

CONGESTION ON VAN REENEN'S PASS AND THE CONSTRUCTION OF DE BEER'S PASS

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1. INTRODUCTION

The essay discusses the congestion on Van Reenen's Pass which is situated on the N3 between Harrismith and Ladysmith. Directly related to the congestion on Van Reenen's Pass is the timing of the construction of De Beer's Pass, which has been identified and proclaimed as the future alternative to Van Reenen's Pass.

The essay covers the status quo situation on the N3, where some background statistics, economic figures and social and political issues will be highlighted.

Furthermore, the essay will also include the background motivation for the construction of De Beer's Pass, estimated costs and financial and social impact of the new route, etc.

This will be followed by public and political views and newspaper articles highlighting the general feeling of the affected parties, particular the business people from Harrismith.

The essay will also touch on the current policy, strategy and legislation documents related to freight logistics.

The essay will be concluded with a short paragraph including a summary of recommendations and the way forward.

2. STATUS QUO OF THE N3

South Africa has seven (7) primary transport corridors of which the N3 corridor between Gauteng and Durban is the most strategic regarding tourism as well as freight movement (*National Freight Logistic Strategy: 2005*). The N3 is also by far the busiest corridor of all.

Van Reenen's Pass was originally constructed as a gravel road connecting the old Transvaal with the coast of Natal. The road also provided the corridor between the

Free State (*Bloemfontein*), the Cape Province and Natal. People travelling between the Cape and Durban had to drive around Lesotho via Van Reenen's Pass.

Van Reenen's Pass has subsequently been upgraded a number of times, shoulders were added at steep slopes and some of the sharp corners were eliminated and regarded.

Unfortunately, Van Reenen's Pass has a limited capacity due to the mountainous terrain, steep grades, deep valleys and gorges. During the late 1960's the limitations of Van Reenen's Pass were identified and alternative routes were investigated. During these investigations De Beer's Pass was identified and proclaimed. The alternative route through De Beer's Pass would divert from the current alignment of the N3 at Warden and connect to the N3 again at the toll gate at the foot of Van Reenen's Pass.

The advantages of De Beer's Pass would be the shorter travel distance (*110km instead of 114km*), less severe slopes etc. which will result in lower vehicle operating cost, road crashes, etc.

Because the new proposed De Beer's Pass route will not pass through Harrismith, the business community is opposing this alternative route in all possible ways. The town of Harrismith is dependent on tourism and through traffic and a number of petrol stations; restaurants and shops will be severely affected if the De Beer's Pass alternative route is constructed. Businesses affected are indicated below:

- Nando's
- Wimpy
- Spur
- Juicy Lucy
- KFC
- Something Fishy
- House of coffees
- Pringles pub & grill
- Number of smaller shops and food stores
- 11 Petrol Stations

According to a socio economic impact study done (*Harrismith Chronicle: 25 April 2008*) 1,5 million vehicles stop in Harrismith annually. Each vehicle spends approximately R650-00 per stop, bringing the total financial injection into Harrismith to about R950m per year. Currently a SMS petition is being run by a concerned group of business people to try and stop the alternative route (*various local newspaper clippings studied*).

On the negative side it should, however, also be noted that the N3 is currently running through Harrismith which results in a negative visual impact and noise pollution. Large and overloaded trucks are driving through the town, firstly damaging the existing roads and, secondly, contributing towards the problem of prostitution and promiscuity.

Angry residents and dissatisfied shop owners affected by the trucks stopping in Harrismith are speaking out loudly and are currently busy with action to prevent the trucks from entering the town. (*Harrismith Chronicle, 18 January 2008*).

N3TC, the current toll operator on this section of the N3, has implemented some measures to try and reduce the visual impact of the N3 and the associated noise pollution. The measures taken are summarized below (*N3TC.co.za*):

- “Whisper” course asphalt has been used as an overlay through Harrismith to reduce tyre noise.
- Large earth banks (berms) have been constructed along the route.
- A number of indigenous trees have also been planted next to the road to provide a scenic screen between the road and the nearby houses.
- The speed limit has been reduced to 100km/h.

