

COVERING THE WORLD OF CONSTRUCTION

OCTOBER 2021

CROWN
PUBLICATIONS

Construction **WORLD**



**M&D'S INFRASTRUCTURE
AND PLANT DIVISIONS DEMONSTRATE
METTLE AT ZONDEREINDE MINE**



ATVANCE™
EMPOWERED RISK
MANAGEMENT



AUDITS

We conduct internal and external audits to examine the quality and effectiveness of your Health and Safety management system.



CONSULTATION

Our consulting services include Occupational Health and Safety, Environmental and Quality Management compliance into your risk management processes.



TRAINING

Our online and in-person training courses focus on techniques aimed to design and implement quality training material and effective delivery of training by our facilitators.



SOFTWARE SOLUTIONS

Our software solutions assist companies in overall business management. Developed and designed by experienced auditors, risk managers and SHEQ consultants.



ATVANCE™
EMPOWERED RISK
MANAGEMENT

010 786 0223
info@atvance.co.za
atvance-erm.co.za



YOUR HOLISTIC RISK MITIGATION PARTNER

HOW CAN WE IMPROVE SAFETY IN YOUR WORKPLACE?

At Atvance Empowered Risk Management we believe that workplace health and safety is essential and must be established within your organisation in order to protect your workers, customers, suppliers, partners, and the environment from unnecessary risks.

When your risks are not kept in check, it can greatly affect your employees, the environment, the local community and also your bottom line.

Our experts can help you effectively identify the hazards and risks within your organisation. We assist you by creating custom solutions and by conducting internal and external audits that accommodate in authenticating legal compliance. Our consultancy services include but are not limited to Safety, Occupational Health, Environmental and Quality Management.

Our experts continually strive to increase Health and Safety awareness in the workplace and work within the following sectors:

Manufacturing, Wholesale, Retail and Trade, Financial Services, Transport and Communication, Mining, Construction, Agriculture and Governmental and more.

FEATURES

05 Industry body advises rethink of property development investment

The ASQS says it can assist with solving our uniquely SA problems.

08 Harnessing 65-year heritage to overcome current-day challenges

Engineering firm GIBB has a rich history to help it overcome COVID-19.

12 Zutari co-creates community solutions in Soweto

'Future Cities South Africa' tackles gender, social and economic inequalities.

16 African real estate market to bounce back by Q1 2023

Broll Property presents an in-depth look for real-estate future.

24 Cintocare hospital is a benchmark in sustainable healthcare facilities

Hospitals and associated building services are complex in nature.

26 Connecting villages in Ha-Lambani

An important bridge construction to link rural communities.

28 Future uncertain as consulting engineers stand ready to serve

Can the sector remain up to the task?

34 Products for upmarket hotel

a.b.e. Construction Chemicals supplied various products to green hotel.

36 Admixtures support water-saving by contractors

CHRYSO is supporting the conservation efforts of water resources.



REGULARS

04 MARKETPLACE

16 PROPERTY

20 ENVIRONMENT & SUSTAINABILITY

24 CIVIL ENGINEERING

36 DAMS & RESERVOIRS

ON THE COVER

Murray & Dickson Construction Group (M&D), a leading diversified construction company, continues to build on a long and proud tradition of servicing the mining infrastructure market. The stellar work that M&D is currently undertaking for Northam Platinum Limited, an independent, fully empowered, integrated platinum group metals producer, is another sound example of the extent of the company's skills and experience supplying world-class construction services to the mining industry. Notably, this is the second project that M&D is undertaking at NPL's Zondereinde mine, an established, conventional and long-life operation which mines UG2 and Merensky ore.

Turn to page 22



The Civil Confidence Index in South Africa, as compiled by First National Bank (FNB) and the Bureau for Economic Research, increased to 17 points in the third quarter. This means that 80% of respondents are unhappy with the current conditions. The Bureau of Economic Research Building Confidence Index declined by 4 points (from 39 to 35) for the same period. This means that some 65% of respondents are dissatisfied with the prevailing business conditions.



Despite the increase in the Civil Confidence Index, some of the underlying indicators worsened as many industry respondents are unhappy with the business conditions. The major concern is lack of new work – this influences concerns of profitability. As the civil sector relies on the public sector, there is little to be happy about. Something such as the amendments to Schedule 2 of the Energy Regulation Act, which is a step towards developing renewable energy projects through the IPP (independent power producer) programme, will only provide contractual value once it materialises.

This index has been hovering at about the 20-point mark since the middle of 2017. It is a far way from 50 points that will indicate that respondents are neither happy nor dissatisfied.

Building confidence declines

Despite the fact that the composite index remains higher than the average of the past few years, the index that measures the confidence in the core building sector (and excludes the hardware retail

and building material manufacturing sector), fell to 20 from 25 in the second quarter.

FNB's economists stated that the confidence in the core building sector has, since the start of the year, been noticeably lower than the overall composite index, "highlighting the persistent weakness in the larger-by-value brick and mortar segments." Main contractor confidence slid from 22 to 18 (Q2 vs Q3) and subcontractors' confidence declined from 28 to 21 (Q2 vs Q3).

As in the Civil Confidence Index, the overall profitability within Building Confidence is under pressure. As activity and profitability go hand-in-hand, FNB says that the extent to which the profitability index declined has far exceeded that of activity.

The building pipeline also declined – this resulted in the confidence of architects declining from 23 to 18 while that of quantity surveyors shrank from 26 to 21.

Stay safe

Wilhelm du Plessis

Editor

EDITOR & DEPUTY PUBLISHER
Wilhelm du Plessis constr@crow.co.za

ADVERTISING MANAGER
Erna Oosthuizen ernao@crow.co.za

LAYOUT & GRAPHIC ARTIST
Katlego Montsho

CIRCULATION
Karen Smith

PUBLISHER
Karen Grant

PUBLISHED MONTHLY BY
Crown Publications (Pty) Ltd
P O Box 140
BEDFORDVIEW, 2008
Tel: 27 11-622-4770 • Fax: 27 11-615-6108

PRINTED BY
Tandym Cape



Scan for website



TOTAL CIRCULATION:
(Second Quarter '21)
12 156



LEMAITRE
SAFETY FOOTWEAR

FALCON BOOT



Raptor sole with TPU inserts for grip, support and protection.

Genuine leather.

Padded collar for improved comfort.

Footology Elastopan Climate Control insole.

KEEPING YOU STEADY ON UNEVEN TERRAIN - LADDER GRIP DESIGN AND TOUGH DURABLE UPPER

Get the ultimate grip while stepping with a uniquely designed sole with ladder grip TPU inserts.

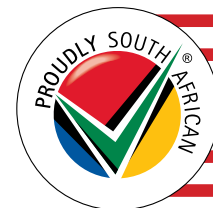


HAWK

EAGLE

MAXIMUS

FALCON SHOE



www.lemaitre.co.za

SOURCED AND MANUFACTURED
IN SOUTH AFRICA

**FROM ONE WORKER
TO ANOTHER**





PG BISON 1.618 EDUCATION INITIATIVE WELCOMES NEW JUDGE

*PG Bison, a Proudly South African company that aims to inspire and enable beautiful living spaces, has been running the prestigious 1.618 Education Initiative for 29 years. This annual design competition aimed at third-year architecture and interior design students around South Africa is part of the curricula of participating educational institutions. PG Bison is proud to welcome **Nathaniel Wakefield, Director at Batley Partners**, to the competition judging panel for 2021.*

Judging panel

Wakefield joins four other respected judges who will have the difficult task of selecting this year's top 10 and then top three submissions.

Lian Markham, Communications Manager at PG Bison, explains that the 1 618 Education Initiative aims to nurture and recognise young talent, introduce students to real-world briefs and products, and encourage creative thinking.

"We're thrilled to have Nathaniel Wakefield on board, representing Batley Partners, a design-focused, architecture, interior, and graphic design consultancy headquartered in Johannesburg," she says. "Nathaniel heads up the practice's contribution to South Africa's business empowerment lobbying and bursary funds for architecture students from previously disadvantaged backgrounds, and his enthusiasm for working with students is evident. It's wonderful to welcome him to the judging panel."

Judging is set to take place during September 2021. Lecturers have already submitted their students' entries through the online portal, and the judges, who are spread across the country, will begin their multi-stage deliberation process soon.

The brief

Every year, students are tasked with meeting a real-world brief, based on a specific site. The site is selected based on the city in which the previous year's winner is located. The top three students in 2020 were from Cape Town, so the 2021 brief is set

there. The brief requires students to create a design to develop the historical Strand Street Quarry as an attractive tourist destination and connection hub along the City's planned Heritage Route.

"The site needs to be considered from a physical and cultural contextual perspective and the design solutions must be grounded in reality," says Madre Marais, creative director and partner at Source Interior Brand Architects who created the brief. "I'm excited to see how students engage with the site as a gateway into the CBD and how it can connect certain heritage landmarks in the city. Students must understand the location as a cultural hotspot that connects the Bo-Kaap and the Waterfront and responds to the site's sensitive historical context."

The prize and opportunities

The winner and their lecturer will each get a R50 000 cash prize, with R25 000 for the runner-up and R10 000 for third place. All remaining top 10 finalists receive a cash prize of R2 000 each.

"Our finalists also enjoy the chance to set themselves apart in the eyes of potential employers," says Markham. "For example, all of the top three students from the 2020 competition have been employed by ARRC, an acclaimed multidisciplinary interior design and decor studio based in Cape Town."

She adds that the PG Bison 1 618 Education Initiative is not only a means to support young South African talent, but also to connect students with industry. ☺

INDUSTRY BODY ADVISES RETHINK OF PROPERTY DEVELOPMENT INVESTMENT

“In the wake of the July incidences of looting and destruction, we need to rethink the role property development can play in addressing a variety of socio-economic issues in South Africa,” says Mosha Senyolo, newly elected Vice-President of the Association of South African Quantity Surveyors (ASAQS). “Before we can talk about feasible solutions, we must first understand the unique South African problem that we actually need to solve.”

“Saying that no one would want to invest in South Africa due to socio-economic instability isn’t likely to inspire those in need of help to make different choices,” says Senyolo. “We should rather have conversations about how we are going to get people to understand how infrastructure and property developments coming from outside their community benefit them.”

“In addition to this, social responsibility should be at the forefront when rethinking how the sector approaches property development, for example,” says Larry Feinberg, Executive Director of the ASAQS. “To sustainably address the unique South African challenges, the property sector will be required to take on social responsibility that goes beyond just – for example – skills development.”

This proposed focus on increased social responsibility aligns with the ESG trend where investors consider the financial return and the environmental, social and governance aspects of projects and companies they invest in.

“There are opportunities to assist people to start businesses and allow them to thrive without the usual capital constraints that goes with running a business that requires a physical location.”

“For example, an office space developer could allocate a small rent-free portion to a business that just needs a physical location at a great address to give them an edge,” explains Feinberg. Similarly, a retail developer could allocate a small rent-free portion to spaza-type shops, allowing the shop owners to benefit from the foot traffic of the established brands located in the mall.”

“Collaboration between the public and private sector will be key to bringing these important changes about,” says Senyolo. Keith Skinner, newly elected ASAQS President, agrees with Senyolo. “Going forward, social responsibility and local community inclusivity are key to new property developments providing good returns in respect of benefits to the community, planet and being profitable investments.”

“We can’t wait for some undefined point in the future; we need to rethink our approach to the inclusion of local communities in the new property developments process now.”



Keith Skinner, newly elected ASAQS President.



Mosha Senyolo, newly elected Vice-President of ASAQS.

According to Skinner, Quantity Surveyors can support the inclusion of local community involvement in the construction phases of a project without it necessarily being a financial burden to the project. The education, training and knowledge base required of Professional Quantity Surveyors (PrQS) equips them to implement clearly defined – and well documented – procurement processes.

“Quantity Surveyors are well placed to effect and manage financial governance and reporting processes on projects,” explains Skinner. “Thorough financial control minimises opportunities for fruitless expenditure and corrupt activities, thus ensuring that funds are utilised efficiently, and to the maximum benefit of both investors and communities.” ©

DEN BRAVEN SEALANTS SOUTH AFRICA APPOINTS INTERIM MD

Colene Baker has been appointed interim Managing Director of Den Braven Sealants South Africa. She takes on the role after being with the company for more than 20 years as the financial manager.

Colene studied cost management accounts at the Technikon Witwatersrand, obtaining her national diploma in 1994 with the goal of following in her father's footsteps in construction. She feels very fortunate to have worked very closely with her mentor and previous Managing Director, Averil Webbstock.

Colene lists her management strengths as being open and inclusive and enjoys a close knit relationship with her team. She is married and has two children, Kathleen and Alec. Much of her spare time is taken up in seconding Kathleen who is a provincial mountain biker and supporting Alec on the cricket field. Colene has a love for cars and motor bikes but family time is foremost, spending any spare time they have in the outdoors of our beautiful country on their mountain bikes.

Her vision is to support her team in getting Den Braven through these incredibly tough trading times, continuing to grow the business by building on its strengths of integrity, service and technical know-how, in both the built environment and hardware industry.

Den Braven Sealants has been trading for over 40 years in South Africa and currently employs 27 people, many of whom

have been with the company for over 10 years. There are branches in Cape Town and Durban with the head office being based in Johannesburg. ☺



Her vision is to support her team in getting Den Braven through these incredibly tough trading times, continuing to grow the business by building on its strengths of integrity, service and technical know-how, in both the built environment and hardware industry.

SEIFSA WELCOMES GDP UPTICK

The Steel and Engineering Industries Federation of Southern Africa (SEIFSA) is encouraged by the latest real Gross Domestic Product (GDP) data released by Statistics South Africa (Stats SA) today, affirming an uptick in economic growth of the domestic economy from the the first quarter of 2021 to 1,2%.

The uptick in GDP is certainly a welcome development, especially given the current economic environment against the backdrop of rising unemployment levels, rising input costs, increasing energy costs and the COVID-19 pandemic. Encouragingly, the agriculture sector and mining showed the best growth rates at 6,2% and 1,9%.

Gross Fixed Capital Formation (GFCF) data released along-side the GDP figures is also supportive of the positive trends we are seeing in GDP and production

figures, as GFCF decreased by a marginal 0,9% in the second quarter of 2021. The increase was attributed to increases in machinery and transport equipment.

SEIFSA Chief Economist Chifipa Mhango, said it is important to note that the Metals and Engineering Industry is heavily reliant in the performance of the Mining, Construction and Building industry and other manufacturing market segments to survive, as these are the key sectoral markets.

"It is evident that during the time when the South African economy had a strong injection of infrastructure projects being implemented in the periods of 2003 to 2010 in the energy sector, as well as projects related in the 2010 World Cup, the Manufacturing Sector, and the Metals and Engineering Sector in specific, also experienced

a boom in production and capacity utilisation of over 85%," he said.

Mhango said it should be encouraging to see a return in demand for the Metals and Engineering industry products in the economy as the South African Government commits to R792,1b public infrastructure spending into the next three fiscal years. However, to guarantee stock availability, the industry needs to move back to higher levels of capacity utilisation from the current COVID-19 driven levels of 75%.

Another positive element in the StatsSA data release of today is the increase in exports of goods and services of 4% in the second quarter of 2020, mainly attributed to increases in mineral products, precious and semi-precious stone sand vehicles," Mhango concluded. ☺



Always
Visible

Improve your mining operation with dynamic Ctrack Solutions.

Features

-  **Driver Identification & Driving Behaviour Monitoring**
-  **Engine Performance Monitoring (RPM & Idling)**
-  **Collision Avoidance Sensors**
-  **Fuel Level & Consumption Monitoring**
-  **Iris Camera Solution**
Front-Back-Side Facing Camera Option
-  **Onboard Weighing**
-  **Breathalyser**
-  **Tip Sensor**



www.ctrack.co.za | sales@ctrack.co.za | Call Centre: +27 (0)860 333 444

HARNESSING 65-YEAR HERITAGE TO OVER-COME CURRENT-DAY CHALLENGES

“The loss of lives and destruction of livelihoods associated with the COVID-19 pandemic has been painful to witness. Like everyone else, our business has had to do everything possible to survive the pandemic,” says Richard Vries, Group CEO of engineering firm GIBB.

Vries says the challenge is far from over. “The construction industry is currently the worst performing economic sector in South Africa. As a share of nominal GDP, fixed investment has fallen to critically low levels, down to 15%, which is similar to the troughs experienced towards the end of apartheid and after the emerging market crisis of 1997/98 (Nedbank Capital).

“The consulting engineering industry market size has shrunk from a peak of R27b 2017 to R10b in 2020. Our concerns are not only the lost economic opportunities and reduction of inequality in our society that would come from fixed investment, but also the loss of the globally recognised talent pool available in South Africa. It might take us many years to regain the lost engineering and architectural know-how necessary to create a globally competitive South Africa,” he adds.

Within this milieu, GIBB has drawn strength from its heritage and people to use the opportunities presented by the pandemic to build resilience and institute new ways of doing business. “We have found ways to optimise our operations while also creating a better work-life balance for our people and we are actively transforming our business to take advantage of the opportunities presented by the digital evolution,” notes Vries.

Despite the various market challenges, Vries says history has shown that the market will improve. “Now in our 65th year, our company has not only survived six decades of construction and engineering industry boom and bust, but our people have first-hand knowledge of many facets of the industry and the challenges related to developing sustainable infrastructure solutions. Because of this, we see opportunities when others may have lost hope. This understanding has set us on a new path to ultimately evolve into an infrastructure asset owner and operator,” says Vries.

