

BY THE WAY



ISSUE 07

Creating wealth through infrastructure

Jan/Feb 2016

Congratulations to the Class of 2015!



What a year 2015 was... And what a stunning end to the year with some of our scholarship recipients matriculating and achieving great results.

The 25 top matriculants with SANRAL scholarships together earned an average of six distinctions each and are set to embark on university studies that will lead to careers that will benefit the country.

Top of the list are Marne Kruger of Gauteng and Jemima Meyer of the Free State with eight distinctions each, Phodiso Makanatleng of Limpopo scored 99% for maths and 96% for science while Vincent Clarke of the Free State and Theresa Brummer of the Eastern Cape both got 98% in maths and science.

This top group of 25 earned 150 distinctions among itself, with 16 for maths and 18 for science.

South Africa has a dire shortage of engineers but SANRAL is making a significant effort to address this critical skills gap. Not only does it have 85 students at six universities but starts nurturing future engineers at school level through its offer of scholarships.

In 2015, 55 learners in grade 12 had received scholarships.

This is in addition to support programmes at school level to boost the interest and understanding of science and maths. Several thousand learners in a number of provinces are beneficiaries of this programme.

Bursaries go to those who have excellent results at school. An overall average of 75% is a requirement as well as getting the same percentage for maths, physical science and English.

The scholarship programme pays for school fees, book and stationary costs, as well as school and sports uniforms. SANRAL also arranges for learners to attend beneficial extra-curricular activities.

The programme was initiated with the aim of providing sponsorships for learners with an aptitude for maths and science and creates opportunities for students who want to proceed to tertiary studies.

It creates a pipeline to develop and nurture young talent which will one day make important contributions to the built environment - specifically in the fields of road infrastructure development, intelligent transport systems and civil engineering.

Some of these learners will receive SANRAL bursaries and go university. These cover their tuition and registration fees, accommodation and meals, books and equipment plus compulsory excursions and seminars as well as a living allowance.

The bursary programme is very comprehensive, offering among other things, invaluable work experience during study breaks and an employment pipeline for when the students graduate.

Visit our blog <http://stop-over.co.za/> to read more about how we invest in our youth to help build their dreams.

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SANRAL EMPOWERS our youth

In 2015 SANRAL had 85 students at six universities across the country, 20 of which were studying at the University of KwaZulu-Natal. It also supports learners across the country who aim to become engineers.

How important this support is, is typified by the responses of some of the recipients.

Sanchia Pillay, a graduate design engineer, completed her degree in 2013 and has since been employed by SANRAL. She has gained vast knowledge and experience working on different projects with consulting engineers, also known as design officers, which have many divisions that perform a variety of functions.

“Working for SANRAL has been a great learning curve thus far,” she says.

Kerisha Govender, a graduate construction engineer said the SANRAL bursary had relieved her family of a major financial burden.

“After graduating, SANRAL placed me with SMEC consulting engineers which opened a door of opportunities for me,” she said.

Top achieving scholar Nikai Jagganath from Durban Girls High School was awarded a SANRAL scholarship in Grade 12 and has already been accepted by the University of Cape Town to study engineering in 2016.

“I have worked incredibly hard to achieve the results I wanted and I am finally able to embark on a career in engineering.”

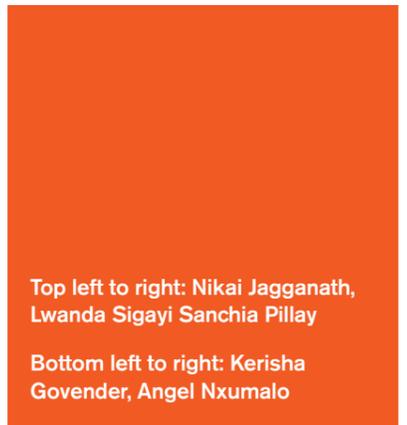
Nikai Jagganath

Second year civil engineering student from the University of KwaZulu-Natal and SANRAL bursary recipient Jernelle Mariemoothoo said she is most grateful for the opportunity afforded to her by SANRAL.

“Being a SANRAL bursar means the world to me. It has eased the financial burden and given me a chance to fully concentrate on my studies,” said the 20-year-old.

Angel Nxumalo, 25, from Nkandla believes she would not be where she is today had it not been for SANRAL. The third-year civil engineering bursary recipient is the first resident in her rural community to have received academic sponsorship to further her studies.

Lwanda Sigayi from Umtata in the Eastern Cape, also a third-year civil engineering bursary recipient at the University of KwaZulu-Natal, is another grateful recipient whose dreams were enabled by SANRAL.



SANRAL achievers honoured

In October last year SANRAL hosted its annual scholarship function at the Nelson Mandela Metropolitan University.

The event was attended by SANRAL school scholarship recipients – learners in grades 10 to 12 from schools in Nelson Mandela Bay.

Speaking at the event, SANRAL Southern Region Project Manager Marelize Nel-Verwey said the agency is committed to developing the skills of learners who express an interest in studying and building a career with SANRAL or similar organisations.

This is how important the scholarships are to the recipients. Said Abulele Dilima of Westering High School: *“It was gratifying to get financial assistance from SANRAL, and I will always be indebted to them.”*

Dilima’s class mate Bevan George also received support from SANRAL: *“I come from a single parent household. I applied for a SANRAL scholarship in Grade 11 and they financed my matric year. This was a huge relief for me because it was also the year that my deceased father’s trust fund ran out. It is a big help for me and my mother.”*

Carmel Chan-Lok from Collegiate Girls’ High School said, *“The SANRAL scholarship has helped me to do more things than I can possibly imagine. It really is good motivation – you do well to stay on the programme.”*



Marelize Nel-Verwey
SANRAL Southern Region Project Manager



Carmel Chan-Lok, Luzuko Jack, Noluvuyo Bell and Malan Steenkamp

Elrike Hugo, Bevan George, Abulele Dilima, Marlize Nel-Verwey and André Koekemoer

Science teachers honoured

In November last year teachers from Nelson Mandela Bay were recognised for their outstanding efforts to help learners improve their marks in physical science.

The Nelson Mandela Metropolitan University's (NMMU) Science, Technology, Engineering and Related Management/Mathematics (STEM) Fields Pipeline Project in Port Elizabeth has named the area's top performing schools and teachers.

The project is the result of a partnership formed in 2010 between South African National Roads Agency SOC Ltd (SANRAL) and the NMMU School of Engineering, in response to poor matric results - particularly in science and mathematics.

The top school, Alexander Road High, walked away with R30 000, which must be used to purchase equipment for Physical Science. The equipment can only be bought through the NMMU. The winning teacher, Cronje Oosthuizen, head of science at Alexander Road High, also won R5 000, while runner up Raymond Mali of Khumbulani High School won R3 000.

The competition criteria are strict for both the schools and educators and run over a three-year period. Schools are judged on their function as a school and the support they give to their learners. The educators have to improve the physical science experience for the learners.

Speaking at the awards ceremony, Minister of Transport Dipuo Peters said she was very proud of the STEM programme.



Transport Minister Dipuo Peters with participants of the STEM programme.

She said SANRAL was demonstrating that skills development and higher education are a priority. "This commitment is reflected across all the pillars of SANRAL's operations especially with regards to engineering, technology, community development and job creation."

SANRAL CEO Nazir Alli took the opportunity to acknowledge the hard work and dedication of the NMMU's STEM programme.

"Your hard work and commitment have culminated in today's prize-giving ceremony. Equally, I congratulate our prize winners and their families, because achievements in education cannot be reached without a broader support system that includes family and community," Alli said.

"SANRAL has strong vested interests in the education of suitably-qualified engineers and artisans. We are primarily responsible for the planning, design and management of the country's vast national road infrastructure - and increasingly also at provincial level."

SANRAL funds and manages a number of educational projects. It awards bursaries and scholarships to students, most of them from previously disadvantaged backgrounds. In partnership with numerous South African universities, the agency also funds projects like the Targeting Talent Programme (TTP) with the University of Witwatersrand and the Family Maths and Science Project with the University of the Free State.

Top award for SANRAL at global meeting

SANRAL's prominent international standing was once again confirmed when it was given the award for the best paper submitted at the 25th World Road Congress (known as PIARC) held in Seoul, South Korea in November last year.

Also, its exhibition stand was adjudged to be one of the best.

The congress brought together 122 national road administrations from around the globe and is held every fourth year. This year its theme was 'Roads and Mobility - Creating new value from Transport'.

Five SANRAL employees delivered papers (Alex van Niekerk, Randall Cable, Kersen Naidoo, Alice Mathew and Mogole Mphahlele) while CEO Nazir Alli chaired two sessions.

The congress brings together so many views and so much information from so many participants that it can truly be described as an ideas-platform, where information is shared and there is indirect mentoring. Being exposed to so many different cultures in one place is equally important.

Many countries exhibited but the South African exhibition was seemingly the most popular. It was crowded every day and several other exhibitors praised it, notably the United States and Mexico.



SANRAL Bursary for PhD students



Ayanda Shabalala
PhD civil engineering candidate

Ayanda Shabalala from the University of Mpumalanga is a researcher and a lecturer in Water Management and a PhD candidate at the University of Johannesburg. She is the recipient of a SANRAL bursary so that she can work towards a PhD in civil engineering. Her successful application came as a result of a visit by CEO Nazir Alli to the university earlier last year. The bursary covers registration, tuition, books, food, living allowance, accommodation while travelling.

"I am extremely honoured and appreciate to have been awarded the SANRAL bursary. It will not only provide the financial backing I need for a successful completion of my PhD studies but will help in accelerating my professional development, and put me in a position where I can impart my skills and knowledge to the wider society."



Introducing paved roads in the Madidi Village

Small projects bring big advantages

The country's national road agency does not only handle massive construction projects. It also assists communities which live along its roads, creates jobs and boosts SMMEs.

It also is happy to be involved in smaller projects - but which have huge advantages for local people, such as in Madidi which is in the Madibeng Local Municipality.

Some time ago a local ward councillor (Suzan Nthangeni) approached SANRAL for assistance to upgrade a six kilometre stretch of gravel road, which is Madidi's main entry and exit route. The road had deteriorated to such an extent that taxis, buses and delivery vehicles refused to use it, forcing residents to walk long distances in order to leave or enter the area.

SANRAL decided to assist as part of its policy to support job creation and community development.

It reached agreement with the North West province to re-lay the road with an asphalt surface at a cost of R30 million, with the province and SANRAL each contributing R15 million.

The partners identified 13 local contractors and put them through an accredited business training course. They were then registered as start-up contractors by the Construction Industry Development Board. Supervisors were identified and trained, and about 600 local people were trained as road construction workers.

The opportunity created jobs for two years and the local economy was boosted. Public transport improved

significantly and new taxis were purchased, car wash businesses were opened and other businesses started to thrive. Above all, contractors in the area were empowered with road construction skills.

The road was officially handed to the community on 14 October 2011, where learner contractors were also given competency certificates.

