

Two Much Asphalt employees win Sabita's first HSE award

Much Asphalt Western Cape QA, safety and training co-ordinator Adelaide Martin and Eastern Cape regional manager Colin Brooks have received the Southern African Bitumen Association (Sabita)'s inaugural CEO Merit Award for the introduction of sound health, safety and environmental (HSE) practices in the workplace.

Sabita has created this award to acknowledge organisations and individuals for integrating sustainable HSE practices in the work environment. "Getting to the hearts and minds of staff members in implementing HSE protocols is a slow process that requires immense courage, patience and passion," said Sabita CEO Saied Solomons.

Receiving the award, Adelaide praised Sabita "for this brilliant initiative to develop people even further and beyond their expectation, to enhance safety in the workplace, and to reward people in such a unique and special way. We will continue to fly this banner very high, promoting HSE as a lifestyle in which we not only strive to avoid accidents, but to live and work safely."

"Having worked in this field for 17 years, I am constantly amazed that we have survived given the standards of HSE 10 years ago," said Colin. "The improvements have been dramatic and have changed the HSE landscape forever. I also find that my colleagues take the HSE lessons of the workplace home with them, and apply them both on the way home and in their domestic environments."



Colin Brooks (left) and Adelaide Martin receive Sabita's inaugural HSE Award from CEO Saied Solomons (right).



BITUMEN
CRISIS

P3



GREEN
ROADS

P5



ANNUAL
BRAAI

P8

Protecting our people – and our industry

Zero Harm! Safety is our number one priority and two recent events around safety at Much Asphalt have, respectively, left me deeply saddened and extremely proud.



The first was an accident at our George plant that resulted in one of our employees being severely injured. He is receiving excellent care and is in all of our thoughts and prayers. We continue to drive home safety measures in a bid to eliminate accidents on our sites once and for all.

We cannot allow this situation to continue. Much Asphalt, as the major asphalt producer in South Africa, is taking a lead in facilitating a resolution to this crisis. We are keeping our clients abreast of developments and will do all in our power to meet our commitments and avoid delays due to non-availability of asphalt products.

On a happier note, two Much Asphalt employees, Adelaide Martin and Colin Brooks, have won Sabita's inaugural CEO Merit Award for sound HSE practices in the workplace. This is a tremendous honour for Much Asphalt and I'm sure all *SurfaceTalk* readers will join me in congratulating Adelaide and Colin.

As we approach the end of yet another financial year, I see encouraging green shoots such as the infrastructure spend promised in the latest national budget and improved confidence levels in the construction industry. We also hope for an early resolution to the e-tolling debacle so that SANRAL can get on with its job of upgrading our vital national road networks.

This is essential to grow the South African economy, create jobs and improve the quality of life for those South Africans who need it most.

Phillip Hechter
Managing director

“ We continue
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sites once and for all.”

A *Together We Can* approach is a prerequisite for safety at our plants. We face another challenge that demands similar teamwork within the industry. This is the bitumen shortage that continues to delay strategic road projects and threaten the future of the asphalt industry.

LIFTING QUALITY IN OUR LABS

Much Asphalt's SANAS-accredited Central Laboratory (Cenlab) in Eerste River has introduced a new in-depth training programme to improve the quality of our testing and results across the board.

"Most laboratory employees have a good understanding of what is expected of a laboratory technician," says Cenlab manager Alec Rippenaar. "But they tend to rush through processes due to time constraints in the process control labs, sometimes resulting in having to repeat tests."

In a bid to solve this challenge, Cenlab is providing individual training for lab



staff on

- test methods;
- safety in the laboratory;
- good housekeeping;
- general laboratory administration.

The trainee shadows Cenlab staff and then does various tests under the direct

supervision of the Cenlab technical management. A thorough competency assessment, lasting three to five hours, concludes the programme and certificates are issued to successful candidates.

Alec believes the course, ranging from one to two weeks depending on the experience of the employee involved, is making a difference in Much Asphalt's laboratories around the country. "Our laboratory teams are more confident and professional and I am certain that clients will see an improvement in the quality of testing and service levels from all our labs."



John Onraët

Resolving the Bitumen crisis

The critical shortage of bitumen in South Africa has been well publicised and everyone associated with the asphalt industry has been affected by it in one way or another.

Bitumen has gradually become scarcer over the past three years, with both planned and unplanned shutdowns at South Africa's four refineries becoming increasingly common as they get older.

