



environment-friendly

Published by
The Clay Brick Association
of Southern Africa

The CBA expands knowledge and support for clay brick masonry and educates the clay brick industry about energy efficient, environmentally-sustainable manufacturing technologies.

Suite B 102, de Goedehoop Close
Office Park, 121 Sovereign Drive,
Route 21 Corporate Park, Irene



 You can WIN a bottle of
JOHNNIE WALKER BLUE!
For details, visit our website



THE VOICE

OF THE CLAY BRICK INDUSTRY

President's Report

It gives me great pleasure to report on my first three months in office.

Switch Africa Green Project

All members should be aware by now of the Switch Africa Green Sustainability Programme funded by the European Union. You will be contacted soon by a CBA appointed facilitator who will assist you with the submission of your own confidential data. Once complete, each member will benefit from benchmarking themselves against key industry averages such as energy and water consumption. This project is vital for the future sustainability of our industry and I urge you to participate fully.

Changes to Legislation

Our industry faces numerous challenges and the CBA is doing excellent work – often behind the scenes – to represent our members' interests. Both the Mining Charter and Carbon Tax are punitive pieces of legislation and we continue to lobby both the Minister of Mineral Resources and Treasury in our effort to mitigate the impact. The Technical Committee, under the astute guidance of Nico Mienie, has carried out sterling work in this regard.

Get involved

At my induction at the AGM I spoke about the need to re-ignite interest in our industry and to build up our member participation. To achieve this I undertook to visit each member at least once, to visit ex-members and potential members and to attend at least one regional meeting per region, per year.

To date Mariana and I have visited 26 members and 4 non-members. I have found member visits most enlightening and worthwhile and I look forward to visiting the remaining members over the next two years. I also attended three Roadshows as well as two regional meetings, giving me opportunities to talk to both Full and Associate Members.

I urge members to "get more involved" by attending Regional Meetings as a minimum. Based on my personal experience, the more a member contributes to the Association, the more he or she will understand the industry and benefit accordingly.

Finally, I wish all CBA members prosperity and growth during the balance of 2018.



COLIN MEYER
President, Clay Brick
Association of South Africa

Promoting Inclusive Sustainable
Practices in the South African
Clay Brick Sector

This project is
co-funded by the
European Union

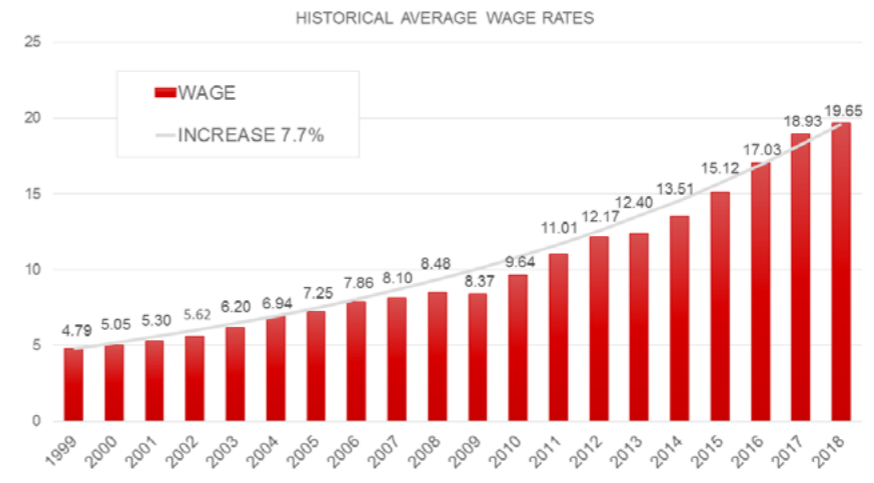




NATIONAL ROADSHOW 2018

The CBA's national roadshow was presented to members and construction professionals in 9 cities across South Africa. It provided facts and figures on sustainability and green building, upcoming changes to SABS standard 10400XA as well as LCA findings on the thermal performance of clay brick.

Our specialist guest speaker Henk Sa, reviewed recent legislation on carbon tax and emissions for the sector. This was also our opportunity to introduce the CBA's exciting new sustainability project which is co-funded by the European Union.



CBA Annual Wage Survey

The CBA has been running an annual wage survey for the past twenty years and participating members have found the data useful in wage negotiations. Based on averages of participating members, the average wage increase over the past twenty years has been 7.7% pa – refer to the graph above.

Submitted by: C Meyer

Ceramics Short Course

Dr Smith (who you will remember from our AGM) will be in Johannesburg from 19-21 November 2018 to present a short course on ceramics to our members. See our website for the details of the course and a summary of Dr Smith's Academic CV.

The event bears a fixed cost so the more attendees we have, the less it will cost per delegate. We are planning for 20-25 delegates. The University Of Derby will issue a formal attendance certificate on completion.