3. ENGINEERING CONSTRAINTS OF THE N3

The current average daily traffic on this section of the N3 is 9 100 of which 30% are heavy vehicles. The capacity of Van Reenen’s Pass is 13 900 vehicles per day. Before this figure is reached, De Beer’s Pass should already have been completed. If the current traffic growth of 6 per cent is sustained, De Beer’s Pass is supposed to be completed and opened by 2015. During the month of December 2007, the average daily traffic reached 11 000.

Due to the geometric insufficiencies of Van Reenen’s Pass and adverse climatic conditions such as severe mist, strong winds and snow, the number of accidents is excessively high. The steep grades also have a substantial impact on the vehicle operating costs of heavy vehicles.

The accident statistics on Reenen’s Pass from September 2000 to August 2006 is indicated in the table below.

ACCIDENT STATISTICS FOR VAN REENEN PASS: SEPTEMBER 2004 TO AUGUST 2006 (N3TC Website)

COMPARATIVE 12 MONTH PERIOD	SEPT 2004 TO AUGUST 2005	SEPT 2005 TO AUGUST 2006	CHANGE
Number of accidents	79	69	-12.7%
Number of fatal accidents	3	8	166.7%
Number of heavy vehicle accidents	16	24	50.0%
Number of injuries	107	171	29.8%
Number of fatalities	4	11	175.0%
Estimated cost to the National Economy	R13 960 000	R14 560 000	4.3%

From a road safety point of view, Reenen's Pass is the single most dangerous section of the N3.

4. CURRENT MEASURES OF N3TC TO IMPROVE SAFETY ON VAN REENEN'S PASS

Since the N3 is such a strategic route between Gauteng and the Port of Durban and the fact that the Van Reenen's Pass is a very dangerous section of road, N3TC has implemented the following measures to try and reduce fatal accidents:

4.1 Road Upgrading and Improvements

N3TC has introduced the concept of "truck lanes" for heavy vehicles exceeding 16 tons. From research it was found that the major contributor to fatal accidents on Reenen's Pass is the speed differential between trucks in low gear and passenger vehicles travelling at high speed.

The truck lane (left hand) is exclusively reserved for heavy vehicles with a speed limit of 60km/h and the right hand lane for passenger vehicles with a speed limit of 80km/h.

It is also proposed that trucks should stop dead at a specific point on the route to ensure that the brakes are fully functional.

N3TC has also embarked on a high visibility signage programme

.4.2 Education

Below are some of the educational measures that are currently being introduced:

- To reduce accidents, driver attitudes and behaviour will have to change, primarily through education.
- Responsible drivers adhering to the speed limit, wearing of safety belts, etc. would be required from all drivers.
- A prominent motoring journalist, Dave Scott, in conjunction with Fleetwatch magazine, is finalising the conceptualisation of driver training, with specific reference to the Van Reenen's pass situation.
- The Department of Transport is also on a continuous basis busy promoting the 'Arrive Alive' programme.
- Weather SA has also introduced an innovative free weather forecast service for the KwaZulu Natal section of Reenen's Pass.
- N3TC has started a customer care line to assist motorists with their journeys.

4.3 Law Enforcement

Traffic law enforcement plays a major role in reducing road crashes on Van Reenen's Pass. Some of the major issues are:

- Law enforcement falls primarily on the shoulders of the KwaZulu Natal Road Traffic Inspectorate (RTI).
- Strict law enforcement is done by means of visual policing and speed checking by fixed cameras.
- Mr John Schnell, manager of the KZN RTI and Dave Steele, Ladysmith Station Commander, are both outspoken critics of lawless driving and has indicated that they are enforcing the principle of "Zero Tolerance".

5. POLICY, STRATEGY AND LEGISLATION

According to the National Freight Logistics Strategy of 2005 (DoT, 2005), the following issues are relevant to the Gauteng/Durban corridor (N3).

