



KASITECTURE

THE DEVELOPMENT OF AN URBAN PLANNING MODEL, FOR A TOWNSHIP-BASED COMMUNITY, THAT AIMS TO CREATE CONDITIONS FOR PROSPERITY BY ACTIVATING THE KASI ECONOMY.

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DECLARATION

I, Oreneile Tshегоfatso Tidimalo Mabusela student number 0603122R, am a student registered for the course ARPL7003 in the year 2012. I hereby declare the following:

I am aware that plagiarism (i.e. the use of someone else's work without permission and/or without acknowledging the original sources) is wrong. I confirm that the work submitted for assessment for the above course is my own unaided work, except where I have stated explicitly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my unaided work, or that I have failed to acknowledge the source of the ideas or words in my own work.

ABSTRACT

Due to the apartheid basis under which the townships (also affectionately known as 'Kasis') were created, South Africa's Kasis remain synonymous with exclusion and poverty, sustained by the widespread perception that they are dangerous, crime-ridden areas with no economic potential.

It is therefore of utmost importance to point out the vital role Kasis are playing for the country's growth and stability. Successful urbanisation in South Africa is very closely linked to successful transformation of apartheid Kasis and former homeland areas to functional urban areas, (Küsel, 2009:2) and so too is successful interaction and integration across the colour and class bar.

For some who have never known poverty or have had to endure the injustices of apartheid, Kasis are perceived as nothing more than human deposits of poor black people who are an unknown and unstable entity.

The research objective is to discover how one economic/architectural intervention can trigger transformation of the Kasi from a dormitory suburb housing the country's labour force to a self-sufficient socio-economic hub with ideal conditions for prosperity.

Research methods employed include mapping, interviews, questionnaires, meetings with community leaders and members and sourcing information from the Ga-Rankuwa City Council, the internet, books, articles, theses and dissertations related to the study.

In terms of the architecture, it aims to be of an affordable, easy-to-build technology with a natural organic atmosphere and urban, modern yet human scale aesthetic.

The resultant design achieves the research objective through the creation of The Kasitecture 'Urban Industrial Village' that aims to create conditions for prosperity by activating the kasi economy through the development of a small scale manufacturing centre.

DEDICATION



**For everyone who has ever lived in a kasi
and experienced the strength, courage and resourcefulness that often
thrives in the face of its despair.**

ACKNOWLEDGEMENTS

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NOMENCLATURE

Kasi : A shortened version of the Afrikaans word “lokasie”. The english word is location, an older word for townships. During the apartheid era, black people were relocated to these townships. (<http://blogs.sowetanlive.co.za/slang/category/dictionary/> Cited 3 October 2012)

Township : A racially segregated area in South Africa established by the apartheid government as a residence for people of colour. (<http://www.thefreedictionary.com/township> Cited 3 October 2012)

Circular migration : A form of migration by which migrants move to the city for a few months and then return to the village when they can be most useful there. (<http://encyclopedia.thefreedictionary.com/Circular+migration>)

Green economy : A system of economic activities related to the production, distribution and consumption of goods and services that result in improved human wellbeing over the long term, while not exposing future generations to significant environmental risks and ecological scarcities. (www.unep.org/greeneconomy)

Comparative advantage : The ability of an individual or group to carry out an economic activity, such as production, at a lower cost and more efficiently than another entity. (<http://dictionary.reference.com/browse/comparative+advantage> Cited 3 October 2012)



CHAPTER 1

AN INTRODUCTION TO THE KASI ENVIRONMENT

In this essay Geopolitics, Urbanism, Economy and Education in the context of disadvantaged South African Kasis will be explored. The intention being to explore these themes in terms of the interrelations between them and the implications they have for the disadvantaged Kasis of South Africa. The aim is to highlight the key issues that prevent the existence of conditions for prosperity in these areas. With an understanding of these issues, potential solutions and strategies for creating conditions for prosperity in the Kasi can be proposed.



FIGURE 1 - Pantsula dancing in the kasi (right) (Source; Alexia Webster, 2010. <http://kokofifi.blogspot.com>.)

In this sub-chapter the impact of the apartheid government's policies is explored in the current state of township conditions and its relation to urbanism.

Within the "old" South Africa, 10 homelands were created, four of which were granted "independence" by the then South African government. None of these homelands were ever recognised by any other country in the world. (Berry, B. 2007)

Through the enforcement of the Group Areas Act, accompanied by various elements of racially engineered town planning legislation, the government forced the non-white urban population to live in townships. (2009:4. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

Three and half million black people were forcibly transferred to these artificial Homelands (Zorgbibe, 2008:319) because the apartheid regime believed that "each race group should have its own consolidated residential area. Each residential group area should be separated by a strong physical 'buffer' such as a river or ridge, or an industrial or commercial area. Should buffers of this kind not be available, then an open space or 'buffer zone' was to be left between group areas." (Smit 1989:103)

All the former South African Homelands/Bantustans ceased to exist as political entities on 27

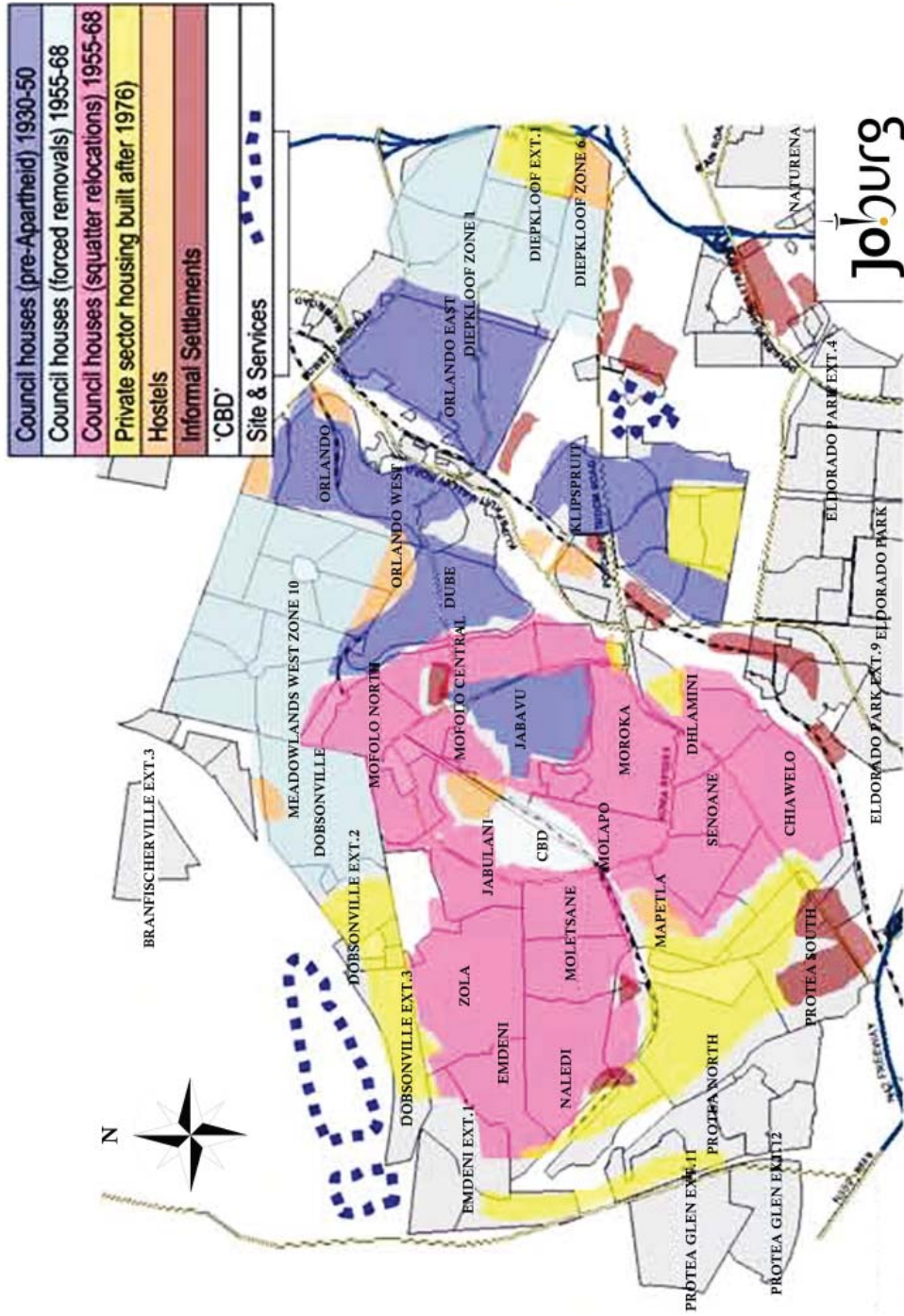


FIGURE 2 - Map of Soweto over time (above) shows how, over time, Soweto grew from a few small 'suburbs' to the township it is today. (Source: 'Change and Continuity', 1999. Adapted by City of Johannesburg 2006.)

April 1994. They have all (including the former so called independent homelands) been reincorporated into South Africa.” (Berry, B. 2007) Yet these former homeland Kasis still exist along with similar areas created on the basis of racial segregation known as apartheid townships.

Kasis were inspired by colonial town planning. While at home, they are often considered a uniquely South African creation, Kasis are found in many African cities. The colonial planners intended to physically segregate three classes of people, which generally coincided with race:

- the white colonial elite
- the colonised middle class made up of Indians and some Africans employed in the bureaucracy
- the urban majority of Africans. (2009:4. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

The colonial town planners of the apartheid regime had this to say about their creation: We have given total sovereignty to the four homelands. But they have rejected it in favour of regional economic integration (Zorgbibe, 2008:267-267), and who can blame the inhabitants of these homelands for rejecting such segregation? Not only did it segregate people on the basis of race, but also on the basis of class. Thus those who felt the brunt of both were the

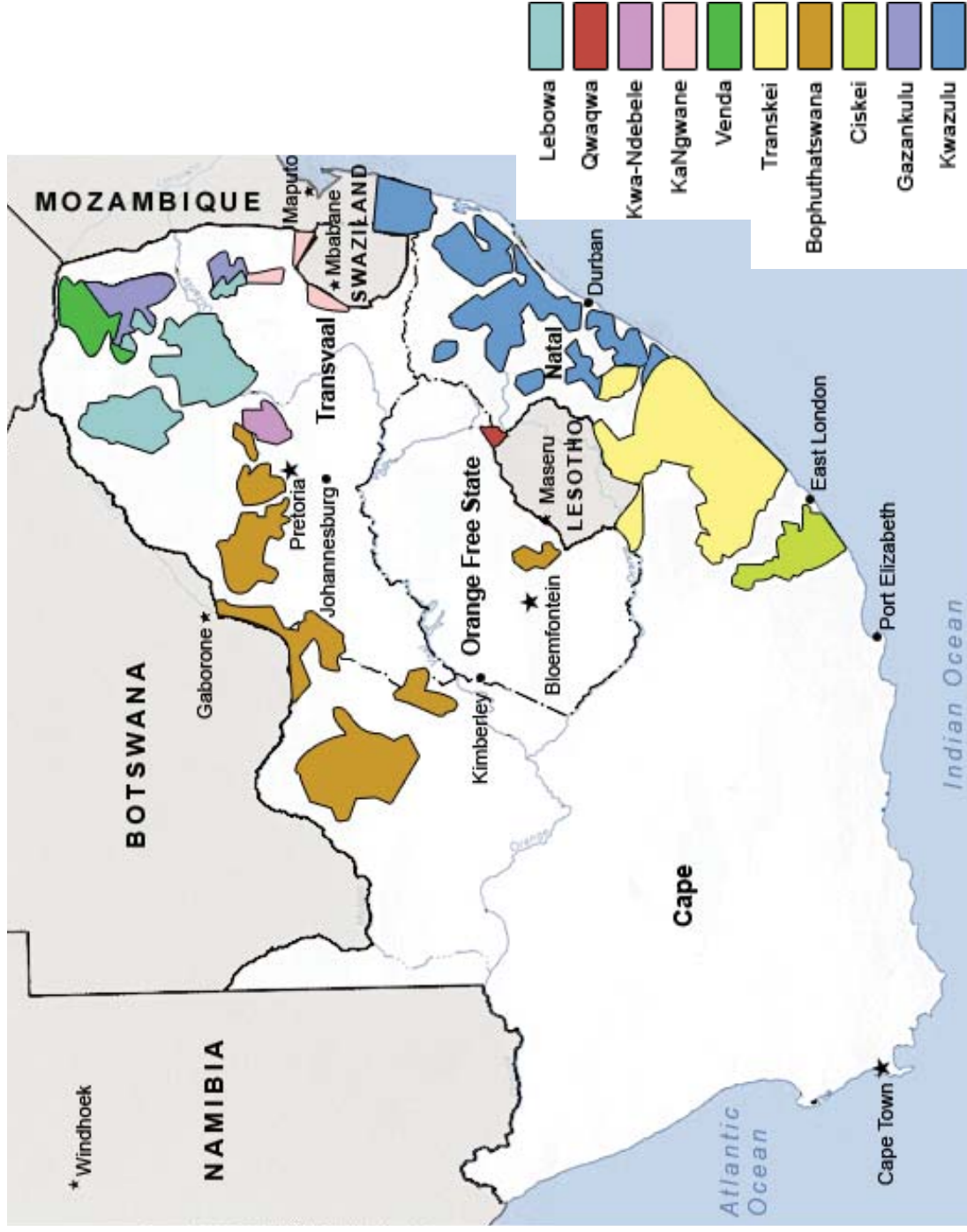


FIGURE 3 - Map of Homelands (Bantustans 1984). (Source: ‘South Africa, overcoming apartheid, building democracy’, <http://overcomingapartheid.msu.edu/image.php?id=257>)

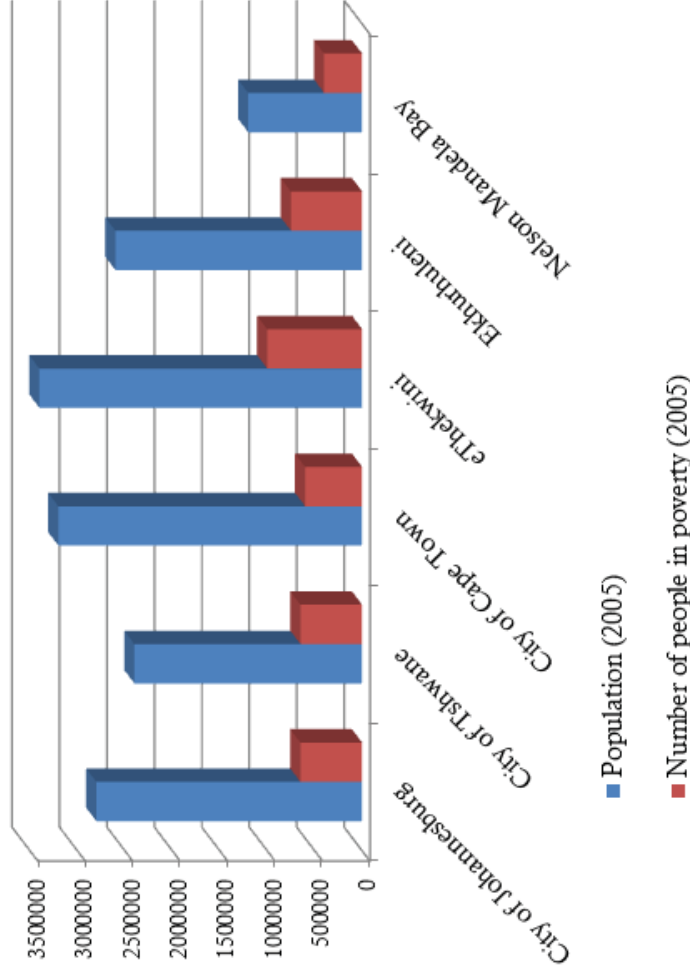
urban majority of Africans. Especially the African working class who had access to all three worlds, and are still often discriminated against in all of them, even by their own people, precisely because of their ability to access them. (2009:4. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

For black South Africans (African, Indian and Coloured) Kasis were areas of exclusion, control and containment, affecting every aspect of the residents' lives. (2009:4.http://www.sacities.net/images/stories/pdfs/module_1.pdf)

Kasis were planned some distance away from the colonial towns in which they worked. The peripheral location of many Kasis and their limited transport links to the cities was the worst aspect of spatial exclusion – and most townships still face this problem.” (2009:5. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

Many Kasis, especially those built in the 1970's and 1980's (e.g. Soshanguve in Pretoria, Mdantsane in East London and Botshabelo outside Bloemfontein) remain far away from work opportunities. Others find themselves close to new economic nodes (e.g. INK [Inanda, Ntuzuma and KwaMashu], which lies one freeway exit away from Umhlanga Ridge – the wealthy business/residential district of Durban). But proximity to urban growth nodes has

FIGURE 4 - Populations of Poverty in different cities; the graph (right) shows the number of people in poverty in selected municipalities. This is defined as people living in households with monthly incomes under certain thresholds, depending on household size. For 2005, the thresholds varied between R893 for a 1-person household to R3 314 for an 8-person household. Only the metropolitan municipalities are shown, but the situation applies to smaller towns to an even higher degree. (Source: Global Insight: ReX Version 2.0p (305))



not resulted in integration or in visible development.” (2009:5.http://www.sacities.net/images/stories/pdfs/module_1.pdf) For apartheid's planners, cheap and efficient movement of labour to and from work opportunities, was never a major factor in deciding on a new factory or a new settlement for the poor. This has left South Africa with a very expensive public transport system – costly for Kasi residents to use and for the state to subsidise. (2009:5.http://www.sacities.net/images/stories/pdfs/module_1.pdf)

The planning model always contradicted the function of Kasis as dormitory suburbs of the working class.

Local economies could never develop because of low wages and large amounts of money leaving the Kasis to pay for living expenses and services. Few public and private facilities, for functions such as trading, sport and recreation were developed in Kasis and large portions of the main and sub-centres remain vacant up to today. (2009:6.http://www.sacities.net/images/stories/pdfs/module_1.pdf)

More than 40 per cent of South Africa's urban population live in Kasis, and 20 per cent live in informal settlements and low-income hous-

ing estates. As a result, Kasis are likely to be home to the highest concentrations of poverty. (2009:7. http://www.sacities.net/images/stories/pdfs/module_1.pdf) This is because residents of informal settlements often migrate to Kasis to find work and Kasis are already overflowing with the unemployed, thus a culture of unemployment and poverty is formed in Kasis. This slows down Kasi economic growth due to the lack of capital circulating within these areas.

This is evidenced by the fact average household incomes in Kasis are experiencing significantly slower growth than average household incomes in cities and the country as a whole.

“Between 1996 and 2004 the average income of households in Soweto has grown very slowly compared to those of Johannesburg City and of South Africa. In 1996, the average income in Johannesburg City was about 2.5 times as high as in Soweto; in 2004 it was nearly four times as high.” (2009:8. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

Internationally, the tendency for the poor to concentrate in poor quality private or social rented housing is inextricably linked to:

- The shortage of local jobs
- Poor access to employment opportunities due to high transportation costs
- The lack of social networks to access in-

formation on available jobs,

- Lack of educational qualifications and vocational skills among residents and the development of cultures of poverty (2003:68). These residents miss out on the opportunities available in urban environments, purely because of their geographical location and its geopolitical history. As a result many bread-winners migrate to more urban areas in search of better opportunities.

From old...

to

New...



But still....

FIGURE 5 - (above) Old South African flag map (Source : <http://www.homepages.force9netrothwell.SouthAfricahtm> and <http://www.cnx.org/contentm3194511> edited by O.T.T Mabusela

FIGURE 6 - (left) South African flag map (Source: <http://www.pakamstudies.wordpress.com>)

In this sub-chapter the role Kasis play in South African urbanism and its relation to the country's economics is explored.

“Urbanism is the culture or way of life of city dwellers or the character of city life.” (<http://www.answers.com/topic/urbanism> Cited 11 October 2012)

Urbanization is the movement of a people from rural to urban areas or the transition of a growing region into a city. (<http://dictionary.reference.com/browse/urbanization> Cited 11 October 2012)

“Urbanization trends in South Africa, as in other countries, are mainly driven by rural-urban migration, circular migration and natural growth. The rates of urbanization range between 3 and 5 %. In South Africa, due to the apartheid history, this reality coincides with the fact that against great efforts taken by the government of South Africa over the last decade, apartheid Kasis and bigger urbanising agglomerations in former homelands are still suffering from huge public service back logs, further triggering the urban management challenge. The aforementioned challenge is further amplified by the actuality that Kasis, apart from hosting the majority of the South African population and suffering from huge infrastructural back logs, are increasingly net recipients of migration flows both, rural-urban and circular.”



FIGURE 8 - Nolli map of Ga-Rankuwa township. (Source Google Earth 2012; altered by O.T.T. Mabusela)

(Küsel, 2009:1) This means that the population density levels in Kasis are much higher than originally designed for. In addition, as Kasis were never designed with a defined center and a development framework for expansion, the result is sprawling informal settlements, filling mostly the edges but also internal empty pockets of land in Kasis. This unplanned and informal expansion further compounds the problem of infrastructural backlogs.

Eventually, governmental efforts to increase service delivery at a rapid pace are not able to keep pace with the extent and the complexity of demand dynamics. (Küsel, 2009:1)

Consequently, South African Kasis are still densely populated areas located outside the vicinity of municipalities and in the outskirts of urban areas. The typical settlement pattern were not designed to create “social environments” which might provide for livelihoods and “social identification” and “cultural expression”, nor to create geographically demarcated sub entities to keep and better administrate people. (Küsel, 2009:1) “This practice very likely continues to promote dormitory types of settlements, hereby inhibiting the efforts to translate the new housing policy on sustainable human settlements into visible expressions of areas where people can live, play, work, and invest.” (Küsel, 2009:2)

Because of the governance context under

which Kasis have been created, South Africa’s Kasis remain symbolic to exclusion and poverty sustained by the widespread perception that they have no economic potential. However, numerous Kasis from across the country are known for their vibrancy in various aspects such as creative industries (arts & culture festivals, etc.), mass transport activity (taxi industries), trade promotion (community markets) and cultural heritage promotion (emerging tourism industries). (Küsel, 2009:2)

Besides these problems, it is important to point out the vital role Kasis are playing in contributing to growth and stability in South Africa. They have become sites of transformation and can be labeled as laboratories of social and economic transformation, and factories of democratization. (Küsel, 2009:2) Successful urbanisation in South Africa, to a very high degree, will be determined by successful transformation of apartheid townships and former homeland areas to “functional urban areas”, following the definition of “sustainable human settlements”. (Küsel, 2009:2) In order to achieve these objectives, the communities residing in apartheid, Kasis, and former homelands must be involved in decisions, policies and projects relating to the development of these areas. This is because “the community is the arena to mobilise public participation and to improve local engagement of migrants and migrants’ self-organisations.” (Küsel, 2009:2)

Kasi residents generally flock to cities to find employment and a better quality of life. They seek to escape Kasi experiences of under development, malnourishment, unexplored opportunities and untapped poten-

tial. Kasis often only need a spark to cause a big bang that will revitalize the lives of the people who reside there.

Urban cities are forced to carry the load of the country’s economic growth. They become pressure-cookers of desperation and crime. Security measures taken in urban cities are more stringent than those in Kasis, with the population densities much higher. This equates to high levels of traffic, low levels of tolerance and high levels of crime, and often violence. Thus the dog-eat-dog mentality; the tangible tension between the rich and poor and the silent animosity that looms like a volcano threatening to explode!

And yet, it doesn’t have to be this way; Kasis can also assist in the country’s economic growth. If Kasis were developed to become self-sufficient, well-managed entities, they would soon be as popular for job seekers and home makers as urban cities are. The development of Kasis could take the strain off urban cities by creating more desirable places to live in, with better living conditions and opportunities for prosperity.

Currently, the cost of living in Kasis is lower than that of urban cities. Commodities such as fruits, vegetables, meat and alcohol are available, albeit generally at a higher price. The cost of accommodation and utilities however, is significantly more affordable in Kasis than in urban cities. The ‘village’ sense of neighborliness, homeliness and ubuntu is more inherent

in Kasis than it has ever been in urban cities. Kasis have the potential to be highly sought after living environments and vehicles of economic growth. If these areas could be developed, (through upliftment in the form of facilities and infrastructure, amongst other developments) the economic growth, quality of life and crime rates experienced in our country could improve exponentially.

The Neighborhood Development Partnership Grant (NDPG), is designed to support infrastructure development projects in Kasis through “reforms and systems reforms to initiate infrastructure-led economic growth.” (Küsel, 2009:3) The NDPG also aims to provide basic public services and transfer the current situation of spatial marginalisation of Kasis in relation to the related urban cities into a pattern of spatial integration (desired endpoint); thus laying ground for the creation of single economic entities and social inclusion. (Küsel, 2009:3)

This can be accomplished through (Küsel, 2009:4 and 5):

- Intra-area mobility and integration of the areas (townships into the city) – focusing on socio-political integration, economic integration and spatial integration.

- Enhanced autonomy of nodal areas (Kasis) by improving intra-area access to services, infrastructure and information.

- Enhanced human and social capital, focusing on crime and violence, education and skills, local economies and capacity of local institutions.

- Greater connectivity – including enhanced intra-area circulation of purchasing power, increased generation and capture of savings. Connectivity also relates to increased access to governmental services.

The main concern of people migrating is to maximise family household livelihoods. Migrants therefore in many cases stay attached to their home region and migration is temporary or circular. What might at first sight look like a benefit for both regions (sending labour and receiving money) in the long run might have a boomerang effect and add to social and economic destabilisation. This is because migrants who stay closely connected and emotionally attached to their home regions are reluctant to establish permanent and thus predictable household structures, to invest and to engage themselves socially and politically in the ‘place of work’. Sometimes family structures deteriorate, are built up anew or are even doubled and tripled eventually causing short cuts in social and economic support, as social safeguarding basically depends on family support. (Küsel, 2009:6)

This situation is true in cities and Kasis alike as most migration patterns flow from rural areas to Kasis to cities. Most migrants cannot afford to bring their spouses and offspring to the Kasi to build stable fam-

ily structures. Thus Kasis develop into unstable environments where people are more concerned with making money than building their communities into healthy living environments. “To turn around the wheel, it is essential that municipalities at both ends of the migration lines or circles are encouraged and capacitated to endeavor for social and economic inclusion, accompanied by a concerted effort for better public service delivery and new partnerships, which might bear the potential to create ownership and provide for job opportunities.” (Küsel, 2009:6)

The developing of connectivity and job creation sum up to: “the provision of ample technical and social infrastructure and transport in an environmentally friendly and thus sustainable way, which may account for predictable household structures and stimulate private investment and political engagements of both inhabitants and newcomers (migrants)” (Küsel, 2009:6) which will be integral to the renewal of former homeland Kasis. This is because the transformation or renewal of Kasis and successful migration are inseparable; both are related and interdependent. (Küsel, 2009:7) This task is generally left to government to tackle, and since government deals with a wealth of other tasks necessary to manage a country, the responsibility is passed on the government’s municipalities.

residents.” (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html> Cited 3 April 2012)

In most former homeland townships, this presents a double edged sword because of the low income levels of their communities.

If a municipality provides more sophisticated services, the costs to provide the service increases and so does the price that the municipality will have to charge its customers. Since municipalities rely heavily on income received from users, if the costs are too high and people are unable to pay, the municipality will lose money and will be unable to continue to provide the services. (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html> Cited 3 April 2012).

According to former president Mbeki; “The provision of free basic amounts of electricity and water to our people will alleviate the plight of the poorest among us while plans for the stimulation of the local economy should lead to the creation of new jobs and the reduction of poverty.” (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html> Cited 3 April 2012)

As a result, a balance has to be attained to help alleviate poverty and maintain sustainable economic growth (including maintaining a basic level of services).

The Government and its municipalities have formulated policies that create conditions for other organisations to assist them to alleviate poverty in former homeland Kasis, apartheid Kasis and the country as a whole. One of them is a municipal service partnership

“Municipalities must make sure that people in their areas have at least the basic services they need. There are a large number of services that they provide, the most important of which are:

- Water supply;
- Sewage collection and disposal;
- Refuse removal;
- Electricity and gas supply;
- Municipal health services;
- Municipal roads and storm water drainage;
- Street lighting; and
- Municipal parks and recreation”

(<http://www.etu.org.za/toolbox/docs/localgov/munservice.html> Cited 3 April 2012)

Kasi municipalities themselves have other responsibilities to the Kasi apart from transformation and renewal. The above mentioned responsibilities take precedence over the arduous task of transformation and renewal because they are necessary to facilitate conditions for it to take place. “These services have a direct and immediate effect on the quality of the lives of the people in that community. For example, if the water that is provided is of a poor quality or refuse is not collected regularly, it will contribute to the creation of unhealthy and unsafe living environments. Poor services can also make it difficult to attract business or industry to an area, and will limit job opportunities for

(MSP).

“A municipal service partnership (MSP) is an agreement between a municipality and a service provider which promotes a shared costs model, but also allowing greater shared responsibilities. A service provider may be another public authority (such as a water board or a district municipality), a private company, a non-



FIGURE 9: South African coat of arms (Source : <http://www.cdioinstitute.org>)

governmental organisation (NGO) or a community-based organisation (CBO).” (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012)

Another policy formulated to create conditions for other organisations to assist government and municipalities to alleviate poverty is a concession. “A concession is an agreement between a municipality and service provider where the service provider is responsible for the management, operation, repair and maintenance of a particular service. The service provider is required to invest large sums of money to expand and improve the service. For example, the service provider may be required to build a new water supply system for the area. The contract period is often between twenty and thirty years to allow the service provider enough opportunity to recover the costs on its investment. At the end of the contract, the ownership of the new plant and equipment belongs to municipality. Concessions are often called BOTs -Build, Operate and Transfer.” (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012)

“Citizens and their organisations also have very important roles to play in the planning and implementation of MSP’s. Some of these are:

- Assisting the municipality to accurately decide on which services are to be expanded and improved, particularly during the planning stages and insisting that council consults citizens during decision-making. (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012);
- Residents should also work with NGO’s, CBO’s and political parties to develop proposals for council to consider. (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012);
- Communities can also request the municipality to appoint a committee of community representatives to monitor processes as well as to advise the municipality on priorities for service extension and improvement. (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012); and

- Communities or their representatives could also play some role in the evaluation of potential service providers, the involvement of communities in service provision and monitoring of the performance of service providers.

(<http://www.etu.org.za/toolbox/docs/localgov/munservice.html>) Cited 3 April 2012)

The South African Government has played a part to create conditions where organisations can assist in creating conditions for prosperity. The systems

and policies already discussed deal specifically with running operations for regional areas and outline how one can use these systems to create positive change. However these systems are inadequate without economic strategies, systems and people to make them viable. Urbanism leads to urbanization, which deals with migration, and is caused by a lack of conditions for prosperity and the need for employment, exacerbating the problem of service delivery backlogs and unstable family structures in Kasi dormitory-type settlements. These often become the Governments’ problem. Yet government cannot solve these issues alone, it requires assistance from the private sector and the local community working together in a system of self-governance.

In this sub-chapter the current state of Kasi economics and how they can be improved will be explored.

“Like slavery or apartheid, poverty is not natural. It is man who has created poverty and who tolerates it, and it is man that will overcome it. To overcome poverty is not a charitable gesture. It is an act of justice. It concerns protecting basic human rights.” (Zorgbibe, 2007:265)

“What I would like to see happen is an environment within which the youth of our country have a chance to develop the inherent possibilities within them in order to create a better life for themselves” (Zorgbibe, 2007:266-267)

“Our problem is not financial. This country is rich enough to raise the standard of living of black people considerably, without having to ask the white community to make any sacrifices. The tragedy is that black people are not involved on a civic level in the affairs of the nation. They work to earn a bit of the “Whites’ money” and to buy ‘goods manufactured by the Whites.’” (Zorgbibe, 2008:324)

Zorgbibe touches on some very valid points; the South African Kasi condition is not the result of an economic problem. It is rooted in social injustices based on human rights violations that have bred nationwide psychological

disorders. Despite 1994 being marked as the beginning of a democratic era for the country, the change in government has not effected a change in the mindsets of the people governed by these new laws.

We are still defined by our skin tones; not just in terms of where we live, but also in terms of how much we have to live on and what we think living means. The majority of black people are still caught up in the misconception that they can never have what white people have and many whites are still caught up in the very same misconception. This is true to such an extent that as soon as a black person manages to alleviate him/herself to lifestyle on par with that of most whites, they immediately lose their ‘blackness’ (defined as an experience of going through hardship and poverty according to The Gentrification reader (Lees, L, Slater, T. and Wyly, E. 2010) and experience ‘whitening’ (defined as the direct opposite of ‘blackness’ according to The Gentrification reader (Lees, L, Slater, T. and Wyly, E. 2010). Equally true is the experience of ‘blackening’ undergone by white people who fall on hard times.

We need to stop associating quality living with whiteness and poverty with blackness. These are the attitudes that continue to breed black poverty and white wealth. White children are bred to master, to be entrepreneurs/to take over businesses, to be the ‘boss’ and never know hunger. Black children are bred to be self-sacrificial, to wait for good things to come to them, to serve their betters, to accept having a master as a way



FIGURE 10 - South African Economy (Created by O.T.T. Mabusela 2012)

of life. The interface between these two breeding patterns is the racial tension still inherent today. Blacks who deviate from this course used to be called 'rebels', now they are called 'radical politicians', 'educated' or 'entrepreneurs' and celebrated for their bravery. This breed of black should be the norm rather than the exception.

Yet just as a typical white mind finds it difficult to accept or even understand poverty and lasting hunger because they have never experienced it before, the typical black mind also finds it difficult to accept and understand wealth (and the production thereof) because they have never experienced it before. It is only those generations of black children whose parents were smart and/or lucky enough to be able to give them the experience of wealth and fulfillment, who grow up reclaiming it as rightfully theirs.

These psychological ills are learned and passed on from one generation to the next. Yet these teachings and beliefs can be reversed if more and more generations of black people are exposed to wealth and fulfillment. This entails the ability to afford a lifestyle inclusive of quality food, entertainment, education and a reasonable level of autonomy. Once these needs are met, a breed of black people that have an interest in governing themselves, developing themselves and their environments is born. Yet this breed needs monetary resources to birth it,

and these resources can only (sustainably) be provided through economic growth.

There are a number of ways this can be accomplished, including, but not limited to the following:

On a macro scale, economies can be grown in three ways:

- creating new enterprises (generates 15 – 25% jobs);
- attracting investment from outside (10 – 20% jobs); and
- growing existing businesses (60 – 80% jobs) (2009:13. http://www.sacities.net/images/stories/pdfs/module_2.pdf)

In European developed practices, outcomes are generally presented in two categories:

- 'For place' outcomes target improved neighbourhoods and residential areas, public environments, new property investments and so on; and (2009:10. http://www.sacities.net/images/stories/pdfs/module_1.pdf)
- 'For people' outcomes target the residents of an area and seek to enhance education levels, skills, ability to compete for jobs and so on. (2009:10. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

"Pursuit of these two sets of outcomes is not necessar-

ily incompatible."

