APPENDIX A:

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 upgrade 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 upgrading 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.
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 decide 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

Indigenous people settle, working jobs in the newly formed city of Pretoria.
1860

Land declared a Black African residential area due to location of factory and stations.
1913

Residents refused to live in the ten Rand government-sponsored houses, which were situated from the traditional Nati Village.
1947

Group Areas Act introduced.
1953

Mamelodi is established on Vaalrand farm.

Rapid urbanization results in job seekers moving in to brick and clay houses.
1958

Settlement officially named Mamelodi.
1962

First Informal Settlement established in Mamelodi East.
1991

First Democratic Elections held in South Africa.
1994

South African nation takes over government.
2004

Breaking New Ground is published.
2005

2007

Mamelodi: Historical Timeline
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 started informally on the Eastern edges of Mamelodi.

2008

2009

2010

2011

2012

2013

2014

Pretoria & Mamelodi: Racial Demographic Maps

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Critique of Previous Frame

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

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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 Elandial Spruit. This master plan would further perpetuate the Islandisation 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
The Apartheid Spatial Legacy has left Aleska removed from Pretoria’s urban centre, economic hubs and public spaces. Mapping revealed Aleska to be an Urban island - void of defined public space, but host to the beginnings of social structures, mere the loss. The potential exists for this site to become an urban centre. Building upon these existing, adaptable social structures, the Urban Framework aims to unlock this site’s potential and in doing so, conceptualise 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.

largely in dependant Economy

well defined and accessible Civic Spaces and amenities.

Self-Reliant Urban Centre

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 3

- Formulating pedestrian routes along river
- legible and formalised pedestrian routes along channel
- create and define public and recreational spaces for encounters
- reserve green spaces

Open spaces before housing blocks provide public spaces and agricultural opportunities

Promoting public space along routes

Medium density housing for workers along the major activity nodes

Surrounding landscape provides walkways and safe public space

Pedestrian routes along major routes provide for social encounters
APPENDIX B:

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 nurses’ - 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.