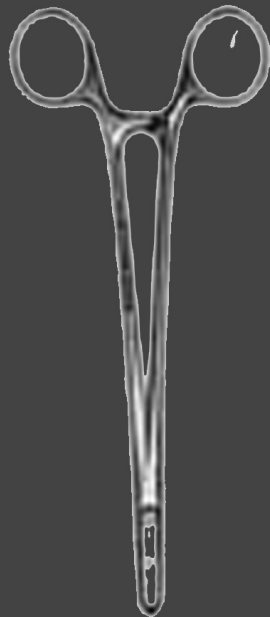


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# APPENDICITIS

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## APPENDICES





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## APPENDIX A:

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### MAMELODI: MARGINS AND MOUNTAINS

The urban design framework was developed as a group in response to the mapping and observations made during transect walks.

According to Marie Huchzermeyer (2010) informal settlements are the only form of urbanism that are really deconstructing the spatial legacies of apartheid.

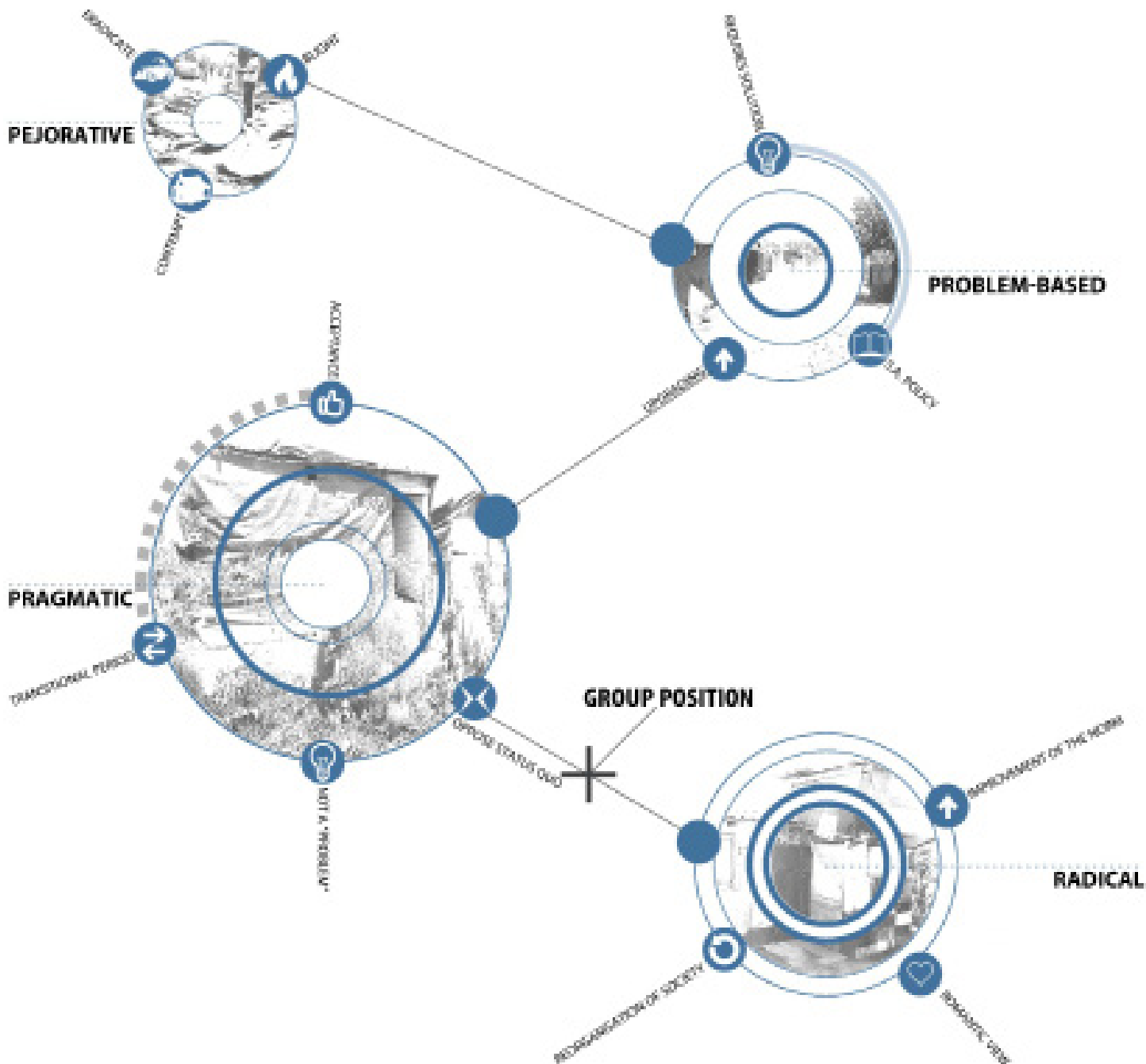
The group recognises the innovation and relevance of informal settlements and thus positions itself within the spatial debate surrounding informal settlements.

The position lies between the pragmatic and romantic views of informal settlements. Recognising that informal settlements are inevitable in the south african context, the pragmatic approach seeks to up grade settlements, in situ. The romantic view, sees informality as the most appropriate form of urban design in the current context. Positioning between the two, the group acknowledges the settlement's position and the residents' spatial right to the city and endeavours to create catalyst interventions which will encourage the in situ up grading of the settlement, in a sustainable way.

The following is a reproduction of the presentation of information gathered during mapping and the urban design proposal in response to that mapping.



# Margins *and* Mountains.



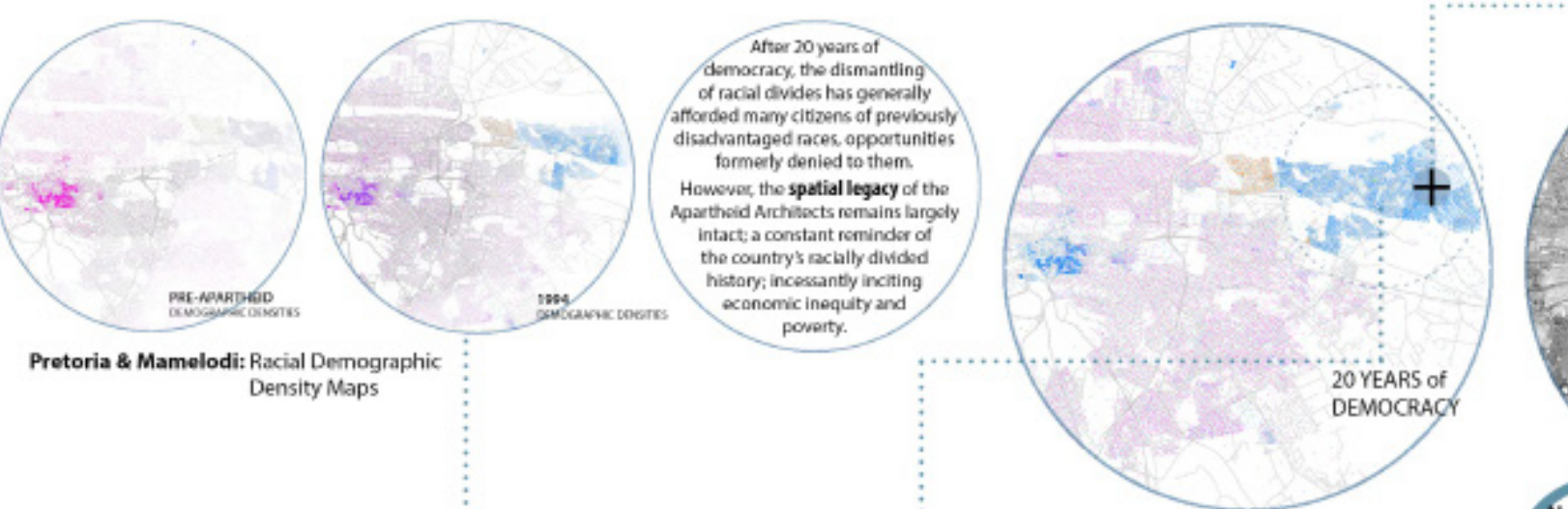
In the geography of Professional practice, there's a very dry high ground, where you can practice the techniques and use the theories on which you got your PhD.