(2009:10. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

"Gentrification, for example, is one area where the achievement of 'for place' outcomes can act against 'for people' outcomes. Public-sector initiatives to turn around an area by improving access, upgrading the public environment and stimulating property investment can attract wealthier groups of residents from further afield. In the process, as prices rise, 'yuppie' populations can displace lower-income residents to another poor neighbourhood." (2009:10. http://www.sacities.net/images/stories/pdfs/module_1.pdf)

Another example where the already wealthy population groups are reaping the benefits of 'for place' outcomes at the exclusion of lower income groups is in terms of growth in GDP (Gross Domestic Product). This growth has consistently outpaced population growth post-1994. Real GDP grew by 68% between 1993 and 2008 while the total population grew by 22%. This resulted in a GDP per capita growth during the same period of 36%. Population growth started to decrease from 2000, most likely due to the spread of the HIV/AIDS pandemic. Unfortunately this economic growth has not been equitably distributed throughout the population, making the per capita figures

an inaccurate reflection of the change in well-being for the poorest segment of the population. While there has been some improvement in measured poverty over the post-apartheid period, inequality has worsened. (Leibbrandt, Woolard, McEwen, and Koep, C. 2010:6) As a result, "South Africa today is characterised by a highly dualistic economy, with a sophisticated formal sector of numerous globally-competitive multinational companies, paralleled to a population where up to 40% are unemployed and dependent on welfare grants and the informal sector to survive. This duality in South Africa has been termed as the first (formal) and second (informal) economy." (CWCI: 2006).

Former president Mbeki argued that interventions made with regard to the first (formal) economy do not necessarily impact on the second (informal) economy, in a beneficial manner. Explicitly questioning predictions that the benefits of growth would "trickle down" to poor people, he argued that "the reality is that those who would be affected positively, as projected by these theories, would be those who can be defined as already belonging to the 'first world economy'." What is needed are interventions that could benefit those in the second (informal) economy directly. (du Toit, A. and Neves, D. 2007:3) This would "ensure that the majority of South African citizens who are residents of townships are enabled to move from

the lock-in of the second economy into the opportunities of the first economy". (dplg 2006)

On a more micro scale, strategies for township economic growth include, but not limited to:

- developing local capital (human, natural, financial, physical and social);
- attracting investment into the area;
- keeping monetary resources circulating within the township;
- fostering existing business (i.e. ensuring that they are not disadvantaged by new developments);
- maximising local spin-offs from development; and
- integrating into the mainstream economy

(2009: 14. http://www.sacities.net/images/stories/pdfs/module_2.pdf)

'For place' outcomes appear to go hand in hand with the less effective forms of macro scale economic growth, namely the creation of new enterprises and attracting investment from outside. While 'for people' outcomes appear to directly relate with the most effective form of macro scale economic growth, namely growing existing business. Also, micro scale strategies for economic growth all seem to be geared towards 'for people' rather than 'for place' outcomes. This seems to separate 'for place' and 'for people' outcomes into first and second economy interventions respectively. The inherent implication is that 'for place' outcomes are a cop-out used to give the illusion of improving the

lives of the poor. Meanwhile these outcomes instead water the already sown seeds of anger, betrayal and discontentment by worsening the situations of the people who need the most help. In Kasis, 'for place' outcomes are especially detrimental to economic growth if 'for people' outcomes do not take precedence.

Economic activity in many Kasis is generally limited to retail trade (frequently informal), transportation and government services. According to several studies, Kasi residents spend most of their disposable income outside the Kasi. Studies consider the doubling of local spending to be a realistic projection if more attractive and cheaper shopping facilities are made available. (2009:14.http://www.sacities.net/images/stories/pdfs/module_1.pdf) The creation of such shopping facilities should be treated with caution especially in terms of their size and ownership. This caution is necessary because according to a study in Soshanguve by the Bureau of Market Research; "large shopping malls can have a negative impact on informal retailers and, to a lesser degree, small formal shops near the malls." (200:14.http://www.sacities.net/images/stories/pdfs/module_1.pdf) The study stresses that small businesses play a vital role in increasing local economic activity. The level of economic activity can be measured by determining how often each Rand that comes into a certain area (e.g.

through wages or pensions) circulates before it leaves the area. Where economy thrives, each Rand typically circulates eight to 10 times, but in Kasis it circulates, on average, only 1.3 times (Business Day, 6 September 2006).

The Government has embarked on the creation of Township Service Enterprise Hubs to improve the circulation of each Rand in townships. These hubs are but one of the measures that will ensure that those traditionally without access to economic opportunities are able to engage in income generating activities using their most basic abilities. It is also aimed to build on existing support programmes through a coordinated bottom-up approach to township economic development interventions, as it is intended that it will be part of a the basket of measures to provide employment opportunities in Kasis. In so doing, the Department of Economic Development will develop 3 types of hubs in the first phase. These are outlined below:

- Automotive Hub
- Enterprise Hub
- Industrial Hub (<http://www.ecodev.gov.za/SpecialProgrammes/Pages/SpecialProgrammes.aspx> Cited 3 April 2012.)

The proposed establishment of the Hubs has

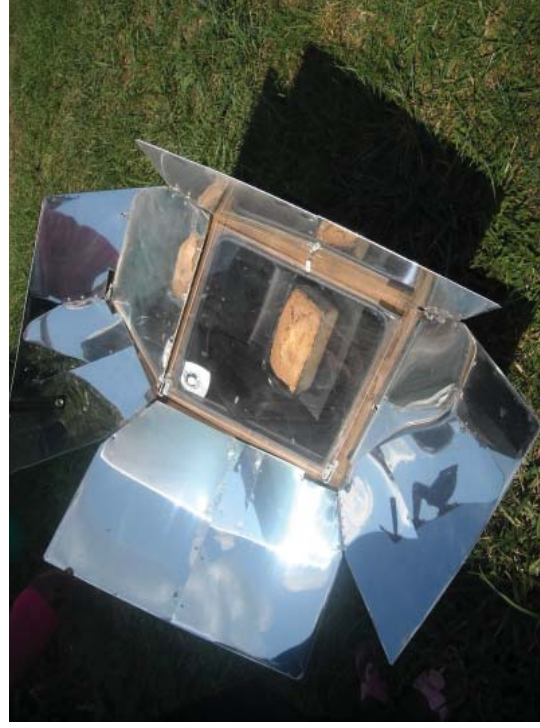


FIGURE 11 - Sun oven (Source; ABC Solar Incorporated, http://www.abc-solar.com/solar_oven_by_sunoven.html)

FIGURE 12 - Solar water heaters (Source; Nelson Mandela bay Municipality, <http://www.nelsonmandelabay.gov.za/Content.aspx?objID=425>)



immense positive socio-economic implications on the livelihoods of people in the township in general, and the direct beneficiaries (would be participating SMMEs) in particular at a micro level. Further, it is evident that the proposed development of the Hubs represents a considerable departure to traditional models of economic development and the success or failure of the Hubs has profound implications thereof on development thinking and the development trajectory of South Africa as a country in general, at a macro level. (<http://www.ecodev.gov.za/SpecialProgrammes/Pages/SpecialProgrammes.aspx> Cited 3 April 2012.)

Accordingly the establishment of the Hubs in select townships is both desirable as it is necessary as a critical component of achieving the strategic imperatives of both the province of Gauteng and country as a whole, including but not limited to:

- Facilitating the creation of sustainable and decent work opportunities for young people;
- Building a diverse and inclusive economy;
- Building cohesion and sustainable communities;
- Fostering Broad Based Economic Empowerment; and,

- Promoting the development of Small to Medium and Micro Enterprise. (<http://www.ecodev.gpg.gov.za/SpecialProgrammes/Pages/SpecialProgrammes.aspx> Cited 3 April 2012.)

“The physical form and operations of the hubs will be informed by the precepts of sustainable development, especially the applications of clean and green methods of operations where possible. This is important to ensure that there is no high overhead cost in terms of municipal amenities and to ensure that a greater portion of the activities conducted that need energy and water do not become a cost burden for the individuals that use the facility to generate income. Furthermore the use of these energy efficiency devices such as solar water heaters, recycling water through portable treatment plants and waterless sanitation will emphasise the policy stance of department on moving towards a green economy.” (<http://www.ecodev.gpg.gov.za/SpecialProgrammes/Pages/SpecialProgrammes.aspx> Cited 3 April 2012.)

Such a development would cost municipalities less in terms of service delivery (see Municipal Service Levels table), and if the residents of the township could be encouraged to follow the example of this development and reconfigure their homes to greener systems, the municipality can redirect the savings to improve service delivery and infrastructure development. Per-

haps the fitting of these green systems in the homes of township residents could serve as one of the micro industries included in such a development. It would serve to reduce the living expenses of township residents, reduce the service delivery costs of municipalities and create job opportunities through the manufacture and sale of these green systems to retrofit buildings throughout the country. The cost of these green systems needs to be considered though, as the cost of their production and installation would be more than the cost of current municipal service delivery for several years, but in the long run the savings would outstrip the cost especially in terms of its direct short and long-term benefit to the residents of the municipality.

Municipal Service Levels:

Service Type	Level 1 Basic	Level 2 Intermediate	Level 3 Full
Water	Communal standpipes	Yard taps, yard tanks	In house water
Sanitation	Sewage collection/disposal	VIP Latrine Septic tanks	Full water borne
Electricity	5-8 Amp or non-grid	20 Amps	60 Amps
Roads	Graded	Gravel	Paved/tarred & kerbs
Stormwater drainage	Unlined open channel	Open channel lined	Piped systems
Solid Waste disposal	Communal (Residents)	Communal (Contractors)	Kerbside

Table 1 - Municipal Service Levels (<http://www.etu.org.za/toolbox/docs/localgov/munservice.html> Cited 3 April 2012)

The Kasi economy is thus closely linked to municipal service delivery, the Kasi people’s psychology, the nature of the developments taking place as well as the people for whom these developments are meant to cater. This means that Kasi people need to be more involved and informed about the rand circulation in their Kasias and how it can be improved. Rand circulation and local economy are directly proportional, with the key people necessary to facilitate its growth lacking the education to do so.

In this sub-chapter the current state of education will be explored, as well as its effect on Kasi economics and how it can be improved.

“Education remains a key to unlocking the future of the South African youth. Although there is documented evidence of improved educational attainment, there are still challenges that need to be addressed to rectify the imbalances in the education system. In the context of youth development, the growing demand for better education across all age levels, the quality and appropriateness of education, lack of access to educational options for young people who leave school prematurely, poor quality education, poorly resourced schools, and lack of schools are among key issues that need to be given more attention.

Education and experience are considered the most important factors that ensure employability. Conversely, the lack of education and experience is viewed as a great hindrance to class mobility and improvement in the socio-economic condition.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Although joblessness among the youth is a worrying factor, equally worrying is the impact that the current education system has on joblessness, because poor quality education

produces people who are not employable, thus making transition from secondary school to tertiary institutions or to work difficult. The transition from school to work is the most significant for determining the economic (and social) well-being of the individual and, if taken collectively, for influencing the level of development of the country.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Kasi schools lack the necessary resources to provide quality education. Most educators in the Kasi lack the necessary training and education (although they possess the qualifications) to adequately educate learners. Further compounding the problem is the fact that the parents of most Kasi learners do not participate in their children’s education. This lack of participation is one of the trademarks of poverty, directly resulting in a poverty trap from generation to generation. It is also one of the key contributors to the development of a culture of poverty which is concentrated in Kasis, resulting in communities of people who perceive poverty and illiteracy as a way of life.

“Schools should provide the knowledge and skill for life and work while serving as sites where young people can feel they belong, develop their identity and build their self-esteem through personal discovery and social interaction.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Schools should also “aid young people in their transition to adulthood by promoting a wider and more flexible range of learning pathways available to them,



FIGURE 13 - Education.
 (Source; <http://www.easyreadsystem.com/news/putting-the-fun-back-into-learning-to-read/alphabet-blocks>)

showing how these can impact on their prospects for further learning, personal development and employment.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012) This is key to alleviating the situation of poverty because “youth with lower levels of education, are more likely to be unemployed as compared to those with higher levels of education.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Moreover, youth with lower levels of education are not aware of the opportunities and possibilities for self-employment and self-development. These youths are unaware of the role they can and must play in the development of their communities, and of the potential they have to make the changes necessary to improve the quality of their lives and the lives of those around them. They are trapped in a poverty of the mind and are unable to find a way out.

Kasi learners tend to believe that education is only for the mentally gifted and fail to understand how it can revolutionise the lives of even those who are slow at learning. The apartheid legacy of Bantu education thus still prevails; with Kasi learners failing to see education as their ticket out of poverty; the key to unlock their own capabilities and the path to self-empowerment, self-governance and self-discovery.

They are blinkered to attainable visions of prosperity and perceive only endless poverty and the hardships of lack.

It is also important to note that the emphasis on education should not just be on the production of academics. While academics are necessary to increase the number of disadvantaged individuals occupying first economy employment, it leaves little motivation for those not academically inclined. This is evidenced by the fact that the National Youth Policy now advocates the idea that “government should re-establish apprenticeships and introduce incentives as a key mode of imparting technical and other job specific skills, and must promote trades as attractive occupations for young people”. (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

This is especially true in disadvantaged areas where information about alternative career paths is not readily accessible. More facilities are required that offer skills training and career guidance to those less academically inclined and those with learning disabilities.

It is not enough to merely adjust government emphasis on academics; skills training colleges like FET (Further Education and Training), colleges need to target business skills, incubation and mentoring of budding entrepreneurs in high growth industries and future industries. Government should increase the diversity of post-secondary institutions for matriculants, focusing on a variety of career opportunities. (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

The problems in education are further compounded by the lack of sufficient training facilities to provide skills education. “It is on record that, the absorption capacity and throughput rates of the learnerships are insufficient to meet demand from industry or to absorb the supply of young people requiring training. This contributes to the problem of preparing our youth for economic participation.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

The development of more skills training facilities is therefore needed to absorb more young people in order for industry and economic participation to grow. Apart from skills training, young people are also being disadvantaged from gaining access to other avenues of the economy due to the lack of access/training to enable them to creatively express themselves.

“As a consequence of carefully orchestrated segregationist policies of the past, space for creative expression among disadvantaged youth was deliberately kept to a bare minimum. The legacy of apartheid led to lack of adequate facilities, infrastructure and opportunities for arts, culture and heritage training for the youth. There was systematic obliteration

of places for creative arts, culture and heritage training, with preference for producing subervient factory workers. Creative arts were seen as a threat to the apartheid regime, in that they could mobilise the masses into action.

Since 1994, attempts to redress these as part of the creation of integrated human settlements have not been completely successful. This mostly affected the youth from disadvantaged areas and backgrounds and prohibited them from claiming their own space for creative expression. In advancing this imperative, youth development needs to address a full range of issues that inhibit youth from fully participating in social, cultural, economic, educational, and political activities that seek to strengthen social cohesion.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Arts and culture centres can serve as more than just a means of keeping the youth off the streets after school; “young people who become actively engaged in social cohesion activities such as community service, civic participation and volunteering, are less likely to engage in risky or self-destructive behaviour, because these activities inculcate a clear sense of purpose and a desire for them to reach their set goals.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)



FIGURE 14 - (Source: <http://www.students.blogs.browardpalmbeach.com>)

“There is need to engage youth in recreational activities that enhance social cohesion. This includes development of community based infrastructure promoting arts, culture, sport and overall entertainment of youth. The need for such facilities which should offer a range of activities far outweighs the supply. Such facilities should also be provided in rural areas. There is a crucial need to channel and redirect young people’s energies in a positive direction by creating an environment that will enable them to

reclaim their space for creative cultural expression. This will inculcate in youth a sense of belonging, self-worth and self-identity.” (<http://www.info.gov.za/view/DownloadFileAction?id=102384> Cited 3 April 2012)

Arts, culture and sporting infrastructure can also serve to supplement arts and culture education that is lacking in disadvantaged township schools. They can also serve to educate the youth about viable career paths within the arts and culture and expand a community’s

awareness of the value of artistic talents within creative and design industries.

The Kasis lack of quality and diverse education is a double-edged sword for economic and social development of Kasi and country. This lack forms the biggest divisions between people in terms of both race and class, and even more so within the Kasi. If the people of the Kasi could gain access to the level and quality of education available in city schools, they could learn how to help themselves and how to interact with those who can help them help themselves.

Teaching Kasi children to learn about themselves will lead to them gaining the tools to adequately express their needs. Once they are able to do this, the same education can help them draft strategies to improve their situations. They could finally cease to be a potential mob of angry ignored people whose pent-up frustrations form a time bomb for widespread class-based violence akin to the xenophobic attacks previously experienced in South Africa’s recent history.



FIGURE 15 - Ballet dancer strikes a pose outside her home in Khayelitsha, South Africa. (Photographed by Per-Anders Pettersson 2009)

It seems as though the inadequacies of the Kasi have been carefully engineered into a system for the production of a mentally enslaved people, blind to anything but subservience, whose effects continue to be felt long after the dawn of democracy.

One of the major issues to be addressed is the disconnection between Kasi economies and the country's economy. There is no real trade between Kasis and cities, Kasis and Kasis or even within a single Kasi. Trade entails some kind of exchange, including imports and exports. Kasis import most of their goods from neighbouring cities yet export next to nothing. The only income that is brought into Kasis is through migrant labour. This income then circulates among some Kasi businesses, but most of it is used to buy goods imported from urban cities and is thus absorbed back into city economies, thus Kasi economies do not grow.

Perhaps part of the solution would be for Kasis to create their own products to export to cities and neighbouring Kasis in order to stimulate trade. This would bring additional income Kasi and help to grow Kasi economies. If Kasi inhabitants produced and used more of their own products and reduced their heavy reliance on city-imported goods, there would be more income circulating within the Kasi and result in less income leaving the economy. In this way, a sustainable economy could be developed

within Kasis, also generating employment. This would lead to an increase in investment potential in the Kasi and a decrease in urban degeneration, enabling an improvement in service delivery and infrastructure development.

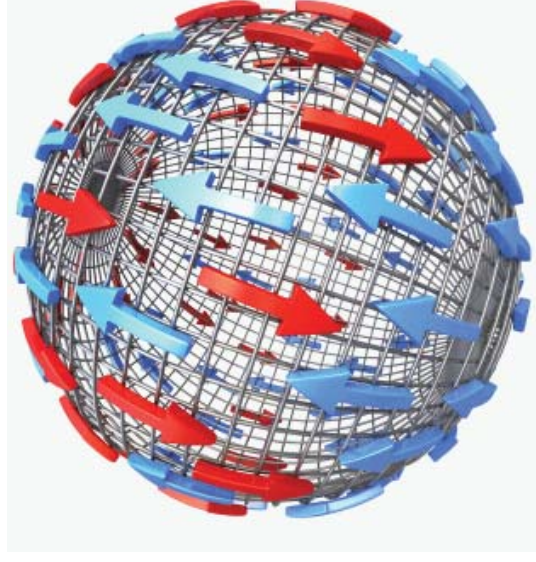
With increased income levels due to higher income retention, education will become more affordable. This will result in improved facilities, better trained and skilled staff, thus improving the quality of education, and also improving the populations' hope for a better future. In this way, the poverty that marks Kasis across South Africa could eventually be eradicated. The already social nature of Kasis will become more vibrant, the conditions of despair and desperation could finally be lifted, with the conditions for prosperity finally created.

In order to create conditions for prosperity, it is necessary to activate the Kasi economy, the question that remains is how. This thesis attempts to investigate the "how" through the study of the following:

- i) Ga-Rankuwa Kasi, the study township; to base the study on reality and gain a perspective of one real township, its actual conditions and the nature of the community with which this study will engage. The study will also include a high level assessment of the Kasi skills to determine the comparative advantage of the study township. Assessing the potential market of users for the development, employment opportunities for people with these skills and the ways in which this system can be improved.



FIGURE 16a - No Trade (Source; Nature's sunshine, <http://www.nspmanager.com/>). FIGURE 16b- Stimulate Trade (Source; Nature's sunshine, <http://www.nspmanager.com/>)



ii) The study will also delve into the needs of the potential end users of the development. Methods and approaches for working with communities will be generated in order to ascertain the value of input from the local communities on the developments that are in essence, designed for their use. This study will also assist in finding ways in which to communicate with members of the township.

iii) Using the methods and approaches generated, discussions with Ga-Rankuwa residents were undertaken to ascertain first-hand information, at a grass roots level, about what the developments' end users really need.

iv) A study will also be undertaken on Urban planning patterns to gain an understanding of urban developments and how they are structured, based on the purpose for which they are designed, and the principles that govern urban centres, that are truly alive in their interaction with their communities.

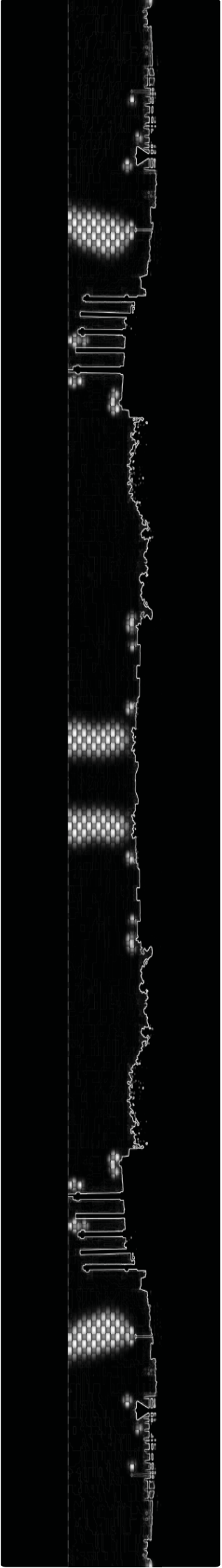
v) Based on all the data gathered, a Site selection will be undertaken, including a discussion about the reasons for the chosen site and as well as in-depth mapping of the chosen site in preparation for the design of the urban development.

The table below summarises the requirements for township regeneration.

GEOPOLITICS	URBANISM	ECONOMICS	EDUCATION
Reduced transport costs and times for commuters	Reduced outmigration of human capacity and role models	Increased capital flows into the township	Re-establishment of technical and other trade skills learning institutions
Greater access to regional opportunities	Improved use of existing capital/ infrastructure assets	Increased rand circulation within township communities	The development of community based infrastructure promoting arts, culture and sport
Reduced physical segregation/isolation from adjacent city/town	Increased end-user/ community involvement in urban management	Fostering of existing business by ensuring they are not disadvantaged by new developments	Increased number, range, capacity and connectivity of local community institutions
Increased access to facilities, goods and services in the township	Improved quality of residential accommodation	Optimal performance of township residential property markets	Enhanced access to a range of regional social opportunities
The creation of more local employment opportunities based on comparative advantage	Improved access to municipal services, policy, councilors, information and self-governance	Improved trade links within townships and with other urban centres	Increased career development and entrepreneurship services
Enhanced intra-township mobility and accessibility	Incorporation of eco-friendly principles in urban development	Increased integration into the mainstream economy	Improved networks to access information on available employment

Table 2 - Requirements for township regeneration

These queries are expected to lead to answers that can be translated into an architectural solution through which Kasitector can achieve its goal of creating conditions for prosperity.



AN INTRODUCTION TO THE STUDY KASI; GA-RANKUWA

Ga-Rankuwa township is the Kasi of my birth and upbringing, I have chosen it because I would like to give back to the community in which I was born and raised. Also because I believe that it will make the creation an urban planning model much more feasible due to my own personal knowledge of the study area.

Co-ordinates	25°37'12"S, 27°58'48"E
Country	South Africa
Province	Gauteng
Municipality	City of Tshwane
Area	48,31km ²
Population	160,000
Density	1,700/km ²
Racial makeup	
Black African	99.6%
Coloured	0.3%
Indian	0.1%
First languages	
Setswana	74.1%
Northern Sotho	8.7%
Tsonga	4.7%
Zulu	3.5%
Other	9.0%
Time zone	SAST (UTC+2)
Area code	012

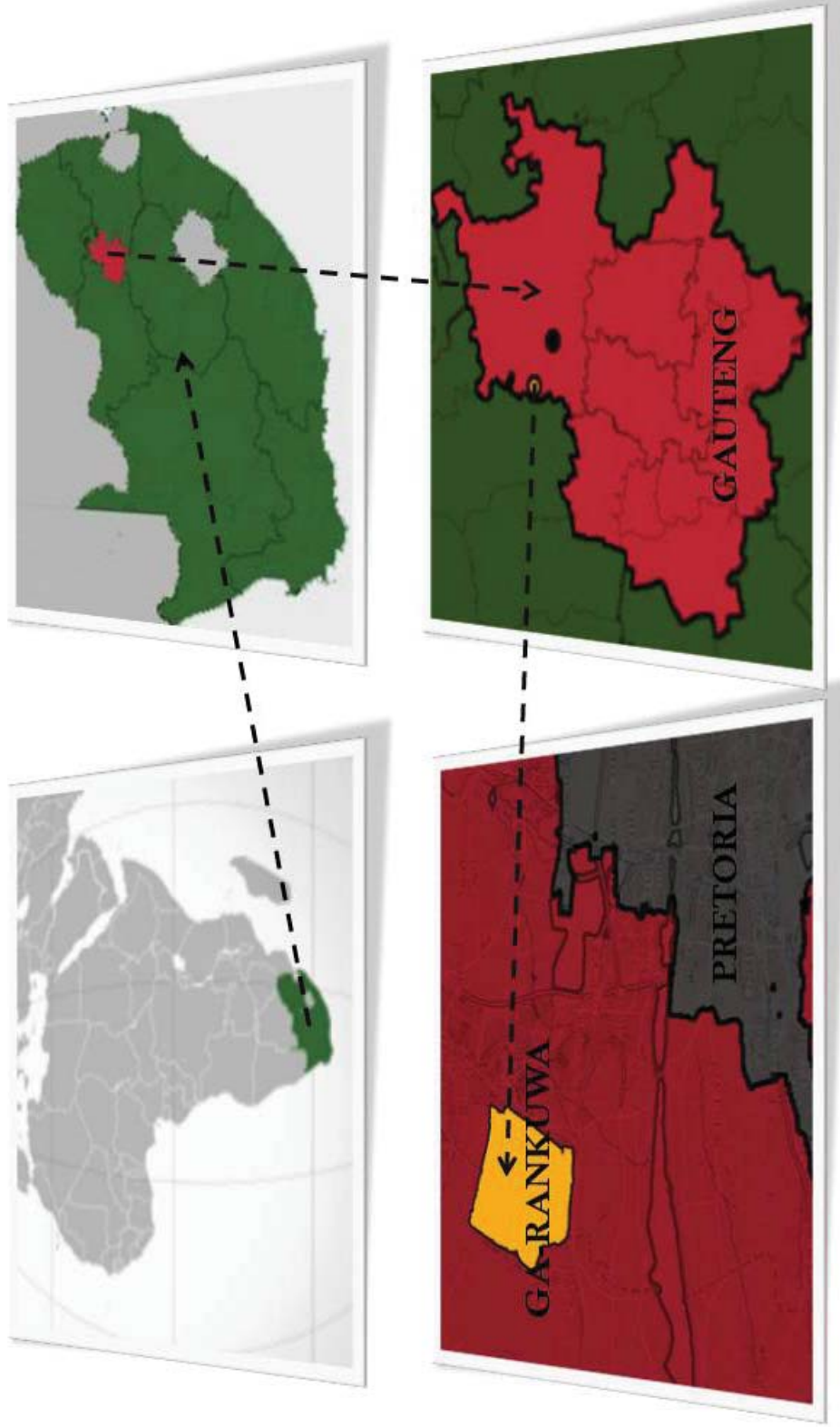


FIGURE 17 - Ga-Rankuwa location. Created by O.T.T Mabusela, 2012.

History

The area around Ga-Rankuwa has been settled by Tswana people since at least the 17th century. Many of these communities were conquered by the invading Ndebele (or Matabele) under Mzilikazi in the early 19th century. When the Boers defeated and drove away the Matabele and claimed ownership of the land of that kingdom; they divided the area into farms and distributed the land among themselves. This included the land of many Bakwena-Tswana villages that still existed there. In oral histories gathered among the Bakwena in the early 20th century, elderly Bakwena claimed that the Boers virtually enslaved them. In the mid-19th century, the Bakwena chief, Mamogale, and several German Lutheran missionaries began collecting cattle and money from the Tswana in the area who were indentured to Boers in order to buy back land that had been taken away from them. Despite many obstacles, Chief Mamogale and the missionaries bought back several farms.

Ga-Rankuwa was one of these farms, and with the lands, Chief Mamogale was able to establish a chiefdom that came to be called the Bakwena Ba Magopa. Oral testimony and written records suggest that the local Veld Kornet, Paul Kruger, who would become president of the Transvaal Republic or South African republic, helped Chief Mamogale and the missionaries acquire these

lands. They also purchased land near Brits, where Chief Mamogale established his “capital” in the village of Bethanie. Chief Mamogale’s descendants continued to be recognized as the chiefs of the Bakwena Ba Magopa and having jurisdiction over Ga-Rankuwa. Chief Mamogale’s lands were included in the “Scheduled Native Areas”, or “Reserves” under the 1913 Native Lands Act that divided South Africa into white areas and “Native” areas. For several decades of the late 19th and early 20th centuries, these villages engaged in farming and raising livestock and compared to Africans on white farms they were relatively affluent.”

(2011; <http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa/history> Cited 10 June 2012)

Developed in accordance with the Physical Planning Act of 1967, Ga-Rankuwa was intended to accommodate black labourers and their families who were meant to provide cheap labour to the neighbouring Rosslyn industrial area; 10 km away.

This area was proclaimed a township in 1965 by government Proclamation 448. The establishment of this Kasi was also in accordance with the tenets of the Group Areas Act of 1965 which insisted on the separation of the South African population along racial and ethnic lines.

This was to be done by the establishment of homelands, which would have strict racially and ethnically inclined admittance rules, resulting in the establishment of a number of homelands.

At the time, Ga-Rankuwa fell under a ‘native reserve’ which was demarcated to be part of Bophuthatswana. This meant Ga-Rankuwa would then be reserved for Setswana-speaking people who were to be forcibly removed from Lady Selbourne and Claremont-which were proclaimed “White Areas”-and later from Atteridgeville.

Though the then government had built some houses for displaced people to move into, as well as hostels to accommodate workers in the industrial area of Rosslyn, the people were also provided with an option to buy plots and build their own houses.

Accounts on the origin of the Kasi’s name are interestingly conflicting and there seems to be a lack of documentary proof to support any of the claims. One claim is that the area was named after a Bakgatla headman, Rankuwa Boikhotso.

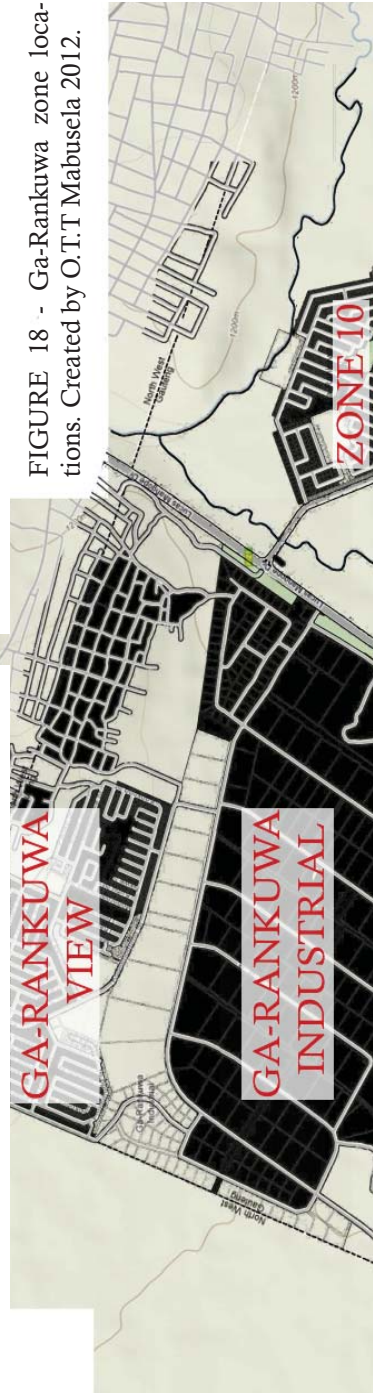


FIGURE 18 - Ga-Rankuwa zone locations. Created by O.T.T Mabusela 2012.

According to Tshwane Tourism, the name Ga-Rankuwa is derived from the sheep farming which once took place in the area. The name Ga-Rankuwa or place of the sheep farmer is derived from the work “nku” meaning sheep. Modern times have seen the area becoming mainly residential.

The other claim, which is more believable, is that the area was named after a land owner close to Lucas Mangope with the surname Nkuwa. This claim is attributed to oral history. It is believed that Mr. Nkuwa (or RraNkuwa in the Setswana language) owned some of the land on which this township was established. This can be believed because in the Sotho language of the group-Southern Sotho (Sesotho), Setswana and Northern Sotho (Sesotho sa Lebowa) -names of places are usually attributed to their owners or chiefs/kings (such as usually assigned the prefix: Ga-) (2011; <http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa/history> Cited 10 June 2012)

Geographical information

Located approximately 37 km north of the Pretoria CBD, Ga-Rankuwa is divided into many sections known as zones/ units. These are zones 1,2,3,4,5,6,7,8,9,10,15,16,17 (The Heights),20,21,23 (Tsunami, an informal settlement), 24,25 and Ga-Rankuwa View (Chesa Mpama).



Demographics

Ga-Rankuwa is a diverse township whose residents speak many languages. A mixture of languages such as Afrikaans, Sesotho, English and isiZulu are sometimes fused together to form what is now a unique language style of the township with a slight inclination to slang known as Tsotsitaal. It shares this language with its neighbouring townships (Mabopane, Soshanguve, Mamelodi and Atteridgeville).

Residents from this area provide the bulk of labour for the Rosslyn industrial area and also for the industrial park in Zone 15. Most of the inhabitants of Ga-Rankuwa are middle class citizens.

The dominant religion in Ga-Rankuwa is Christianity followed by other dominant African traditional religions and Islam. (2011; <http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa> Cited 10 June 2012)

Health care

Ga-Rankuwa has the second largest hospital in Africa, Dr. George Mukhari Hospital (formerly known as Ga-Rankuwa Hospital). This hospital also serves as a teaching hospital as it shares its facilities with the University of Limpopo Ga-Rankuwa campus, which produces the largest



FIGURE 20 - University of Limpopo Medunsa Campus (Photographed by O.T.T Mabusela 2012.)



FIGURE 21 - Ga-Rankuwa taxis (Photographed by O.T.T Mabusela 2012.)

Public Transport

Taxi Services

The Ga-Rankuwa township's taxi service system is diverse and provides access to a number of neighbouring townships, suburbs and the Preto-

number of new medical doctors in South Africa.

Ga-Rankuwa is also littered with many small clinics and medical centres in the various zones. (2011; <http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa> Cited 10 June 2012)

ria CBD. Local taxi services provide for travelling around the many sections of the township, neighbouring villages and townships such as Soshanguve, Mabopane, Rosslyn and Mmakau. The long-distance taxi services connect Ga-Rankuwa to Wonderpark and Pretoria North.

The taxis can be boarded on the roads throughout the township and at various taxi ranks. This Kasi has three taxi ranks, one in Zone 1, next to the Dr George Mukhari Hospital for travelling to neighbouring townships and nearest cities, the second, at the Ga-Rankuwa Shopping Centre for local travel and the third is located at the entrance to the Dr. George Mukhari Hospital for long distance travelling.