Much Asphalt has a high level team assessing options such as regular importation of bitumen to ensure that we can supply our clients' asphalt needs. As the country's largest asphalt supplier, we are also engaging with the industry to mitigate the seriousness of the problem. We cannot rely on government intervention or refinery upgrades as neither can provide the immediate relief needed.

Meanwhile two shiploads of bitumen have been imported to fill some of the void. The first arrived in Durban in November 2011 and we were fortunate to secure 1 000 tonnes of 50/70 pen grade.

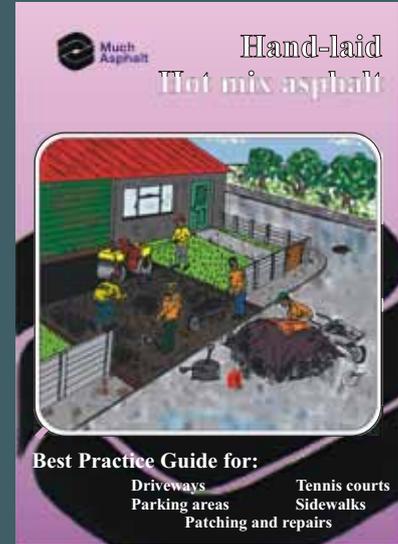
Price increase

"The second shipment of 4 000 tonnes arrived in Cape Town on Monday 19 March 2012 and we have had to implement a price increase to cover the additional cost of import duties, shipping, berthing, storage and transport," says Much Asphalt marketing director John Onraët. To date the imported bitumen has cost bitumen purchasers about 26% more than the local product due to these factors.

"The industry has no choice but to continue importing if the current situation persists," says John, who has been sending weekly updates on bitumen supply constraints to clients for several months.

"Our major challenge will be storing large volumes in a central location and keeping it warm, which is simply not feasible at present.

"Road maintenance projects are being severely impacted by the erratic bitumen supply and this will cost the taxpayer dearly when the window for maintenance closes and full rehabilitation becomes necessary."



Support for hand asphalt applicators

It's not only about the big guys – Much Asphalt is equally determined to give our smaller customers quality products and service.

It was for this reason that marketing director John Onraët led a forum attended by 25 hand applicators in Pietermaritzburg on 2 February.

The forum enabled Much Asphalt's team to engage with customers who pave our asphalt by hand and with small pavers or mechanical spreaders. It aimed to solve issues raised by participants and to improve communication in the interests of better service all round.

Topics discussed included pricing and tendering, transport and delivery, ordering and planning, administration, product quality, compaction practices, technical support, and training.

Just a few of the actions taken to improve service to hand asphalt applicators in Pietermaritzburg are:

- Better forward planning on both sides so that orders can be despatched on time;
- Daily checking of aggregates to ensure consistency and quality of mix;
- Sending a lab technician to site to take samples for testing in the case of a complaint;
- Ongoing education and information to prevent quality problems due to incorrect asphalt storage and placement.

All customers have access to Much Asphalt's *Hand Laid Asphalt Best Practice Guide* and workshops on hand laid asphalt are offered to groups of 10 or more nationwide.



The second shipment of bitumen is transferred to tankers in Cape Town harbour.

N2 project advances despite bitumen shortage

Work is progressing, with a few hiccups due to the bitumen shortage, on the Colchester to Nanaga section of the N2 freeway just north of Port Elizabeth in the Eastern Cape.



Paving of semi-gap mix on the N2 Colchester project in January 2012.

Much Asphalt regional and mobiles manager Francois van der Spuy recalls supplying asphalt for the same section of the N2 about 22 years ago. This time the contract, awarded to Concor, involves upgrading to a double carriageway.

"The westbound section is almost 100% complete and we have mostly been able to overcome the bitumen supply problem, with only four days' delay," says Francois. "The eastbound surfacing phase is due to commence in September on completion of the layerworks."

Asphalt products on the project include 12 000t semi-gap graded wearing course modified with A-P1 binder and applied in conjunction with 13mm pre-coated chips, 22 000t continuously graded (medium grade) wearing course also modified with A-P1 as well as 4 600t of 9.5mm ultra thin friction course.

Near misses – *not good enough*

As part of Much Asphalt's ongoing safety drive, director Brian Mchunu has launched a campaign to promote reporting of near misses in the workplace.

While near misses usually go unreported – we tend to breathe a sigh of relief and move on without another thought – Much Asphalt employees are now being encouraged to report all such incidents so that we can learn from them.

