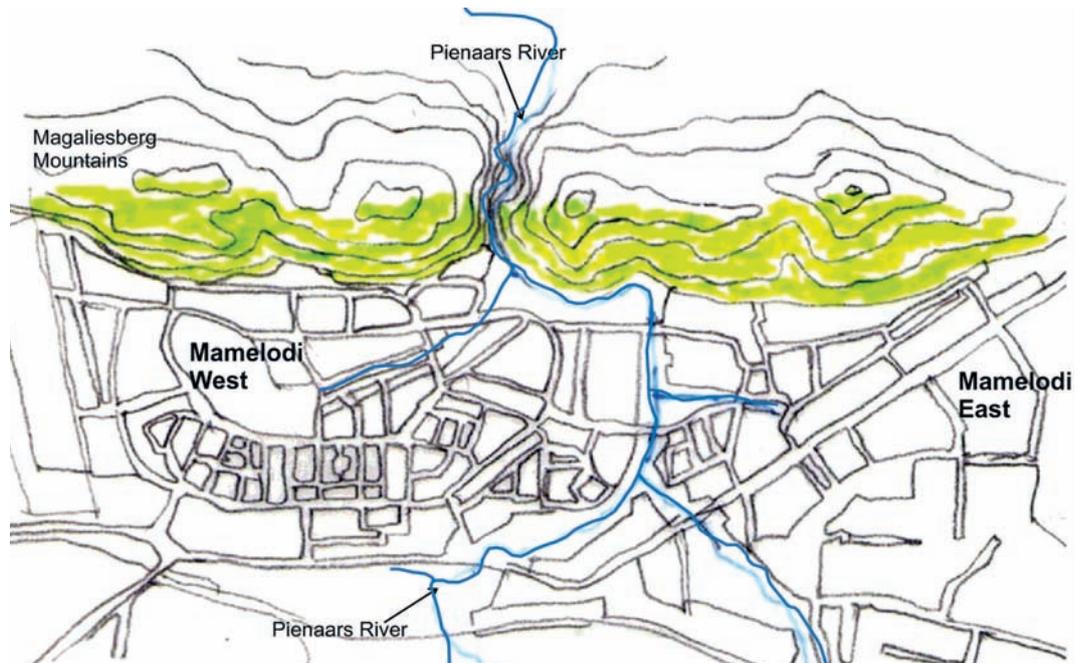


CHAPTER

2

CONTEXT

Figure 4: Location of Mamelodi in relation to the Magaliesberg Ridge (green) and Pienaar's River (blue) (Author, 2011)



2.1. BIOPHYSICAL CONTEXT

Mamelodi is in the east of the greater CoT in Gauteng Province, South Africa, and sits at the foot of the Magaliesberg Range which forms its northern boundary. It spreads in an east-west direction and gets split into Mamelodi East and Mamelodi West by the Pienaar's River (Figure 4). Pienaar's River forms the catchment basin for Mamelodi with all tributaries flowing to the north, merging at the Magaliesberg and running through a 'poort' to the north. The framework and design will therefore respond to the river as both an element acting as a boundary between the west and east as well as its function as a catchment basin for the township.

2.2. HISTORICAL CONTEXT

The name Mamelodi is of Tswana origin and directly translates to 'mother of melodies'. According to Walker and Van Der Waal (1991:3-4), the founding of Mamelodi was on 30th October 1945 when the Pretoria City Council (PCC) bought parts 2 and 3 (Figures 5) of the Vlakfontein 329 JR farm land for the purpose of laying out a black urban area. Development started west of Pienaar's River in part 3 (Figures 6). As the population grew and Mamelodi West, became fully occupied, the settlement expanded over the Pienaar's River which was initially the eastern boundary of the township (Figure 7). According to Chiloane (in Walker & Van Der Waal, 1991: 5) it is estimated that 80% of residents of Mamelodi moved into the township from locations of Bantule, Eastwood and Lady Selborne. These people were relocated by the apartheid regime. They were then grouped according to race and ethnicity and the development of 'boundaries' between neighbourhoods. This is still evident today as people have continued to stay in ethnic groupings and this has sometimes contributed to clashes.

