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If the percentage movement in the last 12 months of the JSE listed construction heavyweights is a barometer of the Construction Industry at large, the industry is indeed in the doldrums. A quick glance down the relevant column of the JSE Share tables shows a dismal trend with all but one stock in the heavy engineering sector reflecting significant negative share price movement over the last year. The related sectors of mining show an equally depressing picture.

A perusal of the various commentaries issued by the listed sector shows below par performance being partly as a result of the common themes of unstable labour, delayed contracts, lack of public spend, tough contractual conditions, lethargic GDP growth, skills shortages, unresolved claims, litigation and tight margins. Notwithstanding the relatively small representation in the listed construction space, the rest of the industry is unfortunately also affected by the market sentiment towards the JSE listed entities.

The FNB/BER Building Confidence Index for the first quarter of 2015 shows a fall in confidence from 60 to 55 points. The index, measured between 0 (indicating an extreme lack of confidence) and 100 (indicating extreme confidence), reveals the percentage of respondents that are satisfied with prevailing conditions.” He went on to say that “the biggest surprise this quarter was the fall in confidence of main contractors, particularly residential contractors, which rose noticeably towards the end of 2014”.

Residential main contractor confidence shed 21 points which, along with a fall in non-residential main contractor confidence, saw overall main contractor confidence decline to 49 index points.

There are indicators that the industry is near the bottom or at the bottom of the current downturn and with the recent success of SARS in collecting their forecast revenues, the Government is hopefully poised to unleash its planned infrastructure roll-out to the benefit of all.

The last word on the B-BBEE New Codes of Good Practice was received via Government Gazette 37453 that extended the transitional period for the implementation of the new codes to 30 April 2015. This means that with effect from 1 May 2015, any Empowerment rating will be required to be issued in terms of the New Codes, either utilising the DTI generic or sector specific tables.

Notwithstanding that the industry has been aware of these pending changes for in excess of 18 months, I suspect there is still a wait-and-see attitude from many. The current rating certificate is valid for a maximum of 12 months which means that, unless there are further notifications, the new rating certificates will be phased in between 1 May 2015 and 30 April 2016, the latter being the last possible date that a certificate utilising the old codes will be valid.

Neil Loos, FNB Property Economist, stated that “although the index was lower, it still indicates that more than half the respondents are generally satisfied with the prevailing conditions.” He went on to say that “the biggest surprise this quarter was the fall in confidence of main contractors, particularly residential contractors, which rose noticeably towards the end of 2014”.

Neil
Comment – by the President of MBSA

Are we at the bottom of the downturn?.............................................1

MBA news

Funding for future Master Builders .....................4
East Cape MBA office bearers ...........................4
KZN-MBA member Saint-Gobain leads the way ..............................5

Construction Health and Safety

CHS Professional? Have you registered?.................................6
“Spend more time on-site” says SAISC ........................................7

Steel Awards 2015 – call for entries......................8

Economic

Building confidence falters, civils confidence plummets in Q1................10

Industry news

Congress 2015 – anticipates to be alive with opportunity ..............................11
RICS Africa Summit resonates with Africa..........................12
Captains of Construction to meet with industry stakeholders at Totally Concrete .................13

Cement and concrete

Concrete Institute calls for penalties for poor curing ..........................14
Sarma sharpens its audit criteria ........................................15
COVER STORY – AfriSam provides customers with value beyond price ..................16
Elematic SA doubles its precast hollow-core capacity ..............................18
Franki, the CTICC and the Foreshore .......................19
Murray & Roberts pioneers concrete technologies in quest to become carbon neutral ........................................18
Sephaku Cement reports impressive growth .......................................22
Readymix Conference 2015 to explore new techniques in concrete ..................22
Civil engineering bodies add strength to the Concrete Institute ...............24
contents

PPC sponsors prestigious Fulton Awards ...........24
Take your ready-mix plant to the next level .......25
Hollow core plant-friendly green wall innovation .............................................26

Company news
Edelweiss: Master Builder celebrates third generation in fenestration ....................................28
Buco shifts into high gear .................................................................30
Roller alliance for Wacker Neuson and Wirtgen ..........................................................30
It's all about the company DNA: Inyatsi ..........32

Walls and floors
KBAC flooring for Londolozi ..............................34
New surfaces for architecture and design ........36
Pre-stressed slabs and cell phone technology connect at MTN Data Centre ..................38
Good floors make good customers ................39

Refurbishment and renovation
Refurbishments, conversions and upgrades: it's all about experience .................................40
Corobrik collaborates in refurbishment of Government House ...........................................41
A dream restoration opportunity ......................42

Windows and doors
Fire doors: a burning issue ..............................................43
Besam: entrance solution of choice for hospitals and gyms ........................................44

Product news
New Cat rippers for mini excavators ................46

Events 2015 .................................................................47

People.................................................................48

MBSA members and affiliates ..........................48

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Funding for future Master Builders

Recognising the need for funding to be made available to further the growth of skills within the South African construction sector, the Master Builders Association of the Western Cape (MBA WC) has implemented a number of initiatives. Among these are the donation of bursaries and an apprenticeship programme.

This year, the association for employers in the building industry has provided approximately R519 000 in bursaries to 21 young people who are employed by MBA WC members and have completed their first year of studies. According to Group Skills Facilitator at the MBA WC Tony Keal, “These bursaries have been given to individuals who have been recommended by their employers as well as by other institutions.”

The MBA WC’s apprenticeship programme, which was implemented in 2010, has seen 142 matriculants being given the opportunity to earn while they learn. “The MBA WC pays for their training and places them with our member organisations for experience,” explains Keal. “After all, a worker that understands his or her trade produces quality work.”

He continues, “Our first intake of apprentices will be qualifying next year and we are looking forward to equipping the matric class of 2015 with the skills and experience they need to become master builders. Apprenticeships not only create skilled people, but also future entrepreneurs in the industry.”

“By providing young people with the means to further their education we are ensuring not only the growth of skills in South Africa, but the growth of the country too,” concludes Keal.

East Cape MBA office bearers

The East Cape Master Builders Association covers a considerably large region. Pictured here for your reference are the elected office bearers for the sub-regions.

The East Cape MBA, founded 116 years ago in 1898, is affiliated to MBSA and operates on a wide scale with regular meetings and events at its three main branches namely, Port Elizabeth (East Cape), East London (Border/Kei) and George (Southern Cape). Activities also extend regularly to smaller centres within the Association’s area of jurisdiction.

The Association represents the interests of about 700 employer members throughout this region.

For membership and other enquiries contact the East Cape MBA on 041 365 1835; ecmba@global.co.za or visit www.ecmba.org.za
Master Builders KwaZulu-Natal member, Saint-Gobain South Africa, has been officially certified by the Top Employers Institute for its exceptional employee offerings.

Saint-Gobain is a world leader in habitat and construction markets. They design, manufacture and distribute building materials, providing innovative solutions to meet the growing demand in emerging economies.

The annual international research undertaken by the Top Employers Institute recognises leading employers around the world: those that provide excellent employee conditions, nurture and develop talent throughout all levels of the organisation as well as continuously striving to optimise employment practices.

Saint-Gobain South Africa has been awarded the exclusive Top Employers South Africa 2015 certification.

The Top Employers Institute globally certifies excellence in the conditions that employers create for their people. It recently announced the results of this year’s research into the employee conditions of significant employers in South Africa. Saint-Gobain South Africa is one of the select organisations to achieve the Top Employers South Africa 2015 certification and is delighted to be officially recognised as a leading employer.

Crucial to the Top Employers process is that participating companies must complete a stringent research process and meet the required high standard in order to achieve the certification.

To further reinforce the validity of the process, all answers were independently audited, meaning this research has verified Saint-Gobain South Africa’s outstanding employee conditions and earned them a coveted spot among a choice group of certified Top Employers.

The Top Employers Institute assessed Saint-Gobain South Africa’s employee offerings on the following criteria:

- Talent Strategy
- Workforce Planning
- On-boarding
- Learning and Development
- Performance Management
- Leadership Development
- Career and Succession Management
- Compensation and Benefits
- Culture

Samantha Crous, regional director South Africa and Benelux (Belgium, the Netherlands, and Luxembourg) for the Top Employers Institute comments: “Optimal employee conditions ensure that people can develop themselves personally and professionally. Our comprehensive research concluded that Saint-Gobain South Africa provides an outstanding employment environment and offers a wide range of creative initiatives, from secondary benefits and working conditions, to performance-management programmes that are well thought out and truly aligned with the culture of their company.”

For the fourth consecutive year Saint-Gobain South Africa has been included in the Thomson Reuters Top 100 Global Innovators ranking. The list is based on the number of unique patents, the number of patents accepted compared with the number filed, and their international scope and renown.

Saint-Gobain South Africa has been awarded Top Employers South Africa 2015 certification. Accepting the award on behalf of Saint-Gobain are, from left to right: Mhlo Ntshangase – HR director; Barbara Ayissi – HR manager; Steve du Toit – Saint-Gobain delegate; Shenaaz Chenia – head of delegation Finance; and Fanie Vos – head of delegation HR and Corporate Communication.
SACPCMP launches a comprehensive national roadshow to facilitate the smooth registration of Construction Health and Safety (CHS) professionals by 7 August 2015.

Last month the South African Council for the Project and Construction Management Professions (SACPCMP), in collaboration with the South African Forum of Civil Engineering Contractors (SAFCEC) set off on its nationwide road-show, staging workshops in most cities of all provinces to assist and guide CHS professionals through the registration process required by the recently promulgated Revised Construction Regulations, in which: “The National Department of Labour has tasked the SACPCMP to register CHS Professionals in terms of the Construction Regulation 5(8) of the Occupational Health and Safety Act”.

The registration of CHS professionals is a critical intervention in terms of enhancing CHS in the construction sector, and the urgent need to reduce injuries, fatalities and disease. The application and approval of Construction Permits by the Department of Labour was mobilised to ensure that competent professionals are appointed prior to commencing any project in the built environment. It is mandatory for CHS professionals to register by 7 August 2015 in order for them to practice in the field of CHS.

Following months of deliberation, and through active consultation with and participation by a range of industry bodies, including Master Builders South Africa and Master Builders Associations – the SACPCMP has arrived at the final definition of CHS professionals, and has formulated their detailed registration application processes.

This process is now the subject of the national workshops being run by SACPCMP across the country through to the end of May.

Categories
The following CHS Professional categories are those defined for registration:

Officer, Manager and Agent (for client). Each of these categories has fully defined criteria, experience and qualifications set out as prerequisite requirements of the applicant. In addition, comprehensive guidelines have also been formulated and are available for download from http://www.sacpcmp.org.za/registration. The various categories and guideline information is discussed in detail at the workshops, at which registration application forms are also available.

In the structuring of these categories, knowledge, experience and skills are taken into account in a weighted scoring system for each, along with training and competency requirements.

Allowance has also been made to accommodate foreign qualifications. Evidence of continued professional development, such as short courses, is also allowed for in the application.

This project organogram depicts the position of Construction Health and Safety practitioners relative to other functions in the six stages of a construction project.

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>CHS Office</th>
<th>CHS Manager</th>
<th>CHS Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Project initiation and briefing</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td>Concept and feasibility</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Stage 3</td>
<td>Design development</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Stage 4</td>
<td>Tender documentation and procurement</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Stage 5</td>
<td>Construction documentation and management</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Stage 6</td>
<td>Project close out</td>
<td>✓ ✓ ✓</td>
<td></td>
</tr>
</tbody>
</table>

At the time of going to print registration workshops for CHS professionals have been conducted in the following provinces:

**Gauteng**: Johannesburg, Pretoria, Vereeniging

**Free State**: Welkom, Bloemfontein

**Northern Cape**: Kimberley, Upington

**Western Cape**: Cape Town, Paarl

**Mpumalanga**: Secunda, Nelspruit

**KwaZulu-Natal**: Durban, Richards Bay

**Eastern Cape**: Port Elizabeth, East London

Registration workshop dates for Limpopo and North West are:

**Limpopo**: Polokwane 06 May 2015; Lephalale 8 May 2015

**North West**: Mafikeng 20 May 2015; Rustenburg 22 May 2015

Registration may also be done online at http://www.sacpcmp.org.za/
In terms of the 2003 version of the Construction Regulations, a part of the 1993 Occupational Health and Safety Act, designers have a significant responsibility. This responsibility has grown considerably and is now more clearly defined in the new Regulations which come into force in August 2015.

