

SurfaceTalk

Winter 2013



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TOGETHER WE CAN...



NEW BEGINNINGS

This is my first *Surface Talk* message to our valued clients and employees as Managing Director of Much Asphalt. As you know, I stepped into these shoes in April 2013 following Phillip's retirement. I wish him and Estelle well in the next chapter of their lives and thank both of them for their significant contribution to Much's leadership role in the asphalt industry.

I have worked for Much Asphalt for 24 years now and it is an honour for me to have an opportunity to lead this great company. I trust that I will do justice to my new role and am grateful to have the support of a very capable team.

Thank you for positively receiving this leadership change.

Some organisational changes were necessary as a result. Our Marketing Director, John Onraët, will retire at the end of January 2014 after almost 40 years of service. Leon Alberts has relocated to Cape Town to assume responsibility for strategic business development and it is planned that he will assume the marketing role upon John's retirement.

Following Leon's move, Eddie Jansen van Vuuren was promoted to Regional Manager for Gauteng. Thandi Mokgalagadi was promoted to the position of Regional Manager for the Gauteng Outer Region vacated by Eddie. My former position as Operations Director will not be filled for the time being and the regional managers continue to report to me.

The year has been an exciting one so far, dominated by the news of our parting from Murray & Roberts after 27 years

as part of the group. We hope to finalise the transaction in the next quarter and more details will be announced in due course. Suffice to say that our focus and strategies will not change under the new ownership and the current management structure will remain in place.

We seek to differentiate ourselves from our competitors by providing client satisfaction through quality products and exceptional service. In the past few years we have captured this focus under our "Together We Can" ethos.

We will continue to regard our relationship with every customer, whether it is of a direct or indirect nature, as deserving of a personal commitment or promise. This promise will ultimately become a stronger focus within our "Together We Can" philosophy, aimed at providing you with an improved overall experience.

I thank you sincerely for your continued support and hope you enjoy reading this *Surface Talk*!

Bennie Greyling
Managing Director

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SANAS ACCREDITATION RENEWED

Much Asphalt's Central Laboratory (Cenlab) in Eerste River, Cape Town, successfully renewed its SANAS (South African National Accreditation System) accreditation following a tough audit late last year. Cenlab first achieved SANAS accreditation in 2006. Well done to Cenlab Manager Alec Rippenaar and the team on maintaining the very high standards required for continued accreditation.

Alec Rippenaar

OUR NEW MANAGING DIRECTOR

A short background

Bennie Greyling completed his matric at Hoërskool Uniondale in 1985. He obtained a National Diploma in Mechanical Engineering at Cape Technicon in 1989 and joined Much Asphalt as a student trainee in the same year.



Bennie Greyling and Phillip Hechter at Much Asphalt's Eerste River customer braai.

Since then Bennie has gained experience in all aspects of the business and his leadership skills have resulted in steady promotion through the company.

His first taste of the asphalt business was as a Paver Supervisor on various contracts for the City of Windhoek in Namibia. On completion of his studies Bennie was appointed Milling Machine Supervisor in Cape Town and in November 1990 he returned to Windhoek as Plant Manager for two years.

Bennie was transferred to East London as Branch Manager in May 1992, successfully managing major plant upgrades during his time there. In 1997 he was also appointed Branch Manager of the binders business which had previously been managed by Petrocol, another company in the Murray & Roberts group.

In 1999 Bennie was promoted to Regional Manager – Gauteng. At that time Much Asphalt operated two asphalt plants in this region, Benoni and Eikenhof to the south of Johannesburg. During 2000 and 2001 we acquired

“ Since then Bennie has gained experience in all aspects of the business and his leadership skills have resulted in steady promotion through the company.

two more operations in Pomona and Roodepoort, doubling our capacity and significantly increasing our footprint in Gauteng.

Bennie was invited to join the board of Much Asphalt in August 2003 and the following year he was appointed Operations Director responsible for our 17 static asphalt plants in South Africa and the three mobile facilities operating in the SADC region. Reporting in to him were the regional managers and the group technical manager.

