

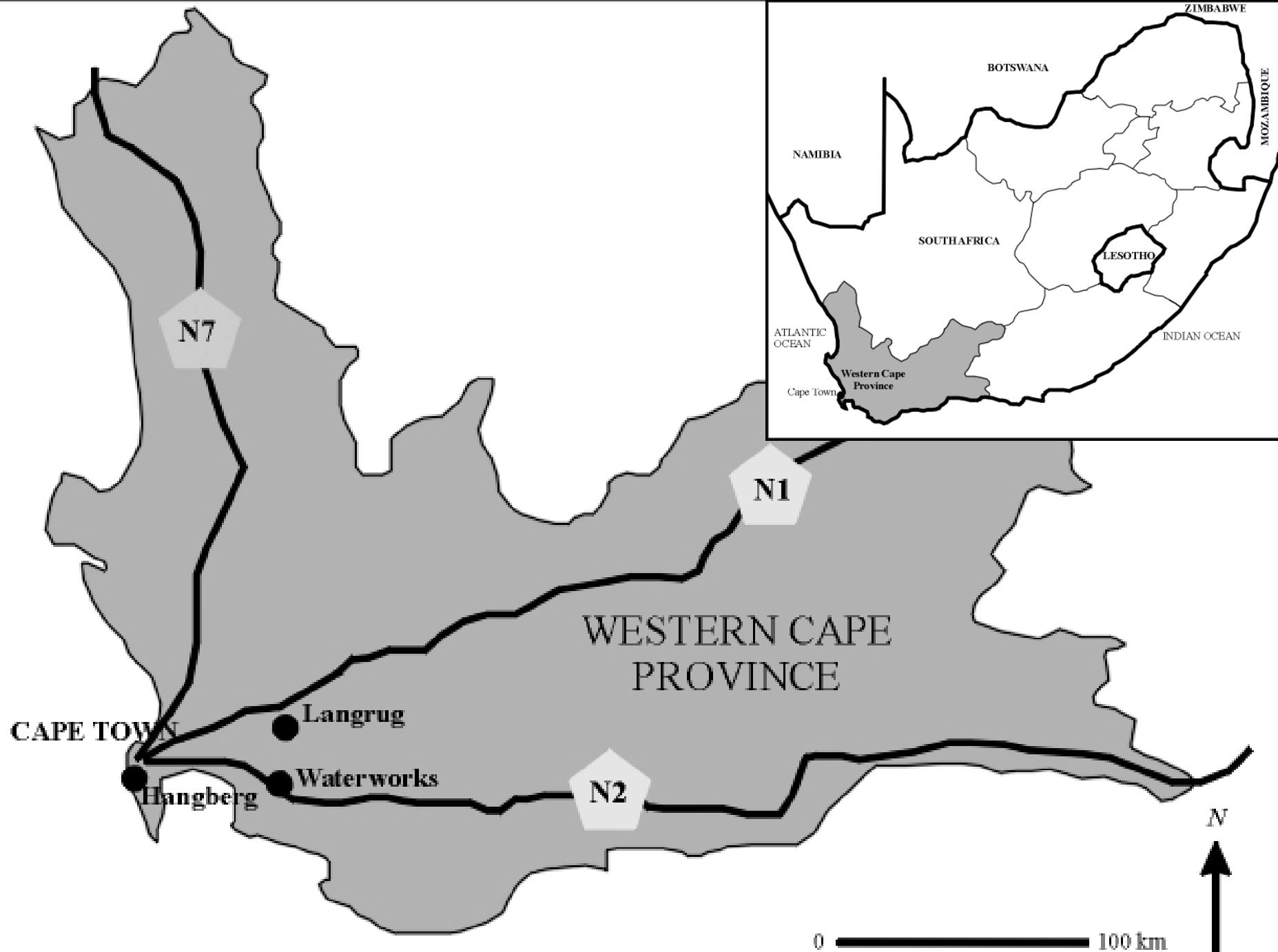
# Let's fix it: Managing greywater in shanty settlements, South Africa



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Lizzie Kruger, Ncedo Mngqibisa and Ntobeko Dyani

