

# Construction WORLD



**Government must level the PPP playing field**

**MBA NORTH LOOKS TO ITS NEXT 120 YEARS**

**SAICE urges focus on EXPERIENCE AND SKILLS IN THE TRANSPORT SECTOR**

**Keller Geotechnics designs and installs lateral support on challenging Atlantic Seaboard**





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## ON THE COVER

Keller Geotechnics, with its vast expertise and knowledge, has successfully designed and installed lateral support systems on the challenging Atlantic Seaboard. This expertise was crucial at the Le Béton residential development, where a complex cut, with numerous intricate details, was required. The Le Béton residential development in Bantry Bay, on De Wet Road, will feature three luxurious homes. Bantry Bay, the second most expensive suburb in South Africa, only to Clifton down the road, will see the price of a villa in this development exceed R70m.

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*Even though it may feel as though the construction industry is experiencing a total onslaught from various directions - data that points to an industry in crisis, lacklustre new infrastructure announcements and the recent George building disaster which may highlight the inherent shortcomings of construction in South Africa - there are enclaves of success.*



WBHO recently announced the company's financial results for the six months ended 31 December. The company's total pipeline of work is R240b, up from R211b last June. CEO, Wolfgang Neff said that the industry is not experiencing only doom and gloom but that the company's earnings are the best they have been in a decade. 'Pipeline' refers to the projects that the company is likely to bid on and, if successful, may start working on over the next 24 months. As such, the country's project pipeline is a barometer for the work available in the construction space.

Some 80% of WBHO's project pipeline in the Roads and Earthworks division, which has a value of R81b, is in the public space. Work for road construction and water infrastructure showed growth, but work for mining infrastructure declined.

With the increased opportunities for warehousing, data centres, hotels, healthcare and energy, the company's Building and Civil Engineering division saw the pipeline grow to R107b.

In terms of work already secured, WBHO's order book reached R32,9b - it managed to sustain its record levels of June 2023.

Another company that recently had stellar results is Afrimat, a mid-tier mining and materials company providing bulk commodities, construction materials, industrial minerals and future materials and metals. During the first half of the financial year that ended on

29 February, Afrimat invested substantially in projects expected to yield fruitful returns and further strengthen diversity and competitive advantage in the future.

Revenue increased 23,9% from R4,9b to R6,1b. Operating profit increased by 19,8% to R1,2b (2023: R961,6m), delivering an operating profit margin for the Group of 18,9%. Diversification and efficiency improvement initiatives remain the cornerstone of the Group's strategy. These counter economic impacts that are beyond management's control.

Afrimat is obviously very different to a construction company such as WBHO that cannot diversify to cushion it from market conditions. However, like WBHO, its results show the direct opposite of what is expected in the current market.

In line with indications that the residential construction market - which buoyed construction during Covid - is on the decline, decade-high interest rates and the sluggish economy weighed on the residential market of South Africans. The result is that Balwin Properties, the JSE-listed national residential property developer of large-scale, sectional title estates, sold 896 fewer apartments last year, resulting in the company's 2024 full-year profit plunging 50% to R217,4m (the financial year ending 29 February).

Even though this is a negative point, it can, inversely, indicate to Government

that the construction industry needs a change in focus and this, and other results in this sphere, may herald a period where more focus is given to much needed infrastructure. A country of some 60 million people needs roads, schools, hospitals, and other infrastructure to operate and flourish.

*Wilhelm du Plessis*  
Editor

2024

T W E N T Y - T H I R D

# BEST

## PROJECTS

This issue publishes the third call for entries in *Construction World's* Best Projects awards. This is the 23<sup>rd</sup> time these awards are to be held and will recognise excellence in civil engineering, building, specialist contracting, specialist supply, consulting engineering, and architecture. The AfriSam Innovation Award for Sustainable Construction recognises how a project contributes to sustainability in the built environment.

The deadline for entries is Friday, 6 September.

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## 4-star hotel development nears **COMPLETION IN LIMPOPO**

*While many developers have responded to the construction sector downturn by taking a cautious approach and adopting a wait-and-see attitude, one company bucking this trend within the hospitality sector is Premier Hotels & Resorts that has just finished building its 24<sup>th</sup> establishment in Thohoyandou, the former capital of the old Venda state.*

It has chosen to fill a gap in the Limpopo area by growing its footprint into a new node in South Africa with its 4-star hotel due to open at the end of June 2024.

Undoubtedly to be the biggest 4-star hotel in the far Northern part of Limpopo Province in the Vhembe District that borders with Zimbabwe in an ever-green scenic view of Thohoyandou and a stone's throw away from the Kruger National Park's Punda Maria gate, the hotel will be a major milestone in the tourism sector and will serve as a catalyst to many economic developments that exist and are still planned for the region.

It is designed to serve both institutional travel demands and local business interest in a state-of-the-art conferencing venue. "Our decision to forge ahead with this development demonstrates our confidence in the Venda community and that we believe in the long-term future and economic viability of the area," says Sigal Nassimov-Geva, COO of Premier Hotels. "We strongly believe in the upliftment of skills which is why we have partnered with the main contractor, African Century Group, by providing opportunities to the local construction workers for growth, learning and upskilling who might not have had the experience in building a 4-star hotel."

"Never before have the construction workers in the area had the chance to learn the skills needed to build a hotel of this stature which is why we've chosen to collaborate with Premier Hotels & Resorts," says Lady Masia, head of the construction company African Century Group. "We approached them to be the management & marketing company due to the depths of experience they have had in the hospitality industry, much needed in order to make the hotel a success.

A project of this magnitude is critical in creating job opportunities. During the construction phase, in the region

of 480 jobs varying from unskilled local construction labour through to highly skilled artisans, project managers and the like will be created. When the hotel officially opens it will also employ 85 permanent workers, and 30-40 contract/part time staff, improving the livelihood of the local families.

The Chief of Venda said that he wasn't aware of any other privately funded developments of the scale of this hotel, that's currently under construction and progressing at an aggressive pace with the IDC in funding the build.

The key factor in selecting the site was the hotel's visibility as it is being built on a rise enabling it to be seen from the recently built mall, sports stadium built to celebrate the independence of Venda and University of Venda - a big catalyst in the area - as well as giving guests superb views of the town and surrounding mountains.

This injection of money will also undoubtedly influence further future development in the region as well as attract trade and investment into Thohoyandou, serving as the gateway to the Kruger National Park and Zimbabwe.

The Premier Hotels development on the north-eastern edge of the town will be a modern build, with a touch of African flair, very similar to its OR Tambo hotel. The facade will be stone as opposed to brick with numerous environmentally friendly aspects.

With close to 8 289 m<sup>2</sup> of usable space, the hotel will accommodate 120 rooms, conference space to host up to 450 delegates for conferences for local business in the area or celebratory functions, business suite, bar & restaurant with wine bar, outdoor pool and gym facility.

This is not the last development we will see from the town and Limpopo province, but the 4-star hotel will definitely change the look of the town, known to have the largest baobab tree in Africa for those venturing into the Kruger and surrounding tourist hotspots. ©

# Disruptions to supply chains **ON THE HIGH SEAS**

*The vast majority of goods are still transported by sea. According to SAPICS (The Professional Body for Supply Chain Management), sight is often lost, however, of how shipping disruptions have a far-reaching impact on global trade and supply chains, including inflation and food and energy security.*

To survive and thrive in an environment marked by a host of problems in maritime trade, businesses must be able to identify the risks and have plans in place to mitigate them, SAPICS stresses.

In its first quarter report for 2024, the International Chamber of Commerce (ICC) International Maritime Bureau (IMB) expressed concerns about the continued acts of maritime piracy off the coast of Somalia. The report noted that a total of 33 incidents of piracy and armed robbery against ships were recorded in the first three months of 2024, an increase from 27 incidents for the same period in 2023.

Of the 33 incidents reported, 24 vessels were boarded, six had attempted attacks, two were hijacked and one was fired upon. Violence towards crew continues with 35 crew members taken hostage, nine kidnapped and one threatened.

ICC Secretary General John WH Denton AO said: "The resurgence of Somali pirate activity is worrying and, now more than ever, it is crucial to protect trade, safeguard routes and the safety of seafarers who keep commerce moving. All measures to ensure the uninterrupted free flow of goods throughout international supply chains must be taken."

The first few months of 2024 have also been difficult for vessels using two of the world's busiest shipping lanes. As a result of Houthi rebels attacking vessels travelling into the Red Sea through the Bab al-Mandab Strait, ships were diverted around southern Africa. Trade volumes through the Suez Canal dropped by 40%. Trade through the Panama Canal has dipped by 30% since November. While the Suez's troubles are geopolitical, Panama's issues are climate related. The lakes that feed the canal are drying up due to drought. The locks connecting the Atlantic Ocean to the Pacific via Gatun Lake are now almost too shallow for the largest container ships to pass through. Earlier this month, Panama announced plans for a "dry canal" to move cargo between the Pacific and Atlantic oceans. Until then, some

shippers are reportedly paying up to USD4m for a slot in an auction that enables them to jump the queue of backed up vessels.

The Suez Canal disruption and the rerouting of vessels around Africa could represent an opportunity for South African ports, but they are currently hampered by chronic congestion, infrastructure deterioration and equipment breakdowns.

These are enormously challenging times for global maritime trade, states SAPICS, with supply chain repercussions impacting businesses, economies and consumers. According to the United Nations Conference on Trade and Development (UNCTAD), the disruption of the Suez Canal has created shortages of goods due to the increased cargo delivery time. Products affected include avocados in East Africa as well as tea and coffee supply chains. An UNCTAD report notes that 'rerouting vessels around Africa adds about 12 days to the ship journey on a route from Asia to Europe. Extended travel distances and transit times are estimated to cut effective global container shipping capacity by around 9%. A round trip between India and Europe, for example, takes 56 days and eight ships. If the journey takes 63 days, an extra ship will be needed'.

Recognising the critical role that shipping plays in global supply chains, SAPICS has lined up a compelling presentation on supply chain disruptions on the high seas at the upcoming 2024 SAPICS Conference, Africa's leading event for supply chain professionals. Malcolm Hartwell, Master Mariner and Head of Transport for Africa at Norton Rose Fulbright, South Africa, will share his experience and insights with attendees. "It is crucial for supply chain professionals to understand the current causes of disruptions to supply chains caused by shipping issues," says Hartwell. He explains that this 2024 SAPICS Conference presentation will offer steps to take to mitigate the risks, including contractual and insurance arrangements.

Now in its 46<sup>th</sup> year, the 2024 SAPICS Conference takes place in Cape Town from 9 to 12 June 2024. It will see

hundreds of attendees from around the world gather to network, learn and share knowledge through panel discussions, presentations, workshops and case studies. SAPICS is hosting this year's conference in association with the Southern African Association of Freight Forwarders (SAAFF). ©





Mohau Mphomela, MBA  
North's Executive Director.

## MBA North looks to the next 120 years of **SUPPORTING THE INDUSTRY**

*On 1 February 2024, the Master Builders Association (MBA) North held its 120th annual general meeting, marking years of serving the construction industry in Gauteng, North-West, Limpopo and Mpumalanga. Mohau Mphomela, MBA North's Executive Director, said that 2023 was one of the most challenging years the Association had ever experienced, with many of its long-standing members continuing to go into business rescue or actually closing their doors.*

However, the Association looks forward to its bicentenary with a sense of optimism symbolised by the inauguration of a new President, Liana van der Walt, and Vice-President, Gavin Morrow.

MBA North dates back to 1894 when the Johannesburg Master Builders Association was founded. In 1996, it joined up with the equally venerable Pretoria Master Builders Association, founded in 1903, to form the Gauteng Master Builders Association. The organisation expanded to cover North-West, Mpumalanga and Limpopo as well as Gauteng in 2012, which is when its current name, MBA North, was coined. It is an employers' organisation, serving the interests of its members in the building and allied trade industries, and over the years its members have been responsible for many of the landmarks that represent the region.

Many of MBA North's members have been on its books for decades, and many are smaller, family-owned businesses – an excellent indication of the potential this industry has for intergenerational empowerment.

Mphomela says that these stalwarts have played a role in helping MBA North establish itself as a trusted advisor to its members, and to the success it had realised in training and

skills development, the preparation of standard contracts and manuals and, in particular, the great strides made in health and safety in the construction industry.

Morrow says, "The challenges continue, but there are some indications that the outlook could be turning more favourable. Word from colleagues in the industry is that there is a noticeable uptick in the number of tenders out there, which is obviously good news for principal contractors and subcontractors alike. However, we're also hearing that tenders are slow to be awarded."

Morrow believes that demand from the emerging middle class has the potential to drive demand for new construction projects, with a strong focus on residential estates. Other growth drivers include the logistics sector, which is busy taking up the slack caused by the implosion of Transnet and needs to expand its network of warehouses and depots.

Morrow adds that continuing high demand for student housing is also driving the market. "The private sector has seen the opportunity, with investments also coming from the big pension funds," he says. "In addition, there's a lot of cash in the economy and the potential lowering of interest rates this year could also play a positive role in stimulating new business."

He notes that the construction mafia continues to pose an enormous challenge for contractors, with scant protection from the police or assistance from clients. “Clients have put themselves at arm’s length from what is quite a messy situation in order to reduce their project risk, so contractors really are on their own as their project risk increases. Contractors are learning how to deal with these potentially explosive situations, and building genuine community engagement is key,” he says. “Dealing with construction mafias adds cost that’s difficult to pass onto clients even though margins are still very thin. At the moment, there seems to be no political will to resolve this crisis despite the regular promises from various political leaders including our president.”

MBA North has taken up the construction-mafia challenge, standing alongside members in the frontline when required. Morrow pays tribute to the active participation of the Executive Director, Mohau Mphomela, who often puts himself in harm’s way to help members.

Looking into the future, Morrow sees a growing need for the MBA North to expand its traditional supportive role. A significant focus remains health and safety; through its annual safety competition and regular training webinars, the organisation is helping even small contractors to improve performance in this area.

“We continue to cement our good relationship with the Department of Employment and Labour, and we can play a positive role as a trusted third party, particularly when there is an onsite accident,” Morrow comments. Morrow says he is particularly keen to see MBA North taking the lead

in getting industry players engaging with each other about issues of pressing mutual concern. “The industry has become atomized – we need a united voice on many fronts,” he says.

Some of these issues are transport and logistics challenges, including slow transit through ports, the aforementioned construction mafia, the need for integrated training initiatives to counter a persistent skills deficit, and the perennial issue of the proper usage of JBCC contracts to protect all parties.

“The future is uncertain but we must do what we can to shape it. We look forward to helping MBA North play an even more important and constructive role in uniting the whole construction value chain and making its concerns heard,” he concludes. ☺

#### About the Master Builders Association North

The Master Builders Association North is the amalgamation of the former Master Builders Associations of Johannesburg (founded in 1894) and Pretoria (founded in 1903). The organisations merged to form the Gauteng Mast Builders Association in 1996, and was renamed Master Builders Association North, representing four regions: Gauteng, North West, Mpumalanga and Limpopo. It is a chapter of the Master Builders Association South Africa. Based in Halfway House, the Master Builders Association North represents the interests of employers in the building and allied trade industries in the abovementioned four regions. It aims to serve its members by facilitating best practice within its membership and the building industry as a whole.