Notable achievements during Bennie's nine years in this role included the establishment of new branches in Witbank and Polokwane and the successful completion of various major contracts on the Gauteng Freeway Improvement Project as well as the R300 contract in the Western Cape.

Bennie was promoted to Managing Director in April 2013.

He is married with three children and is a member of the Genealogical Society of South Africa.

AIRPORT UPGRADES CONTINUE APACE

Night shifts kept busy supplying after hours construction teams

NEW RUNWAY AT MTHATHA AIRPORT

East Coast Asphalt, the joint venture company formed by Asphalt Services and Much Asphalt East London in 2008, has supplied the asphalt for the new 3.1 km runway designed to land bigger aircraft at Mthatha Airport.

Ndodana Consulting Engineers designed the runway for ACSA and Rumdel Construction was appointed as the main contractor tasked with all foundation layers. Phambili Road Surfacing was the paving contractor for asphalt supplied from the East Coast Asphalt's 80 tph plant in Mthatha.

A total 27 662 tons of AE2 modified 13 mm wearing course was supplied as the initial blacktop layer, with binder content averaging 5%. The design parameters were chosen to counter premature aging due to oxidation, which is common on less active asphalt layers.

The current trend is to apply open graded ultra-thin friction course (UTFC) mixes on runways to aid skid resistance and reduce noise. This project was no exception and included 4 760 tons of AE2 modified UTFC mix with binder content and voids averaging 4.7 and 15% respectively.

"Challenges regarding large aggregate volumes were overcome by strict quality control procedures, particularly as four different sources of aggregates were used through the project," says Brian Mchunu, East Coast Asphalt Managing Director. "East Coast Asphalt adopted a zero tolerance approach to product problems and credit must be given to our plant and laboratory staff for achieving a reject rate of less than 0.2% on the six month contract."

"Plans are in place to rehabilitate the existing smaller runway in the future and we plan to play a role in this project too."



BLOEMFONTEIN AIRPORT

Much Asphalt Bloemfontein successfully completed a two month project for taxiway rehabilitation at Bloemfontein Airport at the end of 2012. We supplied about 600 tons of BTB for patching and repair work and 5 000 tons of UTFC with an AE2 rubber modified binder.

The main contractor was Invula Roads and Civils and UWP Consulting was the engineer.

"The project ran smoothly and was delivered in record time in December 2012," says Thandi Mokgalagadi, who was Bloemfontein Branch Manager at the time (she has since moved to Gauteng to manage the Gauteng Outer Region).

"I would say the major contributor to the success of this project was communication," says Thandi. "We held a pre-supply meeting where everything about the project was discussed and agreed upon up-front. This is critical for every project irrespective of how small/big it might be."

CAPE TOWN INTERNATIONAL AIRPORT

Much Asphalt has recently completed delivery of 35 997 tons to Cape Town International Airport, reports Garth Miller, Western Cape Regional Manager.

The contract, completed by Power Construction at the end of June 2013, called for the construction of 60 m of stabilised shoulders on either side of the main runway, as well as realignment of lighting. The shoulder work was done for safety and cosmetic reasons. The old runway edge was uneven with poor levels. The new large passenger airliners have a much wider wing span and there is a chance that debris from the shoulders can be sucked up into the engine air intakes.

"The work was carried out under difficult circumstances, with late cargo flights and early departures often affecting construction work," says Garth.

"Of course the Cape's fickle weather played its part from time to time, with late cancellation of production due to sudden downpours. There were times when the heavens opened once all



Tandem milling.

the mix was on its way to the airport. Thankfully we had an understanding engineer at RHKDVH, who allowed the contractor to delay cancelling the shift as late as possible without compromising the quality of the asphalt."

The fact that Much has two plants in the greater Cape Town area – Eerste River and Contermanskloof – meant that there was always a back-up and contributed significantly to the success



Tandem paving.

of this project. "While we did experience a few mechanical issues, these did not cause any delays in reopening the runway," Garth points out.

Four different types of asphalt were supplied: 2 773 tons Colto medium grade wearing course; 13 424 tons TRH8 AE2; 8 138 tons Colto BTB AE2; 2 738 tons BRASO; and 9 534 tons UTFC. The BRASO was supplied from Eerste River, the UTFC from Contermanskloof.

