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Even though funding from the national budget to support the 16854km non-toll portion of the 19704km network has steadily increased, this has been offset by higher construction costs (even without the collusion recently uncovered in the industry) and expansion in the length of roads The South African National Roads Agency SOC Limited (SANRAL) is required to manage.

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BALANCING TAXES AND TOLLS

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This independent report was commissioned by the The South African National Road Agency SOC Limited (SANRAL). Its contents do not necessarily reflect the views of any publication with which it is distributed.

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NATIONAL ROADS UPDATE: THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED
However, the challenge to upgrade and maintain the national road network will become even more demanding. The current 1970km of roads the agency is required to manage is likely to be expanded to some 35 000km over the next several years, explains SANRAL chief executive Nazir Alli.

SANRAL will therefore need to access sources other than tax-based revenues for specific developments.

SANRAL believes the most equitable way of doing this is to implement the user-pays principle through tolling certain roads, which has been government policy since 1995. Any other forms of indirect taxation, such as increasing the national fuel levy to cover costs of a major development in one part of the country, imposes an unfair burden on commuters who will not use that road.

“We have examined the arguments put forward by groups, such as those opposed to e-tolling the routes covered by the Gauteng Freeway Improvement Project,” says Alli, “but we remain convinced that tolling (user-pays principle) is the most equitable way in which to fund the upgrading and maintenance of these roads.

“Government has a wide range of priorities to meet through tax revenues, principally poverty alleviation and elimination of inequality. We need to find a fair balance between funding of roads through the national fiscus and mobilising private sector capital and toll revenue to develop and maintain key routes.

“SANRAL will therefore continue to selectively expand toll roads to maintain and grow the national road network in a sustainable manner. This will be done with a view that tolling is not only used to deliver infrastructure but to do so timeously in order to meet current and future social and economic growth needs.”

Alli is also convinced that the benefits of tolling urban freeways significantly outweigh the cost of fees. “The Gauteng Freeway Improvement Project has substantially eased the gridlock, congestion, time wastage and accompanying frustration commuters experienced before the upgrade.”

SANRAL’s revenue streams from the national fiscus and tolls are managed separately, with no cross-subsidisation of funds between the two portfolios.

Currently, only 16%, or 3121km of the national road network is tolled. This includes 1 832km of toll roads operated by SANRAL and 1 288km by private consortiums. These have been awarded 30-year concessions to upgraded and maintain certain roads, and to undertake community development programmes along the routes.

The concessionaires are contracted to return the roads to the State free of debt and in a pre-determined condition at the end of the concession. This will enable government to operate these roads without having to make major improvements for several years after the concessions.

Three private concessions are in operation on routes that support major economic development. These are the N3 linking Gauteng and the KwaZulu-Natal coast; the N4 between Gauteng, Mpumalanga and Maputo and its port; and the Bakwena toll route.

This includes the continuation of the N4 from Pretoria through Rustenburg to the Botswana border where it becomes the Trans Kalahari highway ending at Walvis Bay in Namibia, and the N1 between Pretoria and Bela-Bela in Limpopo. SANRAL operates the rest of this toll route, from Bela-Bela to Messina on the Zimbabwe border as well as other toll routes nationally.

However, the major part of SANRAL’s mandate is focused on the remaining 16 854km of the national road network.

Engineering & Technology

Keeping Pace With Growth

The South African National Roads Agency SOC Limited (SANRAL) invests heavily to maintain, upgrade and expand an asset valued at some R320 billion. National treasury allocates funding for work on the non-tolled 16 854km portion of roads managed by SANRAL. In the 2012/13 financial year, SANRAL invested R9.6 billion into non-toll roads and awarded a total of 255 road contracts on the toll and non-toll network worth R11.6 billion during this period.

SANRAL spent a further R1.46 billion on operating costs for the 1 832km of toll roads, and invested R1.822 billion to strengthen and improve these roads, and build new facilities on them.

SANRAL benchmarks its engineering work against international standards, says the agency’s chief executive Nazir Alli. It also sponsors the chairs in Pavement Engineering at the University of Stellenbosch and of Transport Planning at the University of Cape Town.

