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Building Unchanged? The Built Environment amid a Changing Climate



THE ARCHITECTURAL ASSOCIATION OF KENYA INVITES YOU TO THE

Annual AAK Convention

The Built Environment and Climate Action: An Impactful Way Forward



AAK ANNUAL CONVENTION 2021

The Built Environment and Climate Action: An Impactful Way Forward

SAROVA WHITESANDS BEACH RESORT, MOMBASA

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EDITORIAL

" Should we be applying soft or hard interventions for climate change adaptation? "

EDITOR'S NOTE

Are we building unchanged? I suppose the answer to this question is as varied as there are views on climate change. What is certain however is that we are no longer living in a business as usual planet. For instance, despite the advances in technology, it is still a challenge to accurately predict the seasons as we used to about a decade ago. In addition, over the past few years there has been a marked increase in the frequency and magnitude of hydrometeorological hazards.

This issue of BuildPress is a precursor to a year in which we shall bring the debate on Climate Change right to the heart of the built environment. Most of us have interacted with theories on community based approaches to climate adaptation but how practical is it?

In this issue we catch a glimpse of actual projects that KDI has undertaken within Kibera and see just how practical bottom-up design approaches can be. Should we be applying soft or hard interventions for climate change adaptation? How much about plastic recycling do you know? Have you considered lifecycle costing for proposed developments? The articles herein shall illuminate more on these topics and inevitably spur the need for further action among us practitioners of the built environment.

I would like to thank the contributors for your thought-provoking articles, the AAK secretariat, the AAK leadership, the publication team and as always, our esteemed members for making this publication a success. Happy Reading!

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CEO'S MESSAGE

The world has placed climate change as a priority matter that needs to be addressed in order to enable the continued existence of mankind. This calls for all of us - individuals and organisations to change the way we conduct our business and to place sustainability at the top of our minds as we set out our strategies and implementation plans.

Rapid urbanisation and population growth in Africa places our continent at a precarious position since these issues have led to the extensive development of housing units, commercial and other socio-cultural amenities, in order to meet the growing demand. The continent has experienced serious threats to lives and livelihoods, particularly on the most vulnerable of our communities. This is best illustrated by the recent floods and the rise in water levels in Kenya, which led to loss of lives and displacement of thousands of people.

The Architectural Association of Kenya has actively been involved in the development of practical and inexpensive solutions that would help the most vulnerable people better adapt to the threats posed by climate change.

Specifically, we set up a Floods Response task force which conducted a design competition last

" The Architectural Association of Kenya has actively been involved in the development of practical and inexpensive solutions that would help the most vulnerable people better adapt to the threats posed by climate change. " year in order to develop low-cost housing units that can safely be developed in flood prone areas and hence minimise the disruptions to human lives when they occur.

Further, our Association together with Konkuey Design Initiative and in partnership with Akiba Mashinani Trust (AMT), Arup East Africa, and University College London (The Engineering for International Development Centre) is working to promote the Inclusive and Integrated Infrastructure Framework (3IF) for Kenya. This framework - 3IF - will develop, test, and disseminate a set of principles and practices designed to make infrastructure an integral catalyst for improving a broad range of social, economic, and health-related goals.

Without a doubt, the Association has a very important role to play in guiding the actions that will mitigate the impacts of climate change. We have already developed a Green Building Rating tool that will be used in the country and the region as a whole. This will be rolled out in the coming weeks and we call on all members to actively contribute to its adoption and use in the country.

It is our trust that as we continue to engage in this timely topic on climate change, we will come up with innovative, home-grown and inexpensive solutions that can be easily adopted in the country.

JACOB MWANGI CEO, AAK **NEWS**

PRESIDENT'S MESSAGE

"As an Association, it stands as our responsibility to advocate for, educate on, and make available tools to encourage our membership to build green towards a more impactful future on Climate Action. "

MUGURE NJENDU PRESIDENT, AAK

In this Build Press the Association is tackling the Built environment amid a changing climate. This year's AAK Convention 2021, is aptly titled 'The Built Environment and Climate Action: Towards an impactful future.' As Built Environment professionals and members of AAK you may be wondering why our Association is heavilyfocused on this subject matter. Allow me to contextualize this for you.

Climate change is one of the most pervasive and threatening issues of our time, with far-reaching impacts in the twenty-first century. Climate change is expected to have unprecedented implications on where people can settle, grow food, build cities, and rely on functioning ecosystems for the services they provide. In many places, temperature changes and sea-level rise are already putting ecosystems under stress and affecting human well-being.

Recognizing the increasing threat of climate change, many countries came together in 2015 to adopt the historic Paris Agreement, committing themselves to limiting climate change to well below 2° C. Some 184 countries have formally joined the agreement, including Kenya. The agreement entered into force in November 2016. No continent will be struck as severely by the impacts of climate change as Africa. Given its geographical position, the continent will be particularly vulnerable due to the considerably limited adaptive capacity, and exacerbated by widespread poverty.

The construction sector has become one of the most significant sectors that cause real environmental impacts by emitting a large amount of emissions into the atmosphere. Buildings are responsible for 39% of CO2 emissions and 36% of global energy consumption. The good news is that the Building Sector has the largest potential for significantly reducing greenhouse gas emissions compared to other major emitting sectors.

The World Green Building Council notes, that the world over, evidence is growing that green buildings bring multiple benefits. They provide some of the most effective means to achieving a range of global goals, such as addressing climate change, creating sustainable and thriving communities, and driving economic growth. If carefully planned, greenhouse gas mitigation strategies for buildings can stimulate the growth

NEWS

of new businesses and jobs, as well as contribute to other, equally pressing, social development goals, such as better housing and access to clean energy and water.

It is imperative due to the impact of Buildings and Construction on Climate change that Built Environment professionals commit to a more sustainable building and urban future.

As an Association we have taken significat steps towards this. We have recently signed MOU's with like-minded organisations that are seeking to be impactful in Climate Action including the Kenya Green Building Society and the Kenya Climate Innovation Centre.

Climate Action means steppedup efforts to reduce greenhouse gas emissions and strengthen resilience and adaptive capacity to climate-induced impacts, including: climaterelated hazards in all countries; integrating climate change measures into national policies, strategies and planning; and improving education.

In the UNEP Report ' Buildings and Climate Change' A summary for decision makers, some basic 'Building Blocks' are identified to guide decision making in our sector towards impactful Climate Action. These are:

1. Buildings are responsible for more than 40 percent of global energy use and one third of global greenhouse gas emissions, both in developed and developing countries. 2. The Building Sector has the largest potential for delivering long-term, significant and cost-effective greenhouse gas emissions.

3. Buildings have a relatively long lifespan, and therefore actions taken now will continue to affect their greenhouse gas emissions over the medium-term.

4. Most developed countries and many developing countries have already taken steps towards reducing greenhouse gas emissions from the Building Sector, but these steps have had a limited impact on actual emission levels.

5. To overcome these barriers, governments must take the lead by prioritizing the building sector in their national climate change strategies and putting in place a number of "building blocks"

6. With these "building blocks" in place, governments are well placed to select and design appropriate policies to reduce emissions from new and existing buildings.

7. At no other time has the case for international cooperation to address climate change been more pressing than now.

8. Reducing emissions from buildings will bring multiple benefits to both the economy and to society.

For us as Built Environment Professionals in Kenya, and in the larger East African region, it stands as our responsibility as global citizens, who can largely make an impact on climate action to do so. As an Association, it stands as our responsibility to advocate for, educate on, and make available tools to encourage our membership to build green towards a more impactful future on Climate Action. **This is a call to each of you, to think green and build green.**

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A COMMENTARY: RESILIENCE OF LIVELIHOODS IN URBAN AREAS

By Stella Nyambura

All around the world

We tend to interpret climate risk and our contribution to climate change, to within an inch of our comfort. Outside of this well architected but virtual comfort, is an existential problem; climate change. Rallying the collective consciousness towards climate action is fundamental, however, this is currently rigged with lags, and solutions that are running out of time. In order to rein climate change in, there is so much to do, so little time.

Worlds apart

The global North has made headway on development through carbon activities (GHG emitting activities). We point to these activities (human activities) as the main source of carbon emissions that have led to climate change; in turn this brings us to the global carbon inequality.

Nothing quite paints the picture like the research by Oxfam and the Stockholm Environment (Tim Gore, Mira Alestig, 2020). It reports that from 1990 to 2015, the contribution by the richest 10% of the world's population (63 million people) was 50% of cumulative carbon emissions, while the poorest 50% (3.1 billion people), were responsible for (only) 7% of cumulative emissions.

The global South, despite being less developed, and being responsible for far less carbon emissions than the North, is also more vulnerable to climate change. This is not only because of limited adaptive capacity and a higher sensitivity to climate events, but also, because the most prevalent climate events (droughts, floods and increased temperatures) currently gravitate towards the tropics. It's easy to see why anyone would refer to this as climate 'injustice'.

The value proposition

The argument for 'adaptation and risk reduction' over 'decarbonisation' for Africa, is based on the fact that Africa's carbon footprint is low (at 3-5% annually), while vulnerability is the highest globally. Any action towards reducing her carbon emissions would not make a marked difference on the 'global whole' of emissions. It would be noble and responsible living (especially going into the future), but to reduce the vulnerability of African people would address a desperately urgent need, that's with us here and now. With Africa warming 1.5 times faster than the rest of the world, widespread desertification will continue to trigger conflict (due to limited resources) and migration. We've witnessed this in our back yard. Therefore, the value proposition for Africa and her states, lies in adaptation.

To reduce the vulnerability of African people would address a desperately urgent need.

Urban vulnerabilities

Urban areas occupy less than 2% of the Earth's surface area. This is home to more than 50% of the global population. The consequent concentration of carbon activities (a result of urbanization and industrialization), points to a human induced microclimate, that not only physically removes us from nature but also, spurs the growth of our 'disconnect' from it. What is also noteworthy, is that the increasing density of people in cities, translates to increased vulnerability (Ford et al., 2019).

In cities, you'll find critical infrastructure such as energy systems, water systems, health care, security, transportation among others. These are often centralized. The interconnectedness of this infrastructure means that impacts of climate change could reverberate far beyond, to places spatially removed from where disaster strikes. This inspired a recommendation in the IPCC's 5th assessment report; that monitoring tools need to be multi-scale (Mukherjee & Hastak, 2018).

Even more, in the age of globalization, the interconnectedness of cities means that disaster strikes are that much easier to scale; from local to global (recent happenings make a good case).

Worst hit

The most vulnerable urban areas are those with inadequate disaster preparedness, lack early warning systems, have infrastructure poor e.t.c., (Mukherjee & Hastak, 2018). Cities in the global South are particularly at risk due to high population density, many living in informal settlements, concentrations of solid and liquid waste, unplanned growth of cities, persistent poverty among other things (Hossain & Ur, 2018).

These, coupled with flood events, affect water quality in cities. In addition, due to high land conversion rates, in favour of built up space, there's less infiltration for rainwater and more run-off that could turn into floods given the right conditions (and which we openly refer to as man-made floods). The latter goes to show, that to understand future climate risks to our urban areas. it's important to understand land-use changes (Ford et al., 2019).

While the effect of a 1.5°C temperature increase in Africa may be uncertain (due to inadequate monitoring systems), it is bound to put a strain on sanitation, drinking water, land tenure, and trigger underlying governance weaknesses in our cities (Pelling et al., 2018).

In addition, due to high land conversion rates, in favour of built up space, there's less infiltration for rainwater and more run-off that could turn into floods given the right conditions 'Day Zero' in Cape Town gives a preview of a 'strain on water'. Cape Town experienced a water crisis so bad, it was christened the first modern city in the world to completely run dry. We have not had a 'Day Zero' in Nairobi, but water shortage is not alien to us.

The Kenyan urban- Nairobi

In a direct sense, human activity is threatening the biodiversity that we pride ourselves in. The Nairobi National Park for example, is a tale that goes back to the 1960's. From land that belonged to the Maasai (seen them crossing the road with their cattle and thought they were misplaced?), to an exchange of hands over a promise to safeguard its biological assets. However, the park is slowly turning lifeless. Misappropriation of land in general, has the same effect on our sensitive ecosystems as well as our indigenous communities. This, a land governance issue, is much like COVID-19, a virus that exposes deep inequalities.

On the other hand, climate change is threatening urban households through increasingly prevalent drought and flood cycles. These, and the locust invasion, put a strain on food production. Our urban food systems being dependent on sources far removed from the city, means that shocks in the village, affect us. This could be in the form of increased food prices.