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# “INTRODUCTION TO TECHNICAL FACILITIES MANAGEMENT” course launched

*Afroteq Advisory, a leading provider of advisory services in the facilities management and built environment sectors, is thrilled to announce the launch of its latest training offering: the “Introduction to Technical Facilities Management” course, through its Afroteq Academy division.*

Designed specifically for facilities managers lacking training or experience in building technical services, this comprehensive programme aims to equip participants with essential knowledge of the most common technical disciplines in facilities management, including HVAC, electrical and plumbing systems. The course emphasises practical application, enabling participants to effectively communicate, collaborate, and oversee technical teams and processes without requiring in-depth technical expertise.

“Facilities Managers come from diverse backgrounds and need accessible training programmes. Afroteq Academy’s new Introduction to Technical Facilities Management course has been carefully crafted to meet their specific needs. For example, the increasing reliance on technology and telecommunications, new developments in electrical equipment, HVAC management and planned maintenance pose a challenge for Facilities Managers without technical background. This course helps Facilities Managers manage these and other challenges they might face on a day-to-day basis efficiently - ensuring a solid understanding of risk service level agreements (SLAs) to protect clients and contractors from financial losses due to system failures,” says Andre Michau (pictured), Programme Manager at Afroteq Advisory.

## About the course

The course will be offered in Cape Town and Johannesburg during May, June and July 2024, hosted in a facilitated and blended online format over three days. Specially developed by industry expert Fanie Louw (founder of The Knowledge Store) and delivered by Xolisa Fumba (Executive Director of Afroteq Advisory, a registered Professional with ECSA (Pr. TechEng), SACPCMP (Pr. CPM) and SAFMA as an Accredited Facilities Professional) and Ronald Nothnagel (a director of Facilities Management Solutions (Pty) Ltd, registered with SAFMA, and a member of the SABS panel of advisories).

Managers will be equipped with the tools and knowledge to effectively manage the technical aspects of their roles, driving innovation and

excellence in the facilities management sector.

“This course is strongly recommended for facilities managers who have high technical SLA components to manage. It will equip them with the knowledge, tools and techniques they need to manage various aspects of properties, buildings and equipment.

This will provide them with the skills to make informed decisions that can impact the short- and long-term value of the facilities they manage,” Michau explains.

Facilities Managers will learn how to analyse and assess the physical condition of assets, develop and implement maintenance plans, budget effectively, manage vendors and contractors, and ensure compliance with relevant regulations and standards. They will have the opportunity to engage in class discussions, case studies and knowledge assessments to evaluate their understanding of the technical material. Upon completion of the course delegates will receive a certificate of attendance.

As Facilities Management (FM) in South Africa continues to evolve into a more formal and mature discipline, the demand for a diverse skill set encompassing technical, project management, and people management skills continues to grow. However, many individuals entering the FM field lack the experience traditionally associated with building infrastructure and engineering services management. With backgrounds ranging from IT infrastructure to business administration, these professionals may feel ill-prepared to address the technical aspects of their roles.

“While FM encompasses a broad range of responsibilities beyond technical services, such as mechanical and electrical services, it’s undeniable that technical expertise plays a crucial role. Our new course fills a critical gap by providing facilities managers with the foundational knowledge necessary to navigate technical challenges and effectively manage building infrastructure. It demystifies the technical environment and equips delegates with practical tools to manage the inputs and outputs required in this space,” Michau concludes. ☺



# Empower workers in multiple sectors **WITH THE LATEST INCENTIVE SOLUTIONS FROM adumo**

*In the ever-evolving landscape of workplace safety and employee engagement, the significance of incentivisation cannot be overstated. This is clearly apparent in multiple sectors, where the inherent risks demand constant vigilance and adherence to safety protocols. “However, traditional incentive programmes often fall short in fostering the desired behaviour and attitude of workers,” comments Steve Mallaby (pictured), CEO of adumo Payouts.*

Mallaby advocates for a paradigm shift in how companies approach incentivisation, particularly in sectors dominated by blue-collar workers, from construction to mining, manufacturing, engineering, agriculture and oil and gas. “The transformative potential of modernising safety incentive programmes not only enhances workplace safety but also bolsters productivity and fosters a culture of corporate responsibility.”

Mallaby champions the concept of earned incentives, whereby workers are rewarded based on tangible results tied to clear tasks and milestones. This approach not only aligns incentives with desired outcomes, but also empowers workers by providing a transparent framework for compensation. “When workers understand what is expected of them and how they will be rewarded, they are more likely to prioritise safety behaviour.”

Moreover, modern incentive programmes have a broader societal implication. In an era where companies are increasingly scrutinised for their Environmental, Social and Governance (ESG) practices, incentivising workers assumes extra significance. By prioritising the well-being of employees and promoting financial literacy, companies can position themselves as responsible corporate citizens, thereby attracting investors and fostering sustainable growth.

Crucially, adumo Payouts understands that a ‘one-size-fits-all’ approach to incentivisation does not adequately cover the diverse requirements of multiple sectors. Instead, companies must leverage flexible solutions tailored to the unique needs of their workforce. “We provide such a solution through the adumo payment card system, which not only streamlines the distribution of incentives, but also empowers workers to make meaningful financial decisions,” says Mallaby.

By embracing modern incentive schemes, companies not only demonstrate their commitment to employee welfare, but also tap into the economic potential of empowered workers. As Mallaby aptly puts it, companies must “stop being stuck in the Dark Ages” and embrace the changing dynamics of the modern consumer market. “Traditionally, companies disbursed grocery vouchers as an incentive. However, this does not make the best use of the opportunity and does not provide the maximum benefit to either the company or the employee.”

Modernising safety incentive programmes is a rallying cry for companies across various industries to prioritise the well-being of their workforce. By adopting flexible

and transparent incentive schemes, companies can not only enhance workplace safety and productivity but also contribute to broader societal goals of economic empowerment and sustainability.

“It generates loyalty and productivity in your workforce. If your incentive system is up to date, efficient, flexible, and adaptable to workers’ requirements, it is no problem, for example, to get workers to work on a public holiday like Workers’ Day, as they have peace of mind they will be incentivised properly and have access to those additional funds soonest,” says Mallaby.

An added benefit for companies in terms of brand recognition and marketing is the fact that adumo payment cards can be accordingly branded. This provides both workers and the retail sector with confidence that the cards being used are backed by a reputable company that prioritises the well-being of its workforce.

“A proper incentive scheme contributes to the overall well-being of communities, putting money back into the local economy to stimulate growth and development and ensure blue-collar workers have some cash on hand, especially if they have a lot of historic debt and garnishee orders. This, in turn, contributes to meeting a company’s ESG strategy and facilitating its goals to be a good corporate citizen,” concludes Mallaby. ©



# Enel Green Power's game-changing **BURSARY PROGRAMME TO UPLIFT SA'S YOUTH**

*Enel Green Power South Africa's (EGP South Africa) bursary programme aims to tackle youth unemployment by affording young people an opportunity to increase their educational aptitudes and drive future change in South Africa.*



the programme has already seen 177 bursaries being awarded to students from various communities where EGP South Africa operates.

The bursaries for high school students include school fees, stationery, textbooks, school uniforms and transport fees. In the case of tertiary students, the bursaries include registration and tuition fees and learning materials, as well as an allowance for meals and travel. Where applicable, it will also cover university accommodation or residence.

Bursary applicants must meet certain criteria, with tertiary applicants needing to have completed their Matric qualifications, and been accepted into a university or currently enrolled at a tertiary institution,

while those in high school must be in grades eight to 11.

Furthermore, all applicants are expected to have achieved a minimum overall pass rate of 65%, and come from a household with an income of less than R357,000 per annum. Candidates with disabilities are also encouraged to apply.

Local government officials and other stakeholders in attendance at the event not only showed their support for the host school, but pledged assistance in various forms. This included financial contributions towards the school's needs, as well as commitments such as providing accommodation for an additional student during their first year of tertiary studies.

The launch of the Enel Green Power Bursary programme stands as a beacon of hope and opportunity for the youth of South Africa, particularly those from previously disadvantaged communities. EGP South Africa's dedication to sustainable development and youth empowerment is evident in this life-changing initiative, which not only supports academic pursuits but also nurtures the potential of future leaders in the renewable energy sector.

"To quote a famous entrepreneur, sustainability is no longer about doing less harm, it is about doing more good. As EGP South Africa, we could not agree more and hope that these bursaries will enable our youth to do more good, empowering them to realise their potential, and drive positive change in South Africa," concludes Battisti. ©

**E**nel Green Power South Africa (EGP South Africa) has announced the awarding of another bursary through its Garob Wind Farm, an initiative aimed at empowering South African youth from previously disadvantaged communities that EGP South Africa operates in with opportunities to further their education.

The company's recent Career and Bursary Day at the Gariep High School in the Northern Cape, underscored the company's unwavering commitment to supporting the United Nations Sustainable Development Goals, and marking a significant milestone in its efforts to foster sustainable progress in society.

Speaking at the event, Manuele Battisti, Country Manager at EGP South Africa, reiterated the company's values of trust, responsibility, innovation and proactivity, adding that by putting people and the environment first, EGP South Africa is confident about the future of sustainable progress in the country.

"For EGP South Africa, sustainability is at the core of our relationships, from the communities we operate in, to our dealings with our partners and prospective clients. To this end, and to meet the 2030 Sustainable Development agenda, EGP South Africa recognises the importance of driving youth involvement to meet these criteria," he says.

The Enel Bursaries are available to tertiary students in any field of study, as well as high school students from grades eight to 12, and cover the Northern Cape, Western Cape, Limpopo and the Free State provinces. To date,

# Technology is making health and safety more **ATTRACTIVE TO PROJECT TEAMS**

*Maintaining exceptional health and safety (H&S) standards is integral to the ongoing success of any project in the mining, construction, and engineering, procurement, and construction management (EPCM) industries. However, the time and expenses involved can be discouraging, leading to less effective outcomes.*

For experts in the H&S field, the solution is clear: utilising technology can streamline the health and safety process, and lead to more beneficial outcomes for companies, contractors, and stakeholders across the board.

Sam Mabena, Safety Manager of the South African-based EPCM firm Erudite Strategies explains: “A focus on H&S in the workplace substantially lowers incident risk, protects employees, reduces lost time injury frequency, and, ultimately, protects against substantial profit loss. Companies in mining, construction, and manufacturing that lead in H&S innovation, also often lead in their respective industries. That said, developing and managing impactful strategies is resource intensive and requires significant input from employees, which often deters some businesses from implementing H&S practices effectively. The goal is to simplify and even automate the process to the point where barely any additional thought or effort is spent to maintain near-perfect safety standards. The best way to accomplish that is through integrating technology into normal operations.”

Mabena notes that larger companies in high-risk industries in South Africa have largely made the transition to technology-driven H&S solutions, but that small and medium businesses can likewise benefit, and should also consider making the transition.

## **Uncomplicating H&S through technology innovation**

The first step companies often take when introducing technology into their H&S processes is converting physical data to a digital format. Digitisation streamlines H&S-related administrative tasks, reduces paperwork, and is ideal for capturing and managing employee’s personnel files, training records, and certifications. It not only eliminates the burden of manually completing paperwork, but also ensures data accuracy and accessibility.

A common second step is incorporating technology into H&S training practices. Learning modules can be digitised and easily shared among employees, and companies can develop simple training apps, empowering employees to complete their training on any smart device. Workers are further able to review safety protocols or revisit modules on the same app whenever necessary.

From there, risk assessment and emergency response software that integrates geospatial data, weather forecasts, and real-time communication channels can be used to accurately identify potential risks, and to assess the impact and likelihood of those risks occurring.

“Advanced analytics tools enable us to analyse vast quantities of data at speed to identify patterns and threats, empowering our project managers to institute pre-emptive measures or prepare a reactive response plan.” Mabena further notes that H&S does not happen in a bubble – it involves many



*“By leveraging the power of technology, digitisation and digitalisation, we can effectively automate auditing processes across a project's ecosystem.”*

Sam Mabena,  
Safety Manager of Erudite Strategies

individual employees, teams, departments, and, importantly, any subcontractors or suppliers that may access the project site at any point. These variables must also be controlled and managed, with specific H&S standards applied to subcontractors and suppliers as needed, which often involves intensive auditing processes. “By leveraging the power of technology, digitisation, and digitalisation, we can effectively automate auditing processes across a project’s ecosystem. For example, by centralising subcontractor data, performance metrics, and compliance records, we can ensure that they conduct regular risk assessments themselves, and that their employees are fully trained and H&S compliant.”

Looking ahead, he explains that the use of digital data analytics and machine learning algorithms will soon be widespread as companies seek to identify risks and deviations more accurately and proactively, enhancing their oversight and accountability.

“Ultimately, technology makes the workplace much safer, freeing up valuable time for safety professionals and employees to focus on proactive safety initiatives, as well as engagement with other relevant teams. This means greater consultations on the client-side or with subcontractors to ensure that the whole project is aligned, and H&S is practiced consistently and effectively throughout,” Mabena concludes. ☺

# Big 5 Construct South Africa 2024: **THE GATEWAY TO THE COUNTRY'S CONSTRUCTION SECTOR**

*South Africa's construction sector is projected to grow thanks to government's National Development Plan 2023, with numerous mega projects happening in all nine provinces; projects such as Mtentu Bridge, which is set to be Africa's tallest bridge, the High-Speed Rail (HSR) framework and many others.*



The South African construction market is valued at USD25,5b and is expected to grow at an average annual rate of over 3% from 2024 to 2027, signifying a rapid increase in demand for manufacturers and suppliers. South Africa is the 3<sup>rd</sup> largest economy in Africa, commanding a GDP of USD406b.

Big 5 Construct South Africa is the leading conduit for regional and international companies to showcase their expertise and knowledge to the South African construction industry. The event connects manufacturers, suppliers and service providers with construction professionals, architects, project managers, civil engineers, consultants, designers, urban planners, procurement managers and other professionals, all looking to source new suppliers and products.

International pavilions showcasing at this year's event are India, Italy, Greece, Germany, Turkey and China. Some of the

participating countries include Jordan, Malaysia, Mozambique, Saudi Arabia, Singapore, South Korea, Spain, Thailand and the United Kingdom, among others.

"Last year, the South African construction sector made a significant impact, contributing approximately R109,5b to the country's GDP, marking a notable increase from the previous year," highlights Ben Greenish, Executive Vice President at dmg events.

"Recognizing this growth and potential, Big 5 Construct South Africa has been instrumental for over a decade in bringing together key figures from the construction sector, facilitating opportunities for collaboration and partnership between global and local enterprises to develop the extensive construction prospects in the country. Big 5 Construct South Africa nurtures networking, commercial interactions, and knowledge exchange among influential decision makers and professionals, accelerating the advancement of South Africa's construction industry."

The event will feature innovative products and services under construction sectors such as Building Interiors and Finishes; Mechanical, Electrical and Plumbing; Concrete and Cement; Digital Construction; Windows, Doors and Facades; HVAC R; Construction Tools and Personal Protection Equipment; Urban Design and Landscape, Heavy Construction Equipment, Machinery



and Vehicles; Solar Products, Technologies and Services.

“Once again we are proud to welcome a number of first time exhibitors this year,” said Greenish.

Saudi Arabia’s Almunif Pipes, a leading producer of plastic pipes and fittings; Turkey’s Parget Makina, which provides complete solutions and equipment for gypsum, plasterboard, cement, dry mortars, calcite, and perlite; and SA’s own, Rigifoam a leading supplier of high-quality polyurethane products.

