

BY THE WAY



Creating wealth through infrastructure

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Moloto Road to be upgraded

One of South Africa's most dangerous roads is about to be upgraded and made safer for road users and pedestrians. SANRAL will improve Moloto Road, which runs north-eastwards from Pretoria, traverses three provinces and ends at the N11 near Marble Hall.

Seventy people were killed on the road and many more seriously injured during the last two years. In November 2013, there was a horrific accident when a truck and bus collided and 29 people were killed.

The road is used by 60 000 commuters daily, using buses and taxis, plus private cars.

As the road traverses three provinces it made road maintenance more difficult than is normally the case. Partly for this reason, the road is about to be transferred to the SANRAL, which will bring it up to the widely acclaimed high standards which the roads agency maintains on the national roads of the country.

Upgrading will include, amongst others, improvements to bus bays, storm water drainage, passing and climbing lanes where necessary, the addition of a lane in both directions, the closure of unsafe and illegal accesses and improved sight distances.

Improving the R573 is part of a more comprehensive approach to save lives and make life easier for commuters, connect nearby rural villages to such an important artery and improve the economies of the regions.

The approach includes a long-distance rapid rail service with feeder and distribution services provided by 50-seater buses. This will mean

upgrading feeder routes too. But this will take several years and so SANRAL's intervention is a priority.

The initiative is underscored by the fact that the government has set aside more than R1 billion in the Budget in February. In his budget speech Finance Minister Nhlanhla Nene said, "R1.1 billion is allocated for the upgrade of Moloto Road to improve safety and mobility on this road".

The funding will be spread over three years. The R573 will not be tolled. As confirmed by the Minister of Transport, Dipuo Peters, recently: "I have in writing informed the Premiers of Limpopo, Gauteng and Mpumalanga that it will be part of a network of roads under SANRAL that is not tolled."

The Moloto Rail Development Corridor has also been approved and the project was handed over to the Passenger Rail Agency (Prasa) for implementation. "They (Prasa) have started engaging with the National Treasury and I am happy to indicate to you that the Minister of Finance (Nhlanhla Nene) has received a presentation by Prasa and will be engaging with us to make it possible that when we arrive at the final costing of the project, we are within the limits that the government can afford. The project has been registered as a public-private partnership, so they have to start looking for partners in the private sector that will help fund it," Minister Peters said.

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Building roads through bursaries



The recent announcement of the new e-toll dispensation included a six month grace period to either pay or make a payment arrangement. This comes with a 60% discount.

"The decision to ease the burden of this accumulated debt does not come at the expense of road users who have done the right thing from the start of the system and paid," said SANRAL's communications manager, Vusi Mona.

"We thank the hundreds of thousands of law-abiding vehicle owners who have registered in the past and continued to

pay their fair share for the upkeep of our top-class freeway network.

"We can assure you that you are winning all the way with the new dispensation. You have no debt to settle, and even with the 60% discount for those that have not been paying, you will have paid less," he said.

60%

DISCOUNT
ON HISTORIC OUTSTANDING DEBT

The new dispensation will not disadvantage those with e-tags. They will continue to benefit through the standardised 30c/km tariff (in the case of light motor vehicles) the reduction in monthly caps (A1:Motor cycles R125, A2: Light vehicles R225, B: Small heavy vehicles, C: Large heavy vehicles R2 900) the continuation of the time-of-day discount and the peace of mind that their annual vehicle licencing renewal will be handled without any complications.

This table explains it simply using a R10 example:

	Compliant with a e-tag	Paid within grace period	Not Paid
	R10	R10	R10
e-tag discount (48%)	R4,80	N/A	N/A
Paid within grace period	YES	YES	NO
Old alternate rate applied (x3)	N/A	N/A	R30
New e-toll deal discount	N/A	N/A	R18
TOTAL PAID	R5,20	R10	R12

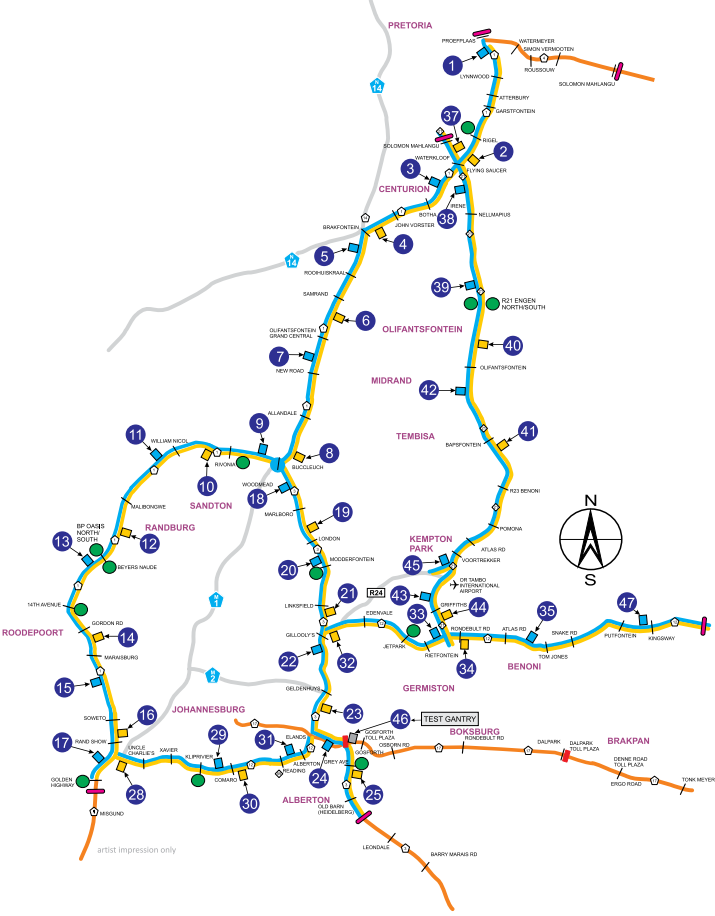
How will visitors to Gauteng benefit from the New E-toll Dispensation?

Should they only visit Gauteng once or twice a year, they would not pay any toll fees as the first 30 gantry passes in a year are free. Payment is only due on the 31st gantry pass (which will include the cost of the preceding 30 gantry passes). The year runs from 1 April to 31 March. These free passes cannot be banked or rolled-over from year to year.

"Even Gautengers who use the e-roads but go through 30 gantries or less per annum will not pay,"

Vusi Mona
SANRAL Spokeperson

E-toll gantries in Gauteng



MARKERS INDICATE WHICH SIDE OF THE ROAD THE GANTRY IS LOCATED AND INDICATE THE DIRECTION OF TRAVEL

GREEN MARKERS INDICATE CUSTOMER SERVICE CENTRES

LEGEND

- Gauteng e-Roads
- Existing physical toll plazas (and excluded from GIPPORT discount and vehicle classification)
- Existing SANRAL funded toll roads (and excluded from GIPPORT discount and vehicle classification)
- Existing BOT toll projects (and excluded from GIPPORT discount and vehicle classification)
- Entry and Exit points to the Gauteng e-roads (from other National Roads)
- Interchanges
- Routes
- Toll Gantry

GANTRIES

1 BARBET	25 ROOIVINK
2 MOSSIE	26 MPSHE
3 INDLAZI	27 OXPECKER
4 PIKOKO	28 PHAKWE
5 IVUSI	29 THAHA
6 FLAMINGO	30 LENONG
7 IHOBE	31 LEKGWABA
8 SUNBIRD	32 LOERIE
9 TARENTAAL	33 GULL
10 BLOUVALK	34 ILANDA
11 OWL	35 BEE-EATER
12 PELICAN	36 HADEDA
13 KING FISHER	37 NTSU
14 UKHOZI	38 HERON
15 FISCAL	39 BLUECRANE
16 STORK	40 SWAEL
17 ILOWE	41 LETATA
18 LEEBA	42 SWAN
19 IBIS	43 WEAVER
20 KIEWIET	44 HORNBILL
21 KWIKKIE	45 UGAGA
22 STARLING	

Rustenburg traffic flow eased

Traffic flow in Rustenburg will have improved substantially by the end of the year when a major project in this fast-growing town is completed. The project is the upgrading of the R24 which is situated on the outskirts of Rustenburg.

The R24 is currently a single-lane road that has recently been incorporated into the SANRAL network. The road serves as a link between Rustenburg and other towns and provides access to the N4, Rustenburg's industrial area as well as various small holdings next to the road.

Rustenburg has experienced significant development and expansion in recent years due to mining activities. Major developments occurred along the R24 which have changed the road's status to an urban arterial.

Hennie Kotze, SANRAL's Senior Project Engineer for this upgrade, said the province has identified the need to upgrade the R24 from a single to a double lane carriageway in order to cater for the increased traffic volumes as a result of numerous developments taking place in the area. He said, *"The increased capacity will also reduce heavy congestion during peak hours that is currently being experienced on the road and also on feeder roads as a result of the lack of capacity on the R24."*

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

The project started in March 2013 and will be completed in October 2015 at an estimated cost of R194.9 million. The work is being undertaken by Lonerock Construction. Kotze said as part of the deal, SANRAL recommended to the contractor that 12% of the value of work should be allocated to local SMMEs and employment of local labour – a move which will contribute to job creation and skills development in the area.

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



New building method will save time and money



If all goes according to plan, a historical moment in bridge construction will occur in mid-2016 when the longest incrementally launched bridge in South Africa is completed.