Taxis are the most used form of public transport in this township and the industry is run by two taxi associations, namely ; Ga-Rankuwa United Taxi Association (GAUTA) and Ga-Rankuwa United Local Taxi Association (GULTA). (<http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa/public-transport> Cited 10 June 2012)

Buses

Like most townships in the country, Ga-Rankuwa is adequately provided with bus services. Most of the people who travel by bus in this area are workers in the neighbouring industrial area of Rosslyn, Pretoria and its surrounding suburbs.

Most of the bus services in Ga-Rankuwa are provided by Thari buses, under the “North West Star” flagship. (<http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa/public-transport> Cited 10 June 2012)

Train services

Metrorail, a Passenger Rail Association of South Africa (PRASA) subsidiary, provides all the daily train services between this township and areas in and around Pretoria. The railway system connects with Mabopane railway to Bosman Station (Pretoria) at Winterness Station. Winterness Station provides an off-ramp for trains heading to Rosslyn, Lynross, Hornsnek; Medunsa, Ga-Rankuwa, Talliardshoop and De Wildt train stations from Pretoria. This railway is also used by long distance trains departing from the Pretoria station to places as far as Zimbabwe. (<http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa/public-transport> Cited 10 June 2012)

Sports and Culture

A number of sporting codes are played in Ga-Rankuwa such as netball, volleyball and soccer, largely because they are school sports. The most popular of these sports is soccer and the township being the home of Ga-Rankuwa United Football club which is part of the Vodacom League. Their home stadium, Odi stadium, is situated in the neighbouring township of Mabopane. In terms of community outreach, Ga-Rankuwa boasts a workshop for the blind known as Itireleng, and YMCA; a crèche and community hall. Apart from seasonal private par-

ties, events and taverns, the only constant nightlife is at Taliban Cocktail Bar located in Zone 6. (<http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa> Cited 10 June 2012)

Compared to most Kasis, Ga-Rankuwa is quite relaxed and experiences relatively low crime rates. There have been instances where the father figures of certain crime ridden zones would form neighbourhood watch groups with the aim of either scaring away or apprehending criminals to hand them over to the police. They also developed systems where whistles that emitted a distinct, loud, piercing sound were distributed to each household as a method of calling for assistance from the nearest neighbour. Ga-Rankuwa boasts churches in almost every single zone and is littered with community groups based on religion, gender, age and group saving initiatives. It also boasts several choirs and youth singing and dance groups.

Education

A number of primary and secondary schools are spread throughout all the zones, with two major University Campuses also located in Ga-Rankuwa. A University of Limpopo campus, formerly known as the Medical University of South Africa (MEDUNSA), and a Tshwane University of Technology campus are both located in Ga-Rankuwa. The campus was formerly known as Setlogelo and was renamed after merging with

the then Pretoria Technikon and Technikon Northern Gauteng (TNG). (2011; <http://www.kopitori.co.za/index.php/kopitori-townships/ga-rankuwa> Cited 10 June 2012)

Some of the key statistics regarding education in Ga-rankuwa are as follows:

- 11 % of adults have no schooling;
- 17 % of adults within the region are schooled up to grade 12; and
- Only 1 % of the adult population has a degree.

The population of the region has a low level of education compared to other metropolitan planning regions. (City of Tshwane Metropolitan municipality 2012)

The middle-class members of the Ga-Rankuwa population insist on sending their children to schools in the city rather than any of the numerous township schools. The only exception was a school called Tsogo, run by catholic nuns, which produced some of the best results in the Kasi. Despite the fact that all matriculants write the same exams, and that all the schools in the area have the same educational syllabus as schools in the city, the quality of education and facilities in the Kasi is much lower.

“The formerly white Model-C schools uniformly produce better results and their governing

bodies are able to raise substantial private funds used to get resources that are then unreachable by the rural and township schools which survive on the commitment of their teachers. That the shortfall in the public education system are hindering South Africa’s quest for inclusive growth, is almost universally acknowledged. There is far less agreement, however, over what needs to (or realistically can) be done. Analysis by the World Bank has attributed the expenditure-outcomes disconnect to a variety of structural factors, ranging from lack of basic information on school performance, limited parent participation, lack of school autonomy, weak links between performance and teacher pay, insufficiently-trained teachers, strong resistance to change from the teacher unions, highly unequal schools’ infrastructure and physical assets based on income differences, and a host of adverse socio-economic factors affecting the poor communities.” (2012; <http://blogs.worldbank.org/african/100-pass-rate-in-south-africa-s-township-schools> Cited on 11 October 2012)

Most of the members of the Ga-Rankuwa population cannot afford the transport costs and fees required to provide their children with access to better schools (mostly in the city). Also, most city schools have developed a selection system based on the vicinity of applicants’ place of residence to school grounds, the closer the applicants’ place of residence; the more likely they are to be accepted into the school. As a result, those who cannot afford or do not meet the requirements to access city schools were consigned to Kasi schools.

More often than not, it was mostly the learners who

went to schools in the city who managed to enter tertiary institutions. The others ended up studying via long distance at institutions like UNISA, or studied whatever was available at the university campuses within the area. While the rest joined the workforce in lower-level positions with very little room for growth, or joined the masses of the unemployed of the township. This was often because of the reasons stipulated above, but also because most parents couldn’t afford the additional costs that came with sending their children far from home to study. Other parents could not afford tertiary education at all.

Unofficially, it was deemed that those who made it out of the Kasi were ‘successful’ and those who stayed behind were not. Invariably, it was the children whose parents could afford to send them to schools in the cities and subsequently to quality tertiary institutions, who graduated, got good jobs and relocated to apartments in the city.

In Ga-Rankuwa, there is a large disparity between members of the first economy and second economy and this is even apparent in the settlement patterns inherent in the different township sections. The zones with the largest concentration of first economy members of the population are (in order of largest concentration); Zone 8, Zone 17 and Zone 7.

Even though members of the first economy living in Ga-Rankuwa had more opportunities than

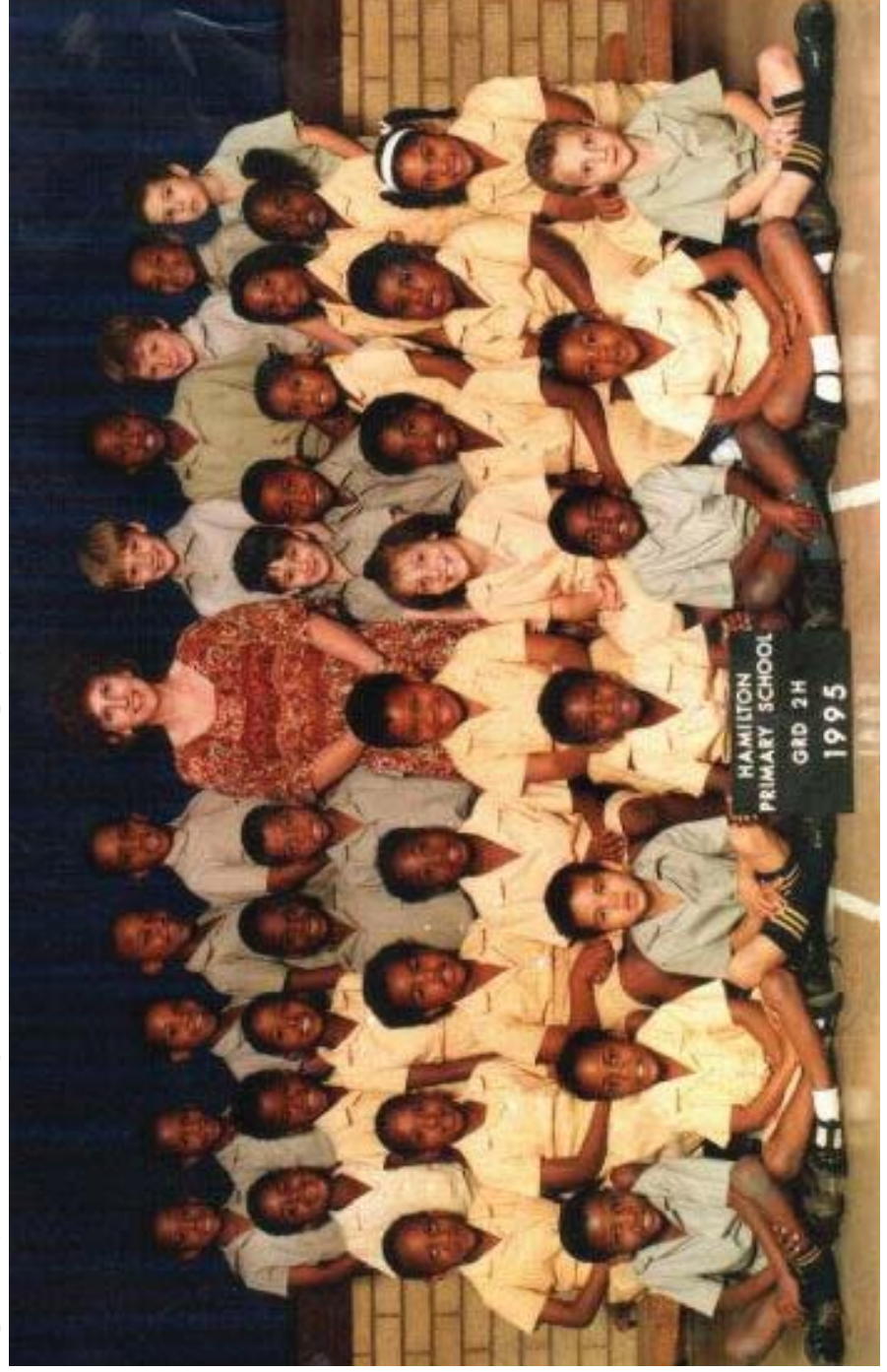
their second economy counterparts, it was still difficult for them to get into good university institutions. It was harder for students from townships to keep up with their city based colleagues even when they went to the same city school. This was because learners from Kasis had to wake up significantly early (04:00 am to 05:00 depending on their location in relation to the bus route and or mode of transport) in order to arrive at school on time. They also had to endure long (approximately 2hrs) bus rides back home in the afternoon. As a result, most of the township learners did not take part in extra-mural activities as this meant that they would only get home after sunset. They subsequently missed out on study groups, Olympiads, extra classes, sports and other opportunities for self-advancement. Those who did capitalize on these opportunities had less time for homework and study than their city-dwelling counterparts. The only advantage to this situation is that these learners ended up spending less time on the streets. As a result, in an attempt to provide a better quality of life for their children, most parents who could afford it relocated to the cities where the quality of education and facilities is higher and more conveniently situated.

In this way, the migratory pattern is instilled from childhood and those left behind see no hope for the development of their Kasi to improve their lives. While those who leave the Kasi often only come back to visit family and friends,

they hardly ever return to develop their home town and improve the lives of future generations. As a result, Ga-Rankuwa suffers from a brain-drain and a shortage of people with positive attitudes and minds that have been groomed for success and prosperity. Instead, the young adult and teenage population in Ga-Rankuwa sinks into

despair, indulging in risky sexual behavior and abuse of drugs and alcohol, resulting in teenage pregnancy, increased mortality rates and reduced quality of life. This condition is then passed on from one generation to the next.

FIGURE 22 - Grade 2 class of 1995, Hamilton Primary School (photographed by Prestige Photographers 1995). At least 20% of the learners from this Tshwane CBD based school come from neighbouring Kasis. These learners have had to wake up as early as 04:00 from grade 2 - 12 in order to receive quality education.



Comparative advantage

In order to alleviate the on-going problem of migration, brain drain and despair, it is necessary to create conditions for prosperity. Yet this cannot be accomplished with a single project. It requires a driver, an engine, a consistent, continued effort for improvement through economic development, economic growth; the inflow of monetary resources instead of an outflow, resulting in improved facilities, better opportunities for education, skills development, sportsmanship, dignity and success.

There are a number of ways this can be achieved. One way is to create an incubator for the development of the most prevalent skills in Ga-Rankuwa into successful business models. Yet before this incubator can be created, the most prevalent skills need to be ascertained through the identification of the comparative advantage of Ga-Rankuwa.

Ga-Rankuwa's economic situation is as follows:

- Approximately 127 000 of economically active persons are permanently unemployed. This is approximately 19 % of the population and excludes those that cannot work, could not find work or are only seasonally employed;
- Although there are industrial areas within the region, the dominant area of employment is still the CBD of Tshwane;




























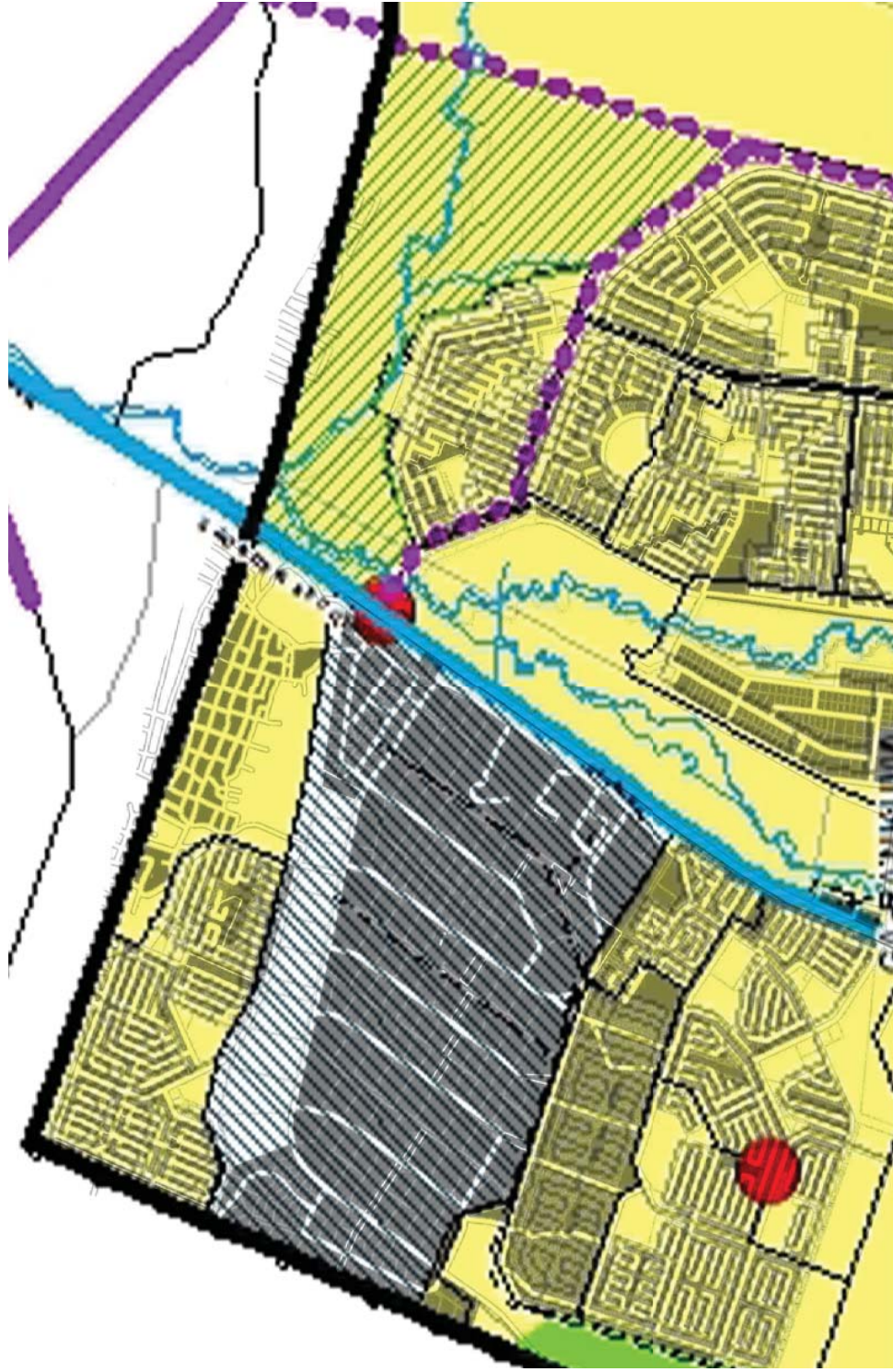
- The population generally has low-income levels, 40% of the population reported during the 2001 Census to have no formal income and 16% of the population earned a monthly income of less than R1600.00;
- On average, retail outside the CBD is provided at a ratio of 3,4m² per person. In Ga-Rankuwa less than 1m² per person is provided; and
- Ga-Rankuwa has 8,489 formal jobs, which accounts for 1.4 % of the job opportunities in Tshwane. (City of Tshwane Metropolitan municipality 2012)

In terms of retail nodes, urban cores can be classified into either regional centres or community centres based on the total square meterage of their retail space. In order to attain regional centre classification, a total retail area of 50 000 to 100 000m² is required. To attain community centre classification, a total retail area of 12 000 to 25 000m² is required. Ga-Rankuwa is classified as a community centre and has the second lowest retail area in the north western region of Tshwane. (City of Tshwane Metropolitan municipality 2012)

Ga-Rankuwa has an industrial area which was developed during the apartheid period in an attempt to create jobs on the border of the previous homelands. Since the abandonment of this policy, the area has struggled for survival due to its' peripheral locality. It is poorly linked with the rest of the metropolitan area and with Rosslyn. (City of Tshwane Metropolitan municipality 2012)

LEGEND

	Nodes		Landfill		Proposed Roads		Highways		Activity spine		Mobility spine
	Metropolitan core		Institutional		Proposed Gautrain rail		Existing		Existing		Existing
	Urban corridor		International airport		Proposed Gautrain station		Proposed		Proposed		Proposed
	Environmental areas		Government		Proposed railway		Proposed		Proposed		Proposed
	Open space		Industrial		Proposed stations		Existing		Existing		Existing
	Natural areas		Mixed use		Existing stations		Proposed		Proposed		Proposed
					Existing railway line						



A significant percentage of the total land area for manufacturing activity is located in Ga-Rankuwa. Rosslyn (located 10 km away) contains the automotive cluster, which is a highly specialised sector and contributes greatly to job creation and economic stability within the area. (City of Tshwane Metropolitan municipality 2012)

In comparison to other industrial areas of the metropolitan area, the region does not have a significant number of workshops or commercial uses such as warehouses, stores and wholesale. Ga-Rankuwa is an industrial node and represents one of Tshwane's main areas of job opportunity development. It must be strengthened through concentration and proper linkage. (City of Tshwane Metropolitan municipality 2012)

Tshwane Metropolitan Municipality intends to enhance the linkages via a road network that aims to integrate the industrial area with the N4 and the rest of the metro. It also intends to improve public transport via the rail system to positively contribute to the general economic viability of the area. (City of Tshwane Metropolitan municipality 2012)

Cleary, Ga-Rankuwa's comparative advantage lies in the manufacturing industry. Normal working conditions in this industry include a 5-7 day 8 hour shifts, for minimal pay (e.g. on 5 days a month, a trainee could make R2,000.00 a month and would not receive any benefits such as pen-

sion, UIF etc.), minimal skills development with little to no room for advancement. Most manufacturing industry employees work for years in the same position with pay increments that are few and far between despite the attempts of the unions. Meanwhile, the cost of living continues to increase. Due to these reasons, the development of small scale manufacturing offered a better economic and therefore developmental impact than large scale manufacturing, and is therefore the focus of this thesis.

Unlike most large scale manufacturing companies which continue to use townships as dormitory suburbs for their labour force, small scale manufacture empowers disadvantaged communities. It can help to develop alternative structures that can pave the way for shareholding programmes for small, medium and micro-enterprise. Small scale manufacture also improves the rand circulation within the Kasi and ensures that members of the community own their own businesses.

This means that more income is brought into the Kasi and more goods are produced. Thus the income of township residents could be used to buy these goods, instead of it being absorbed back into city economies. If proper trade links could be established, then the goods produced by small scale manufacturers could be exported to cities and other Kasis. This would ensure the growth of the area's manufacturing industry and its economy.

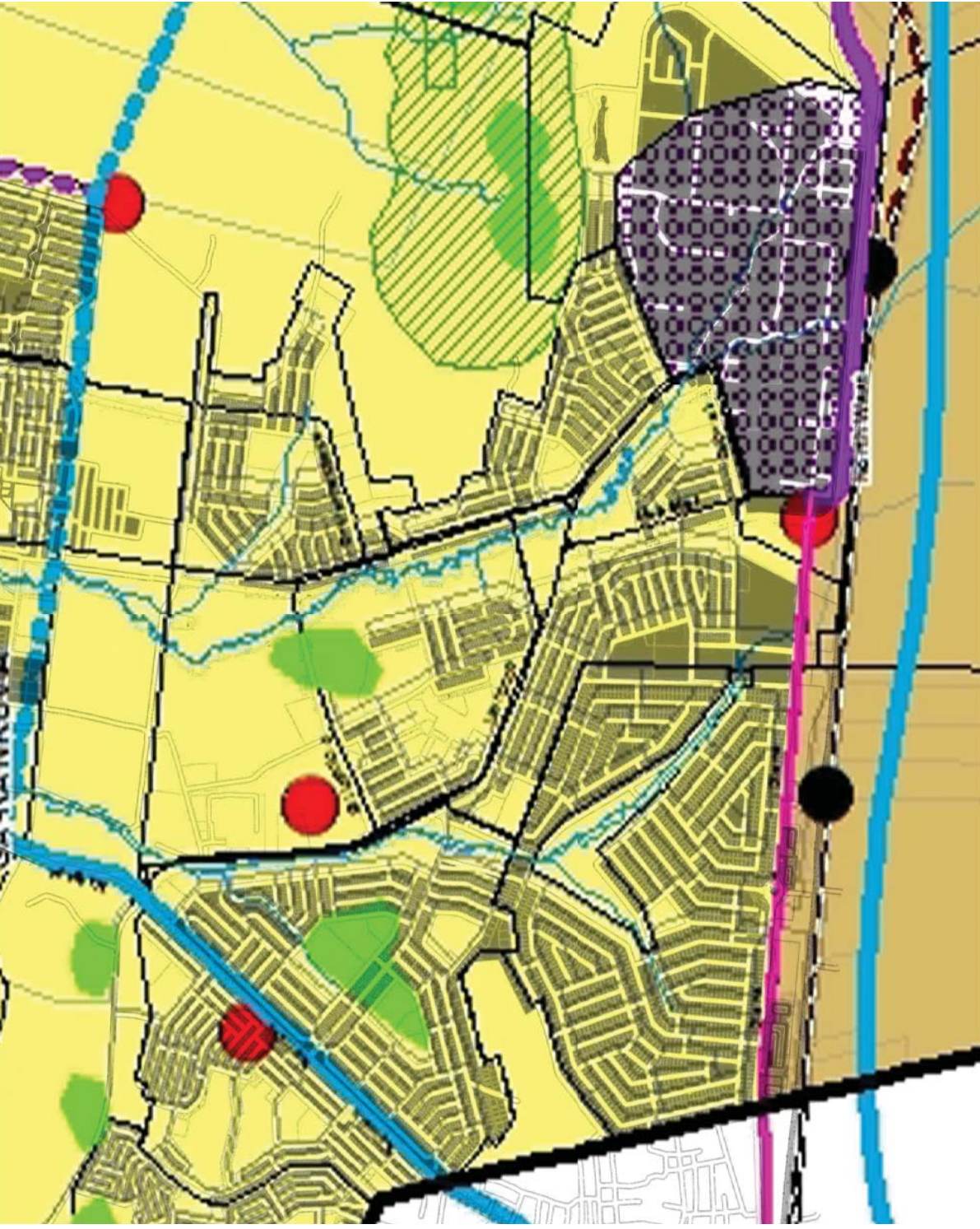


FIGURE 22 - Urban Development Concept : Region 1 City of Tshwane Metropolitan municipality 2012

LEGEND



Higher learning institutions



Primary and High Schools



Sports facilities



Shops and businesses



Medical facilities

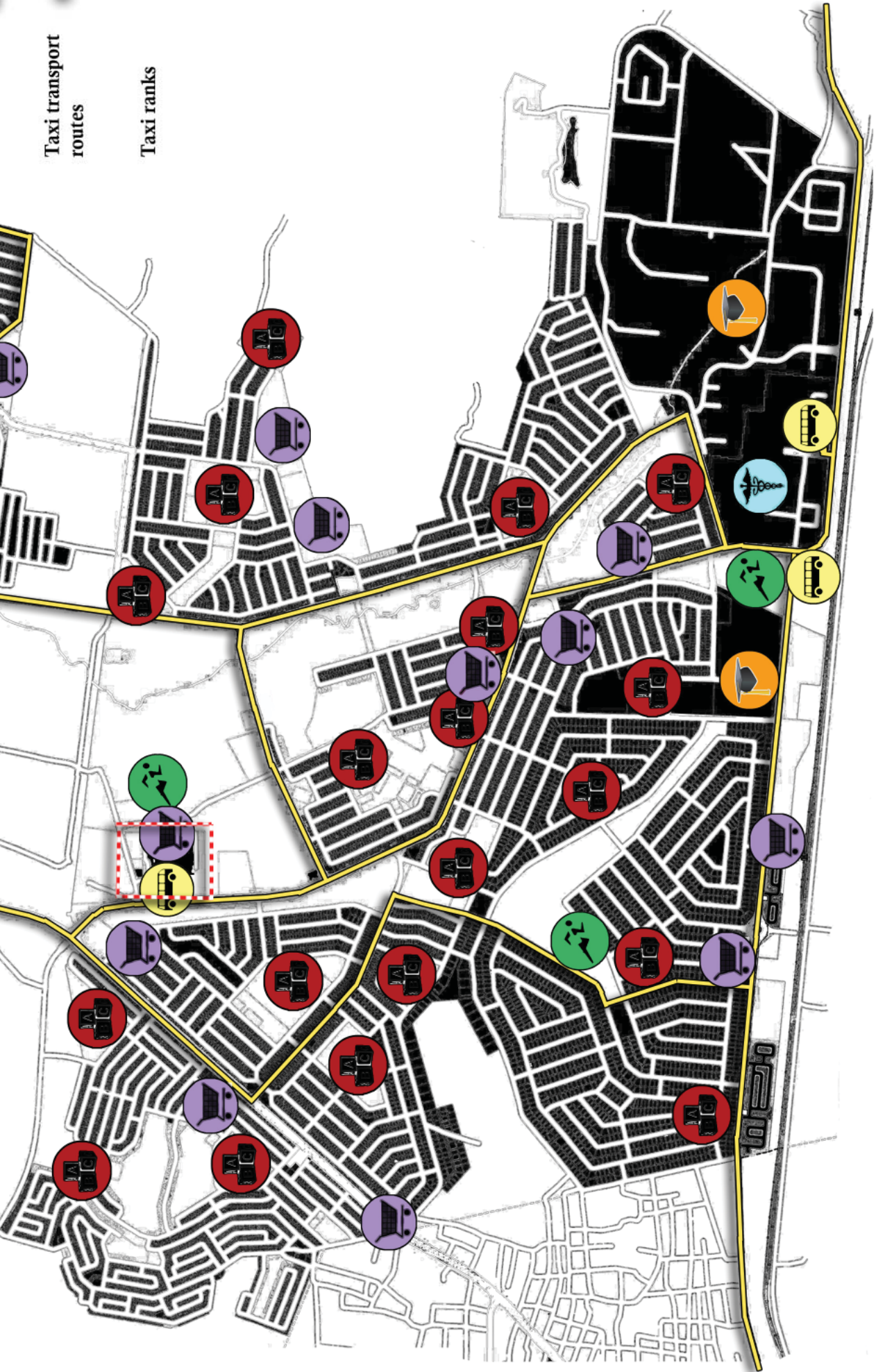
Site



Taxi transport routes



Taxi ranks



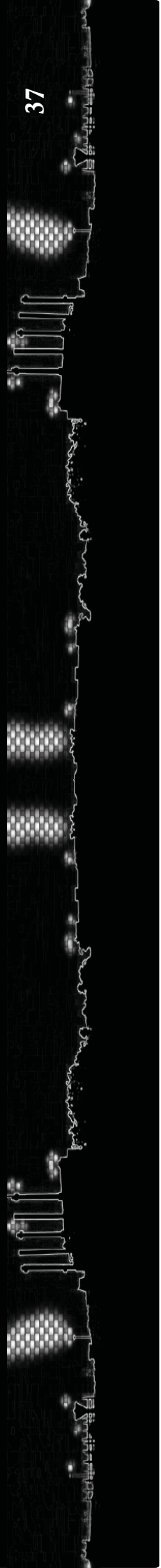
LEGEND



Economic
pulses

Site





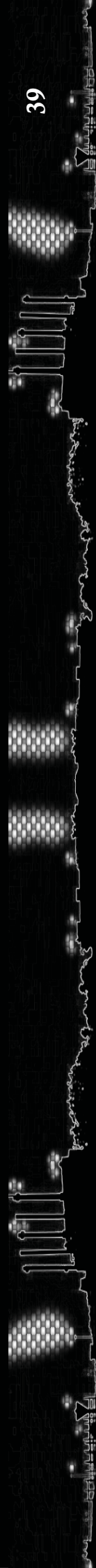
LEGEND

Missing links between urban areas

Island urban areas

Buffer zones between Kasi urban areas







The previous diagram mapping Ga-Rankuwa on an urban/town scale illustrates the results of apartheid planning and also suggests possible improvements.

Due to the lack of proper town planning, Ga-Rankuwa has no defined town centre, is prone to urban sprawl and contains vast expanses of empty land between developed urban residential areas. The Kasi appears to be separated into roughly seven parts by wide expanses of undeveloped land which are defined through this thesis as buffer zones. These buffer zones form ribbons that create islands of isolated built-up areas. Buffer zones are unsafe areas for people to walk/jog or cycle as there are no walking/jogging or cycling paths. This means that people must either walk/jog or cycle on the street (in areas where there are no sidewalks) or move through the veld.

Walking/jogging or cycling on the street is particularly dangerous because people prefer to use the existing mobility spine (as the roads are more secluded) which only boasts traffic lights at one or two intersections. This mobility spine often has high speed traffic and has been the scene of many accidents, some of them fatal.

Walking/jogging or cycling through the veld is also dangerous because one could be attacked by criminals while moving through these secluded areas. In my opinion, any development that takes place in Ga-Rankuwa should be located in areas where it can bridge the missing gaps and link the Kasi's urban islands. It should also act as a critical mass to attract more development to effectively stitch the Kasi back together and eliminate the buffer zones. These areas do not have to become completely built up, a series of park spaces, walking/jogging and cycling paths could link several developments together. This could make the Kasi more walkable and bicycle friendly through the creation of networks of safe walking, jogging and cycling paths through scenic, natural environments.

In this way the Kasi could be regenerated through development on both the urban/town and building site-specific scales by a series of simultaneous interventions, stemming from an integrated plan.

METHODS AND APPROACHES FOR WORKING WITH COMMUNITIES

Before one can approach a community with a project, one must develop means and ways with which to work with communities. Before these means and ways can be developed, one should establish if the community would like to be worked with in the first place. This part of the thesis queries whether communities can create their own architecture without architects or if an architect is required to step in and show the community the way. In this way the question of an architect's significance is raised and the architect can gain a community perspective. This perspective should generate ways in which to interact with and gather information on the township. It should also illuminate the advantages and disadvantages of working with communities.

FIGURE 23 - Community (Source; ProBlogger
<http://www.problogger.net/archives/2009/02/28/8-tips-for-building-community-on-your-blog/>)



their own buildings, to a world where building construction is almost strictly the architect's domain.

In orthodox architectural history, the emphasis is on the work of the individual architect, while in vernacular architecture, the accent is on the communal enterprise. This vernacular architecture can be defined as a communal art, not produced by a few intellectuals or specialists, but by the spontaneous and continuing activity of people with a common heritage, acting under a community of experience (Rudofsky. 1964)

It is liberating to realise that people can get on without architects, but the truth is that architecture and architects evolved through this. There was a time when there were no architects, and as architecture evolved, architects became necessary because a degree of specialisation was required which required a set of skills not common to everyone. Historically, great architects with a range of skills (e.g. engineering, architectural, military design skills etc.) and experience were used. Currently, architecture continues to diverge into degrees of specialisation. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

The idea of communal architecture may sound beautifully poetic, but there are very few people today who have a community of experience in terms of building construction. The village practices of passing down such skills are dying out at a faster and faster rate. As more and more communities become more urban, they tend to rely on skilled professionals to as-



FIGURE 24- Architecture without Architects
(Source; <http://www.warquitecturas.com>)

Architecture without Architects

It is a well-known fact that the existence of architecture predates that of architects. Yet, we have gradually moved from a world where people designed and constructed

sist them in the construction of their homes and buildings. Nic Whitcutt's ideas about the evolution of architecture lead one to wonder how the communal art of architecture wandered so far from its community origins.

“Part of our troubles results from the tendency to ascribe to architects or, to all specialists for that matter, exceptional insight into problems of living when, in truth, most of them are concerned with problems of business and prestige.” (Rudofsky. 1964)

Is it possible that architecture has gone from being a communal art to an individual art revolving around an individual principles and ideas? Is it possible that architecture as a profession has changed built environment for the worse? How can we recapture the community, vernacular construction methods and ideologies of the past as architects today?

Architecture will probably never again be a communal art because of the way in which communities and architecture itself have evolved up to the present day. Yet perhaps there is a way in which we can recapture the community of architecture. Perhaps all architecture is actually a community project and interaction with the residents and occupants of the area around any site should be part of the design and construction of any building type particular to that



FIGURE 25 - Draughtsperson http://www.chow.com/about_6623539_job-description-draughtsperson.html

site. In this way, every building would serve to educate the residents of the area in which it is built on the various functions of architects and how they can be of use to any individual.

The architect as draughts person and /advisor

A draughts person is not known for being particularly adept at spatial visualisation or design, but is known to be quite proficient in technical drawing. This implies that all the technical skills necessary to draw-up a building are there, but the knowledge of what makes a building functional and comfortable is little or non-existent. However, with the addition of the term 'advisor', it is implied that the lacking skills are covered therein. Thus being a draughts person and /advisor reduces the architect to a consultant on the project, where only advice is given but no decisions are made.

The crux of this matter lies in who makes the final decisions. According to Wates and Knevtitt "The activity of community architecture is based on the simple principle that the environment works better if the people who live, work and play in it are actively involved in its creation and management, instead of being treated as passive consumers." (1987:13) The way in which this would work is if local communities are given "the resources to enable them to put their energies into action – financial resources certainly, but also the resource of professionals who are willing to work alongside communities rather than on their behalf." (Wates and Knevtitt 1987:11) It has been established that the community does require the skills of architects, especially in terms of "the boundaries of legality and illegality" and "finding ways of creating solutions and by-passing obstacles." (Wates and Knevtitt. 1987; 11) Yet most communities feel that architects take the extent of their require-

ment too far and in this way undermine the people for whom architecture is constructed.