Reflecting on the company’s history, Vries says he invited one of the founders of the South African chapter of GIBB, David Hill, to join him at the company’s excellence awards celebration in Cape Town in 2014. “Notwithstanding his frailty due to his advanced age at the time, Hill shared his immense pride in how GIBB had become a leading success in the field of engineering and reminded me that good people built great companies.



“Our ability to develop these projects is enhanced by our integrated approach and the various partnerships we have created over the years. We always seek out partners who share our drive for excellence – be they local or international.”

Richard Vries,
Group CEO of engineering firm GIBB.

This was the motto of Hill Kaplan Scott (HKS), the company that became the cornerstone of GIBB in South Africa, from its inception in 1956.”

The British firm, Alexander GIBB, founded by Scottish engineer Brigadier-General Sir Alexander GIBB, subsequently merged with an Atlanta based American company, LAW to form LAW GIBB. LAW GIBB (now part of Jacobs) acquired HKS in 1994, just as South Africa entered the miracle of its new democracy and set in motion a step-change for Hill Kaplan Scott to become an Africa-based world-class engineering house.

The company was rebranded LAW GIBB and immediately adopted an international best-practise approach to project delivery and client services, reflected in its recognition of being one of the first engineering companies in South Africa to become ISO9001 accredited. Vries attributes the company’s

success over the years to its people talent who carried the GIBB brand as it executed some of the most complex engineering projects on the African continent. “Today, having returned the ownership to South Africans in 2002 and becoming a 100% broad-based employee-owned company in 2006, we still view ourselves as competing with the best in the world.

This was aptly described by former Chairman, Dr Don Mkhwanazi when he stated in his 60th anniversary message: “GIBB demonstrated with distinction that black economic empowerment can be implemented with dignity and pride that is beyond reproach. A shining example and a beacon of hope for the South African industry, GIBB competes in a space dominated by multinational firms, but remains wholly South African owned.”

The journey over 65 years carries with it many stories of success, disappointment, ingenuity, courage, transformation and agility. From its early days as a partnership in Cape Town, providing electrical and structural engineering services, GIBB evolved into a leading multi-disciplinary company, offering services across power, transportation, property, water, mining and now more recently the oil and gas market.

“In line with our ethos to always be agile, the GIBB Group of Companies has evolved its role in the delivery of engineering and infrastructure projects. Through our subsidiaries and affiliates, we now partner with project developers and owners to finance early-stage project development in the water sector, undertake joint development of renewable energy projects and provides life cycle services, such as asset management and operations & maintenance of infrastructure projects. We believe this integrated offering makes us an attractive partner for developers and owners of infrastructure assets,” adds Vries.

GIBB has to date delivered some of the largest and most complex infrastructure projects, from the design and building of a new 500-bed ICU hospital in 30 weeks during COVID; to being an integral part of the team overseeing the building of the first rapid-rail project in South Africa (Gautrain); leading the team designing and delivering the largest pump-storage scheme in the southern hemisphere (Ingula Pumped Storage Scheme); leading the team designing and delivering a dam to supply the economic hub of South Africa (Lesotho Highlands 2); being an integral part of the teaming planning, designing and delivering a new 68-000 seat world cup stadium in record time (Cape Town Stadium); designing the signalling system to ensure that millions of passengers are safely transported across the country on our rail systems (Prasa Signalling projects); designing key components of a new mine with critical time constraints and a limited budget; helping to solve the power problems in SA; and developing a detailed plan for transforming an existing highly populous African city to a modern and world class city (Port Harcourt, Nigeria).

“Our ability to develop these projects is enhanced by our integrated approach and the various partnerships we have created over the years. We always seek out partners who share our drive for excellence – be they local or international. When we acquired SVA International in 2013, we were not only attracted by the architectural aesthetics of their great projects, but we also saw an opportunity to create an integrated professional services offering for the property sector,” notes Vries.

When GIBB and EDF (a global French energy company) joined hands in 2018 to form GIBB Power, it was from the realisation that South Africa (and the rest of Africa) is in great need for both local and global expertise to respond to the power challenge. “Similarly, we work closely with SAIPEM (Milan based oil & gas EPC firm) to find climate change solutions to industry in Southern Africa. Our project development initiatives are being supported through a partnership agreement with Crede Capital Partners (a financial and investment services company),” concludes Vries. ☺



Bosch Diesel Service specialises in providing advanced diesel injection system components, as well as the repair and servicing of diesel fuel injection systems to keep things on track. Our certified fuel injection **experts are trained to world-class standards** and will make sure the cleaning, servicing, refurbishing and calibration of your diesel injection components are done to the same standards.

All work is done in-house to the **highest standards using quality parts**. To keep your engines running at optimal capacity, book a premium diesel injection component repair today.

boschdiesel.co.za



SAICE AND SANRAL WORK TOGETHER TO BUILD A SUSTAINABLE AND PROFESSIONAL CIVILS INDUSTRY

A professional, ethical and knowledgeable civil engineering community is paramount in meeting South Africa's socioeconomic development needs. Infrastructure development holds the key to stimulate the country's economy, but must be steered by excellence in engineering. Aligned with this, the South African Institution of Civil Engineering (SAICE) holds an annual awards function in recognition of industry excellence, and is pleased to announce that this year, South African National Roads Agency Limited (SANRAL) has partnered as the main awards sponsor.

Vishaal Lutchman, CEO of SAICE comments: "South Africa's road network infrastructure is necessary for bolstering economic activity in terms of its provision, operations and maintenance. It is a prime example of what is possible when infrastructure is rolled out professionally." South Africa's national road network is widely acknowledged as being world-class. "We have long been aligned with SANRAL in our objective of supporting a strong civil engineering sector in South Africa, and are honoured to have them backing our annual awards process," adds Lutchman.

Further, SAICE seeks to support SANRAL in projects going forward, fostering technical excellence and a partnership based on capacity building, knowledge creation and sharing. "We have a common development agenda and with the awards, showcase the value of industry collaboration," says Lutchman.

Promoting and acknowledging professional excellence in the sector through these awards serves to meet various objectives. "By shining the light on our highly competent civil engineers, technicians and technologists, we hope to encourage leadership in the sector, foster entrepreneurship, and create role models for young professionals. It is also important that our young people are encouraged to seek professional development opportunities and to seek mentors to assist them on their career paths," says Lutchman.

Fostering professional development

SAICE plays a crucial role in fostering a pipeline towards advancing a skilled civil engineering community in South Africa. The voluntary association makes it simple for members to seek mentorship, career opportunities, and institutional knowledge.

For example, the SAICE Academy offers a multi-disciplinary range of books and discounted CPD accredited courses aimed at growing and improving members' professional development. It assists in developing knowledge and presenting engineers with best practice and new advances in the industry, thus maintaining a high standard of engineering practice.

"However, some things must be learned from peers and projects, rather than from books," comments Lutchman. "For this reason, we launched SAICE Connect last year." SAICE connect is a platform which helps members network with others in the industry, to foster mentorship and a collaborative



"We have long been aligned with SANRAL in our objective of supporting a strong civil engineering sector in South Africa, and are honoured to have them backing our annual awards process."

Vishaal Lutchman,
CEO of SAICE.

approach to problem solving. It also connects job seekers with employers to help engineers, technicians, and technologists to grow their careers.

The SAICE Awards take place on 22 October and will recognise ten outstanding individuals in the sector. "We hope that we – in partnership with SANRAL – can motivate the industry to contribute to South Africa's sustainable development agenda. When civil engineers execute with excellence, the whole country benefits," concludes Lutchman. ©

INDUSTRY THERMOMETER RESULTS REVEAL LONG-TERM IMPACT OF UNREST IN JULY



Recent data released by Skynamo's Industry Thermometer has revealed that the unrest which took place in July is having a long-term impact on local businesses. This is following previously recorded signs of strong sales growth which were heading towards pre-pandemic figures.

The Skynamo Industry Thermometer is a free-to-access resource that benchmarks industry sales activity and sector health on a monthly

basis. It reports average order values and volumes from over 500 South African manufacturers, wholesalers and distributors in 26 industries using

the Skynamo field sales app. Zane van Rooyen (**pictured**), Product Marketing Manager at Skynamo says that unfortunately the company's Industry Thermometer data for August has shown the first slowdown of the growth pattern this year. "Optimistically, only 8 out of the 26 industry groups monitored have shown negative growth when compared with the previous month. This negative, or stalling, is small compared to the big drop experienced in 2020 as a result of the pandemic."

"Apparel, such as clothing and shoes, as well as packaging were amongst the industries that struggled in August," he adds. "However, looking at the combined total of all the industries monitored together, the graph still shows an ever so slight outcome in the right direction. Order volumes were lower than the previous months this year, but August managed to still hold its own, if only just."

These results mirror the sentiment of Finance Minister Enoch Godongwana, who recently said that the economic impact of the recent unrest would not be quickly resolved and would persist beyond 2021. He said that while early estimates of the economic impact were about R50b, the impact would be felt for some time.

"However, the 1,2% economic growth recorded in the second quarter this year, as mentioned by the National Treasurer, has been encouraging to witness in our data," says Van Rooyen.

Only time will tell what the tight rope of the next few months will look like, he says. "I am cautiously optimistic that the South African resilience will shoulder this wave and that local business will emerge wiser and stronger at the other end." ☺

"However, the 1,2% economic growth recorded in the second quarter this year, as mentioned by the National Treasurer, has been encouraging to witness in our data."

ZUTARI CO-CREATES COMMUNITY SOLUTIONS IN SOWETO

Contributing to inclusive and sustainable economic growth, poverty reduction and mitigation of gender, social and economic inequalities is a key focus of the Future Cities South Africa (FCSA) programme. FCSA is the delivery partner for this UK Foreign, Commonwealth and Development Office (FCDO) funded bilateral programme in South Africa, which delivers targeted technical assistance on urban planning, resilience and transport to municipal governments.



Leading consulting engineering and infrastructure advisory firm Zutari is part of a unique alliance of organisations and independent specialists comprising the FCSA, together with PwC (UK and South Africa), Open Cities Lab (OCL), Palmer Development Group (PDG), Violence Prevention through Urban Upgrading (VPUU) and the Isandla Institute, among others.

The FCSA consortium aims to support the city administrations of Johannesburg, eThekweni and Cape Town with the urgent urban challenges, including those posed by COVID-19. This has resulted in the scoping and delivery of several projects, with Zutari overseeing one particular project in Soweto, highlights Monique Cranna, Technical Director, Urban Planning.

The project includes a highly participatory approach in conjunction with the traditional technical component, looking at urban planning in particular. This encompasses spatial economics, finance, engineering, climate change and resilience in order to bolster economic development. “We are involved with high-level engagement with stakeholders from the Soweto community and Johannesburg itself, where we are working across various city departments,” comments Cranna.

The ultimate aim is to co-create a long-lasting partnership between the two. “We are liaising intensively with both the local community stakeholders and the local government in order to co-design innovative solutions that are based on emerging best practice for township economies,” elaborates Cranna. The planning process for the project alone has taken two years to date, interrupted last year due to COVID-19.

Establishing a relationship with the local community stakeholders and forging inter-governmental institutional framework structures have been the biggest challenge posed by the project to date, adds Cranna. The team is currently fleshing out the vision manifesto for the project, which is anticipated to be presented jointly

to both the local community stakeholders and the city shortly.

“What we have found is that the local community knows exactly what its issues and problems are, and is willing to engage with an organisation like Zutari that is willing to articulate these issues and problems and co-create value-adding solutions,” highlights Cranna. The project initially encompassed a major survey, but this had to be scaled back due to COVID-19. “We had to reconfigure our entire scope of work in terms of the process we wanted to adopt, so as to ensure that a viable outcome was still achievable within a reasonable timeframe.”

This outcome is expected to take the form of a detailed strategic area framework for a study area within Soweto that is endorsed and therefore validated by all stakeholders. “It is a very different approach to that normally adopted by the city, due to the fact that we wanted to depoliticise the process itself and keep it to a technical and pragmatic level so that the local community could clearly see how it would translate into tangible deliverables,” stresses Cranna. “This also serves to empower the local community in that they have an active stake in a project that will impact materially on their quality of life going forward.”

However, Cranna sees the most important outcome of the project as nurturing reciprocal trust between the Soweto community and the City of Johannesburg, which have had a strained relationship of late due to factors such as ongoing service delivery protests. “As soon as this project has been bedded down successfully, the aim is to have benchmarked an approach to spatial planning that can be rolled out to other township economies or marginalised settlements. Most rewarding for me about the process to date is engaging with the local community itself, who have been articulate and specific about their needs and requirements.

Taking all of this onboard and co-creating solutions with ourselves, the local community and the City of Johannesburg has been extremely effective, and will go a long way in setting out a roadmap for sustainable collaboration in the future,” concludes Cranna. ☺

“What we have found is that the local community knows exactly what its issues and problems are, and is willing to engage with an organisation like Zutari that is willing to articulate these issues and problems.”

DISPUTES CONTINUE TO BE RESOLVED FOR CIVILS SECTOR

Settling disputes is a key aspect of maintaining fairness and stability in any sector, and the Bargaining Council for the Civil Engineering Industry (BCCEI) continues to render this vital service for the civil engineering industry.

Through the BCCEI's Dispute Resolution Centre (DRC), dispute referrals are resolved as quickly as possible to meet the accreditation standards of the Commission for Conciliation, Mediation and Arbitration (CCMA), according to DRC manager Merle Denson.

"To ensure we achieve the best results, the BCCEI appoints highly rated commissioners and arbitrators who are accredited by the CCMA and hear cases under industry-specific standards and guidelines," says Denson.

Since the onset of the COVID-19 pandemic, cases have continued to be dealt with using all means possible including remote online facilitation via Video Conferencing, Zoom or Teams, she says. As an industry-based forum of organised business and labour, the BCCEI regulates employment conditions and labour relations in civil engineering – with the aim of fostering a stable and productive working environment.

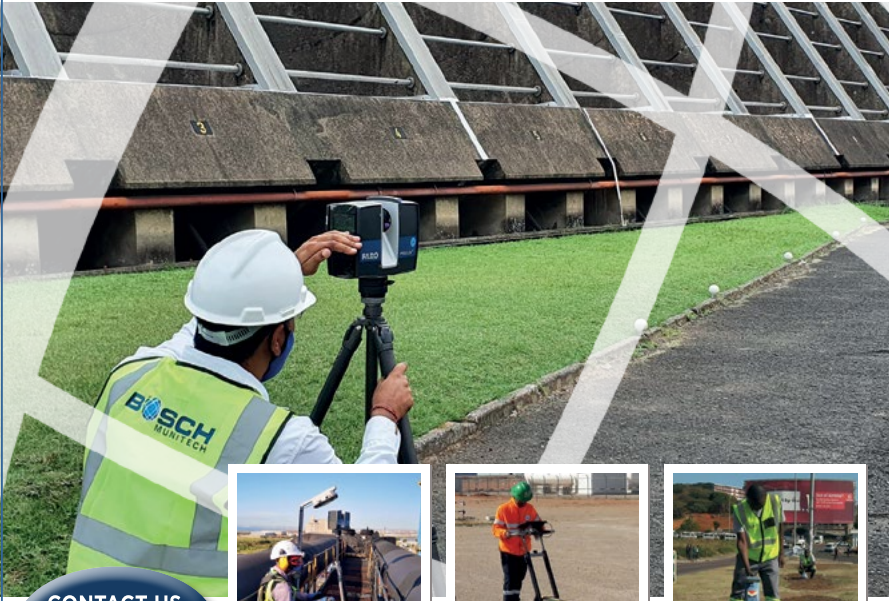
The DRC's services are available to all firms in the sector, and to all scheduled and non-scheduled employees who fall within the BCCEI's scope. "The cost of using the BCCEI DRC is covered by the monthly dispute resolution levy paid by employers


and employees," she says. Denson highlights that, in all dismissal cases referred to the DRC, the applicant and respondent must first explore a process of conciliation to try to resolve the dispute amicably.

"Where such a settlement cannot be reached, the case then goes to arbitration, if this is requested by the applicant or referring party," she says. In the arbitration process, she explains, the arbitrating commissioner hears both sides of the dispute. Based on the evidence that is led and the arguments that are made, the commissioner decides if the dismissal was procedurally or substantively fair, or not – and issues an arbitration award.




All arbitration awards are final and binding.

Denson notes that 'statutory disputes' around a range of different kinds of dismissal can be handled by the DRC. These include retrenchments (operational requirement disputes), incapacity due to ill health or poor work performance and misconduct – as well as strike action, lock-out, unfair suspension, and severance pay. Among the advantages of the DRC's service is that disputes in large projects can even be heard on site, for example, at the Medupi and Kusile Power Stations "On site dispute resolution can be conducted in long-term, multi-disciplinary projects where site agreements are applied," says Denson. "This means significant savings in time and cost, while ensuring that the process is fully compliant." ☺





**CONTACT US
FOR A FREE
QUOTE**

UNDERGROUND UTILITY DETECTION


- High level of safety measures
- Minimise utility damage
- Risk management


3D LASER SCANNING

- Factories, buildings and structures
- Power lines and sub stations
- Tanks and pipelines
- Roads and bridges

LEAK DETECTION


- Quick turnaround time
- Private and Public sector
- Advanced technical equipment
- Reduced damage loss
- Detect and reduce water loss



Tel: +27 (0)31 535 6000 | QSE Construction Sector - B-BBEE Level 2
 Email: info@boschmunitech.co.za | www.boschholdings.co.za
 [@boschholdings](https://www.linkedin.com/company/boschholdings)

Your partner in utility management

A member of



8555 XPRESSIONS ADV

GVK-SIYA ZAMA APPOINTS LANCE COHEN AS GROUP PRODUCTION DIRECTOR

GVK-Siya Zama Building Contractors recently acquired the expertise of Lance Cohen as Group Production Director. Cohen is a construction long-timer with a passion for the industry and is steadfastly people-centric. He discusses the challenges in the construction industry, the superb talent pool of emerging construction youth, and the future for GVK-Siya Zama.

