

‘Road of Death’ becomes a road to hope

A safer Moloto Road will benefit everyone in local business and tourism

Major construction work to overhaul the Moloto Road and create a much safer environment for 150 000 daily commuters in cars, taxis and buses has started.

At a sod-turning ceremony at KwaMhlanga, Minister of Transport Dipuo Peters envisaged a significant reduction in the number of crashes and fatalities on a road that has often been referred to as “the road of death”.

“We have listened to the concerns of local communities and road users and responded by taking action to make it safer,” said the minister. “This will now become ‘a road of hope.’”

An upgraded road will also contribute to the regional economy, which is predominantly focused on agriculture and tourism, while the construction activities will create job opportunities for local communities and emerging enterprises.

The Moloto Road – R573 – was incorporated into the SANRAL network in August 2015. The upgrading will be done over a five-year period at an allocated budget of R4.5 billion.

“We have listened to the concerns of local communities and road users and responded by taking action to make it safer,”

Dipuo Peters
Minister of Transport



Caption here

Fast Facts

- The 139.1km Moloto Road passes through three provinces – Limpopo, Mpumalanga and Gauteng
- It starts near Marble Hall and runs through the districts of Sekhukhune and Nkangala, to its link to the north-east of Pretoria
- It carries almost 150 000 commuters every day – most as passengers in taxis and buses to and from Gauteng
- Statistics taken over an 18-month period (from June 2014 to December 2015) show that there were 52 fatal crashes on the Moloto Road, resulting in 65 deaths

Speaking at the event, Minister Peters promised the community that, once completed, the Moloto Road would become a symbol of more than just a safer road that enables its users to travel from one destination to another without being concerned about accidents or fatal injuries.

It would direct more economic activity into the region, enable small farmers to bring their produce to markets, be used as a route by tourists who want to visit game reserves and natural attractions and facilitate the movement of people, products and services.

Road projects undertaken by SANRAL across the country always come with opportunities for job creation and training that benefit the wider community. In the past financial year, SANRAL allocated contracts to the value of more than R2.4bn to emerging companies owned by black entrepreneurs, women, the youth and people with disabilities.

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How the fuel levy works

Continuous effort required to curb littering along our road



Dipuo Peters
Minsiter of Transport

Work is already underway...

Since incorporation, SANRAL has started on a wide range of road maintenance interventions that include the repair of potholes, cleaning of drains, trimming of foliage on the side of the roads and the introduction of new road signs and line markings.

The Minister said the commencement of the project to upgrade the R573 was a clear demonstration of how government had listened to the concerns raised by communities and road users about the safety of the road.

“For a long time, the state of this road has been a blight on the region. The Moloto Road has become synonymous with crashes, bus accidents, injuries and death. It has

robbed communities of breadwinners and beloved mothers. Parents had to stand at the open gravesides of their children.

“I know this all too well, because as Minister of Transport I often attend the funerals of crash victims and have to respond to the unacceptable carnage on our country’s roads,” she said.

The construction of the road also demonstrates the successful cooperation between national, provincial and local governments to deliver important infrastructure development.

Road to regional development

The Moloto Road project forms part of the programme coordinated by the Presidential Infrastructure Coordinating Commission, which has identified 18 strategic infrastructure projects (SIPs) being undertaken to rejuvenate the South African economy.

SIP 1 is designed to unlock the northern mineral belt with Waterberg as the catalyst. It will include the development of a logistics corridor to connect Gauteng with Mpumalanga and Limpopo.

The Moloto Development Corridor, initiated by government, will also include investment in passenger rail, to offer commuters a safer, faster and more accessible connection between Mpumalanga and Gauteng.

And although the road will be upgraded to the same standard as other SANRAL national roads, it will not be tolled.

On the Grapevine

Cllr Mashimole Mmakola,
Mayor of the Ephraim Mogale Municipality

“A safer and well-maintained R573 will be an important economic boost to our region. To unlock this potential, we need quality infrastructure, especially a reliable and safe road network. With such roads in place, we can encourage more people to visit our ecological and heritage attractions – such as the Flag Boshielo Dam, the Schuinsdraai Nature Reserve and the many specialised game farms and conservation areas within our district.”

Stanley Chupu Mathabatha,
Premier of Limpopo

“I am confident that an upgraded and well-maintained road will contribute greatly to the safety of commuters that make use of this important artery and enable Limpopo to achieve its developmental targets and reshape the structure of our economy with a strong focus on industrialisation and the growth of knowledge-based enterprises.”

David Mabuza,
Premier of Mpumalanga

“The upgraded road will be a vital stimulus for the growth of the Moloto Development Corridor and strengthen the ability of Mpumalanga – the place of the rising sun – to attract investment and increase the prospects for employment creation and local enterprise development.”



Building bridges on the North Coast

Visitors to KwaZulu-Natal will soon pass underneath an engineering masterpiece on their way to the most popular tourist destinations on the North Coast.

One of the bridges across the N2 freeway, at the Mount Edgecombe Interchange (M41), will be the longest structure ever built in South Africa using a method known as “incremental launching”. This is an achievement of note for both SANRAL and the engineering and construction companies involved in the project.

Incremental launching is a modern bridge-building technique that involves casting 12-30m sections of the bridge’s superstructure behind an abutment and then pushing the completed sections forward along the bridge axis.

This process saves time, money and space, cuts down on disruptions to traffic during construction and delivers a high-quality finished bridge.

Serving the burgeoning ‘burbs

Corné Roux, the project manager for SANRAL’s Eastern Region says the rapid growth of suburbs and settlements in the Umhlanga and La Lucia Ridge areas to the north of Durban has created the need for an upgraded interchange at Mt Edgecombe. An

additional 40 000 vehicles enter or leave the N2 at the M41 daily, resulting in substantial queueing on the freeway and access roads.

Anticipated further expansions in the Cornubia area prompted a rethink on the capacity of the roads to handle the higher volumes of traffic and a decision was made to upgrade the intersection at an initial project cost of R816m.

The new four-level interchange offers at least two lanes per ramp in each direction. The upgrade includes the introduction of directional ramps, which will eliminate the need for controlled signalisation and ensure the free flow of traffic in all directions.

A pedestrian bridge is constructed across the N2 and connected to new footways to improve access for members of the community and contribute to the safety of pedestrians.

The construction of the interchange is jointly funded by SANRAL and the KwaZulu-Natal department of transport. The contract specifies that 6% of the total contract expenditure must be spent on labour who lives in the eThekweni Metro.



When plans come together...

The construction of the new Mt Edgecombe Interchange on the N2 Freeway, north of Durban, has demonstrated how large, established engineering contractors can work in partnership with emerging businesses to create jobs and transfer highly sought-after skills.

Global construction company CMC di Ravenna was appointed by SANRAL as the main contractor for the project that began in April 2013. Local engineering and development consultants SMEC South Africa serve as the project’s supervisors.

SANRAL construction projects are always accompanied by job creation for local residents and skills-transfer programmes for small and medium enterprises responsible for work packages.

By the Way chatted to Paolo Destro Cappelano, the previous project manager from CMC di Ravenna, and Frans Boraine, a director of Duncan’s Industrial (one of the SMMEs involved in the project).

Why do SMMEs need big business?

PDC: SMMEs can learn from major contractors on projects as complex as the Mt Edgecombe interchange. By working with large businesses they acquire different and new skills such as developing new ways of thinking, working with targets, quality assurance and non-conventional methods of construction.

FB: Big businesses give SMMEs opportunities to be part of large contracts. South Africa needs jobs. SMMEs create more than 50% of all employment opportunities in the country, while contributing 45% of the gross domestic product. Large contractors support the smaller enterprises by making available expensive equipment and providing valuable advice and mentorship.

What are the major challenges facing SMMEs in these relationships?

PDC: It is important for SMMEs to understand that they can’t grow too rapidly. They must take it one step at a time and build on the experience gained while working on major projects.

FB: A big challenge for SMMEs is limited credit facilities. This creates cash-flow problems when you have to pay for materials and wages. Proper site management is another concern; some of the best people prefer to work for larger companies because they want stability – even if the SMMEs pay good salaries.

How can the relationship with big business help create future success?

PDC: By transferring skills, big business can help SMMEs to progress. It is, however, important that they see the benefits in differentiating – they all want to do the same thing. SMMEs must begin customising and specialising their activities.

FB: Big business must ensure that entrepreneurial development forms an important part of its empowerment programmes. It can contribute in no small measure to the transformation of construction programmes through the transfer of skills and expertise.

Mt Edgecombe Interchange in Numbers

- **948m** – The length of the bridge that joins the Mt Edgecombe side of the M41 with the N2 South, having been launched from both ends simultaneously. The other, incrementally launched, bridge that joins the Umhlanga side of the M41 with the N2 North is 440m long
- **6%** – The minimum target of the total contract allocated to labour living in the eThekweni metro
- **12%** – The minimum target of the contract expenditure going to SMME subcontractors
- **461** – The number of trainees who have attended skills development courses during the construction period
- **R127m** – Money earned on salaries and wages by the 842 people employed by the contractor
- **20 582.79m³** – The amount of concrete used to construct the 948m-long ramp bridge that was launched from both sides
- **54 042.41m³** – The total volume of concrete used on the project
- **3 103 tons** – The steel used on the project
- **11km** – Total length of piles used on the project.



Kagung about to get a boost from N14 project



Keenan Walbrugh, SANRAL project engineer (centre) next to the N14 with Mmusho Segacwi, a local taxi owner (left) and Gaoganelwe Motsamai, local headman and representative of the Chief of the Kagung community.



Kagung is a traditional settlement about 10km east of Kuruman, with the N14 between Kuruman and Vryburg passing through it. The N14 is the major economic artery that runs from west to east through the Northern Cape.

The settlement is located on either side of the N14 and land is held under tribal trust. The population of Kagung is estimated to be approximately five thousand.

High numbers of pedestrians and vehicles travelling along and crossing the N14 create a constant and significant road-safety risk, with a high potential for fatalities.

Currently vehicles enter and exit the N14 via several access driveways or gravel roads in the area, which means slow-moving vehicles interfere with through traffic.

SANRAL is designing a major N14 improvement project in-house, providing valuable first-hand experience to its engineers-in-training, like Keenan Walbrugh, who has been appointed as project engineer.