It appears that the issue of who makes the final decision is tied to issues of self-empowerment and degrees of control. "The crucial issue today is how to give people more pride in their environment, involvement in their housing and more control over their lives, all this leading to increased confidence and hope, a development of new organisational skills and a consequent flourishing of new enterprise. We are talking about the regeneration of thousands of local communities..." (Wates and Knevtitt. 1987:15)

This could explain the behaviour of people who destroy public property even to their own detriment. There is possibly a "link between social unrest and the degree of control that people have over their environment." (Wates and Knevtitt. 1987:16)

"When people who inhabit any environment are effectively involved in its creation and management, it 'works' better. It is likely to be of higher quality physically, will be better suited to its purpose, will be better maintained and will make better use of resources... and the people's initiative and enterprise. Also the process of involvement, combined with the better end product, can create employment, can help reduce crime, vandalism, mental stress, ill health and

the potential for urban unrest, and can lead to more stable and self-sufficient communities, and to more contented and confident citizens and professionals.” (Wates and Kneivitt. 1987:20)

The issue of self-empowerment and degrees of control is not limited to the design process, but also to the management process. The management process starts from the construction phase; this phase is usually handled by a labour team managed by an architect or project manager.

Wates and Kneivitt seem so suggest that this too should be given over to the people. They also state that “mismanagement of the built environment is a major contributor to the nation’s social and economic ills...” (Wates and Kneivitt. 1987:17) Although this may be true, this mismanagement may also be attributed to the corruption inherent in some professionals involved in the industry. This taints the perception of all built environment professionals in the eyes of communities. Unfortunately, corruption is inherent and pervasive, even the leaders of communities are not exempt from its temptation.

These issues do not present instant solutions “communities change in their needs and aspirations, cities grow and shrink, and there is a continuous process of renewal which can be helped – or hindered – by experts. The real task for today is to create a partnership be-

tween those different sectors that have different resources to offer: the public sector, which can often assist with the supply of land, the private sector, which has the finance, the professionals, who have the skills, and the voluntary movements – housing associations, cooperatives, self-build associations, etc., which know the immediate needs and have the commitment to resolve them.” (Wates and Kneivitt. 1987:11)

Nic (an architect who deals mostly in community projects), believes that as an architect, you cannot reduce yourself to just being a draughts person because that means denying possibilities that could come into a process. He, along with many other professionals (including Wates and Kneivitt), argue that the more they involve the users, the richer the architecture becomes, and that what is created is a new vernacular, harnessing new technology and making it appropriate to the needs of modern society. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

This is, of course, true, but this involvement is quite a taxing process for all parties involved. The number of people that tend to be involved in community architecture projects (this is excluding the community), tends to be so many that it impedes the progress of development. This is because people all bring various politics and points of view to the fore and usually don’t all have the same end goal in mind. This makes the process of working with communities even more trying as the situation stipulated above is usually significantly increased and the potential fall out more

difficult to avoid. Often, a lot of projects never see the light of day because of the inability of such a large body to come together and jointly go through the process of decision making.

For such a process to work effectively, there must be a fundamental change in the roles of everyone involved in the development process. For professionals (architects, planners etc.), it means using their knowledge and skills to help people solve their own problems rather than dispensing wisdom and solutions from a distance, becoming enablers and educators rather than preachers and providers. As well as assisting people in their own homes and neighbourhoods to understand their problems and devise solutions to help them solve them. For citizens, it means willing acceptance of responsibility for the environment, and being prepared to devote time, energy and resources to learning how it works and how to improve it. For everyone it means developing a ‘creative partnership’ with all the others involved. (Wates and Kneivitt. 1987: 20-21)

The 'super-hero' architect

This kind of architect is the one we are most familiar with in the building construction environment today. This architect deals only with the client and other relevant specialists. In this case, the client would be defined as the one who funds the project. If the project is a standalone house this situation is ideal because the chief financier and the end-user of the project are usually the same person. Yet in large-scale projects including public spaces, large programme and large end-user groups, the financier and end-users are not the same. This is partly due to the quantity of people ascribed to the end-user group and the fact that often the financier is more concerned with the building's image than the needs of the end-user group. In such cases, the client/financier leaves it to the architect to incorporate design principles that focus on the people who will use the building, rather than focusing on the building as a product. Architects who are put in this position often conduct research; mapping, site analysis etc. yet more often than not, they do not go to the effort of seeking out and communicating with potential end-users of the project.



FIGURE 26 - Super hero architect (Source: <http://www.homedepot.com> and <http://www.promatic.co.za> edited by O.T.T Mabusela)

This behaviour is mostly because, as Nic states “you always kind of imagine that there’s going to be a community and the truth is, there’s not.

There are just people who come together and sometimes they get on better and sometimes they get on not.” (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

As a practicing architect today, it isn't always easy to find a group of people who are ready and willing to assist you in a project where you will gain financially and they will not. Also, often the client has time constraints for the completion of the project and is not willing to 'waste' time talking to people who are firstly, not professionals and secondly, not financial partners in the project. We live in a world where money talks and the common perception is that if you are not paying for it or being paid to do it, then you should have nothing to do with it.

Nic believes that this perspective is just as misplaced as the notion of 'Architecture without Architects' and the notion of 'The architect as draughts person/advisor'. According to him these notions pertain to exclusion and deprive the project of possibilities and opportunities that result in truly great architecture, both functionally and aesthetically. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)



FIGURE 27 - Form-making (Source: <http://www.flonline.de> Bildnr./image no: 2112693)

The architect as form-givers for others

These alternatives seem to suggest that you can only have either/or but you can actually have it all. If you reduce it to any of the extremes, you will be losing out on a vast amount of opportunities. This is not only true in community projects but true in any project of architecture. It is much better to work together and pool together the various skills that come from all the people that can be involved in the project. Just because the architect has a lot more skills that deal with the project than anyone else involved, it doesn't mean he/she should have the biggest influence over the project. Rather the architect should put forward their notions of what is negotiable and non-negotiable and all the other people involved in the project (including the end users) should do the same and a solicitation procedure can happen almost like a jury session. Yet have the community/end user as your client and don't lose focus on the interest groups (e.g. elder vs. younger generation). (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

and it is the architect's task, not the public's, to present the reasons that design can help." (Bell. 2004:13)

Another approach to finding a client is to undertake research into a specific community or issue, which can reveal problems in need of a built solution. (Bell. 2004:26) This is where this dissertation comes in; often the client is aware of the problem, but not aware that there is a possible built solution for it. This can often be the first part of interacting with communities in the creation of a community project. In this way "architects' greatest contributions can be as the form-givers for others, shaping lives in the most fundamental and personal ways." (Bell. 2004:13)

Bear in mind that this is only the first step in being a form-giver; that identifying the problem and the potential built solution will only point you in the direction of the group of people who will become the client. "As we move to actually designing with a specific client, we strive to meet two guiding principles: disclosing the process and sharing the decision-making. Explaining the design process to the client from the beginning and detailing opportunities for their input help foster a productive working relationship." (Bell. 2004:30)

Therein lies the greatest difficulty, working with a community requires one to be more than just an architect; "successful participatory design requires an ability to move across disciplinary and epistemological boundaries, from community organising to design, from expert knowledge to local wisdom. An ability

to grasp these dimensions of place-making in communities can serve to deepen the practice of participatory design." (Bell. 2004:52)

Most architects do not have these skills and are not trained in the ways necessary to acquire them. This is despite the fact that the hopes and dreams of many communities depend on the visioning skills of design and the practical skills of construction budgeting. These are services in which architects are trained and which equip them to play an important role in community projects. (Bell. 2004:141)

Thus architects need to develop more skills specifically pertaining to community interaction and involvement. It is clear that community involvement is important and so are the professional skills of architects and other practitioners of the built environment.

Thus all four potential roles of architects are important and must each play a role to greater or lesser degree depending on the nature of a project.

As an architect, you have to be a facilitator. Not the common misconception of this leader or hero that comes in and saves the day. You only get an interesting project and great design when you are balancing a whole lot of constraints. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

When the architect is cast as a form-giver, the role of the architect; as we know it today; does not change. Instead it is the person or group to whom the title of 'client' is ascribed that changes. "Traditionally, architects and clients start their working relationship when the clients, who understand what architecture is and what they need from it, contact the architect. But when architecture is a community service, it is the architect who seeks out the clients." (Bell. 2004:23)

The client being the community for whom the architecture is to be constructed. This presents a major problem as this version of the client does not always understand what architecture is and what it is they need from it. Sometimes, this client is not even interested in finding out the ways in which architecture can improve their lives. This is because the greater public does not actually have access to architects, mostly because of the cost implications that are associated with hiring an architect. This makes it difficult for architects to find and serve this client.

The big question then becomes "how can architects increase the number of people they serve? First, they must reassess the service and benefits architecture provides. Defining those is necessary, because the greater public -the 98% without access to architects- certainly does not understand what architects do,



FIGURE 28 - Working with communities (Source: <http://www.socialnorth.com>)

of community-based design.” (Bell. 2004:45)

Community organisations are more likely to be considered for funding (especially if several organisations campaign together) of a community project than a built environment professional or even a professional built environment company. Community organisations are easier to mobilise because they are already members of the community who meet regularly to discuss agendas that are pertinent to their lives, neighbourhoods, religious associations etc.

Including local businesses in the community will help, especially in the distribution of information about the project to the residents and the customers. Once the different organisations in the community have worked together for one community development project, they will hopefully realise the power they have to change their environments. This will make them more likely to band together in the creation of future community development projects, and will hopefully reverse their current roles in community development projects from inactive to pro-active. In this way, half the problem of community architecture, namely the search for and the involvement of the community in a community project, will be resolved. The only issue that will then remain would be to equip architects with the necessary skills for working with communities.

Only when we as architects begin to ask ourselves “What problem are you trying to solve?” rather than “What service are we capable of providing?” (Bell. 2004:63-65) will we be able to forge a path that will keep us clear of both extinction and the narrow-mindedness of casting ourselves as the super heroes.

The advantages of working with communities

“There are obvious things that you will hear again and again. One of them is about getting buy-in right from the very beginning. This means making sure that whatever project that you are working on has been identified in conjunction with a community group. However, you will find, even in some well-known projects that this first step is missing. So it might be considered a great project but what if it’s not really needed or wanted? Then from the outset, it is potentially (not necessarily, but potentially) DOOMED. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

Based on my research, it appears that one of the best ways of communicating with a community is to approach community organisations. Once the community organisations have been brought on board they can be conglomerated into a group that will spearhead the project and organise publicity and inclusion of the greater community. “Strategic participation- the use of citizen involvement to build a base of local power and support, produce a project identity, and attract resources for project implementation- is an integral part

obvious thing is that giving 197 beneficiary households one settlement plan to get their farms back doesn't make sense. Some people just don't want to farm anymore, there's old people that dream of the farms that were taken away but actually won't be able to do the work anymore. It's not a homogenous thing anymore. How do you then even begin?" (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

This is where a technique called participatory rural appraisal (PRA) comes into the picture. It is used as a mapping technique to help people figure out what their real priorities are. When working with a large group of people, they tend to gravitate into like-minded groups and this is an excellent premise on which to base certain exercises. Through simple ranking and prioritisation of elements, as an overall group, it is possible to get people to work through developing a list of what everything they would want, a type of wish list.

Then in smaller groups, one would workshop around ranking what would be at the top, second and third. If there's a disagreement, you bring the smaller groups back into the overall group and have them try and thrash it out. Whether they resolve it or not, they will start to realise the implications of working together as a community and the responsibility that comes with making the decisions yourself. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

One of the most successful exercises involved 10 pieces of card and string. This was given to the commu-

nity group to link the cards with the string and see how much string they used. They laid the cards in a straight line on one side of the string and used up 10 cards worth of string. Then they were told that they were going to be charged for the string and were asked to see if they could use less string. Then they put the cards back to back on both sides of the string and only used 5 cards worth of string. They were then told to pretend that the string was a road and that the entire infrastructure goes down the road. The question then put to them was how to take each of the 10 blocks divided up among them and link them such that they had access and mobility affordably. This encouraged the group to play around with various arrangements like a challenge, a puzzle, and people got very intense and passionate about it. Thus the group had begun to interact and work together such that we got all the stands linked to the road with individual access and no wasted roads. This exercise helped people get excited about what PRA really means. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

"Initially, what had happened was that the Department of Land Affairs had pretty much screwed the whole thing up at the outset because they just took those two pieces of farm and more or less divided them into 200 sites. We were doing mapping with special interest groups, the guys that had worked the land, who knew the

Methods for working with communities

"Our first method of understanding our clients' needs, wants, and localized conditions is to undertake surveys." (Bell. 2004:28)

Through neighbourhood meetings, community events, and design workshops, it is possible to successfully chart a long-term plan to rebuild a community. (Bell. 2004:101)

Methods and techniques to solicit input from community members range from slide show presentations and visual surveys to guided walking tours and design workshops. (Bell. 2004: 48)

According to Mr Bell, there are many ways to solicit input from community members. Nic Whitcutt, an Architect known for his community projects, had the following to say during the interview conducted with him about design workshops:

"We had a project in Driefontein, in Mpumalanga, which was a classic example of a group of people that had been forcibly removed, their farms taken away from them. A government restitution programme bought parts of two farms for this group, which constituted of about 197 beneficiary households, which were meant to be represented by a group of trustees. There were some interest groups, but the

land. We would walk through the site with a site diagram and map rocky areas and steep inclines, where nothing can be constructed or grown. We would also map the grasses (sweet and sour) and the various areas where different kinds of crop were planted. All this gave us an agricultural overlay. Then we superimposed it over the urban plan done by the Department of Land Affairs and found that some of the properties were located on rocky ground, on a steep slope and other properties were located where the best grasses grew (sweet grass) and were close to the water sources. It then seemed as though the trustees who were supposed to be looking after a group of people were actually only looking out for themselves." (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

Through the PRA process, one could never be accused of only looking out for oneself because the people make the decisions themselves. The PRA process also helps to orient a project towards the skills, materials and technologies that are already present in the area. This helps to further minimise costs and benefit the economy in the area where the project is constructed.

When asked how he found the appropriate members of these PRA groups, Nic told me that he usually interacted with someone who had knowledge of the community. This person would then identify the people

that were quite key within the community because they were, for example, mothers who ran a particular kind of support group or farmers etc. He would also include people who were generally interested in the building, construction industry and together they would form the groups that he would work with.

Each group would have a facilitator to help with language and understanding skills and he would explain, through them, the purposes of the various exercises with an understanding that other things would come out. In these workshops, people would always be put into mixed groups so that one could get a spectrum of ideas that enable the perception of people's priorities in different areas. (Whitcutt, N. Interviewed by: Mabusela, O.T.T. 12 June 2012)

My personal experience with working with communities

Bringing a community into a project that has not yet gained much momentum is difficult, because as Nic said, a community is not just a thing you can call upon and present ideas to. It is people, who are often struggling to make a living and have no time for dreams. They applaud any effort to improve the community, but are not keen to work on something that may end up being a waste of time. One must develop other ways to gain insight into the end-user's requirements without the use of time-consuming workshops. Community groups are more likely to be founded on projects that already have momentum.

Equally difficult is the task of building this momentum. As per Nic Whitcutts' suggestion, I attempted to get the buy-in of a community group right from the start. Before conducting any interviews in the Kasi, I made contact with Ga-Rankuwa's Thusong Service Centre, a one stop centre for services and information by provincial government. I aligned myself to the Community Development Workers (CDWs) as my study was along the lines of community development. I was hoping that this organisation would help me identify the key people to form what would be my community group. Despite their attempts, attendance at the meetings was dismal and none of the workshops I had planned ever came to fruition. One of the CDWs had warned me that this would happen, she informed me that it was difficult to form groups to spearhead projects in the township. The organisation also tried to get me a meeting with the Ward councilors, who are in charge of three different parts of the township called wards. This meeting never came about due, I suspect, to internal politics and suspicions about my motives. Eventually I managed to find the right people to talk to, but never managed to assemble them into a group. Instead, through interviews that included getting them to sketch their ideas, I managed to gather some information that was integral to site choice and design principles.

Conclusion

Workshops and various other techniques for eliciting input from members of a community relevant to a project are good ideas, but only if these members are willing to meet and form a community group. Sometimes one does find people willing to form community group, but they are not able to make most of the meetings due to other more pressing commitments. Regardless, the project must go on; the need for the project and its nature has been identified and often the project is quite urgent (as was the case for this dissertation). The other important information necessary for its practicality for public purposes must be found in other ways. Community participation can be defined as interacting with the community as a client. In typical architect-client interactions, one has meetings with the client on their needs and specifications to clarify a brief. From there, the first architectural drawings are draughted and a consultation process ensues. Sometimes approval is gained in the second or third meeting (sometimes it takes longer), and the project commences with minor adjustments in the duration of its construction. As long as the community in a community project is treated like a client by the architect, with the relevant consultation taking place with relevant key groups and relevant approvals given, I believe that participatory assessment has taken place.

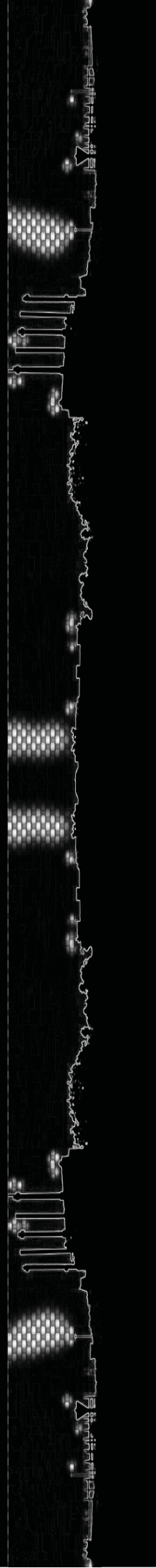
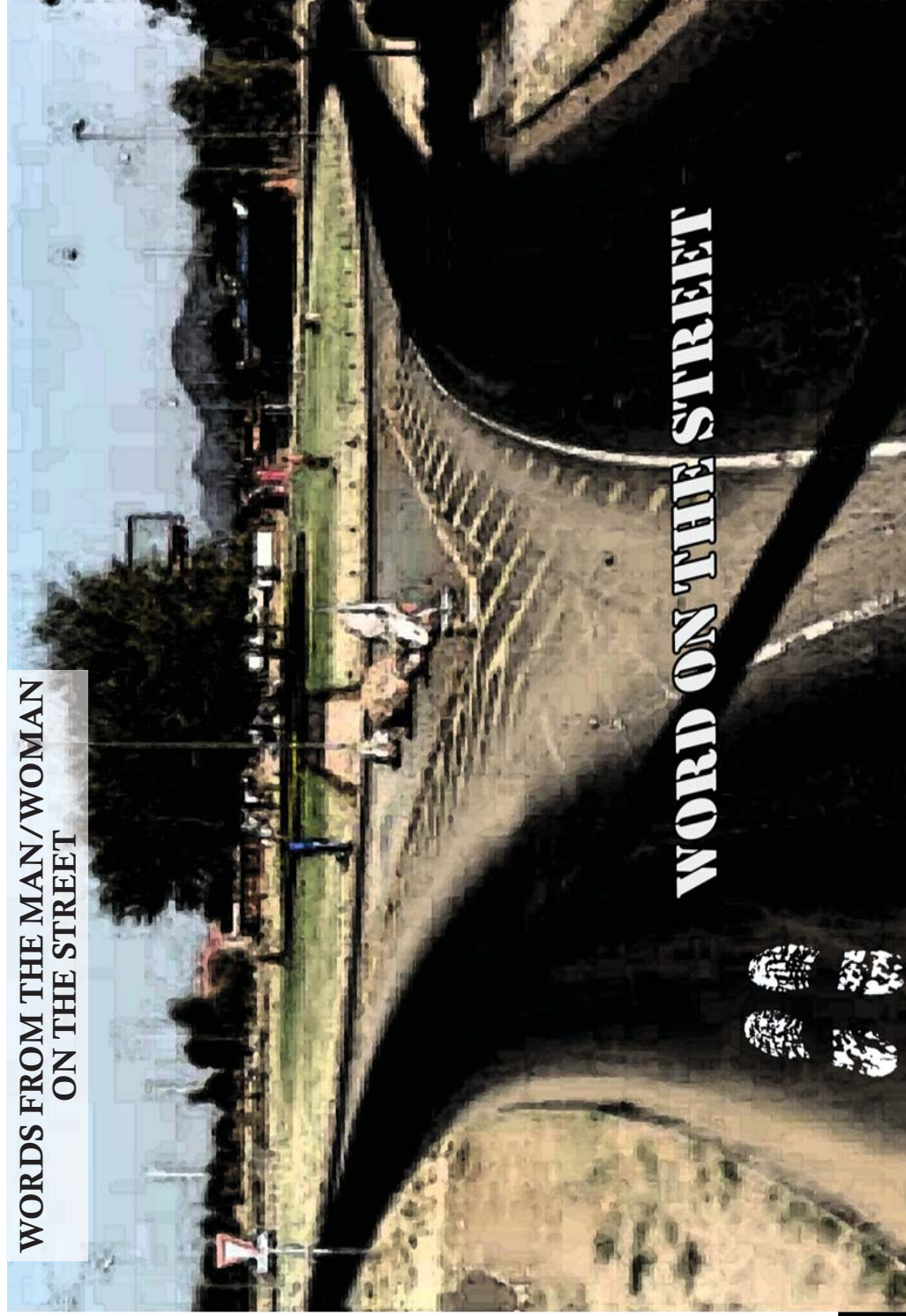
After establishing small scale manufacture as the focus of this dissertation, I decided to make contact with the local small scale manufacturers in Ga-Rankuwa in order to get a sense of the requirements.

I got in touch with a Mr. D. Ramasodi, the acting senior tenant coordinator at the North West Development Corporation (NWDC). According to the pamphlet I was given, this organisation's mission involves promoting sustainable business and human resource development. Their focus is the development of the manufacturing sector from small to large scale manufacturing.

The NWDC manages Ga-Rankuwa's Industrial Estate and were kind enough to provide me with a letter of introduction and a list of all the local manufacturing companies under their jurisdiction. I conducted interviews with

FIGURE 29 - Motlegi street/Pilane Street Ga-Rankuwa Kasi. (Created by O.T.T Mabusela 2012.)

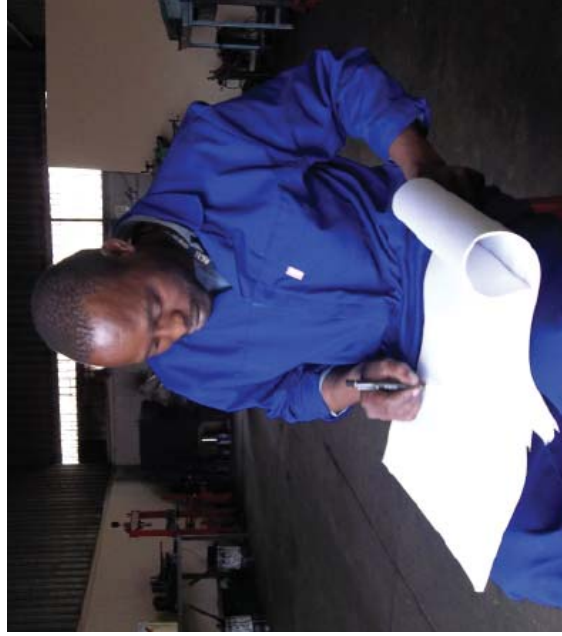
WORDS FROM THE MAN/WOMAN ON THE STREET



the few I managed to find (all 100% black owned), and this is what they had to say:

1. Naphtali Ndlovu – Car suspension, prop shafts, brake, clutch and general repair. He requires more equipment (post lifts) for repairs, more space approx. 500sqm. Currently they are forced to work indoors and the space is insufficient, they cannot work outside because the weather sometimes prohibits this and it is impractical to move a damaged car back and forth during its repair. A covered drive would be sufficient to solve this particular issue as the cars and the people repairing them would be protected from the elements.

Another major issue they face



is the inability to keep accounts, they cannot afford to hire someone to fulfill this purpose and must do it themselves. They also do not have the necessary skills or time to do their own book keeping and often end up committing their accounts to memory.

This led me to believe that they do not submit to income tax as they have no records of their income. This is one of the biggest problems in the township, a lot of residents do not pay tax, thus their municipalities are unable to provide the services and build the infrastructure necessary to adequately service the community and have a real impact in the economy, reducing unemployment, poverty, etc. This,

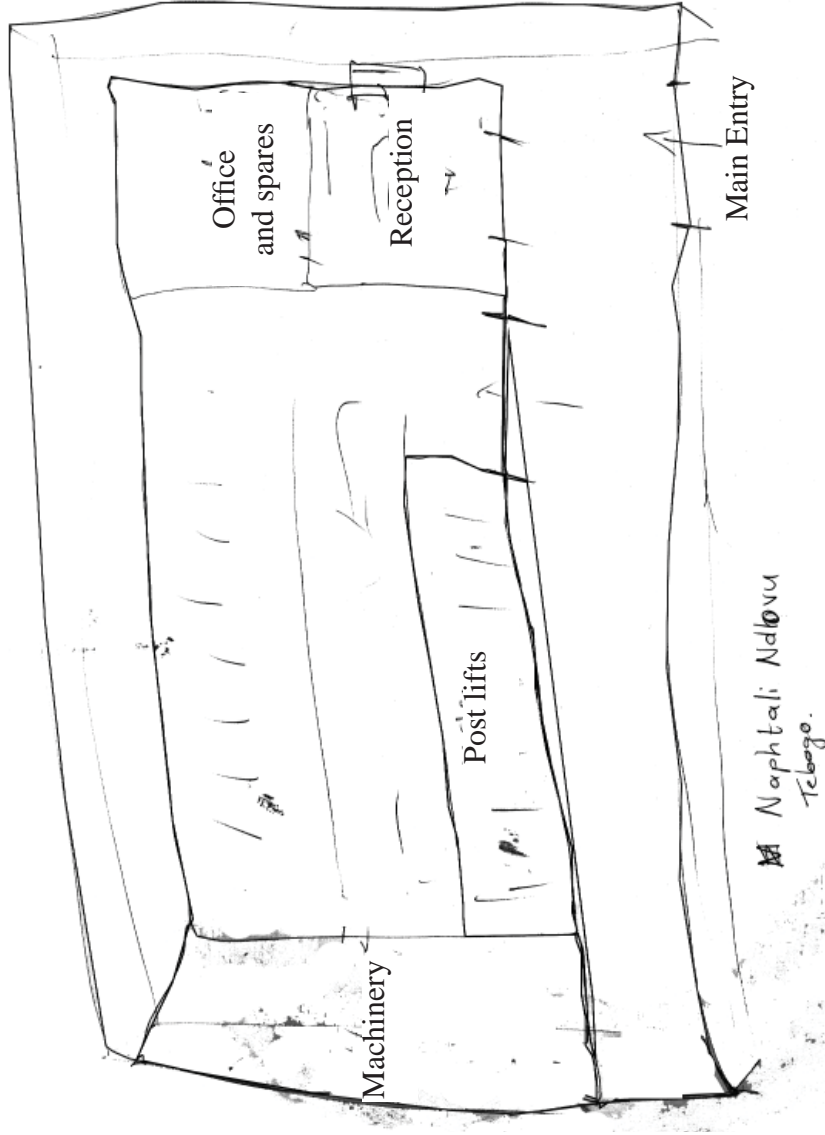


FIGURE 30 - Mr Naphtali Ndlovu drawing his ideal work space (photographed by O.T.T Mabusela)
 FIGURE 31 - Ideal work space (By Naphtali Ndlovu 2012)

in itself, is a challenging problem because if the problem of unemployment is not rectified, then the amount of money in the township municipal coffers is not likely to increase.

Naphtali confirmed my belief about the lack of income tax submission and further expanded upon the other implications of the lack of proper book keeping. These implications apply to the business itself and prevent them from applying to the bank for business loans to extend property or buy parts or equipment. In essence, the inability to keep accounts stunts both the small business and the local infrastructure and therefore its economy. This led me to question if there were any support structures in the township for small businesses. According to Naphtali, such support structures do exist and he had recently signed up his business to one called Satec and knows of another one called AIDC. The one to which Naphtali is currently subscribed provides the bookkeeping skills his business so desperately needs. These organisations also help small owners' access funds to start or boost their businesses. According to Naphtali, these organisations are extensions of government and also provide a variety of skills required to run small businesses.

The inability to keep records, luckily, does not prevent them from being able to pay insurance on their prop-

erty and equipment as this only requires money and not records.

Naphtali says that there is a lot of room for the growth of small scale manufacturing businesses and that they contribute a lot to the local economy in terms of job creation and rand circulation within the township.

In his response to my question to him about whether he thought his business could benefit from sharing facilities with other small-scale manufacturing businesses, he said he does think it would help in terms of renting and service costs and agreed to draw an example of the kind of space he requires for his business. He also pointed out that he needs office space for his customers as this interview took



FIGURE 32 and 33- Mr Ndlovu's brake and clutch business premises (photographed by O.T.T Mabusela 2012) The premises are run down, inadequately ventilated and lit with no provision for communal spaces for socialising and preparing or consuming meals.



FIGURE 34 - Ncozana Trading Brake & Clutch (photographed by O.T.T Mabusela 2012)

place at the roll-up garage door of his establishment where we sat on two plastic stools. Naphthali's entire outfit is run by four men and himself.

2. Kenneth Maluleke – Ncozana Trading; brake bonding and brake parts for trucks and buses. Kenneth said his biggest concern is his lack of customers as his business is based deep in the industrial area of Ga-Rankuwa

Township and is quite hidden. He has to do extensive marketing in order to alert potential customers of the existence of his business. He says that he would much prefer to be close to the road where anyone driving past would be made aware of his business.

Another one of his main concerns is that he has to look for his own materials for assembling brake parts for trucks and busses and that these materials are hard to find. He would like to have some support for his business and does not know of any of support structures for small businesses.

Kenneth, when asked to describe what kind of business space he needs, answered that all he needs is a large empty space with good ventilation and light. He claims that offices and meeting rooms are not important to him (despite the fact that this interview was conducted standing by the roll-up garage door of his establishment), but thinks that he would benefit from shared facilities.

Kenneth actually has a secretary and an office built out of Masonite board in part of his work space, but it is very noisy there and does not have adequate ventilation. His secretary is one of very few women working in any position in small scale industry. His other employees include one male assistant who works on the brake repair and assembly with him.

This is due to the fact that most industry is perceived to be heavy dirty work. Also because small scale manufacturers are lumped in with large scale manufacturers and



FIGURE 35 & 36 - Ncozana Trading Brake & Clutch premises (photographed by O.T.T Mabusela 2012)



produce goods more quickly and efficiently, and complained of a lack of book keeping and organisational skills. Makula Johanna also bakes and could cater and decorate for events like weddings, and would like to have facilities that could support both her businesses. She approximates that she would require 240sqm of space to accommodate her business needs.

At the time of the interview she was having trouble getting a contractor to repair her property (repairing walls and broken windows). She indicated that she needs financial support as she started the business with her own capital and does not have a lot of customers or exposure to customers. She does not have a trusted supplier who can sell her materials for the production of her goods at wholesale prices and ends up buying from fabric shops. This cuts significantly into the company profits. Johanna said she was not aware of any organisations that assist small businesses.

In terms of programme, she said the business could benefit from spaces like: a show room, reception area, offices and kitchens. She does be-



FIGURE 37 & 38 - Balemese Jwi cc premises (photographed by O.T.T Mabusela 2012)

placed in areas that are far from any local urban centres and public transport routes.

3. Makula Johanna Matlou/Madisa – Balemese Jwi cc. This is the only woman I found running a small-scale manufacturing business. She has three assistants, also women who are proficient in all aspects of her business production. Her business entails producing uniforms, comforters, chair covers, duvets, embroidery, curtains, hats, cutting clothes for hemming and pleating etc.

Her biggest concern is the need for a show room to display her goods which allows for substantial visibility for walk in customers. She also indicated that she needs more machinery (for cutting, pleating, sewing and embroidery) so she can





FIGURE 39 & 40 - Laboratory manager Alfred Siziba's place of work (Photographed by O.T.T Mabusela 2012)

lieve that the business could benefit from shared spaces, it would cut down on rental costs and maybe she could afford to properly decorate her space.

4. Alfred Siziba, Laboratory manager for Earth and soil testing labs. They work with contractors that get tenders to fix roads, they are appointed to conduct earth and soil compaction tests and to test concrete for construction. Alfred said they need about 200sqm of space and more testing equipment. He

said the biggest problem they faced in this business was the issue of exacting payment from the contractors. Sometimes when the contractors have been paid their invoices at the end of the month, they don't pay the laboratory that does all the tests. Usually they end up paying, but only after some time has elapsed. Alfred's laboratory does not seem to have a plan for eliciting this income if the contractors are slow or reluctant. Sometimes they are able to make an agreement with the municipality so that they are paid by the municipality directly instead of waiting for payment from the contrac-

tors, then they get paid as soon as they submit their invoice. This kind of agreement usually only happens for big projects.

The laboratory has a resource that performs their accounting function; he serves as a private accountant who is outsourced by the company. As for an organisation that assists small businesses, Alfred says there is a large laboratory organisation called Rodlab that assists small businesses to get lab training for testing services. When asked what other support he thought his business could use, he said he would want a place that he could own (instead of renting as he does). He needs a place with:

- 4.1 An open space where they could dump the soil (The tests don't contaminate the soil);
- 4.2 A compaction area (for testing the compaction of the soil);
- 4.3 A drying area (to dry the soil for testing);
- 4.4 A testing area (a soil testing lab); and
- 4.5 Offices and a reception area to entertain clients.

The space also needs to be well ventilated because of the nature of the soil tests. He said he needs the business to be located somewhere central, somewhere where they can easily be found. They get clients from Johannesburg, Rustenburg and Pretoria and these clients often get lost trying to find their way to their place of business.

