

# Construction KENYA SHOWCASE



OCTOBER-DECEMBER 2022

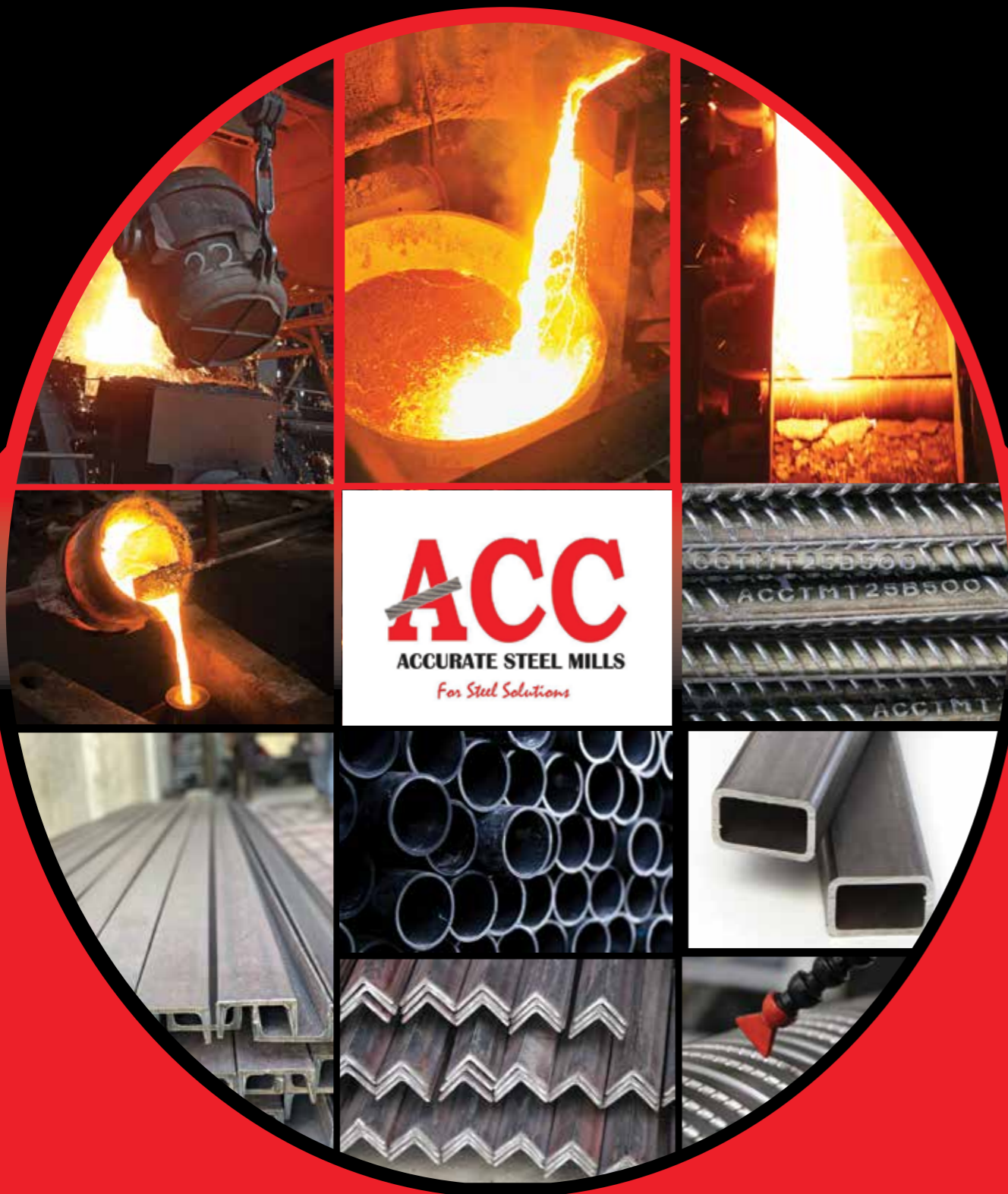
## The Elusive Quest for **AFFORDABLE HOUSING**

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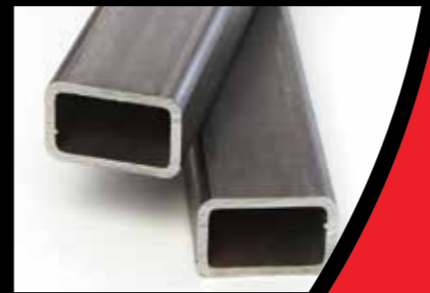
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*Plus all the regulars*

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EDITOR  
John Njiraini

PROJECTS EDITOR  
Francis Makari

SENIOR WRITERS  
Uddi Benkiff A.  
Brigette Wambui

CONTRIBUTORS  
Anthony Kamau  
Peter Miano

MARKETING  
William Mutama  
Lilian. Khavosa  
Peter Mbugua  
Fred Okoth

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Tel: +254 101 865828/+254 772 864886  
Email: editor @constructionkenyashowcase.com

## PURPLE DOT INTERNATIONAL'S PROJECT WINS AT DUBAI PROPERTY AWARDS



Development and Best Commercial High-Rise Architecture in Africa, while topping for both categories as Winner in Kenya.

