

Friends of City Park - comments to Nairobi Masterplan, following consultation with GIBB International
Date: 31 March 2014

Attention: Ms. Joya Owino / Mr. George Owuor - GIBB International

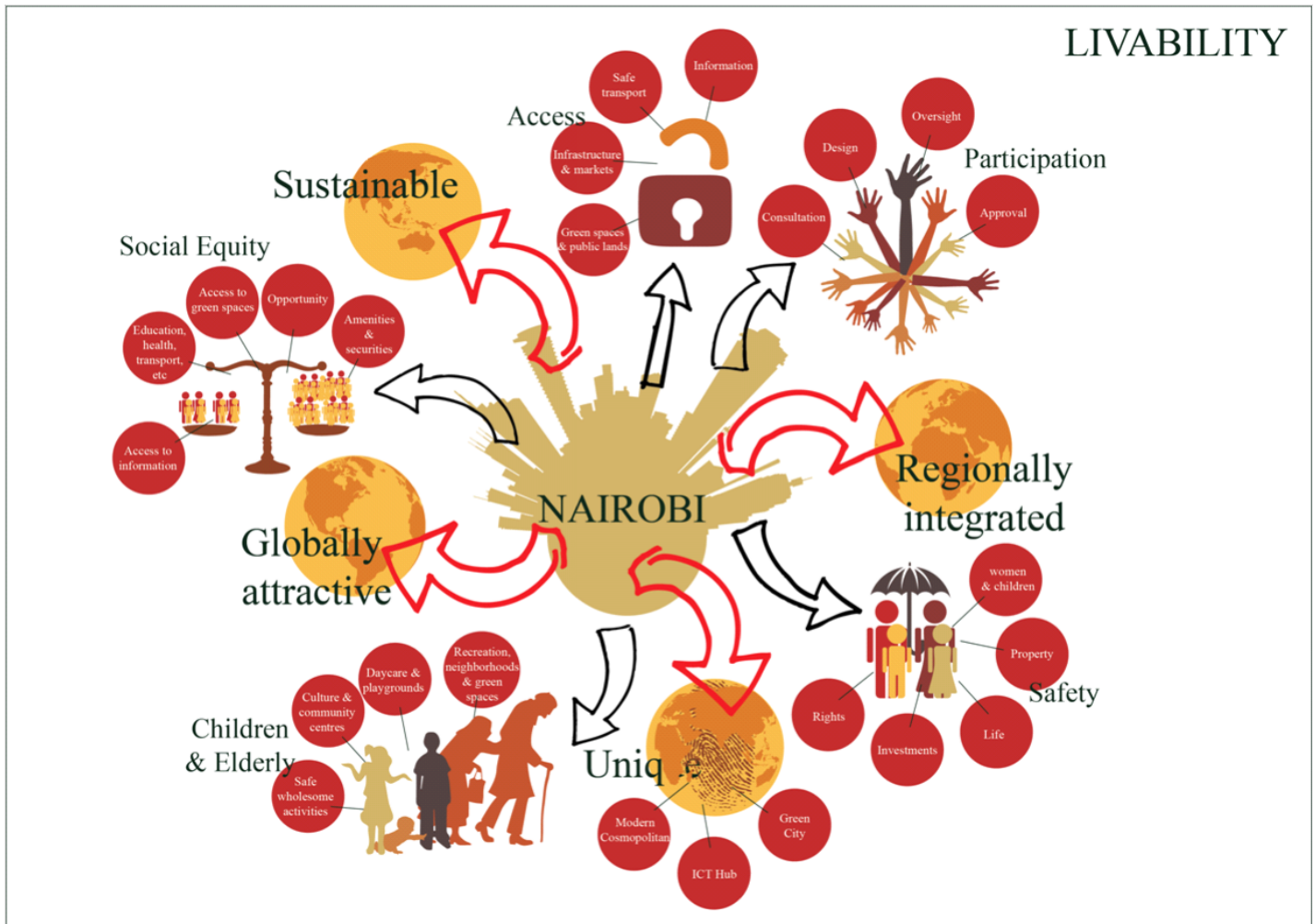
Overall, we commend the The Nairobi Masterplan for the amount of work and detail that has gone into it.

- Friends of City Park should be added as one of the organizations consulted. Wherever there is information about existing green spaces, City Park should be included – it is in a few places but not throughout the document. City Park is not only a garden/ public space, but has an indigenous upland forest with huge biodiversity.
- The plan should be commended for making cleaning of Nairobi river, a flagship project. Many of the activities suggested by the plan e.g. increasing forest cover, preserving biodiversity, improving air quality (by planting broad leafed trees), urban agriculture to assure food security (e.g. through perma culture) are great ideas and these are in line with Friends of City Strategy and we are in a position to implement or are already implementing these in City Park.
- *The report alludes to rainwater harvesting and solar power being important, but we are unclear whether it suggests that it should be mandatory in all developments particularly of scale - solar power not just for hot water heating, but possibly for lighting in developments of scale.*

Specific areas where the Masterplan can be bolder in addressing the real needs of the people are commented on below:

SECTION I: OVERALL VISION, LIVABILITY

VISION OF THE MASTERPLAN:



The schematic above illustrates our vision for Nairobi and is larger than what is currently proposed. We would be very happy for it to be included in the submission.