About half of the population of Nairobi's poor occupy 5% of the total urban residential land area. There is literally no room to breathe. Climate risks are therefore even greater for the urban poor. They have lower adaptive capacity by virtue of limited resources (lack access to assets), limited information, poor access to services, poor social networks and limited mobility.

Misappropriation of land in general, has the same effect on our sensitive ecosystems as well as our indigenous communities.

Arresting the situation

Adaptation can be achieved through soft or hard interventions. Soft interventions being the creation of awareness, for example, and hard interventions being infrastructural, such as the installation of early warning systems.

The health burden of inadequate water for sanitation and drinking requires an integrated urban water management. Our urban spaces also require robust waste management protocols, that cater for future pressures emanating from an everincreasing population. These among other interventions, point to the need for spatial plans that promote adaptation.

Currently, our water, energy and food systems are easily susceptible to weather events. To address the issue of centralized systems that are also interconnected (the water-energy-food nexus is a sensitive one; where

failure in one is likely to affect the others), calls for innovation. A take on micro-grids perhaps? It would mean exploring opportunities in our most immediate surroundings for our sustenance. Devolution is a good foundation for this, and given some thought, is fertile ground for a circular economy.

Integrating water, energy and food micro-grids into our homes would mean that we would have access to these resources, even if the main grids failed due to floods for example. Those at risk of suffering from disruption would be better able to navigate the flood event because they'd still have access to clean water, power and food; therefore reducing their vulnerability. Another example is the shortening of supply chains by buying Kenyan. Aside from 'building' our own economy, it would reduce risks that supply chains are exposed to at the global scale of trade.

On the whole, having access to water, energy and food, regardless of weather-related events would have a positive effect on livelihoods because socio-economic development would continue undisrupted.

Talking about micro-grids as a solution favors a few. It is not easily accessible to the urban poor. This means that as we look at adaptation measures for our cities, we cannot forget to accommodate this group of people, who are the most

A take on micro-grids perhaps? It would mean exploring opportunities in our most immediate surroundings for our sustenance.

vulnerable and therefore in greater need of adaptation.

With increased temperatures, there's bound to be more and more pests, insects and bugs not only coming for our food, but also bearing disease (Niles & Salerno, 2018). Heat waves and dust winds will have us retreat from the outdoors, unless we find a way to dissipate the heat. The case of sponge cities, though theoretical, is a strong one. In a nutshell, it entails the use of green infrastructure as opposed to grey infrastructure. This is for the purposes of reducing the impact of seawaves (e.g., mangrove forests), inland flooding (forest cover allowing for infiltration) and heat waves (cooling through evapotranspiration). Nature is always 'just right'.

Something borrowed

The following example of adaptation is an early warning system designed for urban and coastal flooding in the UK. It's a 3D visualization tool for Torbay, a region exposed to flooding (Chen et al., 2018). Using this tool, one can evaluate the impact of a flood on critical infrastructure (hospitals, power stations, roads), and with the information, be in a better position to prescribe adaptation strategies.

The framework achieves this through simulations, where one can model various flood scenarios. With the critical infrastructure mapped (in a map layer), the flood map is then overlaid. Given data such as the flood depth and duration, one would be able to identify the infrastructure that would experience disruptions during the modelled flood.

Using such a tool makes the risk to infrastructure and related services easier to communicate to stakeholders. The tool also allows the input of data relating to adaptation capacity and the effect that it would have in reducing flood risk; therefore, the adaptive solutions can also be modelled. Running various adaptations would allow for more informed decisions on what solutions to implement. For a resource constrained undertaking, the tool could help in the identification of the most affordable yet efficient adaptations.

It could go wrong

The reverse of 'arresting the situation', is referred to as maladaptation, where results from interventions have negative effects that could in fact result in increased vulnerability. For instance, a Governor from Saint Louis, Senegal, saw to the building of a 4-meter-wide channel that would act as a new outlet for the Senegal River. This was to reduce pressure on the existing outlet and therefore lessen the likelihood of floods at the coast's plains.

All very innocent and

successful at first, but it led to another problem that makes one think, we should leave creation to the Maker Himself. In the span of a decade, the channel's width increased from the initial 4 meters to 2 kilometres. Ocean water inundated, resulting in salinization- which puts an end to coastal farming and other economic activities that depend on marshlands and their ability to absorb pollutants and improve water quality (Andersson-Sköld et al., 2015).

To counter the threats and weaknesses that might result from such adaptation efforts, it is important to take note of the trade-offs involved at the 'life-cycle' scale.

What else?

It is important to lean into experimentation and its potential in devising solutions. The complexity and uncertainty surrounding climate change and its effects on our cities translates to a complicated adaptation process. Experiments could allow for solutions that are designed around the current resource potential of these communities, ensuring that they are flexible (not only for transferability but also to accommodate growth) and encourage participation from stakeholders, which would provide an opportunity for social learning and encourage innovation. It would be a great way to find solutions that truly address a city's vulnerabilities.

AUTHOR BIO

Stella Nyambura Mbau PhD, 32, is the Founder and CEO of LOABOWA, where climate resilience is the primary focus. She also curates a blog (medium.com/much-to -do) that is committed to climate resilience in Kenya, and in Africa. She volunteers with the COP Non-Official, Mother Earth Project, Polluters Out, among others.

The complexity and uncertainty surrounding climate change and its effects on our cities, translates to a complicated adaptation process.

ADOPTION OF PLASTIC RECYCLING IN THE CONSTRUCTION INDUSTRY By Timothy Chomba

The UN-Habitat has celebrated World Habitat Day since 1986 to remind citizens of their power and responsibility in fighting climate change. Subsequently, the UN adopted the Paris Climate Agreement in 2015 that made it legally binding for member states to limit global temperature rise by 2° celcius with one of its goals being that buildings reach net zero emissions by the year 2050.

According to the United Nations Environment Program, buildings and constructionrelated activities account for 39% of carbon emissions. Activities such as heating and lighting were the main contributors at 28%, while construction activities like manufacturing and transporting of construction materials and the actual construction process contributed 11%. Currently, no building has been considered to be a net-zero carbon emitter.

Plastics have been considered as one of the major contributors to carbon emissions since fossil fuels are the main ingredient used in making plastics. Oil producers use large amounts of petrochemicals leading to the emission of toxic gases. Scientists have stated that the rate of producing plastics has surpassed that of other manufactured products like cement, steel, and aluminium.

It is estimated that in Kenya only 9% of plastics are recycled with the rest ending up in landfills, water bodies, or incinerators. Additionally, when discarded, the plastics disintegrate to produce toxic gases like methane and ethylene. The incineration of plastics also emits greenhouse gases. Plastics also affect soil quality, which in turn has an effect on the health of vegetation, which are important carbon sinks. The Government of Kenya was legitimately praised for its ban on single-use carrier bags and went a step further by banning single-use plastics in protected areas such as nature parks, beaches, and conservation areas.

Various techniques that reduce carbon emissions in the construction industry are in use including the use of recycled plastics as construction materials. Plastics can be recycled to form various products. They are collected, sorted, shredded into pieces then mixed with additives at high temperatures by an extrusion machine to produce a polymer that is placed in moulds to form various shapes, then cooled. Additives are added to increase the structural strength thus creating various construction products. These end products include; floor tiles, plastic bricks, lumber as a substitute for wood and fencing posts.

In Kenya, various entrepreneurs have taken advantage of this technology to produce different construction materials. One of the companies for instance, produces tiles which are priced similar to clay and concrete tiles. Another social produces enterprise plastic blocks, pavers, and manhole covers and has managed to recycle over 20 tonnes of plastic thus far. The pavers carry three times the weight of concrete and come in different colours. Yet another company's timber substitutes are used by KeNHA for road signage along major highways. An emerging leader in fencing posts production recycles plastics and mixes them with other wastes like sawdust to create a wood plastic composite. The product looks like wood but is as durable as plastic. They are then used to make fencing posts, road signs, benches and tables.

Worldwide, an open-source platform called Precious Plastics has been disseminating information freely on plastic recyclina. Through YouTube videos and social media platforms, the company informs people on how to assemble and use machineries like shredders injection machines. compression machinery, and extruders. In Kenya, the organization has established its roots through the International School of Kenya as Plastiki Rafiki. Their school club has networks in Diani, Mathare, Lamu, and Dunga Hill in Kisumu that regularly participate in the collection and recycling of waste along beaches.

FEATURES

In Columbia, there is a company that converts plastics and other waste into interlocking plastic bricks that are assembled on site. This company has partnered with UNICEF to construct over 500 classrooms in Ivory Coast within the next two years. A Scottish company reuses plastics by melting and adding them to asphalt concrete to construct civil projects like roads, car parks, and runways. The projects are 60% more durable with less occurrence of potholes and cracks. Moreover, less bitumen is used thus reducing the demand for fossil fuels.

Recycling alone cannot get rid of the world's plastics.

Recycling alone cannot get rid of the world's plastics. Some would even say that recycling creates a burden to consumers rather than producers. This is because only 9% of plastics ever produced has been recycled. Though the appetite for construction materials may be substantial, the quantities of plastics produced overshadow those recycled. Efforts are being put in place to lobby for producers to bear responsibility from manufacturing to the disposal of plastics in the form of extended producer responsibility.

Though environmentally conscious materials are used, the major form of carbon emission is energy consumption in infrastructure. It is worth noting that not all plastics can be recycled and this still leaves out an unknown amount of waste in the environment. Technology does not guarantee that buildings will be net-zero carbon emitters.

Another limitation would be the disposal of these materials. Once demolished, discarding the building materials would beat the purpose of recycling. Further recycling of plastics may lead to loss of structural strength. Thus the process may just be delaying the problem rather than solving it.

We need to acknowledge the severity of the crisis. The recycling of plastics in the construction industry may be one of the ways but for there to be any change a special kind of effort is needed from all, consistently.

AUTHOR BIO Chomba Timothy is a Graduate Quantity Surveyor

BUILT ENVIRONMENT CONTEXTUALIZATION; INNOVATIVE SOLUTIONS TO SUSTAINABLE ARCHITECTURE

By Brian Babu

Unsustainable impacts on the environment brought about by human development have been part of civilization for centuries. Many ancient communities experienced local problems related to evolution of society. From past experiences, sustainable development can be expressed using three overlapping concepts: Economic development, Social development, and Environmental protection.

UNDERSTANDING THE ENVIROMNENT

Unique features of a location should always be considered, as opposed to application of generalized planning rules.

Analysis should be site specific. Technological advances have enhanced data collection

UNDERSTANDING THE SOCIAL & CULTURAL CONTEXT

Traditionally across the globe, most homesteads provided liveable, walkable clustered housing with quality green areas that enhanced emotional and psychological wellbeing of inhabitants; factors that improve air quality, a key factor in the fight against the ongoing pandemic.

Space was always given to outdoor living areas. A development never filled out a site as this had highly undesirable outcomes resulting in large and dark dwellings that were neither pleasant nor sustainable in their energy use.

UNDERSTANDING THE BUILDING ECOMOMICS

A sustainable building should be able to meet its operational, maintenance & financial needs with minimal tenancy. This is achievable through maximizing the building's performance in energy use, food, water & housing supply.

Using generative design tools, maximization of these parameters can be amplified to achieve low impact high performance buildings. Just as nature's biological cycle, a building by design should be able to use itself & its waste to build capital benefiting businesses, society, the environment and contribute to the circular economy.

GOING BACK TO OUR ROOTS

Sustainable architecture should have self-replenishing systems which create an economy based on a spiral loop system that minimises matter, energy-flow and environmental deterioration without restricting economic growth or social and technical progress.

Thanks to cost effective UAV technology, reconstruction of highresolution 3D site models has enabled fast and accurate capturing and documentation of site specific physical characteristics.

A sustainable building should be able to meet its operational, maintenance & financial needs with minimal tenancy.

CASE STUDY:

Sustainable Economy

Energy production & storage, water collection & recycling, waste reduction & food processing

Sustainable Living Location responsive design, social amenities enhancing wellbeing.

Sustainable Farming Eco agricultural practices, sustainable fish & animal farming, mixed vegetable & fruit farming.

Architecture should be productive, where designs aim to increase the natural resources. Sustainable architecture should provide healthy environments, improve the quality of life, and avoid the production of waste, to preserve the long-term survivability of the human species.

AUTHOR BIO

Brian Babu is an Architect with a focus on innovation. He is passionate about evidence-based analytical and capacity building solutions to emerging challenges of devolution such as: affordable self-sustaining housing, community based development processes, advocacy for use of locally sourced construction materials and construction technology and enhancing service delivery in devolved sectors including agriculture, health, water, and urban renewal. LinkedIn: https://www.linkedin.com/in/babubrian

Introduction

The most effective means of achieving resilience of a people is to adopt a community-based approach in policy making, planning and implementation of climate change adaptation measures.