Down below there's a swamp, **where the real problems lie.**

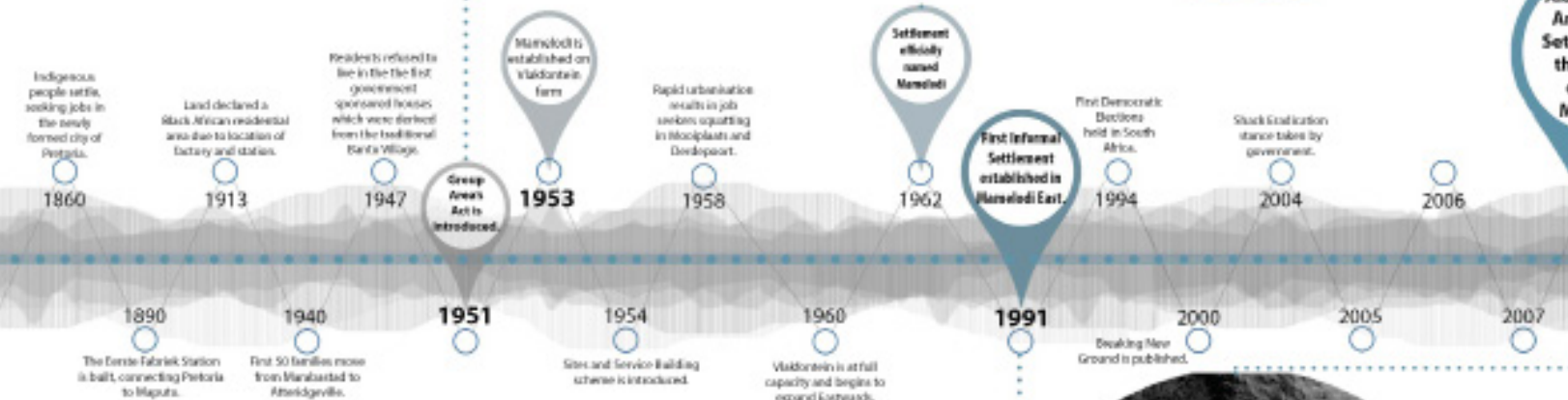
The difficulty is to decided whether to stay on the high ground, where you can be rigorous with the ideals you stand for; or go down into the swamp, to work on problems you really care about.

-Don Sherwin

# A History of Mamelodi



Pretoria & Mamelodi: Racial Demographic Density Maps

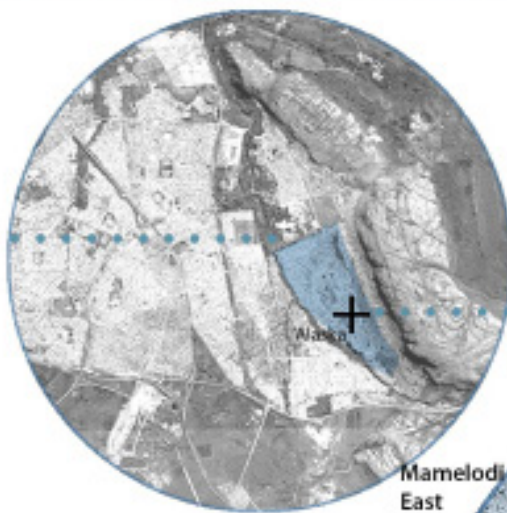
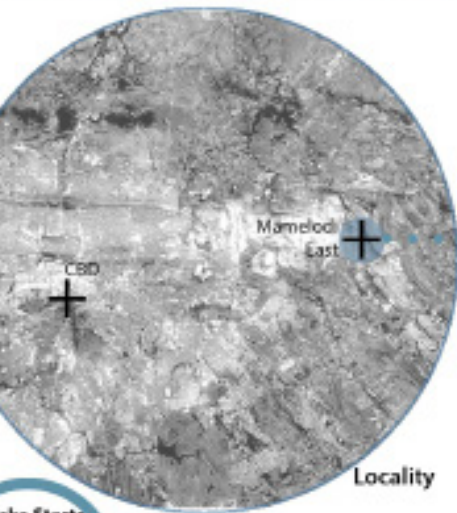


## Mamelodi: Historical Time line

Mamelodi presents itself as a relevant focus area when investigating the urban and architectural issues within Informal Settlements. Although Mamelodi is largely a formalised area, with many RDP zones; expansion to the East is done so largely through Informal Settlements.



# Welcome to Alaska



While the exact reasons are unknown, Alaska began somewhat spontaneously in 2008.

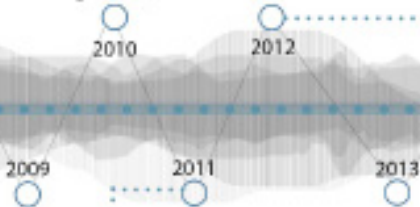
The settlement which has developed rapidly, has a parasitic relationship with the RDP development on the tallis slope.

As the young settlement continues to grow, many urban and social issues arise. Many of which can be solved through architectural interventions.