Walbrugh, who matriculated in 2006, was awarded a SANRAL bursary in 2007 and completed his BTech degree at Cape Peninsula University of Technology (CPUT) at the end of 2010. In January 2011 he joined SANRAL's engineering team in the Bellville office.

Walbrugh specialised in road surface materials and worked for a while in a materials laboratory in Bellville.

"I gained valuable knowledge and experience in analysing and testing road surface materials and did quality control on the road construction projects that I worked on, including the N7," he says.

Earlier in 2016, Walbrugh gained experience in the design of contracts and planning and engineering design, which stood him in good stead when he was appointed as project manager for Kagung.

Walbrugh says the biggest challenge of the Kagung project was to come up with a practical, realistic and economically viable solution to balance the needs of the local community with the needs of road users.

"We implemented three intersections to provide access for the community in 2014 and this additional project will provide a system of internal roads that connect to the major N14 intersections. It will improve safety for residents in the area, as well as road users who are passing through.

"In addition, we are planning to build pedestrian walkways, running parallel to the N14 on both sides, as well as

1.4m-high fences, over a distance of about 5km. This should prevent people and animals straying over the road."

Another big challenge is dealing with storm water run-off from the N14. Walbrugh says the area is amazingly flat and there are no natural water courses to accommodate drainage.

"We needed to create proper paths for water run-off. The difference in elevation from one end of the 5km stretch of road to the other is less than 4m, which compounds the problem of draining the run-off from the road."

He says it is vital to engage with and involve the local community in all aspects of the project and to accommodate their interests.

"We are constantly in contact with community leaders. The feedback we're getting from them is so far very positive."

The local authority in Kuruman was also consulted and expressed its full support for the project. The council will take over responsibility for the maintenance of the newly constructed streets in Kagung, after construction is completed.

The design phase will be followed by a review period and once all the consultations with the community of Kagung are complete, the construction project will be put out on tender.

Tenders will be called for in September or October and the intention is to start construction in January 2017.

Gaoganelwe Motsamai, the local representative of the Chief of the Kagung community, has welcomed the planned improvements, saying they would help reduce the number of crashes in the area, along with travel time for commuters, and assist with job creation in the community during the construction.

Local taxi owner Mmusho Segacwi says he is pleased with the project.

"It will help me with the collection of commuters, make the roads much safer and help boost business in the community."

On the right track

Millions invested in road infrastructure for the Northern Cape

The Northern Cape's major economic arteries – the N7, N8, N10, N12, N14, R27 and R31 – will get a new lease on life when SANRAL begins the improvement and upgrade of several sections of these roads.

There are currently 25 road construction projects in different stages of planning and implementation on these routes for different periods.

SANRAL's Western Cape Regional Manager, Kobus van der Walt, says several of the projects have direct benefits, including safety, for the road user and local communities. These include the construction of pedestrian facilities in Griekwastad on the N8; the provision of pedestrian and hawker facilities and access and service roads at the Kagung settlement on the N14 near Kuruman.

Van der Walt says three intersections on the N8/R31, N12/R31 and R31/R357 routes will be upgraded and traffic circles will replace the intersections, which have seen many fatal collisions.

Other projects serve to improve road surfaces and extend the life of these routes, including the resurfacing of the N12 between Kimberley and Windsorton. SANRAL has 11 routine road maintenance projects in place on the national and regional routes in the province.

The widening of two major bridges on the N12, between Hopetown and Kimberley, crossing the Orange River and Langford Stream, forms part of the planned improvements. This alone is worth approximately R90m.

Project Engineer Tiago Massingue says bridge rehabilitation and maintenance is one of the core businesses of SANRAL and an essential part of keeping South Africa's national roads in good condition.

The bridge over the Orange River on the N12 near Hopetown (312m long) will be widened to allow pedestrians and cyclists to cross the bridge safely. Slightly further away from the Orange River along the route, the Langford Stream bridge (32m) will also be widened to accommodate pedestrians.

Massingue says the tender for the work has been awarded and work started in July. The estimated date of completion is March 2018.

"Most people take roads and bridges for granted. They rarely take notice when crossing them at 120km/h.

"But there is a considerable amount of science and technology that goes into the construction of these impressive structures," Massingue says.

"Major preparation and planning has to be done before construction can start. For example, a detailed geo-technical investigation had to be done to determine the condition of the bridge footing. We also have to take into account the flood levels of the Orange River and calculate worst-case scenarios."

The next time you drive over a SANRAL bridge, take a mental second to appreciate the technological marvel that's keeping you – and other motorists – aloft.



An aerial view of the bridge over the Orange River on the N12 near Hopetown, which will be widened and upgraded to make provision for pedestrians and cyclists



Bridge over the Orange River, on the N12 looking towards Kimberley.



N2 make-over brings Myddleton together

The small community of Myddleton straddles the N2 to the east of Caledon. The community was established when coloured people were displaced from the nearby Caledon, under the reprehensible apartheid-era Group Areas Act.

To add to its woes, the community was split in half by the N2 highway. This division lasted for many years and created a dangerous pedestrian situation for community members having to cross the road to attend school or church.

Access to Myddleton was gained by two level intersections (known as “at-grade intersections”) directly onto the N2. The eastern access was particularly poor, because the geometry of the road did not allow for the required sight distance from the east. This was identified as a road safety and a community development issue SANRAL could solve.

SANRAL Project Manager Renaldo Lorio says the aim was to consolidate the two accesses into a single one, as well as to provide grade-separated crossings that linked the severed halves of Myddleton.

This was achieved by constructing two new bridges on the N2 in the vicinity of the accesses and linking the internal roads of Myddleton (Vlei Street and Berg Street). An on-ramp and an off-ramp were constructed at the Western access point to create a new grade-separated access. That way there are no conflict movements (i.e. right-turn movements) on the N2, which has significantly improved safety on the N2.

The southern portions of Vlei Street and Berg Street, as well as a part of the northern portion of these streets were rehabilitated as part of the access improvements.

Construction began in January 2013 and was completed in May 2014, after the contractor was granted an extension on the time for completion (originally scheduled to be a

12-month contract). The installation of piled foundations presented unforeseen difficulties, since the sub-surface conditions encountered were different from those originally expected.

The completed project was worth R45.4m. At the peak of the construction activities, 114 local people were employed. The total spend on labour was R2.5m, which equates to 50 full-time jobs (on an annual basis). R5.1m was spent on black-owned SMMEs – ten were used to work on the project.

Lorio said it was pleasing to see how the new grade-separated crossings positively impacted the community.

Since completion, a number of new houses have been built in the area and improvements have been done on others. Apart from the obvious growth, Myddleton looks a lot better these days.

Myddleton was established as a missionary about 165 years ago, said Glen Carelse, Ward Councillor for the area at the Theewaterskloof municipality, long before the N2 was built. The Ou Kaapse Wapad then served as a route between Caledon and Swellendam, crossing through the southern part of the missionary's terrain, dividing the settlement from its agricultural land. The national road was later rerouted and constructed further north, to run through the settlement.

Carelse said that after many years of this geographic division, the two halves of Myddleton have finally been united – something for which he fought very hard.

“But there is a considerable amount of science and technology that goes into the construction of these impressive structures,”

Tiago Massingue
Project Engineer



Another view of the bridge over the Orange River on the N12 near Hopetown



Before and after photographs showing the dramatic improvements in access roads between the two parts of Myddleton

Ad

Limpopo: SA's north star



Off the beaten track: Limpopo Top 5

1. Thulamela stonewalled city
2. Pafuri Wilderness Camp
3. Khamai Reptile Centre
4. Modjadji Cycad Forest
5. UNESCO Waterberg Biosphere Reserve

It's in the north of the country, the nether-end of the N1 national highway, which traverses the length of South Africa. The province of Limpopo is for too many an almost unknown place; somewhere to travel through to get to Zimbabwe.

But you really should visit. Fair warning: you'll have to linger a little because it's big.

Finding highlights is easy. There are the warm baths at Bela Bela, just north of Pretoria; the Marakele National Park in the west; the Nylsvley Nature Reserve – a birder's paradise along the N1. Then there's the spectacular Blyde River Canyon to the east and the ancient and impressive Mapungubwe, beyond the Soutpansberg.

These are the touristy places. But there's more. Just look around. And you can do it on excellent roads.

Most places can be reached from the N1. But there is also the R71 – upgraded to carry the heavy traffic going to the ZCC's Moria City and beyond – the ongoing work to improve the 1 628 km of provincial roads (which were incorporated into SANRAL's network two years ago) and, of course, the work that has just begun on the R573 – Moloto Road, which runs from Pretoria to Marble Hall.

The province is named after the great river that runs between it, Botswana and Zimbabwe – and through Mozambique to the Indian Ocean. Limpopo is exceptionally rich in minerals (platinum, iron, chromium, diamonds and so much more). It's cattle country, but increasingly, South Africans are realising its magnificent travel potential.

Breathe, marvel, take it all in...

Limpopo really does have something for everybody – from bushveld, mountains and primeval indigenous forests to unspoilt wildernesses and traces of ancient cultures.

You will need a fair amount of time to take it all in, but here we suggest some good places to start your exploration.

Start in the Kruger National Park – which incidentally gets almost 1.5 million visitors a year. Despite this, you will often be alone watching game while on the road network spanning some 2 500km.

Just east of Pafuri, you will find the remarkable Thulamela, a stonewalled city on a plateau in the Soutpansberg. The sophisticated kingdom flourished between 1200AD and 1600AD. It housed goldsmiths and iron workers, bartered with Indian and Chinese traders and had trade links with West Africa.

This technologically refined past underpins a proud southern African cultural heritage. Both the VhaVenda and XiTsonga locals claim links to the site.

For the birds or the Big Five?

You can stay overnight at the Pafuri Wilderness Camp, a private lodge right in the ancestral lands of the Makuleke people, who, along with a private tourism company, are the custodians of this beautiful area. It houses the Big Five, with elephants in abundance.

For the birders among you – even casual ones – it is a special place to spot the crowned eagle, wattle-eyed flycatcher, Bohm's spintail and the elusive Pels fishing owl, among others.

If you're a history buff, there is Crooks' Corner is where South Africa, Zimbabwe and Mozambique meet – and criminals could easily hop the border if law-enforcement from one of the countries was hot on their heels.