Structural engineers fall fairly and squarely into the definition of a designer in terms of the regulations. The work that they do is also encompassed in the definition of constructions that fall under the jurisdiction of the Regulations, which refer to changes to the built environment, to make sure that all site work will fall into the definition.

In a series of lectures recently delivered to structural engineers in Cape Town, Johannesburg and Durban, the author emphasised the need to concentrate not only on the paperwork required, but also on the need to spend much more time and effort on observing what is happening on site in an attempt to prevent accidents from happening. Steel fabricators and erectors report that safety programmes have significant cost to develop and implement, that productivity has dropped in order to satisfy the over-zealous requirement of the “Safety agent” but that a reduction in accidents has not been the result.

Somewhere along the line we are going wrong. We need to redirect our energy to stopping accidents.

In order to ensure that structural engineers know their responsibilities related to the Regulations, the Southern African Institute of Steel Construction (SAISC) has developed a course aimed at making structural engineers aware of their responsibilities and to encourage them to go that extra mile in

"Spend more time on-site" says SAISC on the new Construction Regulations

The structural engineer’s responsibility in the Construction Regulations of February 2014.

By Spencer Erling, education director, Southern African Institute of Steel Construction (SAISC)
In terms of the OHS Act and its Regulations structural engineers must “by law,” ensure that their clients know that they are responsible for having a safe site, that the client shall appoint a registered safety agent to assist him in this task. That the client under the guidance of his agent, shall develop a safety policy which should act as the guidelines for the site safety programme that the principal contractor must develop and enforce for the whole construction team.

The client shall, when the project exceeds R13 million in value, comply with specific conditions – one of which is to apply for a permit from the Department of Labour 30 days before commencement of work on site. This permit number is to be prominently displayed at the entrance to the site.

Of the dozen client obligations in the Regulations, one that stands out is that the client will only appoint a “competent” contractor. Competence is clearly defined for designers and contractors (including managers) using words such as: Has required knowledge; Training; Experience; Qualification (if applicable) and training as described in the National Qualifications Network (NQF) to define the requirements; and Is knowledgeable about the OHS Act and its requirements.

The structural engineer, or in fact any designer on the project, has an obligation to ensure that the client is familiar with these requirements.

The structural engineer also has an obligation to review the client’s safety policy to ensure his design will not prevent the policy from being enforced. The engineer shall inform the client and tenderers of any risk and hazards that may be associated with the construction of the structure. He shall provide information to ensure safe construction of the project.

To satisfy this requirement engineers are encouraged to talk to their contractors as early as possible to understand what hazards and risks could exist in the eyes of the contractors.

When engineers undertake design works for contractors for temporary supports such as scaffolding, formwork, props, and temporary stability devices, this requirement becomes more onerous – indicative of the drafters of the regulations’ perception of the inherent dangers of temporary support systems used in construction. It is a requirement that a full set of calculations, clearly indicating the vertical and horizontal loads designed for, and drawings be available on site for these temporary works.

One of the interesting provisions of the new Regulations allows for the situation where the designer is not mandated by the client to do inspections and final sign off of the structure. In such a case the inspection will be done by the client’s principal agent. One hopes that such agents are qualified to sign off a structure as having been built to the engineer’s design (and by inference an occupation certificate)!

The Regulations also warn the construction team not to overload structures during construction and looks to the engineer to provide sufficient design load information to prevent this from happening.

Two of the clauses that our building owning fraternity either is not aware of or chooses to ignore, because of the expense involved are: the owner’s need to have his structure inspected every six months in the first two years and then annually to ensure that the structure is still safe to use for its intended purpose; and to maintain the structure where necessary and to keep records of such inspections and maintenance in case a Department of Labour inspector asks to see such records. Because these clauses are in the Construction Regulations, and surely not every building owner is involved in the construction, this requirement may never reach them.

All too often site safety pays lip service to the Regulations – safety personnel sometimes just look for comfort in having their “paperwork in order,” even the site safety induction given to visitors may simply be a paper thrust in front of them for signature. The SAISC advises engineers to take stern action against safety officers who do not do this work properly. After all sites are inherently dangerous places.

For more information you can download a copy of the Construction Regulations by visiting the Department of Labour’s web site www.labour.gov.za

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**Steel Awards 2015 – Call for entries**

The Southern African Institute of Steel Construction (SAISC) has called for entries for the 2015 Steel Awards and photo competition.

SAISC communications manager Renee Pretorius says that after the high standard of the 2014 Awards there has been extraordinary expectation throughout the steel construction industry in relation to this year’s Awards.

This year’s awards are structured under the following categories: Overall Winner, Tubular Category, Light Steel Framing Category, Factory and Warehouse Category and a new category for Carbon steel based cladding.

Entries must be sent in as soon as possible.

The Steel Awards take place in Gauteng, KZN and the Western Cape on 3 September 2015.

For more information go to www.saisc.co.za or email Renee Pretorius on renee@saisc.co.za.
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Building confidence falters, civils confidence plummets in Q1

Building confidence index drops 5 points

The FNB/BER building confidence index reports a drop of 5 index points, registering a level of 55 in the first quarter of 2015 (1Q2015). Compared to last quarter, half of the sectors, namely, manufacturers of building material, main contractors, and quantity surveyors recorded a fall in confidence. This was partially offset by higher confidence among retailers of building material, subcontractors and architects.

“The biggest surprise this quarter was the fall in confidence of main contractors, particularly residential contractors,” said John Loos, Property economist at FNB. Residential main contractor confidence shed 21 points which, along with a fall in non-residential main contractor confidence, saw overall main contractor confidence decline to 49 index points.

Main contractors

Growth in building activity (Net balance)

Source: BER, Stellenbosch University

According to Loos, “Confidence was down on the back of a sharp slowdown in residential building activity which, in turn, resulted in lower profitability.” In contrast, subcontractor confidence rose for the third consecutive quarter, by 2 index points to 52 in 1Q2015.

The confidence of building material retailers continued to rise during the quarter, from 74 to 91 index points. “This is encouraging given the slowdown in building activity during the quarter. With lower inflation, it does seem as though the fortunes of consumers are changing somewhat. This likely boosted sales to the informal and DIY markets” Loos noted. Confidence of manufacturers of building material on the other hand declined on the back of poorer domestic demand and domestic orders. “Unlike retailers, manufacturers seem to have been much harder hit by the slowdown in building activity” said Loos.

The building pipeline provided mixed results, adding to the uncertainty regarding the outlook for the sector. Architect confidence edged up slightly to 49 index points while the confidence of quantity surveyors decreased to 57. Similarly, general activity of architects improved somewhat during the quarter while that of quantity surveyors deteriorated.

Civils confidence plummets

After rising to 59 last quarter, the FNB/BER civil confidence index shed 20 points to register a level of 39 in 1Q2015.

The outlook for construction activity, particularly for new work, is poor.

This fall in the index returns it to levels last seen in 2012.

The current level of the index suggests that more than half of the respondents are dissatisfied with prevailing business conditions.

Civil construction

Growth in construction activity

Source: BER Stellenbosch University

According to the South African Reserve Bank (SARB), growth in the real value of construction work eased to only 3,3% year-on-year (y-o-y) in 4Q2014, from 8,3% in 3Q2014 and 17,7% in 2Q2014.

“If the 1Q2015 survey results are anything to go by, then construction activity likely slowed further in 1Q2015, possibly even contracting on an annual basis. As a result, confidence declined” said Jason Muscat, senior industry analyst at FNB.

The moderation in construction activity also caused overall profitability to worsen.

“In addition to the current slowdown in construction activity, the outlook has also deteriorated” said Muscat.

Although respondents expect construction work to improve next quarter, an increasing proportion cite the lack of demand for new construction work as a constraint to their business operations.
Congress 2015 anticipates to be alive with opportunity

Master Builders South Africa (MBSA) is well advanced in the planning of its 110th Congress which will be staged at the Johannesburg Expo Centre (JEC) from 16 – 17 September.

Under the broadened theme of **Building sustainability in Africa**, Congress 2015 aims to create an environment to enable the African market to network and role players to interact and grow their understanding of the different construction markets on the continent.

“Important issues facing the construction sector, both here at home and across the continent, will be addressed at Congress 2015,” says Pierre Fourie, MBSA operations director. On the agenda are a range of burning issues to be discussed and addressed, such as progress of the National Development Plan, procurement issues, standards within construction, construction health and safety, and green building measures.

MBSA anticipates a record number of delegates to attend Congress 2015 due to its alignment with Bauma Conexpo Africa, which runs concurrently at the same venue.

“This collaboration will provide the perfect platform for industry players from across the continent to maximise their time spent through engagement, interaction and exploring of opportunities at both of these key events,” says Fourie. Congress 2015 guests will be accommodated at the world-class Montecasino Hotel, from where they will be transported to all Congress activities by luxury bus. As always an array of the now legendary social networking events, such as golf, exciting construction-related outings for delegates, notable social outings for delegates’ partners and first-class entertainment for all at the Theme and Gala Dinners.

Be sure to book early for Master Builders South Africa Congress 2015 – to meet the right business partners and suppliers; and to boost your return on investment on projects of all sizes.

To exhibit, sponsor or enrol for Congress 2015 contact Marie Ferreira at MBSA on +27 11 205 9000
Email: Mferreira@mbsa.org.za; or enrol online at www.mbsacongress.co.za

Conference Secretariat is Scatterlings Conference and Events, Jeanne Day-Spriestersbach 011 463 5085 or jeanne@soafrica.com
RICS Africa Summit resonates with Africa

Over 200 delegates from a range of African countries and from across the globe, from all sectors relating to growth, development, the built environment and infrastructure, attended the Royal Institution of Chartered Surveyors’ (RICS) Africa Summit 2015 staged in Johannesburg in March, RICS’s first international conference on the continent.

Undoubtedly one of the most vibrant, high-energy and fruitful events pertaining to the Built Environment in recent times, the RICS Africa Summit wasted no time in cutting to the chase in setting about to address crucial development challenges and opportunities facing the continent.

A common thread throughout the presentations and discussions was recognition that Africa is taking its place on the world stage in terms of real estate, infrastructure and construction. There was a clear sense that the RICS can play an important role in helping countries build consistent standards where needed, albeit with a definite focus on collaboration with existing bodies and governments.

Louise Brooke-Smith, Brooke Smith Planning & RICS President, said in her opening address: “This truly international organisation RICS, has over 118 000 individual professional and corporate members worldwide, of which 800 members are in South Africa, Ghana and West Africa, with new offices now in Nairobi to represent East Africa.”

Moving along swiftly Kganya Kgare, Emerging Market Economist for Stanlib, set the scene on the future economic sustainability and emerging market outlook for southern Africa. “In South Africa investment spending is in recession,” he said, “whereas Africa’s economic growth as a continent is predicted to outpace all other continents during the next five years. Forecasts also show that four of the world’s 10 fastest-growing national economies will be African, with annual GDP growth in Ethiopia, Mozambique, Tanzania, Congo, Ghana, Zambia and Nigeria predicted to exceed more than 6%.”

The meat of the matter was then debated in a lively interactive panel session, in which global respected specialists Martin Brühl – a Fellow of the RICS (FRICS); Jones Lang, LaSalle Global Director; EMEA Corporate Solutions Vincent Lottefier; and Francois Viruly (FRICS) debated key markets, drivers, trends and opportunities.

Brühl, who is RICS President Elect and Head of International Investment Management, Union Investment Real Estate, stated that there are investors who ‘think that Africa is the new Asia’. Again, the need for benchmarking and adequate data was mentioned. Viruly, of University of Cape Town’s Department of Construction Economics and Management, identified Kenya, Rwanda, Ghana, Mozambique and Zambia as possible markets for new investors.

A common theme throughout the conference was the importance of infrastructure as a core factor in sustaining growth. In a session on ‘The African economic engine’, the question was asked what infrastructure sub-Saharan Africa needs to be truly globally competitive.