Currently, the development vision presented (Nairobi 2030) is not one that takes into account what it means and feels like to live in a city. It is not one that addresses LIVABILITY. It is therefore not one that reflects the residents of the city rather only the government of the city. Thus it cannot adequately address one of the needs of the Master Plan: to enhance the quality of life of inhabitants of the city.

This is an old colonial hangover where the city was not built for the vast majority of its residents but rather for a small minority and for the sake of colonial governance. If we are truly to stand as an independent country 50 years after independence then surely we must redress the foundations for the way we think of Nairobi as a city. It should be thought of through the livability of the majority of its inhabitants – what can make their experience of the city wonderful, equitable, inspiring, sustainable, productive and unique?

We must therefore ask for a vision that inspires. One that incorporates the point of view of residents of the city that address the issue of what it means and feels like to live in a city and the consequences of living in the city and what it means to be young and grow old in this city. To this end we feel the following areas are missing from the narrow vision provided and should be incorporated:

SAFETY: especially safety at night, safety of women, safety for children, safety on public transportation, safety from harassment by city officials, safety from undue detention, safety of property and person, safety from the arbitrary policing of personal behavior, safety from death by cars, safety from terrorism, safety from corruption, safety from fraudulent practices in health and education, safety from demolitions and arbitrary removal, safety to invest in a home or business. This would establish the priorities for the provision of lighting, for the location and training of police, for the governance of public transportation, for the arrest and trial of thieves,

SOCIAL EQUITY: All residents of the city should have similar amenities (especially water, sewerage, and garbage collection), security, access to green spaces, treatment by city officials, access to information, education, health, and transportation. When the city is providing services or planning transportation EQUAL access and opportunity should be first priority. This includes planning for which roads are build first and when, the improvements of water, health or educations systems, the costing of public amenities, and the treatment of the public by city officials, the police, courts and hospitals in Nairobi. Reaching social equity such that the poor and the rich, the young and the old can equally enjoy the city should be the aim of this vision.

EQUAL ACCESS TO THE CITY: in terms of the poor, the disabled, women, children, the elderly, the illiterate etc. This includes thinking access to downtown amenities – public and private, the construction of roads in poor areas FIRST, the construction of flyovers, sidewalks and buildings that are disabled assessable, the provision of efficient and safe public transportation, transportation for all types of wheeled vehicles not just cars, open and free access to green spaces and public lands, open access to city county social halls, access to information and libraries, access to government institutions without harassment, access to the sidewalks, sufficient accessible markets. This also includes access to public transportation in the city center.

PARTICIPATION: The most valuable asset of Nairobi—is its residents, who come from a multitude of backgrounds, professions, and experience. In addressing the problems that every major capital in the world is grappling with, (including but not limited to waste management, sewage treatment, affordable housing, clean water, affordable electricity, healthy food), there are professional groups, volunteers, interest groups, civil society groups, residential associations, youth groups, universities, and research institutions; people who should be actively and adequately participating in finding solutions. This allows the city to learn lessons from the past, allows us to avoid pits which others have fallen into, and gives us creative innovative solutions, that saves the city time and money.

Participation is not the same as consultation. Participation means the ongoing active presence of the public throughout the life of the Master Plan, design and implementation, and the general governance of the city. This is a constitutional right. The constitution does not say consultation but participation. A vision of the development of Nairobi must include public participation in DESIGN, OVERSIGHT AND APPROVAL.

It would be very important to understand the percentage of Nairobi population that has participated in the creation of the Masterplan. A large enough percentage is required to be adequate for a supporting sample. In addition to the many public consultation meetings GIBB and other organizations have held, we would recommend participation via radio, social media, competitions, print and TV. The Masterplan team could ask for example, questions over popular radio programmes, and get text and immediate feedback. Imagine a competition to write a 600 word essay about “the street I live on?”

CHILDREN AND ELDERLY: What does it mean to be young in Nairobi? Or to grow old in Nairobi? This city was designed in colonial times to accommodate the single male African worker with no children. Thus, someone neither young nor old

nor female. This is no longer the population of the city. Planning for this new demographic would include issues of recreation, education, neighborhood schools, daycare, green spaces, playgrounds, culture, access, health, museums, libraries, community centers, safe wholesome activities for teenagers, sports, safety from displacement and efficiency and maintenance of services.

