range of products to cover a wide variety of applications. We are the only all-round tower crane manufacturer as we manufacture the entire range of applications, from small cranes for housing construction to mega cranes on dam projects and power plants. This is what the market recognises and appreciates Potain Cranes for," explains Semple.

Potain offers more than 60 models in a variety of product ranges. Over 120 000 Potain cranes have been sold and installed around the world.

"With at least 200 Potain cranes in active service in South Africa alone, we can see that the local market is very loyal to this strong brand," says Crous. "Crane & Hoist provides existing and new customers the highest level of service and support."

Potain's investments benefit dealers

"One should not underestimate the intellectual work that goes into designing, manufacturing, supplying and supporting tower cranes. Potain passes this significant investment onto our dealers. This includes technical documentation such as ensuring that manuals are accurate, and an emphasis



The Potain MR 418 offers faster lifting speeds.

on training as there is no point in having the best cranes in the world if you cannot explain to those using them how they should be set-up, work, and be maintained. A tower crane is an expensive asset that if looked after, will last for decades. Training users on proper use and maintenance is paramount," says Semple.

He says the availability of spares is critical. "Our smooth logistics performance is crucial as we must have the ability to deliver parts to our dealers as fast and smoothly as possible. The way in which Potain designs the machine is equally important. Spare parts need to be interchangeable so they can be used between different models. That helps with the availability, support and service and assists dealers to keep the inventory they need at the right level."

Potain can support its dealers with many engineering studies about the difficulties

they are faced with when erecting cranes on congested job sites or when the geological conditions may be tricky. "These studies, readily available to dealers, can ensure that the cranes are set up in the right configuration," Semple explains.

Potain's business model is such that it relies on its dealers and distribution partners to look after 99% of their market's service needs. "Every now and then you have an exceptional event – a breakdown that is beyond our dealers' expertise. In such cases we dispatch high end technicians, our so-called 'flying doctors', to assist. These are experts with decades of experience with our products who can be sent to South Africa if there was an issue," explains Semple.

Potain's innovations

Semple says the tower crane world is surprisingly full of innovations. "One would think that a tower crane is a steel structure

with a couple of winches, so what is the 'big deal' – but in fact there are a couple of *big deals*. As a world leader in this industry we are constantly innovating. Our main design office is in France, but also design engineers in China and India to assist," says Semple.

One of these innovations is the logistics of erecting and dismantling and moving cranes around. Being able to package cranes in a way that they are easy to transport and fast to erect is one such area of innovation.

Semple explains that safety is another area where Potain innovates. "Together with some other manufacturers, our experience is being shared with various regulators to put together the world-class standards that shape the safety features of our machines."

There are innovations in terms of control systems which include the efficient use of power to ensure efficient lifting, constant electrical currents, smooth deceleration and acceleration. "The project determines the type of crane being used. The Manitowoc Group which owns Potain cranes, also specialises in mobile cranes. When I compare tower cranes and mobile cranes, the main difference between the two is that a tower crane fits every job site as a different application."

Potain has pioneered self-erecting cranes and have over the last decade had two generations of self-erectors. "With every generation we are making erecting of the crane easier, faster, safer, and more efficient," says Semple. In South Africa the market is smaller, so smaller type of cranes work. "Although there is a market for self-erecting cranes, the cost of labour is lower here than in Europe where self-erecting cranes are preferred," says Semple.

"Crane & Hoist Equipment enjoys dealing with Potain. It provides us with all the support – all readily available, gleaned from its 90 years in the industry," explains Crous.

Safety is vital

"As a company we place a priority on safety and compliance with all our products and services, and being part of the Potain family will also give us direct access to their global expertise," says Crous. "Safely deploying tower cranes on construction sites is critical to raise the pace of the project through higher productivity, however any non-compliance with the numerous safety regulations will have the opposite effect.

"For our part we are a registered lifting machine entity with the Department of Labour, and believe in close compliance with OEM specifications in all our work. In addition we even have in-house training capacity which is certified by Potain, so we are able to train our own staff and customers' staff," concludes Crous. ■



Potain Topless cranes have a fresh and modern design that allows for ultra-fast ground preparation and assembly.

SWEDEN'S BIGGEST ROAD AND TUNNEL PROJECT



A 21 km motorway bypass is being constructed to relieve traffic in Stockholm: E4 Bypass Stockholm, or in Swedish 'E4 Förbifart Stockholm'. The bypass, scheduled for completion by 2030 doesn't just stand out as one of Sweden's biggest infrastructure projects: its 18 kilometres of tunnel will make it the second-longest underground tunnel in city buildings. Doka is providing the formwork equipment for four project sections.