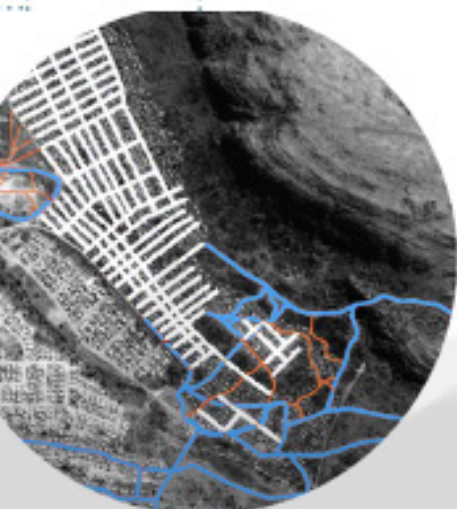
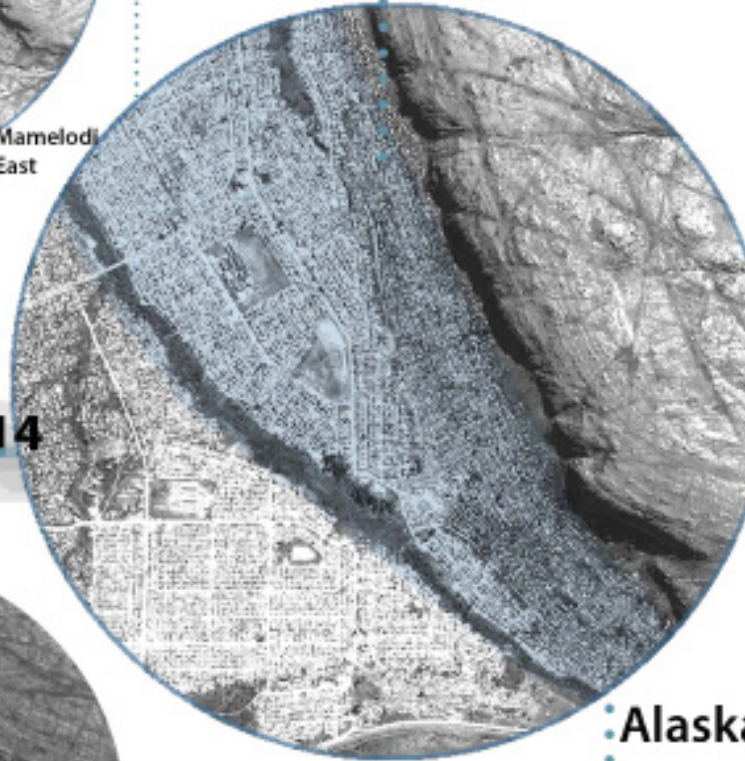
Alaska Starts Informal Settlement on the Eastern Edges of Mamelodi

2008

In-situ upgrading programme adopted by government.