In the development vision (Nairobi 2030) there are three categories under Economy, Environment, Governance, Social Culture: Globally attractive, Regional integration, Sustainability. It is a pity that there is not one category that is local but all looking outwards to somewhere else (and this was typical of the colonial set up of the city). What this vision needs is to demonstrate how Nairobi is unique. It needs something to build on and to guide this building. Something to remember the city. To this we have two suggestions:

1. Add a development vision called **LIVABILITY**
2. Add a category called **UNIQUE NAIROBI**

LIVABILITY: Within this development vision the above concerns from the point of view of Nairobi residents could be incorporated: Safety, social equity, access to the city, participation, etc. *Globally Attractive:* you can have all else in place but without safety Nairobi will not become globally attractive. But this cannot be the driver of safety rather the safety of citizens should take priority over the safety of attractiveness. Thus what is attractive is an open city where locals and foreigners, the young and the old, the rich and the poor can walk in all parts of the city day or night without fear of their life. Global attractiveness is a vibrant city where everyone has access to all parts and amenities of a city. Global attractiveness is free public parks. *Regional Integration:* the issue of participation is important for regional integration. Regional integration would then have buy in from the general public rather than be a governmental dream alone. In addition access to the city is essential for regional integration. All parts of the city must be accessible to all residents and not privatized, sectioned, or made convenient only to the wealthy. This would also include greater avenues of access like green belts, river walks, scenic views, open squares. It would also need efficient, abundant and safe public transportation, and providing infrastructure to ensure residents can access public transport without hazard from other car traffic, or heavy foot traffic and congestion. *Sustainability:* the issue of social equity, equitable access to the city, participation and youth and elderly are issues of sustainability. Without these issues being addressed the other visions of development are not viable. Finally unique Nairobi: we have an opportunity to demonstrate that this is a city to live in, that it offers and promotes the arts, culture, history, sports, music, dance. A city that is safe and most important beautiful. It is actually something to be proud of: Nairobi the green city in the sun.

UNIQUE NAIROBI: This should be added as a category within each development vision. **ECONOMY:** unique economic features Nairobi has produced, go from jua kali enterprises to the new dot.com, digital media hubs. What economic things make Nairobi unique and can be promoted and enhanced? **ENVIRONMENT:** Nairobi was known as the green city in the sun. Nairobi is rapidly losing this reputation with all the trees being cut and not replaced in road development. The original green city was one that no matter which road you looked down you could always see a tree. Trees were planted along all sidewalks and all buildings. It had many public green spaces, including the roundabouts (running down the middle of the city) originally planted with unique flora, but now dug up in the name of 'beautification.' These are unique features of Nairobi. Another feature is the many rivers that run through it. The city itself is named after water. How are we building on this legacy?

GOVERNANCE: Sadly a unique feature of Nairobi governance has been the city council bylaws and askaris. Can we turn this around to be a plus? Also another unique feature of governance is that it was first governed by the railway. What tribute are we playing to this historical feature?

SOCIAL CULTURE: the unique feature of Nairobi that makes it stand out from almost all other towns in Kenya is its modern, cosmopolitan cultures that have mixed and matched cultures from Kenya and across the world to give Nairobi its own personal flavor, sound, rhythm and voice. There has been a long and strong media presence, there has been historic theatre groups and institutions, film houses and a conservatory of music, dance halls, a Nairobi art and music scene. The fact that bands used to play at City Park or Kamukunji for the public every weekend until the 1970s. Where is this represented in the vision? How is this being planned for? What cultural things does Nairobi have, including authors, musicians, playwrights, artists, collectors, philanthropists, and builders that need to be recognized, not just their works but their lives as part of the city? Talk about global attractions! But it can't be reduced to economy rather it is a matter of pride and inspiration for those of us who actually were born and raised in this city.

SECTION II: PUBLIC GREEN SPACE SPECIFIC COMMENTARY

PUBLIC GREEN SPACE SPECIFIC COMMENTARY



The illustration above shows all the roles played by public green space for citizens of a city. The provision of public green space requires to be a priority project for the purposes of social equity, health, beauty, livability, and the numerous benefits discussed here below.

This information is based on City Park but can be generalized though out the city for public green spaces. Current international research shows that one of the most attractive things about a city is its green spaces. Not only do they enhance the quality of life of residents but also it enhances the likelihood of investment, the retention of workers and

industry, the health of the population and the appeal for tourism and social events and small businesses. Public green spaces throughout the city bring up concerns in the following areas

SOCIAL EQUITY / ACCESS TO THE CITY: There can be no sustainability without social equity. This is not just environmental sustainability but political sustainability. The fact that a fee of as little as Ksh. 20 is an exorbitant economic burden for the majority of Nairobi residents means that keeping the remaining green spaces public, free and supported by the city is one of the most important investments in the future the city can make. Our experience at City Park shows that it is most used by those people who have no other free access to green spaces where they live. In other words they do not have gardens, they do not have cars and cannot go to the National Park and they cannot afford entry fees to other green spaces (Karura and Ololua forests). Rather they use City Park, the Arboretum, Jeevanjee Gardens, Uhuru Park, Uhuru gardens, and Kamukunji grounds, and the botanical gardens of the National Museum of Kenya, because they are free. And they use them in HUGE and INCREASING numbers of people. As the population of Nairobi becomes increasingly born in Nairobi, and live in areas that have no trees (like Huruma—population density of 77,000/km²), the demand for green spaces will continue to grow in Nairobi. It is a matter of social equity and equal access to the city to keep these green spaces FREE and open to the public.