Dale Ramsden, Founder and Managing partner, RMP Westport, said the ‘supply and demand mismatch’ in West African countries such as Ghana, Nigeria and Angola creates opportunities. While RICS can be a huge help in drawing up standards, African countries often wrongly ‘get a bad rap’: “There are planning standards and approval processes. You have to be patient and things will happen. Do proper traffic impact studies, don’t take short cuts and embrace the community.”

RICS CEO Sean Tompkins confirmed that RICS is a natural collaborator to find investable opportunities to which to direct investors. RICS would be delighted to support the development of valuation standards and prepared to host meetings with leaders and stakeholders to agree common standards.
Captains of Construction to meet with industry stakeholders at Totally Concrete

The organisers of the African Construction and Totally Concrete Expo will be staging the Captains of Construction forum at the expo on 13 May 2015. “Captains of Construction creates a platform for public and private sector industry stakeholders to discuss regional development plans and how an enabling environment can be created,” says Anita Kruger, executive director of Captains of Construction.

The forum, which will debate key issues in infrastructure development and construction in South Africa, will be hosted by Max du Preez, South African author, columnist and documentary filmmaker. It will also promote growth in the region’s construction industry through the collaboration of different stakeholders across the board.

Private sector participants will personally engage with policy makers and pose the questions that will allow them to determine their future path in the industry. This will allow government stakeholders to balance expectations and for private participants to gain a better understanding of the regulatory environment within which they are operating and how they can adapt to ensure that their full potential is met.

National and provincial government representatives will be in attendance, along with high-level representatives from select associations and executives of financial Institutions, consultancies, law firms, EPC companies and cement manufacturers.

Launching at the forum is a special publication entitled, Captains of Construction Leaders Book; 100 People at the Steer of Infrastructure Development in Southern Africa. The book showcases South Africa’s most influential figures that are driving infrastructure development and construction in the country and region. Not only will this prestigious feature serve as the definitive guide to the industry, but also give insight as to where industry leaders believe the country and continent is headed.

The forum is co-located with African Construction and Totally Concrete Expos, which is expected to see over 6 000 attendees from approximately 1 000 companies cross its threshold and will be hosted at the Sandton Convention Centre from 12 – 14 May.

WHY ARE BUILDINGS AND STRUCTURES COLLAPSING IN AFRICA?

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Concrete Institute calls for penalties for poor curing

The South African building and civil engineering industries have for years not employed correct or adequate methods of curing concrete – sacrificing strength, permeability and durability in the process, says Bryan Perrie, managing director of The Concrete Institute.

Perrie says the fact that curing is important is well-known in the construction sector, yet current curing practice still remains generally inadequate. “Perhaps the time has come to consider introducing penalties for incorrect curing to change the apathy that prevails in the building and civil engineering sectors,” he suggests.

“Correct curing means maintenance of adequate moisture and temperature conditions to encourage cement hydration. This is of fundamental importance in the development of the physical properties of concrete necessary to ensure its performance in service. Properties such as strength and durability, as well as permeability, depend on the extent and quality of curing of concrete during the first few days after casting. Curing, in fact, is the final – and vital – step in the production of good quality concrete,” Perrie states.

He says some of the major factors that contribute to the poor state of curing in South Africa include:

• National specifications and codes of practice contain only vague stipulations regarding the curing methods required for the different applications of concrete in various environments;
• Project specifications do not clearly state the specific curing action required for concrete on a given project;
• The cost of curing is not billed separately in most tender documents;
• Insufficient support at all personnel levels for training and education, such as offered by The Concrete Institute’s School of Concrete Technology, exacerbates the situation. “This training is vital for all employees involved in the design, construction, and management of concrete projects,” Perrie stresses;
• The misconception that cube compressive strength sufficiently indicates the durability of concrete in a structure;
• The increasing emphasis on ‘fast track’ construction methods in which concrete is enclosed in shutters for very short periods of time, followed by exposure to drying conditions.

Perrie says the need to develop a more “responsible” approach to concrete curing cannot be over-emphasised. “A pro-active approach is essential to address the present lack of education and control of concrete curing, particularly in the South African environment with its excessive heat, dry climates, considerable wind speeds, all of which lead to a rapid loss of moisture from freshly cast concrete, often resulting in plastic cracking on the exposed concrete surfaces.”

He also believes that curing should be listed as a separate cost in the Bill of Quantities or be listed as a fixed, prime cost in the tender documents, with penalties imposed for inadequate curing.

“It is also necessary for national Codes of Practice and specifications to provide more details and guidance on concrete curing,” Perrie adds.
Auditors have reviewed existing processes and standards and have proposed amendments that will improve the overall standards of the industry. At the same time the process of compliance has been simplified.

“Each year we review our audit process and feedback improvements in all areas where our members are audited,” says Johan van Wyk, general manager of Sarma. “This includes Safety, Health, Road Traffic, Environment and Quality (Shreq) where we maintain standards that are directly comparable to ISO standards.”

Accredited members are able to bid for work wherever Sarma accreditation is a prerequisite and, in addition, ordinary buyers have the assurance of dealing with a competent ready-mix supplier. “Accreditation is an acknowledgement that the ready-mix supplier concerned is a professional with the necessary skills and equipment to produce quality concrete in a sustainable and responsible manner,” says Van Wyk.

**Changes to follow**

“Documentation often proves to be a significant obstacle for companies seeking accreditation — as proper record keeping is a prerequisite to obtaining accreditation. Likewise, we will concentrate on on-site signage this year, as this requires urgent attention on many sites we visit, particularly where health and safety warnings are concerned.

“Amendments will also be made to parts of the audit documents that deal with training, recycling of water, induction courses for workers and visitors, labelling electrics and COFs, equipment calibration requirements, and so on. Other areas of improvement may include: maintenance schedules; staff appointment procedures and documentation; document correctness; quality controls; and road safety.

“This year we want to ensure that members have access to all the information and tools to ensure a seamless path to certification. As long as they take cognisance of, and abide by, statutory requirements and the requirements of Sarma standards they will have no problem passing the audits,” concludes Van Wyk.

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**Sarma sharpens its audit criteria**

Southern Africa Readymix Association (Sarma) members will have to pass tougher audit criteria this year in order to maintain their good standing with the association and meet tighter controls in line with international standards.

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However, AfriSam is advising customers to consider the direct correlation between price and quality. “Customers should avoid basing their purchasing decisions on price alone, as this could have long term implications for quality and aftermarket support,” says Koena Sesele, National Sales Manager at AfriSam.

There are key factors that need to be taken into account during a purchase decision – the most important being the range of products offered by the supplier, the quality of the products and the supplier’s credibility. Other issues that need to be taken into account when making a purchase decision are the sustainability of the product and the supplier’s commitment to innovation and product development. AfriSam’s broad product range comprises aggregates (sand and stone of different sizes), readymix concrete, cement and premixes. Sesele says customers often overlook the fact that there is a direct correlation between price and quality. “We do not simply sell products, but we also focus on providing a solution for a client’s specific application. This means we add as much value as we are able to, from providing in-depth product knowledge to having access to a reference base of successful projects and applications.”

For example, AfriSam’s C-Tech cement, which is a cement specifically engineered to offer strong and durable structures.
structures, is the end result of an ongoing development process that began in 2000. The mineral components of C-Tech cement embody significantly less carbon than clinker, with such products having an inherently smaller carbon footprint. AfriSam produces composite cement using additives such as pulverised fly ash (PFA), ground granulated blast furnace slag (GGBFS) and limestone as partial replacement for cement itself.

AfriSam’s Eco Building Cement has a carbon footprint almost half that of pure Portland cement due to its sophisticated incorporation of advanced mineral components. The addition of such mineral components utilising AfriSam’s C-Tech technology ensures major savings in energy and natural resources, slashing the carbon emissions associated with pure cement production.

AfriSam’s ongoing initiatives to get closer to its customers and make its products easily accessible is yet another way the company is helping customers save money. The container sales initiative, which has seen 50 branded and fully stocked containers placed in strategic locations throughout South Africa, has made buying building materials more convenient while saving customers money they would have otherwise used on commuting to buy cement.

The mobile business units, which are owned and operated by local community members and entrepreneurs, are also aimed at developing communities. AfriSam’s product range is sold directly to end users via these mobile business units.

“This initiative is aimed at training entrepreneurs and equipping them with the necessary business skills. It is not just about cement and how to sell it, but how to empower these small businesses and to contribute to local community development.” Sesele says that AfriSam even conducts product training on site, wherever possible.

“We are able to dispatch engineers from our head office in Roodepoort to actually visit such entrepreneurs in order to give practical, hands-on training. In addition, we also stage a major workshop at the beginning of the year where we impart certain skills training to operators and entrepreneurs. We also have external experts on hand to teach them about the business aspects,” adds Sesele.

While the construction industry remains highly competitive, Sesele concludes that AfriSam has a responsibility to not only promote and maintain standards in the industry, but to also educate its customers as well.

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Leading building materials producer AfriSam is providing customers with key pricing factors to consider when purchasing cement.
Elematic SA doubles its precast hollow-core capacity

Elematic South Africa (ESA) is doubling its output capacity with the construction of a second manufacturing plant. The operation, which currently has eight 120 m long extruder beds in its existing factory, will add another eight with the construction of the new factory, bringing the total to 16 extruder beds. The new plant becomes operational from April.

According to Craig Webber, director at ESA, the expansion is due to high demand for the company’s products. “Property developers and building contractors have seen the benefits of using precast concrete floor slabs over the years and demand has been surging,” he says. “The product is becoming more widely used as it is well known to save time and money during the construction process. On top of that, we have always aimed to provide a good and reliable service to our customers.” This has not only secured the company word of mouth business, but many repeat clients as well.

ESA has been manufacturing precast hollow-core concrete slabs at its manufacturing plant on Gauteng’s East Rand since 2007, using internationally respected precast technology. “The extrusion methods we use are well known in the industry to produce the best quality hollow core slabs,” Webber adds. Elematic itself is a well established international brand. It was established in Finland in 1959 and currently has a presence in over 100 countries on six continents worldwide. Added to this is the fact that Elematic South Africa’s production facility is ISO 9001 certified and all its products carry the SABS mark of quality.

It is a testament to ESA’s high quality products and superior service that the company has continued to grow despite difficult economic circumstances. Recession struck South Africa just a year after the company started operating. Nevertheless, it has managed to grow its market share steadily and demand is at an all-time high. “Our intention from the outset was always to grow the market and we certainly believe we’ve done that. It is always healthy to have competition in the market,” Webber comments.

ESA now supplies slabs to customers throughout South Africa and beyond its borders. Slabs are available in thicknesses of 120 mm, 150 mm, 200 mm and 250 mm. In order to ensure that its expanded production line will have minimal delays, it is important to have as reliable a supply of raw materials as possible. To ensure a long term reliable supply of aggregate, Elematic’s holding company acquired Atoll Mining, a dolomite quarry situated about 500 metres from the company’s main factory.

Apart from ensuring a reliable aggregate supply, additional benefits are the high quality and consistency of the aggregates supplied by Atoll. “The quality of the ‘classified sand’ produced by Atoll using air separation technology from the USA is of particular importance for Elematic in the manufacturing process. The classified sand has a very defined and controlled ‘cut point’ due to the sand being classified in a dry process. The use of this dry classified sand dramatically reduces the water demand in the batching plant and produces a very constant high strength concrete,” explains Webber.

Hollow core concrete slabs continue to grow in popularity as construction timelines are pressurised and contractors require reliable solutions. Customers can be assured that all ESA’s products are manufactured in a controlled environment, to the highest standards and finishes. The products also have a degree of environmental friendliness – their acoustic and thermal properties are better than those of a solid slab, and conform to the new, more stringent requirements in the building regulations for these properties. The slabs can also be recycled.

ESA has built up a solid reputation and a large customer base over the years. The company has a long track record of successfully completed projects, some of the most prestigious of which include the Gautrain Station parkade at Rosebank, the parkade for the new registration hall at the UNISA campus in Pretoria, and the 50 000 m² Stella Park shopping centre in the south of Johannesburg.
Franki, the CTICC and the Foreshore

Leading geotechnical contractor and solutions provider, Franki Africa (Franki), now part of the Keller Group, has been contracted to implement a range of geotechnical work on the Cape Town International Convention Centre (CTICC) East Expansion project.