This will help us to become proactive in preventing accidents. By paying more attention to near misses, we address root causes before accidents occur, we can create a safe working environment, improve our safety record, be accountable for our actions and show respect to our fellow workers.

Much Asphalt
RISK MANAGEMENT
www.muchasphalt.co.za

**REPORT NEAR MISSES!!
TOGETHER TO ZERO HARM!**

WHAT IS A NEAR MISS?
It is an unplanned event that DID NOT RESULT in an injury, illness or damage but had POTENTIAL to do so.
By addressing near misses effectively, large, expensive and life threatening accidents may be avoided.

HOW DO WE SEE THEM?
They occur more frequently.
They are smaller in scale and therefore easy to ignore.
Simpler to analyse.

ADVANTAGES OF REPORTING:
An opportunity to exercise our Value to CARE for other employees.
Major or fatal injuries can be prevented.
Cheaper zero-cost learning tools for safety.
Continuous improvement through continued data collection.

STOP.THINK.

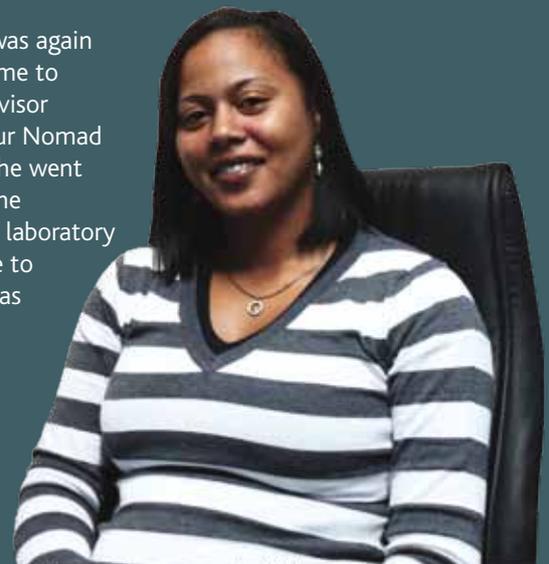
From lab assistant to branch manager

Rozaan Jones has been appointed branch manager at Much Asphalt's George plant.

Rozaan joined Much in 2005 as a laboratory assistant at the Contermanskloof branch in the Western Cape, where she was responsible for road sampling on the N1 rehabilitation contract. On completion of this contract, she moved into the laboratory to continue her training. The following year she was promoted to laboratory technician.

In 2009 Rozaan was again promoted, this time to production supervisor responsible for our Nomad 1 mobile plant. She went on to supervise the Contermanskloof laboratory prior to her move to George this year as branch manager.

We congratulate Rozaan and wish her well in her new role.



Our health and safety vision: Together to Zero Harm

Greener roads for South Africa?

Much Asphalt looks forward to playing an integral role in the Greenroads sustainability rating system for the design and construction of roads.

What is Greenroads?

Greenroads is an international sustainability rating system for roadway design and construction developed in the USA. It is applicable to all roadway projects including new, reconstruction and rehabilitation, bridges, any project where a road is involved.

The Greenroads™ Rating System is a collection of sustainable best practices that address water, environment, access, community impact, construction practices and materials. There are 11 "project requirements" that must be completed in order for a roadway to be considered a Greenroad, as well as 37 "voluntary credits" that a project team can choose to pursue.

Achieving these credits can earn points towards a total Greenroads score for the project, which can be used as an indicator of sustainability for the roadway.

Greenroads Foundation

The Greenroads Foundation is a non-profit, third-party corporation established in 2010 to manage certification reviews for roadway projects using the Greenroads Rating System. SSI Engineers & Environmental Consultants has signed a memorandum of understanding with the Greenroads Foundation to localise the tool for South African conditions.

World's first Greenroad

On 29 February this year the Greenroads Foundation announced that the Meador Kansas Ellis Trail Project in Bellingham, Washington, had become the first ever project to achieve Greenroads certification.

"Working with the Greenroads system has helped us to add key content to our specifications for more sustainable project delivery as well as getting our department to design more holistically," said Freeman Anthony, Bellingham's project manager.



First Greenroads certification – the Meador Kansas Ellis Trail Project in Washington.

The City of Bellingham incorporated many sustainable elements into the project's design including:

- Recycled porcelain aggregates made from over 400 crushed toilets that were diverted from the landfill;
- Asphalt with recycled content of 30 percent and recycled concrete aggregates;
- Porous pavements that naturally treat runoff and provide effective storm water management;
- Low-energy LED street lighting;
- New amenities and improvements for pedestrians and bicycles.

