NAIROBI - A CITY WITHOUT A MASTER PLAN?

Banana Hill

Ridgeways
Garden Es

Karuru Forest

Kabete

Dagoretti

Spring Valley
Parklands

Ruthimitu

Westlands

Mathare

Eastleigh

CBD

Bu

Riruta

Eastlands

KilimaniChiromo

Industrial

Ngong Forest

Karen

Wilson Airport

Lang'ata

Nairobi National Park

Thika

Ruiru

Kahawa

s &
tates

Njiru

Dandora

ru Buru

Area

Embakasi Airport

CONCEPT
ETH Studio Basel and Gideon Aschwanden & Martina Vogel

THE NAIROBI STUDIO

ETHZ Studio Basel Contemporary City Institute
Prof. Jacques Herzog
Prof. Pierre de Meuron
Manuel Herz
Ligia Nobre
Shadi Rahbaran

IN COLLABORATION WITH
Harvard University Graduate School of Design
and
University of Nairobi School of Built Environment

NAIROBI -
A CITY WITHOUT A MASTER PLAN?

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INTRODUCTION

PLANNING HISTORY

PLANNING STRUCTURE

NAIROBI'S FUTURE
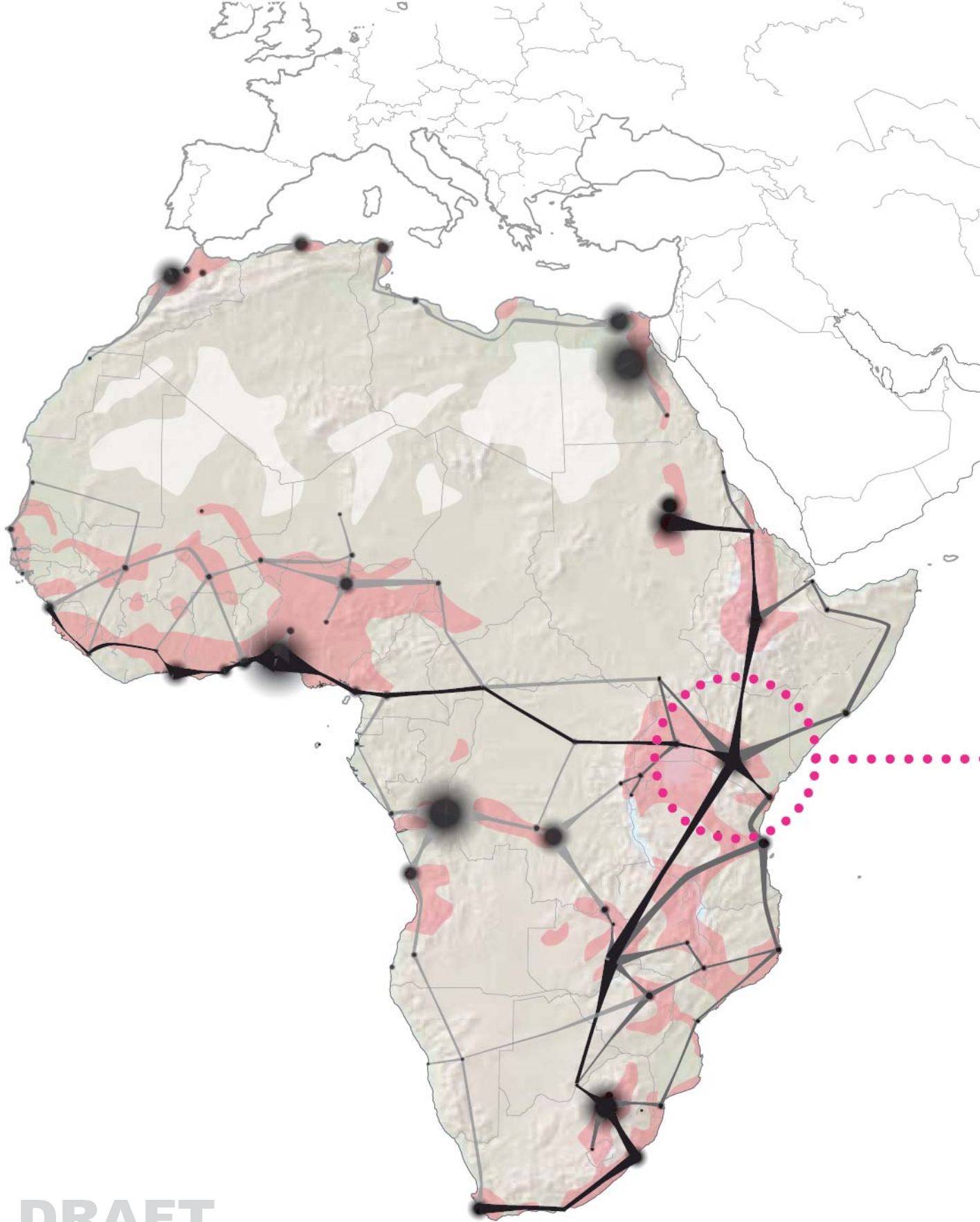
WHY NAIROBI

Nairobi is currently the most populous city in East Africa, with an estimated urban population of between 3 and 4 million. The city is only about hundred years old, but in this time its population doubled three times.

As Nairobi is not only home to many international companies and NGOs, it is also on the crossroad of the Trans African Highway and Northern Great Road, which make it to one of the most prominent cities in Africa politically and financially.

While Nairobi is becoming more and more international, still over 60% of the urban population live in informal settlements on 5% of Nairobi's ground. The sparsely implemented infrastructure suffers under the increasing pressure. There is a desperate need for strategies to channel Nairobi's growth.

LEADING QUESTION

How is it possible that such good concepts of planning, how they were proposed in Nairobi, doesn't result in a well planned structure?

To understand the wired physical structure of the contemporary Nairobi we need to look at the city's planning history and the present planning structure. We want to evaluate the difference between planning efforts and the actual implementation. Further we want to answer the question why the implementation of proposed concepts stocks regularly and who profits from that stagnation. Another focus we put on visible mutations of erstwhile implemented concepts.

Through the analyze of Nairobi's planning history we want to get closer to the city and evaluate current conflict zones, that are in a way responsible for the observed stagnation.
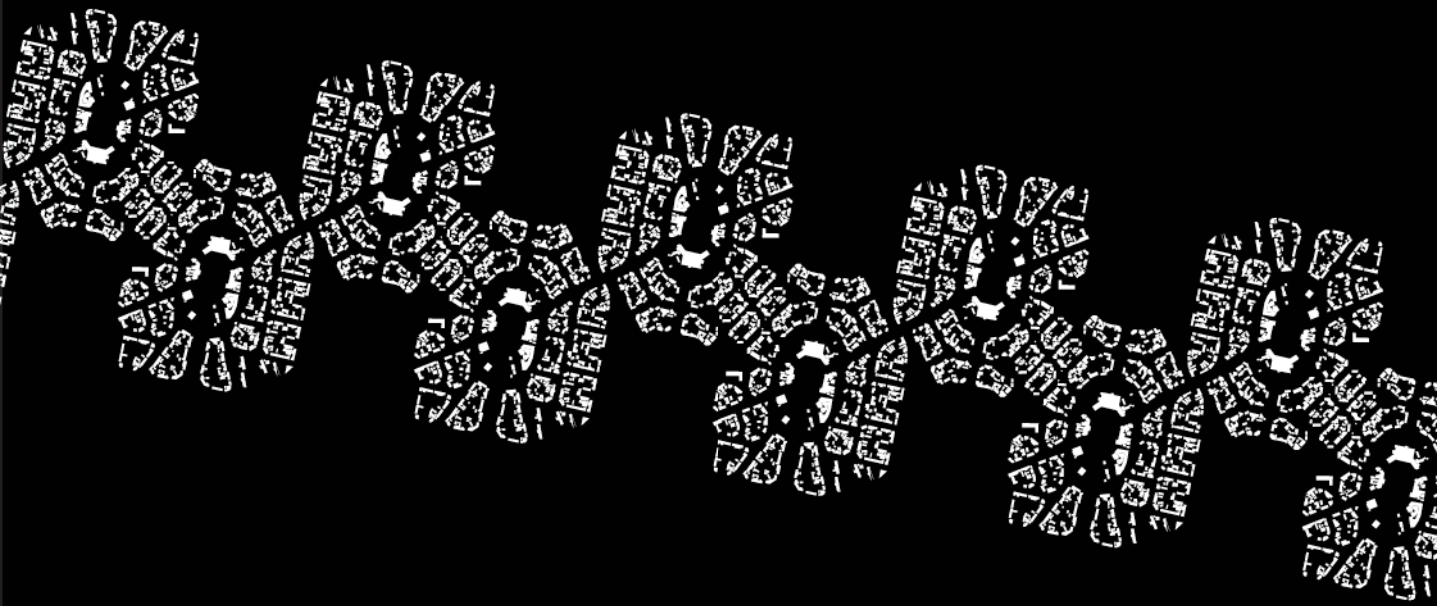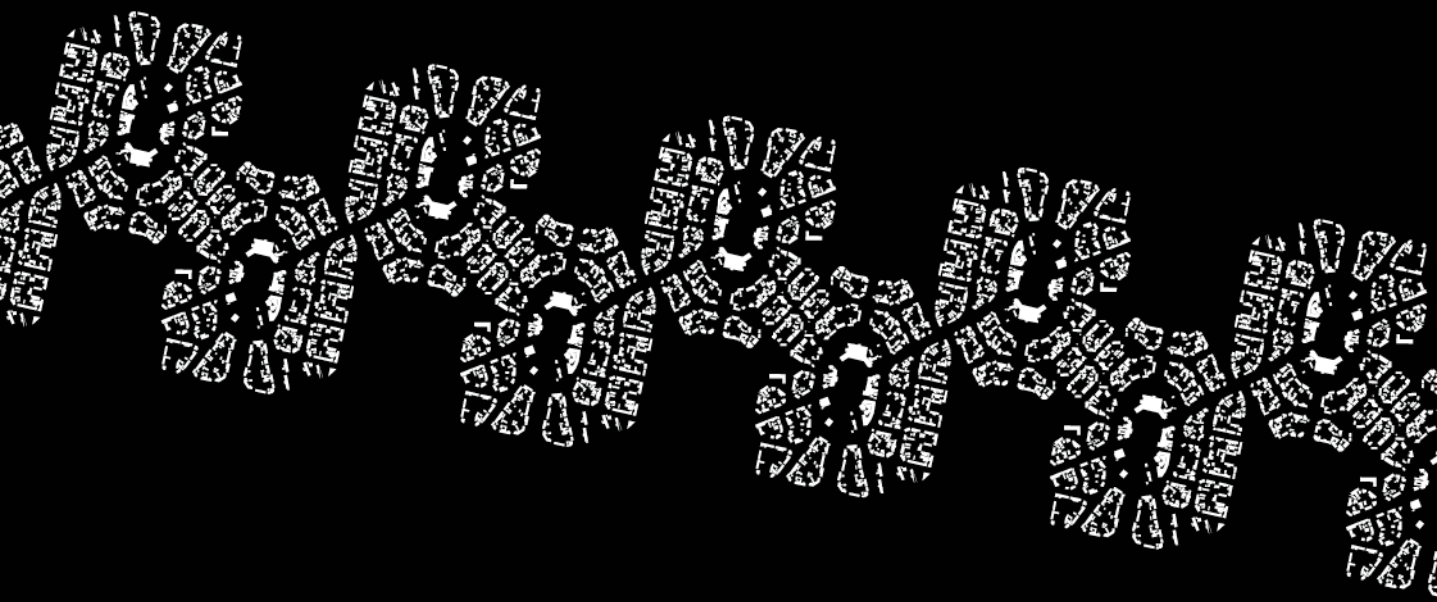
PLANNING HISTORY

1899 Foundation - KUR reaches Nairobi

1927 Plan for a Settler Capital

1985 Berlin Conference

World War I

World War II

% Increase in population
Boundary extension in km

18

25

77

| 1850 | 1899 Kenya Uganda Railways reaches Nairobi | 1901 Ministry of Land and Settlements establishes the Department of Lands | 1907 Nairobi becomes Kenya's Capital | 1912-14 Plague: Expropriation Indian Bazar | 1915 Crown Lands Ordinance | 1920 | 1923 Command Paper / 1923 Devonshire White Paper | 1930 | 1932 Town and Country Planning Act | 1940 | 1947 Town and Country Planning Act |

1885-1920 BRITISH EAST AFRICAN PROTECTORAT

1920-1963 COLONY OF KENYA
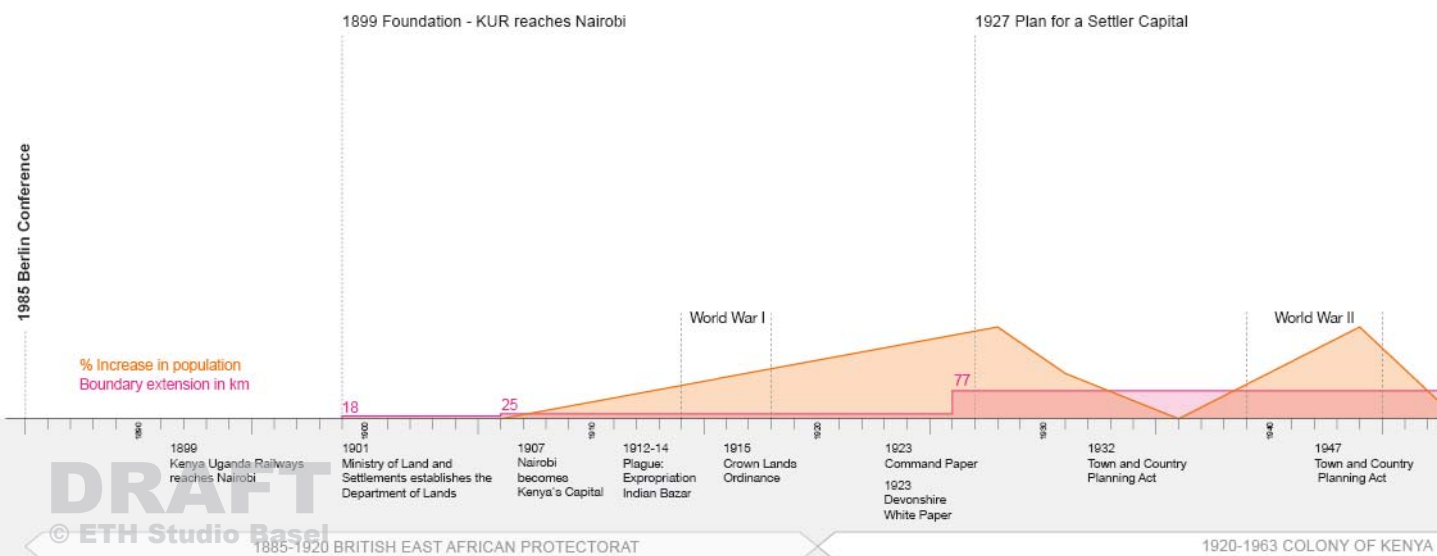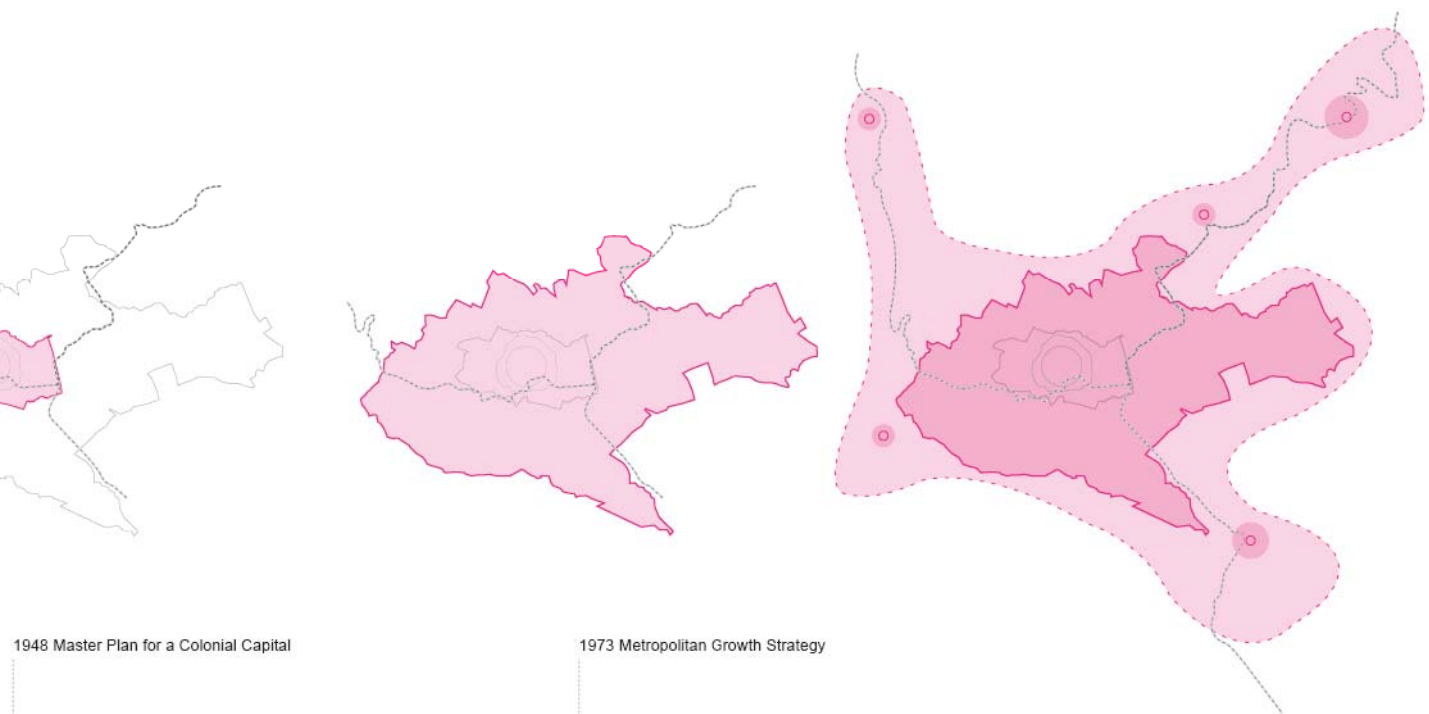
1948 Master Plan for a Colonial Capital

1973 Metropolitan Growth Strategy

1963 Kenya's Independence

686
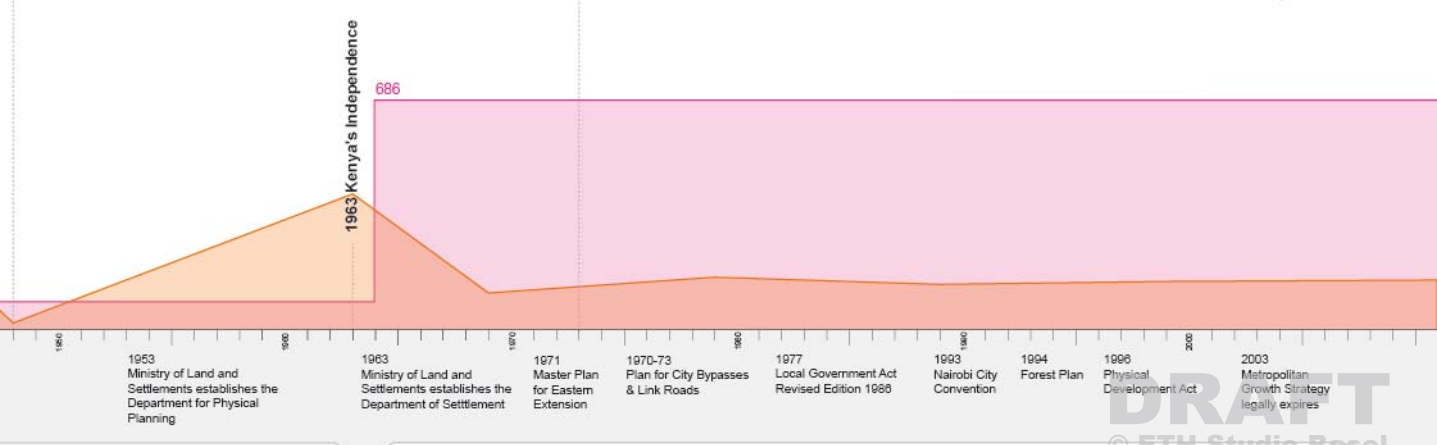
1953
Ministry of Land and
Settlements establishes the
Department for Physical
Planning

1963
Ministry of Land and
Settlements establishes the
Department of Setttlement

1971
Master Plan
for Eastern
Extension

1970-73
Plan for City Bypasses
& Link Roads

1977
Local Government Act
Revised Edition 1986

1993
Nairobi City
Convention

1994
Forest Plan

1996
Physical
Development Act

2003
Metropolitan
Growth Strategy
legally expires

SINCE 1964 REPUBLIC OF KENYA

FOUNDATION

Foundation

After the Berlin Conference in 1885, the British government declared the East African Protectorate that led to the building of the Uganda railway starting 1896. The laying of the railway from the Indian Ocean at Mombasa to Lake Victoria in the hinterland was to facilitate a communication corridor for exploiting the resources of the East African region. The labour for constructing the railway was imported from British crown colony of India, as the African peasants an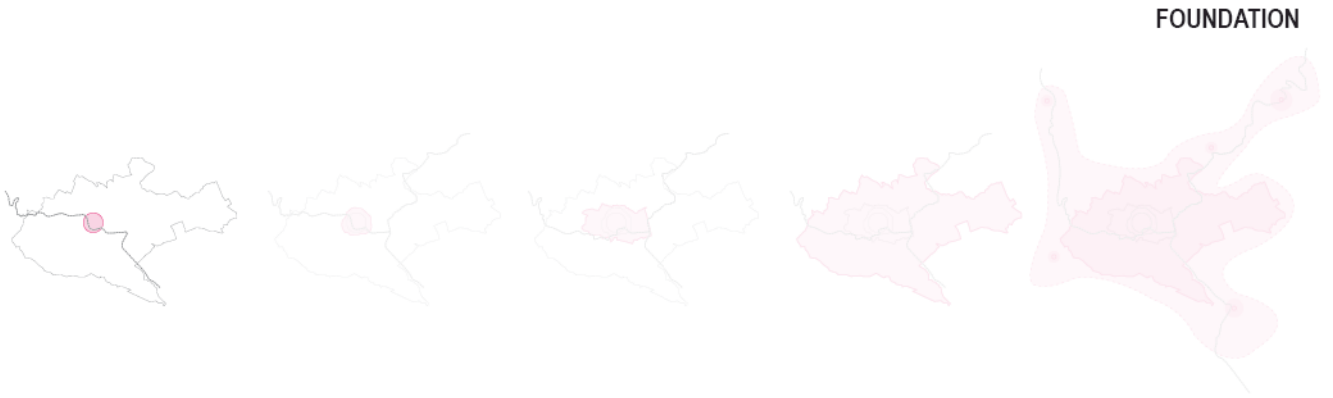d nomads were not available as labour. After the Kenya Uganda Railway reached Nairobi in 1898, Nairobi became Kenya's Capital in 1907.