The winners of the 2022-2023 edition of the awards were announced at the Habtoor Grand Resort, Jumeirah Beach, Dubai in October.

The Africa & Arabia Property Awards are judged by an independent panel of more than 90 industry experts. Judging focuses on design, quality, service, innovation, originality, and commitment to sustainability. The Awards, which are in their 29th year, cover more than 45 different residential and commercial property categories. Regional heats are staged for Arabia, Europe, Africa, Canada, Central and South America, the

PURPLE Dot International Ltd was recently honoured at the Africa & Arabia Property Awards for their upcoming Grade A Commercial Development, The Purple Tower. The developer competed against the best property professionals across the Africa and Arabia regions to be nominated for Best Commercial High-Rise

Caribbean, USA, UK and Asia Pacific.

The judging panel is chaired by Lord Caithness, Lord Best, and Lord Waverley, members of the House of Lords in the UK Parliament.

Purple Tower, whose off-plan sale was unveiled by the developer earlier in May, sits along Mombasa Road, hovering just above the Nairobi Expressway.

The mixed-use development is centrally located and strategically nestled near key urban addresses including the city's Central Business District, Upperhill, Westlands, Industrial Area, Wilson Airport and Jomo Kenyatta International Airport (JKIA) as well as SGR Terminal.

## BIG 5 CONSTRUCT EXPO CLOSES AT SARIT CENTRE



THE BIG 5 Construct Kenya Expo 2022 was held between 9<sup>th</sup> and 11<sup>th</sup> November at the Sarit Centre in Nairobi.

The trade show, which brings together stakeholders in the construction industry from around the world was officially opened by Roberto Natali, Italian Ambassador to Kenya and Matt Denton, President, DMG Events.

The trade fair welcomes industry professionals looking to access the latest innovative products from various countries including Kenya. It is also an opportunity to learn and network. There was a large presence of European and Middle East companies at this year's show.

In addition to being inspired by industry trendsetters on the exhibition floor, visitors were also able to upskill and earn their annual CPD points by attending a wide range of interactive and collaborative talk sessions led by industry experts across four key themes: Technology, Project Management, Architecture & Design, and Sustainability.

**Safal Group's Moses Obera (left) and Alice Kagacha at the Expo**

## KIAMBU COUNTY GOVERNMENT COMES UNDER FIRE FOR SUSPENDING ONLINE BUILDING APPROVALS



**AAK President Wilson Mugambi**

IN A WIDELY criticized move, Kiambu County recently announced the discontinuation of their Electronic Development Applications Management System (eDAMS). In a public notice, the County Executive in charge of Land, Housing, Planning & Urban Development Eunice Macharia, said the system had experienced "serious challenges" that had negatively impacted service delivery especially in the approval of development applications.

"To avoid further inconveniences and undue delays, all developers are advised to manually submit development applications at their respective Sub-county physical planning offices for processing starting 27th October 2022", she said.

Ms Macharia asked developers with pending applications in eDAMS to re-submit them manually attaching

all the required documents. "This is a short-term measure to allow the County to make arrangements for a better system in the near future", she assured stakeholders.

The Architectural Association of Kenya (AAK) was among the first to fault the move. In a statement, President Wilson Mugambi said: "We reiterate that resorting to a manual system does not capture the spirit of the government's commitment to enhancing service delivery through digitization and automation of all critical government processes."

Institution of Engineers of Kenya (IEK) President Eng. Erick Ohaga said: "IEK does not support this manual approval process."

A former Chairman of the Association of Construction Managers of Kenya (ACMK) Nashon Okowa also expressed disapproval of the move.



**IEK President Erick Ohaga**



**Former ACMK Chairman Nashon Okowa**



The new showroom and warehouse located along the Eastern Bypass, Nairobi

## RUBY GRANITE & INTERIORS OPENS NEW MEGA SHOWROOM IN NAIROBI

Leading home interior solutions provider Ruby Granite & Interiors Limited has opened a new showroom along the Eastern Bypass near Ruiru.

Ruby Centre, an expansive and ultramodern showroom consisting of three levels of showroom space, offices and a warehouse is located in a spacious section of the newly expanded road with ample parking for customers.