Like many students, Cohen wasn't sure what he wanted to do after school, but he was interested in engineering, so he signed up for Wits University's Engineering Week programme, in which students stay at the university for a week and experience for themselves what each engineering discipline is all about. During this week, the students visited the then construction site of Southgate Mall, and it was there that Cohen realized construction would be a good career for him.

In his third year of studying Civil Engineering at Wits, Cohen was required to get work experience (vacation or 'vac' work). He managed to get vac work on a building site in Richards Bay working for WBHO. After that, he asked WBHO for more vac work and then a job, which he was granted when he finished university.

And so, his 22 years with WBHO began, with unique experiences such as the 2010 World Cup construction projects. It was also where he registered as a professional civil engineer. He worked his way through the ranks and finished up in a senior management position.

After WBHO, he decided to try his hand at property development and joined Investec Property where he received invaluable coaching in people, management and leadership skills. "I did however learn that property development wasn't my forté. Construction is my passion, so I was

extremely excited to join GVK-Siya Zama."

Cohen's role at GVK-Siya Zama is to take care of the production side of the business at group level. He says, "What's important for me is maintaining solid, authentic relationships with clients and suppliers, and making sure that we deliver on our projects."

Regarding his personal and professional goals, Cohen says, "I think that my future is definitely with GVK-Siya Zama and I'm very happy to be in this role, working with our management teams on the ground to build on the success of the company and make it the contractor of choice. I love the entrepreneurial spirit and problem-solving approach I've encountered here."

Cohen sees himself as client and people centric. "Our people mean everything to me and I spend a lot of time understanding and nurturing them. I also want our company to be the most client-centric construction business in the country. We must have empathy and understand what our clients' needs are, and then tailor our response to make sure we are aligned."

"We want our people to be heard – and that includes clients, subcontractors and suppliers. We see ourselves as a cog in the greater construction team and we want to know if people are happy working with us, and that extends to our employees as well."

The talent emerging from universities and even high schools is impressive,



"We want our people to be heard – and that includes clients, subcontractors and suppliers. We see ourselves as a cog in the greater construction team and we want to know if people are happy working with us, and that extends to our employees as well."

Lance Cohen,
Group Production Director.

says Cohen. However, there are limited work and career opportunities for them. "The industry needs to focus on creating careers for our emerging talent as it is uniquely able to play a critical role in creating employment," he says.

When it comes to advising students how to choose their careers, Cohen says, "I hope the universities still have the programmes that I attended to help students choose which career to pursue. I advise students to follow their passion even if it's not a popular choice or the 'sexiest' career. Think about what makes you feel comfortable and what you're passionate about. You'll likely make a success of it if you do."

After hours, Cohen likes to exercise. "I find that it calms my mind. I'm also very blessed to have two daughters who I try to spend as much time with as possible." Passionate about his work and his family, Cohen is an unequivocal asset to the GVK-Siya Zama team. ©

PROMOTING A DIVERSE AND INCLUSIVE INDUSTRY FOR FUTURE LEADERS

Encouraging the development of a workforce, which is inclusive and diverse was the key message from the South African Institution of Civil Engineering (SAICE) during a recent webinar held in association with the SAICE Young Members Panel (YMP).

Innocentia Mahlangu Pr.Eng, SAICE Champion of Diversity and Inclusivity and Project Manager at Hatch, started the event by presenting on SAICE's diversity and inclusivity (D&I) initiatives, which form a vital part of their strategy. "We need to drive change in our industry and establish a working environment which is inviting to everyone. It has been said that diversity is being invited to the party and inclusivity is being asked to dance. We need to build a civil engineering industry which is inclusive regardless of race, gender, religion, culture or disability."

Chair of the SAICE YMP, Michael Mhlanga added: "Young professionals have a massive role to play as future leaders and advocates for change. We need to move D&I from theory to practice." He said this can be achieved by engagements with young people at school and university level. "The YMP is proud to be running various initiatives of this sort, where our young engineers and connecting with our youth. These students are receptive to us, as they see that we are like them – young, with exciting careers ahead of us."

Malani Padayachee-Saman Pr.Eng, CEO of MPAMOT, said that from the gender perspective of D&I, it is important to not just focus on women in the industry. "We need to focus on wider gender mainstreaming, where we are not just focusing on including women in technical fields, but encouraging general 'role reversal' in the workplace and in the home. The role of men must also be considered," she said. She also unpacked the role of ethnicity and religion in the workplace.

The programme manager for the event was Tsebo Koena, Civil Technician for Zutari. In conversation with Kim Timm Pr.Eng, Executive Structural Engineer at AECOM, he asked her what it takes for young people to get ahead in the industry. "From a women's perspective, there is immense pressure to be 'strong' all the time. You get put in a situation where you are loaded with more responsibilities and expected to succeed – and I don't think that's always fair. We should rather be looking at knowing



Michael Mhlanga,
Chair of the
SAICE YMP.

your own strengths and weaknesses, develop confidence, and then building competencies. Then you become much harder to be overlooked," answered Timm.

Mahlangu added that diversity and inclusivity is a journey. "Undoing so much historic imbalance is a massive task. SAICE wants to encourage equality and fairness – and raise awareness of unconscious bias. People are so unaware of the perceptions they hold, and how this impacts their actions." Unconscious biases are social stereotypes about

certain groups of people that individuals form without being aware of it. Everyone holds unconscious beliefs about various social and identity groups, and these biases often inhibit inclusive behaviour.

Koena concluded by saying that it is important to recognise that civil engineering professionals play an important role in society. "We are building a world for people and collaborating with each other. As civil engineering professionals, we are building society and it is important to be inclusive as we move forward." ©

"Young professionals have a massive role to play as future leaders and advocates for change."



AFRICAN REAL ESTATE MARKET TO BOUNCE BACK BY Q1 2023

Broll Property Group presents an in-depth look at the future of the real estate in Africa over the next decade at the API Summit 2021 as part of its new five-year strategy, plus detailed reports on the emerging markets of Mozambique and the DRC

Leading Pan-African professional real-estate services provider Broll Property Group anticipates the African real estate market to normalise and bounce back to pre-COVID-19 levels by Q1 2023. This was the key message from Broll Group CEO Malcolm Horne, delivered a keynote address at the 12th Africa Property Investment (API) Summit 2021 from 6 to 10 September.

“Our success is built on our in-depth knowledge and expertise, based on our tangible understanding of local markets across Africa. This allows us to provide end-to-end real estate solutions based on strategic, fully-integrated property services for both the occupier and investor segments. As a leading provider of end-to-end real estate solutions, an interesting correlation that we are monitoring is the potential relationship between the vaccination rollout in Africa and the associated economic recovery across the continent,” says Horne.

This is particularly important to Broll’s mission of leveraging its industry-leading, patented technology platforms to enhance asset values in a sustainable real estate market. “I do not necessarily think that we will trend the same as what you see in First World countries, which anticipate the bulk of the jobs shed due to COVID-19 to be largely regained by year-end. This will be an important driver of the global recovery.”

Many of the trends dominating the international real estate market at present were already prevalent or on an upward tick prior to COVID-19. “A lot of the trends we have seen, whether globally or in Africa, had their roots before the pandemic. It was not a case of COVID-19 suddenly leading to massive change. It did accelerate market trends, especially as the sectors benefiting now had already started to grow prior to COVID-19.”

Looking at the international real estate market, Horne says the obvious winners at present are industrial, data centres and lifestyle, the latter focused on well-being and healthy living, in addition to healthcare. “These have done very well. However,

if you compare it to Africa, they have fared equally well.” Thus, there seems to be a real correlation across the board between those resilient sectors that have stood out. In Africa, industry, data centres and hospitals have been at the forefront of much development. Secondary emerging investment sectors that are rapidly gaining traction include cold storage, self-storage facilities and affordable housing.

“The real challenges lie in offices, retail and hotels,” says Horne. In the case of retail, the sector continues to attract investment. “Yes, there have been major retailers exiting some African markets, but if you look at the international trend, a lot of landlords have actually invested in retailers in order to get them going again. We have observed a similar trend in Africa in terms of a resurgence of local investor interest in the retail sector.” In terms of the office sector and the global ‘work from home’ phenomenon, while a general return to the office environment is predicted by Q3 this year, with a hybrid model most likely to be adopted, Africa is an interesting exception. “Due to the slow rollout of vaccines across the continent, a lot of companies are still working remotely as a result.”

However, Horne does not expect the office sector to necessarily shrink in size as companies downsize or consolidate. “Offices are going to have to be repurposed for increased spacing between workers, which will result in fewer employees per square metre and the adoption of more flexible workspace solutions. Hence there will be fewer people, but the space will remain the same.”

Horne is bullish about the impact of COVID-19 going forward, especially as Broll’s mission is to ‘strengthen the core’ of the business so it can remain resilient and flexible. The Group has a clearly-defined five-year strategy to take it ‘beyond 2021’, and to future-proof the business as it continues to explore opportunities for further growth and expansion in Africa.

As for the future trajectory of COVID-19, vaccines will likely have gained much momentum globally by Q4 this year. While



the vaccination rate in Africa remains low, there is a lag period that has to be taken into account. “We therefore estimate now that the impact of COVID-19 will still be felt for another year at least,” predicts Horne.

“Hopefully by Q1 2023 the supply and demand issues related to the vaccines will largely have been resolved, with a sufficient supply to Africa so we can gain momentum across the continent in terms of the vaccination drive. That will be positive and see the start of a ramp-up in economic activity. In most countries people are back in the malls and spending. It is crucial that lockdowns are not instituted again, which is why the successful vaccine rollout is so critical.

“Hence by the start of 2023, African economies will start to normalise and head back to pre-COVID-19 levels of activity. We are already seeing this shift globally, where economies have plans in place for job creation, reshaping and expansion by as early as the end of the year. However, we do not anticipate any significant movement in the investment market until probably Q2 next year.”

Despite these challenges, Broll remains committed to future-focused thinking in order to unlock new solutions, opportunities and partnerships, especially across Africa. “The phrase to ‘strengthen our core’ is a perfect summation of this approach, as it reveals how we plan to leverage off our expertise in order to continue to promote innovation and growth in all that we do.”

Horne highlights that the API Summit is a platform that attracts investors and occupiers, service providers and financiers. “It is one of the few events on the continent that is actually an aggregator of whomever is interested in occupying or investing in real estate. It also cuts across all sectors, from residential to commercial.”

The high-level speakers showcased at the event also goes a long way for setting the tone and trends of the real estate market in Africa. “This not only talks to the importance of the event, but the important role that property plays in building economies and creating employment. It has been proven time and again that the property sector is one of the greatest job creators in developing economies. If countries can just get their property sectors formalised, developed and growing and rebuilding, it will not only generate employment and wealth, but can result in wholesale economic

transformation.” One of the emerging markets that Broll will showcase during a presentation at the API Summit 2021 is Mozambique. “We have all the major real estate sectors present in this market,” says Jose Castilho, Co-Founder Partner and CEO of Broll Mozambique, a joint venture with Broll Property Group. Being a developing country, the major focus at present is residential, retail and logistics, as well as office developments in the main areas of economic activity such as Maputo.

With a population of 30 million, Mozambique presents major opportunities for investors, especially in residential and retail, which are still largely undeveloped sectors with much potential. Castilho stresses the importance of having a resilient investment structure in place. The building cycle can easily last three years, while time to market is 1,5 to three years, which calls for longer-term financial strategies. “Success can definitely be achieved in the Mozambican market by developing quality real estate in selected locations. Remember, real estate is a long-term game.”

Another emerging market not necessarily equated with the real estate market in Africa is the Democratic Republic of Congo (DRC). Patrick Katabua, Account Director, Africa Desk at Cushman & Wakefield | BROLL, who hails from the DRC but is based in Johannesburg, will deliver a presentation outlining how the DRC real estate market is “progressively developing”, compared to what it was three to five years ago.

“From a growth and development perspective, that is readily visible. However, it is fairly complex to compare the DRC real estate market to that in say Nigeria or Kenya, for example, which have established stock exchanges and large property funds. That is not yet the case in the DRC. Thus, its real estate sector is not as formalised as the other economic powerhouses of the continent.”

Due to the fact that the DRC is growing from a fairly low base, it presents opportunities across the board, from affordable housing to industrial, healthcare and commercial. “It is about finding the right partner and packaging a solution that makes sense for that particular node. A lot of big brands have found that the ‘cut-and-paste’ model does not really work in the rest of Africa. You need to customise in accordance with the local context.”

Katabua says: “Our model at the moment is to provide best service to our clients, whether it be transactions, advisory services, valuations or production of bespoke market reports. We aim at representing our client’s interests from concept right through to completion, and team up with the best-in-class locally-based subject matter experts to ensure robust delivery on assignments.” Improvements in ‘ease of doing business’ parameters and an improved political and economic landscape have resulted in augmented investor appetite, which positively unlocks the real estate market. ☉

“The phrase to ‘strengthen our core’ is a perfect summation of this approach, as it reveals how we plan to leverage off our expertise in order to continue to promote innovation and growth in all that we do.”

FLANAGAN & GERARD LEASES THROUGH THE LOCKDOWN

From March 2020 to date, the Flanagan & Gerard portfolio of 10 shopping centres has welcomed 113 new stores, which have been crucial for adapting to the changing and exciting retail environment emerging in South Africa.



electronics stores, which have helped keep people connected and set up home offices, and apparel focusing on value, casual wear and athleisure,” says Gerard. “It is also worth mentioning that supermarkets and pharmacies in our portfolio have performed exceptionally throughout, providing essential goods that customers spend the most on.”

Gerard adds, “The agility of many retailers has really impressed us, and we have witnessed them adapt their offerings and innovate to be more relevant to changing customer needs. We are particularly excited by the incredible local entrepreneurs with whom

The challenges of the past 18 months, brought about by the global pandemic and, more recently, the devastating unrest in KwaZulu-Natal and Gauteng, have had a massive impact on South Africa. The retail ecosystem – consumers, retailers and landlords alike – have been particularly impacted.

“The tough and uncertain times we are in, including various and changing lockdown rules, have hurt many businesses. Unfortunately, some retailers were not in a financial position to survive the prolonged trading restrictions, which resulted in a sharp increase in vacancies within shopping centres countrywide. Re-letting space and renewing leases has required a strategic, savvy approach to structuring sustainable deals for both tenant and landlord,” says Paul Gerard, MD of Flanagan & Gerard.

Flanagan & Gerard and its partners in the different assets across its 500 000 m² portfolio, have let a combined 15 500 m², or 3% of the portfolio’s gross lettable area (GLA), during the lockdown – minimising vacancies to less than 1% of GLA at end-July 2021.

“These deals include national retail groups expanding their footprints in better-performing categories, and with exciting brands that see excellent opportunities and bright futures in our shopping centres, notwithstanding current macro trading conditions,” explains Gerard.

Homeware is one of the categories where sales per square metre have outperformed, reports Gerard, with more people prioritising decorating, DIY projects and renovations, so they can enjoy their homes while spending more time in them.

“Other stellar turnover performances have come from

we have had the privilege of doing business. Among them are Bathu Shoes, Drip Footwear and Legends Barber, to name but a few. These are genuine South African success stories that have taken our market by storm and inspire us with confidence about the future of retail. They are world-class and have what it takes to make their mark globally.”

Gerard believes that these role models for aspiring retail entrepreneurs are only the tip of the iceberg of what is to come for Mzansi retail. “We have also taken note of other exciting new names like Tshepo Jeans, Sneaker Shack, and Veldskoene, and we are excited to see these names grow in the SA retail landscape. As retail continues to evolve, so do our retail spaces and the way we work with retailers. We look forward to continuing to cater for the needs, expectations and enjoyment of our retailers and customers.”

Flanagan & Gerard co-owns a prime portfolio of 10 malls in five of South Africa’s provinces: Ballito Junction Regional Mall in KwaZulu-Natal; Morningside Shopping Centre, Springs Mall and Vaal Mall in Gauteng; Highveld Mall and Middelburg Mall in Mpumalanga; Thavhani Mall, Musina Mall and Mall of the North in Limpopo; and the new redevelopment of Boardwalk Mall in the Eastern Cape.

Its respected track record includes an even higher number of retail properties developed for other leading investors. Flanagan & Gerard’s investment partners include the most respected names in property investment, including Growthpoint Properties, Grapnel Property Group, Menlyn Maine, Moolman Group, Resilient REIT and Vukile Property Fund. ☺



TAKEALOT SIGNS WITH GROWTHPOINT FOR CAPE TOWN WAREHOUSE

Growthpoint Properties has signed a lease with South Africa's largest online retailer, Takealot, for an 11 600 m² warehouse in Montague Gardens, Cape Town.