The 1km long bridge will form part of the improvements being undertaken at the N2/M41 Mt Edgecombe Interchange north of Durban, connecting Phoenix and uMhlanga with Durban and the North Coast of KwaZulu-Natal.

Incremental launching is a relatively recent method of building a complete bridge and can save time, money,

space and disruption while easing access and delivering a high quality finish.

It involves casting 12-30m long sections of the bridge superstructure in a stationary formwork behind an abutment and pushing a completed section forward along the bridge axis. The sections are cast contiguously and then stressed together.

Corne Roux, project manager for SANRAL Eastern Region, said due to the expansion of the uMhlanga and La Lucia Ridge areas, the existing interchange is operating at capacity with vehicles backing up on the M41 and onto the N2 in peak hours.

"An additional 40 000 vehicles enter or leave the N2 from the M41 daily resulting in substantial queuing of vehicles during the day.

"This, together with expected future expansions and anticipated development of the Cornubia area, required

the existing interchange to be upgraded at a cost of R816 million in order to improve the flow to and from the N2 and M41 to the supporting road network."

Roux said the new four-level interchange facility would provide at least two lanes on each of the major movements. The upgrade includes the implementation of directional ramps which will eliminate the need for controlled signalisation, thus ensuring free flow of traffic in all directions.

The construction of the interchange, which is jointly funded by SANRAL and the KwaZulu-Natal Department of Transport, is being undertaken by Italian construction company CMC di Ravenna, with construction being supervised by engineering and development consultant, SMEC South Africa.

Henk Kaal, Senior Engineer at SMEC who is overseeing the N2/M41 Mt Edgecombe Interchange, said the main advantages for using the incremental launching method rather than other traditional methods, are the minimal disturbance to environmentally sensitive areas, the need for a smaller assembly zone, less disruption to traffic, and greater safety for motorists and pedestrians during construction.





New expressway mooted for N3

The safety of road users and the macro-economic benefits of the planned N3 Development Expressway between KwaZulu-Natal and Gauteng were highlighted at a media site visit that SANRAL hosted.

SANRAL's Communications Manager, Vusi Mona said once the proposed highway has been completed, it will significantly ease the congestion on the current Van Reenen's Pass route and will result in higher levels of safety, comfort and productivity for all road users.

"Should the expressway be constructed, it will be an entirely new stretch of highway across the Drakensberg escarpment in the vicinity of the existing De Beers Pass. It will be a 99km four-lane highway that will link Keeversfontein (Tugela Toll Plaza) in KwaZulu-Natal with Warden in the Free State Province," Mona said.

The new route will be 15km shorter, its grades will be much flatter and its alignment will be much smoother without the sharp and many curves of the existing N3 route. Much time will be saved and better levels of service will result in improved safety and a reduction in accidents.

The existing Van Reenen's Pass route, built in 1961, is no longer able to effectively handle the growth in traffic volumes. In recent years the number of accidents on the route had increased, resulting in scores of fatalities and road users being inconvenienced through sporadic road closures.

Accidents and road closures are regular occurrences on the Van Reenen's Pass due to the steepness of the road and the sharp and many curves. It is particularly hazardous to drive during cold and wet weather.

"Total closure time increased from just less than 80 hours on the southbound road in 2011 to 95.6 hours in 2013. On the northbound road this grew from 88.25 to 102 hours. The economic impact of road closures translates into tens of millions of rands," Mona said.

The N3 route has been identified as one of the priorities of the government's multibillion rand Strategic Infrastructure Project which is crucial to unblocking economic development and providing much needed capacity along key freight corridors in South Africa.

Construction of the expressway route is crucial to plans to develop the Durban-Free State-Gauteng logistics and industrial corridor, which is vital to the future of the national and regional economies. This new project will not result in additional toll plazas along the N3.

"With Durban handling over 40% of the country's imports and exports, and Gauteng being the country's economic heartland generating over 33% of the country's gross

domestic product, the Durban-Free State-Gauteng corridor is by far the most important economic corridor in the country and this route will directly contribute approximately R4.4 billion annually towards South Africa's GDP," said Mona.

"We don't want this to be a project done to the people but with the people..."

Vusi Mona
SANRAL Spokeperson

He said the agency was aware of the opposition of the project by some of the locals in and around Harrismith. *"We don't want this to be a project done to the people but with the people. That is why we were part of the Imbizo in Harrismith convened by Transport Minister Dipuo Peters. We are confident that through her leadership and consultation with the Free State Provincial Government and stakeholders in the community, a solution will be found."*

An R8 billion commitment TO THE FREE STATE

SANRAL does not only build some of the best roads in the world, it is proud of its long-standing tradition of doing so much more – education, skills transfer, assisting SMMEs, investing in communities and road safety.

It has particularly close ties with the University of the Free State in the provincial capital, Bloemfontein. The roads agency and the university launched a new chair in science, mathematics and technology education only last year, with SANRAL contributing R30 million over five years.

This is in addition to its long-standing joint initiative with the university to boost science and mathematics amongst school learners as well as its scholarship programme which was launched in 2008.

When SANRAL constructs new roads and maintains existing ones, communities along these roads are engaged and given a leg-up. SMMEs are contracted to do some of the work, they are assisted to boost their knowledge and abilities and thus create employment. The workers are educated so that skills are left behind when the construction work has been completed and finding a new job will be easier.

Of course, SANRAL's primary responsibilities lie with the roads which fall under its jurisdiction – all national or N-roads and those provincial or R-roads which have been incorporated into the network by the relevant provincial authorities.

How committed the roads agency is to the Free State can be gauged by the fact that it is currently engaged on 28 projects which are at various stages of development – at a cost of some R8 billion.



The agency is upgrading and building some roads, while it is also doing periodic maintenance, building new interchanges and pedestrian facilities and improving a traffic control centre.

In all it does, SANRAL takes care of the environment and how it may be damaged by any of its activities. Environmental assessments precede all major works and, as can be expected, local communities are engaged.

It is slap bang in the middle of South Africa, surrounded by six of the country's nine provinces and borders on a foreign country. It is the Free State, a province in which SANRAL is investing heavily in a wide range of areas.

The bulk of the funding for these activities comes from the national fiscus and where there is a shortfall, public-private partnerships are created and a small number of roads are tolled – something which in the Free State occurs only on the N1 close to the Gauteng border.

Fundamentally, SANRAL stands for excellent roads and meaningful community engagement.

A 360 view of SANRAL's work in the Free State

SANRAL's commitment to the Free State is best illustrated by citing practical examples.

One is the construction of an interchange and overpass at Thaba Nchu on the N8. The project is located south of Thaba Nchu. A pedestrian bridge was added due to some 400 school children who were crossing at this section of the road daily which made it unsafe for them.

Construction commenced at the beginning of January 2011 and was completed in April 2014 at a total cost of more than R101 million.

But SANRAL does more than build roads. During the construction period 157 people, including site staff, were employed. The total cost spent on labour was almost R19 million. There were three SMME subcontractors employed on this contract and the total spent on them was some R32 million. A total of 138 employees were trained at a cost of R334 000.

Another example is the maintenance of the N5 between Paul Roux and Senekal.

The need for the periodic maintenance intervention on this section, which has been subject to a significant

growth in the number of vehicles per day, was identified by SANRAL's pavement management system.

Road works commenced at the beginning of September 2014 and will be completed at the end of June 2015 at a total cost of R70 million. The construction period is 10 months.

Four SMMEs are employed on site and the total spend on them was R6.5 million while 137 people were employed.

A total of 46 employees were trained at a total cost of R59 000. Three students from the community who have been employed on this project received intern training towards their Civil Engineering Diplomas.

An example of the rehabilitation of a road is that of the existing N6 between Onze Rust and Bloemfontein. It is a two-lane single carriageway without any paved shoulders up to the start of Church Street with paved shoulders up to the N1, south of Bloemfontein.

The road was originally constructed in the 1950's, reconstructed in 1970 and repaired and resealed in 1996. It was declared a national road in 2003.

The road surface has exceeded its structural life with maintenance actions becoming uneconomical. A contract for the rehabilitation of this road commenced in January 2014 and it is estimated to be completed by July 2015.

As part of this contract, the existing pavement is strengthened by the addition of new road surface layers and the construction of surfaced shoulders. The section between Church Street and the N1 received an asphalt overlay.

Also included in this contract is the reconstruction of the N6/Church street intersection to improve safety as well as the construction of a new bridge over the Kaalspruit.

R159 million is estimated to be spent on this project of which R11.5 million has already been spent on wages in the employment of 145 persons thus far.

Some R436 000 was spent on 29 employees who benefited from training courses.



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It has four major routes running through it, its ancestors include three different state entities, it borders on a foreign country and is just too big to see all there is to see in a single trip – even if you travel on the world-class national roads.

It is the North West province, which borders on Botswana, to the west of Gauteng and the Free State with the northern Cape to the south, traversed by the N4, N12, N14 and, almost as an afterthought, a short bit of the N1 as it goes north to the border with Zimbabwe.

And the rest of the other major roads are beyond good – SANRAL took over 1 352km of provincial roads in 2012 and upgraded them at a cost of a billion rand.

The province consists of the former homeland Bophuthatswana and parts of the former Transvaal and Cape provinces. Its economy is mainly based on mining but agriculture and tourism are also major catalysts for development.

Known as the Platinum Province because it is such a major producer of this mineral, it also mines gold, uranium and diamonds while maize, cotton, sunflowers, cattle, sheep and game farming are important.

There is much to do in the North West – gambling at a pleasure resort, boating on lovely big dams, two major game reserves and an historical city.