He said he believes they could benefit from shared facilities. He also believes sustainable technology would help the business, especially rain water collection, as they use a lot of water for their tests. Sometimes there is no water and they

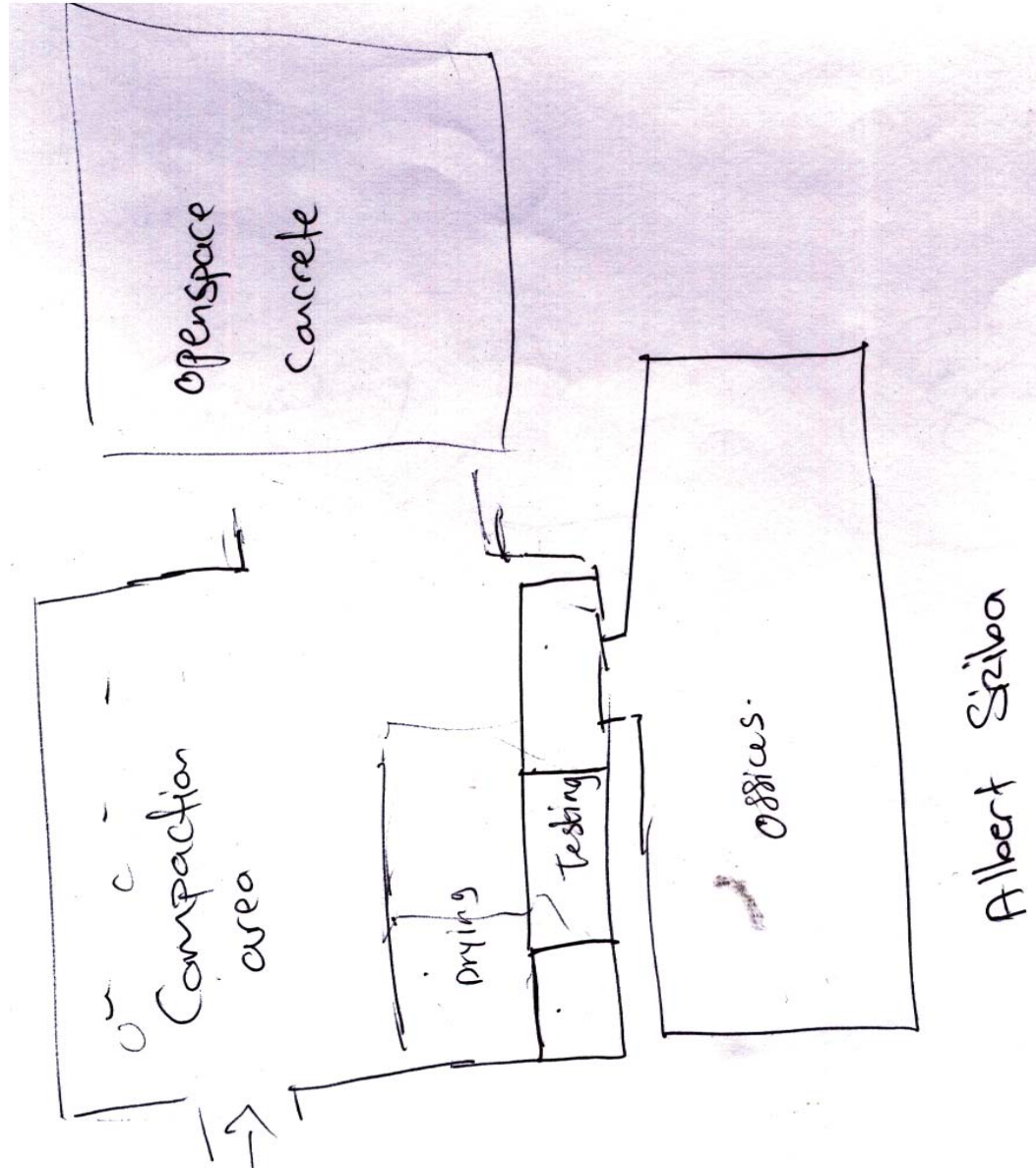


FIGURE 41 - Laboratory manager Albert Siziba's drawing of the ideal work environment (Photographed by O.T.T Mabusela 2012)



FIGURE 42 & 43 - Titus and Jacobs premises (Photographed by O.T.T Mabusela 2012)



cannot conduct their tests. They also do not have an alternative power source like solar power, as they completely rely on electricity, and are unable to conduct their tests if there is no electrical power. During those times when they are unable to conduct their tests, their clients are kept waiting for urgent results, causing reputational damage to the business.

5. Titus Maiffo, Titus and Jacobs This business produces and sells toilet paper. Mr Maiffo works with two assistants and a partner Jacob. His main concern is transport; he complains that he is forced to use his partner's vehicle, a van, which is not always readily available. They also need a bigger vehicle to be able to make more deliveries at once.

His other challenges entail finding a way into the market, they lack a supply chain to distribute the toilet paper. He would like to locate his company in a more public place where it can easily be seen from the street by potential customers. He has the necessary skills to do his own bookkeeping but is desperate for advertising and links with businesses that would be interested in buying toilet paper at factory prices. He also requires financial support, he and his partner started the business with their own capital, and it has been tough for them. They have found a bank that is willing to support them, but the bank wants to see an increased number of clients as it does not want to take a risk on a company that doesn't have a significant customer base. Yet in order to acquire these customers, the com-

pany needs an injection of capital in order to promote itself, attract more customers and produce more goods. For now, they work at the production of toilet paper until about 1pm, and then they fill up the van with the supplies and go door-to-door in order to sell their product.

His company has joined one organisation that assists small companies, but it is based in Win-terville which is about three townships away. This organisation is called Tshwane Black Empowerment Business Association. They assist small businesses by helping them create committees where the businesses can work together. For example, they have a committee for spaza shops where several shop owners can come together and buy their goods in bulk. This enables the shop owners to be able to negotiate a cheaper price with the wholesale companies and save on the cost price but still sell their products as individual shops.

Now that their company has joined this organisation, they can negotiate for shop owners who are also a part of it to buy toilet paper from his company instead of a larger company that already has several supply chains. In this way, the organisation helps with networking and assisting them to find customers. Unfortunately, this organisation does not assist with funds for small businesses. Mr. Maiffo also indicated that he does think

spaces required for his business entail a display room, offices, storage and manufacturing space.

General

Almost all the businesses (both large and small), that are zoned as industrial businesses, are located in Ga-Rankuwa Industrial, on the periphery of the township, just north-west of Mangope highway which dissects the township in half. Its location is very secluded and only members of the population who work there or customers, who already know the location of their destination, ever go there. This location is quite sufficient and adequate and even well suited to large scale manufacturing, but it inadequately meets the needs of small to medium scale manufacture. This is because most large scale manufacturing companies already have a set target group, they already have contacts and a distribution chain. They do not really have a need for locally advertising their goods and usually already have the funding necessary to access materials for production and to construct the kind and quality of spaces they require for business operation (such as canteens, offices, changing rooms, meeting rooms, reception areas for clients and the amount of space required for production).

In contrast, the small to medium manufacturing companies end up being side-lined in such an envi-



the company could benefit from shared facilities like boardrooms, bathrooms, kitchens and restaurants. He also believes that green technologies like solar electricity and rainwater collection would help with day-to-day running costs of the business. His idea of the

FIGURE 44 - Small scale manufacture premises supplied by the North West Development Corporation in Ga-Rankuwa Industrial (Photographed by O.T.T Mabusela 2012)

FIGURE 45 - Small scale manufacture premises supplied by the North West Development Corporation in Ga-Rankuwa Industrial. (Photographed by O.T.T Mabusela 2012)



ronment. They rent derelict spaces from which to conduct their business, because they do not have the capital to buy property and construct or refurbish spaces that can suit their needs. The locations in which they are situated are difficult for already existing customers to find and are nearly impossible for potential new customers to access. This is not always ideal, especially in the case of small-scale manufacturing companies that do not have an established chain of supply and demand. These companies are unaware of the opportunities and support structures that have been set-up for small to medium enterprises and do not have the necessary skills for running businesses. Consequently, a lot of other small-scale manufacturers who produce furniture, building materials etc., were not at their places of business because they had gone out to look for customers to buy their products, which means that potential customers who come to their places of business will be unable to contact them. Another aspect of this problem is that the numbers for these businesses listed in pub-

FIGURE 46 - The toilet facilities provided for the small scale manufacture premises ; these are the only shared facilities in the development. (Photographed by O.T.T Mabusela 2012)



lic directories no longer exist as Telkom has pulled out of the township due to unrecoverable debts. This makes it doubly harder for these business owners to find customers as their cell phone numbers are often not publicly listed for business use as they also lack proper advertising skills.

Small scale manufacturing companies need to be grouped together, share links, facilities, exchange goods and information with each other, and form a community that can launch them into large-scale manufacturing companies. This will enable them to move to their own individual spaces and also provide support to the next up and coming small scale manufacturing company.

Conclusion

- From these interviews I have ascertained that small-scale manufacturers require the following:
- a. Access to quality equipment and materials to produce their goods at an affordable price;
 - b. Access to contacts and networks that can form distribution chains;
 - c. A business location that receives high volumes of both vehicle and pedestrian traffic to provide passive advertising for their businesses and attract potential customers;
 - d. Business skills that enable them to keep their accounts, access bank loans, pay tax and adequately manage and advertise their goods and services;
 - e. Adequate business space for showing their goods, entertaining customers and producing their goods and services quickly and efficiently; and
 - f. Access to information on support structures and opportunities for small businesses.

CHAPTER 5

URBAN PLANNING PATTERNS

This visual analysis aims to conduct an examination of Pattern languages of different urban planning models. It makes use of urban planning principles from Christopher Alexander's book "A Pattern Language; towns, building, construction"; as it provides a language for building and planning. The book describes patterns for towns and neighbourhoods. Alexander states that a pattern language has the structure of a network always used as a sequence, moving always from the larger patterns to the smaller. These are just some of Alexander's pattern language elements that I believed were most beneficial to my study: (1977:xvii-xxv)

Transport, shopping, parking and building heights

1. Local transport area
2. Web of shopping
3. Four-story limit
4. Nine percent parking

Streets and nodes

5. Activity nodes
6. Promenade
7. Shopping street
8. Green streets

Paths gateways and children

9. Network of paths and cars
10. Main gateways road crossing
11. Bike paths and racks
12. Children in the city/ village

Outdoor, high and public places and small industry

13. Accessible green
14. Small public squares
15. High places
16. Master and apprentices (1977:xvii-xxv)

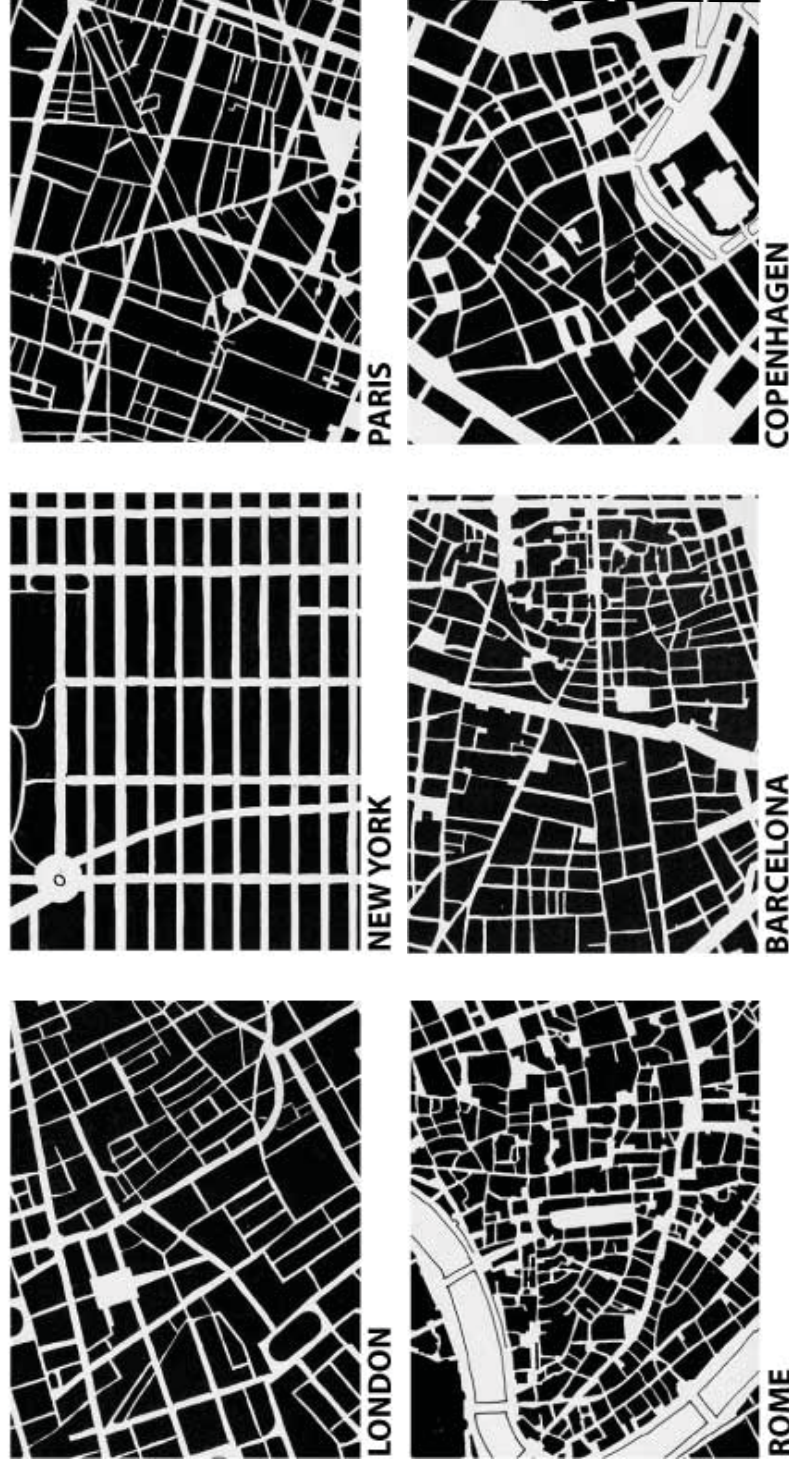
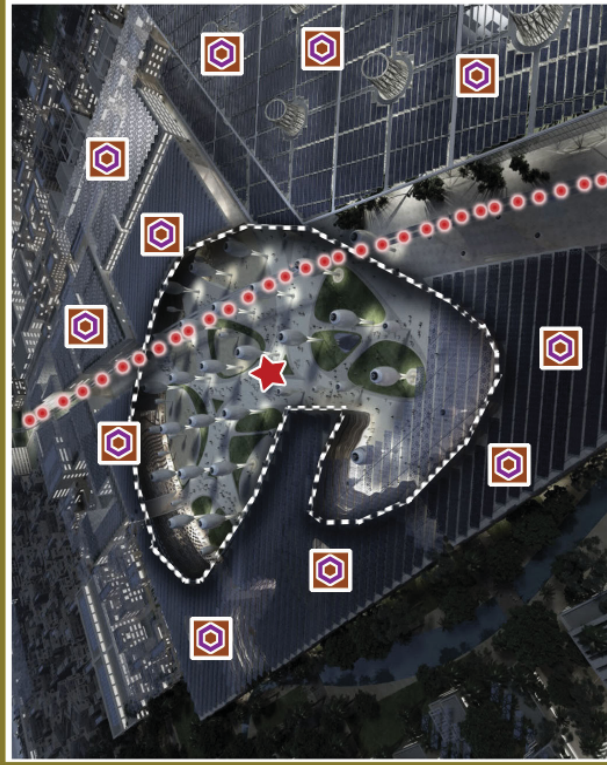


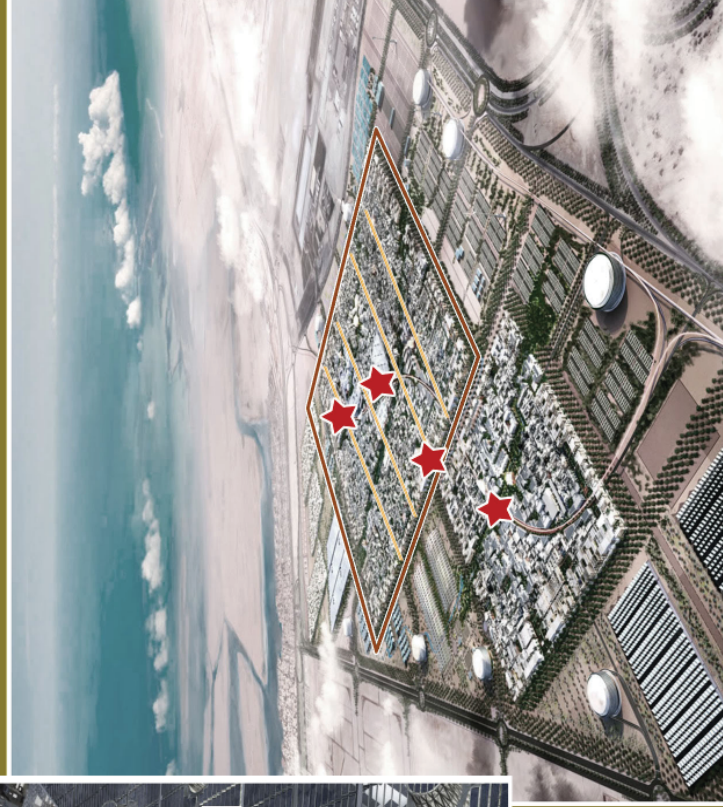
FIGURE 47 - Urban planning patterns. Modelled by Nde, photographed by Pablo. (Source http://www.blablarchitecture.com/category/what_projects/14isie_freetown-house/)
Cited 11 October 2012)

Masdar City, by LAVA (Laboratory for Visionary Architecture) Architects. is the city of the future; positioned at the forefront of integrating sustainable technology into modern architectural design. Masdar City is said to be “The Oasis Of The Future”, a living breathing, active, adaptive environment. The town square is conceived as an open spatial experience, whereby all features; hotel, conference, shopping or leisure, offer the highest quality of indoor and outdoor comfort and interaction.



Masdar City aims to be an iconic beacon that attracts global attention to sustainable technology.

The town square’s “Petals from Heaven” feature interactive umbrellas, open provide shade, and capture energy during daylight hours and fold at night to release heat.



It has pattern elements such as:

* Local transport areas (magnetic public transport system of individual pods)



* Web of shopping

* Four-story limit

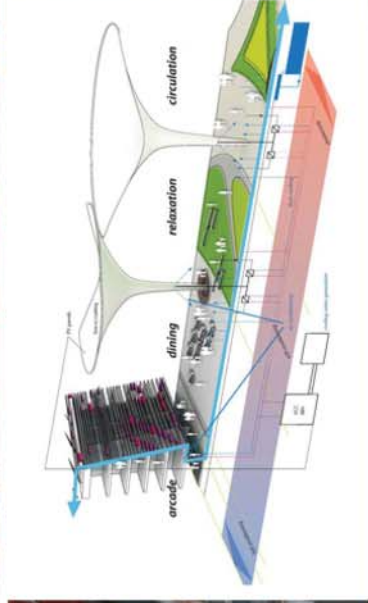
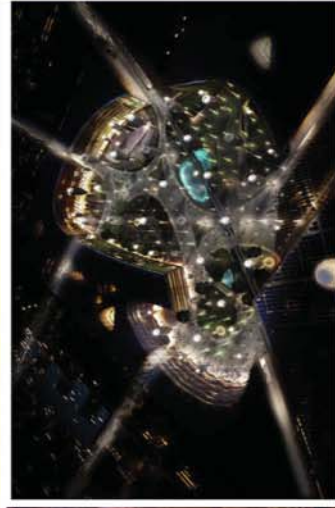
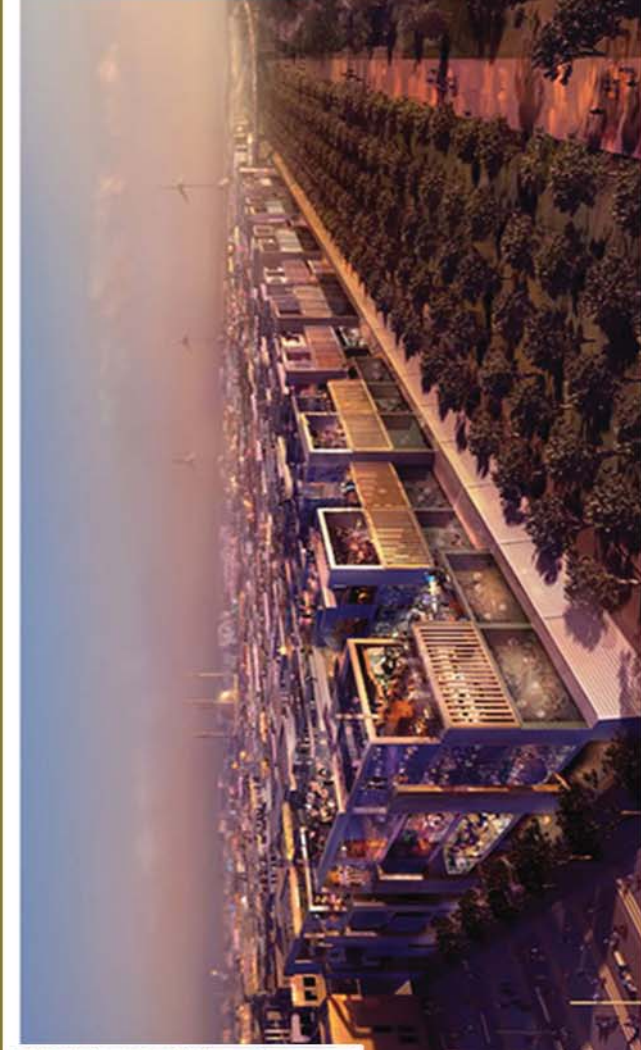
* Nine percent parking

★ Activity nodes

... Promenade

... Shopping street

... Small public squares



* Main gateways road crossing

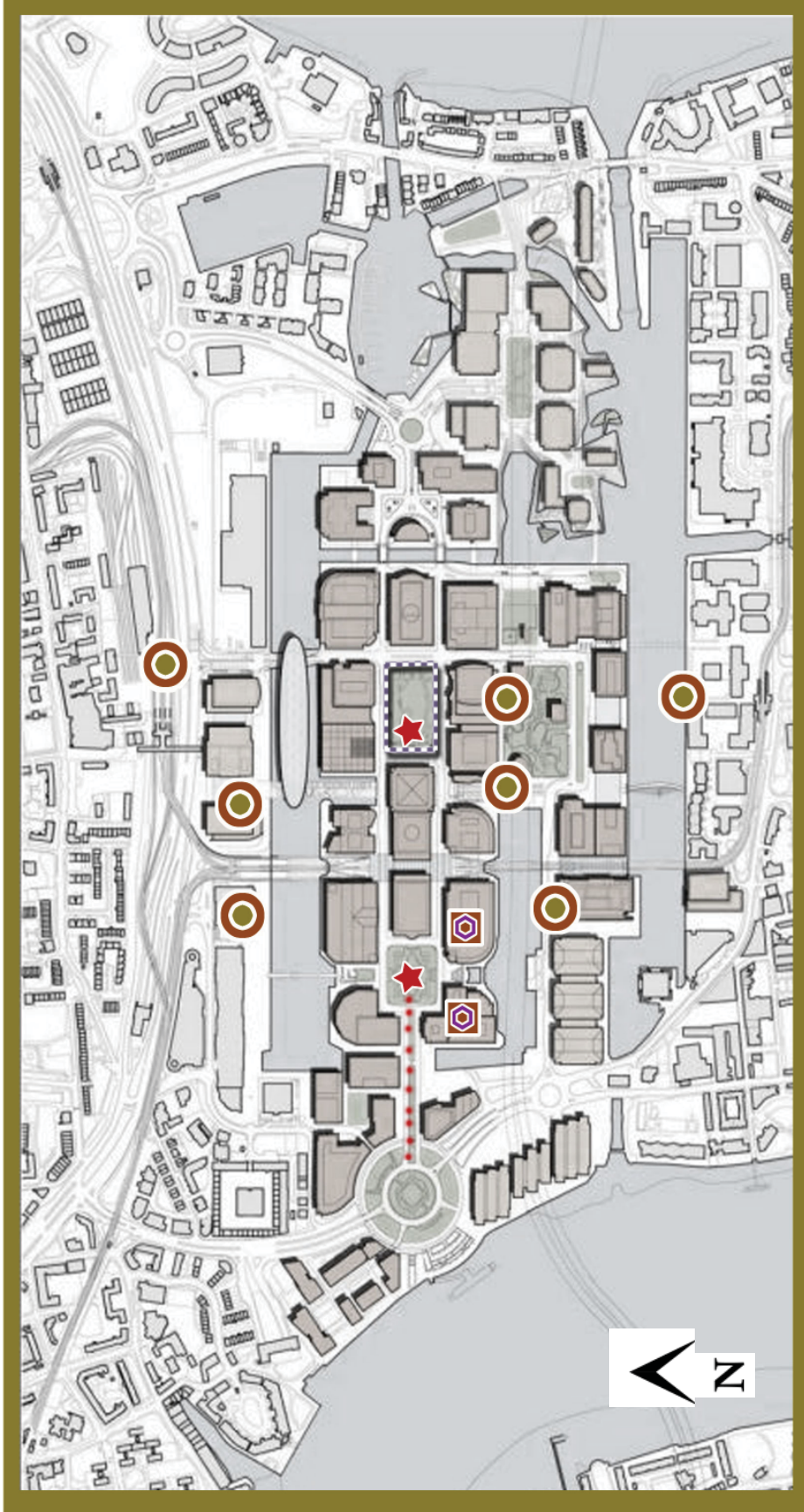
* Green streets

* Accessible green

* Small public squares

* High places

Canary Wharf was designed by Zoka Zola architects, to revitalize a vacated industrial zone within the London Docklands and accommodate the City's expanding financial sector. The master plan established essential connections to public transport, linking Canary Wharf to Central London via the Docklands Light Rail and London Underground as well as ensuring the vital integration of Crossrail in the near future.



It has pattern elements such as:



* Local transport areas



* Web of shopping



* Activity nodes



* Promenade



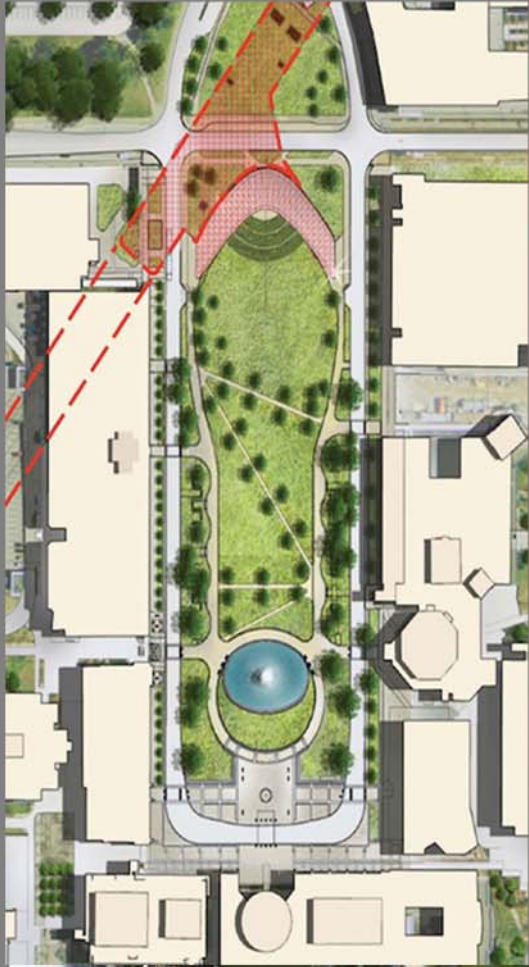
* Small public squares

CANARY WHARF site plan

CASE STUDIES

ECONOMIC

CANARY WHARF



* Main gateways road crossing

* Accessible green

* Small public squares

The Missionvale housing pilot project, by The Delta Foundation and Metroplan, was started to demonstrate that more sustainable environments can be developed through the use of higher-density housing typologies. It is located in the vicinity of an industrial area on the northern outskirts of the Nelson Mandela Metro area (Port Elizabeth). The project maximises on space while minimising on building cost.



LEGEND	COLOUR CODE	TYPE	DESCRIPTION	AVERAGE AREA	NO. OF FAMILY ACCOMMOD
	White circle	S/1/30	Free standing single storey	30	1
	Red circle	S/2/36-S	Semi detached single storey	36	2
	Purple circle	S/2/36-L	Semi detached single storey	36	2
	Pink circle	S/4/40/36	Row single storey	40 36	4
	Green circle	S/4/42	Quad Single Storey	42	4
	Yellow circle	D/2/48	Semi detached double storey	48	2
	Blue circle	D/4/52/48	Row double storey	52 48	4
	Orange circle	D/4/56	Quad double storey	56	1
	Light blue circle	D/6/52/48	Row double storey	52 48	6

These individually owned housing units take the form of free-standing, single- and double-storey semi-detached and single- and double-storey row units, and single- and double-storey fourplex units in a green-field development.

It has pattern elements such as:

- * Local transport areas
- * Four-story limit
- * Nine percent parking
- * Activity nodes
- * Network of paths and cars
- * Children in the city/village
- * Small public squares



		DEPENDS ON HOUSE SPEC & METHOD OF CONSTRUCTION					
NO. OF RECIPIENTS	TOTAL SUBSIDY	LAND & SERVICE COST	RESIDUAL AMOUNT	BUILDING COST/M ²	TOP STRUCTURE SIZE	SIZE PER UNIT	ERF SIZE
1	R 15,000	R 6,000	R 9,000	R 300	30 m ²	30 m ²	240m ²

Typical individual use of R15,000 subsidy

		DEPENDS ON HOUSE SPEC & METHOD OF CONSTRUCTION					
NO. OF RECIPIENTS	TOTAL SUBSIDY	LAND & SERVICE COST	RESIDUAL AMOUNT	BUILDING COST/M ²	TOP STRUCTURE SIZE	SIZE PER UNIT	ERF SIZE
2	R 30,000	R 8,000	R 22,000	R 250	88 m ²	44m ²	280m ² (140 m ² each)

Collective use of R15,000 subsidy: two beneficiary families

		DEPENDS ON HOUSE SPEC & METHOD OF CONSTRUCTION					
NO. OF RECIPIENTS	TOTAL SUBSIDY	LAND & SERVICE COST	RESIDUAL AMOUNT	BUILDING COST/M ²	TOP STRUCTURE SIZE	SIZE PER UNIT	ERF SIZE
4	R 60,000	R 10,000	R 50,000	R 255	222 m ²	56m ²	240m ² (120 m ² each)

Collective use of R15,000 subsidy: four beneficiary families



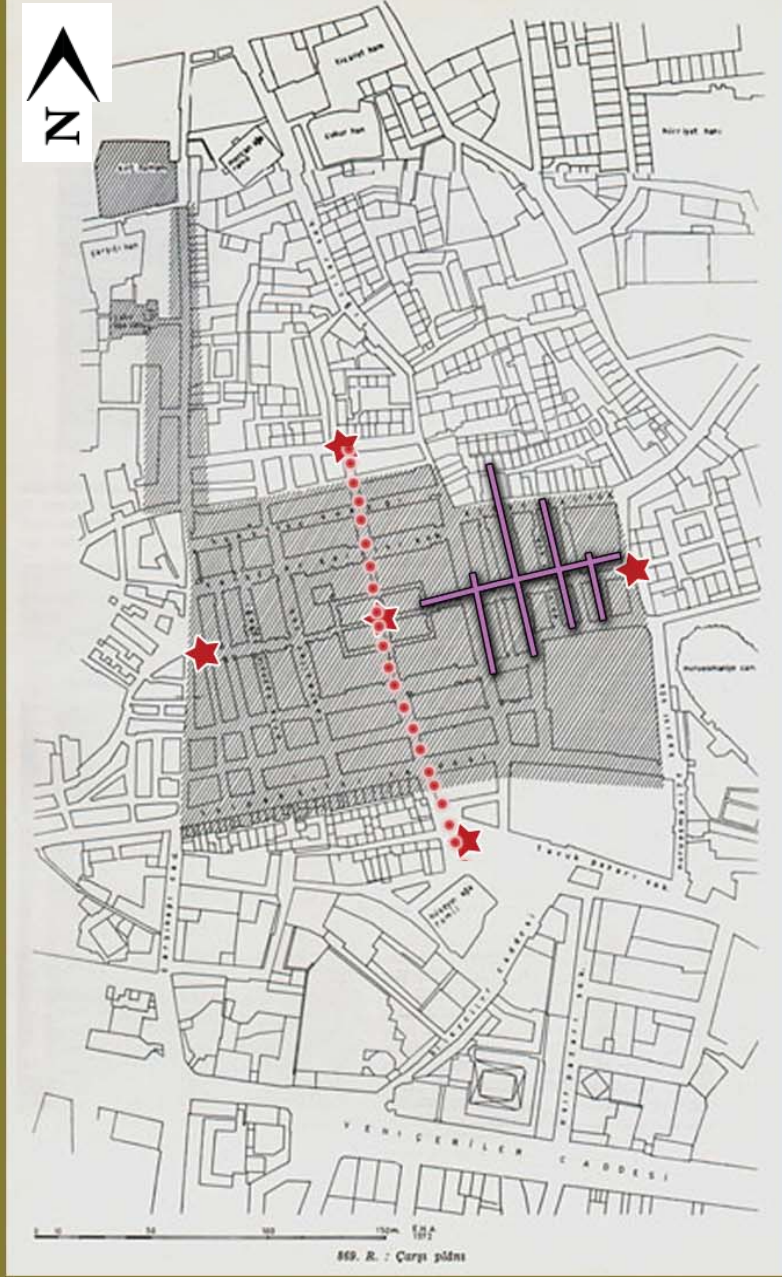
The use of double-storey units brought about streetscapes that were visually and spatially more pleasing. In addition, precincts were more pedestrian-oriented, improving the safety of children playing under the surveillance of adults in the adjacent houses. Most of the precincts contained public areas which were intended as meeting places for adults and play areas for children.

The **Kapalı Carsi** or **Covered Bazaar** or **Grand Bazaar** is one of **Istanbul's** most intriguing sights. This labyrinth of vaulted roofed winding streets and domed buildings evolved over a period of 250 years and has become the hub of Istanbul's commerce. It covers an area of 30.7 hectares (75.8 acres), and consists of over 3000 shops and 61 streets, not to mention ten wells, four fountains, two mosques, and several cafés and restaurants. The heart of Turkey's gold market and unofficial foreign exchange market beat here.

It has pattern elements such as:

- * Local transport areas
- * Web of shopping
- * Four-story limit
- * Nine percent parking
- * Activity nodes
- * Promenade
- * Shopping streets

- * Network of paths and cars
- * Children in the city/ village
- * Main gateways road crossing
- * Master and apprentices



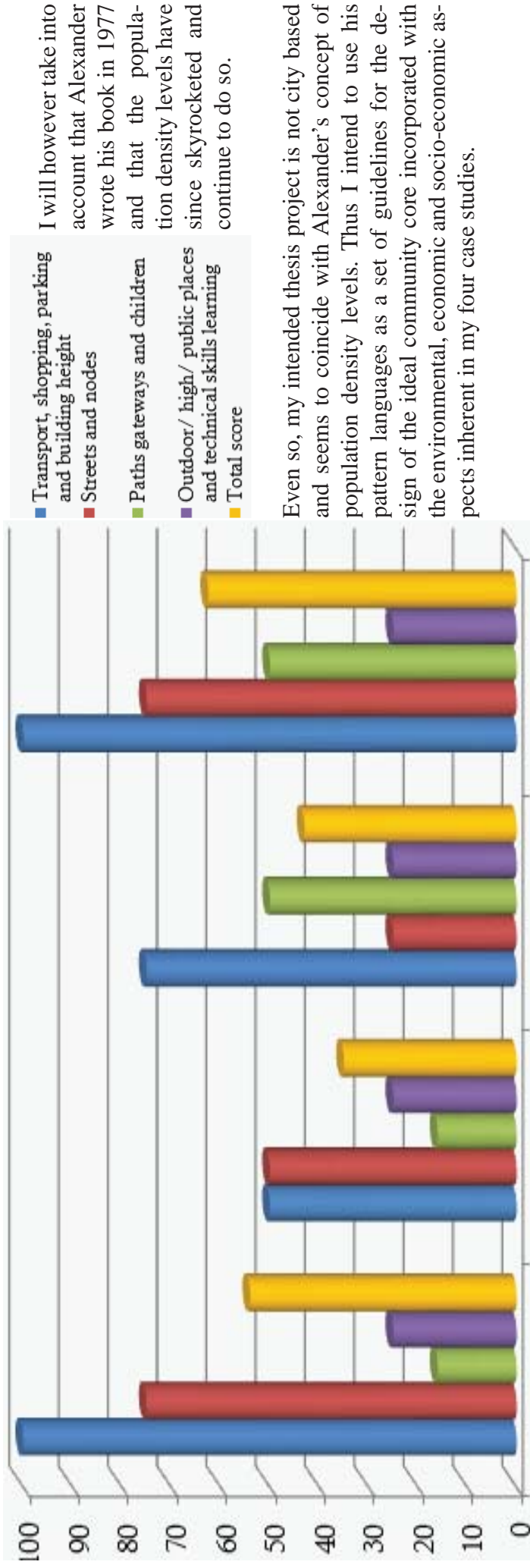
The incline, called Çakmakçılar Yokusu, which leads up to the northern entrance of the Covered Bazaar at the end of Yaglıkçılar Street.