Other new exhibitors include roof sheeting producers Clotan Steel, Fritz J SA, which supplies commercial and industrial roller doors and generators, and Alif Doors and Bolwa Securities from South Africa. From the USA, Lintech, which manufactures mechanical positioning components and systems will be exhibiting along with India’s Surie Porex, a manufacturer of floor polishing machines.

The event will feature 20 speakers and 20+ CPD-certified Big 5 Talks sessions. This year’s free-to-attend talks streams focus on the themes of Architecture, Smart Buildings, Contractors, Green Construction and Concrete.

The Stakeholders Engagement Forum marks the commencement of Big 5 Construct South Africa on the 4<sup>th</sup> of June and this year’s theme is Building Tomorrow’s Cities. The Forum will delve into crucial facets of construction such as the transformative approaches needed for sustainable urban development. The diverse sessions will cover a range of critical topics, such as water infrastructure, and strategic developments in road, rail and port expansions.

The African Smart Cities Summit is an exclusive gathering of private and public industry leaders, and Africa’s only dedicated conference that explores and tackles the continent’s readiness to

adopt smart methodologies, technology, and creative thinking for implementation on current infrastructure.

“Big 5 Construct South Africa brings together the industry to do business and network providing ample opportunities to share ideas and ultimately realize the full potential of South Africa’s thriving construction sector,” Greenish concludes.

Big 5 Construct South Africa is supported by a host of sponsors including Rubber Roofs as the Registration Sponsor, Talk Sponsors include Zutari, Modena, Building Point, CIDB, Cad4All, Mapei and other participating sponsors. African Smart Cities Summit is sponsored by Kwikot Water Care, Uxene Smart City and Kapsch TrafficCom and supported by Knowledge Partner, Frost & Sullivan.

Confirmed associations and organizations endorsing the event include BimCommunityAfrica, the Concrete Manufacturers Association (CMA), the Chartered Institute of Building (CIOB), the Corrosion Institute of Southern Africa (CorriSA), the Lifting Equipment Engineering Association of South Africa (LEEASA), the South African Institute of Building Design (SAIBD), the South African Capital Equipment Export Council and the South African Institute of Civil Engineering (SAICE). The event is co-located with Totally Concrete, Woodex and Deck & Flooring Africa.

- The South African construction market is valued at USD25,5b and is expected to grow at an average annual rate of over 3% from 2024 to 2027
- Registrations are open for the 11<sup>th</sup> edition of Big 5 Construct South Africa, the largest construction industry event in the country, which runs from 4-6 June 2024 at the Gallagher Convention Centre, Johannesburg
- Over 200 exhibitors from 20+ countries showcase products & services. ☺

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# Revolutionising construction with lightweight **BUILDING SOLUTIONS**

*In the dynamic landscape of construction, innovation is the cornerstone of progress. Gyproc South Africa stands at the forefront of this evolution, bringing forth cutting-edge lightweight construction solutions that are reshaping the way buildings are designed and erected. Championing the cause of lightweight steel frame buildings, Gyproc has partnered with leading contractors specialising in LSF, and providing sustainable, environmentally friendly products to use in LSF buildings.*

“Traditional construction methods, while steeped in history and reliability, often come with inherent challenges that impact both efficiency and sustainability,” explains Farayi Muhamba from Saint-Gobain, owner of Gyproc South Africa. “We, at Gyproc recognize these challenges and address them head-on through the adoption of flexible, easy to use products within lightweight building systems. This innovative approach combines state-of-the-art materials with advanced engineering principles to deliver a host of benefits, revolutionising the construction process.”

One of the primary advantages of constructing a lightweight building is the accelerated construction timeline. Unlike traditional methods that can take months to complete, lightweight structures can be erected in a fraction of the time. This time efficiency not only reduces labour costs but also allows for quicker occupancy, making it an ideal solution for projects with tight deadlines.

“Moreover, Gyproc's range of products that are used within lightweight steel frame systems boast enhanced structural integrity. Both our internal and external boarding and cladding systems offer fire resistance and excellent acoustic performance, that can withstand the test of time and various environmental conditions. This durability not only contributes to the longevity of the structures but also minimizes maintenance costs, offering a cost-effective solution in the long run,” says Muhamba.

Versatility is another key feature that sets Gyproc's lightweight solutions apart. The flexibility of the gypsum boards and Glasroc® X Exterior Wall Cladding System allows for creative and customizable designs, catering to the diverse aesthetic preferences of clients. Whether it's residential, commercial, or industrial projects, Gyproc's systems provide architects and builders with the freedom to innovate and create structures that are not only functional but also visually appealing.

Gyproc's success in implementing lightweight buildings in South Africa is reflected in various projects across the country, with the Cape Town Stadium and world-renowned Leonardo skyscraper in Johannesburg as prime examples. The use of Gyproc's systems has led to the completion of structures that stand as testaments to the efficiency of this alternative construction method.

Gyproc South Africa's commitment to innovation has propelled the construction industry into a new era with lightweight building systems. This alternative method addresses the shortcomings of traditional construction, offering a faster, more durable, and versatile solution. With successful implementations both in South Africa and globally, Gyproc's lightweight building systems are undeniably shaping the future of construction, setting new standards for efficiency, sustainability, and excellence in the built environment. ☺

# Lichtenburg solar project fosters growth and **HOPE IN EMBATTLED COMMUNITY**

*Wilson Bayly Holmes-Ovcon (WBHO) Construction, together with our joint venture partner, the Sola Group completed the construction of one of Africa's largest renewable energy projects under a Private Power Purchase Agreement in 2024. The Merak 2 & 3 PV projects cover approximately four square kilometres and will deliver power through a wheeling agreement to Tronox, a large player in the mining and minerals sector, thereby contributing considerably to the energy sustainability of the South African economy.*

The Merak 2 & 3 solar plants are situated near Lichtenburg in the North West province. The Merak 3 plant achieved Commercial Operation (COD) in March 2024 and Merak 2 in April 2024. This comes after a construction period that started in September 2022. WBHO is the majority partner for the design, procurement, construction, installation, connection and commissioning of the respective 130 MW and 126MW solar PV plant and grid works.

Apart from contributing to renewable energy in South Africa, the project is especially meaningful as a pioneering example of how involving rural communities in a project can foster shared growth and betterment.

"On arriving in the area, you could immediately notice the intense levels of need," says Shabier Ismail, a Director in WBHO's Projects Division. The area still experiences the impact of the severe social unrest in Lichtenburg and Coligny in April 2017. Violent protests are not uncommon in the area. "You meet the station commander at the police station. You meet the community leaders. You meet a councillor and they all tell you the unemployment in the ward is 90%, and then you realise you are not just here to build a project, you are here to make a difference."

The project created over 800 local jobs. Dozens of sub-contractors were also hired from the surrounding area, including Bakerville, Grasfontein and Carlisonia.

As part of these projects, the WBHO Sola joint venture, in partnership with the employer, set aside a ringfenced budget for community initiatives during the construction period. This enabled the WBHO Sola JV to start a number of social initiatives such as: funding the establishment of vegetable gardens in communities; the repair of streetlights to increase night-time safety; the provision of 1 000 school bags, stationary, sanitary packages, sports equipment, as well as Christmas gifts to local schools; the provision of transport for school learners to attend extra classes during the holidays and the North West University's open day; and the establishment of a local soccer league of twelve teams with sponsored kits, equipment and tournaments.

"Companies simply can't go in and just spend corporate social investment money. In the construction sector, and especially in Lichtenburg, we

get to know the community in the area where the project happens, and we partner with them. You must invest in them. Their success is your success. I mean, people in the project team could tell you the improvements in the past rates at JM Lekgetha Commercial High School, they were that passionate about it," explains Ismail.

An example of this unique approach was when load shedding affected local water supply. WBHO and Sola stepped in and supplied generators for the pumps and assisted in distributing water in the community. For a period of 6 weeks, 46 million litres of water was supplied to the entire town of Lichtenburg and surrounding areas. This event underscored the wider need for a sustainable and dependable energy supply, something WBHO is committed to through numerous green energy construction developments.

Another initiative that set the Lichtenburg project apart was the months of training offered to Small, Medium and Micro Enterprises (SMMEs) in the community. Senior WBHO personnel instructed emerging local businesspeople through management, marketing, logistics and other more technical construction-related courses. It was extended into a mentorship program, which now includes on-site work training.

The Merak 2 & 3 PV projects are representative of WBHO's unique method of community involvement. A community's identity, needs, and potential must be acknowledged. Greig Bastion, WBHO Project Director for these PV projects, underscores this approach: "A construction project must become part of the community. Big projects have the potential to leave a community with a better economy, better skills, and with better infrastructure, but also with hope and trust - we are all building a better place together." ©



# Bright outlook for affordable housing IN WESTERN CAPE TOWNSHIPS

*The announcement that the City of Cape Town has approved a fund aimed at supporting micro-developers who build affordable housing in lower-income communities is a boost for aspiring property entrepreneurs in the Province. Nomfundo Molemohi, Portfolio Manager for uMaStandi in the Western and Eastern Cape shares her views about the enormous potential to provide quality, affordable rental housing in the townships.*



The demand for quality, affordable rental housing in Cape Town's townships has been high for some time and shows no signs of slowing. uMaStandi, TUHF's township-focused finance arm, has grown to offer finance in 11 Western Cape townships since it first established its office there in 2018. Yet supporting property entrepreneurs who want to develop housing in the townships has had its challenges.

"One key challenge facing affordable housing development in any South African township is rooted in town planning," Molemohi says. "Infrastructure to provide clean water, sewerage, and other essential municipal services is often insufficient in townships, so that zoning and building plan approvals are slow and difficult."

As a mortgage financier committed to inclusive growth and creating real development impact, uMaStandi engages with local government to ensure its projects have all the right approvals in place so that clients will have a commercially valuable asset when their building is complete. "We know that people are constructing developments in the townships without the right approvals and certificates," Molemohi says. "But because we make sure our clients' projects are zoned correctly and plans are approved, our clients can access things like building insurance – a point of pride for us."

"We engage with local government to help our clients get their approvals timeously, and we've been able to bring several successful micro-developments online," Molemohi says. "The fact that the City of Cape Town is supporting micro-developments in affordable housing through the new Development Charges Fund, is exciting for us and will help to smooth the process."

Molemohi is optimistic that uMaStandi several new developments will kick off in the Province, where clients have been waiting for plan approvals. "It's important for private investors to help address the need for quality, affordable housing in townships. It cannot be addressed by government alone. Small-scale developers like those that uMaStandi funds are key not only to addressing the need for accommodation, but to stimulating township economies and the vibrancy of these communities." uMaStandi is unique in that it has the risk

appetite to support property entrepreneurs with a focus on township developments. "In particular, we work with clients who have knowledge of the township they want to invest in and understanding of the community's needs. Often, this is because they grew up in the area, or still live there, and they have a vision and a passion for making a change close to home."

For these micro-developers, well-run affordable housing developments represent the opportunity to build sustainable wealth for their families and leave a positive legacy for their communities.

"Converting run-down houses to provide decent accommodation and amenities like parking, security and Wi-Fi improves tenants' lifestyles and has a positive impact on the community as well," Molemohi says. "One of our clients, for example, installed solar powered spotlights to serve both the complex and the undeveloped field opposite the building. The developer knew that the area is a popular taxi stop and wanted to improve safety at night."

Because uMaStandi supports the TUHF ethos of creating massive impact through scale, it encourages clients to consider building mixed-use developments. Including retail space in the housing development helps to provide access to important amenities – such as a place to buy groceries close to home. Incorporating greening elements – such as solar geysers, solar lights, low-flow bathroom fittings etc – are another important consideration. They make good commercial sense by helping tenants to manage their utility costs, offering back-up solutions for water and energy, and improving security – which in turn attracts tenants that are happy to pay their rent and renew their leases. "Occupancy rates in uMaStandi developments is 100%," Molemohi says. "Our clients often have waitlists for their units long before their projects are completed."

Building on its success in the Western Cape, uMaStandi has expanded its footprint into the Eastern Cape. It is actively engaging with local municipalities to understand town planning needs in major metros. "It's important to engage with local government and support their plans for affordable housing developments if we are to make a positive impact for urban densification in the townships through private investment," Molemohi explains.

Micro-affordable housing developments in the townships are an important part of changing South Africa's socio-economic landscape. Creating decent housing with access to amenities in already densely populated areas stimulates local economic growth. By empowering property entrepreneurs to unlock the equity in their township properties through commercially viable rental housing businesses, uMaStandi supports inclusive growth and helps to create generational wealth for families who could not extract value from their properties before. ☺

# African Property Investment **AWARDS 2024 NOW OPEN**

*The 8<sup>th</sup> annual African Property Investment Awards (API Awards) are now open for entries. This prestigious platform recognises excellence in the African real estate industry. This year, for the first time, the #APIawards will be open to entries from South Africa.*

The awards, which will be presented at the API Summit on 19 and 20 September 2024 at the Westin Hotel in Cape Town, are open to developers, professional teams, consultants, suppliers, and property owners across Africa.

The API Awards offer significant benefits to winners and finalists.

**Murray Anderson-Ogle, GM of marketing and commercial at API Events**, says, "We are thrilled to open the 8<sup>th</sup> annual API Awards. The awards are not only about recognising the best projects and individuals in the African real estate industry, but they are also about celebrating the innovation, dedication, and expertise that drive the industry forward. We are excited to open them out to South

African entries in 2024. API is proud to provide a platform that highlights the very best of African property with these esteemed peer-reviewed awards that are a symbol of excellence that money simply can't buy."

The awards encompass a wide range of categories, each one significant in its own right, reflecting the vast property industry. These include the best developments for shopping malls — both larger and smaller than 15,00 m<sup>2</sup>, residential — both high-end and affordable, mixed-use, office, and hotel. There is also a unique category that pits industrial, logistics and alternative real estate assets such as healthcare, data centres and education against each other, showcasing the diversity of our industry.

Acknowledging the key roles that innovation, technology and service play in real estate, there are awards for banks, co-working operators, and property services. The best transactions and occupier deals will also be recognised. Shining a spotlight on the industry's extraordinary talent, there are awards for Top Real Estate CEO, Young Property Person and Woman in Real Estate, and the ultimate Lifetime Achievement Award.

For previous winners, the recognition has been transformative.

**Mikalya Benkenstein, CEO of Hodari Africa**, who won the Young Property Person of the Year award in 2023, says, "The award has significantly enhanced both the visibility and credibility of Hodari Africa and myself within the industry. This accolade serves as a powerful endorsement of our expertise and dedication, instilling confidence in current and potential clients alike. The recognition has opened doors to new opportunities and expanded our network, which may not have been possible otherwise. Moreover, it has provided a valuable platform to advocate for causes close to my heart, such as empowerment and inclusivity, particularly focusing on inspiring young people, especially women, to chase their dreams."



*Provider Best Property Service Provider in Africa API 2023 award handover to CBRE Excellerate.*

**Craig Hean, Managing Director of Advisory & Transaction Services at CBRE | Excellerate**, says, "Winning the 2023 API Award for Best Property Service Provider in Africa has significantly boosted CBRE's reputation in the markets where we operate. Both our extensive client base and our competitors note and value API events, making this award especially impactful. Showcasing our award has reinforced our position as a premier service provider across Africa. We believe that the visibility and recognition garnered from this prestigious award are a testament to our meticulous effort in crafting a comprehensive submission highlighting our business achievements throughout the year."

**Wayne Troughton, Chief Executive Officer of HTI Consulting**, a past winner and a member of this year's awards judging panel, adds, "It's great to be a part of the API Annual Property Awards for another year. They are the pre-eminent awards on the continent, recognising excellence in all aspects of property development. Winning an award has increased our exposure and has recognised and validated our commitment to the continent and to excellence."