African cities are now faced with increased vulnerability to climate change due to scarce resources and limited capacities to adapt to the effects of climate change as pointed out by Siri Eriksen et. al. The urban poor of Sub-Saharan Africa experience a heightened vulnerability to climate extremes owing to the fact that they live and work in hazardous environments that have poor infrastructure; in addition to inadequate governance structures. (WIREs Clim Change 2014. doi: 10.1002/ wcc.287)

This article seeks to highlight the importance of building resilience through changing the way built environments are planned and constructed to reduce vulnerabilities within low-income neighbourhoods. Based on Kounkuey Design Intiative's (KDI) decade-long experience working in Kibera, it demonstrates how grassroot level approaches to decision making, context-appropriate innovation, green infrastructure design solutions, and co-development of adaptation measures to climate change with local communities can

help residents of low income neighbourhoods build their resilience. KDI has demonstrated that in order to enable these communities to be better prepared to respond, survive and recover from adversities of climate change, an approach that seizes the local knowledge and the assets existing among the people ought to be embraced by practitioners in the built environment, non-profit organisations, the government and civil societies.

Flooding in Kibera, Nairobi

The informal settlements in Nairobi city, like other major growing cities, exhibit a pattern of forming along roads and riverines where flooding is extreme among other adversities such as limited access to potable water, sanitation and electricity. Kibera is an informal settlement and a home to about 250,000-350,000 residents.

The settlement follows the banks of Ngong river, other minor rivers and tributaries lacing through the settlement and culminating in the Nairobi Dam. It continues to grow and densify with the cheapest structures for rent being found along the streambanks where riverine (fluvial) flood risk is highest. Moreover, due to the lack of a waste management system and the poor state of the make-do drainage systems the settlement is also affected by localised (pluvial) flooding. Often, houses get destroyed by being washed away or collapsing.

BUILDING RESILIENCE WITHIN LOW INCOME URBAN NEIGHBOURHOODS

By Kounkuey Design Intiative (KDI)

Impacts of extremities of climate events are more pronounced among the residents of urban informal settlements and are expected to maintain an upward trend with projected increases in rainfall over parts of Eastern Africa. Innovative, sustainable water management is critical to protecting urban ecosystems, developing climate-resilient cities, improving living conditions for the most vulnerable and is key in contributing to sustainable urban development in these densifying neighbourhoods and expanding cities.

nments The settlement follo

CASE FOR BUILDING RESILIENCE THROUGH BOTTOM-UP APPROACHES

Policy making and planning in many cases so far has failed to address the needs of the poor, while they are the most vulnerable to climaterelated shocks and stresses. It is essential that we come in to protect the limited physical capital among the low-income populace by improving their climate resilience through the use of appropriate infrastructure and technologies. (Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation,

2003 (Part 2: pages 15-43)

Social networks play a fundamental role for the poor by providing safety nets as an immediate response in times of adversity. Community activism, informal economies and entrepreneurship which exist in poor communities can be strengthened to reduce their vulnerability to climate change. Within the context of poverty, resilience may be understood as the ability of poor individuals and poor communities to recover or 'bounce-back' from climatic shocks and stresses. (WIREs Clim Change 2014. doi: 10.1002/wcc.287). In the past, external interventions have often undermined rather than supported the efforts of informal networks.

Participatory design approaches

Over the years, KDI has tested a model that applies inclusion and integrated practices that build on existing local economies and social networks to generate locally-led prosperity. This multidisciplinary approach is a hybrid of solutions incorporating green infrastructure and usercentered design for productive public space.

Construction follows a participatory process through labour selection, skills transfer and understanding functionality of solution with a strong emphasis on gender considerations. This ensures that project realization, completion and sustainability will be attained as the beneficiaries acquire skills during the construction of the project. Further, it enables them to manage and maintain the projects after completion and can take development initiatives on their own to share and scale up the solutions.

KDI has tested a model that applies inclusion and integrated practices that build on existing local economies and social networks to generate locally-led prosperity.

Case studies

KDI's approach to design solutions in informal settlements is informed by the results of the above outlined participatory process. Material choices and construction technology are directed to be ones that the end users are familiar with, if possible, or that can easily be learned about and understood. The building phase of these design solutions involves use of local labour to ensure the skills transfer as well as ensure proper functionality and a sense of project ownership post handover.

Ultimately, the aim is to equip the communities with skills and understanding to be able to maintain the co-developed solutions as well as replicate them on their own.

Nature Based Solutions at St. John's School Kibera

Nature Based Solutions to flooding and waste water management are based on learnings from nature's abilities to handle these challenges and adapting them into built interventions. They are win-win solutions that involve protecting, restoring and sustainably managing ecosystems to address society's challenges and promote human well-being.

The project site was a community school in Silanga, Kibera located about 40 metres from the Ngong River. The school has been affected heavily by pluvial floods as well as flooding from surface runoff flowing down towards the river.

KDI sought to build an integrated nature based water management system to address this challenge working with the community to co-design, build, implement and evaluate their suitability to address these challenges in these neighbourhoods.

The integrated system agreed on after a series of community workshops included rainwater harvesting systems, rain gardens, infiltration tanks and filter drains. The capture and detention of storm and rainwater helps to reduce the volume of water flowing into watercourses, and therefore can help to reduce the risk of flooding downstream. Less water flowing over the ground also helps reduce erosion.

Sustainable Urban Drainage Solutions in VUMA

VUMA is a youth group that co-designed and lent its name to the eleventh Kibera Public Space Project located in Makina village, Kibera. Comprising two sanitation buildings and a community hall, the project takes advantage of several social, economic and environmental resilience strategies including community organized labour and renewable energy systems.

However, this article will focus on the Sustainable Urban Drainage Solutions strategies adopted in the project. Sustainable Urban Drainage Solutions are water management strategies aimed at aligning modern drainage systems with natural water processes. Ground conditions in the VUMA project site posed a challenge due to low infiltration rates of the soil in part due to the numerous pit latrines covered after filling up and the scarcity of open spaces due to the high density of buildings.

VUMA's stormwater management strategy focused on reducing surface water runoff from the project site by capturing, enhanced infiltration and storage. The facility has guttered roofs with rainwater

downpipe systems draining into a rainwater harvesting system and a rain garden. Rain water from the community hall roof is captured into a system of 2001 water tanks to be used by the community. A rain garden and an infiltration tank are installed to improve soil infiltration rates.

The infiltration tank located beneath the community hall plaza is made up of about 560 soda crates wrapped in a geotextile fabric and covered in gravel and a layer of permeable concrete paving. Working in concert, these drainage solutions significantly reduce the amount of surface runoff joining the surface water drainage network in the village from the VUMA site. The KDI projects have been a success in getting solutions built and operationalized; which is no small feat in informal settlements. However, the impact of these interventions is currently small and a long way from achieving what is required to see actual transformation at a settlement scale. To achieve wider adoption of these solutions, support is needed from built environment professionals combined with more central roles for other stakeholders (local and national governments, CBOs, NGOs and private sector). Stakeholder awareness and understanding of climate change and its risks, as well as a

need for environmental design is key to achieving this improvement.

Although policies on addressing climate change in urban planning and design (construction processes) exist, there is a need to raise the importance given to climate change adaptation and to demonstrate how these policies can be translated into practical, effective, community-based adaptation measures. A link needs to be forged between the local experience and needs of communities and the higher level policy makers.

To achieve wider adoption of these solutions, support is needed from built environment professionals combined with more central roles for other stakeholders (local and national governments, CBOs, NGOs and private sector).

Kounkuey Design Initiative (KDI) Profile

Kounkuey Design Initiative (KDI) is a non-profit design and community development organization. We partner with under-resourced communities to advance equity and activate the unrealized potential in neighbourhoods and cities. We accomplish this mission through advocacy, research, planning and built works.

KDI was founded in 2006 by harvard design students. Keen to use their design skills to alleviate economic, environmental and social challenges, they travelled to Nairobi, home of one of the co-founders, and began codesigning and building their first projecct with residents of Kibera, an informal settlement. The KDI founders believed that their design skills would not be useful unless the local residents were actively guiding them. This led them to develop a model of participatory practice that followed a simple pattern: ask, listen, collaborate and repeat.

KDI has since grown into an interdisciplinary firm with project experience in diverse settings, from urban informal settlements inKenya, to rural farmworker communities in the US, as well as urban and rural settings in Morocco, Mexico, Haiti and Ghana. Today, KDI has offices in Nairobi, Los Angeles, and Stockhom, and employs 41 staff members, which include planners, landscape architects, engineers, designers, researchers, and community organizers.

Our work encompasses 4 distinct but interrelated service areas: Design+Build, Plan+ Program, Research+Test, Advocate+Educate.

Integrated &
 Inclusive
 Infrastructure
 Framework
 for Kenya

WHY WE NEED 3IF

Upgrading approaches in informal neighbourhoods in African cities have failed to integrate sustainable infrastructure planning or real resident engagement, resulting in inadequate infrastructure and exacerbating vulnerabilities for residents.

OBJECTIVES OF 3IF

- **1 Create and Apply a new Framework** based on applied research and interdisciplinary contributions to enable quality, reliable sustainable, and resilient infrastructure design, with a focus on affordable and equitable access.
- 2 Contribute knowledge and data from Kenyan and UK institutions at the forefront of sustainable and resilient infrastructure design for integrated and inclusive informal settlement upgrading at the County and National Levels in Kenya.
- 3 Build capacity in Kenya's built environment professions for effective climate change-related planning and management by demonstrating resilient infrastructure design in climate threatened areas.

ACTIVITIES OF 3IF (2021)

- Develop 3IF for slum upgrading in Kenya including a Infrastructure Needs Methodology, Design Principles and Guidelines, and an Assessment Framework.
- 2 Apply and test 3IF in real neighbourhood upgrading processes in Mukuru, Kibera, and Mathare.
- 3 Influence policy and participation by creating a resource kit for government, and a Practical Guide for Communities.
- Institute professional learning through dissemination program with the Architectural Association of Kenya.
- 5 Investigate scale for further institutional and educational linkages, and to other initiatives in East Africa.

PROJECT LEAD: Kounkuey Design Initiative (KDI) Contact: kenyadirectors@kounkuey.org

PROJECT PARTNERS: University College London (UCL); Architectural Association of Kenya (AAK); ARUP; Akiba Mashinani Trust (AMT)

PROJECT FUNDER: The Royal Academy of Engineering

RESOURCE EFFICIENCY IN THE BUILT ENVIRONMENT By Laurene Wambui Luther

Introduction

Built environments are

human-made surroundings that provide the setting for human activity, ranging from buildings, parks and roads. The COVID-19 pandemic is

presenting an opportunity to make improvements to our living spaces while shifting the focus to sustainability for better use of natural resources. We have entered into a period where, now, more than ever, consumers are demanding

safe and efficient properties that promote healthy living. An increase in remote working brought on by the pandemic has also resulted in many residential properties being utilized as workspaces.

Italy, for instance, is currently experiencing a rising demand for high-quality properties due to the lack of flexible spaces and efficient energy systems. Across the European continent, the use of green building technologies to contain the spread of viruses is increasing with buildings now being designed for value, experience, and performance. COVID-19 has been a stark reminder that the construction industry is driven by human habits that are constantly changing.

Built environment and Climate Change

Climate change, though perhaps not in the same scale as the COVID-19 virus, is also having a significant influence on human behaviour. Though the impact on buildings remains unclear, research shows that buildings handle more than 50% of the global usage of resources and energy and the resulting emissions¹.

Also, the construction sector is one of the major sources of waste generation as well as a contributor to an increase in global greenhouse gas (GHG) emissions. Studies² show that better construction and use of buildings can reduce final energy consumption by 42%, total GHG emissions by 35%, extracted materials by 50%, and save up to 30% of the water in some regions. The adaptation to climate change is now seen as a useful requirement expected from a building.

While global warming-driven changes of ecosystems could have multiple impacts on the built environment, this sector has potential for climate change mitigation. In developed countries, where the majority of the buildings are older than 50 years, more effort should be put into creating policies for renovation. In developing countries such as Kenya, where there is rapid growth in the urban environment and previous lack of energy-efficiency policies, the focus should be on developing relevant policies as well as increasing environmental awareness within the industry.

Resource Efficiency

As we move towards more sustainable buildings, resource efficiency allows the economy to deliver greater value with less input while sustainably using resources to reduce environmental impacts. From material extraction in the construction phase, through resource use during occupancy and maintenance phase, to material recovery at demolition, resource efficiency is key in the move towards a green economy and global sustainability.