LANSERIA INTERNATIONAL AIRPORT

On 19 June 2013 Much Roodepoort commenced supply to Hammon Road Surfaces for the new main runway at Lanseria International Airport, under construction by Lonerock Construction with engineering design by Delta Consultants. The contract includes 22 100 t BTB, 9 000 t medium grade wearing course, and 5 000 t SMA (modified with cellulose fibre). About 10% recycled material is being incorporated in the mixes.

"On average we have supplied some 820 t/day of BTB, reducing to between 280 and 350 t/day for the surfacing material," says Greg van Wyk, Roodepoort Branch Manager.

"Obtaining the required quantities of bitumen (due to the SAPREF refinery shutdown) and bitumen storage have proved challenging, but Otto van Griethuysen, Logistics Manager at Much Asphalt, deserves credit for successful management of these issues to ensure that we deliver on time each day.

"At peak production we have been using 22 trucks, mainly from Khan's Transport. Site inductions were undertaken for all truck drivers entering the airport to ensure safety compliance."

The plant is starting up at 04h00 every day to meet the needs of this project as well as other clients. "We have a great team that shows total commitment to promoting the Much brand and is always prepared to go the extra mile," says Greg.





Beating the challenges in Cape Town IRT contracts

Much Asphalt has supplied more than 60 000 tons to various Integrated Rapid Transport (IRT) contracts in the Cape Town area over the last two years and this will increase to more than 80 000 tons by the end of 2013.

Martin & East has been the contractor involved in most of these projects, which include:

- > Atlantis IRT;
- > Melkbos IRT;
- > Potsdam Road IRT;
- > Blaauwberg Road IRT;
- > Resurfacing of portions of Cape Town highways and CBD roads;
- > Construction of Public Transport Corridor along Koeberg Road.

"These contracts are very much in the public eye, as many road users were not convinced that the concept was going to work," says Much Western Cape Regional Manager Garth Miller. "There has been a lot of negativity around bus lanes in the middle of carriageways, cordoned-off bus lanes, the inconvenience of construction work, traffic diversions and so on."

On top of this, construction has to be carried out in confined and dangerous conditions and supply of the highest quality asphalt is essential to the success of each project. Most of the



Bus on/off point in Tableview Road.

work is done on weekends when traffic tends to be lighter and slower. "This has placed huge pressure on our Contermanskloof plant, as maintenance work is usually reserved for weekends," Garth adds.

The contracts have called mainly for modified mixes such as AP1 Colto BTB, EVA LAMBS and AE2 Colto Medium. Ethyl vinyl acetate (EVA) is blended with base bitumen to produce AP1, which becomes the bitumen in the final mix. Likewise, styrene butene styrene (SBS) is blended with base bitumen to produce AE2. Some of the mixes are also manufactured with 50/70, others with 70/100 (sidewalk mixes).

Some juggling was needed to find storage space for all these different bitumens and substantial work has been done to increase the capacity of the bitumen tank farm at Contermanskloof.

"We have also experienced bitumen shortages, but are happy to report that to date we have supplied all requirements successfully without delays," says Garth.

Potsdam Road IRT (22 138 tons), Blaauwberg Road IRT (18 632 tons), the highway resurfacing (18 260 tons) and Koeberg Road (13 840 tons) have now been completed. We are also looking forward to the awarding of the IRT contracts for the Klipfontein Corridor.



Bus lane in Tableview Road (Melkbos IRT).

MUCH SETS A NEW RECORD IN RECYCLED ASPHALT CONTENT

Much Asphalt Benoni has produced a trial mix for use at OR Tambo International Airport containing the highest known proportion of recycled material in a hot or warm mix asphalt product in South Africa.



As much RA as the belt will carry continuously going into the plant.



The trial section incorporating 55% recycled material.



Paving at OR Tambo International Airport.



Benoni 2 plant foaming 55% BTB mix.



Some new and a lot of old material going into mix.