Map of the covered bazaar and the surrounding market neighborhood; the streets to the north descend down to the Golden Horn



The wayward, seemingly random plan of the bazaar is part of its fascination. Surrounding the bazaar itself are numerous commercial buildings known as hans, each a warren of small workshops on several floors, often named after trades, such as Varakçı (Gold Leaf Maker) Han.

Pattern languages for any town, neighbourhood or urban design seem to call for density levels and urban planning models that are a fusion between city and suburb. This would explain why Canary wharf scored the lowest of the three case studies. Canary wharf is located in London city and was built on dilapidated docklands. Such a project would not be viable to developers if it included mixed density levels of accommodation when the aim was to maximize spatial use. Another aspect of pattern languages is that it requires a level of informality (for lack of a better word) in terms of services and retail. This level of informality is typical in villages and townships (which explains both the Grand Bazaar and Missionvale's score) and again calls for suburb and city fusion. In fact, in most ways, Alexander's pattern languages seem to imply that cities are not ideal urban planning models especially because one of the elements of his pattern languages speaks of a 'Four-story limit'. The only evidence that he in some ways supports the urban model of cities is in the pattern language element that speaks of 'High places'.



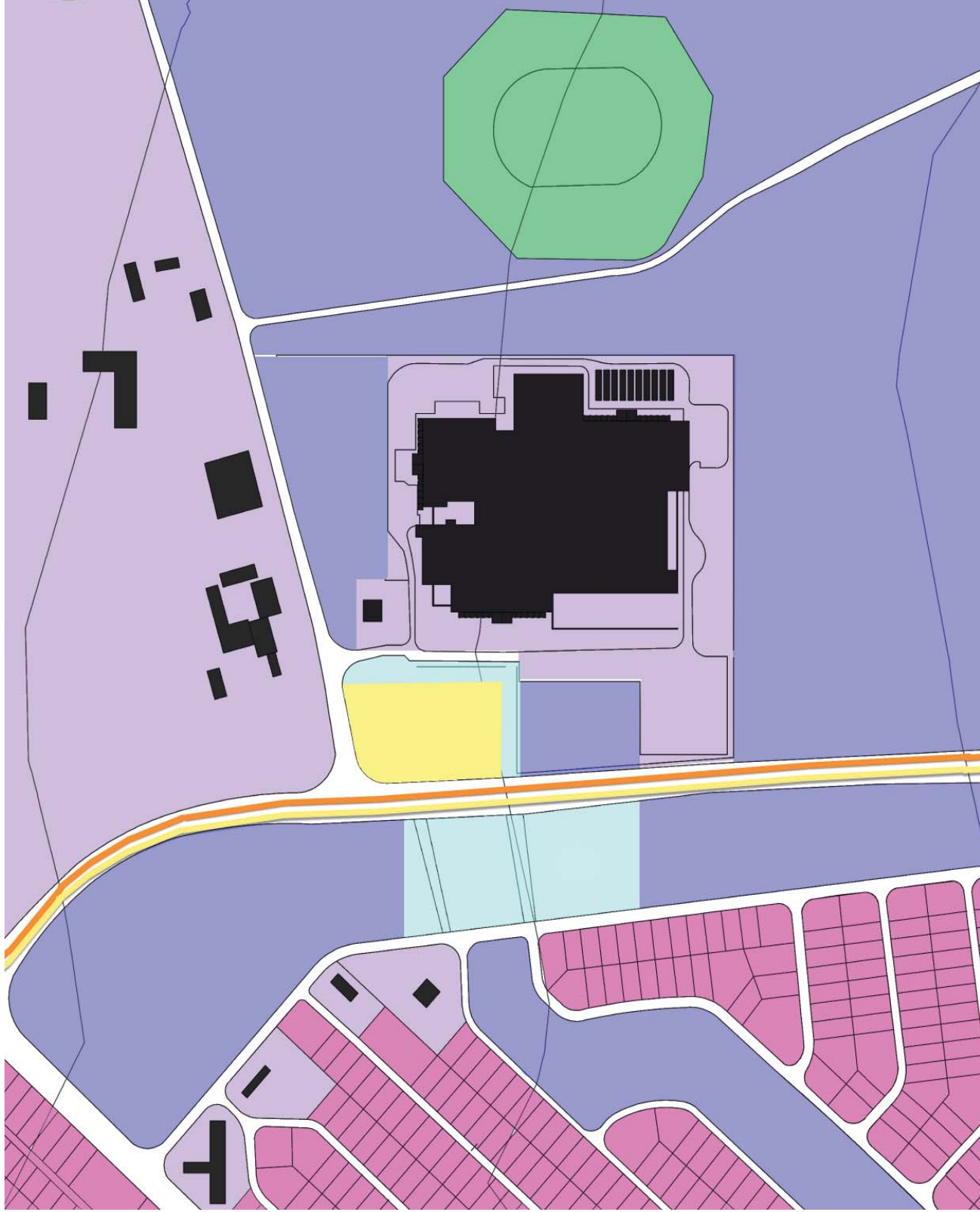
I will however take into account that Alexander wrote his book in 1977 and that the population density levels have since skyrocketed and continue to do so.

Even so, my intended thesis project is not city based and seems to coincide with Alexander's concept of population density levels. Thus I intend to use his pattern languages as a set of guidelines for the design of the ideal community core incorporated with the environmental, economic and socio-economic aspects inherent in my four case studies.

Masdar Eco City Canary Wharf Missionvale Grand Bazaar

Figure 48 - Pattern comparison graph (Created by O.T.T Mabusela 2012.)

SITE SELECTION; GA-RANKUWA SHOPPING CENTRE



LEGEND



Education facilities



Sports facilities



Shops and businesses



Bus transport route



Taxi transport routes



Taxi rank



Residential accommodation



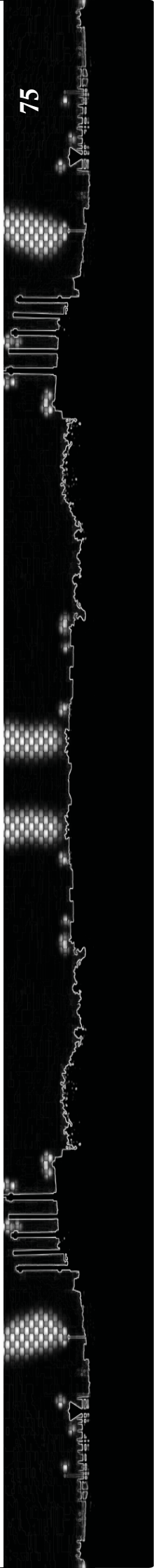
Open land


Informal retail and services



I have identified the area surrounding Ga-Rankuwa shopping centre as the ideal site for the following reasons:

- Of all the economic pulses in the Kasi, it has the largest attraction, absorbs the most income and is located close to the poorer areas of the Kasi;
 - The mall is also an obvious example of a ‘for place’ outcome that disadvantages the existing businesses in the area. Incorporating a ‘for people’ development to make use of its attraction will go a long way to offset the damage done by its existence;
 - This development is aimed at improving the small scale industrial sector of the Kasi. The members of the small scale industrial sector confessed a need to be located in places that are exposed to a lot of pedestrian and vehicle circulation. This site has the highest of this nature of circulation in the Kasi;
 - In terms of urban planning patterns, the mall serves as the only urban center in the Kasi and already has much of the infrastructure necessary for the proposed development. This will cut down the construction costs that the proposed development is likely to incur;
 - Despite it being an urban centre, it fails to interact with the local community in terms of proximity to road edges and scale. The proposed development has an opportunity to bridge this gap between the Kasi and the shopping centre in the creation of better urban environments;
 - Although it fails to adequately interact with the Kasi, it still boasts several of Alexander’s principles and has the potential to incorporate more;
 - It also boasts one of the Kasi’s only three taxi ranks and is on the bus route, making it a major public transport interchange;
 - Because the shopping centre is a place of consumption and the small scale manufacturing development would be a place of production, it would pose little threat of reducing the profitability of the existing establishment. In fact, the development would create a critical mass that will lead to more development in the area
 - Also, based on Ga-Rankuwa’s urban development framework, it is one of only five nodes in the Kasi and is located close to mobility spines.
- In this framework, the empty land to the east and south of the shopping centre has been zoned for strategic development. The development I intend to undertake to the north and west of the shopping mall can expand into a larger development to the south and east, which will incorporate more facilities and services that are currently lacking in the Kasi. As the shopping centre is located next to Ga-Rankuwa’s biggest soccer field and is more or less in the centre of the Kasi, this area can soon become a major community hub and spread in such a way that unifies the otherwise fragmented Kasi.

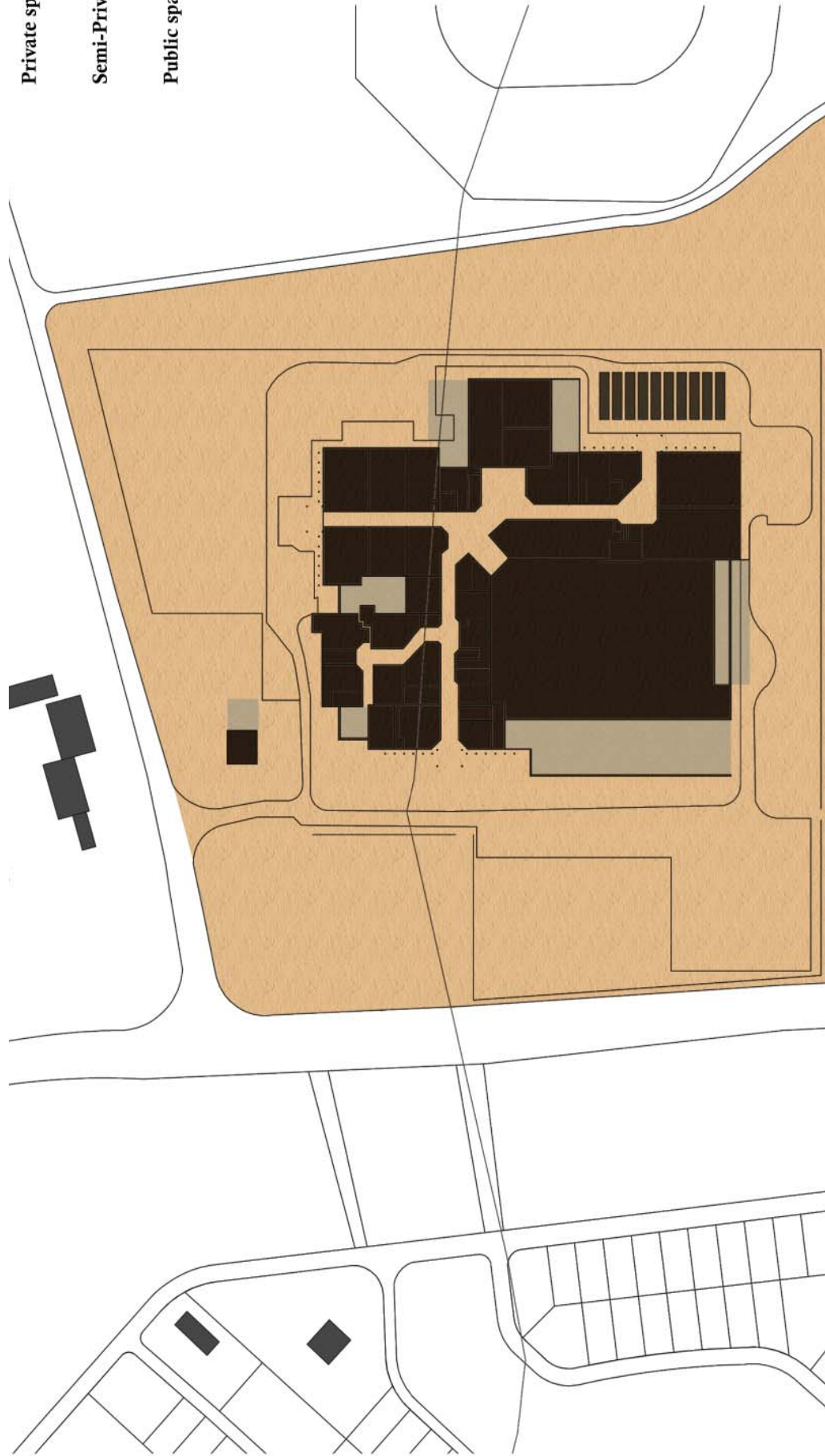


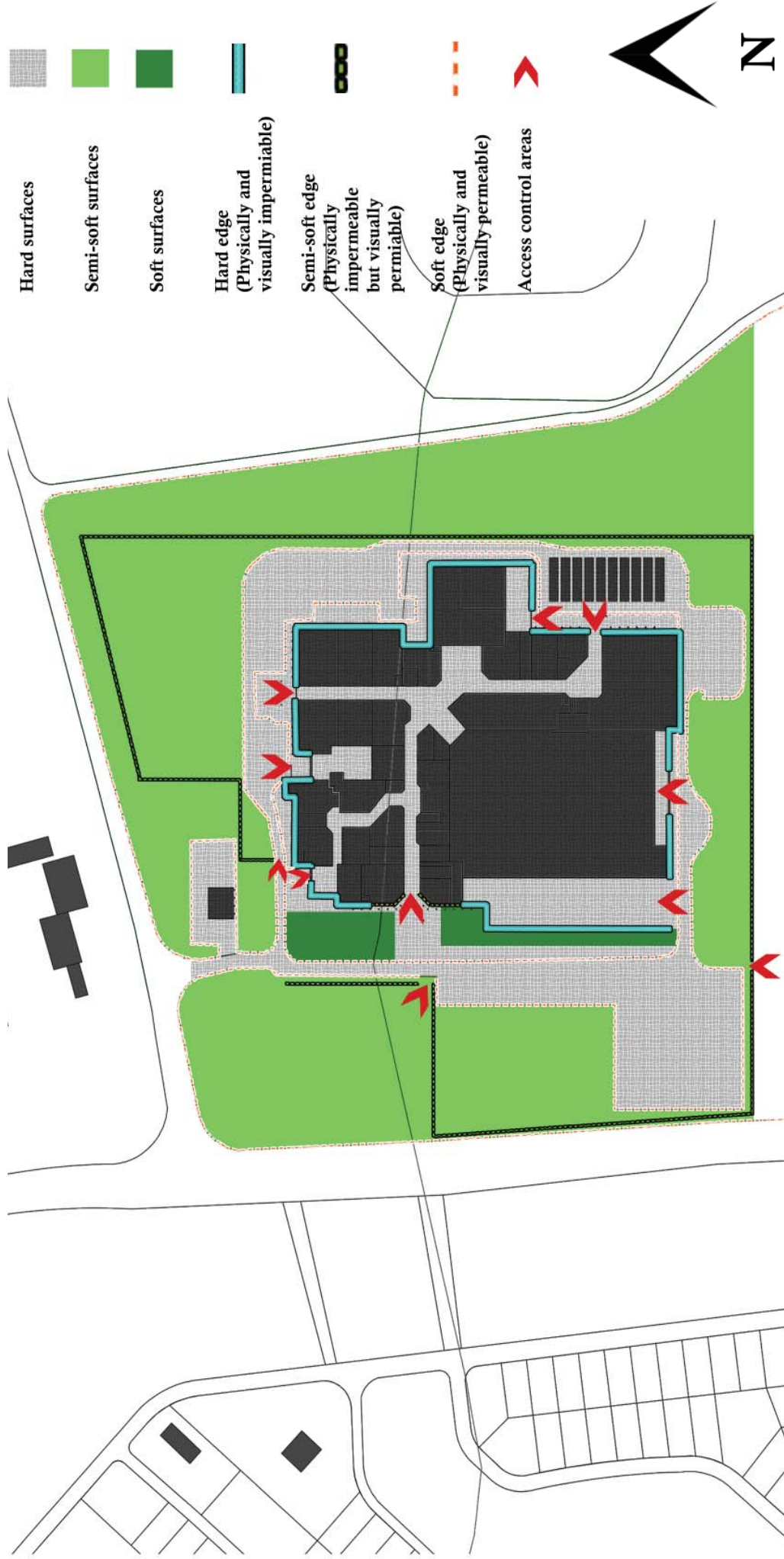
- P**
Destination point
* Parking
- T**
Destination point
* Taxi access
- O**
Destination point
* Other
- 
Pedestrian movement
(Two-way)

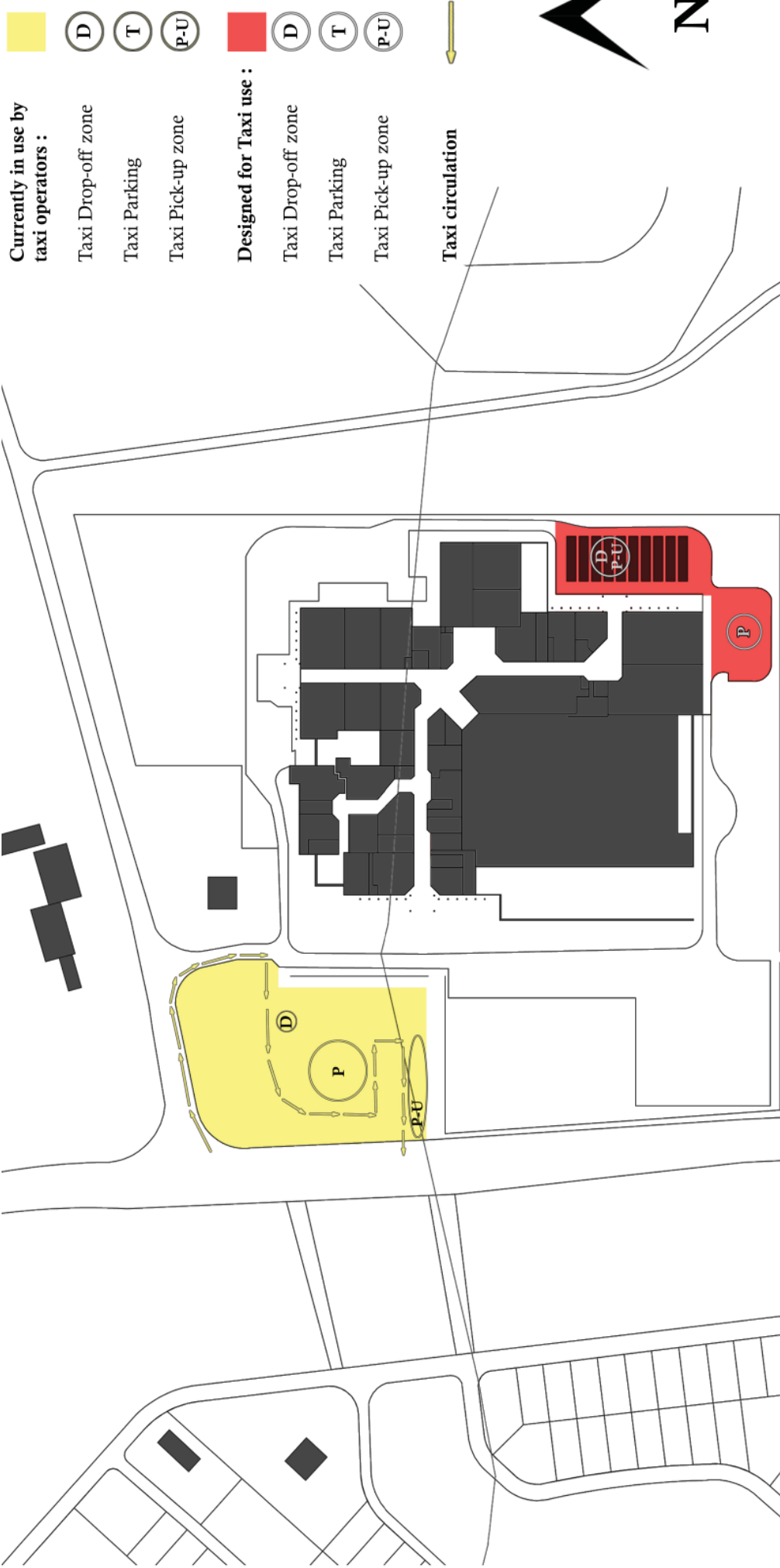
* At the destination points, pedestrian movement either converts to vehicular movement of doubles back on its self.



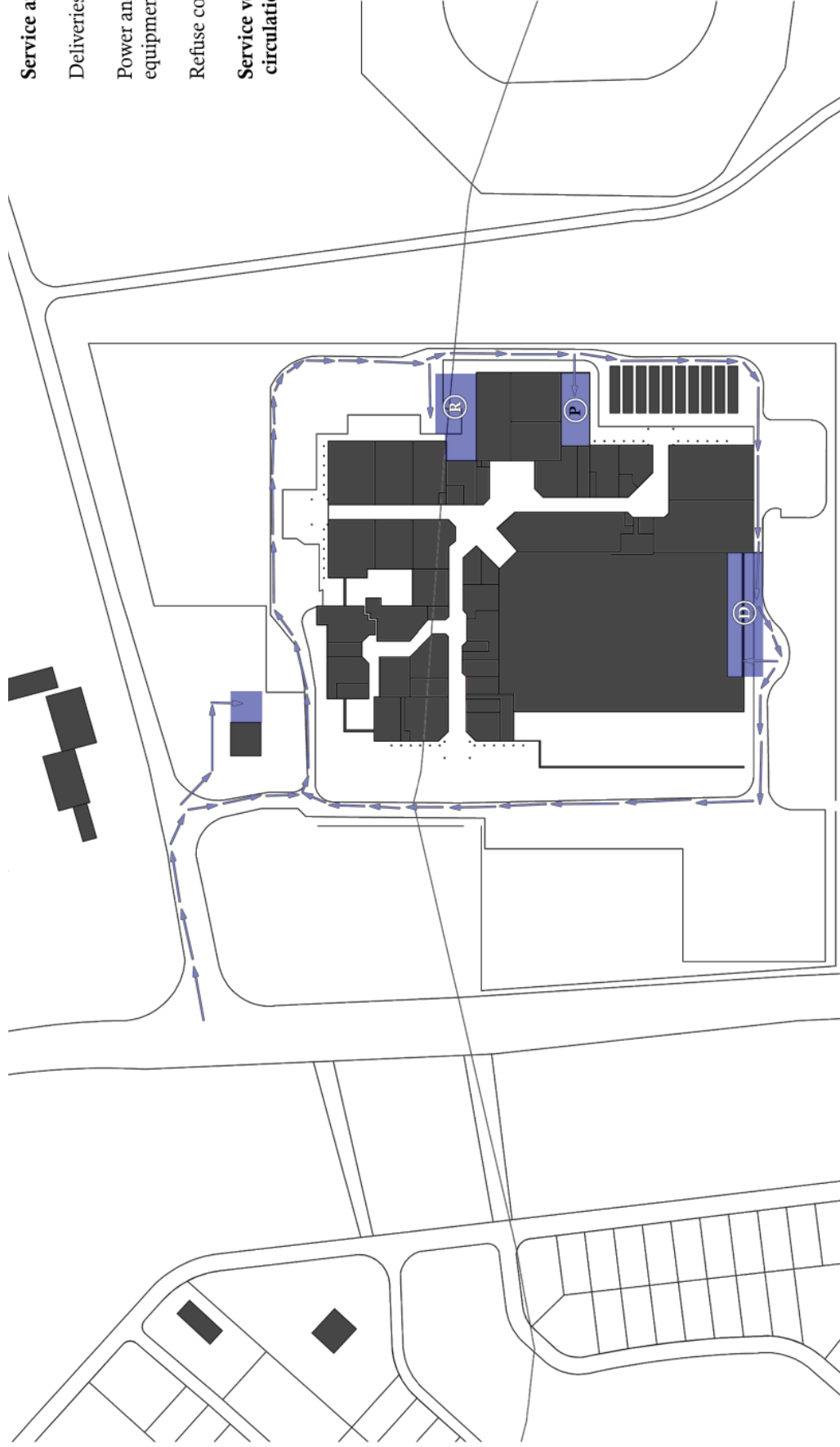
- Private space
- Semi-Private space
- Public space



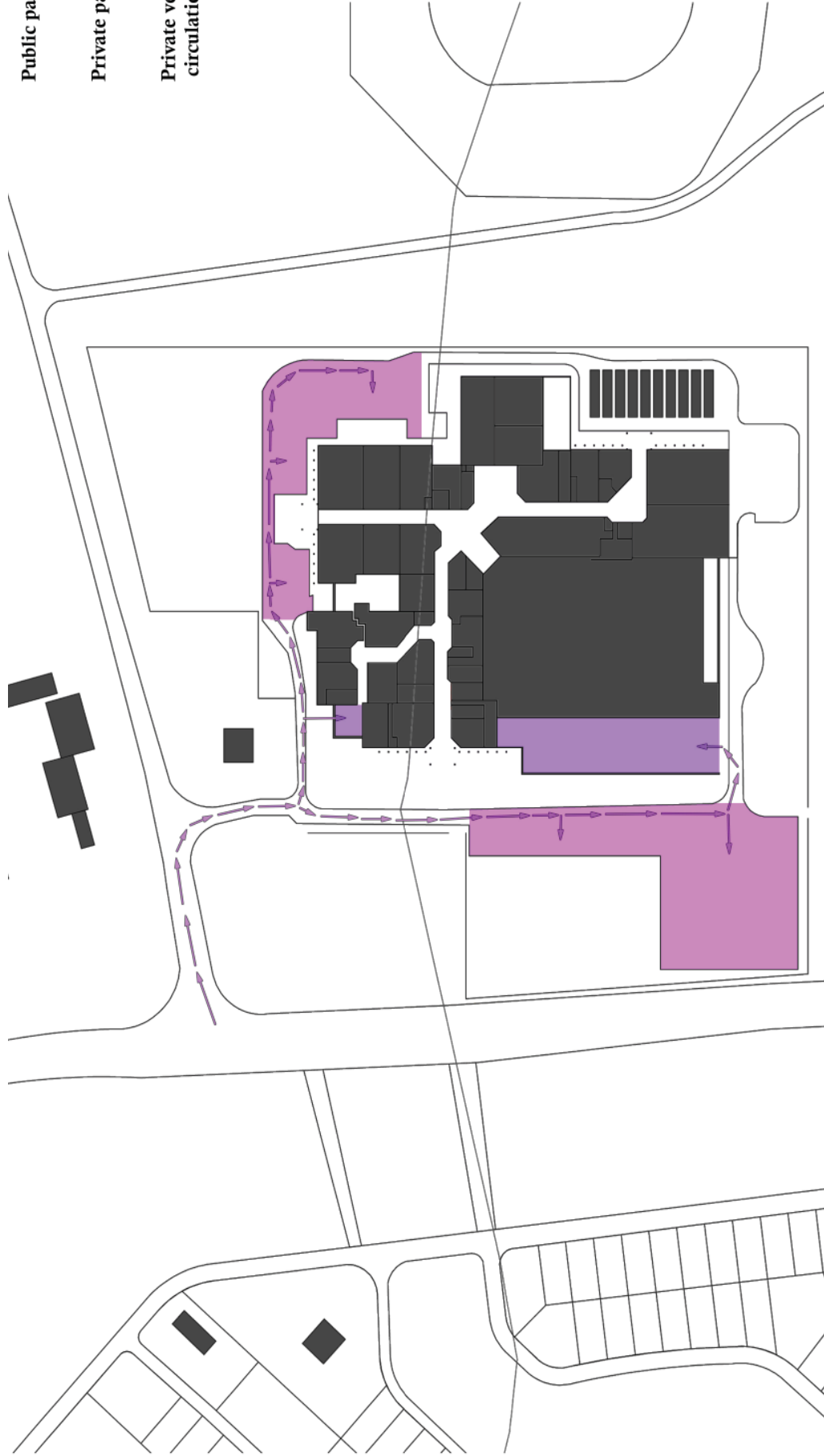




- Service areas:**
- Deliveries (D)
 - Power and ventilation equipment (P)
 - Refuse collection (R)
 - Service vehicle circulation (↑)



- Public parking areas
- Private parking areas
- Private vehicle circulation



GA-RANKUWA SHOPPING CENTRE





These images of Ga-Rankuwa shopping centre depict a typical mall setup with internal streets and minimal natural light. Natural light wells are only situated at major intersections where two or more of the internal streets intersect (See central image), here squares are formed where promotional events sometimes take place. The shops found inside are chain stores that can be found anywhere in South Africa, there are practically no shops that are typical to Ga-Rankuwa Kasi only. This implies that local business is either not supported or cannot thrive in this environment. Both are probably true due to high rental rates and the image desired for the mall.

All the entrances look the same, the only exception is Entrance 2 which is aligned with the main pedestrian circulation route and serves as the main entrance for majority of customers using public transport or travelling on foot. Thus this is currently the main public space and the only entrance with a significant amount of planting. Yet, oddly enough, it has no public furniture and seems to encourage only movement but not rest. As is evident from the internal images of the mall, this principle is also repeated inside the mall. This means that if rest is required, one must pay for it, this is a common principle in most shopping malls; everything is commoditised regardless of who the customer is and how much they can afford. Even the grass planted beside the main entrance is strictly out of bounds to any member of the public and serves only an aesthetic function and cannot be used as a place of rest.





A taxi rank was built at the rear end of the mall to accommodate the taxi industry stimulated by the mall. However, due to its location; far from main pedestrian routes and street access; it is largely under-utilised. In fact it is barely used at all. Taxi drivers prefer an uncovered, unpaved, dusty area that is adjacent to main pedestrian circulation and the main access road. This is an example of how lack of communication with the communities for whom you design can lead to undesirable consequences.



The functional taxi rank, located on the western most edge of the site, is bordered by hawker stands along the western front of the mall and along the main pedestrian route aligned with entrance 1.

Previously, taxis used to drop off their passengers on the vehicular circulation route along the western front of the mall, but this has now been prohibited and the passengers are now dropped off in the dusty area where the taxis park. The taxi rank and hawkers form part of an informal 'second economy' which is marginalised by the 'first economy' of the mall. These two economies are separated by a road and though mutually exclusive physically, economically they feed off each other.





FIGURE 49 - Romans Pizza opposite Ga-Rankuwa shopping centre. (All Ga-Rankuwa shopping centre images Photographed by O.T.T. Mabusela 2012)

Also on site, on the northern most edge least frequented by pedestrians, is a fast food outlet that has changed brands and owners several times. It used to be a KFC, but since KFC took up a property inside the mall, it is now a Romans Pizza. The mall is a much bigger draw card for pedestrian circulation because it offers more variety. As a result, this property becomes less desirable for business owners and customers alike. It seems that malls are designed to be exclusive, not just economically, but physically too.

The diagrams to the right illustrate this exclusivity and also suggest ways in which to counteract it.

The typical shopping centre model is inward facing, monumental and isolated:

- Impermeable edge
- Flow of movement
- Permeable edge
- Main pedestrian zone
- External boundary
- Intersection point (singular)

- *Impermeable edges usually house services
- Pedestrian zone
- Broken external boundary
- Semi-permeable projections

I suggest we invert this norm:

Outward facing, human scale, connected:

- *Multiple intersection points
- *Internal non-pedestrian zones to promote free flowing pedestrian movement
- *External pedestrian zones flowing into external courtyards.

How would one connect the two models?

- *Maintain broken external boundary on the most public places
- *Allow external boundary to reappear around service and less public areas
- *Line edges with public facilities (only the broken boundary edges)

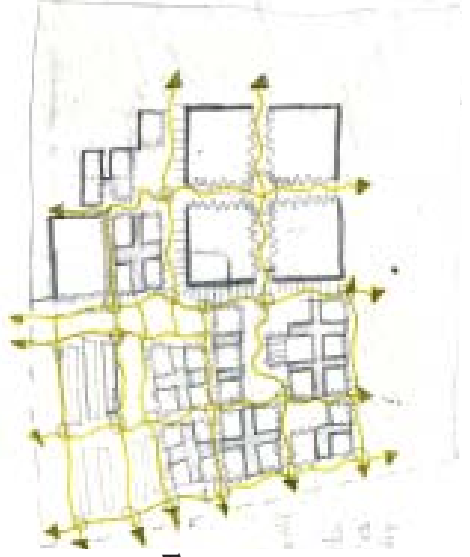
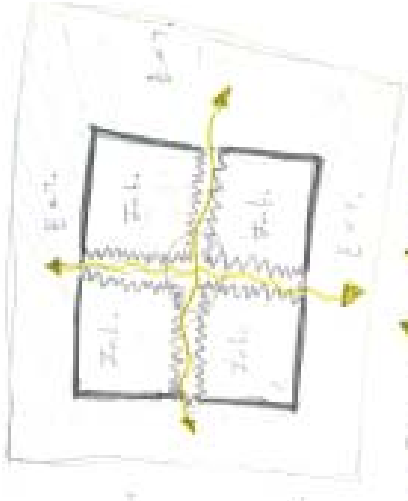


Figure 50 - The exclusivity of the typical mall model and potential ways to counteract it. (Created by O.T.T Mabusela 2012.)

KASITECTURED

It has already been ascertained that Kasi economies are disconnected and that a viable way in which to alter this situation is for Kasis to create their own products to export to cities and neighbouring Kasis in order to stimulate trade.

Ga-Rankuwa has already been identified as a centre for industrial development, I would like to build on that by incorporating a development that focuses on the people that live in Ga-Rankuwa township ('For people' development that will also be 'for place' due to the knock on effects). This entails a manufacturing development that will cater for various kinds of small scale manufacture. It will be based on principles of sustainable design and construction as well as a small scale manufacturing industry for low-tech 'green' products. It will be inexpensive to build, labour intensive and make use materials that can be found on site as much as possible.

It will be run and owned by members of the Ga-Rankuwa population and include skills development facilities where they can be taught how to start and manage a profitable business in small scale manufacture, how to generate income, bring it into the Kasi and make it thrive. This development aims to be a force to kick-start the momentum of the Kasi economic advancement. With the help of the community, the Kasi will be developed it into an economic hub which will grow and spread, encompassing sports, education and arts facilities, possibly even higher density low cost housing. This will encourage further development, attract sponsors and serve as a generator for socio-economic growth.