The new road has brought significant benefits to the community. Examples include:

- Development of new skills, with a few contractors managing to secure additional work. SANRAL maintains a data base with contractor details and refers these to its own national road contractors who may need to subcontract work.
- Taxis, buses and delivery vehicles now use the road, and taxis have even lowered their fares to take into account the reduced wear and tear on their vehicles.
- Sidewalks and designated crossing points have improved pedestrian safety, particularly for school children.

Nthangeni, the ward councillor who initiated the project, has moved up and is now the Madibeng Municipality's Member of Mayoral Committee (MMC) for Finance.

She says: "SANRAL has really changed the lives of people in Madidi. We are proud to have worked with such an agency, which listens to the concerns of ordinary people and assists them. The road built by SANRAL in this village will remain its heritage and asset for many years to come. The quality of the road itself is an indication of the efforts taken by the roads agency during its construction

phase. The road has brought economic life to Madidi. It has improved mobility, and above all, it has improved road safety in the area. Our sincere thanks to SANRAL and the North West Provincial Government for their excellent contribution in bringing about positive change in Madidi."

SANRAL has undertaken similar projects but the Madidi road upgrade was particularly successful because of the strong provincial and local political support it received.

"The community of Madidi is humbled by the support given by SANRAL and the North West Provincial Government. The beneficiaries of the programme will start to manage their own construction contracting businesses, demonstrate competence in areas of speciality as part of back to basics we would be encouraged if this method is implemented across the country."

Transport Engineering comes to Mahikeng

There is a shortage of qualified transport engineers in the country which is made worse by the increasing demand for these skills, particularly at local government level. In addition, there are very few tertiary institutions in the country that offer degrees in transport engineering.

It is for this reason that the Department of Transport, together with SANRAL, have entered into a strategic partnership to develop a new curriculum for such a degree at the North West University, Mahikeng Campus.

There was an earlier beginning to address the problem, but it did not get off the ground. However, some basic work has been done in this area.

An initiative to produce quality graduates in transport economics and transport planning was started by the Department of Transport together with the Universities of Cape Town and Pretoria in 2002. The project was, however, not developed because of lack of funding from the Local Government Sector Education Training Authority (LGSETA).

There are many opportunities for young graduates in transport planning because municipalities do not currently have the capacity. Municipalities generally rely on outside consultants to do this work and the quality of work generally varies from good to exceptionally poor and shoddy work.

Utmost importance will be placed on transport planners and transport economists. Transport planning should not be isolated from spatial planning as this influences the urbanisation of cities – which is happening at an

Incorporating the R24 into SANRAL's network

Jobs have been created and business opportunities in the Rustenburg area are set to improve, thanks to an important project currently underway in the North West province.

Major upgrades to the R24, currently in progress, are intended to improve traffic flow in the area. The road is being widened and improved.

The R24 is currently a single carriageway road and was recently incorporated into the SANRAL network. The road serves as a link between Rustenburg and other nearby towns, providing access to the N4, Rustenburg's industrial area, the Waterfall Mall as well as various smallholdings next to the road.

Rustenburg has experienced significant development and expansion in recent years due to mining activities. Much of the development occurred along the R24, raising the road's status to an urban arterial. Hennie Kotze, SANRAL's Senior Project Engineer for this upgrade, said the North West province identified the need to upgrade the R24 from a two-lane single carriageway road to a four-lane dual carriageway road because of increased traffic volumes in the area resulting from the numerous developments.

"The increased capacity will also reduce heavy congestion during peak hours that is currently being experienced on

the road and also on feeder roads as a result of under-capacity of the R24," he said.

The scope of works involves the construction of new road works, structures and road lighting as well as the rehabilitation of the existing road.

The project started in March 2013 and it is foreseen to be completed in October 2015, at an estimated cost of R194.9 million. The work is being undertaken by Lonerock Construction.

Kotze said as part of the contract, SANRAL requires the contractor to allocate 12% of the value of work to SMMEs and 6% to the employment of local labour – a move which will contribute to job creation and skills development in the area.

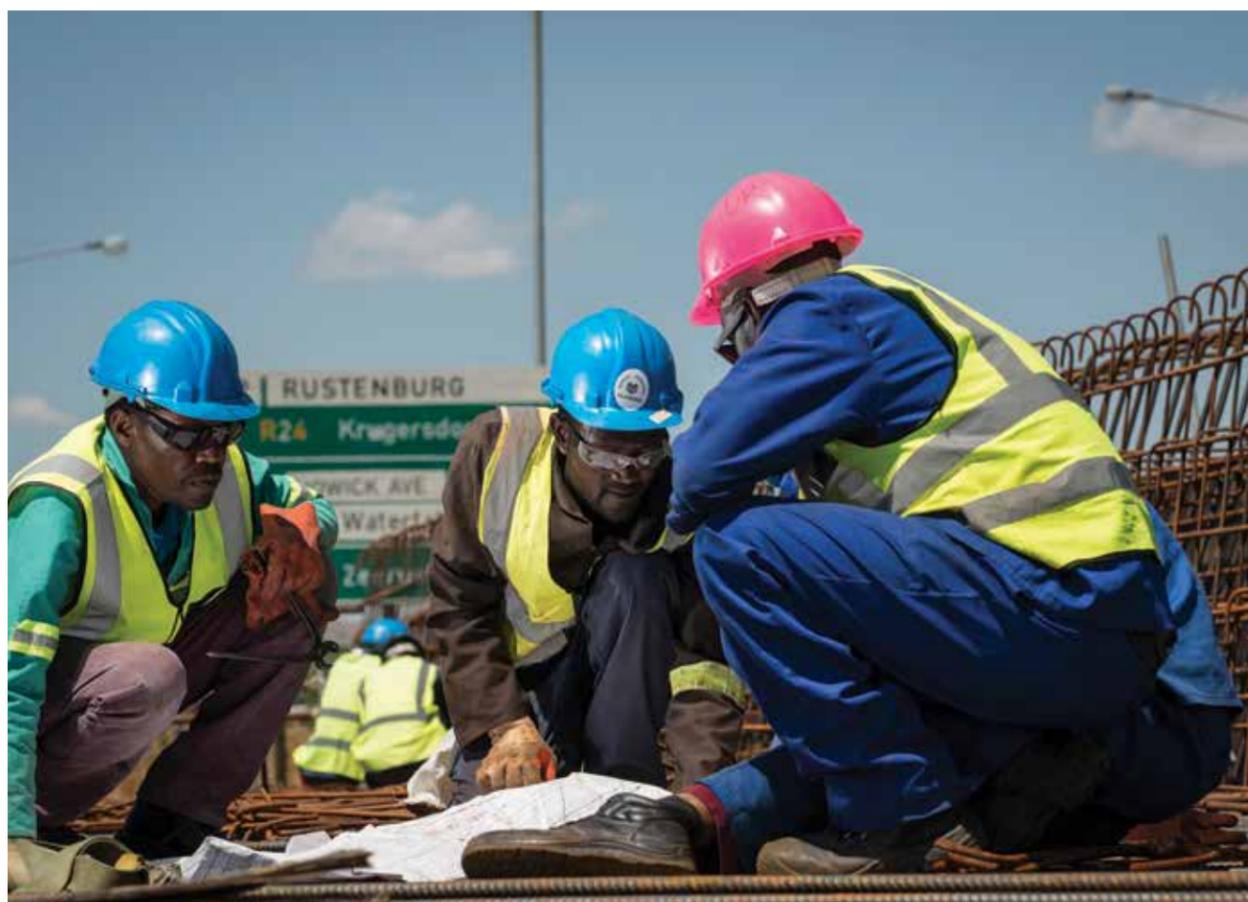
These upgrades are done in part to create improved accessibility to adjacent properties, 'businesses and the potential for further development on vacant land which will have a major impact on economic growth in the area.

"The increased capacity will also reduce heavy congestion during peak hours that is currently being experienced on the road and also on feeder roads as a result of under-capacity of the R24,"

Hennie Kotze
SANRAL's Senior Project Engineer



<https://youtu.be/M9rolvPdXis>



increasingly rapid pace - and this has had a profound effect on city planning in South Africa. Prior 1994 it meant that the disenfranchised were far from work opportunities

Basic approaches to such planning exist - such as the Integrated Transport Plan - but skilled people in municipalities to implement them adequately are in short supply.

The programme curriculum of the envisaged transport engineering degree will support the National Development Plan and the National Transport Policy. The partnership between stakeholders in the transport engineering sector will also culminate in the creation of a networking platform between industry players and students for employment and placement opportunities.



YOUR LIFELINE ON THE ROAD



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ROAD SAFETY ESSENTIALS



LIGHTS ON



BUCKLE UP



OBEY SPEED LIMITS



KIDS IN THE BACK



OBEY ROAD RULES



DRIVE SOBER



CHECK VEHICLE



REST OFTEN



NO CELL PHONES



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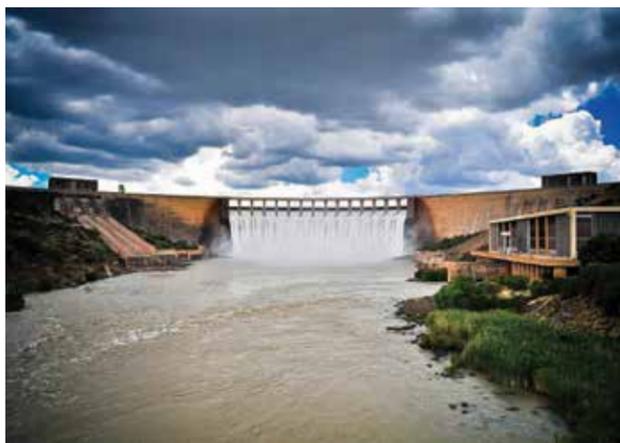
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Off the beaten track in the Free State – top 5 highlights

1. Gariiep Dam Nature Reserve
2. Naval Hill
3. Vredefort Dome
4. Clarens
5. Golden Gate Highlands National Park

Free State – the place to rest your soul



It is slap-bang in the middle of the country, borders Lesotho and six South African provinces - and is easily accessible along some of the best roads in the world - SANRAL roads: the N1, N3, N5, N6 and N8.

The Free State, previously the Orange Free State, has Bloemfontein as its capital and is also the country's judicial capital. It is also the only province where Sesotho is the most spoken language with Afrikaans a close second.

Its eastern border nestles against the Drakensberg and Maluti mountains with relatively flat grassy plains stretching westward. With its rich soil, it is not surprising that it is South Africa's biggest grain producer. While agriculture and mining are the heart of its economy, high tech industries are growing apace, with tourism also a factor. There are several places to see in the Free State and one of its attractions is the number of small towns which are all quiet and friendly - places to go to when you intend doing very little but relax.

Should you need more when you go on a road trip, you can have that too.

Such as the Gariiep Dam Nature Reserve on the similarly named river (previously the Orange) on the border with the Northern Cape at the town of Colesberg on the N1 which runs from Cape Town to the border with Zimbabwe.

It is a haven for all sorts of water sports, angling, game and bird watching, horseback rides, hiking. There is accommodation to pick and choose from but if you travel with a young family the adjoining Aventura Resort is the place to go to - there is swimming, tennis, mini golf, again water sports and play areas for the children.