Early Traces

Planning has always ascribed importance to the central business district. That is the occasion for us to search for traces of these planning efforts in it . The connection from the Railway to the Railway Authority was the first motor of urbanization. Along this street was the division line between the Indian and the British Community, today it is the eastern boarder of the CBD. We can still see that along this strip hierarchic system was implemented with a main street and a back street, in fashion in the historism of the late 19th century. The buildings remaining from this period are the Railway and the squatter settlement.

Railway Authorities and Train Station as Urban Engine
1905

High Growth of the Indian Bazar
1900-1910

Plan for a Railway Town 1906

Before the railway actually reached Nairobi in 1898, there was a need for a plan for a railway town. The choice of the site of Nairobi for this town was based on its topographical surroundings. The flat terrain was suitable for laying out of shunting areas, depots workshops for European staff and commerce. The plan only took into consideration the European employees of the railway and the European and Asian traders, the city boundary covered 18 km and was extended in 1920 to 25 km². The plan completely ignored Asian laborers and the Africans.

From its earliest times, urban planning patterns in Nairobi showed segregation between the commercial center (CBD) and European, Asian and African residential areas, so the town's functions were directly expressed by notions of segregation, by class and race.
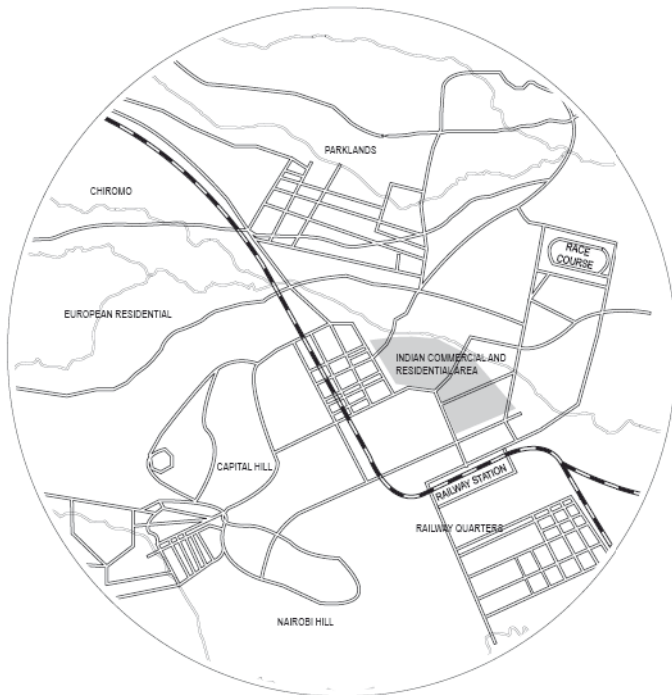
Reconstructed Plan for a Railway
1906

Nairobi Bazar Street
1904

The Great White Way in Nairobi
1905

Nairobi Market
1908

Moi Avenue
1920

Shunting Area Nairobi Railway Station
2007
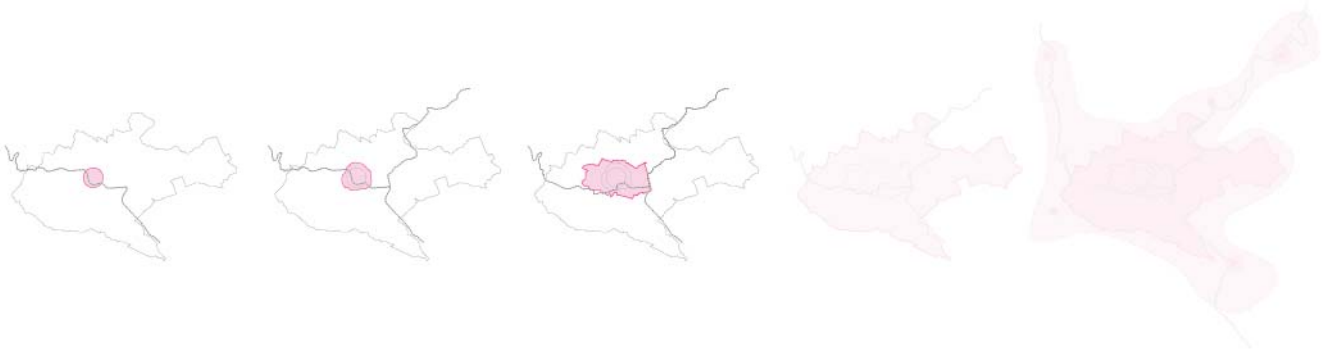
1927 PLAN FOR A SETTLER CAPITAL

Authors

The plan for a settler capital was drawn by F. Walton Jameson and planned by Eric Dutton, a key planer in the British African Empire.

Content

The boundary of Nairobi was extended to cover 77 km². This plan proposed extensive traffic regularizations to access the increased land ares, drainage and swamp clearance, building and density regulation and the attempt to furnish Nairobi with a monumental administrative center.

Goal

A major aspect was the inflated land price in the Asian and African residential areas, also a result of the Command Paper 1923 which prohibited the racial segregation between Europeans and Asians. The racial segregation turned into class segregation, which was in the complete agreement with the interest of the settler class. 90% of the territory belonged to Europeans, 10% to Asians and for male African the only legal way to live in the city was in the squatter settlements.

UPPER PARKLANDS ESTATE

EDUCATIONAL RESERVE

CROWN LAND

CHIR EST

ST. AUSTIN'S MISSION (PRIVATE)

GOVERNMENT HOUSE GROUN

OLD MUNICIPAL BOUNDARY

CROWN LAND

NEW MUNICIPAL BOUNDARY

GOLF COURSE (PRIVATE)

RAILWAY
MAIN ROAD

EUROPEAN USE   ASIAN USE   AFRICAN USE

Plan for a Settler Capital
1927

PARK LANDS

GOLF
COURSE
(CLUB)

CITY PARK
(PUBLIC)

ROMO
ATE

EASTLEIGH

MILITARY RESERVE
(AERODOME)

RACE
COURSE

T
DS

EDUCATIONAL
RESERVE

CBD

GOVERNMENT
RESERVE

STATION &
WORKSHOPS

GOLF
COURSE

RAILWAY QUARTERS

LIGHT INDUSTRY

HEAVY INDUSTRY

MILITARY RESERVE
(AERODOME)

0   1km

Moi Avenue
1920

Moi Avenue
1986

NAIROBI MASTER PLAN
AIR VIEW - PROPOSED CENTRAL AREA
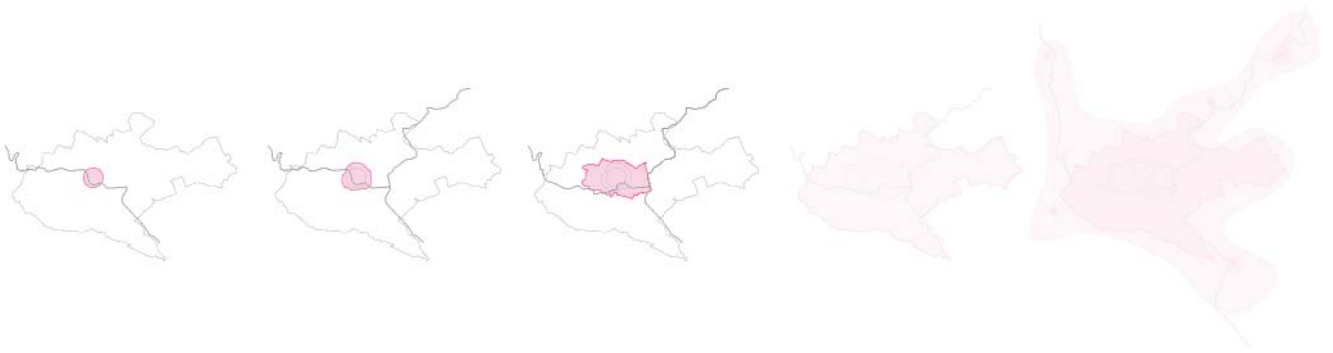
1948 PLAN FOR A COLONIAL CAPITAL

Authors

Kenya has made town planning history by experimenting with three, the first time academic planners: L. W. T. White, Architect, town planner and Head of Department of Architecture at the University of Cape Town, P. R. Anderson, Civil Engineer, Senior Town Planning Engineer and L. Silberman, Sociologist and Lectureer in the Department of Social Stu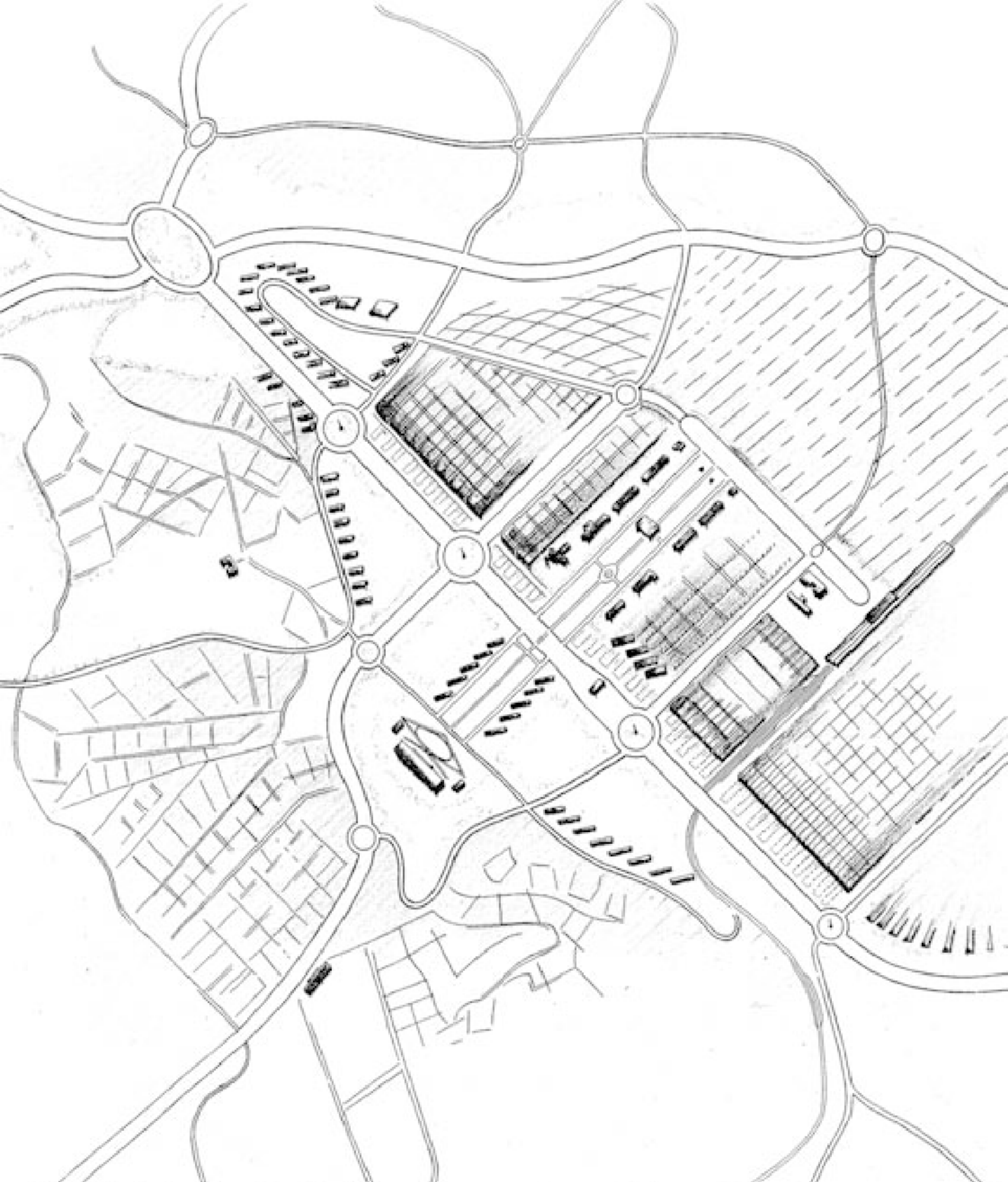dies at the University of the Witwatersrand, Johannesburg. The master plan is founded by the Municipal Council of Nairobi and by the Railway Authorities.

Content

With functionalism as main principle Nairobi was classified in zones; Kenya Center, official buildings, business an commerce, industry, railway, residential, official housing, open space, and also in forest reserve and park zones. The main spatial structure of the plan was to establish neighborhoods units for the working class, a segregation for purpose of surveillance and dominance.

Goals

The main aim of the master plan was to make Nairobi more attractive to for industrial investments. As capital of Kenya and East Africa it became center for tertiary and quaternary industries (service sector and intellectual service sector).

Implementation

The railway track has been moved out of the residential area to the south and nearer to the official housing zones to minimize their way to work. Another very important issue was the planning of open spaces, even in the official housing areas. A major network of main and regional roads was established also roundabouts on junctions.

GREEN BELT   SPRING VALLEY

KIKUYU
LAND UNIT

RESERVE

GREEN BELT

○	ROUNDABOUT	
	MAIN ROAD	—■—■— RAILWAY
	REGIONAL ROAD	———— BICYCLE PATH
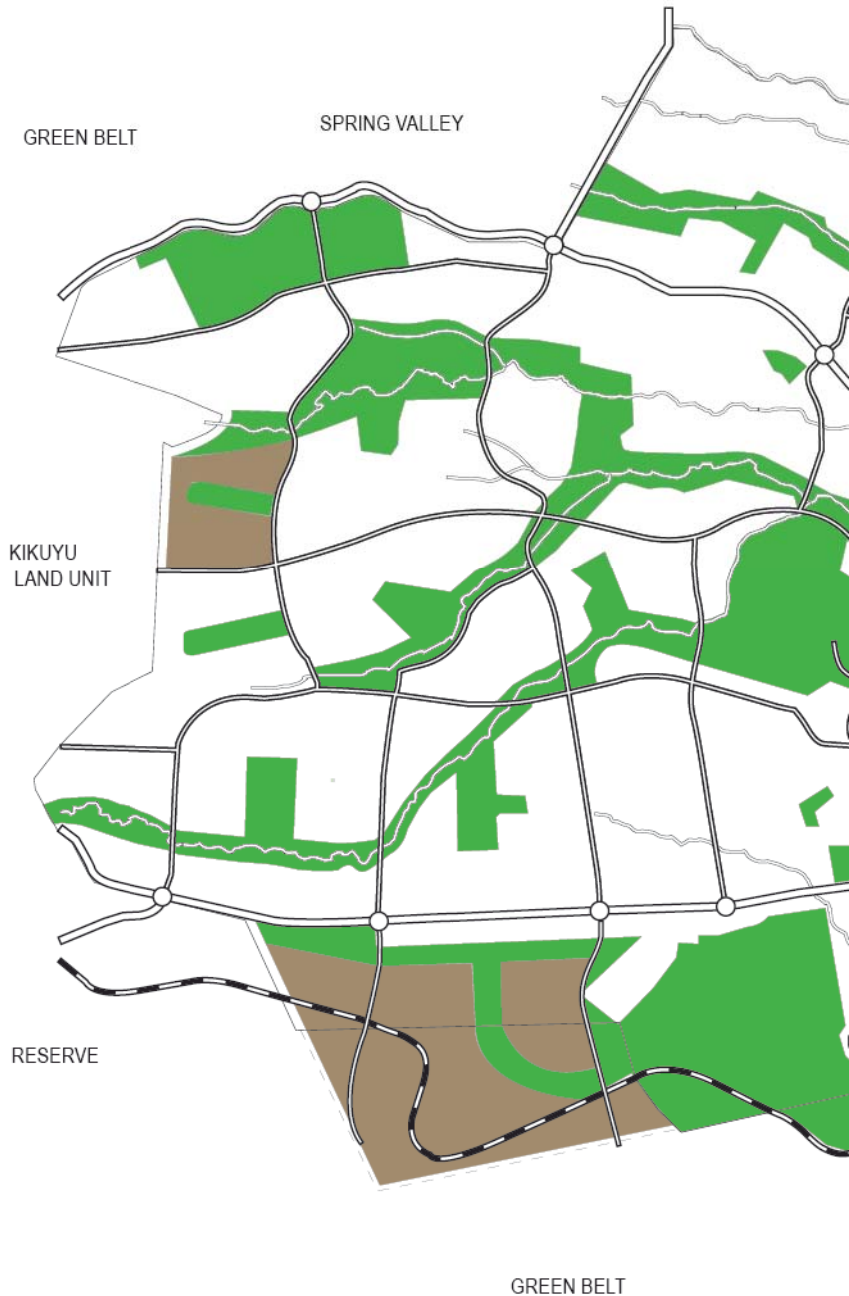
KENYA CENTER	BUSINESS & COMMERCE	LIGHT INDUSTRY	RAILWAY	HEAVY INDUSTRY
OPEN SPACES	RESIDENTIAL	OFFICIAL HOUSING	RESERVE FOR OFFICIAL HOUSING	NOXIOUS INDUSTRY