SYSTEMIC THINKING OF GREEN SPACE USE: Another issue brought up by City Park is the great distances people without green spaces travel to use green spaces. People travel to City Park not just from the surrounding constituencies but from as far afield as Kasarani, Embakasi and Kibera. This means that when thinking the preservation and planning for green spaces the greater hinterland of the green space (like the equivalent of a water catchment area) must be taken into account.

GREEN CORRIDORS / GREEN BELTS: Another issue of systemic thinking of green spaces is the provision of green belts that allow the multiple kinds of green spaces in the city to be connected. The riverine and riparian areas provide perfect opportunities for this. Not only would it include the protection of riparian areas but it would allow further sports uses of green space (longer distance running and hiking trails) and better conservation of the biodiversity already existing in any one site. This is an imperative for the sustainability of habitat and species. In addition, it is an imperative for the sustainability of social uses of the parks. A good starting point would be joining City Park to Karura forest through a green belt. Another is making a green belt the length of the Nairobi River and joining Parks from at minimum Chiromo Campus of the University of Nairobi through the National Museum gardens, the “Michuki” park along Kipande road (Nairobi River Park) through globe cinema and racecourse roundabout to Kamukunji. On either ends we currently have nice parks with pieces of greenery in between that could be developed to an attractive green belt river walk.

RIVERINE / RIPERIAN AREAS: This includes the maintenance of riparian areas, the control of pollution and effluent and the reduction of plastic bags going into the rivers.

PUBLIC LANDS: All green spaces are threatened by land grabs. The master plan must speak to the perpetuity of green spaces and their increase rather than decrease. Limiting public access through fees will actually increase the insecurity of the parks as it limits use.

FORESTS: Four public green spaces in the city are also biodiverse indigenous forest – Karura forest, Ololua forest and Ngong Road forest. They serve as reservoirs of indigenous species of plants and animals as well as the only place many residents of the city can interact with these plants and animals. City Park retains a remnant of evergreen forest, and hosts over a thousand plants and animal species.

CEMETERIES: Cemeteries remain some of the green spaces in the cities and sites where loved ones are still visited. They also hold historic importance (in the case of City Park with Murumbi and Pinto as well as veterans of the World Wars) as sites whose study and experience can give residents a sense of their city.

HISTORIC SITES: The historic sites located in green spaces in Nairobi include the cemeteries, bandstands, gardens, park designs, trees, art collections, civic action, Mau Mau caves and the site of the declaration of independence. The gardens and park designs are as historically important as the buildings.

BIODIVERSITY: The parks within Nairobi lead to its unique characteristic as examples of indigenous biodiversity as well as planted gardens. They conserve unique habitat and species.

BEAUTY: All green spaces provide two kinds of beauty. The feelings of peace and comfort that nature affords in a city of high activity and stress. And the beauty of a city with green spaces, the valuation of buildings nearby, residential areas nearby and businesses benefit from workers who can relax nearby to regain energy and inspiration to work.

HEALTH: Green spaces are the city's lungs. Without them the problem of pollution, heat, deaths by asthma (already exorbitantly high in Nairobi), water contamination and air quality of Nairobi will be continuously problematic.

CULTURE: Green spaces are extremely good venues for providing excitement about living in a city through entertainment, culture and education to all residents equally.

EDUCATION: Green spaces in Nairobi provide hands on experience of nature, biodiversity, plant and animal species, which is an essential basis for a science education. They can thus provide the foundations for building educated knowledgeable workforces of the future.

ECONOMY: International research has shown that one of the most important criteria for investments in cities by new businesses is the existence of green spaces. This is a huge attraction for businesses.

INTERNATIONAL STANDARDS: The international standard for green spaces in cities is 12m per inhabitant. At the moment Nairobi has LESS THAN 1M per inhabitant. Without an increase in green spaces we will not achieve international standards, and remain considerably less attractive.

RECREATION: Recreation is one of the things least planned for by the city planners due to the residues of colonial mentality. Recreation is one of the features that make cities livable and attract families and income to the city. The green spaces provide free recreation in multiple forms including biodiversity, playgrounds, hiking paths, tennis courts, soccer fields, bowling greens, hockey pitch, ponds, boating, picnic areas, swings, and educational information.

BY-LAWS: All bylaws inconsistent with the master plan should be removed. This would enable by laws that affect the city's green spaces to enhance the green spaces from the hinterlands of the parks.

SECTION III. THE BUILT ENVIRONMENT

The new masterplan aims to integrate the different facets required for a functioning city - including transport, access to water and electricity and waste management etc. However, we need clearer supporting evidence to show there will be adequate utilities provided in the masterplan. This is a critical missing piece of information for 'participatory governance.' Also, while supporting studies may have been done that reveal that water or waste disposal will not be a problem, the studies should be shared with the public to ensure they are robust, and to make the public aware of what investments are being planned and allow them a chance to voice their support for or against the proposed investments.