Stockholm is growing astonishingly fast – in fact, the Swedish capital has the fastest growth rate in Europe. The 14 islands that make up the Stockholm region are currently home to over a fifth of the Swedish population, with 2,1 million inhabitants. By 2030, this is expected to grow to around 2,5 million. For the region to continue to develop, well-functioning infrastructure is essential, and major investments are being made in Stockholm. For example, local public transport has been improved by a new railway through Stockholm's central districts, the Citybanan, which was officially opened in 2017. Although the Citybanan represents an important step towards improving public transport systems, it is not sufficient to combat the increasing car traffic in the city.

Stockholm currently only has one major road artery, Essingeleden. The road was opened in 1967 and is designed for 80 000 vehicles per day. Fifty years later, it is travelled by around 160 000 vehicles on a typical working day – and rising. Consequently, the transport system in Stockholm is extremely vulnerable, with Essingeleden in particular very sensitive to road accidents. To address this situation, a 21 km motorway is being constructed that will link the south of the city (Skärholmen) with the north (Häggvik). The new road, 'E4 Bypass

Stockholm', will divert traffic away from the city centre to the west.

One of the longest road tunnels in the world

Most of the bypass – 18 of the 21 kilometres – will run through tunnels, making the bypass the world's second-longest urban road tunnel, runner-up only to Tokyo's Yamate Tunnel. The link will consist of twin tunnels, with its deepest point beneath lake Mälaren lying almost 70 m below sea level.

Each tunnel will have three lanes of traffic in each direction, supporting an anticipated traffic flow of 140 000 vehicles daily. During the construction work, 22 million tonnes of rock had to be excavated. Doka Sweden won the contract to provide formwork to four sections; FSE105 Kungens Kurva (King's Curve), FSE502 Hjulsta Norra (North of Hjulsta), FSE61 Akalla and FSE62 Häggvik. ■



NEW MODEL LAUNCHED

The launch of the new 21CM750 crane took place on 27 November, in Hangzhou. Comansa will also start manufacturing this model at its factory in China, mainly to meet the needs of the Asian market, which increasingly demand heavier load cranes.

More than one hundred guests attended the event, including the leader of the Xiaoshan District, the President of the Comansa Group, the manager of Comansa in China, the main rental companies, the Tower Crane Industry Association and end customers, both domestic and from overseas.

Comansa is taking an important step in technological innovation and product development, making a significant contribution to the construction industry by developing solutions to adapt the products



to the market demand in China and other countries in the region. Among the main technical features of this crane are:

- Flat-Top, modular crane model.
- Two maximum load versions: 50 and 37,5 tonnes.
- Designed following the European safety standard EN14439
- Automatic changing double trolley to optimise the load chart. The lifting speed is faster than for cranes of the same capacity made by other local manufacturers.
- Interchangeable: these models share several jib sections with the 2100 series. Thanks to the modular design, the jib and counter-jib sections have six different configurations to enable the adaption do different jobsite conditions
- Optimised design in the jib and counter-jib connection for faster and safer assembly and disassembly.
- This system also allows great modularity between the two versions: the 37,5 t model can load 50 t by changing the front trolley and hooks.
- Incorporates the Cube Cabin: the design of the cabin won the iF Design Award 2018. It is more spacious, comfortable and increases the capacity of the cabin to implement the new crane function for future needs.

The 21CM750 can be used for prefabricated construction, construction of power plants, mining, bridges and other large-scale infrastructures. It has the approval of the Chinese National Type and the TÜV Süd certification from Germany.■

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SPECIALISED ADMIXTURES USED ON M2 BRIDGE REHABILITATION

CHRYSO Southern Africa is proud to have been the supplier of specialised admixtures for the recently completed M2 bridge rehabilitation project in Johannesburg, according to Hannes Engelbrecht, CHRYSO General Manager: Inland Sales.



CHRYSO Southern Africa supplied specialised admixtures to Lafarge for the M2 bridge rehabilitation project.

CHRYSO's comprehensive range of admixtures plays a vital role in many projects, optimising concrete mixes to ensure that stringent concrete specifications are met. The M2 bridge rehabilitation was no exception.

Following concerns over the safety and structural integrity of the Selby and the Kaserne bridges, the Johannesburg Roads Agency closed the M2 between the Crown Interchange and Maritzburg Street, at the end of February 2019.

Investigations found that sections of the concrete bridge elements were severely compromised, identifying alkali silica reaction (ASR) as the cause of the deteriorating concrete. These deteriorated elements were subsequently demolished in preparation for the casting of new concrete.