Much Asphalt and Greenroads

"We work constantly towards achieving sustainable practices in the composition and manufacture of all our asphalt mixes," says John Onraët, marketing director at Much Asphalt.

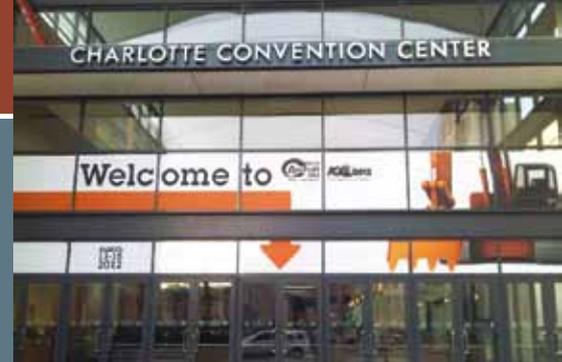
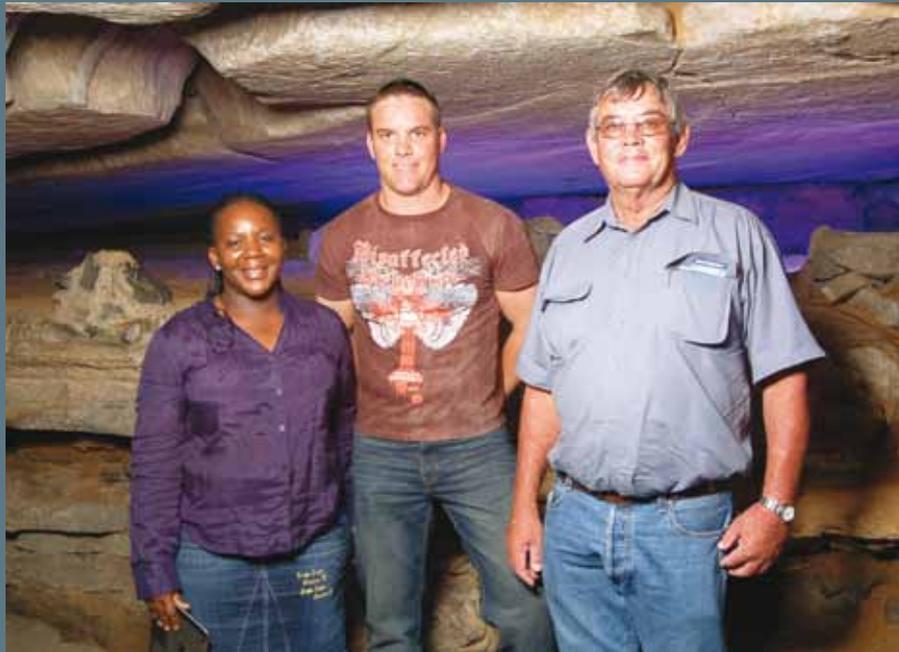
"In the past two years we have converted many of our plants to be able to produce warm mix asphalt (WMA) in order to achieve energy savings and reduce our carbon footprint. We have also made significant increases in the percentages of recycled material that can be used in our products. Our leadership position in both initiatives places us well to bring a strong positive contribution to projects subject to the Greenroads Rating System."



POMONA RELATIONSHIPS

Our Pomona (Kempton Park) branch hosted a family day for employees on 21 March, Human Rights Day. Enjoyed by all, this was a fitting opportunity to say thank you and to build friendships and team spirit.

World of asphalt 2012



Much Asphalt sent a delegation to the World of Asphalt conference in Charlotte, North Carolina, USA, in mid-March. Attending the conference and the associated Aggregates Forum and Expo were (from left): Thandi Mokgalagadi, (branch manager, Bloemfontein); Eddie Jansen van Vuuren (regional manager, Outer Region); and Georg Kilian (branch manager, Mobiles). The trip also included visits to Astec, the manufacturer of our Green Double Barrel WMA plant in Benoni, as well as Martin Marietta Arrowood Quarry in Charlotte, one of the biggest aggregate quarries in North Carolina. The Much delegates brought home new ideas on energy efficiency at the plant, lowering costs and going green, safety, stockpile management, baghouse maintenance and dust control, among others.

