



# PIONEERING THE IMPLEMENTATION OF PLASTIC ROADS IN AFRICA

KOUGA MUNICIPALITY

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# THE TEAM

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# 3 MAJOR PROBLEMS FACING SA

**POOR ROADS/INFRASTRUCTURE**



**PLASTIC WASTE POLLUTION**



**UNEMPLOYMENT/POVERTY**



# Poor Roads/Transport Infrastructure

- ▶ One of the largest contributors to poor economic growth in South Africa is poor roads infrastructure.
- ▶ Roads are the lifeblood of the economy as it connects people to job opportunities, schools, hospitals and clinics. It is also vital for exports of agricultural products to markets.
- ▶ In Kouga there is an estimated R500 million backlog on roads maintenance.
- ▶ In the EC there is an estimated R105 Billion backlog on roads maintenance.
- ▶ Roads contain bitumen which is made from crude oil which is a very expensive commodity (as it is linked to the oil price) that is becoming very scarce.
- ▶ The situation in terms of poor roads are costing thousands of lives on the road annually and the situation is becoming critical.

This road was tarred in 2016 outside Queenstown...





# Plastic Waste Pollution

- ▶ 300 million tonnes of plastic is produced each year.
- ▶ 8 million metric tons end up in the oceans.
- ▶ South Africa is one of the largest contributors world wide (at no 20), of plastic pollution in the oceans – estimated at being responsible for 8 million tonnes plastic in the ocean per month.
- ▶ It is estimated that by 2050 there will be more plastic in the ocean than fish if we continue to pollute the ocean at this rate.
- ▶ Most plastic end of in landfills where it can take over 400 years to break down into another harmful chemical known as micro-plastics.
- ▶ Only 16% are recycled each year.






# UNEMPLOYMENT/POVERTY



- ▶ The expanded unemployment rate in the Eastern Cape is at 46%.
- ▶ Almost 1 in 2 people do not know where their next meal will come from.
- ▶ People are stripped of their dignity as they fail to provide for themselves and their families.
- ▶ Almost half of the people in the EC have stopped looking for work, have given up all hope as they are unable to break the shackles of poverty.
- ▶ Investor confidence in South Africa is at an all time low, economic growth is at 1.3% and there is no hope of improvement.





**PIONEERING THE IMPLEMENTATION OF  
PLASTIC ROADS COULD BE THE ANSWER  
WE ARE LOOKING FOR TO ADDRESS ALL  
3 OF THESE PROBLEMS IN A SIGNIFICANT  
WAY.**



# PIONEERING THE IMPLEMENTATION OF PLASTIC ROADS

- Plastic Road refers to replacing significant amount of the bitumen mix (made from Crude oil) with waste plastic.
- It has been done in Bahrain, Australia, Canada, USA, Saudi Arabia and the UK.
- It will be the first of its kind in **AFRICA**.
- It will be the first of its kind in **SOUTH AFRICA**.



# BENEFITS OF PLASTIC ROADS

- ▶ No POTHOLEs, cracks or edge breaks.
- ▶ It will be much more cost effective.
- ▶ It is estimated to last up to 3 times longer than a conventional road and can withstand much higher and lower temperatures and heavier loads.
- ▶ It can take up to 1.8 million plastic bags/1.5 tonnes of plastic to build just 1km – significantly reducing our waste plastic going into oceans and landfills.
- ▶ It can create thousands of jobs for licensed unskilled labour, start-ups and entrepreneurs in terms of waste plastic collection, sorting and packaging etc.
- ▶ It will positively affect the value chain of plastic over time as it will become a more valuable commodity.
- ▶ We can finally start eradicating the massive roads maintenance backlog in SA.
- ▶ It will assist in redressing the connectivity of rural areas to opportunities.



# CHANGING THE WORLD

- ▶ It can be the most significant progress we have ever made through one innovation to address plastic pollution in South Africa.
- ▶ It can be the one of the largest sustainable initiative to address unemployment in South Africa especially for unskilled labour.
- ▶ It could be the only viable alternative to effectively address the roads backlog in South Africa – focus on new infrastructure and reducing the maintenance on existing infrastructure.
- ▶ With this initiative the long term goal is to open a factory in the EC that will export the product to Sub-Saharan Africa.

# HOW DID WE GET HERE?

- ▶ I tabled a motion in the EC Provincial Legislature in 2017 on behalf of the DA to implement a pilot project for plastic roads. The motion was unanimously defeated by the ANC who ridiculed the idea.
- ▶ Mr Nel from MacRebur reached out to me with their initiative.
- ▶ I met him in Cape Town in 2018 to discuss the idea further.
- ▶ I thereafter reached out to Mr Van Vuuren who I met through being a ward Councillor where his company was building roads in PE.
- ▶ Mr Van Vuuren went to the UK to look at the idea in practise.
- ▶ Mr Van Vuuren approached Mr Scribante to assist in terms of plant and equipment and asphalt mixing expertise.
- ▶ I made contact with Mayor Horatio Hendricks to present the idea on 4 March 2019.



**LET'S CHANGE THE WORLD BY STARTING  
RIGHT HERE AT HOME, IN THE SOUTH  
AFRICAN TOWN OF THE YEAR, JEFFREY'S BAY!**