- Understanding the current and future capacity of utilities at a City and sub-centre level, is critical to meeting the housing needs of this City. Currently, most developers complain of the exorbitant cost of servicing land for housing - which can be as high or higher than the cost of the raw land itself. Also, the current situation where each developer services his own land, is highly inefficient, compared to a central body enabling services for a large piece of land. **This central body need not be a public body - a private body can be given the authority to open up a large piece of land and collect levies from subsequent developers. All tendering should be highly transparent and go to the best bidder.** The Masterplan should identify which areas of land will receive priority for being serviced - and hence open up large areas of land. This system has been systematically been used in large cities of India, to open up the peripheral rings of land for housing development, which are now being delivered to the market at very affordable prices. In India, one can buy a finished apartments with all services connected, in the periphery of large cities like Mumbai and Ahmedabad and Bangalore for as little as USD 10,000. These neighborhoods are functioning and lively centres, with public transport, health care and educational facilities, recreation, shopping and retail facilities available. In Nairobi, Suraya is making a bold effort to reach this price point at Sucasa, but the housing they are providing is far from any other services, other than what is provided on the land itself.
- The Masterplan needs to have a stronger vision for each sub-centre.
 - *For example GIBB report Section3-9 'Development of Sub-Centres' reads as follows for Dandora:Proposals for Dandora sub-centre include:*
 - *Surrounding areas of Dandora Railway station be developed for a high density residential and commercial mixed development*
 - *Adoption of Plot Ratio of 300% allowing for housing for about 24,00*
 - *Development of access roads between Kangundo and Koma Rock Roads*
 - *Underground installation of power lines should be considered to utilize its way leave which count more than 30 ha area; and*
 - *Improvement of Koma Rock road together with Dandora Station development*
 - These proposals consider several factors like density and transport, but appear to be formulated within a vacuum. As a starting point, it should clearly state what is the current population of Dandora, and what the future population is expected in 5,15, 30 years. The income bracket of the population should be understand. An analysis of their needs from utilities, health care, education, retail , public green space should be assessed and compared to what is currently available on the ground. It is widely accepted that all these needs are currently hugely underprovided - so a strategy on how they will be provided, and the cost (with different options, as money is not infinitely available), should be provided.
 - We cannot simply allow every private developer to increase their developable area (300% in this case, but increased everywhere), without recognizing that this increased development will further tax our already stretched utilities and services. How will the additional population be catered for?
- The UK has 2 excellent planning regulations which can be adapted for use in Kenya. **(1)** The first is S 109 agreements - these require every large developer to reach a transparent agreement with the local authority, on what the developer will contribute to public services, 'in exchange' for being granted planning permission. So, for example, if a developer is going to build a large shopping centre, he can be required to improve the transport linkages near the shopping centre as part of the S 109 agreement and to provide a financial contribution to the maintenance of a green park near the shopping centre. These S 109 agreements are legal documents, that are open for all to inspect, and can be argued in a Court if the developer feels too high a burden is placed on him, or the County feels the developer is getting too much benefit without assisting the growth of the County. Contrast this to Nairobi, where in the last 5 -7 years, it has become the norm for each developer to attain planning permission to build to the edge of his boundary wall, cram in as much density as possible, 'overflow the parking

needs of his development' to the footpaths outside his property boundary, and contribute nothing to society except for additional sub-standard development. Simultaneously, it is true that all developers pay hefty sums to obtain planning permission, yet there is no trace of how the money collected by the County is used to improve the City. Therefore, a system like the S 109 agreements can go a long way, as long as they are just for the benefit of the surrounding neighbourhood and do not become another way to exhort money. **(2)** A second excellent planning regulation in the UK is the obligatory provision of affordable housing virtually all developments. If a developer applies to build 100 houses, he is required to sell a certain percentage of them at a price below market. The people who purchase the houses have been vetted as being needy. This system of providing affordable housing in every development has been recognized as the best way for a family to move out of poverty, as the benefiting family is moved away from living in a pocket of poverty and desperation, to living within a normal working -middle to upper class society. The children of these families are exposed for the first time, to neighbours who could be anything from government officials to bankers, lawyers, architects etc. Their world is expanded and they dream big. Such families truly make a step out of poverty, and is more successful than the Housing Vouchers system in USA as the people receiving housing vouchers tend to stay within a pocket of poverty.

