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## FEATURES

### 04 Budget highlights major investment opportunities in SA's water sector

Unprecedented opportunities for private sector participation.

### 08 Addressing delays in infrastructure projects

Addressing the causes of delays and their impact on stakeholders.

### 10 How Quantity Surveyors can help manage costs as global tariffs impact SA construction projects

The Executive Director of the ASAQS explains the role of a QS in this conundrum.

### 14 The future of construction

In the future, modular buildings will transform how the industry builds.

### 22 Specialist concrete repair and protection for silo repair

Citi-Con's specialist concrete repair capabilities on full show.

### 24 Certified buildings deliver higher returns

More expensive to build, but long-term returns are attractive.

### 26 The giant awakens

PPC's turnaround strategy is delivering results – early.

### 34 No early strength compromise for greener concrete

EnviroMix® delivers a solution for the environment and construction efficiency.



04



22



34

## REGULARS

04 MARKETPLACE

22 CEMENT & CONCRETE TECHNOLOGY

34 ADMIXTURES

## ON THE COVER

A continuous concrete pour has been successfully completed to create a bridge deck across one of South Africa's busiest freight highways, demanding meticulous planning and execution from Teichmann Structures, AfriSam and other key participants. As part of much-needed upgrades by the South African National Roads Agency Limited (SANRAL) on the N3 highway through Pietermaritzburg, a new Market Road bridge is under construction. This is being built by Teichmann Structures as subcontractor to Grinaker-LTA in the New England JV (Grinaker-LTA). The consulting engineers on the project are WSP.  
**Turn to page 16**





Despite economic headwinds, supply chain disruptions, and policy uncertainties, the South African construction industry continues to deliver projects of exceptional quality, innovation, and impact. This sector - often seen as an indicator of broader economic health - is quietly defying the odds with a spirit of resilience and world-class execution.

From iconic infrastructure to pioneering green buildings, South African construction companies have long been at the forefront of engineering excellence. Today, they're not just holding the line - they're raising the bar. Recent achievements across commercial, public, and residential projects point to a sector that refuses to be defined by its constraints.

At the heart of this industry are the people - the engineers, artisans, project managers, and labourers who bring visions to life. Despite educational challenges, South Africa continues to produce top-tier talent, many of whom are globally recognised for their skills and problem-solving abilities.

Institutions such as the Construction Education and Training Authority (CETA) and initiatives by private companies are fostering a new generation of professionals. Importantly, these programmes are also helping to transform the industry,

opening doors for women, youth, and historically marginalised groups.

With climate concerns rising, sustainability is no longer optional - it's a necessity. South Africa has emerged as a continental leader in green construction, with a growing number of projects achieving top certifications from the Green Building Council of South Africa (GBCSA).

Landmark developments such as The Ridge at the V&A Waterfront and Discovery's head office in Sandton are more than just architectural marvels - they're showcases of eco-conscious design, efficient energy use, and responsible construction practices.

Far from lagging behind, the industry is actively embracing digital transformation. Tools such as Building Information Modelling (BIM), drones for site inspections, and mobile project management platforms are helping firms deliver better results faster and more cost-effectively. This fusion of traditional craftsmanship with cutting-edge technology is enabling the sector to weather disruptions and emerge more agile and resilient.

South African construction expertise isn't confined to local soil. Companies like WBHO, Stefanutti Stocks, and others have carved out a solid reputation on the African continent and abroad. Their involvement in major infrastructure projects in countries like Botswana, Ghana, and Australia

positions South Africa as a construction and engineering powerhouse in the global south.

Of course, the industry isn't without its hurdles. Payment delays, corruption in procurement, slow infrastructure rollout, and regulatory uncertainties remain real concerns. Yet, rather than stall, many firms are adapting by streamlining operations, diversifying services, and focusing on niche markets to stay afloat.

The recent revival of state-led infrastructure programmes and the introduction of public-private partnerships (PPPs) offer a glimmer of hope for more sustained growth.

The story of South Africa's construction industry is one of grit, innovation, and unshaken commitment to building a better future, literally and figuratively. As it continues to transform skylines, connect communities, and provide livelihoods, it deserves recognition not just for what it has built, but for how it continues to build against all odds.

### Showcase an industry

In 2026, *Construction World* will have quarterly features on the very elements that make this industry so resilient - and showcase the results.

In March 2026 we will have 'Best Contractors' feature.

In June we will feature the 'Best Developers' in the country and in September the industry's 'Best People' - the very people who make this industry excellent, despite the many challenges.

The 'best' idiom will culminate with an issue dedicated entirely to the winners of *Construction World's* Best Projects awards.

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## Budget highlights major investment opportunities **IN SA'S WATER SECTOR**

*The 2025 Budget Review points to the need for R256-billion in annual investments to ensure South Africa's water security by 2050, creating unprecedented opportunities for private sector participation in safeguarding the country's water future.*

Citing a 2023 Southern Africa Towards Inclusive Economic Development (SA-TIED) report on SA's water sector investment requirements, the Budget Review notes that a total estimated R7,2-trillion investment is needed by 2050 to achieve water security and universal access. But while this represents an enormous commitment given the many competing demands on the public purse, it simultaneously offers exciting prospects for investors and the construction sector, states industry expert Roelof van den Berg, CEO of the Gap Infrastructure Corporation (GIC).

He emphasises the critical importance of private sector involvement and public-private partnerships (PPPs) to support government in this essential undertaking.

"South Africa is considered a water-scarce country, with average rainfall totalling just half of the global average. This places even greater emphasis on efficient water resource infrastructure, and effective water and sanitation

services to reduce any wastage, optimise existing resources, and increase supply for a growing population," he says.

"As such, any delay in investment in water infrastructure risks costing our economy millions in productivity. Ensuring ongoing investment in water is vital to safeguarding communities' health and supporting industries reliant on water, such as agriculture, manufacturing, mining, and construction.

"But the good news is that we're seeing innovative solutions emerge through increased emphasis on water infrastructure and PPPs – as highlighted by the latest National Budget."

### **Private funding to bridge budgetary gaps**

Government's R49,9-billion allocation to water and sanitation in 2025 marks a strong starting point for the



*Roelof van den Berg, CEO of the Gap Infrastructure Corporation (GIC).*

how PPPs are developed and managed in South Africa,” he explains.

### **Key measures to encourage PPPs**

During the 2025 Budget Speech, Finance Minister Enoch Godongwana highlighted several steps that will make it easier for private developers to pursue PPPs:

- New PPP regulations, taking effect on 1 June this year, will simplify procedures and introduce clearer rules for better fiscal risk oversight and sector-specific PPP units in national departments. This will simplify and shorten the process of setting up and approving PPPs, which will be critical for large water-sector projects that often involve complex engineering and construction.
- Clearer protocols for government to evaluate and accept (or reject) unsolicited proposals from private firms have been introduced, providing an avenue that can be especially relevant if a private partner has a unique technical solution for local water challenges.
- A renewed focus on risk oversight and transparent fiscal management will allow private participants to have greater confidence in the government’s financial obligations and the predictability of project cash flows.
- The Budget Facility for Infrastructure (BFI) has been reconfigured to allow multiple bid windows per year. This means that water infrastructure partners seeking public co-funding or guaranteed support can submit proposals more flexibly on a rolling basis, instead of waiting for a single annual opportunity.
- A new credit guarantee vehicle (launching in 2026) will initially focus on energy transmission, but is intended to expand to other sectors once proven effective. This facility would derisk large infrastructure investments so that private lenders and developers can access better financing terms.

“Looking ahead, GIC plans to collaborate closely with government and other private partners to make the most of opportunities within the water sector. With 40+ water projects in our pipeline and strong interest from institutional investors, we’re already well positioned to support government’s vision for water security. If we channel the momentum from the Budget Speech into well-structured PPP collaborations, we can turn the tide for South Africa’s water sector in the coming years,” concludes Van den Berg. ©

ambitious expansion and transformation of the water sector, and successful PPPs could assist in unlocking the additional R206.1 billion required annually.

To this end, van den Berg notes that amendments to certain regulations – particularly those aimed at easing the PPP approval process – will streamline collaboration between government and private sector participants in project tendering, allocation, and financing. These reforms will strengthen the broader infrastructure sector and make it more attractive for private investors.

GIC itself has already raised R616-million in private investment over the past four months to assist in infrastructure development, with a goal of securing R20-billion by the end of 2026.

“We’ve seen substantial investor interest in South African infrastructure, including water infrastructure. Both local and international investors recognise the opportunity present in supporting government’s strategy for infrastructure-led economic growth. All they need is the appropriate financial mechanisms and structures – an area where government has made significant progress.

“Improvements in the PPP framework represent a triple-win. By involving private partners from the early planning and financing stages, government will distribute risks and responsibilities far more equitably. For investors, well-structured PPPs offer predictable long-term returns. For government, efficiencies and innovative technologies introduced by private companies can reduce long-term costs, while communities benefit from improved water access and service delivery. But to truly succeed, we must critically reexamine and refine

# 38 YEARS OF CELEBRATING UP-AND-COMING BUILT ENVIRONMENT PROFESSIONALS

*Now in its 38<sup>th</sup> year, the Corobrik Student Architecture Awards continue to celebrate and promote excellence in architectural education in South Africa. These awards have become one of the most respected accolades for emerging architects in the country.*



*Corobrik Chairman Peter du Trevou and Thapelo Douse from Nelson Mandela University.*



*Corobrik CEO, Nick Booth.*



*Corobrik Chairman Peter du Trevou and Shannon Rees from the University of Pretoria.*



*Corobrik Chairman Peter du Trevou, Tammy Ohlson de Fine and Corobrik CEO Nick Booth.*

The awards play a vital role in showcasing the next generation of South African architects by celebrating innovative thesis work, providing a national platform for exposure to industry professionals, and fostering opportunities for recognition, networking, and mentorship.

The awards elevate architectural education by promoting excellence in design, sustainability, and social impact, while highlighting the potential of architecture to address critical urban and societal challenges. They are specifically aimed at final-year Master of Architecture (Professional) students. Each participating university nominates a top thesis student to represent their institution.

The selected students then compete at the national level for the title of Corobrik Student Architect of the Year. The competition includes participation from all South

African universities that offer accredited programmes in architecture. Each institution holds its own regional award event, after which the national finalists are selected.

In a year marked by exceptional quality and diversity in student work, the judges also issued two special commendations. The regional finalists for the national award were selected from the eight major universities, based on the students' Architectural Master's theses from the class of 2024.