“The research work we do with them and other institutions, such as the CSIR, also helps to keep us at the cutting edge of technology”

SANRAL makes extensive use of technology to monitor traffic, alert road users to problems ahead, manage incidents and accidents, and gather information for use in planning new developments.

The agency operates a Freeway Management System in Cape Town, Gauteng and KwaZulu-Natal. The system provides real-time information on freeway traffic flow conditions, enabling SANRAL to alert drivers to crashes, incidents and possible delays on the network. The Gauteng Freeway Management System (FMS) covers 221km of the Gauteng Freeway Network, and is designed to improve road safety and reduce the impact of incidents on the flow of traffic.

On-road services, light and heavy vehicle towing; medical and incident response, operate round the clock and are decentralised at strategic positions across the Gauteng network to enable rapid response to incidents. The incident response fleet includes 10 light motor vehicle towing vehicles, eight heavy vehicle towing vehicles, 10 incident response vehicles for scene safety and control, six medical services vehicles equipped with intermediate life support equipment and six “medics on bikes”. Gauteng on-road services responded to 6 451 incidents in the period from June 2012 to May 2013.

The KwaZulu-Natal FMS covers about 100km of the busiest sections of the N2 and N3. These freeway sections have 118 cameras and 18 VMS units linked via a high-speed fibre optic communications backbone. The system dealt with a monthly average of 900 traffic-related incidents during SANRAL’s past financial year.

The Cape Town FMS covers major freeways, including those managed by the provincial government and the City of Cape Town. The system facilitated responses to 12 000 incidents during the past year. In addition, SANRAL’s iTRAFFIC website (www.itraffic.co.za) provides regional-specific information on traffic conditions, road works and congestion as well as traffic alert information for Gauteng, the Western Cape, and KwaZulu-Natal.

Road Safety

Adopting The Right Attitude

It’s one thing to provide well-engineered roads, but entirely another to ensure that drivers use them safely. SANRAL’s main focus is on building awareness of road safety, particularly among the youth and in communities along its routes. A major objective is to include road safety as an integral part of the school curriculum. With more than 40% of road fatalities involving pedestrians, SANRAL also focuses on improving pedestrian safety and awareness.

In addition to SANRAL’s own initiatives, promoting road safety is also a priority for the three concessionaires who manage toll routes. SANRAL supports the UN-endorsed Decade of Action for Road Safety which aims to halve the number of road deaths by 2020. SANRAL’s main focus is on safer roads and road users, and post-crash response.

Safer roads and road users

SANRAL continuously evaluates the national road network against a set of standards and norms during project design, construction and routine road maintenance. It also identifies high-incidence areas, and works with education and traffic law enforcement authorities to...
improved community safety.

(Above) The Blackburn pedestrian bridge in eThekwini has been monitored and evaluated. An associated Safe Routes to School project implemented at 403 schools nationwide, and results are being assessed.

A SANRAL road safety education programme has already been implemented at 403 schools nationwide, and results are being monitored and evaluated. An associated Safe Routes to School project on all major routes in South Africa.

Post-crash response

The entire national road network has incident management systems in place to ensure optimal, coordinated response to incidents. Plans are under way to legislate and roll out incident management systems on all major routes in South Africa.

Road safety education

A SANRAL road safety education programme has already been implemented at 403 schools nationwide, and results are being monitored and evaluated. An associated Safe Routes to School project on all major routes in South Africa.

Giving Them An Advantage

Upgrading, expanding and maintaining the national road network provides considerable scope for SANRAL to open opportunities for communities along its routes. These opportunities focus on the procurement of works and services, training people to become economically active, and promoting small, medium and micro enterprises. SANRAL trained 18 161 people in road building projects at a cost of about R21 million, and created 110 400 jobs of varying duration at a cost of about R2 billion. A total of R1.8 billion was spent on contracts with small businesses, of which more than R1.2 billion went to 820 black enterprises.