Regional meetings

Regional meetings were well attended and valuable information was shared. Thank you to our hosting members - Apollo Brick (Gauteng), Algoa Brick (Eastern Cape), Kurland Brick (Southern Cape) and Worcester Brick (Western Cape).

Technical Report

SANS 10400XA

SANS 10400XA is in its final draft stage, and is with the committee for comment. In terms of masonry walling, the main points are as presented at the AGM and Roadshow.

Cavity wall construction & training

The Technical Committee is planning a builder's guide on the construction of uninsulated cavity walls. This is in preparation for the implementation of the new version of SANS 10400XA. A short, animated training video is also under consideration.

Edge Tool

A quotation has been accepted from Green Building Design Group to resolve the current shortfalls in the base case model for external walling.

New Mining Charter

Weber Wentzel submitted the CBA's feedback to the DMR, and asked for clarity on several points. The Mining Charter 2018 was gazetted on 27 September 2018.

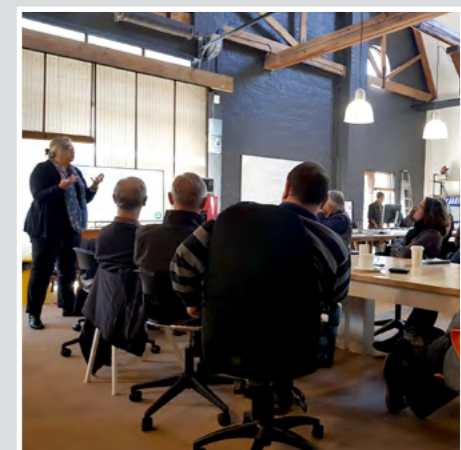
Mine & Quarry rehabilitation.

The DMR has accepted that guarantees to rehabilitate mines and demolish buildings and structures can be based on actual quotes from suitable contractors.

CPD Accreditation sought for Thermal Performance presentation

A revised presentation on Thermal Performance of clay masonry walling is being prepared, with the objective of getting this CPD accredited by the SA Institute of Architects. This may require additional thermal performance modelling to be carried out to update the LCA. Revised information will take the new energy zones into account.

Submitted by: N Mienie, C Dickinson & M Lamont



On behalf of the CBA's Switch Africa Green Programme, Lisa Reynolds of Green Building Design Group gave two specialist presentations to the Eastern and Southern Cape chapters of the **S A Institute of Architects (SAIA)**.

Topics covered included the sustainability and energy efficiency of clay brick, as well as the impact of proposed changes to SANS with regard to cavity wall construction.

This presentation has been accredited by SAIA for CPD points.



CBA President Colin Meyer and Executive Director Mariana Lamont visit Vhavenda Bricks in Louis Trichardt, Limpopo.



Air Quality Forum learns about the environmental benefits of clay brick

Dickson Mofokeng, Factory Manager at Algoa Brick, spoke at the Port Elizabeth Air Quality Forum hosted by the Department of Environmental Health.

This regional forum meets quarterly to discuss legislation and issues around air pollution. It is regularly attended by up to 50 business leaders across a wide range of sectors from manufacturing to mining to infrastructure.

"After the presentation, delegates approached me to say they never realised the complexity of the brickmaking process," reports Dickson. "They were impressed at how Algoa and the industry as a whole were investing in research and technology to improve air quality."

Arbour Day at Federale Stene

Federale Stene planted 10 Karee trees close to the factory's brick yard in support of National Arbor Month. The Department of Agriculture, Forestry and Fisheries decided the theme for this year was 'Forests and Sustainable Cities' which fits in well with the industry's message that clay brick and sustainability go hand-in-hand!

Submitted by: Federale Stene



Mandela Day Centennial Cleanup



To honour the life and legacy of our late president Nelson Mandela in his centenary year, Algoa Brick partnered with Zwartkops Conservancy and the Department of Water and Sanitation at a clean up of the Motherwell Stormwater Canal.

"On arrival we were supplied with bags, gloves and rakes and embarked on cleaning the sides of the canal. The initiative was fun and well supported, we are proud to have made a real difference to the Swartkops Estuary."

Submitted by: Algoa Brick



Informal brickmaker Anah Mulaudzi near Thohoyandou prepares her clamp kiln for firing using macadamia nut shells as her fuel source.

Our Switch Africa Green programme reaches out to brickmaking micro-enterprises

The CBA has recognised a real need to better understand the informal sector and the challenges they face. Project Manager John Volstead is engaging with informal brick-makers to survey their practices and attitudes with regard to sustainability.

He has been assisted by local Clay Brick Association members who are helping to identify informal brickmaking belts, provide interpreters and then test samples gathered in the field. Other stakeholders including local public sector organisations have also been approached to assist in the survey.