Fully rested, you can continue on the N1 to Bloemfontein which has much to offer. It is probably the only city which has a rural feel to it. It houses the Supreme Court of Appeal, the Anglo-Boer War museum, the National Museum and, if you're in town on Saturday, go to the Boeremark in Langenhoven Park.

A must-see is Naval Hill where the Franklin Game Reserve of 250 hectares is - the only one right in the middle of a city, with a wide range of game and birds. Entry is free and the reserve offers spectacular views of the Free State capital.

Continue north until you are close to Parys and turn off to see the Vredefort Dome, a UNESCO World Heritage Site. It was formed two million years ago when a meteorite the size of Table Mountain hit the earth. It is the largest impact crater and was 300 km across when it was formed.

The centre of the crater is 40 km in diameter and is still recognisable - small hills in a large dome shape with

beautiful valleys in-between. A visit will probably only take half-a-day but stay on. There is excellent local accommodation available and much to do - from river rafting to mountain biking, archery to abseiling.

Another option would be to take the N5 at Winburg and on to Clarens, famous for its art galleries, arts and craft shops, excellent accommodation and a variety of eateries. If you're into the arts, this is the place to be.

But there is more to do - 4x4 safaris, hikes in the spectacular landscape, horse trails and white water rafting.

Nearby, nestling in the foothills of the Maluti Mountains near the Lesotho border is South Africa's only grassland national park - the Golden Gate Highlands National Park, with abundant game and extraordinary views. It has exceptional sandstone cliffs and outcrops which are coloured in multi-hued bands, eroded by sand and rain. Visit the biggest of many caves, Cathedral Cave, where San, Basotho and Anglo-Boer War refugees found shelter over time.

This is for those who love wide open spaces, breath fresh mountain air and nature to restore their life balance.

The Free State - wide horizons, blue skies and a mix of cultures, farmland and goldfields and really warm South African hospitality. With excellent roads to take you through the province. But, stop, visit and enjoy what it has to offer.

Amanzimtoti congestion to be eased

The upgrade planned for the Adams Road Interchange at Amanzimtoti is necessary to alleviate the congestion currently being experienced by road users in this area. The aim is to improve the traffic capacity, which will reduce delays that motorists experience.

The upgrade has been planned jointly with Ethekwini Municipality as substantial upgrading is required to the local road network adjacent to the interchange.

SANRAL has no plans to use any of the overpass bridges or pedestrian bridges for camera installations related to Open Road Tolling or traffic violations enforcement purposes. The red dots on the bid documents indicate the positions of bus and taxi lay-bys, not toll infrastructure as alleged by some.

At this stage the Adams Road Interchange upgrade is awaiting the completion of the detailed design plans and obtaining the necessary environmental authorisations. The construction phase is currently not budgeted for but further discussions will be held with the Ethekwini Municipality to possibly provide a share of the construction cost similar to how the Umgeni Interchange was funded.

It has to be noted that upgrading of the interchange is separate from the N2 Wild Coast Toll project. The Adams

Road upgrade is required due to congestion and safety concerns, which are expected to worsen significantly in the short term.

The upgrade has been considered as part of the wider metropolitan road infrastructure upgrades to support local and regional economic activity. It is expected that the upgrades will encourage the free flow of traffic within Amanzimtoti with reduced congestion, which will encourage local economic activity.

Drainage design forms a major part of the technical development of the interchange upgrade project and specialist engineers are engaged to ensure that the local drainage systems are upgraded where required so as not to pose a safety and operational risk to the interchange and the surrounding areas.

SANRAL raises funds for charities

SANRAL Western Region and its contractors, suppliers and consultants recently raised an impressive sum of more than R100 000 at its annual Imbizo held near the Huguenot Tunnel at Paarl – all for a good cause.



Twenty nine teams participated in various games of the event.

The roads agency that cares

November saw proof of how SANRAL takes road users into consideration while upgrading roads to boost economic growth in the Eastern Cape. It is part of the roads agency's national approach to work closely with the communities living near its roads and/or using them.

The upgrading of five interchanges in Port Elizabeth had the potential of seriously disrupting traffic flows and causing long delays, with the inevitable consequence that drivers would become agitated and possibly be late for work.

The upgrade meant that roads would have to be closed, but this was done at night. Asphalt patching operations were then completed. At each road that was closed, a variable message sign (VMS) board was in operation to keep road users up to date with traffic flow information. This happened over five days and SANRAL also supplied alternate route information.

In the wider Eastern Cape, SANRAL is also active on the vital N2 which connects Cape Town with Durban, and thus

also Port Elizabeth to East London as well as on the R72, the coastal link between these two cities.

It can be expected that road works on some 30km along both routes will occur every year. Roads should be resurfaced every ten years and rehabilitated every 20 years. This is done in stages and therefore there will continually be road works on some sections of these two roads – all done for the sake of boosting the Eastern Cape economy.

Failing to do so would mean that roads deteriorate and would not only cost far more to fix, but will also cost the economy and a poor road condition is downright a safety hazard. At the roads agency, any one of these is unacceptable.



Mott McDonald team came out top.

Every year, SANRAL hosts this event to build relationships with industry related stakeholders, create an opportunity for companies to network and give back to the community.

SANRAL selects specific charities that benefit from the Imbizo. In 2015 funds raised were donated to the GH Starck Frail Care Centre in Hanover Park; the Lily Haven Place in Bonteheuwel; and Huis Zonnekus in Milnerton. The teams also helped to pack 'pamper packs' for the senior citizens at the three homes.

Twenty nine teams participated in various games including tug of war, relay races, wheelbarrow race and obstacle courses.

Stand-up comedian Wayne McKay, who was a laugh a minute with his witty comments, kept everyone on track and in good spirit.

During the day the teams prepared dishes at their stands as part of a cooking competition and presented their best culinary delights ranging from chicken kebabs, fish to potjiekos to the judges. The team of Mott MacDonald came out tops. The team from Aurecon SA won the Team Spirit award.

The overall winner on the day was the team of Mott Macdonald, followed by Aurecon SA and Element Consulting Engineers.

Comments from the teams: *"This was a great day and we had a tremendous time enjoying the vibe and people around..."*

"The music, the stand-up comedian kept everyone entertained and there was lots of laughter, fun and games. At the same time it was rewarding to know that all our efforts were in aid of a good cause ..."

Alta Groenewald, who heads up the event organising committee, said it was amazing to see the positive spirit of all the participants and how generously they gave to the less privileged.

Kobus van der Walt, Western Region Manager, said it was heartening to see not only the enthusiasm with which the teams competed, but also the support given to the auction to reach the amazing amount of R106 000. *"People really opened their hearts and we would like to say a big thank you for all who made the day such a huge success."*



Massive debt discount has kicked in

Road users on the Gauteng freeway network became eligible for a 60% reduction of their historic e-toll debt in arrears on 2 November 2015. This once-off discount applies to all unpaid e-tolls levied on GFIP roads from 3 December 2013 up to and including 31 August 2015

The new e-toll dispensation announced by Deputy President Cyril Ramaphosa in May last year was phased in and changes were made to the electronic systems to ensure a seamless transition, says SANRAL's Head of Communications, Vusi Mona.

Among the changes that were already in place are a uniform rate per vehicle class (for example, 30 cents per kilometre for light vehicles) and a 50% reduction in the monthly maximum for registered account holders.

Road users with outstanding e-toll debt incurred from 3 December 2013 until 31 August 2015 now have six months to settle their accounts, or make payment arrangements.

"This is not an amnesty or a debt write-off," says Mona. "It is a special discount offered to road users in terms of the new dispensation."

Detailed information on all payment options available can be found on the special website www.less60.co.za.

Mona says the best option for road users is still to register for e-tags and benefit from the reduced tariff and a monthly maximum that has been cut in half from R450 per month to only R225 for light vehicles, since the beginning of July.

"Government has listened to concerns from Gauteng road users about the affordability of the e-toll fees and responded by reducing toll fees and making it easier for those who do not have an account with SANRAL to settle their debt," he says.



E-tags take you further

Existing tag holders were the first to benefit from the rollout of the automated payment system on key toll routes.

This system comes at no additional cost to motorists.

Most significantly it offers convenience as road users will not have to stop to pay at the following plazas from December 2015:

- N3 – Mariannhill toll plaza near Pinetown
- N1 North - Kranskop, Nyl, Sebetiela, Capricorn and Baobab toll plazas
- N1 South - Verkeerdevlei, Vaal and Grasmere toll plazas
- N17 linking Gauteng with Swaziland through Mpumalanga - Leandra Trichardt and Ermelo toll plazas
- N2 South - Oripieter toll plaza
- N17 - Dalpark & Gosforth toll plazas.

The difference between this system and open road tolling of the Gauteng Freeway Improvement Project (GFIP) is that on the GFIP network vehicles pass under overhead gantries on the freeway and the tolls fees are automatically deducted. With automated electronic payment motorists will still have to pass through the existing toll plazas but choose the dedicated lanes with equipment to recognise the electronic tags in the vehicle.

This system has the following benefits:

- it will cut down on travel time
- lead to improved safety and comfort on the road
- and best of all: road users need not do anything to have a smooth and easy passage through the toll plazas. They are automatically opted in.

Motorists must have a positive balance in order for the boom to lift.

Look out for the sign that says TAGS ACCEPTED!



Books for the long road

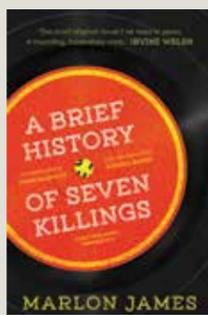
Book Review



A brand new year with a brand new harvest of literary pleasure awaits us in 2016. Authors are industriously busy writing on crime, passion, adventures, intrigues, business, sport, the world, politics, witchcraft and magic, space travels, the poor, the rich, the infamous, the ordinary, the unexplored, the old, parents, young adults, children, animals, the lost, the ill, the filthy rich, the decrepit, the famous, the brave, the lovers.

While we await these writings we have time to look back on what 2015 had to offer. The literary world was a rich goldmine of the humdrum and the exciting. And as all readers know, we were taken on journeys away from our own, at times too placid, lives.

The yearly Man Booker prize is always a major event. These chosen English novels are at the top of the class and last year was no exception. The winner was Marlon James with his extraordinary fact/fiction novel **A Brief History of Seven Killings**. It has been described as “*epic in every sense of the word*” (New York Times), “*magnificent*” (Financial Time), “the hottest name in Caribbean literature, Marlon is a writer who can scarcely be questioned” (Independent), “a very fluent and superbly controlled work” (Spectator), and more.



A Brief history of seven killings
Marlon James

What is Marlon's book all about?

In 1976 seven gunmen stormed Bob Marley's house on the island of Jamaica with machine guns blazing. The reggae superstar survived and still turned up for his free Smile Jamaica concert two days later. But the island's biggest celebrity left his home the very next day. He did not return for two years. And thus the world was left with questions galore. The streets of West Kingston buzzed with surmises, theories, true and false information.