SANRAL also pays a much wider developmental role by supporting a number of initiatives to enable learners from disadvantaged communities to enter higher education with a focus on skills development in maths, science and technology. Overall, SANRAL awarded 70 bursaries at a cost of about R5.9 million and as of 2013, awarded 179 scholarships to grade 10, 11 and 12 learners, with a value of about R1.5 million. Current initiatives include:

Targeting Talent Programme (TTP)

The University of Witwatersrand TTP aims to increase the academic, social and psychological preparation of academically talented high school learners from disadvantaged backgrounds for admission to universities. SANRAL has funded 191 grade 10, 11 and 12 learners who have completed a three-year cycle of participation in the project.

School of Open Learning

SANRAL supports the University of Free State's School of Open Learning (SOL) project which aims to change attitudes towards maths and science and to raise the number of achievers in the Free State, Northern and Eastern Cape provinces. The project involves two programmes.

The first programme aims to demystify maths and science for learners in their early school years. A total of 14 088 learners from predominantly rural communities in the Free State, Northern Cape and Eastern Cape provinces were involved in this programme in 2012. The SOL trained 16 subject advisors to act as coordinators in their regions with the responsibility for training and supporting local educators in the implementation of the programme.

The second programme is an ICT laboratory, which focuses on the skills levels and understanding of maths and science concepts among grade 10, 11 and 12 learners. In 2012, 325 learners from 21 schools attended the ICT laboratory sessions.

Taking Care

The challenge facing SANRAL is to meet the needs of people and the environment by striking a balance between the requirements of road users and road authorities and environmental and socio-economic interests. This is seen as the way to build a sustainable road network. SANRAL undertakes an Environmental Impact Assessment (EIA) for each project that requires compliance with environmental legislation. SANRAL and the Department of Environmental Affairs have signed a Memorandum of Understanding to provide an administrative framework that ensures a coherent and consistent approach to road development and the EIA process.

In addition to SANRAL’s own environmental initiatives, three private concessionaires who operate toll routes on key national roads maintain environmental programmes. Among numerous initiatives being undertaken by SANRAL are:

The Fynbos Project

SANRAL is involved in an on-going project to draw up a guideline document for management of this plant kingdom.

Science, Technology, Engineering and Mathematics Pipeline Project (STEM PP)

The aim of the Nelson Mandela Metropolitan University STEM PP is to increase the number of learners entering studies for careers in science and technology. STEM PP exposes learners to laboratory activities, presents curriculum-based experiments using information and communication technologies, and assists learners to comprehend theory taught in class.

Environment and Sustainability

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A recent example of the challenges facing SANRAL was the need to conserve Cape Flats Sand Fynbos and Swartland Shale Renosterveld which were affected by the upgrading of the N7 between the Melkbos and Philadelphia roads intersections near Cape Town.

Following an EIA, SANRAL adopted an alternative alignment for the road, resulting in the saving of some 25 000 m² of vegetation. Vegetation that could not be saved was relocated. The ramps of the Atlantis/Philadelphia Interchange were also realigned to avoid the loss of Swartland Shale Renosterveld.

Greenroads
SANRAL is adapting Greenroads, a rating tool developed by a US university, as a measure to reflect national sustainability priorities and values in roadway design and construction.

A new pedestrian bridge in Ladysmith has become the first Greenroads South Africa Pilot Project. Assessment of the project against requirements of Greenroads and SANRALs practices will highlight parallels and gaps between South Africa’s existing practices and sustainable best-practices proposed in the Greenroads SA Rating System.

Road noise
SANRAL is undertaking an investigation of seal types that can reduce road noise, particularly in urban areas. The initial conclusion is that there is no standard surfacing that can provide a noise level low enough to meet national specifications and new international guidelines.

Further investigations need to be undertaken on development of a standard paved surfacing and the cost of additional mitigation measures, such as barrier types.

Governance
Sticking to the Letter
SANRALs high international credit rating was downgraded this year amid concerted opposition to e-tolling on Gauteng freeways and uncertainty over the agency’s ability to service loans to fund certain projects.

SANRAL chief executive Nazir Alli finds it difficult to come to terms with this after 15 years at the helm of an agency whose creditworthiness and corporate governance has seldom been questioned since its establishment in 1998.