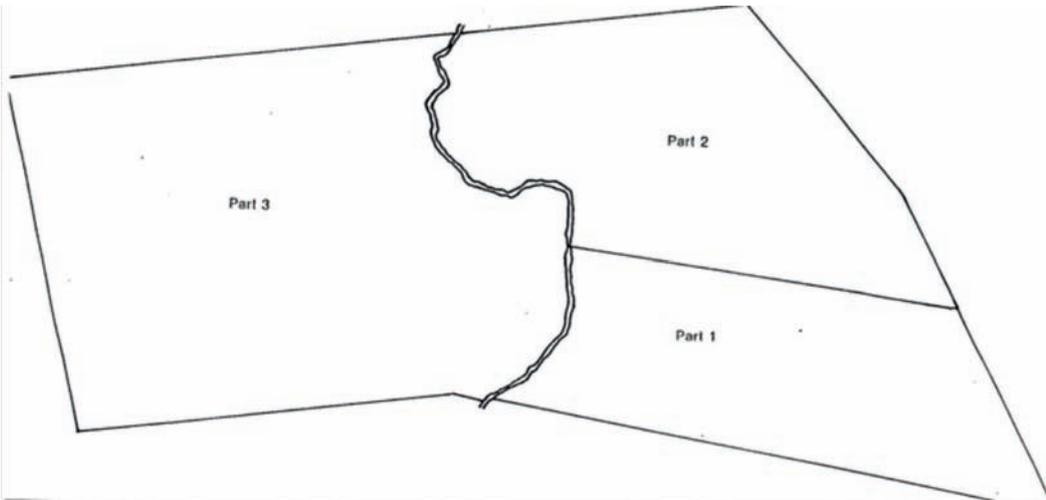


Figure 5: Subdivision of the farm Vlakfontein 329 JR during the 1870s showing Pienaar's River cutting North-South (Walker & Van Der Waal, 1991)

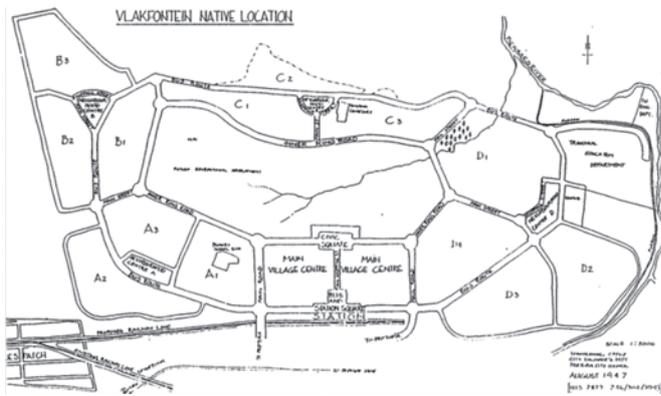


Figure 6: Vlakfontein Native Location: layout in 1947 showing Pienaar's River as the Eastern edge (Walker & Van Der Waal, 1991)

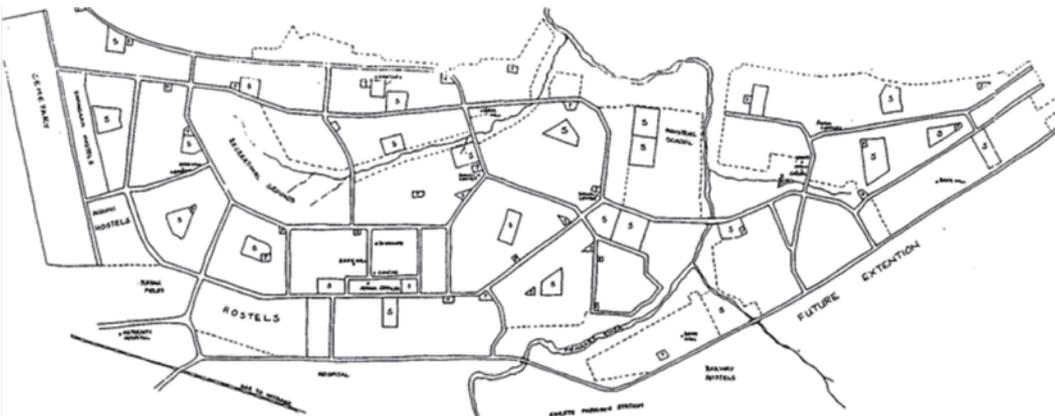


Figure 7: Mamelodi: situation in 1961 showing extension over Pienaar's River (Walker & Van Der Waal, 1991)



Figure 8: The first housing in Mamelodi showing lapa system (Walker & Van Der Waal, 1991)

The building of Mamelodi began in 1947 with the lapa scheme applied here by use of Rondavels (Figure 7). The term lapa refers to a Tswana spatial organisation concept of a “walled public courtyard that connects the area in front of the principal houses of a family homestead. This is the place where visitors are received, and in many respects it plays the same role as a living room in Western houses” (Denbow & Pheny, 2006: 94-95). Dintlo (houses) surround the lapa as bedrooms would do around a living room. It can therefore be assumed that the first black inhabitants included the Tswana who spend most of the day in the lapa where most (if not all) day chores were carried out. The author feels that the idea of the lapa could have been better explored here as it forms the most important aspect of Tswana planning and will therefore attempt to bring this out in the proposed design.