James' book spans three decades, the Seventies, Eighties and Nineties and is presented as an imagined oral biography in pure Quentin Tarantino-style. He paints a host of characters; he delves deeply into motives and events, and gives us an imagined intrigue inspired by fact. He stays true to the ambience of the times using authentic slang which is puzzling to the reader but necessary for the telling. And the range of characters is at times perplexing but fascinating. The extreme graphic violence gets too much here and there but does not lessen this very complex novel. So many real and fictional characters

are given a voice (even a ghost or two!) that the reader's memory is constantly challenged. If one enjoys a mixture of politics and crime, colourful and famous people and places and imagination and reality par excellence, this is a belated but must-read.

The release of the 4th novel in the Millennium series was awaited with bated breath. The follow-up to Stieg Larsson's trilogy (Girl with the Dragon Tattoo, etc) was written by David Lagercrantz. The Girl in the Spider's Web could have misfired but Lagercrantz succeeded in giving Lisbeth Salander and Mikael Blomkvist extra life.

The intrigue: Blomkvist is asked for assistance by a world leading scientist in artificial intelligence to tell the world his terrifying story and the fact that his own and his son's lives are in danger.

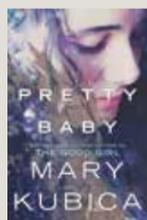
But the Swedish scientist is not the only one in danger. Blomkvist's compatriot in previous adventures is also the target of dangerous cyber gangsters. Lisbeth Salander, the goth, anti-social hacker enters the scene and we are cartwheeling through blood-spilling scenes.

The tale of criminal intent and danger is high, but the story does not quite reach the emotional depth of Larsson. Maybe one expected too much. It is more enjoyable and gripping than many others, though.

SHORT BUT SWEET

Pretty Baby

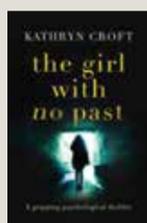
Mary Kubica



A psychological thriller by the bestselling author of The Good Girl. A do-gooder, Heidi, takes a homeless mother and a small baby under her wings and becomes embroiled in a tale of spiralling suspense and surprises...happenings that cause a breakdown. But whose? Find out!

The Girl with no Past

Katherine Croft



Another thriller delving into the psyche. If you liked Gone Girl and Girl on the Train, this will satisfy. Leah Mill is a fugitive from life. One horrible day in her past swept away her social life. Sans friends she is just starting to get back to normality when she receives a note - somebody knows all about her past. Keep reading, it will keep you on the edge of your seat.



Flame in the Snow

If you want to delve into the love lives of two of the most well-known Afrikaans authors, this is the book for you. Poet Ingrid Jonker (who took her own life by wading into the sea) and André P. Brink had a stormy and passionate affair, and true to their natures, wrote about their feelings for one another, to one another. Brink's widow published their letters and it has now been turned into a stage play and a best seller... and I am sure a future TV film.

Playing with Fire

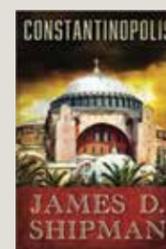
Tess Gerritsen



The prolific Gerritsen is at it again. Music and motherly love is the leitmotif in this one. Something is happening with Julia's daughter and the mother is puzzled and terrified. In her search for answers she enters some back streets of Rome and buys a sheet of music. When she plays the music at home, her daughter is eerily disturbed. Play on.

Constantinopolis

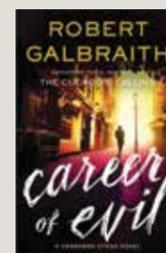
James D Shipman



One of the absolutely best books of the year. Constantinople, the medieval city, has been on the human mind and its history for more than a thousand years. It was the jewel in the time of the Roman Empire but a Turkish sultan, Mehmet, wants to wrest it away from the Christians and its emperor Constantine. A breathless story of epic military struggles and the desperation of human endeavours, greed and passions.

Career of Evil

Robert Galbraith



Private detective Cormoran strikes again through the grown-up pen of JK Rowling. Robin Ellcott, his receptionist and fellow-investigator, receives a strange delivery - a package containing a woman's severed leg. Whose? Why? From where? This is an obvious message that someone, somewhere, somehow, has plans for him. And the four that he can think of, are capable of dangerous brutality. Then more fearsome things occur and Strike must solve and clear up the mess. You will be gripped!

Perspective



National educational dialogue needed



Daphne Mashile-Nkosi
Board member of SANRAL

The “#FeesMustFall,” campaign by university students has generated much debate. That is to be welcomed and encouraged.

Like the 1976 generation, the so-called hashtag youth of today have once again reminded us not only of the imperative of the right to education, but also its place in facilitating economic access and meaningful citizen participation.

With humility, one is reminded of an observation which became the mantra of the late Stan Nkosi (my husband) that “Africa will not be free until education, economic freedom and moral regeneration is prioritised”.

In the area of education, it should be possible to explore consensus on a package of measures to broaden access so as to facilitate the potential of all our people.

The starting point should be discussion among the leadership of the key stakeholders on the strategic importance of education in the achievement of our national development goals as articulated in the National Development Plan (NDP).

SANRAL already takes the approach seriously in its programmes to enhance educational possibilities for students and learners, especially in the field of science and mathematics.

We should use the students’ protest urgently to convene a national dialogue on education to examine the constraints and opportunities in the system and what we should do to turn the situation around.

It should concern us that while government currently spends an estimated R203 468 billion on basic education, with the figure projected to rise to roughly R640 billion in the next three years, our return on the investment is still less than satisfactory.

Before 1994, we used to talk about the vital need for the rekindling and promotion of a culture of learning and teaching, which was asphyxiated by decades of the system of Bantu education. Today, that discussion has disappeared from the national discourse. One consequence of this is that it is taken for granted that the culture has been rekindled over the years, which might be partially correct if not entirely erroneous.

We should use the students’ protest urgently to convene a national dialogue on education to examine the constraints and opportunities in the system and what we should do to turn the situation around.

The poor literacy and numeracy performance of learners registered over the years in Annual National Assessments are indicative of serious shortcomings that suggest a national crisis in education.

The Basic Education Minister Angie Motshekga revealed that the Diagnostic Report effected to examine the tests revealed that “in some cases,” the difficulties experienced by learners “were the result of ineffective teaching methods”. However, the poor performance of learners at critical stages like those in the senior phase might suggest that the “ineffective teaching methods” might be more widespread than we think.

The assessments, as indeed other elements of education, cannot be left to the department and teachers’ unions alone. They are a national concern that requires the attention of all stakeholders including parents, learners themselves, business and education specialists.

It is also clear that the current system of engagement by stakeholders within the sector does not bode well for consensus promotion and might inadvertently reduce the capacity to reach national goals. For example, what happens if learners’ organised formations enter into agreements with the department which unduly disadvantage teachers or vice versa?

The recent public announcement by the Congress of South African Students which encouraged learners to respond in kind to corporal punishment meted to learners by teachers was an illustration of the absence of consensus about how to address discipline in the schooling system. This is despite the existence of government policy as reflected in law.

There is therefore need for a more democratised system of engagement which takes into account the place of education in the nation’s economic, political, social vision and aspirations – one in which stakeholders appreciate accountability not only to their constituencies but, above all, the nation as a whole.

The same attitude should guide stakeholders at the apex of the education system, the tertiary level.

These and other matters could best be debated in the context of a national dialogue on education which focuses the nation’s attention singularly to the issue.

It is an initiative which the Stan and Daphne Nkosi Foundation would readily partner.

There is therefore need for a more democratised system of engagement which takes into account the place of education in the nation’s economic, political, social vision and aspirations – one in which stakeholders appreciate accountability not only to their constituencies but, above all, the nation as a whole.

Letters



Below is a letter of commendation to SANRAL received from the Pato Traditional Council after a pedestrian sidewalk was completed in Tsholomnqa:

"We, as the Pato Traditional Council, wish to convey our unreserved thanks to SANRAL for the R72 Construction of Pedestrian Walkways Project in Tsholomnqa.

We have seen first-hand the positive impact this project has had on our community and people. It has been a big job creation initiative that has helped many families struggling financially. Pedestrians are now kept away from the R72 which means there has been a reduction in injuries and fatalities that were previously caused by people being knocked over by vehicles.

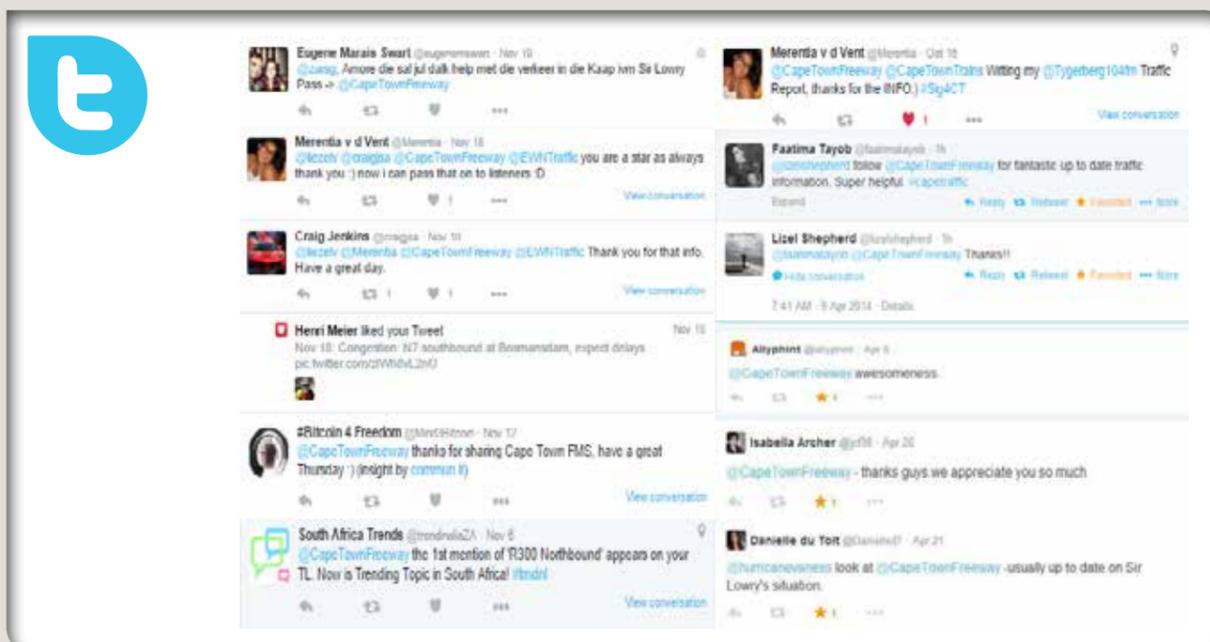
A legacy of the project that we are very appreciative of is that many people have walked away from it with some form of qualification or skill that they can use to further develop themselves.

We have seen these kinds of projects in other provinces and communities, and we are grateful you have brought it to our community. Please don't hesitate to bring a similar project to our community. We humbly request that you look into upgrading our access road, as this will assist in controlling pedestrian traffic entering the R72.