Master Plan for a Colonial Capital
1948

GREEN BELT

GREEN BELT

GAME RESERVE

0   1km

Proposed Kenya Parkway
1948
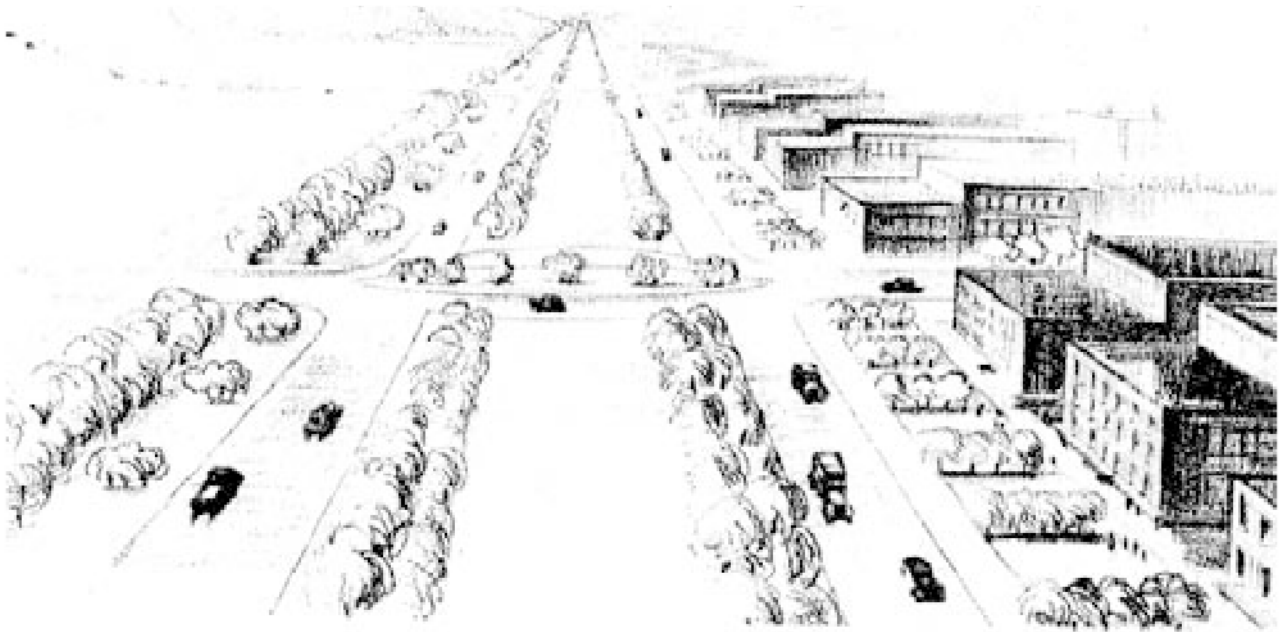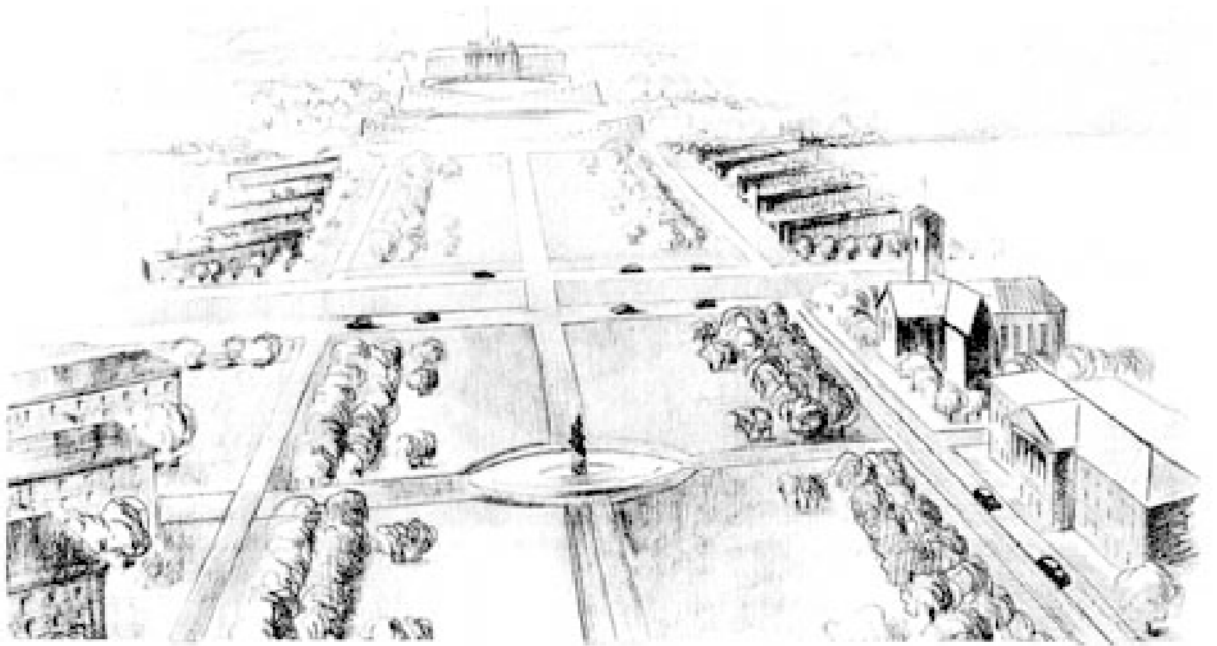
Proposed Kenya Centre
1948

Delamere Avenue
1950

Planning History
1948 Plan for a Colonial Capital

Fast and Blocked

Through the 1948 plan the city got a big number of roundabouts which still exists today. What was seen as a sign of efficiency and candling traffic very fast is causing today every day traffic jams. The round about blocking under the pressure of the commuter streams which still have to circle the CBD to cross the city. They introduced red-lights but they are neglected. Today the policeman are during rush hour employed to keep the traffic liquid.

Point-de-Vue without a Point

Inside the CBD the plan was to create a big cross, like in Washington, of wide avenues. But the 4th point has never been built in Uhuru Park. This park at the western edge of the CBD is untouchable since independence for development, even president Arab Moi wasn't able to built.

City Cross for Beautification
1948
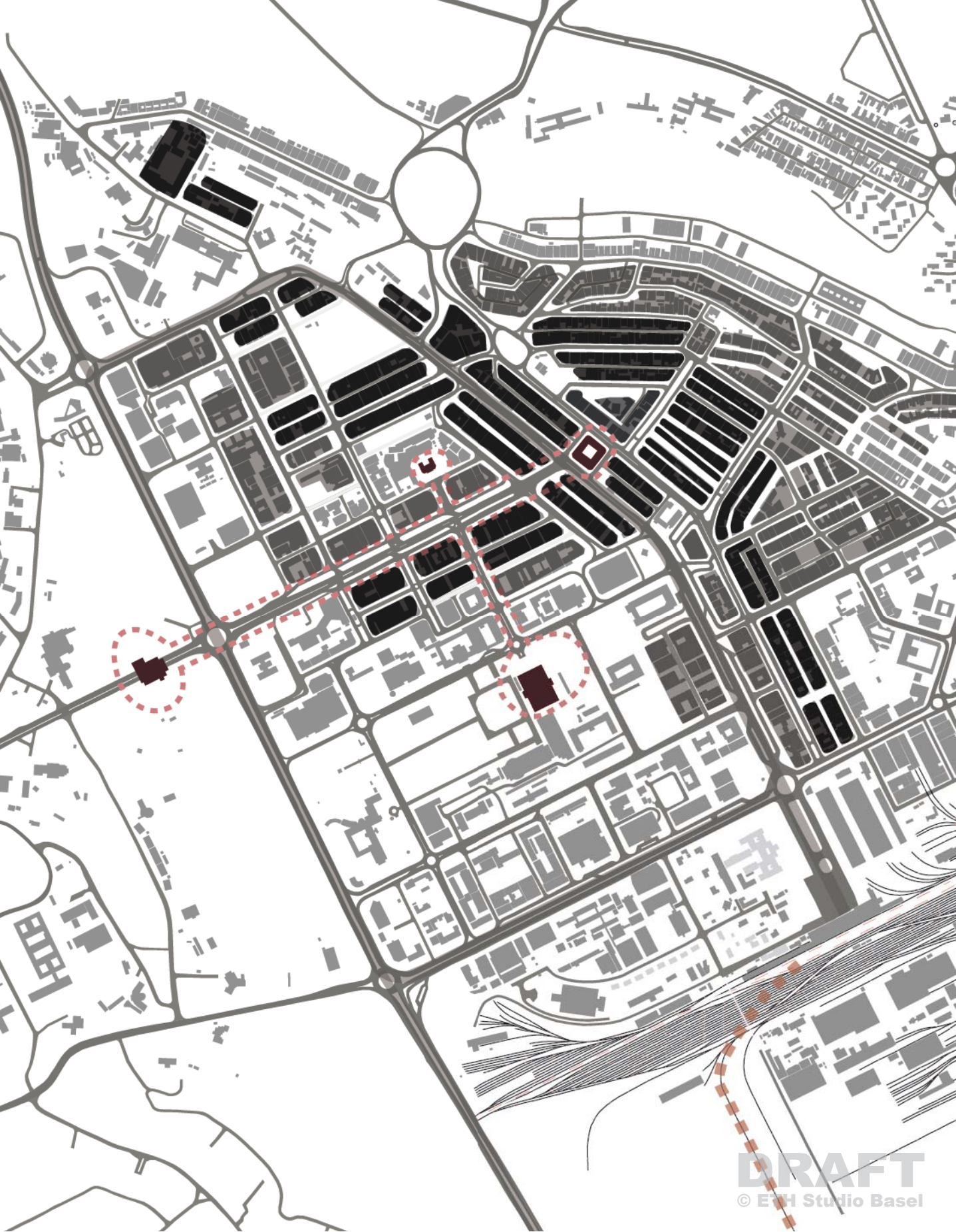
Planning History
1948 Plan for a Colonial Capital

Central Business District
2007

The Green City in the Sun
In the Master Plan for a Colonial Capital 1948 many open spaces were planned along the rivers and through residential areas. The first time in Nairobi's history open spaces were proposed as public spaces.

Green Network versus Slum Belt
Base of the 1948 planned green-network is on the one hand the planning idea which was already in the Bronx, New York present. A green space along the river. In the civic twilight of the 19th century green spaces were places to meet and discuss. In Nairobi the problem of drainage was still a big problem in the rainy season when the lower part of Nairobi turned into a swamp. They planned alluvial soil along the rivers for the flood waters. Even doe the green space network is present throughout the city, the function and use is very different. Within the last 60 years the rivers have become sewers and the green spaces informal settlements. As an example we show the formally green skirt-board south of the industrial area. This river shaped the industrial zone. As a sewer for this area all the streets are roughly vertical to the river. With the features of 'fresh water', sewer and work nearby the green skirt-board become a prime spot for informal low income housing. The same pattern is visible in all areas where work is near.

Proposed Open Spaces 1948
Situation Today 2007

Colonial Planning influenced the City
While the Plan for a Settler Capital 1927 advanced the racial segregation, the following Master Plan for a Colonial Capital 1948 enforced the class segregation through planning housing zones for the high and low income inhabitants. Further the 1948 plan was very functional and moved the existing railway track out of the European residential zone to the south, through the official housing zone. This shows the preferential treatment of the high in come class and the railway track becomes a functional border between the different classes. The increased traffic transit should be solitude by street widening and new roundabouts on junction, which leaded later to heavy traffic jams.

Informal Settlements on the City's Border
Although the 1927 and 1948 developed plans have never been fully realized, as the amount of capital outlay that was required for their implementation was never allocated, this colonial planning marginalized the African urban majority, and propagated informal urbanization on the town's periphery (Thornton White, 1948:43).
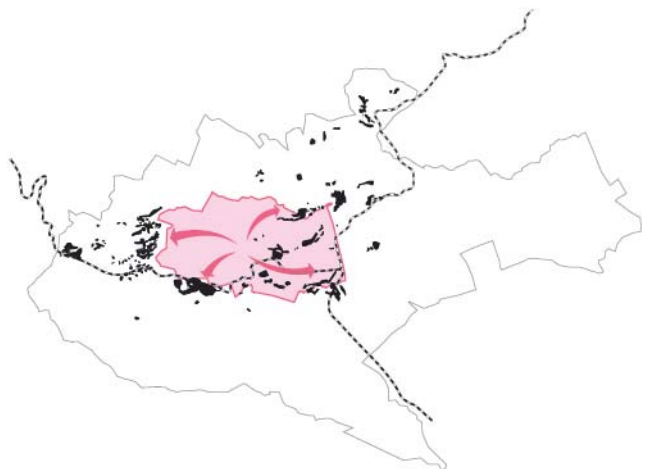
Informal Urbanization along City Boundary
Until 1963

Central Business District
1950

Increasing Parking Problem in CBD
1973

Uneconomic Use of Road Space through Mixed Traffic
1973

President Jomo Kenyatta
July 1963

INDEPENDENCE 1963

Internationality through Independence
Since Kenya's independence in 1963, several important factors made a contribution for a need of a new strategy. Nairobi has developed after independence into one of the most international cities in the world. As the third UN city after New York and Geneva and host to the headquarters of some of the main UN bodies, it is thoroughly tied into a global network of policy making, diplomacy and governance.
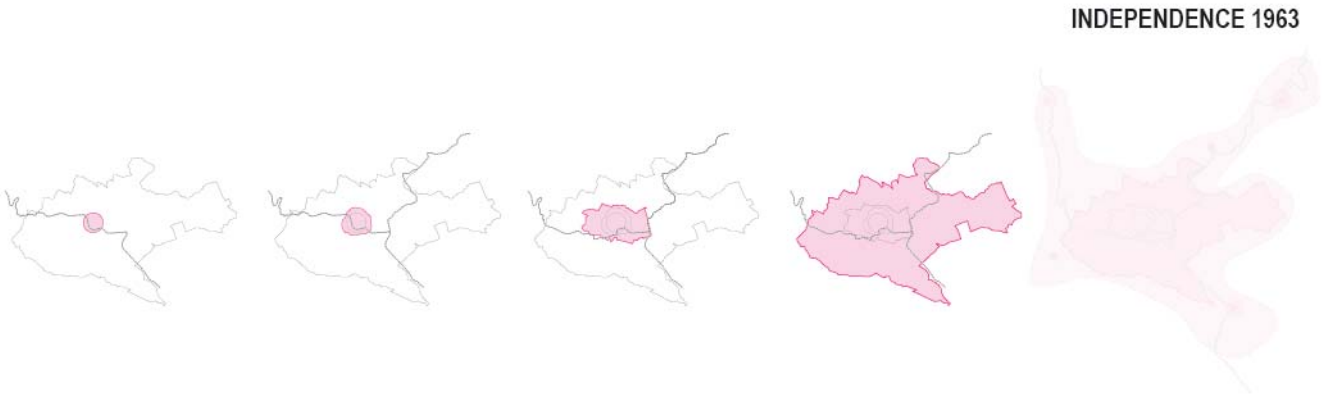
The African Majority is born
Against the conceptualization of the colonial period Africans were now allowed to live within the city. Through the huge boundary extension, all the informal settlements which contained the majority of the local population along the old boundary became now included. Beside this Kenya has been host to large refugees camps since the 1970s. Leaving refugee camps that are located within Kenya's border zones, thousands of refugees, mostly Somalians, have moved to Nairobi and settled in various neighborhoods across the city. The independent new government and its boundary extension leaded first time in history of Nairobi, to an African majority in the city.

Suffering under old Structures
Nairobi's physical structure was at this point still regulated by the centralized planning concepts of the old colonial regime. The CBD became overcrowded, the roads outreached their capacity and a parking concept was urgently needed. Therefore the government worked out in collaboration with the UN a new strategy, which covers and guidelines future developments and expansions Nairobi's, the Metropolitan Growth Strategy in 1973.

70s Architecture has born
An other impact the independence had to Nairobi, was the modern architecture, representing the post colonial period.

Boundary Extension
1963

Legend:
- Rapid growth
- Substantial growth
- Mixed growth
- Decline or low growth
- No growth

0   20 km.
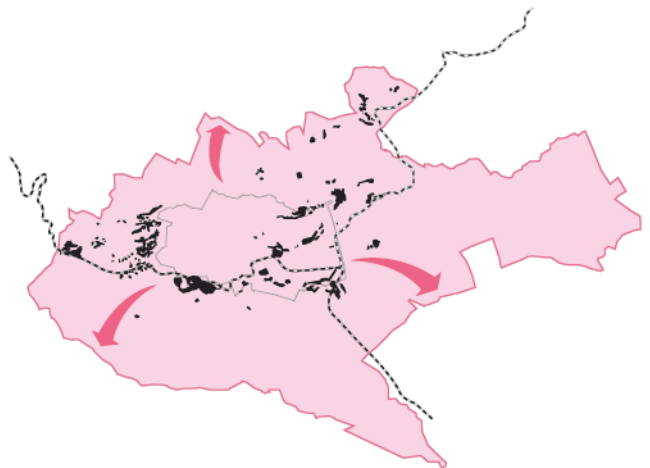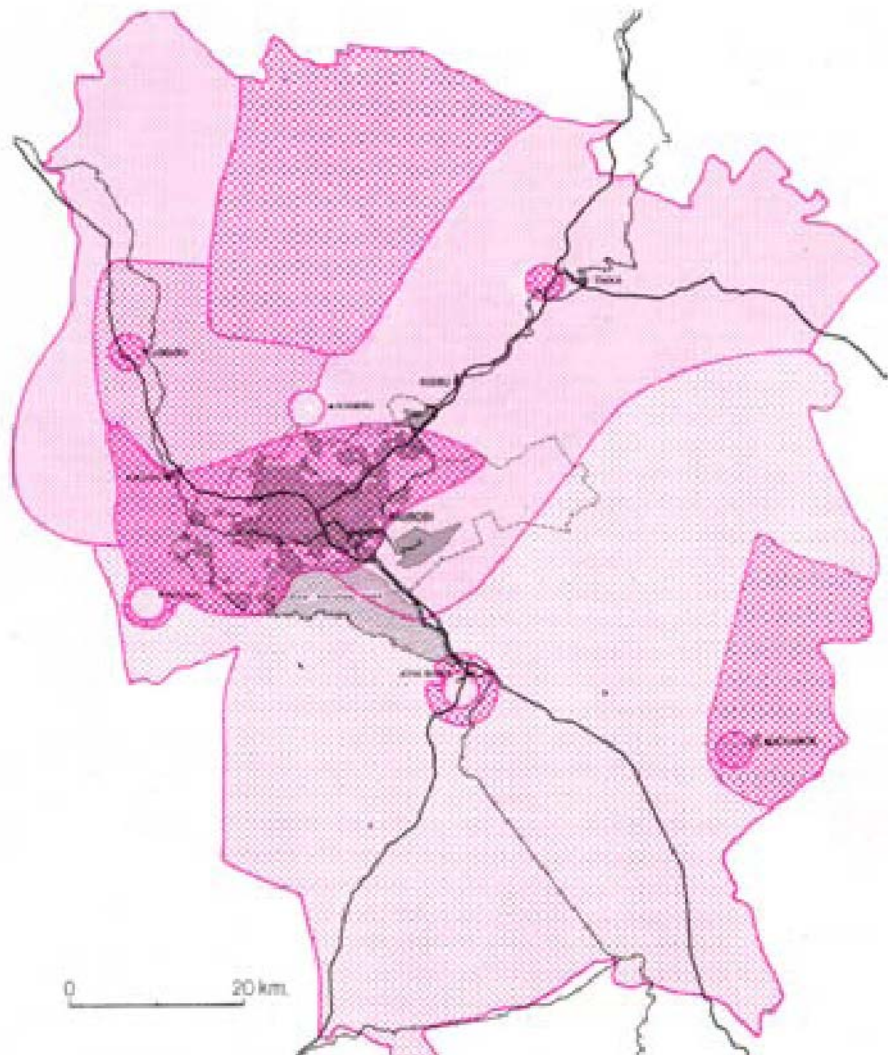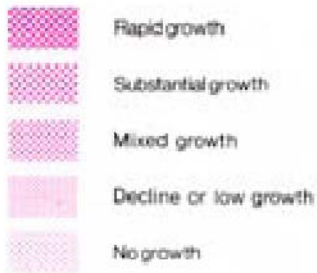
Regional Population Change 1962-1969
MGS 1973

Central Business District
2007

METROPOLITAN GROWTH STRATEGY 1973
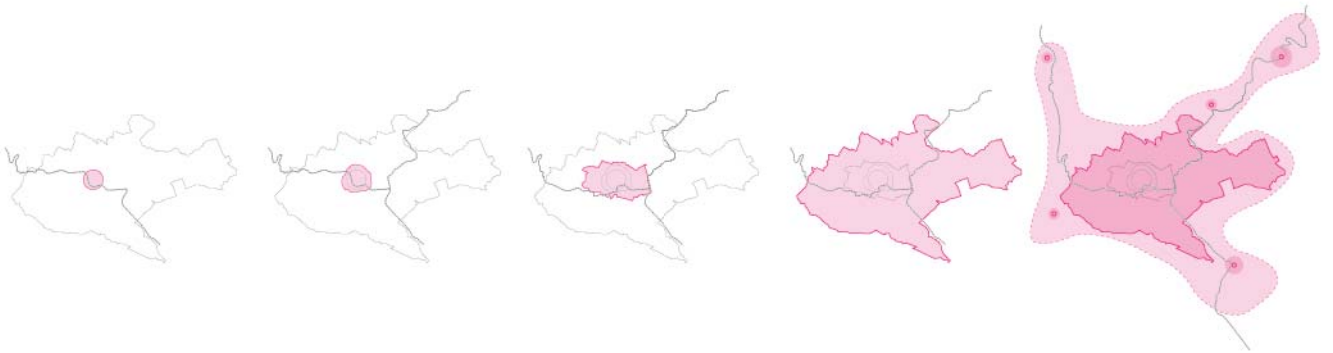
Planning History
Metropolitan Growth Strategy 1973

Authors
Nairobi Urban Study Group (NUSG) worked out the Metropolitan Growth Strategy (MGS) and the New African City Government proposed it 1973.
The MGS is founded by the Nairobi City Council (NCC), the Kenya Government, the World Bank and the United Nations.