Far to the south, in Hoedspruit (close to the middle of the Kruger Park), you'll find the shield-nose snake, which is

endemic to the area and occurs nowhere else in the world. And if herpetology is your thing, stop in at the Khamai Reptile Centre.

There you will find frogs, toads, snakes, chameleons, turtles and more. It's a reptile haven that's all about conservation, research and education, enlightening the public about the role of these often-misunderstood animals in the ecosystem.

Welcome to the realm of the Rain Queen

Take a short trip to the north-west and visit the Modjadji Cycad Reserve, near Tzaneen. It houses the largest concentration of single cycad species in the world and they are some of the oldest and largest.

It is the realm of the legendary Rain Queen; a unique natural forest, unspoilt and much like it was in prehistoric times. Take a guided tour of the village of Modjadji, which was settled in the 16th Century, and the home of the queen who claimed to have special rainmaking powers.

To round it all off, go east across the N1 to the UNESCO Waterberg Biosphere Reserve: the only savannah biosphere reserve in southern Africa. Its mix of rock formations are millions of years old and is teeming with significant San rock-art sites and abundant bushveld plains that support a diverse set of flora and fauna.

There is an abundance of excellent accommodation, so you can rest and recover from your jam-packed and informative trip while you enjoy the internationally recognised biosphere.

Regional travel becomes a doddle

A ring road near Musina in the far north will significantly reduce traffic pressure on the border town and 200km to the south, construction is well under way on the Eastern Ring Road close to Polokwane, the provincial capital of Limpopo.

These projects form part of SANRAL's management of 21 490km of national and provincial road network, stretching from Musina in the north to Cape Town in the Western Cape.

The volume of traffic passing through Musina has rapidly increased in recent years, causing severe congestion for road users, along with major safety concerns. The high volumes of traffic in a town of about 35 000 people have caused clashes with local movement and complaints from local residents, business and communities about safety, access to business premises and a lack of parking.

The "Great North Road" – or N1 – is a toll road and commuters can expect a high level of service and safety in exchange for their toll fees. The Baobab toll plaza is located south of the town on the way to Louis Trichardt.

A shot in the arm for the local economy

The solution to the congestion identified by SANRAL is to build a ring road around the town, at an investment of R556m. The two-and-a-half-year construction project started early this year.

In addition to the broader benefits to the travelling public, the project will provide job opportunities and skills development for local communities. The regional economies of Musina

and the Vhembe district will also benefit from a surge in commerce and trade – as well as the provision of housing, hospitality, equipment and maintenance services during the construction period.

Some of the construction activities will have an impact on the natural habitat and SANRAL has undertaken to move three large Baobab trees – Kremetart – to new positions within the road reserve.

SANRAL's environmental track record is second to none and trees transplanted 12 years ago during a similar project have thrived.

The Nancefield interchange bridge, which also forms part of the project, has been commissioned. Upon completion, the bridge will be a major landmark as the primary entry and departure point in the country's northernmost region.

Polokwane's arteries unclogged

Near Polokwane, work has started with the upgrading of the Eastern Ring Road to the south of the capital, linking with the Tzaneen intersection (R71). It's a stretch of about 15km.

The Eastern Ring Road was completed in 2010, prior to Polokwane's hosting of matches during the FIFA Soccer

World Cup. A substantial increase in traffic on the road – especially heavy vehicles – has necessitated the upgrade. This traffic reflects population growth in the region and the movement of people between South Africa and Limpopo.

Construction includes:

- Upgrading of the interchange and the building of a new bridge over the R101 – "old north road"
- Construction of a new carriageway from the Silikon Road intersection northwards towards the R71
- Rehabilitation of existing roadways and the widening of roads at the R37 (Lydenburg) and Silikon Road intersections
- The upgrading of all storm water drains, road signage and facilities such as bus stops and taxi drop zones.

These improvements to the Eastern Ring Road will accommodate the growth in traffic in the region for at least the next 15 years. Truckers, motorists, passengers and pedestrians will benefit from improved road surfaces, new interchanges, increased safety and a reduction in collisions.

Construction is scheduled to be completed by the end of 2018. The project is managed by SANRAL's Northern Region, based in Pretoria, and Basil Read is the main contractor.

The value of the project is set at R700m and about R85m of the work will be undertaken by small and emerging enterprises, creating an estimated 200 local jobs.

It is considered to be one of the largest road construction projects in southern Africa and will bring significant benefits to the local economy. In addition to direct employment of workers and SMMEs, most of the goods and services will be procured locally. On completion, the new road will improve access to Polokwane and the rest of Limpopo, facilitating the movement of people, goods and services.

KZN MIDLANDS ROAD gets a safety makeover

Maintenance work on one of the most dangerous stretches of road in KwaZulu-Natal is contributing to major improvements in safety for road users travelling between Gauteng and the coast.

The routine construction on the Town Hill part of the N3 just outside Pietermaritzburg started in November 2014 and expectations are that the road will be in good condition for the next decade.

Town Hill has a high frequency of serious traffic incidents due to steep grades combined with sharp curves as the route descends from the Midlands Plateau to the Coastal Plains of the province. An alternative alignment is being considered with a much gentler grade and straighter alignment.

The maintenance work involves repairs to the concrete left-hand lane that is used by trucks and resurfacing of the two asphalt lanes. Damaged sections of the asphalt lanes are removed and replaced using a more expensive, but longer-wearing, asphalt base – which saves money in the long run.

Residents get the 411 on progress

Hugh Brooks, SANRAL's Eastern Region Project Manager, says a special concrete mix was used to repair damaged sections of the truck lane. Each repaired section remained closed to traffic for at least a week to allow the concrete to dry and gain strength.

A major challenge on the Town Hill maintenance project was that work could only be done during daylight and had to be abandoned when peak traffic was expected (such as on public holidays or during major events such as the Midmar Mile).

Brooks said that while delays have been commonplace during construction, because of high traffic volumes during the day, social media interaction with the affected residents was employed to keep them informed of construction closures and anticipated delays.



5 Fast Facts on the N3

1. The N3 Durban-Free State-Gauteng corridor is South Africa's primary freight link, carrying in excess of 40 million tons of freight per annum
2. It's one of the 18 major projects – SIP 2 – of the Government's multibillion rand National Infrastructure Plan
3. It connects Johannesburg – the largest city in South Africa – with Durban, the continent's busiest port and gateway for imports and exports
4. In keeping with SANRAL's commitment to economic empowerment, three SMMEs have been used on the project and been allocated contracts to the value of R14.5m
5. The government has estimated that 135 000 jobs will be created in construction projects in the corridor, which includes upgrades to the Durban harbour and the container terminal at City Deep



Donated shoes put children on the road to education

Children at Mooiplaas Public Primary School in Mzwini village in the Eastern Cape scored 80 new pairs of school shoes, thanks to the ingenuity and generosity of a SANRAL staff member.

It used to be the case that some of the learners would stay away from school in cold or rainy weather, because they had no shoes to protect their feet. Some children braved cold and windy conditions wearing shoes that were damaged or the wrong size – and sometimes even sandals.

The initiative was introduced by SANRAL Southern Regional Project Manager in Training Lindokuhle Mahlangeni in response to the extreme poverty observed at the school by SANRAL staff working in the community.

To drum up donations for the school shoes initiative, Mahlangeni competed in the 56km Old Mutual Two Oceans Ultra Marathon this year, with the aim of raising one pair of shoes for every kilometer completed, hence the hashtag #56SCHOOLSHOESCHALLENGE.

He asked his colleagues at all the SANRAL regional offices for help and received an overwhelming response. More than 80 pairs of shoes were donated by various staffers across South Africa.

Mooiplaas Public Primary principal Nomqondiso Gobingca said about 70% of the school's learners live with their grandparents. Most people in the district are unemployed and about 30% of the parents are illiterate.

"We are so grateful for the school shoes. We need good Samaritans like Lindokuhle and his colleagues at SANRAL to help these children. Many of the teachers go beyond the call of their duties to bring in whatever clothes and shoes they can. But the need is great and we can't do this alone," she said.

An emotional Mahlangeni told the children, teachers, parents and members of the school governing body that the school shoes initiative was only possible because of team work.

"It is easy for people to turn a blind eye when they see hardship. But you never know; that child who suffers today might just be the person who helps your own child one day," he said.

Lindokuhle's next mission is to run the Two Oceans Marathon in school shoes to raise awareness and draw attention to the plight of rural school children.

#56SCHOOLSHOESCHALLENGE

Road levy replaces toll fees at Beitbridge border

Travellers on the highway from Zimbabwe will now pay a road charge on the stretch of road just south of the Beitbridge border post. The good news is this doesn't mean higher costs for commuters, because the road charge will simply replace the toll fees levied in the past.



The charge will be used to pay for maintenance of the road network leading up to Beitbridge and for the bridge structure – including future additions or widenings to handle the growth in traffic.

Beitbridge is South Africa's busiest land border post and more than 2 000 vehicles pass through it in both directions every day.

The fee changes have come about after a 20-year concession with a private company – to finance, construct and operate the bridge over the Limpopo River – came to an end mid-2014.

By agreement, Zimbabwe subsequently continued to collect the toll fees on behalf of both countries – but South Africa has now decided to collect the levy south of the border.

Border payroll pretty standard

SANRAL spokesperson Vusi Mona says the levying of road charges is common practice between neighbouring countries, to contribute to the upkeep of connecting roads. All South Africa's adjoining countries – Botswana, Lesotho,

Swaziland, Namibia and Zimbabwe – collect road charges from travellers who cross their borders from SA.

Inside the country, these issues are dealt with by SANRAL's sister agency, the Cross-Border Road Transport Agency (CBRTA).

Mona says it's likely the South African Revenue Service will become responsible for the collection of the road charge. SARS already collects other taxes and duties at the border and already has the infrastructure to assist in the collection of road levies.

Decisions will also be taken in future on whether to build a facility where the road charges can be paid, just south of the current border precinct.

The impact on road users will be the same. The only major difference is that the collection from southbound traffic will be done by South African authorities and not by Zimbabwe.

The current charge is in US dollars and differentiates three classes of vehicle:	
Motorcycles:	\$ 4
Light vehicles:	\$ 9
Heavy vehicles exceeding 3 tons gross:	\$ 23

In the new dispensation, these amounts will be levied in South African rands, so you don't have to fiddle with a currency converter to work out what you owe. No more currency lag.

