



IS THE MOUTH OPEN?

Beyond the breach : a conservation Sedgefield needs

By Jonathan Britton,

former excavator handler at the Swartvlei Mouth

Sedgefield has settled back into its familiar routine, the tidal rhythm of the estuary forming the backdrop to life in the village. In the days following the flooding around the Perdespruit, a familiar debate surfaced that was, on reflection, more balanced and thoughtful than in previous years. This article adds depth to those questions being written by someone who spent many years in the arena. A fuller understanding of what drives flood risk here opens a more empowering conversation.

What actually happened and why it matters

Authorities breached the Swartvlei mouth well below the prescribed trigger level of 2.0 metres above mean sea level, acting early and proactively. Had that intervention not been made, the flooding would certainly have been considerably worse.

Mechanical breaching is a risk mitigation action, not a risk elimination measure. One intervention in an extraordinarily complex system, designed to reduce severity, not prevent flooding entirely. The process is far more nuanced than it appears when viewed from the car park. The decision of when to breach is a layered read of constantly shifting conditions, data patterns and a structured decision-making process.

Swartvlei is a temporarily open and closed estuary, a living interface between river, sea, sediment, tide and human influence. Its behaviour is governed by laws of nature that do not bend to urgency, and an open mouth state does not override the physics. Wave action and storm surge actively resist outflow during major events, and research consistently shows that tidal state, wave setup and backwater effects can raise water levels upstream even when a mouth is fully open. This was precisely the sea state during the last breach, compounded by a neap tide cycle reducing outflow efficiency. Before the rainfall began, Swartvlei was already at 1.15 metres above mean sea level. Breaching at that level against powerful swells and storm surge would have delivered insufficient hydraulic head while wave action deposited sand into the preparatory trench, impeding the process.

The theoretical sweet spot for breaching is shortly after spring high tide, aligned with an outgoing tide and rip current, at the prescribed breaching height, in calm sea conditions. This event did not offer those conditions. The rate and volume of rainfall was the controlling variable.

The railway embankment and the N2 compound this further, functioning as physical berms constraining floodplain drainage regardless of mouth state.

What we experienced rivals the historic rainfall events of 1981,

1996, 2006 and 2007. and was a severe natural event meeting the limits of what any mitigation action can absorb.

A broader conversation worth having

The conversation about mouth state is only one part of what resilience in Sedgefield requires. We lost water for days. We lost electricity. Neither failure has anything to do with the estuary breach, yet both point to equally important questions about infrastructure resilience and contingency planning that deserve the same attention when a storm warning is issued.

Sedgefield is not separate from the Swartvlei system. It is part of it. The decisions regarding how to adapt and prepare for extreme events are woven into the ecology itself. Flood risk in this village is as much a product of accumulated human choices as it is of rainfall volumes. Understanding that does not assign blame, it clarifies where the levers of genuine resilience actually are.

The questions worth raising together

The Disaster Management Act 57 of 2002 is unambiguous. Municipalities carry mandatory obligations to anticipate likely disasters, identify at risk communities, reduce vulnerability, ensure emergency preparedness, and maintain funded contingency plans embedded in Integrated Development Plans. A plan without a funding allocation is not a plan. It is a document.

These are not aspirational guidelines. They are legal requirements.

Our community has every right to engage constructively through ward committees, ratepayer associations and IDP participation processes on the following: Does an approved

Disaster Management Plan exist, and when was it last reviewed and tested with the community? Is there a tested evacuation plan, and how has it been communicated? What budget exists for disaster preparedness and preventative infrastructure maintenance?

Organised communities that engage formally through recognised civic structures are not complainants. They are active participants in governance, and the record they create is far harder to ignore than a social media post.

The harder conversation

Severe weather cycles are shortening. Those who invest in and live alongside these systems carry a responsibility to understand that risk cannot be engineered away, before we buy, before we build, and before we direct our frustration.

Resilience is not only a question for Authorities it begins at home and between neighbours. The social fabric of a community is itself a form of flood infrastructure, one no municipal budget can build on our behalf. The goal must be resilient communities, not merely reassured ones, communities that understand the state of the mouth are one factor among many, prepare across many layers, and do not mistake a single mitigation action for a guarantee.

Where the river meets the sea, certainty ends. Preparedness begins.

About the author

Jonathan Britton spent 21 years in formal conservation with SANParks, including taking the responsibility for the mechanical breaching of the Swartvlei Estuary Mouth. His career evolved to include Social Ecological Systems Thinking, the study of how human communities and natural environments are inseparably connected, across open access Protected Areas. He now works in environmental consulting, lives in Sedgefield, and personally holds a significant stock of sandbags!!