Approach
To guarantee a successful planning the NUSG worked out a regional strategy and a city strategy for describing further develoment. They developed different city strategies for the year 1985 and the year 2000. The proposal are based on estimated population forecasts by the Ministry of Lands and Settlements that expected an total urban population of 1.396 Mio in 1985 and 2.883 Mio in 2000.

Thika

Ruiru

PROPOSED CORRIDOR OF DEVELOPMENT

Nairobi

Ngong

Athi River
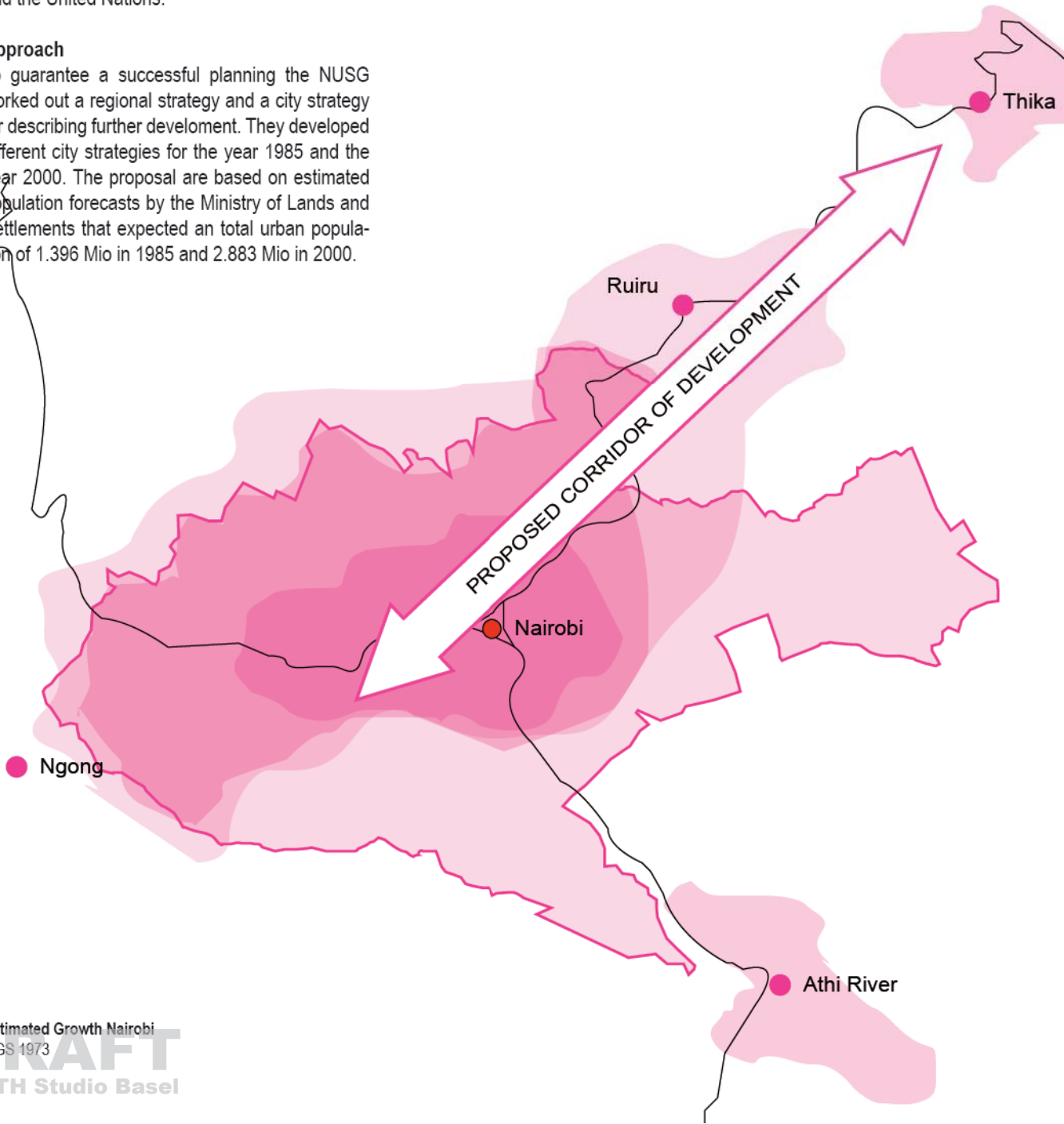
Estimated Growth Nairobi
MGS 1973

The Regional Strategy

The regional strategy involves the expansion of Nairobi to the west and to the north-east along the axis of the Thika Road and at the same time, the encouragement of growth of Thika, Athi River and Machakos. Through a popuvlation forecasts by the Ministry of Lands and Settlements a continuation of growth was estimated, which brought up the eventuality that Thika and Nairobi could fall in the same metropolitan area. The therefore formulated strategy proposed the expansion of the city along a corridor of development, which give flexibility to react to changing growth rates.

Implementation

The proposed corridor of infrastructure has never been implemented. But the expectation that the government would provide infrastructure along the Thika Road ended up in the result that government employees started to buy land in that area to make maximum profit from the upcoming infrastructure.

Population Forecast 2000
Total urban population; 2.883 mio

Population Forecast 1985
Total urban population; 1.396 mio

Population Forecast 1979
Total urban population; 0.989 mio

Planning History
Metropolitan Growth Strategy 1973

City Strategy
The consequent decentralization and the development of alternative service centers within the different districts of the city were proposed to reduce the high employee density in the Central Area.

The outlaying secondary centers could develop as major settlements which would be independent of the central city for many services, as they would have their own industrial, residential, commercial and administrative sub zones. Service centers would be located in relation to their potential catchment areas, sitting on main roads and bus routes would also allow for the attraction of passing trade. The fact that almost 25% of the total trips will still made on foot or bicycle shows the importance of having employees areas not far away from the residential areas.

THIKA ROAD

WAIYAKI ROAD

NGONG ROAD

MOMBASA ROAD

	CITY BOUNDARY			RAILWAY
	ROAD			PUBLIC TRANSPORT

| INDUSTRIAL AREA | COMMERCIAL AREA | EXISTING FORESTS | EXISTING & COMMITTED DEVELOPMENT | NEW HOUSING |
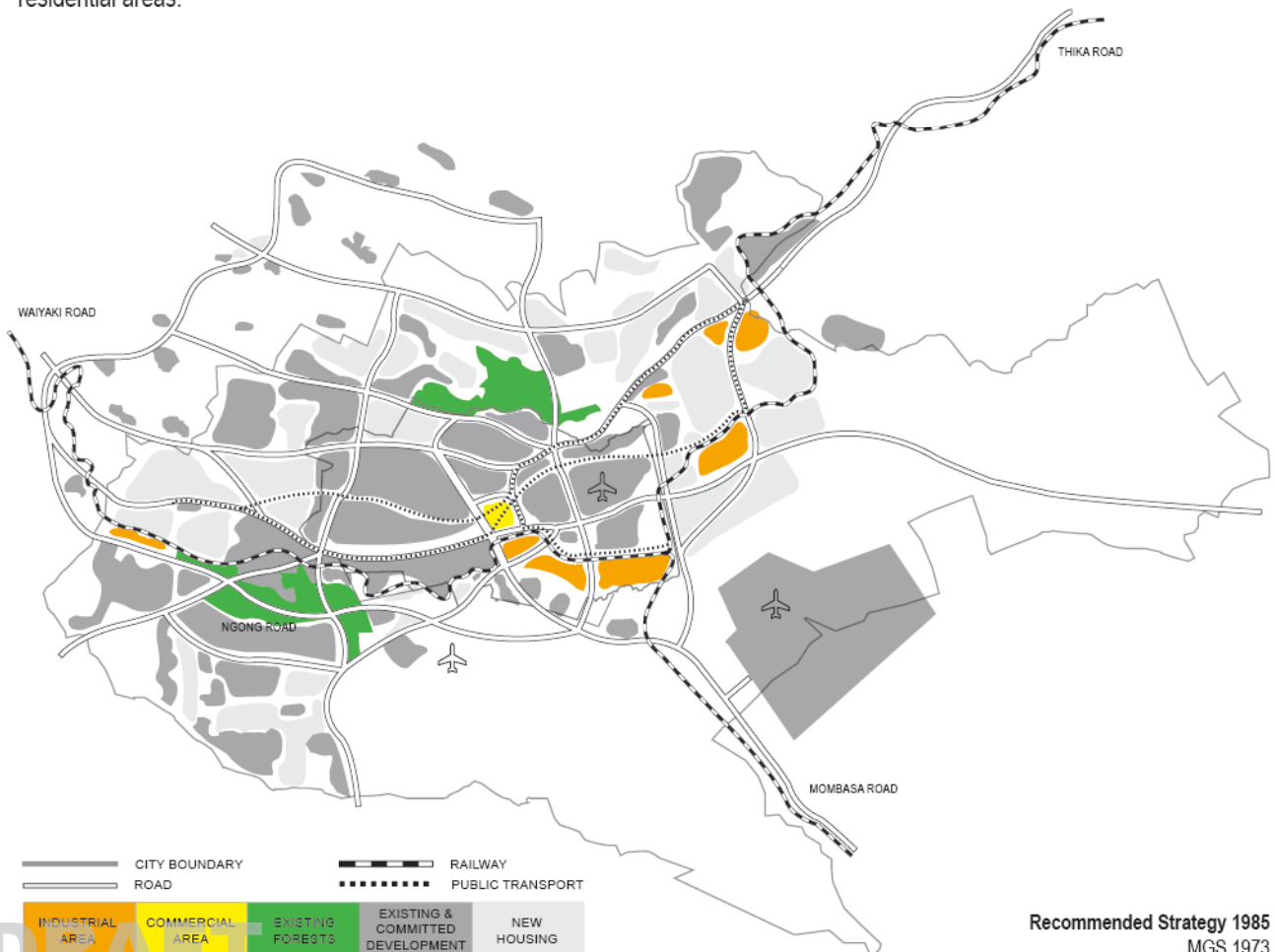
Recommended Strategy 1985
MGS 1973

Housing

The major areas for development would be Dago-retti, Karen-Langata, the Eastern Area and the areas outside the north-eastern city boundary around Ruiru.

Industry and Commerce

Associated with each of the main areas on new housing would be one or more industrial areas and a large commercial centre. The industrial centers have been located nearby to the main roads and where possible, next to the railway to offer a good accessibility by road and rail.

THIKA ROAD

WAIYAKI ROAD

NGONG ROAD

MOMBASA ROAD

0   5km

Preferred Strategy 2000
MGS 1973

Planning History
Metropolitan Growth Strategy 1973

Decentralization Strategies
The NUSG worked out two different strategies for the possible decentralization in the year 2000. Strategy 1 was based upon the concept that the growing population would be provided for within the existing city boundary. Strategy 2 suspects development spreads beyond the present city boundary.

Proposed New Service Centres
Service centers would be located in relation to their potential catchment areas, sitting on main roads and bus routes would also allow for the attraction of passing trade. The fact that almost 25% of the total trips will still made on foot or bicycle shows the importance of having employees areas not far away from the residential areas.

KARIOBANGI

DANDORA

KANGEMI

DAGORETTI

RIRUTA

KAREN LANGATA

CITY BOUNDARY   RAILWAY

| INDUSTRIAL AREA | NEW SERVICE CENTRES | EXISTING & COMMITTED DEVELOPMENT | NEW HOUSING |

Nairobi Strategy 1- Year 2000
MGS 1973

Housing

The major areas for development would be Dago-retti, Karen-Langata, the Eastern Area and the areas outside the north-eastern city boundary around Ruiru.

Industry and Commerce

Associated with each of the main areas on new housing would be one or more industrial areas and a large commercial centre. The industrial centers have been located nearby to the main roads and where possible, next to the railway to offer a good accessibility by road and rail.

RUIRU

KIAMBU
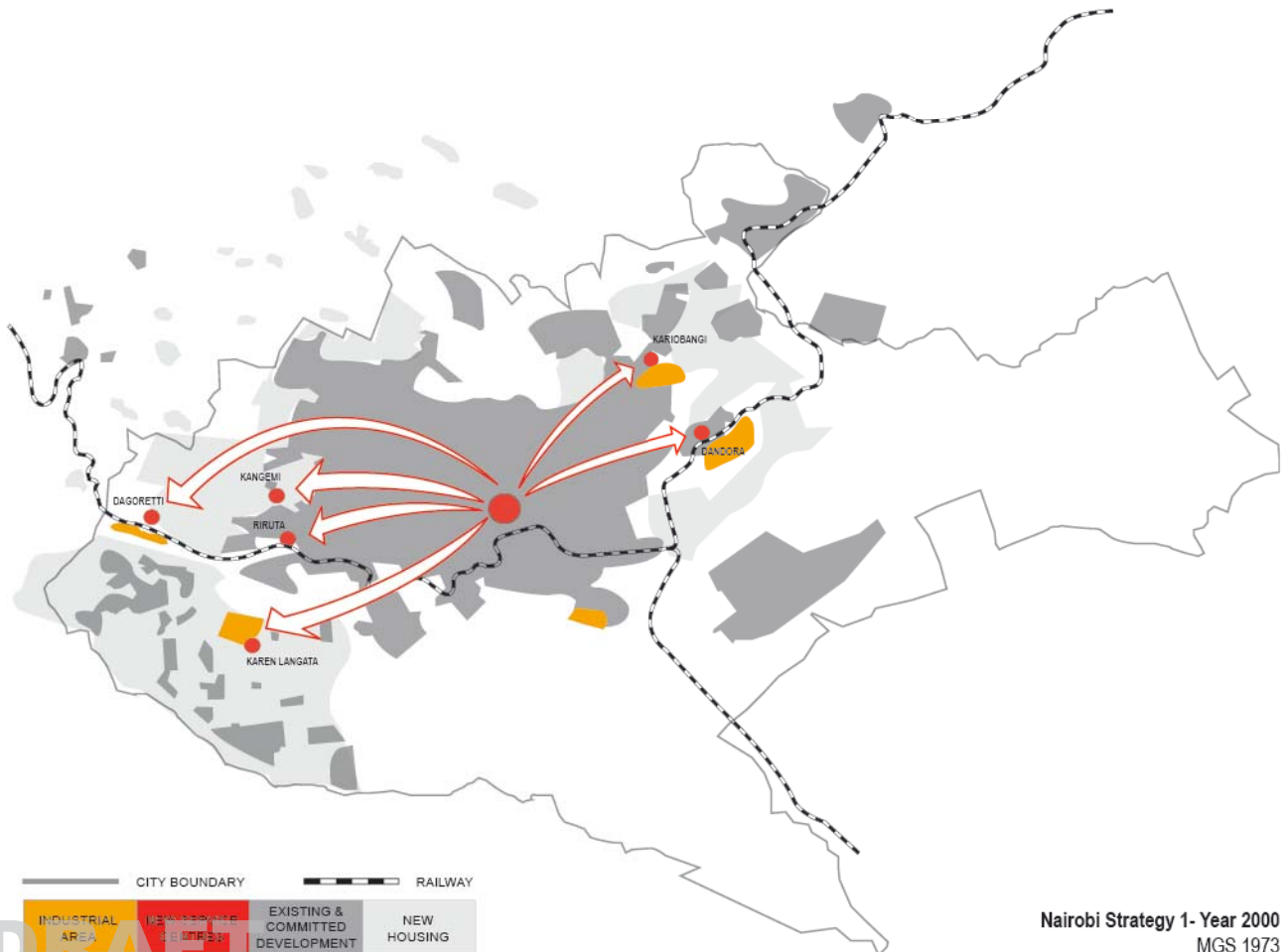
KASSARANI

KABETE

RIRUTA

KAREN LANGATA

0   5km

Nairobi Strategy 2 - Year 2000
MGS 1973

Planning History
Metropolitan Growth Strategy 1973

Affected CBD
An extended road network should release the CDB highly affected by the increasing traffic volume, caused by the increasing population and the more and more important transit traffic.

Road Network
Through the extensions of the major routes from Mombasa, Thika and Nakuru, a comprehensive network of roads and public transport routes has been proposed. The roads are in the form of a modified grid, thereby providing maximum accessibility between residential, industrial and commercial areas.

Proposed Bypasses
The need to reduce the traffic volume in the CBD increased continuously, and the situation is becoming worse due to the industrial and commercial development in the sub-urban areas. This proposed roads are the mile stone for Nairobi's future City Bypasses.

Public Transport
The proposed three bus routes should serve both existing and major new areas of development. A systematic reduction of bus fares was proposed as well. The City Council was asked to establish an autonomous transport authority to control public transport operations.

Parking & Cars
It was recommended to develop additional car parks and to stop free parking and to increase car parking fees.

Pedestrians
They improved traffic controls, including provision for pedestrian safety and pedestrian walks. The fact that almost 25% of the total trips will still made on foot or bicycle shows the importance of having employees areas not far away from the residential areas.

Housing Program
Proposals made how to construct affordable houses for the low income group were as well part of the recommended strategy.

Proposed Transport Network serving Central Area
MGS 1973

Existing on Street Parking Usage
MGS 1973

Existing Central Area Parking Supply and Demand
MGS 1973

Primary distributor (regional)

Primary distributor (urban)

Secondary distributor

0   10 kr

NAIROBI

0   10 km.

Proposed and committed industrial areas

Proposed and committed residential areas including redevelopment

Proposed and committed public uses

Committed roads

Proposed roads

First phase of mid-Chania water scheme

Possible second stage of mid-Chania water scheme

Recommended Long Term Road Hierarchy & Commited and Proposed Development
MGS 1973

Inadequate Public Transport in Nairobi
1973

Private Public Partnership: Matatus
2007

Planning History
Metropolitan Growth Strategy 1973

Ruiru
Located along the Thika Road within three kilometers of Nairobi's city boundary, Ruiru is a dormitory town for the nation's capital, and is connected by both rail and road. The town covers an area of 292 km², and is surrounded by numerous coffee plantations. In 1999, Ruiru had a population of 100,000, but has undergone rapid population growth in response to shortage of available housing in Nairobi. The town has struggled to adapt to the influx of people.

Land Grabbing along Thika Road
The proposed corridor of infrastructure has never been fully implemented. But the expectation that the government would provide infrastructure along the Thika Road ended up in the result that the president's family and the government employees started to buy land in that area. Through that speculation land prices inflated highly.

Development Pattern of Sub Centres
We observed several times that the physical development of sub centres starts at the local train station, in Ruiru too. Industry and train station are close to each other and a commercial zone is connecting the town centre with the public transport facilities.

Ruiru
Connecting Commercial Zone 2007

Ruiru Power Station
1960

Ruiru Power Station
2007

Ruiru
Matatu and Train Station 2007

Ruiru
Town Centre 2007

Ruiru
Market Street 2007

Planning History
Metropolitan Growth Strategy 1973

Athi River
Athi River's railway station built in 1920 along the Mombasa - Nairobi line was point of department for future development. Athi River is located on the Mombasa Road and has an urban population of 22'000 and a total population of 48'260. The town is relatively industrialized, including a major cement factory. Athi River town is also a growing residential area due to its proximity to the capital.

Symbiosis Industry
This small town grew into an industrial city accommodating some of the most labour intensive industries, as per example the cement factory. But apart from this, Athi River lying on Mombasa Road, is affected by a heavy transit traffic, which set the stage for a booming sex industry.