It is encouraging to see developers such as Centum Real Estate and Housing Finance Group developing sustainability policies that encourage an increase in resource efficiency and the mitigation of climate change by reusing materials and narrowing energy loops. These efforts will undoubtedly reduce GHG emissions and bring on additional savings to the construction process as well as lead to longer life buildings.

Laurene Wambui Luther. MK-Africa. info@mk-africa.com

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DESIGN FOR FLOOD RESILIENCE

By Bruce Mugola

The world today is

uncontrollably unpredictable. Climate change is a reality my generation has grown up seeing as a fact of nature. It is a reality that the current and future generations will have to contend with in the years to come. It is almost impossible to imagine a future whereby we can go back to the past; when weather patterns were perfectly predictable and issues like food security and safety was a non-issue. The change is here to stay.

The human race has to adapt to change in order to imagine a future community that can not only survive but also thrive under turbulent conditions.

Resilience and adaptability are key elements that need to be imbued in the minds of the current generation. Most importantly too is the fact that these elements are vital to the people who are going to shape the future cities; the designers, architects, engineers, and policy makers. They need to ink it so to speak, in their DNA.

This article is based on a design submission I made for the AAK design competition themed 'flood resilient settlements' where I got to design a rescue pod, which is a structure that potentially adapts to changes in water levels, stores food reserves and secures the safety of its users during flood events.

THE SITUATION AT KANO PLAINS

With floods as a regular phenomenon in their lives, the residents of Kano plains have experienced floods since 'the beginning of time'. If that is so, then living in a way that doesn't anticipate this phenomenon is the oddity. Therefore, as a designer who has been practicing in the era of climate change, I was keen to develop **adaptable and sustainable design solutions** to this recurrent problem.

My journey as a problem solver in this regard was to begin with watching the tonnes of YouTube videos covering floods at Kano plains over the years. A review of victims' interviews by local media revealed the following key aspects:

> - The floods were sudden and more often than not, occurred at night.

The water levels rose from knee height up to overhead height.
Food security was a major issue. Most victims lamented having been left destitute with nothing to eat as their food reserves had been ruined by the floods. I used this information as a brief. With Ksh. 200,000 as the allocated budget, I had to come up with a solution for a figurative family unit situated right on the banks of River Nyando. I needed to design a structure that can:

1.Adapt to changes in water level.

Secure food reserves
 Secure the safety of its users.

Thus, I came up with the *rescue pod.*

The residents of Kano plains have experienced floods since 'the beginning of time'.

THE RESCUE POD – FOOD SECURITY & SAFETY

The rescue pod is designed to adapt to changes in water level – it is buoyant. *(I did a Buoyancy calculation to determine its buoyancy using the Archimedes Principle)* 1. It can carry 6 - 8 people. (Two families) - A total of 1 Tonne. *This is inclusive of its own weight.

2. It has compartments to store food - maize, millet, sorghum, rice, peanuts.

3. It has Shelving - whereby, during a flooding emergency the families can keep their vital effects such as: a torch, first aid kit, blanket, important documents, a few key utensils, matchboxes, toilet paper etc.

4. It has a water tank that collects clean rain water for drinking during shelter.

5. It can be made with locally available materials such as: papyrus, treated wood poles, plastic barrels, docking rope, 12 gauge chequered plate, screws, steel plate, steel cap, wood pallets, timber rafters, 18 gauge galvanized gutter, water tank, float switch and corrugated sheets which can be found in the local hardware stores,

5. It has a Solar panel, LED lighting and charger.

6.Local Labor skills required: welding, fabrication and wood working.

The use of sustainable techniques employed:

1. Collection and use of rain water.

- 2. Cross ventilation.
- 3. Use of local materials;
- 4. Use of solar panels to
- generate energy.

site context & Land Use

PAPON

Situation Analysis

5. Use of local labor.

Construction period

The structure would take within 2-3 days to assemble and construct using 2-3 laborers - a carpenter and metal fabricator. The construction cost was within the allocated budget. A future model could accommodate a dry toilet.

THE RESCUE POD The rescue pod is designed to adapt to changes in water level – it is buoyant.

YET ANOTHER CALL FOR SUSTAINABLE CONSTRUCTION By Ernest Nyakundi

The date is September 20th 2019. It begins like all other Fridays do. Unlike other Fridays, however, on this one history is about to be made. In an almost seamless fashion, an approximate 4 million people line up the streets of the world. The reason for this - climate change. This becomes the largest climate protest in history to date. One detail that is not to be missed is the person at the centre of the protests. It is a girl; a teenage Swedish girl to be precise. Greta Thunberg is her name. A few weeks before this date, she received an invitation to speak at The UN Climate Action Summit in New York City; for her efforts as a climate activist. In order to make it to the summit, she has sailed across The Atlantic on a zeroemissions yacht accompanied by her father and supporting crew.

Earlier in the year, a trend Greta would be proud of unfolded in Europe's political scene. The 'Greens' surged as their constituent parties made their strongest ever showing in Europe. The 'Greens' refers to a group of political parties with an ideology that aims to foster an ecologically sustainable society rooted in environmentalism, nonviolence, social justice and grassroots

democracy. The main selling point for the Greens in 2019 was combating climate change and an increased number of Europe's citizens rallied behind them. Conventional wisdom dictates that fighting change is absurd. In fact, it advises that we embrace the change and in some cases push for it. If we were to follow conventional wisdom to the letter, we would be fighting for climate change not against it. We would not be fighting to maintain similar climatic conditions. Conventional wisdom might have prevailed early on. As the climate got warmer on the heels of the industrial revolution, scientists in the 1890s were pleased and in fact welcomed climate change claiming it would usher in equable and better climatic conditions especially with regards to the colder regions of the earth.

The built environment is a major contributor to the adverse climate changes we are witnessing.

It is only later on that they began to realize that changes in climatic conditions had adverse effects on the ecosystem. Even presently, in the face of all scientific findings, we still have climate change deniers in our midst. A notable one is former US President Donald Trump. The climate change deniers refute claims that the change is adverse. They counter claims that there is something humanity can do about it. They even go ahead to contradict findings that the global climate is indeed warming.

Contrary to what climate change deniers claim, the global climate is indeed changing and the changes we are witnessing are adverse. Here is a simple breakdown. The earth is warming since more heat is getting trapped in our atmosphere. The heat is getting trapped in our atmosphere due to the effect of greenhouse gases. The largest contributor to greenhouse gas emissions is human activities. The built environment is a direct contributor of more than 30 percent of all the greenhouse gas emissions. That's right. The built environment is a major contributor to the adverse climate changes we are witnessing.

A warming earth is causing polar ice to melt. This threatens to wipe out the entire polar ecosystem. As the polar ice melts, the sea levels are increasing. Unchecked, this is bound to effectively displace millions of people in the near future. Other effects of the warmer earth are unpredictable weather patterns which are affecting agriculture hence our food security, severe catastrophes such as stronger tsunamis, frequent floods, rampant wildfires such as those witnessed in Australia and the Amazon rainforest, prolonged droughts, among others. The list of adverse effects is endless

So, how can we, professionals in the built environment, reduce our sector's contributions to the global greenhouse gas emissions? The answers to this question have already been presented in numerous articles before this. In fact, most, if not all of us, know what we are supposed to do; having been taught sustainable construction practices as part of our academic programmes. Nonetheless, there being no harm in a gentle reminder, I will restate some of the solutions. There are three main stages in a building's life cycle; design, construction and maintenance. Incorporating sustainable practices in all these stages is crucial if we are to achieve lower greenhouse gas emissions. However, for this article, I would like to focus on the design stage.

I am under the impression that should sustainability be incorporated in design, it will be adopted in all the other subsequent stages. So, what can the design team do during the design stage to achieve sustainable buildings?

In the design stage, a climate-conscious architect will come up with a design that is

inherently 'green'. This type of design should lead to a building that consumes as little energy as possible and more preferably, one that utilizes green energy such as solar and wind. The climate-conscious quantity surveyor (QS) on the other hand will preferably do a lifecycle costing of the proposed development instead of the normal Bills of Quantities.

Why lifecycle costing? Because green buildings tend to be approximately 7% more expensive than their non-green peers yet most of the initial costs required to develop them are offset by lower operational costs. Therefore, a climateconscious QS will go beyond the Bills of Quantities and in his arsenal for the developer have a lifecycle costing of the proposed development.

Other measures that can be taken in the design stage to improve sustainability include energy auditing the designs, incorporating grey water recycling techniques in the designs, making the internal building climate comfortable without the use of air conditioning systems and maximizing penetration of natural light.

These are just some of the measures that can be adopted in the design stage of construction projects. By mindfully adopting any of them, you are in a small way, contributing to a greener planet. A greener planet is a better home for all of us and is without doubt the best inheritance we can confer upon future generations. Sustainable construction is the trend to adopt. Let's all build green!

AUTHOR BIO

Ernest Nyakundi is the Managing Director of Grey Arc Limited, a construction company based in Nairobi. He has a Bachelor's Degree in Quantity Surveying from The University of Nairobi. He is a member of the AAK Quantity Surveyors Chapter.

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876	F. KAIRU BACHIA
889	GITOHO JAMES
931	MUSYOKI NORBERT
941	MEHTA HITESH
950	KUNGU PHILIP
1014	
1040	MUNGAI FRANCIS
1009	KIBINDA PETER
1190	
1274	
1274	
1772	
1445	
1472	
1515	
1563	KARURI LEF
1758	MUNYANYA MOHAMMED
1759	MULYUNGI GIDEON
1890	OUNDO STEVEN

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2601	ODINGA RAILA

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1078	WOODS SIMON
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1106	KITHIKA JOHN
1137	GACHERU CHARLES
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1176	KIBWAGE JULIUS
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1221	KABIRU MATIAS
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1228	OCHIENG` CRISPINO
1230	M`GITHAE BEDAN
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1630	ONYANGO MARTIN
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1653	VIRDEE AMERJEET
1669	MACHARIA JOHN
1689	OBIRI JARED
1694	OKELLO OLIVER
1695	MAINGI PETER
1701	ADEDE GEORGE
1703	JACK ALLAN MUSAU
1707	OBURA DEREK
1721	ABONYO ERASTUS
1728	OYARO EDWIN
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1765	MUGO EDWARD
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1927	MWANGI GEORGE
1930	OGETO CHARLES
1931	ACHARYA THIYAGARAJAN
1937	MUNENE GEORGE
1939	KIRATHE EDWARD
1950	OINO EVANS JUMA
1970	WARIITHI PAUL
1981	HASHIM NADI OMAR
1984	GICHUKI GEOFFREY
1986	OWENDE MAURICE

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2010	MILIKAU EMMANUEL
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2015	MANDUKU DANIEL
2077	MULI PIUS
2078	KAGIRI GEORGE
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2123	MWANGI SAMUEL
2132	ADEYA ARTHUR
2135	ODULA TERESIA
2136	OGWAPIT STEPHEN
2137	WACHIRA PETER
2141	GITHUTHU (MS) RITA
2146	RAI JAMES
2153	MUGURE NJENDU
2154	WASILWA PETER
2156	MOTANYA DOMINIC
2164	SUERO MAXWELL
2173	VINCENT MICHAEL OCHIENG
2175	NG`ENY STANLEY
2181	NJUGUNA ANTHONY
2182	GREMLEY ANDREW
2191	KEDOGO JOSEPH
2193	MUTUA JACKSON
2194	PATEL SUJESH
2202	ABDULNASSIR MOHAMMED
2254	NDUNGU KENNETH KIMATHI
2255	DR ARCH MUGWIMA BERNARD
2301	WAWERU ROSE
2306	MUTAKAA JOHN
2307	TOROITICH CALEB

ARCHITECTS CHAPTER CORPORATE

M. No	Name
2312	NYAGAH ALEX
2319	OYUGI OTIENO
2320	NAMULANDA D.M.
2321	KIAI SAMUEL
2329	RAJNOVIC PREDRAG
2333	MACHARIA WILSON
2337	MWANGI BENSON
2338	KARIITHI JOHN
2342	NYAMATO STEPHEN
2344	GITHENDU JAMES
2372	BISHER FAWAZ
2374	WAMBETE SOITA
2382	MAITHYA MUSUNGA
2385	KEEGA JOSEPH
2386	GATAI HENRY
2388	NAMULANDA GYAVIRA
2390	MBOGO DAVID
2393	KAGIINA JOSEPH
2407	KYENGO MARTIN
2409	SINGH JASPAL
2410	RALWALA ANTHONY
2411	MWAURA NELSON
2415	CHARFARE ASIF AHMED
2421	MUSUVA MUMO
2423	MATHENGE JONATHAN
2429	GACHANJA JOSEPH
2435	WEKESA DOUGLAS
2438	MECCA PEPELA
2445	LATI FELIX
2446	ONGUTO OSCAR
2451	NYONGESA ANDREW
2463	PATEL KUNAL
2468	
2500	
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2012	
2010	
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2529	
2534	NJENGA DAVID