The mix, manufactured using Benoni's warm mix asphalt plant, involved 500 tons of bitumen treated base (BTB) containing 55% recycled asphalt (RA).

The trial mix was successfully produced on 9 March 2013 and paved at the OR Tambo cargo area, resulting in a subsequent order for an additional 2 000 tons.

Initially an emulsion treated base was specified but design constraints led the contractor, Power Construction,

to approach Much for an alternative solution. "We proposed the use of a high percentage recycled material mix," explains Joanne Muller, QA Supervisor at Benoni.

"The mix chosen is based on the standard BTB gradation using warm mix foam technology. The decision to use 55% recycled material was made bearing both cost effectiveness and product performance in mind," says Joanne.

"All specialised requirements were met and test results as well as feedback from the external laboratory and paving teams showed that the 55% RA BTB exceeded expectations, producing a very consistent and stable mix. The workability of the mix has also been noted to be well on par with standard hot mix asphalt products at greatly reduced temperatures.

"We believe it has great potential as an alternative to standard BTB and ETB courses in the South African road construction market."



LEADS TO A UNIQUE ROAD REPAIR SOLUTION

Some two years ago Much Asphalt KwaZulu-Natal teamed up with Eco Asphalt in Durban to develop a unique asphalt mix for use in the Pro-Phalt Infra-Red Road Repair System.

The Pro-Phalt system is effective for potholes, trench surface repairs and reinstating failed joints and seams, completing a typical repair in just 15 to 20 minutes. These are permanent repairs and the process, developed in the UK, holds both South African and European Agreement Certification.

The existing road surface material is recycled and supplemented with bagged Promix, a product specially formulated by Much Asphalt and Eco Asphalt. A portable infrared heater is positioned over the defect and heats the surface area to about 200 degrees C in less than eight minutes. The existing surface is then reworked. The Promix is added to the recycled asphalt at a temperature of up to 110°C and the repair is compacted with a single drum Bomag roller.

According to Pro-Phalt General Manager Trevor Spence, the heat generated

creates a strong bond between the new material and existing surface, reducing potential weak spots and leaving a seamless joint and thus giving a genuine permanent repair.

Much Asphalt became involved with Eco Asphalt and the Pro-Phalt system shortly after it was first introduced in South Africa in early 2011. DJ de Beer, Much Asphalt Regional Technical Manager for KwaZulu-Natal, has worked closely with Trevor for two years to come up with the optimum asphalt mix essential to Pro-Phalt's success.

"Initially we tried normal hot mix asphalt, but realised we needed something a bit more workable," explains DJ. "The problem was to mix something through our plant as hot mix, cool it down and bag it, and then reheat it to half-warm conditions and be able to work with it.

"Another challenge was to open the repaired pothole sections to traffic as soon as possible, which made conventional warm mix technologies difficult due to reheating and viscosity problems. Early this year we eventually settled on a combination of fluxes, fine-tuned to develop Promix. This is supplied in 25 kg bags specifically for the Pro-Phalt technique."

Eco Asphalt also sells bagged Coldmix developed by Much Asphalt for the repair of potholes by small contractors or hand labour teams. "We supply the Coldmix to the KZN Department of Transport, the City of eThekweni and municipalities in the KZN and Eastern Cape regions," says Trevor.

Both mixes were initially developed at Much Asphalt's Coedmore plant in Durban, but are now manufactured by other Much Asphalt plants as the need arises.





Melissa-Ann Jew



Adelaide Martin



Peter Greyling



Roger Geswindt

Great strides in HSE performance

"Since our successful OHSAS 18001 (Occupational Health and Safety Management System) certification in June 2012, a vast improvement has taken place in health and safety performance at Much Asphalt," says HSE Manager Hennie Kruger.

The company's Lost Time Injury Frequency Rate (LTIFR) dropped from 5.3 in July 2012 to 0.82 in June 2013. Various factors have contributed to this very significant reduction:

- › Involvement of site management in day-to-day health and safety issues;
- › Involvement of employees in health and safety;
- › The setting of targets for all sites to above 90% in external audits, which resulted in an average percentage increase of 9.82%;
- › Participation of employees in risk assessments as well as the quality of the risk assessments;
- › Increase in H&S inspections as well as Hunt for Hazards inspections;
- › Implementing the Fatal Risk Control Protocols (FRCPs) and the Life Saving Rules.