To start with the latter: Mahikeng in the west is the provincial capital, known initially because the infamous Jameson Raid was launched from it with the intention to topple Paul Kruger's South African Republic. It failed, but the Anglo-Boer War broke out four years later and the city became

known world-wide when the Boer forces besieged it for 217 days.

It was also here that Col. Baden-Powell conceived his idea of the Boy Scout Movement – which is now global.

It was at this time that the later president of the African National Congress wrote his literary masterpiece: The Boer War Diary of Sol T Plaatje: an African at Mafikeng.

The city still has many historical buildings but now also recognises the history and role of its black citizens. It houses a campus of the Northwest University.

The local game reserve has a wide variety of animals and, very important, is one of the principal breeding areas for the White Rhino.

Further away, on the Botswana border, is the Madikwe Game Reserve which is home to the Big Five as part of its 66 large mammal and 300 bird species. It was started because it was the best option for such an economically depressed area. It is a joint venture between the state, private sector and local communities.

If you just love wide open spaces, this is the place for you – vast plains of woodlands and grasslands, and excellent accommodation.

Driving east from there to Johannesburg one gets to another popular game reserve which is only a two-hour drive from

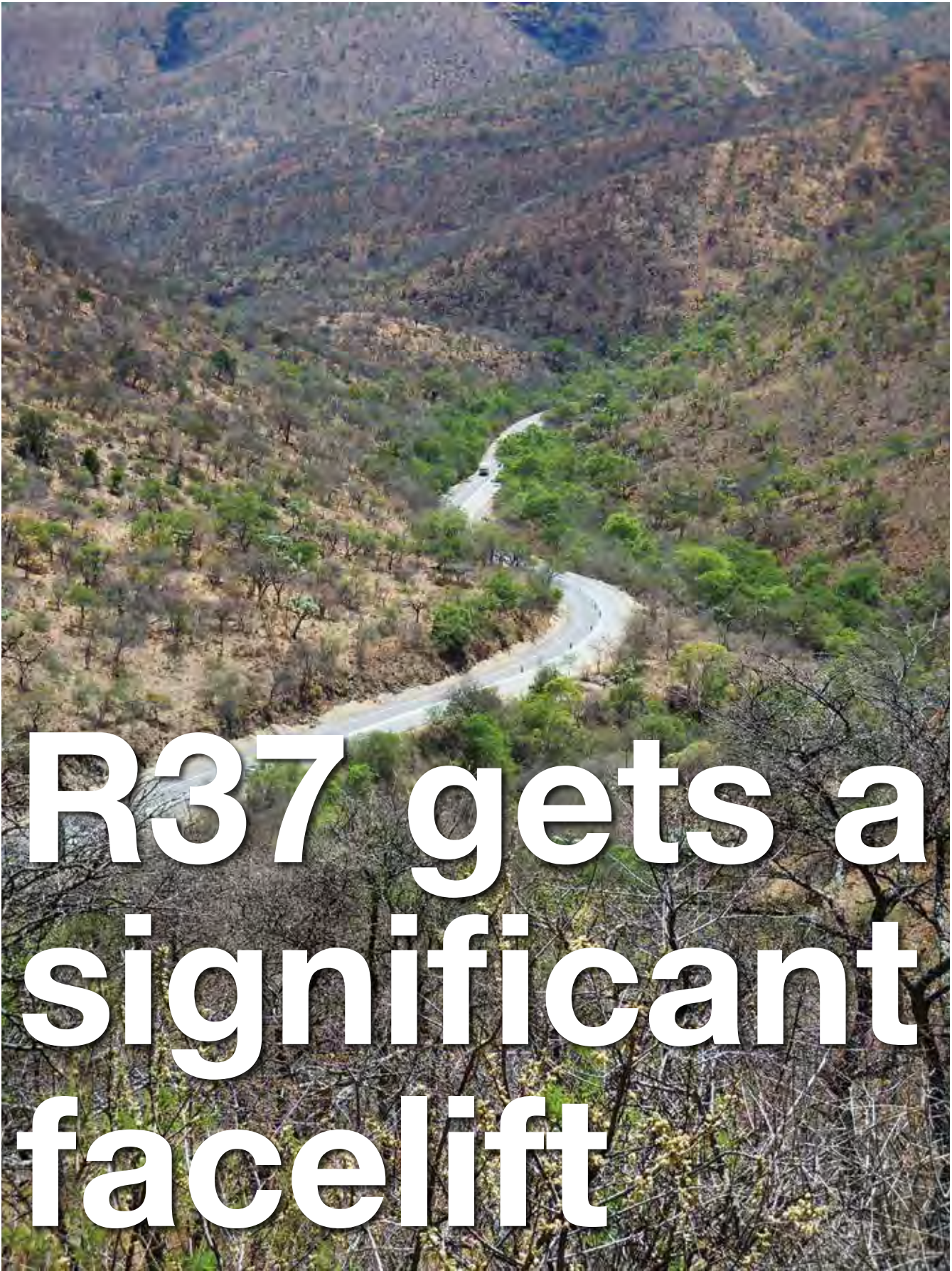
Johannesburg: Pilanesberg. It is set in an ancient volcanic crater and supports a wide variety of animals, birds and plants. And, again, the Big Five, plus wild dogs and the brown hyena.

As is the case with Madikwe, it used to be farmland which had to be rehabilitated before animals could be brought in. Operation Genesis at the end of the Seventies was the largest game translocation in the world. Six thousand animals were moved.

Next door is Sun City, sometimes called Fun City, internationally known for its gambling, Gary Player Golf Course, adventure sports and safari options, rides and games for the children, sitting poolside at the Valley of the Waves, revues and live music shows – an experience of a different kind.

Even closer to Johannesburg is the Hartebeespoort Dam with a shoreline of 56km, offering a wide variety of things to do. To name some: all water sports, air ballooning, hikes and rambles. It nestles against the picturesque Magaliesberg Mountains.

Then there are parts of two UNESCO World Heritage Sites, the Vredefort Dome and the Taung Fossil Site, the latter on the Cradle of Humankind, which houses Nirox, famous for its sculpture exhibitions, jazz concerts and poetry readings. You can see all of these because you can travel on wonderful roads!



R37 gets a significant facelift

The bad road conditions that have plagued the R37 will soon be a thing of the past. SANRAL is currently undertaking a major makeover of the road which connects Polokwane with Nelspruit via Burgersfort and Lydenburg.

SANRAL appointed G4 Civils/ Jodan Construction Joint Venture for the reconstruction of the R37. The changes are made to make the road safer for road users and to protect this valuable road asset. The reconstruction of the R37 between Burgersfort and Lydenburg started in March 2014 and will be completed in December 2015.

The construction period of the project is 20 months. This particular project does not cover the entire length of road between Burgersfort and Lydenburg but only covers a 36km section.

"The project entails the partial reconstruction of the road pavement, the widening of the traffic lanes and shoulders of the road and the provision of new surfacing over a distance of some 36km. A number of safety improvements are also being implemented. The project is on track for completion by the end of this year. We are approximately 80% complete with the reconstruction of the road," said Project Manager, Hannes van der Merwe.

The reconstruction would cost SANRAL approximately R165 million to complete. Local labour has already benefited during the construction as approximately R5.74 million has gone towards their employment in various fields. Small and Medium Micro Enterprises (SMMEs) stand to receive R10.86 million from the project.

"A number of job opportunities were created during the reconstruction and the local communities from Burgersfort and Lydenburg benefitted from this project. The community further benefitted through skills training and development during the construction. Various training providers were utilised for the programmes, including engineering, entrepreneurial and generic skills," said Van der Merwe.

The reconstruction has not been without challenges. These include the difficulty of working in the mountain pass area, the quality of the in-situ materials of the road as well as the cold winter conditions of the area. The contractor is not able to construct certain surfacing layers due to the low daily winter temperatures.

The reconstruction of the road is said to come at a price, both financially and in terms of travel time delays. SANRAL appeals to the public to be patient and continue obeying the rules of the road during reconstruction.

"Due to the improved riding surface of the road, we are observing that the travelled speed on the road is on the increase. We urge motorists to adhere to the posted speed limits and to obey all road traffic signs and markings for instance, not overtaking lines. By ignoring the painted barrier lines and overtaking vehicles, motorists are not only endangering their own lives but also the lives of others.



"We apologise for any inconvenience caused during construction and the inevitable time delays but believe that on completion, the road will be safer and ensure a better and uninterrupted journey to the road user. It is only with the co-operation of the public that this project can be completed safely and be to the benefit of road users. By disregarding the closures or by overtaking within work zones, the safety of not only the construction workers but also other motorists is put at risk.

"We are all looking forward to the successful completion of the R37 road between Burgersfort and Lydenburg"...

Hannes van der Merwe
Project Manager

THE N7

A major economic artery gets a total make-over

The N7 along the West Coast is an important national route which connects the Western Cape with the Northern Cape right up to the border with Namibia.

SANRAL is in the process of upgrading vast stretches of this major economic artery. Derek Wilson is one of several project managers overseeing the improvement and construction projects. He is in charge of the section between Citrusdal and Cederberg – a distance of almost 27km. The total investment is about R450 million.

He says the section between the two towns carries more than 3 000 vehicles per day of which 20% are heavy vehicles transporting goods between South Africa and Namibia. *"The improvement of this part of the N7, which was originally constructed around 1957, was long overdue due to the increased volume of traffic and poor condition of the road surface."*

Work on the project started in May 2012 and is expected to be completed by the end of August this year.