FIGURE 51-Design Principles (Source; <http://www.whcvs.org.uk>)

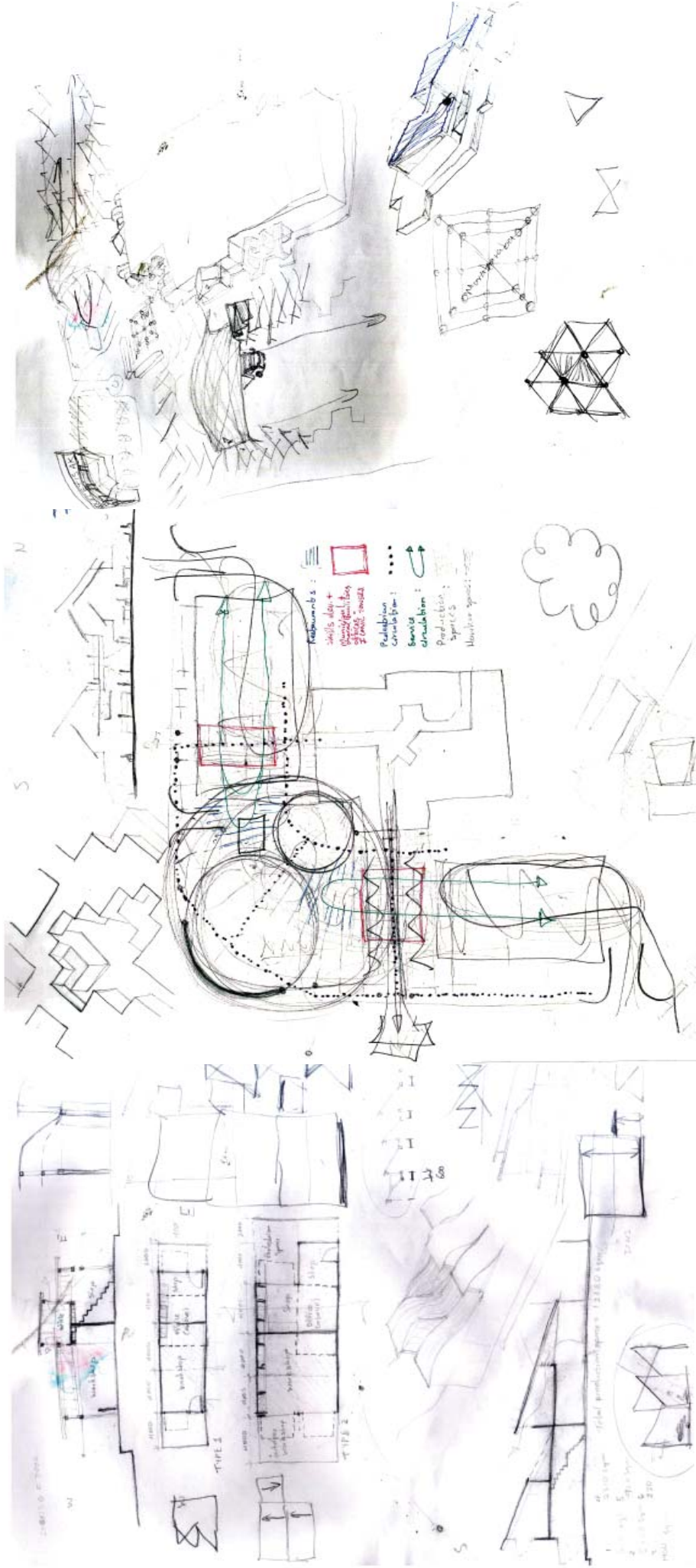
PROGRAMME



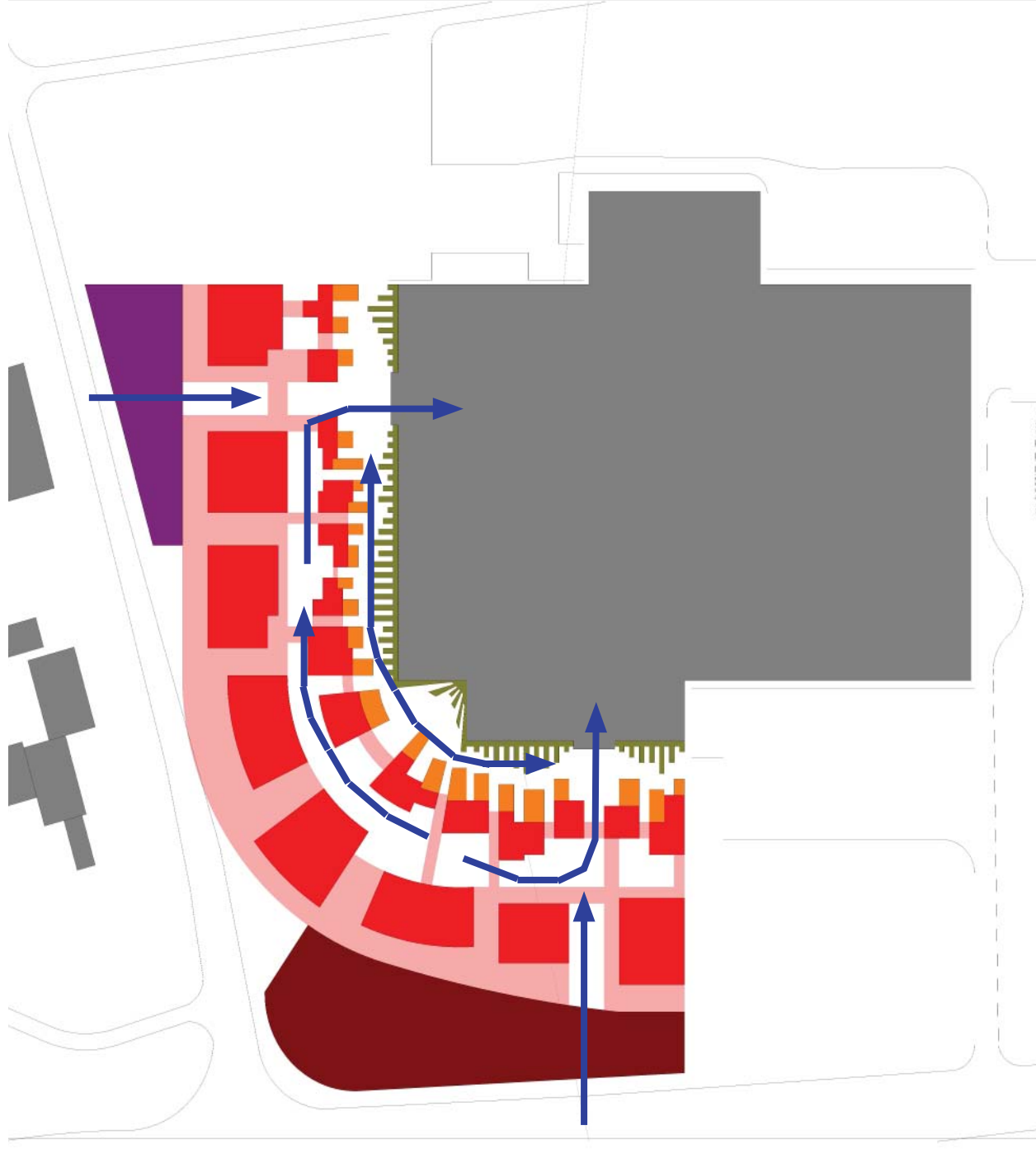
FIGURE 52-Green parks (Source; [http // www.victorianweb.org](http://www.victorianweb.org))

The programme will give much emphasis to public green pedestrian spaces for social interaction as well as healthy working environments.

DESIGN DEVELOPMENT



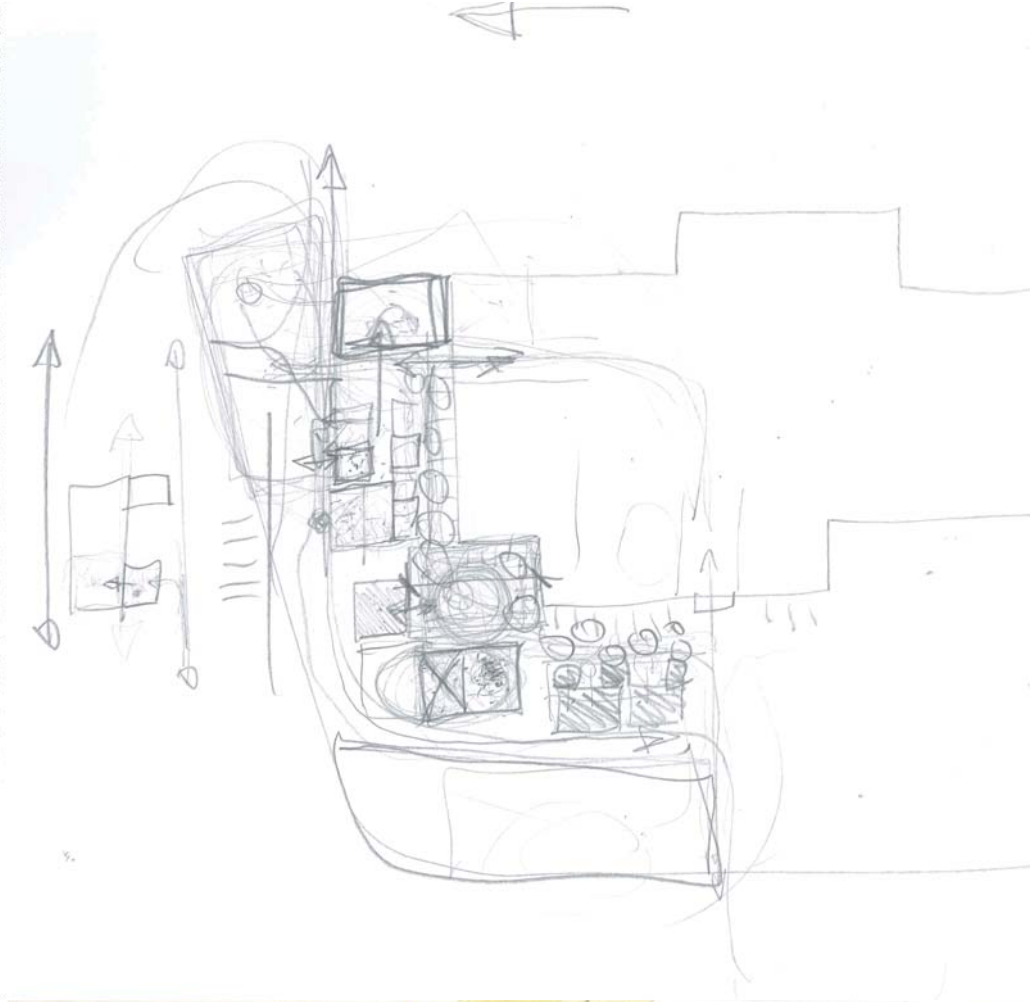
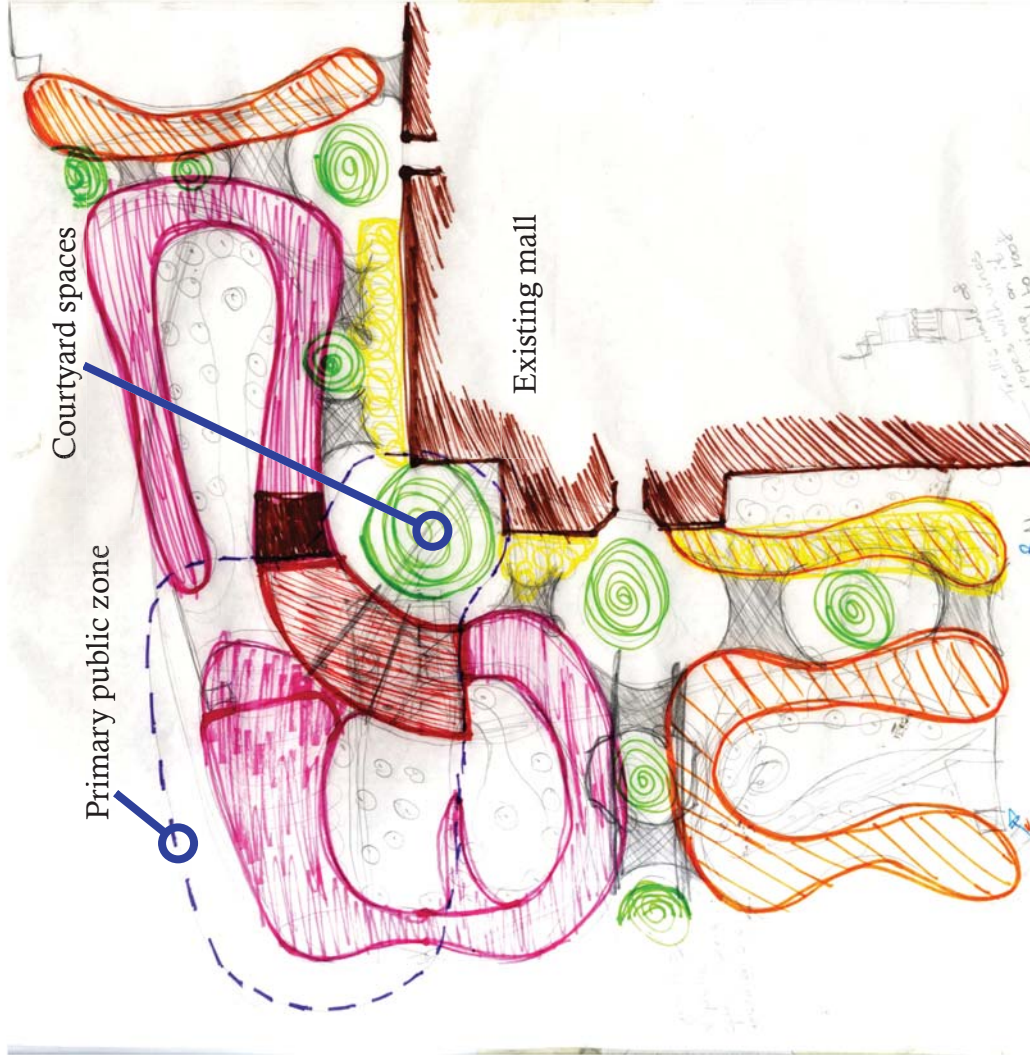
The design development was concerned with the creation of various kinds of circulation systems arranged in such a way that pedestrian circulation (not just within the building but also around it) would be high priority; a direct inversion of the current situation. It was also concerned with creating small scale manufacturing units that were flexible enough to cater for a variety of industries while simultaneously creating human scale environments that are comfortable and convenient. The roofs are primarily concerned with permitting south light and cross ventilation for the best working environment.



- Skills development and civic centre
- Vehicular service roads
- Small scale manufacturing units of various sizes
- Retail component
- Hawker stands
- Public transport access
- Pedestrian circulation

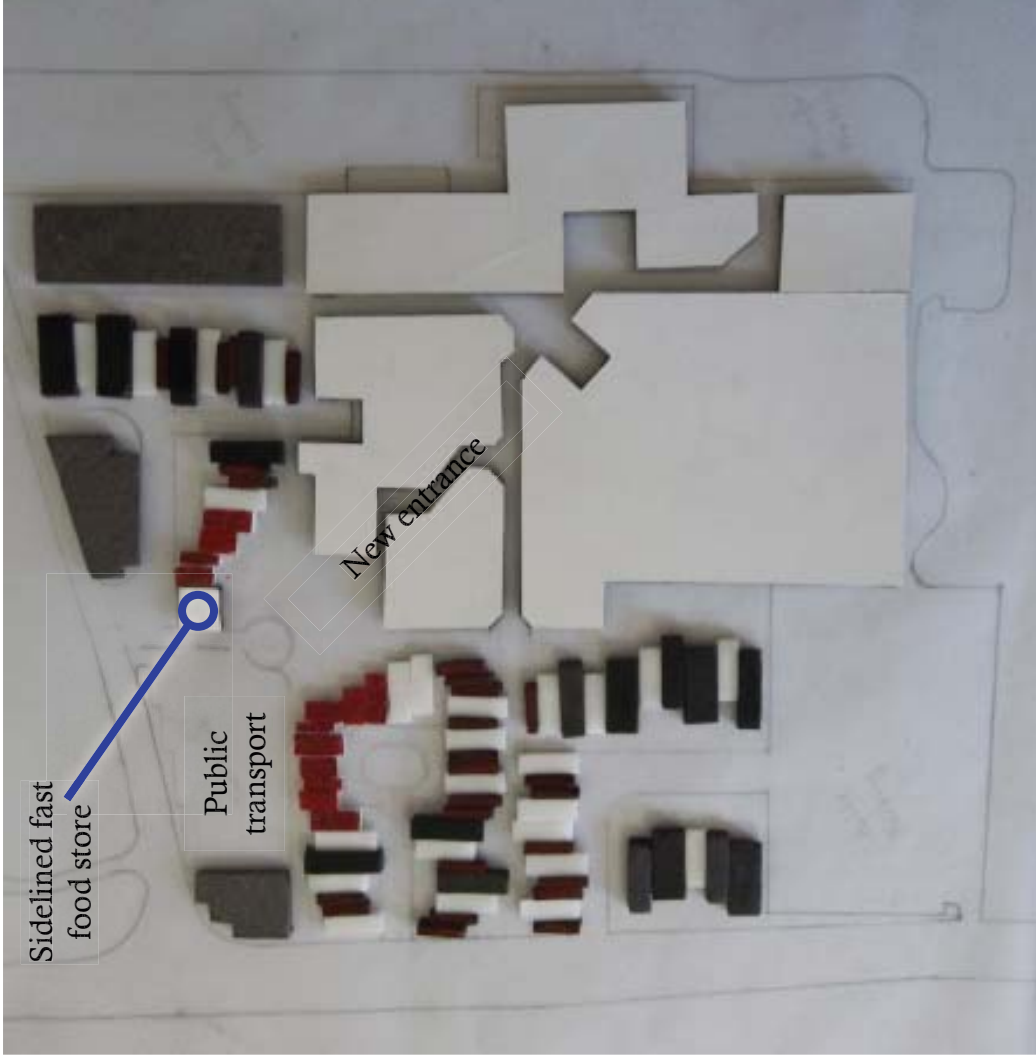
This was an initial diagram of how the various spaces could be arranged to form circulation routes. Its aim was to separate vehicular and pedestrian movement while connecting the new development to the existing mall through feedback loops that would circulate movement through both developments without bias.





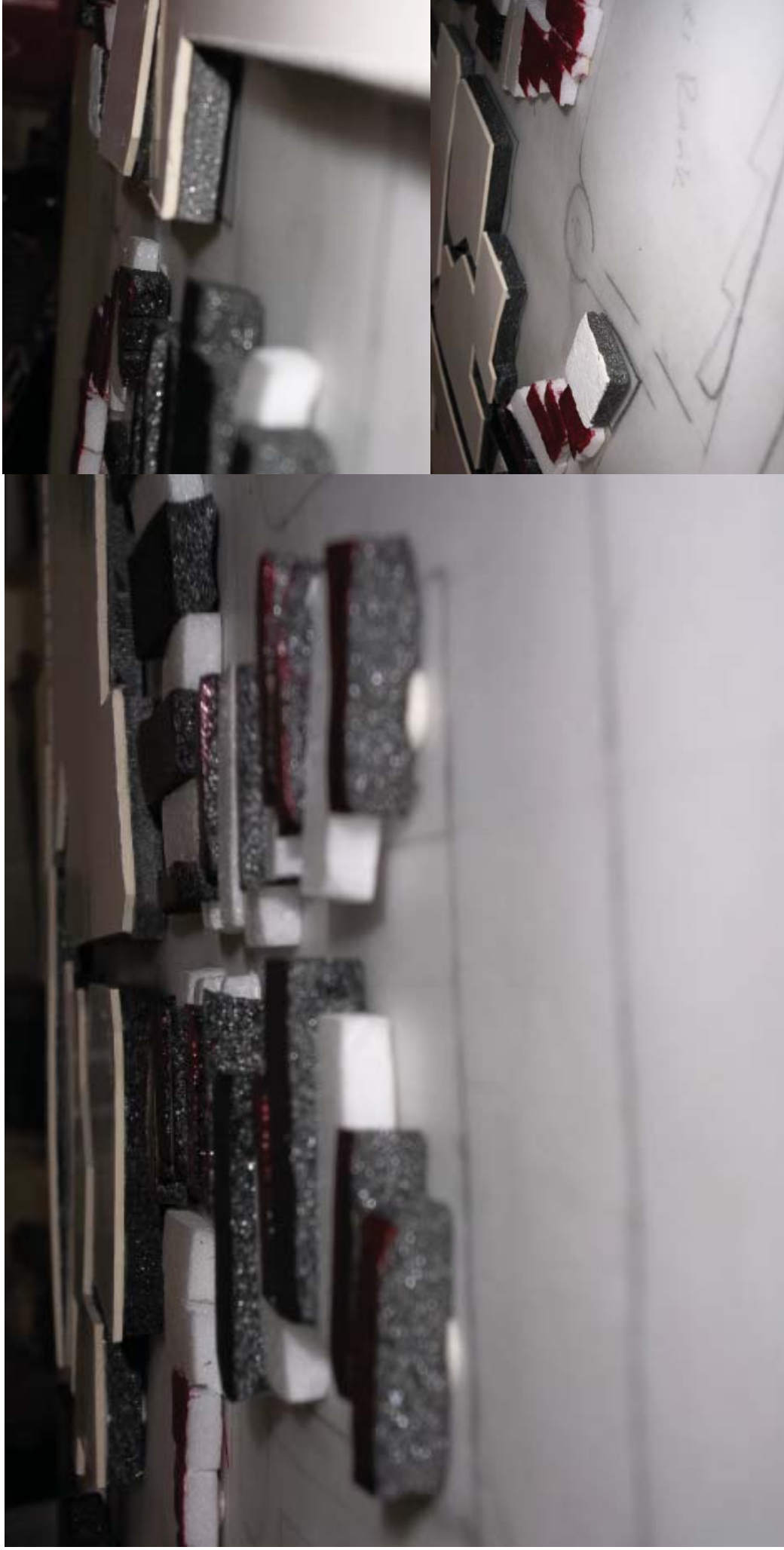
The diagram on the right is an expansion of the previous diagram and eliminates the spaces in between the various programmatic elements to prevent dead spaces by forging only one pedestrian route and one services route. It speaks to the economy of using two or more circulation routes in areas where one will be more functional.

The diagram on the left starts to define spaces where the manufacture units wrap around contained vehicular circulation routes and on the opposite side create pedestrian walkways and courtyards where people can stop to rest, eat and shop in natural healthy outdoor environments.

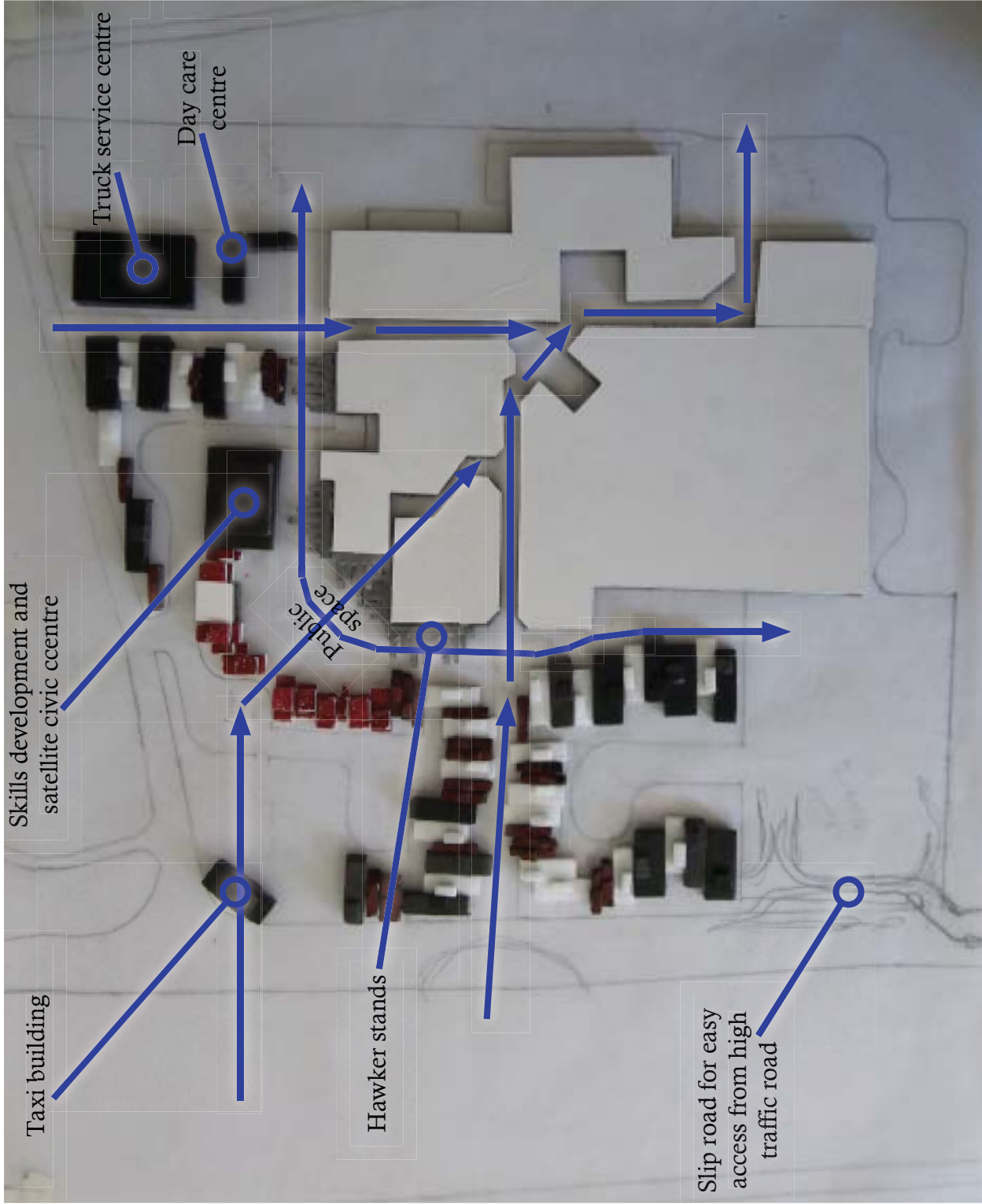


This model was built as an interactive design process that played with the spatial arrangement of the various programmatic elements by placing them in a scaled context and imagining perspectives and various kinds of circulation. The bright red units represent restaurants and food stores, the large charcoal grey ones represent buildings such as a truck service station, skills development and taxi service buildings (to cater to the needs of public transport practitioners). Here the mall has been given a new entrance in the north-west corner, promoting pedestrian circulation around, as well as diagonally across the site. This new entrance becomes a large public space that opens onto the public transport area and incorporates the fast food store that was previously sidelined.





The perspective angles of these shots attempt to simulate the experience a pedestrian would encounter walking down the reinforced main pedestrian circulation route to the malls entrance 1 (top left), the path between the existing mall and the new small scale manufacture units (top right) and the drop-off zone, taxi rank and new main entrance (bottom right).

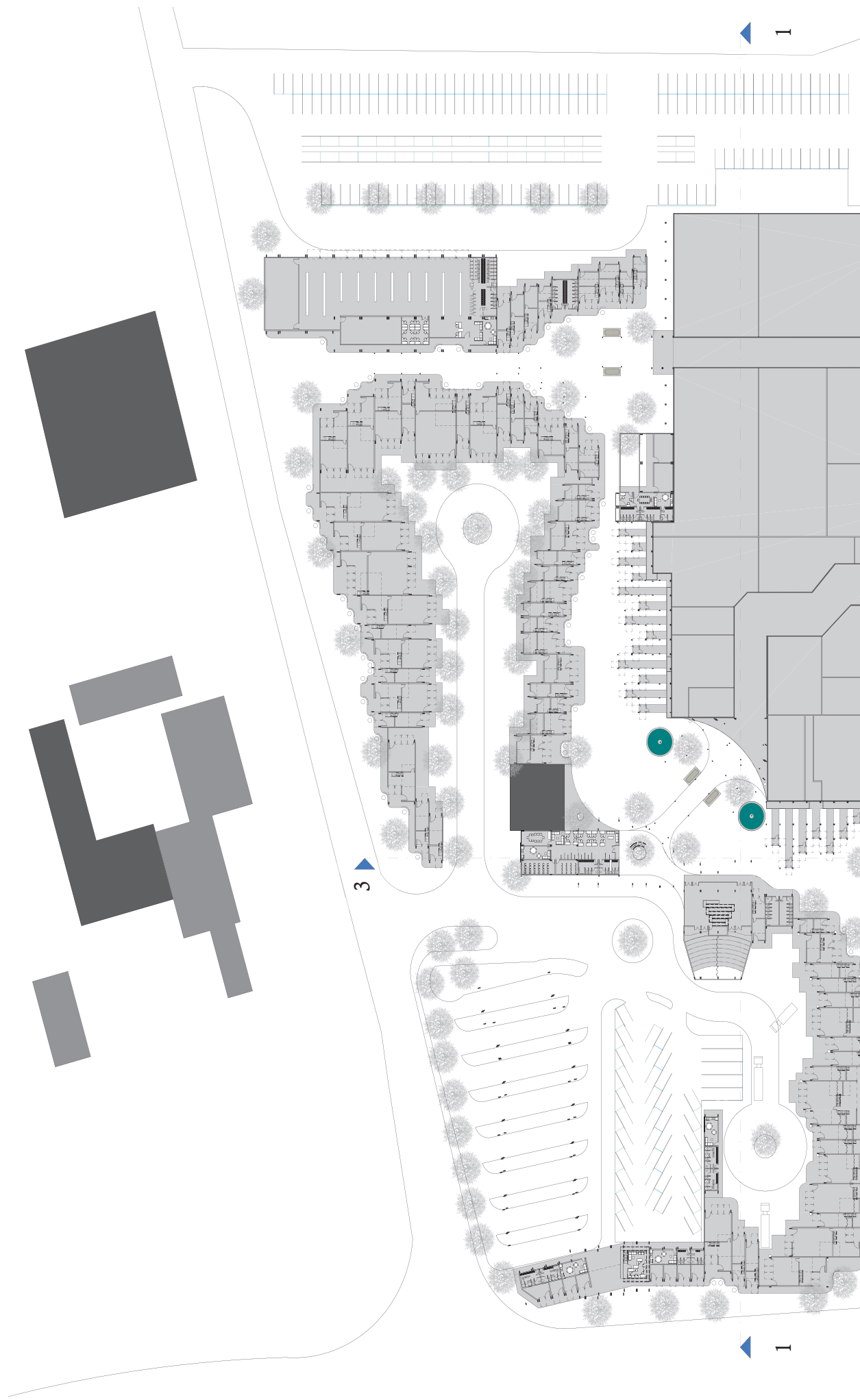


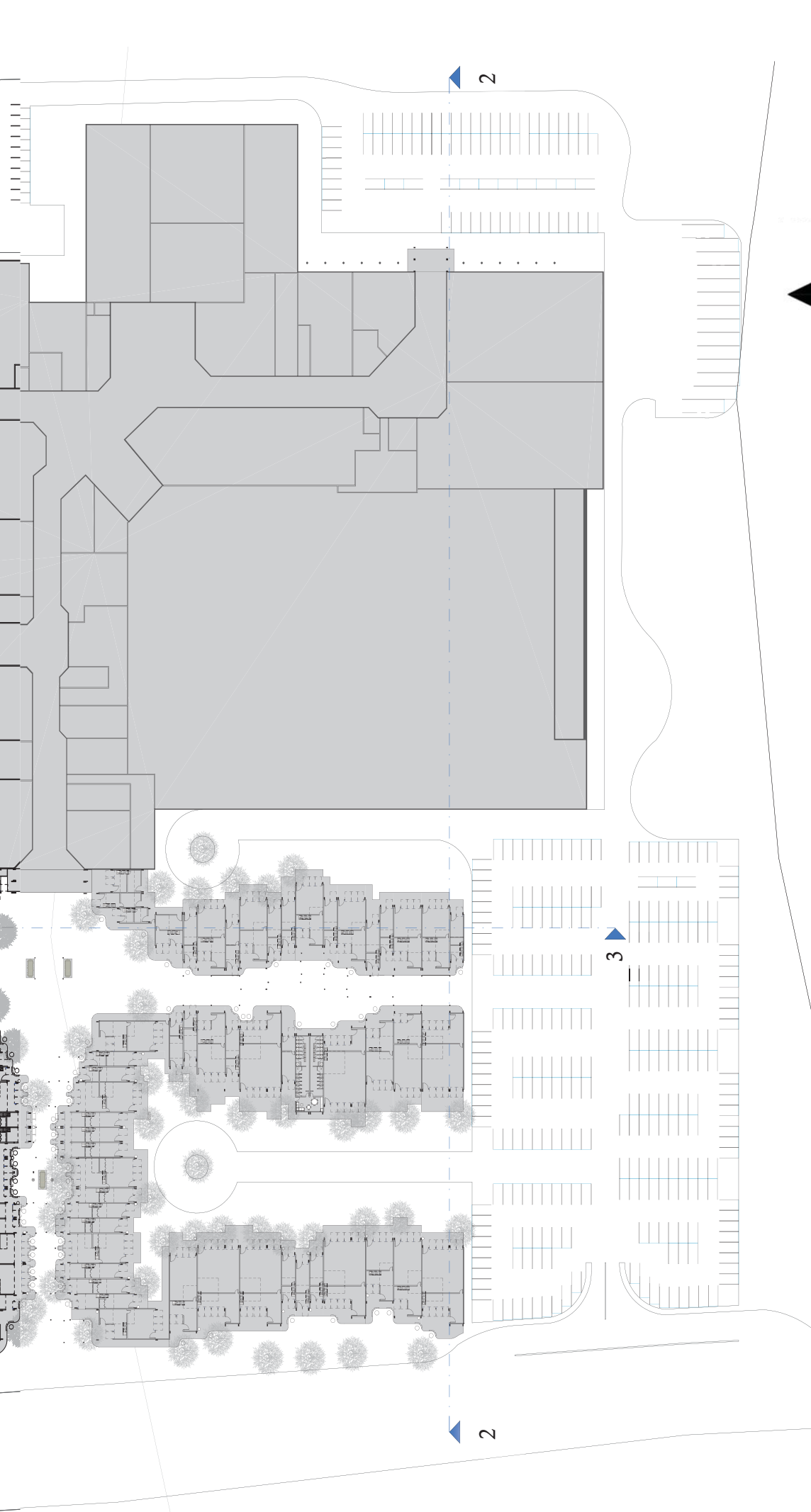
This version incorporates hawker stands as permeable protrusions that attach to the edges of the existing mall and create much more interactive spaces between the existing mall and the manufacture units.

Here the skills development centre/civic hub is moved from the edge and into the public space formed by the new entrance, taxi rank and eateries.

The taxi service building is reduced in size and the black 'L' shaped building to the north-east is a new addition; a creche for the children of shoppers and workers who will use this development. This ensures child safety in this now semi-industrial area because parents now have somewhere to safely leave their children while they work or shop.