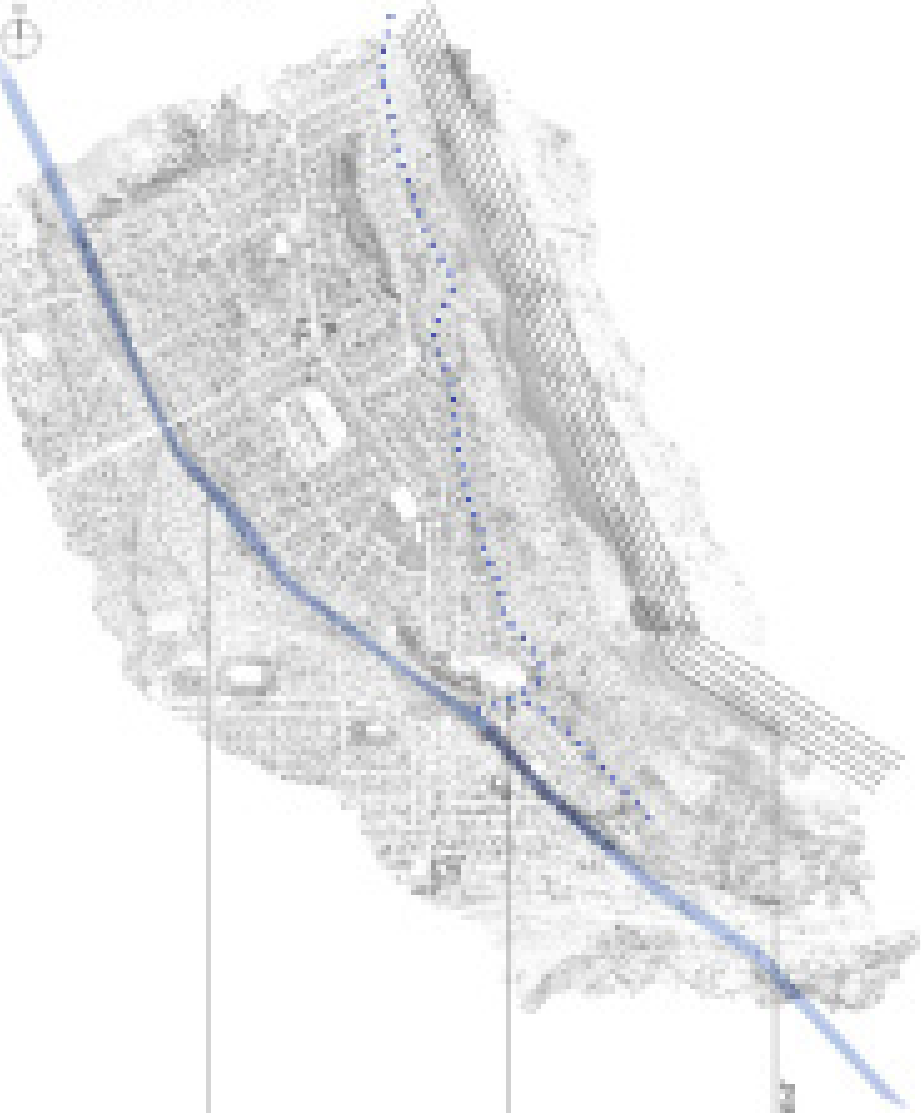
2014



Pretoria & Mamelodi: Racial Demographic Maps

# Mapping

## PHYSICAL FEATURES



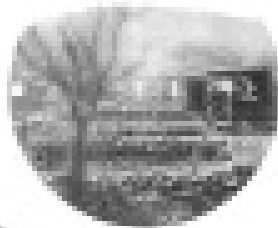
ECOLOGICAL



ENVIRONMENTAL



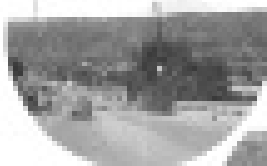
MOISTURE



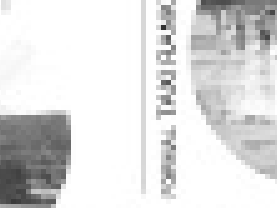
## ACCESS ROUTES



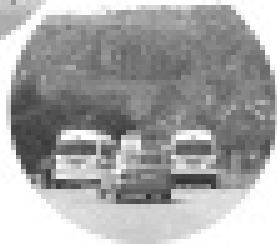
ROADWAY



ENVIRONMENTAL



FORMAL TRAIL



MOISTURE

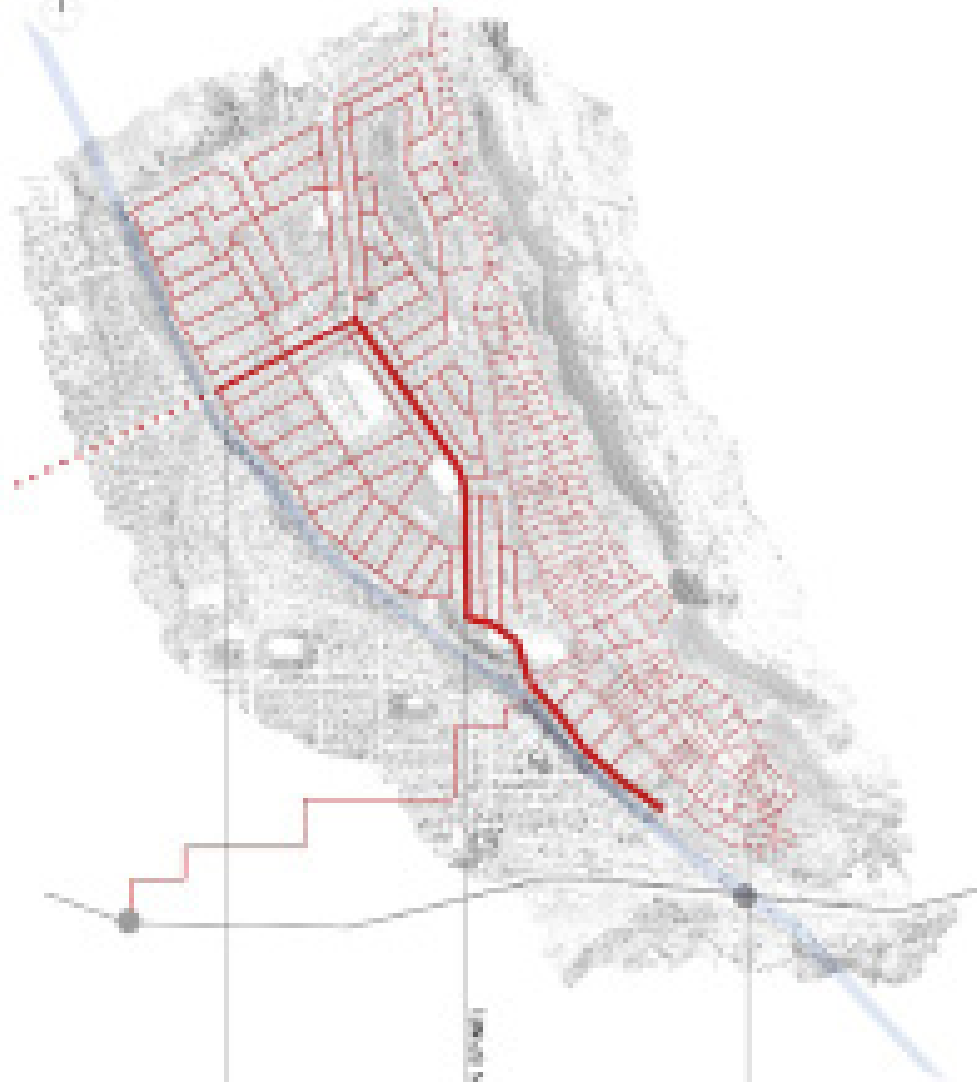




# ROAD HIERARCHY



FRAMEWORK (FUNCTION and CORRECTION)



TERTIARY ROAD (SECONDARY)



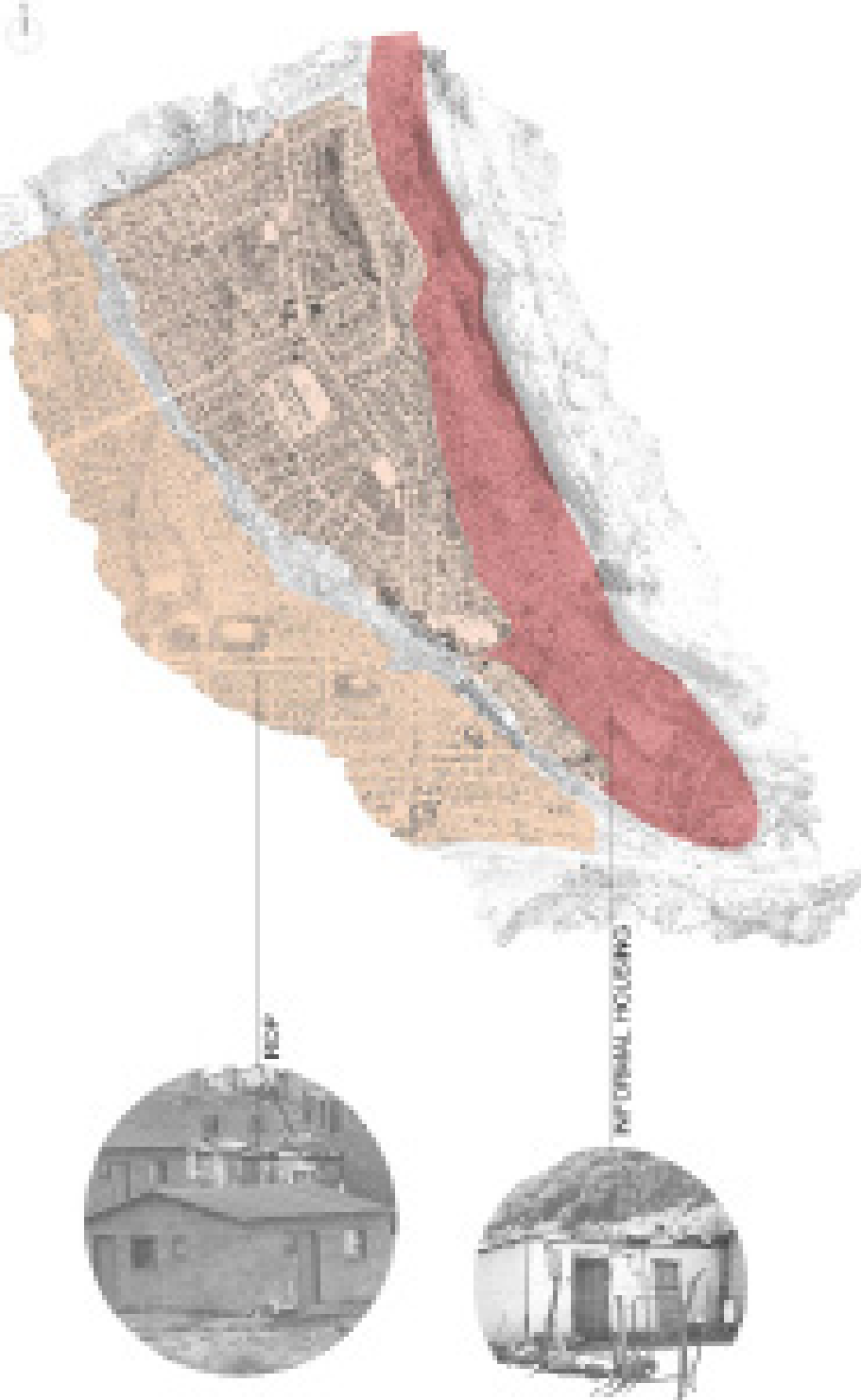
TERTIARY ROAD (MAIN STREET)