University of Cape Town

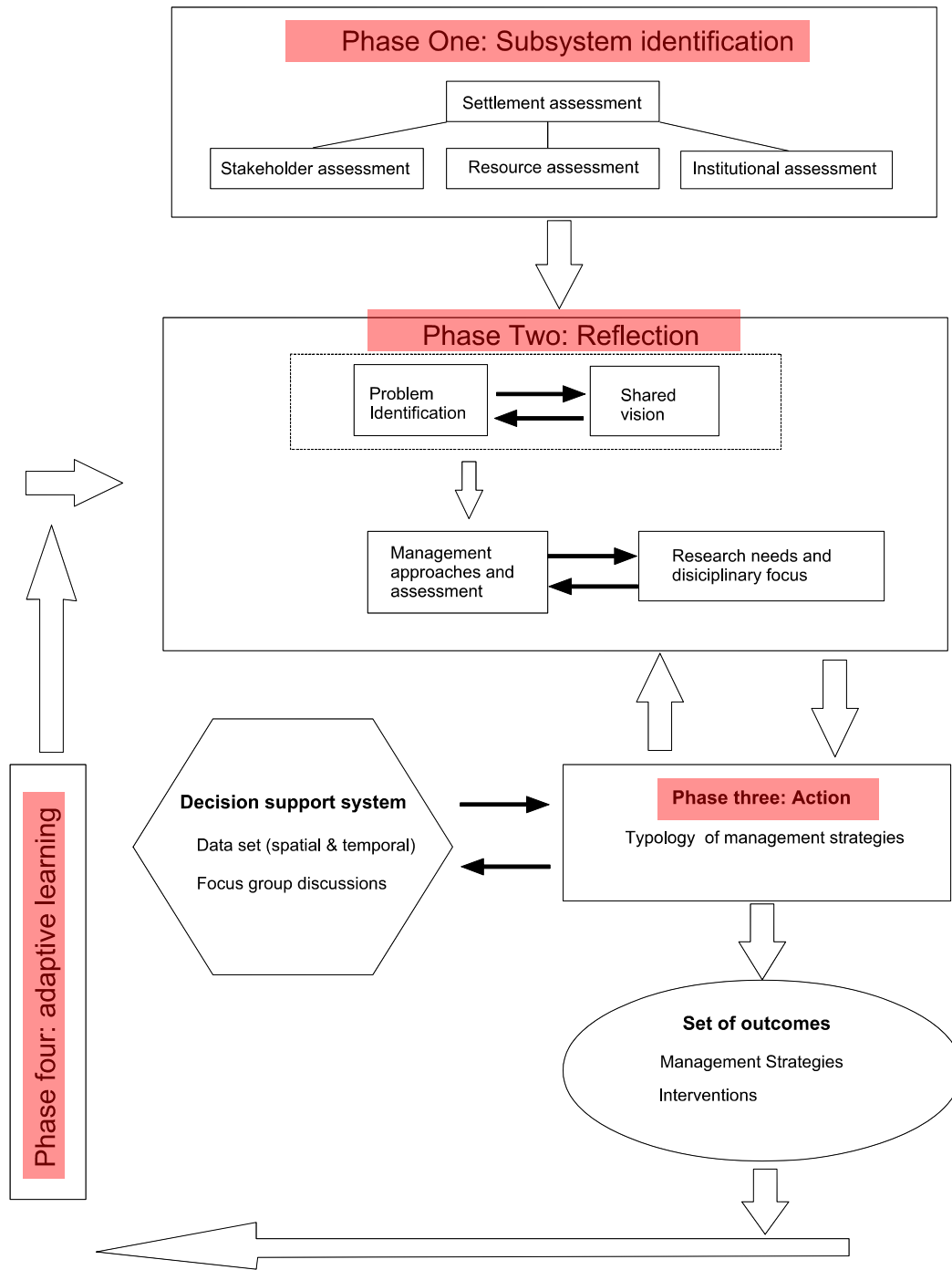
Water Research Commission Project WRC K5\_1654