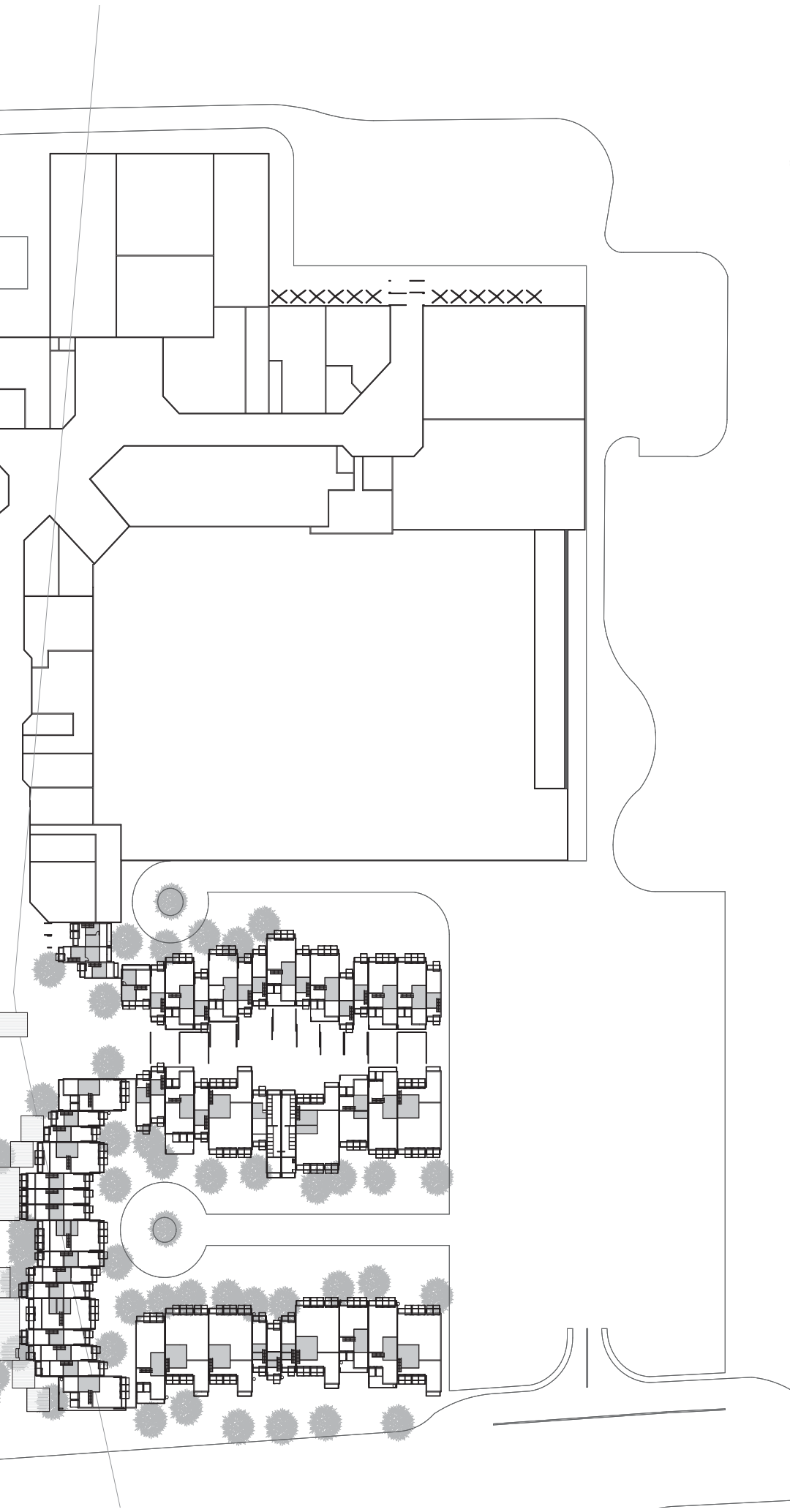
GROUND FLOOR PLAN



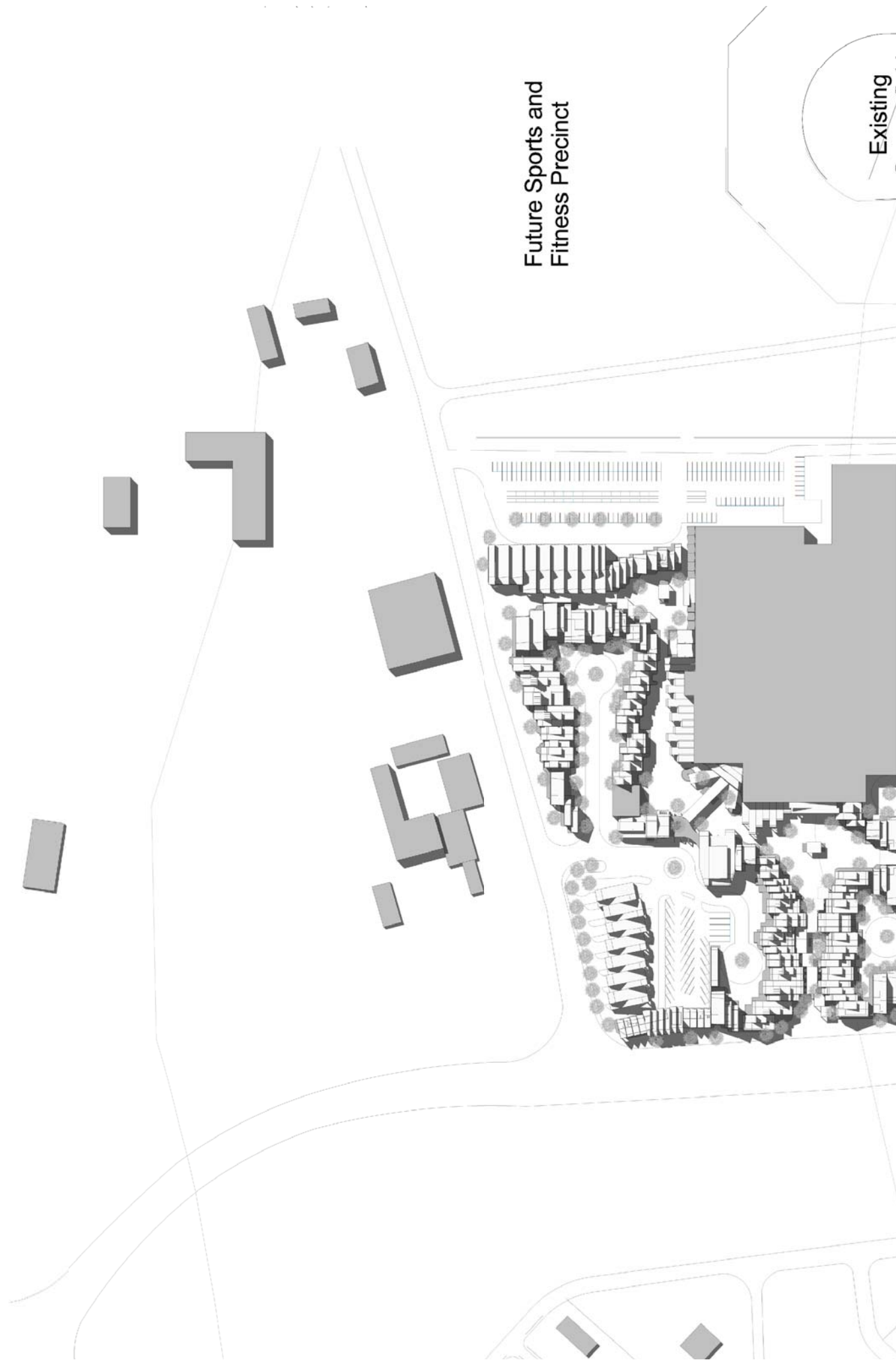


FIRST FLOOR PLAN



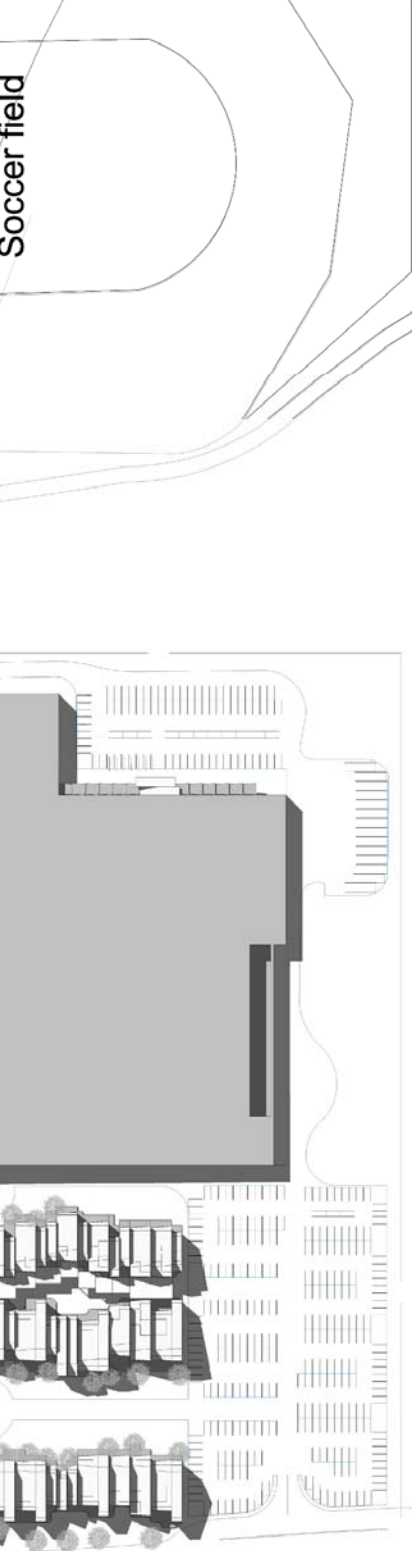


SITE AND ROOF PLAN



Future Sports and
Fitness Precinct

Existing



Soccer field

Future
Education
Precinct

Future Arts and Culture Precinct

Future Residential Precinct



N



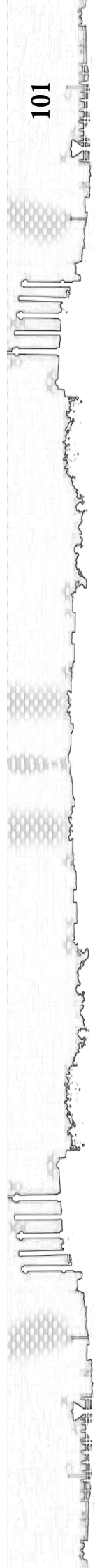
100m

50

30

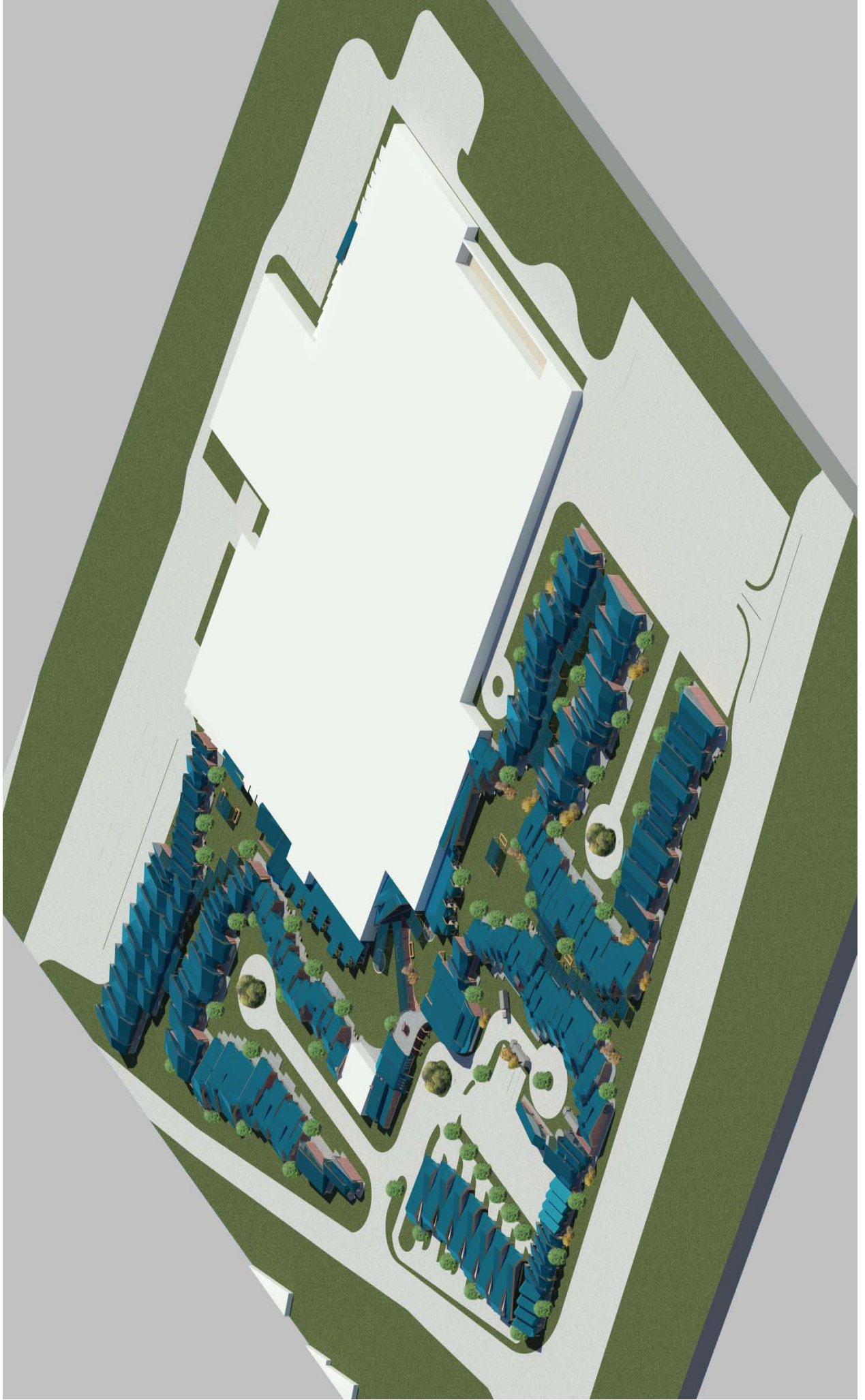
20

10



101

NORTH WESTERN URBAN DEVELOPMENT PERSPECTIVE



SECTIONS AND ELEVATIONS



Northern Elevation



Section 1



Section 2



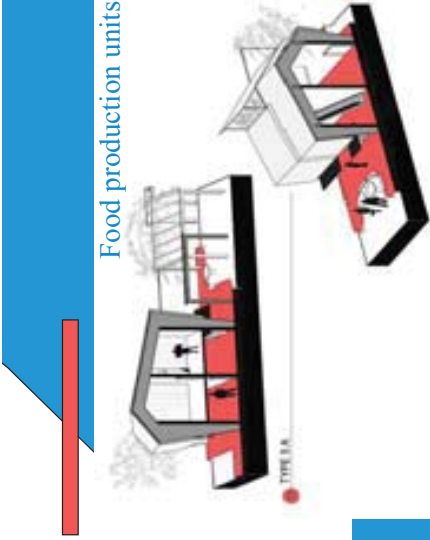
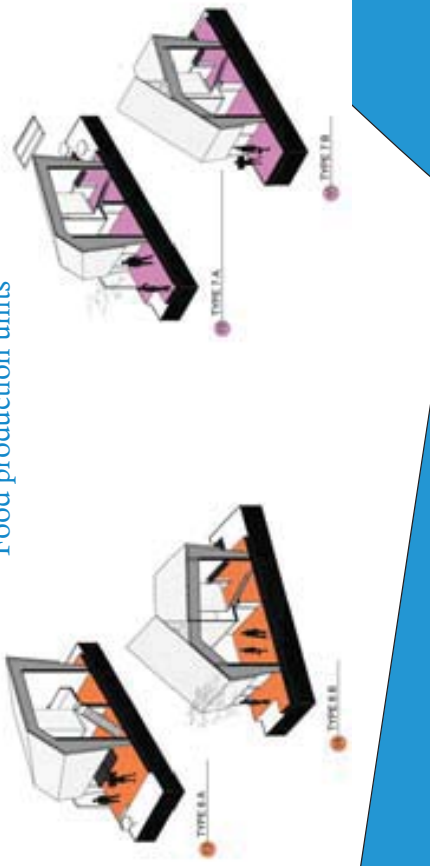
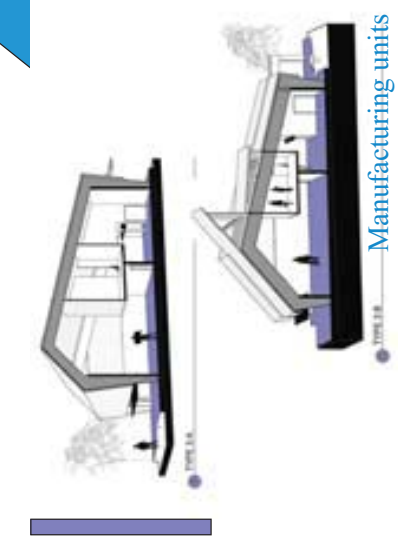
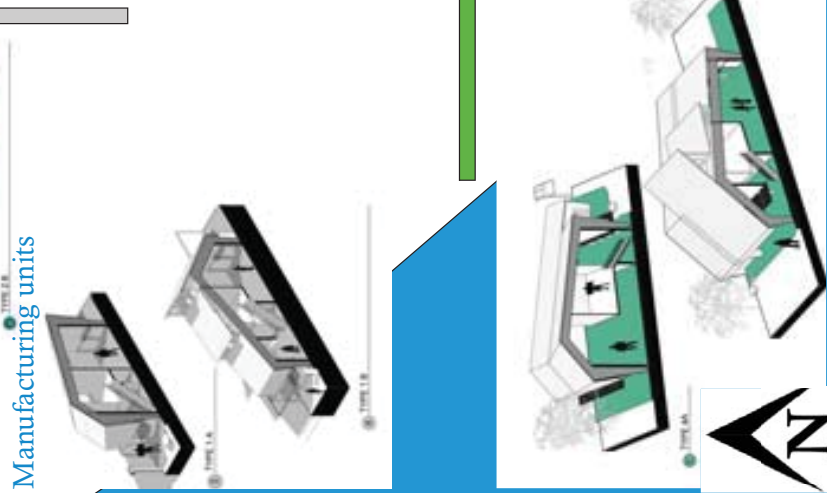
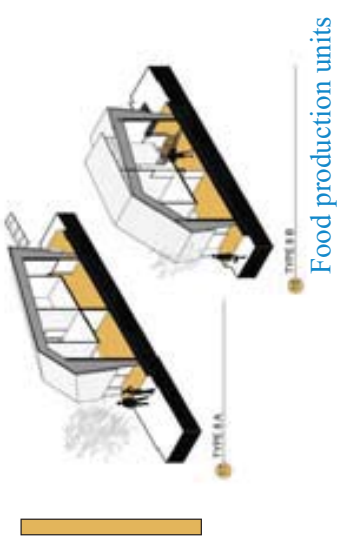
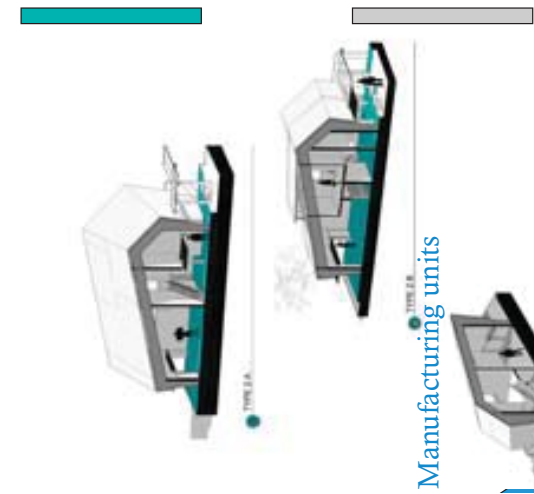
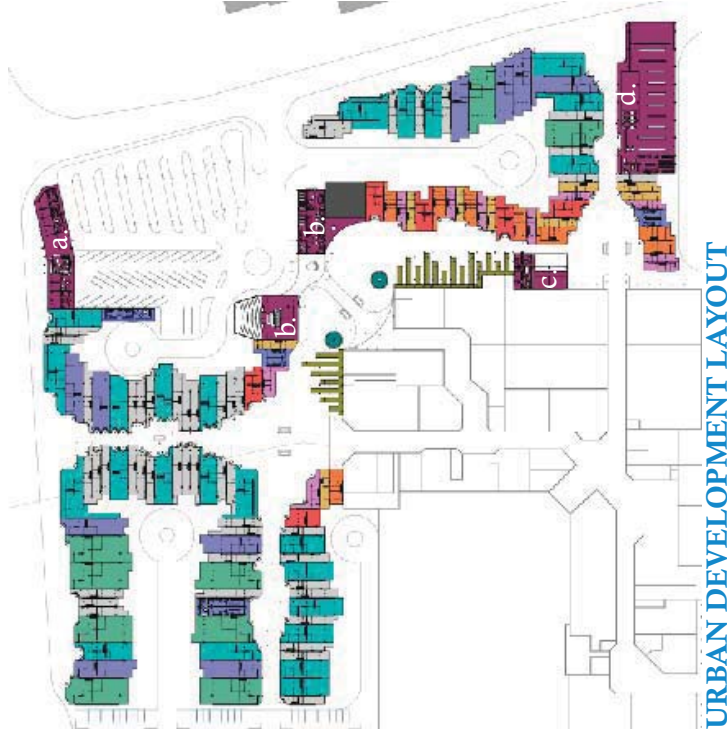
Western Elevation



Section 3



SMALL SCALE MANUFACTURE UNITS



TYPLOGIES

This urban development is divided up into 8 different types of small-scale manufacturing and food production units based on size and use. The sub-categories A and B are based on orientation and its resultant roof envelope for optimal south light for working conditions.

These different typologies allow for occupation by a variety of small scale manufacturing businesses, both in terms of size and goods production, and are arranged to stimulate pedestrian movement across the site.

ANCHOR BUILDINGS

This colour represents neither small scale manufacture nor food production; these are the anchor buildings of the site.

- a. The northern most is a service building for taxi operators. It includes retail spaces, an info centre, kitchen/chill spaces, ablutions and meeting rooms.
- b. The second northern most building is the civic centre; it includes a satellite government office with information to help small scale manufacturers find employment, employees, distribution chains and business support. It also includes a skills development centre with auditorium, classroom and meeting facilities to host a variety of events to educate people about the opportunities of the manufacturing industry.
- c. The second southern most building is a day care centre where children can be taken care of while their parents go to work or shop (in the mall or the industrial village). It includes ablutions, reception dining area, enclosed play ground and activity room.
- d. The southern most building is a truck and car service centre.



1. THE MALL'S NEW MAIN ENTRANCE, MAIN PUBLIC SPACE AND CIVIC/ SKILLS DEVELOPMENT BUILDING



2. SMALL SCALE MANUFACTURE DISPLAY AREA AND WALKWAY



5. NEW MAIN ENTRANCE



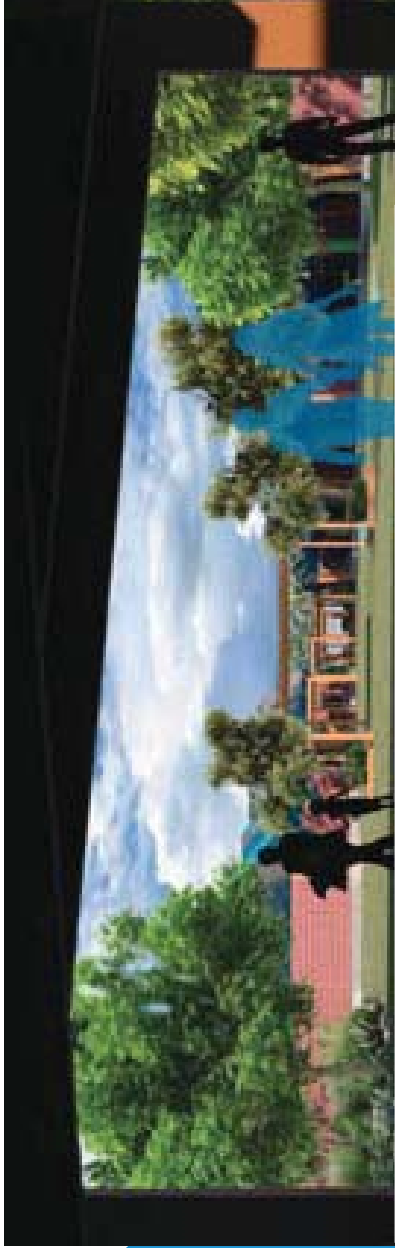
3. INTERNAL SERVICE ROAD AND OUTDOOR WORK AREA



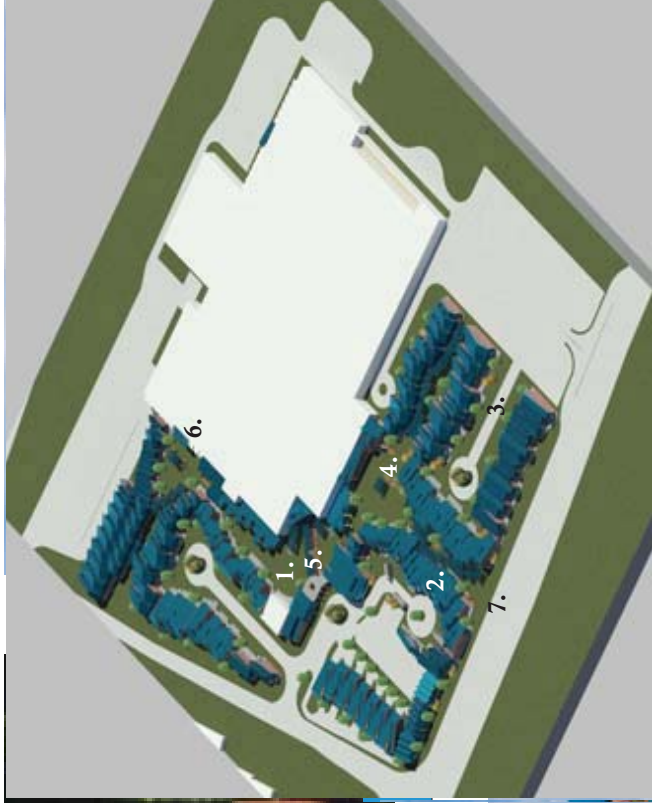
4. WEST ENTRANCE TO THE EXISTING MALL



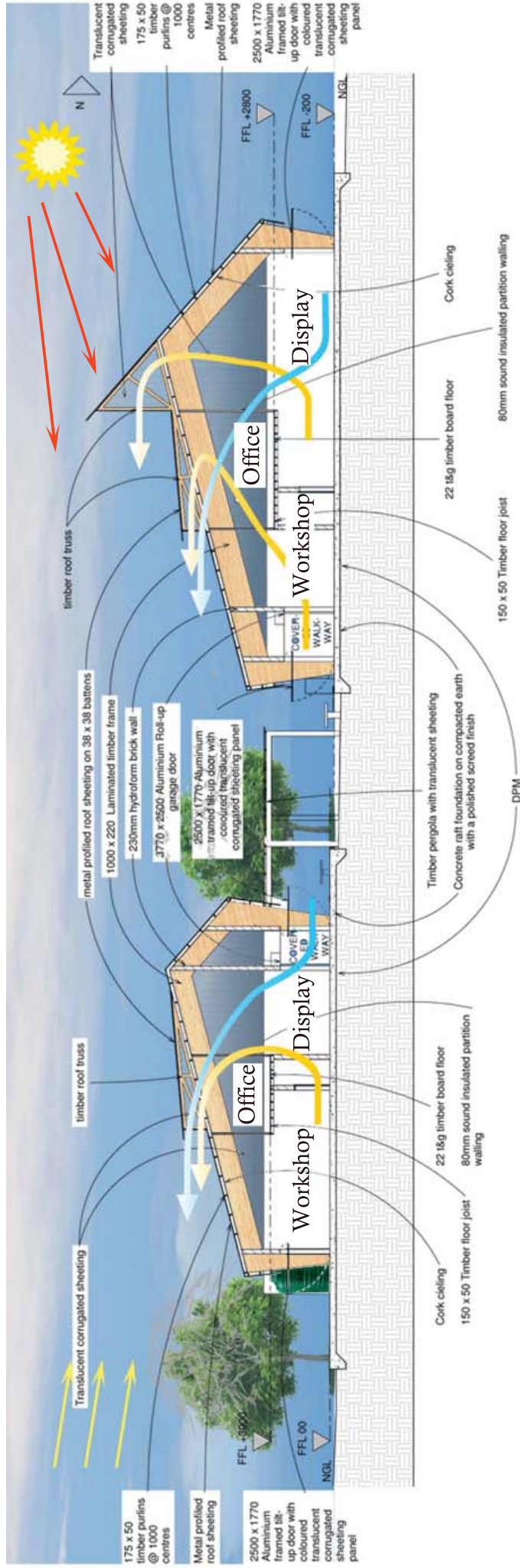
PERSPECTIVES



6. PEDESTRIAN WALKWAY FROM THE MALL'S NORTH ENTRANCE



7. WEST PEDESTRIAN STREET ENTRANCE



The sectional spatial arrangement composed of outdoor spaces on either side of each unit, separated according to vehicular circulation and pedestrian circulation. Internally, each unit is consists of space for a workshop, a storage area (buffer zone) and a display area.

The envelope design is centred on good natural lighting, ventilation, passive heating and cooling and rain water collection for efficient and healthy working environments:

- i. The roof apertures are oriented southwards to avoid over-bright sunlight and instead receive an even wash of south light best suited for working spaces.
- ii. The roof apertures also allow for stack ventilation and work with the tilt-up doors to stimulate cross ventilation; this will allow for sufficient ventilation for manufacture and food production spaces.
- iii. This will also help to cool the building in summer, in winter the roof apertures and tilt-up doors can be closed and the insulated north facing planes of the envelope can absorb heat and radiate it back into the building as a heat source, while preventing heat from escaping.
- iv. The roof area of the entire development is used to collect rain water, which is then stored in collection tanks arranged to give access to each unit.
- v. The roof structure for all the typologies of the industrial village is independent from the walls that divide up the spaces. This can be done in a fast and clean procedure because of the use of dry stacked hydroform bricks in the wall construction. This means that multiple planning configurations can be adopted for ultimate flexibility in terms of spatial use for any manufacturing, food production or dining function.

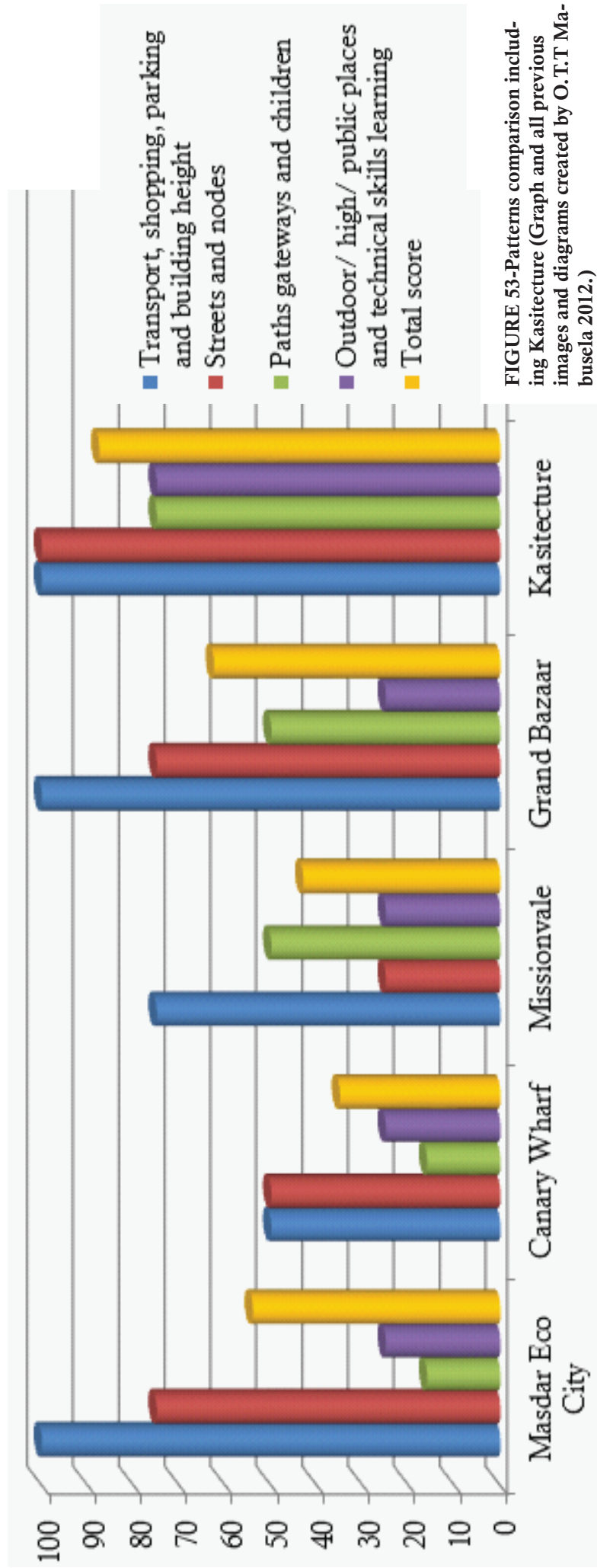


FIGURE 53-Patterns comparison including Kasitecture (Graph and all previous images and diagrams created by O. T. T Mabusela 2012.)

In terms of Alexanders principles, Kasitecture possesses majority of the elements and scores higher than the four case studies highlighted in the urban planning patterns chapter. This is mostly due to the fact that it was designed with these patterns in mind, but also because it is a development based in a low density area.

I would have liked to penetrate the development further into the mall, but as I hope to make this project a reality, I had to come to terms with the fact that the owners of the mall would never allow this based on their unresponsiveness to my attempts to make contact with them. Thus I restricted the development to gently touching the mall’s external walls and aligning the pedestrian routes with the mall entrances.

Kasitecture serves as an antithesis to the mall both in terms of function and form. The mall is nothing more than a consumerist prison for Kasi people’s minds and finances, while Kasitecture is a production house and education centre for Kasi mentality and economy. In terms of form, it rejects the covered, artificial, pedestrian walkways of the mall in favour of natural, green, open-air environments. It is also designed on the principles of passive heating, cooling and ventilation.

Kasitecture Urban Industrial village provides space and business support for fledgling businesses, as well as source of education on the possibilities and advantages of small scale manufacture and trade skills to the young and old. Kasitecture is meant to house fledgling businesses just long enough for them to gain independence, they would then move to larger production spaces of their own and make room for the next fledgling business. Thus the Kasi economy can continuously grow at a steady rate and create conditions for prosperity.

It is my hope that this urban planning model can be implemented in other Kasis in the following way:

- By studying the chosen Kasi in terms of geopolitics, economy, education, history, geographical information, demographics, health care, public transport, sports and culture and most importantly, comparative advantage;
- In this way, one gains a Kasi overview and can then choose a study group with which to work in the community, based on the Kasi's most dominant needs and already existing businesses and advantages. One can then draft methods and approaches for working with said study group and then engage in a consultative design process with them;
- I would suggest that one draft the urban development with the help of an urban designer in order to generate an appropriate urban environment to house the desired intervention. Based on all the information gained thus far, one must choose a site and proceed to map it in terms of; pedestrian circulation; vehicular circulation; public and private spaces; surfaces, edges and access; and
- With all this information gathered, one should be able to delve into the design starting with programme, design development and the final design. In this way, it is the process that may remain more or less the same, and yet the results will vary for each Kasi to suit its specific needs

The key elements highlighted above must be tied together to generate a “for people” development that will create a cyclic effect in terms of job creation, business creation and economic growth.

The people of the Kasi are hungry, poor and desperate, but this is not all that they can be. They can be inventive, productive, efficient and adaptable. They are able to thrive in harsh conditions, but have lived in these harsh conditions for too long. They are ready to lose control and destroy everything they don't have, but are more ready to be given the means to change their situations, to shape their dreams and build their own destinies. Through this self-actualised evolution, they will bring the whole country with them towards prosperity and improve the standard of life.



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