Your assistance will be highly appreciated.

Yours faithfully

Chieftainess
A N Phatho



Name: Danie Van Der Merwe
Topic: Traffic Data
Message: Impressed with the overlay of live camera data with the Google traffic data. Not sure if we can, but would be great if we could access the cameras from mobile devices too (maybe save a few favourite cameras and be able to quickly view them). A way to do this may be to make the camera feeds available publicly like other international traffic feed cameras - then any 3rd party camera viewer app can use it.

Name: Rob Scott
Topic: Other
Message: Thanks for the webcam feeds. Very helpful.

Name: Tristan
Topic: Traffic Data
Message: I just wanted to say what a great job you guys have and are doing - I've worked in traffic industry before and I know it is no simple task coordinate such a large geographically-spread range date. You present it very well and have a great interface - I live in the northern suburbs and work in Observatory so use your traffic data to know when it's 'safe' to leave - after all, one of the best ways reduce congestion is to spread out the departure times (as I'm sure you well know). So just wanted to say, thank you for making my life easier and great job - keep it up!



AARTO ACT: Encourages Voluntary Compliance with Road Traffic Laws



The Road Traffic Infringement Agency (RTIA) is an entity of the Department of Transport responsible for influencing positive driver behaviour and to encourage voluntary compliance with road traffic laws of the country through the implementation of Administrative Adjudication of Road Traffic Offences Act (AARTO) and its Points Demerit System. RTIA commits to using its legislative mandate to ensure that road traffic laws are adhered to, lives are saved and our roads are safer for all those who use them.

In preparation for the implementation of AARTO nationally the Agency is involved in a series of stakeholder engagement sessions in the form of AARTO roundtable discussions, Sihamba ne AARTO roadshows and partnerships with civic society and the interfaith fraternity in echoing the saying that "road safety is everybody's responsibility".

These interventions are in support of the Minister of Transport's conviction to drive road user behavioural change through robust debate, moral revival and heightened awareness about motorist rights and responsibility on road safety. It is in appreciation of the fact that 90% of all road crashes that occur on the South African road network are often found to have resulted from a violation of road traffic laws. RTIA through AARTO education and awareness campaigns seeks to harness interventions for changing the culture of the road users, heighten the appreciation for more prudence and respect for life on the road.

Objectives of RTIA's Road Safety Awareness Campaigns under the AARTO Act:

- Mobilise and empower civic society to enhance accountability amongst fellow motorists.
- Mobilise support for the **Million Signature Campaign** towards active participation of civic society as government's partner in changing the behaviour of the road user.
- Encourage a culture of voluntary compliance amongst road users in South Africa.
- Foster a heightened understanding of road traffic regulations and increased sense of responsibility amongst road users.

CALL FOR A NATIONAL PRAYER DAY:

Bottom Right Picture: "Deputy Minister of Transport, Ms Sindisiwe Chikunga signing the Million Signature petition to declare an Annual National Prayer Day for Road Safety".



Creating Awareness: RTIA management team during the AARTO Roundtable Discussion themed "Motorists rights and responsibilities under the AARTO Act".



Getting ready for Implementation: The Chief of the National Traffic Police, Ms Ntsiki Jolingana and Mr Phillip Phurnell from the Automobile Association formed part of the roundtable discussion panel.



About the Million Signature Campaign

As a symbol of citizen activism, Minister Dipuo Peters is lobbying for parliamentary processes to have the first Sunday of October declared a National Prayer Day for Road Safety. South African citizens throughout the country are urged to express their activism by signing the Million Signature Petition to Parliament as well as be part of integrative solutions towards changing the behaviour of the road users by stopping driver delinquency.

In this spirit, the Agency is in the process of moving a petition to gather a million signatures to declare 1 October every year a National Prayer Day for Road Safety, to be tabled by Minister of Transport Ms Dipuo Peters to Cabinet in support of the United Nations Decade of Action " Make Roads Safe Campaign" visit www.rtia.co.za to sign the petition.



The Minister of Transport Ms Dipuo Peters delivered the keynote address during the World Remembrance Day held at the Mandela Park Stadium in Khayelitsha, Cape Town on Sunday, 15 November 2015. She said: "On this emotional yet imperative day of remembrance, we have gathered in earnest to extend our prayers and deepest thoughts to the victims of road crashes, as well as to express our

support to families of road accident across the world. ... "Mothers, fathers, children, teachers, doctors and sports personalities alike, we all matter to someone and by not obeying the rules of the road you are endangering the lives of those we love most dearly and hold closest to our hearts. So I want to ask that we change our behaviour and attitudes for the better when we use the roads..."

SANRAL activates awareness in Motherwell community

Road safety campaigns, scholarships, bursary programmes and information aimed at saving lives were taken to the people of Port Elizabeth by the South African National Roads Agency (SANRAL) when the agency held an outreach event at the Motherwell Shopping Centre.

The community activation, which drew large crowds, included a general overview of SANRAL projects, SANRAL's ChekiCoast (Save a Life) road safety campaign and information on SANRAL's scholarship and bursary programmes targeted at learners with potential and students interested in engineering.

Community members were afforded the opportunity to interact with SANRAL employees who were not only there to listen but also to inform them of the benefits they could reap from scholarship programmes offered by the state-owned entity. The SANRAL employees also informed the residents of projects which could directly and indirect benefit from the work done in and around their communities.

Mbulelo Peterson, SANRAL Southern Region's regional manager says SANRAL supports civil engineering students to reach their full potential. "During the 2014/15 financial year, we granted bursaries to 105 students at a cost of about R11 million. We are passionate about mathematics and science and continue to attract learners to our scholarship programme," said Peterson.

He explained that learners who excel academically are supported from grades 10 to 12. During the past year SANRAL awarded scholarships to 172 learners at a cost of about R2.3 million.

Elna Fourie, SANRAL Manager of Road Safety Education and Awareness said SANRAL was very passionate and serious about road safety.

"Apart from the engineering infrastructure projects we implement, we also roll out our road safety education project at schools. Last year (2014) our road safety education material targeting grades 1 to 12 was delivered to 326 schools. This material reached 153 193 learners and 1 446 teachers, with 608 of the teachers attending workshops," said Fourie.

Earlier this month (November) SANRAL and the Nelson Mandela Metropolitan University (NMMU) Missionvale campus in Port Elizabeth hosted the Science, Technology, Engineering and Related Management/Mathematics (STEM) Fields Pipeline Project where the area's top performing schools and teachers received awards. The objective of the project is to develop human capital and capacity in these vital subjects, especially among learners in Grades 10 to 12 in the Uitenhage and Port Elizabeth school districts.

"We hope to inspire people to become active and take charge of their futures. We went through SANRAL's bursary programme and we are now able to sow back into the communities where we come from and this gives us a sense of pride," said Lindokuhle Mhlangeni, an engineering intern at SANRAL (Southern Region).

The activation was broadcast live by local radio station, Nqubela FM (also known as KQFM) which gave everyone who did not attend the activation an opportunity to learn about ChekiCoast and what SANRAL offers Port Elizabeth and the rest of the Eastern Cape.



CHECK LEFT, CHECK RIGHT: Luyolo Vuma (3) promises to ChekiCoast before crossing the road and to be bright at night with his reflector arm band. With him is brother Iviwe (7) and mother Mandisa Vuwa who visited the SANRAL stand at the Motherwell Shopping Centre in Port Elizabeth, earlier in November.

Mandisa Vuma, who visited the stand, said "What some people don't know about SANRAL is the role they also play when it comes to supporting education. They support educational programmes hosted at the university (NMMU)."

Thulisa Lukwe and her mother Phunyezwa Lukwe were surprised to learn that SANRAL also offers bursaries and scholarships.

Thulisa said she was happy that SANRAL publicised the bursaries and scholarship programmes as well.

"This was a good idea to talk about what else SANRAL does besides fixing roads. I am happy they have reached out to parents and told them about the bursaries and scholarships," said Thulisa.

Sive Pupa said although she did not have extensive knowledge of the SANRAL bursary and scholarship programmes she was aware of SANRAL roads maintenance projects.

"My mother has an SMME and she worked on road maintenance projects before. This is how I know there are people who keep an eye out on the conditions of the roads. After this community activation programme of today I will know so much more about what else SANRAL has to offer," said Sive.

Individuals who would like to gain insight on SANRAL are encouraged to visit www.nra.co.za for more information.

"During the 2014/15 financial year, we granted bursaries to 105 students at a cost of about R11 million. We are passionate about mathematics and science and continue to attract learners to our scholarship programme,"

Mbulelo Peterson

SANRAL Southern Region Manager

TRAC

Remembering crash victims

Victims of road accidents were remembered by Trans African Concessions (TRAC) as the company joined thousands of people worldwide to commemorate World Day of Remembrance (WDR).

This day is celebrated annually on the third Sunday of November and is dedicated to remembering those killed or injured in road accidents, and their families. It also serves to pay tribute to the dedicated emergency response crews, law enforcement authorities and all other stakeholders who deal with the traumatic aftermath of road deaths and injury.

Despite all efforts made to promote and improve road safety, serious road accidents are still a reality and have a severe impact on those affected by them. Each year, millions of newly injured and bereaved people from every corner of the world are added to the countless millions already suffering as the result of road collisions.

TRAC marked the day with a tree planting ceremony held near Bergendal Monument on the N4 Toll Route where 18 people lost their lives in a horrific taxi accident in 2011. TRAC representatives, paramedics, traffic officials, pathologists and an EMS chaplain paid tribute to the victims by planting six trees in their honour.

The planting of the trees went hand-in-hand with one of TRAC's Corporate Social Investment projects – Tree of Remembrance – which was launched in 2014 and allows people to have an indigenous tree planted in memory of loved ones who were the victims of fatal accidents on the N4 route.



From left: Riaan Labuschagne (SAPS Pathology), Arthur Boucher (TRAC Senior Sector Manager), Solange Soares Nicholson (TRAC Communications Manager), Pastor Kallie Joubert.

