

Sanral's Chief Engineer on Retirement, Career Highlights and Tolling

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Koos Smit

When **Koos Smit** studied civil **engineering** on a public **service** bursary at the **University of Pretoria** in the 1970s, the plan was that he would qualify and build dams and **pipelines**.

However, an oversupply of engineers at the Department of **Water** Affairs saw him sign up at National **Roads**.

He remained at National **Roads**, and its successors, for the next 43 years, managing the development and **maintenance** of **roads** instead.

Smit will retire at the end of May, exiting the **South African National Roads Agency Limited** (Sanral) as the entity's **engineering** executive.

"I never regretted the decision to go National **Roads**. I have had some wonderful opportunities to grow as an engineer," says Smit.

For the first eight years of his career, he was part of internal supervisory teams that procured and directed the **construction** of three diverse greenfield **projects** in different parts of the country.

He started off as an assistant resident engineer, and became a resident engineer midway through this period.

The **projects** included the **construction** of 7 km of N1 **concrete** freeway between Fairlands and Main Reef **road**, at an estimated current value of R1.1-billion.

Construction of this **road** included the relocation of 1.5 km of railway line carrying 600 000 commuters a day, as well as traversing a number of mine dumps, which had to be stabilised.

Another **project** was the **construction** of the N3 dual carriageway between Umhlatuzana and Key Ridge, in KwaZulu-**Natal**, which comprised 3.5-million cubic metres of earthworks, with a single embankment size of 1.35-million cubic metres. To complicate matters further, an unexpected

visitor, cyclone Domoina, wreaked havoc halfway through the **project**.

After this eight-year period, Smit acted as engineer on the reconstruction of the Cradock to Cookhouse portion of the N10. He also managed the **construction** of greenfield **projects** on the Garden Route, as well as the **North Coast toll road** between Umhloti and Tinly Manor.

Toll Roads

In 1993, amid the political uncertainty in the build up to the change of government, Smit became involved with the proposed **N1 toll road**.

“With the fast-growing growing traffic on the N1 in the 1990s, there was a dire need to extend the N1 from **Middelfontein** to **Polokwane**, but, as there were no funds from the fiscus and limited borrowing capacity as a result of a cap on the State guarantee, it was decided to develop this 126 km of freeway as a public–private partnership (PPP), with off-government balance sheet financing.”

Legislation at the time, however, did not allow the private sector to collect tolls for its own account in order to construct and maintain the **road**, which meant the N1 tender was structured as a long-term performance contract in which government would collect the tolls.

This provided a revenue stream on which the prospective tenderers had to tender to procure financing to construct and maintain the **road**, then transferring the **road** back to the State within the shortest possible repayment period.

The shortest repayment period of 23 years tendered by the successful **contractor**, ends in October 2018.

“Despite uncertainty in the markets and our failure to obtain off-government balance sheet financing it was still a very successful partnership.” says Smit.

As a new government came to **power** in 1994, the responsibility for national **roads** was transferred to State-owned entity Sanral in 1998, with Smit joining the agency as **engineering** executive.

The new government wanted to create job opportunities grow the economy through the development of **infrastructure**. This placed three identified spatial development corridors on the table, explains Smit.

Toll **road** concessions – or upgrading of the **roads** through the user-pay principle – in the Maputo Development Corridor, the **Platinum** Corridor and the **Durban-Gauteng** Development Corridor saw **financial** close in less than six years.

The combined initial **construction** cost of the three concession **projects** was R19-billion, at current rand value, with the combined estimated cost of **maintenance** and improvements over the 30-year concession period around R28-billion, also in current rand-value.

“Our main challenge in the development of these **projects** was that there was very little or no experience of PPPs in government or the private sector at the time, nor any local guidelines or regulations,” says Smit.

“We had to start from scratch to carve out a concessions template that would suit the South

African **environment**.”

Gauteng Toll Roads

Smit says he made “a modest contribution in the procurement methodology, as well as conceptualisation, structuring and procurement of the toll **system service** providers” of the Gauteng Freeway Improvement **Project** (GFIP), which led to the implementation of electronic tolling (**e-tolling**) on 200 km of Gauteng’s urban highways.

The **project** has faced much resistance from users, with compliance rates well below initial forecasts.

Political will and public acceptance are the main pre-requisites for an enabling **environment** to develop toll **roads**.

“I believe GFIP would have been a global flagship **project** if procured in a less complex enabling **environment**,” says Smit.

Smit says Sanral still has R120-billion of possible toll **roads** on its books, but warns that these **projects** will now have to join a long waiting list for Sanral’s non-toll budget.

Highlighting another challenge he faced in his career, he expressed his disappointment that the De Beer’s pass **project**, as a second route over the Drakensberg mountain range, has not been approved.

“It would have been of huge benefit to the economy of **South Africa**.”

Instead of **building** the De Beer’s pass, Sanral has opted to upgrade the existing alignment between Keeversfontein and Warden.

Core Function

Despite the large **projects** that have marked Smit’s career, he describes the task of developing and maintaining **South Africa**’s national **road** network as his core function.

“It is about the optimal investment of our non-toll budget of around R15-billion a year and the procurement of around 450 **service** providers on an annual basis in order to develop and maintain our **road** network. Overseeing the delivery cycle is where most of my **energy** goes, and there is no glory there, only hard work.”

He adds that nothing he has achieved at Sanral has been a “one-man show”.

“It is a huge team effort to procure and manage **service** providers to develop and maintain the national **road** network.”

No successor has been named for Smit yet.

He notes that he will do some **consulting** work upon leaving the Sanral office for the last time as **engineering** executive.