It follows that durability criteria, according to the South African Durability Index, were paramount in determining

the concrete specifications for the new elements. Water sorptivity and oxygen permeability were the durability parameters evaluated for the concrete mix. The new elements were heavily reinforced and access limited, calling for a particularly flowable mix, in order to aid the concrete placing and to minimise/eliminate the necessity of using poker vibrators. When Lafarge Readymix was contracted to supply the specified 45 MPa readymix concrete, Darren Jacobs, Lafarge's Technical Global Brands Manager, identified that a robust mix which would compact easily and meet all durability requirements was required. Lafarge's Agilia concrete, which is engineered to flow and self compact under its own weight, effectively filling the entire formwork without requiring vibration, was selected as the best option for this project.

It soon became apparent that CHRYSO's range of chemical admixtures presented

the ideal solutions, to achieve the optimum, fit-for-purpose mix for this application.

Jacobs elaborates: "DuraPozz fly ash was incorporated into the mix to reduce the alkali content, as a prerequisite to eliminate the possibility of future ASR deterioration. The addition of CHRYSO's admixtures from the Optima and the new Quad ranges, ensured that durability parameters and placing requirements were met."

Engelbrecht explains that CHRYSO's philosophy, is to put their customers' priorities at the heart of their business. Harnessing relationships by supplying quality chemical admixtures, coupled with expert technical support, is the mainstay of CHRYSO's success.

Engelbrecht and Jacobs agree that the success of this project was a joint initiative, building on a long-standing association between CHRYSO and Lafarge Readymix. The rehabilitation of the Selby and Kaserne bridges used more than 1 000 m³ concrete, incorporating optimised admixture dosages.

As the M2 was completely closed down during the construction period, the execution of the rehabilitation commanded great urgency, leaving no room for error or delay. All the readymix was supplied from Lafarge's Wynberg plant, which ensured consistency of the concrete, with the Cleveland plant as back-up facility. CHRYSO's supply team ensured that adequate admixture stocks were maintained throughout the project.

The M2 was re-opened on schedule, at the end of October 2019. ■



CHRYSO admixtures played a vital role in the M2 bridge rehabilitation project.



Training for batchers – **KEY FOR QUALITY CONCRETE PRODUCTION**

The Concrete Institute's School of Concrete Technology will this year offer a special one-day course for concrete batchers and batch plant staff in Johannesburg, Durban, Cape Town and Port Elizabeth.

Matthews Magwaza, lecturer at the School of Concrete Technology, says batching – the process of measuring and combining concrete ingredients according to the predetermined mix design – is a vital element of concrete production which ensures high and uniform quality of readymix concrete for each batch produced by a batching plant.

"The durability of a structure is highly dependent on the quality of the concrete used to build it. Therefore, it is essential to precisely and meticulously select the concrete ingredients and this can only be achieved by a competent batcher.

It is, for example, important to maintain the water-cement ratio constantly at the set value and a skilled batcher will be able to adapt his or her production to cater for the water content in the aggregate," Magwaza explains.

He says proper batching offers several benefits including:

- Low variability in plastic and hardened concrete properties;
- Better plant efficiency;

- Lower production costs; and
- Higher client satisfaction and sales volumes.

"The course offered by the School of Concrete Technology will provide batchers and staff at a batch plant with the essential concrete education and theory to competently produce quality readymix concrete. The training will also benefit batch plant supervisors, laboratory staff, sales and staff and even general labourers involved with batching," Magwaza adds.

Topics covered will include:

- Batcher's responsibilities;
- The concrete materials and their effect on the concrete mix;
- Fresh properties of concrete - and the tests to check it;
- Basics of mix design, including the control of the water content;
- Testing for the hardened properties of concrete; and
- Basic management of a batch plant, including implement Quality Control systems.

The course (SCT15) will be presented in Midrand on 23 June, Durban on 20 July, Cape Town on 14 September, and Port Elizabeth on 5 October. For further information, contact John Roxburgh on 011 315 0300 or email johnr@theconcreteinstitute.org.za. ■



Matthews Magwaza, lecturer at the School of Concrete Technology.

SLOW ECONOMY DEMANDS EFFICIENCY AND QUALITY IN READYMIX



AfriSam's Jukskei readymix plant is one of the highest volume production plants in the country.

With South Africa's construction sector in the doldrums, it is vital that material suppliers get smarter. AfriSam's Jukskei readymix plant is doing just that, says operations manager Kevin Naidoo.

"Readymix is a high-speed game," Naidoo says. "The poor state of the market, and the continuous entry of new players, only adds more pressure for us to be faster and better."