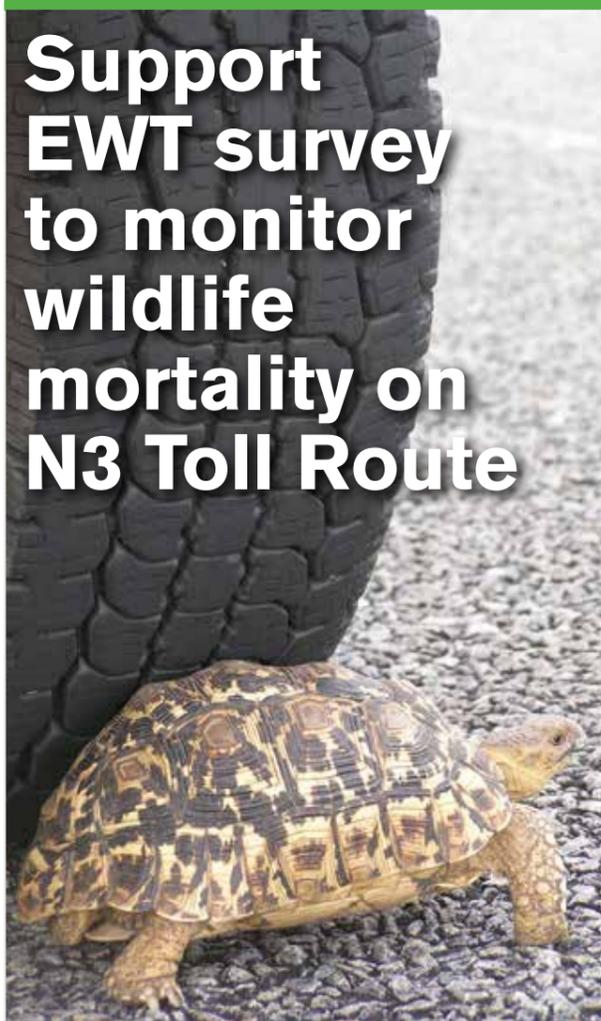
BAKWENA

Bakwena Potjiekos Competition raises much needed cash

Bakwena's annual Potjiekos Competition, held in November last year at the Voortrekker Monument Cultural and Picnic area in Pretoria, raised over R34 920 for three community projects situated along the N1N4 toll route.

N3 TOLL CONCESSION

Support EWT survey to monitor wildlife mortality on N3 Toll Route



Roads are integral to the continued development and prosperity of South Africa's economy. However, roads have the potential to fragment habitats and wildlife populations. Traffic can have a direct negative impact on wildlife, with many species at risk from wildlife-vehicle-collisions.

N3TC, as the concessionaire responsible for the N3 Toll Route between Cedara in KwaZulu-Natal and Heidelberg in Gauteng, commissioned the Endangered Wildlife Trust's (EWT) Wildlife and Roads Project to analyse roadkill data on its behalf, and to provide measures to reduce the impact of roads on wildlife. It is the first initiative of its kind by a company managing a transport corridor in South Africa.

"Training workshops for data collection and species identification have been provided to N3TC route patrol teams in order to capacitate them to record and submit sightings of dead animals killed," explains Wendy Collinson, the EWT Project Coordinator. This project focuses entirely on animal fatalities along a particular section of road.

The EWT's Wildlife and Roads Project originated in 2011 around the Greater Mapungubwe Transfrontier

Conservation Area in northern Limpopo where the EWT recorded 1 121 animal deaths along a 100 km stretch of road in just 120 days. "Insurance claims suggest approximately R82.5-million is paid each year against collisions with wildlife, but we don't have a grasp on the concomitant cost to our biodiversity," continues Collinson.

Collinson joined a N3TC route patrol team for a twelve-hour shift to experience how patrollers operate and collect data. "During this period, a number of roadkill were identified including a Serval, African Civet, Black-backed Jackal, Scrub Hare and Spotted Thick-Knee," says Collinson.

With the help of the EWT, N3TC hopes to identify high risk areas along the N3 Toll Route to enable the implementation of appropriate mitigation measures where necessary. "We have noticed that the movement of animals, seasonal migration and changes in habitat may cause some animals to be more vulnerable at certain times," says Con Roux, N3TC's Commercial Manager. "Drivers most often do not expect to find animals in the road and very seldom adopt driver behaviour which considers such an eventuality," explains Roux.

Everyone can get involved

The EWT and N3TC welcome help from the public to collect relevant data for this initiative. Submit roadkill data to the EWT Wildlife and Roads project team by sending an email to roads@ewt.org.za or via **EWT's Road Watch app which is available on www.ewt.org.za.**

The following information should be provided:

- **Location of roadkill (GPS co-ordinates)**
- **Identification of species (as best as possible); and**
- **Date and time it was seen**

Notes on the habitat type at the particular section of the route where the roadkill was located (e.g. riverine, grassland, rocky, wetland, etc.) would also be useful.



Bakwena is dedicated to uplifting the communities that reside along the N1N4.

The three organisations that benefited were President Kruger Children's Home that received R11 640 as well as some stationery donated by G4 Civils, Trust Hope Faith Youth Development Organisation that also received R11 640 as well as stationery donated by Bakwena and lastly Solidarity "My Held" that received R11 640.

This year's competition brought industry stakeholders together to enjoy a fun day of friendly rivalry with an amazing 25 teams taking up the challenge. The event was an opportunity for all the participants to interact and network while working towards a cause relevant to them all.

Thanks to the hard work and dedication of Bakwena's finance team, the event ran smoothly from start to finish. However, none of it would have been possible without sponsorship from generous donors, including V & V Consulting, WBHO, Talisman Wonderboom, Hassims Supply Store, Warmbad Grassny Dienste, Ras Appliances, Pink Drive, Nameplate, Bigen Africa, Carstens Elektries, Radium Garage and Phiriphi Security.

The competition itself was close and the judges had a tough time choosing between the delicious potjies on offer. However, a decision had to be made and the team from Bigen were announced as the first prize winners, followed by National Asphalt in second place and Scan RF who came in third.

"Bakwena is grateful to all the volunteers, participants and donors for making the day such a success," says Charmaine van Wyk, spokesperson for Bakwena. *"We look forward to seeing everyone again at next year's event."*

For more on Bakwena and the various CSI projects that they are involved in, visit www.bakwena.co.za

" Bakwena is grateful to all the volunteers, participants and donors for making the day such a success."

Two options to fill any lunchbox with goodness to help keep those New Year's resolutions.

Padkos



Homemade Snack Bars

A filled with texture, flavour and goodness

- ¼ cup raw macadamia nuts
- ¼ cup raw pecan nuts or raw almonds
- ¼ cup raw sunflower seeds
- 2 tablespoons raw pepitas (pumpkin seeds)
- 1 tablespoon flaxseeds
- 1 teaspoon sesame seeds
- 1/3 cup desiccated coconut
- ¼ cup Rice Krispies
- ¼ cup chopped dried fruit of your choice
- ½ cup honey
- ½ teaspoon vanilla extract
- pinch of salt

1. Line a bread loaf tin with greaseproof paper.
2. Dry roast / fry (without oil) the macadamia nuts, pecan nuts, sunflower seeds and pepitas in a pan over medium heat. Stir continuously - it burns quickly.
3. Then dry roast/fry the flaxseeds, sesame seeds and coconut in the same manner as the nut and seed mixture.
4. Heat the honey, vanilla and salt in a pot over medium heat until heated through and runny.
5. Mix all the ingredients with the honey and spread evenly into the prepared tin. Press down to flatten and line another piece of greaseproof paper on top of the mixture.
6. Place in the fridge and chill for at least 1 hour, or until solid.
7. Turn it out of the tin and peel off the paper.
8. Cut into bars or squares with a serrated knife.

Keep in an airtight container and store in the fridge for up to one week.
PS add 1 tablespoon of chia seeds for extra goodness.

Crispy Root Vegetable Chips

A healthy alternative to store-bought potato chips

Sweet potatoes, peeled

Beetroot, peeled

1. Preheat the oven to 180° C.
2. Slice the vegetables very thin using a mandolin or a handheld slicer.
3. Spray two baking trays with cooking spray.
4. Arrange the sweet potato in a single layer on one of the trays and spray lightly with the cooking spray.
5. Repeat with the beetroot.
6. Bake for 8 - 10 minutes or until the edges start to brown.
7. Turn slices and bake until browned.
8. Sprinkle with preferred spices e.g. ground cumin, BBQ spice, pepper and sea salt.

Eat immediately or store in an airtight container for up to 3 days.

To re-crisp already cooked chips that have gone soft, cook on a baking tray for about 8 minutes at 180°C.

PS carrots and parsnips are good alternatives. Just keep in mind that that they shrink quite a bit when cooked.





Creating jobs, expanding skills

The current slow rate of economic growth and lack of job opportunities calls for urgent measures to be taken to nurture small, medium and macro enterprises (SMMEs) as a means of bolstering this relatively underdeveloped sector of the South African economy.

The development of SMMEs forms part of SANRAL's broader socio-economic development strategy.

An example of a thriving SMME in Limpopo is Expectra 388 cc. It is mainly responsible for Routine Road Maintenance (RRM). The company is currently doing all the maintenance on the road from Polokwane to Burgersfort. Over the past six years, Expectra has done work worth R17 million. In the past year alone, it carried out RRM work worth R3.7 million.

The company has also invested heavily in the training and development of its employees for current and future employment opportunities. Some of the training that has already been offered to its workers include: Road Traffic Management; Basic Fire Fighting; Occupational Health & Safety; Stone Pitching; Installing Gabions & Reno Mattresses; Level 1 & 2 First Aid; Erecting and Maintain Guardrails and Aids awareness.

Expectra is also involved in corporate social investment in the province, such as the refurbishment of the Thabong Drop-in Centre in Mankweng. It is an after-care centre that

caters for young children between seven and 14 years old in the area, run by one woman - Paulina Letsoalo - with the assistance of a few community volunteers. They feed the children and provide a safe place for them to go to after school where they can do their homework and get a meal - sometimes the only meal they get for the day.

The refurbishment project entails the construction of an entire playground, a soccer field as well as a netball court. The company also supplied the centre with a 10 000 litre water tank, tables and chairs as well as constructed

six toilets. Further work will include fencing around the property, starting a vegetable garden, planting of grass and trees. All these will ensure that the centre provides a homely environment to the children it was established to assist.

George Brand, Route Manager for Expectra said, *"It is always a pleasure and honour to do work for SANRAL. What brings us pride is that the results are always visible and noticeable to road users."*

This SMME sources all of its local labour entirely from the communities along the routes it services.



"It is always a pleasure and honour to do work for SANRAL. What brings us pride is that the results are always visible and noticeable to road users."

George Brand
Route Manager for Expectra



Information to help safe driving

SANRAL has two important and highly effective communication systems that provide road users with information to ensure they arrive safely and with travel-time predictability.

The Intelligent Transport Systems (ITS) currently operates in Cape Town, Gauteng and KwaZulu-Natal. The Advanced Traffic Information System (ATIS) collects information about our road networks, where information such as traffic flow conditions and incident notification alerts are disseminated

for purposes of pre-trip and en-route decision making. The information is distributed on SANRAL's i-traffic website, the Variable Message Signs (VMS) and to local radio stations and social media platforms reaching hundreds of thousands of motorists. We also use the recorded incident footage

to train and debrief our operational personnel, emergency services, traffic and law enforcement stakeholders to ensure effective on-scene management and to assist with resource management.

KWAZULU-NATAL FREEWAY MANAGEMENT SYSTEM

The KwaZulu-Natal FMS covers about 120km of the busiest sections of the N2 and N3 freeways. Its traffic management centre also monitors the Tongaat mainline, the King Shaka ramp and the Mariannhill mainline toll plazas and helps manage vehicle queues during busy holiday periods. The system managed an average of 9 600 traffic incidents, including 1 100 crashes this year. The average incident detection time is impressive at 2.2 minutes.