"While the formal clay brick sector is well regulated, very little is known about the informal sector which is in excess of 2 000 micro-enterprises mostly in rural areas," says John.

"Our project goal is to undertake education interventions that will reduce coal and water consumption, air pollution and waste. This will minimise the impact on communities by decreasing greenhouse gas emissions and nurturing local biodiversity."

Findings

Initial findings indicate there is virtually no knowledge of sustainable consumption and production (SCP) practices. A common concern is sourcing and paying for fuel which is a major cost. Education on energy-efficient production methods will not only improve resource use and air quality, it will also reduce costs so informal brickmakers are keen to learn.

Moving forward, the CBA project team will develop a comprehensive database for future communication with the sector. They plan to develop information toolkits and training materials based on locally-relevant best practices to raise awareness and build capacity.

"We face many challenges, particularly in funding materials and fuel, but we remain in business as we have a loyal following of customers who prefer clay bricks over cement blocks. These are mostly people who build their own houses."

Daniel Scheepers, an informal brickmaker in Phuthaditjaba.

Siyabonga Nene shows off some of his fired clay products in Newcastle, KwaZulu Natal.



Online submission of sustainability performance data

The Switch Africa Green platform launches in October 2018!

What is the objective of the online submission of brick manufacturing statistics?

This online platform will allow advanced monitoring of performance against various Key Sustainability Indicators (KSIs). In order to manage and improve performance it is first of all important to know how one is performing currently. By participating in the platform, members will be able to compare their performance against industry benchmarks.

Each company's individual performance figures are protected and kept confidential.

The sustainability platform will also help members with carbon tax returns and reporting of GHG emissions. It will form the basis for annual sector-based and individual sustainability reports.

What key information will need to be provided, and over what period?

Data collected covers clay extraction, products, fuels, water, electricity and waste. In order to establish a useful benchmark of sector performance, data will be collected for 2015, 2016 and 2017. This is a 'baseline' against which performance improvements can be monitored. Moving forward, monitoring takes place monthly.

How similar is this to the initial collection of data for the LCA?

The LCA was a once-off assessment of the clay brick sector. The sustainability platform will enable clay brick producers and the sector as a whole to track its performance over time, and see the impact of interventions made.

Initially the platform will focus on production statistics, so it is more limited than the LCA that covered the entire supply chain. This minimises and simplifies data entry. Over the next two years, the system will be expanded to cover more elements of the value chain.

What useful reports will be available to business owners?

1. Own performance against sector indicators, including monthly performance trends over time
2. Carbon tax calculator and reporting
3. GHG emission reporting module

Who will input the data and how will members be assisted?

Site surveyors will contact brick producers shortly to make an appointment to visit the plant to set up the portal. They will collect information relating to the baseline years and get brick makers up-and-running with monthly monitoring.

The plant manager, technical operations manager or the bookkeeper will be the person dealing with the ongoing monitoring of monthly performance data. Users will be shown how to input data for a recent month. The platform will have a monthly online data collection sheet tailored to each production site. Monitoring data on a monthly basis will allow clay brick makers to quickly assess the effect of improvements as they are implemented.

When will the system be ready?

The system will be ready for data collection from October 2018. While data collection is in progress, online dashboards will be developed to provide comprehensive analysis. This will include GHG reporting as well as a carbon tax assessment and reporting.

How is the data being protected?

EcoMetrix Africa, as an independent sustainability consultant, manages the data collection portal. Access to the portal is only given to participating companies, and each user will only have access to data from its own site or sites. The industry Key Sustainability Indicators are calculated from anonymised, aggregated data.

How does this fit into the EU project and its objective of improving sustainability?

The sustainability portal is funded by the Switch Africa Green programme. By providing insights about performance and allowing for benchmarking against sustainability indicators, the potential to improve becomes visible and performance improvement can be managed. In many cases the sustainability indicators look at resource efficiency and environmental sustainability improvement simultaneously.

Submitted by: EcoMetrix Africa

Sustainability Week Sustainable Cities Africa Conference 2018



Sustainability Week seminars provide intensive exposure to professional experts on sustainability topics. One of those experts was CBA Technical Director Nico Mienie, who presented the findings of our LCA and energy efficiency research, and introduced our 3-year sustainability project co-sponsored by the European Union (EU) under the **SWITCH Africa Green programme**. The CBA exhibition stand provided a range of literature on the environmental benefits of clay brick.



TUT student visit

Students from Tshwane University of Technology were excited to visit Corobrik Midrand. The field trip explored best practice in clay brick manufacture and was escorted by Musa Shangase.





2018 Honorary Member, Ivan Freeman

2018 AGM

On behalf of the CBA Board of Directors, I would like to thank all sponsors, organisers, speakers and participants for their enthusiastic participation in the 2018 AGM and Conference. We hope our delegates returned to their businesses energised and inspired about new technologies and strategies.

