

N2 WILD COAST TOLL HIGHWAY

ALTERNATIVE INLAND ROUTE

through Amadiba (Mbizana, EC)



Updated Presentation September 2024

Meetings with Sanral, Government, academia and the public before Sept 2024

- 3 March 2022*; ACC meets with SANRAL in Port Edward. M Peterson, N Gxumisa and C McLahlan refer to DFFE.
- 20 July 2022*: Reps of Traditional Council of Umgungundlovu, ACC & ACC Technical Experts meet with **DFFE and the EC DEDEAT** (V Skosana, Dr D Smit (DFFE) & Dr D de Villiers (DEDEAT)) at Mtentu camp site.
- 24 Nov 2022*: ACC & ACC Technical Team meet in Mbizana with **SANRAL** and **Winnie Mandela Madikizela LM** delegation led by Mayor Hon. Mafumbatha.
- 28 January 2023 & 3 March 2023*: ACC's Technical Experts meet **SANRAL** in Gqeberha (Peterson, McLachlan, Songxaba). SANRAL doesn't come back with a date to discuss Lurholweni passing as agreed on 3 March.
- 10 and 30 June 2023; 10 August 2023*: **Public meetings** in Cape Town (AIDC), East London (Miriam Makeba Hall) and King Williams Town (Steve Biko Centre) with together over 200 participants.
- 24 August 2023*: The Umgungundlovu Council, ACC and ACC's Technical Team present at Umgungundlovu Komkhulu in **Xolobeni** before 350 participants from the coast and 30 from Lurholweni township arriving in taxis.
- 15 September 2023*: ACC and ACC's expert team present before 50 students and teachers at **UKZN** Geography department in Pietermaritzburg.
- 20 September 2023*: ACC's experts meet with **SU** Transport Economics program at Logistics Economics.
- 7 November 2023*: ACC and our experts at **Dangeni Komkhulu**, inland Amadiba. 500 residents present (after the imbizo on 4 October was blocked by high level political intervention against Chief Lunga Baleni).
- 15 November 2023*: ACC and experts present to **The National Treasury** delegation, which then contacts ISA.
- 26 November 2023*: ACC and inland business organisation Umbono Wethu present before 35 residents at inland **Dangeni community hall** in inland Amadiba.
- 12 December 2023*: ACC and our experts present to **ISA at the Department of Public Works and Infrastructure**.
- 22 April 2024*: ACC present the AIR in **Phandulwazi** to 120 inland residents (Jama, Baleni, Phandulwazi).

National government officials who so far have discussed ACC's AIR proposal for N2WCTH

Department of Forestry, Fishing and Environment, 20 July 2022

Vusi Skosana - Integrated Environmental Authorisations (Director), DFFE

Dr Danie Smit - Control Environmental Officer (Deputy Director, DFFE)

The National Treasury, 17 November 2023.

Ulrike Britton - Chief Director: Urban Development Infrastructure

Resego Tekanyo - Budget Analyst

Luyolo Ntlangula - Senior Budget Analyst

Boitumelo Mashilo - Chief Director Capital Projects Appraisal Unit

The Infrastructure SA program at Department of PW & Infrastructure, 12 December 2023

Mameetse Masemolo – DDG Infrastructure Investment Planning & Oversight,

Colin Pillay - Senior Infrastructure Specialist (Transport)

Dr Herbert Joynt - Programme Manager ISA Centre of Excellence

Tshepo Motiang - Provincial KZN Government, Provincial Lead

Thabang Tladi – Western Cape Provincial Government, Provincial Lead

Alvino Widschutt-Prins - Programme Manager: Infrastructure Pipeline Development

1 of 1 RAL'S COASTAL N2 ROUTE & ACC'S INLAND N2 ROUTES COMPARED

The South African National Road Agency (SANRAL) got approval in 2011 to build a new HIGHWAY between the MTAMVUNA and MTENTU rivers which will run 3km from the protected Coastal area

SANRAL says that the major benefit of this new HIGHWAY is that it will reduce travel time between DURBAN and EAST LONDON by between 1.5 to 3 hours.



ISSUED 10 August 2023

1. THE AMADIBA CRISIS COMMITTEE (ACC) IS NOT OPPOSING the building of the Highway.

2. But ACC is OPPOSED to it running along the Coast through Community owned land where:

* It will disturb a large part of the unique, precious & sensitive NATURAL ENVIRONMENT (the Pondoland Biome)

* It will take away large sections of the RICHEST & most PRODUCTIVE Agricultural & Grazing Land

* It will have a NEGATIVE IMPACT on the ECONOMIC BENEFITS that comes from ECOTOURISM if disturbed and developed insensitively

3. ACC argues THAT BUILDING THE HIGHWAY ALONG THE COAST WILL TRIGGER OTHER DEVELOPMENTS WHICH WILL FURTHER DISTURB THIS VALUABLE LAND.

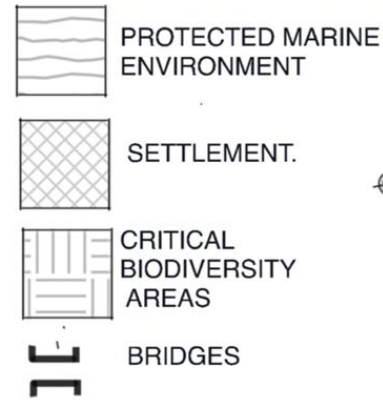
7. The MINING LOBBY is already reviving it's efforts to mine TITANIUM & will benefit greatly from this location

4. GOVERNMENT is already promoting the idea of 'SMART CITIES' along the Coast

5. DEVELOPERS would line up to establish more LUXURY HOLIDAY RESORTS along the Coast

6. ILLEGAL SAND MINING is mostly uncontrolled in Inland Amadiba. This would now extend to the Coast

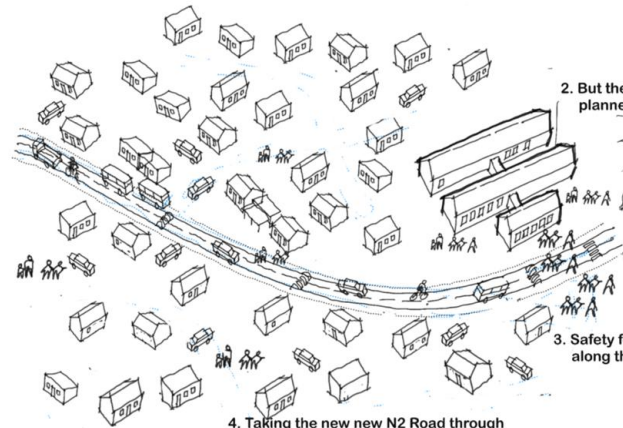
8. Uncontrolled building of new houses & shacks along route, as has happened elsewhere on the N2, will mushroom here.



ACC's simple pamphlet in isiMpondo and English distributed in Amadiba

ACC'S PROPOSED INLAND ROUTE THROUGH LURHOLWENI

1. A lot of development has already taken place along the existing R61 which runs through LURHOLWENI



2. But the development has not been properly planned and there are lots of clashes



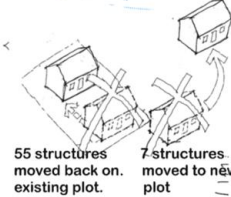
3. Safety for people walking is a big problem along the narrow road

4. Taking the new new N2 Road through LURHOLWENI can bring lots of improvements

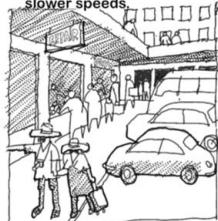
5. This will be better than disturbing the sensitive areas

7. SANRAL says over a 1000 structures will have to be demolished!!!

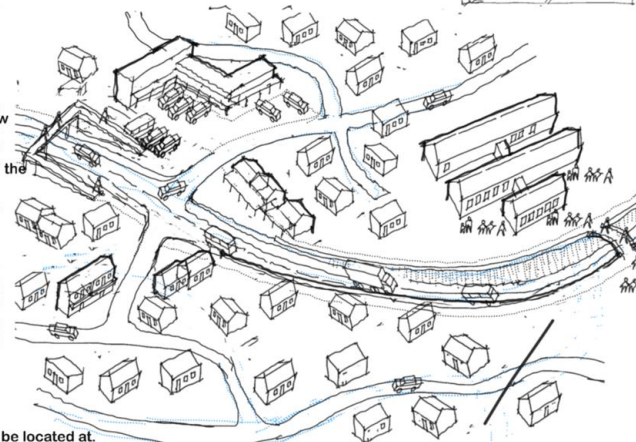
6. With the new N2 Road , pedestrian and vehicles can be separated which will greatly improve safety!



8. The above can be achieved if the new N2 Road is designed for slower speeds.



9. Vendor stalls and shops can be located at centres along the new N2 Road with easy ACCESS for local people & greater volumes of passing traffic.



10. An internal road network can be installed to improve the whole of LURHOLWENI

Proposed INLAND ROUTE; KWABULALA TO MTENTU

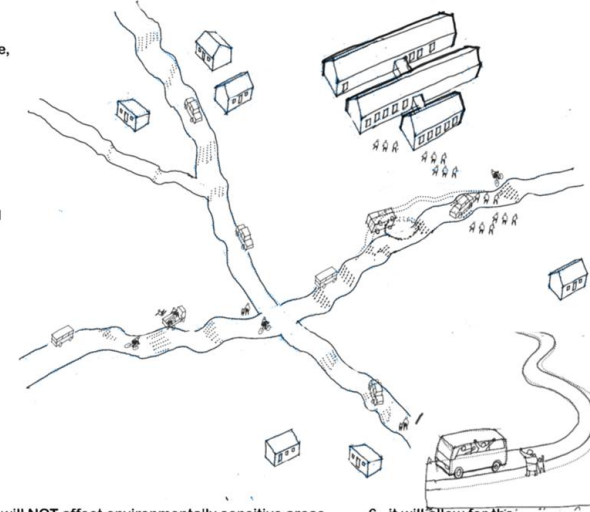
1. The condition of the existing road network is very poor

2. This greatly affects our quality of life, our ability to access markets, schools and social services



3. The dirt roads are corrugated and poorly maintained

4. People walking are at risk & our vehicles are damaged.



5. MOVING THE NEW N2 INLAND: * will NOT affect environmentally sensitive areas. and the most productive agricultural land

* a significantly larger proportion of the AMADIBA population will be get improved ACCESS.

* will add about 13 minutes to the travel time from Durban to E.London

6. it will allow for the improvement of the local road network

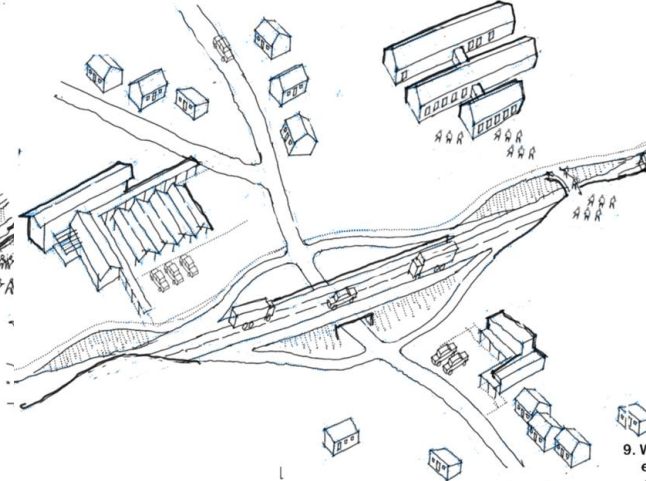
7. Aproximately 54 houses could be affected



8. would bring more JOB opportunities into the area

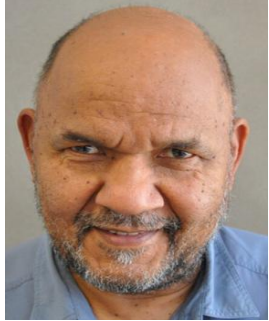


9. Will allow for the creation of new economic hubs for both locals passing travellers alike.



Over 2000 copies has been distributed of the pamphlet in isiMpondo and English

THE AMADIBA CRISIS COMMITTEE TECHNICAL TEAM



MALCOLM CAMPBELL is **FACILITATOR** and a DEVELOPMENT PLANNING CONSULTANT

He CO-ORDINATES the work of the TECHNICAL TEAM



DR SUYABU MANONA is a **research associate** at Rhodes University

and the Director of Land Governance Policy and Implementation, at Phuhlisani NPC.



JOHAN JONAS has been working as a **Planner** in the eastern part of the Eastern Cape Province for 30 years.



DR DICK FORSLUND works at Alternative Information & Development Centre as Senior Economist and researcher.



NONHLE MBUTHUMA Nonhle Mbuthuma is the **Spokesperson of Amadiba Crisis Committee** and has worked as tourist guide in the eco-tourism project Amadiba Adventures.



WILMIEN WICOMB is an **attorney** at the Legal Resources Centre specializing in land and resource reform, customary governance and community rights to development.