The charms of the new Rondavels did not seduce the users who condemned them as “primitive kaffir housing ... which was causing considerable racial conflict and feelings of hostility” (Pretoria News in Walker & Van Der Waal, 1991: 10). The author concurs with these comments as people leave rural areas (e.g. villages) and come to urban areas for a better standard of living as well as to enjoy services (e.g. water and electricity) and even luxuries (e.g. parks) which they are not getting where they come from. Moving the ‘village’ to the city by direct translation of the Tswana lapa was therefore inappropriate and demeaning. The lapa layout was later replaced by four-roomed houses. Other important historical places around the area of study that contributed to the growth, vibrancy and culture of Mamelodi include:

- Moretele Park (10 in Figure 9)
- Vlakfontein Industrial School (14 Figure 9)
- Old Rondavels (15 Figure 9)
- Government Guest house (19 Figure 9)
- Beer Hall and Mthunzini Park (8 in Figure 9)

Community facilities are mostly concentrated in Mamelodi West as it was the first location. Mamelodi has many schools, some with a history as old as the first buildings in Mamelodi, around the Rondavels area opposite Moretele Park Resort. These places contribute to a sense of place and can further be investigated and enhanced as public spaces and facilities where they may possibly to contribute to the identity and spirit of the community. Moretele Park, situated where Pienaar’s River meets the Magaliesberg, is well maintained and enclosed.

Figure 9: Mamelodi historical Sites (Cadre Plan, 2000)



2.3. STATUS QUO

According to Darkey (2000: 9), “the Pienaar’s River and flood plain including the smaller tributary which joins the system, performs an important physical and ecological function. Among others, it provides an environment of food resource for birds, frogs and insects, thus making the area an ideal future urban open space conservation area.” Originally, Pienaar’s River was a very important source of water for the township as well as the farm(s) that existed there. “Laundry was done in the river and dried on large flat stones which are still there. Once the washing was completed, one often washed oneself as well. Water for the house was also taken from the river (Walker & Van Der Waal, 1991: 15).” These authors paint the picture of a positive environment that people would like to live in. It contributes to the community at environmental and social level. Unfortunately, today these attractive attributes and benefits have been lost. The river has now become a deserted boundary of unmanaged and underutilised open spaces (green space in Figure 10).

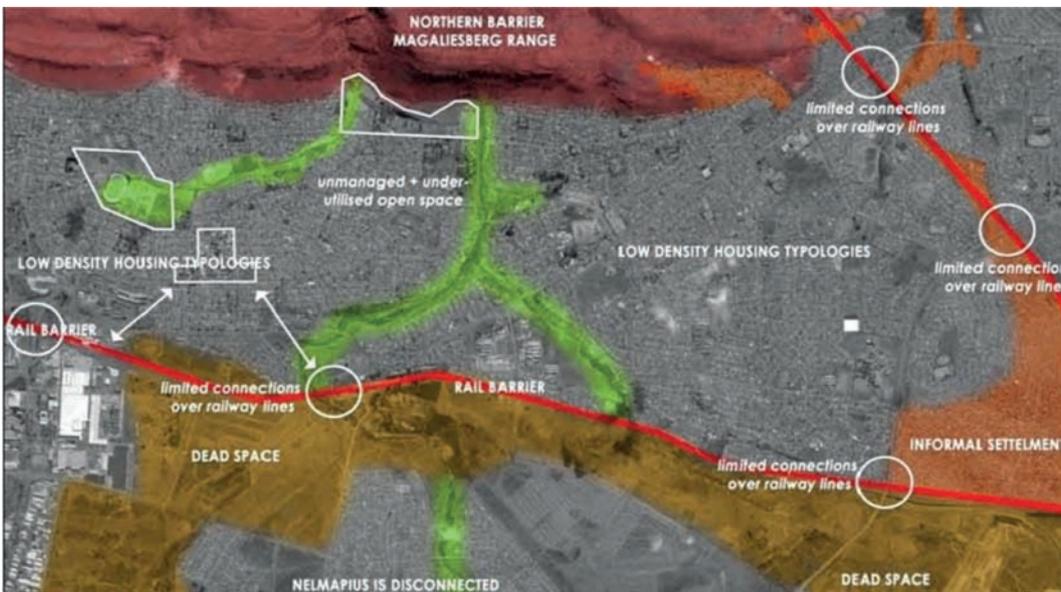


Figure 10: Mamelodi physical constraints (GAPP, 2010: 20)



Figure 11: Panorama of Pienaar's River: relationship of settlement to the river (Author, 2011)

2.3.1. Pienaar's River as physical and social boundary

The growth and/or increase in population has put pressure on the natural resources. The Pienaar's River has suffered the most as a 'no man's land' and has since been transformed and degraded (Figure 11). The current state of the river is undesirable in that:

- Pienaar's River forms a major unmanaged and underutilised green open space covered with veld grass and devoid of trees in Mamelodi. The riparian vegetation throughout the area is fairly disturbed, consisting of mostly alien vegetation species (African EPA, 2007: 26);
- Flooding of the river has in the past resulted in children drowning while trying to cross it;
- It has become a place for storing dangerous weapons, mugging as well as murder thus a place of danger;
- It is now an 'informal dumping site';
- Most of the neighbourhood parks along the river have been neglected by the community;
- Water is polluted with waste from backyards and oil from informal vehicle repair and parking spots among other things
- Minimal and inappropriate agricultural practices which include growing of maize with no irrigation leading to insignificant harvest, not even providing enough for family consumption.
- Sedimentation has led to the proliferation of reeds in the channels of some areas while habitat integrity has been critically impaired.