Work being undertaken on the project over the next 18 months includes lateral support consisting of: jet grout columns; soldier piles with both temporary and permanent anchors; and with cantilever piles; as well as foundation piles consisting of forum bored piles and micro piles.

Franki’s association with the CTICC started back in 2001 when Franki did the piling work there, together with the foundations and deep basement, by diaphragm wall technique, for the then Arabella Grand Hotel, now The Westin.

The company has a long and proud history in the Cape where it started business some 68 years ago, in the late 1940s, which is the time when the Foreshore reclamation, where the CTICC is now situated, was completed and the land was made ready for development.

Since then Franki has been involved in the development of many of the structures now standing on the Foreshore, providing the design and construction of piled foundations and lateral support for basement construction. These structures include, amongst many others, the contentious elevated Foreshore Freeways, the huge Civic Centre, Artscape, the high-rise Metropolitan building, The Cullinan and Southern Sun hotels together with the neighbouring office developments and the Icon building.

Recently Franki provided lateral support for the deep basement of the tallest building in Cape Town, Portside, on the edge of the Foreshore and has just completed piling and lateral support works for the new Netcare Hospital next to the CTICC East site.
Murray & Roberts pioneers concrete technologies in quest to become carbon neutral

The Murray & Roberts Group is pioneering the latest developments in concrete technology in its ongoing effort to become a carbon neutral construction company. Research initiatives in this regard include the long-term testing of geopolymer concrete at Transnet’s City Deep Container Terminal in Johannesburg, a contract undertaken by Murray & Roberts Infrastructure for client Transnet Capital Projects.

“We have been able to carry out an enormous amount of testing on these slabs,” says Cyril Attwell, Murray & Roberts Construction, group concrete and research manager. The latest strengths achieved nine to 12 months after installation are 75 MPa to 85 MPa. “Essentially what we are doing is conducting trials for future applications of geopolymer concrete.”

Characteristics being investigated include durability and abrasion resistance. “The abrasion resistance is far higher than that of normal concrete because it does not use water as its critical mass,” Attwell says. He explains that geopolymer concrete refers to alkali-activated material. “The production of geopolymer concrete in civil construction projects is fairly recent.”

Murray & Roberts is also looking at the application of geopolymer concrete in mine infrastructure. “Infrastructure is a major focus as this needs concrete that is highly durable and versatile. One of the biggest potential applications of geopolymer concrete is for the control of nuclear radiation.”

Research conducted at the University of Sheffield in the UK shows that geopolymer concrete effectively neutralises the highly radioactive casings of nuclear fuel rods by binding the radioactive substances within the concrete material itself. This renders geopolymer concrete highly suitable for South Africa’s estimated R1 trillion nuclear-build programme.

Another sustainability feature of the City Deep project was Transnet Capital Projects’ stipulation that Murray & Roberts Infrastructure had to recycle the old concrete paving broken out of the site. About 86% of the old worn concrete pavements were broken up and reused, amounting to about 123 840 m³ of the total 144 000 m³ of concrete – far exceeding the client’s original requirement.

“Transnet is a forward-thinking client, as shown by the fact that we were able to install geopolymer test slabs. The client is now looking actively at other projects where this technology can be applied.” A particular environmental benefit of geopolymer concrete is that it does not require water for the curing process.

“Water is a scarce resource, and its use is likely to become very constrained in the construction industry in the near future. We are currently designing a geopolymer concrete that can be cured by utilising carbon dioxide, with the added benefit of this material acting as a carbon sink as it traps the carbon dioxide in the geopolymeric form. This means the concrete becomes much stronger far more quickly,” Attwell says.

Other research initiatives include the development of a ‘coral concrete’ for marine environments. “We are looking at applying an electro chemical process where growth achieved is about 5 cm a year, which works well to protect such structures against mechanical wave action and corrosion,” Attwell says.

Another focus area is Advanced Re-Crystallisation (ARC) technology, which refers to the optimisation of the arrangement of atoms and molecules in a solid and amorphous state with concrete. “Murray & Roberts is the only construction company applying ARC technology on a regular basis. This technology, as applied on the City Deep project, enables the reduction of shrinkage and causes a curing membrane to form.

In addition the activator requirement is reduced from about 200 litres per m³ to 20 litres per m³, whilst simultaneously reducing the requirement for heating during curing.
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Sephaku Cement reports impressive growth

In its Operational Update published in March, Sephaku Cement (SepCem), a member of Sephaku Holdings Limited, has confirmed that it achieved a total revenue of R919 million for the financial year ended 31 December 2014 with R405 million attained in the fourth quarter. The SepCem brand has successfully entered all market segments and is being distributed by all four of the major retailers.

Production of clinker from the Aganang integrated plant started in August 2014 with cement production from the same plant commencing in October 2014. The introduction of the internally produced clinker has significantly improved variable cost efficiencies by 50%. By the end of the fourth quarter of 2014, SepCem was achieving c26% EBITDA (earnings before interest, taxes, depreciation, and amortization) which is comparative to the industry average despite production not yet fully ramped up for both plants. Combined annualised production capacity utilisation was at approximately 60% by end of December 2014 with steady state utilisation targeted for the second quarter of 2015 subject to demand. The modern state-of-the-art technology at both plants has further improved efficiencies and established SepCem as the lowest cost producer in the industry.

The Delmas milling plant performed well for the year despite a slow start due to the unusually high rainfall. By the end of the fourth quarter, Delmas was at approximately 100% capacity utilisation as the Aganang cement production began ramping up. Good quality consistent cements and customer service were instrumental in enabling the successful entry into high demand markets such as Gauteng, Limpopo, and Mpumalanga. The SepCem conducted comparative cement in concrete test demonstrated that the SepCem brand had superior performance to competitors in the 32,5 product and matched the best performing incumbent on the 42,5 product.

Since August 2014, Delmas has been utilising Aganang clinker to produce cement and over 80% of the ash produced at Sephaku’s Kendal Ash facility.

SepHold is pleased to state that the cement market has widely and positively accepted SepCem as a mainstream producer and SepCem is well positioned to further entrench itself as a formidable cement manufacturer in South Africa.

Méter’s consistent performance continues to distinguish it as a highly profitable mixed concrete producer.

Méter Mixed Concrete (Pty) Ltd, a wholly owned subsidiary, continues to increase its customer base in Gauteng and is achieving repeat business from its traditional customers due to the specialised skills and customer service offering. To date, Métier has built 11 plants with the fourth Gauteng plant commencing production on 22 September 2014. All the plants are currently operating at full capacity and Métier remains focussed on achieving relatively high margins through the creation and production of specialised concretes.

SepHold is pleased to state that investor interest continues to increase as Métier and SepCem deliver against stated targets. The highest share price of R9.01 has been reached in a 52 week period during which the lowest price has been R5.15. The values and volume traded also increased as more institutional shareholders purchase the shares.

Readymix Conference 2015 to explore new techniques in concrete

This year’s Readymix Conference to be staged by the Southern Africa Readymix Association (Sarma) will strive to showcase more of the abilities of readymix concrete and help put local suppliers and construction professionals into the picture to show them what can be done.

A high-powered line-up of technical speakers has also been arranged to discuss practical ways of ensuring local suppliers of readymix concrete are able to produce the best possible concrete.

The conference will also focus on pushing the boundaries of local construction and improving practices, methods and machinery in order to ensure that our construction industry keeps up with global trends.

Speakers will also examine new formulae and new techniques available and will discuss and demonstrate the benefits of new products and techniques.

The conference will take place at Misty Hills Conference Centre on the West Rand on 13 – 14 August 2015.

To sponsor or book seats at the conference contact Sarma on: 011 791 3327; office@sarma.co.za; www.sarma.co.za
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Civil engineering bodies add strength to the Concrete Institute

South Africa’s three leading civil engineering organisations, Consulting Engineers South Africa (CESA); the South African Forum of Civil Engineering Contractors (SAFCEC); and the South African Institution of Civil Engineering (SAICE) have become the first Associate Members of the Concrete Institute.

The three organisations will be represented on The Concrete Institute Board together with representatives of the three cement producers, Lafarge, Sephaku, and AfriSam, who founded the Concrete Institute in 2013.

The addition of the three new Associate members opens the way for the Institute to not only concentrate its technical and educational services on the cement and concrete industries, but to broaden its operations to include complementary organisations in the South African building, construction and engineering sectors.

Bryan Perrie, managing director of the Concrete Institute, says the Concrete Institute is delighted to have the three respected and influential South African civil engineering bodies as Associate Members. "Civil engineers play a vital role in the building and construction industry. They are responsible for planning, designing, building and maintaining infrastructure such as dams, bridges, water distribution networks, railways and runways, roads, sanitation systems, even cellphone towers – everything that adds quality to South Africans’ lives. Having the construction industry on board, is a major step towards The Concrete Institute and its members being able to speak with one voice to assist government in the implementation of the National Development Plan to the benefit of employment and the general economy.”

SAFCEC was founded in 1939 and has played a major role in developing South Africa’s infrastructure, which has been the foundation of the country’s economic prosperity.

Consulting Engineers South Africa (CESA) is “The Voice of Consulting Engineering in South Africa” with over 500 member firms – employing well over 23 300 staff – responsible for 80% of the government’s infrastructure spend.

As the South African representative of one of the world’s oldest construction professions, SAICE has a proud history spanning more than a century with over 12 000 civil engineering professional members, making it the largest body of its kind in South Africa.

PPC sponsors prestigious Fulton Awards

Leading cement supplier, PPC, is the anchor sponsor in the Concrete Society of Southern Africa’s (CSSA) 2015 Fulton Awards – which honour excellence in the concrete construction industry.

Twenty-four submissions have been received for this year’s Fulton Awards, which are presented every two years for “Excellence in the use of concrete” on the African sub-continent.

The entries will be judged in four categories: Civil Engineering Structure, Building Structure and Architectural Concrete – with each including sub-categories for projects up to and in excess of R100 million in value.

The fourth category, Innovation in Concrete, aims to attract new ideas in projects or initiatives where totally new materials, techniques, technologies, applications, design and analysis concepts or procedures, using concrete as the principal material, have been developed and implemented.

According to Alta Walker from PPC, “The Fulton Awards are considered the ‘Oscars’ of concrete and is arguably the most prestigious award that a project team can receive in the built environment. The Awards have been associated with the celebration of achievements in the South African building industry for decades. As a company, we remain passionate about investing in initiatives and projects that advance excellence in concrete. Our support of the Awards shows that we constantly strive to bring our customers innovative, industry-first products and services.”

The Fulton Awards originated as a tribute to the late Dr Sandy Fulton for his outstanding contribution to the understanding of concrete, its development and its improvement. The first Fulton Awards were held in 1979 and the event has grown to be one of the highlights on the industry’s calendar.

The winners this year will be announced at a special Gala Dinner to be held as part of the Fulton Awards Weekend from 5 – 7 June 2015, at the Champagne Sports Resort, Drakensberg.
Research by Istituto Italiano per il Calcestruzzo (Italian Institute for Concrete – IIC) on the comparison of the quality of concrete produced in dry vs. wet batching plants shows that a mixing plant produces concrete which is higher quality than that from the dry process.

PMSA has recently partnered with global batching plant contender, IMER, to offer the ready-mix sector specific wet batching plants with output capacities from 30 m$^3$ to over 240 m$^3$ per hour.

The IMER wet batching plants are fitted with either a planetary or twin-shaft mixer (depending on capacity of the plant) – and are notably more efficient than the traditional dry “Karoo” batching plants which are essentially materials handling plants.

Aggregate is batched automatically from bulk aggregate storage bins onto a weighing conveyor belt. The weighed aggregate is fed into the mixer where cement and water are automatically added. The concrete is then mixed by the forced action of mixing paddles before being discharged into the transit truck or even directly into a pump as may be required in the case of on-site batching.