He feels particularly aggrieved over “insinuations” that SANRALs procurement processes in awarding contracts for the Gauteng Freeway Improvement Project were corrupt. “We have laid all bid documentation before the Public Protector and made them available on our website, and we are confident that we acted as ethically as we have always done. Ethics are the cornerstone of good governance and determine the manner in which we conduct our business.

“The downgrade will also impact on our country’s sovereign credit rating and eventually on the private sector, so borrowing will become more expensive for everybody.”

As an example of SANRALs past good standing, Alli cites the European Investment Bank (EIB) which interrogated the agency’s governance systems to ensure they complied with European standards before investing in projects.

“The EIB has invested directly in our toll roads without sovereign backing and taken commercial risk in all three of our toll concessions,” says Alli. “Concessionaires take the full commercial risk and SANRAL does not provide guarantees if the amount of traffic is less than projected.”

Alli adds that SANRAL has never had a qualified audit since it established as an independent statutory company in 1998.

Since then, SANRALs staff complement has grown from 92 to 233 permanent members, while the national road network has expanded from 7 200km to 19 704km.

SANRAL outsources most of the services it requires, but the conceptualisation of its projects and planning for their implementation is done internally. “All decision-making is done within SANRAL,” says Alli. <<<

The N4 Toll Route
Public-Private-Partnership
PIONEERS

As Africas first tolled cross-border transportation corridor, the N4 linking South Africas landlocked northern provinces and their nearest port in the Mozambique capital of Maputo has paved the way for integration of the countries economies.

The 571 kilometre N4 toll route from Pretoria in Gauteng to the Mozambique coast is the backbone of the Maputo Development Corridor (MDC), which was conceived by the South African and Mozambique governments in the early 1990s.

South Africa sought to break out of apartheid-era isolation by opening an efficient and shorter export and import route for its economic heartland in Gauteng, mining and agricultural operations in Mpumalanga and Limpopo provinces, and tourists to the Mozambique coast.

Mozambique had emerged from a debilitating civil war and needed rehabilitation of its principal port in Maputo was uppermost. The MDC was designed to provide an efficient road transportation corridor that would meet the two neighbours needs as well as stimulate social and economic development along the length and breadth of the route.

The key to the success of the MDC was the upgrading of the N4, then an ageing road mainly confined to two single lanes that made its way across Gauteng and Mpumalanga, with roads from Limpopo joining the route. At the border with Mozambique, the road became the precarious EN4, which passed through areas riddled with landmines left by civil war combatants, as it made its way to Maputo.

The decision by the two governments to turn the route into a modern

(Above) SANRAL CEO Nazir Alli

(Above) A recently completed double divided carriageway between Schagen and Mloobenda, seen here under construction, will improve road safety along this busy section of the N4.
National Roads Update: The South African National Roads Agency SOC Limited

and safe transportation corridor involved the establishment of their first major public-private-partnerships.

Trans African Concessions (TRAC), a consortium of local and international construction companies, was awarded the contract to develop the N4 and EN4 into a toll route and to use fees collected at plazas along the route to upgrade, rehabilitate and maintain the road according to strictly specified standards over a 30-year period. Toll fees were set during bidding for the contract and are subject to annual increases in line with the Consumer Price Index.

At the end of the concession in 2027, TRAC must return the road to the two governments debt free and in the pre-determined condition.

TRAC was also required to develop and maintain a corporate social investment programme to benefit communities along the route, and to conserve the environment in its construction activities.

Mozambique followed through by awarding concessions to private companies to develop, operate and maintain Maputo port’s import and export facilities. The Maputo Corridor Logistics Initiative (MCLI), was established to facilitate co-operation between the governments and business, remove barriers to further development, market the route, and promote investment opportunities in the region. TRAC is a founding member of MCLI as well as of chambers of business in towns along the route.

TRAC chief executive Arthur Coy points to burgeoning growth in Mpumalanga’s capital, Mbombela (formerly Nelspruit) and Maputo as among the most visible impacts that the upgraded N4 toll route has had on the region.