M. No	Name
2536	GITAU HENRY
2537	WAHINYA CECILIA
2543	MANGURO ROBINSON
2546	NYAGA DAVID
2548	GITHATU FRANCIS
2581	MBURATHI STEPHEN
2585	BABU SUNDAY
2587	KIGAI EDWIN
2588	MACHARIA ANTHONY
2590	GITHINJI STEPHEN
2591	MWANGI EUTYCHUS
2593	MUNGAU KATHERINE
2595	KIGADA ERIC
2597	OMENYA (Dr.) ALFRED
2599	MATOLE DAVID
2614	SONGORO DAVID
2615	KIBOWEN KATHY
2616	KIBAARA ISAAC
2635	MWILU STEPHEN
2644	ABDI ADNAN
2647	KARAMA YASIR BREK
2653	NDULU MWALYO
2654	SANCHEZ URKO
2655	ALI L.I. LAILA
2656	WAFULA ALBERT
2658	ONYANGO NICHOLAS
2662	KUMO WILLIAM
2669	MABONGA DAVID
2679	KAMAU ISAAC
2681	GIKERA IRENE
2683	NJAGAH MICHAEL
2686	NDICHU NINA SYOMITI
2691	KAHUTHU CHARLES
2714	KIMANGA SAMUEL
2715	SINGH MAYANK MAYANK
2716	KIBISU LINUS
2726	GITAHI MARK
2727	MAREIRA FESTUS
2736	KINYUA EVANS
2737	KARUGA VICTORIA
2738	MRUTTU OTTO
2747	BHOYYO BRENDA
2748	OBALA PASCAL
2749	KABUTU JOSEPH
2750	KAMWERU GEORGE
2751	OPIYO GAD

M. No	Name
2773	MUNGA MOSES
2774	NYACHWAYA WYCLIFF
2778	SULEIMAN IMRAN W
2779	MWANGI MICHAEL
2786	KYALO STANLEY
2806	MWATU ONESMUS
2807	KARIUKI STEPHEN
2811	NJERU JOHN
2819	KIBE GIBSON
2820	ISMAIL ABDI
2823	ODINYO ALISO
2824	WETUNGU CALEB
2825	NGUNGUI JERUSHA
2826	ACHANDO JOHNSTONE
2832	KINUTHIA HELLEN
2843	MURIITHI JAMES
2847	GATOME MARYCLARE
2865	THETHY JATINDER
2869	NJOROGE JOEL
2875	TOROITICH KIBET
2876	SIKHILA HAM
2891	KARANJA DENNIS
2895	MAINA PHILIP
2897	WAMBUA PIUS
2904	KEBENEI JUDY
2905	KABERE JULIET
2907	
2934	OKELLO NOEL
2974	
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3004	
3098	
3102	NDEGE LUKE
3110	OGONJE ALLAN
3119	ALOYO PAUL
3122	JUMA JACINTA
3125	SUTHAR RITESH
3126	KETOYO LENAH
3132	MBAKA NICK
3137	MWANGI ARTHUR

ARCHITECTS CHAPTER CORPORATE

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M. No	Name
3138	KILONZO ANDREW
3147	GITHINJI MBURU EDWARD
3149	WERE EUGENE
3158	SEMBHI TARVINDER
3188	KAMAU THIMBI
3195	NDUNGO JOSPHAT
3202	ISOE DENNIS
3210	MWANGI MONICA
3211	MAINA ELIAS
3213	MAKAGUTU NOEL
3221	KISIENYA KELVIN
3222	MOORES PAUL
3223	SYENGO KEVIN
3228	SAMOKA KENNEDY
3232	ESSENDI SYLVIA
3262	MAINA RUTH
3263	NYAKANG'U TUESDAY
3264	NAMWAKIRA AMY
3265	MALECHE DAVID
3270	MUNYOKI JEREMIAH
3275	KIPNGETICH NICHOLAS
3281	GITHIRI GEOFFREY
3282	MUIRURI ISAAC
3283	WAHOME CHRIS
3287	FRANCIS PATRICK
3288	NJAGI RAEL
3289	MILGO NANCY
3291	OKUTA HEMORIKE
3295	MOGENDI SURE
3300	ONGUKA LINDA
3301	KAMAU KENNETH
3304	LAGAT DAVID
3307	MUNENE LEE
3316	NYANGE WILSON
3336	HOFF JOANNA
3397	MANGO ALFRED
3398	MUTUA U.M. URBANOS
3415	MUDOME TIMOTHY
3430	MUNALA (DR) GERRYSHOM
3431	MUJIVANE MARK
3432	WARUTERE ERIC
3433	NJOROGE MARTIN
3434	GITOHO BENJAMIN
3438	NASILA MASINDE
3439	MUSYIMI MARYLYN
3444	NYOLE FLORENCE

M. No	Name
3445	KAIRU JACQUELINE
3446	KUBAI MARTIN MURIMI
3448	OLUGA PRISCILLA
3450	NDUNGU SIMON K.
3458	OBUTU IVAN MAGORI
3459	MWAZIGHE JOHN
3492	NJAMBI GABRIEL
3506	KAMUYU ANGELA
3511	GITONGA LEWIS
3530	SEMWOGERERE KENNETH
3608	WAINAINA KEVIN
3609	FAITH MASIBILI
3624	DEOGUN IQBAL
3629	EBOYI JOAN
3655	MUTHUMBI KEVIN
3676	KARIUKI WAGAIYU
3677	NZIOKA EVANS
3680	GITHAIGA DENNIS
3684	PANESAR GURMUKH
3692	OPWONDI PETER
3693	WARUHIU NICHOLAS
3732	ESMAIL FIZAA
3748	KIMANI MOSES
3837	WAKHUNGU JOSECK
3851	TURYAHABWE RICHARD
3872	MANANI KEPHER
3873	LUTTA STEPHEN
3895	KANJA DAVID
3897	LIKU ASHLEY
3905	FELIX L.O KAWUONDI
3930	SIDNEY E. NDALILA
3931	THOMAS O. ONWONG`A
3934	NEWTON KORIR
3940	DENNIS M. MOYO
3941	ESTHER W. MUIRURI
3959	GODFREY W. MWAURA
3969	MASEGHE MARTIN TAIRO
3971	CYPRIAN CHOGE
3973	WYCLIFFE WABURIRI
3984	ANVI SHAH
4013	PARIMALA SAXENA
4024	ANTJE CLAUDIA ECKOLDT
4100	NDEDA SAMUEL
4122	EDWIN MUCHUGIA
4129	NGUMBAU VICTOR
4133	FIONA KAITESI

M. No	Name
4135	CHARLES NJUGUNA
4163	KRISHNA DEEPAK
4167	KAMANJA JEREMIAH
4187	JESSE KARANGA KIMANI
4239	JOEL LAWSON MAINA
4246	CALEB MONG`ARE NYAKOIRO
4293	NICHOLAS OTIENO OWUOR
4316	EMMANUEL GITAU NYORO
4341	CHARLES MUSYOKA AKAYI
4343	BRIAN BABU KARIUKI
4400	DONALD MUHONDA ANDOLO
4453	NAMAGULU CHRISTINE
4603	REUBEN CHERUIYOT RUTTO
4718	DANIEL WAIRAGU THENYA
4755	NJERI JAMES MWANGI
4788	OKEMWA NYAKWEBA MOSES
4933	ODUOR HUMPHREY HASUWO
4941	MAHINDA VICTOR MURIITHI
4951	MATOVU JOHN RICHARD
5004	GATHIRU PETER MWAI
5007	CHRISTIAN BENIMANA
5053	DAVID NGUGI
5062	MICHAEL ODINDO
5071	CHRISTOPHER KIMUTAI TARUS
5117	DAVID MWANGI WAITITU

ARCHITECTS CHAPTER LICENCIATE

M. No	Name
2129	NGUNJIRI SIMON
2166	DEYA ELLY
2184	KAMAU N JOSEPH
2188	KIPKOROS SILAS
2228	BARASA IDRIS
2322	TSENGA DENNIS
2340	VICTOR OKELLO RACHUONYO
2343	MABIA GODFREY
2375	SHISIA WILLIAM
2392	MBURU GIBSON
2399	ABINCHA ANDISON
2401	NJAGI DAVID
2464	NGIGI LILIAN
2637	PAUL ODHIAMBO OKICH
2638	KANG'ETHE BERNARD

ARCHITECTS CHAPTER LICENCIATE

M. No	Name
2650	SIOCHA SAMUEL
2652	MOHAMMED ALI
2687	KAMUNGE MICHAEL
2688	KUOGOH GORDON
2721	LIMO LEONARD
2813	MUCHUNU ALLAN
2814	WANJIKU DENNIS
2821	MWAURA JOHN
2909	KARANJA MWANGI STEPHEN
3054	WATAKO VINCENT
3095	OTIENO PATRICK
3170	OGORA BEATRICE
3203	MWANGO WALLEX
3233	KARIMI ANTHONY
3259	MAJIMBO RICHARD
3363	MURIANTHI NEBERT
3372	OMUNJALU STEVEN
3672	AWITI CLIFFORD
3852	OMOM TOBIAS
3877	GERALD MAINA
4049	MWIWAWI ALLEN
4092	ONGONG`A COSAM
4196	HELLEN MOSSE
4245	RIOBA EVANS AERA
4256	MUREITHI JOSEPH GITAU
4381	NYAGA DENNIS MWENDA
4555	JASSAN NDEGWA NJANI
4646	KENNETH WAYNE MUTUMA
4794	KARIUKI MARK ANTHONY
4800	KARANJA DAVID KAMAU
4841	ODHIAMBO VINCENT
4970	OTIENO DAVID OCHIENG
5031	OTIENO DUNCAN
5041	JOHN OTIENO OPIYO
5111	HENRY CHEGE NJAMI
5150	PATRICK MUGENDI MUGO

ARCHITECTS CHAPTER GRADUATE

M. No	Name
1817	KIARAHO DAVID
1857	EKAJUL ANTHONY
1970	WARIITHI PAUL
2125	KILILO THOMAS
2143	KAGWI SIMON

M. No	Name
2310	MALONZA JOSPHINE
2436	AKALI GEORGE
2506	MAKHULO SUSAN
2523	
2549	
2584	AKUMA AUGUSTUS
2670	OYUGA JOEL
2674	IRERI PATRICK
2682	OPIATA CHRISPIN
2697	MATHARU AMRITPAL
2717	MEDIRATTA KAVIT
2845	MATHU WAMBAA
2846	GACHUHI EZBON
2854	TALAAM JULIUS
2856	NDUNGU VIRGINIA
2858	NGUNYI SIMON
2866	MWANGI ALLAN
2871	MOSHEH JAFFAR
2874	HIUHU EDWARD
2900	ARAKA SUSAN
2902	MAONCHA LABAN
2903	MUHANDI GEORGE
2912	GICHUYIA LINDA
3139	MUSANGI HENRY
3140	TOO KEFA
3153	LATESTE MARIANE
3159	DIANG'A CLAIR
3160	KIMURA JOHN
3165	KIMANI GABRIEL
3167	MAKAU MWAKI
3180	MUNYAO VERON ICA
3183	KORIR MARK
3201	KAGO JACKSON
3212	IRINA RICHARD
3229	MASIKA JOSEPH
3248	OKELLO PHILIP
3250	KAMUNYU ALEXANDER
3260	MANDUKU CHARLES
3261	OYUGI COLLINS
3267	
3271	
3272	NGUMBAU GIDEON
3298	NGATIA EDWARD
3303	MUGAMBI JACKSON
3308	MAIMBA MICHAEL
3318	MAVIA EVANS

M. No	Name
3325	OPIL ANTHONY
3330	SEGECHA BERNARD
3343	HUSEIN ABDILATIF
3346	OUMA ROBERTS HOPE
3347	STEPHEN JOSEPH
3348	MOSOIN KENNEDY
3365	GITHINJI FRANCIS
3369	VAN DER EERDEN JOHANNES
3376	WANJALA REINIER KHAMALA
3378	CHAVULIMU ERICK
3383	JAHANGIR IQBAL CHAUDHARY
3384	KARIUKI DUNCAN
3404	MWANGI BILLY
3405	MASABA SYLVIA
3418	KUBAI KOIGI
3422	KAMAU GERALD
3436	GICHURU VICTOR
3443	BUSIENEI JESE
3447	NJUGUNA ALEXANDER
3451	GITHINJI KEVIN
3455	KANINI EMMANUEL
3456	NZUKI SOLOMON
3460	NDUHIU EMMA
3461	RONOH CLAIRE
3473	MTAMU JOSEPH
3480	KARIUKI BEATRICE
3486	WET JOHANN
3495	MUGO SUSAN
3531	KIHU MWAI
3532	LANGAT EZRA
3533	KANTARIA RAKHEE
3538	NDALO ROBERT
3539	SHIKUKU JAMES
3605	ASATI JOSHUA
3607	RONO CALEB
3610	MUHANJI JAMES
3631	OMBATI ANTONIO
3657	OYARO JAMES
3669	
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3698	
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3755	OKETCH MIRIAM