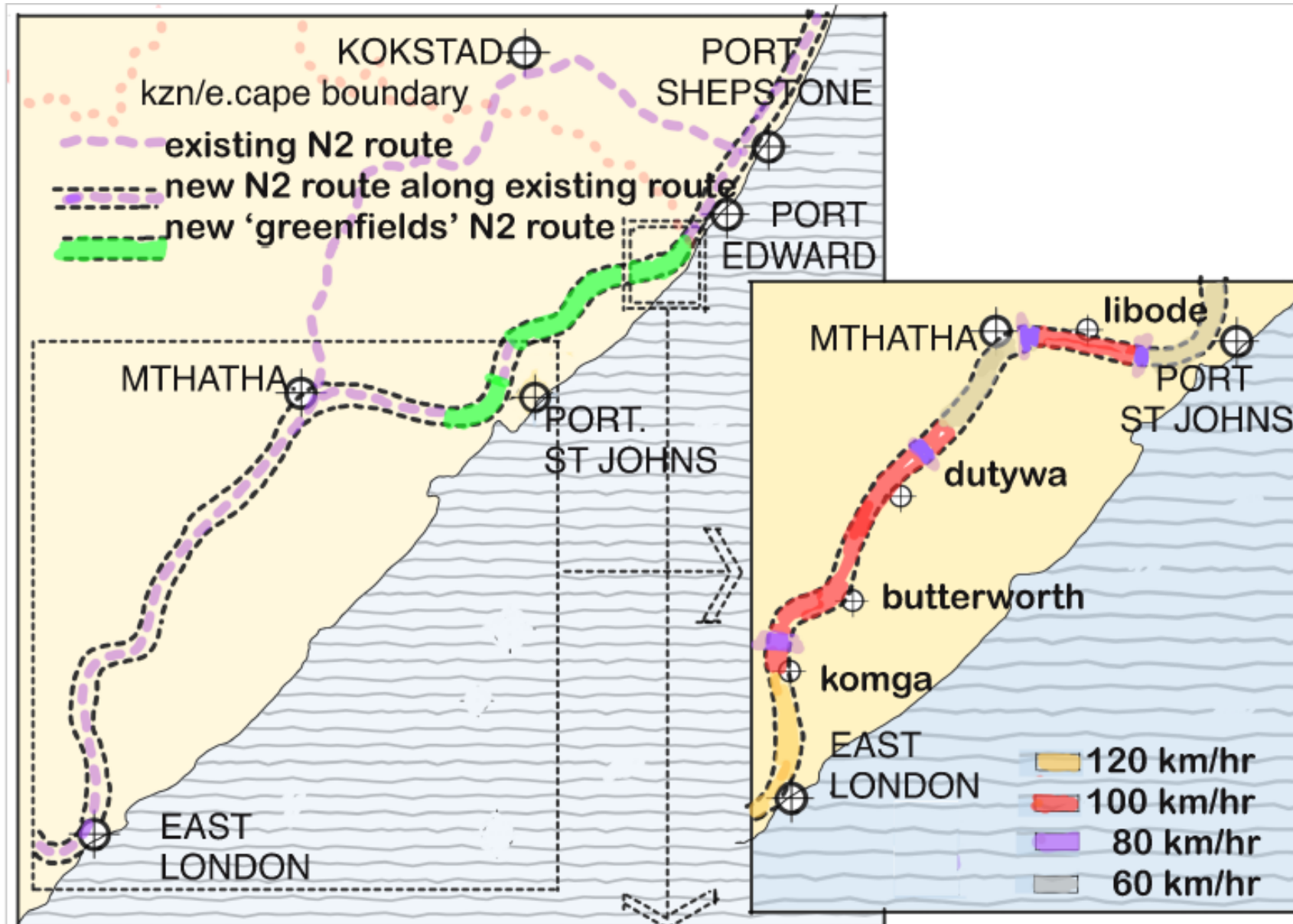


HENK SMITH Henk Smith has been a **lawyer** for 35 years working on land matters,.

Since 2015 he has been a member of the legal team of the ACC

‘THE FRIENDLY ENGINEERS’: ACC’s Technical Team is greatly indebted to a firm of Consulting Engineers, who prefer to remain anonymous for their work in testing the feasibility and alignments of the AIR and it’s compliance with standards set for national roads

THE N2 WILD COAST ROUTE AND AMADIBA AREA IN CONTEXT



Details of the proposed SANRAL WILD COAST N2 ROUTE

PRESENTATION OUTLINE

- A. SOME AMADIBA HISTORY HIGHLIGHTS since 2016.**
- B. SANRAL PREFERRED ROUTE & ACC'S INLAND ROUTE COMPARED**
- C. BASIC POINT OF VIEW from which to look at the goal of SUSTAINABILITY**
- D. SANRAL'S PREFERRED ROUTE: 'THE UNINTENDED CONSEQUENCES'.**
- E. THE ECONOMY OF THE N2WTR PROJECT:**
- F. RESPONSES TO SANRAL's CRITIQUE of ACC's ALTERNATIVE INLAND ROUTE: LURHOLWENI**
- G. LEGAL ISSUES**

A. HISTORY HIGHLIGHTS in Amadiba

9 November 2023: Inland Komkhulu in Dangen, debating the AIR proposal for N2WCTH





22 March 2017 Commemoration of the late 'Bazooka' Radebe, chair of ACC killed by two assassins on 22 March 2016.



Nonhle Mbuthuma's final speech at the 6 April 2017 meeting with the SANRAL CEO Mr Macozoma
(Ref to the documentary 'IHLAZO' on YouTube)



6 April 2017 meeting with SANRAL's CEO Skhombuzo Macozoma at Xolobeni Komkhulu



Imbizo for the whole of Amadiba at Komkhulu in Xolobeni on 23 January 2020 with SANRAL present. An Amadiba Committee with Chief Lunga and representatives from Amadiba inland and coast then holds negotiations with SANRAL about moving the N2WCTH from the coast and the use of the Dangeniquarry. When the talks end unsuccessfully in September 2020, ACC starts to assemble a team of technical experts.

HISTORY HIGHLIGHTS: 'Strategic misrepresentation'

The late Headman from Sigidi village in 2006 signed a support letter for N2WCTR, saying:
"This road is far from the sea as it runs about 10km inland. There is no threat to the beauty of the environment near the coast."

This the Headman's statement was even quoted by the Judge in the 2019 Court judgement on the N2 on its Environmental Impact Assessment (EIA).

"10km" or "15km from the coast" has since been repeated to the public by project involved SANRAL officials (documented in TV and the press 2017, 2019 and 2021).

Up until 2011-2012, Amadiba thought that the new N2 would run inland.



B.SANRAL PREFERRED ROUTE (SPR) & ALTERNATIVE INLAND ROUTE (AIR) COMPARED

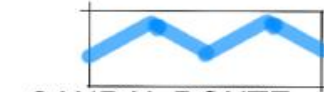
- Map & Connection to existing roads
- Biodiversity Impact
- Biodiversity Impact Quantified
- Construction, Lengths & Speeds



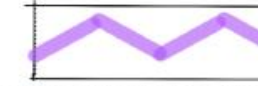
B. SANRAL & INLAND ROUTE COMPARED: MAP OF ROUTES



B. SANRAL & INLAND ROUTE COMPARED : Biodiversity Impact



SANRAL ROUTE



EXISTING R61 ROAD



INLAND ROUTE



Critical Biodiversity Area 1



Critical Biodiversity Area 2



Ecological Support Area 1



Ecological Support Area 2



OTHER

B. SPR & AIR COMPARED : Biodiversity Impact Quantified

ROUTES	EXISTING GRAVEL ROAD	EXISTING R61 ROAD	NEW ROAD (GREENFIELD)	TOTAL LENGTH
Alternative Inland Route	10.53km	18.00km	16.47km	45.00km
SANRAL Coastal Route	0km	0km	31.0km	31.00km

SUMMARY OF GRAVEL AND GREENFIELD SECTIONS						
	CBA 1	CBA 2	ESA 1	ESA 2	OTHER	
Alternative Inland Route	±1.60km	±0.40km	±3.01km	±5.19km	±17.80km	±26km
SANRAL Coastal Route	±5.62km	±7.09km	±5.55km	±11.34km	±1.40km	±31km

The complex N2/R61 interchange with 1km of off-ramps by Mtamvuna river in a CBA1 and CBA2 and the four interchanges in Mzamba, Sigidi, Mdatya and Khumbuza are also excluded.

Ribbon development - an inevitability: *blind spot*

- **The Planning/Development Specialist Study for SANRAL N2 (2008)** highlighted this and emphasised the likely scenario: that if the “N2 Toll Highway” is constructed, it will only be a matter of time before settlements will start to emerge.
- Increased and unregulated settlement along the route will lead to densification, especially close to a town like Port Edward and existing built up areas, like Lurholweni.
- This, in turn, will ultimately lead to losses in the initial high mobility benefit (the 120km/h speed limit) as elsewhere and, of course: have significant environmental impact.
- Ribbon development caused by N2 in Amadiba will therefore have an unpredictable large and growing footprint. The ribbon development danger was highlighted in the 2009 EIA that did not consider a much less sensitive inland route option.
- Ribbon development can be expected also along an inland route, but in a landscape not classified environmentally as sensitive (but as “Other Natural Areas”).
- In the AIR proposal, the ‘Development Corridor 1’ – envisioned on both sides of the new N2 in the 2023 Eastern Seaboard Regional Spatial Development Framework – is moved 10-12km inland

Illegal sand mining -- *blind spot*



- SANRAL correctly characterises illegal sand mining as a socio-economic problem + points to under-resourced authorities. In the discussions with ACC's technical team Sanral representatives have proposed to address illegal sand mining with education. But the challenge is more complex due to:
 - Institutional (legal and structural) fragmentation on a wholesale scale.
 - Demand outstrips the rate at which resource is produced (sustainability).
- DMRE has not issued mining licenses for regulation along the Wild Coast.
- The complexity at different scale and dimensions of institutional interventions cannot be resolved through education -- as SANRAL proposes -- the response is simply not equal to the challenge.
- The approved route of Sanral brings the challenges posed by illegal sand mining to the environmentally sensitive space on the coast.
- The AIR puts the expected increase of spontaneous and unregulated demand for sand due to incoming migration 15-18 km from the coast (spatial rationality).

C. "Sustainable Development in a Three Node Context"

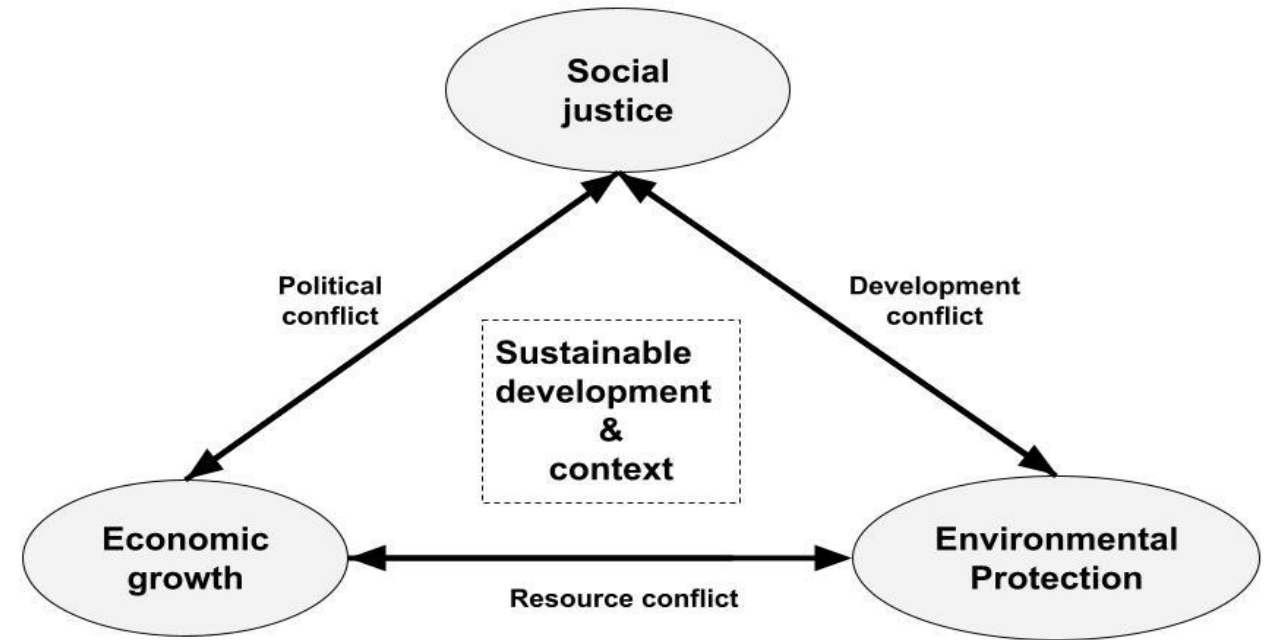
The debate is pertaining to the conflict between **three nodes**. They are an always present reality.

The ACC is consciously highlighting **Sustainable Development & Context**.

An approach to the N2 mega project that is fragmenting or dividing social and environmental issues from purely economic ones is problematic. Decision and solutions will become fundamentally unbalanced.

Instead of tension between the nodes we will get outright conflict between them.

In a large project like this: **'Social Justice'**, **'Economic Growth/Development'** and **'Environmental Protection'** do not exist and evolve isolated from each other. And if we shouldn't look away from the dynamics they have together, we must look at them together.



D. SANRAL APPROVED ROUTE (SPR) : OBVIOUS CONCERNS

- Mushrooming of Settlements:
Ribbon development inevitable
- Ineffectiveness of Land Planning Controls
- High Environmental impact



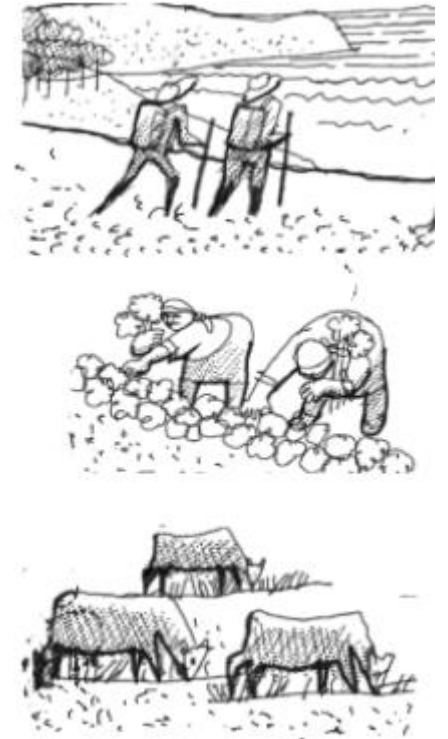
D. SPR -CONCERNS - High Environmental Impact

Excerpt from Conservation Assessment of the Wild Coast (CSIR January 2005) & Wild Coast Biodiversity Strategy and Action Plan (CSIR July 2005)

The objectives of the Wild Coast Biodiversity Strategy and Action Plan towards the N2 were very clear – “ensure that the alignment of the greenfields section of the N2 (toll road) does not compromise the integrity of the proposed outer boundaries of the greater Pondoland Conservation Area”; “ensuring that the EIA for the proposed N2 (toll road) mitigates the potential social and environmental impacts”.