“Mbombela has developed from a town into a major regional service centre with extensive infrastructure, including an international airport,” he says. “Maputo is once again a vibrant port city, and trade between the two cities is extensive. The number of vehicles passing through the Maputo toll plaza has increased from a projected 11 000 to an average of 55 000 a day since we began developing the route, and truck traffic along certain parts of the route is growing at 5% a year.”

High levels of safety, which TRAC rates as its top priority, have also been achieved. “We are particularly proud that we did not have a single accident fatality over the recent Easter peak holiday season,” says Coy. “The road is not only safer, but travel time between Pretoria and Maputo has been cut by as much as three hours.”

TRAC raised R3 billion to undertake initial construction works. It plans to invest a further R3.5 billion to R4 billion to improve and maintain the N4 over the life of the concession.

Construction work valued at R1.2 billion is currently being undertaken along the South African section of the route, and R400 million is being invested in improvements in Mozambique.

In South Africa, the section from Middelburg to the Hendrina off-ramp on the Mpumalanga highway, is being developed into a divided dual carriageway and in the lowveld a new divided carriageway...
between Schagen and Mbombela was opened to traffic at the end of June 2013. Parts of the Schoemanskloof road, which was substantially upgraded during initial works, are being rehabilitated and resurfaced, and passing lanes are being added to the Crocodile Gorge section between Mbombela and Malelane.

The latest set of upgrades follow the opening of a major improvement project in mid-2010: the Mbombela Ring Road. “In Mozambique,” explains Coy, “we were particularly fortunate because the road was in poor condition and we were able to build it virtually from scratch to high standards, though we had to overcome major obstacles such as the removal of landmines.

More recently the on-going damage caused to the road by overloaded trucks poses a new challenge. However, during recent heavy floods, the road sustained virtually no damage while surrounding areas were severely affected.”

Looking back over the first 16 years of the concession, Coy says TRAC has been involved in “continuous improvement and I don’t think we will ever be in a space where we are not working on the road.”

The upgraded N4 has also facilitated development of high-end tourism in highveld towns where trout fishing and lifestyle resorts have been established, and easier and safer access to Kruger National Park, private game lodges, and the Mozambique coast.

TRAC operates a 24-hour Help Desk (South Africa: 0800 8722 64 Mozambique (+258) 84 34 34 34) to provide travellers with route information, traffic updates, emergency and accident response and roadside assistance. Follow TRAC on Twitter: @TRACN4route

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Community Development

Coy explains the company spends about R90 000 per kilometre per annum on maintenance of the N4 and its road reserve. The work is contracted to small enterprises which employ some 1 000 people from local communities along the route. TRAC laid the basis for this at the start of the concession by establishing three community centres which were used to train maintenance crews as well as a further 8 500 people in social, community and basic business skills.

The centres have since been donated to communities to use as they see fit, for example, as health clinics.

TRAC’s broader corporate social investment programme is based on promoting community socio-economic development including tourism, education, road safety, and environmental conservation.

The Environment

An overall environmental impact assessment was undertaken before construction on the N4 began, explains Coy. TRAC has developed environmental management plans for each section of the route, and has passed all annual compliance audits “with no breaches whatsoever having been reported,” says Coy.

Travelling on the N4 will never be the same again. Environmental conservation is now part of the everyday work we do on the road and our Environmental Management Systems have been developed to meet the requirements of the South African National Roads Agency (SANRAL) and the environmental regimes of the surrounding countries.

In July 2010 TRAC introduced its new environmental conservation programme – TRAC Cares – to provide an integrated solution to help meet environmental management responsibilities along the N4.

TRAC has had to meet some demanding challenges along the way. Realising that support structures of a new bridge over a spruit in Schoemanskloof would inhibit the ability of tiny Southern kneria fish to swim upstream, engineers built fish ladders and resting blocks for the fish so that they could pass unhindered to their spawning ground. The innovation has been a great success, says Coy.

Construction of a new bridge over the Komati River was postponed to allow critically endangered blue swallows residing under the old bridge to breed and hatch their young.

On another level, after completing the R750 million Mbombela ring road as an alternative to the old road passing through the city, TRAC replanted or replaced some 4 000 indigenous trees along the new route. And, on request of the local community, the new dual carriageway near Nelspruit was re-aligned at a cost of R1 million to save a centuries old wild fig tree.