- The Masterplan should provide for different density allowances depending on the scale of the development. For example, what someone can build on 1 acre of land can be higher than on a ¼ acre x 4, as on one acre there is more room for planning the access, investing in infrastructure. This is similarly true for very large scaled developments like 50 acres plus. If incentives are provided for the provision of well planned, large scale developments, this will encourage the market to come together and assemble large parcels. It need not stop developments occurring on small parcels, but will provide incentives for well planned communities to come to the market. In large cities in more developed markets, the occurrence of large apartment complexes on 10+ acres of land is very common. At that size, the developer can provide for many of the needs including some green space etc.
- The Masterplan also needs to provide guidance for education / healthcare provision. Currently, most large developments are required to put in a nursery school. But what happens when there are 20 large developments in say Athi River, but no one is putting in a primary or secondary school. Similarly to health care - several people put in a small clinic, but when the population from many developments adds up, you need to be looking at larger health service provision. And of course, the one that is always over-looked is green space, with the government allowing the development of private property to the boundary lines. This makes the provision of free public space all the more important. In older well planned estates all over the City, previous green space is being turned over to development. The pressure for additional development is so high - however, if there is no space for green space, we are looking towards growing a city where our inhabitants may literally go mad - and this is scientifically proven. **Particularly in newly opening areas like Athi River, it is more cost effective to identify and protect parcels for green space now - before the area gets highly developed. Once the area is highly developed, the price of land for compulsory acquisition will become many multiples of what it is now, and the logistics of finding land that is accessible becomes harder.**
- The Masterplan should also look at road and pedestrian access to each parcel. An example of poor planning is the development along Mombasa Road. All plots facing Mombasa Road cut an entry to the highway itself - this is dangerous and inefficient. Instead, feeder roads for each neighbourhood should be provided - so that traffic first gets off the highway, and then goes into each individual property.
- The issue of food security in urban centres is gaining more importance world over - the potential of urban agriculture - through permaculture / roof top gardening etc - is hugely progressive - it assists with food security, employment creation, and can use degradable waste in the surrounding neighbourhood for creating manure. (The proposition of agriculture on land at ground level may not be justified due to the cost of land and competing land requirements, but can also be provided for in peripheral estates).

- As Nairobi expands, a lot of land that was previously used for agriculture - including tea farming in higher altitude areas, is being converted to residential use. The Masterplan should define a 'green belt' around the City. This may require additional acquisition of private land to ensure the green belt is created.
- There is a lot of emphasis on 'golf course estates' within Nairobi and its environs. Golf courses are expensive to maintain, require significant water resources, and are accessible only by a few. The Masterplan should encourage the provision of green spaces that are more widely used, and easier to maintain, with indigenous plants and wider accessibility.

SECTION IV. TRANSPORT, ROADS, TRAFFIC, CONGESTION

In order to have a long-term solution to the traffic problem in Nairobi City, urban planning has to recognize that **DENSITY IS GOOD**. Many studies have shown that cities have higher economic productivity on average than the rest of the country (see [this article from UN/Habitat](#) and [this one in Smithsonian Magazine](#)). It is also obvious that when density is higher, more people can walk to work or need to be transported shorter distances. The Masterplan looks at additional road capacity - but needs to look at how to make roads for the people - which is a key requirement for some of the Masterplan vision including, making Nairobi Globally attractive, and making the City sustainable, socially equitable etc. We continue to plan our road infrastructure only for cars, ignoring the fact that almost 50% of our population walk and a further 30% take matatus. **Roads should provide for pedestrians.** It is shocking that footpaths have been converted to parking for private development. Adequate footbridges and pedestrian crossings should be allowed. **Roads should provide for public transport.** Highly congested areas like the CBD, Westlands, Upper hill etc - should provide large car parks on the periphery of that sub-centre, with only pedestrian or public transport access in the core. Designated pick up and drop off points for public transport should be built into the road networks, and not allowed haphazardly - so many deaths occur while people are simply crossing a road to get to work. **Please see extract of talk provided by architect Natalie Sham, at the Friends of City Park.**

Therefore in a long term perspective city transport planning should aim at:

IMPROVE TRANSPORT FOR *ALL* CITY RESIDENTS

- **mass transit** that efficiently reaches all major parts of the city, and is clean, safe, well lit and works all hours. When the wabenzi are willing to ride the high-status mass transit system, then our problems will be solved (mass transit includes buses and matatus but trains are probably required as well).
- **stop favoring car owners!** Stop building highways! Impose high congestion taxes focusing on downtown streets; favor matatus, buses and rail. Improve lighting and security at all termini.
- **improve pedestrian pathways, lighting and security.** The new highways in Parklands are an example of excluding pedestrians, forcing them into dark tunnels with no pedestrian access on the shorter, better-lit roadways. Also, be realistic about the uses pedestrian areas are put to, including street sales
- **greatly extend bicycle lanes** and add m-pesa-powered bikeshare (like m-kopa lights)
- **accommodate motorcycle traffic in its own lane**, not bike lanes or car lanes, thus making motorcycle traffic safer and more attractive to commuters, including women

DEVELOP THE CITY NOT TO NEED SO MUCH COMMUTING

- **develop mix-use districts** (like Westlands today) with both housing and offices to reduce the need for 100% of workers to commute as is currently the case. Incentivize the building of housing as well as offices in downtown.
- **increase the density of offices and housing**, which is not only efficient for traffic but also for the provision of services such as security, water, sewer, electricity and broadband. Do not allow the city to sprawl beyond its current borders, thus reducing the need for additional cars and additional highways. This will be particularly

important as the number of households in the city continues to grow as our population gets older, richer, more urban and has fewer children.