How easy is that?

- SANRAL's successful return to the bond market**
- In early June, SANRAL conducted its first bond auction since April 2016.
 - The auction was a great success – despite a cautious market.
 - The market yielded an auction that was oversubscribed by more than two times what SANRAL asked.
 - The response from the investment community demonstrates confidence in the quality of the roads agency's financial management and corporate governance.
 - Policy certainty about the future of e-tolling in Gauteng contributed to the investor confidence observed.
 - A total of R600m was allocated – all of it mark-to-market.
 - The auction was postponed twice before June, because SANRAL was waiting for the decisions on South Africa's sovereign rating by ratings agencies Moody's and Standard & Poor's.
 - SANRAL regularly raises money through the bond markets to finance major road infrastructure programmes.



"Investors are known to be prudent and focused on the long term. It is clear that they regard our bonds as a good investment."

Inge Mulder,
Chief Financial Officer, SANRAL

Books for the long road

Book Review

NEED HRES IMAGES
these are from
fotoalia stock photo



#59556346

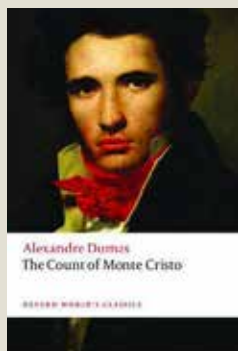
Shorten the journey by reading a good book (and not while behind the wheel).

When an owl dropped wax-sealed letters on the doormat of 4 Privet Drive, it was the start of an explosion of literary excitement that fascinated both young and old. Harry Potter and his adventures at Hogwarts School of Witchcraft and Wizardry were the precursors of modern youth literature that stimulated a renewed interest in reading among young people.

But JK Rowling's Harry Potter series isn't the only game in town when it comes to fascinating youth literature. The well-stocked buffet of age-bridging fantasy includes as wide-ranging works as JRR Tolkien's Lord of the Rings trilogy, The Hunger Games series by Suzanne Collins, The Trials of Apollo and the other Percy Jackson books by Rick Riordan, Markus Zusak's The Book Thief and The Messenger, Twenty Thousand Leagues Under the Sea by Jules Verne and the 13-part series of A Series of Unfortunate Events by "Lemony Snicket" (aka Daniel Handler).

These timeless books all have massive crossover appeal, managing to keep both kids and the parents reading to them fascinated and engaged... and the teens and tweens occupied.

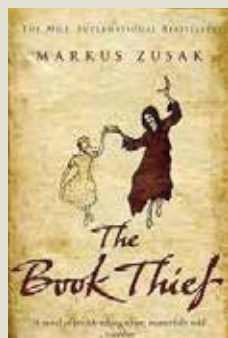
Here are a few good picks to keep you and your little ones entertained when you've already seen all the animals in the Kruger National Park.



The Count of Monte Cristo
Alexander Dumas

This evergreen favourite has been adapted for the big screen numerous times. It is an ageless story, chock-full of important life lessons, which makes it an enjoyable and educational read for all ages. The story is set in the post-Napoleonic era, a period of political turmoil and wavering loyalty.

Our hero, the young sailor Edmond Dantès, is falsely accused of treason and imprisoned without trial in an isolated and forbidding island prison. Dantès's winding tale of escape and eventual bitter revenge is packed with adventure and derring-do. The original was written and published in French, but English versions are available in almost every good bookstore in South Africa.



The Book Thief
Markus Zusak

A refreshing look at World War II for young readers, even if they have no prior knowledge of the last big war. It is set in Nazi Germany, where the pre-teen Liesel Meminger lives with foster parents – her own parents having been carted away to a concentration camp.

It is a time of bombs, misery and despair, but really this story is about the importance of taking joy from small things. It is a story of hope against a grey backdrop of loss and war. But the most enthralling part is that Liesel's story is narrated by Death.

There are few stories as fascinating as these adventures of a girl whose love of books turns her into a believer in the power and joy of the written word and the importance of sharing it.



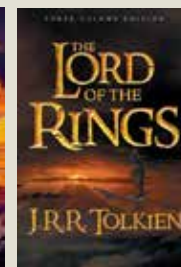
A Series of Unfortunate Events
Lemony Snicket

Netflix has grabbed this series of 13 children's novels for the small screen. It will undoubtedly prove to be popular with viewers. Every book, though concerning some of the pretty upsetting circumstances that befall the three Baudelaire siblings, is nevertheless captivating.

The three are orphaned after their parents die in a fire and are sent to live with various distant relatives – all of whom end up being disastrous guardians. The first is the evil Count Olaf, who dedicates an awful lot of time and energy to making the three surviving Baudelaire's lives miserable.

Their attempts to foil Count Olaf is makes for spectacular moments of victory, while the suspense of what is to become of young Violet, Klaus and Sunny will keep you in enough suspense to keep reading till the last page of The End. The novels were published between 1999 and 2006 and the 13 titles in chronological order are as follows:

- The Bad Beginning
- The Reptile Room
- The Wide Window
- The Miserable Mill
- The Austere Academy
- The Ersatz Elevator
- The Vile Village
- The Hostile Hospital
- The Carnivorous Carnival
- The Slippery Slope
- The Grim Grotto
- The Penultimate Peril and, of course, The End.



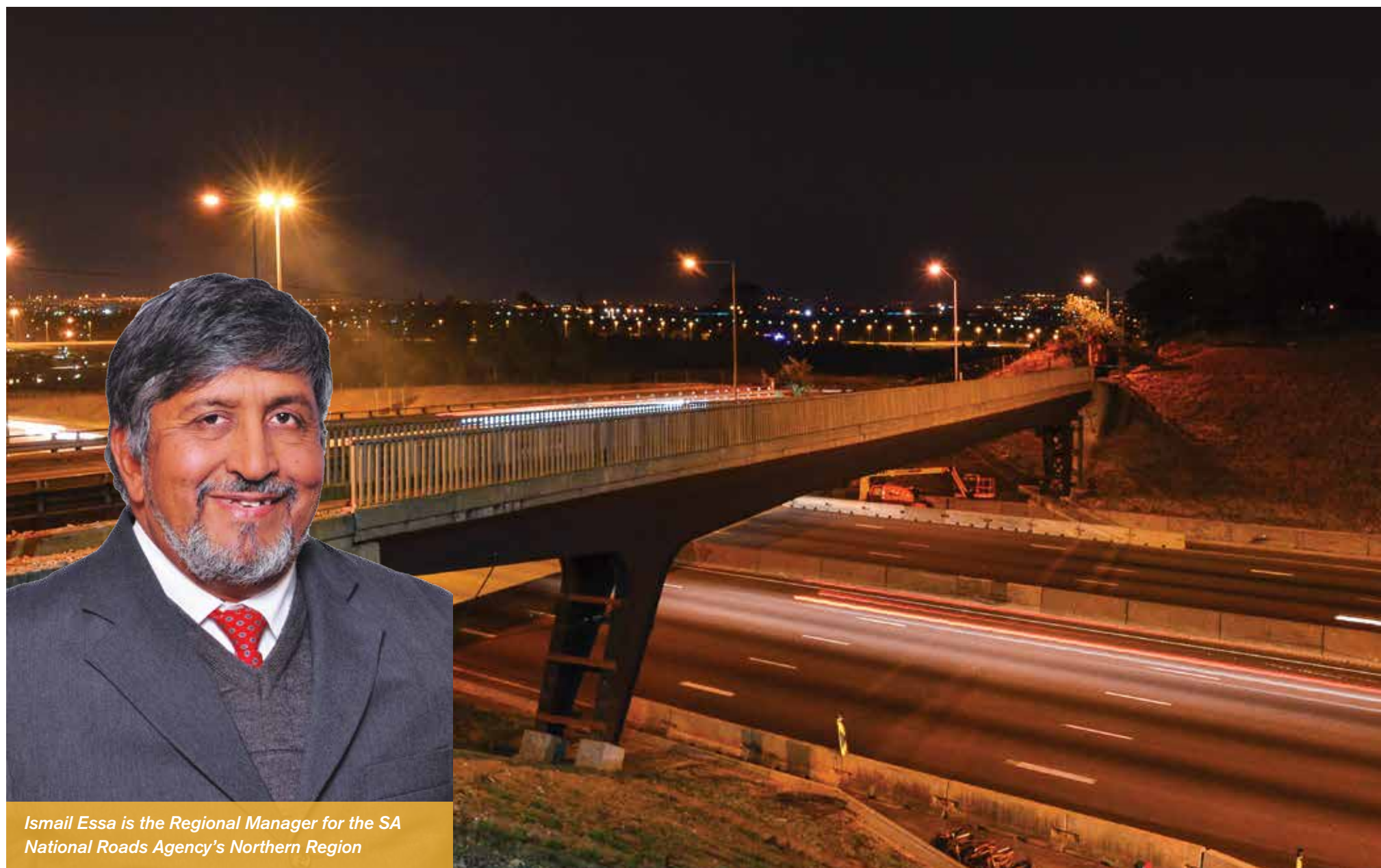
The Hobbit & The Lord of the Rings
JRR Tolkien

Early 20th Century children's classic The Hobbit and The Lord of the Rings trilogy are epic masterpieces that have thrilled generations of readers. The intricately woven and interconnected stories are set in the fictional world of Middle-Earth, which is inhabited by all manner of magical species, from the ancient elves to the innocent "Halflings", or Hobbits.

The Hobbit: There and Back Again tells the story of Halfling homebody Bilbo Baggins and his accidental adventures with the Dwarves, who want his help as "a burglar" to reclaim their homeland from the dread dragon Smaug. He is pressganged into said adventure under the guiding hand of eldritch wizard Gandalf the Grey.

The three volumes of The Lord of the Rings, The Fellowship of the Ring, The Two Towers and The Return of the King, are about a dark ring of power and the efforts to destroy it by a band of intrepid adventurers, consisting of a Dwarf, a Human, an Elf, a wizard and a Hobbit. In these tales, Sauron, The Dark Lord, has been resurrected and seeks to reclaim the magical ring of power to enslave all the species of Middle-Earth. Hobbit Bilbo Baggins finds the ring quite by accident and it befalls a few initially unheroic inhabitants of the sleepy Shire to keep the ring safe. A perilous journey ensues – across Middle-Earth to the fires of Mt Doom, the only place where The One Ring can be destroyed forever.