FOOTPATH



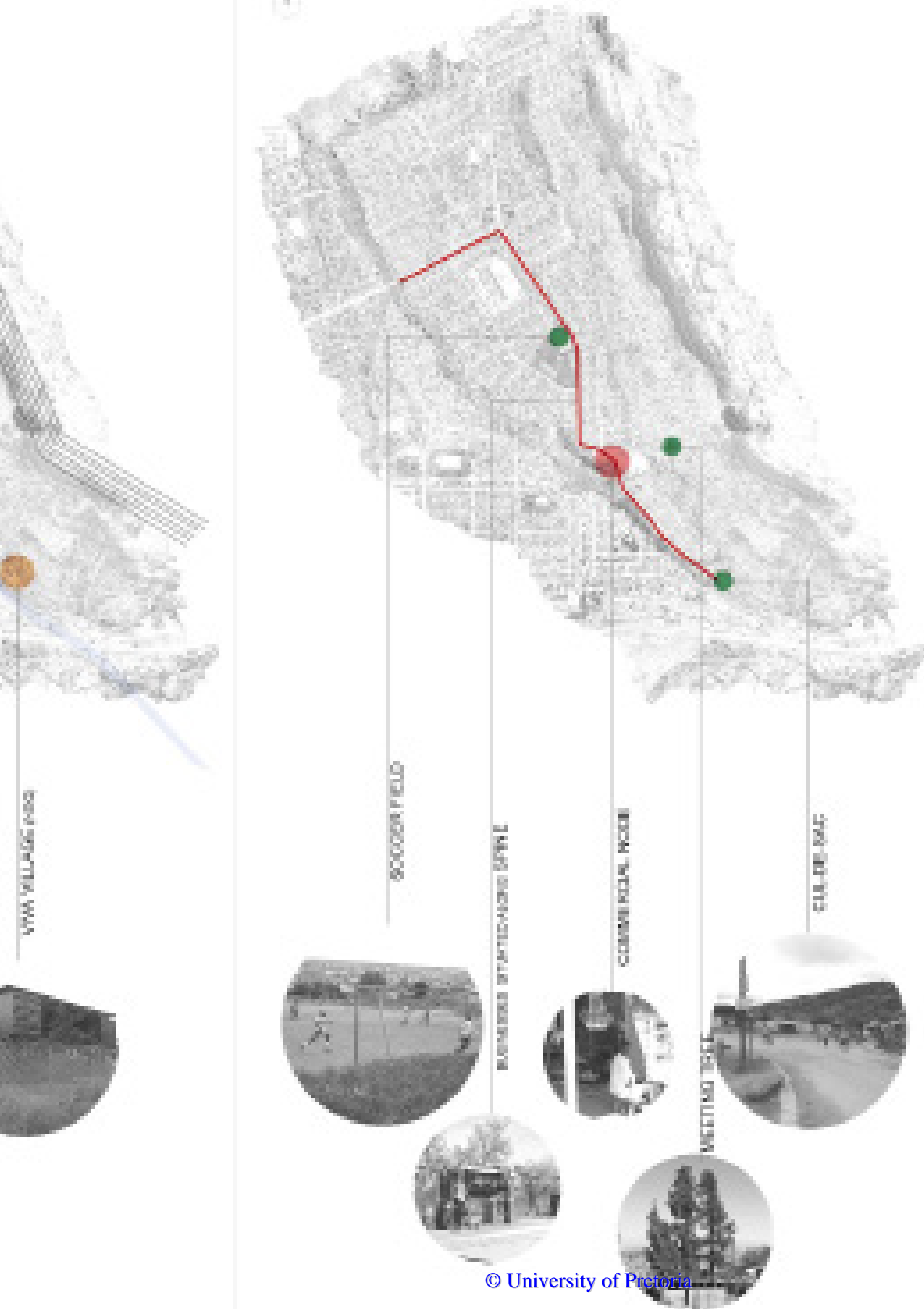
### PERMANENCE/TEMPORALITY



### AMENITIES



## CITIC SPACE AND COMMERCIAL NODES



## river

as one of the major crossings and access points to Alaska is over the river, issues arise when the water level is very high, thus limiting crossing opportunities.

## road access

as the only stretch of road that is paved, this becomes the main vehicular access point, which means a high traffic flow, although this, means that maintenance becomes an issue, the road provides a great foundation for a residential entry.

## RDP housing

the houses closest to the paved road are all RDP, and represent a limited phase of implementation, these houses are fenced or walled off, creating a sense of separation from the rest of the settlement.

## dividing road

the dividing road acts as one of the main pedestrian movement arteries, which would allow for future vehicular movement, this road though separates the formal from the informal.

## drainage

drainage and storm water run-off in the area is very poor, flooding down the main pedestrian paths, eroding the soil, making movement almost impossible. Furthermore, it becomes a health risk, as children are playing in these paths, and thus coming into contact with this unhygienic run-off.

## landmark tree

In the mountains of Alaska, a single landmark tree stands as a symbol of the region's history and culture. It is a tree that has survived through centuries, and its presence is a testament to the resilience of the people who have lived in the area.

## power lines

The illegal power lines that run up the mountains of Alaska pose a rather high threat and become health hazards, as they consist of small normal cables, taped together, running either along the floor or elevated by wires of used poles.

## shacks

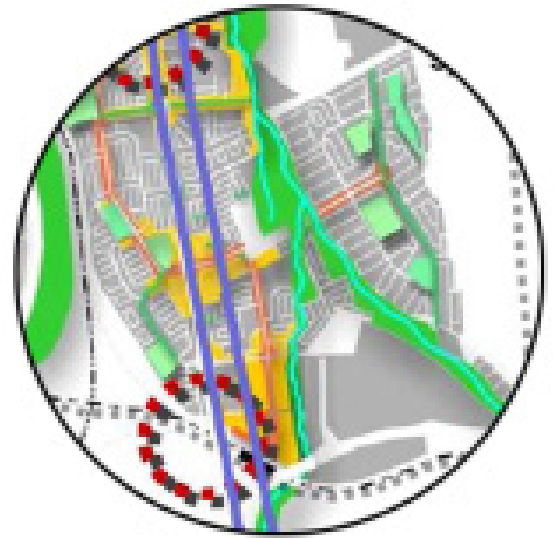
The shacks are small, but in most cases kept in a good condition, involve the construction methods can be seen, to withstand the natural elements. Many of the shacks are constructed using prefabricated panels, which are manufactured locally in Alaska.

## footpaths

Footpaths in Alaska are the main form of circulation, the paths are rocky and very steep, posing serious challenges of transportation and access to the mountains.