The plants have an average of 90 second cycle time between mixes. Having completely mixed concrete reduces costs as a mixing plant eliminates the need for high-speed mixing in the truck, thus reducing wear and tear on the ready-mix plant’s highest capital expense, the fleet of trucks. There is also no need for manually checking the truck before dispatch as the mix is completely homogeneous by the time it is discharged into the truck.

The IIC findings confirm that a mixing plant produces concrete which is undoubtedly higher quality for the following reasons:

- The mixing effect of concrete mixers facilitates the complete cement hydration.
- When using the same water/cement ratio, concretes produced in a wet batching plant have a higher workability, reducing this ratio for a higher strength concrete with the same cement content.
- Lower permeability of the concrete produced.
- Repeatability which can result in a reduction of the standard deviation.
- Reduction in errors made by inexperienced or inattentive personnel.

Globally, mixing plants are the standard for ready-mix and site batching and in Southern Africa there is a noticeable shift towards mixing plants especially where high-strength and high-quality concrete is required.

For more information on IMER and PMSA contact Sean on sean@panmixers.co.za or visit www.pmsa.com

Further research information is available from the Italian Institute for Concrete here: www.istic.it
Hollow core plant-friendly green wall innovation

Combining construction with the healing process

The Al Jalila Children’s Specialty Hospital, an initiative of His Highness Shaikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE, and Ruler of Dubai, is not only dedicated entirely to children but was also designed by combining innovative aspects of design and construction with the healing process in mind.

Says Al Maidoor, Director-General of the Dubai Health Authority (DHA): “The hospital will be the first-of-its-kind facility in the region offering super-specialty and multi-spectrum paediatric care. It will provide paediatric services from newborns to 16 year olds and will offer all necessary paediatric services under one roof for the children of the UAE and the region,”

Al Maidoor adds that of the total area, nearly half has been dedicated for gardens and landscaping including a ‘healing garden’ with bright flowering shrubs and herbs and medicinal plants: “The use of natural light, greenery and healing landscape is aimed at offering a high level of indoor air quality, reducing noise and creating a pleasant environment.

“The development will be highlighted by several energy saving initiatives including sustainable construction techniques to reduce energy use, an active wall façade system to reduce ambient temperature inside the hospital, and rooftop gardens that provide greater insulation. As part of its focus on sustainability, the hospital will use recycled water for irrigation purposes.”

When Italian architects and engineers Studio Altieri International were looking for green building materials to use in landscaping on hospital grounds, they came across Terraforce, a South African developed hollow core, plant friendly concrete retaining wall system. Manufactured under licence in the UAE and region by Consent LLC, the Terraforce system is akin to a living wall, the unique hollow-core design of the interlocking blocks allowing plants to become a part of the wall. By using water wise plants and a good irrigation system, a sustainable yet durable green wall can be created.

In this innovative Terraforce wall design every third row of blocks provides a plant supportive pocket.
On request by Studio Altieri, Consent proposed a design for a number of earth retaining and noise reduction issues on the expansive site. This design is a unique variation for Terraforce, and was put together by Bryan Newby, a Namibian based specialist Terraforce installer, Simon Knutton, a Johannesburg based consulting engineer with extensive experience in designing Terraforce walls, and the input from the Terraforce head office in Cape Town. Once the proposal was accepted, Al Aamal Construction Co. LLC was appointed as the sub contractor, and, under the guidance of Bryan Newby, started the installation in 2013.

Construction of the walls started with the placement of 1,800 x 1,000 x 300 precast foundations, 600 mm below the finished ground level, onto which Terraforce L16 blocks were installed – double skin and concrete filled – to the finished ground level. Subsequently the blocks were placed double skin, soil filled and in the rock-face finish at an inclination of 80 degrees.

As the wall progressed, the innovative façade of this Terraforce wall design came into play, by reversing and moving forward slightly every third row of blocks, to provide a plant supportive pocket that could also accommodate an efficient, easy maintenance dripper irrigation system. Out of these pockets, water-wise plants would eventually drape over the side of the block, softening the near vertical concrete surface with curtains of greenery.

Says Holger Rust, Cape Town based founder of Terraforce, after he visited the site in February 2015: “This must be the most efficient irrigation system ever. The exposed pipe is hidden by the plants (portulacaria afra) within three months. Each plant has a dripper and water provision for each plant can be accurately controlled with a timer and wastage of the precious resource is reduced to a minimum. Further the system is extremely maintenance friendly and repairs are a breeze.”

As the wall increased in height, backfill was brought in, compacted to specification with reinforcing layers of high strength geo-grid every second course, to the final height of up to 8 m. Near the top of and mid-way of the walls, a non-woven geo-textile cut-off filter layer was installed. Bryan Newby stayed on in Dubai for a few months, working with the team mostly at night to avoid the intense summer heat. Later Sinan Awad took over the supervision of the contract, which is still on-going.

### Main contractor:
Al Futtaim Carillion

### Architect:
Studio Altieri International

### Consulting Engineers:
Eng. Adnan Saffarini Office

### Sub-Contractor:
Al Aamal Construction LLC

### Terraforce Design Engineer:
Knutton Consulting Engineers

### Terraforce consultant:
Bryan Newby

### Terraforce licensed UAE manufacturers:
Consent LLC

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Terraforce L16 blocks were installed on a concrete foundation and subsequently placed double skin, soil filled and in the rock-face finish at an inclination of 80 degrees.
Edelweiss: Master Builder celebrates third generation in fenestration

Edelweiss Glass & Aluminium, the well known and respected Pretoria-based fenestration company, celebrates 30 years of service excellence to the construction industry with a third generation family member, Dewald (22), having recently joined the business.

Edelweiss has grown steadily with excellence over the years, earning its rightful place in the fenestration segment of the construction industry as a respected, innovative and reliable manufacturer, designer and installer of aluminium joinery, glass cladding, solutions and proposals for commercial and selected residential projects. Edelweiss was established in 1985 by Liana van der Walt.

The family business employs a staff compliment of over 130 at its Silverton factory, some of whom have 30 years of service – with management representing a total of 107 years in the glass fenestration industry.

“We have truly come a long way since we first started the business,” reminisced Liana. “Specific projects are executed in close cooperation with façade engineers - in South Africa and abroad. When our first big contracts such as the Secunda Police Station, and Siemens HQ started coming in I would cut the glass, manufacture and train the staff myself.”

Edelweiss specialises in technology transfer from associations abroad, with tax incentives for the European technologist. “We have a continued growth of 15 to 18% year on year,” said Liana. “And a loyal customer base, as well as supplier base. We also have no hesitation to go back to site to address any problem, big or small, well after our two year workmanship guarantee period.”

“The company provides a turnkey service in fenestration,” says Isak. “Through our comprehensive design facility, which is based on Auto Cad software, we work closely with project professional teams right from the concept stage to completion: from design alongside the architects; to producing of our own detailed drawings; then we work closely with the mechanical and structural engineers, all the way to final production and installation.” The company prides itself on its capability to offer innovative solutions and stays at the forefront of changes and developments demanded by the industry, especially with respect to the new SANS 10400-XA and SANS 204 Regulations on fenestration.
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Michelin South Africa (2013)
Shop-fronts with performance glass and cladding to all steel corner posts

Cresta Mall (2014)
Frameless internal shop-fronts with clear toughened safety glass spider fittings and suspended fins, sliding stacking and Sliding doors

Ekurhuleni Western College (The Drum) (2014)
Segmented flush glazed curtain wall with flush glazed roof for water drainage onto roof level and Solarshield Bl10 Blue laminated safety glass

Residential (2014)
Various shopfronts, windows, sliding doors and frameless entrance shopfronts

Porsche Pretoria (2015)
Continuous frameless showroom screen with Clear toughened safety glass. Shop-fronts on higher level and above Main entrance between steel with aluminium cladding.
**Buco shifts into high gear**

With its retail outlet refurbishments and brand launch completed, Buco, a growing retail supplier to the construction and DIY sector, and a member of the Iliad Group, shows strong underlying health.

This is according to Eugene Beneke, CEO of Iliad Africa, who last month presented the Group’s audited financial results for the year ending 31 December 2014. “Iliad Africa Trading reported excellent results for the year ended 31 December 2014, recording earnings of 73.3 cents per share, compared to a loss of 4.8 cents per share for 2013,” said Beneke. “Headline earnings per share increased to 72.3 cents, compared to 40.0 cents for 2013 and the substantial improvement in earnings, amongst others, reflects the continuing benefits of the Group’s portfolio adjustments made since 2013.”

The Group ended the year with net cash reserves of R97.1 million, compared to net cash of R38.8 million at the end of 2013. This improvement is attributable to significantly higher cash profits and the proceeds on prior year disposals.

Building on this positive buoyancy Iliad plans further organic growth in the immediate future with the opening of new stores, as well as new acquisitions. “We are also seriously exploring the possibilities of crossing the Limpopo,” said Beneke.

Much of the steady settling and growth of the Buco brand is attributed to Iliad’s development and implementation of a single, central enterprise resource planning (ERP) platform, streamlining all procurement, stock, administrative and financial management services across all stores.

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**Roller alliance for Wacker Neuson and Wirtgen**

Wacker Neuson SE and the Wirtgen Group recently agreed to enter a strategic alliance for soil and asphalt compaction rollers whereby Wacker Neuson will source rollers from the Hamm factory in Tirschenreuth, Germany, and distribute them via its own sales network.

According to Eugene Brown, general manager of Wacker Neuson South Africa, these units will be available in South Africa in the third quarter of 2015.

Hamm AG is a member of the Wirtgen Group and has been producing rollers for over 100 years. The company’s portfolio includes compactors, tandem rollers and static rollers.

From 2015 the factory in Tirschenreuth produced models to the technical and design specifications of Wacker Neuson.

The rollers produced by Hamm will be distributed via the Wacker Neuson sales network under the Wacker Neuson brand.

The additional roller models from Tirschenreuth will offer customers an even broader and deeper portfolio of compaction machines backed by proven, customer-centric service.

“The collaboration with Wacker Neuson will enable us to increase production output and leverage economies of scale,” explains Jürgen Wirtgen, Manager of the Wirtgen Group.

“This is a very attractive partnership for several reasons. In terms of sales structures, Wacker Neuson’s dense sales network with its own sales and service stations is a particular plus.

“In addition, the move will extend our joint customer reach.”
energy efficiency. Specific design criteria will also be sourced from abroad where necessary.

Isak joined the company 28 years ago at age 19 and trained in Chicago in the US and later in France. Has the scope and capability of managing the full contract from start to finish - whereas in Europe the trend is for individuals to specialise in specific aspects only of the industry.

Johann studied Building Management prior to joining the company and Liana studied Business Management and Financial Management at UNISA as well as undergoing training in France.

The new family team member, Dewald, is a software engineer and has already started making significant contributions to the operational aspects of the business through the streamlining of factory management and introduction of a fleet management and state-of-the-art tracking system for the company’s 32 vehicles. He has also introduced the “paperless office” concept to the business.

Edelweiss is also a well known, active and long standing member of Master Builders Association - North, having joined the then Northern Transvaal Master Builders Association in 1985. Liana has served for many years on the Executive Committee and has attended numerous MBSA Congresses and MBA-N events. The company is also a member of the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA) as well as the South African Glass and Glazing Association (SAGGA).

Training is ongoing within the company and is given a high priority at all levels. “We have a core staff of experienced people,” explained Liana. “We prefer to train juniors ourselves to our standards as we achieve best results through our own training.” In true family business tradition, the children of many of the operators also join the company.

As expected Edelweiss is serious about Construction Health and Safety, both in the factory and on site during installation and operates to a comprehensive CHS programme which it has in place through NOSA and its SAMTRAC courses, in which Dewald is fully trained.

Edelweiss also have a full complement of highly experienced staff in the following dedicated departments: drawing office, logistics and human resources.

Recent fenestration projects by Edelweiss include the 14 story Hatfield Forum; Ferrari; Menlyn Corporate Park; VW- Hatfield, Bruma and Bryanston; and currently in progress are: CBC German Embassy; the I-Cat building; Duncan Court; Pretoria Old National Library; UJ Soweto Second Residence; TUT Ga-rankuwa and Rivers Church.