Other achievements

The Port Elizabeth site obtained 97% in the 2012 Master Builders Association (MBA) regional safety competition and, after an extensive follow-up audit by the MBA, was awarded 3rd place in the 2012 national competition.

Port Elizabeth won the regional competition again this year and the

Coedmore branch, entering for the first time, has won the KwaZulu-Natal region. Both have now progressed to the national competition.

Ten of the Much Asphalt's 17 sites are now Sabita certified and Leon Alberts (in his previous role as Regional Manager – Gauteng Inner Region), was awarded the Sabita CEO award for H&S performance in 2012.

"The success of an effective HSE system lies in constant interventions to maintain continual improvement with the ultimate target of Zero Harm," says Hennie.

Regional HSE officers

With this goal in mind three HSE Officers, Peter Greyling (based in Benoni), Adelaide Martin (Eerste River), and Roger Geswindt (Port Elizabeth), have been appointed to assist management at both branch and regional level on all HSE matters. This includes implementing our newly developed Environmental Management System, based on the OHSAS 14001 standard.

Environment

"Our Environmental Management System (EMS) framework has been essentially completed and we have started to roll it out to the branches, along with training for our HSE officers and branch managers," says Group Technical Manager Brian Neville.

"The EMS will be populated by environmental policies and procedures such as waste management, air quality and spill response as we move forward."

An independent environmental compliance audit of all Much Asphalt sites against national, provincial and local regulations and legislation has been completed and non-compliances are being given specific focus as part of the EMS development.

Melissa-Ann Jew, Much Asphalt Environmental Co-ordinator, will maintain and populate the system, collate information received from the HSE officers and provide EMS training and environmental awareness programmes for employees. Melissa, who holds a degree in chemical engineering and is an accredited ISO 14001 auditor, will audit the EMS together with Brian and Hennie.



MELICIA NAIDOO THRIVES ON CHALLENGES

When Melicia Naidoo was appointed Branch Manager at Much Asphalt's Pietermaritzburg plant a year ago, she brought to the role a management style that is analytical, logical, process orientated and results driven.

"What I enjoy most about this position is the exposure to the asphalt plant itself, the opportunity to make engineering modifications and enhance systems/processes," she says. "For the plant to be successful, I must also lead my team in achieving operational excellence, cost savings, client satisfaction, quality and a safe and happy working environment."

Born in Durban, Melicia matriculated with distinction at Grenbury Secondary School and has a BSc degree majoring in microbiology and biochemistry from the University of KwaZulu-Natal.

She joined Much Asphalt four years ago as a laboratory assistant in Empangeni, moving rapidly up the ranks to trainee production manager after just one year and then production manager at the Coedmore branch in Durban. Melicia spent about four months as acting Branch Manager at Mthatha prior to her appointment as Pietermaritzburg Branch Manager in August 2012.

She believes competition in the asphalt sector will increase to meet South Africa's growing development needs, but is confident that Much Asphalt will continue to lead in asphalt production and supply through its continuous focus on improvement.

Melicia supports her mother and four siblings. She plays several musical instruments, paints and builds model ships/robots. Squash keeps her fit and she is a keen rugby fan.

“ She believes competition in the asphalt sector will increase to meet South Africa's growing development needs, but is confident that Much Asphalt will continue to lead in asphalt production and supply through its continuous focus on improvement.



TAKING MUCH ASPHALT OUT ON THE ROAD

The bold branding of Much Asphalt vehicles in Benoni and Eerste River, as well as a staff transport bus at Contermanskloof, is taking asphalt marketing to a whole new level. What better way to advertise than on a vehicle proudly travelling over your own product?

NEW TECHNOLOGY FOR N3 WMA TRIALS

Tony Lewis, Warm Mix Asphalt Interest Group

Warm mix asphalt (WMA) trials completed earlier this year on the N3 freeway were the latest in an extensive series of successful trials in the Durban area in the past five years. The trials are being facilitated by the WMA Interest Group representing the South African asphalt industry.