Adaptive Decision Making

Participatory Action Research



















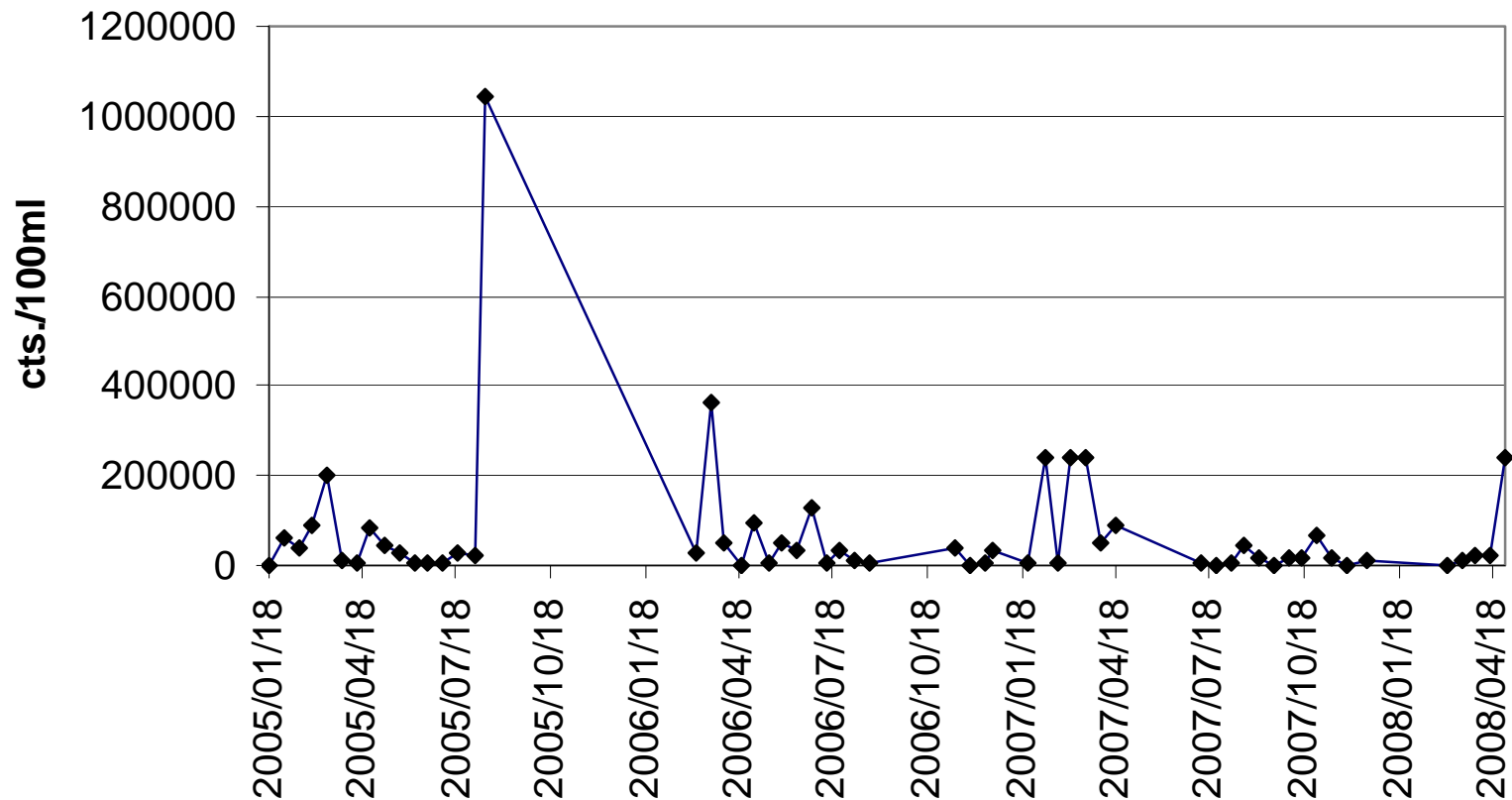


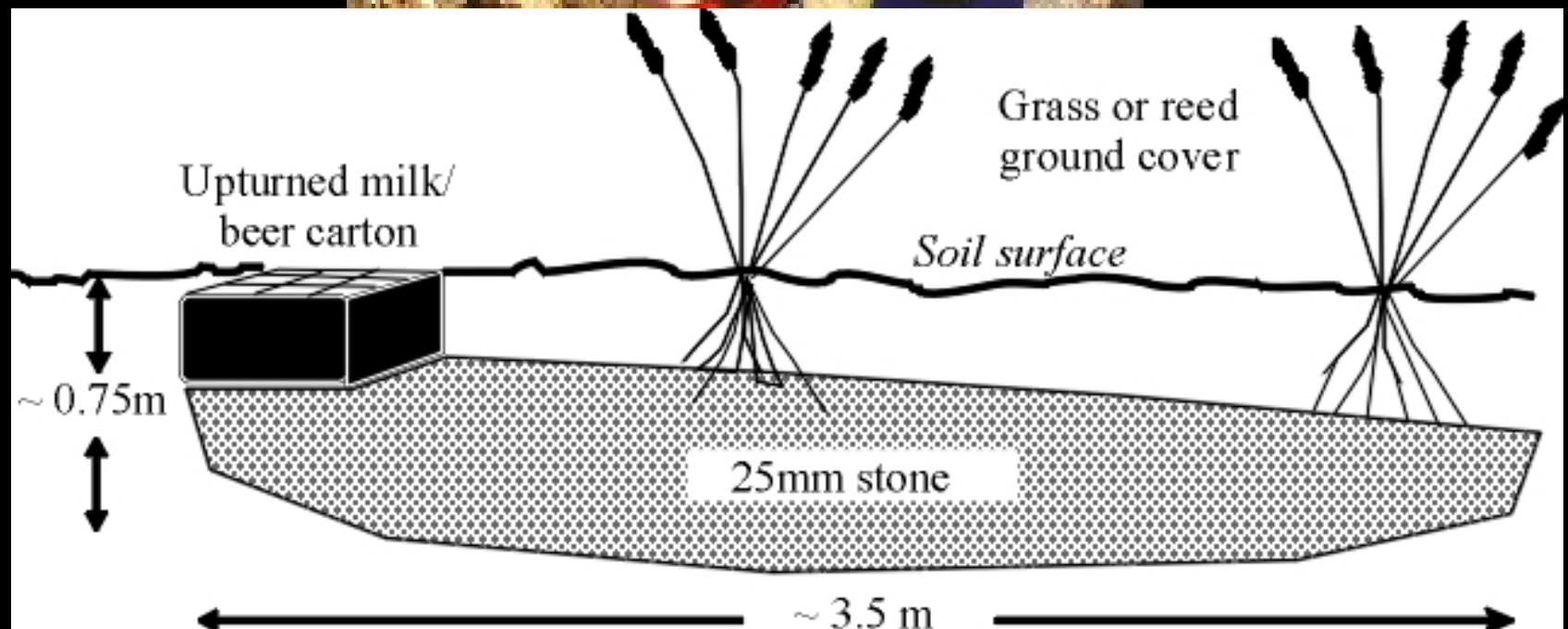




# Results of NMMP sampling in the Franschhoek River (DWAF, 2008)