Tolkien's tales of sword and sorcery set the tone for all fantasy that has come after and is to date probably the most globally celebrated product of Bloemfontein in the Free State.



Ismail Essa is the Regional Manager for the SA National Roads Agency's Northern Region

Big projects, big results

Big is beautiful and this is seldom more true than when it comes to infrastructure.

These projects have the capacity to change the lives of individuals and communities, assist with local and regional development, stimulate the local economy and create jobs. They make life better – long- and short-term.

The really vital large infrastructure projects are roads. They connect people and communities with each other and towns with towns. They make trade possible, enable social activities and interaction and boost tourism.

Very important for SANRAL, the custodian of the country's national road network, is that such projects are not just inanimate. They're about people. People as individuals, part of a community and as economic stimulators.

There are many stories to tell that underscore this approach. They touch on existing roads, planned roads and roads that are not yet built but ought to be.

Take Moloto, dubbed the Road of Death.

It's approximately 139km that stretches from Pretoria, runs through Gauteng and Mpumalanga and ends in Marble Hall, Limpopo. Thousands of commuters use it daily and its poor surface and inadequate lanes, coupled with irresponsible driver behaviour, have resulted in an alarming rate of crashes, serious injuries and fatalities.

SANRAL was tasked by the government to upgrade and maintain Moloto Road to the road agency's globally recognised high standards. R3.7bn has been set aside for improvements over the next five years and road maintenance has begun.

These interventions are bound to bring down the collision and death rate on this route, contributing to the safety of both vehicles and pedestrians. Access roads to schools, villages and communities along the road will also be upgraded, bringing about a marked improvement in the lives of people.

And what about the Musina Ring Road? The N1, which is South Africa's major link with the rest of Africa, runs from Cape Town to our border with Zimbabwe at Beitbridge. It passes through the town of Musina, 15km south of the bridge.

Due to high traffic volumes, severe congestion is being experienced in the Musina CBD, through which the current N1 route passes. Movement through the CBD is also in conflict with local traffic, business access, on-street parking and pedestrians.

The N1 route from Pretoria to Beitbridge is a toll route and road users expect a certain level of service when they have to pay. Congestion and delays on the N1 in Musina therefore have a negative effect on the paying road user.

SANRAL's solution to these problems is to build a ring road that circumvents the town, at an investment of R556m. Some community members will benefit directly from the project, through labour or targeted enterprise development. But the Musina economy in general will also benefit, though the provision of housing, equipment, materials and supplies to the contractor.

The Nancefield Interchange Bridge, which also forms part of the project, was commissioned to mark the entrance

into and departure from South Africa. The bridge will be a landmark, conveying a sense of national pride and achievement.

Then there's the three-phase plan to address congestion on the inner-Gauteng highway network. This is the vastly improved freeway stretch between Johannesburg and Pretoria – the economic heart of South Africa.

In 2015, this phase of the Gauteng Freeway Improvement Project saved the road user an estimated 443 000 vehicle hours per day, of which 150 000 were on the highway. At an average rate of R101 per hour, per person, and an average of 1.2 people per vehicle, this phase saved Gauteng R53m worth of time alone. This in addition to the reduced impact on the environment, in terms of carbon footprint.

If the next phases are not constructed soon, congestion on the N1 is likely to return to pre-upgrade levels. That means an increase in costs, time wasted and frustration for road users.

From a national and regional economic point of view, this is a crucial project, but it is being held up because of funding issues. The draw-downs on the national budget for the country's social priorities are such that other mechanisms have to be found to fund this vital infrastructure project.

Tolling is the only feasible funding stream. But because of negative perceptions and resistance to E-tolling, these very necessary next phases of the highway network are just not happening.

Not doing it will have dire consequences for the people of Gauteng. No TOLLING, no new highways or improvements – unless other funding sources can be found.

At the heart of what SANRAL does is its concern for people – a concern, in this case, that the everyday lives of Gauteng people and the economy will be negatively affected by not acting now.

Letters

A trip down memory lane

South Africans Stephen and Laura Kramer relocated to Melbourne, Australia, 20 years ago, where they both work as veterinarians. They recently returned to SA for an extended holiday – and enjoyed every moment of the journey.

While travelling on our highways and byways, they diligently documented their travels and blogged it back to their daughter in Australia. Here are some of their favourite moments...

"I can't really find anything funny to write about, or something to be sarcastic or facetious about. Probably because I feel this vested interest in this country and find it difficult to be too critical."



"The people we've met have all been warm and friendly. And generally, everybody is trying really hard to make things work."

"The beauty of the country is absolutely breathtaking..."



Free State landscape

"The roads are great; the food is excellent; service is great and the standard of accommodation in the country areas is way higher than in Australia."

"We're stuffing ourselves with mangoes and biltong; so cheap here."

"So, sorry if I can't be funny, but I'll make it up on the next trip. Just wait until we go to New Zealand – that's going to be one long joke!"

Source: SA Good News; www.sagoodnews.co.za



We're in Arncliffe at the moment, after travelling to Clareville



Weenen Nature Reserve

"...and the lack of rules and regulations like in Australia give a fabulous feeling of freedom."

"I could carry on about how beautiful the country is, but that would be boring."



...and Hermanus.



The drive from Fouriesburg to Clarens.

Ad

Road safety programme reaches rural communities

Road safety remains a national priority and education and awareness programmes continue to reach out to communities in both urban centres and rural villages.



NEED HRES IMAGES
these are from net



The small town of Norvalspont, south of Bloemfontein, recently hosted SANRAL's flagship road safety campaign at its local Norvalspont Primary School. The town is located on the banks of the Orange River, close to the Gariep Dam, in the Northern Cape.

Long-distance travellers on the way to the Wild Coast often make use of the R58 from Colesberg to Barkly East. Education on road safety awareness is thus an important issue in the daily lives of the local community.

As a state-owned entity responsible for building, maintaining and financing the country's national road network, SANRAL is responsible for ensuring that our national roads are safe and reliable, for both motorists and pedestrians.

South Africa is known to be one of the countries with the highest road casualty rates in the world. That's why SANRAL is working with the Department of Transport to educate the public about road safety. The most vulnerable of all road victims are school learners. We need to instil a culture of road safety awareness among our learners, especially at an early age, as part of their life-skill set.

Teaching the teachers

SANRAL runs a successful road safety campaign aimed at schools along its road network. According to SANRAL Road Safety Manager Elna Fourie, the first step in entrenching the culture of road safety at schools is to equip teachers with the necessary knowledge to share with learners under their care and guidance.

"Learners are very vulnerable, as they are still going through a process of mental and physical growth. Their perceptual skills are still at an early stage of development, making them easy victims of road incidents," Fourie said.

The process of changing attitudes and modelling the right behaviours in children takes time and so teaching safety behaviours at primary school level is an important step in keeping them safe on the roads.

The event at the Norvalspont Primary School was a workshop for teachers, dedicated to teaching learners road safety. SANRAL facilitator Madimetja Mamashela, from the University of Pretoria, took the teachers through the training manuals and showed them how to make learning both interesting and practical.

"Teachers play an important role in embedding the culture of road safety at school. That is why it is important that they are thoroughly equipped to teach learners. In this way, we can contribute to the reduction of the overall accident rate in the country, particularly involving pedestrians," he said.

School principal Mario Kivedo praised the roads agency for the work it does to improve the national road network.

"And, more importantly, we thank SANRAL for its outreach here in Norvalspont. We might be a small town, but we are also a significant part of South Africa, since we are situated not far away from the N1. Our learners need to be taught about road safety. It will go a long way toward saving lives," he said.

SANRAL is not only committed to reaching out to the big cities where there are high traffic volumes, but also to remote areas, where learners have to deal with traffic that is equally dangerous.

"Learners are very vulnerable, as they are still going through a process of mental and physical growth. Their perceptual skills are still at an early stage of development, making them easy victims of road incidents,"

Elna Fourie,
Road Safety Manager, SANRAL



Journalists get the TRAC treatment on the N4 Toll Route



A comprehensive media tour of the N4 Toll Route resulted in a greater understanding of the complexities of managing a successful road network, forging better relationships between TRAC N4 and the media.

TRAC N4 is responsible for the management of the N4 toll road, stretching from Tshwane to the Komatipoort border post in Mpumalanga, and then further to the port of Maputo in Mozambique. It is one of southern Africa’s major arteries and is at the core of the Maputo Development Corridor.

The media tour was an opportunity for TRAC to show the extent of its operations and to create a better public understanding at a time when public perceptions about the toll industry are under pressure.

Various media houses in the three provinces along the N4 – Gauteng, Mpumalanga and Maputo – attended the two-day tour. They were hosted by the CEO of TRAC, Graham Esterhuysen, and several staff members, who were always on-hand to provide information about the route, the environment and TRAC as a company.

The participants were given a tour of various facilities, including Mozambique, and a breakdown on how they work.

At the Middelburg Toll Plaza, members of the media experienced toll-collecting from the vantage of the operator and visited the TRAC helpdesk and the Moamba and Maputo plazas. Located between these two toll plazas in Mozambique is the Pessene Load Control Centre – one of Africa’s most modern and unique weighbridges. It uses solar power and operates on a 24/7 basis.

They also got to experience a lifelike accident simulation scene, organised by TRAC’s accident and roadside assistance units. Many were impressed with the quality of the work responders do and the close cooperation of emergency service providers and law enforcement.

One of the observers commented:
“I hope the road users actually realise what they are paying for. I cannot believe how much you guys do.”

Couldn’t have said it better ourselves.

Upgrades to Bakwena toll plazas will smooth the flow of traffic

Major new upgrades to a number of toll plazas on the N1-N4 route will improve traffic flow and ensure a safer and more pleasant travel experience.

The Bakwena N1N4 Toll concession has committed some R160m to the construction project and the work is expected to be completed by December 2017.

Bakwena holds a 30-year concession contract with SANRAL to manage a 385km route on the N4 from the Botswana border to Tshwane and then northwards along the N1 to Bela Bela in Limpopo.

The Bakwena N1N4 Toll concession is the central link in a freeway system that connects southern Africa’s east and west coasts.