Tammy Ohlson de Fine from the University of the Witwatersrand took home the R70 000 grand prize. Thapelo Douse from Nelson Mandela University and Shannon Rees from the University of Pretoria received commendations.

The prestigious awards ceremony was held in May at the Fairway Hotel, Spa and Golf Club. Corobrik CEO Nick



Judges Donette Werkman, John Wilson-Harris and Vedhant Maharaj in conversation with MC Miles Kubheka.

Booth described the event not merely as a competition, but as an ongoing investment in South Africa's architectural future. "It is an investment not only in terms of money, but in passion and belief in the profession and the future of the built environment," said Booth.

"We live in a country with significant challenges, but also with remarkable legacies and a resilient spirit. Progress requires new ideas and innovation, and our universities are a powerful engine for that. The faculty members empower the passion we see in students, not just in the winners, but in all participants."

Booth emphasised the importance of fostering innovation within the industry: "Changing mindsets is key. These awards represent a major investment to help drive the kind of change we need, especially in architecture. Corobrik is proud to be the only brick company consistently developing new products. While many in the industry are focused solely on price, we believe creativity, innovation, and ideas are the way forward."

He added: "We go the extra mile in producing special shapes that provide that final architectural detail, an element that enhances the legacy of the buildings our architects envision. Our long-standing relationship with the architectural profession is one we deeply value, and we remain committed to investing in both the profession and these awards."

This year's judging panel included Donette Werkman, Sole Director of We Do House Plans and Co-Director of Minnaar Werkman Architects; Vedhant Maharaj, CEO and Principal of Rebel Base Collective and winner of the 29<sup>th</sup> Corobrik Awards; and John Wilson-Harris, Director at Gabriel Fagan Architects.

"For me, it has been an amazing experience," said Wilson-Harris. "I always enjoy working with students as they bring such energy and passion. Every project was unique, which made the judging process incredibly rewarding. It has been a real pleasure to be part of these awards." Werkman added: "After over 20 years in the industry, it becomes harder to find things that challenge you. I said yes to this opportunity, and it's been a wonderful, enriching experience. All the students were excellent."

Maharaj echoed the sentiment: "As a past winner, it has been a personal privilege to come full circle and contribute from the other side. I was inspired by how conscious and distinct the projects were. Post-COVID, the field of architecture struggled, but there is now a resurgence of care, craft, and technical proficiency. Each project, whether technically or environmentally focused,

demonstrated a gentle sensitivity to people and context. That gives me great hope for the future of the profession."

### Winning projects inspired by history, environment, and craft

Grand prize winner Tammy shared that growing up with a father in the building industry gave her early exposure to the built environment. "I only started architecture school at the age of 38. It was not daunting. I just went to Wits, put my head down, and did the work. I had a wonderful time, and I am a Witsie for life."

Her award-winning thesis, based in Prince Albert in the Karoo, responds to the climate crisis by focusing on a biodiversity research station. "Much of architecture prioritises human users. My project also prioritises the land and its creatures, treating the environment as an equal protagonist in the design process, not just a backdrop."

Commended finalist Thapelo, from Gqeberha, shared that he knew from the age of six that he wanted to be an architect. "I could not tell you what made me say it; it was as if I manifested it into the universe. When applying to university, my mother asked for a backup plan, but I told her there was none. It was architecture or nothing."

Douse's project explores discomfort and memory, reflecting on forced removals under the Group Areas Act. "I looked at South End in Port Elizabeth, a vibrant, diverse town dismantled by apartheid-era freeway structures. My proposal is not just a building, it is an evocative, almost uncomfortable setting. That is the kind of architecture I aspire to, serving as a mediator between humanity and matter, telling stories through space."

Commended finalist Shannon took an unusual path into the profession. "My back story is boring as I did not want to be an architect at all. I studied engineering for two years, but after walking past the architecture faculty and seeing the wild things they were doing, I enquired, joined, and fell in love with it."

Her project is situated in Eshowe, Zululand, and explores the region's rich traditions of craft. "Eshowe houses the world's largest display of wicker baskets and pottery. My project asks if I, as an architect, can be influenced by a potter or basket weaver? The locals speak so confidently of their craftsmanship, as if they can build anything from any shape. Learning from that is probably the best architectural education I could ask for."

### Celebrating a legacy of design excellence

Corobrik's support for architectural excellence extends beyond sponsorship and is a long-standing commitment to shaping the built environment through collaboration with South Africa's top universities offering Masters of Architecture programmes.

"We are privileged to be part of this journey," said Nick. "Many past participants have gone on to make significant contributions to their communities." Corobrik Chairman Peter du Trevou, who has handed out the prizes at every single awards since its inception, added that Corobrik was proud to be part of such a longstanding tradition and would continue to do so with the 39<sup>th</sup> Student Architecture Awards next year. ☺

# ADDRESSING DELAYS IN INFRASTRUCTURE PROJECTS

*Delays in infrastructure projects are a persistent challenge, particularly in developing economies. These delays, whether stemming from government inefficiencies, funding constraints, or mismanagement, have far-reaching consequences for socioeconomic development. To address this, root causes of delays, their impact on stakeholders, and actionable solutions should be investigated so that they can be mitigated. **By Chris Campbell, CEO of Consulting Engineers South Africa***

## Understanding delays in the construction industry

Deviations from planned schedules, whether during the design or construction phase of project, are often caused by a combination of factors, including insufficient planning, inadequate budgeting, and bureaucratic inefficiencies.

One of the most significant contributors to delays is the government's inability to release payments on time. This issue is particularly detrimental to essential services such as schools, hospitals, roads, energy projects and water infrastructure. When funds are delayed or reallocated mid-project, contractors are forced to halt work or operate at a loss. This creates a vicious cycle where projects remain incomplete, costs escalate due to inefficiencies, and service delivery is compromised.

These delays have wide-reaching consequences that extend far beyond just project timelines, as it creates a ripple effect across various stakeholders, influencing everything from business sustainability to the quality of completed infrastructure.

On the other hand, there are often contractors who do not meet performance standards. In this case, there is also a need for stronger consequences to set the tone for the industry, such as not being allowed to bid for future projects.

The tendering system should further outline clear non-negotiables and establish what the consequences of poor performance will be, as implementing these harsh consequences could force companies to improve their performance

## Contractors and consulting engineers

Contractors and consulting engineers, especially smaller firms who rely on timely payments to sustain their operations, face significant financial strain when payments are delayed for months or, in some cases, even years. Unlike larger organisations with more robust cash flow systems, smaller firms often lack the financial cushion to weather such delays. This vulnerability can lead to business closures and hinder the growth of skilled professionals within the industry, ultimately limiting overall industry development.

As payment delays accumulate, reputable firms may be less inclined to participate in projects that carry a high risk of non-payment. This reluctance pushes governments and organisations to seek out less-established or lower-quality service providers to step in, thus jeopardising the final output. These compromised projects often result in subpar infrastructure that may not meet safety standards or function effectively, undermining the project's value and durability.

## Socioeconomic development

The ripple effect extends to the communities that rely on infrastructure projects for essential services. When projects are delayed or executed poorly, vital public works, such as roads, hospitals, schools, and utilities, remain incomplete or substandard. These delays and deficiencies negatively impact the socioeconomic development of these communities, further exacerbating inequalities and stalling progress.

To mitigate the negative impacts of payment delays and



improve the efficiency of project execution, a multifaceted approach is needed. Governments must adopt strategies that promote better planning, streamline processes, and ensure accountability at all levels.

### **Enhance government planning and management**

One of the primary solutions lies in improving government planning and management capabilities. Departments should invest in technical expertise and adopt robust planning mechanisms that ensure projects are budgeted and scheduled realistically. Establishing proper timelines and realistic cost estimations can help prevent project delays from the outset. Furthermore, capacity-building initiatives are critical to improving the skills of government employees responsible for project oversight and management.

Another crucial area is streamlining payment processes to ensure timely disbursement of funds. Governments should establish standardised procedures for payment claims, eliminating unnecessary delays in fund transfers. One potential solution is the creation of escrow accounts or suspense accounts, which could help reduce bureaucratic bottlenecks and ensure that funds are released as per contract terms, thus preventing payment delays from escalating.

Lastly, enforcing accountability through regular audits is key to addressing inefficiencies in project execution. Audits conducted by independent entities, such as the Auditor-General's office, should be used to identify inefficiencies, uncover mismanagement, and implement necessary consequences. These audits can promote transparency and ensure that government departments are held accountable for their roles in project delivery, fostering a culture of responsibility and improving the overall quality of public projects.

### **Balancing risk with representation**

While promoting inclusivity through mechanisms like black economic empowerment is essential for capacity-building in developing economies, it must not come at the expense of technical competency. Tender evaluations must prioritise expertise alongside inclusivity metrics to ensure successful project execution.

Organisations, like the Consulting Engineers South Africa, play a vital role in maintaining industry standards by vetting members for integrity and competency, while also advocating for member firms to be heard in changes to policy. Encouraging collaboration between government entities and professional associations can help ensure that only qualified firms handle complex projects. ©



*Chris Campbell, CEO of Consulting Engineers South Africa.*

# How Quantity Surveyors can help manage costs as global tariffs **IMPACT SA CONSTRUCTION PROJECTS**

*The saying "When America sneezes, the world catches a cold" is relevant once again. In 2025, it illustrates how the sweeping US tariffs are being felt across the globe, even affecting the construction industry at the southern tip of Africa.*



**Nolubabalo Tsolo, Executive Director of the Association of South African Quantity Surveyors (ASAQS).**



combined with historical data as well as statistical forecasts and construction and material price indices," says Tsolo. Ideally, the estimate also includes reserves for contingencies and escalations to cover unforeseen risks and costs during the project.

However, Treasury currently doesn't accept contingencies (typically 5% to 10% of project value) in the public sector, and QS have to formally request additional funds for unexpected costs. It's meant to boost accountability, says Tsolo, but adds onerous of bureaucracy, which delay construction and drive costs even higher.

## How to build resilience

The ASAQS suggests the

following responses to the tariff-related challenges on SA's construction sector:

- **Embrace dynamic pricing strategies**

Together with other industry bodies, the ASAQS is engaging with government departments for more flexible public sector procurement frameworks to address price volatility. But this requires regulatory clarity. "The Standard for Infrastructure Procurement and Delivery Management stated that no escalations and contingencies should be included in the contract price (clause 14.5.9)," says Tsolo. "However, when this regulation was replaced in 2019 with the Framework for Infrastructure Delivery and Procurement Management, it didn't mention the escalations and contingencies."