## E.Coli Results: confluence Stiebeuel & Franschhoek River

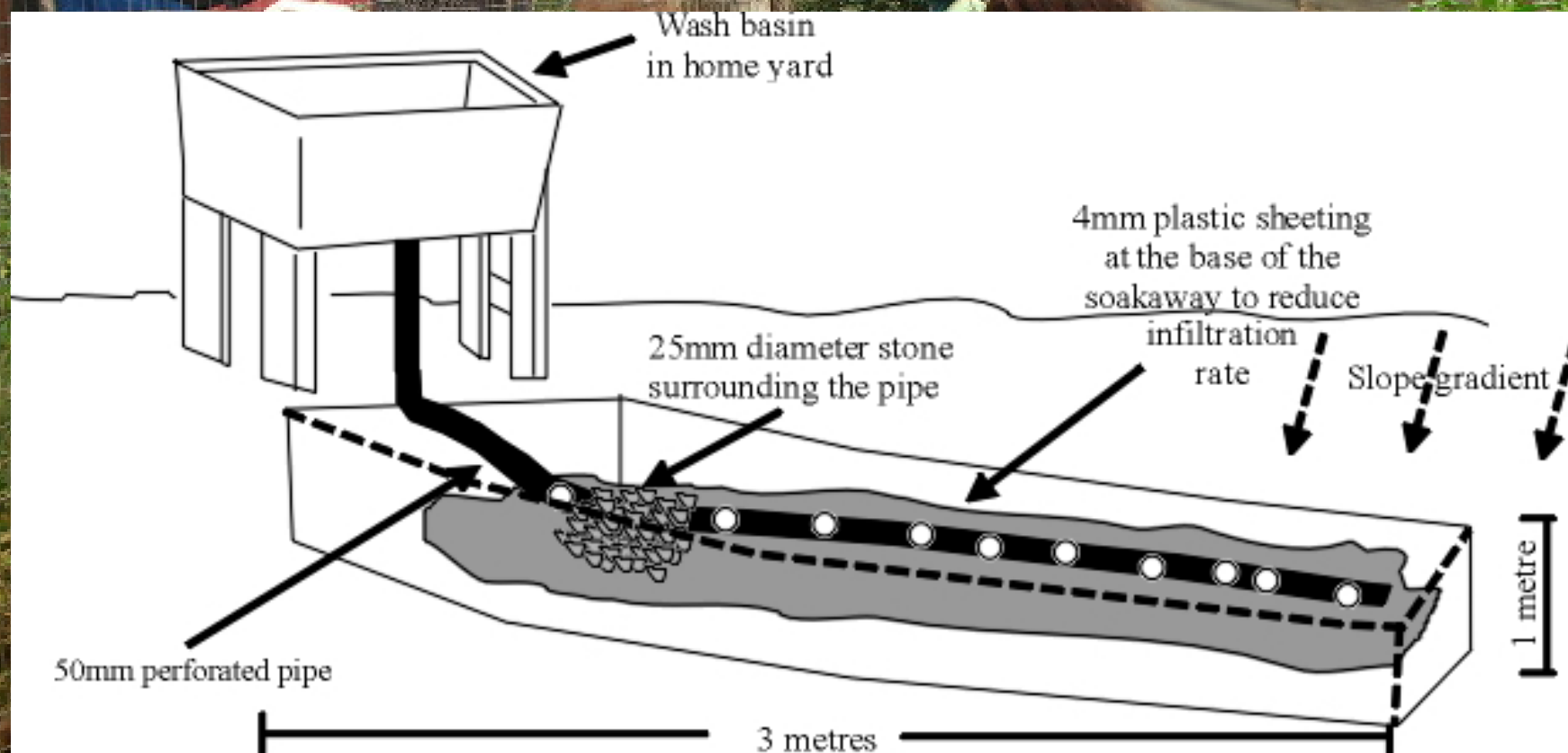


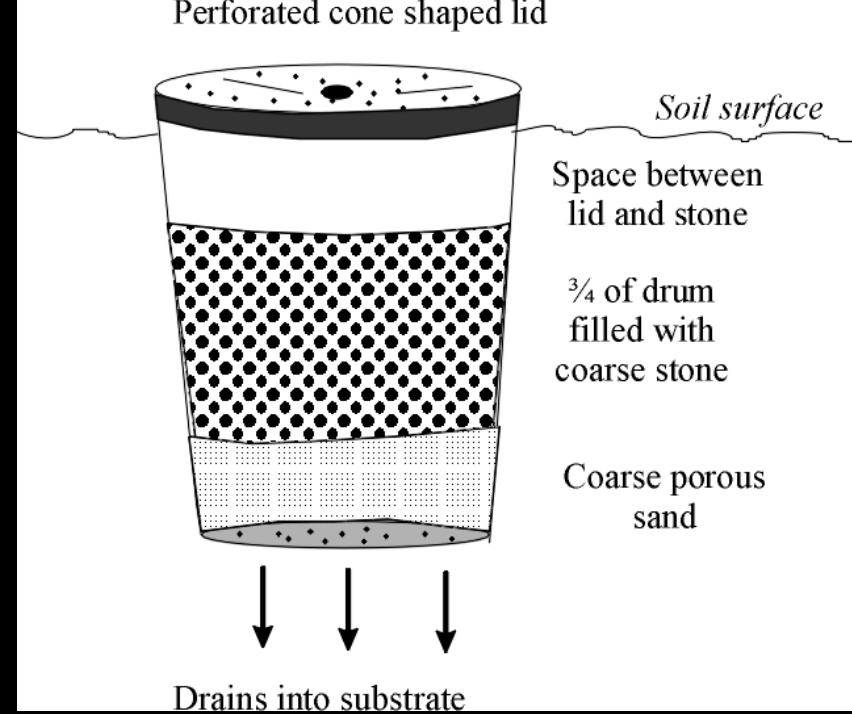




Nimrod thought that the trench's capacity was too small for the volume of water.... [he] recommended widening it to 1m and deeper. He imagined bigger dimensions and that the mouth could be closed to keep rainwater out.







Unbearable smell as we enter Waterworks....it didn't drain...is a murky brown-grey colour.