- given the goal of increasing overall urban density which will reduce the existence of private gardens, it's **imperative to create green spaces and parks**, and have tree-lined avenues. We are currently allowing development to take over too many parks, and building new estates with no green space at all. This will inevitably have to be rectified in the future: we need to start now.

LOW COST / QUICK TO IMPLEMENT SOLUTIONS THAT SHOULD BE DONE IMMEDIATELY:

- **enforce pollution laws** so that we don't all die of asthma and lung cancer before any of these recommendations can be put into place - have you noticed how the smog hangs over the city and is particularly dense in the new Thika road tunnels? Matatus and lorries are the main (but not the only) offenders but I've never heard of a policeman stopping anyone for polluting.
- **make the police enforce the traffic lights!!!!** Why did we spent all that money to put in lights just to have the police tell people to do the opposite? And is the only purpose of those "cameras" to cause temporary blindness at night?

In the short term, we endorse the proposals in the THE NAIROBI METROPOLITAN REGION (NMR) TRAFFIC DECONGESTION PROGRAM with 2 suggestions

- the proposal has too few bus stops in town. If people have to walk a long distance from the bus stop to their place of work, the buses will start to deviate from the regulations. Make it convenient and people will tend to cooperate.
- you have mentioned underutilized car parks but no plan for how to increase utilization. My hunch is an impression of lack of security and lack of courtesy at NCC facilities are the main reason motorists would not want to use them. Consider hiring private management for city-owned car parks.

Nairobi's faithful citizens lose 1-2 hours every day in traffic, wasting time and money, choking on fumes and fighting with matatus. We would rather walk down a safe, well-lit sidewalk to my neighborhood transit stop and read a book while we ride the metro to work! Who wouldn't?

SECTION VI: OTHER PROVISIONS:

The Masterplan provides or alludes to some of these things, which should be encouraged:

- Mandatory requirements for roof water catchment and storage in all new developments, together with ground water storage of excess water collection
- Requirements for solar power on roofs - this is already mandatory for water heating, but guidelines could be created for lighting and other solar energy, depending on the size of the development
- Strong provisions for recycling of waste (including e-waste) are important. The waste collection and recycling industry should be driven by competition, not be a monopoly as has been recently implemented in the Nairobi CBD.
- Significant potential to create energy from bio-mass, particularly in low income areas. Similar to work done by Sanergy: <http://www.csmonitor.com/World/Making-a-difference/Change-Agent/2014/0317/In-Kenya-selling-human-waste-could-revolutionize-sanitation>

SECTION VII. PRIORITIES / BUDGETS / IMPLEMENTATION

The Masterplan has many, many, many good ideas, but as with everything, we need to clearly understand the cost implications and prioritize on cost benefit analysis. We encourage the Masterplanning team to create a simple analysis of the most important interventions / suggestions in each category, and obtain estimated costs for these, so that they

can be prioritized. Please see this article from David Ndi about the new railway. White elephant projects should be discouraged.

[http://www.nation.co.ke/oped/Opinion/New-railway-is-not-value-for-money-/-/440808/2207034/-/wgmkw/-/index.html?fb_action_ids=10202363875311165&fb_action_types=og.recommends&fb_source=other_multiline&action_object_map=\[250661691779109\]&action_type_map=\[%22og.recommends%22\]&action_ref_map=\[\]](http://www.nation.co.ke/oped/Opinion/New-railway-is-not-value-for-money-/-/440808/2207034/-/wgmkw/-/index.html?fb_action_ids=10202363875311165&fb_action_types=og.recommends&fb_source=other_multiline&action_object_map=[250661691779109]&action_type_map=[%22og.recommends%22]&action_ref_map=[])

- Clear and regular information available to all citizens on the growth patterns of Nairobi, the use and availability of scarce resources like water, the amount of waste collected and recycled - should also be provided to the citizens.

APPENDIX A: Planning to Accommodate our Growth – It’s not too late! - Talk from 2013

By Natalie Sham, Aga Khan University and Friends of City Park

Nairobi is seeing an unprecedented amount of growth: the current population is estimated at 4 million people, and is expected to more than double to 10 million people by 2030. This increased population puts extreme pressure on our infrastructure, and requires an urgent attention to how we plan our city.

Some recent improvements in infrastructure, for example, the Thika Superhighway – are commendable in certain aspects – they are easing the congestion felt on our roads, and have spurred real estate development around the new infrastructure. However, we seem to be pre-occupied with designing for ‘the car’ which is not the most common mode of transport. A study showed that the primary mode of transport for Nairobi residents and workers (check) as follows:

- **47% of people walk**, 29% use matatus, with the balance 24% using cars / buses

So it is clear that we seem to have our priorities out of sync – we are more concerned with planning for cars, when half the population walks.