- **Focus on strengthening local supply chains**

The government has been encouraging local manufacturing, but it should use the US tariffs to actively help local producers of construction materials, for example through tax breaks and other incentives. This would reduce reliance on imports.

- **Train QSs on integrating global economic indicators into cost planning**

ASAQS members already benefit from evolving continuous professional improvement programmes and webinars that also tackle macro-economic topics. Other industry bodies and partners could add value to this.

"By building resilience, we intend to lessen global economic shocks on the local construction sector," says Tsolo. "Quantity surveyors are central to this, ensuring that construction projects remain feasible, efficient, and financially sound, even in uncertain times." It shows that while South Africa can't stop America from sneezing, we can protect ourselves from catching a full-blown cold. ☺

**"A**lthough these are taxes on imports into the US, they have a ripple effect on local building costs as Chinese and other suppliers redirect their materials to markets without tariffs and disrupt our supply chains," says Nolubabalo Tsolo, Executive Director of the Association of South African Quantity Surveyors (ASAQS).

## Pushing up construction costs

Local buyers in South Africa are consequently facing material shortages, steep price increases, and longer lead times for essentials such as steel, aluminium, solar panels, and electrical components, says Tsolo. She explains that contractors are struggling to manage the rising costs and add risk premiums to tenders. This means that projects – from roads and bridges to schools and affordable housing – risk exceeding their budgets. In addition, currency fluctuations are making dollar-priced imports even more expensive. All this puts strain on both public and private projects, with affordability and delivery timelines being reassessed.

## Behind the scenes

"Amidst this uncertainty, quantity surveyors (QS) play a crucial role in stabilising the construction sector and keeping costs under control," says Tsolo. "We're the only profession specialising in the finances of the construction industry – also referred to as 'building accountants' (Bou-rekenaare) in Afrikaans."

The QS's initial estimate of the project cost – including labour, material, time, and profit – is based on information from the architects, engineers and other industry specialists. "We look at the current market prices in construction,

# 10 LEADERSHIP DEVELOPMENT STRATEGIES TO STAY AHEAD

*Even the world's most successful leaders and top performers, whether Fortune 500 CEOs or a chart-topping artists, view the pursuit of mastery as a continuous journey, not a destination.*



What separates the top 1%, though, isn't just their initial success, but their relentless commitment to growth long after others plateau. Think Warren Buffett, who is still learning at 94, Madonna, reinventing her music decades into her career, and Gordon Ramsay or Heston Blumenthal, who constantly push culinary boundaries. All these legends embody this principle because the more skilled you become, the more you see the subtleties, possibilities, and depths you hadn't noticed before.

"The gap between good and extraordinary isn't talent, it's the tiny, deliberate choices that compound over time," says Jacqueline van Rooijen, Transformation Coach and Founder of Ycagel. "Most people optimise for comfort; the top 1% optimise for growth."

She reveals 10 little-known mindsets and micro-habits the top 1% use to stay ahead, with insights you can adopt right now.

- **Strategic vulnerability**

Admitting "I don't have all the answers" isn't weakness, it's a catalyst for innovation. When Satya Nadella became Microsoft's CEO in 2014, he openly acknowledged areas he hadn't mastered. That humility ignited a culture shift towards collaboration and reignited the company's growth.

- **Daily mind audits**

A nightly "win/loss" journal where you record one triumph and one misstep builds self-awareness. Lady Gaga credits this simple reflection practice for her ability to reinvent herself and deliver hit after hit. It builds the self-awareness that separates good performers from great ones.

- **Worst-case rehearsals**

Rather than fearing failure, challenge yourself to map out exactly how you'd respond if the worst-case scenario happens. Jeff Bezos famously required Amazon teams to conduct 'pre-mortem' sessions - imagining their project had failed and working backwards to identify and prevent potential causes.

- **Micro-mentorship**

You don't need boardroom heroes - wisdom lies everywhere. Turn everyday interactions in unexpected places into five-minute mentoring. Pharrell Williams (well-known musician) has said his best musical insights often come from non-artists, like cab drivers or store clerks. He listens for mood, rhythm, and emotion in everyday speech.

- **"Over-communication" of vision**

Netflix co-founder Reed Hastings believes that over-communication of context far outweighs persuasion. He famously published the company's internal "culture deck" for the world to see, making it available not just to employees, but to investors, competitors, and anyone curious enough to click. His goal? To ensure total clarity on where the puck is headed.

- **Harness the habit**

Track one tiny habit, like reading a paragraph of a classic each day, and celebrate each small win. Serena Williams treated her serve routine as a ritual: with five bounces on first serves and two on second, helping her stay focused and consistent under pressure.

- **Mastering deep work**

Reserve two 90-minute "deep work" sessions per week with no distractions. Warren Buffett spends around 80% of his time quietly reading and thinking, immersed in financial reports and books, purposely avoiding social media to focus on his long-term investments.

- **Embedded generosity**

Multiply your impact beyond profit. Marc Benioff entrenched giving into Salesforce's DNA with his 1-1-1 model (1% equity, 1% time, 1% product), creating a culture that boosted both employee

- **Preemptive planning**

Draft your "what if something goes wrong" analysis prior to starting a big project. Before launching Barbie's 2023 rebrand, Mattel ran scenario planning exercises to anticipate backlash and missteps before a single ad went live. This pressure-testing helped the team fine-tune messaging and strategy, turning potential pitfalls into global success.

- **Thriving rhythms over work life balance**

Forget a rigid 50/50 split. Design weekly rhythms that let different facets of your life shine on different days - family night on Mondays, creative Fridays. Richard Branson credits his adventurous pursuits for fuelling his creativity.

"Leadership development isn't optional", concludes Van Rooijen. "It's the lifeblood of sustained success. Use these strategies as your blueprint to elevate performance, spark innovation and cultivate resiliency; and even share it with colleagues and contacts who refuse to settle for 'good enough'. ☺





## The Construction Mafia Crisis: **ISO 37001** MAY BE SOUTH AFRICA'S LAST LINE OF DEFENCE

*Criminal syndicates known as the construction mafia have brought South Africa's infrastructure sector to its knees, hijacking over 180 projects and causing an estimated R63-billion in economic damage, according to National Treasury. These groups, often operating under the guise of community forums, use threats, extortion, and violence to force their way into government tenders and construction contracts.*

**W**hile law enforcement has begun to respond, 745 extortion cases have been reported, and 240 arrests have been made since November 2024. Public Works and Infrastructure Minister Dean Macpherson admits that this is only the beginning. "We are turning the tide," he said recently, but warned that corruption remains deeply entrenched in procurement systems and local government supply chains.

Against this backdrop, experts at WWISE (Worldwide Industrial and Systems Engineers) are calling for the widespread adoption of ISO 37001, a tool they believe could play a critical role in fortifying the sector from within. "This may be South Africa's last line of defence if we want to build infrastructure without bribery or intimidation," says Muhammad Ali, Managing Director at WWISE. "ISO 37001 helps organisations embed ethical conduct into every stage



*Left: Van Zyl Krause, Technical Specialist at WWISE. Right: Muhammad Ali, Managing Director at WWISE.*

of a project, from procurement to execution, making it harder for criminal networks to manipulate the system.”

ISO 37001 is not just a policy; it's a globally recognised standard, or in other words, a formalised, best-practice framework developed by international experts to help organisations detect and prevent bribery. As a standard, ISO 37001 establishes a uniform, auditable benchmark for anti-bribery management across industries, enabling companies and governments to foster transparency, demonstrate accountability, and safeguard their reputations.

“The standard requires top-level leadership commitment, risk assessments, strict financial controls, and confidential reporting systems,” explains Ali. “It doesn't just help companies avoid corruption, it actively reshapes their culture.”

Corruption in the construction industry not only inflates costs but also endangers lives. Ali notes that criminal infiltration has led to shutdowns, missed milestones, and Service Level Agreement (SLA) penalties. “We've seen cases where construction mafia threats delayed entire projects, with local authorities often turning a blind eye, or worse, getting a cut,” he says.

Van Zyl Krause, Technical Specialist at WWISE, warns that companies often feel forced to hire unqualified labour to avoid conflict. “These so-called ‘community contractors’ are often unregistered, uninsured, and unsafe,” Krause says. “That puts the principal contractor and everyone on site

at risk, while forcing them to spend even more on private security.”

ISO 37001 offers practical safeguards. It ensures that tender documents are traceable and auditable. It enforces ethical vetting of suppliers and enshrines whistleblower protection through encrypted systems. “You can't bribe your way into a tender process governed by ISO 37001,” says Ali.

Yet adoption of the standard remains frustratingly limited. “Most construction companies in South Africa haven't implemented it,” Krause says. “The only time we see ISO 37001 considered is when international investors require it,” Ali adds that public sector resistance is particularly troubling. “The fear is that ISO 37001 will expose misconduct,” he says. “But that's the point. The excuses, ‘too complex’, ‘too bureaucratic’, don't hold water. This standard can be adapted to any organisation.”

He points to a compelling case in Iraq, where a security company under attack from corrupt government officials used ISO 37001 to clear its name. “The audits exposed the wrongdoing, and the officials were jailed. That's the power of a strong, standardised anti-bribery framework.”

For smaller contractors, who are often the most vulnerable to extortion, ISO 37001 can provide an essential shield if supported by law enforcement. “The problem may not be with the company,” Ali warns, “but when it needs support, the authorities often fall short.”

WWISE urges companies to begin their journey with a Gap Assessment to identify risk areas, followed by a structured implementation process that includes internal training, documentation development, internal audits, and certification. “This isn't a checkbox exercise,” says Ali. “It's a roadmap to ethical business.”

With billions at stake and a growing list of sabotaged projects, it's clear that arrests alone won't be enough. As Minister Macpherson rallies law enforcement, experts say South Africa must also rebuild its infrastructure sector from the inside out, with internationally recognised standards, such as ISO 37001, leading the way.