- The freight capacity of this corridor is 57 million tons. It was estimated that this figure would only have been reached at 2020. In 2004, 53 million tons of freight was moved on this corridor, which was substantially higher than anticipated. Eighty (80) percent of the goods moved between Gauteng and KZN is for local consumption and cannot be switched to other ports or corridors. Alternative corridor strategies or additional capacity on existing corridors need to be investigated.

- The operational capacity of rail is approximately 20 percent of the installed capacity which is one of the major reasons for the bottle neck.
- Unbalanced traffic patterns, more fully laden vehicles towards Durban than towards Gauteng.

6 GAPS IN CURRENT KNOWLEDGE AND NEW RESEARCH TOPICS

Mr. Neil Tolmie the CEO of N3TC toll concession (formerly from SANRAL) has indicated that three (3) alternative routes are currently being investigated, which may replace the proposed De Beer's Pass. Since the proclamation of a new route is highly sensitive, N3TC does not want to disclose any information at this stage.

Factors influencing the final position of the alternative N3 route include the following:

- Expropriation of private land
- Environmental impact on sensitive areas
- Construction cost
- Toll fees
- Public private partnerships
- Economic development along the new corridor
- Socio economic impact on the affected communities

The effect of moving the N3 away from Harrismith has not been researched in great depth and needs to be investigated thoroughly. The actual decline in economic activity and the subsequent reduction in employment opportunities will have a major influence on the small rural towns of Harrismith, Swinburne and Van Reenen.

In the current economic climate where unemployment is a hard reality, moving the N3 can be detrimental to the sustainability of these towns.

A good example of this phenomenon is the town of Winburg in the Free State. This once striving town has been reduced to a small town with limited opportunities after the N1 main route between Gauteng and the Cape Province has been diverted away from the town.

Intensive research is therefore required to determine the most appropriate alternative route for the N3 as well as the subsequent effect on the towns of Harrismith, Swinburne and Van Reenen.

Any improvement of the current freight by rail transport will alleviate the congestion on the N3. Currently rail is not considered as an alternative due to the following factors:

- Long turnaround time which is unacceptable for any perishable goods
- Safety and security of valuable items
- Lack of freight handling capabilities at stations
- Limited railway lines (*not covering all the areas*)

Currently the possibility of a logistic service centre (*container facility*) is being investigated for Industriqwa in Harrismith. The suggestion is to upgrade the rail service between Durban and Harrismith and to provide a fully functional container facility for off and on loading.

Road transport will then be used between Harrismith and Gauteng. In Gauteng similar container facilities can be provided at strategic positions.

On 11 April 2008, the national Minister of Transport, Mr Jeff Radebe, held a “Transport Imbizo” in Harrismith. Me Beatrice Marshoff, premier of the Free State, Nazir Alli, CEO of SANRAL and other officials also attended the meeting (*Chronicle 18 April 2008*).

During the meeting it was indicated that the logistic service centre would be investigated. 300 000m² of land was identified and a budget figure of R400m was mentioned (*Chronicle 18 April 2008*).

7. CONCLUSION

Due to the geometric constraints of Van Reenen’s Pass, this section of the N3 will reach congestion capacity at a certain date in the near future. Currently this date is estimated at 2015.

An alternative route such as De Beer’s Pass will have to be constructed to alleviate the freight logistic issues in future.

With the current growth of South Africa, De Beer’s Pass alone would not be sufficient. The rail system between Gauteng and KwaZulu Natal would also have to be upgraded and optimized. The alternative route over De Beer’s Pass will have a severe impact on the economic sustainability of Harrismith.

Harrismith will have to accentuate its strategic position regarding tourism and the gateway to the Drakensberg to try and compensate for the reduced traffic volumes travelling through town.

REFERENCES

Harrismith Chronicle: 18 January 2008

Harrismith Chronicle: 18 April 2008

Harrismith Chronicle: 25 April 2008

National Freight Logistics Strategy, National Department of Transport: 2005

Web site of SANRAL: <http://www.sanral.co.za>

Web site of N3TC: <http://www.n3tc.co.za>