The Chain Avenue warehouse building spans more than 12 000 m², and Takealot will use almost the entire area, excluding 450 m² of offices. The warehouse is supported by an excellent yard area.

The new lease agreement extends Growthpoint's relationship with Takealot in the Western Cape. Growthpoint co-owns Takealot's large flagship distribution centre in Montague Park, Montague Gardens - only a few blocks from the overflow warehouse. Montague Gardens is a well-established industrial area popular for its immediacy to Cape Town's port and CBD and supported by excellent arterial road access via the N7 and N1.

Besides being an ideal location for Takealot, the overflow-stock warehouse provides several operational and cost benefits. The Growthpoint building enables Takealot to put the plug-and-play warehouse space to best use immediately.

Takealot began operating from the Chain Avenue warehouse this month (August 2021).

"We are pleased to provide Takealot with a warehouse in affordable premises at a strategic location for their operations and to do so with the agility that comes with partnering with fast-moving, blue-chip businesses. From initiation to occupation, the whole deal took Growthpoint and Takealot a mere month to finalise. It is a pleasure working with them. Takealot's expansion is extraordinary, and we are proud to be part of it," says Timothy Irvine, Growthpoint regional asset manager for the Western Cape.

Growthpoint makes space to thrive with innovative and sustainable property solutions. It is an international property company invested in real estate and communities across Africa, Australia, the UK and Eastern Europe. Growthpoint is 50% co-owner of the V&A Waterfront in Cape Town. ©



ALLIED CRANE HIRE

Setting the Standard!



0800-CRANES

info@alliedcranehire.co.za
www.alliedcranehire.co.za

Branches covering Sub-Saharan Africa



"I envision a holistic and sustainable transformation in the industry that is inclusive of all South Africans irrespective of creed, race or gender."

Nontokozi Nkosi,
Head of Enel's
South African Commercial Office.

Having joined EGP RSA in 2016 as a Commercial Officer, Nkosi's key responsibilities include identifying and originating new business opportunities. This entails scouting, origination, structuring and pricing of long-term PPAs for new renewable capacity around the world with industrial, commercial, and non-traditional off-takers, as well as ensuring the business enjoys organic growth year-on-year. In addition to her current role, she serves as a board member for the EGP South African Project Portfolio.

As a membership body committed to the development of a thriving commercial wind power industry in South Africa, SAWEA acts in the interest of the South African public and seeks to improve the quality of life for all citizens, particularly those who have been systematically disadvantaged and those who have been impacted directly by the industry through its operational practices. Additionally, its mandate includes promoting wind energy as a

SAWEA APPOINTS NONTOKOZO NKOSI TO BOARD MEMBER POSITION

Enel Green Power (EGP) RSA is proud to announce the appointment of Nontokozi Nkosi, current Head of its South African Commercial Office, to the board of the South African Wind Energy Association (SAWEA) as a co-opted member.

viable, affordable and sustainable energy source to power South Africa forward.

"I am excited to take up the position of co-opted board member within SAWEA," says Nkosi. "I believe my current position within EGP RSA will allow me to drive the mandate of the association, and I regard it as a privilege to assist SAWEA in realising its vision."

Driven by passion and a thirst for knowledge

Nkosi's determination and commitment to boosting her education has ensured that she always puts her best foot forward in the complex and growing renewable energy sector. Her educational background includes EGP's School of Business Development course, a customised two-year program from Bocconi School of Management in Milan, Italy.

Nkosi holds a bachelor's degree in management leadership (strategic management) from the University of the Free State, a post-graduate diploma in business management at Regenesys Business School, and is currently pursuing an MBA.

Passionate about the potential of renewable energy in mitigating South Africa's economic, power, and unemployment challenges, Nkosi notes that the country's unique abundance of natural energy sources must be harnessed. She acknowledges that while the REIPPP programme was initiated nearly a decade ago, the balanced representation challenges

in the industry sectors remain.

Leading the transformational charge

"Being a part of SAWEA provides the ideal platform for changemakers to network and collaborate on a shared vision and play an instrumental role in driving and advocating for fair opportunities and the overall growth of the renewable energy sector," adds Nkosi.

She believes that associations like SAWEA and others must become the industry gatekeepers to drive people empowerment and create fair and open opportunities that will reach all South Africans while creating an attractive market for local and international investors.

"I envision a holistic and sustainable transformation in the industry that is inclusive of all South Africans irrespective of creed, race or gender, particularly female participation and empowerment. Women are game-changers in the renewable energy industry, and female participation should not be by chance but instead by design," she concludes.

William Price, Country Manager at EGP RSA echoes Nkosi's sentiments and adds: "At EGP RSA we are committed to fair representation and transformation. We are exceptionally proud of Nontokozi's achievements and believe that with her passion for the renewables industry and her alignment with the key objectives of SAWEA, there is no doubt that her contribution to the association will help take it, and herself, to even greater heights." ☺



“We understand the financial hardship that most of these smaller third-party waste collectors are experiencing and understand that the cost of disposing of this waste is becoming harder to afford.”

SUPPORT FOR SMALLER W-CAPE PLAYERS IN SAFELY MANAGING COVID-WASTE

While the third wave was in full swing, healthcare facilities and staff were having to manage growing quantities of hazardous medical waste in addition to their life-saving medical work.

While bigger health facilities generally have an end-to-end waste management system in place, it's the smaller health clinics or rural hospitals and their third-party waste collectors who are now under considerable strain.

“This has resulted in reports of this hazardous medical waste being illegally dumped in certain provinces,” says Justice Tootla, managing director of waste management company Averda.

He explains that if waste is not handled in the correct regulatory manner, it can pose health risks for local residents and of course the large community of waste pickers.

South Africa already has in place an established hazardous waste management system that's compliant with global standards and has had its competence tested by previous outbreaks of other viruses.

Tootla emphasises that even smaller facilities must ensure they safely manage hazardous medical waste, and that internal safe operating procedures need to be sufficiently up to date and applicable to the risk at hand.

The first step is that all medical waste generators must ensure that the waste is packaged in two legislated liners and a sealed box-set and stored in a safe space.

The second step lays with the third-party waste collectors. “We understand the financial hardship that most of these smaller third-party waste collectors are experiencing and understand that the cost of disposing of this waste is becoming harder to afford as many South Africans find it difficult to make

ends meet,” he adds. “This is why my team here in the Western Cape and George are prepared to offer preferential destruction rates for these third-party waste collectors. We are interested in making sure all benefit during this time of national need.”

Tootla points out that there are regulations in place when it comes to the disposing of medical waste:

- The collection, transportation, treatment, and disposal of HCRW may only be performed by an appropriate, qualified service provider. However, a health establishment must ensure that waste is safely stored until a health care waste management company collects the HCRW and that the company is aware and acknowledges that waste was generated by suspected or confirmed COVID-19 case.
- Waste must be transported directly to the treatment facility or duly authorized disposal site.

Averda treats this waste stream by incineration and electro-thermal deactivation sites around South Africa, its healthcare incinerator in Klerksdorp has the capacity to incinerate up to 28 tons of waste per day, more than twice that of other incineration facilities in the country.

The Western Cape site has more than 75% capacity at the moment to process hazardous healthcare waste, plus a fully established incinerator and operational plant located in George.

“In solidarity and in the interest of the public safety we all need to work closer together in ensure that we can curb this virus and help South Africa get back on its feet.” ☺



M&D's INFRASTRUCTURE AND PLANT DIVISIONS DEMONSTRATE THEIR METTLE AT ZONDEREINDE MINE

Murray & Dickson Construction Group (M&D), a leading diversified construction company, continues to build on a long and proud tradition of servicing the mining infrastructure market.



“The fact that we were again appointed by NPL to provide critical construction services validates our clients’ confidence in our abilities.”

Niekie Wagener,
Head of M&D's Infrastructure Division.



The stellar work that M&D is currently undertaking for Northam Platinum Limited (NPL), an independent, fully empowered, integrated platinum group metals (PGM) producer, is another sound example of the extent of the company's skills and experience supplying world-class construction services to the mining industry. Notably, this is the second project that M&D is undertaking at NPL's Zondereinde mine, an established, conventional, long-life operation which mines UG2 and Merensky ore.

“We consider this project to be the most important work that we have undertaken for NPL to date. It provides us with ample opportunity to demonstrate our core values of ‘being safe’, ‘doing it right’, ‘finding the best way’ and ‘doing what we say’. Our unwavering commitment to these core values has ensured that we retain our standing as one of the foremost suppliers of infrastructure solutions to the mining industry. The fact that we were again appointed by NPL to provide critical construction services validates our clients’ confidence in our abilities,” Niekie Wagener, Head of M&D's Infrastructure Division, says.

The success of any project starts at the tender stage. M&D secured this contract in an open tendering process while competing against other major

construction companies. Under the stewardship of Chris Porter, Group Commercial Director, the company's Estimating team compiled a very competitive bid that met all the tender requirements. The construction services, which included the strong team reserved for this project, were also competitively priced.

M&D's team on this project includes George Stoop, Contract Manager; Rassie Erasmus, Project manager; Marthinus Erasmus, Construction Manager; and Siyabonga Mtshali, Site Engineer. Certainly, the company's experience working with NPL at Zondereinde mine also provided a strategic competitive edge when bidding for the contract.

A significant component of the work scope entails the large earthworks associated with the construction of the platform for the development of Shaft 3. By the time that M&D has completed the project, the company will have moved almost 1 000 000 m³ of material.

This includes the 470 340 m³ of unsuitable material and 42 032 m² of topsoil that is being removed from the site terracing area. A total of 466 682 m³ of G7 and 31 410 m³ G5 material is also being imported for the construction of the terrace and the capping layer, respectively.

The professional team is working to

a tight deadline to avoid delaying the works programme of the shaft development team. Completing this project within the specified contractual period requires moving a fixed amount of material every day. Marthinus Erasmus provided invaluable advice by suggesting the deployment of larger haulage trucks and double-handling methods to further fast-track production. These combined with incentive schemes have helped to ensure that the team meets its daily targets. Moreover, daily planning meetings are held between team members to confirm that they are always aligned with M&D's core values, while also facilitating teamwork that is conducive to high levels of productivity and efficiency. There is also constant communication and planning between M&D and DRA, the engineer that is monitoring the construction works. DRA is represented on site by Werner Henning, Contract Manager, and Dries Taljaard, Construction Manager.

Relying on M&D's Plant Division

The Infrastructure Division is relying extensively on the skills and expertise of M&D's Plant Division. Led by Mark Drury, the Plant Division is ensuring that the various items of plant and equipment on this contract are adequately maintained and serviced within the constraints of a very demanding schedule to mitigate downtime. Certainly, credit also needs to be given to the company's many equipment suppliers for the quality technical support that they are supplying to the M&D team on this fast-track contract.

A total of 64 machines from the Plant Division's fleet were deployed to this construction site. They include 5 x articulated-dump trucks; 32 x 10 m³ and 9 x 15 m³ tipper trucks; 3 x 14 KL water trucks; 3 x 19 T rollers; 2 x bulldozers; 6 x excavators; 1 x loader; 2 x motor graders; and 1 x diesel bowser.

Drury and his team also worked with the Infrastructure Division to develop a cloud-based diesel management system that has been integrated with the site-based administration system on this project. It enables the team to monitor performance daily to maintain high levels of productivity. "Mark and his team have again performed with distinction. The strong support that we receive from his team to keep machines in tip-top condition has helped us to stay focused on delivering quality and safe construction services. These objectives are also in line with M&D's own ISO-

accredited quality management system," Wagener says.

Scope of work

As part of the work scope, the Infrastructure Division is also rerouting an existing main access road, as well as constructing a new shaft access road and internal roads on top of the platform. This is in addition to the 800 m³ of concrete work that the company is undertaking as part of the contract. It includes constructing the stormwater control dam and silt trap, as well as Armorflex-lined stormwater trench. The company has also been tasked with constructing 120 m of stormwater culverts and pipes for the various roads, as well as excavating the buried section of the new route for a Magalies Water line and constructing the plinths for the portion that runs above ground. M&D's scope of work also includes building the perimeter fencing and retaining walls that total about 1 790 m².

M&D made a solid start on this contract when it mobilised to site on 24 May 2021. The company had already optimised its processes and ensured compliance with mine and project specific requirements during its previous work constructing the access road to the smelter, two concrete bunkers, buildings and undertaking associated infrastructure work at Zondereinde mine. The Infrastructure Division was, therefore, able to again focus only on other critical factors, counting maintaining high levels of productivity and efficiency.

By September 2021, the company had already finalised 35% of the project and had received very favourable feedback from the client on its performance thus far. Wagener is confident that all work will be finalised by the contractual completion date of 29 April 2022. The project will peak in January 2022 by which time there will be about 150 M&D workers on site.

"M&D wants to be associated with successful clients and projects in the mining industry. This project provides us with an opportunity to do so. The mining industry is playing a critical role in salvaging South Africa's economy that has been ravaged by the COVID-19 pandemic. Surging demand and prices for commodities, including PGMs, have generated record mining-company profits and strengthened government revenue. Our Infrastructure Division, which is a leader in surface infrastructure for mines, is strategically positioned to benefit from this cycle," Rukesh Raghubir, CEO of M&D, concludes. ☺



CINTOCARE HOSPITAL IS A BENCHMARK IN SUSTAINABLE HEALTHCARE FACILITIES

Leading consulting engineering and infrastructure advisory firm Zutari provided design and construction supervision of the mechanical services, as well as environmentally-sustainable design (ESD) consulting, at the new Cintocare Hospital in Menlyn Maine, Pretoria. It is the first Green Star South Africa Custom Healthcare certified hospital in South Africa and on the African continent. “The brief from developer Growthpoint was that Cintocare must set a new benchmark for sustainable design, construction and operation of a healthcare facility,” comments Yovka Raytcheva-Schaap, Associate, ESD Consulting & Project Management.



In a collaborative effort between Growthpoint, A3 Architects and the professional team, a design was conceived that expresses the purpose of the building as a modern, hi-tech medical-care facility with sustainability features that are artistically and seamlessly integrated. Examples include the high-performance double-glazed façade, water-efficient greenery in and outside the building, high-efficiency LED lighting, extensive glazing connecting to the outdoor environment and ample natural daylight. All of these elements contribute to the positive experience of the staff, patients and visitors, notes Raytcheva-Schaap.

The medical requirements were directed by a highly-specialised team of surgeons, medical staff and technical managers from Cintocare, supported by national and international regulations and guidelines, as well as best practice. Interestingly, the hospital was never intended to have an emergency department, but rather to create a healthcare facility that would allow leading-edge procedures using the latest technology.

Commenting on the importance

of Zutari's ESD consultancy on this project, Raytcheva-Schaap explains that the main aim of healthcare facilities is patient treatment and recovery, which places a high demand on resources when compared to other buildings. “As responsible citizens, we recognise the major challenges of our times, some of which relate to public healthcare and climate change.”

The development of this facility was carefully considered along these lines. Decisions related to sustainability and occupant well-being were made intrinsically in response to these major challenges. While the unobstructed large window areas provide excellent views, these also increased the radiant heat load and glare. High-performance glazing was modelled in advance so that the most ideal glazing and screening could be selected.

Water is essential for the operation of a building of such nature. However, design interventions were introduced to optimise water use as much as possible. These include a 60 m³ storage tank for rain-harvested water used for toilet flushing and car washing, as well as water-efficient fittings in all staff, patient and public ablutions.

Any building requires shafts for vertical reticulation of services. However, this type of building, with its multitude of integrated critical services, including medical gas, machine data and hot water reticulation, called for 3D design and coordination in order to optimise the space utilisation in shafts.

Raytcheva-Schaap concludes: “This was a groundbreaking work for the entire project team. Hospitals and their associated building services are more complex in comparison to commercial buildings. There are life-critical systems that cannot be compromised. Given that, we had to plan and design carefully to achieve the necessary energy and water performance to meet the rating goals. It was a steep learning curve for the entire team. However, the project has been hugely rewarding and sets a sustainability standard for other healthcare facilities to follow.”

“This was groundbreaking work for the entire project team. Hospitals and their associated building services are more complex in comparison to commercial buildings.”



N7 UPGRADE SET TO BOOST SWARTLAND LOCAL ECONOMY

With an economic injection of R600m, the next phase of the N7 upgrade, from Rooidraai to Moorsburg, holds major economic benefits for the Swartland.

“The scope of work entails widening the cross section of the N7 section 8 (for approximately 25 km) and the construction of additional climbing lanes for improved road safety and ease of traffic flow,” said Petronella Theron, Project Manager for the South African National Roads Agency SOC Limited (SANRAL).

SANRAL had recently awarded this contract to Martin & East, and the process of site mobilisation commences in September. During this time, the contractor will structure works packages that will be subcontracted to SMMEs.

“In line with SANRAL’s Transformation Policy and government’s Preferential Procurement Regulation, a minimum of 30% of the contract value of all projects is to be subcontracted to targeted enterprises, in a bid to prioritise economic development opportunities for black-owned entities. These include women-owned businesses, youth-owned businesses and persons with disabilities,” explained Morné Windvogel, SANRAL’s Transformation Officer in the Western Region.