“If we don't change how we build,” says Ali, “we'll keep rebuilding what criminals destroy.” ☺

# THE FUTURE OF CONSTRUCTION

*The construction industry is undergoing a significant transformation, driven by the demand for faster, smarter, and more sustainable building solutions. In South Africa, both government and businesses are increasingly adopting modular construction as a preferred method to promote economic growth through infrastructure development. **By Zharn-Pierre Nel, Branch Manager - Waco Modular***



**Zharn-Pierre Nel, Branch Manager, Waco Modular.**

## **Sustainability and future readiness**

Sustainability is becoming a core strategic goal for the construction industry. Modular construction's precision manufacturing in factories reduces waste and upholds environmental responsibility. By integrating energy-efficient systems and sustainable materials, modular projects offer long-term environmental benefits and lower operational costs.

## **Built-in scalability and flexibility**

Modular construction's inherent adaptability is one of its greatest advantages. Modular buildings are designed to expand, rearrange, or move locations easily. This flexible

**T**his approach is particularly valued for its rapid delivery capabilities, especially in sectors like mining, education, healthcare, and commercial projects.

Modular construction offers efficiency that surpasses traditional building methods, achieving completion rates up to 50% faster. The controlled environment of factory-based module construction minimises weather-related disruptions, optimises labour productivity, and significantly reduces on-site disturbances. As a result, project timelines become more predictable, budgets are better managed, and projects reach operational readiness more quickly for clients.

## **Addressing key sector needs**

Beyond speed, modular construction offers versatile benefits. In the mining industry, it provides robust and relocatable accommodations and operational facilities suited for challenging environments. Educational institutions benefit from modular facilities that offer scalable, high-quality solutions to accommodate growing enrolments. Meanwhile, the healthcare sector utilises modular buildings for hygienic and adaptable solutions such as clinics, mobile testing units, and temporary wards that meet industry standards.

## **Accelerating infrastructure development**

South Africa's infrastructure deficit, particularly in underserved rural areas, demands urgent solutions. Modular construction provides an efficient means to meet these needs. By rapidly delivering fully constructed modules, public and private entities can address socio-economic and logistical issues before they escalate. This swift deployment of essential facilities directly benefits communities, enhancing service delivery and driving economic growth.

infrastructure investment allows companies to grow their facilities without the lengthy construction schedules and operational disruptions typical of traditional methods. Modular solutions scale with market demands, empowering businesses to adapt confidently.

## **Innovation and industry trends**

The future of modular construction lies in continuing innovation. Modern infrastructure demands the integration of advanced tools, digital management systems, smart modular technologies, and energy-efficient materials. By embracing design improvements, sustainability measures, and digital integration, the construction industry delivers lasting solutions that adapt to both business and community changes.

Despite its clear advantages, some misconceptions persist about modular construction, with some viewing it as temporary and lower in quality. However, today's modular solutions create durable structures that meet or exceed industry standards for safety, durability, and performance. Completed projects and manufacturing facilities showcase the versatile and high-quality nature of modular construction. Extensive customisation options allow businesses to align infrastructure with their corporate branding and design while ensuring efficiency and durability.

Modular construction has proven its ability to deliver cost-effective, high-quality, and sustainable building solutions across various sectors, including mining, education, and healthcare. It is now an established, mainstream solution poised to meet the increasing demand for smarter, faster, and sustainable infrastructure development. ☺

# THE TAX-SMART EVOLUTION OF CAPE TOWN AS A GLOBAL HUB

*As global tax regulations tighten and cross-border tax compliance becomes a focal point for governments worldwide, Cape Town is rapidly emerging as an attractive destination for foreign professionals and investors. South Africa's well-respected tax framework enriched by robust international treaties, creates a transparent and secure environment ripe with opportunities for growth and prosperity in the region.*

According to 2022 data from Statistics South Africa, the country is home to approximately 2,4 million expatriates. The majority - over 80% - originate from other African nations, with the remainder coming from Europe and the United States. Smaller communities also exist from Asia, including India and China, as well as from regions such as South America and Oceania

Geo Kilian, a tax attorney and expert in cross-border tax administration, notes that South Africa's tax laws and bilateral agreements offer both structure and compliance mechanisms that appeal to foreign individuals and businesses. "With over 70 tax treaties in place, South Africa effectively prevents double taxation and facilitates seamless tax information exchange. These agreements adhere to international standards set by the Organisation for Economic Co-operation and Development (OECD) and the UN, creating a transparent and dependable environment for foreign investors and expatriates," Kilian explains.

With its well-developed infrastructure and welcoming atmosphere, Cape Town has firmly positioned itself as an appealing destination for expatriates to live and work. According to relocation specialists, Wise Move, an estimated 100 000 to 150 000 foreign nationals call the Mother City home, many originating from Europe, particularly the United Kingdom and Germany. While detailed figures on the number of foreign nationals contributing to South Africa's tax base are not readily available, the thriving expatriate community in Cape Town and across the country undeniably plays a significant role in bolstering the country's economy.

South Africa's strong legal tax framework further cements its appeal as a tax-smart destination. The South African Income Tax Act facilitates the creation of international tax treaties, preventing double taxation and fostering administrative cooperation. Additionally, the Tax Administration Act equips the South African Revenue Service (SARS) with enforcement tools such as preservation orders to secure assets at risk of dissipation and mechanisms to assist foreign jurisdictions in tax collection. These legal provisions ensure a reliable and dynamic environment for foreign professionals and investors.

"Under Article 26 of the OECD and UN Model Tax Conventions, South Africa shares tax-related information with partner countries, ensuring that foreign earnings in Cape Town can be reported to tax authorities abroad," clarifies Kilian. "This fosters compliance while offering certainty for expatriates and investors."

Further strengthening its dedication to international



cooperation, South Africa actively participates in the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes. This initiative ensures that tax authorities worldwide can access crucial financial data, effectively curbing opportunities for tax evasion and fostering a fairer global tax system.

South Africa's extensive treaty network also includes provisions for mutual tax collection assistance. "If a foreign taxpayer owes taxes in their home country, SARS can assist in the collection of that debt under the relevant treaty," says Kilian. "This effectively dispels the notion of using South Africa as a tax haven for avoiding foreign tax obligations."

## So, what is the appeal?

Cape Town's growing allure lies in its unique blend of lifestyle advantages and regulatory stability. With well-established financial and legal sectors, the city offers foreign nationals access to expert tax advisory services, making it easy to navigate tax regulations.

"For those working or investing in Cape Town, the tax environment offers both opportunity and responsibility," Kilian adds. "While South Africa ensures compliance through rigorous enforcement, it also provides clear and structured tax benefits through its extensive treaty network."

Rooted in South Africa's steadfast commitment to global tax compliance, Cape Town is fast earning its reputation as a tax-smart destination. With its respected legal framework, strong international treaty partnerships, and a well-regulated financial sector, the city presents expatriates and foreign investors with a secure and transparent tax jurisdiction in a dynamic and thriving location. ©



## TEICHMANN STRUCTURES AND AFRISAM EXCEL IN DAY-LONG CONCRETE POUR OVER N3 HIGHWAY

*A continuous concrete pour has been successfully completed to create a bridge deck across one of South Africa's busiest freight highways, demanding meticulous planning and execution from Teichmann Structures, AfriSam and other key participants.*

As part of much-needed upgrades by the South African National Roads Agency Limited (SANRAL) on the N3 highway through Pietermaritzburg, a new Market Road Interchange bridge is under construction. This is being built by Teichmann Structures as subcontractor to Grinaker-LTA in the New England JV (Grinaker-LTA). The consulting engineers on the project are WSP.

Supplying the large volume of readymix concrete for the 103 metre bridge deck was AfriSam, who delivered over 1 300 cubic metres of concrete in 218 truckloads over a 24-

hour period in April this year. According to Kieresh Singh, Site Manager for Teichmann Structures, the critical aspect of the project was to avoid disrupting the traffic on the busy N3, as well as the traffic over the existing Market Road bridge close to the N3. The solution was to place protective safety netting on the sides of bridge, so that concrete could be safely poured without the risk of any spillage onto the live highway below. At the same time, the existing Market Road bridge would be closed overnight, from 20:00 on Thursday, 10 April to 6:00 on Friday, 11 April.



**AfriSam delivered 1 300 m<sup>3</sup> of concrete in 218 truckloads.**



**The pour had to be continuous to ensure no cold joints, which meant there was no room for error on this task.**



**The critical aspect of the project was to avoid disrupting traffic on the N3 as well as over the existing Market Road bridge close to the N3.**



**Due to the dense steel reinforcement, maintaining a concrete slump consistent within the specification was essential.**



**The new bridge deck spans 103 metres.**

“In line with our carefully calculated schedule, we began to place concrete onto the first half of the bridge at 1pm on the Thursday, so that we could achieve the maximum pump reach of a third of the pour by 20:00,” Singh explains. “With the existing bridge closed, we could then move the pumps onto the existing bridge, completing the central spans of the new bridge. The pump and supply rate needed to be maintained to ensure that traffic on the existing bridge was re-opened to the public by 6 am the next morning.”

He highlights that the pour had to be continuous to ensure no cold joints, which meant there was no room for error on this task. Everyone involved had to play their role in perfect collaboration, he notes, so it required intensive planning meetings to ensure that every conceivable risk was mitigated – and there was always a Plan B for any eventuality.

“We developed a detailed ‘pour plan’ with all parties, including AfriSam, Grinaker-LTA, WSP and SANRAL, to ensure that everyone was on the same page,” he says. “The New England JV (Grinaker-LTA) conducted the traffic accommodation as the main contractor, while SANRAL kept the community and motorists informed about the planned road closure times, resulting in minimum disruption to motorists.”



*Stringent concrete testing was carried out throughout the project.*

He emphasises the importance of ensuring the safety of employees on site as they poured the concrete, as well as the concrete truck drivers, motorists and the general public in the vicinity.

Large pours like this one demand considerable resource capacity and flexibility from a readymix provider, according to Randal Chetty, Regional Sales Manager at AfriSam. Having the Pietermaritzburg and Umlaas Road readymix facilities in close proximity to the project was an important advantage, as was the company's nationwide truck fleet.

"We allocated 36 trucks to the pour, primarily from our KwaZulu-Natal operations with additional support from Gauteng to ensure sufficient capacity," says Chetty. "The project also called for two 12 hour shifts, so we mobilised personnel from our other KZN sites to maintain safe and efficient working practices."

Among the key risks assessed for the readymix delivery was the potential for delays caused by road accidents or other disruptions between the AfriSam plants and the site, he explains. To mitigate this, a detailed route analysis was undertaken to ensure deliveries could continue smoothly, even in the face of unforeseen challenges.