He highlights that quality remains a critical factor for readymix in the construction sector, as lives depend on concrete performing as expected. This means that systems and technology should always be advancing to harness productivity while prioritising control.

Digital communication technology is among the tools that are embraced by the group. In one such application, variances in plant performance can be communicated directly to managers' mobile phones, he says. The state of the sector is reflected in the output from the Jukskei plant in Midrand, situated in the heartland of Gauteng's urban economy.

"Despite the weaker demand, our standards remain high," Naidoo says. "Customers rely on that from us." The increased risk of using readymix concrete suppliers without the necessary quality controls, he says, leads customers to always come back to AfriSam. All the company's 40 readymix operations nationwide are certified for the ISO

9001 quality standard. They are also fully accredited members of the Southern Africa Ready-Mix Association (SARMA).

"This gives our customers the confidence they need in the quality of our systems and our products," he says. "They know that our affiliations demand rigorous auditing – both internal and external – of our operations. This is vital in managing the considerable risks inherent in their projects, especially in infrastructure and large building projects."

Among the recent high-profile projects that AfriSam has supplied are the Leonardo skyscraper in Sandton, the super-sized Mall of Africa in Midrand, the Gautrain stations and the Rea Vaya Bus

Rapid Transit (BRT) bridge over Johannesburg's M1 highway.

Managing the tight economic environment also means getting the most of operational assets, says Naidoo.

Naidoo highlights the importance of constantly checking basic elements like accurate measurement of material at the plants. With a world-class computerised batching system, the plant's scale calibrations are conducted internally every two weeks. An external service provider also does a full range of calibration tests every month. These are all conducted within SANAS specifications. ■



Among the high profile projects supplied by AfriSam's Jukskei readymix plant is the Gautrain.

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- D) Sustainable Social Programmes

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If you are experiencing any difficulty in entering online, mail hello@sustainabledesign.co.za



Ground-breaking **BBBEE AGREEMENT**

Heavy equipment manufacturer and distributor, Bell Equipment, has concluded a Broad Based Black Economic Empowerment agreement, effective 1 January 2020, that will empower the Group's South African manufacturing subsidiary, Bell Equipment Company South Africa (BECSA) and further empower the South African sales and distribution subsidiary, Bell Equipment Sales South Africa (BESSA).



At the signing ceremony were (seated from left): Bruce Ndlela (Business Development Director, BESSA), Duncan Mashika (Managing Director, BESSA), Dominic Chinnappen (Global Manufacturing Director, Bell Equipment Group), Niraj Andhee (General Manager: SA Manufacturing & Material Planning, BECSA), Diana McIlrath (Company Secretary, Bell Equipment Group); Karen van Haght (CFO, Bell Equipment Group), Avishkar Goordeen (Chief Strategy Officer, Bell Equipment Group), Bharti Harie (Sibi Capital), Sindi Mabaso-Koyana (Sibi Capital), Zinhle Dlamini (Bell Equipment Foundation Trust beneficiary); (standing from left): Gary Bell (Chairman, Bell Equipment Group), Tiisetso Masimula (Transcend Capital), Xolisa Beja (Beja Attorneys Inc.), Bruce Hunt (Transcend Capital), Leon Goosen (CEO, Bell Equipment Group) and Craig Brown (Finance Manager, BECSA).

Commenting on the empowerment transaction, Bell Equipment Group Chief Executive Officer, Leon Goosen, said that both BECSA and BESSA will be 51% black owned and aligned with Government's economic transformation policies. This will improve the BEE scorecards of both entities and position the Group more competitively in the South African market in addition to a number of other significant benefits.

"BECSA, as a 51% black owned entity, will benefit from continued access to Automotive Production and Development Programme (APDP) funding, the ability to increase manufacturing throughput and encourage the drive for greater industrialisation. We estimate BECSA to achieve a Level 3 BBBEE recognition.

"This transformation will also be advantageous to Bell customers as BESSA will be a 51% black owned and 30% black women owned entity, with an estimated Level 1 BBBEE recognition, allowing our customers to maximize the benefit of their procurement spend from BESSA. In addition, an improved BBBEE level, coupled with our local manufacturing, is aligned with the goals of the 2018 Mining Charter and SANRAL's transformation goals," explained Goosen.

BESSA became 30% black women owned in April 2017 when shares were sold to BEE shareholders – 22,5% to SIBI Capital, a 100% Black women owned and managed company, with Sindisiwe Mabaso-Koyana and Bharti Harie as the ultimate shareholders, and 7,5% to a BBBEE trust, the Bell Equipment Foundation, which benefits black female beneficiaries.