Furthermore, in the interest of transparency and fair business practices, all SANRAL projects are guided by a 14-point plan that sets the tone for project liaison, sub-contracting and labour sourcing, as well as a commitment to its transformation policy.

This plan also includes the appointment of a Project Liaison Committee (PLC) which has oversight over SANRAL projects – but does not influence who is awarded tenders or who get jobs on those projects.

“We are currently engaging with various

stakeholders in the region, including business chambers and sector formations, local government and other civil society interest groups, in a bid to attract nominations for PLC members, so that we can ensure a well-constituted PLC that will represent the interests of all stakeholders,” said Theminkosi Mosobela, SANRAL Stakeholder Coordinator in the Western Region.

This is an exciting project and comes at a time when the road construction industry is crying out for economic relief through infrastructure upgrades. “As part of SANRAL’s response to this call, and the development of the knowledge economy, training and development are prioritised on this project, to ensure that both the SMMEs and the local labour can benefit from new skills and knowledge that will empower them to tackle bigger projects down the line,” concluded Theron.

SANRAL initially started the upgrade of the N7 with the Melkbosstrand Interchange in 2012 and completed the Hopefield Interchange early 2020.

The following are some of key stats taken from the entire N7 upgrade to date. ☺

40,5 km	Length of dual-carriageway freeway constructed
69,2 km	Access and other roads constructed
46	Major concrete structures built and upgraded
8	Interchanges constructed
173 400 tons	Asphalt surfacing
162 700 m ²	Bituminous seals
R333m	Spent on targeted labour
R529m	Spent on targeted labour

CONNECTING VILLAGES IN HA-LAMBANI

Coreslab recently helped Tshidaho Construction Services bring an important bridge construction project in Limpopo back on track. When completed, this bridge will connect Lambani, located 53 km outside of Thohoyandou, with other villages in the deep rural Ha-Lambani area. They are separated from one another for extended periods every time the river bursts its bank and floods the gravel roads and a small culvert crossing that connects Lambani and the other villages. During periods of heavy rainfall, residents would often also have to rely on dangerous makeshift bridges for mobility.



The project is being undertaken on behalf of Thulamela Local Municipality and the construction works are being supervised by MCE Consulting Engineers. It is one of many road and bridge construction projects that the municipality will be undertaking in its jurisdiction to improve access for constituents.

Coreslab manufactured and installed the 39 precast-concrete bridge beams and 78 bearing pads for the project. The precast-concrete beams, each weighing about 4,8t, were installed in only three days to enable Tshidaho Construction Services to complete the construction of the remaining portion of the superstructure. This was after the principal contractor realigned the levels of the two piers based on Coreslab's surveys and advice.

"Coreslab is well represented in the province and is known for being able to deliver according to expectation, while also providing a cost-effective service. These are among some of the reasons that we chose to partner the company as our bridge-beam supplier on this project. Clifford Mogale and his team did not let us down and we will, therefore, not hesitate to use Coreslab's services on future bridge projects," Patrick Mudau, owner of Tshidaho Construction Services, says.

The bridge is 7,5 m high and 8 m wide and consists of three spans, two 11,6 m and one 12 m in length. As part of the project, Tshidaho Construction Services will also upgrade sections of the gravel roads

on either side of the bridge. This will include raising the levels of the approach roads so that they are aligned with the new bridge.

Mogale says that the project presented very few challenges. "We again made very light work of the installation, relying on our extensive experience manufacturing and installing precast-concrete bridge beams and culverts for many road builders over the years. This is combined with our state-of-the-art transportation and lifting equipment that facilitates working in remote areas. Of course, excellent team dynamics between Tshidaho Construction Services and Coreslab also contributed to a very successful outcome," he says.

Tshidaho Construction Services is a Construction Industry Development Board Level 7 civil-engineering contractor. The company has grown significantly since its inception in 2001, having undertaken many road, as well as bridge and culvert construction projects for municipalities.

Ahead of the project's completion at the end of August 2021, Mudau concludes that he is proud of his involvement in constructing the very first bridge in Ha-Lambani. "This infrastructure that has been highly anticipated by the communities in this area and I am glad that we have been able to deliver it, while also creating employment opportunities for about 90 people from poor areas during the construction. Many of them also acquired new skills that they will be able to use on future Thulamela Local Municipality projects in the area," he concludes. ☺



COROBRIK LAUNCHES NEW VIDEO SERIES TO SHOWCASE FEATURED PROJECTS

Leading clay face brick manufacturer Corobrik has launched a new video series entitled Corobrik Projects to highlight the many possibilities offered by face brick as a building material. The series features some of South Africa's top architects talking about a range of landmark projects.

Sol-Tech campus, Pretoria

Jeremie Malan, owner of Jeremie Malan Architects & Interiors, selected Corobrik's Redwood Travertine face brick from the Rosema factory for the Sol-Tech project. "The bonding in a face brick is very important, that's what gives it its structural stability." A variety of face brick bonds were used to give the building a three-dimensional quality, with patterns created by the shadows and openings. The Corobrik factory stepped in to provide the large numbers of bricks required.

The Onyx affordable rental accommodation, Jewel City, Johannesburg

When GASS Architecture Studios Associate Director Wandile Mntambo told Divercity Urban Property Fund CEO Jonathan Reader he wanted to make face brick 'sexy', the latter had no idea he meant hand-cutting Corobrik's Nala and Protea Travertine products to create a bespoke 'split-brick' façade for the Onyx building in

the Jewel City precinct. Corobrik assisted by cutting all of the bricks off-site. Needless to say, Jonathan was impressed by the final result.

South Point student residence, Johannesburg

Project Architect Sarah Kuiper from LYT Architecture had to ensure that the project at 56 Jorissen Street was efficient and robust. "Face brick is a very low-maintenance solution, which is ideal. It also offered us room to be playful, as using different brick bonds to introduce different pattern types gave us a real opportunity to explore the material."

Brooklyn House student residence, Pretoria

Project Lead for Phase 1, Cliff Gouws highlights that Boogertman + Partners is guided by architectural and social sustainability. "We had a very clear brief on the specifics of our materiality and finishes." Counter to the common idea that educational architecture has to be bright and colourful, Cliff tapped into the legacy of Harvard University to introduce classic elements such as brick arches. For the building envelope itself, Corobrik Black Brick Satin was combined with Titanium Satin face brick to continue this concept of a building that is both aspirational and formal. ☺



MAPEI offers a complete range of high-quality adhesives for ceramic, porcelain and stone materials. MAPEI stays up to date with growing trends and technology within the market, making it the ideal application solution.

The range includes:

- Polymer modified cementitious adhesives
- Deformable cementitious adhesives
- Fast-setting levelling compounds
- Reactive resin polyurethane and epoxy adhesives
- Water repellent cementitious grouts
- Water based epoxy grouts

Learn more at mapei.co.za
Tel: + 27 11 552 8476
Email: info@mapei.co.za

MAPEI
ADHESIVES - SEALANTS - CHEMICAL PRODUCTS FOR BUILDING





FUTURE UNCERTAIN AS CONSULTING ENGINEERS STAND READY TO SERVE

Finding solutions to momentous social, economic and environmental challenges in South Africa today demands – more than ever – the expertise of consulting engineers, but can the sector remain up to the task?



“Consulting firms like SRK also proactively nurture and mentor young engineers and scientists – both within our local offices and our global network.”

Vis Reddy,
Managing Director of
SRK Consulting (SA).

The question is a real one, according to Vis Reddy, Managing Director of SRK Consulting (SA), as Consulting Engineering stands at a vital inflection point leading either to progress or deterioration.

“Our sector has been pivotal to the country’s development on various levels, leveraging the specialised skills of many scientific and engineering professions,” said Reddy. “The position now, though, is that the demands on us are growing at the same time that the sector’s capacity could erode.”

Years of infrastructural decline in the country, for instance, have occurred alongside slow economic growth, social instability and policy uncertainty that has deterred foreign direct investment. This depressed situation has been exacerbated by the global COVID-19 pandemic. While dealing with these challenges, South Africa is facing the impacts of climate change – and is also under pressure to adapt to a lower-carbon future.

“The current demands of our economy and society are huge, if we are to achieve the equitable and prosperous future that we have all worked towards in recent decades,” he said. “In our modern world, the solutions include highly technical interventions which call for specialised and innovative skill-sets. This is really where consulting engineers play their

most significant role in facilitating the national development process.”

He highlighted the increasingly intricate work being done in fields such as infrastructural development, water management, energy generation, environmental protection and social engagement.

“The growing complexity of the world’s regulatory and ethical framework is demanding a more wide-ranging consideration of project requirements and risks in industry,” he said. “These dynamics have called for a new breed of engineers and scientists who recognise traditionally ‘non-engineering’ factors like environmental and social impacts, as well as health and safety. South Africa is no exception, and we have a growing awareness among clients that all projects require a focus of sustainability.”

Beyond their technical input, consulting engineers also help develop policy on which sustainable development can be pursued. SRK’s recent work within the Southern African Development Community (SADC), for instance, has included developing sector mainstreaming guidelines on disaster management. This important resource benefits fields as wide-ranging as agriculture, food security, gender, education, infrastructure, water and sanitation.

“Our current concern is that the

consulting engineering sector is struggling to retain the experience we have developed, and to continue building the skills we need,” said Reddy. “There are many practitioners in the market, but there is often insufficient experience.”

He notes that this problem expresses itself in the variable quality of work that is delivered, especially when companies and organisations issuing tenders are not equipped to judge which proposal presents the best long-term value for money for shareholders or taxpayers. Consulting engineers’ bid proposals are often adjudicated through price-focused procurement systems which pay little attention to the bidder’s experience or suitability. Further, in terms of contractor appointments, consulting engineers are today rarely involved in vetting the award of projects. This is counter-productive, as responsibility for additional support tends to fall on the consulting engineer when unsuitable contractors are awarded projects which they then struggle to complete.

“The under-valuing of consulting engineering input can be seen by the drop in the proportional value of our services within engineering projects,” he said. “An accepted norm is for consulting engineering services to make up around 7% of project value, but these days this as low as 2% in some projects.”

He emphasised that quality design and execution ensure a longer and more cost-effective life-cycle for engineering projects, giving the best return on a society’s investment in these works. This requires the focus of experienced scientists and engineers from multiple disciplines, integrating their insights into a sustainable solution. “We are starting to feel

the effects of losing that experience, due partly to the gap in the supply of engineers in the 35 to 50-year age range,” he said. “We no longer have enough people in this group, so we can expect to face a real crisis in less than a decade or so – when the current experts in our industry retire and there are too few in line to take their place.”

One of the factors behind this shortage is that not many graduate engineers are being developed within mining companies, municipalities and state-owned enterprises – which in the past was an important source of high-level professional experience. Also, many graduates who may previously have been attracted to engineering were now entering fields like information technology.

“On the positive side, many of our local universities still produce high-quality graduates,” he said. “Consulting firms like SRK also proactively nurture and mentor young engineers and scientists – both within our local offices and our global network.”

He concluded that government needs to play an important role in supporting the capability of the consulting engineering sector, by prioritising the employment of local engineers and scientists in government’s infrastructure and service delivery programmes.

“The members of Consulting Engineers South Africa (CESA) are qualified and professionally registered to accelerate infrastructure development,” said Reddy. “They also have the high ethical standards and integrity necessary to ensure that clients and the country at large receive the best value for money in their infrastructural and business investments.” ☺

THE ART OF CONCRETE

REFINED THROUGH THE DEVELOPMENT OF QUALITY AND RELIABLE
PRODUCTS THAT CONSISTENTLY DELIVER REQUIRED RESULTS

- Bonding Agents
- Chemical Anchors
- Concrete Bonding
- Concrete Crack Repairs
- Concrete Release Agents
- Concrete Repair Mortars
- Curing Compounds
- Epoxy Adhesives
- Epoxy Grout
- Joint Sealants
- Non Shrink Grouts
- Pre Cast Repairs
- Water Proofing



Producing world-class products for YOU since 1958!

- Tel: + 27 11 822 2320
- Fax: + 27 11 822 2354
- e-mail: cindy@ashak.co.za



ACQUISITION DELIVERS POWERFUL URBAN DESIGN PLATFORM INTO SOUTH AFRICA

Autodesk announced the completion of its acquisition of Oslo, Norway-based Spacemaker on 24 November, 2020, for USD240-m net of cash. This represents Autodesk's 13th investment in design and construction solutions providers in three years, including five acquisitions.

Spacemaker helps architects and urban designers maximise developers' long-term property investments and realise the full potential of the site by enabling them to quickly generate, optimise and iterate on design options taking into consideration design criteria and data like terrain, maps, wind, lighting, traffic, zoning, etc. Further, supporting the effort to combat climate change, Spacemaker offers designers and developers the ability to consider sustainability options from the start.

The acquisition of Spacemaker provides Autodesk with a powerful platform to drive modern, user-centric automation and accelerate outcome-based design capabilities for architects, and urban designers and planners.

Customers of Spacemaker have seen remarkable results, decreasing project costs and increasing the value of their developments:

- A large European developer saved a year on the planning phase of a residential development project.
- A large Nordic developer was able to increase density by 16% while improving the number of apartments with a sea view by 33%, which could be worth more than €8-m.

- A large architecture firm improved productivity by 50% in early-phase development projects.
- A large construction firm increased density on a site by about 4%, which added an extra 900 m² amounting to an extra €4,5m.

"I am proud to officially welcome the Spacemaker team to the Autodesk family," said Andrew Anagnost, CEO of Autodesk. "Now we get to the important work of developing the integration roadmap between Spacemaker and our existing design portfolio and introducing the Spacemaker team to our architecture customers worldwide."

"From the outset, Autodesk demonstrated great appreciation for Spacemaker's team, technology and vision, which made the decision to become a part of Autodesk a straight-

forward one," said Håvard Haukeland, CEO and co-founder of Spacemaker. "We appreciate those customers who embraced Spacemaker early on, and we look forward to not only deepening those relationships but to creating new partnerships with design teams around the world."

"Bouygues Immobilier is committed to being one of the most climate-conscious real estate development firms in the world requiring an ever-evolving exploration of digital tools to support the effort," said Pascal Minault, Chairman of Bouygues Immobilier. "Spacemaker is one such tool which allows us to design and build in a way which reflects our corporate values." WorldView is the value-added distributor of Autodesk in South Africa. ©

"Now we get to the important work of developing the integration roadmap between Spacemaker and our existing design portfolio and introducing the Spacemaker team to our architecture customers worldwide."

COMPLETED SPECIAL ROAD MAINTENANCE PROJECT WILL IMPROVE ROAD SAFETY

The R93m special maintenance project on the R75 from Wolwefontein to Jansenville Phase 2 in the Sarah Baartman District Municipality has been completed, according to the South African National Roads Agency SOC Limited (SANRAL).

Route R75 is one of the major National Roads within the Eastern Cape that links the coastline with its hinterland.

Twenty-two sub-contractors were engaged, and 300 local labourers worked on the project. The project was completed on 16 August 2021.

“SANRAL is committed to developing small, medium and micro enterprises (SMMEs) on road construction projects,” said Mbulelo Peterson, SANRAL Southern Region Regional Manager.

The scope of work included gravel



shoulder construction, in situ recycling sections with emulsion treated base and 10 mm Cape Seal to protect the recycled base. The pre-treatment included rejuvenator fog spray, 50/70 continuously graded base patches with BTB, 50/70 continuously medium graded surface patches, ETB edge break repairs and texture slurry.

Additional work on the project included the new concrete edge beams, subsoil drain cleaning and replacement, building new gabions, erecting new guardrails and fencing, 14 mm and 7 mm double seal, and retroreflective

road marking. “The upgraded road will reduce commuting time between destinations and there will be road safety improvement for motorists and pedestrians,” said Peterson.

In addition to the special maintenance work on the road, SANRAL implemented some community development projects. The work also included the repair and reseal of the road leading to the Jansenville hospital, the rehabilitation of a landfill site and the erection of a fence and signage to the dumpsite. ©

Find our branches at www.technicrete.co.za

FINISHING Touch

paving | mining | masonry | kerbs | erosion protection | retaining walls | drainage



PRODUCT LINE:

- Pre-bagged Concrete products (TechniMix, DryCrete)
- VentaBlock (interlocking blocks)
- Composite Packs (Conmixer, Blokpak Grout)
- Liquid Polymer (TSL, TSL-L)
- Rock support

APPLICATIONS:

- Sealing of dams, drains and sumps
- Sealing sensitive rock structures
- Support structures
- Abrasion resistant applications

Technicrete is a subsidiary of ISG, a leading supplier of innovative infrastructure products to the construction and mining markets in Southern Africa.



CMACS APPROVED



TECHNICRETE

HOT DIP GALVANISING VERSUS ZINC-RICH PAINT

Engineering and technical staff often get confused over the various terms bandied about in South African industry such as 'galvanized' or 'cold galvanizing' or 'zinc-rich paints'. So, what's the difference? By Simon Norton, International Zinc Association, Africa Desk



Zinc-rich paints contain sufficient quantities of metallic zinc dust to provide cathodic protection.

It is metallic zinc in hot dip galvanising that affords cathodic protection and barrier protection to galvanized steel. The extent of protection offered is directly proportional to the zinc coating thickness.

This is not so for zinc-rich paint, which consists of fine zinc powder dispersed in a dry film of paint resins. A further factor to be considered is the environment to which these coatings would be exposed. Paint coatings are notorious for having pinholes that allow the external environment to penetrate the coating, something hot dip galvanising avoids.