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Clearing alien vegetation along the N4 route is part of the TRAC concession’s on-going environmental conservation programme.

The N3 is one of the key economic and leisure arterials in South Africa. The N3 Toll Route, a 415km stretch of the N3 from Cedara in KwaZulu-Natal to Heidelberg in Gauteng, is managed by the privately-owned, single-purpose entity, N3 Toll Concession (Pty) Ltd (NJTC), under a 30-year concession contract from the state-owned The South African National Roads Agency (SOC) Limited (SANRAL).

NJTC is responsible for the design, construction, financing, operation and maintenance of the N3 Toll Route until 2029 when the road must be returned to the State in a pre-determined condition, free of debt.

Funding to meet NJTC’s contractual obligations is raised at four mainline toll plazas – Mooi, Tugela, Wilge and De Hoek – and eight associated ramp plazas.

In addition, toll revenue enables NJTC to service its debt and provide a reasonable return to its shareholders, who include financial institutions, infrastructure investment funds, engineering and BBBEE companies, and the Public Investment Corporation.

“There are a lot of misperceptions about toll routes. Many people think we simply take over an existing road and collect tolls. In fact we
been created.

As part of its commitment to road safety, N3TC prioritises safety as a key objective of its responsibility to customers through road safety programmes, interaction with law enforcement authorities, promoting safe driving practices and providing the necessary support.

As one of Africa’s busiest routes, the N3 Toll Route is used daily by between 11 000 and 16 000 vehicles, with 35% of traffic consisting of trucks hauling goods between South Africa’s economic heartland in Gauteng and the continent’s most active port in Durban.

The route also provides access to major tourism destinations, and as many as 4 000 vehicles per hour have been recorded using it during peak holiday periods. It is therefore critical that motorists share the road responsibly.

A fully-fledged, integrated Road Incident Management System (RIMS), managed by N3TC, contributes to the effective management of crashes, breakdowns and obstructions to ensure that traffic flow is quickly restored.

Central to N3TC’s RIMS is its Route Control Centre that manages the structural and functional parameters of the road, such as skid resistance, rutting and riding quality, and take appropriate action to ensure that standards are met.

While major works are contracted to large firms, four small companies, trained by N3TC, to carry out a wide range of services and employing about 785 people from communities along the route, undertake essential daily route maintenance.

Convenience

N3TC defines convenience as being the ease with which its customers travel along the N3 Toll Route. The N3TC Route Control Centre provides a point of contact for N3TC’s customers via the 24-hour Customer Careline. Dedicated N3TC Route Patrol vehicles operating 24 hours a day cover between 90 000 and 120 000 kilometres a month to provide assistance to motorists and respond to incidents. They are trained and equipped to fight fires, deal with minor hazardous substance spills and provide basic medical services.

Customers can obtain key information and plan journeys via www.n3tc.co.za, as well as a subscription-based SMS service. Variable message signs along the route alert users to problems ahead.

N3TC also makes use of Twitter via @N3 Route to provide traffic, road safety, and other information.

“The Twitter service, with more than 23 000 followers, adds huge value,” says N3TC marketing manager Andy Visser. “Regularly we receive feedback from our customers indicating their appreciation for the service.”

Mobility

Minimising traffic congestion and delays and maximising throughput at the toll plazas is essential to a customer’s mobility along the route, particularly during peak traffic periods.

A number of technological systems are in place to meet these objectives. In particular, a Video Toll Audit System (VTAS) at all plazas along the route monitors every transaction to provide customers with financial security.

A number of payment methods are accepted at the toll plazas, such as cash or credit cards, with certain limitations. To provide customers with additional payment options, convenience and security, N3TC is planning to introduce an electronic payment option in 2014.

The introduction of e-Tags as a means of payment will increase plaza throughput by up to five times the current transaction rate of manual payment methods and be of enormous benefit.

Touching Lives

N3TC’s work is underpinned by its Touching Lives Corporate Social Investment Programme that supports more than 70 community projects in the four provinces traversed by the N3 Toll Route. The programme focuses on 12 core areas including education, environment, tourism, job creation, road safety, child welfare and heritage. N3TC estimates the programme benefits some 69 000 people in any given year.