Edelweiss has no real geographic limitations and has completed embassies as far afield as Madagascar and Mauritius – as well as projects in KZN and Western Cape. The preference remains however, to focus on projects in Gauteng and within South Africa.
It's all about the company DNA: Inyatsi

Inyatsi Construction expands into South Africa

In 1982 in the town of Manzini in Swaziland a small but capable construction company was established: Inyatsi Construction, which today is the largest construction company in Swaziland with an annual turnover of R1.3 billion. South African Builder recently had the pleasure of interviewing the chairman of Inyatsi Construction Group Limited, Swaziland, Frans Pienaar, and CEO Dave Roberts.

Since its establishment the company has enjoyed continued growth and success, and has evolved over time through various acquisitions and expansion programmes to form Inyatsi Construction Group Holdings (Pty) Ltd in 2007 – the holding company of Inyatsi and its regional subsidiaries.

The Inyatsi Group has significant operations in Swaziland, South Africa, Zambia, Mozambique, Uganda, Botswana and Namibia – with primary focus on construction of roads, railways, airports, harbours, water infrastructure, as well as commercial and housing projects.

Inyatsi Construction South Africa was established in 2007 and is a subsidiary of Inyatsi Construction Group Limited, Swaziland.

Through the dynamic vision and leadership of Pienaar and Roberts, Inyatsi has now established operational offices in Johannesburg, supported by a tendering, procurement and logistics hub in Kempton Park.

“As a company we uphold our passionate belief in the strength of our corporate DNA – one in which our people think and work to the same goals and objectives,” said Pienaar. “When buying a company, for example, one’s own DNA doesn’t rub off that easily – which is why we believe that full integration is so essential. Through the DNA in our systems and our ISO 9001 accreditation we’re able to give our clients the guarantees they expect.”
Roberts, a civil engineer and systems specialist says: “It’s important for us to have a presence in South Africa and we are well up to the challenge of competing against the best. When the infrastructure roll-out occurs, here and in the rest of Africa, we’ll be ready to play our role.”

Regarding construction plant and equipment assets, Inyatsi will usually own 70% of equipment used on a project, none of which is more than five years old. “On all projects we will also always have a strong core of our own staff,” said Roberts. “Further entrenching our DNA standards – even although it is usually necessary to hire locally as well.”

Across the Group Inyatsi employs some 3 300 people. The South African division is a member of the South African Forum of Civil Engineering Contractors (SAFCEC) and will also be joining Master Builders Association – North. The company holds 4 Platinum Star in NOSA 5 Star rating.

The Inyatsi Construction motto is “QCD”

Quality – Do it right the first time.
Control – Control every last little detail of everything we do to ensure we do it right the first time.
Discipline – The discipline to continuously do this every time and in everything we do.

Inyatsi fact sheet

- In 2010 Billion Construction was purchased by the Group, expanding its building division into South Africa. Consequently, in November 2010, Billion Construction changed its name to Inyatsi Construction South Africa (ICSA) and successfully carried out a number of projects prior to being sold to Mota-Engil Africa during 2014.
- South Africa offers vast opportunities and subsequently Inyatsi Construction Limited was established in 2015 in response to the growing call for black empowered construction companies to be at the forefront of the South African Government’s Infrastructure spending.
- Inyatsi is one of the few majority Black owned Construction Companies (Level 2 BEE contributor >51% Black owned >31% Female Black Owned) in South Africa which holds a 9GB and 9CE CIDB grading.
- Inyatsi Construction remains committed to growth and development in South Africa and is equipped to fulfill these needs, locally as well as the rest of Sub Saharan Africa.
- Inyatsi Construction has a policy when selecting joint venture partners, to ensure that local black enterprises and local black women-owned enterprises are given preference and have already established such MOU’s with selected partners in certain areas. Such arrangements ensure that enterprise development takes place within the joint venture arrangement.
- Some of the projects completed by Inyatsi Construction in South Africa include: Main intersections such as the N4 bypass with seven bridges in Bombela; the R50 million Bombela water works, the Sybrand van Niekerk water works in Westonaria; and the restoration of the Nelson Mandela Museum in Qunu, Eastern Cape.
KBAC flooring for Londolozi

Kevin Bates Albert Carpets (KBAC) has recently supplied and installed flooring at both Tree and Pioneer Camps at the internationally renowned Londolozi Game Reserve in the Sabi Sand Game Reserve.

Yvonne O’Brien of The Private House Company, in collaboration with Londolozi co-owner, Shan Varty, selected KBAC flooring material for the refurbishment of all the rooms at Londolozi Tree Camp, specific areas in both Pioneers and Founders Camps, as well as the Londolozi Wellness Centre and The Living Shop.

Brandon Park, sales director of KBAC, says KBAC’s EarthWerks Rapid Clic floating luxury vinyl plank flooring system was selected to replace Londolozi’s existing laminate flooring.

“EarthWerks Rapid Clic was chosen because it has a natural wood look finish with registered embossing which gives the vinyl floor an exceptionally realistic appearance. A dark shade of flooring was selected for Tree Camp in order to complement the existing décor in the rooms.

EarthWerks luxury vinyl plank flooring is 100% waterproof, and impervious to water spills which makes it preferable to laminate flooring in most environments, including rugged, bush installations.

The tongue-and-groove flooring requires little maintenance, is resistant to scratches, and remarkably quiet underfoot.

In fact, EarthWerks’ slogan, ‘inspired by nature’, never seemed more appropriate than in this installation,” Park added.

Installation, handled by a three-man KBAC team in about a week, was...
relatively simple and rapid because of the team’s extensive experience and because the floating flooring system did not need to be glued or nailed to the floors.

Conservation and environmental protection are core philosophies to Londolozi.

Independently owned and managed, it is one of the original pioneering private game reserves of the eco-tourism industry in South Africa and has received acclaim the world over as the “home of the leopard” because of prolific sightings in Londolozi and the respected behavioural studies on leopards carried out by the Varty family over many years.

Londolozi received the Condé Nast Travellers’ 2014 Readers’ Choice Award for the Number 1 Hotel in the World; and last year also won the TripAdvisor Certificate of Excellence award.

It was the first game reserve in the world to be accorded Relais & Châteaux status.

“Londolozi’s enviable global reputation has been established and preserved over many decades through selecting only top staff, the finest products and service-providers for all its operations.

“KBAC’s selection as Londolozi’s flooring supplier and installer endorses our Group’s status in the SA flooring industry,” concluded Park.
New surfaces for architecture and design

Dekton® is a sophisticated mixture of the raw materials that are used to manufacture glass, porcelain materials and quartz surfaces. The Dekton® surface can recreate any type of material with a high level of quality. It is manufactured in large format (320 cm x 144 cm) and thicknesses of 0.8 cm, 1.2 cm and 2 cm and it has superior technical characteristics:

- High mechanical resistance
- Good resistance to fire and heat
- High scratch resistance
- High UV rays resistance
- High hydrolysis resistance
- Reduced water absorption
- Very good colour stability
- Very good dimensional stability
- High abrasion resistance
- High stain resistance
- Resistance to freezing and thawing.

These superior technical characteristics are achieved thanks to the exclusive TSP (Technology of Sinterised Particles), developed by the R&D arm of the Cosentino Group in Almeria, Spain. TSP technology is an ultra-compaction process which makes Dekton® a totally revolutionary low-maintenance, long-lasting product with a multitude of applications.

Prestigious architect and designer Daniel Libeskind created a spectacular architectural sculpture which was the first design and architecture landmark created with Dekton®. It is also the only project of Daniel Libeskind in the Iberian Peninsula. Under the title “Beyond The Wall”, this impressive polycentric spiral is located in the Cosentino Group headquarters and was presented by Libeskind himself in February 2014. “Beyond The Wall” is not a traditional spiral with a single centre and axis, but a contemporary spiral which opens a plurality of directions along many different trajectories; a polycentric spiral, propulsively twisting to a dramatic zenith. The spiral is the result of the synergy between Libeskind’s architectural vision and Cosentino’s innovative material Dekton®.

“Beyond The Wall” shows how this ultra compact surfacing material can successfully cover a complex and contemporary architectural façade. Dekton® has been used in all exterior façades, interior walls and flooring. In total 305 m² of Dekton® has been applied with 2 cm pieces in different formats, including the large format size, 320 cm x 144 cm. The whitest finish of Dekton®, Zenith, has been the colour chosen for façades and walls, in contrast with the perfect black of Sirius colour, chosen for the flooring of this impressive work of 8.5 metres high.

The ultracompact surface Dekton® was selected for the flooring of Baku airport, Pepe Jeans stores in Barcelona, Paris and Rotterdam, Dani García restaurant in Marbella (two Michelin stars) and DiverXO restaurant with David Muñoz (three Michelin stars) in Madrid.

In 2015 the Spanish tennis player Rafa Nadal features in the worldwide Dekton® advertising campaign. At the same time, thanks to Cosentino’s sponsorship of the project “Rafa Nadal Academy by Movistar” the tennis academy will include Dekton® in diverse applications of the spectacular premises.

The Cosentino South African office is fully geared up for distribution of the product in South Africa and into Africa.

Cosentino believes in fostering a culture of learning and continuous development with regards to their products and the application thereof. The South African office works closely with their head office in Spain to ensure that technical training is available when necessary.
A Grand Slam tournament is won after thousands of shots. It puts
competitors and oneself to the ultimate test.

It is also our way to put Dekton to the test. By subjecting it to an
unlimited effort, by challenging its looks, technology and unlimited
design. Create anything you could ever want with DEKTON.

DEKTON IS UNLIMITED.

RAFA NADAL

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DeaktonSouthAfrica

25411.548.042515
C ompleted in February 2012, Phase 1 comprised a 3 000 m² single-storey structure which was roofed with Echo pre-stressed slabs. Phase 2, begun in January 2014, entails the construction of a second storey which is being built on the pre-stressed slab roof of Phase 1. Once again pre-stressed hollow-core slabs, in this instance covering an area of 2 600 m², were used for the roofing.

The main contractor on both phases was Aveng Grinaker-LTA; DSM Consulting Engineers was the engineering consultancy on the second phase.

Morten Jerg, contracts director of Aveng Grinaker-LTA, says that the benefit of using precast slabs as opposed to in-situ concrete is that it speeds up construction times and causes minimal disruption.

“We have used Echo slabs on many occasions. They enable us to do away with formwork and propping, not to mention long curing times, and in some instances, having to pour concrete in wet weather. We also like their smooth soffits.”

The pre-stressed roof slabs used on both phases were 250 mm deep and varied between spans of 2,2 m and 11,5 m. They were designed to carry live loads of 10kN/m² and dead loads of 2,5kN/m² and were mounted on precast inverted T-beams measuring 420 mm deep and 630 mm wide. The design and manufacture of the beams were outsourced by Echo. Andreas Rehwinkel of ENCON did the design and Civilcon handled the manufacturing.

The beams and the slabs were installed by Echo using 80 and 200 ton cranes. The former were placed on 6,5 m high reinforced cast-in-situ concrete columns. Most of the columns were cast with additional rebar which protrudes 1,5 m through Echo’s pre-stressed slab roof. These may be used at a later stage as stub columns for supporting solar panels or other plant on a suspended steel grid.

After all the slabs had been placed, a lightweight poli term screed-to-falls, ranging between 75 – 400 mm, was installed. It was covered by a second 40 mm screed to take a dual layer of water proofing. Once the new roof was semi-sealed, Aveng Grinaker-LTA was able to remove the screed on the roof of Phase 1.

DSM consulting engineer, Mike Silberman, commented that the new roof had been designed in close collaboration with Echo Group engineer, Daniel Petrov, who he said was extremely helpful in ensuring the success of the project.

“Due to the amount of services and penetrations through the new roof, an in-situ concrete slab had been investigated as an alternative to the pre-stressed slab solution.

“However, the amount of propping required for an in-situ slab and the high loading on the existing slab precluded this choice and this is why we opted for pre-stressed concrete slabs,” said Silberman.