- **However, SANRAL’s Coastal N2 alignment between Mtamvuna river by the KZN border and the Mtentu river cuts right through the middle of the priority conservation area.**
- **The EIA did NOT consider what (in reality) the likely development consequences will be. It should not have been approved.**
- **Mitigation measures of the EIA are based on what is assumed to be within the control of Government.**

This wishful thinking is exemplified on the next slide.



Key quote in the Dec 2009 EIA ('Volume 1: Main Report', page 30)

*"It is estimated that the proposed new road and its potential indirect and/or cumulative impacts (including possible strip/ribbon/nodal development) could lead to sufficient loss of habitat to result in Pondoland-Ugu Coastal Sourveld being re-categorised as an Endangered vegetation type (...). It is likely that **other proposed projects in the area would further exacerbate this loss** of habitat and make it more likely that habitat loss would lead to re-categorisation of the vegetation type.*

"On the basis of the above criteria, the proposed new road is considered not ecologically sustainable."

*"However, **if** secondary impacts can be controlled and conservation measures can be put in place to effectively protect core components of the PCE **then** the assessment of five of these criteria **may** be reversed/become insignificant and the proposed project **could then** be considered to be ecologically sustainable."* [our emphasis].

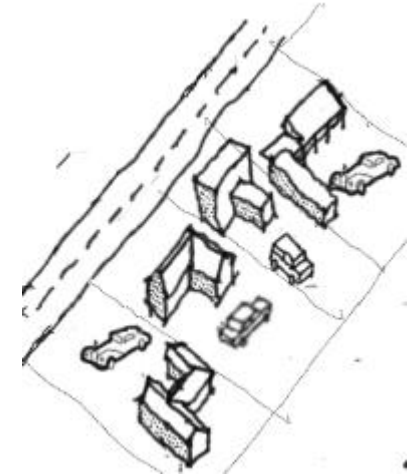
The AIR addresses those concerns on the basis of new data and 15 years of proved experience since 2009 .

But already the 2009 EIA had no reason to believe that these concerns would be addressed

D. SPR -CONCERNS - High Environmental Impact

The route affects critical biodiversity areas and wetlands

- The 2019 Eastern Cape Biodiversity Plan, compiled by SANBI and provincially gazetted in Oct 2020, highlighted that the Authorised Route (SPR) impacts several areas mapped as 'Critical Biodiversity Area 2' (CBA 2) in Bekela, Mdatya and Sigidi, one Critical Biodiversity Area 1 (CBA 1) in the Xolobeni area and by Mzamba river in Sigidi as well CBA1 and CBA 2 areas in the Mzamba area before the Mtamvuna river.
- The SPR road reserve runs through CBA1 and CBA 2 areas for 12.7 km of the 31-32 km through Amadiba.
- There are serious concerns around SANRAL's Authorised Route re the cumulative impacts of easy access and anticipated development influx on a confirmed Priority Biodiversity Conservation Area, including :
 1. Illegal sand mining (increased massively since the start of building the Mtentu mega bridge).
 2. Siltation of pristine estuaries and impact of this on Marine Protected Areas (MPA).
 3. Loss of rangeland for grazing.



The disclaimers in the Final 2009 EIA.

Final 2009 stated: The N2WCTR is “not ecologically sustainable”. But “**if**” ribbon development and “other projects” can be stopped, “**then**” it is ecologically sustainable. Evidence show that it was wishful thinking.

The 2023 Eastern Seaboard RSDF notes:

Key Institutional Arrangements and Governance challenges and opportunities

Key Institutional Arrangements and Governance challenges: Eastern Cape

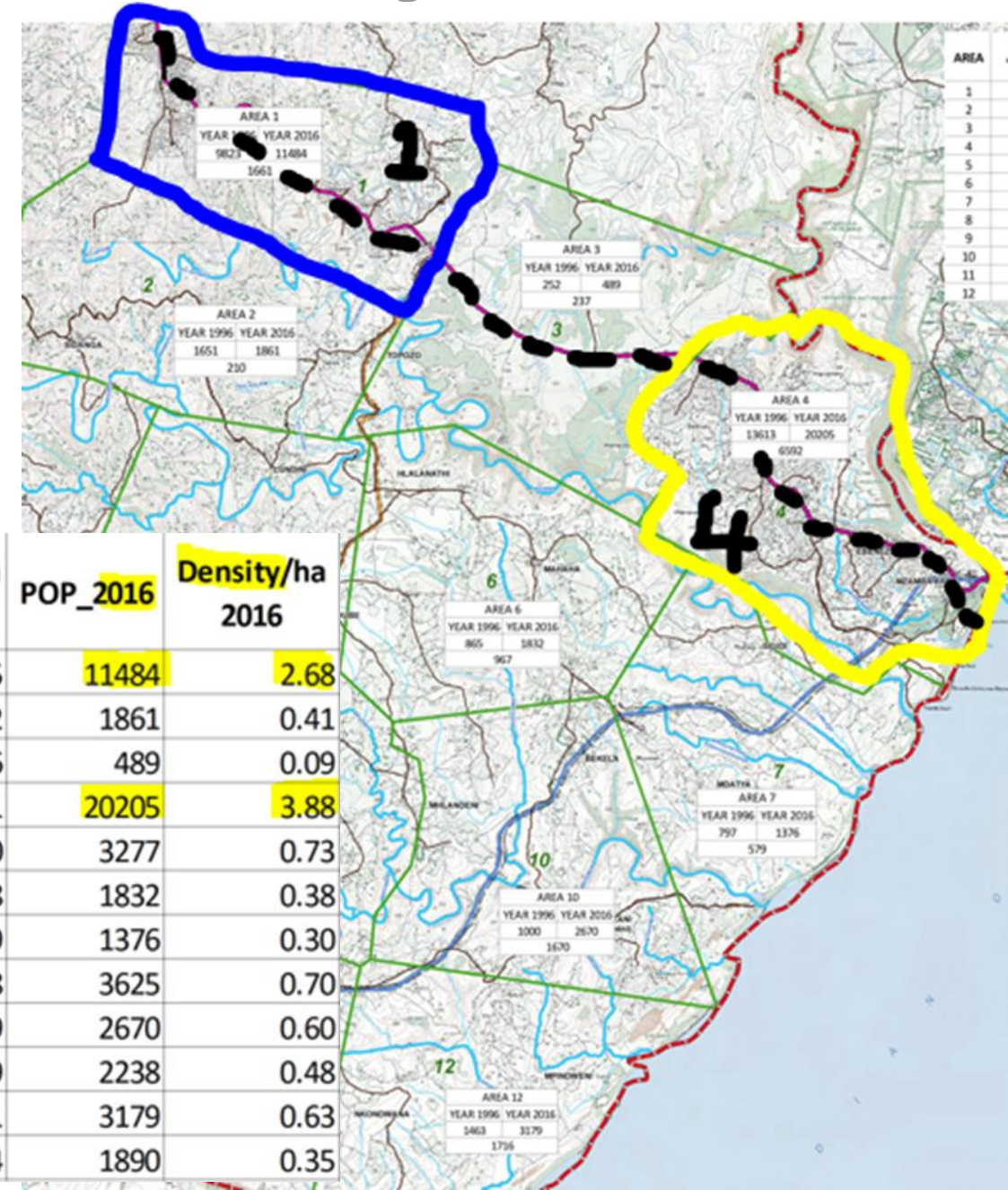
- Inadequate Provincial capacity to facilitate, monitor and co-ordinate development functions
- The Land Administration system collapsed
- Local Government lack of capacity to implement and manage development
- Parts of the Province still affected by different and outdated laws governing development.

Re ‘outdated laws’ (last point above):

(1) ACC argues that customary law governance of land on the Amadiba coast comprises a final bulwark of protection against illegal projects, mal-development and “the anarchy of the rich”. (2) The 2023 EC Environmental Management Act implicitly suggests abolishing the 1km protective zone along the Wild Coast (“the 1992 Decree 9”). ACC argues that the 1km zone is necessary to protect the pristine coast line.

D. SPR -CONCERNS :Ineffectiveness of Land Planning Controls

- Area 1: 1996 to 2016
 - 16.9% increase in population
 - increase in density from 2.3 people / ha to 2.68 people / ha
- Area 4: 1996 to 2016
 - 1996 to 2016 – 48% % increase in population
 - increase in density from 2.61 people / ha to 3.88 people / ha



AREA	Area in HA	POP_1996	Density/ha 1996	POP_2001	Density/ha 2001	POP_2011	Density/ha 2011	POP_2016	Density/ha 2016
1	4278.6430	9823	2.30	10222	2.39	11328	2.65	11484	2.68
2	4581.8362	1651	0.36	1950	0.43	1939	0.42	1861	0.41
3	5343.0401	252	0.05	246	0.05	298	0.06	489	0.09
4	5213.7836	13613	2.61	14258	2.73	19847	3.81	20205	3.88
5	4460.0013	3350	0.75	2674	0.60	3127	0.70	3277	0.73
6	4772.0877	865	0.18	1230	0.26	1797	0.38	1832	0.38
7	4522.0638	797	0.18	1276	0.28	1311	0.29	1376	0.30
8	5174.0216	3041	0.59	3424	0.66	3500	0.68	3625	0.70
9	4427.1667	2839	0.64	2197	0.50	2594	0.59	2670	0.60
10	4708.6114	1000	0.21	1306	0.28	2310	0.49	2238	0.48
11	5042.9804	2519	0.50	2609	0.52	3096	0.61	3179	0.63
12	5428.2427	1463	0.27	1086	0.20	1841	0.34	1890	0.35

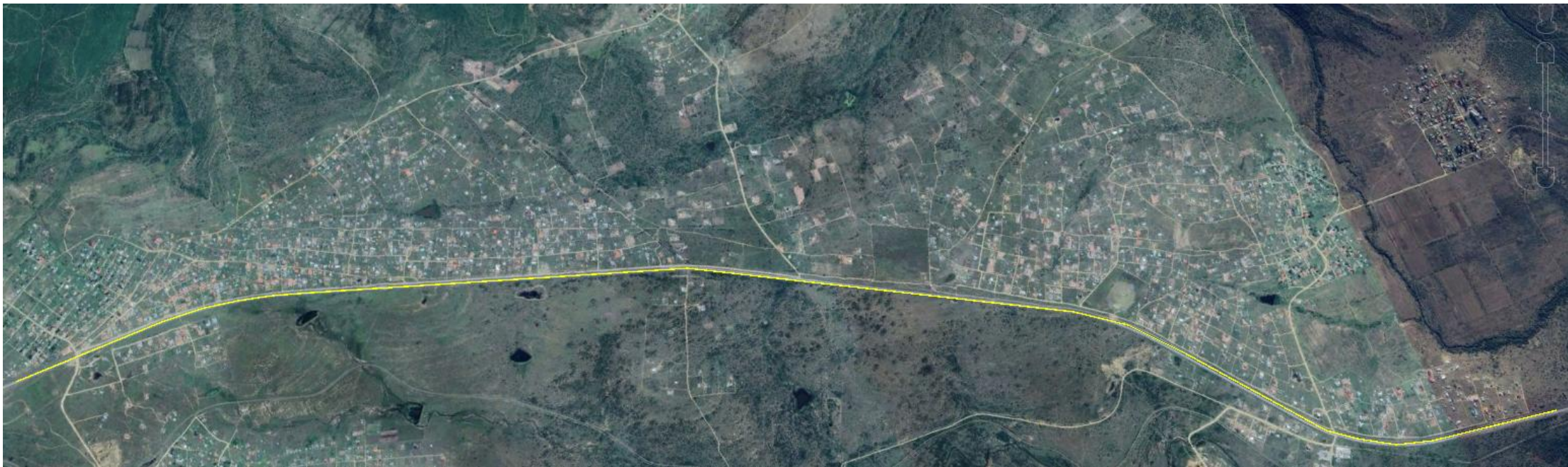
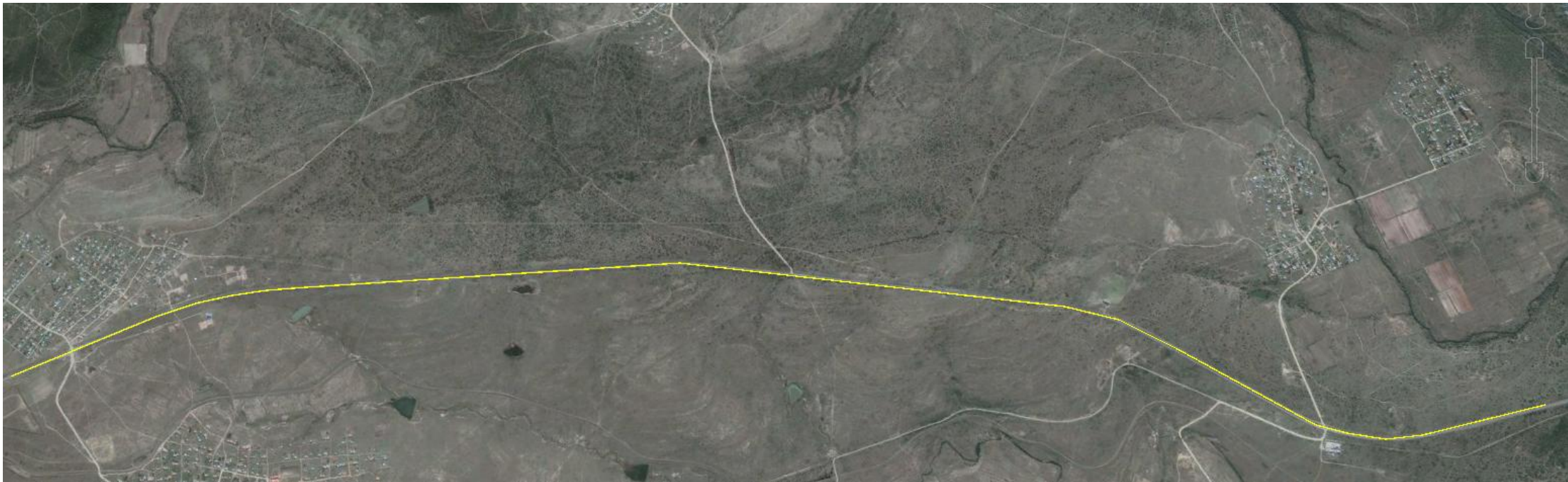
D. SPR -CONCERNS: Ribbon Development

Example 1: A stretch of $\pm 13\text{km}$ between KWT and Dimbaza, on the doorstep of the Provincial Legislature. The next slide show Development Sprawl from 2012 to 2022



be indigent households.