This leads to serious planning implications. For example, the Thika Superhighway, as all other new roads, have limited measures built in for pedestrians. Another scary outcome seems to be how high rise developments in upscale areas like Parklands and Westlands are allowed to create parking on the outside pedestrian paths! This seems to be a violation of human rights for our population – why should we take away public footpaths which serve thousands of people daily, to serve for a few cars?

Most people who have lived in Nairobi for decades are saddened by the lack of our long term vision in our planning. A recent study by Natalie Sham of the Aga Khan University, shows that we still have the opportunity to plan for our growth.

Studies of successful large cities around the world show that 3 principles are required for creating sustainable cities. These are:

- **Planning to the human scale**
- **Integrate local culture into the architecture, and**
- **Building circular economies**(this means the economy provides employment opportunities, recreational opportunities etc, and all these opportunities feed on the economy thriving and being self sustainable)

Ms. Sham conducted an in depth survey of the Parklands neighborhood and found that several challenges. Many people used cars for short trips as the roads were not friendly to pedestrians, most intersections remained congested with traffic and there are limited stops for public transport, there were limited green spaces for the residents or workers to relax in, and there was no cohesiveness holding the old and new developments together.

While the current situation paints a bleak picture for future growth, we identified that the Parklands neighborhood could adopt some measures relatively easily, to create a welcoming and sustainable neighborhood.

1. Making roads friendly to pedestrians and non-car users:

Natalie's team undertook cross sectional measurements of all the roads in the Parklands area: namely 1st, 2nd, 3rd, 4th and 5th Parklands, and found that the roads are a minimum of **18 meters** wide. The results were mind-blowing – no user of the road would imagine they could be that wide.

Natalie looked at international standards of road usage and demonstrated that with the existing space, a whole different road experience could be created. Basically, with by placing slabs over open water drains, there is enough width in the road to accommodate 2 single lane traffic, pedestrian path, bicycle path and a path for mkokotenis etc.

These measures need tiny budgets compared to the billions being spent on larger scale infrastructure projects in Nairobi - and could transform the way the whole neighborhood functions. More friendly streets will automatically improve security for the area too, an added plus.

2. Reducing traffic congestion and increasing public transport stops

The measures suggested above will automatically ease congestion, as more people walk for short trips instead of taking the car. Proper planning for matatu stops will also assist in regulating where the matatus stop, and reduce 'spontaneous' traffic jams.

Other suggestions are to create specific 'parking' areas: all Western cities have highrise parking 'lots' which serve a certain area. So instead of each development needing to provide for it's own parking, highrise parking lots are an actual user allowed by the planning code. This would be more effective than every development requiring it's own planning. Western cities allow 'parking' as a use, to be provided by the private sector, and Nairobi should also adopt this practice.

3. Green spaces to rejuvenate and relax in

Parklands once was an extremely green neighborhood – most developments provided for some green space. However, with the rapid growth in high rise apartment developments, most green spaces have been lost. Thankfully, Parklands is still blessed with the presence of City Park – a jewel right in middle of a densely developed area. Despite it's large size and convenient location, City Park is relatively underutilized due to the fear (more perception than actual) of insecurity.

The Friends of City Park have worked tirelessly for the last 5 years (check), to ensure 66 hectares of the park have been gazetted. They are now turning their efforts from advocacy work to seeing how to actively improving the usage of the Park. This dream is also held by the Aga Khan Development Network, which recently signed an MOU with the Nairobi City Council, on creating a public private partnership to create a proper park – a safe place which provides opportunities for all to exercise, relax and connect with nature. Many people will remember that in the 1960s, Nairobi residents would walk all the way from Ngara for a picnic in City Park – this is a legacy we wish to re-create, and bring to thousands of users.

4. Creating cohesive developments and a circular economy

With attention paid to the existing fabric and the need to plan for continued future growth, we can create a cohesive and sustainable economy. Planning permission is a valuable tool which should be used effectively. What seems surprising in Nairobi is how little the planners regulate developers – each new development has limited entry and exit space and creates immediate congestion.

One measure that can be adopted to effectively unleash the 'value of planning permission' is the Section 106 agreements enforced in the UK. In this agreement, the council and developer transparently acknowledge the additional stress that will be put on the neighborhood with the completion of the proposed development. The council then determines what measures would be sufficient to mitigate the additional stress. So, for example, if a new shopping centre was planned, the council would determine if the road network could bear the additional cars. If not, the council would require the developer to improve the road network leading to the supermarket by putting in an extra roundabout at a key intersection etc. To ensure the council does not overdo their planning gain requirements, the Section 106 agreements are publicized in the media and can be arbitrated by a tribunal.

There are several ways we could create a circular economy: for example, schools could generate more income by allowing parking on their premises in the evening, or hospitals could allow neighborhood residents to use their gyms. All bio-degradable garbage from residences and businesses could be collected and used to create manure for the green spaces, and some sections of the green spaces could be made available for residents to plant food and vegetables.