Concrete quality was critical to the project's success, highlights Xolani Mbatha, Regional Product Technical Manager at AfriSam. For the bridge deck, a 40 MPa durability mix was a requirement on the project to ensure the high compressive strength required to support heavy vehicle traffic and durability to resist deterioration.

"There were sections of the bridge deck with dense steel reinforcement, which meant the concrete needed to be sufficiently workable to flow into cavities as deep as a metre," explains Mbatha. He adds that maintaining a concrete slump consistent within the specification was essential.

"We also had to manage the heat of hydration by incorporating fly ash into the mix to minimise the risk of thermal cracking," he says. "Consistency of aggregate materials was another priority, so we isolated specific stockpiles identified through our testing regime. This was made easier by the fact that AfriSam's two local batching plants are located on

our quarry sites, where we crush the required stone ourselves."

Stringent concrete testing was carried out throughout the project by AfriSam in collaboration with WSP, the consulting engineers and RoadLab - a SANAS accredited laboratory on the project. Due to the high volumes of concrete being poured in a short period, AfriSam also engaged an additional independent laboratory to ensure all testing requirements were met without delay.

"Over 200 test cubes were made during the pour to ensure sufficient compressive strength data was attained and quality was ensured. "We also exceeded standard testing requirements by monitoring strength development at 1, 3, 7, 14 and 28 days."

With aggregate sourced from its own quarries and cement supplied from its Roodepoort plant, AfriSam maintained close control over the quality of all materials - ensuring that approximately 97% of the bridge deck concrete mix comprised AfriSam's own products. Every truck underwent slump testing before leaving the batching plant, resulting in a 99,2% acceptance rate of concrete deliveries on site. Durability panels were also cast on site and will be cored and tested for properties such as chloride conductivity and permeability, amongst other requirements, adds Mbatha.

Singh highlights that the project was successfully completed within the tight timeframe, enabling traffic to resume along Market Road into Pietermaritzburg from 6am on the Friday morning. The operation was completed without any delays or injuries on site, and the result was a high-quality concrete deck ready to form part of the new bridge.

This concrete milestone was achieved with the collaboration of the entire team which makes successful projects. ☺

#### **Project Team**

- **Client:** South African National Roads Agency Limited (SANRAL)
- **Main Contractor:** New England JV (Grinaker-LTA)
- **Subcontractor:** Teichmann Structures
- **Consulting Engineers:** WSP



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# BEST PROJECTS

# 2025

## TWENTY - FOURTH

**Construction World's** Best Projects showcases excellence in the South African building, civil engineering, supply and project management sectors. In its 24<sup>th</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 are Uwe Putlitz - a retired architect and construction project manager, Petra Devereaux, the executive director of the MBAWC, Hanlie Turner, a retired business development manager and Musa Shanagasa, former president of the MBSA.

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@crowm.co.za](mailto:constr@crowm.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 .jpgs 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.
- When a project was executed elsewhere in Africa, but executed by a South African based company, it is eligible to enter.
- 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 when there is more clarity with the situation around COVID-19.

### Entry form available on

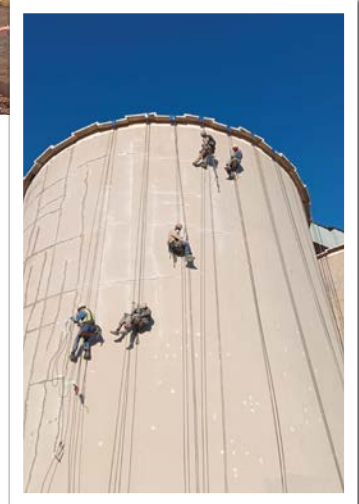
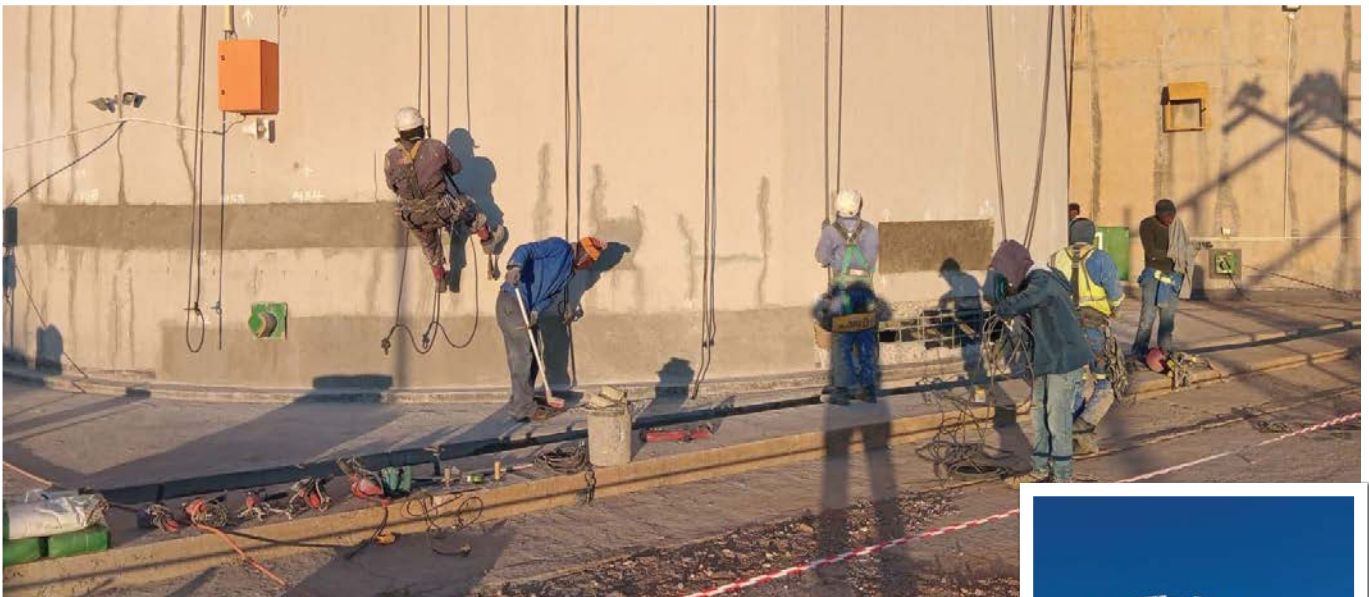
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<b>1</b> <i>Category</i> <b>Civil Engineering Contractors</b>	<b>2</b> <i>Category</i> <b>Building Contractors</b>
<p><b>Please address the following criteria:</b></p> <ul style="list-style-type: none"> <li>• Construction innovation technology</li> <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>
<b>3</b> <i>Category</i> <b>Civil Engineering and Building Contractors (outside South Africa)</b>	<b>4</b> <i>Category</i> <b>Specialist Contractors or Suppliers</b>
<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>
<b>5</b> <i>Category</i> <b>Consulting Engineers</b>	<b>6</b> <i>Category</i> <b>Architects</b>
<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>
<b>7</b> <i>Category</i> <b>The AfriSam Innovation Award for Sustainable Construction</b>	<div data-bbox="810 1608 1481 1751"> <h1>Construction <small>WORLD</small></h1> </div> <div data-bbox="842 1787 1481 2020"> <p><i>Main Sponsor</i></p>  <p><i>Platinum Sponsor</i></p>  <p><i>Gold Sponsor</i></p>  <p><i>Silver Sponsor</i></p>   </div> <div data-bbox="995 2033 1299 2123"> <p><b>Entry Deadline</b>  Friday, 8 August 2025</p> </div>
<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>	

# SPECIALIST CONCRETE REPAIR AND PROTECTION FOR SILO REPAIR

*Citi-Con's specialist concrete repair capabilities are being harnessed by a leading agricultural company to refurbish its silos at three sites. Their useable lives are also being extended, a critical intervention considering the strategic nature of this infrastructure.*



“Silos are very costly to demolish and reconstruct, which often involves specialist construction techniques to reduce build time and costs. Even so, it is not always possible to decommission this infrastructure without negatively impacting operations. This is considering the strategic role that silos play in preventing post-harvest losses by providing efficient and reliable storage capacity,” Andrew Rudolph, Technical Director of Citi-Con, says.

Taking into account the age of these silos, they require extensive concrete repairs. The work scope includes waterproofing the bin roofs and ceilings, as well as sealing the drip ends. Citi-Con is also sealing the ring-beams; vertical wall joints; wind inlets; and manholes.

This is in addition to comprehensive repairs to the concrete walls, each about 33,5 m in height and 49 m in diameter. Rudolph says that the process starts with thorough preparation of the concrete substrate, removing a thin layer of concrete via high pressure cleaning at 200 bar. This exposes the many vertical and horizontal cracks in the walls, after which a comprehensive structural investigation is undertaken. Cracks greater than 1mm in width are addressed first. A chip hammer is used to identify honeycombing and spalling due to steel reinforcement corrosion and the compromised concrete then marked for attention.

Thereafter, square cutting is undertaken to prepare the compromised concrete for repair. This entails cutting the edges of the cracks to about 120 mm on either side and widening the bases. They are opened to about 20 mm behind the reinforcement to create a shelf for the repair material to lock in. “This level of preparation is key to ensuring durable concrete silo repairs. In many instances, premature failure of concrete repairs can be attributed to poor preparation practices to save

time and costs,” Rudolph says.

As part of the process, the steel reinforcement is treated with StonCor Africa’s Pro-Struct 688 Zinc Rich Primer. It was specified for this application because of its durable and corrosion resistant properties. He says that this is a sound example of how Citi-Con is also extending the useable life of the infrastructure, considering that corrosion is one of the leading causes of degradation of reinforced concrete structures.

Thereafter, the exposed concrete is saturated with water ahead of the application of StonCor Africa’s TAMMS structural mortar, which provides high strength and increased adhesion due to its proprietary formulation. The structural mortar consists of Portland cement; graded aggregates; unique fibres; and polymers, while also containing a corrosion inhibitor.

Cracks that are less than 1 mm in width are chased with V-joint/V-groove cutting discs and then reinstated with ProStruct 506 Flexicoat. This is a high quality elastomeric waterproofing membrane.