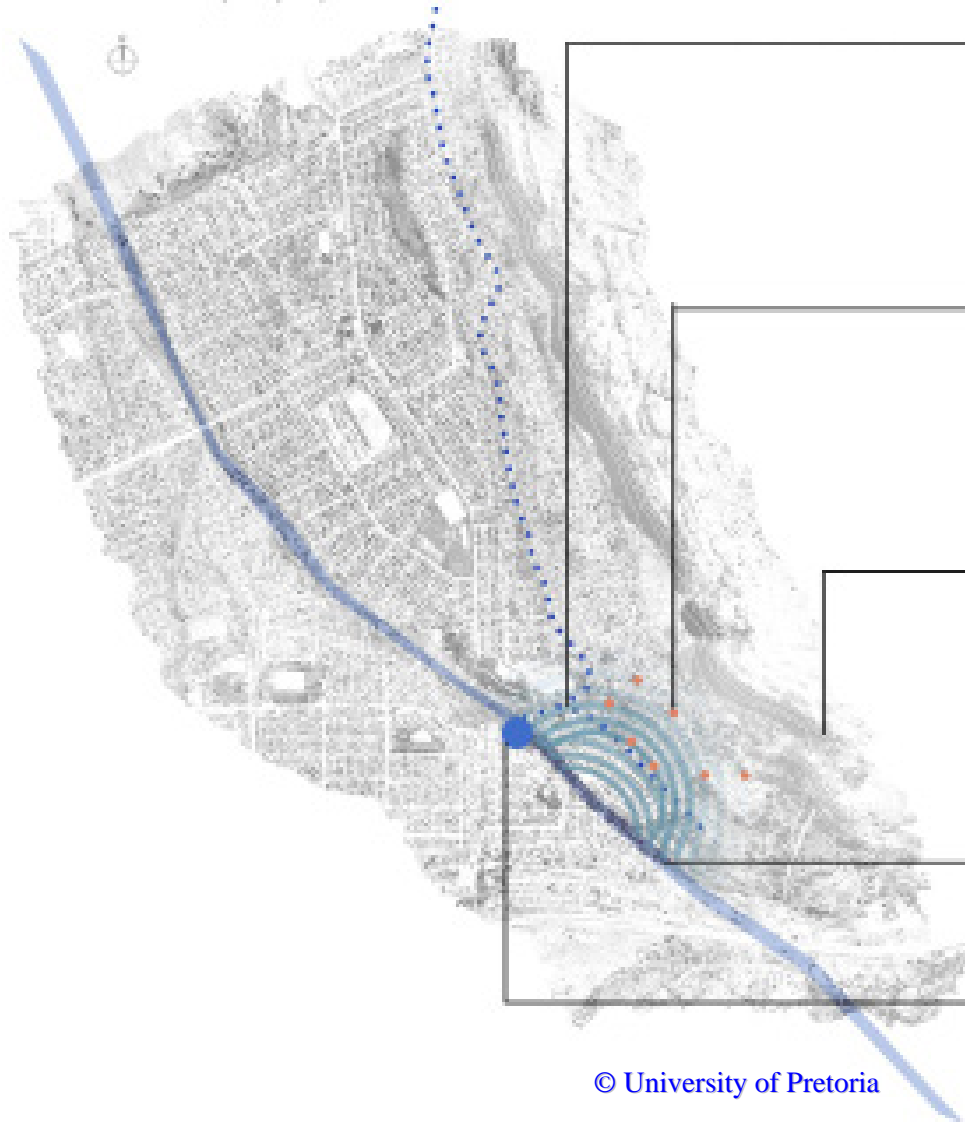


## Macro Urban Scheme - GAPP Urban Designers, 2011



## Meso Urban Schemes - HSU Honours Students, 2011&2013

The majority of the student projects deal with the Informal Settlement, East of the RDP development. Many suggest similar interventions - such as a bridge, emergency gathering points, public amenities, off-grid infrastructure and in situ upgrading of the informal settlement - thus changing the status of the settlement from temporary to permanent.



### Catalysts & Phases:

- Infrastructure
- economic
- social

### Route Markers:

- Gathering markers
- Footpath legibility

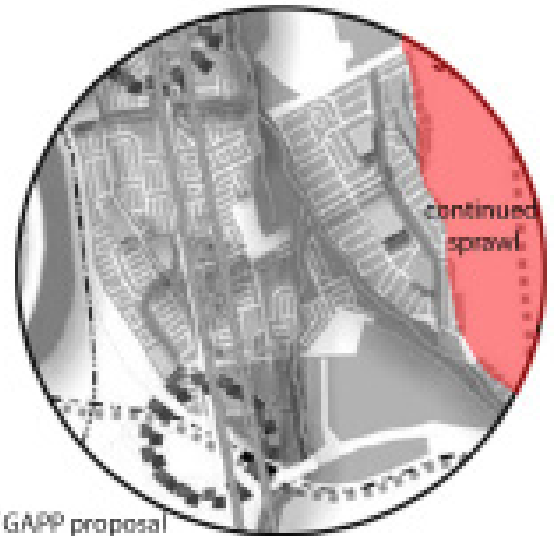
The advantage of the slope:  
potential for terraced buildings