Athi River
Mombasa Road 2007

Athi River
Growing Residential Area 2007

Athi River
Growing Residential Area 2007

No Results after 30 Years
The city of Nairobi is using a master plan developed in 1973 which legally expired in 2003. Legally a master plan is valid for between 20 and 30 years, which means that structures constructed in Nairobi since the year 2003 are technically illegal.

According to the newspaper Daily Business, the old Metropolitan Growth Strategy 1973 will be adopted again and has been resold for new.

„...since 2003 any constructions in Naiobi are technically illegal...“

„... the Metropolitan Growth Strategy is still the ground of every negotiation...“

Jesus Barre, Urban Researcher NCC

Case Study 1
CITY BYPASSES & LINK ROADS

The Adopted Concept

Planning History
Case Study 1
City Bypasses & Link Roads

Author
Nairobi Urban Study Group developed the City By-
passes & Link Road Concept between 1970 and
1973 as part of the Metropolitan Growth Strategy.

Adopted Plan
As nothing was implemented of this proposal since
1973 the city adopted the bypass concept again
about then years ago. As the old proposal for the
road network already contained these proposed
bypasses the city decided to wide existing streets
up and build the additional part. They proposed
the Southern Bypass, the Eastern Bypass and
the Northern Bypass. In addition, there is also
a proposed link road between the Southern and
Northern bypasses. The road corridors reserved
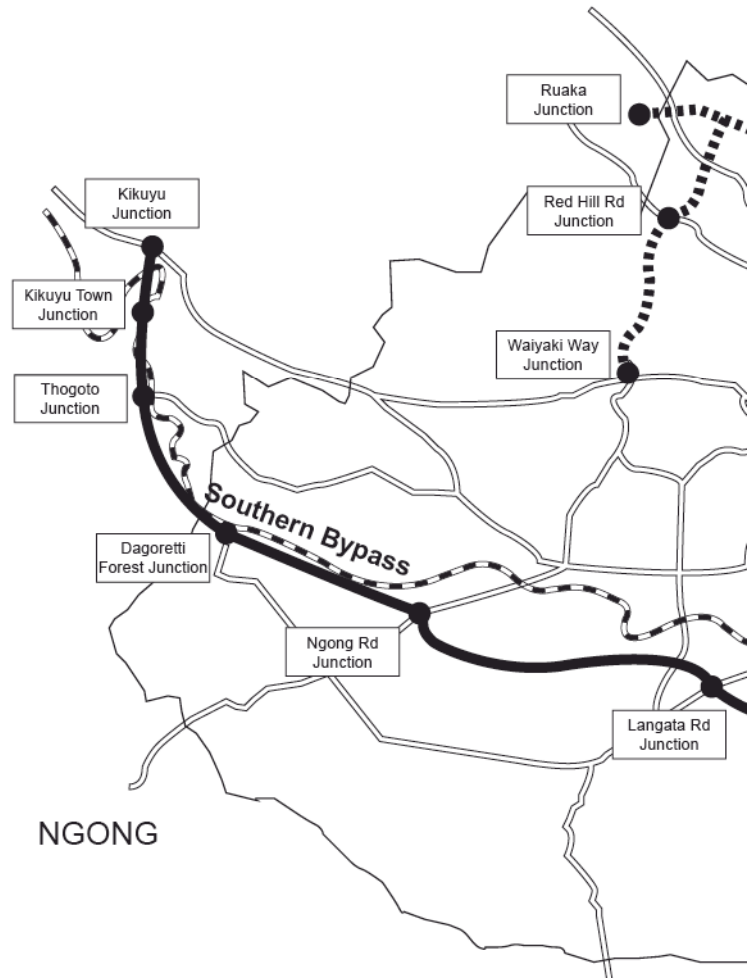for these bypasses are 60m wide.

Nairobi as Junction
The arterial traffic routes of Mombasa – Nairobi –
Athi River connecting Kenya with the United Re-
public of Tanzania are parts of the Trans African
Highway extending to Uganda and Zaire. The
Nairobi – Isiolo – Moyale road, which is part of the
Great North Road from Cape Town to Cairo, con-
nects Kenya with the Republic of Ethiopia. These
routes direct great volumes of traffic into and
through Nairobi.

Sustainable Economic Development
Roads create and support business environment
that facilitates private sector investment, growth
and job creation. Furthermore trade within the
country and with the neighboring countries heavily
utilizes roads for transportation. Adequate provi-
sion of roads is therefore an essential precondition
for sustainable economic and social development.

Implementation Today
 Parts of the Bypass have been built in the last
couple of months. Mainly the western part due to
its higher level of urbanity. The largest implement-
ed part is in the Ngong forest. But most parts are
just street widening.

KIAMBU TOWN

RUIRU

North. & East.
Junction

Kamiti Rd
Junction

Kiambu Rd
Junction

Northern Bypass

NAIROBI
CITY CENTRE

Ruai
Junction

Eastern Bypass

Mombasa Rd
Junction

City Cabanas
Junction

DRAFT
© ETH Studio Basel

Southern Bypass
Ngong Road Junction

Southern Bypass
Dagoretti Forest Junction
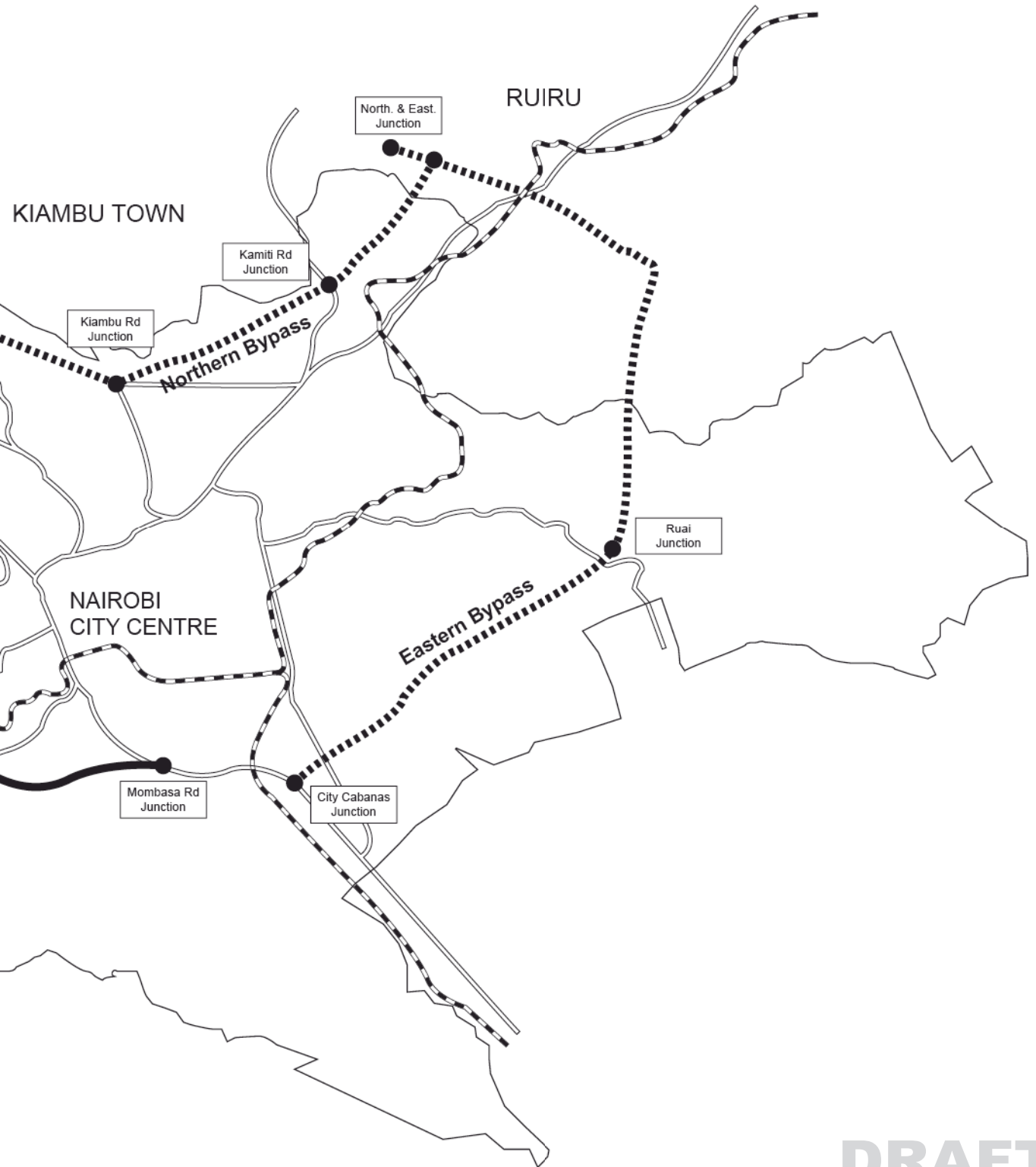
Planning History
Case Study 1
City Bypasses & Link Roads

The Western Extension
On our way on the Southern Bypass we figured out that there is a western extension starting at Kikuyu Town Junction. Street works are growing much faster here than on other junctions.

Highway demolishes houses
This road was planned trough a populated region. To build the highway, the there standing houses needed to be demolished or moved back.
In case of the set back of a housing unit, the government need to pay the owner for his lost. Inhabitants living along the street are very happy about that and they see a big opportunity for new businesses and economic development.

WESTERN EXTENSION

Western Extension
Kikuyu Town Junction

Western Extension
Demolished House in Kikuyu

Western Extension
Dust of Economic Change
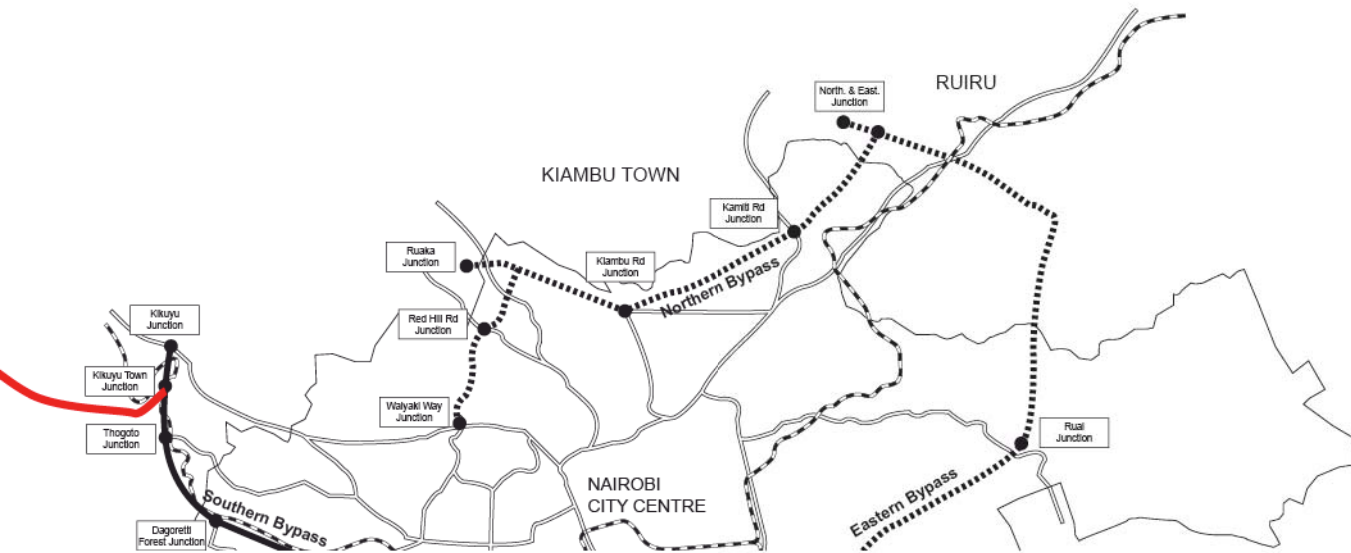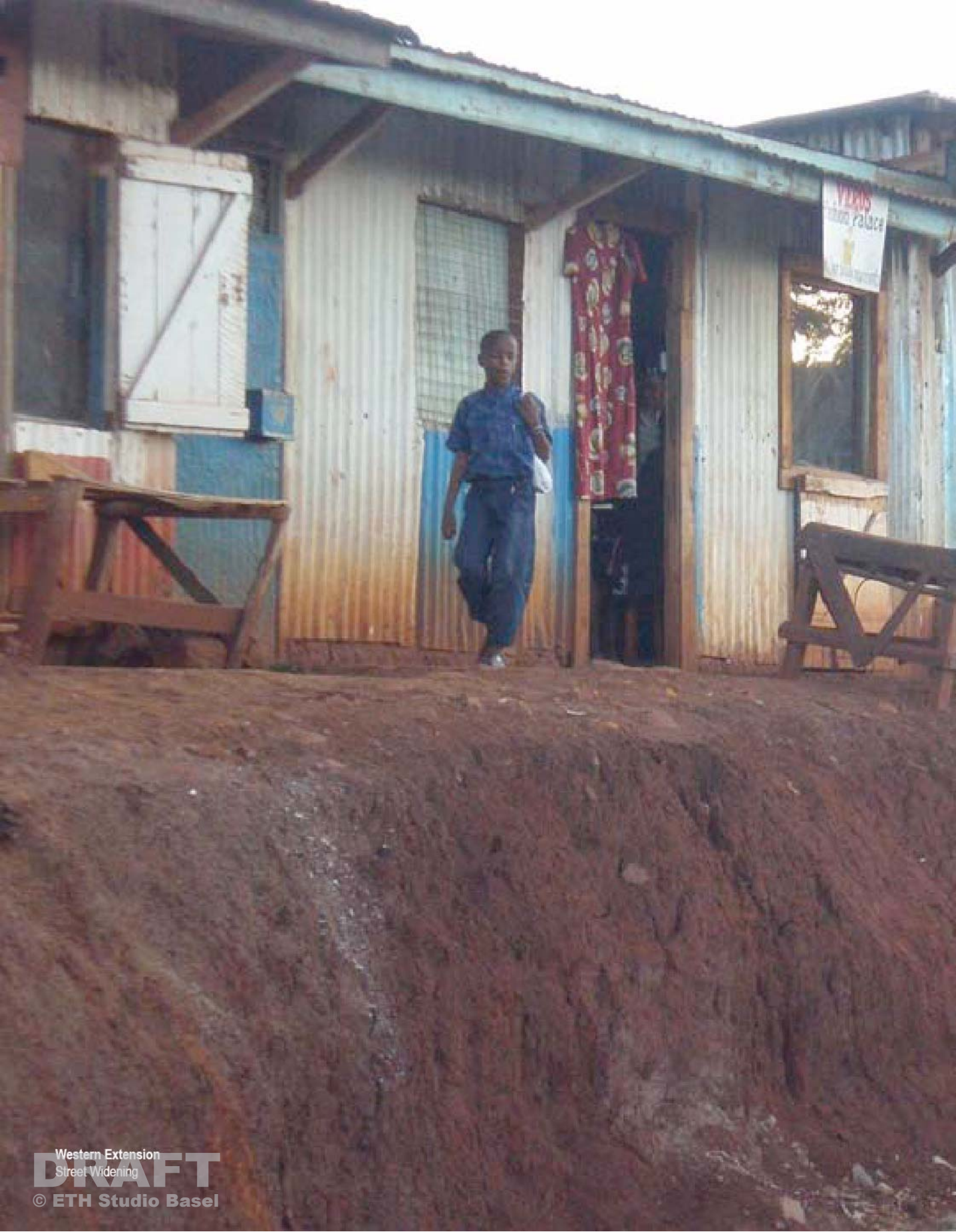
Case Study 2
THE EASTERN EXTENSION BURU BURU 1971

Planned versus Unplanned Structures

Planning History
Case Study 2
The Eastern Extension Buru Buru 1971

Authors
The Nairobi Eastern Extension Plan was designed 1971 by Menezes and Partners. The project was a joint venture between the Nairobi City Council, the Kenya Government and the Commonwealth Development Corporation.

Middle Income Scheme
Buru Buru is one of the residential neighborhoods developed in the 1970s as an owner occupier middle income scheme. The Mumias South Road corridor was designed as the central spine of the Buru Buru neighborhood, it was meant to have commercial facilities and community amenities along it, but they were never realized.
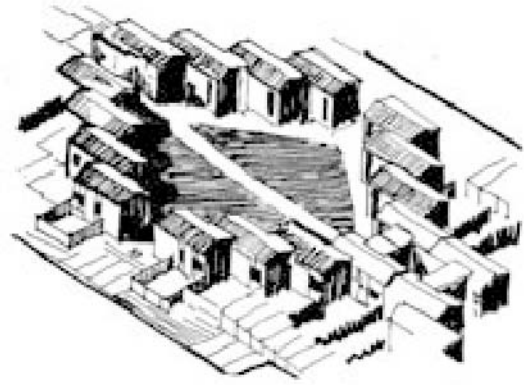
Phases
There are 5 phases of Buru Buru. To give them time to absorb the new residents they were built after each other an other reason was the lack of money.
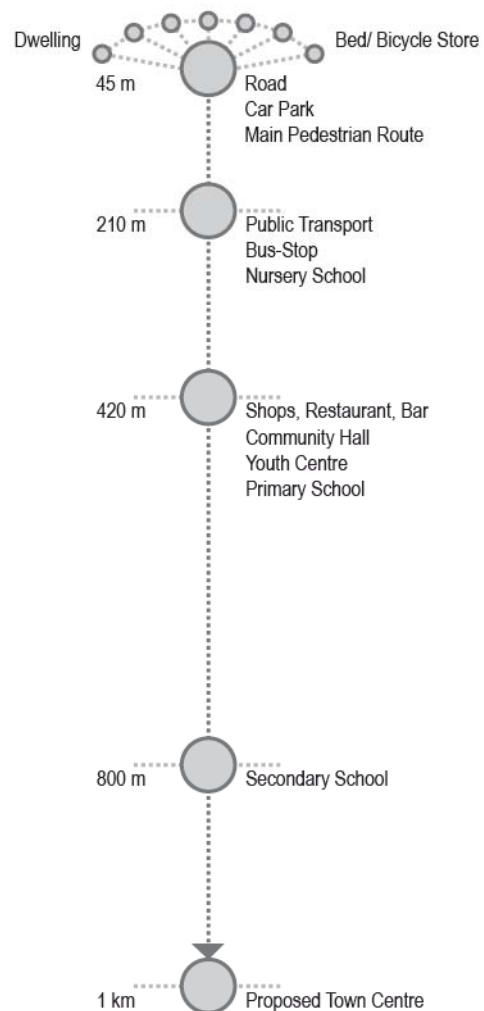
Flow along a Spine
The general organizing principle of the whole neighborhood was to create introverted courtyards from which all houses were to be accessed. These courtyards were interconnected by footpaths for the free movement of people, they were also linked to the central spine by foot paths. Over the years for security reasons and control, these courtyards have gradually been closed off using gates, creating a sort of gated community arrangement. The walk through thoroughfares that linked the courts to the central have also been sealed, such that courtyards have only one entry point.

Mutation or 6. Phase
All the lots adjoining the central spine can only be accessed from the internal courtyards away from the central spine. There is a 9m building line along this spine, which over the years has been ignored and manipulated by individual plot owners, to develop additional commercial space, opening onto the spine and maximizing on the economic potential of the lot. This omission facilitated for an ad-hoc development process on this corridor, and clienteles and manipulation by the power elite as the main principle of urban space procurement.