Both Sibi Capital and the Foundation will also participate in the current empowerment transaction with a direct shareholding of 7,5% each in BECSA. "Our partnership with Sibi Capital and the Foundation has proven successful as they are aligned to our business and we have a solid foundation on which to build a long-term relationship that can add value to our business," said Goosen.

Black management shareholders

A black management company, comprising current Bell executives, Avishkar Goordeen, Dominic Chinnappen, Duncan Mashika, Bruce Ndlela and Niraj Andhee as well as the Bell Foundation will hold an effective 36% share in BECSA and a 21% share in BESSA.

"The Bell management team making up the BEE management company are a well-balanced and highly qualified team with years of institutional knowledge. They bring together the necessary manufacturing expertise, new business development focus, sales and distribution skills and are able to continue to spearhead interactions with the private and public sectors.

Provision has also been made through the structure to allow for future managers to participate," said Goosen.

Restructuring for empowerment

To accommodate the empowerment transaction, it was necessary to restructure the organisation and Bell Equipment SA Holdings has been formed as a holding company through which both BECSA and BESSA will be owned.

All the group functions, and functions associated with being an original equipment manufacturer will reside in a new company known as Bell Equipment Group Services (BEGS), which will be 100% owned by Bell Equipment Limited.

"This BBBEE transaction reflects our commitment to South Africa and we wish our partners well in their new roles as we begin a new chapter of the Bell legacy together".

We are excited about the future of our country and believe that our entities are now optimally positioned to continue to deliver our premium product range and comprehensive support network for the maximum benefit our customers," concluded Goosen. ■

TECHNICALLY-ADVANCED FLEET

Jet Demolition has a fleet of 34 specialised demolition excavators, and 44 additional items of plant, ranging from skidsteer loaders to tractors, telescopic handlers, and articulated dumpers. It also has over 65 hydraulic attachments, and a range of mechanical attachments. This makes it not only the leading demolition specialist in Africa, but the most technically-advanced as well.



A mechanical pulveriser used to crush concrete in-situ.

What makes Jet Demolition so unique is that the bulk of its equipment and attachments are unavailable locally. Although it uses reliable, well-known excavator brands, these are all adapted to suit the challenging and arduous demolition environment. "These modifications enable us to carry and operate with heavier attachments that are unavailable in South Africa," Jet Demolition Operations Manager Willie Vermeulen explains.

Complex tools and attachments are imported specifically from abroad, while Jet Demolition has an in-house R&D capability to develop and manufacture simpler attachments and tools locally. Vermeulen reveals that the material cost alone is often more than the attachment value if it were to be purchased outright. However, this is due to the attachments being designed and built to long out-last those available commercially.

Jet Demolition has also established relationships with original equipment manufacturers (OEMs) and engineering firms over the years, which ensures that the specific tools it requires are manufactured to exacting quality and precision standards. In addition, its relationships with international demolition professionals, as well as a keen interest in mechanical engineering, gives it the capability to modify equipment suited specifically to its requirements.

Generally it is very uncommon for any equipment or attachments to be only for a once-off application. Before investing resources into any tool or attachment, Jet Demolition always analyses ways that it can be incorporated into different projects. "While we are able to safely execute the same operation using a different method, a decision to purchase or manufacture a specific tool to perform that function is generally motivated by the safer, quicker, and more reliable operating performance provided," Vermeulen stresses.

Jet Demolition has its own fully-equipped on-site workshop at its Roodepoort premises. General services are carried out on-site by trained and qualified mechanics. While most contractors tend to run their machines into the tens of thousands of hours before considering replacement, the demolition specialist replaces its key machines at about 6 000 hours on average.

"This is exceptionally uncommon in the heavy equipment market. We need to be able to ensure that our machines are ready to work under any and all circumstances, and simply cannot afford to have an unforeseen breakdown during critical activities. For this reason, we keep our fleet relatively young, and make a considerable investment in our fleet," Vermeulen highlights.

In addition to basic operator training and certification, on-site experience and



The largest demolition shear in Africa.

mentoring is critical. "Our operators generally carry the same accreditations as earthworks contractors, but their expertise as specialised demolition operators sets them apart. It is similar to the crane industry in that operators may have a licence, but their experience, confidence, and performance determines the extent of their development and growth," Vermeulen adds.

Commenting on the latest equipment trends and developments, Vermeulen points out that mechanisation is an ongoing objective of many large demolition firms. "We have also noted a trend in using digital advances, including sensors, anti-collision devices, and complicated live-feed camera systems that are able to further advance safety in the demolition industry," he concludes. ■



A crusher suspended from a crane to crush in-situ concrete walls on silos.