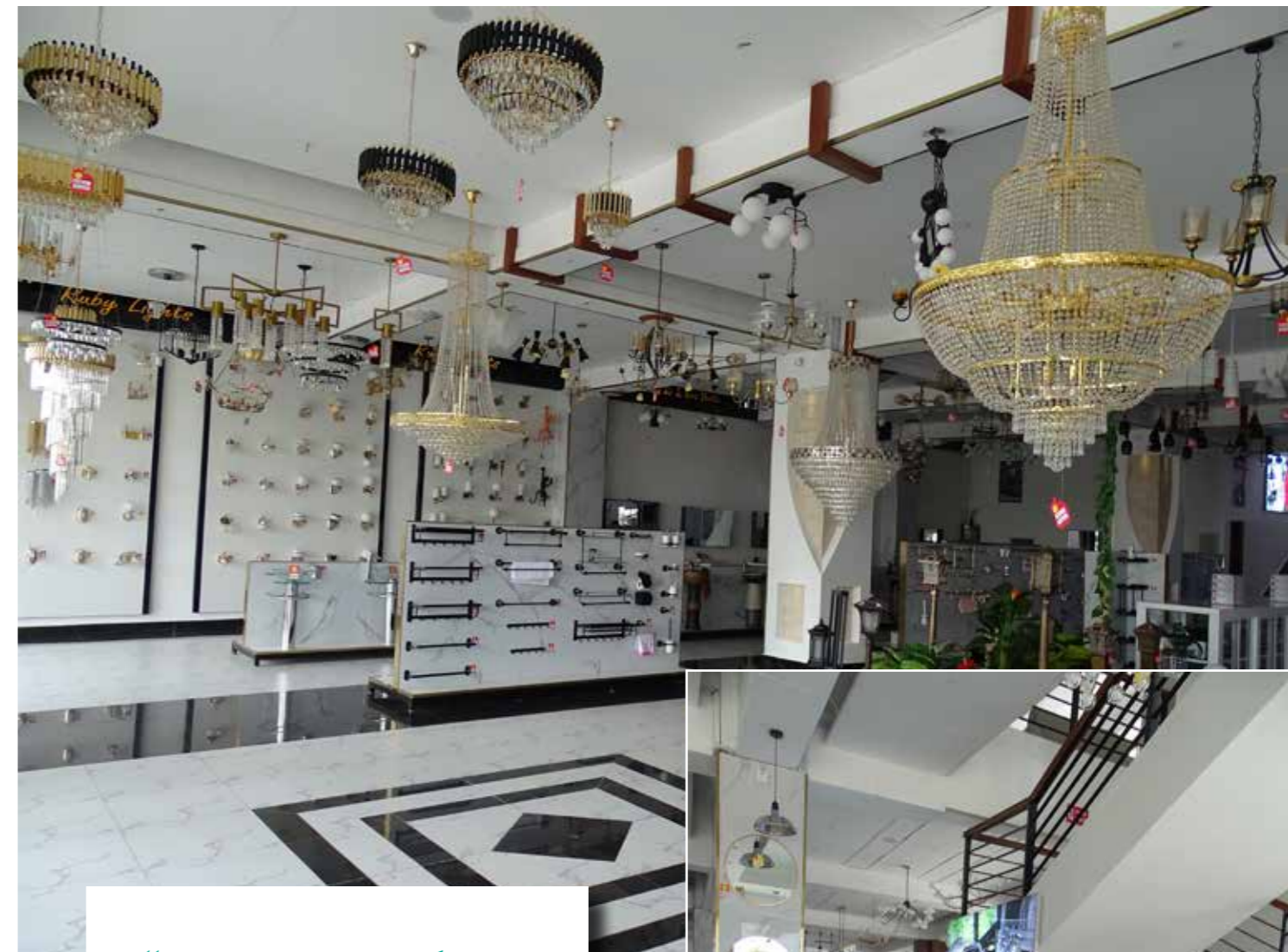
According to one of the company's directors Esther Kamau, the new premises will enable them to serve their customers quickly and more conveniently.

"Ruby Granite & Interiors Limited is well-positioned to serve not only customers in Nairobi and the environs but

the entire country as well," says Esther. She adds that they have supplied customers as far away as Mombasa and even in Rwanda. The company has other showrooms on Kijabe Street in Nairobi and recently opened another one in Nakuru to serve the region.

Ruby Granite & Interiors Limited was founded in 2015 and has quickly established itself as a formidable supplier of interior fittings to homeowners, developers and contractors. The company's products are used in homes, hotels, restaurants and other commercial establishments.

Esther says the decision to start a home finishes store was largely driven by the challenges she and her family



"We are constantly updating our products in sync with changing tastes and preferences."

experienced when they were building their own home. "It was difficult to source for materials and we could not obtain everything we needed in one place", she recalls. "We created Ruby Granite & Interiors Limited so that other homeowners did not have to go through the same experience".

Ruby Centre is now a comprehensive interior fittings shop where one can obtain practically everything needed to install in the house or other premises. Products includes stylish lighting fixtures, elegant kitchen sinks and faucets, granite tops, showers, toilets and other bathroom fittings, vanity sets,



TOP: Chandeliers and other lighting fixtures. BOTTOM: A variety of kitchen faucets available in the showroom.