Our specialist guest speakers - Dr Andrew Smith, Dawie Roodt and Lorne Sulcas - were both entertaining and enlightening. We also thank all the members who contributed their expertise and time with marketing and technical presentations.

Honorary Member
Ivan Freeman of ISCOA



Diarise 2019!

Our 2019 AGM and Conference will be held in a location that demonstrates our ongoing commitment to sustainability and environmental responsibility! See you at Skukuza Conference Lodge from 16 to 19 May 2019!



Our Sponsors

None of this would be possible without our generous sponsors, who help to offset costs. Please support them wherever you can!

- Bedeschi
- Busch Vacuum SA
- BMMS
- Dezzo Equipment
- Ehrenberg Engineering (including Beralmar, Forgestal & Verdes)
- Iscosa
- Bell Equipment
- Keller Group
- Bernini Impianti
- Morando Rieter
- Metalcértima
- FFS Refiners
- Cermalab
- SABO SA
- Insulation Refractory Consultants
- Bonggianni Machines



In August, the CBA marketed the benefits of clay brick at **Interbuild Africa** - the biggest building and construction exhibition on the continent. We demonstrated the economic and environmental credentials of clay masonry with a built cavity wall. Thank you to our CBA members who staffed the stand:

- Apollo Brick
- Corobrik
- Federale Stene
- Sabrix
- Ocon Bricks

Dry Running Vacuum pumps for extrusion

Busch Vacuum Pumps and Systems has successfully introduced their dry vacuum technology for clay brick extrusion to the African market with 13 local installations (including five market leaders). Although the capital outlay on the Busch system is higher than traditional liquid ring systems, clients can expect a return on investment of under 12 months due to energy savings, quicker drying, better brick quality and reduced waste.

The New Technology - Rotary Vanes

Liquid ring vacuum pumps are associated with high costs in energy, water and pump downtime and maintenance. The Busch dry running vacuum pumps achieve a 0,1 mBar absolute vacuum versus 33 mBar on liquid rings. These significant improvements in vacuum levels are associated with savings in utility costs.

The Results Achieved

In many cases, savings are greater than anticipated because the existing liquid ring vacuum system is inefficient.

- Better vacuum performance of 1.5 to 3 kPa
- Energy savings 20% - 30% versus liquid ring pumps technology. (Far smaller motors)
- Zero water costs
- Reduction in waste of $\pm 2\%$ due to improved density and break strength of the bricks
- Helps with ISO14001 and other certifications.

Apollo Brick in Gauteng installed Busch vacuum pumps in 2015 and soon after invested in them as a permanent installation.

"These pumps enhanced our quality standard on column hardness. It increased our vacuum measurement by 2-3 kPa leading to a reduction in green waste."

"The ROI through waste reduction is obvious. This technology is energy friendly, compact and requires little maintenance compared to the polluting liquid ring pumps. The sales and after sales service of BUSCH is GREAT."

Leo van der Meer - Apollo Brick

Busch Vacuum South Africa. Tel (011) 856-0650



Durability, quality and sustainability win Steyn City project for Apollo

Apollo Brick is proud to be chosen as one of the main suppliers of an extensive construction project launched at Steyn City in Fourways. The durability and sustainability of clay brick was a key factor in the design of this multi-purpose, multi-story structure!

Apollo Brick's acclaimed NFX was chosen to build and fill structural columns due to its weight bearing qualities, high Mpa (29) as well as durability and sustainability. Apollo Brick is fully SHEQ compliant, meeting the requirements of the Steyn City board. Apollo has an average 99.7% compliance over the past four months. The project demonstrates that fired clay brick is the building method contractors can really rely on.



Community Project



As part of their Mandela Day Centennial 67 hours of service, Federale Stene generously sponsored bricks for the Blessing Creche in Mbombela to build a kitchen work station. The semiface Travertine bricks were delivered to the crèche by Malelane Stene. The crèche takes care of approximately 34 children between the ages of 5 months and 5 years.

Customized Vacuum Technology

Vacuum technology plays a vital role in many industrial processes. Robustness, reliability and energy consumption are now more important than ever. With energy savings of up to 20 % and reduced operating costs of up to 60 %, Busch vacuum technology sets new standards.

Call us. Find out more about economical vacuum generation from Busch. We offer dry-running and oil lubricated vacuum pumps, liquid ring vacuum pumps, blowers, full service and repairs.

Ask for vacuum technology by Busch!



Busch Vacuum South Africa (Pty.) Ltd.

87 Mimetes Road | Denver, Johannesburg

Phone: +27 11 856 0650 | info@busch.co.za | www.busch.co.za

BUSCH
Vacuum Pumps and Systems