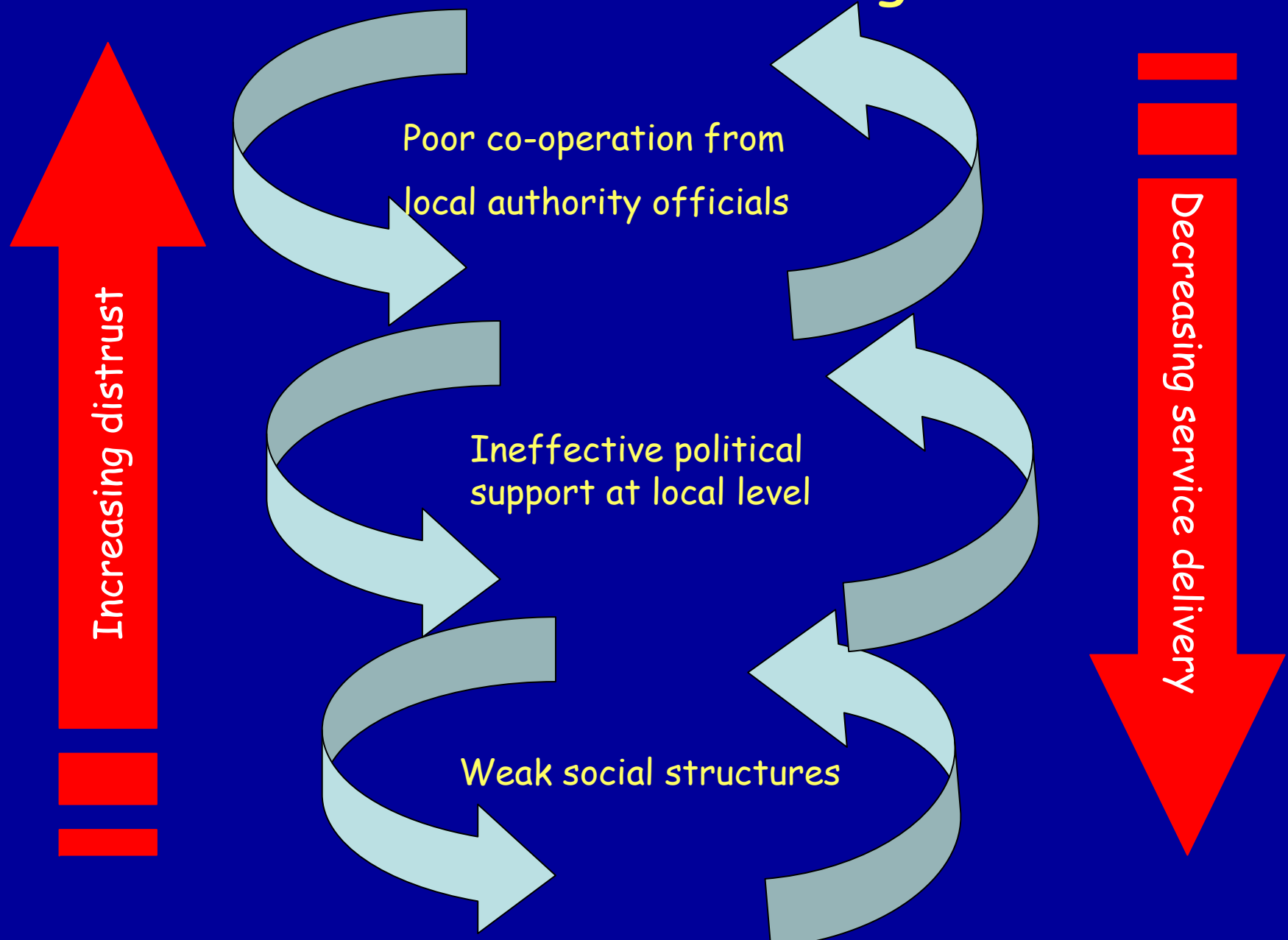
*Waterworks 22 January 2008*

# The Report Card: Langrug & Waterworks

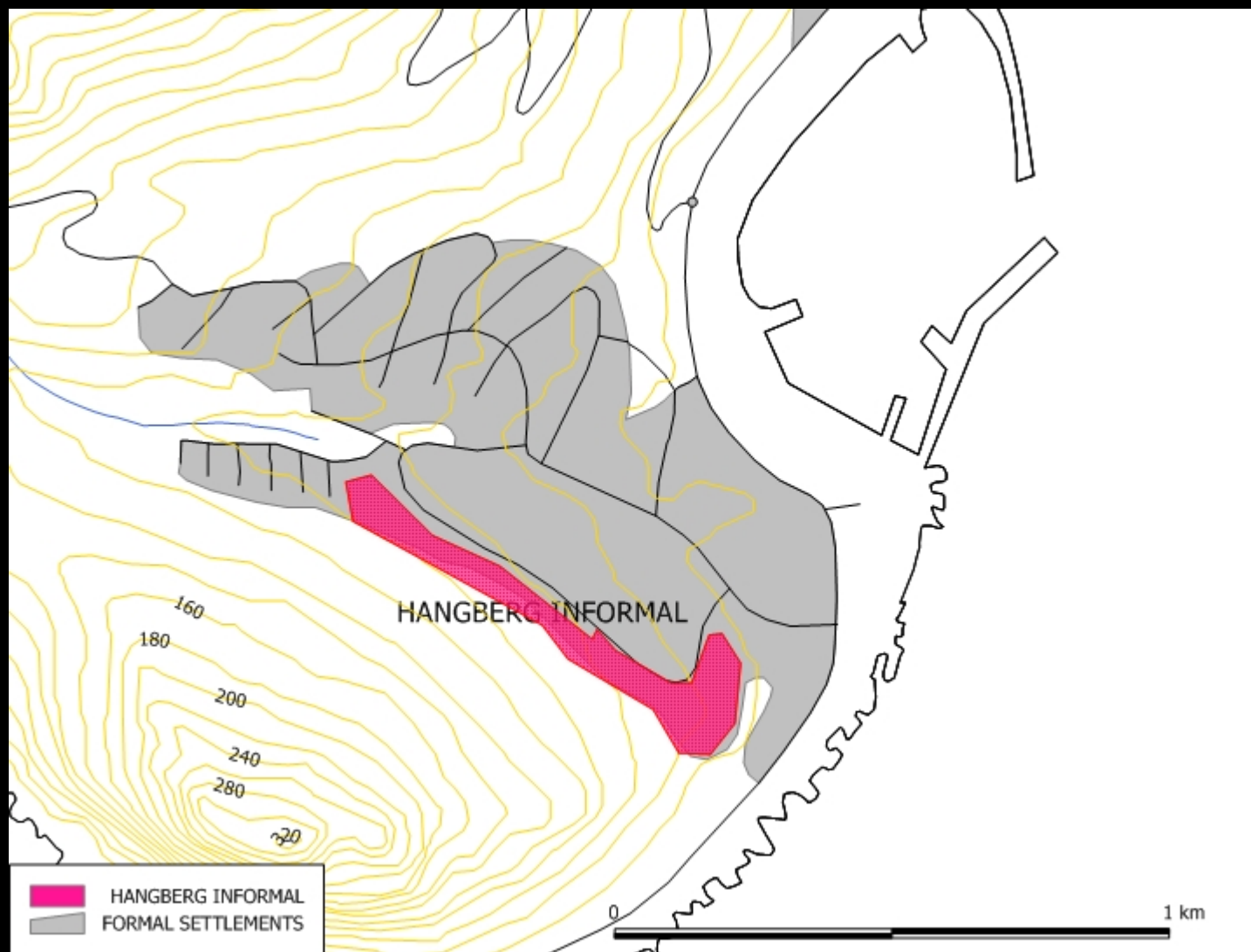


Poor communication: residents; councillors; officials  
Residents have lost confidence in the local authority  
and in political structures  
Reluctance to co-operate in new initiatives  
Unrealistic expectations fuelled by political/ideological  
rhetoric  
Poor design of existing infrastructure  
Authorities operate in crisis mode  
Reluctant Councillors with agendas that are not  
transparent  
- Street committees in paralysis