Several different WMA technologies have been used to reduce manufacturing and paving temperatures to between 20°C and 30°C below similar conventional hot mix asphalt products. Trials have included both base and surfacing mixes, some using modified binders and several containing reclaimed asphalt (RA).

After discussions between the WMA Interest Group and SANRAL, it was agreed to carry out further WMA trials on the N3 between Pietermaritzburg and Durban. This section was seen as an excellent test section as it carries extremely heavy traffic loads.

Maintenance work that was being carried out by Roadspan, supervised by consulting engineers PHBagale, involved asphalt inlays and overlays and offered an ideal opportunity to trial new base mixes produced by Much Asphalt and National Asphalt.

Both of the Much Asphalt base mixes incorporated 20% RA. One used Advera, a synthetic zeolite supplied by PQ Corporation – the first time this WMA

technology has been used in South Africa – while the other employed Ammann foam technology.

The Much Asphalt mixes were manufactured at our Coedmore plant south of Durban, a batch type mixing plant that has been modified to produce recycled asphalt mixes.

National Asphalt's base mixes both contained 40% RA, the first utilising its locally developed ECONAT as a dual-purpose WMA technology and rejuvenator. This was also the first South



Tony Lewis of the WMA Interest Group (left) and Pieter Botha of PHBagale, on site during the N3 trials.

African trial of ECONAT. A second base was produced with NA Foamtech, an in-house foamed bitumen technology.

The quality of the various mixes was thoroughly tested at initial laboratory design stage, full-scale plant mix design stage and final trial stage.

Despite long delays between manufacture and paving, the required level of compaction was achieved on all the trial mixes.



Much Asphalt Coedmore plant.

HAND ASPHALT WORKSHOPS



Seven years after Much Asphalt hosted its first Best Practice Workshop on Hand Laid Hot Mix Asphalt, these popular free training sessions continue to attract large numbers of delegates around the country. The most recent workshops hosted by Marketing Director John Onraët in George (pictured) and East London achieved record attendances by consultants, small contractors, as well as provincial and municipal government employees. Techniques for the placement of hot mix asphalt on small projects are demonstrated and delegates receive a manual on the selection, use and application of Much Asphalt's products.



PROMOTIONS PROMOTIONS PROMOTIONS



Leon Alberts has been appointed Strategic Business Development Manager based at head office in Eerste River. He was promoted to this new role from his previous position as Regional Manager – Gauteng Inner Region.



Eddie Jansen van Vuuren has moved from Regional Manager – Gauteng Outer Region to Regional Manager – Gauteng Inner Region. His new role involves responsibility for our flagship plant in Benoni and our other Gauteng-based plants in Pomona, Roodepoort and Eikenhof.



Thandi Mokgalagadi has been promoted from Branch Manager – Bloemfontein to Regional Manager – Gauteng Outer Region. This includes responsibility for our plants in Limpopo (Polokwane), Mpumalanga (Witbank) and Free State (Bloemfontein).



Chesney Glossop has been promoted to Branch Manager – Bloemfontein. He was previously Production Manager in Benoni.



Duduzile Kubheka takes over from Chesney as Benoni Production Manager, moving across from the same role at Pomona.



Riaan Odendaal moves from the regional laboratory to take up the reins as Branch Manager – Pomona.



Mesuli Sopete has been promoted to Branch Manager – Mthatha. Mesuli was employed on 1 May 2012 at the Port Elizabeth branch as a graduate trainee.



Jacques Muller has been appointed as Production Manager – Port Elizabeth.

NEW APPOINTMENT NEW APPOINTMENT

Quintin Viljoen joined Much Asphalt on 15 July as Regional Technical Manager for the Western and Eastern Cape, based at Eerste River. Quintin graduated in 2004 at Stellenbosch University as a civil engineer. He has experience in project management, design and construction of highways, ports and airports, pavement design and value engineering. Quintin will be tasked with ensuring that our plants in these provinces maintain the highest standards of product quality.