Synonymous **WITH QUALITY**

This is according to Mike McDonald, manager of the AfriSam Centre of Product Excellence, who says that the brand is strengthened by the pledge to conduct business according to highest standards and in compliance with the various laws and regulations that govern the business. To this effect, AfriSam has policies that state the company's commitment towards health and safety, the environment, energy management and quality.



Mike McDonald, manager at AfriSam's Centre of Product Excellence.

AfriSam's range of construction materials has been contributing significantly to infrastructure development in Africa over the last 85 years. Customers appreciate that AfriSam's certified products are about the guarantees they have when using these products which have been thoroughly tested, are safe to use, and are fit for purpose.

Validating this claim of quality is the fact that all AfriSam's cement, aggregate and slag products carry SABS Permit certification for their respective Standards, which is regarded as a mark of quality in all SADC counties.

Further to this, all the AfriSam Readymix operations can boast with the valuable ISO 9001 certification as well as fully complying with the SARMA quality certification scheme. Achievement of this requires daily diligence and focus on the quality of the AfriSam manufactured concrete. The SABS mark does not only

attest to the quality of the products, but it also gives customers a sense that they have an impartial platform to approach should a product fail. McDonald elaborates: "The customer gets double assurance: AfriSam's intrinsic value proposition coupled with the SABS stamp of quality." SABS inspectors visit all AfriSam's cement manufacturing sites at least six times a year where they scrutinise production records and take random samples for testing at its SANAS accredited laboratory. Customers, in turn, understand the value of the SABS mark and often request to see the SABS permit.

McDonald explains that because AfriSam views its cement not just as a construction material but as the houses, schools, hospitals and the like which will ultimately be constructed, product development is based on quality decisions that are in the interest of the consumer. AfriSam's product portfolio encompasses specialised products

for engineering applications such as precast, layer works and foundations, as well as cements for general applications and smaller building construction.

The company's longstanding relationship with the SABS is an example of AfriSam's policy to build and empower enterprise towards creating a positive African future. This strong and trusted collaboration with the SABS contributes towards AfriSam being known as a well-respected and admired African brand.

"Our core business is to manufacture and supply construction materials, as well as to provide technical solutions to our customers. Underpinned by our values of People, Planet and Performance, our Quality Policy guides behaviour that aims to develop, implement and maintain a culture of customer satisfaction. With the SABS as our quality partner, it is easy to achieve these goals," McDonald concludes. ■

CAST-STONE COBBLES COMPLEMENT NEW CENTURY CITY PARKADE

Apedestrian precinct and garden courtyard which flank P3, a recently completed three-storey parkade adjacent to a Virgin Active gym at Century City, has been paved with Jura Cobbles manufactured by Cape-based cast-stone producer, Revelstone.

Clad with an attractive perforated aluminium screen, P3 was built for the Rabie Property Group by main contractor, WBHO. It was designed by Vivid Architects (project architect – Nic Cloete) and the project's civil

work was done by Neil Zaaïman Civils.

Landscape architect, Alistair Turrell, of Planning Partners, designed the landscape installation for the pedestrian precinct in collaboration with Vivid Architects. And the Jura Cobbles were laid by 'TJ Paving' on a sub-base of 150 mm G5 aggregate.

Combining paving space with beds of indigenous foliage and trees, the paved precinct includes benches clipped onto the raised beds, making it a space for

relaxation rather than a mere thoroughfare.

"We chose Jura Cobble because it's a refined product with a very regular module," said Turrell. "And its colour tones complement the dark brickwork of the garden walls and the perforated aluminium screens. This is a high-trafficked pedestrian zone and the irregular composition of the planting zones in the courtyard lent itself to the herringbone pattern which was adopted for the layout of the cobbles. They exhibit no differentiation in direction nor extensive patterning, which otherwise could have competed with the architecture".

"Moreover, we know that Jura Cobble is a durable product which has stood the test of time. We first used it 10 years ago at the Business Centre in Century City where it still looks as good as new." Revelstone's Jura Cobble has also been used on several other upmarket projects including the V&A Waterfront's No. 5 Silo project where it lines an indoor walkway on the ground floor. ■



GENERAL BUILDING SOLUTIONS FOR THE LOCAL MARKET



In the current challenging local market environment, it's important to ensure that cost effective, high quality solutions are sought out and used on construction sites – irrespective of whether they are smaller renovations or larger infrastructure projects. Each construction site presents its own requirements and challenges, and this is where MAPEI, local building product solutions provider makes the difference.