The author's visits to the site proved that the space is a social boundary largely contributed to by the above mentioned issues. The connection between people and people and the environment has deteriorated to a point where the community and the public spaces, most importantly the river, has become unproductive, unhealthy, unsafe and hazardous to its people. Apart from two major vehicular crossings and three pedestrian bridges north of Eerste Fabrieke Station, Mamelodi west is completely separated from the east. The current situation of the river is unsustainable and does not nurture the spirit of togetherness between the neighbouring communities.

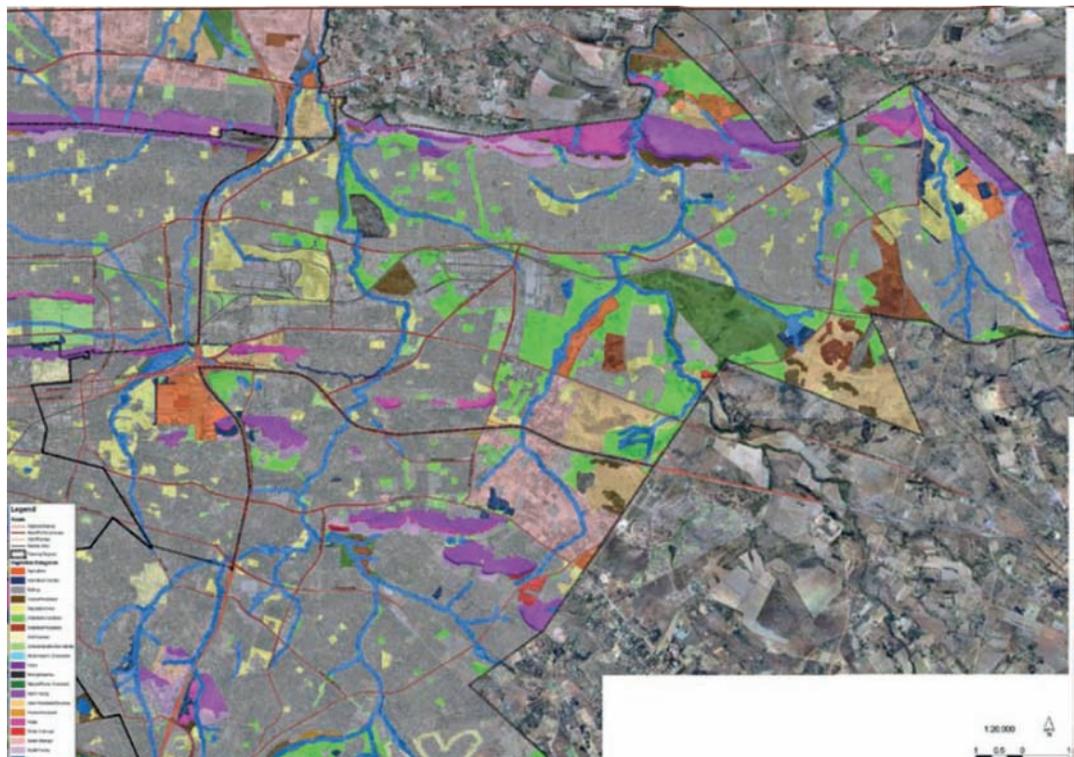
2.4. INSTITUTIONAL CONTEXT

Institutional frameworks serve to guide interventions on spaces that fall within areas that have already been studied and development guidelines set to inform future projects. The Magaliesberg and the Pienaar’s River form two major natural elements that this study will deal with, therefore a look at Tshwane’s policies on these is necessary. The proposed design will make reference to and be guided by the frameworks while proposing other options that might compliment the existing frameworks.