Example 1 (Cont.): R63 King Williams Town to Dimbaza 2012 / 2023

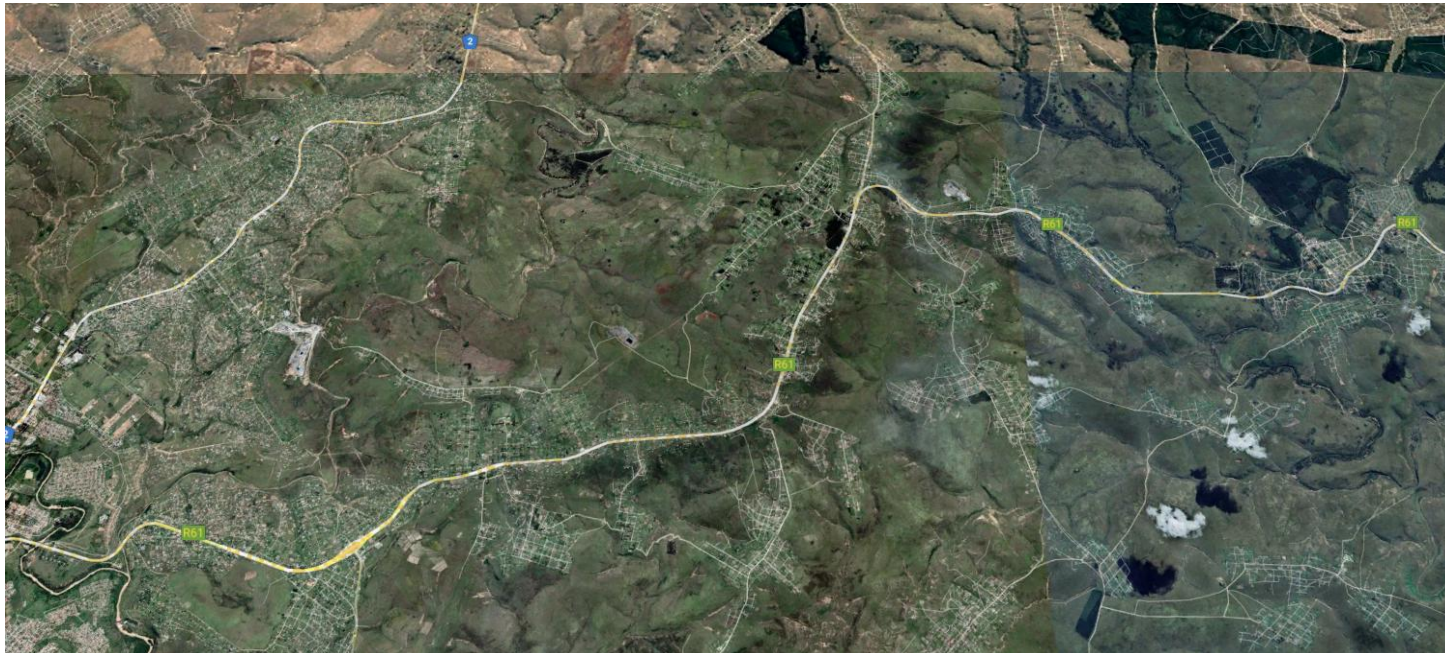
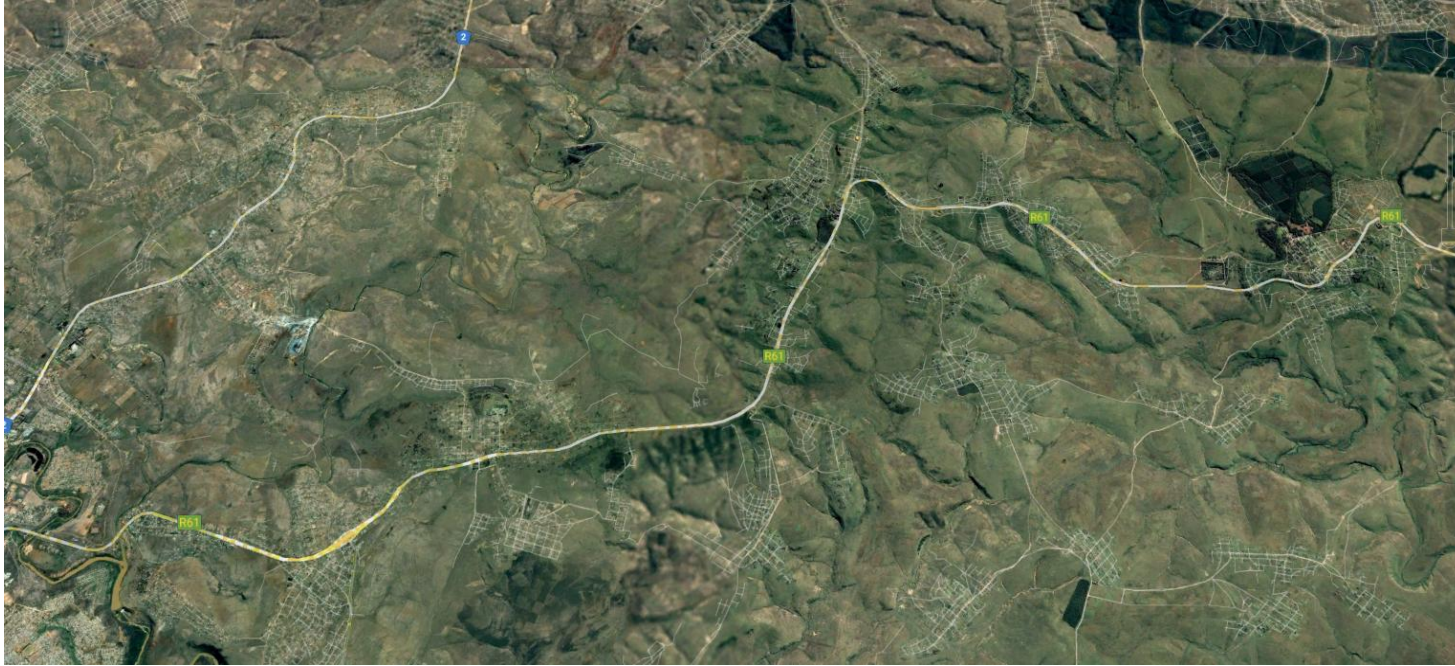


Example 2: R61 view towards Mthatha from Libode



Informal access to road and retail development has reduced the speed limit to 80km/h.

Example 2 (Cont.): R61 (New N2 Alignment) – Mthatha to Libode 2009 and 2023 (Google Earth) Earth



Example 3: N6 (± 6 km north of Komani)

2018 to 2023: Significant expansion of settlements and 8 new illegal access points.

Speed is now reduced to 80km/h



D. SPR -CONCERNS - High Environmental Impact

Excerpt from Sanral's response to ACC's technical team: *"Biodiversity Offset Programme - Every 1km of the 80m wide N2 is mitigated by approx. 2 square km's of new protected area (80 000 m2 footprint vs 2 000 000 m2). In the Amadiba area this will see the creation of Mtentu Gorge/Gobodweni Community Nature Reserve. Mnyameni Gorge Protected Environment."*

The R373.8 million **biodiversity offset** budget:
After 5 years, there is nothing on the ground. The budget is so far spent on consultants and offices.

But at any rate:

1. The white areas on Sanral's map will not 'offset' the degradation caused by Sanral's Preferred Route. Its 'footprint' cannot be defined mathematically ("80 000m²"). The effects of the coastal route will spill over in all directions and dimensions.
2. Areas marked white are already classified as Critical Biodiversity Areas 1 and 2. The remainders are Environmental Support Areas 1 and 2. The Mtentu and Gobodweni area on the northern river bank are not new. They have already status as part of the Mkambathi Nature Reserve just like the area around the Mtentu lodge and camp site on the coast.



environmentally classified areas, CBA 1 and 2 (dark & light green) and ESA 1 and 2 (dark and light yellow) are already supposed to be supervised by the government, notably by the EC Parks and Tourism (ECPTA). The 'biodiversity offset areas' do not offset the impact of a coastal highway. They do not add to environmentally classified areas.

The coastal SPR even runs right through the Mnyameni 'biodiversity offset area' on SANRAL's map. At any rate, it seems to be off the table for lack of funding. All new planned biodiversity areas are located south of Mtentu river.



The ACC is not “against development”

“Critical Biodiversity Areas (CBAs) are those areas that are critical for biodiversity conservation. For the RSDF, CBA 1 is incorporated into the EPT focus area and includes areas that are crucial for meeting biodiversity targets. They are ‘no go’ areas for development and are basically open spaces where only low-impact ecotourism or recreation can be accommodated.” 2023 ES RSDF, p.29

Since 1994, such statements in numerous official documents have not been controversial.

From a monetary perspective: if areas are ‘no go’ areas then they have an infinite monetary value. Which leads us to the Economic discussion ...

E. The Economics of the N2WCTH.

Ostensibly, the 'Economic' foundation bolt of ACC's dispute with SANRAL:

Because of the 12.5-13km longer inland route and its lower speed limits than 120km/h on a third of the 45km inland alternative, SANRAL refers to longer travel time of 16 and 23 minutes for light and heavy traffic.

SANRAL's calculation assumed too low speed limits and too steep slopes and sharp bends. AIR's slopes/grades and bends are however within norms for a national road less than 8%. Bends are within national standard. Speed limit in Lurholweni will be 80 not 60km/h.

Nevertheless, if accepting SANRAL's estimates:

“Motorists and freight companies” – “will lose R145 million per year from the AIR” (SANRAL presentation to ACC).

- **But there are no 'losses' to motorists and freight companies, or to 'the economy'. Economics here speaks of an *opportunity cost*; in this case a 'social opportunity cost'.**

1. SANRAL's repeats that long distance traffic will save R1.5 billion per year from the new N2WCTH short cut.

2. It follows from Sanral's own crude estimates, that 'motorists' and 'freight companies' will make a tremendous win of R1.355 billion per year from the AIR inland N2 alignment in Amadiba/Mbizana (R1.5bn minus R145m).

Long distance traffic will gain 90% of the “R1.5 billion” saving that SANRAL cites in media. There is no “*direct cost to the economy*”. These stakeholders get a tremendous gain from both alternatives. SANRAL's is more extreme.

The concept 'social opportunity cost'

In Economics, a 10% reduction in gains from one alternative when moving resources to gain from another alternative, is called an *opportunity cost*. In a public project, it is a *social opportunity cost*: ***“This concept is crucial in economic decision-making because it encompasses the benefits that society could have received if the resources were employed in a different manner. Unlike narrow cost considerations, social opportunity cost incorporates broader societal impacts, including economic, social, and environmental factors.”***

<https://quickonomics.com/terms/social-opportunity-cost/>

From a social opportunity cost perspective, it is irrational to give a 10 percent top-up benefit to a minority in the formal economy, when there exists a long term inclusive and sustainable development alternative for all. To do so can also be deemed unconstitutional in South Africa.

Everybody will gain from moving the coastal N2 route after the Mtentu bridge to the centre of Amadiba. The concept “Pareto efficiency” can even be invoked.

The economy of local road network:

local communications and accessibility

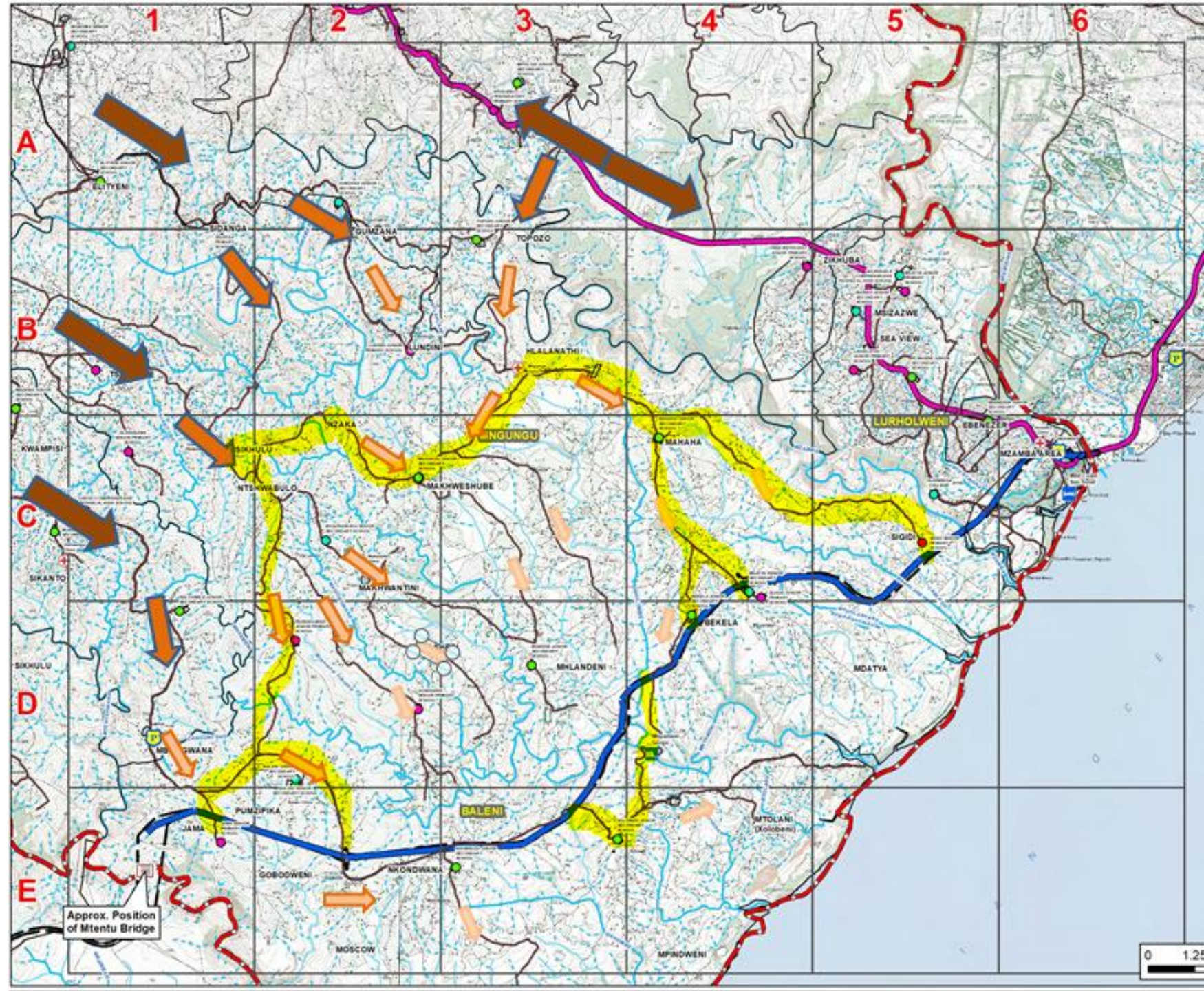
1. Accessibility in principle: The two settings.
2. Rivers are obstacles in the geography.
3. Sanral's current secondary road plan
4. Alternative Inland Route: secondary road network

Long Term Economic Effects.