“Completing the concrete silo repairs entails also treating the other repair areas with Pro-Struct 506 Flexicoat. The wall is first saturated with water using a hose. The first coat is applied horizontally from right to left and the second perpendicular, starting from the top. This approach ensures proper adhesion of the 2 mm-thick waterproofing membrane,” Rudolph concludes. ©

# AFRISAM AND RADA EMPOWER YOUNG GIRLS THROUGH SUSTAINABLE MIPAD INITIATIVE

*AfriSam, a leading construction materials producer, proudly sponsored and distributed reusable sanitary pads to Grade 7 female learners at Mid-Ennerdale Primary School in Gauteng. This initiative, part of RADA's MiPad programme, reflects both organisations' commitment to education, empowerment, and sustainable community upliftment.*

The distribution of reusable sanitary wear is not just about hygiene - it's about restoring dignity, promoting equality and keeping young girls in school. According to UNICEF, 1 in 10 girls in Africa misses up to 20% of the school year due to a lack of access to menstrual products. In South Africa, research by the Department of Women, Youth and Persons with Disabilities has shown that 30% of girls miss school during their menstrual cycle because they cannot afford sanitary pads.

"AfriSam has seen in communities that learners who cannot afford to buy sanitary towels stay at home and miss out on valuable teaching time," says Mathapelo Sehloho, AfriSam Community Development Manager. "By partnering with RADA, we are contributing to a reduction in absenteeism and enhancing the academic performance of young girls."

With the support of corporate sponsors like AfriSam, RADA's MiPad programme ensures that these challenges do not derail the futures of young women. By distributing reusable, eco-friendly sanitary pads, the initiative supports both education and environmental sustainability.

"Too often, the needs of these young kids are overlooked," says Ebeth van den Berg, AfriSam Marketing Manager. "I hope that each of these girls will find their unique space where they can become the absolute best that they can be."

AfriSam's involvement in this initiative is part of its broader



Corporate Social Responsibility (CSR) programmes which include investment in education, infrastructure development, youth empowerment and sustainable livelihoods. These initiatives reflect the company's core value of People, focusing on meaningful impact in the communities it serves.

"The future is bright for these young girls," adds Sehloho. "We look forward to meeting them again one day - this time as successful women who are contributing to our beautiful country."

RADA understands that, despite their motivation and ambition, many girls struggle to maintain regular attendance due to menstrual-related challenges. The MiPad initiative directly addresses this by providing a practical, reusable solution that helps girls take control of their education and future. ☺

## FULTON AWARDS RECOGNISE CORESTRUC'S PRECAST-CONCRETE EXCELLENCE

*Corestruc, a leading precast-concrete turnkey contractor, won two Fulton Awards in the 2025 edition of this prestigious Concrete Society of Southern Africa event. Now in its 45<sup>th</sup> year, the Fulton Awards recognise excellence and innovation in concrete.*

One of Africa's first precast concrete water towers, designed and built by Corestruc, was the overall winner in the infrastructure of up to R100-million in value category. Built on behalf of City of Ekurhuleni's Water & Sanitation Department, this impressive engineering feat showcases the many inherent benefits of concrete prefabrication.

Two 10ML precast-concrete reservoirs, among the many that Corestruc has already designed and built for municipalities, won the innovation and invention in concrete award. The construction of these two high-quality water-retaining structures was fast tracked on behalf of Vhembe District Municipality using precast-concrete technologies.

The judging process focused on the use of concrete for both structural and non-structural purposes. Core criteria included concrete quality and finish; sustainability and "green" building

initiatives; innovative uses of concrete and the overall aesthetic impact of the concrete aspects of the structures, among others. The adjudication panel consisted of well-known experts in their respective fields of concrete technology and application who also visited the two reservoirs and water tower as part of the judging process.

"This achievement would not be possible were it not for our visionary clients who continue to push us to innovate, as well as the high level of their professionalism and that of their engineering and contracting teams. Therefore, we share these achievements with City of Ekurhuleni, Vhembe District Municipality, Tango's Consultants, Infraburo Civil and Structural Engineers, RSMM Construction and Morawa Building and Civils," Willie de Jager, Managing Director of Corestruc, says. ☺

# CERTIFIED BUILDINGS DELIVER HIGHER RETURNS

*Too many buildings are being called 'green' without anything to back it up. As pressure mounts from investors and regulators to meet ESG targets, the difference between a marketing claim and real assessed performance matters more than ever. Green building certification gives the property sector a credible way to eliminate greenwashing, proving that a building performs as sustainably as it claims it does.*



Lisa Reynolds, CEO of the Green Building Council South Africa (GBCSA).

Climate change is often framed as a distant problem for governments to solve, but in reality, the property sector holds one of the biggest levers for impact. Buildings account for nearly 40% of global carbon emissions (UNEP 2023)\*, making developers, owners, and investors central to the climate solution.

By designing and building green and verifying it through independent certification to avoid 'greenwashing', the property sector can drive measurable climate action, reduce exposure to future risk, and unlock access to sustainable finance. Certification ensures that sustainability claims are based on consistent, transparent benchmarks. Not just box-ticking.

Certified green buildings have demonstrated better investment performance than non-certified ones, delivering

higher returns, lower vacancy rates, and greater appeal to ESG-focused investors, according to the MSCI South Africa Green Annual Property Index (2023). They are also typically resource efficient and have low utilities bills. In contrast, uncertified assets face rising operational costs, retrofit liabilities, and increasing risk of market devaluation.

"Property owners need to understand that certification isn't the end goal. Instead, it's a gateway to deeper, more effective sustainable building," says Lisa Reynolds, CEO of the Green Building Council South Africa (GBCSA). "It's how you prove that a building is actually performing in practice and on paper. Certification gives owners, investors, and tenants confidence that a building will deliver environmental and financial value over time."



GBCSA provides independent and credible certification through internationally and locally recognised systems, including Green Star, Net Zero, and EDGE. To date, more than 1,200 projects have achieved certification. Developed specifically for the South African context, Green Star is GBCSA's flagship certification and serves as the industry's trusted mark of excellence in the design, construction and operation of sustainable buildings.

### Certified green buildings deliver better returns

The business case for green building certification is backed by hard data. According to the MSCI Index, green-certified office buildings consistently outperform their non-certified counterparts across key financial metrics. Findings show that certified offices achieve a 1.5% higher annual return, 30% higher net operating income per square metre, and stronger tenant retention and rental stability over time.

These financial benefits are driven by lower utility costs, operational efficiency, and increased demand from tenants prioritising healthier, more sustainable workplaces. Certified buildings also hold stronger appeal in a competitive rental market – particularly among corporates with ESG mandates.

“The MSCI data proves that certified office buildings can be more profitable. Stakeholders such as investors and those in sustainable finance are paying attention and it's becoming a clear competitive advantage,” says Georgina Smit, Head of Technical at GBCSA. “In South Africa, we are proud to have local data and research that backs up the business case for going green. The upside is only half the story. As expectations shift,

uncertified buildings risk falling behind. Lisa Reynolds adds: “A growing trend in real estate is the ‘brown discount.’ Tenants and investors are avoiding uncertified buildings and asking for discounts because they're outdated and inefficient. If your building isn't green, it's at risk of losing value.”

### Certification as a tool for resilience and green finance

Green buildings are inherently more adaptable and resilient to climate change, policy shifts, and economic shocks. During the COVID-19 pandemic, green-certified buildings retained tenants and value more effectively, thanks to lower operating costs and healthier environments. Today, these assets are also better positioned to cope with load shedding, water scarcity, and volatile utility prices.

At the same time, certification is becoming a prerequisite for access to sustainable finance such as green bonds, sustainability-linked loans, and preferential lending terms. A report by a global alliance of the world's leading green certification bodies, entitled Financing Transformation, highlights how third-party verified green buildings offer greater transparency, lower perceived risk, and are increasingly being prioritised by banks and institutional investors.

Reynolds says: “When looking at sustainable finance and ESG reporting, certification provides investors with a sense of confidence. It's an independent, verifiable measure of a building's sustainability performance.”

### A call to action for developers, investors, and the public sector

As South Africa advances its Just Energy Transition and scales up climate adaptation, green building certification is gaining importance across both the public and private sectors.

Government is the country's largest property owner, so its ability to lead by example is significant. Reynolds says that public buildings should set the tone for private developers to follow: “If every building saved just 10% of its energy use, the national impact would be enormous.”

For developers, owners, and investors, green buildings with green building certification is the most effective way to future-proof assets, reduce risk, and demonstrate real ESG performance. Certification is a business imperative, not merely a ‘nice to have’. Without it, green building risks becoming just another marketing term. ☺



#### About the Green Building Council South Africa

The Green Building Council South Africa (GBCSA) is a member-based organisation focused on transforming the built environment into a place where people and planet thrive. We advocate for all buildings and precincts to be designed, built, and operated in an environmentally sustainable manner. GBCSA provides green building certification and sustainability training for all stakeholders in the built environment.

*\*Buildings are responsible for approximately 37% of global energy and process-related CO<sub>2</sub> emissions, according to the United Nations Environment Programme's 2023 Global Status Report for Buildings and Construction. This figure includes both operational emissions from energy use in buildings and emissions from the manufacturing of building materials.*



## THE GIANT AWAKENS

*PPC's turnaround strategy is delivering ahead of plan. "Implementing phase one of our 'Awaken the Giant' strategic turnaround plan has resulted in a step change in PPC's margins, profitability and cash generation, which are the highest since financial year 2018. This early success is largely as a consequence of a fundamental change in our strategic direction, the organisational culture, and an absolute focus on our core competencies," says Matias Cardarelli, PPC CEO.*

The leading Southern African supplier of cement and related products, PPC Ltd (PPC), has achieved significant improvements across its key financial metrics, from EBITDA growth of 28% to R1 593-million (FY24: R1 242-million), EBITDA margins expanded encouragingly by 3,8% points to 16,1%, and free cash flow from continuing operations rose 306% to R1 049-million. Earnings per share increased to 32 cents (FY24: 6 cents) and headline earnings per share increased to 40 cents (FY24: 19 cents).

"These results", said PPC CEO, Matias Cardarelli, "are the highest since FY18, considering the current group portfolio. Additionally, we have resumed ordinary dividend payments from the South Africa business segment, which has not

been declared since 2016, and there was a record dividend from Zimbabwe. This year's performance is not a result of once-off cost cutting, but rather the outcome of operational improvements, the introduction of best practices and a focus on our core business drivers."

Cardarelli continued, "We have set a new direction for sustainable growth and value creation for the short-, medium- and long-term. The past year has been one of rebuilding our foundations, changing strategic direction, action and delivery. As part of our turnaround strategy, tough decisions were taken to simplify our structure, secure highly skilled and experienced talent and, importantly, engage with our people to disseminate the new performance culture. The combined effect of closing



*Matias Cardarelli, PPC CEO.*

the gaps and accelerating the turnaround has delivered substantial results, and ahead of schedule. The foundations that have been and will continue to be built, will deliver sustainable growth”.