**Tim Harlech-Jones, Managing Director of Bentel Associates International**, emphasises the importance of adaptability and sustainability in the judging criteria. "As a judge in the API Awards, it's crucial to adapt and refine our criteria to reflect the evolving landscape of the industry. I'll be looking for projects which showcase innovative approaches to address challenges or capitalise on emerging market opportunities within the African, as well as the specific South African, contexts. This could include innovative design concepts, sustainable practices, or even creative financing models or solutions."

Anderson-Ogle concludes, "We encourage everyone to submit their best work for a chance to be recognized among the best in the industry and we can't wait to showcase the finalists at the #APISummit2024. ©



T W E N T Y - T H I R D

# BEST PROJECTS

## CALL FOR ENTRIES



**Construction World's** Best Projects showcases excellence in the South African building, civil engineering, supply and project management sectors. In its 23<sup>rd</sup> year, the aim of **Construction World's** Best Projects is to recognise projects across the entire construction industry: from civil and building projects to professional services to specialist suppliers and contractors.

There are **SEVEN** categories in which to enter. Projects may be entered in several categories, provided they meet the prerequisites for entering each one, and meet the criteria.

**This competition is by submission only – it is judged solely by what you submit – so it is essential to take careful note of the entry requirements.**

### JUDGING

A panel of independent judges from the construction industry has been appointed. These judges represent ECSA, SAICE, MBA and CIOB.

Each criterion set out for the various categories will be scored out of 10 – with 10 being the highest score and one being the lowest. It is therefore **VERY IMPORTANT** that the entry address the criteria for the particular category it is entering.

If a criterion is not answered, it will be awarded a medium of five points.

In each category a 'Winner' is announced as well as a 'Highly Commended Award'. A 'Special Mention Award' may be given.

### SPECIAL ISSUE

The December issue of *Construction World* is dedicated to the various winners and entries and is an overview of activity in the entire built industry during the past year.

Contact Erna Oosthuizen, the advertising manager, if you wish to advertise in this issue. Advertising here will associate your brand with excellence.



### How to submit entries

- Each entry must be accompanied by the **completed entry form**, available from [www.constructionworldmagazine.co.za](http://www.constructionworldmagazine.co.za) or by requesting it from [constr@crown.co.za](mailto:constr@crown.co.za).
- The maximum length for submissions is **2 000 words**.
- Each submission must clearly state which **category** is entered.
- **IMPORTANT** It is to the entrant's own advantage to address **ALL THE CRITERIA** as set out in the category being entered. If the criterion falls outside the scope of the contract, please state this. It is advantageous to use the criterion as subheader and then to address this directly.
- The written submission must be accompanied by up to **six high resolution** photographs with applicable captions.
- The photographs and copy must be submitted separately. The photographs must be .jpps and the copy in Word (not PDF format).
- The submission must also contain a **summary of important project information** such as the client, main contract, etc. – i.e. the professional team involved in the project.
- **Electronic submissions only.**

### Prerequisites for entry

All the categories have the same prerequisites (unless otherwise stated). These are:

- Only South African civil and building projects that are executed by locally based companies.
- Projects are eligible during the execution of the project and up to 18 months thereafter (within reason).
- Projects must be at least 50% complete at the time of entry.

### Awards evening

Information about the format/venue and date of the awards evening will be available in July.

### Entry form available on

[www.constructionworldmagazine.co.za](http://www.constructionworldmagazine.co.za)  
or by requesting it from [constr@crown.co.za](mailto:constr@crown.co.za)

### Contact

For more information contact the editor,  
Wilhelm du Plessis, on 011 622 4770 or [constr@crown.co.za](mailto:constr@crown.co.za)

<p><b>1</b> <i>Category</i> <b>Civil Engineering Contractors</b></p>	<p><b>2</b> <i>Category</i> <b>Building Contractors</b></p>
<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>	<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>
<p><b>3</b> <i>Category</i> <b>Civil Engineering and Building Contractors (outside South Africa)</b></p>	<p><b>4</b> <i>Category</i> <b>Specialist Contractors or Suppliers</b></p>
<ul style="list-style-type: none"> <li>• In addition to the common prerequisites, projects outside South Africa must be executed by a <b>South African</b> contractor.</li> </ul> <p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>	<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>
<p><b>5</b> <i>Category</i> <b>Consulting Engineers</b></p>	<p><b>6</b> <i>Category</i> <b>Architects</b></p>
<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>	<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>
<p><b>7</b> <i>Category</i> <b>The AfriSam Innovation Award for Sustainable Construction</b></p>	<p><b>Construction</b> <small>WORLD</small></p>
<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <li>• Corporate Social Investment</li> <li>• Design innovation</li> <li>• Environmental Impact Consideration</li> <li>• Health &amp; Safety</li> <li>• Quantifiable time, cost and quality</li> <li>• Risk management</li> <li>• Motivation facts about the project</li> </ul>	<p><i>Main Sponsor</i>     <i>Gold Sponsor</i>     <i>Silver Sponsor</i></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p><i>Associate sponsor</i>     <i>Associate sponsor</i></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div>
<p><b>Entry Deadline</b> Friday, 6 September at 17:00</p>	



## Hidden **BEHIND VIEWS**

*Keller Geotechnics, with its vast expertise and knowledge, has successfully designed and installed lateral support systems on the challenging Atlantic Seaboard. This expertise was crucial at the Le Béton residential development, where a complex cut, with numerous intricate details, was required. The Le Béton residential development in Bantry Bay, on De Wet Road, will feature three luxurious homes. Bantry Bay, the second most expensive suburb in South Africa, only to Clifton down the road, will see the price of a villa in this development exceed R70m.*

The Le Béton development, by the award-winning Svelte Bespoke (Best Residential Development at the International Property Awards, 2023/2024), will have breathtaking views overlooking the Atlantic Ocean and Seapoint. Another impressive and somewhat intimidating view was seen after Keller had completed the remarkable 18 m anchored lateral support. This support is now hidden, but it is allowing the construction of villas to commence.

### Geology

The site is underlain by granite of the Peninsula Pluton of the Cape Granite Suite. It is not far from the interface between the Granite and Malmesbury group, which Darwin studied in his voyage of scientific discovery. The natural slope of the area was roughly 22° to 25° before any development took place in the 80s. This slope angle/natural angle of repose reveals a lot about the residual soil's behaviour and strength and how the material could behave if cut and left unsupported.

The granites are highly erratic in their weathering. Over large portions of the site, the top few metres are decomposed and weathered, and whereafter it grades into soft to harder rock. The weathered material could be classified as an intermediate granular material (IGM) as it is difficult to classify as either soil or rock. Some soft and medium-hard rock zones are found in the profile, as seen in the boreholes in *Figure 1*.

### Problem

Hillsides are typically desired locations for constructing homes with lovely views. In Bantry Bay, spectacular views of the sea and city can be seen from the hillside, which has the advantage of being close to the hustle of Seapoint. Developments on these slopes often come with significant view-imposing regulations; therefore, excavations need to be created to prevent obscuring neighbouring views. These cuts differ from those on level terrain with balancing forces from either side of the excavation, as illustrated in *Figure 2*.

With the excavation at Le Béton being on a hillside, there becomes an imbalance of forces, as seen in *Figure 3*.

The structure, therefore, often needs to resist this imbalance using slabs and shear walls. Shear walls usually take up valuable space within the building and are frequently incorporated with much hesitation by the architect. Alternatively, permanent grouted anchors can be installed inside the property boundary,

resulting in the loss of development volume, or they can be installed into neighbouring properties if allowed. However, this is not easily achievable with permission agreements, and notary deeds of servitude need to be agreed upon with the neighbouring properties. These permissions are seldom given and can take years to conclude. Such designs are, therefore, best iteratively developed by optioneering between the architect, structural engineer and Keller. Moroff & Partners and Keller followed this approach to establish the final bulk earthworks and lateral support requirements based on the architectural design.

The Le Béton hillside excavation has a total maximum cut height of 18 m, with a 4,5 m wide terrace located 6,5 m below the top of the lateral support. The total retained height is 21 m due to a 3 m segmental concrete block wall above the lateral support, adding a surcharge to the lateral support. The lateral support on the side faces was placed relatively close up against existing multistorey neighbouring properties, which induces large surcharge loads.

### Risk

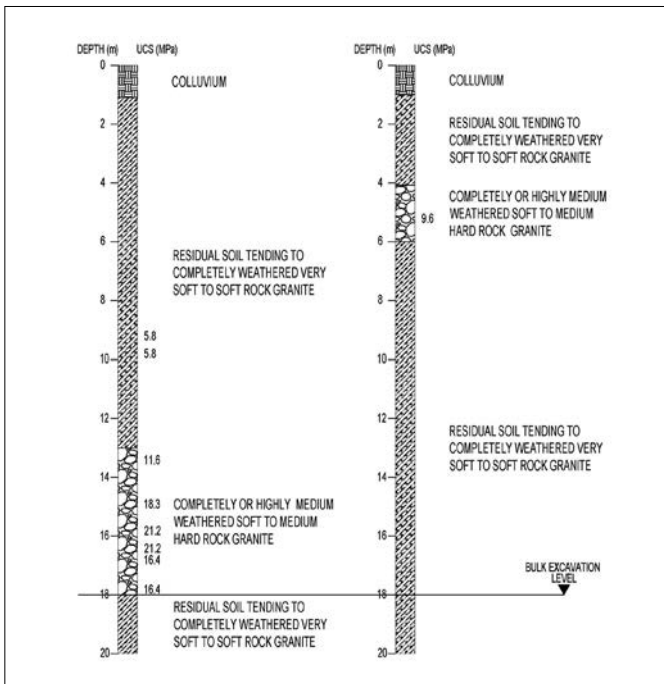
Cutting into a hillside poses a risk to any development. Case studies of unsupported cuts for developments on the Atlantic Seaboard show the importance of lateral support systems, as failure could cost the developer dearly. Lateral support systems and owner's removal of lateral support insurance appropriately reduce the risk of global instability and displacements that could damage neighbouring properties.

### Solution

The lateral support at Le Béton consisted of eight rows of temporary anchors, ranging from 25 m to 12 m, and nails ranging from 18 m to 3 m. The anchors and nails were used interchangeably in an arrangement designed to provide the best solution for the support. The lateral support included a permanent shotcrete (sprayed concrete) wall. The structure includes shear walls that will provide lateral restraint in the permanent condition, with slabs butting up against the walls to ensure propping and transfer.

### Construction and monitoring

Construction was completed within the original timeframe despite some delays in the earthworks. Harder rock was



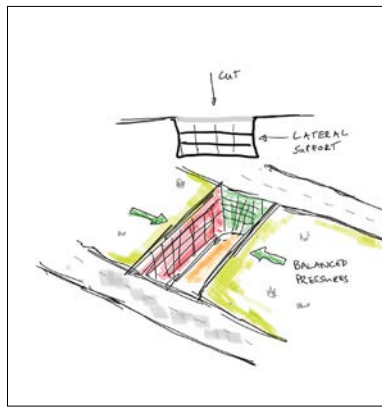
**Figure 1. Subsurface profile.**

encountered at shallower depths than expected, despite boreholes being drilled on the site. This allowed designs to be refined and optimised according to conditions our local design engineers witnessed on-site. With the combined effort of Keller and the earthworks contractor, the project was completed on time, with minimal impact and disturbance to the neighbouring properties.

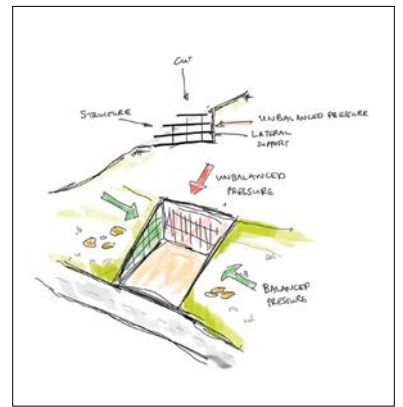
The support was constructed top-down in staged drops. As each level was dropped, grouted anchors, nails, shotcrete and mesh were added to stabilise the cut face.

During the construction, the neighbours of the back lateral support face informed us of a new elevated pool they were building. The pool was built during the construction of the lateral support, and the design had to be refined in light of this new load that would transfer to the lateral support.

A lesson from this design-and-construct project was the importance of a cambered surface and temporary water gullies above the lateral support during a terraced excavation. These prevent rainwater from ponding above the lateral support and need to be carefully managed by the earthworks and lateral support contractors. Nail pull-out tests were undertaken to



**Figure 2: Excavation in level terrain.**



**Figure 3: Excavation in hillside terrain.**

ensure that the assumptions made in the design were accurate.

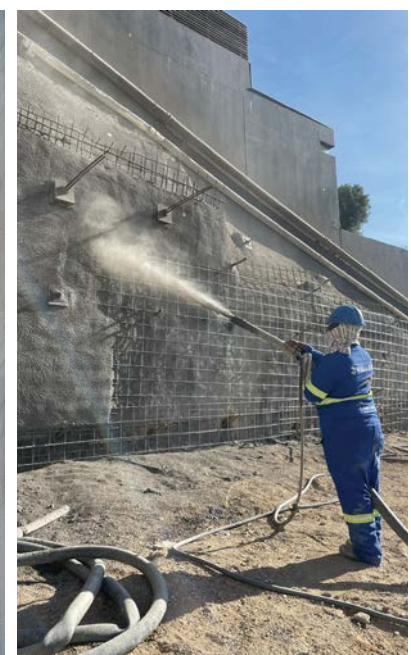
Throughout construction and after completion, monitoring was carried out to observe the movement of the lateral support. The movement fell within the allowable movement for lateral supports, as detailed in the Lateral Support in Surface Excavation Code of Practice (1989). Two localised monitoring points displaced more due to water ponding. This was rectified by removing the ponded water accordingly. However, this did not jeopardise the integrity of the support. The construction of the permanent structure has commenced, and Keller will conduct a post-inspection to review permanent propping. ☺

**Written by:**



**PROFESSIONAL TEAM**

- Development: Le Béton
- Developer: Svelte Bespoke
- Architect: Scott + Partners
- Structural Engineer: Moroff & Partners
- Lateral Support Contactor and Designer: Keller Geotechnics
- Main Contractor: Base Projects



# Ranked first in Dams and Reservoirs in **ENR TOP 500 DESIGN FIRMS FOR 2023**

*Globally trusted infrastructure consulting firm AECOM was ranked first in Dams and Reservoirs in the Engineering News-Record (ENR) Top 500 Design Firms list for 2023. It underpins its reputation as the global leader in dam, reservoir and water projects. With over 85 years in the industry, AECOM has worked on literally thousands of dams and water resources projects around the world.*



*Isak Malherbe, Associate Director, Surface Water Management, Africa at AECOM.*



*Danie Badenhorst, Dams and Hydropower Lead at AECOM.*

**“W**e offer solutions in every facet of dam engineering, from planning and feasibility through design and construction, commissioning, operation, ongoing dam safety monitoring, maintenance, rehabilitation and decommissioning,” explains Danie Badenhorst, Dams and Hydropower Specialist at AECOM.

From homogenous to zoned earthfill, rockfill, Concrete Face Rockfill Dams (CFRD), Asphalt Concrete Rockfill Dams (ACRD), Roller Compacted Concrete Dams (RCC), mass concrete, concrete buttress and concrete arch, AECOM’s dam specialists have achieved success in all design types. Its hydropower experts have designed and constructed all types and sizes of plants, with capacities of up to 12 600 MW and heads from 21 to 2 165 feet.