**ABOVE: Company Directors Esther Kamau and Tirus Mutoru. BELOW: Ruby Granite & Interiors Ltd has invested in customer-friendly staff.**



décor items and many other products that a modern home owner requires. The showroom also features the latest living and dining room furniture.

Esther says the company always pays attention to what customers need. “We are constantly updating our products in sync with changing tastes and preferences. In this regard, we work closely with professionals such as interior designers so that we source products that correspond to customer needs.”

She adds that the company’s products are designed to suit all budgets. “We have products for the premium segment as well as others tailored for those with tighter budgets but who still value quality.”

In line with making Ruby Granite & Interiors Limited the ideal one-stop centre for homeowners, the company recently partnered with a global electronics and household appliances firm, Haier, to stock their products. “As you know, a home is not complete without appliances, hence our decision to expand our product range”, says Esther. “Haier is a leading brand globally that is known for quality and affordable products, hence our partnership with them.”

Haier products at Ruby Centre include refrigerators, smart TV sets, home theatres, washing machines and cookers among others.

The company intends to continue opening new showrooms in other parts of the country in order to bring products closer to the consumer.



**Ruby Granite & Interiors Limited is a one-stop shop for home owners offering a comprehensive range of products to suit all segments of the market.**



## FACTORS THAT COMPROMISE SAFETY AND LONGEVITY OF KENYAN ROADS

It is not uncommon to hear Kenyans express their dissatisfaction with the state of roads in various parts of the country. The most frequently raised issues are quality of work, delays in delivery and, to a lesser extent, design. In this article, UDDI BENKIFF looks at some of the factors that contribute to poor quality and unsafe roads.

Since 2005, Kenya has undertaken numerous road infrastructure projects to accommodate or ease our country's ever-increasing traffic flow especially in urban areas. In Nairobi alone, there are several major road expansions that are either ongoing or have recently been completed. Some of these projects include the Western Bypass, Northern Bypass, Nairobi Expressway and the Eastern Bypass. With this new construction has come an influx of overpasses, interchanges, and flyovers all designed to ease traffic into the CBD, aid pedestrian traffic, and reduce axle load damage on major roads through the city.

While it is commendable that successive governments have made infrastructure a priority, more can be done to ensure that our roads and highways achieve their service life with minimal maintenance, whilst keeping road users safe. Understanding key factors in design and construction that affect road outcomes will not only help save lives but also build better and plan for the future.

### Inadequately designed roads

Road design consists of a variety of phases, which includes geotechnical and topographic surveys (traffic surveys are covered separately) that give rise to the

roadway and pavement design. Roadway design consists of the actual corridor design including pedestrian and service lanes, intersections, stormwater drainage, and other elements of the carriageway. Pavement design involves the design of the road cross-section, including the materials used and their thicknesses.

Highway building design and technology has greatly improved in Kenya, especially on the back of the increased involvement of experienced foreign contractors who sometimes design and build projects themselves. However, it is still not unusual to find a road that hasn't been designed satisfactorily which leads to further problems down in time. For example, if a geotechnical survey hasn't been properly done, chances are that the subgrade will fail under vehicular traffic in some road sections.

Pedestrian and designated lanes for motorcycles and bicycle riders can also help to reduce some of the problems that have been witnessed, especially along major city roads.

### Inadequate Traffic, Pedestrian and Economic Surveys

While a good design on paper goes a long way in improving



Expansion of Likoni Road, Nairobi



**The Nairobi Expressway while under construction.**

a road's lifespan, due consideration should be given to economic expansion both now and in the future for the said road. A good example of this is the Eastern Bypass in Nairobi which was until the recent dualling a nightmare to use.

Another good example is the Outering Road in Nairobi's Eastlands which is currently ranked one of the most dangerous roads in Kenya, with 44 out of 371 road deaths within the city in 2020. The road design is overly complex and outrightly unsafe in some areas, thus increasing the likelihood of driver-induced error. Sudden dead ends to lanes and a particularly strange loop near the former Taj Mall interchange are often pointed out as serious design flaws.

With any new road project, it is expected that the economy of the area will expand. For major highways, there is

expected an influx of people, industries, and thus new traffic and axle loading. In fact, a lack of proper planning is a major reason why Kenyan roads don't remain sustainable for too long. All these are considerations that should be in the initial feasibility study of the road.

### **Cutting corners and use of poor building materials**

Road materials are the most important component of a long-lasting road. A common road design principle is that material should be hauled from as close to the construction site as possible. However, this isn't always the case. A designer or contractor may opt for poor material nearer to the site to save on haulage costs. They may also cut corners concerning the actual pavement construction versus the design, for example, by not

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doing enough compaction, using less material volume, or building on a wet subgrade.

One way to counter deceit during the design and construction processes is to ensure that everything during these phases is double-checked and supervised by a government agent and any omissions noted.