Global approval for WMA – but do your homework first

Much Asphalt technical director Herman Marais, DJ de Beer, regional technical manager for KwaZulu-Natal, and Central Laboratory manager Alec Rippenaar attended the 2nd International Warm-Mix Asphalt Conference in St Louis, Missouri, USA, in October last year.

"The overall perspective on WMA seems to be one of overwhelming optimism based on trials and initial projects undertaken in the past few years," said DJ in a summary of the proceedings.

Environmental value

A lot of emphasis is being placed on the environmental value – reduced emissions, fuel savings and the lower temperatures in the working environment. The other positives are the longer hauling distances and longer paving and rolling windows that WMA allows. Everybody seems to agree that the WMA is as good as or even better than HMA, and will definitely be the preferred mix in future. For some contractors, the advantage lies in the compaction aid it provides.

Technologies, designs and applications will have to be evaluated using different

materials, in different conditions, before implementation. Specifications will have to be based on performance related parameters as there are many technologies with different chemical and mechanical modifications to the rheological properties of the binder and product behaviour.

Recycled asphalt

There was general confidence that warm mix technologies could be used effectively with high recycled asphalt (RA) mixes and various technologies using different percentages of RA were presented.

WMA is a diverse subject that is still wide open and subject to much debate and many studies. There are many technologies being used with different working mechanisms and



"The overall perspective on WMA seems to be one of overwhelming optimism." – DJ de Beer, KZN technical manager, Much Asphalt.



properties – and there will still be more to come. Economic considerations, ease of production and application, together with minimum risk of possible failure, will play a part in the continued development of this concept.

We will continue to look at design methods and specialised testing results to evaluate the performance criteria for Much Asphalt clients.

Contact DJ de Beer at 031 450 0400 or dj.debeer@murrob.com for a copy of the comprehensive summary of proceedings.

Updating bitumen rubber technology

The bitumen rubber technology used in South Africa originated from Arizona. This technology has not changed since it was first introduced in the early 1980s.

Due to some premature failures on the GFIP projects in Gauteng, it was decided to undertake a study tour to the USA to see the latest developments in the field of bitumen rubber binder as well as rubber-modified asphalt.

A bitumen rubber working group was formed under the auspices of Sabita involving consulting engineers, secondary binder suppliers and asphalt suppliers. Representing Much Asphalt were Herman Marais, who compiled this report, DJ de Beer and Alec Rippenaar. The group visited various client bodies, contractors, equipment manufacturers and universities in California and Arizona.

Environmental reasons

California is the USA state that uses the most bitumen rubber and its use is mandated for environmental reasons. It is specified that at least 30% (in 2011) of all asphalt used in California should be modified with bitumen rubber and the percentage is increased by 5% per year. It is also specified that the ground tyre rubber crumbs have to come from used California tyres and in 2010 this resulted in the use of 3 million rubber tyres in bitumen rubber.

From here the group moved to Phoenix, Arizona, where the "wet blend" bitumen

rubber technology used in South Africa originated. Here we witnessed the latest technology in bitumen rubber pumps and sprayers, as well as state-of-the-art Coriolis flow meters which are more accurate than the systems currently used in South Africa.

Seal designs

Visiting a chip and spray project, it was interesting to note that seal design methods are not as advanced as the South African method and seals are predominantly used on low traffic rural roads. The bitumen rubber binder used for chip and spray application is modified with SBS polymer to improve the adhesion and resilience of the binder and reduce bleeding in the very hot Arizona summer.

However we were still bugged by the question as to why USA binders have lower viscosities than South African binders when the specifications, at face value, are similar.

Answers at last

This was answered on our final visit to a commercial laboratory where we learned that the quantity of rubber crumbs used in Arizona is around 18% (compared to 20% in SA) and the rubber crumbs are coarser. This results in much lower viscosities and the bitumen rubber remaining within specified limits for a longer period of time.

The study tour provided the knowledge needed to update the Sabita manual on bitumen rubber asphalt as well as the current South African bitumen rubber specifications.



The bitumen rubber working group on study tour.

CAPSA '11

The 10th Conference on Asphalt Pavements for Southern Africa (CAPSA) in KZN in September last year delivered all it promised and more, says Much Asphalt marketing director John Onraët. The theme of the conference, appropriately, was *ROADS OF THE FUTURE: Living within the carrying capacity of our planet.*



One of our most valued customers, Dieter Vietze, and his wife Gabe.



A breakaway workshop.



Our exhibition stand.

Western Cape braai: 13 April 2012



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