The team has extensive experience in delivering dam engineering projects for public and private sector clients. “We combine our connected expertise across multiple disciplines to solve our clients’ most complex challenges. This integrated approach allows us to pair local knowledge with global expertise to deliver the best project outcomes,” explains Badenhorst.

AECOM has even developed specialised procedures and computer models to simulate past, present and future water system operations. Its world-class engineers and specialists excel in simulating surface and groundwater

supply options, complex reservoir operations and instream flow requirements. It assesses and analyses alternative water resource management strategies and crucially has experience in the complex institutional and regulatory aspects of water rights, environmental permitting and adaptive management programmes.

“We work across the entire project lifecycle,” explains Badenhorst. It ranges from traditional and alternative project delivery options such as design-build, design-build-operate and public-private-partnerships. Projects include Greenfield sites, as well as dam upgrade and augmentation projects. “As a leader in upgrading and rehabilitating major dams, we have completed projects across the globe, which reflects our global reach,” comments Badenhorst.

One of South Africa’s premier dam-design engineers, Badenhorst won Engineer of the Year at the 2016 SAICE-SAFCEC Civil Engineering Awards. He has over 20 years’ experience in major water resource and hydropower development projects, involving master planning, feasibility studies and design, totalling a 40-year career in civil engineering.

Badenhorst has carried out numerous tasks as an approved professional engineer, a requirement in South Africa in terms of the Dam Safety Act. In addition, he has contributed to national and international best practice in dam engineering, including safety designs. Skills development is also a key focus, with

Badenhorst mentoring candidate engineers at AECOM to build technical and professional skill sets in dams and hydropower.

In line with creating awareness for dam engineering in South Africa, Badenhorst has represented the country at the annual meetings of the International Congress of Large Dams (ICOLD) and chaired the South African National Committee of Large Dams (SANCOLD).

At AECOM, Badenhorst has been involved in some of Africa’s most prominent dam projects. These include the Itare Dam Water Supply Project in Kenya, the Mooi Mgeni Transfer Scheme for the Spring Grove Dam and Appurtenant Works, and the Umkhomazi Water Supply Project, together with the rehabilitation of 20 large dams for the Department of Water and Sanitation. Badenhorst was also Project Manager and Study Leader for the engineering investigations for the bilateral Noordoewer/Vioolsdrift Dam Feasibility Study. Here, he trained client and sub-consultant staff on various aspects of dam-design considerations at the feasibility level.

Another major project was managing the repair works at the 145-m-high Mohale Dam during Phase 1B of the Lesotho Highlands Water Project, in addition to his role as Dam Design Engineer. His mentorship on this project saw him win the BKS Prize for Innovative Engineering for the design of a river diversion mechanism using a breaching section for the coffer

dam. Badenhorst comments that his most challenging project to date has been the Corumana Dam on the Sabie River in Mozambique. Accepted by the World Bank, his project proposal resulted in considerable cost and time-savings for the client.

Another key member of the Dams & Hydropower team is Associate Director Isak Malherbe, who has over 30 years’ experience. Malherbe has extensive experience in managing and executing projects related to flood mapping, risk management, flood mitigation and hydrological studies.

“AECOM is consistently ranked as the #1 Dams and Reservoirs firm by ENR, and this proves our capability in this sector. Our goal is to ensure that our water clients have access to globally sustainable technologies, locally delivered.

We are committed to delivering projects that improve the quality of life for many South African communities by installing infrastructure that protects against flooding and safeguards water supply in times of drought,” concludes Malherbe. ☺

*“We work across the entire project lifecycle,” explains Badenhorst. It ranges from traditional and alternative project delivery options such as design-build, design-build-operate and public-private-partnerships.”*

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# From champion swimmer to architectural **VISIONARY AND MASTER DEVELOPER**

*From a young age, Boubker Benjelloun stood out not only as a talented swimmer but also as a visionary dreamer. Representing his country on the national swimming team, he dedicated countless hours to the sport.*

**B**ut Benjelloun's time in the water was more than just about athletic excellence. As he glided through the water for countless hours, his mind was abuzz with ideas, sketching in his imagination the most exquisite urban landscapes and architectural marvels. This unique blend of physical discipline and creative ingenuity set the stage for what would become a distinguished career in urban design, architecture and real estate development.

Despite his passion for swimming and architecture, Boubker Benjelloun initially pursued a career in the dental sector, primarily to please his family. He established one of the most successful clinics in Paris, but his thoughts constantly drifted back to his true passions: architecture and urban development.

The turning point came when Boubker stumbled upon a real estate opportunity that beckoned him back to Morocco. With a bit of luck, his first project in Casablanca involved purchasing a villa in a neighborhood that soon transformed into a commercial hub for high-end and top brands. This fortunate turn of events allowed him to sell the villa and reinvest the money into several very successful projects. Despite these achievements, Boubker still felt unfulfilled, as his ultimate dream was to design and revolutionise the real estate industry.

At the age of 40, determined to pursue even bigger projects, Boubker moved to Dubai, a city synonymous with architectural ambition and innovation. Here, he met with some of the most influential real estate magnates and billionaires, who quickly recognised his exceptional talent. They were struck by Boubker's clear vision and his unique ability to visualize the final project even before the first sketch. Impressed by his foresight and creativity, these industry leaders decided to invest in him. This pivotal moment sparked a series of projects that spanned the globe, from India to Singapore, the Middle East, the USA, and Europe. The success story was launched, becoming an unstoppable force in the world of property development. Boubker finally fulfilled his dream of designing and masterminding some of the most extraordinary property developments worldwide.

Boubker's structural designs are not 'academic' but are 'free and independent'. They have an inherent appeal that is difficult to describe but all too apparent to the eye. Perhaps



*Boubker Benjelloun continues to build and innovate. His most enduring designs are perhaps those that lie within the evolving landscape of human potential.*

the best example of Boubker's remarkable architectural design is the Como Tower in Palm Jumeirah destined to become a landmark in the architecturally rich city of Dubai.

During the design process, Boubker faced significant opposition from some of the most renowned engineers in the world. The challenge arose from his ambitious concept of incorporating a massive arch at the base of the building - a design element that posed a considerable challenge to the balance and stability of the structure. Despite the skepticism, Benjelloun passionately defended his vision and managed to convince everyone of its feasibility. Ultimately, his bold idea was successfully realised, cementing his reputation as a visionary architect. The market acknowledged the extravagance and beauty of the Como Tower, leading to the sale of the world's most expensive front beach penthouse within this iconic building for approximately USD150m.

*B. Foundation's first Ethiopian Village.*



*Museum of Humanity.*



Boubker's previous experiences in Morocco made him realise that conducting a sustainable and successful business requires a strong structure and the support of the best teams. Now, he leads a conglomerate with companies active in several sectors, including architecture, design, engineering, and media, employing more than 300 people.

This determined businessman has no intention of stopping. A visit to one of his Dubai offices, surrounded by lush vegetation and plants, reveals multiple projects in the pipeline, each more extravagant and ambitious than the last. Alongside his business partner, Ben Piper, they aspire to become the architects for humanity. Looking ahead, Benjelloun Piper Architecture plans are as ambitious as they are inspiring. Projects like the Museum of Humanity and the largest football stadium in the world are underway, poised to redefine not just architectural standards but also the role such structures play in community and cultural engagement.

Beyond the UAE, Boubker's projects have spanned the globe, from Europe to the USA, and Asia, each marked by his signature blend of innovation and utility. Parallel to his architectural career, Boubker has nurtured a deep commitment to philanthropy.

The creation of his Family Foundation, B. Foundation is a testament to Boubker's expansive vision transcending the realms of architecture and venturing deeply into humanitarian efforts. This foundation is not merely an extension of his business; it is the heart of his legacy.

Dedicated to improving the lives of the underprivileged, the foundation strategically focuses on long-term solutions

such as education and community development, moving beyond the mere provision of temporary relief.

The inaugural chapter of the B Foundation has begun in Ethiopia, where the focus is on empowering local communities to rise above poverty through sustainable initiatives.

His guiding philosophy - "The true measure of a man is not in what he keeps, but in what he gives" - echoes through every facet of his work. In Boubker's vision, true happiness and success are found in the impact one can make on the world, and in the legacy of positive change one leaves behind.

As Boubker Benjelloun continues to build and innovate, his most enduring designs are perhaps those that lie within the evolving landscape of human potential. Through the B Foundation, he is not only constructing buildings but also building futures, proving that the greatest structures we can create are the communities we uplift and the lives we change.

As Boubker Benjelloun continues to push the boundaries of architecture and philanthropy, his journey from a disciplined swimmer to a visionary architect encapsulates a narrative of relentless pursuit of passion and purpose. His impact extends beyond the skyline; it reaches into the heart of communities, fostering change and inspiring future generations.

In a world where architecture and philanthropy intersect, Boubker stands as a testament to the power of visionary thinking and enduring human spirit. ©

*The Pointe.*



*Como residences.*





# The role of the private sector **IN AFFORDABLE HOUSING**

*Affordable housing remains a complex challenge, with varying interpretations of what 'affordable' actually means. By Lloyd Wallace, Technical Director and Expertise Lead, Infrastructure Advisory, Zutari; and Suzette van der Walt, Consulting Manager, Infrastructure Advisory,*

According to the World Bank, housing is considered affordable when it costs below 30% of the average household income. In South Africa, the term often invokes thoughts of government-subsidised housing, notably the Reconstruction and Development Programme houses and its successor, called Breaking New Ground.

Affordable housing initiatives span a spectrum of models, from Informal Settlement Upgrading (UISP) and site-and-service provision to ownership models like RDP and first home finance (formerly FLISP). Social housing, a privately owned and subsidised rental housing option, along with public housing and community rental units (CRUs), further diversify the landscape of subsidised housing.

Amidst this complexity, the private sector plays a pivotal role

in developing affordable housing and introducing innovative models like sub-market rental and subsidised social housing. Affordable housing, considered a crucial element of economic redress, is a public good when it provides safe, good-quality housing. It provides the foundation for upward mobility and contributes to positive urban environments.

Private sector involvement brings its typical advantages, but some challenges need careful consideration. The grant-based nature of subsidies, particularly those directed to Social Housing Institutions (SHIs) for project capital finance, may inadvertently disincentivise comprehensive asset renewal budgeting. Without a viable exit strategy or a larger share of liability for developers, there is a risk of social housing projects falling into a state of disrepair once the capital commitments



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Lloyd Wallace, Technical Director and Expertise Lead, Infrastructure Advisory at Zutari.

(sometimes as low as 30% of total development cost) have been met. The refurbishment of existing housing stock aligns with green principles, as it is inherently more sustainable than the construction of new structures. Infill design, a strategy that enhances urban density and reduces pressure on infrastructure networks, can further contribute to environmental and social sustainability.

The private sector, equipped with its efficiency and innovation, can play a transformative role in reshaping the landscape of affordable housing. Collaboration between public and private entities is essential to navigate the intricate challenges the housing backlog poses and create resilient infrastructure for future generations. As we strive for economic redress and equitable access to housing, it is crucial to leverage the strengths of the private sector while mitigating the risks



Suzette van der Walt, Consulting Manager, Infrastructure Advisory at Zutari.

associated with subsidy-based models. By doing so, we can pave the way for sustainable, affordable housing solutions that address both the immediate backlog and future challenges. The success of subsidised housing lies not only in its provision but in its ability to endure and adapt to the evolving needs of our communities. Zutari's Infrastructure Advisory Team attended two housing conferences in November 2023. The 8<sup>th</sup> Annual Affordable Housing Africa conference held in Cape Town saw specifically DFIs and private developers in good attendance. The session also concluded with a masterclass on PPPs in affordable housing.

Zutari presented two case studies, contrasting insights from the teams working with the City of Cape Town's Public Housing Department and insights from providing lenders with technical advisory services for social housing developments. ©

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# Curvaceous retaining walls for **ATLANTIC BEACH PADEL COURTS**

*In August 2023, Decorton Retaining Walls, Terraforce recommended contractor, Western Cape, commenced construction on several terraced and undulating rock face finish retaining walls, as well as Terraforce 4x4 Step block access stairs and wide staircases wrapping parts of the courts.*



The walls were required to lower the padel court to the same level as the clubhouse, to help with reducing wind damage and to beautify the whole area. The client, Atlantic Beach Estate, was looking for a rustic finish, and ultimately chose the Terraforce® L12 rock face finish.

Says SP Van Blerk, Decorton Retaining Systems: “Our installation of Terraforce earth retaining walls and 4x4 Step block steps for the Padel Court at Atlantic Beach Estate shows the true versatility and functionality of Terraforce products. The blocks are incredibly adept at creating the most stunning undulating retaining walls, able to follow almost any site contour!”

A uniquely versatile concrete retaining wall system, Terraforce’s reversible, hollow-core retainer block system allows you to make plants a part of your wall

in many creative ways. The blocks were designed to simply stack using a distinctive horizontal interlock, a shape that allows for unrestricted wall gradients and curves to suit your project - unhampered by nibs and slots - to provide a cost-effective, and incredibly versatile earth retaining system.

Even though the blocks are lightweight for easy delivery and installation, they are heavy in mass when filled with soil, gravel or concrete providing additional vertical interlock. ©

#### PROJECT TEAM

**Architect:** Harry Greenberg

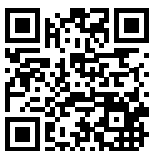
**Main Contractor:** Plastotop Barrett’s Sports Court

**Subcontractor:** Decorton Retaining Systems



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# Azra – City Deep: **THOUGHTFUL USE OF GABIONS**

*Azra – Deep, a recently completed project by Gabion Baskets is nestled behind the bustling Multiflora Market. The project is an integral part of the Natalspruit River Diversion Project. This strategic placement aims to spark future developments along the vibrant trading corridor, bringing new possibilities to the community.*



One key aspect that sets Azra - City Deep apart is the thoughtful use of gabions. These sturdy structures embody Gabion Baskets' commitment to ensuring that the local community reaps the benefits of this project's development. By leveraging gabions, it is not just building infrastructure but also nurturing a sustainable environment that prioritises both functionality and community well-being. The client's vision prioritises the socio-economic upliftment of the area, ensuring that the project positively impacts the lives of those residing in proximity.

After the recent heavy rainfall Gauteng experienced, the results have been both evident and promising. At present, the river is flowing freely, albeit with a controlled release as the diversion has not yet been fully opened. To foster growth and rejuvenate the surrounding environment, Gabion Baskets has kept the flow minimal, allowing seedlings and existing grass to sprout and line the embankments of the channel.

It is noteworthy that despite the varying levels of precipitation, Gabion Baskets' purpose-built weirs and culvert section have efficiently served their purpose. They continue to regulate the flow, ensuring that hydraulic processes filter through as intended. This strategic management of water flow not only aids in environmental preservation but also facilitates sustainable development within our community. During the

course of the project, a substantial number of gabions were used. Specifically, a total of 921 gabions were utilised varying from 1,5 x 1 x 1 to 6 x 2 x 0,3. This statistic alone demonstrates the scale and complexity of the project.

However, the sheer volume of materials put to use in this project extends far beyond just the gabions. An impressive amount of rock was also incorporated into the project's construction. To be precise, 3 234 tons of rock was utilised. The use of such a significant quantity of rock material highlights the project's robustness and durability.