The key difference is that hot dip galvanising results in the zinc coating forming a metallurgical bond with the underlying steel, whereas zinc-rich paints (cold galvanizing) merely adhere to the steel surface. Each has its place in corrosion-protection applications.

Care should therefore be taken when selecting zinc-based coating systems for chemically-aggressive environments. Zinc, being an amphoteric metal, is attacked by both acids and alkalis. Zinc coatings should only be used in the pH range of 6 to 12. Zinc phosphate and zinc chromate containing paints do not provide cathodic protection as they are corrosion inhibitors rather than sacrificial coatings and provide protection by a totally different mechanism.

When considering zinc-rich paints, only those that contain sufficient quantities of metallic zinc dust provide cathodic protection. There must obviously be sufficient zinc particles present to ensure that they are in electrical contact with each other in order to provide a common anode. Individual isolated zinc particles dispersed in the paint binder or resin will not provide protection, as they would essentially be insulated from the steel substrate and each other.

On the other hand, if too much zinc dust is added to the paint, there may be insufficient binder available to glue these particles together, giving a weak coating with poor

adhesion and cohesion. In accordance with ISO 12944, all zinc-rich paints should contain a minimum of 80% zinc in the dry film in order to function as sacrificial primers. From the point of view of zinc content, hot dip galvanising is the ultimate zinc-rich primer. However, there are occasions where a zinc-rich paint is the answer.

Duplex coating systems (galvanized steel plus coating) provide synergy by virtue of the fact that the durability of the combined hot dip galvanized and organic coating system is greater than the sum of the separate durability of the hot dip galvanising and the coating layer. In some circumstances, such as with design restrictions, size of component, geographical location of the fabricator in relation to the galvanizer, or where hot dip galvanising is physically impractical or impossible, it may have to be substituted by either inorganic or organic (epoxy) zinc-rich paint.

Looking at the pros and cons of hot dip galvanising versus zinc-rich paints, one of the considerations is cost. The essential difference is that hot dip galvanising costs are calculated by the mass of the steel that is hot dip galvanized, while painting costs are based on the area painted. Tables are available for most steel sections giving surface area by mass. As a rule of thumb, the following can be used:

- Extra light steel: More than 40 m²/ton
- Light steel: 30 to 40 m²/ton
- Medium steel: 20 to 30 m²/ton
- Heavy steel: Less than 20 m²/ton

In the case of hot dip galvanizing, steel is subjected to a specific cleaning process, including degreasing, acid pickling and fluxing, with intermediate water rinsing, thereby creating a thoroughly clean surface, which is essential for hot dip galvanising to take place.

The resultant coating thickness is dependent on several factors, including chemical composition of the steel, steel thickness and surface roughness. In steel of thickness equal to or greater than 3 mm but less than 6 mm, the mean coating thickness is required to be at least 70 microns by SANS 121. However, on steel thickness greater than 6 mm, the coating must be 85 microns.

In the case of zinc-rich paint, the painter will abrasively blast clean the steel and then apply a suitable 75 micron thick (inorganic or organic) zinc-rich primer coat for a protective coating system at a cost based on the total area of steel painted.

It can be argued that the hot dip galvanized coating contains more zinc and will therefore last longer than the 75 micron paint (with 80% zinc in the dry film). On the other hand, the hot dip galvanising requires thorough cleaning before the primer or intermediate coat can be applied.

However, both methods of providing the required metallic zinc primer can be cost-effective, depending upon circumstances. It is for this reason that in recent years both options have been given in protective coating specifications, leaving the final decision whether to hot dip galvanize or paint up to market forces. Clearly, hot dip galvanized coatings and paint coatings complement each other in the protective coatings industry. ☺

CORRECT PROCEDURES CAN CONTROL CRAZING OF CONCRETE FLOORS

Unightly craze cracking of concrete floors – caused by the shrinkage of the cement paste on the surface – can generally be prevented by correct placement, curing and finishing, says Bryan Perrie, CEO of Cement & Concrete SA (CCSA).

Crazing, which appears as closely spaced surface hair cracks in both plastic as well as hardened concrete, is caused by shrinkage of the surface layer of cement. The cracks are usually no more than 3 mm deep and visible as the floor surface starts drying the day after placement or by the end of the first week.

Perrie says some of the factors affecting the crazing of concrete floors include:

- Correct protection of the concrete in the plastic state and timeous curing are essential because when the evaporation rate from the concrete surface is higher than the moisture gain from curing, crazing cracks will appear because

of low humidity, drying winds, or exposure to sunlight. Delayed curing will cause rapid drying of the surface and crazing. Curing with water much colder than the concrete will cause thermal shock and also lead to crazing.

- Alternating wetting and drying at early stages should be avoided. Continuous water sprinkling is an ideal method of curing to prevent the concrete from drying between applications of water.
- Over-using vibrating screeds and bull floats leads to the coarse aggregates settling at the bottom and drives the cement paste to the surface which is the main cause of crazing;
- Overworking and over-trowelling, especially when the surface is wet, is another negative factor. “Too wet a mix, excessive floating, the use of a tamper or other procedures which depress the coarse aggregate and produce high

concentrations of cement paste and fines at the surface, will result in crazing and cracking.”

- Crazing can also be caused by dusting dry cement onto the surface before trowelling. The cement will dry up bleed water and concentrate fines on the surface.
- Applying water to the surface during finishing operations is another contributory factor. Performing finishing operations with bleed water still on the surface, or using a steel trowel in a way that water and cement fines are brought to the surface, will end up in crazing.

Perrie says although crazed floors are unsightly and may collect dirt, they do not have serious consequences and repairs are seldom necessary unless accompanied by delamination of the surface. “Grinding the surfaces may be considered when the crazing is shallow and the quality of the concrete allows for grinding,” he adds. ☺



The advertisement features a large image of the Atlas Copco HiLight H6+ mobile lighting system, a yellow and black trailer-mounted unit with multiple high-intensity LED light heads. The background shows a sunset or sunrise sky over a construction site. A large blue diagonal graphic on the left contains the product name and key features. A table of specifications is located in the top left corner, and the Atlas Copco logo is in the top right.

HardHat® BODY	UP TO 40% LESS FUEL AND CO2 EMISSIONS	LIFE SPAN 50.000 hrs
-5dB(A) LOWER NOISE	40Min EVERY 600m	LIGHT COVERAGE 6.000m²

HiLight H6+
Built for tough environments

- Reduced noise levels
- Up to 6 000m² illumination coverage
- Life expectancy of 50 000 hours
- Innovative HardHat® body
- Low operational costs

www.atlascopco.com/en-za



PRODUCTS FOR UPMARKET HOTEL

a.b.e. Construction Chemicals supplied concrete fairing and repair products for the construction of the Five Green Star-rated Radisson RED Hotel in Oxford Parks precinct, now being developed in Rosebank, Johannesburg, by Intaprop with Concor as main contractor.

Rens Pelser, Technical Sales Consultant for a.b.e., part of the Chryso Southern Africa Group, says a.b.e.'s durarep FC fairing compound was applied by Concor to enhance the appearance of the finishes of all exposed concrete columns and the exposed, off-shutter concrete surfaces of the precinct's Radisson RED Hotel, with durarep FR fibre-reinforced mortar used to deal with concrete imperfections. The upmarket hotel, which opened in August 2021, has 222 rooms and features a wide variety of ultra-modern, high-tech amenities.

The two a.b.e. products were previously used for the construction of the BPSA head office and other buildings which formed part of an earlier phase of the multi-million rand Oxford Parks development in Oxford Road, between Eastwood and Rosebank roads in Rosebank.

"durarep FC is a single component, polymer-modified cementitious compound that provides a fair-faced finish to concrete and masonry, and can also close blowholes prior to the application of protective coatings. The compound only requires the addition of a minimal amount of water for mixing. It is easy to apply and requires no priming or curing to ensure excellent bonding to concrete and masonry structures. durarep FC also contains no chlorides and can be used for vertical and overhead applications,"

Pelser said. "durarep FR is a polymer-modified, cement-based mortar widely used to repair voids and honeycombed areas of concrete. The product, which is also chloride-free, provides high ultimate strength and has four to six times stronger resistance to abrasion than plain rendering. durarep FR does not shrink and is easy to apply and, as it is pre-blended, constant quality and performance are ensured," Pelser explained.

The vibrant mixed-use Oxford Parks precinct has become a focal point along Oxford Road in Rosebank and currently houses five buildings on a master basement structure. All the precinct buildings are constructed to be compliant with Green Star design requirements. "a.b.e. is likely to supply more concrete products for the rest of the construction of the Oxford Parks project," Pelser added.

Noteworthy South African building projects for which a.b.e.'s durarep products have already been used include:

- Impala Platinum cooling tower, Springs;
- Growthpoint Lakeside offices, Centurion;
- N17 Regents Park highway bridge, Johannesburg;
- Val de Vie River Bridge, Paarl;
- Norval Foundation premises, Steenberg; and
- Nuform office block, Margate. ☺

"durarep FR is a polymer-modified, cement-based mortar widely used to repair voids and honeycombed areas of concrete."

QUALITY CEMENT PAVES WAY BRIGHTER ECONOMIC FUTURE

By ensuring that a high quality of cement is used in infrastructure, South Africa is investing for a stronger future, according to Richard Tomes, Sales and Marketing Executive at construction materials leader AfriSam.

“With our history going back 87 years, AfriSam has sustained a significant focus on quality which today pays dividends in terms of the structures relied upon by our people and our economy,” says Tomes. “By putting the best quality materials, expertise and technology into our products, we pave the way to a brighter and more reliable future.”

The drive for quality is closely linked to being fit-for-purpose, he says, by ensuring that a range of cements is available for defined applications. In the housing sector, AfriSam has raised the bar with the quality of it.

All Purpose Cement so that it can be used for a number of purposes within this segment.

“Contractors and home owners want to rely on a cement that will last, so that problems like cracks in walls do not occur,” he says. “At the same time, there may not be a high level of expertise among some users in this market, exposing them to a potential risk if they choose the wrong cement for the task.”

Mixing concrete with a cement that has been developed only for plastering, for instance, could compromise the integrity of the structure. To avoid this risk altogether, AfriSam’s All Purpose Cement meets a high spec that allows it to be used for any home-building application.

“Road building is another application where quality cement brings many benefits that end-users seldom even see or think about,” he says. “AfriSam’s Roadstab is a specialised cement that allows contractors to create a strong foundation for longer road life, while also giving them delayed setting time to conduct the necessary mixing and compaction.”

By the same token, large structures

need a cement which will reduce the heat differential between the inside and outside of a large concrete mass so that cracking does not occur. Special cements to achieve this have allowed South Africans to build vital structures like dams and wind farms, vital to our economic development.

“As we start to experience the global challenges of climate change, it is not enough to focus just on the quality of cement products themselves,” says Tomes. “We need to innovate the process of how we manufacture these products, for a more sustainable future.”

He highlights that AfriSam’s commitment to both people and the planet have ensured that quality processes have reduced the company’s carbon emissions to well below the

“Contractors and home owners want to rely on a cement that will last, so that problems like cracks in walls do not occur.”

Richard Tomes,
Sales and Marketing Executive at construction materials leader AfriSam.

international average for cement producers. It has even contributed to water savings by developing cements that consume less water when mixed to produce concrete. ☺



Situated near the Putfontein offramp, the 210 m² Vlakfontein reservoir has a project value of R100M+.



ADMIXTURES SUPPORT WATER-SAVING BY CONTRACTORS

Responsible contractors have realised the growing strain on South Africa's scarce water resources, and CHRYSO is supporting their conservation efforts with its water-reducing admixtures for concrete.

A recent example of this was in the construction of the Vlakfontein Reservoir near Standerton in the province of Mpumalanga. This is probably one of the largest cylindrical post-tensioned concrete reservoirs in the world, with an inner diameter of 154 metres and a heavily reinforced 11,8 metre high wall.

According to Patrick Flannigan, technical manager : concrete business unit at CHRYSO Southern Africa, the project made use of several CHRYSO® admixtures to reduce water and improve workability.

"One of these is CHRYSO® Plast Omega 178 plasticiser which, when used in a concrete mix, permits a reduction in water content without affecting the consistency, also referred to as the workability," says Flannigan. "It can also increase the slump – or flow – without affecting the water content of the mix."

The Vlakfontein Reservoir has a ground water drainage system constructed with three layers of 5 MPa no-fines concrete. The 8 000 m³ of no-fines concrete comprises a 50 mm thick layer of 9,5 mm stone mix, followed by a 245 mm and 125 mm layer of 19 mm aggregate.

CHRYSO® Easydrain was introduced to these mixes to facilitate consistency and ensure the aggregate would bind mechanically and hydraulically to the cement paste. This specialised admixture fluidises the concrete, assists with a

homogenous mix and improves curing to reduce the chance of cracking. The bonded aggregates, once dried, will not loosen. An additional drainage layer of around 2 200 m³ of no-fines concrete will be poured around the reservoir.

Once the no-fines concrete was completed, a layer of 200 mm 35 MPa concrete was pumped in 13 pours of approximately 250 m³ each. This mix included CHRYSO® Serenis, a shrinkage reducing admixture. This, together with CHRYSO® Omega 178 superplasticiser, reduces water and assists with workability.

CHRYSO® CWA 10 crystalline waterproofing agent will provide integral waterproofing and reduce permeability in the concrete. The crystals prevent water penetration and protect the concrete against corrosive ground water and chemicals.

CHRYSO's water-reducing admixtures were also used in the Khutsong Reservoir near Carletonville in Gauteng. Due to the danger of sinkholes in this region, and the possibility of ground movement, the reservoir is the first to be constructed with a pre-tensioned concrete floor.

The scale of the work required 212 truckloads of concrete for the floor, successfully poured within a day.

The 1,267 m³ concrete floor used pumped mixes at 35 MPa at a thickness of 450 mm. In this demanding contract, the concrete mix included CHRYSO® ZA 1559, a new generation,

multi-dose water-reducing plasticiser. “This admixture allows a wide range of dosages to be applied, without any excessive retardation at the higher dosages,” he says. “The multi-dose characteristic of CHRYSO® ZA 1559 also gives concrete extended workability characteristics.”

Flannigan notes that it improves the cohesion and lowers the viscosity of a concrete mix. This results in an improved homogeneity and compaction, allowing for superior off-shutter finishes. With less need to add extra water, CHRYSO® ZA 1559 reduces the permeability of concrete, thereby improving its durability.

“The product may be used in mixes extended with limestone or commonly used supplementary cementing materials (SCMs) like ground granulated blast furnace slag (GGBS), fly ash and silica fume,” he says. “At the same time, it does not undermine the early age strength of concrete. In fact, in certain cases, it may be used to improve it.”

CHRYSO® ZA 1559 has applications in readymix concrete and mechanically mixed site concrete, as well as conventionally placed, pumped and highly reinforced concrete. It conforms to the requirements of SANS 50934-2 (EN 934-2) standards, which are approximate equivalents of ASTM C494 Type A.

Water evaporation was successfully controlled with CHRYSO® Profilm 19 evaporation reducer, while shrinkage of the reservoir floor was reduced using CHRYSO® Serenis shrinkage reducing agent. A minimum of 180 litres of water per m3 had to be used and fly ash was added as the heat of hydration had to be controlled due to the mass pour. The end strength did not exceed 45 MPa.Ⓢ



Evaporation was controlled using CHRYSO Profilm 19 evaporation reducer at the Khutsong reservoir project.

CHRYSO® EasyDrain

Eliminates the constraints related to transporting and placing pervious concrete, whilst improving performance

- Cost Effective - Full truck loads and improved concrete mix design
- Easy to Place - More fluid and homogeneous concrete
- More Efficient - Extended workability
- More Durable - Less risk of cracking and aggregate raveling

Gauteng (Head Office): 26 Malcolm Moodie, Crescent, Jet Park T: +27(0)11 395 9700 | W: za.chryso.com

CHRYSO

INNOVATION IS OUR CHEMISTRY

NEW PRODUCT RANGE

Structa Technology, South Africa's leading Structural Steel Water Storage Tank fabricator announces new product range developed

Says Rodney Cory, Director Prestank Structa Technology: "We are indeed proud to have developed a new economical range of water storage solutions, and we are looking forward to be of better service to all companies and municipalities who need such solutions. Our company, Structa Technology, prides itself on being one of our country's best producers of water storage solutions. We manufacture Pressed Steel Water Storage Tanks known as Prestanks as well as our patented Round Water Storage Tank known as The Roddy Tank and have now added the newly developed Circotank range. Our water storage solutions therefore offer our water utilities and municipalities three durable, cost effective water storage products spanning a range from 500ℓ to 1,5 mℓ.

Structa Technology is geared up to assist our government with its water infrastructure and maintenance programme. Due to Structa's drive and continuous commitment to technological advancements the company is able to offer the Municipality more cost effective and durable solutions for water storage."

The Roddy

The Roddy Tank is a welded Sectional Round Galvanized water storage tank that offers the following capacities:

3 900ℓ; 7 200ℓ and 10 000ℓ, specially made where low volume, extra durability and robustness is required

The Roddy tank has found application in rural water storage, domestic water storage, industrial water storage as well as agricultural water storage. Its longevity last up to 40 years (Hot Dip Galvanized according to SANS 121, ISO1461), is easily transported, erected and requires minimal maintenance.