ARCHITECTS	CHAPTER
GRADUATE	

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M. No	Name
3779	MANDA KELVIN KAKAIRE
3789	AYIEKHA GEORGE
3832	LEONARD KOILEGE
3834	PATEL GUARAV
3838	MWANGI STEPHEN
3850	JUMAAN SWABRI
3855	KARIGUH JOSHUA
3898	VIRDI GUNDIP
3899	QIAN FEI
3901	KAMAU JANET
3925	OUMAH OMIENO
3927	ALLAN K. C KANYIHA
3938	PETER A. M. KABURU
3946	KILOO TIMOTHY
3950	CHARLES M. GHATI
3951	GEORGE K. IRUNGU
3952	NJENGA M. MARI
3956	LOUIS O. MUSA
3957	PHILLIP J. ODUK
3963	NJERI MWANGI
3977	JOHN O. ADODA
3982	JOEL ODHIAMBO
3985	MUMBI MAINA
3987	DENNIS MATARA
3993	CHARLES CHWIRI
3998	KILBURN HARRIS
4007	ETTA MADETE
4014	DEEPAK KRISHNA
4026	JOYCE OSODO
4027	EUGENE MBUTHIA
4028	JAMES KAYWA
4034	DAVID CHEMIAT
4039	CALVIN JUSTUS
4044	MICHAEL MBURU
4046	JOSEPH MUGO
4047	IRENE MUSYOKA
4104	JOSEPH WANZATO
4107	ABIMELECH MARONGA
4108	COLLINS AKETCHE
4109	GIKURU IVAN MACHANULE
4110	STELLA AGEYA
4113	GITHAIGA GICHORA
4118	JEDIDA KEMUNTO MAGARE
4120	NJERU EVANS
4123	JOSEPH MUTUA
4131	JOSIAH KIRUMA
4137	IVY WANJIRU WAIYA

M. No	Name
4139	MPURIA MARTIN KIOGORA
4140	ALEX WAIGURU
4141	SAMUEL OKWEMBA
4168	NYAGWOKA FRANK
4173	BASWETI VICTOR NYAMWEYA
4175	KAMAU WANGARI NAOMI
4177	PIGOTT SHAWREN
4185	MUKAMI WANJIKU NJERU
4201	LEONARD BETT
4207	HAFSWA ALI
4247	CATHERINE MUTHONI KIBARU
4251	MUTHOKA ANGELINE MWENDE
4252	KAMAU SYLVIA WANGECI
4258	CONSOLATA MUENI MUTUA
4259	FRANCIS NGOTHO MAINA
4261	ISABEL MUTHONI NJOROGE
4263	EMMANUEL KAMAU GITAU
4265	RICHARD SIMBA NYAMWEGA
4266	MAITHA JANUARIES NGUMBAU
4303	MARWA LEONARD RIOBA
4304	ISABEL MUGURE MBUGUA
4306	JOHANNES JACOBUS MARIA
4314	OLIVER STEVEN ODUOR
4315	ERICK MONG'ARE
4322	MEREMIYA HUSSEIN
4337	HEMPSTONE NYAWANDA OKEYA
4342	ROSEMARY WAMBUI KIMATA
4358	CYRUS MURAGE MUNYI
4360	WILLIAM KATHIANI THURANIRA
4362	BRENDAH GATWIRI GITONGA
4363	ERIC KISANG
4364	IAN NDUNGU NJUGUNA
4368	
4369	WENDY WARIGIA WANDUNGU
4370	MALECHE DANIEL LUNALO
4373	
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4300	
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4391	
4393	DAVID NGANGA NGURE
4397	
4449	HATEM ELTAHER
4450	RFHAB FI NAGGAR

M. No	Name
4470	PAUL KARIUKI GATHITU
4471	MURTAZA KHUZEMA AKBERALI
4473	MATTHEW KILONZI WAMBUA
4474	JOHN DICKSON MWANGI MBATIA
4475	VICTOR NYAKUNDI
4476	MARGARET MACHARIA KEDOGO
4517	TITUS MUTETI MATHUVA
4522	CHRISTINE KAWIRA NKURU
4523	BALQISA ALI OMAR
4526	JEREMIAH OMWOYO OBAIGWA
4529	EDWARD ACHACHI WANDERA
4537	MAKARIOS KAMAU GATIMU
4539	JACKSON MAGHANGA GITHAKA
4540	BEN BALOZY ODERA
4543	LOLO HIRBO BULLE
4547	ACHOCHI ERIC NYABUTO
4550	DOLPHINE KERUBO OMBUI
4553	SWABRA KASSIM MWAMKWARI
4574	IAN INGUNYI MUTALI
4575	SHARON WANJIRU
4581	KENALOIS MURAKARU KINYUA
4604	JOYCE APONDI OCHOLA
4607	TIMOTHY JOSHUA MUSUNGU
4608	ARTHUR OTUKA MAGERO
4610	CHRIS KARANJA MACHARIA
4618	AMANI ALI BWIKA
4620	SAMUEL MUSYOKI MUTIE
4627	PHILIP MUIRURI MWANGI
4636	MARY WANGUI MUNGA
4637	PHIDELIS AWOUR OBUYA
4645	JANET MORAA ONSUMU
4663	VICTOR KIM KIPTUM
4666	DENNIS MANDELA MUSYOKA
4676	ADAMSON MAINGI KYALO
4677	PATRICK MURIRA BACIO
4678	HASTINGS WILFRED ONYANGO
4691	
4695	NJERI MUTERO
4698	
4700	
4704	
4706	
4707	
4708	
4710	
4/11	COLLINS MOSE ORINO
4/12	JAGJIT SINGH KHOKHAR
4/15	EMMANUEL MAWERO RUNYENJE

ARCHITECTS CHAPTER GRADUATE

	OATE
M. No	Name
4716	ALEX ONYIEGO ONYANCHA
4726	STEPHEN JOHN BEKHOR
4729	RUTH JEPKOECH LELEI
4731	KELVIN SALASYA WAKHULE
4741	BECKY ONYANCHA
4771	YUSSUF HASSAN ABDI
4782	MWANGI SAMUEL MURIMI
4792	KASEMBELI DAN KUKUBO
4795	MURIITHI KENNETH MARK
4796	MUSAU SARAH MWENDE
4797	KYALO ADAMSON MAINGI
4799	CHESANG BRIGID JEMUTAI
4802	MUKINDA JIM D. GITONGA
4803	JAMES NGUMA KIMANZI
4813	MWIRIGI MARTIN GATOBU
4823	MBUTHIA RITA NUNGARI
4824	KINGI JOSEPH WAZIRI
4827	MWANGI PAUL MUNGAI
4831	HAZARY NIC
4832	KIMWELE VIOLET
4833	OKOTH CHARITY ACHIENG'
4834	MUGO ADVIN MUNENE
4840	
4845	
4849	
4852	
4000	
4004	
4867	
4875	
4876	
4879	SCHRIJEN PAUL HUBERT
4894	MULI KIMEU
4901	MWAMBURI LEONARD NGWAI
4902	LARRAZABAL CAROLINA
4907	NGENO NOAH CHERUIYOT
4908	KIMARU ALEXANDER GATHIRU
4909	MUTISO MICHAEL MASESI
4910	MURIUKI CHRISTOPHER NGARE
4931	ABDILLAHI ZAHRA
4932	ODONGO PAUL OPONDO
4934	ROUND-TURNER LINDSEY
4935	MUTAI GILBERT
4936	NDHULI NGUMA SAMUEL
4937	KABURU TONY MUTWIRI
4938	MAKORI EVANS MASESE

No	Name
4942	GATHERU ERIC MWAURA
4943	NGIELA DENIS
4944	LANGAT IAN KIPRONO
4945	ESSAJEE ASYA
4950	WEKESA GEORGE SIMIYU
4957	ABDULSHEIKH ABDULLAH
4959	MBURU NELSON GATABAKI
4950	KIRONGON BEATRICE JEPKEMBOI
4961	CHEPKIYENG BRIAN KIPROTICH
4966	NGATU NTONGAI JACOB
4967	AROGO EMMACULATE AKINYI
4968	KAMAU PETER WAMBU
4971	DIO BRIAN MDZOMBA
4976	OGADA ALICE AWUOR
4981	ONDARA VINCENT ABUYA
4982	KIBUE JUDITH WANJIKU
4989	RANGANGA FELIX
4997	MISOI ANDREW KIPNGETICH TOO
4998	OTURI ROSE AMONDI
4999	NJERU GEORGE RAINGWA
5006	NGUNU CATHERINE WANGECHI
5008	MIKE KARANI NDEKE
5009	JOSHUA OWINO
5011	CHRISTOPHER MAVUTI MUEMA
5034	NZAMSA TONNY MALUKI
5043	BOSCO MUMO KYULE
5045	MOTURI OMBOGA AMOS
5055	RAHMA ALI WARIO
5064	DANIEL RONO
5066	VICTOR ALOO NYIKAL
5069	CALEB KIMUTAI SAWE
5070	STEPHANIE MAINA
5072	NYANGWESO JOSEPHAT
5075	IAN MUTULI KHAYONGO
5078	
5102	
5103	
5104	
5105	
5110	
5112	
5113	
5121	SHARON MURUGI NJIRU
5122	KEVIN MURIMI GACHOKI
5124	MUHAMED FAARAH IBRAHIM
5125	ROY GITHAIGA MAINA
5134	JAMES KAGIRI
5135	

MEMBERS IN GOOD STANDING

M. No	Name
5137	SOLOMON KIPKOSGEI SIRON
5138	OWINO BILLY
5140	ALEX MIRITI MBAE
5141	STEVEN NDUBI
5144	ERIC MUTUMA KUNGANIA
5147	PAUL APIYO ODIERO
5148	NAWAL ABDALLA MOHAMED
5149	DAVID KATHURIMA GITONGA
5151	BRIAN AMKE ODEO
5158	ALBERT KIPLETING RUTO
5159	ΤΟΜ ΜΒΟΥΑ
5160	TOM ONGOLO
5161	MARTIN KINYUA WAMAI
5162	SHARON CHERONO NYAMBATI
5163	BENSON KIMATA KIARIE
5170	ADELINE MMBONE
5171	FRANCIS MUSOMBA NZELU
5172	SAMUEL GATONYE MWAURA
5173	AGNES WANGUI MAINA
5174	BRIAN ONYANGO DUDI
5175	CLIFFORD LWAMBE
5176	LINDA KARIMI
5177	RUTH MWENDE MALU
5178	TRACY MANGARE
5179	CHARLES OTIENO ALOO
5180	NELSON NDEGWA MUGO
5181	DESMOND DAIKI KONDO
5182	AZIZ AMIRALI MOHAMEDALI
5183	DANIEL BALONGO ASONGA
5190	LEAH NJERI MUREITHI
5191	WYCLIFFE MOKONG'U ONSONGO
5192	STEPHEN K. NJUGUNA
5193	LESTER LUSEKA KANALI
5194	GEORGINA KINUTHIA
5195	BERNICE MUCHIRI
5196	WALLACE NJIIRI
5197	DISMAS KIMUTAI KIRONGO
5198	CLIVE MICAH MULUNDIRA
5199	MUNTAHA ABUBKAR ZUBEDI
5200	NJIRU PATRICK NJAGI
5201	
5209	
5212	
5213	
5214	
5216	ZACHARIAH NJUGUNA NDIKANGU
5218	ANTHONY MUREITHI CHEGE
5219	RUA (JACHERI MBERIA