The scope of the work includes widening the road from 7.4m to 12.4m and the provision of climbing lanes at various points along this very hilly route to provide safe passing opportunities on steep sections. *"Once completed, drivers will be able to travel safely up to speeds of 120km/h on this stretch of road which means savings in time and vehicle operating costs,"* said Wilson.

One of the challenges for the contractors working on the project is to maintain two-way traffic as far as possible while they are busy constructing the one half of the carriageway.

"During construction in 2013 we experienced some abnormal weather conditions which caused cracks that develop in the cuttings which then resulted in the cutting to slip. A small portion of the road has been realigned away from the cuttings, which resulted in the construction of a retaining wall."

Wilson says another challenge for the contractors and SANRAL is to adhere to all environmental laws and regulations. For instance, they needed to identify and protect all endangered plant species along the route. *"Before any construction took place, the environmentalists had to carry out a 'search and rescue' operation on the fauna and flora."* The contractor must also adhere to all environmental regulations regarding fuel and bitumen spills on the construction sites and do clean-ups where necessary.

This improvement contract is set up in such a way that the contractor must spend 6% on local labour and 12% on black empowered SMMEs.

The road construction has had a positive impact on the communities along the N7. While the number of temporary jobs vary from month to month, there are currently 252 labourers from surrounding towns working on the project. The employment costs to the end of March came to just more than R41 million, which far exceeds the 6% target.

The value of work for black empowered SMME sub-contractors was almost R51 million and was allocated at the end of March 2015.

Lucien Smith, from the contractors Haw & Ingliis, says skills transfer to sub-contractors is an important part of the investment in the development of SMMEs. Formal courses presented to the SMMEs included tendering and pricing. *"We also employed and train tradesmen from local towns such as carpenters, truck drivers and machine operators."*

Shops in surrounding towns such as Citrusdal also benefit from the construction as they get increased business from contractors and subcontractors working on the N7 improvement project.

Before any construction took place, the environmentalists had to carry out a 'search and rescue' operation on the fauna and flora.



Three ways to FUND ROADS

SANRAL roads are funded in three ways - an annual budget allocation from the Treasury, public-private partnerships and the issuance of bonds and loans. This is necessary because there simply is not enough money in the national budget to fund all the building, upgrading and maintaining of the national road network.

The budget allocation for this year is R12.5 billion and goes to the 85% of SANRAL roads which are not tolled. The other 15% are tolled roads which are run by concessionaires or, as is the case on the inner Gauteng highways, through e-tolling.

Cross-subsidisation is not allowed so the toll roads have to be self-funding, thus the issuance of bonds and loans. These roads are then serviced by the revenue thus generated.

Basically a bond auction is where individuals or companies (called investors) buy your debt by bidding a price on how much (volume) they will lend to you.

For example, an investor will bid that they want to buy R300 million of a bond at a specific price of 80 basis points (called spread). Once the auction closes, the issuer (SANRAL) decides the cut-off price or volume (amount of money). All the investors with bids on or below that price then get the bonds allocated to them.

The investor is then paid interest (coupon) on a bi-annual basis as his return on investment. When the bond matures (2035) it means that the capital amount must be repaid, i.e. the R300 million. All the bonds have different maturities and coupon rates, some are fixed and some are linked to inflation.

SANRAL sells bonds at monthly auctions to raise funds for toll roads only. Funding provided by Treasury is insufficient and ring-fenced for non-toll roads. The funds are required to cover all costs for operations, maintenance of roads as well the repayment of debt and interest thereon.

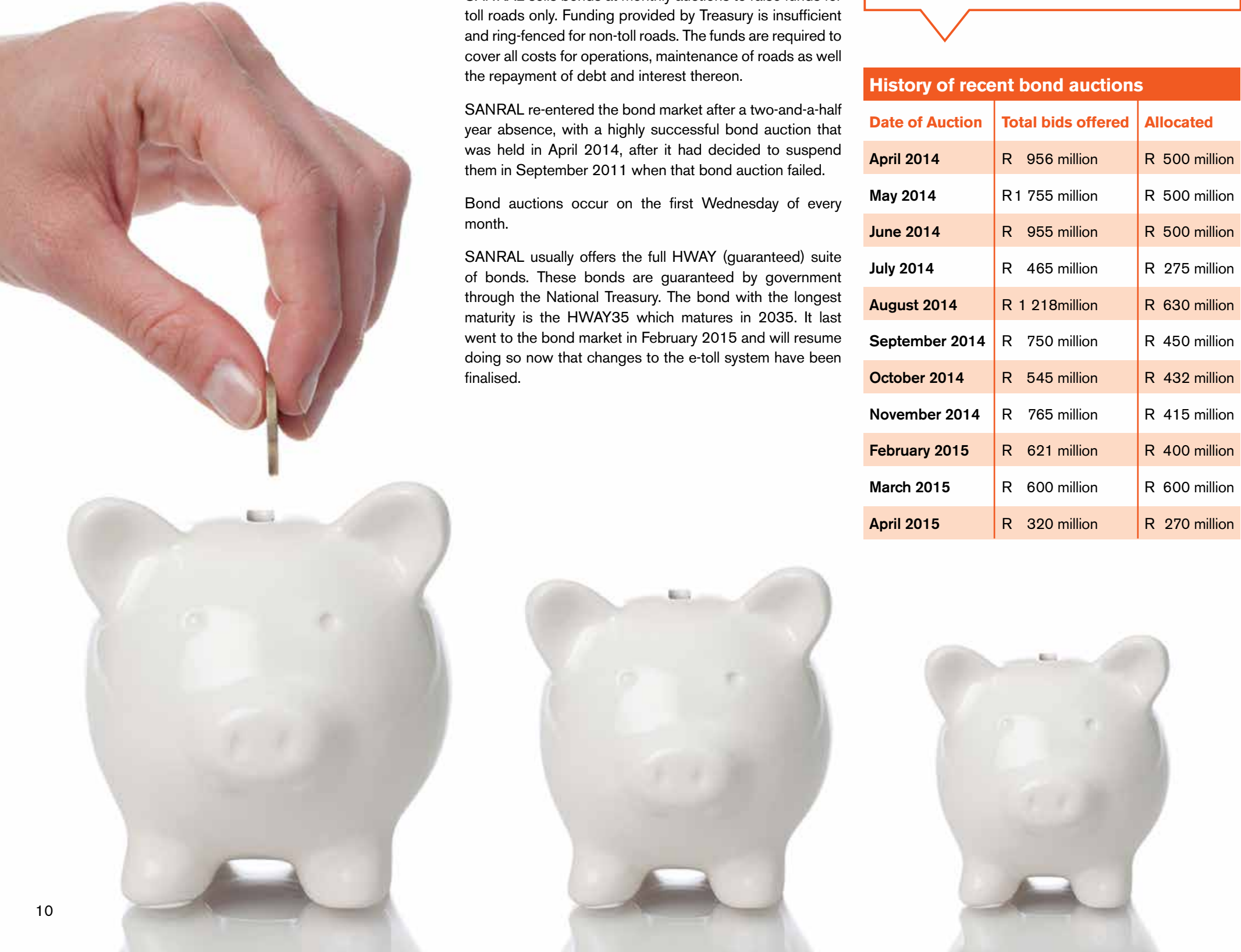
SANRAL re-entered the bond market after a two-and-a-half year absence, with a highly successful bond auction that was held in April 2014, after it had decided to suspend them in September 2011 when that bond auction failed.

Bond auctions occur on the first Wednesday of every month.

SANRAL usually offers the full HWAY (guaranteed) suite of bonds. These bonds are guaranteed by government through the National Treasury. The bond with the longest maturity is the HWAY35 which matures in 2035. It last went to the bond market in February 2015 and will resume doing so now that changes to the e-toll system have been finalised.

Cross-subsidisation is not allowed so the toll roads have to be self-funding, thus the issuance of bonds and loans. These roads are then serviced by the revenue thus generated.

History of recent bond auctions			
Date of Auction	Total bids offered	Allocated	
April 2014	R 956 million	R 500 million	
May 2014	R 1 755 million	R 500 million	
June 2014	R 955 million	R 500 million	
July 2014	R 465 million	R 275 million	
August 2014	R 1 218million	R 630 million	
September 2014	R 750 million	R 450 million	
October 2014	R 545 million	R 432 million	
November 2014	R 765 million	R 415 million	
February 2015	R 621 million	R 400 million	
March 2015	R 600 million	R 600 million	
April 2015	R 320 million	R 270 million	



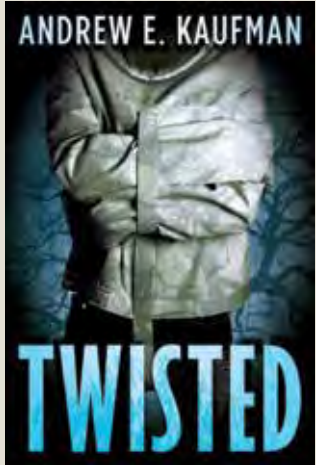
Books for the long road

Book Review



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

The book market for thrillers has been inundated by tales of revenge, psychology, gruesome killings, heartless aliens, obsessive wives and murderous kin. Alas, not a clever, manipulative, sex-crazed spy a-la-James Bond in sight, but the harvest is rich in entertainment, reading value and expertise.