2.4.1. Tshwane Open Space Framework

According to the Tshwane Open Space Framework (TOSF), (TOSF Vol 2, 2005: 4), the vision for the framework is to create a sustainable Open Space network which provides the setting for the capital city, is of a high international standard yet based in the African context, empowers the community to prosper in a safe and healthy environment, and protects the integrity of its ecological systems. The author argues that although these are attainable goals, most of the time they end up as mere policies which CoT still fails to implement especially when it comes to larger green open spaces. It mentions Moretele Park Recreation Resort as one of the catalyst projects that need upgrading but such projects fail to contribute to the everyday life of the local community who cannot afford to access the park (a fee is required to enter). The alternative could be to open the park(s) to the public and maybe have regular events that the people can pay for at affordable prices suited to the Mamelodi community and not only tourists. The community need to feel that they own these places rather than being kept for outsiders, consequently they need to be involved in the development and running of such facilities. TOSF proposes green and blue (ecological importance e.g. in Mamelodi there is Magaliesberg Ridge and

Figure 12: Mamelodi: Open Space Plan (TOSF Vol 2, 2005: 69)



Pienaar’s River), red (Placemaking importance) as well as brown and grey (social and civil infrastructure) nodes and ways for different features depending on their functions (Figure 12). The TOSF still separates man from nature and the proposed interventions in the ecological areas tend to always be for conservation only and do not contribute to empowerment of the community.

2.4.2. The Mamelodi / Nellmapius Master Plan

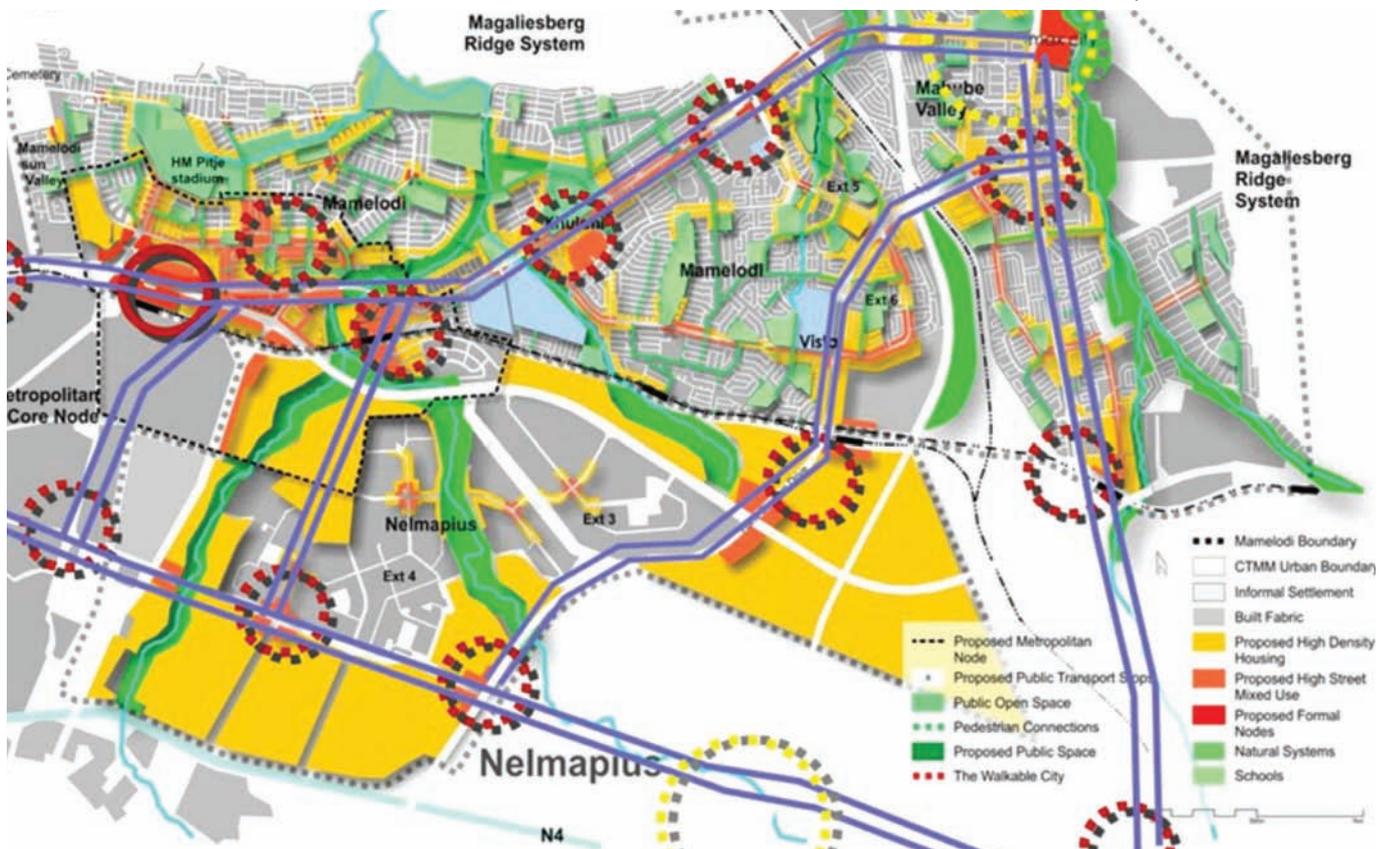
According to GAPP (2010: 2) The Mamelodi / Nellmapius Master Plan (MNMP) is the pilot project of the Tsosoloso Programme which was initiated by the CoT Metropolitan Municipality in 2005 to identify and address structural planning issues that were deterring investment in *disadvantaged* areas of Tshwane. The five proposed strategic outcomes of the Tsosoloso Programme are to (ibid: 2):

- Create community activity centres and focal points (nodes);
- Strengthen activity linkages (spines/corridors);
- Transform transport interchanges into civic termini;
- Enhance the pedestrian environment;
- Enriching the public environment.