“MAPEI has positioned their product offering not as individual products, but as a total system solution for construction projects. With our expansive range of products, we are able to develop and specify a complete solution for use on site, eliminating the risk that comes with using different products that originate from different suppliers,” says Shane Coll, Building Products Manager for MAPEI South Africa.

“Our products are used throughout the full construction phase of a project, from foundation to roof. It is important that high quality and standards are always maintained and never compromised. Failure to do so could have serious consequences and failures later within the project life span,” adds Coll.

The MAPEI building range includes imported products which have been developed in the group's world class R&D facilities around the world, and locally manufactured products which have been developed with strict adherence to the groups international standards.

“We back our solutions up with the expertise and knowledge not only from our

local technical team, but also by taking advantage of the over 80 years of experience the group has banked from various prestigious projects worldwide,” says Coll.

The MAPEI range of building line products includes the following:

Repair and skimming mortars the MAPEI range of repair and skimming mortars includes several products that meet varying requirements and technical needs within the local construction market - giving your concrete render the strong, smooth finish needed.

Cementitious and epoxy grouts developed for use in anchoring or repairing concrete structures.

Anti-corrosion coatings this range provides solutions for protecting concrete on the surface as well as protection for steel reinforcement rods within the concrete

Crack-repair and sealants a comprehensive range of crack repair and joint sealant products.

Repair and levelling screeds MAPEI provides for various substrate repair and preparation requirements in anticipation of flooring.

- Bonding promoters and primers – the MAPEI range includes various primers and bonding promoters
- Soundproofing – MAPEI offers soundproofing products which contribute to the lessening of noise levels in completed applications.
- Waterproofing solutions – MAPEI has an extensive range of waterproofing products meeting the complex and technical requirements of waterproofing on site. This includes cementitious, emulsion and acrylic based waterproofing, protective waterproof coatings, water repellents and bandage systems.

“We don't only offer these solutions to our customers/applicators but also the technical support and training needed in order to ensure that there is every chance of success when applying MAPEI Products. We work closely with the applicator throughout the whole process and thereafter follow up to ensure everything is correct and meets our standards.

“When you use MAPEI – you know you are getting quality” concludes Coll.”■

Non-slip characteristics of DIE-LINE ENHANCE WALKWAY SAFETY

Excellent non-slip characteristics is only one of the advantages the Mentis Die-Line range of positive grip pressed section walkway product offers users. Available in three forms, namely planks, mats and walkways, this locally manufactured walkway pressed section has a positive serration which ensures positive traction in all walking and working surfaces, even where mud, water, grease oil and detergents are present and could cause slippery or hazardous underfoot conditions. The serration on the grating applies irrespective of the direction in which a person is walking.

Lance Quinlan, national technical sales consultant at Andrew Mentis, explains that Die-Line is easy to handle and erect with minimal welding or clipping required. This reduces the need for specialised installation labour. “Another important advantage that Die-Line offers is its high strength to weight

ratio as this ensures an optimum loading bearing capacity and therefore the safety of all who use the walkway system,” Quinlan says. The Die-Line range also ensures high light penetration for further safety benefits and the sections align perfectly for enhanced aesthetics. The sections are designed for longitudinal span, obviating unnecessary steel support and heavy kick plates, both factors contributing greatly to enhanced cost effectiveness.

Transverse loading is transferred to the integrated kick flats (toe boards) which are provided with two slotted holes at each end and positioned around the neutral axis. Pressed angle splice plates fit on the outside and into the returned top edges, and M10 bolts and nuts are provided for easy installation. The Die-Line products, together with all the necessary accessories including bolts, washers, nuts, fish plates, jointing

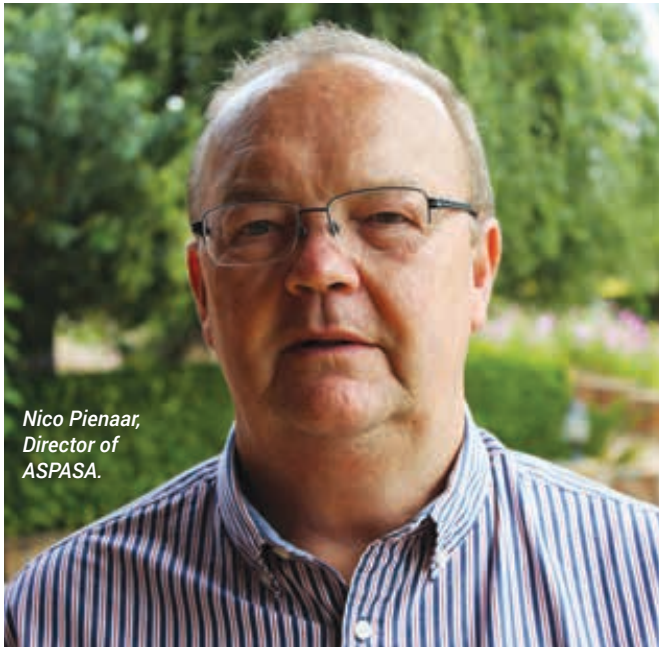
channels, saddle clamps, splice plates and mesh clips, can be used for work platforms, catwalks, conveyor walkways, and stair treads.