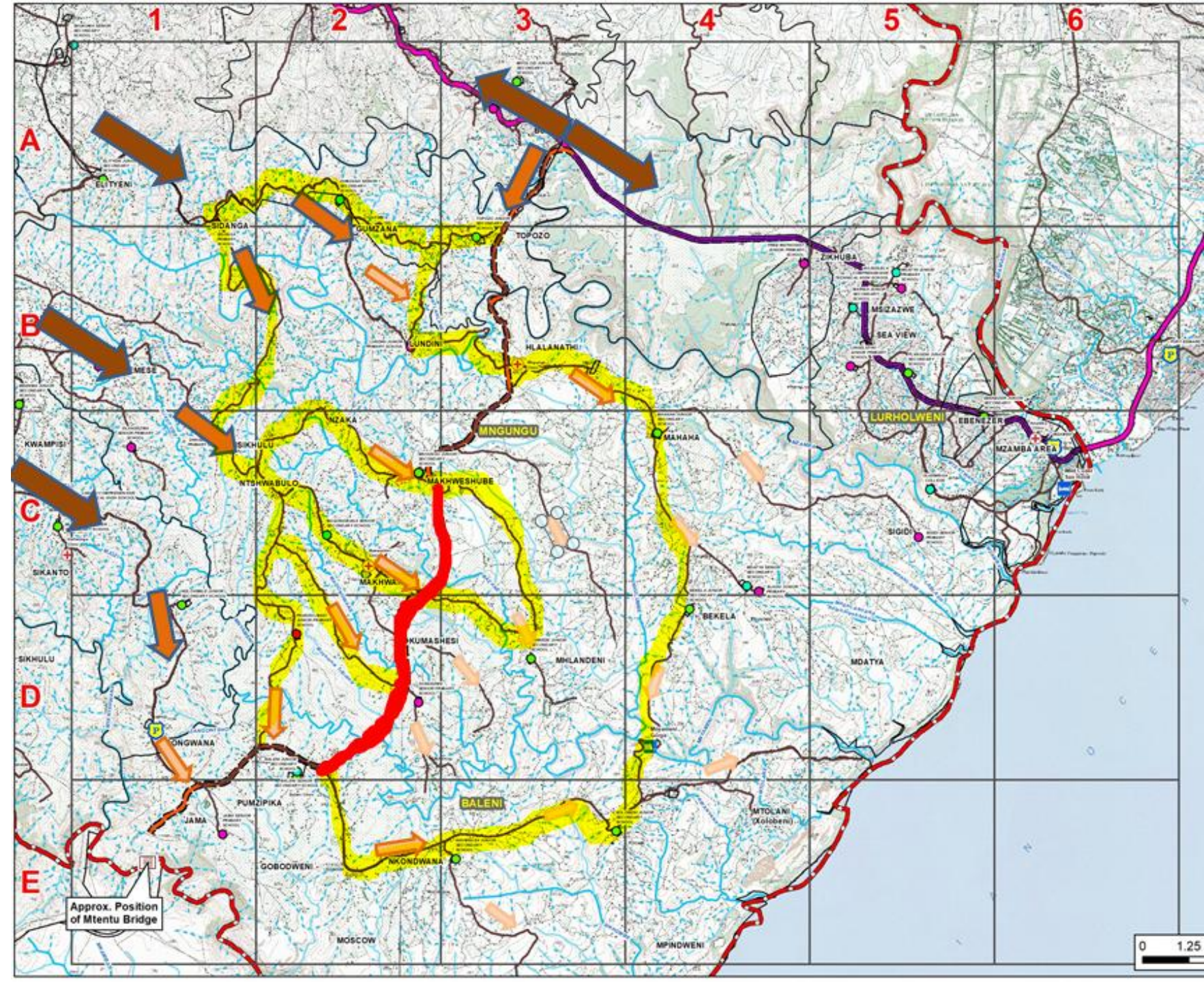
Claim: Local connectivity and communications are better for the AIR than the authorised SPR: AIR can connect better to local roads.

First, oversight maps on next slides

Increased Accessibility – Coastal Route

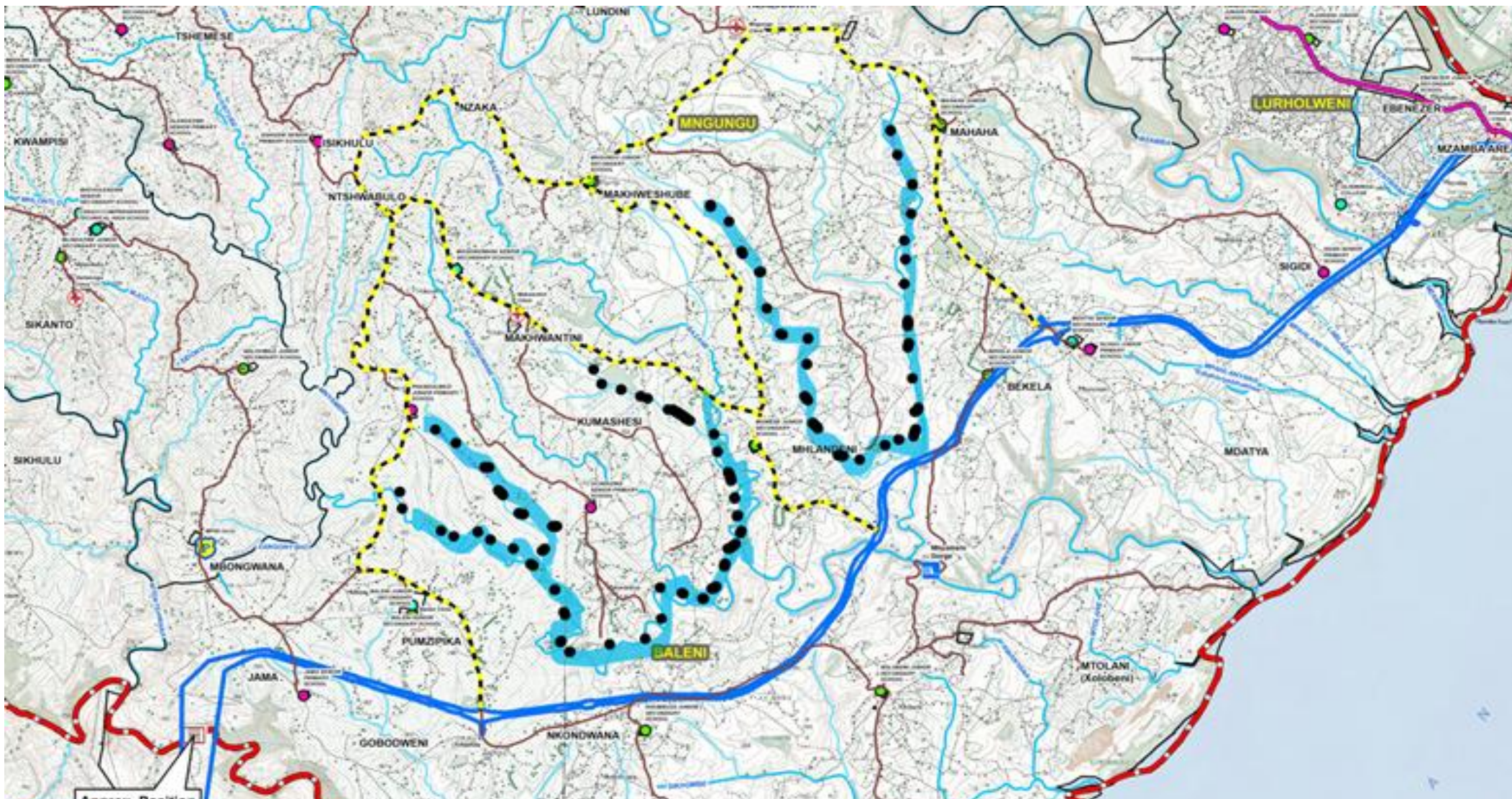


Increased Accessibility – Inland Route



Blue and dotted: Rivers.

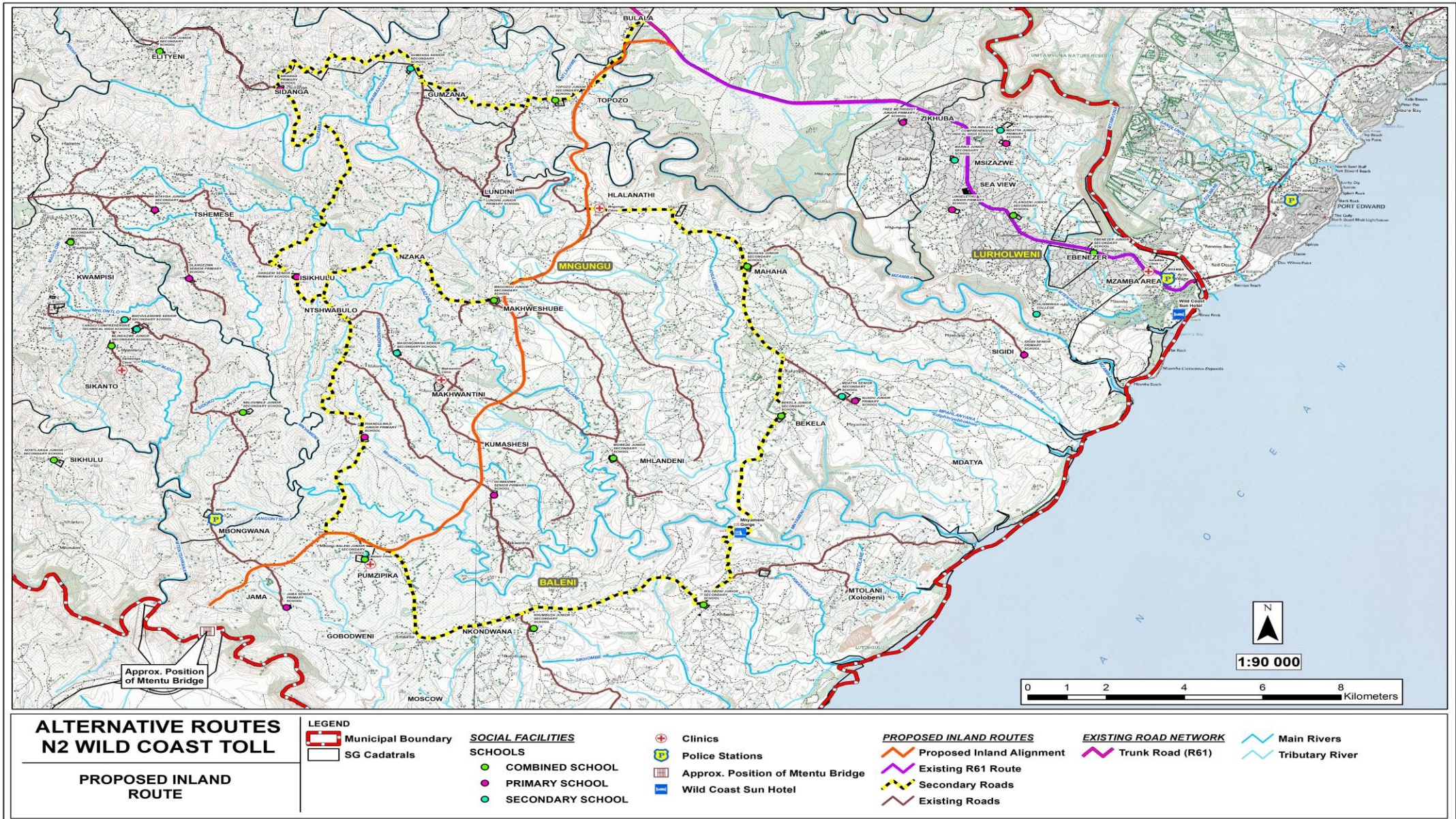
Blue and dotted: Rivers.



Secondary Road Network



Alternative Inland Route: Possible secondary roads



SPR & AIR COMPARED re LONG TERM ECONOMIC EFFECTS:
Connections to **local roads** and acknowledging that (not captured in a standard 'Cost-Benefits Analysis' (C-BA) that locals are 'road users':
Inclusive growth!



Socio-Economic Reports were incorporated in previous EIAs. Especially, the final one indicated there had been political intervention. Both had inexplicable errors and irrationally assumed that the whole project would be completed in 3 years.

Pienaar & Bester 2002:

In line with the “User pay principle” (*Horizon 2010*): P&B (2002) assumed irrational toll tariffs 8-9 higher than today. Not R13-R40 per hour for 1hr drive (light vehicle), but R300-R400 per hour drive.

- This is how P&B (2002) got a positive Financial NPV (viable to SANRAL), even when **correctly** testing the outcome with a 2% y/y traffic growth (instead of 4% in the baseline alternative) over 30 years: [A ‘sensitivity test’](#).

Pienaar & Bester 2008:

- Tempered the toll fee assumptions to 2-3 times more than what they are today.