In the Composite Regeneration Strategy (GAPP, 2010: 18) of proposed strategic outcomes (above), the interventions are grouped according to the following urban structure elements (Figure 13):

- Nodes (red)
- Activity spines (blue)
- Public open space/public environment (green)

Figure 13: The City Structuring Model as it Applies to the Composite Regeneration Strategy (GAPP, 2010: 18)



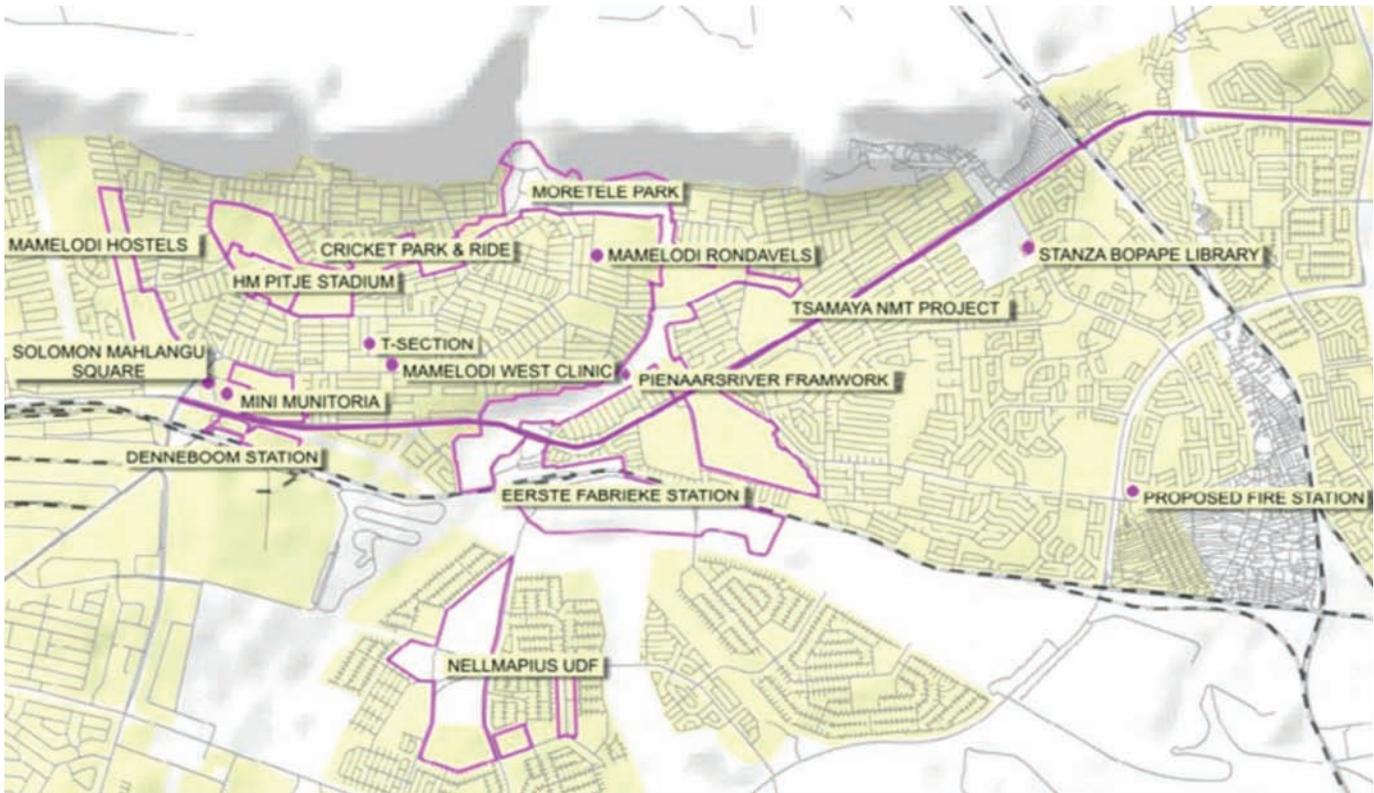


Figure 14: CoT Project identification (GAPP, 2010: 82)

According to GAPP (2010: 43) the current green open space planning proposals for Mamelodi include (Figure 14):

- Local Open Space Plan for Mamelodi West and East (Chapter 2.4.3.)
- Pienaar's River Rehabilitation Framework (Chapter 2.4.4.)
- HM Pitje Stadium Complex upgrade and
- Moretele Park Redevelopment.