Die-Line flooring channels are available in three sizes; 150 by 2 400 mm, 250 by 2 400 mm and 305 by 2 400 mm. All are 2 mm thick. Die-Line walkway sections are available either 500 mm or 750 mm wide at a standard length of 2 400 mm and 2,5 mm thick. It can be supplied uncoated, bitumen dipped or galvanised, facilitating use in a wide variety of applications including where harsh chemicals or saltwater is present. Mats are available either 500 mm or 750 mm by 2 400 mm long and 2,5 mm thick.

Apart from the obvious safety considerations, Andrew Mentis is able to provide customised solutions for specific customer requirements across a number of market sectors. ■

Borrow pits will kill **QUARRYING INDUSTRY**

Surface mining industry association ASPASA is lobbying government to urgently crack down on ill-conceived borrow pits that are jeopardising legitimate quarries and threatening the livelihoods of thousands of workers in the industry.



*Nico Pienaar,
Director of
ASPASA.*

“Once a business shuts down and closes its doors it is too late. We cannot simply stand by while licensed, legally compliant and sustainable quarries are being put out of business by borrow pits that are opened to supply certain large-scale projects more cheaply. These do not employ permanent workers, do not invest heavily in capital equipment and have the potential to scar the environment in ways that can render tracts of land unusable for future generations,” says Nico Pienaar, Director of ASPASA.

“While some in the construction industry, and even some engineering bodies, have called for easy-access to ‘cheap’ aggregates, such an idea is ill-conceived and will lead to catastrophe in the quarrying industry with the consequence of large-scale building material shortages and a rapid downward spiral in material quality.”

Completely unsustainable

“Borrow pits like these are only established for large and lucrative contracts and neglect smaller scale and more specialised requirements. That means the cream of contracts will be eroded from formal quarries, many of whom are only able to survive and recapitalise as a result of this type of cash injection that occurs from time-to-time.

“The knock-on effect is that hard-to-reach aggregates will be neglected, specialised crushing and screening equipment will not be procured and as a result aggregates for high strength concrete and specialised construction will become unavailable. These cannot then be simply imported, as the cost of transport will make it completely

unaffordable,” says Pienaar. He says the association is currently engaging the Department of Minerals and Energy, the South African National Roads Agency Limited, the Department of Environmental Affairs and other stakeholders in order to discuss the ramifications of these “short-term remedies” to cost saving initiatives.

We have already seen the collapse of the large-scale construction sector, mass exodus of skills required to deliver infrastructure and the emergence of mafia style syndicates taking advantage of loopholes in the procurement practices in the construction industry.

Fighting back

“We do not want the same to happen in our industry and will fight tooth-and-nail to prevent ill-though out policies from ruining our industry and costing the jobs of thousands of gainfully employed workers in our industry.

“We rather call for engagement with all stakeholders, because with proper planning our industry has the ability to deliver whatever is required to build South Africa sustainably and to continue to thrive and employ ever-growing numbers of workers for generations to come. Surely, that is a better solution!” Pienaar concludes. ■

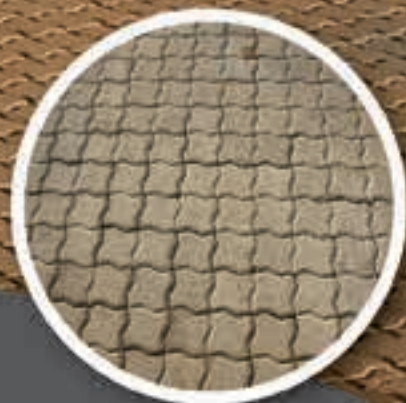
DEFINING A BORROW PIT

A borrow pit is a land use involving the excavation or digging of material for use as fill at another site and includes the pit area, stockpiles, haul roads, entrance roads, scales, crusher, and all related facilities. They are subject to:

- Approval by the Department of Mineral Resources and Energy
- A permit to operate
- Compliance with national and provincial legislation
- Compliance with local bylaws
- Compliance with water usage requirements
- Compliance with environmental requirements
- Compliance with Minerals Charter
- Compliance with MHSA act
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