Proposal for Phase II
1971

Dwelling — Bed/ Bicycle Store

45 m — Road / Car Park / Main Pedestrian Route

210 m — Public Transport / Bus-Stop / Nursery School

420 m — Shops, Restaurant, Bar / Community Hall / Youth Centre / Primary School

800 m — Secondary School

1 km — Proposed Town Centre

Services Concept
1971

Entrance

Parking

Schools

Residential

Light Industry

Commercial

Master Plan for the Eastern Extension
1971
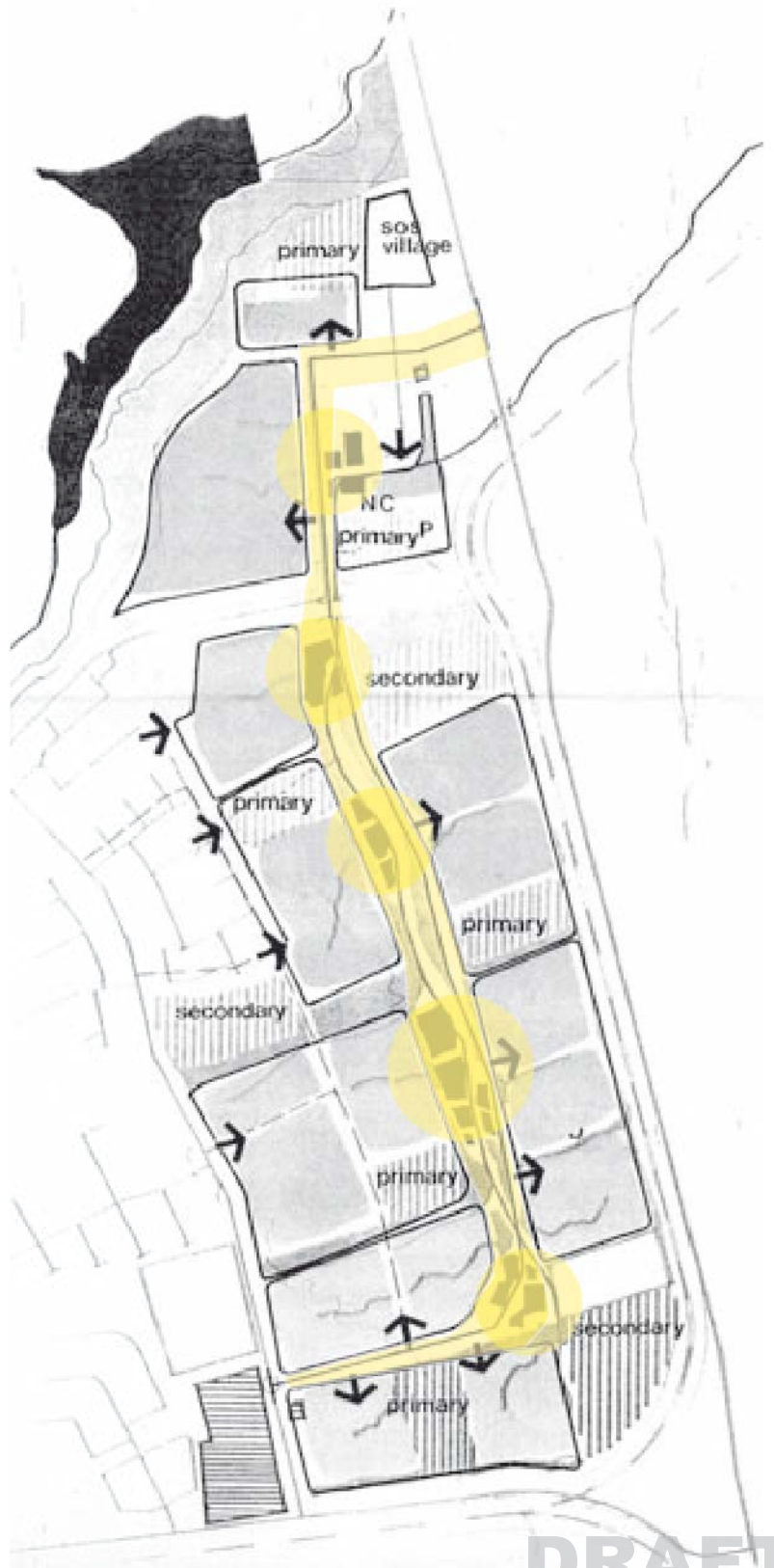
Buru Buru
Phase II and III

Buru Buru
Phases IV and V

Buru Buru
Gated Community in Phase III

Buru Buru
Gated Community in Phase III

Buru Buru
Street Border Extension

Buru Buru
Street Border Extension

Buru Buru
Planned and Informal Extension

Buru Buru
Planned and Informal Extension

Buru Buru
Planned and Informal Extension

Buru Buru
Planned and Informal Extension
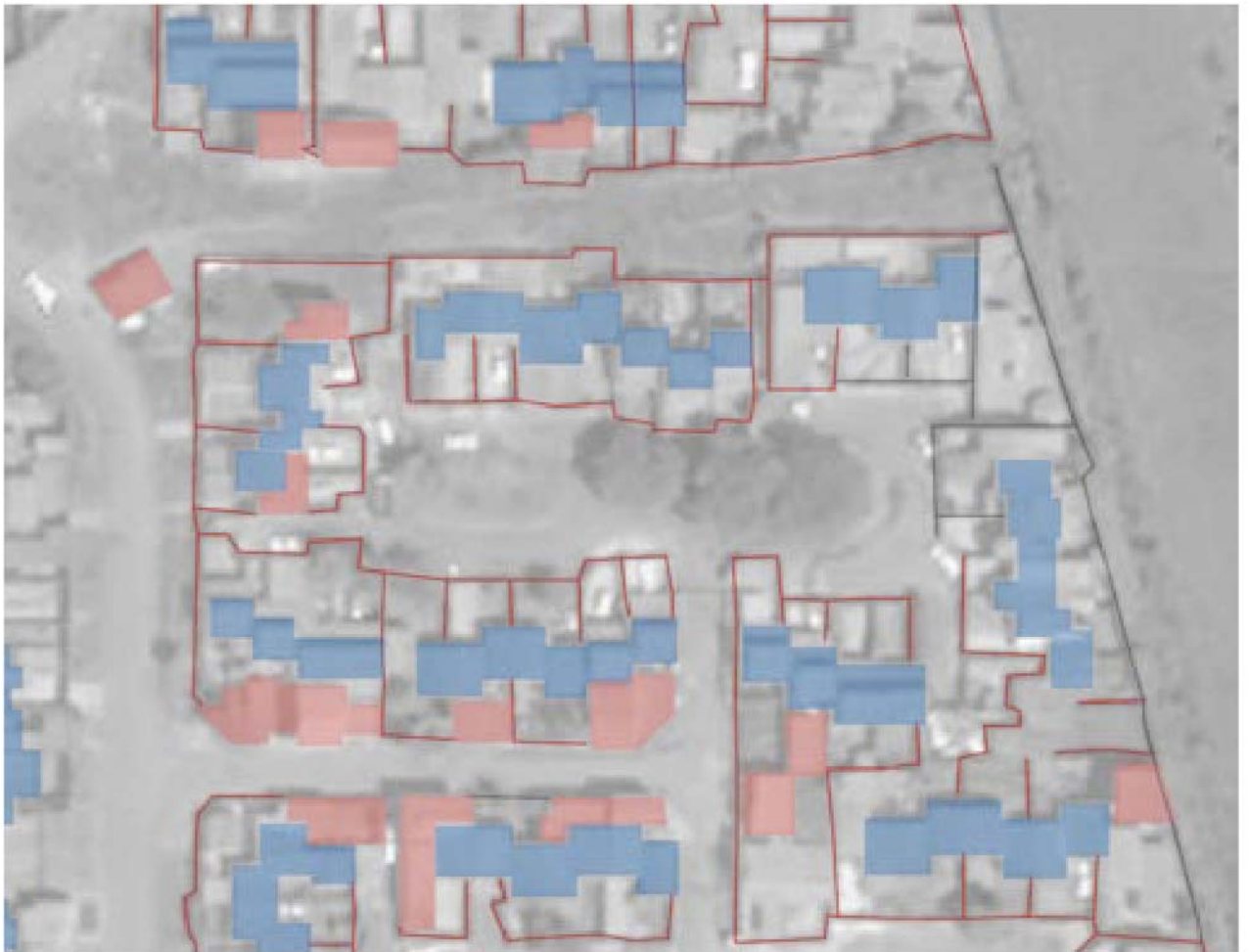
PLANNING STRUCTURE

Introduction
Planning Organs
Planning Documents
**Planning Failures**
Conclusion

The Western Style Master Planning
Nairobi's policy on land-use planning is very similar to the one in Britain. This is because Kenya was a British colony, hence most of the spatial planning concepts, land-use planning tools, instruments and practices were borrowed and adopted from the colonial power. The western style master planning systems that emphasis the production of "conventional master plans" with limited contributions to the actual implementation and land-use planning practice in Kenya has virtually failed to appreciably influence land development patterns in the rapidly growing urban centres. Most of the planning tools for land-use planning have turned out to be inefficient and inappropriate to the local conditions, and therefore failed in their mission either due institutional, social or economic reasons.

In addition, planning institutions are generally powerless to influence town growth and development activities (Olima 1993).

" You western people are responsible that we have slums... "

Peter M. Kibinda, Director of Urban Planning NCC, 2007
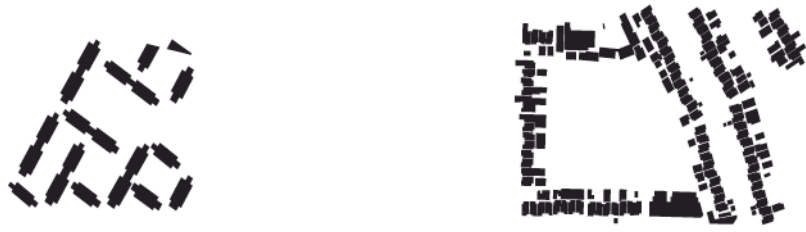
tools

PHYSICAL DEVELOPMENT PLAN
APPLICATION FORM
STRUCTURE PLAN
BUILDING CODE
ACTION PLAN
ZONING PLAN

actors

ARCHITECTURAL ASSOCIATION KENYA
KENYAN INSTITUTE FOR PLANNING
PLANNING DEPARTMENTS
PRIVATE OWNER
GOVERNMENT
TOWN PLANNER
DEVELOPER
ARCHITECT

reality

Structure?

Currently, the Kenyan government structure consist in a two-tier system reflected in its functioning. The lowest cadre of government is the local government which is manifested in various cadres of local authorities, such as area, urban, town, municipal and county councils. But in most cases the central government has the final say on various aspects of local authority polices, particularly land-use.

Kitu Kidogo - Corruption Deals

The term "modern Kenya" is the street term used by corrupt individuals in their request for "kitu kidogo", meaning corruption deals. After 1980, the senior officers at the Ministry of Lands and Settlement and those of local authorities countrywide realized the extend of their immense powers over land-use planning, land-use and land allocation. The social mood of corruption set in, both at local and central government level. Land allocation committees died because the executives allocated land directly to people they favored.

Cutting of the Implementations

As a result, all land that was reserved for use by infrastructure was allocated to individuals. Today, infrastructure expansion cannot take place in accordance with the Nairobi Metropolitan Growth Strategy of 1973. Any attempt to expand a road or a similar item, or build a new public amenity now entails heavy payments in land acquisition compensation. This is because the land originally occupied by the road or intended for the new amenity has already been occupied by permanent development after such irresponsible allocations popularly known as grabbing.

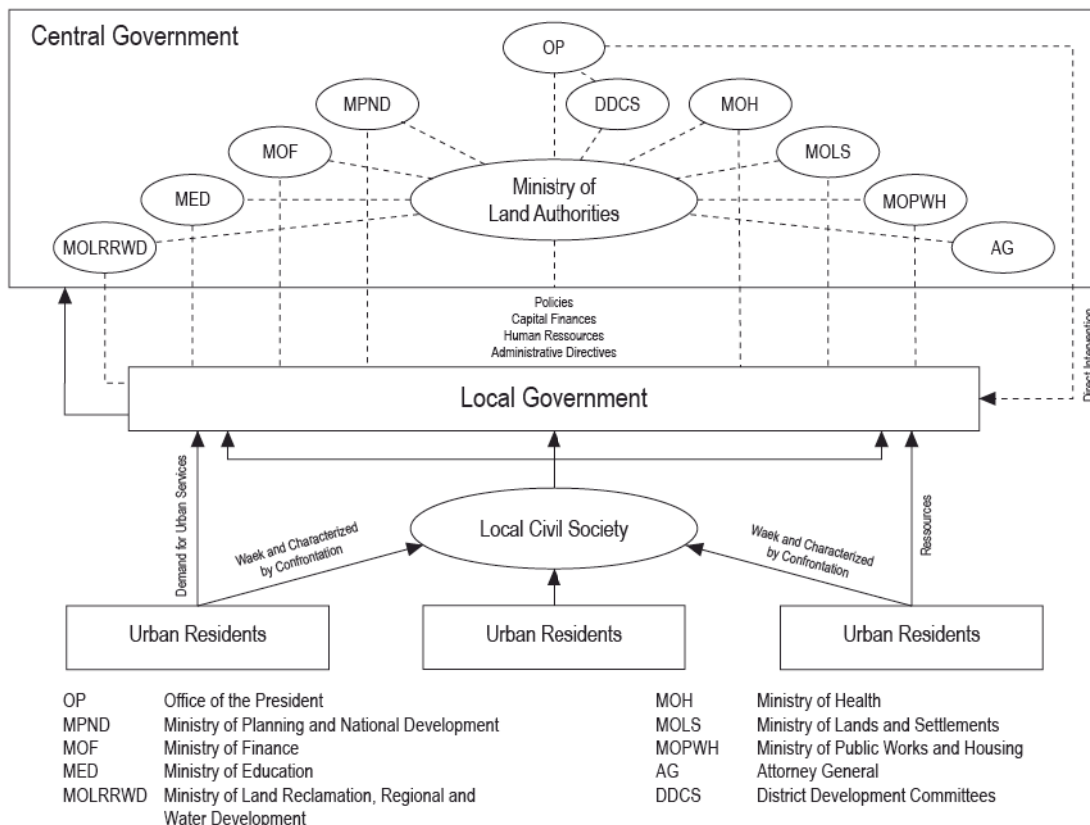**Why is the Kenya Government Afriad of its Former Friends?**
by Onyango Oloo, 2005
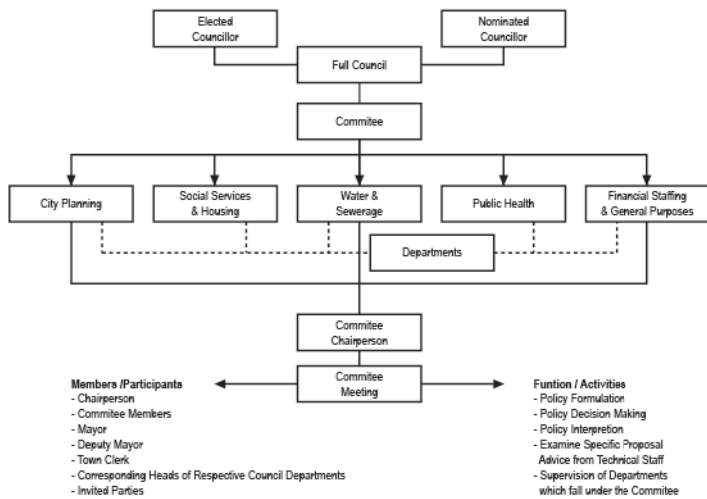
The Profiteers

Political will to enforce the land-use, allocation procedures and regulations is not there, because the enforcers are also the beneficiaries of the loopholes. There is a need to correct this in reviewing all land allocation mechanism and sealing all legal, regulation and procedural loopholes. In particular, no land should be allocated through any form of executive power without going through the land allocation committees. Further district officers and commissioners should never be chairmen of land allocation committees, neither should any officer of local authorities, like county clerks, town clerks, physical planning officers and others. Communities should elect these officers to the land allocation committee offices.

Council and Committee Structure of the City of Nairobi
Source: Adapted from Olima (1993)

OP	Office of the President	
MPND	Ministry of Planning and National Development	
MOF	Ministry of Finance	
MED	Ministry of Education	
MOLRRWD	Ministry of Land Reclamation, Regional and Water Development	

MOH	Ministry of Health
MOLS	Ministry of Lands and Settlements
MOPWH	Ministry of Public Works and Housing
AG	Attorney General
DDCS	District Development Committees

Agency Partnerships and Interrelations in the City of Nairobi
Source: Aligula, 1999

