

# GARDEN ROUTE

Investment Conference

## SA Institution of Civil Engineers Southern Cape Water Status Overview

Presented by: Adrian van Molendorff

Jan Brink



## Introduction:

- South African Institution of Civil Engineers
- Southern Cape Branch approximately 165 members
- Engineers, Technologists and Technicians
- Learned society whose aim is to enable our members, through consultation and accountability, to provide the community with environmentally and economically sustainable infrastructure.

# Water Infrastructure



## Kannaland / Oudtshoorn

- Both are in process of potentially developing new dams,
- Both heavily invested in groundwater exploration, with mixed results. Water has high iron and manganese concentrations in places, amongst others.
- Difficult and costly to be effectively removed currently.
- Karoo region; very arid, i.e. heavily impacted by changes in rainfall.
- Impacts on groundwater recharge also unknown.
- Reports of groundwater levels dropping 1m per annum in certain areas.

## Knysna / Bitou

- Both are in process of potentially developing new dams. Process yet to proceed to final site selection.
- Bitou geotechnical investigation of dam site report awaited shortly.
- Both heavily invested in groundwater exploration, with mixed results. Water has high iron and manganese concentrations in places. Difficult and costly to be effectively removed.
- Low yields too date.
- Groundwater potential in Peninsula formation, but far from existing pipelines and needs further exploration.

## Summary of current state of affairs:

- Roll-out slow due to funding constraints.
- No drive behind process until crisis looms.
- Shortage of capacity at Municipalities.
- Procurement processes slow, often without technical support.
- Limited technical capacity at institutions, departments short staffed

## Challenges:

- Capacity constraints: Infrastructure, Funding, Skill sets
- Lack of maintenance funding
- Lack of 25 year master planning or infrequent updating carried out. Data sometimes inaccurate.
- Right person for the job: Work almost always undertaken by the cheapest provider. Is this how we get quality?
- Transfer of skill sets / mentoring

## Opportunities:

- Capacity development at Municipalities seen as a priority,
- Skill transfer (from planning to maintenance); full skill set required
- Master planning for region required; potential for regional schemes?
- Mentoring of staff.
- Funding should be aimed in developing and keeping skills in region.

# Positives

- All infrastructure reasonably well maintained,
- Qualified technical staff at all municipalities (even if they are too few), but do sometimes lack experience,
- History of innovation – new technologies with mix of infrastructure,
- Master planning undertaken to a degree, but needs to be built on,
- Well established consulting engineers and contractors in region,

# Conclusions

- Water has to be valued higher,
- Although we had good rains recently, the District needs to plan and manage water carefully,
- Can't keep going from one crisis to another,
- Water should not be a constraint to development,
- Technical staff at municipalities are qualified and committed, but require more support from their councils,
- Technical teams are as-a-rule under-staffed,

# Conclusions (cont.)

- Under-spending on infrastructure (planning, capital projects, management and maintenance) can take years to become visible, but once apparent, constrain growth severely and take a lot more time and cost to repair.
- Engineers need to be heard and listened to.