Echo Group marketing director, Melinda Esterhuizen, says precast hollow-core slabs are to the construction industry what cell phones are to modern communications – fast, flexible, multi-functional and cost-effective.
Since the company’s foundation in 1998 it has been intensely focused on introducing new systems for its clients, backed up with outstanding after sales service. With its years of experience – and staff with significant expertise who manage and own the business, CLF operates only with the best products and equipment available in the industry. The company attributes its continued success and growth to its philosophy that “Good floors make good customers”.

CLF uses a very tough composite material which is based on the patented Primekss system, comprising special concrete which incorporates a high saturation of high tensile steel fibres and anti-shrinkage compounds.

Stringent quality management enables CLF to produce the thinnest, toughest and largest jointless floors in the country. No joints mean flatter floors, faster forklift traffic and lower maintenance costs.

The Primekss system was developed in Europe through the European Union Technology grant. The product and system has to date been successfully applied by some of the largest logistics companies in the world in the construction of the floors of their distribution centres, warehouses and factories.

CLF has been exclusively licenced by Primekss, the patent holder, to design and install the system in southern Africa and, with the support of Primekss design teams from all over Europe, CLF is able to design and install the most effective jointless flooring system for its clients.

Advantages of CLF jointless floors
CLF jointless floors have no saw cut construction joints in them and consequently no future problem areas. These floors offer customers the following multiple benefits:

- No joints up to 6 000 m²
- Flatter floors, smooth operation for forklifts, better productivity
- Faster operation of forklifts as no slowing down for joints means better productivity
- Low maintenance due to no joints
- Curling of joints is eliminated
- Functionality and flexibility of the floor are much better as racking and equipment can be placed anywhere on the floor without consideration of floor joints
- Superb fatigue-endurance
- Shrinkage and crack control
- Increased tensile, compression, shear flexural strength
- High impact strength
- Faster construction
- Green floor, less CO₂
- Increased market value of the building
- Up to 50% less cement used
- Improved durability and hygiene.

CLF offers a complete design, supply, install and insure packages for flooring projects.

Advice is offered freely and the company consults with its clients from an early stage prior to implementation of the flooring system.

CLF engineers design each floor to suit client requirements and once constructed, the floors are guaranteed, insured and – being jointless – offer years of minimal maintenance, thereby ensuring longevity of the asset for the landlords and low cost of operations for the user.
Refurbishments, conversions and upgrades: it’s all about experience

Johannesburg based construction company, Gareli (Pty) Ltd., has a core business focus on conventional construction, upgrades, refurbishments and conversions in the commercial, industrial and retail as well as residential sectors. In addition, the company has successfully undertaken turnkey projects as well as consulting in project management and quantity surveying.

The founders of Gareli, Gary Korevaar and Elizabeth Thorburn, are well known and respected in the industry, having been involved in the construction industry for many years, albeit under the banner of previous companies prominent in the industry and between them they have over 40 years’ experience in a vast range of construction projects in excess of R300 million. Gareli, together with their experienced team, is committed to providing existing and prospective clients with professional advice, exceptional quality and service, executed to the highest possible standards.

The company is keenly aware of the importance of achieving high levels of productivity and dedication to the timeous completion of projects.

Amongst the projects recently completed by Gareli are:

- Dis-Chem Distribution Centre, Midrand:
  - Alterations – Value: R5 200 000
- BMG Group:
  - Alterations and Additions – Value: R1 300 000
  (Consulting)
- Industrial Netting:
  - Alterations to existing warehouse – Value: R300 000
- House Thornton, Woodmead Springs:
  - Alterations and Additions – Value: R1 700 000
- House Ras, Bryanston:
  - Alterations and additions – Value: R600 000
- House Finsbury, Lydenburg:
  - Alterations – Value: R835 000

Gareli is currently a B-BBEE level 4 contributor and they endeavour to improve on this rating on a continual basis.
Corobrik collaborates in refurbishment of Government House

A collaboration of passion and expertise resulted in the successful R20 million restoration of the 167-year-old Government House in Pietermaritzburg.

After acquiring Government House in 2010 to house their regional campus, UNISA contracted a team of experts to restore and renovate this beautiful national monument which had fallen into a state of disrepair.

Leading heritage and conservation architect, Robert J W Brusse, was appointed to the project in 2004 to oversee the restoration of the building. Then followed eight years of planning, investigation, research and detailing work discussions. Only once all the groundwork and preparation had been done did Brusse, in 2012, approach Corobrik to assist in the replacement of 1775 bricks which had to be especially manufactured for the project.

The historic building, which began its life in 1848 as a five-roomed thatched cottage owned by William Stanger, the first Surveyor General in the Colony of Natal, was bought by Sir Benjamin Pine on behalf of the colonial government. All subsequent governors lived there until the formation of the Union of South Africa in 1910. During this period, the building was regularly extended and altered, so that it came to reflect a sequence of architectural styles and building technologies. In 1900 a new brick wing was added to accommodate the Duke and Duchess of York who came out for a Royal Visit. And, in 1911 several more wings were constructed in “Maritzburg salmon pink brick” to accommodate a Teacher’s Training College.

“As with so many other restorations of heritage buildings, there was a need to replace weathered brickwork,” said Brusse. “While standard bricks were replaced with bricks salvaged from parts of the buildings that had to be demolished, there were a number of decorative, special bricks which could not be sourced from the demolitions or from Amafa’s warehouse.” Faced with these challenges, Brusse approached Corobrik as the principal manufacturer of clay bricks in the province to help find a solution.

Managing director of Corobrik, Dirk Meyer, embraced the project enthusiastically and a team was put together to oversee the job with the responsibility of liaising with all parties, including the Corobrik factories, the architect and the site management falling to Corobrik manager, Pat Moon. “This was an incredibly complex job,” he said, “and we were pleased to come up with an authentic manufacturing solution.”

A large number of handmade salmon pink bricks typical of the 1900 period had been used in the original historical buildings. Working with a set of detailed drawings of the required bricks, supplied by Brusse, clay from the Corobrik Avoca factory in Durban, which would provide the best...
A dream restoration opportunity

By John Thomé

On a recent visit to the Kgawane Mountain Reserve, previously known as Rustenburg Nature Reserve, my wife and I stumbled upon this beautiful old homestead tucked away deep in the bush.

The Reserve was originally established on the farm Rietvallei, which once belonged to President Paul Kruger, so no doubt he spent some time at this residence in his active days – although details in this regard are sketchy.

The old house, which dates back to the early 1900s, is a restorer’s dream – huge and rambling with the traditional wide verandah so definitive of that period – now completely overgrown with roots wending their way through the brickwork. Sprinkled about the immediate vicinity are the usual outbuildings to be expected, such as the stables and a barn. The National Heritage status of this exquisite residence is unknown, but it is certainly well worth restoring to its former glory, and indeed has the potential to become a viable and sustainable accommodation destination within the Reserve.

Should any of our readers wish to explore this opportunity further, with a view to restoration, please contact me on 011 726 3081 email: john@sabuilder.co.za

from page 41

colour match, was road freighted to the Corobrik Midrand factory where the bricks were formed by hand. Once manufactured, they were returned to the Avoca Factory kilns to be fired at a particular temperature to achieve a specific vitrification and colour.

Many of the 29 special shapes that were produced for the restoration project had not been previously made at a Corobrik facility and special-shaped dies were manufactured to ensure the correct fired sizes to match the existing brickwork. “Numerous specials were hand-shaped and tempered by a special product team,” explained Moon.

This was a really interesting project to be a part of with product handling and logistics playing important roles and it was rewarding for the production teams from the two factories involved to be able to meet the challenge. Commenting on the project, Brusse said: “Government House was entrusted to us at the start of the project and we tried to respect the integrity of this historic National Monument by repairing and restoring the buildings in the spirit in which the original structures were built.”

Drawing on their 112 years of brick-making experience and expertise, Corobrik rose to the challenge of manufacturing the special bricks required, providing the perfect solution for the restoration of Government House. The company has gone on to play an important role in the restoration of other historically significant South African buildings including the manufacture of clay bricks for the Kimberley Magistrate’s Court extension and renovations of the Magistrate’s Court in Port Elizabeth.
Fire doors: a burning issue

“To protect your home or office from fires, prevention is key,” explains Dylan Miller from leading window and door manufacturer, Swartland. “All too often we tend to overlook the fire door,” he says.

Why a fire door?
“The fire door is specifically designed to prevent the passage of flames, smoke and heat into other areas of a home or building,” continues Miller. “The appropriate fire door and its correct installation deprives a fire of vital oxygen, thus slowing it down – providing time to make a safe escape and bring the fire under control.”

What are the local regulations?
The SANS 10400 Building Regulations have an entire chapter dedicated to fire protection, stipulating when a fire door is required and what rating is required.

All fire door components are always to be of a reliable standard which complies with the minimum SABS requirements and must comply with the SANS 10400 Building Regulations. “Swartland’s solution is a quality SABS-compliant timber fire door frame and a fire door which is Class E 30-minute-rated for residential application, between garage and single store dwelling,” says Miller.

What to look out for?
When purchasing a fire door, Miller advises to make a point of checking the following four resistance qualities to ensure you purchase a fire door that is appropriate to its location and will fulfil its role in the face of fire:
- **Stability:** resists fires without developing openings wider than 25 mm.
- **Integrity:** ensures that the fire door can resist fire without the development of vertical openings
- **Insulation:** prevents the surface temperature from increasing by more than 140° C above its initial temperature
- **Structural strength:** where in testing a sample fire door is able to resist pre-determined impacts without the formation of any opening wider than 25 mm.

Where to place them?
Class E fire doors are suitable for the average single storey residential house with inter-leading garage. A Class E-rated fire door must be installed between the garage and the dwelling.

Plywood Board Sizes

12mm | 15mm | 18mm | 21mm

FROM THE FOREST TO YOUR HOME
ONLY SOLID TIMBER OF THE HIGHEST QUALITY

All timber sourced from sustainable, well managed certified forests
www.bedson.co.za 0861 BEDSON
Besam: entrance solution of choice for hospitals and gyms

Pedestrian door solutions specialists, ASSA Abloy Entrance Systems South Africa (Pty) Ltd., have supplied and installed a number of Besam entrance systems to medical facilities and health clubs, both in South Africa and neighbouring countries, that offer fast, convenient and safe pedestrian flow.

“Besam is a premium entrance systems brand that leads the global market in presenting secure, comfortable access without detracting from the aesthetics of buildings and is extensively specified for a wide range of facilities,” says ASSA Abloy Entrance Systems managing director, André Aiton. “We are able to offer our customers the best of both by successfully combining local knowledge with global expertise and product innovation.”

Bi-parting sliding doors
The rugged reliability, high quality and efficient operation of the Besam systems make them particularly suited for medical facilities. The units, which are completely assembled in the support beam, are suitable for extremely heavy duty applications: “This is because the mechanism is programmed to comply with customers’ specific requirements,” explains Aiton. “Furthermore, there is a wide range to choose from, including best-in-class theatre doors that offer numerous unique features to meet this niche application’s specific requirements. We have installed many different types of Besam entrance systems at more than 20 hospitals and clinics both in South Africa and neighbouring countries. Our most recent cross-border project was a Besam Power Swing for a medical facility in Gaborone, Botswana.”

A no-fuss entrance solution is important for a hospital and the Besam bi-parting sliding door mechanism, complete with accessories, was the perfect solution to meet the upgrade of an inner door at Life Little Company of Mary Hospital in Pretoria to facilitate access within the hospital. Life Little Company of Mary Hospital is a member of the Life Healthcare Group, one of the largest private hospital groups in southern Africa, operating 63 acute care facilities across the country.

The door opening response time and the stand-open time of the sliding doors can be set according to the customer’s requirements. Short stand-open time helps to prevent the air conditioned atmosphere to escape, avoiding draughts and allowing for a controlled climate for patient, staff and visitor comfort. Aiton adds that climate control also helps to reduce electricity bills.

Revolving door entrance systems
The company has also successfully installed revolving door entrance systems at 12 Virgin Active health clubs in South Africa in just under 12 months.

There are over 112 Virgin Active health clubs across South Africa in each of the country’s nine Provinces. With the philosophy of ‘Live happily ever active’, Virgin Active health clubs have created a health club that’s different from the rest. The facilities offer state-of-the-art equipment and a wide variety of fitness classes offered by highly trained instructors, within a controlled air-conditioned environment. The health clubs are designed to ensure maximum comfort and convenience for their members who are their number one priority.