Nairobi City Council
Archives

Nairobi City Council
Planning Applications

A Tool for Development Control
Zoning is a planning tool that is used in controlling development within a given area, and more particularly so in the urban areas. To arrive at a zoning policy, it is critical that the availability of infrastructure is taken into account.
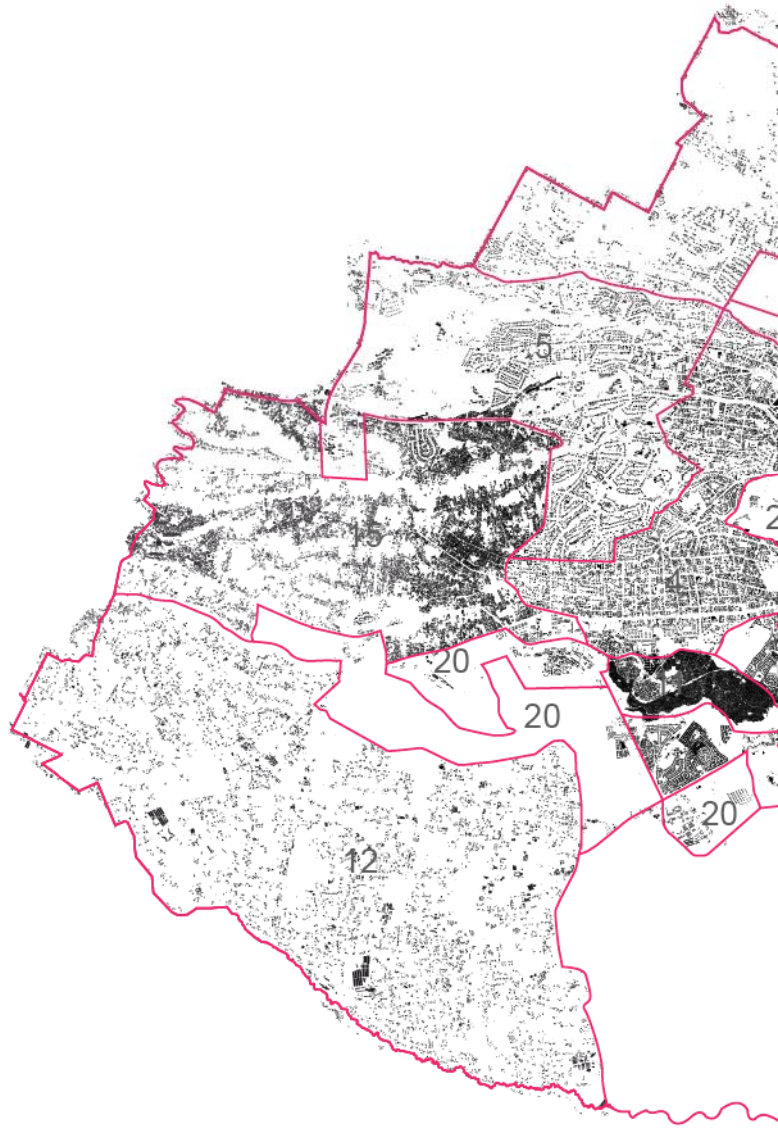
An other Attempt
After the preparation of the MGS, it was found necessary to examine the city's development with a view of determining the implementation of the said strategy. Thus the zoning policy that is in place today. The policy therefore specifies the plot sizes, the amount of developable area that can be allowed in any particular case. For example areas that are adequately serviced by water, sewer and are accessible normally attract higher densities. Other tools that are used in the control of development within the zoning policy are ground coverage and plot ratios. The plot ratios vary from one area to another.
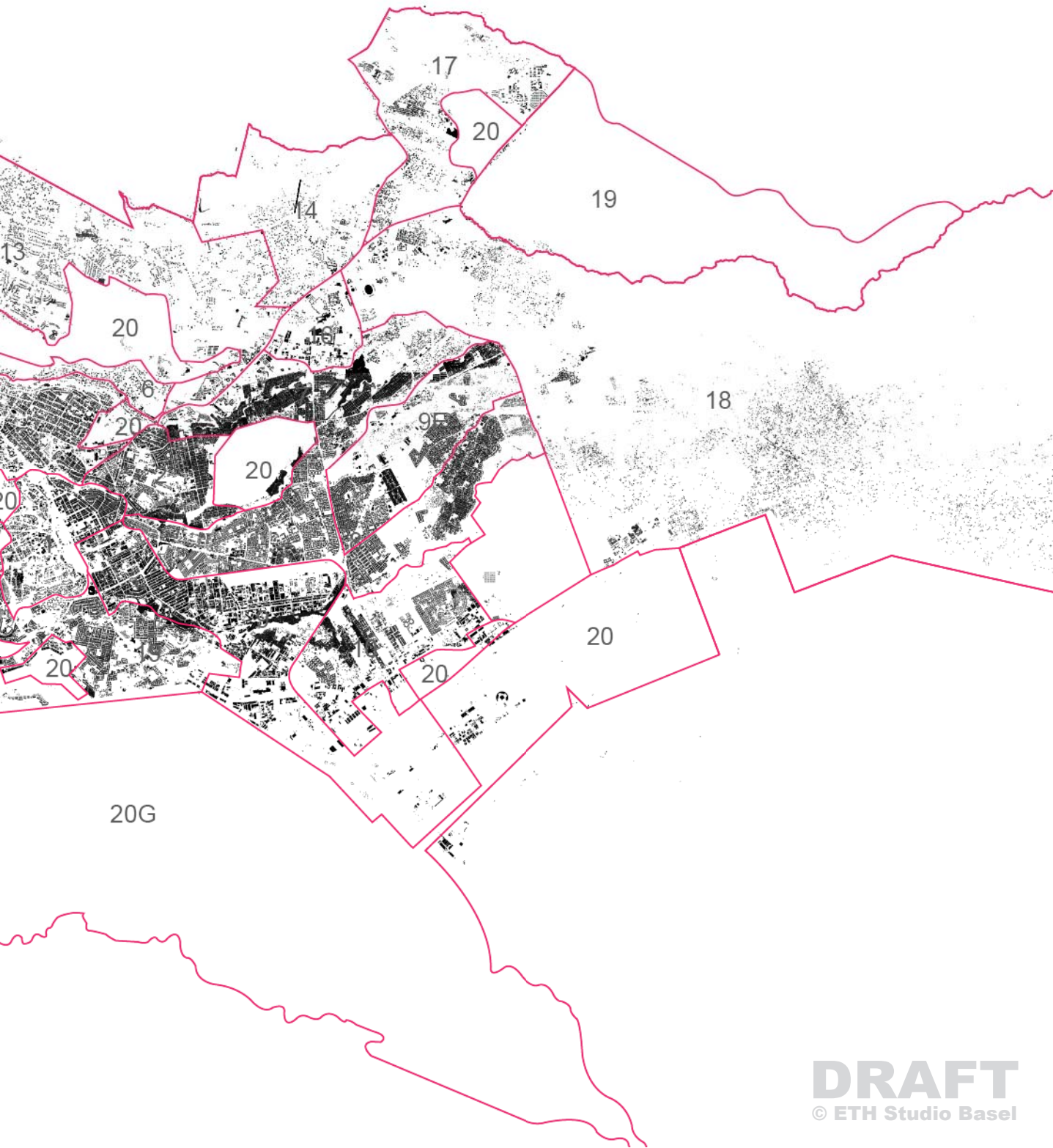
The Concept is here
From the above it is quite evident that although substantial work has been done in terms of review of building by-laws and planning standards, not much achievement has been made in terms of their applications. This is due to the fact that various local authorities are still to adopt the same.
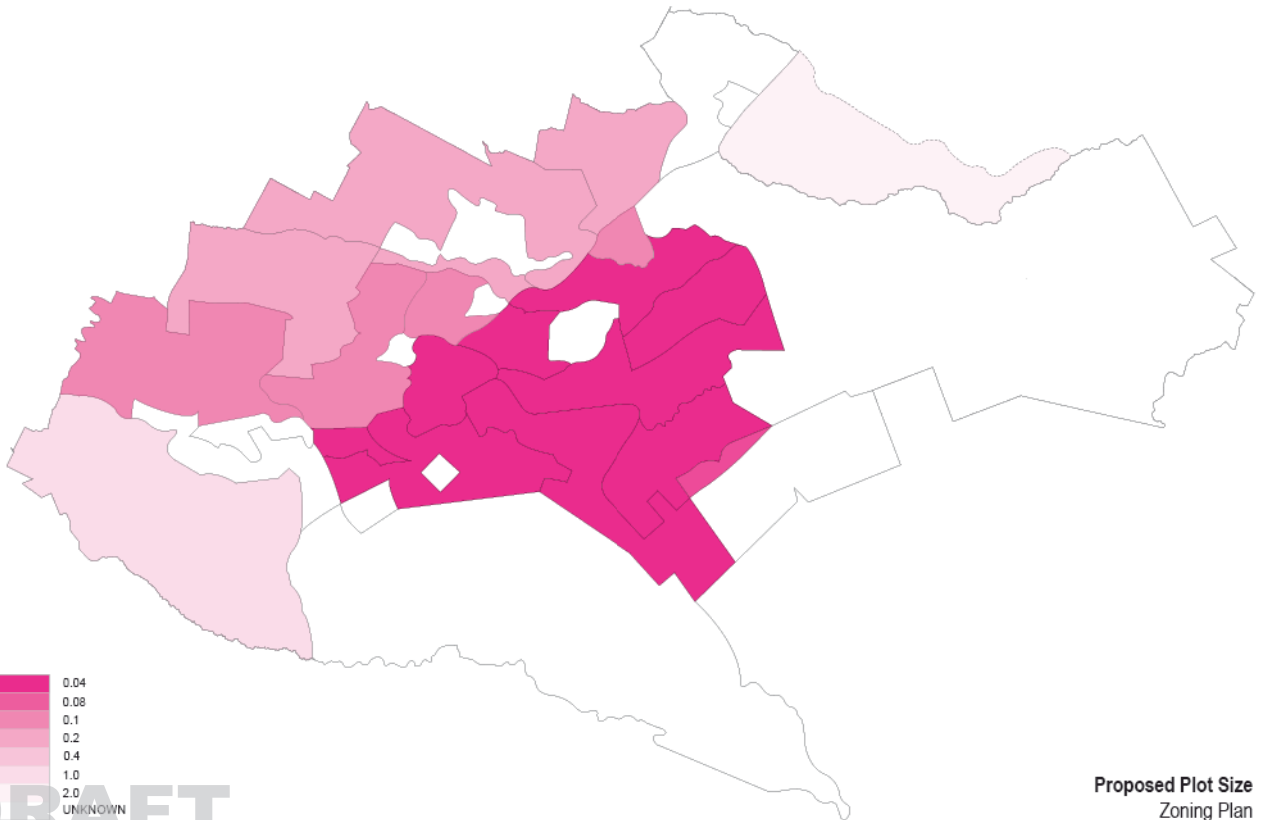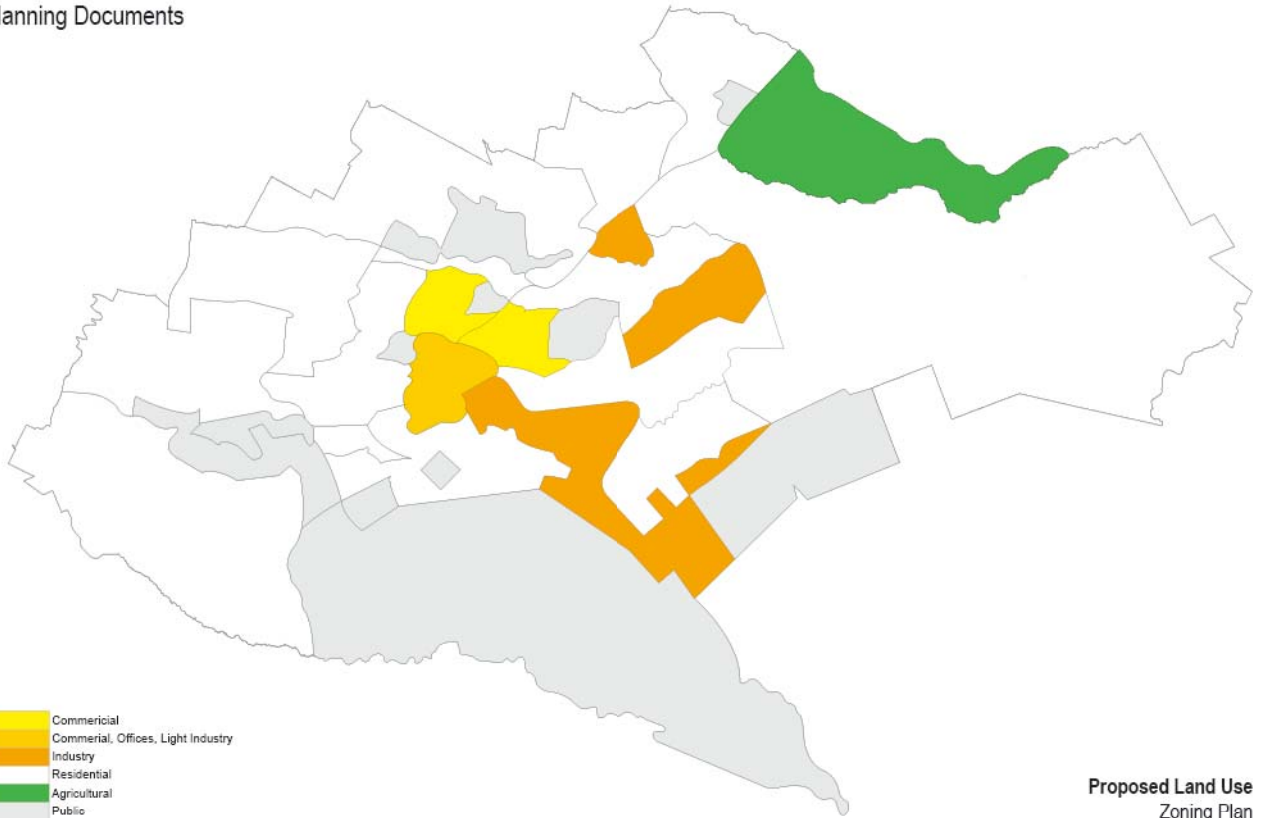
The Control failed
As a result the squatter and illegal settlements continue to mushroom all over while the same local authorities are incapable of controlling the same. It is therefore imperative that an up-to-date set of planning and building regulations be adopted simultaneously with the enactment of the proposed law.

13

17

20

19

14

20

18

6

20

9

20

20

20

20

20

20G

Planning Structure
Planning Documents

Commericial
Commerial, Offices, Light Industry
Industry
Residential
Agricultural
Public

Proposed Land Use
Zoning Plan

0.04
0.08
0.1
0.2
0.4
1.0
2.0
UNKNOWN

Proposed Plot Size
Zoning Plan
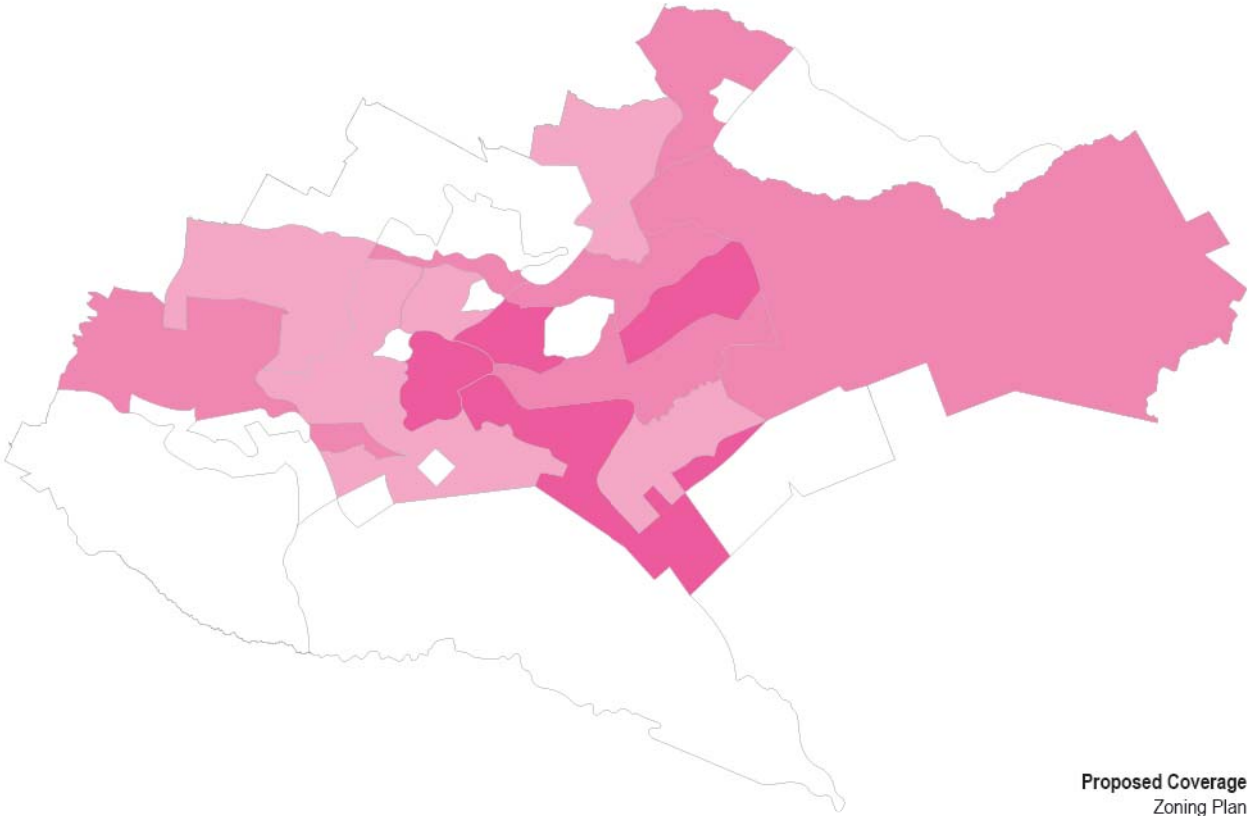
Proposed Coverage
Zoning Plan

Proposed Plot Ratio
Zoning Plan

UNKNOWN
0.04
0.08
0.1
0.2
0.4
0.75
2.0
3.0

Development Control failed
Nairobi's experience reveals a lack of adequate guidance and procedures in formulation decision rules for the allocation of land, for the control, approval, and regulation of urban development. Evidence in Nairobi shows pure inability of physical planning to hinder the occurrence of the problems associated with contemporary land-use planning in Kenyan towns.

Proliferation of Informal Settlements
These informal and unregulated slum settlement as well as illegal and unapproved commercial structures like kiosks have occurred because of the failure and inability of land-use planning to cater for the needs of the low income groups (Olima 1993). If only those responsible for land-use planning would consider the land needs of both the poor and the rich alike and provide effective zoning mechanisms, this problem would be minimal.

Quality of Urban Life at Risk
Conflicts between incompatible land-uses and deficits in land servicing are abundant and reducing both, the value of land and the quality of urban life. We observed that Kiosks have sprung up mostly in open space, parking lots, undeveloped plots and under trees, while walkways and pavements have been incased by hawkers.

Illegal Connection to Infrastructure
Haphazard urban land development is an indicator for poor planning. There are instances where some areas are over-provided with services having extravagant open spaces while others are left without basic infrastructure services, like sewerage, water supply, sanitary facilities, and good roads. The result of this haphazard land development is the emergence of illegal connections to or hooking up on services like water pipes or electricity, which leads to a pressure on these services.

Unplanned Areas
Adopted to Informal Commercial Use

DRAFT
© ETH Studio Basel

Nothing new for one generation
There has been no major attempt at laying down in concrete terms the strategies for Nairobi's future urbanization, since the MGS in 1973. The 1993 Nairobi City Convention on Actions towards a Better Nairobi, is the nearest the city authorities came close to addressing the Urban question of Nairobi. In the mean time urban development has been ad-hoc and clientistic, creating room for corrupt practices.

The Majority lives in Informal Settlements
The Mushrooming informal settlements currently house more than 60% of the city's residents, and the high poverty levels continues to impact negatively on the urban majority. This trend will only magnify urbanization by decree, where informal areas are politically declared formal (Castillo, 2000).

Self-blocking system
The dual Provincial and local Administrative structures seem to duplicate roles, e.g. County Council and District legal structures. There is definitely a need for merging and harmonizing these structures, if a more responsible governance structure has to emerge (Home, 1983)
The colonial logic of indirect rule left a legacy of multiple legal and development control measures in the post-colonial city. Several legal practices applied in the colonial state, these were inherited at independence and actively maintained by the new power elites which are just planning for the power elite themselves.

Land Grabbing
There has been a lot of speculations on land by the few individuals who hold the land through direct allocation or purchase. This has created high demand of land in urban areas and low supply leading to inflated land prices to unaffordable levels. The result was a lot of illegal allocation of public land, commonly referred to as "land grabbing". This reduces the amount of land available for future use and the beauty of the environment.

Definition
According to Olima (1993), the most easily recognizable manifestations of improper use of land and irrational land-use patterns in Kenya's urban centres include: urban sprawl, proliferation of informal and slum settlements, deterioration of the urban physical environment, problems of overcrowding and congestion, absence of social and community facilities, unbalanced land development patterns, land-use conflicts, land speculation and escalating land and property values.

Kibera
2007

Planning without Implementation

The syndrome of planning without implementation has greatly affected the effectiveness of land-use planning in Nairobi. The lack of proper planning capacities within local authorities to give effect to the principles of planning, zoning, subdivisions and development control is shown by the absence of a code of professional conduct and practice for the relevant professionals, land officers, physical planners and land surveyors. Not only one of the proposed strategies in the last century were fully implemented.

Private Public Implementation

Due to the lake of infrastructure provided by the government the people help them self. Some sort of private public partnership is always visible. For example the Matatu system which exists since the early 1950s in Nairobi.

Lately the collecting and recycling of garbage is also in private hands. The Nairobi City Council owner the dump site, but not the dump.

The city started to ask for fees, taxes and licences to make those private public partnerships legal and for them more profitable but the don't supply those system and don't help to make them more efficient.

Matatu Transport System
2007

Matatu Transport System
2007

NAIROBI'S FUTURE

Main Goals for the 21st Century
The future development still asks for solid waste management, water and sanitation supply, provision of energy and air pollution, housing, land use planning and the rise of agriculture. Only through the development of an urban infrastructure system in Nairobi ant it's periphery the migration back to rural areas should be guaranteed.

Need for a Change
Today Nairobi has urban primacy. Whether it is measured by a two or a four city index, within the last 40 Years the size of nairobi divided by the sum of the two or four following cities has increased from 2.1 to 3.2 and 1.6 to 1.8. This urban primacy is not only visible in population size, also in labor force, average income and political power. The city's overwhelming dominance of Kenya's economy is attributable to the country's small productive territory, population, and it's relatively simple economy and simple economy and spatial structure that are unable to support many large cities.

Rapid Urbanization
From 1948 to 1999 the population of kenya grew from 285'545 to more then 10 millions and with it the urbanization level from 5.2% to 34.8%. By 2030 kenya will be predominantly urban!