# A mix of factors contributing to failure













# Hangberg... a different voice

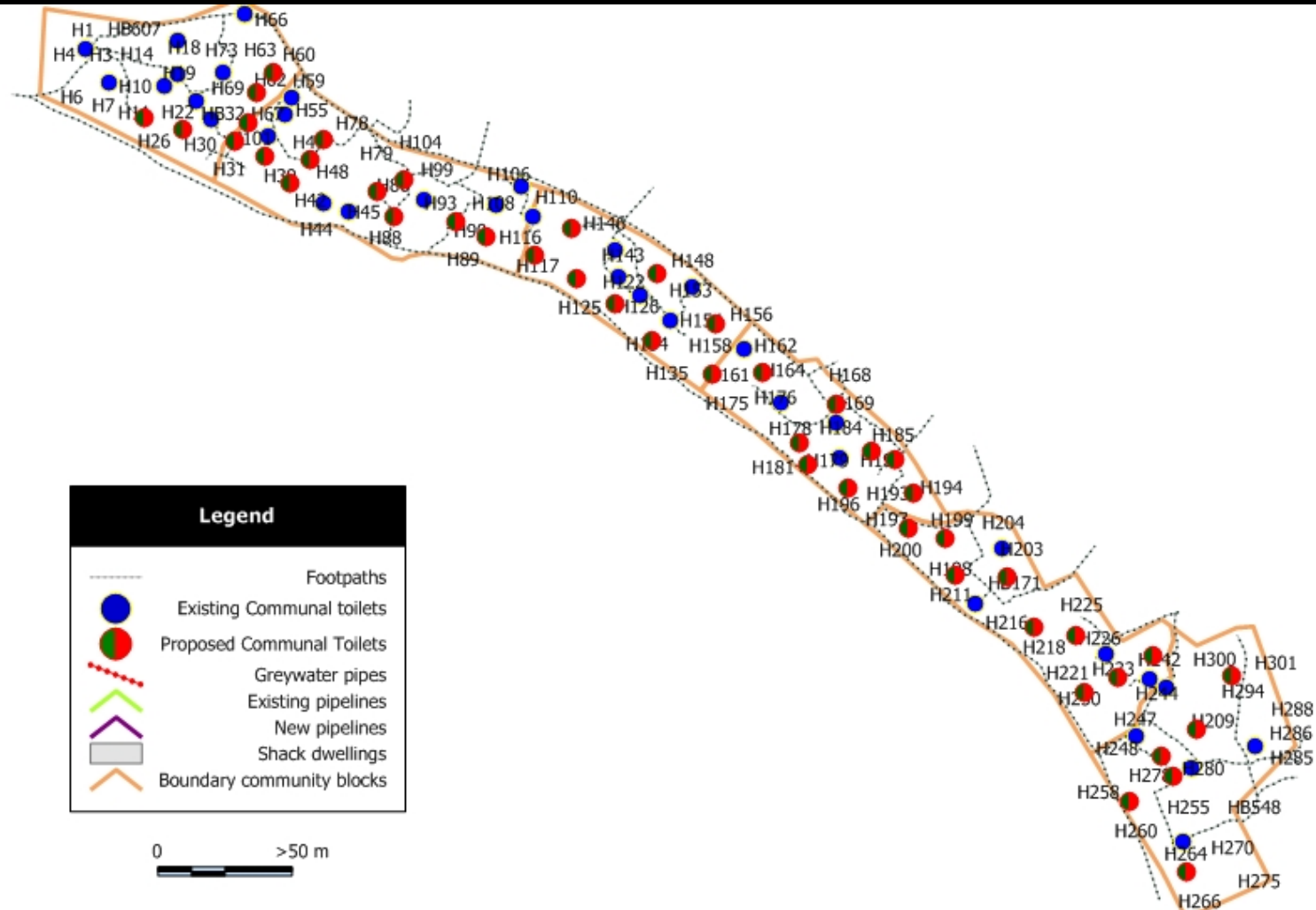
*We feel like we are one family and thus assist one another without expecting to get anything back. We assist each other for the interest of the community. We are living in a fishing village where there is not always a flow of money, we therefore help each other.*