These figures, both for the gabions and the rock quantities used, are a testament to the project's size, rigour, and the high level of detail that went into its planning and execution. It underscores the commitment to achieving the desired project outcome, while also ensuring structural stability and long-term durability.

As the positive outcomes following the rain are witnessed, let us all remain vigilant and committed to the continual maintenance and preservation of our natural resources.

## **A challenging terrain**

The site posed significant challenges, as the prevalent material was primarily composed of mine sludge and slimes, making the conditions exceptionally demanding. The first hurdle was



the difficult founding conditions for culverts and gabions due to the slimes material's scanty shear strength. This situation was further complicated by the extremely saturated soil, which necessitated double handling of material. The wet material had to be excavated and left to dry before being moved, increasing the project's complexity and duration.

Excavation was another significant bottleneck, as the equipment would occasionally sink into the saturated soil when slimes material was abundant. The situation escalated during heavy rains, causing temporary river bursts on several occasions. Consequently, it necessitated continuous water pumping from the new excavations to cut the final channel, an operation that was both time-consuming and resource intensive.

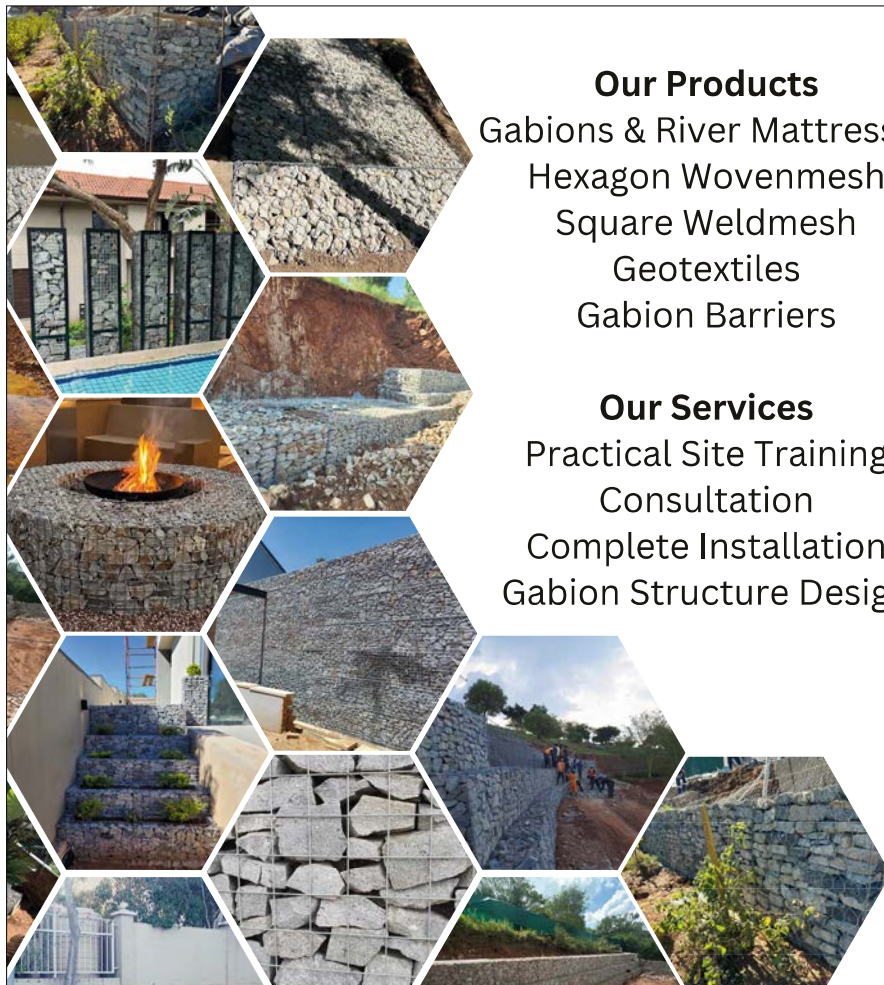
Finally, the stone packing became an arduous task, as trucks could not access the work areas due to the harsh terrain. The stones had to be dropped off at the site entrance and manually transported up to 1 km to the work areas. This process was not only labour-intensive but also led to significant delays in

the project. Therefore, a keen understanding of the terrain and its challenges is crucial in ensuring successful project implementation.

At the outset, it's important to acknowledge that an experienced trainer was deployed on this site. This trainer was pivotal during the initial stages. However, it is crucial to note that we only utilised this trainer's expertise for a duration of one week.

During this time, the trainer played a vital role in educating the team on strategically building baskets and emphasising the necessity of neatly packing the exposed faces. This not just enhanced the overall project efficiency but also ensured an aesthetically pleasing outcome.

Moreover, an invaluable aspect of this training process involved the empowerment of community members. They have been equipped with a life-long skill, one that they can leverage in different contexts in the future. This skill acquisition, believe, will serve as a stepping stone towards their self-sufficiency and growth. ☺



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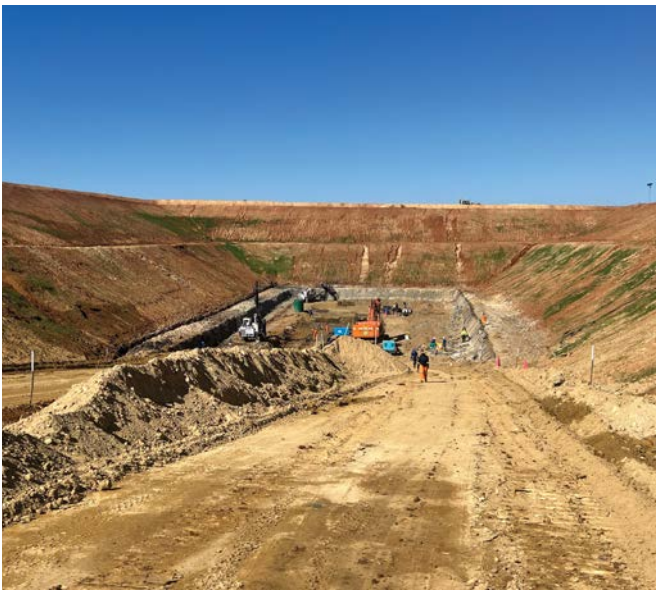
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# Trusted geotechnical **SERVICES**

*BLOC Contractors was started in 2004 and initially focused on concrete cutting and coring. The company's services grew to include, amongst others, concrete repair, specialist coatings and joint sealing. In 2017, Byron Field became a majority shareholder and the company underwent a significant change in focus and is now a specialist geotechnical business offering lateral support, pipejacking, anchoring, sheetpiling, shoring and various other specialist services to the building and civil industries. Construction World spoke to him.*



“Our story is one of expertise and commitment to delivering reliable geotechnical solutions, with which we have solidified our position as a trusted service provider in the construction field across Southern Africa,” says Field. “We take pride in our strategic collaborations with industry leaders, BLOC Concrete Solutions and BLOC Composite Structures, and this enables us to offer a comprehensive suite of services to the construction industry across Southern Africa.”

The company offers trusted geotechnical services. “Our team of skilled geotechnical engineers and specialists are equipped with a deep understanding of the industry and ample experience, allowing us to navigate the complexities of ground conditions with expertise,” says Field.

The company’s head office is in Durban while it also has an office and workshop in Gauteng. “In 2018 we introduced our trenchless service division to service pipe-line, fibre and other infrastructure related clients. Our services have continued to grow in the geotechnical sphere to the point where we are now a fully-fledged geotechnical company that tenders and carries out work throughout South Africa and SADEC,” says Field.

He says the unique selling point of BLOC Contractors is its innovative approach to geotechnical challenges. “Our geotechnical services ensure stability, safety and resilience. BLOC’S young team is energetic and motivated to be productive and solution orientated in its offering of lateral support, deep excavations, shoring, sheetpiling, pipejacking, directional drilling, anchors and micropiling,” Field elaborates.

“To build trust as a contractor is imperative,” says Field. “We need to trust our clients will pay us and our clients need to trust

us to follow through on our commitments to execute projects on time, on budget and to the required quality and safety standards.”

As construction can be a dangerous business, there have been dramatic changes in safety legislation over the past 10-15 years. “Many of BLOC’s services are focused on providing safety to our clients, such as shoring for deep excavations. Safety is non-negotiable and BLOC Contractors considers itself a leader when it comes to the safety systems and processes it implements on site,” says Field. “Due to the company’s growth over the past few years, it has been important to develop our staff and we have found this to be a rewarding process for all parties.”

BLOC is currently participating on multiple sections of SANRAL’s N3 and N2 KwaZulu-Natal upgrades. “SANRAL’s upgrades require many of BLOC’s services including pipejacking and drilling for stormwater, permanent lateral support for cut walls, temporary lateral support for MSE walls, cable anchoring for technical structures and more. We are proud to be working on some intricate technical projects for this professional and demanding client,” says Field. These projects are ongoing for the next 12 to 18 months. ☺

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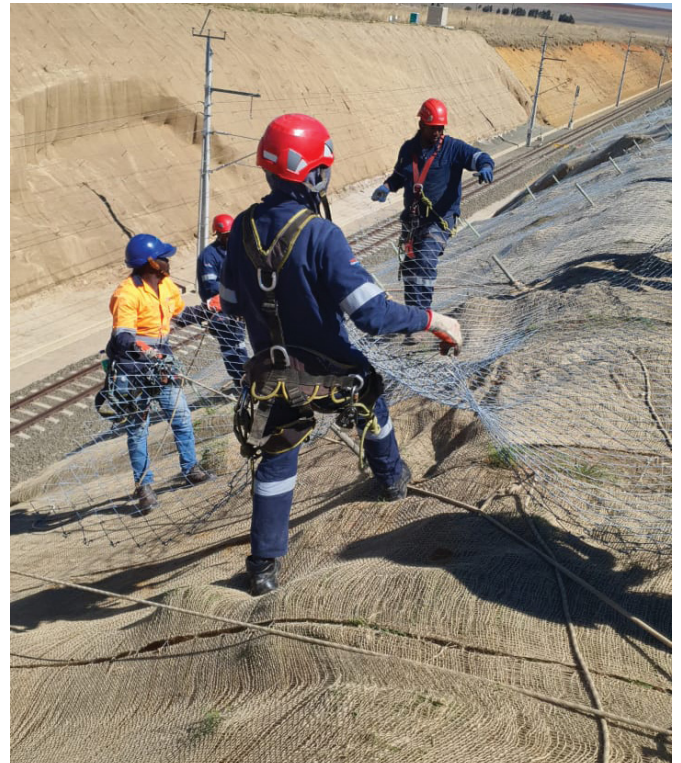
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# A new era in mesh production: **GEO EQUIP AFRICA PIONEERS HIGH TENSILE STEEL MESH FACTORY**

*A significant milestone in the history of South Africa's steel industry was recently reached with the launch of Geo Equip Africa's (GEA) factory, dedicated to producing High Tensile Steel (HTS) mesh. This pioneering venture, led by a seasoned team of experts, is poised to revolutionise the mining and civil engineering sectors.*



As GEA embarks on this exciting journey, it is excited by the opportunity to address a long-standing need in the market. Its factory, currently in the commissioning phase, is on track to begin production in June or July 2024 with the first machine serving as a prototype for future scaled-up operations. This strategic approach ensures a solid foundation for growth and sets the stage for GEA flagship products, MineMat® and SafeT-Mesh®, to make a meaningful impact.

GEA takes pride in being one of the first, if not the first fully South African owned High Tensile Steel wire mesh factory in South Africa, a testament to its team's unwavering dedication and expertise. The company's phased growth approach is designed to respond to market demand and stability, ensuring a sustainable and responsible expansion. To supplement production, GEA has an established partnership with an accredited manufacturing facility, allowing it to import additional supplies and meet the needs of valued customers.

GEA's commitment to the community is equally important. By locating the factory near main market hubs, it aims to

create employment opportunities for local residents, fostering economic growth and development. This approach not only benefits the surrounding community but also enables GEA to tap into the talent pool and expertise in the region.

GEA recognises the importance of quality, reliability and innovation. Its HTS mesh products are designed to meet the exacting standards of the mining and civil engineering industries, providing exceptional strength, durability and versatility. The company's experienced team, comprising technical, commercial, operational and legal experts, is dedicated to ensuring that every product meets its stringent quality control measures.

As GEA launches this groundbreaking factory, it acknowledges the trust placed in it by its stakeholders. The new factory will represent a significant step forward in HTS steel mesh production.

In conclusion, the launch of Geo Equip Africa's factory marks a new chapter in the history of South Africa's steel high tensile steel mesh industry. With its commitment to quality, community, and innovation, GEA is poised to make a lasting impact in the mining and civil engineering sectors. ©



AfriSam celebrates a long standing relationship with CPMs.



# Afrisam’s legacy of support for concrete **PRODUCT MANUFACTURERS**

*Reaching its 90<sup>th</sup> year in 2024, construction materials leader AfriSam can also celebrate a long standing relationship with concrete product manufacturers (CPMs) – a segment which today plays a vital role in construction and other industries.*

According to Adele Wentzel, Sales Manager Cement Manufacturing Gauteng at AfriSam, some CPMs have been customers for over four decades, forming trusted partnerships based on AfriSam’s quality cement and value added services.

“The manufacture of concrete products is generally a highly sophisticated market, with demanding requirements for specialised mix designs and final product quality,” says Wentzel. “This is a key reason behind our integral role in this space, as a quality cement is just the starting point for meeting CPMs’ challenging range of technical specifications.”

## **‘Rolls Royce’ cement**

The cement classes in AfriSam’s offering that serve their needs best are its AfriSam Rapid Hard (52,5R) cement and its AfriSam High Strength (42,5R) cement.

“We regard our Rapid Hard product as the ‘Rolls Royce’ for applications in this segment, as it delivers not only the consistent quality customers rely upon, but can contribute to strategic reductions in production cost, which the market

is always looking for,” she explains. “In most production line operations, for instance, time is at a premium. The quicker a product can be safely removed from the mould, the better. The quick strength gain of Rapid Hard cement gives the user that advantage.” At the same time, the CPM sector includes ranges of decorative products which do not face the same high performance demands as many of the structural items. These users can usually base their production on a more fit-for-purpose class of cement, she notes, and they will receive the same level of attention from AfriSam’s team.

She highlights that a major cost for CPMs is the energy required to provide the under-roof steam curing for many concrete products. These are the kinds of fields where AfriSam’s Centre for Product Excellence (CPE) in Roodepoort provides invaluable advice and support. In addition to helping customers with the optimal cement mixes for their applications, the CPE has partnered with a leading admixture provider to contribute to CPM’s reduction in energy consumption.

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*Creating Concrete Possibilities*



### Curing speed

“With technical expertise across various fields, the CPE team has worked with CPMs to apply these admixtures for speeding up the curing process, or for curing concrete products while reducing the steam energy required,” she says. “Customers have confirmed the savings in energy consumption have been substantial.”

In any mix for concrete products, there are many factors to consider in finding optimal parameters. Wentzel points to aspects like the application of the product and the finish required, as well as the aggregate types and sizes. In fact, this segment of the market is so specific in its needs that AfriSam develops specialists in its service team to consult with particular customers.

“We recognise that we need people who focus their skill-sets on what each niche market is looking for,” she says, “especially when there are sophisticated customers with strategic requirements.”

### Highest standards

Underpinning these value-adds, is the quality of the cement range, where a key benchmark is the South African National Standard (SANS) 50197-1 for composition, specifications and conformity criteria – and SANS 50197-2 for conformity evaluation.