The strategic outcomes could be exciting for the community and the author intends to take them up to inform design but one may question the magnitude of the foreseen developments and the effect it would have on the current identity of Mamelodi. The author argues that sometimes change needs to take time and be in sync with community aspirations and the public open spaces might be a good starting point. This study concurs with TOSF and MNMP on the redevelopment of Moretele Park but they are both still limiting it to a simple face-lift of the park and no integration with the larger Pienaar's River system and its contribution to the community. The author also questions the missing historical layer in the proposal. Historical elements can form community activity centres and focal points and contribute to a sense of place, something that the author intends to investigate further.



Figure 15: Mamelodi West LOSP (Loots 2007: 19)

2.4.3. Mamelodi West Local Open Space Plan (LOSP)

Mamelodi West LOSP (Figure 15) is based on and supports the above-mentioned TOSF in a more detailed decision making aspect. It also identifies different open space typologies according to the TOSF colour typologies. Its aims and principles are:

1. It should protect the natural heritage of the area (ecological objective).
 - Protect the integrity of natural ecological elements;
 - Protect the natural element as major visual structuring elements in the area;
2. It should enhance the character and identity of the area and protect the cultural heritage of the area (placemaking objective).
 - Enhance gateways to the area through appropriate built structures and landscaping;
 - Celebrate unique elements by establishing dignified and beautified spaces around them;
3. It should provide conveniently accessible and sufficient recreational space for the people (socio-economic objective) of the area.
 - Provide safe local parks in close proximity (approximately 400m) of all;
 - Provide adequate multi-purpose recreational spaces;
 - Establish a network of safe and convenient routes for pedestrians and cyclists to use for recreation, as well as everyday use (Loots, A. 2007: 17-18).

Mamelodi West LOSP provides a good foundation upon which this study can be supported because of clearly defined achievable aims and principles. It recognises ecological and social elements in the township that can improve community life while also conserving nature. However, it lacks economical potential of these open spaces.

2.4.4. Pienaar's River Rehabilitation Framework

The framework site was limited to the river and immediate surrounds (i.e. within 100 meters of the river bank). The following areas were identified as problems that proposed interventions focused on:

1. Waste management (large volumes, poor management resulting in dumping, lack of community awareness);
 - prevent vehicular access to open areas
 - waste transfer stations
 - waste buy back & recycling centres
 - formalise open spaces
 - placement of bollards along open space boundaries
2. Storm water design & position (outlets discharge directly into the stream, high velocity, no erosion protection, siltation);
 - outlets to be moved outside of floodlines
 - flow reducers, settling/retention ponds & wetlands
3. In stream conditions (bank profile, erosion, siltation, alien vegetation);
 - bank re-profiling (not needed in nodal focus area)
 - gabions
 - silt traps and wetlands to capture silt
4. Lack of planned open space & community involvement (lack of facilities, pedestrian circulation, parks, lighting);
 - encourage pedestrian circulation
 - ensure adequate lighting
 - create opportunity for open space usage
 - incorporate community
 - ensure alignment with Mamelodi West LOSP
 - community farming
 - use of parks and biodiversity hotspots by schools (African EPA, 2007: i and Siyakhana Initiative, 2010: 7).

Pienaar's River Rehabilitation Framework adds to the Mamelodi West LOSP. It goes a step further by laying down some detailed planning solutions (Figure 16) to the problems facing the river. It also helps in focussing the vision and aims identified so far into applicable physical interventions at a regional scale. This is essential to informing the local framework for this study that will be developed by the author. One important aspect mentioned by the rehabilitation framework is community farming which if explored can really contribute to the socio-economic upliftment of the people of Mamelodi.