According to Aiton, the installations at the 12 respective health clubs are a combination of upgrades, renovations, extensions as well as brand new facilities.

The Besam bi-parting automatic sliding door is the perfect solution for application in clinics and hospitals

The KDB-4-2400 2,4 m revolving door systems supplied and installed in Virgin Active health clubs by ASSA Abloy are pedestrian, security and environmentally friendly

The KDB-4-2400 2,4 m revolving door systems with four leaves supplied and installed by ASSA Abloy Entrance Systems are pedestrian, security and environmentally friendly, offering easy, safe, convenient, uninterrupted entrance and exit availability for Virgin Active members to and from the health clubs.

In addition, the energy saving door systems prevent the air-conditioned atmosphere from escaping and thwart draughts. The controlled internal climate reduces electricity consumption which translates to cost savings for the health clubs.

“When it comes to upgrades and extensions there is only a limited period for installation to limit disruption so that...
member inconvenience is kept to an absolute minimum,” explains Aiton. “We had to ensure that the doors were supplied within the time period specified; the widespread geographical location of the Virgin Active health clubs in Gauteng, the Eastern Cape and KwaZulu-Natal, presented us with a challenge.

“To streamline the installation of the door systems, we deployed specialist professional technical teams, equipped with the necessary tools and skills to each province.”

Aiton adds that the technicians have to remain on standby after fitment to assist customers with rapid technical service support including advice, maintenance and repair of the revolving door systems.

ASSA Abloy Entrance Systems is a preferred supplier to Virgin Active health clubs because the company offers a solution that works for the customer and meets the health club’s pedestrian entrance requirements.

The revolving door system is a high quality, competitively priced product which is backed by service excellence. “In addition, our association with international Swedish giant, ASSA Abloy, a global leading specialist in the manufacture and supply of door opening systems, provides us with access to a global pool of knowledge,” explains Aiton.

“With back up facilities in all major cities in South Africa as well as in a number of other African countries, we combine local knowledge with global expertise and product innovation for ultimate customer peace of mind.”

ASSA Abloy Entrance Systems is a subsidiary of international Swedish giant, ASSA Abloy, and leads the market in the supply of secure, safe and convenient door opening systems to facilities that demand security conscious, customer-friendly, reliable and attractive door opening systems including shopping centres, malls, banks, airports, hotels, fast food chains, casinos.

All door solutions are supported by ASSA Abloy Entrance Systems’ 24 hour after-sales service delivered by highly trained, qualified technicians.

Introducing The New Besam SL500
The Door That Has It All!

The new powerful Besam SL500 Sliding Door System, with its modular, sleek design offers reliable operation and efficient performance, combining modern technology and aesthetics for the all in one sliding door solution.

With speeds of up to 20% faster, this rugged design is low on operating costs with state-of-the-art versatility as the modular features enable upgrades and add-ons when you decide to move your business forward. Customised door speeds ensure optimised safety with exceptional security features.

The SL500 Sliding Door System is the ultimate face-of-the-future that features numerous time and cost saving benefits with a green environmental footprint.

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André Aiton (Managing Director).
Email: andre.aiton@assaabloy.com www.besam.com
New Cat rippers for mini excavators

A newly designed line of Cat rippers is now available for mini hydraulic excavators to meet diverse tasks that include picking, grabbing, sorting and digging in varied ground conditions for applications such as landscaping, demolition, site preparation and the installation of underground services.

These specialist work tools are purpose-built for fitment on a broad spectrum of Cat mini excavators, as well as on original equipment manufacturer machines in the same class. Ripper operating weights extend from 45 to 107 kg, depending on the machine model match.

For added versatility, Cat rippers can be used with a pin grabber coupler, coupler and thumb, or as a pin-on attachment. The curved shape allows the ripper to work in conjunction with existing thumbs.

“When used with the Cat Dual Lock pin grabber coupler, rippers can easily be interchanged with Cat buckets for on-site rip and load multi-tasking,” explains Barloworld Equipment product specialist, Craig Christie. (Barloworld Equipment is the Cat dealer for southern Africa.)

Rippers are manufactured from highly durable materials to match arduous operating conditions. For example, the gussets on the top bracket are designed to withstand side load; whilst the high strength alloy shank further extends wear life.

Three ground engaging tool (GET) tip options are available: penetration, sharp centre, and heavy duty abrasion. “Choosing the right GET tip will be determined by the application,” Christie adds.

Ripper applications include landscaping, demolition and site preparation.
## Events 2015:

Forthcoming events of interest

*Forward details of your events to john@sabuilder.co.za for inclusion here*

<table>
<thead>
<tr>
<th>2015</th>
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<tbody>
<tr>
<td>A-OSH Expo <a href="http://www.aosh.co.za">www.aosh.co.za</a></td>
<td>Together with an unparalleled variety of OHS products and services under one roof, A-OSH Expo also offers a comprehensive educational programme.</td>
<td>Gallagher Convention Centre, Midrand</td>
<td>12 – 14 May</td>
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<tr>
<td>Coatings for Africa 2015 Symposium [concurrent with Totally Concrete]</td>
<td>Leading paint and coatings authorities from overseas countries will deliver important addresses at Coatings for Africa 2015</td>
<td>Sandton Convention Centre</td>
<td>11 – 13 May</td>
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<tr>
<td>Totally Concrete Conference &amp; Expo 2015 <a href="http://www.totallyconcrete.co.za">www.totallyconcrete.co.za</a></td>
<td>Africa’s biggest gathering of qualified buyers and sellers for the concrete and construction industry.</td>
<td>Sandton Convention Centre</td>
<td>13 – 14 May</td>
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<tr>
<td>Women in Construction Awards</td>
<td>Recognising the increasingly vital role women play in the construction industry.</td>
<td>Sandton Convention Centre</td>
<td>13 May</td>
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<td>MOZAMBUILD 2015</td>
<td>The 3rd edition of Mozambique’s International Building Materials and Construction Technologies Fair, will provide a meeting place for both established companies and new entrants to Mozambique to network, engage and cement business relationships, while marketing their products and services.</td>
<td>Girassol Indy Congress Hotel, In Maputo, Mozambique.</td>
<td>19 – 20 May</td>
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<tr>
<td>Fulton Awards</td>
<td>Honouring excellence in the concrete construction industry</td>
<td>Champagne Sports Resort, Drakensberg</td>
<td>5 – 7 June</td>
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<td>Sustainability Week 2015</td>
<td>2015, Sustainability Week welcomes African Capital Cities Sustainability Forum, an event led by the City of Tshwane, which will see high level delegations from around the continent converge to deliberate on shared experiences and perspectives.</td>
<td>CSIR Convention Centre, Pretoria</td>
<td>23 – 28 June</td>
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<tr>
<td>National Women’s Day</td>
<td>Celebrating the role of women in the workplace and in our economy.</td>
<td>Cape Town</td>
<td>9 August</td>
</tr>
<tr>
<td>Cape Construction Expo <a href="http://www.cape-construction.co.za">www.cape-construction.co.za</a></td>
<td>Focusing on building and construction needs for the Western Cape.</td>
<td>Misty Hills Conference Centre on the West Rand</td>
<td>12 – 13 August</td>
</tr>
<tr>
<td>Readymix Conference by Sarma <a href="http://www.sarma.co.za">www.sarma.co.za</a></td>
<td>The Readymix Conference will showcase the abilities of readymix concrete and technical speakers will discuss all aspects of readymix concrete – looking at practical ways of ensuring that local suppliers produce the best possible concrete.</td>
<td>Misty Hills Conference Centre on the West Rand</td>
<td>13 – 14 August</td>
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<tr>
<td>SAISC’s Steel Awards 2015</td>
<td>Recognising excellence in the use of steel in construction</td>
<td>Concurrent in Johannesburg, Durban and Cape Town</td>
<td>3 September</td>
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<tr>
<td>110th MBSA Congress – 2015</td>
<td>Addressing immediate issues and opportunities within the South African Building and Construction Industry</td>
<td>Expo Centre – Johannesburg (Nasrec)</td>
<td>16 – 17 September</td>
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<td>BAUMA CONEXPO AFRICA 2015 <a href="http://www.bcfrica.com">www.bcfrica.com</a></td>
<td>International Trade Fair for construction machinery, building material machines, mining machines and construction vehicles</td>
<td>Expo Centre - Johannesburg (Nasrec)</td>
<td>15 – 18 September</td>
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<td>World Green Building Week <a href="http://www.worldgreenbuildingweek.org">www.worldgreenbuildingweek.org</a></td>
<td>Celebrate World Green Building Week</td>
<td>Global event</td>
<td>22 – 27 September</td>
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<td>World Habitat Day <a href="http://unhabitat.org/world-habitat-day/">http://unhabitat.org/world-habitat-day/</a></td>
<td>The purpose of the United Nations World Habitat Day is to reflect on the state of our towns and cities, and on the basic right of all to adequate shelter.</td>
<td>Global event</td>
<td>5 October</td>
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<td>WorldGBC Congress 2015</td>
<td>The 2015 conference will have the theme, “Urban Density,” and will serve as a platform for knowledge exchange on affordable housing, neighbourhood development, rating tools development, transportation and urban planning, transit oriented development, the sustainable countryside, and diversity in social and cultural aspects.</td>
<td>Hong Kong</td>
<td>28 – 30 October</td>
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Mathieu du Plooy announced as MD for WSP and Parsons Brinckerhoff, Africa

WSP and Parsons Brinckerhoff have announced their new Managing Director in Africa for the newly formed company, following WSP’s acquisition of Parsons Brinckerhoff last year. The company will be led by Mathieu du Plooy, who took over the role of managing director for WSP and Parsons Brinckerhoff, Africa from 1 March 2015.

Du Plooy, a professional mechanical engineering technologist, has been the managing director of WSP in Africa since 2010.

The two companies share similar values, and a commitment to technical expertise and excellent client care. This means the combined organisation’s people and its clients remain its top priority as it manages the change that will be necessary in combining its operations. “Our people will have even greater opportunities to work on exciting and challenging projects, with world-class teams of experts. For our clients this means best of class, innovative solutions that will help to ensure the delivery of sustainable projects on a continent that offers abundant opportunity for growth,” Du Plooy explains.

Ian Maclean, former managing director of Parsons Brinckerhoff Africa and Fellow of the Institution of Mechanical Engineers (IMechE) has been announced as UK managing director for energy and industry, bringing together the former WSP industrial engineering discipline and Parsons Brinckerhoff’s power and energy arm.

Maclean will continue his involvement with South Africa through his responsibility for the Medupi project.

WSP’s acquisition of Parsons Brinckerhoff was completed in November 2014, creating one of the largest pure-play multidisciplinary consulting firms worldwide, with combined revenue of $4.8 billion ($3.8 billion net) and approximately 32 000 employees in 500 offices across 39 countries.
Continuous Innovation

The models below are powered by two 18V batteries in series to supply the same power as a 36V machine.

18V + 18V → 36V

DHR263ZK - 36V (18V + 18V)
Cordless Combination Hammer

Outstanding Performance and Compact Design.

- Capacity: 
  - Concrete: 26mm
  - Steel: 13mm
  - Wood: 32mm
- Blows per min (b/min): 0 - 4,800
- No load speed (r/min): 0 - 1,200

- Powered by two 18V Li-ion batteries in series.
- LED job light.
- 3 mode operation - rotation only, hammering with rotation and hammering only.
- Compatible with 1.5Ah, 3.0Ah, 4.0Ah and 5.0Ah batteries

DHS710ZK - 36V (18V + 18V)
Cordless Circular Saw

Lightweight, well balanced and ideal for cutting roof rafters, sheeting & more...

- Max cutting capacity:
  - 0°: 68.5mm
  - 45°: 49mm
- Blade diameter: 190mm
- No load speed (r/min): 4,800
- Compatible with 1.5Ah, 3.0Ah, 4.0Ah and 5.0Ah batteries

Batteries and charger sold separately.

For more info. contact Rutherford:
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