CAPE TOWN FREEWAY MANAGEMENT SYSTEM

The Cape Town FMS facilitated the response to 2 300 crashes this year on the 150km it covers. The average detection time was less than 2.5 minutes. The system uses VMS (more than 4 040 a month), Twitter (nearly 30 000 followers), Facebook (combined with Twitter more than 120 000 unique social media users) and local radio stations to communicate to road-users. It collects information from 236 CCTV cameras and 52 VMSs.



GAUTENG FREEWAY MANAGEMENT SYSTEM (FMS)

The Gauteng FMS responded to more than 15 000 incidents, including 3 300 crashes on the 220km it covers. The average time taken to detect is 5 minutes while medical response time is 10 minutes. The medical unit attended to 120 patients a month within the critical 'golden hour'. The system communicates using variable message signs (VMSs), Twitter (about 23 000 followers), radio stations and the i-traffic website (about 1 000 daily visitors). The system collects information from 207 closed-circuit television (CCTV) cameras and 53 VMSs.



PE's bright star



Theresa Brummer
SANRAL scholarship recipient

Port Elizabeth can count 18 year-old Theresa Brummer as one of its exceptional young achievers - she achieved eight distinctions with an astonishing 98% for maths and science.

Theresa, a former matric pupil at Collegiate Girls' High School, was a SANRAL scholarship recipient in 2014. She was selected because her results were excellent, and for an essay she wrote on her future goals in which she spoke about the science-based careers she was considering.

SANRAL and Nelson Mandela Metropolitan University (NMMU) have hosted the Science, Technology, Engineering and Related Management/Mathematics (STEM) Fields Pipeline Project since 2000. The primary objective of the initiative is to promote and develop the physical science skills of grade 10 to grade 12 learners in the Eastern Cape, and to ultimately increase the number of learners qualifying to study for degrees in science and technology.

"My dad (Hannes) is my big inspiration. We're very much the same person, focused and passionate about our work."

"The STEM programme is very helpful. Learners get to explore the practical side of the syllabus. The experiments help us understand the work better. We got to build atoms and saw how these worked," said Theresa.

In the recent Matric of the Year competition, Theresa won the academic category. Her other achievements include: first place in the province in the annual ATKV Afrikaanse Olimpiade for two years in a row (2014 and 2015); selected as a member of the International Young Mathematics Convention team that participated in India (2014); winning the Royal Society of Chemistry award at the Eskom National Science Competition (2014); and being invited to represent South Africa at the Intel International Science and Engineering Fair in Pittsburg, USA (2015).

On top of all of this, Theresa was head of her school's debating society, she plays the clarinet and recently completed her grade 8 Trinity music syllabus. She plays social tennis, enjoys French cooking and loves ballroom dancing. She is passionate about French culture and is also learning to speak French.

As a member of the International Young Mathematics Convention team, Theresa was able to attend a school in Lucnow, India. She described the experience as "extremely amazing".

"Lucnow has two or three campuses and between these there are 50 000 learners. They are extremely intelligent. Some were already finishing high school at the age of 14. To compete against people of that calibre is an amazing experience."

"The STEM programme is very helpful. Learners get to explore the practical side of the syllabus. The experiments help us understand the work better. We got to build atoms and saw how these worked."

"I have dreams for South Africa and I would like to thank SANRAL for giving me an opportunity to take a step closer to realising dreams of my own."

Theresa will be following in the footsteps of her father, Dr Hannes Brummer, by studying medicine at Stellenbosch University.

But unlike her father, who is an urologist, Theresa plans to specialise in pathology or surgery. Her parents are her role models.

"My mom (Henriette) is my rock. She's always there for me. I can call on her anytime when I have a bad day. She's taught me to be optimistic."

"My dad (Hannes) is my big inspiration. We're very much the same person, focused and passionate about our work."

Theresa's advice to other youngsters is that even though school work is important, if you don't get the results you want, work to turn that negative into a positive and set yourself new goals.



Theresa Brummer (centre) with her mom Henriette and her younger sister Frances.

Endless possibilities for Origin



Origin Sengwane
SANRAL bursary recipient

Origin Sengwane was born in Giyani, Limpopo and lives in Kagiso on Gauteng's West Rand.

"South Africa is a developing country, and is lacking infrastructure. I chose civil engineering because I would like to be part of the change that I would like to see in the country. Education is very important to me because it equips us with the necessary skills to reason and adapt in various environments. It can also help us earn a living for ourselves," he says.

In his first year at university he was awarded a bursary from SANRAL - offering him the opportunity to realise his dream of studying civil engineering.

"This meant that I did not have to worry about paying my fees, which was a huge motivating factor. It freed me up to work hard at the university, and reach my goal of passing my degree with distinctions," he adds.

"As engineering is a critical skill in South Africa, I would like to see myself contributing to the infrastructure development by properly managing projects and adding to growth of the country. We cannot only think of the present, we also have to maintain the infrastructure for future generations," he said.

With his qualification and drive, the future possibilities are endless for Origin.

"...I chose civil engineering because I would like to be part of the change that I would like to see in the country."

Saving the old man

Oldenburgia Grandis



SANRAL has teamed up with Rhodes University to save a rare, endemic plant species, *Oldenburgia grandis*, and has now brought this species home to help educate Grahamstown residents in the local botanical gardens.

Oldenburgia grandis, an ancient member of the daisy family (Asteraceae), occurs mainly within the Suurberg mountain range between Port Elizabeth and Grahamstown, clustering on the rocky outcrops of the Witteberg quartzite or, nearer to Grahamstown, on hard sandstone outcrops.

SANRAL initiated a transplant project of *Oldenburgia grandis* that grew along sections of the N2 where construction activity for the R900 million upgrading of the road would take place.

The plants have been transferred to the Makana Botanical Gardens.

In conjunction with the transplanting of the species, SANRAL also funded a botanical research project to provide new insights into the reproductive biology of this species.

Before this research, carried out by Rhodes University post-graduate Emma Mostert, very little was known about the reproductive biology or transplantability of *Oldenburgia grandis*.

The project is funded by SANRAL.

Mostert's studies focus on the ecology of the species, such as population structure and reproductive biology, including seed production, germination and pollination.

Mostert describes the species as "a very strange plant that looks almost prehistoric, which makes finding out about aspects of its ecology fascinating".

Steven Robertson, SANRAL Project Manager, said it was standard procedure to conduct Environmental Impact Assessments (EIAs) before starting work on a road project.

SANRAL has also teamed up with Nelson Mandela Metropolitan University (NMMU) to conduct research on the contribution of national road reserves to conservation in the eastern portion of the Fynbos Biome, which forms part of the Cape Floristic Region, one of the country's biodiversity hotspots.

This is of particular importance in the Tsitsikamma area as most of the original fynbos has been converted to pine plantations or agricultural land.

"The SANRAL approach to environmental management is an integral feature of the agency's established record of corporate citizenship. Respect for the natural environment is an important goal for us," said Simon Peterson, SANRAL Southern Region Manager.

Congestion does more than test our patience it costs our wallets and our health

Sitting in traffic must be one of the most stressful yet useless ways to spend our time.

As more people use a road, vehicle speeds slow down, trips become longer and vehicles start queueing. Journey times become very erratic where small incidents, such as a broken-down vehicle on the side of the roads, cause significant delays.

And the social impact of congestion cannot be calculated in monetary value only, but manifests in the social health of families, the ability of parents to assist their children with homework, ensuring that they attend school, family times, etc.

Noise and air pollution increase - negatively affecting your health. Vehicles are one of the largest sources of pollution worldwide. The more time you spend in congested traffic, the more noxious gases your car emits. The constant acceleration and braking of stop-and-go traffic burns more fuel, and therefore pumps more pollutants into the air. Traffic jams are bad for our air.

But if traffic flows and you are able to maintain a reasonable constant speed, you use less fuel and pollute the environment less.

In Gauteng, one of the objectives of the improvement of the roads and one of the reasons to toll them was to decrease congestion, thereby decreasing pollution.

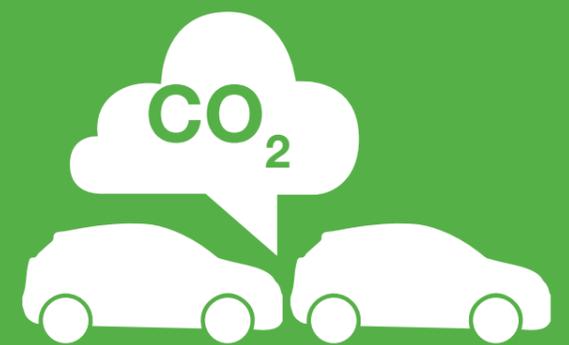
In 2007, before the improvements the Automobile Association estimated that the 80 000 daily commuters between Pretoria and Johannesburg wasted 56 million litres of fuel with a value of R338 million per annum and that 1.57 man days with a value of R1.69 billion were lost to the economy annually as a result of traffic congestion.

In 2014, after the improvements and according to a traffic study by the Advisory Panel on e-tolls estimated the travel time savings alone at about 45 000 man hours (assuming one person per vehicle) for the average morning peak hour, compared to what the situation would have been in 2013 without the upgrades. This amounts to a 20% saving overall. Average speeds on the network is estimated to have increased from 64 km/h to 100 km/h. The upgrades benefited not just travellers on the freeways, but also those using the rest of Gauteng's road network. By relieving congestion on the freeway network, many drivers who previously used alternative roads to avoid freeway congestion switched back to the freeway. This also reduced congestion levels on the secondary roads - average peak hour speeds on the non freeway road network increased from 40 km/h to 48 km/h.

And when you don't stop-and-start and taking longer to reach your destination, you save fuel. This means more money in your pocket, cleaner air and less stress!