The FY25 results are remarkable, considering there wasn't any significant growth in the markets in which PPC operates. Group revenue decreased 1,9% to R9 871-million (FY24: R10 058-million) mainly due to a 6,7% reduction in Zimbabwe's revenue as PPC's SA & Botswana group revenue was relatively stable, increasing by 0,6%.

“Our Awakening the Giant strategic turnaround plan,” added Cardarelli, “is now well underway and is firmly grounded on ensuring PPC recovers competitiveness, rebuilds profitability and becomes a sustainable leader. We were able to offset inflationary costs with early operational improvements, from logistics optimisation to a better product mix, lower clinker factor and improved sales sourcing. We will remain focused on the imperatives within our control – delivering on carefully considered and executed plans, and doing so at an increased pace. We are becoming more competitive and better prepared to deliver an enhanced value proposition to our customers”.

The group's net cash inflow before financing activities increased by R789-million to R1 049-million, mainly due to the improved operating cash flow and reduced working capital.

The group improved its net cash positive position. The board declared an ordinary dividend of 17,6 cents (FY24: 13,7

cents) per share, which comprises a dividend of 1,9 cents per share from the SA and Botswana group, and a dividend of 15,7 cents per share, being the dividends received from Zimbabwe.

Together with the execution of the turnaround plan, PPC continues to evaluate projects and strategic options that will support medium- to long-term value creation. PPC signed an engineer, procure and construct (EPC) contract in March 2025 with Sinoma Overseas Development Company for the construction of a new 1,5 million ton a year, R3-billion, state-of-the-art integrated cement plant in the Western Cape. This will replace and increase existing capacity. This strategic investment will yield substantial benefits, including improved efficiencies, reduced production costs, and a minimised environmental footprint that ensures energy efficiency, while optimising operations to deliver high-quality cement products sustainably and cost-effectively. Cardarelli said, “The real benefits of this project are expected to start materialising in FY28, and will secure PPC's competitive position in the market as a result of innovative energy efficiency, reduced coal consumption and lower emissions per ton of cement”.

## Outlook

The cement industry landscape is changing in terms of market players, global and local competitors and expansion strategies. Cardarelli added, “International cement groups are entering the market with a strong investment in new technology, bringing cost efficiency. This will significantly change the market dynamics and the existing producers' position. We are well underway in creating a more efficient business, better equipped to compete and meet our ambitious objectives”.

While PPC is cautiously optimistic about the planned infrastructure spend recovery, long-term sustainability does not rely on an improved overall economic environment. The focus continues to be on unlocking internal value, as demonstrated in the FY25 results, without requiring any significant market shift.

Cardarelli concluded, “Our approach to volume, price, cost management and contribution margin are becoming systemic and the improvements we have made are expected to reap further benefits going forward. Ultimately, the group's strategy centers on competitiveness, which will deliver growth and shareholder value.” ©



## A CALL FOR SKILLS OVER CEMENT AS INFRASTRUCTURE AND CLIMATE RESILIENCE CRUMBLES

*South Africa is building for a world that no longer exists. Drainage systems can't handle the influx of rain. Dam storage capacities can't hold all the water due to sedimentation. Roads and bridges fall apart within years. The country's infrastructure is collapsing because the skills behind it haven't changed.*

**“W**e need infrastructure that's able to adapt, that's able to mitigate the impact of climate change. Our current urban drainage systems are not adequately able to do that,” said Water Research Commission (WRC), Senior Project Manager Lesego Gaegane.

Gaegane said many engineers, artisans and planners are trained in systems that don't match what's needed on the ground. They need to be reskilled and upskilled on incorporating climate resilience in their work.

“Although the country may have had heavy rainfalls, we're not able to store as much water as we can because the dams are not at their full capacity due to sedimentation. I'm managing a programme on dam siltation management – sedimentation builds up due to poor land use amongst other factors and reduces how much water dams can store. And as a country, we haven't had an optimal approach to this.”

The problem isn't just technical. It's about systematic planning for the long haul.

“When we build infrastructure, not enough thought is given to what happens afterwards. That's why we see new builds falling apart in five years – unfortunately there's no proper plan to maintain them.”

The answer is not new policies. It's practical skills. “If you're building a dam or a power plant, skills development must be included in these contracts, bring in young engineers. There must be a skills transfer. You

can't just build and walk away. You have to pass on the knowledge. If we don't integrate skills development into project delivery, we risk building infrastructure that fails prematurely due to poor maintenance or lack of operational expertise. This leads to higher costs, service disruptions, and even reputational damage. That's how we build sustainability.”

The country needs occupational training that fits the work for each specific sub-sector.

Water and energy systems are inseparably linked. Water is essential for energy production, particularly in hydropower and cooling systems, while energy is critical for every stage of the water cycle, from abstraction and treatment to distribution and reuse. To ensure sustainability, efficiency, and long-term economic value, South Africa must cultivate cross-sector competencies that reflect this interdependence.

For example, energy auditing within water utilities helps reduce operational costs, while understanding water footprints in energy production supports more efficient resource use. These skill sets must be embedded across engineering, planning, and operations curricula. Building expertise at this intersection is not only important – it is urgent. “That's how you make sure the current workforce is equipped and that the next generation is ready.”

This isn't optional.

“Skills development is not a nice-to-have. It's



what stands between us and collapse. You can't have infrastructure without skills. And you can't have resilience without both."

Speaking at the recent DEVAC Infrastructure Summit held in Johannesburg, Gaegane called for developments to be planned in tandem, with training requirements integrated directly into infrastructure contracts while driving and championing local innovations.

"TVET colleges must be central to this effort, recognising that Africa's infrastructure future relies not solely on the expertise of engineers and scientists, but also on the competence of technicians and artisans," she said.

The WRC's projects modelled on these principles have proven to be a success.

"Among these is the Giyani Local Climate Resilience Programme. By deploying solar-powered boreholes in the region, we simultaneously invested in training local communities in the management of both water and energy infrastructure. This dual-skilling approach has demonstrably improved operational reliability, reduced costs, and generated sustainable employment opportunities at the local level," said Gaegane.

Under Gaegane's leadership, the National Siltation Management Programme (NatSilt) has pioneered the first occupational-based skills programmes in South Africa focusing on dam siltation, ecological restoration and catchment rehabilitation. These training programmes have been developed with a recognition of prior learning framework for experienced individuals with no formal

qualifications and have secured accreditation from the Quality Council for Trades and Occupations. The WRC has partnered with the University of Johannesburg to mainstream Dam Siltation Management short learning programmes for sector-wide upskilling.

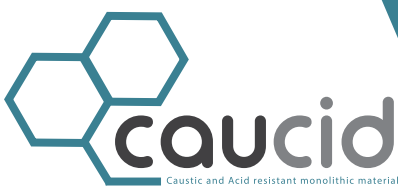
"We must champion local innovation, recognising that African solutions, rooted in local knowledge, will yield the most resilient outcomes. But importantly, we must not overlook the vital role of ecological infrastructure – our natural buffers are essential complements to engineered systems," said Gaegane.

The summit's broader discussions echoed the sentiment that Africa's infrastructure must be both climate-resilient and people-resilient.

KwaZulu-Natal MEC for Public Works and Infrastructure, Martin Meyer, stressed the continental significance of regional infrastructure, stating, "If KwaZulu-Natal ports fail, South Africa and Africa fail."

Deputy Minister of Electricity and Energy Samantha Graham-Mare advocated for policy reforms that champion localisation. Namibia's Minister of Works and Transport, Veikko Nekundi emphasised the critical need for genuine cross-border collaboration.

"Our collective challenge, and indeed our profound opportunity, lies in transforming the continent's infrastructure pipeline into a dynamic platform for skills, innovation and inclusivity. It is essential that the people of Africa, particularly women, youth, and rural communities, are placed firmly at the heart of this transformative journey," said Gaegane. ©



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# EXPOSED AGGREGATE IN THE SPOTLIGHT AS DEMAND FOR SURFACE RETARDERS RISES

*An upward trend in the use of surface retarders in South Africa's construction and infrastructure sector is shining a spotlight on the increasing popularity of exposed aggregate concrete finishes. According to Michelle Fick of Chryso Southern Africa, this trend reflects a growing appreciation for both the aesthetic and functional benefits that exposed aggregate offers.*



*Built to last, exposed aggregate delivers a hard-wearing finish that stands up to the demands of roads and transport infrastructure.*

“Exposed aggregate is no longer just a decorative finish; it’s being adopted across a wide range of applications from pavements and driveways to architectural facades and public infrastructure,” says Fick. “The textured non-slip surface offers a safer option for high traffic zones, while the natural stone aesthetic enhances the visual appeal of buildings and outdoor spaces.”

The finish is also ideal for preparing concrete surfaces that will receive a subsequent layer. Whether it is a waterproofing membrane, screed or cladding, the roughened texture created by the exposed aggregate allows for superior bonding, improving the durability and lifespan of the entire system. This makes it a preferred solution not only in aesthetic applications but also where structural performance is key.

Chryso Southern Africa offers surface retarders designed specifically to meet these evolving needs. The company’s products facilitate reliable consistent exposure of the aggregate to the required depth – up to a maximum of 3 mm – ensuring a uniform and high quality result. This is essential for specialist applicators who rely on precision and repeatability, particularly in large-scale or architecturally sensitive projects.

“The simplicity of the application process is another advantage,” Fick explains. “After the concrete is poured, the surface retarder must be applied evenly before the concrete begins to set. Following a predetermined curing period the surface is washed with water, removing the top layer of cement paste and revealing the aggregate below. A final sealant is then applied to enhance the surface’s durability and finish.”

Sealants can be selected to suit the needs of different environments and projects, including internal and external use, UV resistance and finishes ranging from matte to high-gloss. This flexibility allows architects and contractors to customise the final appearance while ensuring long term performance.

Significantly, Chryso was the first manufacturer to offer a mineral solvent-free water-based retarder designed to prevent soil and groundwater pollution during the cleaning of treated concrete. The product contains no toxic substances, is 85% biodegradable, classified as harmless and complies with EEC



*Exposed aggregate is a durable low-maintenance surfacing solution ideal for transportation infrastructure.*

Directives 88/379 and 93/18.