Footpaths as public space

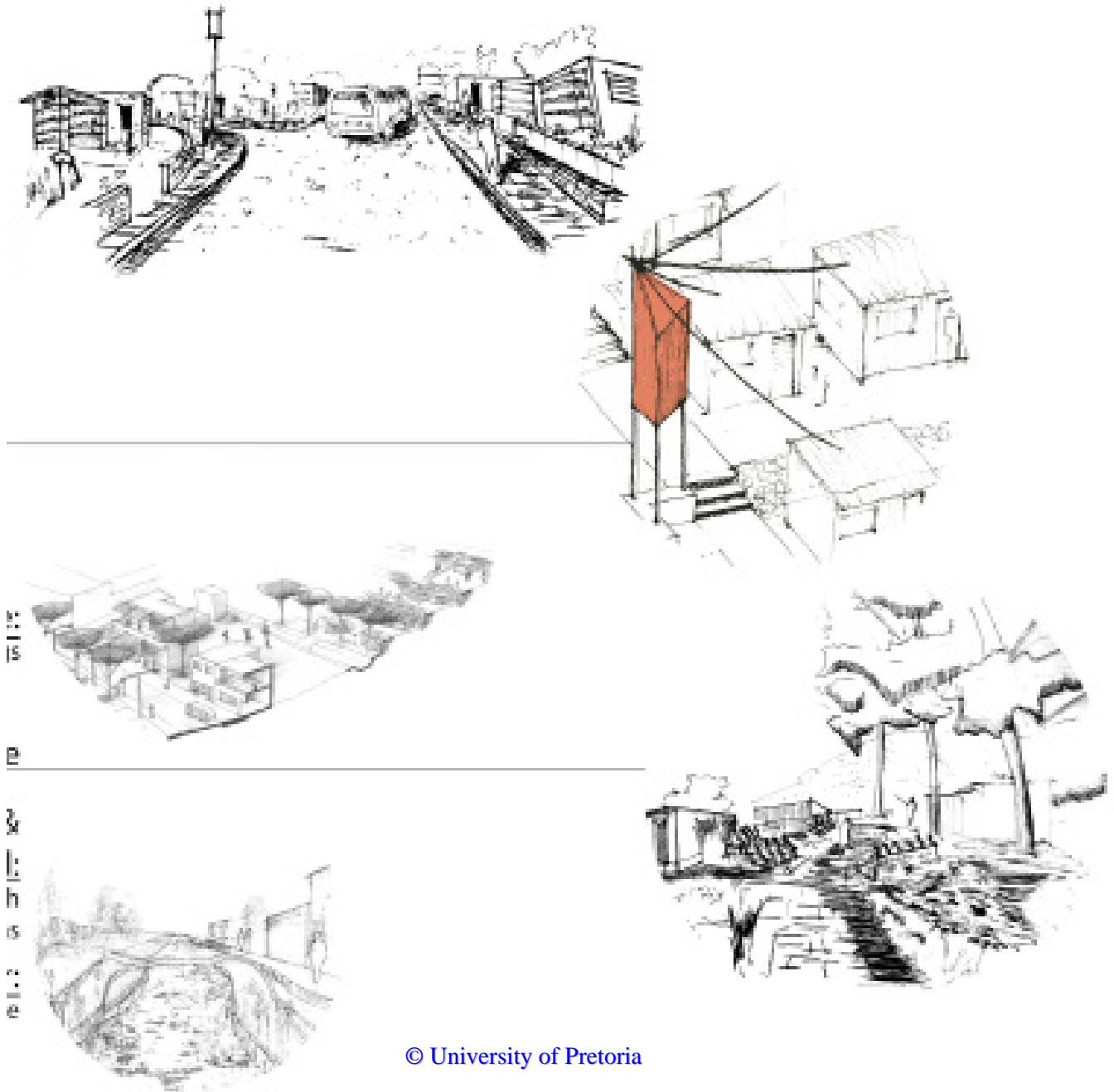
River side terracing &  
Cleaning the Channel:  
improved public realm through  
provision of recreational areas

Bridging the River:  
reduce the cul de sac nature

The GAPP proposal, on a Macro scale - has the potential to transform Mamelodi into an Urban Centre in itself. The proposal, submitted in 2011, completely ignores the Informal settlement of Alaska and almost entirely disregards the RDP Developments to the East of the Elandal Spruit. This master plan would further perpetuate the abandonment of Alaska, as it remains at the end of a Cul de sac, across an unbridged river. No new economic nodes or public amenities are proposed within the focus area. As such, Mamelodi could grow into a thriving Urban Centre, offering more work opportunities and the informal settlement would continue to grow in place, offering migrant workers cheaper living accommodation. Additionally, this proposal does not address the river issues and halfheartedly attempts to connect Alaska with a single BRT line.

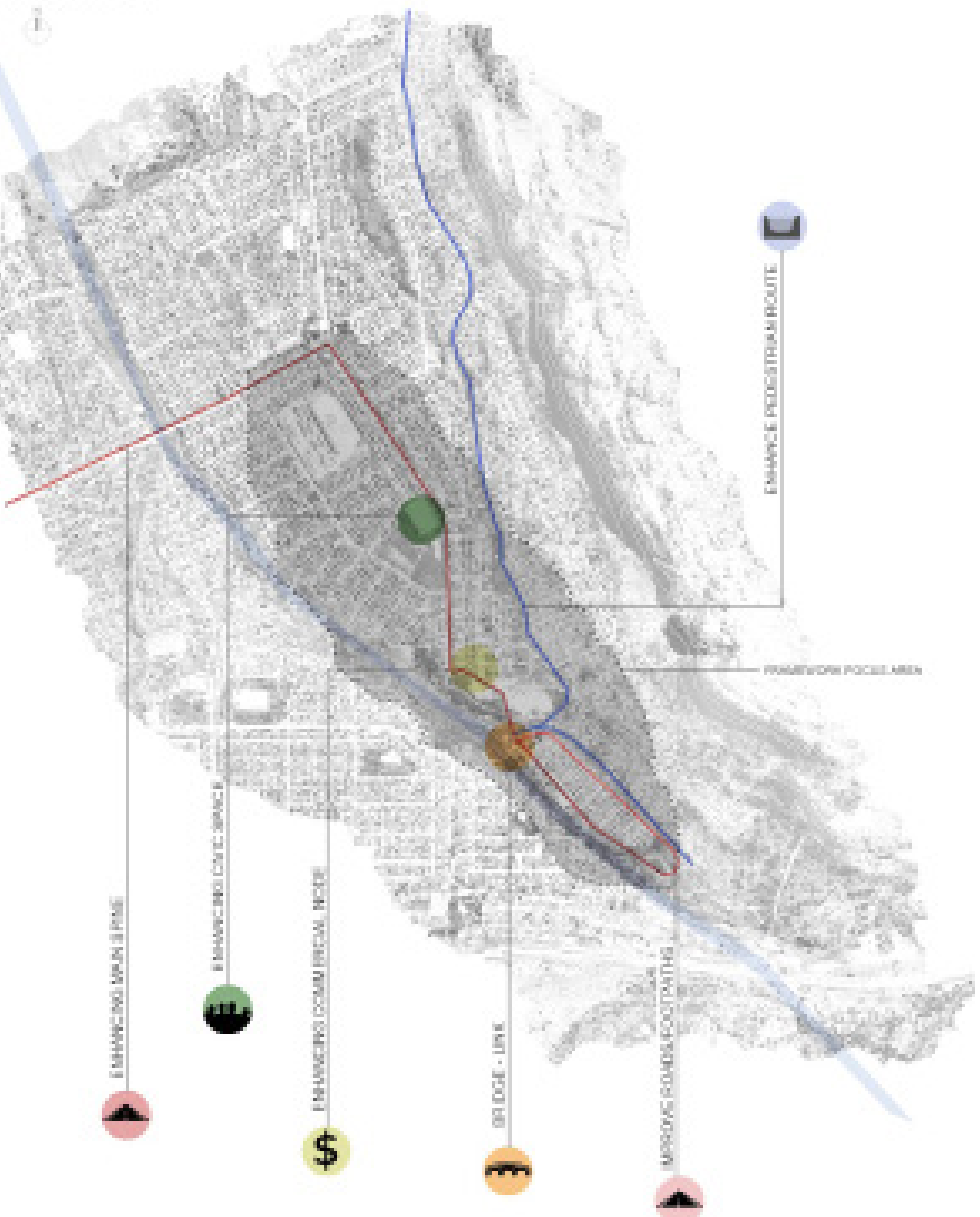


Anticipated Consequence of GAPP proposal



# Framework - Opportunities

- built environment
- health
- recreation
- education
- culture/leisure/active space





The Apartheid Spatial Legacy has left Aloko removed from Pretoria's urban centre, economic hubs and public spaces. Mapping revealed Aloko to be an Urban Island - void of defined public spaces, but full to the beginnings of social structures, more the less, the potential exists for this site to become an urban centre. Building upon these existing, adaptable social structures, the Urban Framework aims to unlock the site's potential and in doing so, control the coherence of community and place.