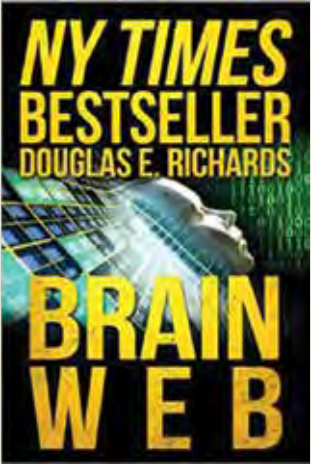
Twisted
Andrew E. Kaufman

This taut psychological thriller takes readers on an immense, draining journey. And for days your mind will stay with the two men you met here: Dr Christopher Kellan, the psychologist with a troubled past and Donny Ray Smith, his newest patient, a man accused of killing ten young girls and making their bodies disappear. The healer is a tormented man and the mind of the killer could dissolve sanity all round.

The characters are twisted out of initial proportions and churn through the reader's mind. One is taken on a wild confusing flight through landscapes of sanity and insanity. Who is sound of mind and who is deranged? Who is steadfast and sane, and who is unravelling day by day?

This is not a book to read in postponed sessions. Dive right in and swim. And be careful of all the deviations and obstacles. They will surprise and perturb you right to the last page.

The Academy Awards are the Red Carpet highlights every year. A moment of pomp and circumstance, a focus on wealth and talent and beauty par excellence. Millions watch and envy, but what happens if that selfsame Academy Awards become the target of a brutal and horrifying attack? Where is the saviour, a Superman or Iron Man, or whoever to stop the carnage? Nobody to stop the unimaginable bloodshed?



Brain Web
Douglas Richards

Remember Nick Hall, the hero of the bestseller Mind's Eye? He is around and with his special ESP ability (Extra-Sensory Perception for those who have not met him before) he can stop this movie holocaust. Action, action all the way. Nick leads a special opps assault team, he is captured, his love Megan is at peril, then his friend Alex (who knows all about micro-computer brain implants,) becomes the target of his enemies.

Computer buffs can smile in satisfaction that they know all about the brain and the web, and how both can be affected and afflicted and abhorred and abandoned.

Brain Web is to be enjoyed page by page. Do not try to analyse too much. Enjoy the philosophical spins on technology and the thrills Richards offers.



The Game Master
William Bernhardt

This book is written for all the game players. Whether you love Poker or Charades, Monopoly or Ludo, Chess or Risk, or even ancient games nobody has even heard of. This author takes you along from game to game in a very clever and manipulative way. He prods why and how and when we play, whether it is for gain or to be winners or to just keep active and busy. He shows that there is method in all our madness for games.

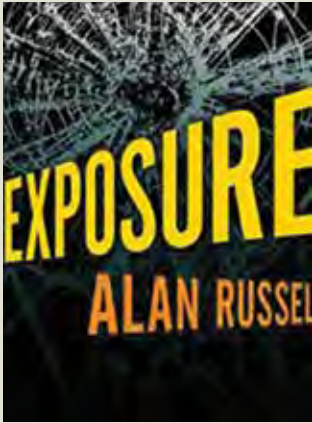
Meet BB Thomas, the master gamesman. He has won every game you can think of: American Poker Grand Slam, he is a chess master knows to be superb at

moving his Scrabble tiles, and he is an expert at human nature. Above all, he knows how to keep psychologically abreast of all his opponents.

The FBI manipulates him into solving a world-shattering mystery of killings, insidious plots by mystifying societies, age-old secrets and the possible destruction of every government on earth! A lot to swallow and to solve for one man who just loves to play games. But remember, he is the master.

Bernardt is known for his Ben Kincaid novels, the popular legal thrillers. BB Thomas has no legal mind but his human knowledge and superior games playing combine to make him the perfect opponent to the maniacal forces. With his ex-wife who is a mathematical genius assisting him, and motivated by that fact that the evil-doers are holding their daughter captive, he must save her to save the world.

A big dilemma, but our BB is the artful dodger of all plots and games and manoeuvres. Jump into this global game with him and remember there are other "masters" in play.



Exposure
Allan Russell

They keep the world in the know. They are the ones who give us visual and written exposés of all the beautiful, influential, scandalous, super-rich and news-making faces of our world.

They are the paparazzi, the chasing cameras, the curse on wheels and foot: the photojournalists of the seedy and sordid and adored. Allan Russell presents one of these men to us – paparazzo Graham Wells. Through an accident the cameras and attention are turned on him. He now feels the destructive quality of the spotlight, and how very life destroying a blackmailer can be. He becomes part of a messy plot to cause the downfall of celebrities and the murkiness of involvements, the tragedy of causing a suicide. He is caught in a spider's web of intrigue and lies and conspiracies. It is suspense of the highest order and our unusual hero – a camera-toting celebrity chaser – takes on Russian mobsters, a triad of villains and absolute mayhem.

In the process he becomes very human and compassionate. A must-read to vaguely understand what the famous have to cope with and endure.



By Nazir Alli – CEO SANRAL

Retaining the principle yet simplifying the operation – an elegant compromise.

That is the shortest summary of the new funding model for the toll-system on the Gauteng Freeway Improvement Project (GFIP) which has just been formally announced. It is important that two fundamental pillars of the model are recognised widely: they satisfy both the national Department of Transport's need to pay for world-class highways in South Africa's economic heartland and the political need to address various concerns which had been raised.

The National Treasury is under severe strain and cannot allocate more funds for road building and maintaining than it does at present. The social demands are just too big. Alternative funding models had to be found – thus e-tolling.

The announcement – and this is important too – came after the provincial government raised the concerns its citizens have about the GFIP tolls with the national government. Then followed a lengthy set of public hearings, which resulted in a report to the regional government which, based on these recommendations, adapted the workings of the toll system, without giving up the fundamental principle of the user pays for the service he benefits from.

ELEGANT compromise on e-tolls

The recommendations were then sent to the national government, which gave its inputs before the new dispensation was finalised and announced.

In short, the people were heard and after due process, they were accommodated in so far as it is practical.

With that as background, looking at some of the detail is helpful.

The new dispensation is not an amnesty for unpaid e-toll bills. You drove under a gantry, you have to pay. As a further accommodation, a six-month grace period is built in so that lagging payers can catch up, with a 60% discount added in.

But bills have to be paid. The penalty for non-compliance is severe. The national registry of which vehicles belong to whom, eNatis, will be flagged and car licence discs will only be issued after all outstanding bills have been paid.

To repeat: there is no amnesty, it is better to pay.

The new funding model has two advantages. While it does not get rid of e-tolls, it does reduce the payable e-tolls and simplifies the range of tariffs.

The new model applies to all types of vehicles – motor cycles, light vehicles, small heavy vehicles, large heavy vehicles, the whole range excepting public transport in the form of buses and registered taxis. These are still exempt should they be registered.

It is important, too, to note that the maximum cap is drastically reduced – almost half of what it previously was. A new feature is that infrequent users who go under fewer than 30 gantries in a year will not have to pay anything.

So, if you are an occasional visitor to Gauteng, you will not be affected by the e-tolls.

Essentially then, this is a democracy at work, from the bottom up but taking into account what is possible and what not.

So, if you are an occasional visitor to Gauteng, you will not be affected by the e-tolls.

Nazir Alli
CEO SANRAL

Not only is the principle of e-tolls retained but – do not forget – so are all the benefits. There still are multiple lanes, alternate routes, lessened congestion, less time on the road, improved safety as a result of improved lighting and cameras to monitor all incidents.

Not noted enough is that as a result of e-tolling, Gauteng has lost out to the Western Cape – the Mother City is now the most congested place in South Africa. The long hours spent on the N1 and N2 around Cape Town is a negative for productivity, time spent with the family, vehicles costs, sense of well-being.

The new funding model does one further vital thing. As with the old model, it is not a burden on the poor as less than 1% of those are thus defined actually use the GFIP.

In essence, it is the same principle at a lower cost to road users while initial construction debts can still be repaid.



Course at the University of the Free State excellent

This past Saturday, or Valentine's Day, I and a fellow Edenburger had the privilege of accompanying a group of pre-school teachers from several nursery schools and Grades R in our area, and almost all from previously disadvantaged backgrounds. We attended a Family Math work session which was specifically developed for them and presented by the personnel of the University of the Free State's unit for science for the future.

I can't praise the personnel enough. With the various challenges that our country still faces, I am reminded of the following well-known Chinese saying: the best time to plant a tree, is 20 years ago. The second best time is now.

This is exactly what Dr Cobus van Breda and his colleagues do. All arrangements during the day were exceptionally professional and the programme ran flawlessly until load shedding kicked in right at the end – as if it just waited for us to finish.

Eskom possibly took note of how great the work is which is done here.

This is truly something that the sponsors of the project, SANRAL in particular, can be proud of.

I can just hope that more pre-school teachers from rural and disadvantaged areas will get this kind of support. Anybody who has been exposed to the circumstances in which many of the children are supposed to get school-ready, will know this is essential. The event of the day was dedicated to Mrs. Elizna Prinsloo who originally handled the project and whose passion for her work made a lasting impression on everyone.

Die Edenburger

Letter first published in Volksblad on 18 Feb 2015.

Dear Sanral

My apologies for taking so long, some of the parents wanted to write letters on their own so I had to wait for them. The School Governing Body, teachers, parents and

learners hereby convey their unreservedly sincere thanks to what you have done for them.

In my own opinion you gave them life. These bags will protect their future bread for life. Our community is so poor but you bridged that gap. When they are carrying these they walk tall and feel very rich. Before when they were carrying books it became very problematic when it rained, they got wet. I hope this is the start of shining the future of these kids which they will never forget in their entire lives.

Thanks to everyone who made this possible, may the Almighty bless you.

I thank you.