[Their tariffs reflected 75% of the \(monetised\) “road user benefit”, i.e. a 25% theoretical rebate. Note however ‘the Lamborghini Effect’: a luxury car is unaffordable to most people even if sold at a rebate, because they balance a range of expenses.](#)

- Compensated this loss in revenue/monetised road user benefits with exorbitant assumptions of y/y traffic growth (over 32 years, not 30 years as the report erroneously stated).
- Did not do a **sensitivity test** of those traffic growth assumptions (which they got from an anonymous “traffic specialist”), with the spurious argument that a test would be bad for taking a decision [see note].
- Anomalies, like: discounting Year 0 (in both reports) so that their results were not Net **Present** Values; P&B (2008) also double discounted the cost for road expansion, and the report had more anomalies.

IMPORTANTLY: Both reports assumed that the project would take three years to complete. This invalidates the all economic and financial analyses. All calculations were based in an irrational assumption.

It can be shown that NPVs become **negative** in the old NPV tables with necessary and rational changes, and the mandatory ‘What-If test’. Alone the Msikaba project is now estimated to take 6.5 years, with the Mtentu bridge completed ‘end of 2027’ after one year of work 2017-2018 and restart in August 2023.

The whole project started 2011 [note]. This has always been a 12 year plus project, if no delays and contingencies.

During the talks with SANRAL a redacted SANRAL 2021 report was presented that used HDM4 software, to show the continued economic viability of the project...

HDM-4

HIGHWAY DEVELOPMENT & MANAGEMENT

Economic Indicators Summary

Study Name: **N2 Wildcoast**
Run Date: **03-05-2021**
Currency: **SA RAND (millions)**
Discount Rate: **8.00%**

Sensitivity: Base Sensitivity Scenario

Alternative	Present Value of Total Agency Costs (RAC)	Present Value of Agency Capital Costs (CAP)	Increase in Agency Costs (C)	Decrease in User Costs (B)	Net Exogenous Benefits (E)	Net Present Value (NPV = B+E-C)	NPV/Cost Ratio (NPV/RAC)	NPV/Cost Ratio (NPV/CAP)	Internal Rate of Return (IRR)
Base Alternative	2,288.886	1,782.572	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maintenance and upgrades	6,006.518	5,500.857	3,717.632	2,211.520	0.000	-1,506.112	-0.251	-0.274	-84.7 (2)
Alt 1 Non-Toll Prov-RRM	14,270.207	13,722.922	11,981.321	15,183.845	0.000	3,202.524	0.224	0.233	10.1 (1)
Alt 1 Toll Prov-RRM	14,641.382	13,664.289	12,352.495	15,627.032	0.000	3,274.537	0.224	0.240	10.1 (1)
Alt 1 Non-Toll Prov-Full Maint	17,406.855	16,902.583	15,117.968	25,667.817	0.000	10,549.849	0.606	0.624	12.7 (1)
Alt 1 Non-Toll Prov-Prov Maint	17,322.257	16,804.982	15,033.372	25,621.266	0.000	10,587.895	0.611	0.630	12.7 (1)
Alt 2 Non-Toll Prov-Prov Maint	17,443.420	16,926.216	15,154.533	25,743.489	0.000	10,588.956	0.607	0.626	12.7 (1)
Alt 3 Non-Toll Prov-Prov Maint	17,352.272	16,834.997	15,063.386	25,662.161	0.000	10,598.775	0.611	0.630	12.7 (1)
Alt 4 Non-Toll Prov-Prov Maint	17,473.435	16,956.231	15,184.550	25,784.383	0.000	10,599.834	0.607	0.625	12.7 (1)
Alt 5 Non-Toll Prov-Prov Maint	16,165.775	15,653.909	13,876.889	24,686.604	0.000	10,809.716	0.669	0.691	13.1 (1)
Alt 6 Non-Toll Prov-Prov Maint	16,195.790	15,683.924	13,906.903	24,727.499	0.000	10,820.596	0.668	0.690	13.1 (1)

Figure in brackets is number of IRR solutions in range -90 to +900

Sensitivity: Cost Increase +20%

Alternative	Present Value of Total Agency Costs (RAC)	Present Value of Agency Capital Costs (CAP)	Increase in Agency Costs (C)	Decrease in User Costs (B)	Net Exogenous Benefits (E)	Net Present Value (NPV = B+E-C)	NPV/Cost Ratio (NPV/RAC)	NPV/Cost Ratio (NPV/CAP)	Internal Rate of Return (IRR)
Base Alternative	2,288.886	1,782.572	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maintenance and upgrades	6,006.518	5,500.857	4,461.289	2,211.520	0.000	-2,249.770	-0.375	-0.409	-0.5 (2)
Alt 1 Non-Toll Prov-RRM	14,270.207	13,722.922	14,369.391	15,183.845	0.000	814.455	0.057	0.059	8.5 (1)
Alt 1 Toll Prov-RRM	14,641.382	13,664.289	14,728.839	15,627.032	0.000	898.192	0.061	0.066	8.5 (1)
Alt 1 Non-Toll Prov-Full Maint	17,406.855	16,902.583	18,141.972	25,667.817	0.000	7,525.845	0.432	0.445	10.9 (1)
Alt 1 Non-Toll Prov-Prov Maint	17,322.257	16,804.982	18,037.854	25,621.266	0.000	7,583.412	0.438	0.451	11.0 (1)
Alt 2 Non-Toll Prov-Prov Maint	17,443.420	16,926.216	18,183.264	25,743.489	0.000	7,560.225	0.433	0.447	11.0 (1)
Alt 3 Non-Toll Prov-Prov Maint	17,447.464	16,929.298	18,073.872	25,662.161	0.000	7,588.289	0.435	0.448	11.0 (1)
Alt 4 Non-Toll Prov-Prov Maint	17,473.435	16,956.231	18,219.280	25,784.383	0.000	7,565.103	0.433	0.446	11.0 (1)
Alt 5 Non-Toll Prov-Prov Maint	16,165.775	15,653.909	16,651.158	24,686.604	0.000	8,035.447	0.497	0.513	11.4 (1)
Alt 6 Non-Toll Prov-Prov Maint	16,195.790	15,683.924	16,687.176	24,727.499	0.000	8,040.323	0.496	0.513	11.4 (1)

“[T]his analysis shows that it [the whole N2 project] is economically feasible with a NPV/Cost ratio greater than 0 and an IRR greater than 8%.” “A sensitivity analysis was run for an increase in construction cost of 20%” ...

“(...) with a 20% increase in construction cost the Project remains economically feasible.”

(SANRAL’s anonymous consultant in the redacted HDM4 report, dated August 2021).

The NT in Guidelines for Large Infrastructure Projects, April 2021:

“A social discount rate of 10 per cent should be used to discount the economic values into present values. This rate, also known as the Economic Opportunity Cost of Capital [...] can be used across all sectors regardless of the project/programme.” The reason is the interest rate on Government loans (30-year Treasury Bonds).

SANRAL used the old 8% discount rate in a 2021 report.

Already the NT Guidelines 2018 recommended: “NT’s long term loan interest rate”, even if not prescribing a discount rate. The 2021 Guidelines instructed “10%”, because the 30-year Treasury Bond rate had increased further (in 2024 it is 11.5%)

NT’s Guideline publications continues: “The sensitivity of the economic analysis and financial statements to changes in key economic variables should also be considered. This includes assumptions on the key variables which may include exchange rates, interest rates, economic growth, population growth and demand for services. Many parameters are affected by optimism bias – appraisers tend to overstate benefits, and understate timings and costs, both capital and operational.” ... “[T]he Project Sponsor should, answer a range of questions such as: Did sensitivity analysis consider major risk variables?” [our emphasis].

All over the world, CBA manuals for highway projects test traffic growth assumptions, not only cost escalations.

Traffic growth is related to economic growth: This 2021 HDM-4 analysis had “2,5%/y for 3+5 years, 3.5% next 5 years and 3% per year “for the following years” [SANRAL] with start “2021” in the HDM4 analysis].

Studying the 2021 Sanral CBA/HDM-4 summary table in light of NT's 2021 Guidelines for Large Infrastructure projects: **Using a correct discount rate 10% and making a sensitivity test of the traffic growth assumptions.** Finally: assuming a 6-year building time, not 3.

Traffic growth rates were not disclosed in the redacted report, but separately to ACC by SANRAL.

Standard analytic period is today reduced to 25 years, not 30 years. The analysis assumed 2021 as the first building year ('Year Zero').

Traffic growth assumptions were (percent growth per year): 2.5% for 3 years, followed by 2.5% again for 5 years, 3.5% for 5 years and 3% for remaining years. The conventional sensitivity test halves those traffic growth percentages.

COMPARING WITH A MODEL WHERE WE ASSUME 6 MORE YEARS OF BUILDING AND USE THE TREASURY'S DISCOUNT RATE.

- (1) **Prescribed 10% discount rate and doing the mandatory sensitivity test (halving traffic growth rate assumptions),**
- (2) **...put in a simple Excel model (like in 2002 and 2008) where traffic volumes each year are proxy for rand values**
- (3) **..and accepting the investment costs as they are in the upper HDM4 table.**
- A) **If the consultants assumed 6 more building years from 2021 (now proved to be an underestimation): The Net Present Value (NPV) of the combined **theoretical** road user savings (Column B) fall by 34.7%, leading to **negative NPV** in two alternatives; close to zero in 7 alternatives. No sensitivity test for 20% cost increase added.**
- B) **The sequencing of the same 2.5% traffic growth into 3 + 5 years indicates that a 3-year **building time** still was assumed. If **increased to 6 years from 2021**: The estimated road savings/toll fee incomes decline by 48%. The **NPV then becomes negative for** all building alternatives in the report from R7.2bn to R8.7bn: "Not economically feasible". No sensitivity test for 20% cost increase added.**
- C) **If sensitivity test for 20% cost increase is added, then all 9 'build the road' alternatives in the HDM4 table become negative from -R2.2 billion even if the 2021 HDM4 assumed that 6 year building time was left.**
- D) **SANRAL's media releases show constantly expanding scope and costs for the N2WCTH project: R8bn in 2016, R20bn in 2020-2023, increased to R21bn in March 2024 and to R23bn in October 2024.**

The need for a Mid-Term evaluation

The benefits start to 'flow' in the first year of operation'. Time is a key analytic factor. The analytic period is fixed. Today a project must "pay back more than what it costed" in 25 years. A change to 6-year building time or more from 2021 "destroys" a positive NPV result: the benefit years becomes fewer. And the estimated total building cost continues to increase (alone +15% from 2020 to 2024).

The N2WCTH project in its current form is **not economically viable**, something that already was evident in the old reports, had they been subject to a close reading. .

The N2 project should be made 'cheaper'.

The 'external benefits' (an empty column in the 2021 HDM4 table) must be taken into account. ACC argues they are negative for Sanral's preferred route on the coast, but can become positive if N2 is moved to the inland. That can change the net benefit result.

The permanent environmental impact of Sanral's coastal alignment is infinitely negative.

The value of continued loss of biodiversity to humankind cannot be put it in monetary terms.

Building costs – the road proper

In response to ACC, SANRAL has argued that the AIR is a little cheaper to build, but that the cost difference is insignificant, claiming that other factors are weighing heavier.

The ACC's Technical Team argues that the AIR costs significantly less to build.

Standish & Boting (2006), reporting on the N2WCTH to CCA Environmental, referred to SANRAL data base and put greenfield road construction costs at 3.2 times higher than building a highway “on top of another road”. all costs for “minor to medium bridges, culverts and intersections” included.

ROUTES	EXISTING GRAVEL ROAD	EXISTING R61 ROAD	NEW ROAD (GREENFIELD)	TOTAL LENGTH
Inland Route	10.53km	18.00km	16.47km	45.00km
SANRAL Coastal Route	0km	0km	31.0km	31.00km

1. Using Standish & Boting's 2005 rand costs per km construction times 3 (inflation), **the AIR is R154 million to R219 million cheaper**, depending on if building on an existing gravel road is counted as “building on the top of another road” just as on top of R61 for 18 km.
2. The goal of expanding the N2 in the future to a dual lane highway demands a 80m road reserve. The AIR assumes a 50m road reserve (as in the original plans). SANRAL's later expansion plan = **significant** cost, comprising over 20 percent of total costs in the 2008 Socio-Economic Report (R1.3bn in 2007 prices).
3. If total bridge lengths are subtracted from the road proper (1370m for SPR; 1740m for AIR), the cost comparison tilts further to advantage for the AIR. **But what are the bridge costs in comparison?**

Building costs – The bridges in Amadiba (excl. Mtentu mega bridge)

In the discussion with SANRAL, the building costs for bridges have basically been regarded the same, and not up for discussion, but it is a fact that:

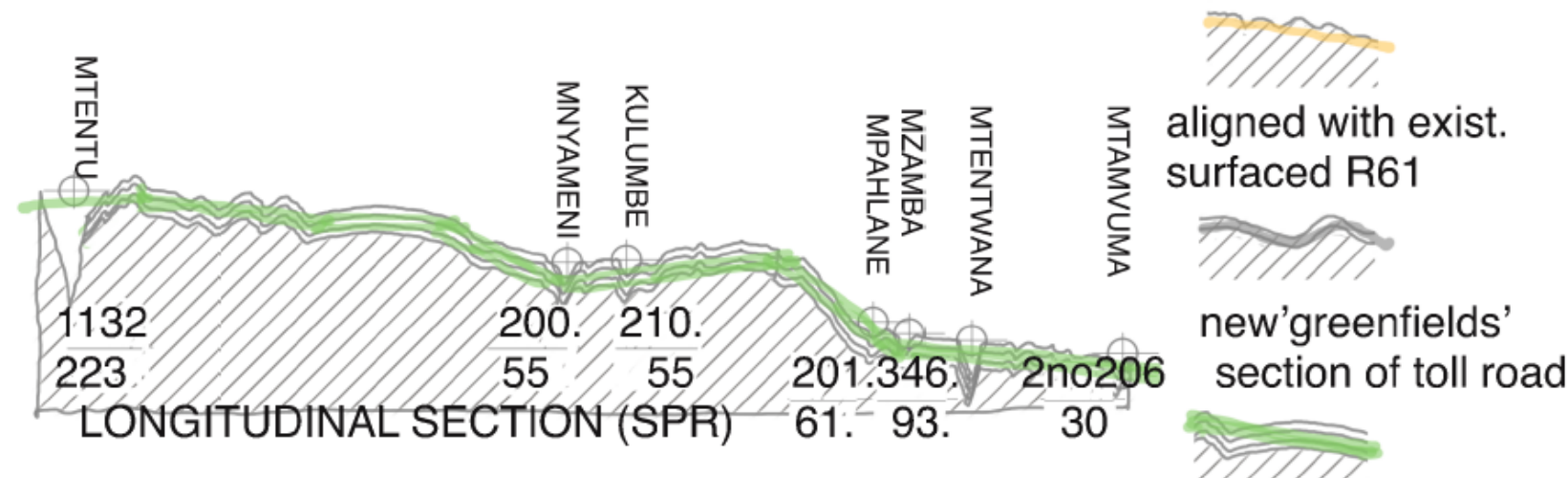
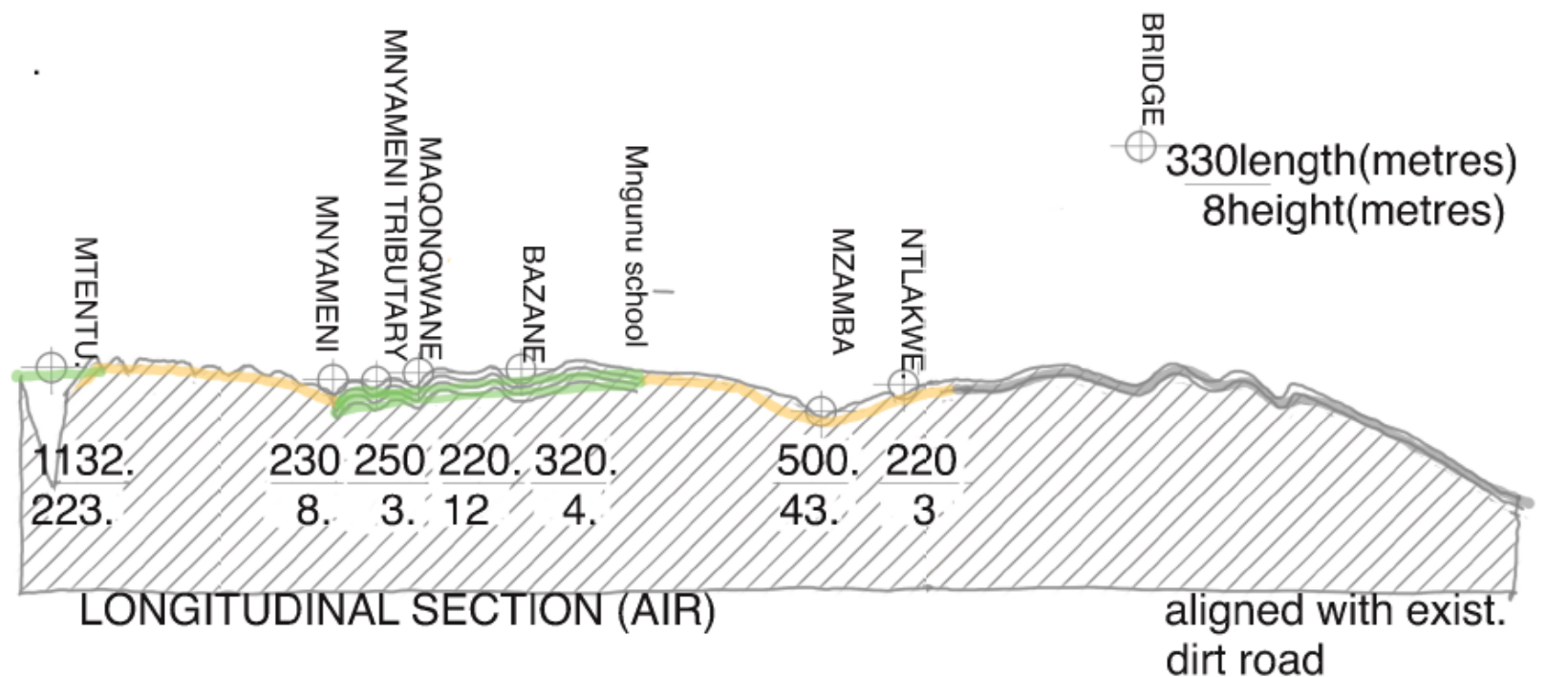
- Except for the crossing over Mzamba river after R61, all the AIR bridges are much lower (3-12 meter high) and less complicated to build than bridges on SANRAL's coastal route in Amadiba (55-93 meter high).

Note again: the inland route was disregarded because of the need for 600-700 meter long (and high) bridges over Ntlakhwe and Mzamba rivers, to keep a speed limit of 120km/h in Amadiba (despite being 80-100km/h for most of the length from East London to Port St John). The AIR lets the N2 go down and up by the Ntlakhwe bridge.

The 120km/h assumption has always distorted the discussion on Lurholweni (below): The disregarding of a stretch through a populated area assumed a 80m road reserve to reach a 120km/h speed limit. Hence, SANRAL's claim "hundreds of households would be affected" in the township.

In general: The N2WCTH project has kept on expanding. From a 36 meter wide road reserve in a report from HHO twenty years ago, changed to a 50 meter wide road reserve, and today 80 meter.

From 13.6m wide bridges in 2004 (HHO), to 17.2m (Standish & Boting) and today 19.1m.

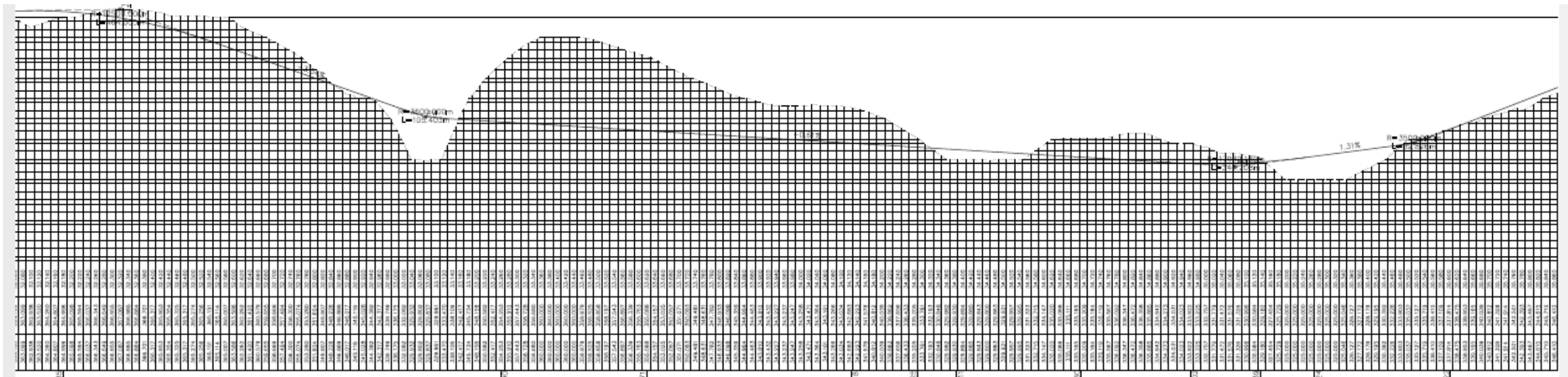


LONGITUDINAL SECTION

Example of ‘long section’ from the high level analysis:

It is 5 meters between the double horizontal lines in the picture.

In the estimates of the AIR bridge lengths we opted to ‘error on the side of caution’. The flood banks may need that their impact on cross-sections is kept to a minimum. The cost overview is based in a high level study.



SPR's 2 new two-lane bridges over Mtamvuna and the intersections after Mtamvuna River, are not to be built in the AIR proposal. The existing bridge is refurbished.

The +1km of the Mzamba area greenfield intersections are not included in our cost comparisons. The AIR uses R61. We assume a more simple N2 intersection with R61 at KwaBulala junction 18km from the coast (R61 continues from there to Bizana).

TIE IN Existing R61 (Eastern Region)

- Eastern Region proposed to construct a duplication of the existing Steel Bridge structure up-stream.
- The new R61 cross section is a undivided 4 lane section east of the Mtamvuna river.
- More interaction is required between the two SANRAL regions to finalize the tie-in in the details design phase.
- The detail design will be dual carriageway from Km 30.0 to the end, Mtamvuna River.
- Transition will be designed to tie into the existing steel bridge over the Mtamvuna River.



N2WCTH and Smart Cities” “on the coast”?

The 2023 Eastern Seaboard RSDF on “Smart Cities”

“For the purposes of developing new Smart Cities, the principle is to redevelop and invest in current towns, spatially transform them and augment their function to give them city status (p.37)”.

The Alternative Inland Route (AIR) means that: If politicians insist on a “new” town in Mbizana, there is vacant land where the AIR turns off at KwaBulala into the AIR Greenfield section, 17.5km from the coast.

Bulala village at the AIR R61/N2 intersection/interchange is for that matter a another natural place for travelers to pause.

The AIR moves Development Corridor 1, envisioned on both sides of the SPR in the 2023 Eastern Seaboard plan. With AIR the DC1 will be placed 12-18km from the coast

- *“**Development Corridors** are links or transport routes between nodes or areas of economic importance where mobility should receive preference over land use, but where an increased intensity of land use is encouraged at certain points along the route, or to provide access to other networks or routes where an increased intensity of land use can be accommodated without affecting mobility in the corridor.”* 2023 Eastern Seaboard Regional SDF, p.73.

Implementing the AIR means that conventional hotels, B&Bs, shops and other structures will be built 12-18km from the coast.

The AIR moves the DC1 to the centre of Amadiba with better local connectivity.

Comparing **short term economic effects**

Equal between the AIR and the SPR: short term job opportunities when building the N2WCTR in the area.

- But an argument can be made for AIR creating more local jobs:
 - 1) AIR is 12.5-13km longer ...
 - 2) 5 out of six bridges on the AIR are very low and more simple to build than the SPR bridges, giving more opportunity for hiring local labour.
 - 3) The building of N2 through Lurholweni township together with a proper internal road network with access points to the highway.

In the discussions with Sanral, short term job opportunities when building the highway has not been an issue. It is “the same”.

Long Term Economic Effects.

Agriculture/grazing lands on the coast will be disturbed by the SPR but undisturbed by the AIR. Agriculture is much more successful on the coast: Food security + selling amadumbe and sweet potatoes to the markets (it has been monetised in socio-economic studies of this coast).



No happy marriage between 2000+ vehicles per day passing close to ongoing **ecotourism** on the coast – ACC argues: New conventional hotels and B&B's has a natural place along an AIR in the inland.



Comparing social impacts:

SANRAL's Preferred Alignment affect 84 homesteads in inland and costal Amadiba (from Mtentu bridge to Mtamvuna bridge), according to the conceptual Package 6 & 7 design by KBK and V3 Engineers.

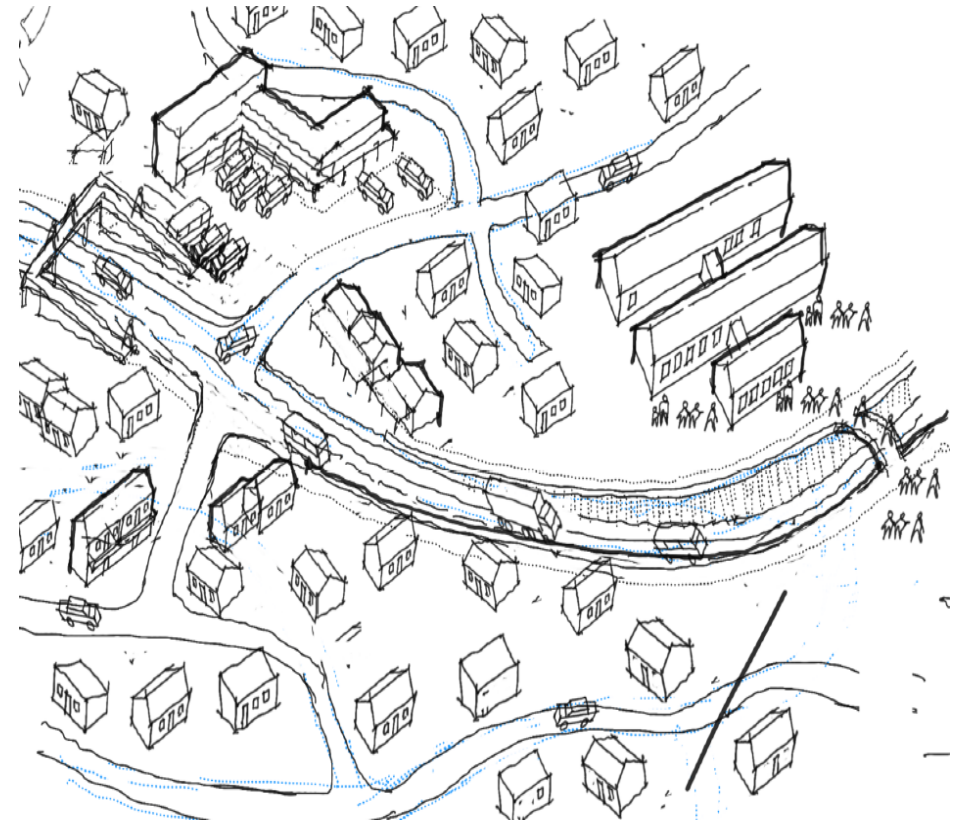
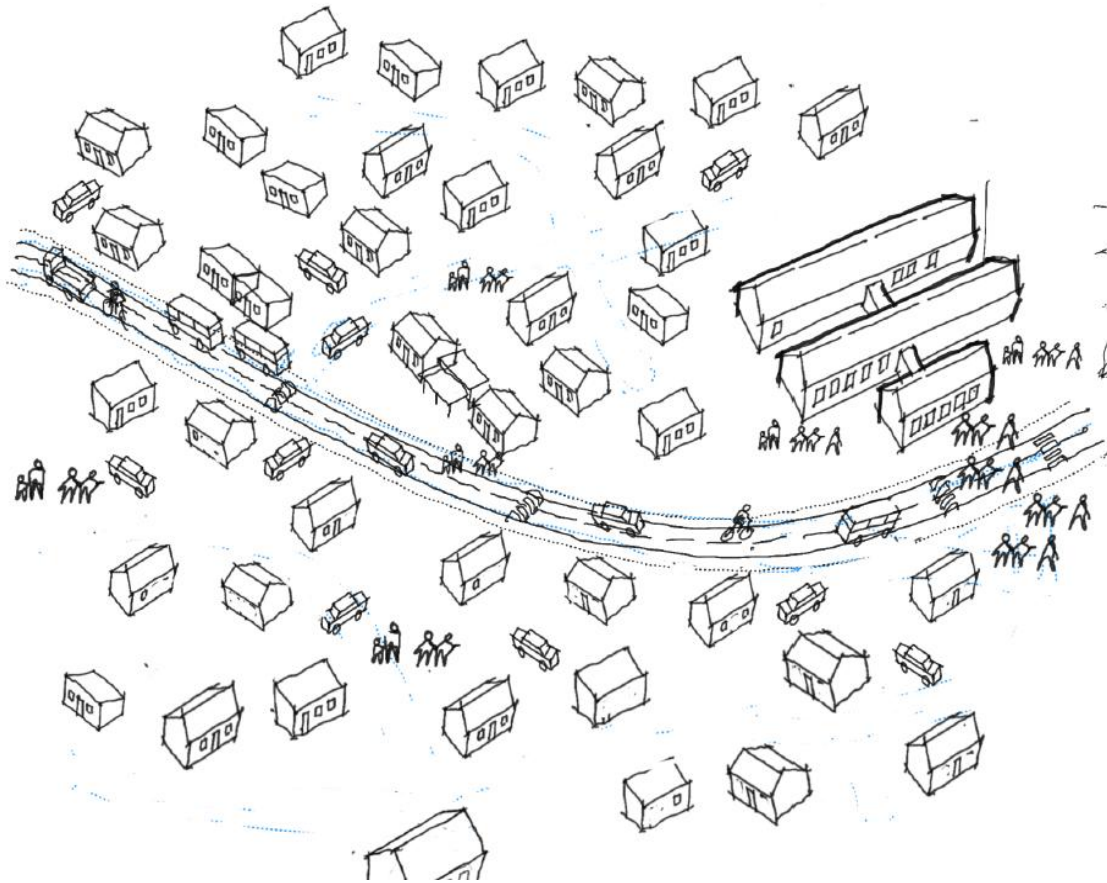
8 homesteads are partially affected in Package 7 (Kulumbe to Mtamvuna).