Potential
The promotion of secondary cities would relieve population pressure and improve the quality of life in the metropolitan cities of Nairobi and Mombasa, and help increase the modernization spin-off which urban centers provide to the surrounding rural areas. Secondary cities play a crucial role in the socio-economic development of countries by:

Pressures
Since 1970 Kenya had different approaches to accomplish the goal of strengthening secondary cities in response to the failure of economic-growth policies in the 1950s and 1960s that sought to transplant modern, large scale, export-oriented, capital-intensive industries in a few regional centers. That lead to deteriorating urban conditions in the major cities and widening rural-urban income gaps that threatened national political stability and tranquility.
Ironically, the country has neither a clearly formulated national urban policy nor a well articulated urban and regional development policy, although both policies exist de facto but were never rectified.
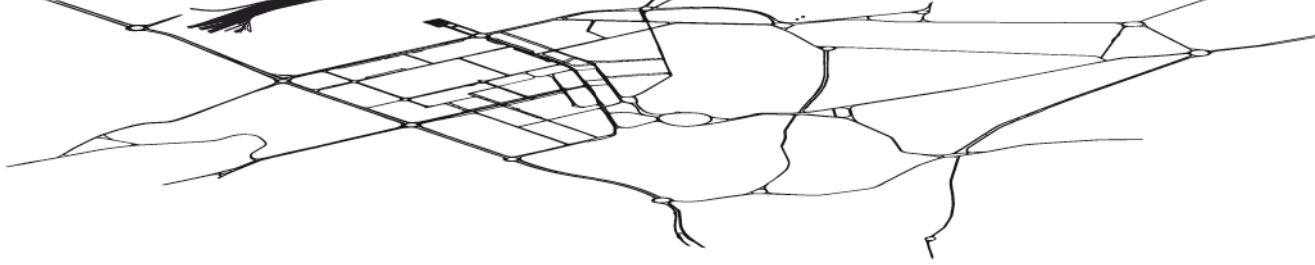
use urban system to promote equitable urban and regional development
channel flow of rural migrants to secondary towns and urban centers
Create an ideal urban hierarchy (form an pattern)
Curb excessive growth of metropolitan centers
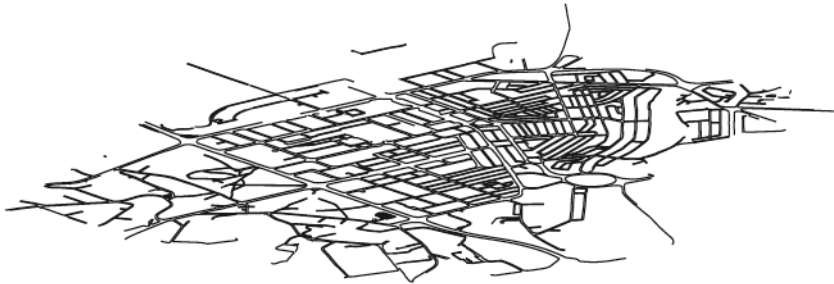
**Top-Down
versus
Bottom-Up**

Local Authorities

National Government

reduce their poverty levels
extend support services
improve their physical infra-
structure
strengthen their economic base and
employment structure
enhance the local governance capabili-
ties to manage their own affairs

Grant municipal authorities
autonomy to plan and manage
their own affairs
Improving community participation
in municipal governments
Enhance human resources capacity
Promote partnerships with private sector
Prioritizing environmental protection Prioritiz-
ing women's needs
being cognizant of the challenges of globalization
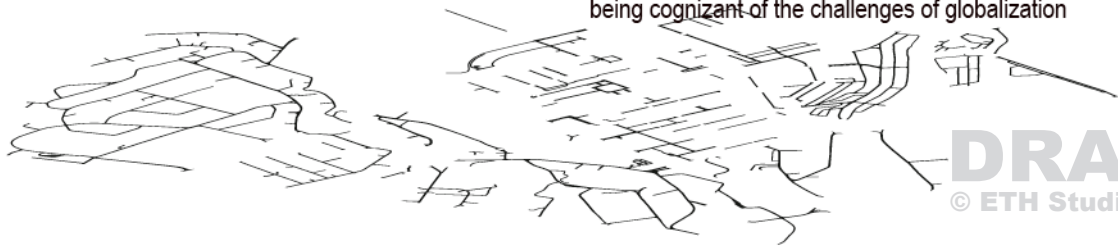
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Ironically, the country has neither a clearly formulated national urban policy nor a well articulated urban and regional development policy, although both policies exist de facto but were never rectified.

There is still a major lack of infrastructure in Nairobi. Not all the areas are provided with power, water and sewerage. Often also social facilities as schools, hospitals and public used zones were proposed once, as the realized their importance, but never really implemented. The ideas are in general there but not the power to implement them.

HOPE HOSPITAL CLINIC

NOW

OPEN

SERVICES PROVIDED.
OUT PATIENT CLINIC.

TUESDAY &
FRIDAY

·FAMILY PLANNING
·DENTAL CARE (KUOSHA MENO)
·LABORATORY SERVICE
·CIRCUMCISION SERVICES (IRUA).
·CHILD WELLFARE CLINIC
·ANT NATAL CLINIC.

COUNSELLING
(MATAMU)

·WORKING HOURS·
MON – SAT. 8:00AM–5:00PM
SUNDAY & PUBLIC HOLIDAYS
9:00AM – 5:00PM.

WELCOME ALL

The sign in the photograph reads:

NO DUMPING
BY ORDER
N.C.C

Waste Management Nairobi City Council
2007

Nairobi's Dump Site Dandora
2007

Additional Sewer in Ruiru
2007

New Sewer along the Western Extension in Kikuyu
2007

Nairobi's Future
View of interviewed Actors

Let's move the Capital
Since 1970 Kenya had different approaches to accomplish the goal of strengthening secondary cities in response to the failure of economic-growth policies in the 50s and 60s, that sought after transplant modern, large scale, export-oriented, capital-intensive industries in a few regional centers. That lead to deteriorating urban conditions in the major cities and widening rural-urban income gaps that threatened national political stability and tranquility. Irionically, the country has neither a clearly formulated national urban policy nor a well articulated urban and regional development policy, although both policies exist de facto but were never rectified.
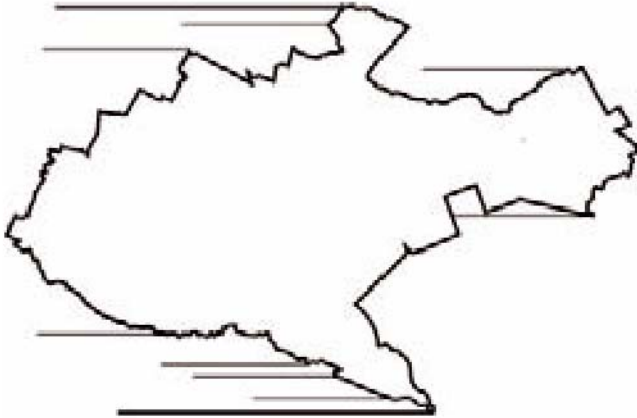
Expensive Mess
A recent survey said traffic jams were costing Nairobi drivers up to 50 million shillings a day through increased fuel consumption, mechanical damage and pollution.

Francis Gitau Mungai
Vice Chairman
Architectural Association of Kenya (AAK)

"The Problems are to big to solve"
Kenya is unlikely to deal effectively with traffic jams, the mushrooming informal settlements and rising crime unless it comes with a new master plan for urban development, the Architectural Association of Kenya (AAK) has said.

The association blames failures by the relevant arms of government to come up with concrete development plans for the country's town. AAK joins a number of professional organizations - including urban planners, architects, real estate experts and engineers - who have warned that the city was headed for a crisis should ongoing construction be allowed to continue without a master plan.

'I'am yet to see any urban city undertake major construction projects without a master plan,' said Gideon Mulyungi, 'Nairobi was designed half a century ago for a population of half a million people while the population today is three million. This has over stretched entirely all the services of the whole city!' The AAK Chairman says Kenya should emulate countries like South Africa that decentralized administrative capitals and relocated them to adjacent ares.

Traffic Jam
CBD 2007

Nairobi's Future
View of interviewed Actors

Mr. Vaulkhard is director of his firm TRIAD Architects. It is one of the most successful architecture firms within Nairobi, they built the Times Tower, the Barclay Plaza and many more. His office employes has around 20 architects.
Mr. Vaulkhard was involved with the planning of the Eastern Extension Buru Buru in 1971, then with the firm Menezes & Partner.

Despite this, he hasn't been to the city centre since one year. He doesn't like the pollution he said. He lives in Banana Hill.

Tim Vaulkhard
Director of TRIAD Ldt. Architect

"There are needed early investments from the government before things are totally run down!"

"I haven't been to the city center for one year."

CBD Nairobi
2007

Mr. Kiamba is a town planner and Chairman of the Kenyan Institute for Planning KIP. As town planner he operates more in Tanzania than in Kenya.

His vision for a future vision of Nairobi is improving satellite towns in the same metropolitan area, Thika, Nairobi, Kiambu and Athi River, which are independent and sustainability. Between those sub centres should be commercial and open space

Mr. Kiamba
Chairman of the Kenyan Institute of Planning KIP

"A metropolitan capital connected by spines to other centres."

"I see a beautiful green Nairobi."v

Banana Hill
2007

Nairobi's Future
View of interviewed Actors

Mr. Kibinda is actually the Director of the City Planning at Nairobi City Council and has the overall responsibility in physical planning.

Peter M. Kibinda
Director of City Planning, Nairobi City Council

"All the planning was and is done without any allocation."

"At the national level economical planning without a corresponding spacial framework actually can not succeed."

"You western people are responsible that we have this structures."

City Hall Nairobi
2007

Eng John Maina
Director of Urban Planning, Nairobi City Council

"We need structures that will deliver results before our cities become a total mess."

"A Metropolitan Authority for Nairobi, Ruiru, Kiambu, Ngong, Limuru and Athi River should be founded."

City Hall Nairobi and its Annexe
2007

Her firm Scion Real Estates Ldt. does investment concepts for housing, planning as well as implementation. Her personal goal is to provide low income housing units for 1.5 Ksh, affordable for poor people and how she said the only way to get the informal settlements with time under control. But through not from the government provided infrastructure it is impossible to realize such concepts. She see the problem in the missing sewers and streets as well as the high prices for building material. There should be an metropolitan authority to coordinate the budget.

Laila Macharia
Director of Scion Real Estate Developers

" I want to build low income housing units for 1.5 mio Ksh"

"The only way to control and solve informal settlements is providing affordable housing units for the low income class."

Kibera
2007

High income

Medium income

Low income

Kenya's population   Kenya's population

Slum upgrading failed

Slum upgrading is inefficient and doesn't help the people. There should be an biological reduction of the slum though increasing the land within and in the hole city. When there would be enough infrastructure and land for everybody, slums would decrease. Without the pressure on them it would be possible to increase the infrastructure. But this has to come with an socioeconomic change for the people that they can afford new the building materials.

"Slum upgrading projects failed - inhabitants sub rent their apartments for financial gain."

"We need a metropolitan authority to coordinate the budget."

Kibera & Plan Voisin
2007

Nairobi's Future
View of interviewed Actors

Xenya Scanlon is working with the UN environmental program in Nairobi. She works there since 4 years in lives in Runda, the 'blue zone'. An area where most of the UN workers are living and higher security is guaranteed.
Even with living in the 'blue zone' and working at the UN Xenya doesn't think she is living in a Bubble.
The UNEP is working with the government of Kenya through the Ministry of Environment and Natural Resources and in topics concerning Nairobi they work with the NCC.

Xenya Scanlon
UNEP Consultant

"UN presence is one of the key factors contributing to economic growth in Nairobi."

Runda
2007

"The impact of the UN is on all levels, from labours to infrastructure."

Street works in Runda
2007

Moving the Growth

All interviews point to the same direction. Moving the growth out of Nairobi seems to be the main goal. This is evident due to Nairobi's collapsing streets and condensed housing areas. How they want to achieve it is different.

Strategy to Tackle the Problems

Nairobi can achieve more sustainable land use if municipalities combine urban planning and development with environmental management. This can better be realized if they challenge of regional and metropolitan development and overcome the syndrome of competing jurisdiction.

Land Grabbing avoids healthy Urbanization

The illegal allocation of land, called land grabbing causes two very unwished effects. First, through the few owner who hold almost all the land Nairobi's, the land prices inflated highly what lead to informal settlement. Second, the city doesn't have anymore land reserves to provide the needed infrastructure.

Many buildings are also poorly constructed and don't with stay even a light earthquake, but the city does have the control measures in place to protect their people.

Kibera
2007

Infrastructure through Moving Functions

These ideas have all the goal of economical growth. This economical growth is based on the investments of the government and international organizations.

What is missing in most of the ideas of the government that all these statistic based ideas need physical implementation. The city and it's planning organs are more and more pull-out of the implementation, the private sector has to step in with more or less good results.

Matatus causing Traffic Jam in the CBD
2007

Need for a Metropolitan Authority

The common an just in the news published idea is forming a metropolitan authority which is in a way nothing else than a city boundary extension. This would include the surrounding cities as Thika, Ruiru, Kiambu, Athi River, Ngong and eventually Limuru. The habit of expanding the city boundaries became extremely common in Nairobi but as Nairobi already has a problem with the control of development, and a boundary extension would probably make the problems even worse than before. This future authority would need tools for controlling development. What is needed are tool which are given in the hand of the authority. This time it is done by financial power. All interviews point to the same direction. Moving the growth out of Nairobi seems to be the main goal. This is evident due to Nairobi's collapsing streets and condensed housing areas.

Vision 2030

This vision was developed under President Mwai Kibaki and covers the period from 2008 to 2030. The outreaching vision is a globally, competitive and prosperous nation with a high quality of life by 2030. Therefore the strategy is divided in three pillars, the economic, the social and the political vision.

The economic strategy covers the aim to maintain a sustained growth of 10% over the next 25 years. This should happen through concepts for tourism, for increasing the value of agriculture and the retail trade sector as well as manufacturing for the region market.

In the social vision they want to focus on education, on the health sector and on water and sanitation. A further goal is to increase the annual production of housing units from 35000 to 200000 units.

Through a democratic decentralization of decision-making and a separation of powers in three arms of governance, the Legislature, the Executive and the Judiciary, the Kenyan government should become much more transparent and accountable.

Trust in the Future

The most surprising thing is the level which is still maintained. A similar distribution of wealth in an European city has and still would lead the city to fall into total anarchy. The ruling elite of Nairobi uses harsh methods to control the unlucky bottom of the population, and as long as they can still put the guilt to the colonial regime they aren't going to ask for their rights.

Today we see a change, a change in the mentality of the people towards their city and towards their work ethics. The ongoing projects show a bigger perspective to help all people of Nairobi and the surrounding. But the problem of implementation is very prominent.

Vision 2030
Published 2007

LIMURU

THIKA

RUIRU

KIAMBIU

NGONG

ATHI RIVER
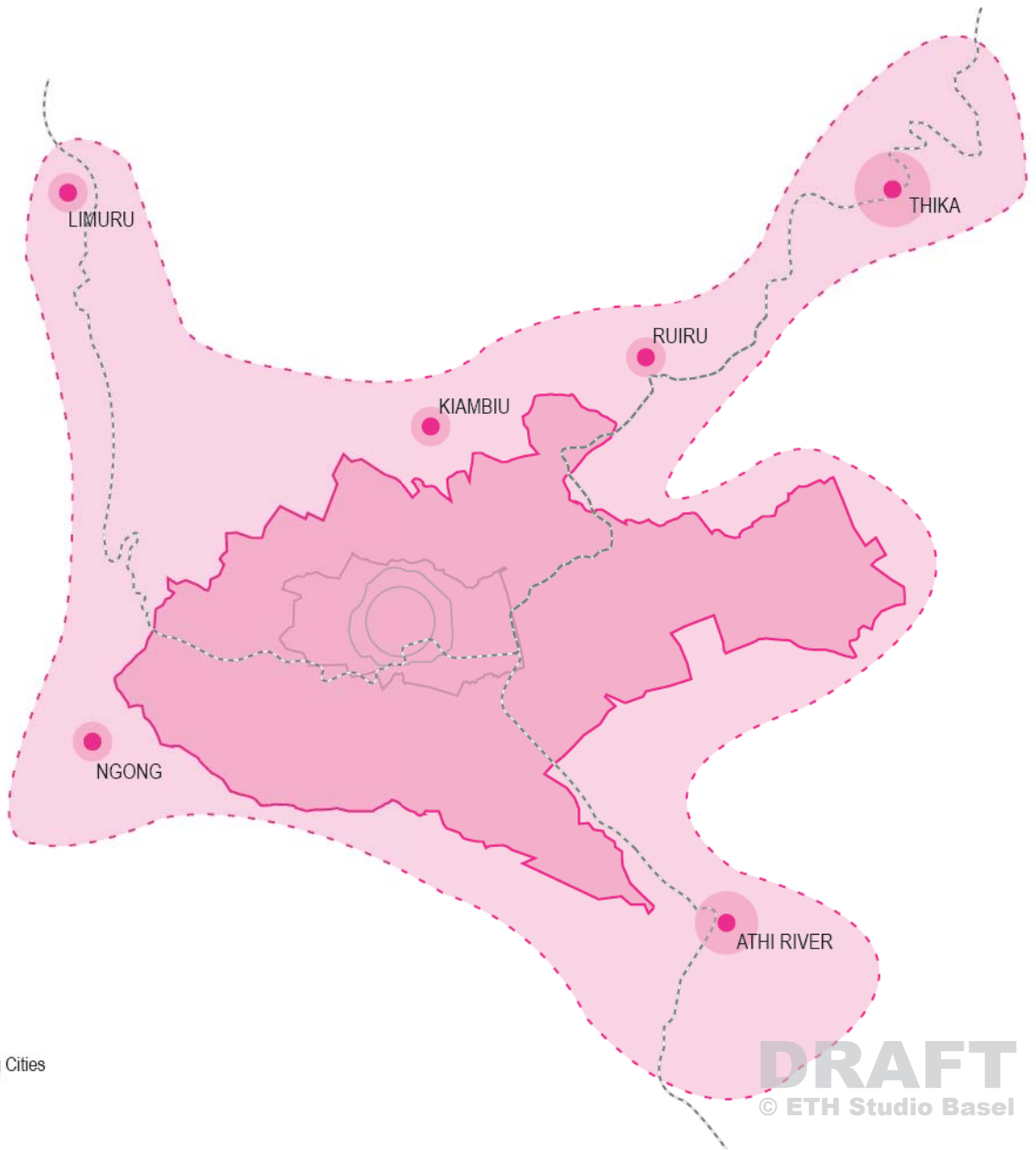
Metropolitan Area
Including the surrounding Cities

DRAFT
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Sources

(1) Nairobi Urban Study Group, Metropolitan Growth Strategy, Volume I and II, Report prepared for the Nairobi City Council, Nairobi, 1973

(2) White L. W. T., Siberman L., Anderson P. R., Nairobi master plan for a colonial capital, Report prepared for the Nairobi City Council, Nairobi, 1948

(3) Menezes and Partners, Nairobi Eastern Extension, Report No. 2., Nairobi 1971

(4) Anyamba T. J. C., Informalisation of a planned neighbourhood in Nairobi, Oslo School of Architecture, Oslo, 2004

(5) Olima, W.H.A., Kreibich V., Urban Land Management in Africa, Spring Research Series, Spring Centre Faculty of Spatial Planning, University of Dortmund, Germany 2002

(6) The Standard Group, Is Nairobi an illegal metropolis?, The Standard Real Estate, Nairobi, 2007

(7) Mitullah W., Urban Slum Reports: The case of Nairobi, Kenya, University of Nairobi, Nairobi, 2002

(8) Myers G. A., Verandahs of Power, Colonialism and space in urban Africa, Chapter Three, Colonial Nairobi, Syracuse University Press, New York, 2003

(9) Obala, L.M. (1997): Land use Conflicts within Open spaces in Low-income Residential Districts of Nairobi. A case Study of Kariobangi North and its Neighbourhood. Final year project, University of Nairobi.

(10) Olima, W.H.A., The Land-use Planning in Nairobi in the Provincial Towns of Kenya: A Case Study of Kisumu and Eldoret Towns, Dortmund Projekt Verlag 1993

(11) Olima, W.H.A. The Conflicts, Shortcomings and Implications of the Urban Land Management System in Kenya, UN Habitat 1997

(12) Republic of Kenya, African Socialism and its Application to Planning in Kenya (Sessional Paper No. 10) Nairobi: Government Printers 1965

(13) Olima, W.H.A., Innovative Strategies towards Redorming Urban Land Ownership System in Kenya, Report, Nairobi 1998

(14) Olima, W.H.A. / Obala L.M., The Effect of Existing Land tenure System on Urban Land Development: A Case Study of Kenya's Secondary Towns with Emphasis on Kisumu Municipality, Habitat International, Vol. 23, No. 1, 1999

(15) Omoke, J. (1996): Leasehold Government Management with Special References to Nairobi Area. Final year project paper. Department of Land Development, University of Nairobi

(16) Ombok Eric, Urbanisation gone wrong, http://www.businessinafrica.net/opinion/colums/nairobi_notebook/388738.htm, Nairobi, 2006

(17) Republic of Kenya, The Physical Planning Act, Nairobi Government Printer, 1996

(18) Republic of Kenya, Local Physical Development Plan Nairobi, Policy Review for Zones 3, 4, 5, Iterim Report, Nairobi Government Printer 2006

(19) Republic of Kenya, National Development Plan 2002-2008, The Government Printer 2000

(20) Republic of Kenya, The Ministry of Planning and National Development, Kenya Vision 2030, Nairobi Government Printer 2007

Banana Hill

Ridgeways
Garden Es

Karuru Forest

Kabete

Dagoretti

Spring Valley

Parklands

Ruthimitu

Westlands

Mathare

Eastleigh

CBD

Eastlands

Riruta

KilimaniChiromo

Industrial

Ngong Forest

Karen

Wilson Airport

Lang'ata

Nairobi National Park

Thika

Ruiru

Kahawa

s &
tates

Dandora

Njiru

Buru Buru

Area

Embakasi Airport