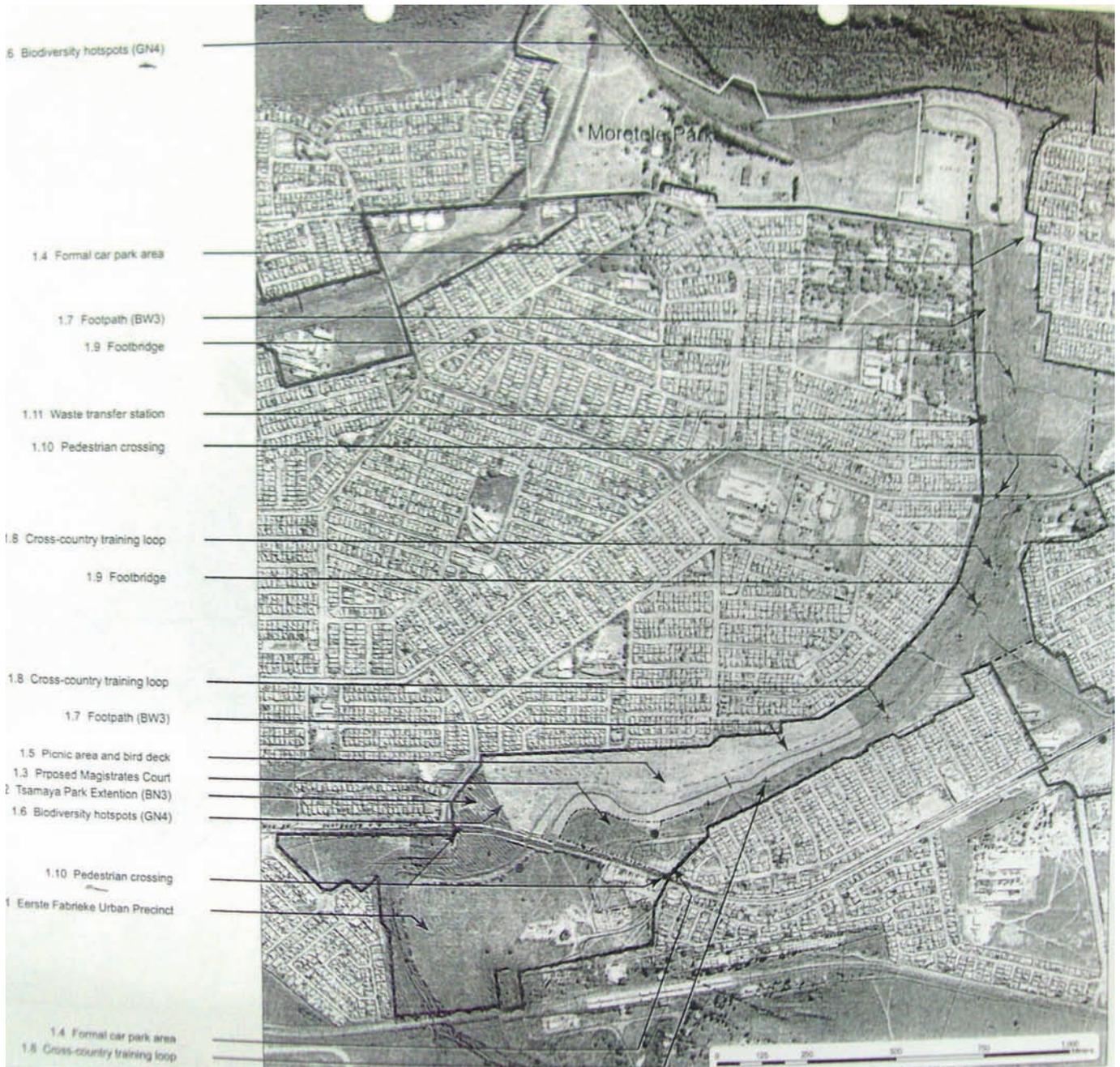


Figure 16: Pienaar's River Rehabilitation Framework intervention zone 1 (African EPA, 2007)

2.5. LEGISLATION

2.5.1. National Water Act (Act No. 36 of 1998)

The Pienaar's River Rehabilitation Framework (mentioned above) also proposes some alterations to the stream and banks that fall under Section 21 of the National Water Act (NWA), 36 of 1998 which considers such alterations as a water use. Section 21 includes the following activities:-

1. taking water from a water resource
2. storing water:
3. impeding or diverting the flow of water in a watercourse:
4. engaging in a stream flow reduction activity contemplated in section 36;
5. engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1):
6. discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit:
7. disposing of waste in a manner which may detrimentally impact on a water resource;
8. disposing in any manner of water which contains waste from or which has been heated in any industrial or power generation process;
9. altering the bed, banks, course or characteristics of a watercourse:
10. removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people: and
11. using water for recreational purposes.

An obvious structure that could be affected by this regulation, would be the proposed pedestrian bridges linking the west and the east banks of the river. This would fall within Section 21(c) on impeding or diverting the flow of water in a watercourse. In this case impeding flow could mean any obstruction that the bridge would cause across the river and/or within the floodlines that might affect its course. Section 21(i) would also be affected by the afore-mentioned example as well as in situations where the floodline are affected by the development.

2.6. CONCLUSION

The author believes that the Pienaar's River can be rehabilitated in an attempt to solve some of the issues that continue to divide people of this township. Some of the most pressing issues in the study area include open space planning and conservation, waste and stormwater management, agriculture and community development as well as integration with recreation and education. This study will address some of the proposed solutions in these frameworks and also propose ways of planning the spaces for optimal use by the community. The proposed intervention should bring back the 'historic' meaningful interactions between people and nature and the appreciation for the latter while staying relevant to current issues.