ARCHITECTS CHAPTER GRADUATE

M. No	Name
5222	DONALD KIPLANGAT
5226	DAINA MURUGI NJAGI
5227	EDGAR LUKALIA MUSETI
5228	BRIAN MWAMBI GATUMA
5229	KEVIN GITARI GACHERU
5230	JOAN NALIANYA
5231	JOHN MUNIALO BAYAYI
5232	LULUA JUJAR LOKHANDWALA
5234	WAMBUA SARAH MWENDE
5235	MUANGE SYLVESTER MASIKA
5236	OBED KIMATHI KAMWILU
5237	CYRUS WAHOME MUREITHI
5238	JOHN KAEKE MUTUKU
5239	ANDANJE OKUTHE KHALFIN
5241	ROBINA NANJALA NDOMBI
5243	GERVASE NDUNGU MACHUGU
5244	JAMES KEVIN MUIRURI NJAU
5245	CAROLYNE BOR
5246	LINDA MURIUKI
5249	TEDDY WAMWANA TIMOTHY
5250	MARTIN KARANJA WARUI
5251	SYLVIA WANGU RUIRII
5252	AMBROSE EBENYO MAIYO
5253	MACHARIA MBUGUA
5254	JESSE OWALA

ARCHITECTS CHAPTER TECHNICIAN

М.	Name
No	
2914	CHHANIYARA BHARAT
3402	MULWA ERIC
3854	SAID FAIZ
4017	JEFF MUNYI
4050	PAUL NYONGESA
4226	PETER MUIRURI
4524	ANTONY KARIUKI KARANJA
4660	LUCAS ODHIAMBO ONGAWO
4724	JERIM ELLY LIYAYI
4732	SHETTY PRAMOD SANJEEVA
4816	MAINA SYLVIA JEMIMAH NJERI
4817	KAMAU PETER RUKUNGU
4839	DANIEL MAJIWA
4847	WANJIKU GEORGE M.
4872	AUKA VITALIS AWUOR
4898	MURAGE DENNIS MUGAMBI
4899	MTUI WYCLIFFE SHADRACK

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M. No	Name
4927	KAGECHU JAMES GICHUHI
5052	GEORGE MAITHO MURIUKI
5084	GEOFFREY MUGI MAINA
5118	KEVIN MACHIRA KIRIGWI
5119	AUGUSTINE ALOO
5139	JAMES GITAU
5167	PATRICK MURIITHI MACHARIA
5188	KIPNGETICH SIGEI KENNETH
5240	GERALD WAMBIU

ARCHITECTS CHAPTER FIRM

M. No	Name
F0001	TECTONICS INTERNATIONAL
F00007	DMJ ARCHITECTS
F00008	SYMBION KLTD.
F00017	TRIAD ARCHITECTS
F00019	SK ARCHPLANS
F00020	APT DESIGN SOLUTIONS
F00022	TEJ ARCHITECTS
F00026	TECTURA INTERNATIONAL LTD
F00032	AIA ARCHITECTS LIMITED
F00050	LINS CONSULT
F00053	OTTO MRUTTU & PARTNERS
F00054	SCOPE DESIGN SYSTEMS LIMITED
F00057	U-DESIGN ARCHITECTS
F00059	BOWMAN ASSOCIATES
F00061	JAWKIM CONSULTING ARCHITECTS
F00062	MAESTRO ARCHITECTS LTD
F00069	LEXICON PLUS ION LIMITED
F00075	ULTIMATE DESIGN LTD
F00085	AAKI CONSULTANTS
F00087	TECTA CONSULTANTS
F00089	STUDIO INFINITY LLP
F00091	SKETCH STUDIO
F00092	PETER THOMAS ASSOCIATES LTD
F00093	DOMUS ARCHITECTS
F00108	K & M ARCHPLANS
F00118	MUTISO MENEZES INTERNATIONAL
F00120	MRUTTU SALMANN & ASSOCIATES
F00126	DESIGNWORTH ARCHITECTS LTD
F00128	INTER ARCHITECTS
F00130	DIMENSIONS ARCHITECTS
F00132	ACHERA & PARTNERS ARCHITECTS
F00134	BLINK STUDIO LIMITED
F00136	BASELINE ARCHITECTSS LTD
F00140	TARAKIBU ARCHITECTS LIMITED

MEMBERS IN GOOD STANDING

M. No	Name
F00141	GIBB ARCHITECTS
F00142	SYCUM SOLUTIONS CO. LTD
F00146	JOFROK BUILDING CONSULTANTS
F00150	HERITAGE ASSOCIATES LTD
F00152	WHINTTO ARCHITECTS (K) LTD
F00154	ARCHSCAN ASSOCIATES LIMITED
F00165	GITUTHO ARCHITECTS&PLANNERS
F00166	BEGLIN WOODS ARCHITECTS LTD
F00171	SYMBION MOMBASA LTD.
F00177	DESIGN SOURCE LIMITED
F00179	LOCUS STUDIO LTD
F00180	TEAM 2 ARCHITECTS
F00181	BOOGERTMAN AND PARTNERS
F00185	PHAROS ARCHITECTS K LTD
F00191	MASTA D-SIGNS LTD
F00198	TD ARCHITECTS LIMITED
F00199	GRASP DESIGN LIMITED
F00201	BOMANI CONSULTANTS

QUANTITY SURVEYORS CHAPTER CORPORATE

Name
FENWICK HAROLD
LEVITAN ANTONY
NGUGI BERNARD
MALACHI ABSALOM OORO
MBAYA JOHN
GAKUYA HARRY
OTUKE JOSEPH
GITHUO GEORGE
JULIUS M. O OLUOCH
GICHUNGE HEZEKIAH
KIHARA CHRISTOPHER
GACHAGUA FREDRICK
HAJEE BASHIR
MUAMBI HARRISON
NAYAR KISHORE
KAMAU MOSES
MWAURA CHARLES
LEAH WANGARI THUMBI
NYAMBANE JAMES
MASU SYLVESTER
JABBAL SUTINDER
GRANTHAM DAVID
KINYANJUI WILLIAM

QUANTITY SURVEYORS CHAPTER CORPORATE

М.

Name

M. No	Name
488	MBAYA JOHN
490	GAKUYA HARRY
550	OTUKE JOSEPH
572	GITHUO GEORGE
604	JULIUS M. O OLUOCH
605	GICHUNGE HEZEKIAH
610	KIHARA CHRISTOPHER
619	GACHAGUA FREDRICK
626	HAJEE BASHIR
677	MUAMBI HARRISON
687	NAYAR KISHORE
700	KAMAU MOSES
721	MWAURA CHARLES
723	LEAH WANGARI THUMBI
725	NYAMBANE JAMES
726	MASU SYLVESTER
730	JABBAL SUTINDER
734	GRANTHAM DAVID
738	KINYANJUI WILLIAM
763	NGUGI PAUL
764	OGAMA MATHIAS
767	MWANGI GABRIEL
768	MUGAKI PETER
770	MAUNGU NEWTON
771	KOIGI GEOFFREY
782	OBAE SAMSON
785	NG`ANG`A JOSEPH
789	KARIGUH ROBINSON
802	BUNEI ROBERT
836	MUTISYA PATRICK
854	OKEROSI JOHN
859	MANDHRY ALI
864	MALALA REBMAN
866	MUSYIMI JOHN
898	WAIREGI WILFRED
1017	NDERITU CHRISTOPHER
1024	NGUYO DAVID
1055	MWANGANGI JULIUS
1092	WANYAGI JULIUS
1099	NDUNGU PETER
1100	KITHINJI BOORE
1125	MWANGI CHARLES
1157	ODHIAMBO EMMANUEL
1164	MOMANYI INNOCENT
1203	KAMICHA ALFRED
1206	KISIA PATRICK

No	
1245	MATHENGE JOHN
1301	MUNALA BENSON
1367	HUSEIN HUSEIN WERE
1419	MIRITI PETER
1457	ADWERA LUCAS
1479	NGARUIYA WILFRED
1494	WOSE LUSWETI
1497	KUSIENYA CASSIUS
1525	MBUGUA LAWRENCE
1532	ODONGO VICTOR
1536	OKWETO ALPHONCE
1539	KANGARA DAVID
1550	AMBUKU ROBERT
1551	MUCHINA JOHN
1638	KITHOME PATRICK
1641	RUKWARO STEVE
1642	GITONGA MUNENE
1655	KUNGU JOSEPH
1656	MUCHUNGU PHILIP
1671	TOROITICH BRIAN
1672	NYAMAI RAPHAEL
1687	GITONGA Ms. LILIAN
1699	MBAYA FRANCIS
1725	OMUFIRA ANNE
1732	MUCHUNGU ANNA
1741	GICHUIRI JANE
1834	MUTAI NATASHA
1865	SAVALA DENIS
1872	MANYUIRA TIMOTHY
1874	MASESE GEORGE
1891	HIRANI NEELESH
1902	KIRUI DENIS
2026	AMBATSA PAUL
2112	WAMALWA EMMANUEL
2170	NGUGI GEORGE
2195	GITONGA AARON
2230	ASURA ELI
2330	KASILI L.M.
2331	KIMANI R.K.
2389	OUMA PIUS
2396	
2420	KALAMA CHARLES
2422	MANGWA DICKSON
2444	OTIENO SALLY OLIVIA
2459	MOTANYA ALEX
2572	NJOGU PETER
2573	MWANGI JOB
2612	NDUNGU SIMON
2643	ALI MOHAMUD

MEMBERS IN GOOD STANDING

M. No	Name
2704	KOBIA MISHECK MICHUBU
2724	KAHURIA THOMAS
2742	ODHIAMBO MARY THERESA
2888	NDULI MICHAEL
2889	NGAYWA BERTRAND
3062	MWANGI MURAGE
3142	GREGORY OMITTO MUNYAKHO
3215	SHUNET MESHACK
3277	NDUA JOHN
3278	CHEK DENNIS
3350	MULONDO RACHEL
3487	MWANGI LAMECK
3503	KIMEMIA SIMON
3548	NDERI KEVIN
3567	MUTUKU JOSPHAT
3632	MUTIE PAUL
3860	MATHENGE ROBERT
4326	WAGUTHII JEDIDA MUCHOKI
4336	SIMON SAILI MALONZA
4464	ALLAN AGESA ABWUNZA
4465	COSMAS ONYANGO ODHIAMBO
4515	JORDAN OTIENO RABACH OPIYO
4684	MUSYOKA DIANA MUMBUA
4754	ODUU GODRICK EKISA
4785	EBOLE PAUL HABWE
4786	KARANJA LEAH WAMBUI
4995	OLUOCH SYLVESTER
5038	NICODEMUS CHEGE MAINA
5079	GERALD OKOTH WAMAYAH
5108	MUKUCCIA TIMOTHY MUTABARI
5152	ISABELLA NJERI WACHIRA - TOWEY
5169	ROBERT OUMA JOHN

QUANTITY SURVEYORS CHAPTER LICENCIATE

M. No	Name
2725	MASAM BERNARD
3633	KANALO JAMES

QUANTITY SURVEYORS CHAPTER GRADUATE

1786	HERD SIMON
2422	MANGWA DICKSON
2459	MOTANYA ALEX

QUANTITY SURVEYORS CHAPTER GRADUATE

М.	Name
No	
1786	HERD SIMON
2422	MANGWA DICKSON
2459	MOTANYA ALEX
2906	ONYANGO DENNIS
3231	KOIGI STEPHEN
3417	TONUI WESLEY
3543	MWANGI LABAN
3581	KAMAU SAMUEL
3582	MUTHOMI KENNEDY
3743	WAIRIUKO CAROLINE
3798	OTIENO ARTHUR
3802	MAKARIO BRIAN
3804	NDOMBI AINES
3844	NYAGWOKA GIBSON
3847	KEMUNTO LINAH
3878	KANE MERCY
3879	KANYARU MOSES
4061	BEDE MWANGI MACHARIA
4065	ALOISIUS WANGUI
4067	WENDY KIMWATAN
4077	VIOLA OBURA
4078	BENARD FRANCIS
4081	JAMES NJOROGE
4085	MARX MUTEA
4086	LUCY NZIOKI
4087	HELLEN KIMANI
4219	
4302	JOEL NJAU KIHARA
4356	
4516	
4685	
4000	
4913	
4947	
5100	
51/2	
51/3	
51/6	
5184	
4067	
4077	VIOLA OBLIRA
4078	BENARD FRANCIS

QUANTITY SURVEYORS CHAPTER TECHNICIAN

M. No	Name
3910	WACHIRA KENNEDY K.
4507	DENNIS KIOKO KIVINDU

QUANTITY SURVEYORS CHAPTER FIRM

M. No	Name
F00011	MGA CONSULTANTS LTD
F00012	HAROLD FENWICK & ASSOCIATES
F00013	SCHEMATIC CONSULTANTS LTD
F00016	AFRICOST LIMITED
F00018	GETSO CONSULTANTS LIMITED
F00024	DAVSON AND WARD
F00040	CONSTING CONSULT
F00041	CONSTRUCTION COST CONSULTANCY LTD
F00042	COSTWISE ASSOCIATES
F00044	GAKUYA & ASSOCIATES
F00052	NORTH WIND CONSULTING LIMITED
F00071	AEGIS DEVELOPMENT SOLUTIONS LTD
F00072	SHAQUE ASSOCIATES LTD
F00079	M & M CONSTRUCTION CONSULTANTS
F00082	INTEGRATED YMR PARTNERSHIP
F00084	BUNEI, MAUNGU AND ASSOCIATES
F00123	SONGA OGODA & ASSOCIATES
F00137	MANDHRY ASSOCIATES
F00143	QUANTECH CONSULTANCY
F00147	QUANTI BILL CONSULTS COMPANY LIMITED