The planned upgrades to toll plazas are taking place to accommodate the increased traffic volumes along the corridor and are intended to increase plaza capacity with the addition of new lanes.

The Zambezi plaza is the first to benefit from the construction, where work has already started to add two extra lanes at the on/off ramps. This will be followed by Stormvoël, Pumulani, Doornpoort and Marikana.

Two additional lanes will be built at Pumulani and Doornpoort and one lane in each direction at Brits and Marikana. One lane on the on- and off-ramps will be constructed at Stormvoël.

Work has also started on the upgrading of the on-ramp at the Wallmansthal plaza, through an additional lane for Class 1 electronic toll collection, to alleviate the congestion during peak hours.

The project will take place over a two-year period and the upgrades will increase capacity at toll plazas for road users with or without e-tags and improve traffic flow during high-volume periods.

Bakwena remains committed to providing a safe and pleasant travel experience for all road users on the N1-N4 route.



- 02:40 Crash.** Light vehicles diverted. Heavy vehicles stacked.

02:45 Crash Update. Recovery in progress. Light vehicles diverted. Heavy vehicles stacked.

04:50 Crash Update. Clean up in progress. Approach with caution. Light vehicles diverted. Heavy vehicles stacked.

06:35 Crash Update. Scene cleared. Road open. Traffic flow normal.

These short text messages tell a story of the people in crisp uniforms who work tirelessly along the N3 Toll Route to keep the road safe for the thousands travelling up and down it daily. They are the crew of the N3TC Route Services teams who provide an invaluable service to N3 Toll Route customers. Their responsibilities are vast and numerous, all contributing towards N3 Toll Concession’s vision to provide road users the safety, convenience and mobility they need.

The Route Services teams are responsible for responding to crashes, assisting with breakdowns, the removal of objects from the road and monitoring the route through daily patrols. These dedicated professionals in their blue uniforms with bright reflective strips are often the first to arrive at crash scenes – where they will stay until the scene has been cleared. They work closely with other emergency services and play a crucial role throughout the emergency, to ensure the scene is safe and to limit secondary crashes.

The Route patrollers all have basic first-aid training. They also have mechanical knowledge, training as fire fighters, advanced driving skills and knowledge of hazardous and highly volatile substances. They understand the practicalities and logistics of keeping a road safe.

The patrollers are more than just good to have around; they are trained for almost any eventuality, highly disciplined and dedicated to serving their fellow citizens. Boundless energy and solid people skills make them great at their jobs.

Route patrol teams are each responsible for an approximate 70km section of the 415km N3 Toll Route between Cedara in KwaZulu-Natal and Heidelberg in Gauteng. Each team sweeps its section of the Route at least twice a day.

“This simply means that we drive the entire distance of our road section, in both directions, and scan for any problems that may need fixing,” explains Specialist Incident Manager Willie van der Merwe.

Driving with a route patroller on the N3 Toll Route, it is immediately apparent that they view a road quite differently to an average road user. Their eyes miss nothing. Continuously scanning for possible dangers or problems, ranging from damage to the road surface and damaged guard rails or road signs to broken down vehicles, obstructions, lines that need painting, wildlife caught on the road, pedestrians and unroadworthy vehicles. They know the section of road under their guardianship intimately and are quick to pick up any changes or items that need attention.

It is not uncommon for a particular team to do 1000km in a day on just their section of the route.

In 2015, the route patrol teams on the N3 toll route covered in excess of 1.78 million kilometres.

The job can be stressful.

“You never know what to expect when you start your work day. It is completely unpredictable. You may just have started to patrol your section of the route when you get called out to a crash. You are often exposed to dangerous situations,” says Senior Route Patroller Simon Mphuthi.

“The hardest part of being a route patroller is to be on crash scenes where you experience first-hand the devastation that can be caused by negligent drivers,” he says.

Van Der Merwe agrees it can be nerve-wracking. “We have also lost some of our own colleagues in crashes on the Route. It brings our vulnerability sharply into focus. The fact that we drive clearly marked, bright yellow vehicles does not make us less exposed to danger.”

Junior Route Patroller Sabelo Skosana says: “That is why we have such a strong team spirit in our crew.”



Padkos

Some youngsters are encouraged to eat their spinach based on the exploits of classic cartoon character Popeye, who gains his legendary powers of strength after gulping down a helping of this leafy green vegetable.

Spinach is, indeed, a “superfood” that is very high in vitamins, minerals and overall nutritional value. It can help toward off diseases and live a longer, healthier life.

What makes spinach so exceptional?

Spinach is a nutritional powerhouse. It is packed with vitamin K, manganese, folate, magnesium, iron, vitamin C, riboflavin, niacin, calcium, potassium, tryptophan, vitamin E, dietary fibre, protein and phytonutrients. It is very versatile and can be eaten raw or cooked.

What are the health benefits of spinach?

- Lowers cholesterol
- Important for skin, hair and bone health
- Improves blood glucose control in diabetics
- Reduces the risk of cancer
- Reduces blood pressure
- Boosts metabolism and strengthens digestive system
- Reduces risk of age-related muscular degeneration
- Protects the skin from UV rays
- Aids in strengthening of the muscles
- Prevents atherosclerosis and strokes
- Reduces risk of osteoporosis.

What are the best ways to use spinach in a meal?

Incorporate spinach into pastas, soups, curries and stews.

Sauté spinach in olive oil and season with sea salt and ground nutmeg and/or freshly ground parmesan cheese.

Add some fresh spinach to a refreshing smoothie.



Thai Spinach, Beef and Peanut Wrap

INGREDIENTS

- 2 wholegrain wraps
- ¾ cup beef strips
- Olive oil or coconut oil
- ¼ tsp ground cumin
- Pinch sea salt
- ½ cup red cabbage, shredded
- 1 carrot, grated
- Handful baby spinach
- ½ red sweet pepper, thinly sliced
- ¼ cup fresh coriander leaves
- ¼ cup salted and roasted peanuts

For the sauce

- 4 Tbsp creamy peanut butter, softened in the microwave
- 1 tsp fresh ginger, peeled and minced
- 1 tsp honey
- 1 Tbsp fresh lime or lemon juice
- 1 tsp soy sauce
- Pinch salt
- Ground red pepper, according to taste
- 2 Tbsp water

METHOD

- Heat the olive oil in a grill pan over high heat, add the beef strips, cumin and salt and grill for 10 minutes. Set aside.
- Whisk all the ingredients for the sauce together.
- Heat the wraps for 15 seconds in the microwave to make them more pliable.
- Pile the beef strips, vegetables, peanuts and herbs in wraps and drizzle with the peanut sauce before wrapping.



Baby spinach and basil pesto

INGREDIENTS

- 3 cloves garlic
- 1 handful fresh baby spinach
- 1 handful fresh basil leaves
- ¼ tsp salt
- 1 cup olive oil
- ⅓ cup sunflower seeds, dry roasted in a pan
- ¼ cup parmesan cheese, grated
- Juice of ½ lemon
- Pinch white pepper

METHOD

- Place the ingredients, except the olive oil, into the bowl of a food processor and pulse several times.
- Scrape down the sides of the food processor with a rubber spatula.
- Add the olive oil and continue to pulse until the pesto reaches the desired consistency.
- Cover tightly and store in the fridge for up to a week.
- Spread the pesto on crackers and sandwiches or use in a wrap.
- Serve it with chicken, beef or fish, or use it as a pasta sauce.



Mopping and Mowing their way to magic

A civil engineering company in the Southern Cape has, over the past 11 years, grown into a thriving enterprise, employing 177 permanent and 37 temporary staff members.

Sakkie van Zyl, one of the co-owners of Magic Moppers Mowers & Maintenance (MMM&M) ascribes his company's success to the work they do for SANRAL, which has contributed to the company's stability and sustainability.

He started the company in 2005, with colleagues Victor Daniels and Deon Kannemeyer. Six years later, Menisa Ndonga joined them as a partner. MMM&M now has a Level 2 BBBEE-rating and is 51% black-owned.

Van Zyl said the company carries out routine road maintenance projects for SANRAL. It is also involved in general civil and construction engineering work, vegetation management and maintenance, grass cutting, herbicide application and general building and maintenance in several provinces and municipal jurisdictions.

"Our clients include Transnet, the Department of Transport and Public Works, several municipal authorities, including the Oudtshoorn and George Municipalities, and the Western Cape government. Over a period of more than three years, the company did a major clean-up of the rest areas along the route through the picturesque Meiringspoort," he said.

MMM&M's current projects include routine road maintenance along the N2 between Riversdale and Soutrivier, as well as on the N14 from Keimoes to the border between the Northern Cape and North West.

Van Zyl said the company assists children from disadvantaged communities whenever the opportunity arises.

"We are presently supporting a local school to sponsor a child, assist him with his education and improve his sporting career. We also sponsor other schools in the George area."

Employees are regularly sent for training in areas such as general health and safety, first aid, firefighting, hazardous chemicals, environmental training, tree felling, quality control and security and traffic control. The company also assists its employees to obtain their licences.

In addition, the company focuses on supporting emerging subcontractors and assists them as and when required.

Through the work done on SANRAL projects, MMM&M now has a well-trained workforce.

"We were able to acquire more plants and equipment and it allowed us to provide other services within the industry at competitive rates."

MMM&M has slowly but surely climbed the ladder of the Construction Industry Development Board's (CIDB) grading levels and has moved from 1 CE PE in 2005 to its current 6CE PE level.

"Our goal now is to complete our current contracts to the best of our abilities and, over the longer term, expand to all other provinces and achieve the highest grading of the CIDB 9CE, which will allow us to undertake projects of unlimited value," he said.

SANRAL gives hands-on owner a hand up

Dedication and a hands-on approach to management have enabled Cynthia Tshabalala to become the proud owner of a construction business that has created jobs.

Her company, Siyahlutha Developers, recently completed a subcontract to build low-cost housing and perform civil work on the R67 road project near Fort Beaufort in the Eastern Cape.

She grabbed the opportunity to deliver on the contract and also achieved the CIDB Grade 03 level offered by the Construction Industry Development Board.

Today, Cynthia is the proud owner of an emerging construction business.

"I want to thank SANRAL for giving me this opportunity. Not only did I get to realise my dream, but I was also given the opportunity to employ people from my community. I cannot even begin to express my gratitude," she said.