### **Inadequate road base or sub-base**

The subgrade and road base are essentially the foundation of a road. Again, this comes down to good design and build. The essential elements of road-base and sub-base are excellent material, enough compaction to provide at least a 95% CBR (California Bearing Ratio) reading, and keeping these sections moisture-free during the road service life.

### **Using unqualified contractors**

Even with a good design, a road is only as good as the person who builds it. In Kenya, various incidents of unqualified contractors being awarded tenders to carry out major road projects have been reported. These contractors may lack the technical expertise, experience, or financial capability to carry out such major projects. As a result, they are more likely to cause omissions during the design or build processes.

### **Inadequate road furniture**

Road furniture such as traffic signs, bumps and crosswalks go a long way in ensuring that roads also meet their serviceability requirements. In many cases, the addition of road furniture in Kenya is mostly reactive, that is, after numerous accidents or complaints.



# AFFORDABLE HOUSING IN KENYA

## THE ELUSIVE QUEST



Affordable housing has become a buzzword in the country in recent years, both in the public and private sectors. Annual and medium term housing targets have been set repeatedly but not achieved. What could be the problem?

*Affordable homes by Kings Developers in Ongata Rongai, Kajiado County.*

By ANTHONY KIGANDA

The figures are mind-boggling. According to Shelter Afrique, a pan-African finance institution that supports the development of Africa's housing and real estate sectors, the African continent requires four million housing units per year to meet its housing needs.

The problem has been exacerbated by rapid population growth, increased urbanization, and a scarcity of affordable housing.

Closer to home, Kenya faces an annual housing demand of 250,000 units, despite government plans to provide 200,000 housing units per year for all income levels.

However, the construction of housing units is currently at less than 50,000 units annually, well below the target number, culminating in a housing deficit of over 2 million units, with nearly 61% of urban households living in slums, according to Habitat.

This construction deficit continues to rise due to fundamental constraints on both the demand and supply side and is exacerbated by an urbanization rate of 4.4%, equivalent to 0.5 million new city dwellers every year.

### Interventions

Housing affordability is a key challenge in Kenya with many people unable to afford to buy or build their own home. Only 2% of the formally constructed houses target lower-income families.

Several interventions have been put in place in a bid to tackle housing deficit in Kenya.

The affordable housing initiative, for example, which was launched in December 2017 as one of the national government's four pillars of growth, aims to address the country's housing shortage. The Affordable Housing Programme (AHP), as it is now known, promises to build 500,000 low-cost homes over a five-year period.

**Ongoing affordable housing project  
at Pangani, Nairobi**



The program's first project, in Nairobi's Ngara Estate, has so far delivered 228 affordable units. It has created numerous opportunities for construction investment, as well as the manufacture and supply of building materials and components.

The houses are being built on nine acres of land at a cost of KSh5 billion. The project includes a nursery school and shopping centre, among other communal facilities. Its 1,370 housing units are to be sold at US\$10,000 for a one-bedroom, US\$20,000 for two-bedroom and US\$30,000 for a three-bedroom house.

Another affordable housing project is Buxton Point currently ongoing in Mombasa County. The project is a joint venture partnership of the County Government of Mombasa and investors led by Hon. Suleiman Shahbal. The affordable housing units will be sold at Ksh 1.2m for a bedsitter, 2.3m for a one bedroom and 3.6m for a two

bedroomed house. The project will have a total of 1850 units.

In Kitui County, 509 affordable houses are under construction. The project is a Public Private Partnership (PPP) between the Kitui County Government and Tecnofin Kenya Ltd, a local real estate company. Flexible payment terms and proximity to the town and other social amenities such as schools and hospitals are a major selling point for the project that is located along Kalawa Road, opposite WARMA offices.

In Ongata Rongai, Kajiado County, construction of 736 affordable housing units has been completed. The units will go for Ksh 4 million each. The project was developed by Kings Developers and targets families seeking serene and tranquil residential areas.

The government plans to construct such houses across the

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“We have said as a government that if you are buying a house for the first time, we won’t tax you. We’ll remove stamp duty. But when we remove stamp duty (for the first-time homebuyers), you should pay land rates because if you don’t, where will we get funds for water supply, road construction, electricity connection and garbage collection?”

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country. President William Ruto for example has detailed his plan to deliver 200,000 housing units annually that will heavily rely on support from counties. In order to enable efficient delivery of thousands of houses in counties, the government will also be working with private developers.

However, the program faces a number of challenges that must be overcome if the program as a whole is to succeed.

In the early and mid-2000s the government proposed a raft of housing incentives to stimulate the housing market and address both the supply and demand side of housing.

Such incentives included incentives under the Income Tax Act such as tax deductibility for housing loans and expenditures on social infrastructure; incentives under the VAT Act that proposed exemption of VAT for construction of low-income housing; incentives under the Stamp Duty Act where stamp duty fees on mortgages was reduced from 0.2 percent to 0.1 percent; lower

taxation of housing bonds and assignment of retirement benefits.