ENGINEERS CHAPTER CORPORATE

M. No	Name
564	BHUNDIA BHAGWANJI
1305	SHANKLA ARJAN
2053	MBUI JONATHAN
2054	NJOROGE GEORGE MUIBORO
2100	MSAFIRI SEBORU
2162	MUTEA EUSTACE
2205	KHABURE OLIVER
2227	NJENGA NATHAN
2231	MONDA ANTHONY
2313	KHAN MOHAMMED
2602	GUMBO NICOLAS
2731	KAGONDU GRACE
2732	KIMANI FRANCIS
2733	MWANIKI ANDREW
2734	WANDAY PETER
2859	NYAWADE BENJAMIN
2890	MUMENYA SIPHILA
3101	MAINA EPHRAHIM
3237	NDERITU MICHAEL
3562	OJENDO DOMINIC
3612	OTWANI JUSTUS
3859	MUCHEMI KARIUKI
3920	BERNARD S. OLOO
4231	KIMANI THOMAS
4286	GIFT KINUTHIA KARANJA
4408	MERCY MUGURE
4506	JOSHUA ICHANGI WERU
4601	MOMANYI GODFREY MARAMBE
4756	OTUOMA PATRICK OTIENO
4929	KIOKO PAUL KIMALI
4949	ADOYO FELIX OTIENO

ENGINEERS CHAPTER LICENCIATE

M. No	Name
3055	MUTHUI ELIZABETH
3896	JOSPHAT MAINA

ENGINEERS CHAPTER GRADUATE

M. No	Name
3864	ROSEBRENDA MUCHIGA
4254	JOYCE MUGURU WAIRIMU
4687	NASHON ONYANGO TAMBO
4693	JACTON MWEMBE ACHIENG
4806	MUNENE DAN BRIAN
4830	KIMARU KENNEDY KIBUCHI
5065	OKWETO SHARON LOICE ACHIENG

ENGINEERS CHAPTER TECHNICIAN

M. No	Name
5005	AMBWAYA SAMO
5164	SALIM ALI KIZA

ENGINEERS CHAPTER FIRM

M. No	Name
F00043	FRAME CONSULTANTS LTD
F00058	UNICONSULT ENGINEERSING CONSULTANTS LTD

LANDSCAPE ARCHITECTS CHAPTER CORPORATE

2120ARCHER ALEXANDER2294MARWA SAMUEL MUGO2307TOROITICH CALEB2499GIKUNDI JOHN2756OFAFA AMBROSE2757WANZA CAROLYNE2759MUGAMBI LORNAH2770ODHIAMBO LORRAINE2816NJIRAINI ROBERT	M. No	Name
2294MARWA SAMUEL MUGO2307TOROITICH CALEB2499GIKUNDI JOHN2756OFAFA AMBROSE2757WANZA CAROLYNE2759MUGAMBI LORNAH2770ODHIAMBO LORRAINE2816NJIRAINI ROBERT	2120	ARCHER ALEXANDER
2307TOROITICH CALEB2499GIKUNDI JOHN2756OFAFA AMBROSE2757WANZA CAROLYNE2759MUGAMBI LORNAH2770ODHIAMBO LORRAINE2816NJIRAINI ROBERT	2294	MARWA SAMUEL MUGO
 2499 GIKUNDI JOHN 2756 OFAFA AMBROSE 2757 WANZA CAROLYNE 2759 MUGAMBI LORNAH 2770 ODHIAMBO LORRAINE 2816 NJIRAINI ROBERT 	2307	TOROITICH CALEB
 2756 OFAFA AMBROSE 2757 WANZA CAROLYNE 2759 MUGAMBI LORNAH 2770 ODHIAMBO LORRAINE 2816 NJIRAINI ROBERT 	2499	GIKUNDI JOHN
 2757 WANZA CAROLYNE 2759 MUGAMBI LORNAH 2770 ODHIAMBO LORRAINE 2816 NJIRAINI ROBERT 	2756	OFAFA AMBROSE
2759 MUGAMBI LORNAH2770 ODHIAMBO LORRAINE2816 NJIRAINI ROBERT	2757	WANZA CAROLYNE
2770ODHIAMBO LORRAINE2816NJIRAINI ROBERT	2759	MUGAMBI LORNAH
2816 NJIRAINI ROBERT	2770	ODHIAMBO LORRAINE
	2816	NJIRAINI ROBERT
2817 MURAGE DEMPSEY	2817	MURAGE DEMPSEY
3182 MUTUA SYLVIA	3182	MUTUA SYLVIA
3191 MOCHAMA EMMANUEL	3191	MOCHAMA EMMANUEL
3192 MWAI RUTH	3192	MWAI RUTH
3332 KIMONDO ANTHONY	3332	KIMONDO ANTHONY
3421 MATHUKU CATHERINE	3421	MATHUKU CATHERINE

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M. No	Name
3826	BAARIU PATRICIA
4200	ARWARI SAMUEL KERONGO
4206	AGHAK ODHIAMBO

LANDSCAPE ARCHITECTS CHAPTER LICENCIATE

M. No	Name
4412	CHLOE JUNE BROWN

LANDSCAPE ARCHITECTS CHAPTER GRADUATE

M. No	Name
1948	PATEL B.P.
2498	M`IKIUGU MARTIN
2760	K`OYOO EDWIN
2765	OJWANG BENARD
2772	OCHANDO S.O
2898	KORIR PATRICK
3174	AHURA BENJAMIN
3175	MAE FREDRICK
3204	MUKOLWE MARION
3205	OWUOR MARTIN
3205	DR. OCHIENG MARTIN
3337	LEGISHION JACQUELYNE
3359	AYELABOLA VICTOR
3740	GITAU DOMINIC
3842	KAMWERU GRACE
4020	JACKSON MUGO
4205	PIUS MOMBO
4257	GEORGE NANGABO WANJALA
4305	MULIEVI JOHN SHAMALA
4308	THEOPHILUS KIPRUTO YAMMAH
4309	VALERIE GATWIRI IRUNGU
4323	KWAMBOKA JUDITH ONYONI
4351	GRACE SYOMBUA VALASA
4353	JOAN NYAGWALLA OTIENO
4480	PETER MUTHAMI MWIRANGA
4481	JOSEPHAT KIMARI GITHINJI
4484	GIBSON NGUMI GACHAGO
4485	MATILU SALOME KAVINDU

MEMBERS IN GOOD STANDING

M. No	Name
4491	ALLAN NDUNGU GITHUKU
4500	TABITHA NGII NDETI
4502	CECILY WANJIKU MURAGE
4598	GIDEON KIMUTAI SANG
4602	PAUL WERUNGA MULATI
4641	NGESA JOAN NANG'AYO
4744	SIMIYU NANCY
4745	OMONDI MICHAEL OGOLA
4768	KAMANDE BRENDA GRACE NJOKI
4821	GITONGA KIBE STANLEY
4850	MASWILI DAVID
4873	MOKAYA ALEX MARIETA
4877	NDALA MARIA TERRY
4905	MUREITHI DENIS MWANGI
4914	PETERS BRANDON SCOTT
4940	KOTOLO JAMES RAILA
4948	KINYUA PATRICK MWANGI
4965	ETYANG IKOJO ROSELYDAH
4973	NYADERO FIONA PENINA
4974	ITA CHRISTINE WANJIRA
4975	SHIVERE SHITOTE AUGUSTINE
4985	KIOKO MULUKI LILIAN
5001	NGATA PETER KARIUKI
5010	DEBORAH CHELANGAT CHIRCHIR
5029	GITONGA STANLEY
5033	SEBORU JUSTUS MWENDA
5036	LOUIS FABER CHITERI
5037	PETER KABUURU KIBAARA
5039	JUDDY NDUNGE MWOLOLO
5040	DAISY MONYENYE OREMO
5042	FREDRICK OMONDI OWINO
5046	CHARLES KYALO MUTUNE
5051	ZABLON KIMUTAI MENGICH
5054	VIVIAN NJOKI KINIU
5091	MURITHI TIMOTHY MBAABU
5097	DANIEL OWUOR NYANDEGA
5098	ALOYSE MAIGO MIKURO
5114	BRIAN MUTHOMI KINYUA
5127	
5130	
5133	
5136	
5154	
5215	
5242	
JZ4Z	
4873	
4877	
4905	MUREITHI DENIS MWANGI

LANDSCAPE ARCHITECTS CHAPTER FIRM

M. No	Name
F00167	URBAN GREEN LANDSCAPES LTD
F00183	MYSTICAH DESIGNS AND ASSOCIATES LTD
F00186	LANDMARK DESIGNS LTD
F00200	GARDENS HAVENS LIMITED

TOWN PLANNERS CHAPTER CORPORATE

No No	Name
705	MOCHACHE (DR) JASON
1174	MARINGA P.M.
1266	ADOLWA PATRICK
1280	PATEL MUKESH
1354	MAIRURA EVANS
1602	KEINO IRENE
1735	MWANZIA ALFRED
1947	PROF. JEREMIAH NYABUTI
1957	MUSYOKA ROSE
1983	MULONGO LEONARD SIMIYU
2035	MICHOMA JAMES
2041	MWAURA PETER
2075	KASUKU SILVESTER
2165	MWAURA ARTHUR
2171	OMONDI FREDRICK
2207	KIMANI MARY
2208	GATIMU DAVID
2209	KUMUNGA EUNICE
2212	PARASHINA ISAAC
2217	MAINA JOHN
2222	SINDANI WELLINGTON
2229	OMOLLO WILFRED
2239	OGUTU CYRUS
2241	KATHENGE JUSTUS
2243	NDUNGU JAMES
2248	RITA JULIET
2257	MBURU ELIZABETH
2263	KOMOLLO FAWCETT
2279	MUMBI ERIC
2295	KAUMBA ALICE
2450	ONYANGO MOSES
2472	AGENG`A GABRIEL
2482	MWAU CHARLES

No	
2256	KIBUTU ESTON
2560	MUGO JANE W.
2567	OLALE PHILIP
2617	MUKETHA SILAS
2621	NGARI STEPHEN
2622	GICHUKI DAVID
2623	MARANGA HANNAH
2624	NJOROGE CASTY
2627	KITONGA CHRISTOPHER
2628	WAWERU PATRICK
2629	MWANIKI MARYANNE
2630	NTABO JOHN-SUIT
2700	WANGILA BEATRICE
2835	SAKWA WINSTON
2837	OSEWE VINCENT
2913	WAMBUA ANTHONY
2944	MANG`IRA PERIS
3063	NAMUSEI EUNICE
3069	OMBUDO ADELAIDE
3079	OGARA DINAH
3103	MUGENDI GEOFFREY
3219	ISAAC MAMBO NYAMWERO
3238	OMOTI KEFA MISUKO
3407	GITHINJI ESTHER
3483	ODHIAMBO BENARD
3613	OTIENO WILFRED
3628	OKOTH CHARLES AMESO ANGIRA
3780	MUCHIRI CHRISTINE
3893	KATHIKE SAMMY
4089	ANN MUGO
4413	BETTY AWUOR ONGINJO
4457	VICTOR MWAVU NZUE
4458	DANIEL MURAGE MURAGURI
4750	KIITI NATHAN MUTUNGA
4752	NDATHO MERCYLEEN NKATHA
4771	PAUL BRIAN NDELEVA
4784	KIRUI ROSE CHEMUTAI
4814	KABERERE PETER MAINA
4859	AUMA NANCY ACHIENG
4861	KISIANGANI RACHEAL NEKESA
4871	CHIRCHIR ERIC KIPKIRUI
4930	LUSALA LOGEDI VICTOR
4946	MWENDA DUNCAN KITHINJI
5000	GICHURU SILAS MBAABU
5030	AGENGA GABRIEL ODHIAMBO
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2544	MUREGI DENIS
2631	KWADHA AGGREY
2829	MATENDE RONALD
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3525	DAUDI JACKSON
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4848	LITUNYA GETRUDE GLORIA
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1810	OGUNDE OSCAR
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2526	OSIDIANA DENIS
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2637	PAUL ODHIAMBO OKICH
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