Impact of the AIR in inland Amadiba and Lurholweni township on the next slide. But "Hundreds of houses" (SANRAL) are not affected in Lurholweni by a 80km/h AIR alignment passing through.



Lurholweni - 40m Road Reserve			Lurholweni - 40m Road Reserve + 5m building line		AIR Greenfield Section - 50m Road Reserve	
	Partially impacted / Can relocate within existing site	Structure and site need to be relocated	Partially impacted / Can relocate within existing site	Structure and site need to be relocated	Partially impacted / Can relocate within existing site	Structure and site need to be relocated
North	32	4	36	25	9	18
South	23	3	50	5		
TOTAL	55	7	86	30		

Long term effects: Lurholweni township today and the possibility of inclusive growth, instead of having the highway by-passing the impoverished township.



Route through LURHOLWENI

Engineers confirmed that it is indeed possible to, with a widened road reserve and interventions to introduce a secondary road network, controlled access / intersections and safe pedestrian linkages, achieve an 80km/h design speed along the R61 section through Lurholweni.



Lurholweni in comparison to other sections of Sanral's proposed N2 alignment

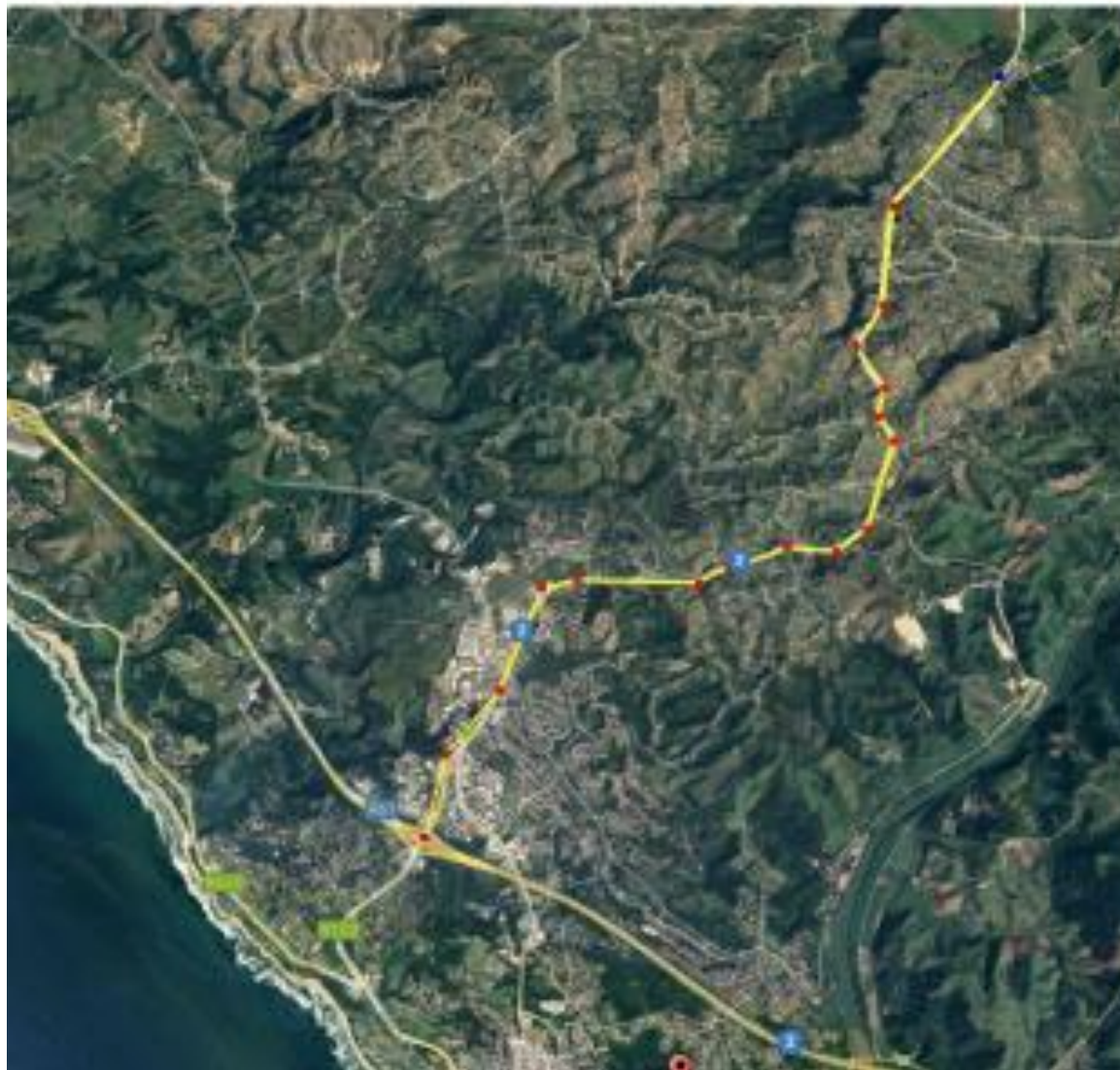
+8km section passing through Lusikisiki peri-urban and urban area



+9km section south of Lusikisiki where proposed N2 follow R61



Lurholweni in comparison existing 11km section of N2 alignment near Port Shepstone



F. RESPONSES TO SANRAL CRITIQUE OF AIR: Mitigation

Ample examples exist where SANRAL has accepted reduced road reserve widths and building set-back lines along the N2 route

Mac Banana (KZN)



Port Edward (KZN)



F. RESPONSES TO SANRAL CRITIQUE OF AIR: Mitigation

Ample examples exist where SANRAL has accepted reduced road reserve



F. RESPONSES TO SANRAL CRITIQUE OF AIR: Mitigation

Ample examples exist where SANRAL has accepted reduced road reserve



E. RESPONSES TO SANRAL CRITIQUE OF AIR: Mitigation

The Amadiba / WMMLM Section in the context of the overall N2 project

SANRAL has applied innovative solutions to mitigate impacts and risks along sections of the N2.









G. Legal Perspective

Wilmien Wicomb

(Legal Resources Centre)

Constitutional considerations:

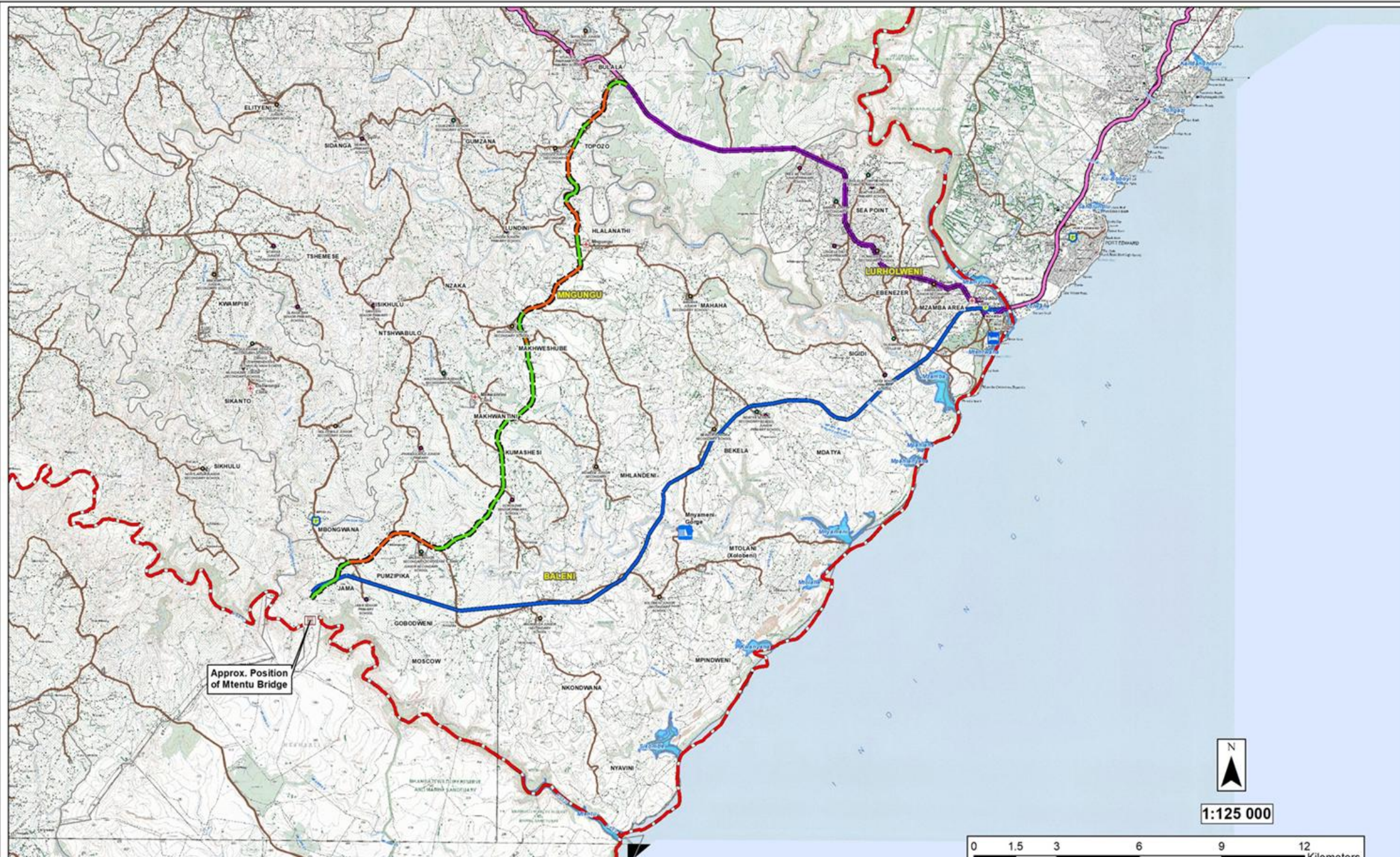
substantive equality

- The administrative decision on a route is a choice between competing interests.
- In the case of Amadiba inland route, it is a choice between marginally improving the position of participants in the formal economy vs significantly increasing the position of the economically marginalised.
- The choice implicates the right to equality – *substantive* equality.
- **Formal equality** means treating everyone the same and not taking the differences between these two competing interests into account.
- **Substantive equality** means assessing equality in relation to lived inequalities and requires an equal outcome. The difference between the two groups is everything.
- The Constitutional Court defines equality in terms of restitution to end poverty and achieve economic justice: The Court says it requires a “positive commitment progressively to eradicate socially constructed barriers to equality and to root out systematic or institutionalised under-privilege.” (*Min of Finance v Van Heerden*)

Constitutional Court

•South Africa is a country in transition. It is a transition from a society based on inequality to one based on equality.[...] The Preamble to the Constitution “recognises the injustices of our past” and makes a commitment to establishing “a society based on democratic values, social justice and fundamental rights”. This society is to be built on the foundation of the values entrenched in the very first provision of the Constitution. These values include human dignity, the achievement of equality and the advancement of human rights and freedoms. The achievement of equality is one of the fundamental goals that we have fashioned for ourselves in the Constitution. Our constitutional order is committed to the transformation of our society from a grossly unequal society to one “in which there is equality between men and women and people of all races”. In this fundamental way, our Constitution differs from other constitutions which assume that all are equal and in so doing simply entrench existing inequalities. Our Constitution recognises that decades of systematic racial discrimination entrenched by the apartheid legal order cannot be eliminated without positive action being taken to achieve that result. We are required to do more than that. The effects of discrimination may continue indefinitely unless there is a commitment to end it.

•But transformation is a process. There are profound difficulties that will be confronted in giving effect to the constitutional commitment of achieving equality. We must not underestimate them. The measures that bring about transformation will inevitably affect some members of the society adversely, particularly those coming from the previously advantaged communities. It may well be that other considerations may have to yield in favour of achieving the goal we fashioned for ourselves in the Constitution. What is required, though, is that the process of transformation must be carried out in accordance with the Constitution.



Approx. Position
of Mtentu Bridge



1:125 000