Siyahlutha Developers is already looking forward to working on new projects and the work done on the SANRAL project will enable her to upgrade to a CIDB level 05.

"I am so proud of the work that we are able to produce, as I never ever thought it was possible. I am so grateful to SANRAL for making this a reality – I never imagined myself working on projects of this nature," she said.

"SANRAL has given me the opportunity to gain the skills I need to be able to run my business efficiently.



Cynthia Tshabalala
Owner of Siyahlutha Developers

"I was part of a group of women who went through a SANRAL SMME programme. I started with nothing. I didn't have a single tool. I had no equipment and no vehicle to transport anything.

"Today, I own a vehicle that has been paid off, I have my own equipment, which I have started renting out, and my own tools," Cynthia said.

Before working on a SANRAL project, Siyahlutha only had four employees and was trading at CIDB Grade 01. She now has 33!

Networking and getting involved are now Cynthia's winning formula.

"The best way to get ahead is to get your hands dirty. In the next 10 years, I would like to see myself trading at a CIDB level 9."

The aim is to allow motorists to make informed decisions on the route they are travelling in order to arrive at their destinations on time and safely.



Traffic Control Centres along SA's national roads are often perceived to be only in places where trucks are weighed, but they're achieving so much more by ensuring the safety of road users through overload control and traffic law enforcement.

SANRAL Northern Regional Manager Ismail Essa said the maximum load that a truck can carry is 56 tons. If a truck is overloaded to 60 tons for example, a single trip can do more damage to the road surface than 80 000 cars. That's a lot of damage.

"The latest research conducted by the Council for Scientific and Industrial Research (CSIR) shows that overloading causes about R5bn worth of damage to the national road network. This can be avoided if there is sufficient law enforcement and proper load controls," he said.

Extending longevity

"Overload control helps us to achieve asset preservation. If we reduce overload, we preserve the road infrastructure and prolong its lifespan. For example, a national road is designed to last for 20 years. If we allow overloading by 10%, we reduce the lifespan on the road by 8-10 years. But if we control overload properly, we can easily extend the lifespan by a further 2-3 years, in addition to good maintenance," Essa said.

Did you know the busiest Traffic Control Centre (TCC) in the country is the Heidelberg TCC, on the N3? It's operated by the N3TC on behalf of SANRAL. Load control oversight here is conducted by sub-contracted company Load Control Operations (LCO JV).

According to Sefora Ramothibe, Assistant Operations Manager at LCO JV, the N3 is one of the most important and busiest corridors in the country used by the freight industry. The TCC's positive effect is very clear – overloading dropped from 25% to about 2.5%. Overloaded vehicles are detained and fined. Also, the load needs to be rectified before the truck is allowed back onto the freeway.

The Heidelberg TCC handles about 92 500 trucks per month, on both the north- and south-bound lanes. There is

also a satellite station in the vicinity that handles about 44 500 trucks per month. It's aimed at drivers who use back-routes to avoid going through the Heidelberg TCC. In total, about 10 960 trucks per month are weighed.

"A truck can carry 56 tons. If a truck is overloaded to 60 tons, for example, a single trip can do more damage to the road surface than 80 000 cars. That's a lot of damage."

Reacting to overloading

There are traffic officers from the Gauteng provincial department of community safety who deal mainly with the prosecution of the drivers of overloaded trucks, along with conducting roadworthiness tests on these vehicles.

Chief provincial inspector Joseph Mosia has said that overloaded trucks damage our road infrastructure. The drivers of these vehicles are also not in a good position to control the vehicle while it's in motion, because the braking force won't be able to carry the load.

If a vehicle is overloaded by between one and five tons, a summons is issued – with an option to defend it before court or pay an admission of guilt.

If the vehicle is overloaded by more than six tons, the driver is arrested immediately, which is good news for drivers and

56 tons The maximum load a truck is allowed to carry

8-10 years The amount of lifespan overloading by a mere 10% will cost the road

2-3 years How much longer the road lasts with proper load maintenance

25% The reduction in overloading achieved using Traffic Control Centres

92 500 The number of trucks passing through the Heidelberg TCC every month

R5bn The cost to the national road network of overloading vehicles

20 years The length of time a national road is designed to last

passengers who share the road with these heavily laden vehicles.

But it's not about being overzealous in penalising. "Our primary objective is not to punish people, but to foster a culture of voluntary compliance among road users," Mosia said.

According to SANRAL's Essa, there are 15 TCCs and 16 satellite stations on surrounding routes in the Northern Region (Gauteng, North West, Limpopo and Mpumalanga). They are generally operated by the provinces, but for reasons of funding and other challenges, SANRAL has had to step in. The roads agency pays for the day-to-day running of the centres, while the traffic officers who police these routes are provided by the provinces.

SANRAL continues to be one of the biggest investors in people and skills development in Limpopo, offering scholarships, bursaries and internship opportunities to students from the province on a yearly basis. In so doing, the organisation has been instrumental in changing and improving the education and skills landscape in the province.

Feeding an enquiring mind

Jansen Loubser is one of the bright minds in Limpopo and whose vision to contribute to the field of engineering has been made possible by SANRAL.

Born and raised in Bela Bela, previously known as Warmbaths, Jansen grew up with a huge interest in computers. He spent much of his time working on them and playing games.

"I was also very interested in science. I wanted to know how everything in the universe worked, so my mind was naturally inclined toward science and engineering from an early age," he says, quick to add: "I also enjoyed playing rugby and cricket for my school."

Jansen says he learnt the art of self-discipline in his school days, as he had to deal with conflicting interests like spending time with friends, extracurricular sports and school work. His time-management skills, hard work and dedication has paid off handsomely.



Jansen Loubser
Sanral Bursary Recipient

Jansen passed his matric with flying colours and is now a proud holder of a SANRAL scholarship. He is currently a third year Electronic Engineering student at the University of Pretoria, where he is further pursuing his interest in computers, technology and science.

"I chose to study electronic engineering because I wanted to know how to design and build new technologies – and repair all my old phones," he says.

Upon completion of his studies, Jansen would like to get into the real world of work where he can apply what he has learnt at University. He's still keen on furthering his studies part-time, while working to improve his knowledge and position himself to be a better asset for his company. It is Jansen's long-term ambition to climb the corporate ladder and occupy a meaningful position in the corporate world.

Building a future with a bursary



Phuluphedziso Rambuwani
Sanral Bursary Recipient

Phuluphedziso Rambuwani, affectionately known as Phulu, did not enter the field of construction engineering by accident. Growing up in Mphagane village in the Vhembe district, Phulu became interested in engineering at a very young age.

His attention was drawn primarily to the construction of roads, bridges and high-rise buildings.

"I have always been a very practical person. I enjoy things like building models and drawing plans. This ultimately stimulated my interest in the built environment," he says.

Growing up in the rural area of Vhembe district had its challenges.

"I am grateful to SANRAL for having given me this opportunity,"

The Miriyavhavha Technical Secondary School, from which he graduated, did not have sufficiently resourced workshops for practical learning. But this didn't discourage him from working hard and pursuing his dreams.

While in Grade 9, Phulu got the SANRAL scholarship brochure, which motivated him to work hard in his studies. When he was in Grade 12, he finally applied for the road's agency's bursary, based on his mid-year results. One day, he received the good news that he had been selected for an interview, which lead to his being awarded the bursary.

Today, Phulu is a proud third-year student at WITS University, studying a BSc in Construction Studies. Although his first choice was Civil Engineering, his current line of study still offers him what he enjoys most – designing and management of engineering and construction projects.

His immediate plan is to ace his graduate degree with flying colours.

"My long-term career plan is to further my studies in Project Construction Management. And I would also like to gain lots of experience in the field and to excel in the work environment. I am grateful to SANRAL for having given me this opportunity," he beams.

Filler needed
Could I use extre
Bakwena story
here?



Gess gushes a word from the expert

Roadworks in South Africa have been significantly shaping palaeontology and research in the country since 1985. Dr Gess says: *"They have enabled discovery of the clues to virtually everything we know about high-latitude late-Devonian life, not just in South Africa, but in the world. Twenty late-Devonian fish species would never have been discovered had it not been for roadworks at Waterloo Farm."*

Invertebrate remains from the Waterloo site include fragments of scorpions that represent the earliest known remains of land creatures from the ancient supercontinent of Gondwanaland.

The black shale in which the fossils are found is prone to weathering and in nature is turned into formless clay before it reaches the surface of the ground.

Roadworks give palaeontologists the opportunity to "reach deep into the landscape" and retrieve fresh unweathered shale, Gess says.

Food's not the only thing going Paleo

A major discovery has shed light on SA's rich fossil record

One of South Africa's richest fossil finds was confirmed earlier this year, discovered during construction work on the N2 freeway between Grahamstown and Fish River in the Eastern Cape.

Renowned palaeontologist Dr Robert Gess, of the Albany Museum in Grahamstown, said this was a momentous discovery as many of the species found at the excavation had been undocumented by scientists.

The controlled explosions used for rock cutting during the upgrade of the road opened a *"fossiliferous shale"* – a veritable treasure trove of a fossilised ancient river-mouth ecosystem.

SANRAL environmental manager Mpati Makoa said: *"A number of new invertebrates, as well as exceptionally preserved plant fossils of the Devonian era, have been excavated and discovered in the rock debris of the Witpoort Formation."*

"The fossilised remains are of life in a marine coastline environment, when South Africa was part of supercontinent Gondwanaland, nearly 360 million years ago. What is now the Eastern Cape was situated at high latitude, within 15° of the South Pole."

SANRAL's highly-regarded environmental management policy makes provision for excavation and specialist examination of rock debris. The environmental impact assessment conducted prior to the start of the construction anticipated the possible discovery of important fossils, said Makoa. It has significantly contributed to South African palaeontology and the study of our ancestral heritage.

According to Dr Gess, the plant and invertebrate fossil discoveries are from ancient, open river-mouth ecosystems.

"It differs from the fossil discoveries of the closed lagoon ecosystem of Waterloo Farm, an important South

African palaeontological heritage site of the late Devonian period, which is 20km away from the excavation site."

This fossil find is allowing researchers to trace a much broader picture of life along an ancient coastline, through the discovery of new plant and invertebrate species.