Identify existing civic spaces



Revitalise & Enhance

such spaces through the various design interventions



Rooted in existing on-site activities and evolved through community participatory processes, the interventions intend to

**Stabilise current Social Structure**

Create catalytic centres for in situ upgrading to grow from.



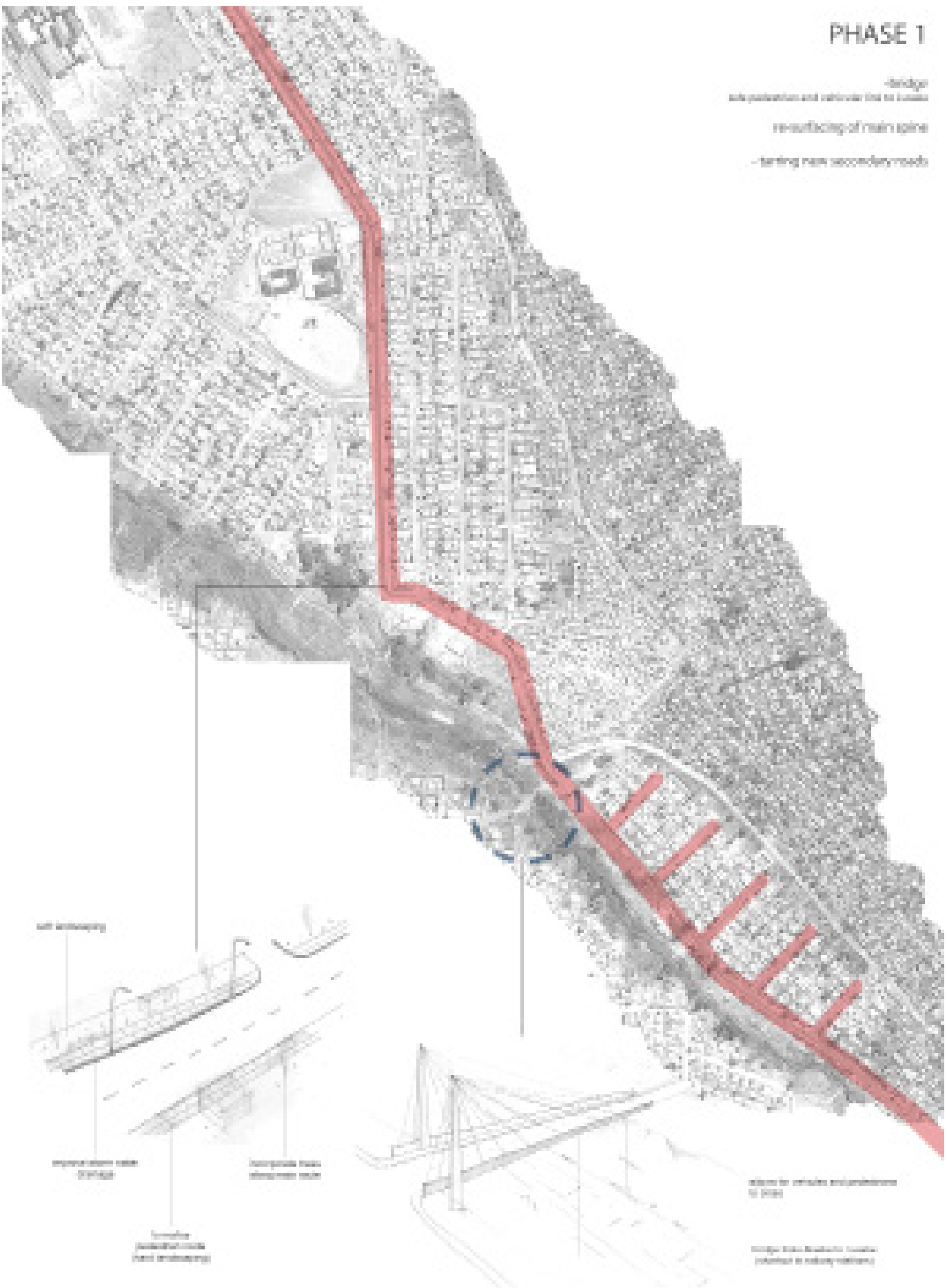
**The right to urban life:**

to renewed centrality, to places of encounter and exchange, to life rhythms and time uses, enabling the complete usage of these moments and places.



# PHASE 1

- bridge
- re-surfacing of main spine
- tarring main secondary roads



- cleaning out of culvert
- establish links across culvert
- replace out of use with loop road
- create emergency routes up mountain
- improve footpaths and create better defined public space



### PHASE 3

- formalising pedestrian routes along river
- legible and formalised pedestrian routes along channel
- create and define public and recreational spaces for the urban riverine green spaces



street layout differentiating blocks provide public space and recreational opportunities

several landscape possibilities including and use public space

public square with multiple possible for social encounters

landscape structure along river

landscaping according to explore RCH along the river in the urban



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## APPENDIX B:

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### OBSERVATIONS ON A SOUND STUDY IN HEALTHCARE FACILITIES

The author was a research assistant for a sound study within hospital wards in Pretoria Healthcare facilities.

The study involved members of the team recording sound events over a course of 6 days. The study itself will compare the different data sets and determine the impact of architectural design choice in the creation or reduction of noise.

Despite the study being conducted in hospital wards, observations made during the author's shifts are noted below as they influence the design. These observations are purely based on personal observations.

#### Tiled passages VS vinyl floors

Noise is drastically increased by the use of tiled floors within healthcare settings.

Trolleys - food, medical and nursed' - are caused to rattle and objects upon them shake, increasing the noise, as trolleys move down corridors.

noise is reduced by smooth floor surfaces, creating a far less aggravating noise environment.

#### Ceiling levels

Lower ceilings decrease the reverberation time and high pitched alarms and medical equipment beeping is caused to echo more in passages with lower ceiling.

#### Surfaces

Healthcare facilities use hard surfaces for their anti-microbial properties. These materials are sound reflective and coupled with the low ceilings, increase noise levels.

The introduction of softer materials lowers the noise - such as the curtains and beds in the wards.

#### Conclusions

As hard surfaces can not be avoided, sound absorbing techniques should be used to reduce noise within high traffic areas.

Flat floor surfaces should be used and penum spaces designed between circulation spaces and private rooms, to reduce the amount of noise that enters the quieter zones.