More recently, President Ruto proposed that first-time home buyers be exempted from stamp duty.

“We have said as a government that if you are buying a house for the first time, we won’t tax you. We’ll remove stamp duty. But when we remove stamp duty (for first-time homebuyers), you should pay land rates because if you don’t where will we get funds for water supply, road construction, electricity connection and garbage collection?” posed the President.

#### Key impediments

Even with all these incentives and strategies and with a constitution supporting adequate housing for all, the housing problem has refused to go and housing affordability remains a thorn in the flesh of the government.

But industry players have put land at the centre of housing affordability.

In order to roll out a successful affordable housing project, land must be serviced with infrastructure and

in good location. But such land is in short supply in Kenya, and therefore expensive.

“From market studies, the cost of land should constitute between 10 per cent and 15 per cent of the total cost of a housing unit for it to be affordable, but this isn’t the case in many countries,” says Kingsley Muwowo from Shelter Afrique.

In Kenya, the cost of land makes up between 40 per cent and 60 per cent of the total cost of a housing unit, Muwowo notes.

A market report by real estate firm—HassConsult shows the average value for land in Nairobi suburbs has gone up from Sh30.3 million in December 2007, to Sh191.3 million in March 2022.

Most land also lacks infrastructure to support development of mass houses. Without basic support infrastructure such as roads, water, electricity and sewer lines, developers have to fork out a lot of money to provide such services. Not to mention delays in approvals and granting of permits.

“Although private developers have innovated ways of delivering more affordable houses, the exorbitant cost of

land and other barriers such as low access to mortgages, as well as high financing and construction costs, continue to impede such projects," says Edward Kariuki director at Delta Homes Ltd.

Furthermore, most land that could potentially be ideal for affordable housing is in private hands. In Singapore, where affordable housing has been carried out successfully, the Land Acquisition Act of 1967 empowered the government to acquire land at a low cost for public use and thus today 90.0% of land is government-owned. In this way, the government was able to acquire land that was not under its control and use it for housing development.

Bureaucracy has also been cited as a major impediment to affordable housing. Many agencies are involved in the approval and licensing of housing development proposals and this makes the process lengthy, costly and complicated.

None of the laws and standards in connection with building construction directly addresses development of large-scale affordable housing.

Then there is the problem of funding. Housing and real estate development is a highly capital-intensive venture and funds are in short supply.

Kariuki urges authorities to speed up approval processes for public-private partnerships (PPPs) to attract serious investors with capacity to put up large affordable housing projects.

However, given Kenya's low income, with the majority of the population surviving on less than US\$2 per day, providing decent affordable housing may remain elusive for decades to come.



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# THE SYMPHONY RESIDENCE BY VAAL REAL ESTATE

**P**an-African real estate firm VAAL Real Estate has unveiled its fifth development project targeting home owners as well as businesses in Nairobi.

The Symphony Residence will be located at Lavington, consisting of 1, 2 and 3 bedroom apartments as well as studios.

"Its meticulous design and unique concept accommodate various housing and investment solutions including studios, 1, 2 and 3 bedrooms, and will be a private sanctuary for both investors and homeowners," VAAL CEO Majeed said while celebrating the company's six years in the sector.

During the inaugural launch of the property, the firm revealed that it had already sold 30 per cent units at the property.

"We handed over our first project the Moon Valley Apartments in Kileleshwa in October 2020 and we will be handing over our second complete project Elite Residence in Westlands in a few weeks' time," Prit Shah, firm's Head of sales said.

VAAL boasts over 20 years real estate experience, serving luxury property owners and investors in Kenya and Africa.

So far, the company has built over 1,000 apartments, serving over 500 clients in Kenya.

"I believe that this will be the best investment option for investors who are looking into buying something modern and futuristic that will fetch them good rental returns in the future," Saad added.



## FEATURING

**WALKING TRACK  
TWO SWIMMING POOLS  
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*(Images courtesy of  
VAAL Real Estate)*

# CITY OASIS GARDENS APARTMENTS FOR THE DISCERNING



**C**ity Oasis Gardens is an exciting development in Nairobi built with the modern home owner in mind. The development, located along Argwings Kodhek Road in Valley Arcade area comprises 1, 2 and 3-bedroom apartments. Valley Arcade is one of the most sought-after residential areas of Nairobi. The location is close to major health, educational and recreational facilities.

## Features and amenities

- Conference area/Business meeting area/club house
- Fully equipped gym
- Backup generator
- High speed lifts

- Children's playground
- CCTV and Video intercom
- 24hrs security guarding
- Borehole and underground water storage among others.

The developer is offering flexible payment plans. There are high discounts for cash buyers and high deposits. The project is expected to be complete by end of the first quarter 2024.