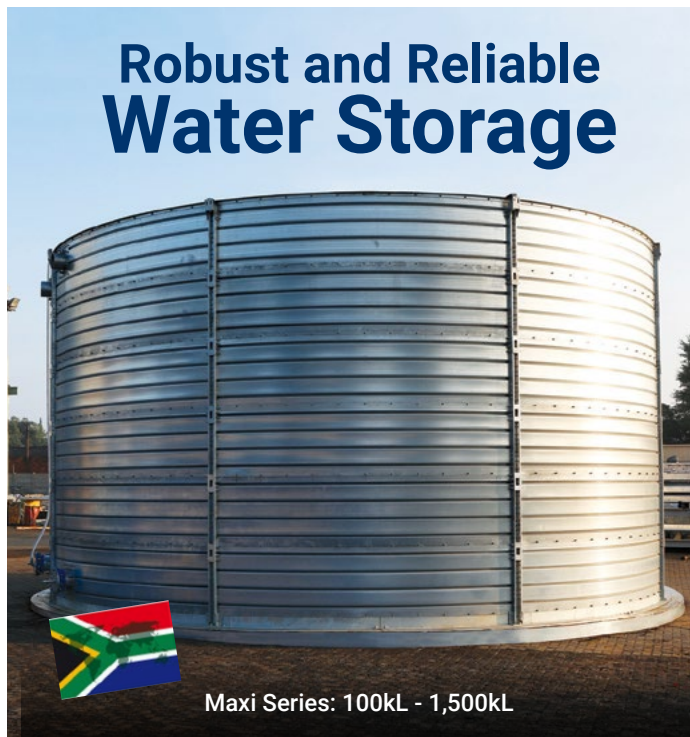
Circotank

Structa Technology has now developed an even more economical but robust round galvanized steel tank range.

The range, branded as Circotank, is manufactured from galvanized steel sheet cold rolled with a stiffening profile. A zincal version is currently being tested for application in corrosive areas. The tanks utilise a PVC liner which hugely improves the speed and quality of build, resulting in a reliable product. Liner replacement is possible thus resulting in ease of maintenance and longevity.

Circotank is offered in two size ranges, being a Maxi-range covering tank sizes of 100 000ℓ up to 1,5 m and a Midi range covering a very user-friendly range of 5 000 – 20 000ℓ.

The Maxi-range is aimed at large scale water storage projects, with typical application in industrial water storage



Maxi Series: 100kL - 1,500kL



Midi Series:

5,000L - 20,000L



ADVANTAGES

- Highly economical cost to volume ratio
- Easily transportable, especially for multiple tanks
- Easy assembly, even at elevated heights
- **NO CRANES REQUIRED**
- Robust steel tank with high life expectancy
- Replaceable liner allows for extended life

SABS
ISO 9001

Manufactured by
Structa Technology
(Pty) Ltd
BBBEE Level 1

STRUCTA
technology

CIRCOTANK

MEYERTON | Tel: 016 362 9100

watertanks1@structatech.co.za

Director: rodney@structatech.co.za | 082 575 2275

www.structatech.co.za | www.circotank.co.za

Manufactured in SOUTH AFRICA

such as fire tanks and mass rural water supply schemes. The tanks are transported in pre-rolled segments, thus allowing for compact transport and easy off-loading. They are erected on concrete ring beam foundations and require reasonably simple earthworks before erection. Erection is done with a strake lifting system that requires no craneage. This all adds up to a very economical total cost per cubic metre water storage. Structa has well trained teams available to install the Maxi range.

The Midi-range fills a gap not covered by typical moulded plastic tanks and would find good application where users need storage between 5 000 and 20 000ℓ, often on stands to provide distribution pressure. Structa is particularly excited about this size range as it would find excellent application in schools, clinics and small rural water storage. These tanks are transported in segments and can be assembled on top of stands if required. This eliminates usage of cranes in difficult rural applications. Structa supplies package systems of tanks and stands, ready for assembly, even by the user.

Prestank

Structa's 40-year-old flagship brand namely Prestank has over the years proven itself as a hygienically safe, cost effective and reliable way to store water for communities, commercial sectors, private sectors and even for personalized storage. Structa's Prestank Water Storage Tank is the ideal water storage solution for volumes from 10 000ℓ and above especially on elevated stands.

Prestank may be used for various water storage applications from temporary or permanent installations

at mines, power stations, building sites, hospitals, water affairs, municipalities, rural communities and agriculture. The Structa Prestanks are fully customizable, high quality water storage solutions that are manufactured according to SANS guidelines and meet South African Hot Dipped Galvanizing requirements. A major advantage of the sectional tank design is that it facilitates easier handling and transportation over long distances to remote areas, regardless of the final dimensions of the assembled unit.

Minimum maintenance is required because the galvanized steel panels resist weathering from the elements, while maintaining the integrity of the water within. The Prestank, Circotank and Roddy Tank adhere to the following design codes: SANS 10160 for structural loading and SANS 10162 for structural steel design.

"With our extended product range we can now supply our customer base with a comprehensive set of products from which to choose the most economical and practical solution to suit their requirements," concludes Cory. ☺


Structa Technology (www.structatechnology.co.za) is a member of The Structa Group of companies (www.structa.co.za) and has successfully manufactured steel engineering products for infrastructure projects since 2002.

The subsidiaries in the group prides itself on excellent:

- Manufacturing standards,
- Quality, health and safety standards
- State of the art machines
- Highly Skilled and dedicated workforce
- Innovative design

sustainable & long term WATER STORAGE SOLUTIONS



Pressed Steel Sectional Water Tanks





Prestank tank capacities range from **1 500 litres to 4.2 million litres** designed to SANS 10329:2004 guidelines and SANS structural codes. Our **Hot Dipped Galvanising** units are **easily transported** and **assembled** on even the most remote sites.

Specialists in the manufacturing of domestic and industrial water storage.

Structa Technology is a Level 1 BBBEE Contributor, and is part of the STRUCTA GROUP of Companies

MEYERTON | watertanks1@structatech.co.za
Director: Rodney Cory
rodney@structatech.co.za | 082 575 2275



Manufactured in SOUTH AFRICA

+27 (0)16 362 9100
www.prestank.co.za



“We thus have evidence that South Africa is not only warming, but that records are being broken more frequently than one would expect.”

Charlotte McBride
of the South African Weather
Service.

Charlotte McBride of the South African Weather Service had her paper ‘Trends in probabilities of temperature records in the non-stationary climate of South Africa’, published in the prestigious *International Journal of Climatology*. The paper was co-authored by her supervisor, Andries Kruger of the South African Weather Service, and co-supervisor, Professor Liesl Dyson, Associate Professor of Meteorology at UP.

Her research supports the sixth assessment report from the Intergovernmental Panel on Climate Change (IPCC), published recently, which indicates that the climate outlook for Africa looks bleak in terms of the increasingly high probability of extreme maximum temperatures and heatwaves projected to occur in the 21st century.

“I investigated record-breaking temperature events over South Africa by using weather station data from 25 stations across the country,” McBride explains. “Daily temperature data for the period 1951 to 2019 was used.” The

SA BREAKING MORE TEMPERATURE RECORDS

A study by a PhD student at the University of Pretoria’s (UP) Department of Geography, Geoinformatics and Meteorology reveals that South Africa is experiencing more maximum temperature records than expected and that this trend seems to be accelerating.

analyses showed that significantly more records were broken than one would expect to occur over a particular time period. Also, in the most recent decade, it was evident that the measured number of maximum temperature records became progressively greater compared to the expected number.

“We thus have evidence that South Africa is not only warming, but that records are being broken more frequently than one would expect,” McBride says. “This implies that our climate is becoming more extreme. My research shows that most stations broke more highest daily maximum records than what is expected in a climate that isn’t under the influence of climate change.”

Even when this influence was taken into account, there were certain stations that still broke many more high-temperature records. “For example, Pretoria was expected to break an annual average of nine maximum temperature records per year over the past 10 years of the study when taking into account the warming taking place at that station,” McBride explains. “However, it broke on average 15 records per year. While future warming is dependent on the amount of future greenhouse-gas emissions, we have already committed our atmosphere to substantial warming in the near to medium term. Therefore, it is necessary that climate-sensitive sectors of society prepare themselves for an ever-increasing occurrence of unprecedented record high temperatures, more frequently than one would usually expect.”

She adds that warming is accelerating in South Africa, which means that high-temperature records are likely to be broken at a higher-than-expected rate. “This is of concern as higher temperatures can affect crop yields and contribute to the spread of pests and pathogens. From a human health point of view, high temperatures

can cause heat-related illnesses, which put certain sectors of the population such as the elderly, very young and people with certain pre-existing medical conditions at risk.”

This research is in support of other research which is indicating that South Africa will become hotter in the future. “There is a real need to address climate change and for governments and the public to play their part in reducing their carbon footprint,” McBride cautions. “This will include making use of renewable energy sources, saving water, recycling, eating less meat, supporting locally grown produce and supporting tree planting initiatives. For those wanting to reduce their carbon footprint, there are many websites that assist all spheres of society in doing their bit.”

McBride’s research recommends that policymakers, government departments, non-profit organisations, disaster managers, farmers and developers of infrastructure need to understand the consequences and risks of the increased frequency of record-breaking temperature events so that their response strategies are more meaningful. “Farmers might need to review the types of crops or crop varieties they plant to ensure that they are more suited to a warmer climate. Town planners and the construction industry will need to take the warming into account when they plan and construct infrastructure. Health services need to be in a position to respond to increased cases of heat-related illnesses.”

This also means that investment and funding need to be more focused on creating adaptive capacity rather than just responding to disasters, she adds. “More thought is needed around how to prepare for climate extremes such as the breaking of high-temperature records rather than waiting for them to occur, then trying to address the consequences.” ©

Moved to BIGGER premises



Safety is our nature

PROTECTION SYSTEMS

Rockfall barriers

Rock slope stabilization

MADE FROM HIGH-TENSILE

Rockfall drape

Soil slope stabilization

STEELWIRE.

Shallow landslide barriers

Debris flow barriers



Your local Geobrigg specialist:
www.geobrigg.com/contacts

Geobrigg Southern Africa (Pty) Ltd
Stand 660 | Lanseria Corporate Estate
c/o Amelia and Electron Lane | Lanseria | 1739 | South Africa
Land Line: +27 11 794-3248
Cell SA: +27 83 772 5564

A company of the BRUGG Group
ISO 9001 certified

JOHN DEERE: UNEARTHING VALUE

In March John Deere announced the expansion of its construction line-up to 18 countries in Southern and Western Africa. In addition to the John Deere machines, customers in these markets have access to product support through the world-renowned John Deere dealer network. Construction World spoke to Lafras Cronjé, Branch Customer and Product Support Manager and Glenys Millingham, Manager Aftermarket Sales, Africa and Middle East about the John Deere aftermarket and customer support offering.

Millingham emphasises how crucial an excellent aftermarket regime is. “It determines machine uptime and in the construction industry it is a vital and non-negotiable element of our offering.”

Cronjé explains further: “John Deere is an international brand for which aftermarket and customer support has always been one of our foundational pillars. After our smart industrial re-design, two aspects – ‘technology’ and ‘aftermarket and customer support’, are crucial. They allow us to have connected machines so that we can be as proactive as possible.

“Our channel gives us our highly unique selling point – its size, capacity, professional nature, skills and technical depth are unprecedented. It ensures that each customer, regardless of where they are or what they buy gets the best possible service,” says Cronjé.

The ‘One Deere strategy’

Each piece of John Deere construction equipment is supported by highly trained and certified technicians who are in turn supported by a network of distribution centres – the main regional distribution centre (RDC) being close to O.R. Tambo International.

“In South Africa we have 30 branches. Each of these dealers have made enhancements to their business models to serve construction and forestry (C&F),” says Millingham. “It is all about our ‘One Deere-strategy’. This means that we have construction and the agriculture businesses represented by one dealer. These dealers have been in South Africa for many years, taking care of the agriculture industry. John Deere has an integrated network so that we can leverage our existing dealers, our current staff, and infrastructure but now with a separate focus on the C&F business,” she explains.

“Before we introduced C&F, we found that at least 60% of the parts for John Deere construction equipment are common with John Deere agriculture machines.”

JDLink™ device enables connected support

“What also makes the John Deere’s brand so unique is that we actively monitor customer satisfaction – not only on the product that is bought, but on the aftermarket and support capabilities,” says Cronjé.

“Our connected support starts with JDLink™ – this is the trigger point. It is a hardware device that is attached to a machine that sends expert alerts to customers’ mobile and the dealership. Our technician can proactively go to site and before having a breakdown, stop the machine and

repair it. This saves time and money. That is where the connected support comes in,” Cronjé elaborates.

Highly trained and experienced technicians

“Having enough trained technicians, being proactive and having parts availability, is what guarantees uptime,” says Cronjé. “In South Africa there are just over 300 technicians. There is one vehicle per technician for work that must happen on site,” he explains. “Because of the size of some construction machines, the servicing or work will often happen on site. As construction machines is a specialised field, John Deere has dedicated C&F technicians.”

Cronjé says that training for the C&F technicians is a keystone qualification that is required prior to achieving the status of a qualified construction technician.

“John Deere has been geared up to serve the agricultural market for many years and therefore has no problem with availability. We make use of RSL (recommended stock list) that lists the typical parts that should preferably be stocked,” says Millingham.

Warranties

“Warranties for C&F machines are – to a large extent – unique when compared to that for agriculture machines,” explains Cronjé. “There are standard warranties, but a customer can also purchase extended warranties on the portion where they need to extend the warranty. We want to provide a distinctive experience over the lifecycle of the product and also support the customer for the duration of this cycle.”

Be proactive with a free inspection

John Deere is currently offering a special whereby customers can get a free inspection and discount on parts for construction equipment.

“The focus is on our installed base machines. We offer our customers a free inspection by our dealer network which qualifies them for a 16% discount on part purchases,” says Millingham. “We have extended this till 30 November 2021 and urge customers to make use of this opportunity.”

“This,” says Cronjé, “will contribute to uptime. We have seen this in agriculture over many years: customers make one machine at a time available for proactive inspections and that significantly reduces downtime. This will lead to proactively servicing the machine, getting it in the best possible condition and then putting it back into the field,” Cronjé concludes. ☺

Extended to 30 Nov



JOHN DEERE

We know how to unearth value **GET 16% OFF**

Get a **FREE** inspection and **discount** on parts for your construction equipment that says 'Deere' under the hood.



Believe in greater

Contact your dealer to find out which of your construction equipment qualifies.
Participating Dealers: AFGRI, Mascor, Senwes. SA Only

*Terms and conditions apply (available at www.deere.com/sub-saharan)
www.deere.com/sub-saharan | africa@johndeere.com | Client Service: 0800 983 821

JohnDeereAfrica     JohnDeere 

ADVANCE EMPOWERED RISK MANAGEMENT OFFERS SOLUTIONS TO ENHANCE WORKPLACE SAFETY

As companies across the world continually strive to create safer working environments, now, more than ever, a renewed focus is placed on the health and safety of human capital and the enhancement of Safety, Health, Environment and Quality (SHEQ) cultures and management systems.

Advance Empowered Risk Management (AERM) is a trusted institution with 18 years' experience in establishing a measurable and sustainable culture of health, safety, environment, risk and quality for clients through tailored risk management solutions and training.

According to Espee Hattingh, General Manager Expert Solutions and Consulting, AERM's customer centric and practical approach entrenches the company as a long term partner in organisations. Our solutions embed safety cultures, from legislated requirements to behavioural compliance – from all different levels within the business structure.

"We believe that SHEQ wellbeing begins with people", says Hattingh. "Our aim is to support our clients through establishing a sustainable culture and increasing their skills and practical training profile, whilst reducing liability and protecting human capital."

"While organisations focus on their core business, our team of experts will assist clients with the design, development and implementation of all SHEQ management solutions."

"We are leaders in the field of SHEQ risk management across a range of industries including mining, construction, government and private; we also believe that driving responsibility and awareness from management levels downwards motivates a culture of risk reduction," says Herman Roets, General Manager SHEQ Solutions, Mining and Related.

"Proper safety training and safety measures are pivotal to protect workers from dangerous injuries, loss of productivity and downtime," he adds. "We focus on cultivating a day-to-day safety awareness among all employees in their diverse environments that is easy to understand and easy to sustain".

When your risks are not kept in check, it can greatly affect your employees, the environment, the local community and also your bottom line.

AERM believes that SHEQ is not a luxury, but an imperative in an evolving business landscape and is assisting companies across the board to safeguard their employees and their business while increasing productivity and creating value. ☺



Espee Hattingh, General Manager – Expert Solutions and Consulting.



Herman Roets, General Manager – SHEQ Solutions, Mining and Related.

DISCOVER COMFORT, DURABILITY & RELIABLE PROTECTION WITH WAYNE'S SUPERIOR QUALITY GUMBOOTS

Wayne Safety has been Africa's gumboot specialist for over 80 years. Since 1940, no other manufacturer has supplied more industrial and safety gumboots into the African market.

Wayne Safety started manufacturing gumboots 80 years ago, with Wayne Rubber producing rubber gumboots in KZN. This began a long tradition of manufacturing superior quality gumboots and serving workers right at the heart of industry. Today, Wayne is one of the foremost PVC and PU gumboot manufacturers in Africa.