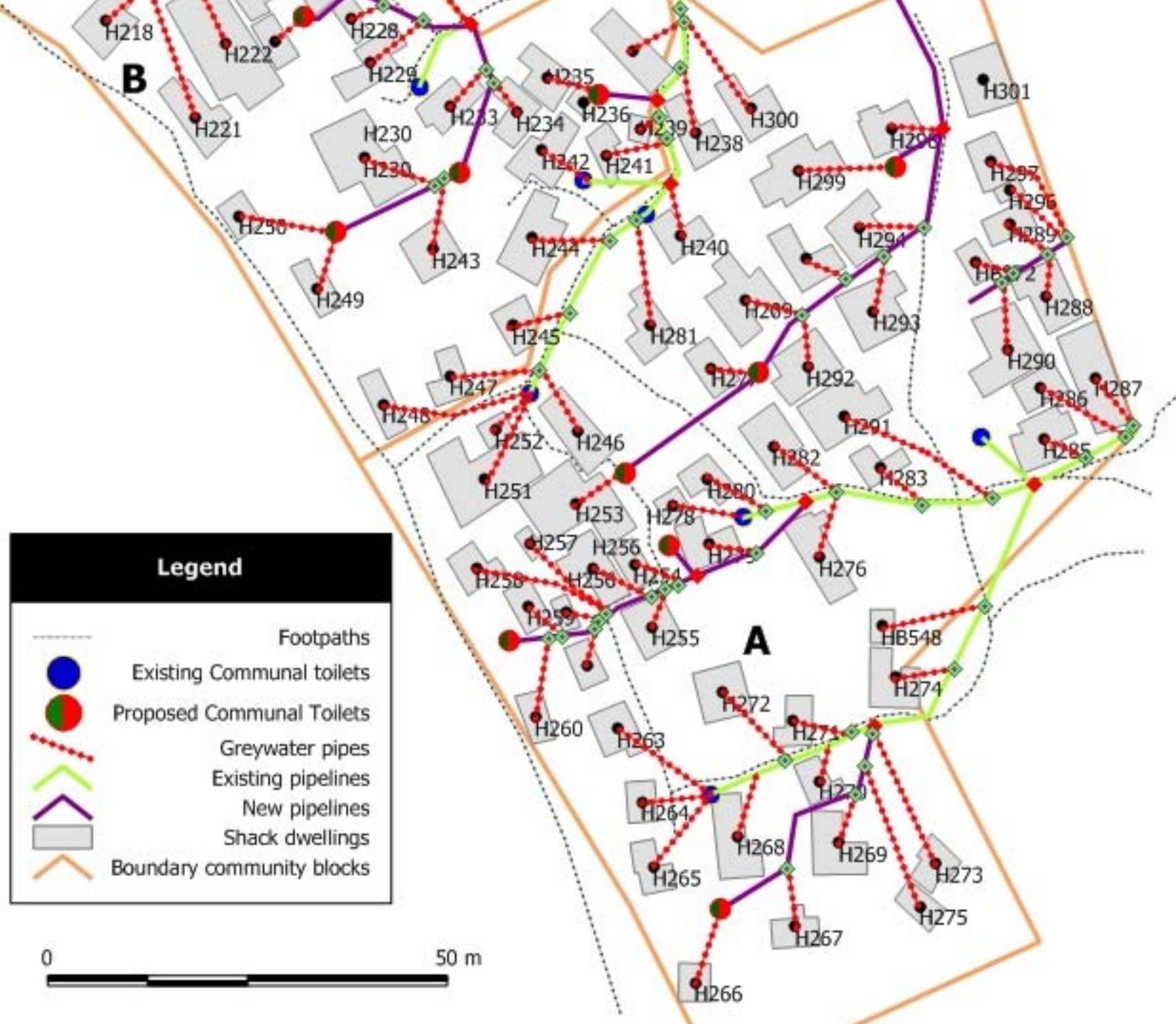




# Proposed and existing communal waterborne toilets







# Ingredients for success







**Table 4.2: Results of Water Quality Tests  
(Hangberg, 7 September 2007)**

Sites	1. Stormwater drain between Council flat and easterly bungalow	2. Stormwater drain pipe discharging into main access road	3. Stormwater outside Advice Office	4. Outlet pipe discharging to sea
E.coli (org./100ml)	1000	600	>1000	>1000
	Mg/l	Mg/l	Mg/l	Mg/l
Total Kjeldahl Nitrogen	3.0	<0.15	17.2	1.9
Total Phosphorous (P)	3.4	<0.10	2.9	2.1

# Some conclusions

- Greywater management cannot be considered separately from stormwater, sanitation and solid waste
- The needs of residents are focused on more pressing issues
- Limited capacity of community structures to effect community-based solutions
- Understand complex social and institutional dynamics first before designing and implementing technologies
- Process, participation and partnerships appear to be key ingredients to realising progress