Sincerely
Patrick Ndlovu (Head Master)
Curry's Post Primary





N3Toll Concession (RF) Proprietary Limited
1st Floor, Block D, Southdowns, Office Park
c/o John Vorster Drive & Karoo Street, Irene

CHANGING ATTITUDES

through art and play

SANRAL was one of the popular exhibitors at the annual Rand Easter Show this year. It is South Africa's oldest and best-loved consumer show, with lots to see and do.



It has been an important event in the city for many years, attracting an average of 400 000 visitors every year. For generations, it has been entertaining people, connecting them with brands, showing them what's new and exciting, hooking them up with great show bargains and creating memories.

SANRAL was amongst the exhibitors that brought some flavour to the event. The target audience this year were young people. In line with its strategy to raise awareness of road safety in South Africa, SANRAL took its road safety initiative, Chekicoast, to the Rand Show.

Elna Fourie, Development Planner at SANRAL, said road safety formed part of SANRAL's strategic vision. "Over the last two years we researched how best we can make our roads safer and better engineered for the South African public. We embarked on a road safety research project which was a longitudinal study over a three-year period. Part of that research was to test and check the behaviour of Grade Six learners," she said.

Fourie said the results of that research were disappointing, because it was realised that the learners could not apply and practice the theory they learnt in real-life situations. This led to a number of initiatives to make learning more practical, suitable and learner-friendly, and SANRAL is currently working with the University of Pretoria in this regard.

The Rand Show also provided SANRAL's Chekicoast team with the platform to reach out to their target audience by offering children fun and entertainment through a number of games and activities designed to teach them about road safety.

"Our children walk to school and back. An initiative like this by SANRAL will go a long way towards teaching them to observe the rules of the road, and to take road safety seriously."

Parent

One parent whose young children also participated in the games was very impressed with the innovative ways that SANRAL used to educate children about road safety.

One parent said: "Our children are also road users, as most of them walk to school and back. An initiative like this by SANRAL will go a long way towards teaching them to observe the rules of the road, and to take road safety seriously. It will also inculcate the culture of safety in them right from an early age."

Fourie said SANRAL will continue working with schools and other authorities to instil this kind of culture amongst young children.



The art of road safety

During April, SANRAL CEO Nazir Alli announced the winners of its road safety art competition at a ceremony held in Pretoria. The yearly contest is aimed at increasing road safety awareness amongst learners and young adults by engaging them through art.

Alli said the competition was part of SANRAL's Chekicoast – Save a Life road safety campaign and supported the efforts of the Department of Transport's safety initiatives.

"Our campaign is aimed at both drivers and pedestrians. Its aim is to instil the correct behaviour in children from a young age and we believe that this will impact the rest of society," said Alli.

SANRAL's, Elna Fourie said that the message of road safety is an important one and that art is a powerful medium through which to communicate it. "The number of road deaths and incidents that we continue to see is unacceptable. Through Chekicoast, SANRAL takes responsibility to do its part to ensure safety on the roads," she said.

From creations by Avuyile Makubalo, a seven-year-old grade three pupil, to Gabrielle Lourens in the Grade 10 to 12 category, the artists' winning works amplified the message that South Africa's roads are owned by all South Africans and must be shared.

Entries were judged on a number of criteria such as creativity, how well they were linked to the theme as well as the correct use of traffic signs and signals.

All pupils are eligible to participate in one of the four categories – grades one to three, four to six, seven to nine and ten to twelve. The top award in each of the four categories carried a prize of a gift voucher to the value of R5 000.

Entries for the 2015 edition of the competition will soon be open and aspiring young artists can participate in one of the following categories:

• Foundation phase	Grade R3
• Primary School	Grade 4-6
• High School	Grade 7-9
• High School	Grade 10-12
• University / Tertiary years	1-3.





Saving leopards along the N4

The Bakwena Platinum Corridor Concessionaire embarked on a joint research project in 2014 with the North West Province Department of Environment, Economic Development, Conservation & Tourism to track the movements of leopards in the Magaliesberg.

Four leopards were rescued from a game farm and three were subsequently released.

A tracking collar sponsored by Bakwena, was attached to one female leopard (Shera) who was released in August 2014 after receiving root canal treatment. A second leopard (Brandy) was released earlier in June 2014 and has recently given birth to two cubs.

Their collars continue to provide information useful to the conservation authorities who analyse the GPS data and camera footage to improve management plans for leopards.

The data from both these leopards has been used by the authorities, in North West Province to reduce the number of leopard hunting permits issued annually from 20 to 10 – a reduction of 50.

A further achievement is that a total ban on hunting leopards in the Magaliesberg area has been enforced, and this is to ensure sufficient breeding takes place in the Magaliesberg mountains – a stronghold for this species.

Bakwena is responsible for the N4, from Pretoria right to the Botswana border.

Working together to achieve more

It takes collective efforts to achieve positive change

Consider a road as an organism, a complex system linking many interdependent parts, relations, activities and functions which are vital to continued socio-economic growth and a sustainable future. This is how N3 Toll Concession (N3TC) views its role and responsibility in South African society.

N3TC is responsible for the N3 Toll Route between Gauteng and KwaZulu-Natal.

Its business model makes provision for collaborative partnerships to help unlock the potential along the 415km stretch of road. Economic value is added through the procurement of services from small and medium enterprises and to empower independent operators through a number of training and mentorship opportunities.

N3TC has developed formalised processes for potential partners to obtain funding according to stringent evaluation and measurement criteria. In the last four years, it went on to develop the concept of the N3TC 2029 Legacy Programme which includes:

- Education
- Socio-economic development
- Tourism
- Environment and conservation
- Road Safety

It includes, amongst others, the N3 Gateway Tourism Association which was initiated seven years ago and continues to be funded by N3TC. It is a thriving non-profit company that traverses KwaZulu-Natal, the Free State, Mpumalanga and Gauteng that fosters collaborative partnerships to market tourism to the region and in so doing promotes economic development.

During the 2014 financial year, 57 963 people benefitted directly from N3TC's Touching Lives initiatives. Apart from the Legacy Projects, N3TC funds projects involved in education, enterprise development, bursaries and scholarships, environment, tourism, child welfare, road safety, youth development, disabled support, HIV and AIDS and heritage.



A really safe road

For the third consecutive year, no fatalities have occurred on the N4 over the Easter week-end which is a national route for which Trans African Concessions (TRAC) is responsible.

This was certainly one of the busiest periods on the toll road, and although 42 accidents were recorded from Thursday 2 April to Monday 6 April (three in Gauteng, 17 on the Highveld and 22 in the Lowveld), none were fatal.

Given that the hourly traffic flow at most of the plazas reached the highest figures ever recorded, this is indeed a remarkable feat which TRAC attributes to excellent teamwork by all involved in promoting and monitoring road safety along the route which runs from Pretoria to the Mozambican border.

One of the key contributors to keeping the N4 fatality-free was the TRAC Easter Rescue and Road Safety Campaign. This annual project saw the bulk of Mpumalanga Emergency Services and TRAC Assist teams, stationed at Alzu Petropport near Middelburg and smaller units deployed to strategic points along the highway.

This initiative went a long way in promoting road safety as it boosted visibility of authorities and allowed road users to connect with them and gain valuable information and knowledge on road regulations and safety.

It also ensured that the response time to accidents and incidents was minimised, thus ensuring very little disruption to traffic flow.

Another element was the high visibility of traffic and law-enforcement authorities throughout the 570km-route. Their constant presence ensured that motorists were more road-safety conscious and respected road rules and regulations.

However, such an achievement would not have been possible without the cooperation of the road users. TRAC believes that road safety is everyone's responsibility and the N4 Toll Route will continue becoming safer and better as long as this philosophy is applied by all who use it.



Soup it up on the road

Padkos

Roasted tomato and red pepper soup

(Serves 4)

Olive oil
1.5kg ripe tomatoes of your choice, quartered
2 red onion, quartered
2 red peppers, deseeded and cut into chunky pieces
4 garlic cloves, kept whole
salt and freshly ground black pepper
4 fresh thyme sprigs
1t brown sugar
¼t ground cinnamon
1L chicken stock
Tobasco sauce for serving (optional)
cream for serving (optional)

1. Preheat the oven at 200 °C.
2. Combine the tomato, onion, peppers and garlic in bowl and season with olive oil, salt and pepper.
3. Lay it out on a baking tray with the thyme and the sugar and roast in the oven until sweet and slightly charred.
4. Pick out the garlic from the roast vegetables and squeeze the juicy flesh out into the stock, discarding the skins.
5. Pour the roasted vegetables with the stock into a pot and blend with a stick blender until smooth.
6. Taste and adjust the seasoning if required.
7. Serve with a drizzle of fresh cream and a few drops of Tobasco sauce.

Warm double cheese, ham and chutney sandwich

(Serves 4)

1 demi baguette
butter
chutney
4 slices country ham
50g sliced mature cheddar cheese
50g sliced brie cheese

1. Cut the baguette open and butter.
2. Spread with the chutney and fill with the sliced cheese and ham. Press as flat as you can.
3. Slice diagonally into 4 pieces.
4. Heat a large pan over medium heat and place the sandwiches inside.
5. Heat and brown on both sides until cheese melts.

Wrap the sandwiches in foil and tuck into an insulated bag to keep warm on a trip or on a winter picnic.

Growing businesses

It is part of SANRAL’s approach when it builds and maintains roads to use local SMMEs, growing their business and transferring skills so that they are empowered to flourish even after their contracts with the roads agency come to an end.