Since 1940, it has focused on what it does best – gumboots, and gumboots alone – allowing it to emerge as specialists in its field and pioneers in both innovation and quality.

Its range of superior quality gumboots has been specifically designed to withstand the various hazards you face in the construction industry, delivering the best in protection, comfort and durability. With lightweight comfort, maximum slip resistance and resistance to oils, fats and chemicals and more, you can trust that your boots will give you unrivalled protection in harsh conditions.

Its Ecoli boots have been trusted by those working in dangerous industries for decades. The new and improved Ecoli 2 features PVC uppers for optimum flexibility and abrasion resistance, nitrile PVC soles for durability and protection, and a cleated sole design for SRA level slip resistance.

Over the years, it has worked on reducing its carbon footprint in line with its objective of sustainability, and today it produces 35% of all its gumboots from recycled materials. Its Duralight 1 is well-recognised in agricultural sectors and incorporates a mix of virgin and recycled PVC that results in a superior, yet cost-effective, recycled

gumboot upon which its customers can trust and rely.

The Wayne range of PU gumboots offers a variety of enhanced features and benefits, with a longer lifespan, a lightweight, comfortable feel, and maximum resistance, flexibility and strength. A unique tread-groove and depth gives our PU boots the highest possible SRC slip resistance rating. Optimum hygiene is ensured through the boot's moisture wicking functionality, and anti-microbial and anti-fungal treatment; and a lightweight composition paired with a unique footbed results in all-day comfort.

Trust in Wayne, Africa's gumboot specialist for 80 years and counting, and get gumboots that have been designed to give you the best in protection, durability and comfort from Wayne today. ☺



SISI SAFETY WEAR LAUNCHES FIRST LOCALLY MANUFACTURED METAGUARD SAFETY FOOTWEAR FOR WOMEN

Over the years, women have been making up a greater proportion of the workforce, and this includes sectors that have typically been male-dominated such as mining, manufacturing and construction. However, there are still limited offerings in specialised female safety footwear within these sectors.

"This is why Sisi Safety Wear is pleased to launch the Basi Metaguard boot, the first locally produced metaguard safety boot for women. The metaguard protector is primarily designed to protect the bridge of the foot from falling rocks and other hazards prominent in the mining industries. There is a serious lack of technical safety offerings for women, with many companies still issuing their female staff safety

wear designed for males," says Predahni Naidoo, Brand Manager of Sisi Safety Wear. "With the growing number of women entering the mining sector specifically, it was important to develop a solution for women against these types of hazards that can also occur in other industries," she continues.

The Basi Metaguard dual density boot offers an SRC slip resistance rating, anti-static properties and steel toe cap that is SANS/ISO 20345 certified. Sisi Safety Wear is invested in providing solutions for women entering more hazardous workplaces with durable and reliable offerings. Women deserve both safety and comfort in the workplace. With locally manufactured, women-specific safety wear ranges readily available, there is little excuse for organisations to not cater to the needs of their female workforce. ☺



NORILSK NICKEL BUYS FIVE NEW BOBCAT ROTARY TELEHANDLERS

The new TR50.210 rotary telehandlers are the first in Russia.

MMC Norilsk Nickel, one of the leaders in the Russian mining industry, has purchased five new Bobcat TR50.210 rotary telehandlers and related attachments from the Bobcat Authorised Dealer in Russia, NAK Machinery. These are first of the new range of Bobcat rotary telehandlers to be purchased in Russia and the biggest order since their launch in December last year.

A new solution born out of a strong ongoing relationship

In 2021, MMC Norilsk Nickel finished the reconstruction of its warehouse complex in Norilsk, a city in Krasnoyarsk Krai, located above the Arctic Circle. This project was part of a long-term modernization of the Unified Warehouse Facility (UWF) run by the company. This facility supplies material and technical resources to all the production departments of the Polar Division, subsidiaries and third-party organizations of the Norilsk Industrial District.

One of the main elements of the modernization was the renovation of the equipment fleet, including the telehandlers. New machines were needed to improve the speed and quality of cargo handling. Given the extreme climatic conditions in the region beyond the Arctic Circle, the company needed reliable special equipment capable of working in any situation, even when the average winter temperature is around -30 °C.

Specialists at MMC Norilsk Nickel have been working with Bobcat products for a long time and have first-hand experience with the durability of these machines. This fact



together with the long-term relationship with Krasnogorsk-based NAK Machinery, the largest Authorised Bobcat Dealer in Russia, predetermined the choice of the Bobcat new TR50.210 model. These rotary telehandlers, launched in December 2020, are unique in the Russian market. MMC Norilsk Nickel also purchased a range of attachments for the new machines, including light material buckets, pallet forks and a crane jib.

"The delivery of the new Bobcat TR50.210 machines is

THE FIRST LIEBHERR R 936 COMPACT CRAWLER EXCAVATOR ON CORSICA

The Lanfranchi company performs earthworks and rock filling work in the Porto-Vecchio region on the island of Corsica, as well as work on traffic routes and various pipeline networks. The company was looking for an excavator with a weight of approximately 35 tonnes so that it could also handle more complex projects. It was to be versatile, easy to handle in confined spaces and comfortable for the operator.

The Liebherr branch in Rognac near Marseilles offered the company a type R 936 Compact crawler excavator. This excavator, with a weight of approximately 35 tonnes, rounds off the Liebherr range of compact excavators from 14 to 38 tonnes. A range of working equipment is available to make it even more versatile. The structural design of this machine facilitates safe working, even in cramped conditions.

Thomas Lanfranchi, CEO of Lanfranchi, values the reliability of Liebherr machines as well as the new generation of Stage V engines with their lower exhaust emissions.

The compact excavator – powerful and manoeuvrable

Lanfranchi has chosen the R 936 Compact to expand its machinery fleet. A Liebherr R 914 Compact crawler excavator had already been part of the fleet. Lanfranchi is extremely satisfied with the reliability, the comfort of the cab and the fast service provided by Liebherr's customer service department. The new machine is now able to take on more demanding tasks such as backfilling embankments or lifting heavy loads.

The new 190 kW/258 hp engine with exhaust Stage V boasts lower fuel consumption than the previous generation of the R 914 compact excavator with exhaust Stage IV. The dozer blade as well as the Likufix hydraulic coupling system in combination with the quick tool change system turn the excavator into a versatile machine. The technical

a first for our company in rotary telehandlers, but we are confident that the customer will appreciate this new line, and we will receive new orders for such equipment in the future," said Andrey Gerasimov, Bobcat Brand Manager at NAK Machinery.

Growing market for rotary telehandlers

Evgeny Supletsov, Country Manager for Russia & CIS for Bobcat said: "In the EMEA region, the concept of rotary telehandlers is gaining popularity and in the last five years showed strong growth from 1035 units in 2015 to 1809 units in 2020. In fact, about 85% of all global sales of these machines came from EMEA, and that is why Bobcat has brought new models of this class to the market.

"We are delighted that our long-time partner MMC Norilsk Nickel became one of the first customers for these new machines. This demonstrates a high level of confidence in Bobcat's special equipment, and we are sure that the quality of our machines will meet the harsh conditions in which they will have to work."

Challenging logistics through northern sea route

Thanks to the close cooperation between Norilsk Nickel and NAK Machinery, the companies were able to successfully coordinate the complicated process of delivering the new equipment. Norilsk is not connected to the mainland by roads, so the machines could only be delivered by the Northern Sea Route.

In the first part of the journey, the telehandlers were transported by trailers to the seaport of Murmansk, and then went by sea to the port of Dudinka, from where they finally reached their destination on trailers again. In spite of such a difficult and long route, the delivery went according to plan and without any delays.

A new multifunctional recruit

Bobcat rotary telehandlers have a number of features that

make them versatile and suitable for a variety of industries and applications. The possibility to rotate the platform through 360° allows the operator to move a load anywhere within the reach of the boom without having to change the machine's position. This is ideal in densely built-up cities or in warehouses, where manoeuvring space is limited. Versatility is also offered by the wide range of Bobcat attachments for the rotary telehandlers, which allow the customer to optimize machines for different tasks.

The Bobcat TR50.210 is the middle model in the new range of rotary telehandlers, designed specifically for the Russian and CIS markets, but also for use in Europe, the Middle East and Africa. The lift capacity of the TR50.210 is 5 tonne and it can lift loads up to a height of 21 m.

Features of the machine

Like all the new rotary telehandlers, the Bobcat TR50.210 is highly automated, which simplifies the work of the operator, as well as enhancing the reliability of the machine and increasing safety on site. For example, the 134 HP engine can automatically adjust its speed depending on the load, and the rear axle is equipped with automatic hydraulic locking.

The cab is also fitted with a wide range of features designed to increase comfort and therefore productivity. For example, its patented design includes an overpressure and full-flow air filtration system, as well as air conditioning, which allows the operator to work in difficult weather and environmental conditions. The machine's fully glazed cab is offset to the side, giving the operator superior visibility. At the same time, a large touchscreen display, intuitive controls, certified ROPS/FOPS protection systems, an adjustable steering column and a comfortable, fully adjustable seat make operating the machine easy and safe.

Thanks to RFID technology, the loader automatically recognizes attachments while loading and displaying a chart of the load characteristics. This allows the machine to be ready to work almost immediately, and the displayed diagram helps the operator to keep track of the load's centre of gravity. ☺

performance of the excavator has been optimised to achieve an even greater load capacity. The compact design of the top carriage, in combination with the assistance systems based on cameras, facilitates excellent handling and ensures enhanced safety even in confined spaces.

Gentle motion sequences ensure a high level of operator comfort

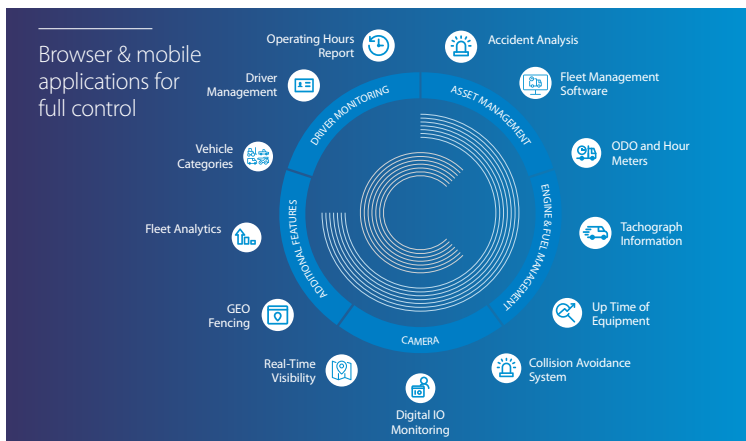
The Lanfranchi company wanted, above all, a machine that offered the operator a high level of comfort. Mathieu, the brother of the company boss and the only operator of the excavator, works on the machine for an average of seven hours a day. He appreciates how smooth the movements are combined with very high performance and breakout force. The low noise level in the



cabin means that you can work all day without getting tired. The new LED lighting surrounding the excavator enlarges the driver's field of vision and thereby significantly increases the safety of people on the construction site. ☺

CTRACK HAS SOLUTIONS FOR AN EVER-CHANGING BUSINESS ENVIRONMENT

The global business environment is ever-changing and at a rapid pace, especially in the wake of the COVID-19 pandemic. To survive during these troubling times, businesses and their partners must continually adapt and give themselves an edge over their competitors.



Own and operating vehicles efficiently, no matter the industry is reliant on information. Having the correct information in a tangible format is imperative to making the right decisions.

“No matter what industry your business operates in, if you use vehicles or moveable assets, then Ctrack can help. During Ctrack’s 30-year history, we have developed cutting edge tracking and fleet management hardware and software solutions. We can also tailor-make analytics to aid with short and long-term decision making,” comments Hein Jordt, Managing Director of Ctrack SA.

A comprehensive fleet management solution ensures that elements including safety and security risks such as dangerous driving, safety, driver fatigue, theft, hijackings and area management can be mitigated.

Improved productivity is guaranteed when business owners know how their vehicles are being used. Efficient fleet management will ensure the avoidance of unnecessary costs incurred by factors such as speeding, accidents, fuel consumption and harsh driving.

Bespoke solutions for every industry

Whether your fleet consists of motorcycles or mining and yellow equipment or whether you operate within airports or the agricultural sector, Ctrack has developed and perfected bespoke tracking and fleet management solutions for a wide variety of industries. Compact, battery-operated tracking devices mean that anything can be tracked, from combine harvesters to small packages.

“Ctrack’s continued emphasis on researching and developing next-generation products ensures that we remain ahead of the market, meeting demands for value-added, flexible, feature-rich, and cost-effective technology that keeps everything, Always Visible no matter your industry of operation,” said Jordt.

Testament to this is the fact that Ctrack also provides integrated solutions with third parties and products that

are not normally seen as true tracking products. This one-stop-shop for fleet managers provides solutions such as a state-of-the-art camera solution, Ctrack Iris, where transport and asset managers can view live camera footage of dash-cams and up to 6 cameras fitted to trucks, trailers and inside cargo bodies. In-cab devices that assist drivers with multi-tasking and route management are a result of years of development of software reports that are easily accessible via mobile devices and cloud-based platforms.

Using data effectively

Cutting edge hardware relies on rock-solid software to operate effectively and to provide users with the necessary information in a tangible format.

Ctrack can help any business, big or small, take the guesswork out of running fleets. Realtime, weekly or monthly reports analyse the data and highlight where an action or decision needs to be made, whether that is regarding driver behaviour, route optimisation or vehicle maintenance.

Ctrack’s Bureau Service is the complete outsourcing of fleet control room activities, backed by highly proficient hindsight, insight and foresight data analytics and reporting.

Furthermore, easy to use software solutions include Ctrack’s Driver Centric Mobi application. Using Ctrack Mobi, assets can be monitored from almost anywhere using a smartphone or tablet with an internet connection.

In addition to vehicle locations, Ctrack’s real-time visibility software, including mobile applications and website dashboards, provide valuable information on drivers, points of interest, ground coverage, upcoming tasks and even a live productivity dashboard.

The culmination of real-time visibility, proactive notifications and infographics ensures optimised and efficient asset utilisation and ultimately a more profitable operation across a variety of industries.

Africa Focus

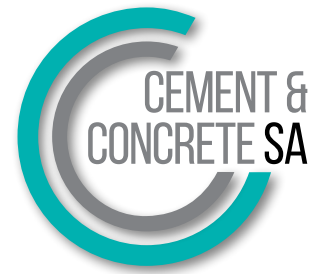
Ctrack believes that the next frontier for growth is Africa because ICT is critical to the future of the 1,3-b-plus people with the youngest population globally.

Growth opportunities continue, and together with digital transformation trends, the youth demographic presents an incredible opportunity for Ctrack.

With a presence in Africa stretching from South Africa as the base and representation in Zimbabwe, Namibia, Zambia, Ghana, Nigeria, Mozambique, Malawi, Senegal, Benin and the DRC, Ctrack is well-positioned to keep assets ‘Always Visible.’ ☺

FULTON'S concrete technology

TENTH EDITION



FULTON's Concrete Technology tenth edition represents a truly South African contribution to the science and practice of concrete technology. Extensive new material has been included, representing a significant update on the previous edition.

The book views concrete in the context of environmental sustainability, as an important leitmotif, threaded throughout the book.

FULTON's has been the essential reference in South African concrete technology for over six decades, and this edition will ensure that local practice remains at the forefront of international trends.

THE BOOK IS ORGANISED IN THE FOLLOWING SECTIONS:

Preview and context: Chapter 1

Section 1: Materials and mixes (Chapters 2-7)

Section 2: Concrete properties (Chapters 8-14)

Section 3: Concrete manufacture, site practices, quality control and non-destructive testing (Chapters 15-24)

Section 4: Special concretes and techniques (Chapters 25-37)



Emeritus Professor Mark Alexander (Editor)

Mark Alexander is Emeritus Professor of civil engineering and Senior Research Scholar in the University of Cape Town. He is a Past President of RILEM and has published extensively both in South Africa and abroad.

Book detail: Hard cover including fully searchable electronic flash card. 2021. 1 152 pp
ISBN: 978-0-9922176-2-4

Non-Member price: R1 100 incl. per copy (plus courier costs if necessary)

Member price: R990 incl. per copy (plus courier costs if necessary)

ORDERS:

CCSA Members order from info@cemcon-sa.org.za

Non-Members order online from <https://www.bidorbuy.co.za>

Or visit the **Information Centre**, Block D, Waterfall Park, Bekker Road, MIDRAND

TREAT YOURSELF TO THE RELIABLE AND AFFORDABLE 966 GC



IT WORKS HARD FOR YOU!!!

- DURABLE.
- LOW ON FUEL CONSUMPTION.
- PILOT CONTROLS.
- COMMON GC CAB WITH STANDARD AIR-CONDITIONING.
- ENHANCED VISIBILITY WITH REAR VIEW CAMERA.
- BUILT WITH PROVEN CAT COMPONENTS.
- BETTER AND EASIER FILL FACTORS WITH PERFORMANCE.
- SERIES BUCKETS.
- EASY TO SERVICE AND MAINTAIN.

GET THE 966GC LEGACY OFFER: FREE 5000HRS PARTS KIT ONLY CVA | AFFORDABLE MONTHLY INSTALMENT | @PRIME RATE

OFFER VALID UNTIL DECEMBER 2021.

T&CS APPLY.

LET'S DO THE WORK.™



**Barloworld
Equipment**