“Based on compliance to these standards, we assist our larger customers – and even smaller companies if and when they need – with performance certificates,” she explains. “This provides confidence through the supply chain, as the quality of their products is dependent on the quality of our cement.”

AfriSam’s advanced testing infrastructure and expertise also leads customers like brickmakers to send their finished products to the CPE for strength-class testing. They may also use AfriSam for comparative testing, where these results are confirmed by tests conducted in an independent third party laboratory.

### Time-sensitive

Given the pressure of production at CPM operations, delivery times of cement need to be both flexible and reliable. This, she notes, is facilitated by the close working relationships that AfriSam’s team develops with its customers.

“It’s really important for customers in this segment to feel comfortable with our ability to respond quickly in an emergency, and for us to be flexible about when deliveries need to arrive,” says Wentzel. “Our sales team needs to have a clear understanding of what the customer needs and expects, and from this we build a partnership of trust that allows better communication and cooperation.”

The importance of a strong relationship has been heightened by the impacts of load-shedding, she concludes, as unreliable power supply adds uncertainty and complexity in any time sensitive operation like manufacturing concrete products. The CPM segment therefore relies heavily on AfriSam’s knowledge and understanding of how operations are affected. ☺



*The CPMs often have demanding requirements for specialised mix designs and final product quality.*



*Customers like brickmakers can send their final products to the CPE for strength-class testing.*

# The impact of cheap imports on South Africa's **CONSTRUCTION SECTOR**

*Confidence in South Africa's construction industry has taken a significant hit, reflecting broader concerns about the economy and investment trends. **By George Parrott, Engineering Division Partner at King Price Insurance***



According to the FNB/BER Building Confidence Index, which reveals the percentage of respondents that are satisfied with prevailing business conditions in six sectors covering the entire building construction pipeline, confidence plummeted to 27 in the first quarter of 2024, down from 43 in the previous quarter. This sharp decline, reaching its lowest level since mid-2020, signifies a stark dissatisfaction with current conditions among industry stakeholders.

Added to this, Stats SA reports that the real value of investment in buildings contracted by an annual rate of close to 6% in Q4 2023 – possibly due to a slowdown in the installation of solar panels and other energy investments being made by households and businesses.

Amidst these challenges, the availability of cheap cement imports has emerged as a potential catalyst for revitalising the construction sector. These imports alleviate cost pressures, stimulate infrastructure projects, and promote accessibility and affordability. Projects that were previously stalled due to financial constraints or deemed financially unfeasible can now move forward, contributing to job creation, national development, and economic stimulation.

Yet, it's essential to recognise the nuanced impacts of substituting local cement production with imports. While these imports offer immediate financial benefits, they also pose significant risks, including potential job losses and economic value erosion. A report commissioned by local cement manufacturer PPC and conducted by the Centre for African Management and Markets (CAMM) highlights these risks, noting that over 2 200 jobs are potentially at risk, primarily in marginalised communities where the cement industry serves as a vital source of employment. Furthermore, there's a potential loss of R2,6b per year in economic value, and PPC's significant contribution to GDP of around R8,8b across its value chain is at risk.

Quality concerns also loom large in the debate. While cheaper alternatives may offer immediate financial benefits, they may also come with compromises in quality control. Structural engineers and architects play a crucial role in

ensuring the integrity and safety of construction projects, with meticulous planning and inspection required to mitigate risks associated with potentially lower-grade materials. Despite assurances that lower-quality cement can yield durable structures, the importance of upholding quality standards remains paramount to safeguarding public safety and long-term investments.

Most recently, the construction industry is showing signs of resilience and adaptability in the face of government having pledged more towards essential infrastructure projects. In his keynote address at the 2024 Sustainable Infrastructure Development Symposium, President Cyril Ramaphosa underscored a pivotal commitment to bolstering South Africa's construction sector. With over R230b-worth of projects currently under construction and an additional R170b in procurement, the nation's infrastructure agenda appears promising. Moreover, the government's 2023 allocation of R903b to infrastructure until 2026 signals a clear intention to drive economic growth and address critical needs in, especially, water and sanitation, and transportation.

Water and sanitation projects, facilitated by simplified procurement processes and legislative changes, offer hope for infrastructure development and job creation. In the 2023 Budget Review, government prioritised 11 strategic projects with an estimated value of R115b. These projects span the entire country and are expected to create about 20 000 jobs during construction and 14 000 jobs during operation. Projects are at various stages of funding and are expected to be completed between 2026 and 2030. In the meantime, municipalities are contracting smaller works out that will see improvements being made in the number of leakages in local water supply facilities.

Similarly, ongoing maintenance and refurbishment of roads, coupled with the emergence of smaller-scale retail and residential projects, reflect a semblance of momentum in the sector. While not without their hurdles, these initiatives underscore the industry's potential to drive economic recovery and social progress.

As an insurer that's active in the engineering, construction and building sector, King Price is keeping a close eye on developments pertaining to confidence in the sector, factors that affect projects, like the availability and price of raw materials, and the insurance needs of the contractors that are busy with projects. For our part, we've recalibrated our offering to meet the immediate risk mitigation needs of smaller contractors and project owners and have implemented a 'back to basics' approach that empowers businesses in the sector to tailor insurance policies that address their unique risk profiles. By streamlining our engineering products and providing comprehensive coverage options for risks at all stages of construction projects, we aim to bolster confidence and resilience across the construction ecosystem. ☺

# SAISC calls for quality, innovation and closer **COLLABORATION TO SECURE THE FUTURE OF THE STEEL INDUSTRY**

*Despite last year's announcement that AccelorMittal South Africa (AMSA) would close its long products facilities – and amidst warnings of projected product shortages, quality issues and supply chain disruptions – it is 'business as usual'. This is according to steel value chain attendees and SA Institute of Steel Construction (SAISC) members at a recent industry breakfast and steel supply panel discussion hosted by the SAISC.*



*Left: Adam Oldfield, Director at Cousins Steel International (CSI), SAISC Board member and leader of its technical committee. Right: Amanuel Gebremeskel, Chief Executive Officer at the SA Institute of Steel Construction (SAISC).*

Nonetheless, during a robust debate attended by over 90 steel supply chain role players – including industry heavyweights – and chaired by SAISC Chief Executive Officer (CEO) Amanuel Gebremeskel, it emerged that while there are no shortages at present, the sector remains on the brink of seismic change.

AMSA representatives present reassured the audience that their Newcastle long products facility would remain operational until June – and that the company was still accepting orders until year-end. It was also stated that negotiations around potentially keeping the long products facilities in production were progressing well.

## Seismic changes

However, Gebremeskel and Adam Oldfield, Director at leading structural steel company Cousins Steel International (CSI), SAISC Board member and leader of its technical committee, are both concerned about the future of the entire steel value chain – of which the SAISC is a longstanding champion and custodian.

Gebremeskel and Oldfield agree that the potential long product facilities closure has unearthed deeper steel sector concerns, including disconnects across the entire supply chain.

“With these in mind, the SAISC seeks to play a proactive role in encouraging strong linkages and relationships between engineers, merchants and fabricators – and by addressing the twin issues of steel quality and availability through the creation

of an overarching quality programme, which will include – amongst other initiatives – a new SAISC Red Book,” says Gebremeskel.

“Having said this, one of our greatest challenges in the steel sector is that there are so many conflicting interests and agendas throughout the industry. Therefore, there needs to be greater trust across the entire steel value chain, with role players collaborating more closely to innovate and adapt in order to accommodate and drive change,” Gebremeskel notes.

## Quality the ‘golden thread’ of industry unity

“Irrespective of the time frame, the closure of AMSA’s long products division would have a strong ripple effect across

the sector – with the largest impacts being cost escalations and the potential loss of long-term pricing – not to mention project delays resulting from logistics challenges, such as the port delays which are already negatively impacting steel imports,” Oldfield points out.

“Other pertinent issues that emerged from the panel discussion included the potential loss of steel product profiles unique to South Africa, the impact which a lack of local content could have on downstream customers (such as the automotive sector) and the possibility of finished products being imported – all of which are indications that the local steel sector is confronting many sobering issues, which could result in massive income losses for local fabricators and galvanizers,” Oldfield adds.

One of the greatest concerns voiced during the panel discussion centre on the critical – and at times thorny – issue of quality, with many SAISC members and industry heavyweights questioning the uniformity of quality standards and the traceability of product in the event of failures.

The panel discussion revealed that many are very disgruntled about low quality steel and deeply concerned about related quality issues, should local production scale down. However, all agreed that independent testing of imported product would also add unnecessary costs.

Gebremeskel believes that quality concerns will be the one area where consensus can be reached – and that this will be the

common 'golden thread' which unites a divided industry.

### Engineers as a link

Oldfield concurs, emphasising however that this starts with the engineering sector working closely with the SAISC and its well-known technical 'bible', the Red Book:

"This is a longstanding, trusted technical resource and an invaluable guide for engineers – but compiling the next edition thereof will not be easy. This is because the greatest challenge will be figuring out what the imminent steel sector disruption will do – for example, what will happen when steel merchants stop stocking certain products, narrowing and limiting available profile ranges."

"We are facing a tough transition in the steel sector, driven by all the factors raised. Typically, at the SAISC, we focus on merchants and fabricators – the downstream sector. I think engineers need to be more involved, forming a link between the upstream and downstream sectors so that collectively, we can adapt to the new demands and realities of the industry," Oldfield adds.

### Innovative industry adaption

This could entail engineers designing steel structures differently - or closing the gap created by unavailable products by using those which are available.

Oldfield uses the example of how a potentially long delay in ordering columns saw his company, Cousins Steel International, manufacture these from steel plate. Although more costly, this kept the project on track.

To enable others to follow suit, or to avoid another problem

– designers specifying product in accordance with software design packages rather than availability - Oldfield suggests that industry professionals require an extra layer of steel supply market intelligence: "A key aim of the SAISC technical committee is to create a database which allows them to understand – and design around – the particular products which fabricators can access. At the moment, no-one is working like that," he explains, adding that the extensive technical training which the SAISC conducts annually will also be crucial going forward to assist the sector in agile adaption to market changes.

### A call to action

Gebremeskel and Oldfield are therefore calling on all echelons of the steel industry to proactively engage with the SAISC, and are also voicing their appreciation for industry leaders who are already bridging the gap between the downstream sector and the primary steel producer (AMSA): "This approach will ultimately force a more united industry approach with which to negotiate with government," Gebremeskel advises.

"Meanwhile, the SAISC is committed to doing our part to ensure that the closure of AMSA's long products facilities will not have the same negative impact on the downstream steel sector as similar upstream closures had in Australia. Instead, our local steel industry needs to emulate Canada where - despite a lack of upstream primary steel producers or mills – engineers design innovatively in steel, and work closely with fabricators to bring these projects to fruition, contributing positively to the sustainability of the steel sector in that country but also to its greater economy," he concludes. ☉

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# Remote Zithulele Hospital gets upgrade, improving **HEALTH AND EMPLOYMENT OUTLOOK FOR LOCALS**

*Despite South Africa's immense potential, the country faces considerable challenges that require concerted efforts to catalyse socio-economic development and empower local communities, particularly in the often-overlooked remote regions of the nation.*

**G**VK Siya-Zama, as one of the largest privately-owned construction companies in South Africa, is committed to driving this change, with the upgrading of Zithulele District Hospital in Mqanduli, Eastern Cape, being a prime example of this.

According to Peet Meyer, Managing Director of the company's operations in the Eastern Cape, the company's expertise extends beyond mere construction to stimulating employment opportunities in the projects it undertakes.

"We are dedicated to collaborative efforts aimed at uplifting communities, ensuring that our impact transcends mere physical structures and leaves behind lasting positive change," adds Meyer.

Based in the heart of the Wild Coast, the Zithulele District Hospital was originally established as a Dutch Reformed Church in the late 1950s, with the clinic facility opening its doors the same year. With a mere 58 functional beds in 2005, and increasing to 146 today, the facility has expanded over the years to meet the growing needs of the community, particularly as more than 14 local clinics and two community health centres refer patients to the hospital.

In response to the demand for expanded services, GVK Siya-Zama, in collaboration with local contractors, is currently renovating the hospital. The renovations will feature 157 dedicated inpatient beds, male and female general wards, facilities for obstetric and basic gynaecological inpatient care, paediatric care, an infectious diseases unit, general outpatient services, clinical support services, rehabilitation and sub-acute services, a gateway clinic, staff accommodation, and a 24-hour emergency unit. Additionally, electrical and sewer infrastructure will be upgraded to meet the demands of the new additions to the facility.

Operating in remote areas is not without its challenges,

including the sacrifices personnel make by spending extended periods away from home and their loved ones, limited access to water and electricity, a shortage of skilled labour, and a lack of accommodation. However, regardless of these challenges, GVK Siya-Zama has taken proactive steps to find solutions to these by erecting short-term accommodation, seeking solutions to remedy supply issues, and mentoring contractors and their personnel, for example.

"Besides addressing the healthcare needs of the immediate community and surrounding areas, the renovation of the Zithulele District Hospital has brought with it increased employment opportunities, intending to employ 2,000 people throughout the project," says Meyer.

"Moreover, several local postgraduate Built Environment students are actively engaged in the project, showcasing exceptional motivation and skill. Their dedication has surpassed our expectations and has prompted us to consider offering permanent employment to three of the individuals."

With a projected completion timeline of 60 months, the success of the project hinges on three key criteria. These encompass job creation within the area, provision of training and internship opportunities for the local community, and engaging SMMEs to foster economic development and sustainability.

In addition to generating employment opportunities, the project prioritizes the creation of jobs specifically tailored for youth aged between 18 and 35, women and individuals with physical disabilities. Training initiatives will encompass technical and skills development programmes and are aimed at enhancing the capabilities of local residents.

Furthermore, the sourcing of SMMEs will predominantly focus on entities within the local King Sabata Dalindyebo Municipality, followed by those in the OR Tambo District Municipality, and the broader Eastern Cape region.

"While operating in a remote part of the country may be challenging, the privilege of being involved in a project that will improve the lives of the community and add to their prosperity far outweighs any burden faced."

"As we look to the future, we remain steadfast in our commitment to driving positive change, fostering sustainable development, leaving a lasting legacy of empowerment and progress, and uplifting the spirits and aspirations of those involved communities for generations to come," concludes Meyer. ☺



# Specialised equipment ensures flexible and **SAFE DEMOLITION PROJECTS**

*Demolition is an essential part of construction and development, with new tools and innovative techniques constantly being developed to boost its efficiency and safety. The aim is not only to reduce the time and cost of demolition projects, but also to reduce the environmental impact, says **Kate Bester, Project and Contracts Manager at Jet Demolition.***



The demolition specialist has an extensive fleet of 33 demolition excavators, ranging from 1,4 t to a 102 t high-reach excavator. High-reach excavators can reach up to several storeys high and can easily tear down high-rise buildings, bridges and other large structures. They are sufficiently robust to handle heavy loads and can be fitted with various attachments.

“The risk of personnel working at heights is one that every demolition company faces,” comments Bester. “Our specialised high-reach demolition excavator is compatible with our range of imported and proprietary demolition tools, enabling the safe and controlled demolition of tall structures, without exposing our personnel to risk.”

Excavators are extremely versatile and form the backbone of Jet Demolition’s fleet. Telescopic handlers are ideal for handling materials and providing safe access to elevated structures. Skidsteer loaders are compact, versatile and can manoeuvre in constrained spaces and be fitted with various attachments to increase their flexibility. Front-end loaders focus on material handling, while tool master loaders are designed for specialised tasks. Rounding out the fleet are the standard rigid dump trucks and articulated dump trucks seen on any construction site.