*(Images courtesy of GNA Real Estate)*



# MACHE HARDWARE STORES NAKURU

## BEHIND THEIR SUCCESS

Mache Hardware Stores is a large building materials provider serving Nakuru and other regions from its vast premises on Geoffrey Kamau Avenue in the Central Business District. However, its road to success was not without difficulties.

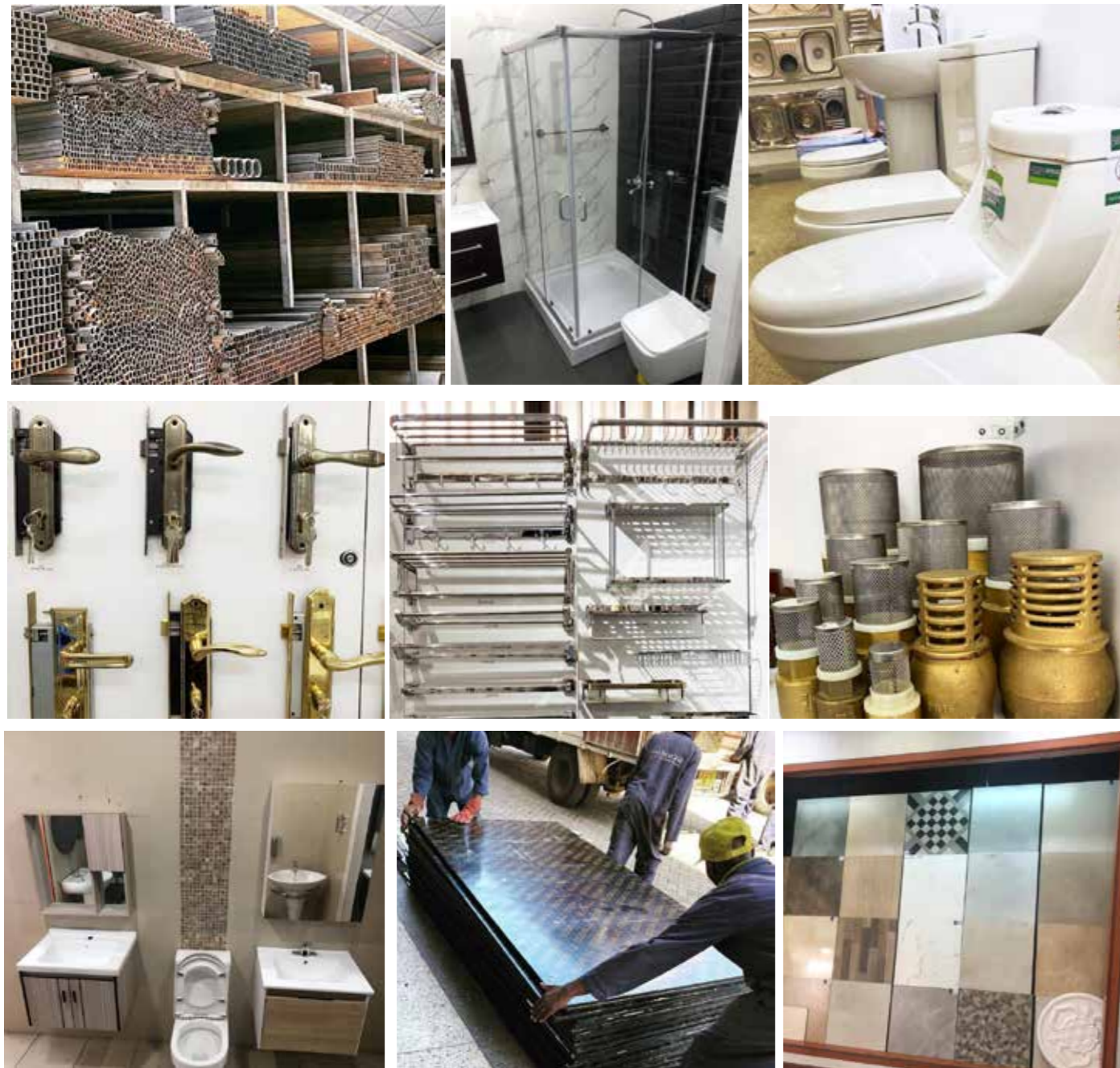


**M**ache Hardware Stores is a first-generation construction materials provider in Nakuru. The hardware was established in 1996 and is in its 27th year of operation.

For many years, the dream of becoming a leading supplier and distributor of construction materials appeared to be coming true, but not without its setbacks. A few years after operations began, the founders and current directors faced a lot of turmoil. They had to find a new location due to landlord-tenant issues, but they were able to do so thanks to strong relationships and unwavering support from family.

The company has evolved into a wholesale distributor of all construction-related products in the market. Other shops dominated the retail construction industry at the time it began operations, and these businesses became





Some of the many products one can find at Mache Hardware Stores.

a natural target market for supplies. Moving up the value chain in any industry necessitates a willingness to take risks. Fortunately, Mache had developed a good relationship with local manufacturers, so it was a calculated risk.