The programme includes four legacy projects designed to make a lasting impact beyond the end of the N3TC concession in 2029. These focus on early childhood development; job creation and tourism development; environmental conservation; and heritage preservation.

One key focus area of the programme is tourism development through the N3TC-initiated and funded project, the N3 Gateway Tourism Association (www.n3gateway.com). The N3 Gateway is an umbrella marketing body for 32 tourism associations and some 2 500 establishments and activities.

“The N3 means many things to many people,” says commercial manager Con Roux. “It is the Gauteng and KwaZulu-Natal economic lifeblood. It is the happy memory of leisure getaways, adventure destinations and family holidays. Within a proud context of Touching Lives, it is N3TC’s privilege to provide Safety. Convenience. Mobility. For all.”

Blasting a bridge during initial construction work in which the N3 toll concession invested R600 million as part of its R25 billion contract to upgrade and maintain the route. The concession annually invests R300 million in maintenance and 1 225 permanent maintenance and management jobs have been created.

The N3 toll concession supports the N3 Gateway, an umbrella marketing body for 32 tourism associations and some 2 500 establishments and activities.

Small businesses employing people from local communities undertake routine maintenance work on the N3.

The N3 carries 50 million tons of freight annually.
The Bakwena N1N4 Toll

The East-West, North-South CONNECTION

The Bakwena N1N4 Toll concession has entered a second major upgrading programme that will raise total investment to R4,2 billion over the past 12 years.

Bakwena holds a 30-year concession contract with The South African National Roads Agency SOC Limited (SANRAL) to manage a 385km route which covers the N4 from Pretoria through Rustenburg to the Botswana border, and the N1 from Pretoria to Bela Bela in Limpopo.

The Bakwena N1N4 Toll concession is the central link of a freeway connecting southern Africa’s east and west coasts. From the east, the N4 toll route, operated by Trans African Concessions (TRAC), stretches from the Mozambique capital, Maputo, on the Indian Ocean coast, through Mpumalanga and Gauteng to Pretoria where it becomes the Bakwena N4 ending at the Botswana border. There it joins the Trans Kalahari Highway through Botswana and links up with Namibia to the Atlantic Ocean port of Walvis Bay.

Some 160 000 vehicles pass daily through the Bakwena N1N4 toll plazas. Much of this is commuter traffic around the north and east parts of Pretoria, which has experienced major growth in recent years. Trucks travelling to and from Namibia, Botswana, mining areas around Rustenburg and Brits and on the N1, also account for a considerable proportion of the traffic the Bakwena concession is required to manage.

Like the N4 TRAC concession, which paved the way for exceptional growth in Mmmbela (formerly Nelspruit) in Mpumalanga and Maputo in Mozambique, development of the N4 west into a modern freeway has contributed to large-scale expansion of the mining centre of Rustenburg, which has far outstripped annual national growth rates, says Bakwena N1N4 chief executive Graeme Blewitt.

The Bakwena concession raised bank loans of R2, 4bn to undertake initial construction works on the N1 and N4, and is now investing a further R1,8bn in a second major upgrade, explains Blewitt. Major initial works included:

• Rehabilitation of the N1 between Pretoria and Bela Bela. “This road was built in the 1970s and had reached the end of its design life, so it was in dire need of rehabilitation,” says Blewitt.

• A new section on the N4 around Pretoria to ease growing commuter traffic congestion.

• Construction of about 100km of new road between Pretoria and Rustenburg.

• Construction of a new road by-passing Rustenburg and avoiding the old road which passed through the city.

• Significant upgrading of sections of the road from Rustenburg to the Botswana border.

Initial construction work, which ended in 2004, was followed by maintenance and smaller rehabilitation operations, but the Bakwena concession is now in the midst of a major second upgrading which started in 2011 and will end in 2015. This will lead to further improvements on more than half of the 385km Bakwena N1 and N4 roads, says Blewitt. Major works include:

• Widening of the N1 dual carriageway commuter section north east of Pretoria, construction of concrete barriers in the median of the road, and installation of overhead lighting. This is designed to further ease congestion and provide a safer route for commuters.