“Our approach on a typical demolition project is to deploy

different sized modified excavators according to the scope, spatial constraints and project duration,” explains Bester. For example, a demolition excavator may be equipped with a hydraulic hammer for concrete demolition, or a hydraulic shear might be called for to demolish steel structures. Mechanical grapples load scrap steel while buckets convey rubble generated by demolition activities.

For larger industrial projects, Jet Demolition deploys boom extensions and pulling tools to safely demolish structures that are out of reach for conventional excavators. Hydraulic shears weighing up to 10 t are used to process and demolish heavy steel members, avoiding conventional hot-work methods. Furthermore, hydraulically driven magnet attachments can recover small steel sections from rubble, efficiently. “Our flexibility allows us to tackle unique challenges and optimise our demolition processes,” says Bester.

What sets Jet Demolition apart is that it owns all its equipment. “We invest heavily in our fleet, and always have direct access to whichever item of equipment we require, without being dependent on external providers,” highlights Bester. Core equipment was traditionally replaced at the 6 000-hour mark, but advancements in technology and higher-quality consumables have extended machine retention up to 10 000 hours. ©

# Construction industry: the right software delivers **GREATER ROI AND MUCH MORE**

*The uncertainty and risk involved in complex construction projects can typically lead to cost overruns, delays and quality issues which, in turn, lead to the low profit margins the sector is notorious for, with net profit margins often hovering between 2% and 10%.*

**R**IB software vice president, Peter Damhuis (**pictured**), says the need to invest in construction software is almost non-negotiable as companies compete for the upper hand in potentially lucrative contracts.

“As construction software becomes increasingly sophisticated and offers ever-greater efficiencies, it is a key differentiator in ensuring construction companies are well positioned to win business and complete projects profitably.”

When choosing software, construction companies need to consider upfront costs, as well as how much the system will cost on an ongoing basis.

“Too often, particularly if the decision-making process does not involve the key stakeholders who will feel its benefit, the selection can be based on price alone without a full understanding of its true cost and real ROI,” says Damhuis.

There is a lot to take into account when looking at the true cost of the software and some of the factors that need to be considered include existing hardware and services; software fees and charges; embedding; upgrades, maintenance and admin; and product training and ongoing support.

“For example, will your company need to make changes to its existing infrastructure to accommodate the software; what do the licensing or subscription fees look like or will it be a once-off purchase; will your business be looking to customise the software; or do you need ongoing maintenance, training and support? All of these are critical considerations,” adds Damhuis.

Beyond these more obvious ROI elements, there are other factors that should be contemplated.

## **The wisdom of choosing an enterprise resource planning system**

“Many construction companies choose a host of software programmes to handle different aspects of the business. If, however, they choose a fully integrated construction enterprise resource planning (ERP) system, the application will span the entire business and provide a centralised data base function linking everything. Data pertaining to the entire business can then be handled by the system, with far-reaching impacts,” explains Damhuis.

Redundant and duplicated data will largely be eradicated, freeing server and storage space. Licensing costs could be slashed as the business won’t need to run multiple autonomous software packages for individual departments.

There will also be a reduction in downtime due to software upgrades across multiple platforms as the system is set up to cover all departments with upgrades and enhancements being planned for and built in to the software architecture.

In addition, construction ERP software incorporates business intelligence and reporting functions that is able to pull data from all departments across every business function. This will identify areas that are succeeding above and beyond

expectations, while highlighting any areas that might be bleeding costs.

## **Anticipating challenges before they cripple margins**

Construction companies often wish they’d identified an issue much earlier as it would have saved significant time and or money to have done so.

Damhuis says there are many stories in the construction industry operations that have seen their entire margin all but wiped out by a simple error in estimating or cost assessment.

“One function of a truly comprehensive construction software package is estimating software that removes calculation errors and reduces human error from the process. Construction ERP software integrates information from every element of your business and provides up to the minute real time data and reporting. This can predict or catch things such as cost over runs and enable you to do something about it before margins are crippled.”

Understanding how construction ERP and construction management software can positively impact the business is more complex than it might at first appear. “It’s important for construction companies to speak to professionals who specialise in software designed and built exclusively for the industry and find the best solutions for them.” ©



# SANRAL announces contractor development PROGRAMME IN PARTNERSHIP WITH CIDB

*The South African National Roads Agency SOC Limited (SANRAL) wants to see emerging contractors elevated to higher Construction Industry Development Board (CIDB) gradings and participating in contracts of high value.*

SANRAL made the commitment at a workshop it convened for small, medium and micro enterprises (SMMEs) of the Buffalo City Metropolitan Municipality at the Steve Biko Centre, Ginsberg, in Qonce recently where it reaffirmed its dedication to fostering transformation and inclusivity in road infrastructure development.

Welekazi Ndika, SANRAL's Regional Stakeholder Relations Coordinator, said "SANRAL is going to be working in the Metro for the next five years, with an investment estimated at close to R3b," adding that the roads agency had established sound working relations with local business formations over the years.

"We called CIDB and SARS today to educate emerging contractors on how to navigate the sector to enable progress in your CIDB grading. SANRAL's transformation agenda is intended to ensure your participation as emerging contractors in all its road infrastructure development projects. We are invested in your growth as targeted enterprises and designated groups," she added.

During the workshop, SANRAL announced several of its programmes intended for targeted enterprises (SMMEs). Thandile Makwabe, SANRAL's Regional Transformation Officer, said that SANRAL was in the process of drafting its preferential procurement policy which will further facilitate transformation and ensure opportunities for more emerging enterprises.

He mentioned that SANRAL would soon be launching its Contractor Development Programme, working together with the CIDB and is aimed at SMMEs with a CIDB grading of 5CE to 7CE, to ensure growth and address the stagnation within this bracket.

Makwabe further stated that SANRAL's ongoing Black Industrialists Scheme, is intended to create opportunities for black material and yellow plant suppliers, in the main. Furthermore, SANRAL will be entering into a Memorandum of Understanding (MOU) with the Department of Military Veterans to ensure that its opportunities earmarked for this designated group are maximally leveraged.

The SMMEs welcomed the announcement that SANRAL would now be taking over the mentoring and training of targeted enterprises, which was previously done by the main contractors.

"SANRAL is a learning organisation and values your input in order to improve and implement change in our road infrastructure service delivery and transformation efforts," said Makwabe.

The South African Revenue Service outlined its tax requirements and some of the benefits intended for SMMEs.

"SARS has changed its systems to keep up with the times.



We have initiated a convenient e-filing system for a centralised approach that does not require physical contact with our offices. However, you need to be registered for e-filing to enjoy the benefits of this system," said Boitumelo Ngcozela from SARS, further emphasising the importance of annual tax returns and issues of compliance.

The CIDB explained how its grading system works and what the requirements are for elevating to higher CIDB grades. It touched on its grading criteria which includes measurement of financial capacity and works capacity. It stressed the importance of maintaining a healthy financial and work track record to enable advancing to the next level.

"It is important to ensure that you pay your annual CIDB registration fee as you will get deregistered after two years of non-payment. This means you will re-enter the system as a grade one contractor, regardless of your previous CIDB grading," said Lusindiso Nocha.

He mentioned that registration could be done online for all the grades. CIDB further announced its training programme for SMMEs and that in future, this training would be a prerequisite to register with them.

SMMEs in attendance appreciated SANRAL's efforts and acknowledged the opportunities the roads agency has created for SMMEs to date. Some of the issues they raised, include challenges with upgrading from 1CE to 2CE. SANRAL was urged to intervene to ensure that emerging contractors advance from this entry level.

Some SMMEs said that although they were participating on SANRAL projects, this did not translate in monetary terms because of the low rates applied by the main contractors, as well as contract charges. Furthermore, SANRAL was requested to share briefing documents for its tender briefing sessions on its website ahead of time. ☺

Mareli Botha,  
Technical Director,  
Process Mechanical  
at Zutari.



Stephan Jooste, MD,  
Management and  
Sustainability at  
Zutari.



## Government must level the PPP playing field to encourage **PRIVATE SECTOR INVESTMENT**

*The South African government is actively pursuing innovative funding mechanisms to enhance infrastructure financing and delivery. These measures aim to optimise the infrastructure value chain, improve efficiency and attract private sector participation. Leading consulting engineering and infrastructure advisory practice Zutari is seeing an uptick in local projects following the ‘2024 Budget Review: Public-Sector Infrastructure and Public-Private Partnerships Update’ released in February by National Treasury.*

“There are projects coming to market to which we look forward to securing and continue to serve South African and international clients. Having successfully tendered for government work in the past, hopefully we will be one of the consulting engineering firms that continue to sustain and grow the economy through the work we do,” comments Vishaal Lutchman, MD, Transport at Zutari.

The power sector is being unbundled to allow for increased private sector involvement, while the second major area of reform is around rail and port infrastructure. The concept of a landlord model was postulated many years ago. With the current slip in operations, it is under reconsideration as a solution whereas it was resisted in the past.

The corporatisation of the Transnet National Ports Authority and establishment of the Infrastructure Manager are two long-awaited reforms. “I am, however, cautious that the factors driving the decision to reform masks failures in the two ecosystems that will not be addressed in the transition, giving exposure to downstream risks,” warns

Lutchman. This comes in the wake of the announcement of a three-year R943,8b infrastructure investment programme involving State-owned companies, municipalities and provincial and national government. Spending on buildings and fixed structures will increase by an average of 15,9% during this period.

“Investing in infrastructure is critical for South Africa’s economic development and social progress,” highlights Stephan Jooste, MD, Management and Sustainability at Zutari. “Infrastructure investment has been shown to drive job creation, reduce unemployment and stimulate economic activity, particularly benefiting marginalised communities and redressing societal inequalities through improved services.”

Therefore, it is imperative that South Africa find a way to stimulate infrastructure spending within a constrained public fiscus. Jooste points to several innovative funding mechanisms the government can draw on, including Public-Private Partnerships (PPPs), Infrastructure Bonds and Development Impact Bonds (DIBs).

Vishaal Lutchman, MD, Transport at Zutari.



It can even explore crowdfunding platforms, leveraging its existing public infrastructure banks such as the DBSA and the IDC and encourage private impact Investing. “The solutions involve attracting private capital to support infrastructure development,” points out Jooste.

Gazetted amendments to the PPP regulatory framework simplify procedural complexities, enhance the capacity to manage PPPs, establish clear rules for unsolicited bids and strengthen fiscal risk governance. The aim is to facilitate smoother PPP execution and encourage private sector involvement in critical infrastructure projects.

The government is also looking to introduce new financing instruments such as infrastructure bonds and concessional loans. In addition, it is considering a flow-through tax vehicle for specific infrastructure projects, similar to trusts and other investment vehicles. A funding window for proposals under this new financing framework will be provided to public institutions.

The government is reviewing institutional arrangements and governance for catalytic infrastructure to fast-track infrastructure delivery. Clearer mechanisms for accountability, cooperation and coordination are being established. Functions are being consolidated to reduce duplication and inefficiencies, especially for blended finance arrangements.

“What is positive is the direct focus on renewable energy, green hydrogen and downstream products to reform the South African energy system,” says Mareli Botha, Technical Director, Process/Mechanical, at Zutari. Though it is well-known that

South Africa is attracting a lot of interest for green hydrogen production on an international level due to its excellent solar and wind resources, it has to be linked to the Just Energy Transition (JET).

“How can we ensure that the correct parties gain an advantage from the change to renewable energy and green hydrogen?” questions Botha. Another issue is ensuring that the local environment and communities are not disrupted to produce a resource that will mainly be exported, at least initially, to Europe or Asia.

This concern was addressed by emphasising the local manufacture of electric vehicles, improving the transmission network infrastructure and potential collaboration with neighbouring countries. If realised, these plans could significantly improve South Africa’s energy security, socioeconomic status and reduce unemployment. “No wonder there is so much interest in the strategy around how these plans will be executed and managed,” says Botha.

Jooste hopes that the intended PPP reforms level the legislative and procurement playing field. He calls for a programmatic solution to streamline project development and bring opportunities to market at scale. For example, significant lessons can be learnt from the hugely successful Independent Power Producer Programme (IPPP).

These include centralised procurement and leadership, standardised contracting, consistent deal flow and clear market communication. “We believe that similar programmes for other infrastructure sectors could go a long way to addressing the current hold-up on PPP deal flow,” stresses Jooste.

“Mature PPPs take a lot of work on the public and private sector side. There is a level of maturity that needs to be inculcated,” adds Lutchman. He points to advanced economies like Europe, Canada and the US where PPPs are the order of the day. This is unlike Africa, where the issuing entity is often mired in issues of corruption and bad business practices.

“By reforming the PPP procurement process to be more efficient, transparent and conducive to innovation, South Africa can attract increased investment in infrastructure development while ensuring that projects are delivered on time, within budget and to the highest quality and sustainability standards,” concludes Jooste. ©

*Gazetted amendments to the PPP regulatory framework simplify procedural complexities, enhance the capacity to manage PPPs, establish clear rules for unsolicited bids and strengthen fiscal risk governance. The aim is to facilitate smoother PPP execution and encourage private sector involvement in critical infrastructure projects.*

# SAICE urges focus on experience and skills IN THE TRANSPORT SECTOR

*In an ever-evolving transport sector, the need for workforce diversification has sometimes come at the expense of experience. In low and middle-income countries (LMICs), retaining critical engineering skills is an ongoing challenge, with professionals often lured away by high-tech, high-income nations. While young engineers bring fresh perspectives and innovative ideas, the absence of seasoned guidance can lead to unintended consequences.*

**A**lan Robinson (pictured), 2022-2023 Chairperson of the South African Institution of Civil Engineering's (SAICE) Transport Division, noted: "Training extends far beyond academic qualifications, encompassing specialisation in specific fields or becoming a project management specialist. However, without the invaluable wisdom derived from relevant experience, the foundational principles of engineering tend to fade quickly."

In LMICs, both public and private sectors grapple with skill shortages. Robinson emphasised: "It's not uncommon to encounter "catalogue" designs founded on narrow strategic perspectives, inaccurate forecasting assumptions, and selective application of design standards and guidelines. This issue permeates across both public and private spheres."

To address these challenges, he proposed the development of a bespoke training programme focusing on transport engineering fundamentals. This programme targets young and senior engineers, even those not specializing in transport. Robinson explained: "We've identified common issues that will be addressed in the courses. The focus of the courses is not on how to do things, which is covered in most other courses, but "why" do things. Our goal is to expand these courses to cover 10 areas of transport planning, and traffic engineering ranging from strategic planning to green transport and autonomous integrated systems."

The training programme aims to equip designers and



reviewers with the ability to assess designs at a high level, ensuring they align with economically efficient solutions. Robinson emphasized, "Experience has shown that it's often the obvious that is missing in transport scheme development."

Reflecting on South Africa's engineering landscape, Robinson recognises the objectives of transformation in the engineering industry, which drives economic transformation. However, he noted: "It is imperative that the experience/skill balance is retained. It is loss of experience in using the skills that cannot be replaced with just the skills."

Robinson underscored the significance of experience, stating: "Experience is not measured in years, but in a cognitive library of real-life events. It provides an unparalleled understanding of project complexities, interdependencies, and potential pitfalls."

The ultimate objective of this training programme, he explains, is to bridge the gap between skills development and practical experience, particularly in LMICs. ☺



# NEXT LEVEL

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