Fick notes that Chryso’s surface retarders are developed with the applicator in mind, offering not only technical consistency but also ease of use in site conditions that can often be challenging. “Our retarders provide reliable performance even under variable temperature and humidity conditions, which is critical for projects with tight timelines and complex environmental demands.”

With sustainability and safety continuing to drive specification choices in the built environment, the use of exposed aggregate finishes is expected to grow. “The combination of visual impact, surface durability, slip resistance and improved bonding makes it a smart choice for both new builds and renovations,” Fick concludes. “As the trend gains momentum, we are committed to supporting the market with reliable solutions that ensure consistent high quality results.”

As urban spaces evolve and developers seek more creative yet practical finishes, the role of surface retarders - and particularly exposed aggregate - is likely to become even more prominent in shaping the look and functionality of tomorrow’s concrete structures. ©

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## LTA AUTECON PROVIDES SMPP FOR NAMAKWA SANDS EAST

*LTA Autecon's Metals & Minerals division, which has a proud industry track record of over 40 years in the construction of mining, steel, iron-making and mineral recovery process plants across Sub-Saharan Africa, is on track to complete a pivotal project in the Western Cape. Namakwa Sands is one of the largest mining projects to be undertaken in South Africa in recent years.*

The scope of work for this milestone project includes the supply, fabrication, delivery and installation of structural steelwork, mechanical, plate work and piping (SMPP) for the new mineral processing plant - as well as associated overland piping - for the Namakwa Sands East OFS (Orange Feldspathic Sand) project.

Located at Brand-se-Baai, which is 385 kilometres north of Cape Town, this operation is owned by Tronox Mineral Sands Proprietary Limited, a subsidiary of Tronox Holdings plc, a multi-national mining and chemicals company.

Tronox mines, processes and beneficiates heavy minerals to produce titanium dioxide feedstock (chloride and sulphate grades), zircon, rutile and high purity iron. These products are used as feedstock in a wide range of applications including pigments, metals, ceramics and foundries.

The Namakwa Sands operation focuses on the extraction and processing of heavy mineral sands via open-cast strip

mining to extract sand ore. The operation features two open-pit mines, three concentration plants, a mineral separation plant (MSP) and two smelting furnaces, which produce titanium slag. The ore mined and processed at the primary concentration plants produces a heavy mineral concentrate - which undergoes further processing at the secondary concentration plant to yield a magnetic and non-magnetic stream.

### Completion and highlights

LTA Autecon General Manager Marius Botes says that the SMPP portion of the project, which was awarded in November 2023, is on track for completion within the scheduled timeline - at which time final completion activities, including electrical, instrumentation and controls will take place. Commissioning will begin immediately with an expected commissioning completion date of November 2025.

"On completion, this project will have included the

installation of 700 tons of structural steel, 1 000 tons of conveyor steel, the entire mill installation complete with mechanical equipment, 530 tons of platework, 6 000 m<sup>2</sup> of grating - as well as 10 200 metres of plant piping and a massive 24 500 metres of overland piping,” Botes advises.

Key project highlights include the completion and handover of the overland pipeline in December 2024; as well as carrying out complex tandem lifts as part of the main construction process.

“Deadlines were also adhered to for outlying areas feeding the main plant area in April 2025,” Botes says.

He adds that this complex project has been challenging due to the remote location of the site - which made transport and accommodation of staff, and delivery of materials to site difficult - not to mention the vast overall site layout.

## Safety and sustainability

Both LTA Autecon and its client Tronox have stringent policies with regard to sustainability and on-site safety. Botes points out: “LTA Autecon’s unwavering commitment to safety aligns seamlessly with our client Tronox’s stringent health and safety standards.

Guided by our company ethos and safety motto of ‘home without harm, everyone, every day’, LTA Autecon prioritises a culture where safety is integral to every operation - as demonstrated by our achievement on this project of 500 000 LTI-free man-hours.”

“This alignment of values - as well as our longstanding SMPP track record in the mining sector - played a crucial role in LTA Autecon securing this project.

Tronox seeks partners who do more than meet regulatory requirements. They look for companies that deeply instil and embed safety into their operations. Our strong safety protocols, leadership-driven approach, and proven track record in maintaining high safety standards reflect a shared commitment to zero harm.”

He also notes that LTA Autecon’s integrated Safety, Health, Environment and Quality Management System emphasises risk mitigation, proactive hazard identification, and continuous improvement principles. These complement Tronox’s dedication to creating a safe and sustainable work environment. This synergy ensures that every worker is empowered to prioritise safety, fostering a collaborative and vigilant workplace.

## Mining for future opportunities

According to Botes, LTA Autecon’s Metals & Minerals division is focusing on mining-related construction opportunities across Africa.

“The Metals and Minerals division utilises proven, customised systems to manage and monitor quality and progress. This includes sequencing and accurately delivering all project materials - from planning to execution,”

The fact that our systems and processes are solidly underpinned by strong teams of experienced SMEIPP professionals - who are very knowledgeable about the supply chain process and have a proven track record of delivering high-quality results in the SMPP and mining sector - also bodes well for the LTA Autecon Metals & Minerals division, as it expands the company’s geographic and operational footprint,” Botes concludes. ©





## NO EARLY STRENGTH COMPROMISE FOR GREENER CONCRETE

*Achieving low-carbon concrete for more sustainable buildings often comes with a trade-off - slower early strength development, which can delay construction timelines and disrupt project planning. However, the EnviroMix® range from Chryso effectively eliminates this compromise, delivering a solution that supports both environmental goals and construction efficiency.*

According to Patrick Flannigan, Chryso GM Technical and Product Support Management Africa, the drive towards more sustainable construction methods is gaining considerable momentum. “We are seeing growing demand from architects, designers and developers who are prioritising lower embodied carbon in their projects and are actively seeking innovative

technologies to reduce the carbon footprint of new buildings,” he says.

One of the most effective strategies to date has been the use of supplementary cementitious materials (SCMs) in concrete mixes. These materials, which include fly ash and ground granulated blast furnace slag (GGBS), significantly reduce the



*Driven by innovation, Chryso's R&D teams tailor EnviroMix solutions through precise material analysis, delivering sustainable high performance concrete formulations.*



*Patrick Flannigan, GM: Technical and Product Support Management, Africa at Chryso Southern Africa.*

*By using tailored polymers and catalysers to boost performance, EnviroMix cuts CO<sub>2</sub> emissions by up to 50% per cubic metre of concrete.*

proportion of ordinary Portland cement (OPC) required - and with it, the energy-intensive clinker content.

"This reduction is key to lowering emissions, but it comes with a drawback," Flannigan explains. "Replacing OPC with SCMs has typically affected the rate of early strength development in concrete. This can delay the removal of formwork and scaffolding on construction sites or slow down the demoulding process in precast concrete manufacturing (PCM) environments, both of which are critical to maintaining construction timelines."

This is where Chryso's EnviroMix® range becomes an essential asset. "It offers a robust and reliable solution that ensures early strength targets are still met, even with higher SCM content," says Flannigan. "This means contractors and precast producers can meet tight deadlines and keep production moving without compromising their sustainability goals."

He notes that early strength development has a direct influence on project economics. "Any delay in achieving sufficient early strength can significantly affect a project's

financial viability," Flannigan warns. "If formwork removal must be postponed, it can result in costly extensions to the construction schedule. This is particularly important because formwork and scaffolding make up a substantial portion of total concrete construction costs. The longer they remain in place, the more they cost in terms of rental, labour and project delays."

This issue is equally critical in PCM environments. "In precast operations, fast mould turnaround is vital," Flannigan



*EnviroMix enables fast mould turnaround in precast by achieving early strength, even with SCM-rich concrete.*

explains. “Any delay in demoulding affects the production cycle and overall output, which in turn impacts profitability. EnviroMix supports the high efficiency demands of these operations by ensuring early strength is achieved even when using SCM-rich concrete.”

South Africa, he adds, has a long history of using SCMs in concrete due to its ready supply of key materials. “Pulverised fly ash from coal-fired power stations and granulated blast furnace slag from steel manufacturing have traditionally been readily available locally, encouraging the adoption of SCMs in the market,” says Flannigan.

“Chryso’s innovative technologies allow our customers to capitalise on these materials to lower the environmental impact of their concrete while maintaining critical performance parameters,” he continues. “Our EnviroMix range ensures early strength targets are met which simplifies project execution for contractors and improves production efficiency for precast manufacturers, making sustainable practices more accessible



*The EnviroMix range makes sustainable construction with SCMs easier and less disruptive for contractors and precast producers.*

and less disruptive to daily operations.”

Looking globally, Flannigan highlights that European markets are leading the charge when it comes to embedding sustainability in construction regulations. “The EU has set ambitious goals - aiming for a further 30% reduction in carbon dioxide emissions from buildings by 2030,” he says. “To help meet these targets, many European countries are implementing legislation that imposes limits on the embodied carbon per square metre of construction, which is measured across the entire lifecycle of a structure.”

He believes it is only a matter of time before South Africa follows suit. “Given that many of our building specifications are modelled on or adapted from European standards, we expect similar regulations to be introduced locally,” he says. “There is a clear shift in the industry towards evaluating the environmental impact of buildings over their full lifecycle - from raw material extraction and construction through to operation and eventual decommissioning.”

Chryso’s contribution to decarbonising the global construction sector is already substantial. Its low-carbon concrete solutions, which include cement activators as well as advanced plasticisers and super-plasticisers, were independently verified to have prevented the emission of 15 million tonnes of carbon dioxide during 2023 alone. This figure reflects the widespread adoption of Chryso technologies across operations in 81 countries.

However, Flannigan cautions that successfully implementing SCMs is not simply a matter of substitution. “There is considerable variation in the chemical and physical properties of SCMs, particularly when it comes to fly ash and slag,” he says. “This variability can affect everything from workability and strength gain to setting times and durability. That’s why Chryso’s R&D teams and laboratories play a vital role - analysing the exact characteristics of each material before recommending the most effective formulation within the EnviroMix range.”

“Our team can design bespoke solutions based on the specific materials a customer is using, whether it is the type of fly ash, cement or other mix constituents,” Flannigan concludes.

The EnviroMix® range integrates tailored polymers and catalysers to optimise performance and enable up to a 50% reduction in carbon dioxide emissions per cubic metre of concrete. It is a powerful tool for the industry as it transitions toward a more sustainable future - without having to compromise on productivity or quality. ©



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