"We have collected the remains of a shrub-sized iridopterid plant, from the group that was ancestral to modern horsetail plants. While iridopterid plants were located both at Waterloo Farm and this fossil excavation site, they are different, though both are undescribed species," Gess said.

Moreover, the team has retrieved the most complete specimens yet of the fronds of the *Archaeopteris notosaria* tree, which according to Gess is the best preserved fertile material of this ancient tree on record.

Gess and his team also discovered new marine invertebrate fossils.

"We are busy describing a new species of bivalve or mud clams from Waterloo Farm. However, at the new outcrops, we are dealing with an entirely different bivalve that has never before been found," he said.

Just a few kilometres west of the main plant fossil locations – and in slightly older strata – Gess's team also discovered linguloid brachiopod shells.

"Linguloid brachiopods were invertebrates that lived in burrows and had a long, fleshy foot. When found without other types of marine invertebrates, they indicate a marine environment with some freshwater input. They have never before been found in this age strata."

Any way you cut it, scientific discovery is just one more way that building infrastructure contributes to developing South Africa.

Visit our ancient past

Motorists travelling in the Eastern Cape will soon be able to visit one of the world's richest paleontological heritage sites.

SANRAL is planning to provide a rest and observation area next to the site between Grahamstown and the Fish River, where the latest paleontological discoveries have been made, says N2 Construction Project Manager Steven Robertson.

The agency is working together with Dr Robert Gess and his team from the Albany Museum in Grahamstown, to ensure the public have access to the new knowledge about the area, dating back more than 360 million years.

"Visitors will be able to stop at the rest and picnic areas and there will be information boards and displays on the significance of the newly discovered fossils, their age and how they fit into the evolutionary history of Earth," Gess says.



Ad

Eat your way through South Africa



With so many different cuisines to be found in our beautiful country, your taste buds can travel the world without crossing a border, writes Lebohang Thulo

“Foodie” is a term used to describe a person with a particular interest in food; a gourmet. It’s no surprise that many of us consider ourselves foodies, but how many of us have gone out of our way to indulge our gastronomic interests?

Here’s an even more delicious question: What would eating your way through South Africa look like? Which pockets of the country would warrant a visit and what kinds of tastes and treasures would you sample?

Pleasures for every traveller

South Africa has a lot to offer in terms of culinary delights. Our rich mix of cultures also means the country has exceptionally diverse flavours and dishes.

You can find everything from fabulous greens (Limpopo, the Lowveld and Middleveld) and succulent fruit (Eastern/Western Cape and KwaZulu Natal) to crispy lamb chops from the Karoo and gorgeous seafood (snoek, hake, prawns and oysters come to mind).

There are also many different ways to enjoy your food. You can choose from numerous fine dining options, casual eateries or even go for street fare.

Where to go

Of course, any South African culinary journey would start in the Cape – it’s the country’s gourmet capital and home to countless award-winning dining establishments.

Some of the better known fine dining spots include The Test Kitchen in Woodstock, Cape Town, which was one of two South African restaurants to make it into the world’s top 100. Think beautiful, creative dishes and only the finest ingredients.

Not to be outdone, there is the famous Wine Route, which is well known for its combination of French-inspired culinary style, farm-fresh vegetables and great wine selection. It’s no surprise that the only other South African restaurant to make Elite Traveller’s Top 100 Restaurants list is The Tasting Room at Le Quartier Français in Franschhoek.

Completing the Western Cape food journey is a visit to the Garden Route - Knysna to be more specific. Knysna is home to the annual Oyster Festival. Fans of oysters (and champers) head to the festival which is held every July and features gourmet events over a period of 10 days.

Charm and food fresh off the grill

A visit inbound has just as much to offer as the coast.

Visitors to Parys in the Free State not only have the town’s arts and crafts to enjoy, but also its quaint and charming restaurants. With their old-school romantic menus, Parys’s restaurants bring to mind the town’s more cosmopolitan and glamorous namesake in Europe.

A mere two hours away in Jozi, a stop at the township of Soweto is a must. Hungry visitors should be sure to sample traditional cuisine – including umngqusho (samp and beans), ujeqe (steamed bread), chakalaka (very spicy), ulusu mogodu (tripe), stews and pap. The better-known establishments are Sakhumzi’s, on the well-known Vilakazi Street, and Chaf Pozi, an African braai restaurant with

communal tables and serving meat cooked on an open flame.

And an hour away from Johannesburg is Hartbeespoort, which promises similarly casual and comforting fare, albeit of a different variety. For example, the Windmill Restaurant, which is set in a Dutch-style windmill, serves typical Dutch and South African meals. Think sweet and savoury pancakes, while overlooking a sea of yellow, orange and white flowers.

If you continue north, you would arrive at the Kruger National Park. It is here at the home of the Big Five that you can enjoy a traditional South African braai under the beautiful night sky.

The bush is also ideal for picnicking; imagine baskets filled with delicious treats, such as vegetable wraps, mini quiches, vegetable terrine, smoked snoek, salmon, rare roast beef slices, crusted bread and chicken-liver pâté.

And if these picturesque foodie locations aren’t enough to awaken your inner gourmand, South Africa has a multitude of delicious hidden gems. Go exploring and delight your taste buds.



Lebohang Thulo

Games and puzzles to keep you entertained on the long road

Captivate & Fascinate

Sudoku

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

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
1																			
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ACROSS CLUES

- A1 Where in the US is the Haas Business School situated
- J1 Where does the N2 from Cape Town connect with N17 to Mbabane?
- Q1 'the' informal (in sport originally golf) – nervous
- A2 Constellation in the Southern twitters that destroy concentration hemisphere near Scorpius
- I2 Scot word for 'call'
- M2 Chemical symbol for cobalt
- P2 Abbr. Los Angeles
- A3 SANRAL CEO
- O3 South Africa's third biggest city
- C4 Severe infectious disease
- I4 Technical name for smallpox
- S4 Abbr. for non-smoker
- A5 Anger, wrath
- E5 Yearly phenomena in Durban in Jun/Jul
- P5 Belief
- A6 Express denial
- D6 Exclamation of pleasure
- G6 Unit of pain intensity
- O6 Armed conflict
- A7 South African for insect
- G7 Variant of Igraine - mother of King Arthur
- N7 Slang for mother
- Q7 Symbol for millibar
- B8 What's heard
- H8 Abbr. English National Opera
- N8 An ornamental sphere
- R8 Scot variant of "ae"
- B9 Shudder or vibration
- I9 Motion of the hands
- Q9 Abbr. of saint
- A10 Precious or semi-precious stone
- E10 Kind of witchcraft

- P10 Remains of burning
- A11 Abbr. Emergency Room
- G11 Who pays for good roads - 4 words
- D12 A group of the Khoisan languages
- H12 Reindeer or elk
- M12 ... Baba – Arabian Nights person
- D13 Acronym: Trans African Concessions
- Q13 Visible impression
- A14 Pilaster – Architectural
- F14 Internet domain name for Angola
- I14 Abbr. for relating
- M14 High in volume
- A15 Surname of Walter, assisted driver on road
- L15 Travelled on boat
- A16 Not outside
- D16 US shortened form of elevated railway
- L16 Abbr. for Transcendental Meditation
- O16 Acronym United Nations
- R16 Noah's vessel
- C17 To see with
- L17 Cloth made of goat or camel hair
- P17 Repeated sound
- F18 Wetland Park which is the country's first World
- Q19 Adding man's former name after Heritage Site present e.g. Lord Beaconsfield, Benjamin Disraeli
- C19 Winning school of SANRAL's quiz
- N19 Internet domain name for Israel
- S18 Domain name for Nigeria
- A20 Acronym South African Airways
- M20 Sandenbergh truck company

DOWN CLUES

- A1 Healthy breakfast
- B1 Period of time
- C1 A sailing ship that has its upper deck removed

- J1 Abbr. for each
- K1 Ancient Egyptian sun god
- M1 Internet domain name for Ecuador
- I2 Academic qualification for prospective CEO at SANRAL
- Q1 Nautical term for outer ends of ship's yard
- T1 Name of egg muffin in today's recipe
- N1 Word for see - ... and behold
- C17 Surname of SANRAL's head of operations in
- D3 Annotation when referring to a book, Mpumalanga article, etc
- E3 Chairperson of SANRAL's board
- F3 In the manner of
- G3 Obese
- L3 Coniferous tree
- O3 SA political party - abbr.
- S3 Small social insect
- I4 "a" used before a vowel
- K4 Means of control
- M4 Not in
- N4 Word "loan" without the vowels
- B5 Another word for cock
- H5 Chief magistrate in old Venice
- P5 Fourth solfa tone
- D6 Shivering
- O6 Articles of the same kind of material
- C7 Foolish person
- J7 Ovary of female fish filled with mature eggs
- P2 Abbr. for loudness unit
- R7 SANRAL's bi-monthly publication – 3 words
- F8 Elf in Harry Potter - not diminutive
- G9 Raised edge of an object
- K9 National Road Agency
- M9 National World Heritage park in Drakensberg

- Q9 Former Soviet Socialist Republic
- A10 Broad-spectrum antibiotics used for infections
- P10 Indicates location
- S10 Scots word for eye
- T10 One of a number of vertical posts
- H11 Short for advertisement
- J11 Abbr. for Indo-European - languages
- N11 Abbr. East London
- O11 University in East London - surname
- D12 Variant spelling of stagy
- F12 Type of bread
- G13 Demure
- Q13 Abbr. Minimum Lethal Dosage
- B14 Childish use of granny
- C14 Internet domain name for Tunisia
- J14 To increase, or lengthen or enlarge
- N14 Cry to attract attention
- P14 North American Indian peoples
- E15 Beer
- H15 Verb used with him, her or it
- L15 Podium for acting
- S15 Malleable metallic element
- R16 Exclamation expressing pleasure
- N7 Layer of acidic humus in cool moist areas
- I17 Abbr. for Variable Message Signs
- N17 Latin: Among other things - inter...
- Q17 Used for ice cream
- F18 Abbr. Immunising Unit
- G18 Abbr. steamship
- H18 Abbr. Ilang Ilang
- J18 Sick
- K18 North West
- O18 Type, class, sort
- T18 Wildebeest
- E19 Variant spelling of 'bye'

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.