One such SMME is Vukuzenzele Trading Corporation which specialises in Routine Road Maintenance (RRM) projects.

“Our primary responsibility is to maintain and repair roads. The standard of roads that SANRAL aspires to is very high and so as subcontractors, we need to ensure we continuously deliver according to specifications,” said Johnny Mofokeng.

He described a typical working day as commencing with morning meetings with the site manager who would familiarise workers with the programme of the day and division of responsibilities.

He said in the first week of every month, the team had a litter pick-up schedule in an effort to keep the roads clean.

He added that Vukuzenzele’s turnover and resources had grown substantially.

At the outset, Johnny did not own any equipment but now, thanks to SANRAL, he has his own which has helped to reduce the cost of hiring equipment dramatically.

He said the agency’s Coaching Guiding and Mentoring (CGM) system of implementation made it possible for Vukuzenzele to access skilled people to assist with executing project work effectively whilst also ensuring that the overall objectives are met.

“The CGM system allows for the subcontractor to work under the guidance of a main contractor in all of its activities including admin-related tasks. You are groomed to be in control of your business,” he said.

The ambitious father of four said he hopes to see his company rise to the success of being a main contractor in the not-too-distant future.



Thabang’s company was subcontracted to undertake work on various projects. These include, amongst others, the N1 Ventersburg, N1 Soweto, N3 near Alexander, N5 Bethlehem to Kestell, N5 Kestell to Harrismith and Bloemfontein to Thaba Nchu.

“Lack of capital when you start a job can be particularly challenging. Sometimes you find yourself running out-of-pocket with additional expenses and employees to pay,” said Thabang. He said the conclusion certificates issued at the end of every job were a vote of confidence for him and his staff who benefited from ongoing work due to their strong work ethic, thereby ensuring they constantly gain valuable industry experience.

Thabang’s working day typically begins at 7am when he transports his employees to site where work continues until 5pm. He believes his culture of doing things has always ensured positive results. Hence, his advice for upcoming SMMEs is to “work hard because this will open the doors to financial benefits, growth, experience and accolades”.

Also growing as a result of SANRAL’s policy of growing SMMEs is Sondawe Trading & Projects, owned and managed by Thamsanqa Johannes Sondawe.

The projects it has worked on include the R21 Isando Pedestrian Bridge, rehabilitation of the national road between Reddersburg and Parys and tarring of the road along Kingsway next to Benoni.

He said the five temporary staff under his employment all gained a wealth of experience and skills such as the importance of taking proper measurements when excavating. “We are most grateful for the work from SANRAL. As subcontractors, the work has made a meaningful difference in my life and enabled me to help feed the families of my employees,” said Thamsanqa.

He added that he was able to purchase a bakkie and office equipment as a result of the work. He cites the exposure to new learnings every day as one of the highlights of working on SANRAL projects.

He said SMMEs need to educate themselves on how to run their business successfully and attend short courses if need be. While adverse weather conditions pose immense challenges in terms of work productivity and remuneration, it does not deter his vision to grow his company, extend the office space and invest in equipment and resources that will significantly improve work efficiency.



Signs of trouble ahead

Saving lives through quality technology and information

Accurate information about road conditions and incidents that might have occurred on the way ahead is a key ingredient of SANRAL’s approach to utilise modern technology to save lives.

The most visible communication between SANRAL’s management teams and road users takes place through variable message signs which are located at strategic intervals on the country’s primary freeways.

Should an accident happen on the road the information is relayed to the relevant Traffic Management Centre responsible for the freeway and the information is then displayed on variable message signs. These large overhead boards are also used to warn road users about road works that are in progress or dangerous conditions that might have been created by natural incidents such as floods or landslides.

Information about road conditions is also available on SANRAL’s i-traffic website while real time information is conveyed to the more than 551 000 subscribers of SANRAL’s three twitter accounts. These services are already available on the major freeways in Gauteng, KwaZulu-Natal and the Western Cape and will, eventually, be rolled out to all nine provinces.

Information about incidents is conveyed to the Traffic Management Centres (TMC) by emergency services or road users who can call the i-Traffic call centres on 0800 387 2332 (0800-itrffic) to report crashes, stranded vehicles or potentially dangerous situations.

The KwaZulu-Natal Freeway Management System, for example, is currently equipped with 137 cameras, 26 variable message signs and 57 radar detection systems – all linked through a high-speed fibre optic network to the TMC located at the SANRAL offices in Pietermaritzburg.

Similarly 150km of the busiest freeways in Cape Town have 240 CCTV cameras, 53 variable message signs and 72 vehicle detector sensors. The Cape Town Freeway Management System responds to more than 1 000 incidents every month with an average detection time of less than 180 seconds.

The availability of accurate information enables SANRAL to consistently improve its service to the country’s road users. The Pietermaritzburg TMC deals with about 700 traffic-related incidents a month and the average time for detection and verification of incidents has been brought down to an impressive 76 seconds.

SANRAL’s centres are in direct communication with provincial and local emergency services and in Gauteng, supporting the Gauteng Freeway Improvement Project, SANRAL has deployed its own on-road service fleets. This consists of towing vehicles to clear the scene of a crash, incident response teams to manage traffic and restore the normal flows, medical response vehicles with life support equipment and “medics on bikes” which can rush to provide assistance during peak hours.

SANRAL’s utilisation of modern technology helps to build its reputation as one of the most advanced road management agencies in the world and a leader in research and applications to create a safer environment for road users.

WATCH OUT... the cameras are watching

If you speed down to the coast today you’re in for a big surprise. If you exceed the maximum 120 km/h speed limit, you WILL be caught.

The latest technology used by SANRAL in collaboration with traffic authorities measures the average speed of a vehicle over a distance. Overhead cameras fitted with number plate recognition technology are mounted on gantries or poles on the major highways and detect the movement of a vehicle as it enters a specific demarcated zone.

A few kilometres down the road another camera monitors the movement, calculates the average speed and takes a picture of an offending vehicle. This evidence is then turned over to the law enforcement authorities who take decisions on whether to take legal steps.

Randall Cable, Engineering Manager of Road Network Operations in SANRAL’s Western Region says the intention is not to generate revenue, but to encourage responsible road behaviour.

“There are no cameras hidden behind bushes in this system,” he says. “Motorists are given adequate warnings through prominent signage that they are entering a zone where this system is operating and these messages are regularly repeated.”

According to Cable average speed enforcement is the latest global trend in traffic management and its validity has already been tested – and confirmed – in South African courts.

Improvements in road safety, as measured by the number of crashes caused by speeding have also been achieved. On roads such as the N1 and R61 in the Eastern and Western Cape, which are main long-distance transport routes, there have been marked improvements in driver behaviour, with much better compliance to posted speed limits and a significant reduction in fatal crashes.

“SANRAL is very much hands-on and works jointly with the contractors to ensure the successful completion of various projects.”

He commends SANRAL for the outstanding work it is doing on South Africa’s roads and thanked the agency for the opportunity to be part of projects that are enhancing road safety and improving the lives of communities and people.

Another SMME partner is Thabang David Molapo, owner of DNC Construction. The construction company currently employs eight temporary staff and is in the business of installing guardrails.

Building ROADS

through bursaries

SANRAL helps itself – and others. Helping those in the field of engineering, and thus helping itself, is an important part of what SANRAL does.

Just ask Nonkululeko Nzimande from Richmond. A talent for mathematics and science, plus motivation from her family, led her to a career in engineering.

Nonkululeko says her fascinating career choice was influenced by her mother as she encouraged studies in engineering and medicine. She then decided on engineering out of the two options because of her strong desire to improve infrastructure.

Although she faced challenges on her educational journey, she was fortunate enough to hear about the SANRAL bursary programme from a university official. *“I applied immediately and by God’s grace I was awarded the bursary,” says the former civil engineering student.*

“Most importantly I hope the internship helps me learn the things that will contribute to me becoming the knowledgeable and skilful engineer I hope to be.”

During her university studies Nonkululeko’s passion for infrastructure development was further influenced by her final year engineering project that made her aware of some of the work done on the provincial routes which had been handed over to SANRAL because the regional government was unable to maintain them.

As she interns at SANRAL, she hopes to learn the process that it takes to achieve a successful project, from inception to completion.

Nonkululeko says she sees herself improving infrastructure technology and contributing to the development in the country by coming up with easier construction methods and structures that require less material but are still strong enough to last long. *“I also hope to one day assist in building a nature of constant infrastructure maintenance to avoid high costs in rehabilitation procedures,”* she adds.

Nonkululeko is determined to achieve her professional accreditation in Civil Engineering over the duration of her career and become an efficient and successful Project Manager for SANRAL.

“On a more personal note I would like to study towards a Master’s degree in Pavement and Construction Methods.”

In contributing to making South Africa better, she would like to serve at a management position where she can influence the way things are done.



Nonkululeko Nzimande
Bursary Recipient and Intern



Lindelani Tsanwani
Bursary Recipient and Intern

Getting a leg-up from SANRAL through its bursary programme, is Limpopo-born Lindelani Tsanwani who developed a passion for engineering because of the role and impact he believes it has on communities.

Although it hasn’t always been smooth sailing for Lindelani on his education journey, he believes that education opens doors and opportunities. *“Because of education, one is able to do what one loves most and contribute in creating a better world”* he said.

During his third year at UCT, he received a SANRAL bursary. Lindelani says that the bursary came at the right time and gave him the financial assistance he needed complete his studies. *“Together with my parents, we were worrying how the following year’s fees were going to be paid”* said Lindelani.