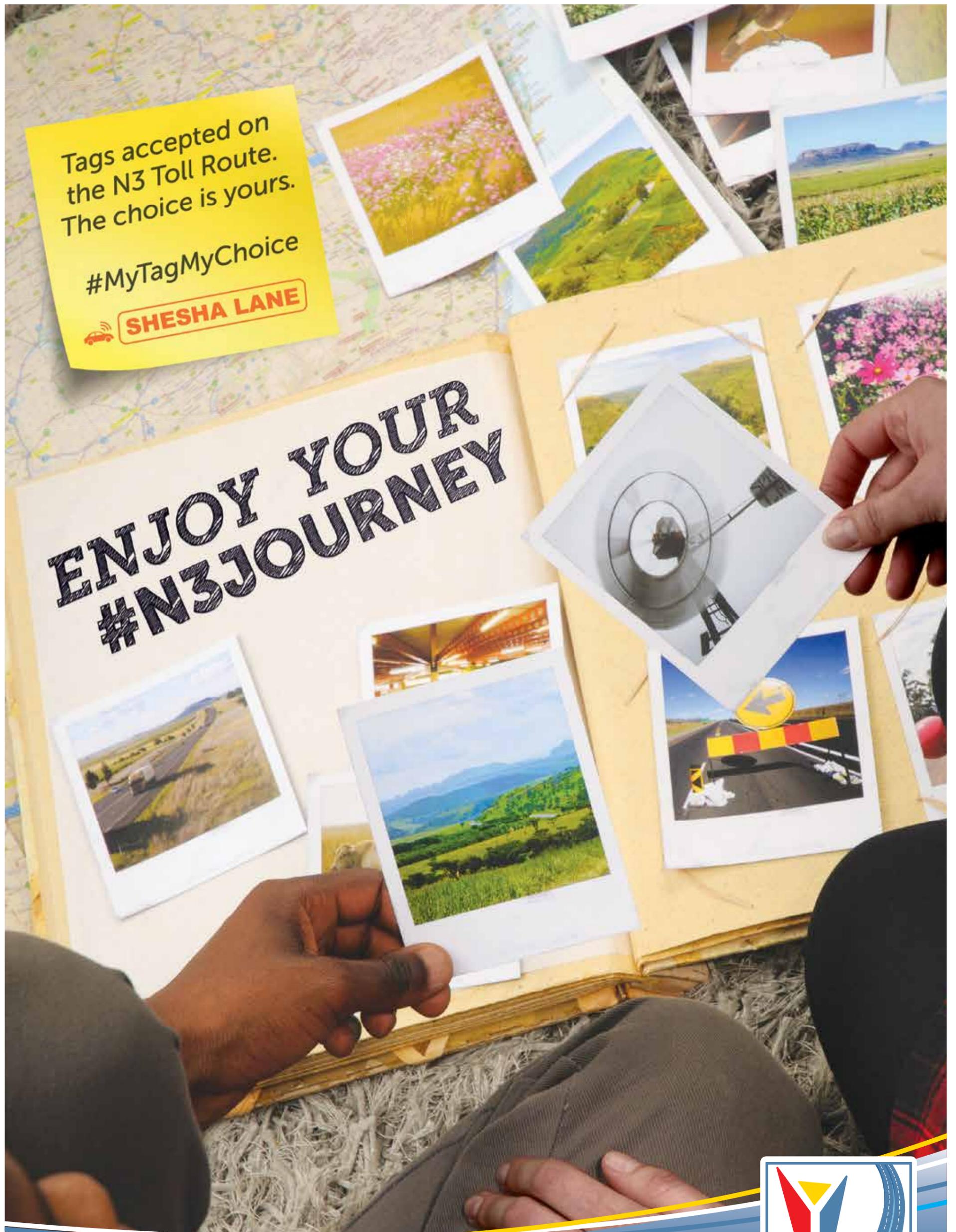
22-26%

GLOBAL GREEN HOUSE GAS EMISSIONS
= TRANSPORT



Transport Minister Dipuo Peters called for developed countries to provide technological and financial support to underdeveloped countries in an effort to reduce gas emissions in transportation. The Minister formed part of the International Ministerial Panel which made policy statements at the High-Level Event: Zero Emissions from Vehicles. The event took place at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) held in Paris, France in November last year. It is reported that between 22% and 26% of global Green House Gas emissions come from transport.

"The introduction of hydrogen fuelled, plug-in and battery powered vehicles will go a very long way in reducing carbon emissions. South Africa is part of the Clean Energy Ministerial and an active partner in the Hybrid Electric Energy Initiative," she said.



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The back to school season offers the best of both worlds, writes Lebohang Thulo

After the wild and free days of the school holidays we welcome back to routine and the promise of new beginnings - which the back-to-school period has become synonymous with.

All that's needed for a fresh start this season is new books (the heavier the better), to give your school shoes a lick of shoe polish, and top it all off with a haircut.

The appeal of this season is so strong that for many adults the smell of freshly sharpened pencils and the cool touch of a new diary will continue to inspire them to set new goals well beyond the schooling years.

The pull and push

No one I would argue, however, experiences the tug of back-to-school rituals more powerfully than boarding school kids. The irony being, of course, that many boarders often reject rules while simultaneously clinging on to them for dear life.

This is often because in boarding school, rules are what deny you the flexibility and freedom to spend your days according to your own choosing, but it is also these very routines that give you that much-needed sense of security and comfort while away from family.

Many people who never attended boarding school won't know this, but for boarders the need for rituals oftentimes extends to the road trips on the way back to school.

My cousins, for example, would travel from their home town of Welkom, the gold mining town located in the Free State, to attend a high school in Bloemfontein.

The 90 minute journey was not complete without the counting down of the 12 overhead passes (and yes you

had to count all 12) located in the last stretch of N1 just before you arrive in the city of roses.

The overpasses also signalled that after a restless hour spent in the car already decked out in their full school uniform, that they were a mere 20 minutes away from reuniting with school friends and surrendering to familiar school traditions.

For a friend, a Port Elizabeth native who attends one of those prim and proper all-boys boarding schools in Grahamstown, the 120 kilometre journey between the two towns always including a stop at an olive farm. What was then a forced detour for him by his parents eventually sparked a lifelong interest in olive oil which could rival any wine or chocolate lovers'.

Loyalties and lollies

I attended a small boarding school in the even smaller town of Bergville in KwaZulu-Natal. To reach the town from my home in QwaQwa you would have to navigate winding mountain roads along the R74 including the particularly treacherous curves as you pass the resort town of Little Switzerland on the slopes of the Drakensberg mountain range.

To quell the anxiety of leaving family and friends behind I also developed specific rituals that were a very important part of making that journey back to school.

One of the more interesting ones was asking every truck driver along the route to honk their horns but making the familiar arm pump.

Another which was particularly close to my heart was stopping at the same filling station during our journey.

There my mother would encourage me to choose any treat in store – the only time I would be afforded such a luxury.

The fact that I would consistently choose a chocolate ice lolly is testament of just how deeply ingrained my routine was.

For many of us it is only in our adult years that we are able to look back and fully appreciate the comfort that tradition and rituals provides. I guess this could explain our love for all rites-filled holidays like the festive and Easter seasons - isn't it great that back-to-school is yet another reason we have to celebrate?



By Lebohang Thulo

Games and puzzles to keep you entertained on the long road

Captivate & Fascinate

Sudoku

		2	7	9	3		1	
		1	5					
4							9	
	4				1	3		
			9			8		
				7	8			6
	9				6			
			2			4		
	6			3		2		

Crossword

some answers can be found in By The Way

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1																				
2																				
3																				
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ACROSS CLUES

- A1 Formerly Orange Free State
- K1 Refers to a male person
- O1 Weak
- C2 Not dirty
- I2 Judicial capital
- B3 Abbr. New Hampshire
- E3 Italian music style
- P3 A colour
- A4 Brandname for extract of beef
- E4 Spanish cooking pot
- J4 Back part of foot
- O4 Pleads
- D5 Abbr. Information Technology
- G5 Acronym Intelligent Transport System
- K5 Not sweet
- P5 Symbol for rupees
- S5 Not under or inside
- A6 Acronym Freeway Management System
- E6 Improving
- M6 A number from one to ...
- A7 Abbr. or/and
- L7 Any of several agave plants
- S7 Abbr. General Electric
- A8 Type, class
- H8 Past tense of tread
- N8 Dissolute man
- S8 Either ...
- A9 Carbon deposit from flames
- F9 Person from Africa
- N9 Ancient Egyptian name for Heliopolis
- Q9 First name of Shankar, Indian musician
- F10 Title for doctor
- I10 ...-47 type of assault rifle

- M11 Campus at North West University
- A12 Period of time
- E12 Take an overdose of drug
- H12 Charities benefit from this event
- Q12 The most distant place or time
- C13 Head of communications at SANRAL
- M13 Very lightly cooked beef
- G14 Used before an initial vowel sound
- K14 Industrial city with Waterfall Mall
- A15 First name of ... Kotze, a SANRAL project manager
- I5 Variant spelling of music's fah
- G16 Any naturally occurring mineral
- K16 Open Road Tolling meters in Gauteng
- A17 To impel, drive
- F17 Full name of the Oldenburgia plant
- N17 Chemical symbol for rhenium
- A18 Acronym for SA National Road Agency
- P18 A car collision
- A19 Unit of measurement
- G19 Toll plaza on N2 South
- M19 Internet domain name for Tunisia
- R19 Greek myth: maiden loved by Zeus
- B20 SA's only grassland national park
- R10 Lair of wild animal / private room in house
- B11 Transport planning should include this type

DOWN CLUES

- A1 Internet domain name for Fiji
- C1 Reflection of sound
- D1 Shortened form of elevated railway
- E1 Most spoken language in Free State
- F1 Unit of weight used in Far East

- G1 One of the activities at Gariiep Dam
- I1 Acronym for Effects Based Operations
- K1 Areas hollowed out in solids
- L1 Abbr. Early English
- O1 Abbr. for Folio
- P1 To come or go into
- Q1 Road users must register for this
- B3 Surname of bursary recipient from Nkandla
- S1 Chemical symbol for lithium
- T1 SANRAL provides a gap for these students
- R1 Scottish & Irish mountain peaks
- H3 Abbr. for national
- L4 Abbr. for Ex Officio
- A6 To sell or pass off cheaply
- J6 Type of pistol
- S7 Graduate construction engineer Kerisha ...
- L7 Writing materials
- Q7 Refers to a female person
- O6 Type of bread
- F8 Township in Madibeng Local Municipality
- C8 Abbr. knock-out
- H8 Internet domain name for Turkey
- I8 Long narrow inlet of the seacoast
- K8 Irish for dad
- G9 Title given to a monk
- R9 Main port of Yemen
- P10 Fourteenth letter in Greek alphabet
- B11 Abbr. for senior
- C11 Nickname for singer Pavarotti
- E11 Surname of Italian composer Francesco Paolo
- H11 King of the jungle

- K11 Slang for hello
- M11 Layers of acidic humus
- O11 In, at or to this place
- Q11 Abbr. Kinetic Energy
- I12 Chemical symbol for Manganese
- J12 A Bachelor of Arts degree
- G13 Master of Arts degree
- N13 Used to indicate location or position
- P13 Half the width of an Em
- B14 Refers to speaker or writer
- A14 Dwelling
- Q14 Shortened form of goodbye
- D15 Poetic contraction of never
- I15 Low-lying flat land
- G16 Used to join alternatives
- H16 Ancient Egyptian sun god
- K16 Loose-fitting white suit worn in judo
- L16 Burnt wood or coal or paper
- N16 Sound of telephone ringing
- R16 To mark or discolour in patches
- B17 Telephone call
- C17 Internet domain name for Guinea
- F17 Internet domain name for Greenland
- J17 Something that is owed
- E18 Along with or addition to
- P18 Abbr. for calorie
- S18 Jocular word for a person
- G19 In contact with a surface
- H19 Acronym of gram
- I19 Abbr. for Iowa
- K19 Abbr. for id est (Latin) – that is
- M2 Drakensberg and which other mountain is on Free State's eastern border
- T14 Chart depicting relation between numbers or quantities

Competition

Enter to win one of three MP3 players. Simply take a picture while driving on SANRAL roads, caption it and include #My SANRAL Road Trip and share on Instagram, Facebook or Tumblr. Judges decision is final and no correspondence will be entered into.