• Widening of off- and on- ramps at the Doornpoort plaza near Pretoria to facilitate smoother traffic flow.

• Rehabilitation of dual carriageway sections between Brits and Rustenburg, and construction of new dual carriageway sections, with 12km of road completed and work underway on a further 23km.

• Rebuilding of sections between Rustenburg, Swartkrug and Z eerust where the road has reached the end of its design life.

While maintenance and smaller scale rehabilitation and upgrading will continue after 2015, the Bakwena concession will undertake another major works programme towards the end of its contract in 2031, says Blewitt. This will enable the concession to comply with a key stipulation in its contract: that the roads will be returned to SANRAL in a pre-determined condition and able to handle a specified traffic capacity.

This will enable the State to operate them without the need for further major works for several years after the concession.

In partnership with SANRAL and law enforcement authorities, Bakwena inspects trucks for overloading at two traffic control centres: Mantsho on the N1 some 30km south of Bela Bela, and Bapong near Brits on the N4. During 2012, 358 450 vehicles were weighed, 6 960 prosecuted, and fines totalling R5 955 000 were issued. In addition, 14 609 drivers were prosecuted for road safety critical offences and fines totalling R9 490 638 were imposed.

Before and after:
construction of a modern, safe toll road, including this by-pass, has opened the way for rapid development of Rustenburg.

“The contribution of these traffic control centres in protecting the N1 and N4 and surrounding roads as well as enhancing traffic safety is substantial,” says Blewitt. Weigh in motion systems are used to collect overloading data, which is made available to SANRAL on a continuous basis.

“We have made the route much safer, which is our major priority. We constantly monitor traffic and analyse trends, and we proactively take corrective action, assess whether the infrastructure needs to be enhanced to increase safety and provide a 24/7 route assistance and customer care service.”

Community development

The Bakwena concession currently implements or supports 52 CSI projects. Bakwena’s policy is to undertake community development projects with authorities to ensure buy-in. Support goes directly to the beneficiaries.

More than 500 previously disadvantaged individuals are permanently employed in the operation. About 1 200 people from local communities are employed by SMMEs which provide routine road maintenance services, with 136 people in managerial positions. R2.4 million is invested in training SMMEs and staff of construction and

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Black-owned SMMEs undertake work valued at R26 million per year. Loans worth R5 million have been approved to assist individuals to start their own businesses. In addition, the Chaneng Business Centre today houses 14 businesses. Some businesses have grown to such an extent that they have relocated to bigger premises.

Bakwena, in partnership with Drive Alive and the Department of Education, supports an edutainment programme in which actors perform dramas at primary schools based on road safety and social issues. Actors also assist high school learners to develop their own scripts and perform plays to community members.

Bakwena, through its project, Vision for the Future, screened the eyes of 14 000 children and provided spectacles to children with eye sight problems. In association with the Red Cross, Bakwena has started disaster management projects in which intensive training is offered to volunteers and communities are taught to take care of themselves and others during emergencies.

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Some 24 000 people have been reached through edutainment and 50 000 through drama performances. During 2012, 52 teachers were educated on environmental issues. They in turn educated 5 100 learners. Scholar patrols and safe routes have been established and training and equipment provided. More than 10 000 children have directly benefited from this project.

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The road to success is always under construction

On the road of life there are always twists and turns and no two directions are ever the same. Yet the lessons come from the journey, not the destination.

Wherever you’re headed though, somehow you will always need a road to take you there. Roads that connect you to the loved ones you haven’t seen for the longest time, to the next big client, or even just to the holiday you have been looking forward to with your family.

Our roads also create opportunities for small businesses that perform routine road maintenance and for students who learn and grow through the bursaries we offer them. Most importantly, our roads make an invaluable contribution to the existence of every single business out there; and ultimately to the economy of our country.

So at the South African National Roads Agency SOC LTD we do everything possible to ensure we deliver the best we can, balancing finance, engineering, safety and the needs of our communities and citizens.

More than just roads

www.SANRAL.co.za