After completing his studies, Lindelani was afforded the opportunity to gain work experience at SANRAL.

He says he is grateful for the training, mentorship and the support he gets from colleagues which has helped him to grow and develop.

“It encourages me to work hard and improve every day while working towards achieving my goals,” he said.

He is determined to become a pavement specialist and a competent project manager who understands the importance of focusing on research to fully understand the changing world we live in.

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to save a life

Bakwena in partnership with **Wheel Well** is proud to promote **‘The Car Seat for Kids Campaign’** along the N1 and N4 Routes.

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Wheel Well
FOR CHILDREN IN ROAD SAFETY

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BALANCING eco-matters with construction

In the process of road construction and operation activities, land is transformed, water resources are potentially affected and used, substances are emitted into the air, waste is generated and there is interaction with local communities.

All of this affects SANRAL.

The national roads agency’s approach to managing the environmental impacts of road construction and operation activities is based on a sustainable development framework. The basic tenet of policy is continual improvement.

To give effect to the policy, SANRAL undertakes project-specific Environmental Impact Assessments (EIAs) in accordance with relevant legislative requirements and continues to improve on existing, as well as to develop new, internal guidelines for environmental management of its activities.

A generic construction Environmental Management Plan (EMP) is one such guideline, which is used for projects that do not require authorisation and would thus not have specific EMPs. It is also used to augment specific EMPs as it addresses road-building activities in general, even those that would not have been the subject of project EIAs, and is therefore updated regularly.

The level of environmental performance on a project is determined by feedback from regular site inspections by

project teams, environmental authorities, and internal and external audit (environmental management inspectors) teams where applicable.

SANRAL’s construction work is subject to government approval based on Environmental Impact Assessment studies and the granting of permits to undertake specific activities. A number of approvals and permits are often required from different departments ranging from environmental affairs to water and forestry, agriculture and mineral resources, and from agencies, such as the SA Heritage Resources Agency.

The roads agency needs to start specific projects at specific times and the permitting process is a critical factor in its timing. The agency is therefore working with government departments to develop a more integrated approach to permitting and to optimise the various processes.

SANRAL does not limit itself to what is required by law – it does more and strives to improve even on that.

What is an EIA?

Environmental Impact Assessment is the process by which the anticipated effects on the environment of a proposed development or project are measured. If the likely effects are unacceptable, design measures or other relevant mitigation measures can be taken to avoid or reduce those effects.

Fundamentally, an EIA is undertaken to protect the environment, but is not a barrier to growth – it is a balance between the two.

An EIA goes through several stages, some of which are to:


- Identify the project so that the complete scope of environmental impacts is evaluated
- Conduct screening when it is decided whether a project does need an EIA
- Do scoping with all interested parties to identify environmental issues which need attention
- Draw up terms of reference to serve as a road map
- Continue public participation throughout the process


A final EIA report is then prepared. It is adopted or rejected and appeals may be lodged. Only then is there implementation, which has to be monitored throughout.


ROAD SAFETY | BE ALERT





ROAD SAFETY ESSENTIALS


**LIGHTS ON**

**BUCKLE UP**


**OBEY SPEED LIMITS**


**KIDS IN THE BACK**


**OBEY ROAD RULES**


**DRIVE SOBER**


**CHECK VEHICLE**


**REST OFTEN**


**NO CELL PHONES**


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A traveller in all seasons





Destinations are like people, you’ve got to take the cold with the heat, writes Lebohang Thulo

The cold weather hits and most of us go into hibernation. It is during winter that all thoughts turn to soups, breads, chocolates and glasses of red wine.

There is little doubt that the winter season is all about slowing down, closing in and gravitating towards the familiar.

During this season travel begins to mean a brisk walk outdoors followed by the bliss of stepping indoors to defrost in front of the heater (or if you are really lucky, a crackling fire), wine glass in hand; and adventure begins to mean stepping out of the cold chill and into the closest café for a steaming mug of hot chocolate.

Any mention of travel beyond this is often met with some scepticism or even outright refusal.

I will admit, I used to fall into that camp. I am a typical winter baby who has never made friends with the cold weather. Like most people I used to think of the season as an unnecessary stop to Summerville.

This was until I met a professional travel writer, one of those lucky people who get paid to be permanently on holiday.

He explained to me that to truly appreciate any destination you have to experience all four seasons.

To only appreciate the warm weather was to cheat yourself of the full experience, he said.

What is it to only know the Western Cape’s dry summers – which are perfect for a game of beach volleyball – but to have never experienced the Cape in the months of

March and April when autumn arrives and a drive along the Winelands route means watching the reds, orange and purples of the leaves from the passing vineyards.

Or missing the Cape’s icy wet winters when thick fog sits heavy on the Hottentots-Holland mountain range early in the mornings, making a drive along Sir Lowrys pass on the N2 some sort of extreme sport.

Even the Highveld which includes the Free State and Gauteng, and portions of the Eastern Cape, Northern Cape, North West, Limpopo and Mpumalanga provinces – well known for its beautiful and often dizzying hot summers and majestic thunder showers; the colder months leave room for a quieter kind of beauty.

Less dramatic maybe, but no less beautiful. The grass turns yellow, and the trees stand bare against the impossibly clear blue sky.

Towns like Parys in the Free State – just over an hour away from Johannesburg along the N1 truly get a chance to shine during the colder months. The town offers many wintertime activities including quad biking, game drives, horseback riding, mountain biking and hiking.

Or how can you say you love the majestic Drakensburg mountain range – which stretches from the Eastern Cape Province, Lesotho and KwaZulu-Natal Province if you have only seen it draped in greenery, but have never experienced the mountains when they are covered in snow and the region transforms into a winter wonderland.

Spring time is not to be outdone either, when the mountain grasslands bloom with wild flowers. A quick research online

reveals that there are over 10 000 species, including: white berg lilies, arum lilies and orchids.

God’s Window, however, has to take the cake for its majestic winter displays. For those initiated, God’s Window refers to the highlight of the Panorama Route in the eastern Mpumalanga province. The view on the route includes cascading waterfalls and impressive mountain gorges.

The view of the sun setting is impressive whatever season, but there is something breathtaking about the scene in the winter. The sky is brushed with all the colours of autumn, the air is crisp and for a moment it becomes perfectly clear that the winter season is much more than a mere stop to Summerville.



By Lebohang Thulo

23

Games and puzzles to keep you entertained on the long road

Captivate & Fascinate

Sudoku

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

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.

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																			
2																			
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4																			
5																			
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20																			

ACROSS CLUES										DOWN CLUES									
A1	Newly made									C11	Abbr. Britain								
E1	Highway									L11	Heavenly gift South Africa needs								
Q1	Short for doctor									C12	Narrow stick loaf								
A2	Singular for osso (bone)									L12	Abbr. Royal Navy								
G2	Act of lending									A13	Symbol for radium								
O2	Armed conflict									F13	To moisten or soak for bacterial action								
A3	States income									L13	Clay-pigeon shooting								
K3	Concessionaire helping track leopards in Magaliesberg									R13	Third solfa tone								
F4	A long narrow inlet of the seacoast									C14	Two								
J4	Product of imagination									O14	Mountain peak in Cape Town								
N4	Old car registration for Bloemfontein									B15	Container								
A5	Equestrian ride									H15	Abbr. for Regus Professor								
P5	Informal for delicatessen									K15	Toy flown by people								
A6	Archaic spelling of woe									P15	SA expression of pain								
D6	Striking ball with head									A16	Ardent fan and cooling devise								
M6	To fit together - 2 words (engineering term)									E16	Archaeological direction (City..... Naples)								
A7	River in Europe									H16	isiZulu word for "go off"								
I7	Internet domain for UAE									O16	Ordinary name for "encephalon"								
L7	Act of being busy									A17	Abbr. before noon								
O7	Low-voiced male singer									D17	Abbr. Gauteng Freeway Improvement Project								
I8	Anybody									B18	To increase, enlarge or portion out								
Q8	Bleat of sheep									F18	Payment on roads (two words)								
A9	Abbr. for teetotaller									A19	Not either								
D9	Relating to Aran islands									D19	A lively and intelligent breed of horses								
I9	Industrial manufacturer									M19	Look! See!								
M9	Abbr. for doctor									P19	Indicate destination								
P9	Belonging to a female									A20	Abbr. SA National Roads Agency Ltd.								
E10	East Cape forest									H20	Mother city								
G10	Abbr. for ritardando (slow down in Italian)									G20	South African for "brother"								
										A1	One of nine provinces								
										B1	Poetic for "fore"								
										C1	Flickering or flashing of light								
										E1	An age of the universe								
										G1	Brilliant or talented group esp. one of 7 members								
										H1	Internet domain name for Romania								
										I1	To listen with								
										J1	Chemical symbol for tin								
										L1	Angry indignation								
										Q1	Originally called uKhalamba by Nguni people								
										S1	SANRAL's road safety initiative								
										Q2	Spider makes it								
										F3	Of or relating to a city or town								
										K3	Husks of cereal								
										N3	Past tense of wear								
										B5	Sedimentary spherical grains								
										D5	Female leopard with tracking collar								
										E5	Scot word for eye								
										I5	Cattle enclosures								
										P5	Prefix "enough" or "during"								
										M6	Bonds are auctioned here								
										O6	Abbr. detention barracks								
										L7	Act								
										J7	Person who designs, plans and constructs								
										R7	Indian dress								
										N8	Fur of stoat								
										E9	Abbr. radio telegraphy								
										F9	Last king of Assurians (cut off "pal" at end of name)								