“We’ve always maintained excellent relationships with our suppliers and customers alike. They are an extension of our family,” says John Kamanda, Operations Manager.

Today, Mache Hardware clients are far more diversified and include manufacturers, retailers as well as other

wholesalers across the country. Trade partners at the moment include most manufactures and importers of construction materials.

With a track record stretching back almost 27 years, Mache Hardware Stores maintains a broad network of suppliers from across the globe. “We’ve developed a global network of suppliers. This allows us to monitor international trends and it is a platform that allows us to source quality products at the right price.”

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The company recently revised its logo to reflect a new direction. The previous logo wasn’t reflective of the company’s premium product offering. Over the past four months the company has rolled out its new logo across electronic and print channels.

“Kenya remains a country full of promise”, says Kamanda. “It is one of the fastest growing regions in the world. Manufacturers looking to capture some of this growth need look no further than an established partner like Mache Hardware Stores from which to source products.”

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## HOW DOSHI'S CNC SERVICES ENABLE QUICK DELIVERY OF STRUCTURES

Cutting and drilling of steel members are key processes whenever a steel structure is being fabricated. When using manual methods of cutting and drilling, a lot of time is taken in the preparation works and in the actual processing especially where a large number of steel components are involved. But with Doshi Group's Computer Numerical Control (CNC) Drilling and Cutting Services, this is not a challenge.

The Doshi Group has been a market leader in Kenya's steel industry for decades offering products and services that meet the ever-changing consumer needs. In 2014, after observing the numerous challenges fabricators were facing when fabricating steel structures, the company invested in a CNC Cutting and Drilling Facility that features a state-of-the-art machine from Germany. It was the first of its kind in the market then, cementing Doshi Group's position as a leader in innovation.

Doshi's CNC machine comes with a high cutting performance and precision of up to  $\pm 0.05$  mm ensuring high levels of accuracy. The powerful clamping system holds the material in place reducing vibrations for best cutting results. Besides its impressive functional benefits, the machine also enables data import from the design programs in use. This implies that a client can share their architectural or structural drawings and it is possible to generate shop floor drawings and a corresponding cutting list.

The use of CNC drilling and cutting offers numerous advantages that enhance productivity giving fabricators and contractors a competitive edge. This is mainly through reduction in fabrication time by as much as 50%, guaranteed precision of cut and drilled sections and reduced inventory cost.

The process eliminates hidden costs caused by delays due to long fabrication time and helps in improving the fabricator's cash flow by enabling mass production that leads to reduced project turnaround time.

"One thing that the CNC has done for me is to give me the power to compete with the bigger players in this business", says one mid-size fabricator who regularly uses the service. "The accuracy with which the sections are processed has enabled me to deliver turn key projects that are up to standard within agreed timelines."

The process of manual cutting will often require referring to shop floor drawings from time to time leading to high incidences of human error. With CNC cutting, errors are negligible since drawings are downloaded directly from the design/drawing software.

An extra step of grinding is often required in manual cuts to achieve a clean finish; CNC Cutting eliminates this by producing smoothly finished cuts on the first go. Scribing and contour marking is also possible which allows for easy identification of sections and quick assembly at the workshop or on site.



In 2020, Doshi's CNC Cutting and Drilling enabled the delivery of a 2,631 m<sup>2</sup>, 2-storey steel building within a 3-month period. The contractor was under immense pressure given the timelines yet the project involved a large amount of steel sections that needed precise cutting and numerous holes to be drilled on some. Manual processing had proved to be laborious and time consuming. The contractor consulted Doshi for a solution. To start off, a few samples were processed to demonstrate the speed and accuracy with which the work could be done. Each column had between 150 – 200 holes which were to be drilled with great precision and this was only possible with a CNC line. After the samples processing was over, the contractor was impressed and agreed to having the steel processed at Doshi of which 133 columns were done within a few days. Eventually, approximately 80% of the steel used in the project was processed through the CNC facility.

Some projects that have been successfully implemented using this service include: The Nairobi Hospital Covid-19 Facility; KTDA factory projects; Chaka Market; the SJSS Temple in Nairobi; various church roofing projects; foot bridge projects along major roads in Nairobi, among many others.

Doshi Steel Division continues to offer superior quality products and services suited for water systems, conveyance and as structural solutions for construction, agriculture, mining, automotive, oil and gas as well as plumbing industries. Our product range includes steel hollow sections, GI pipes, Z-Purlins, steel plates, beams and columns, angle lines, channels, expanded metals and many more.

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# AN AMERIKEN IN NAIROBI

## GETTING TO KNOW ROBYN T. EMERSON

Robyn T. Emerson, or simply Robyn to her friends, is a well-known figure in housing and real estate. Her passion for urban planning and doing things right has seen her lead several organisations and forums. But did you know she once aspired to be a pediatrician? We had a Q&A with her.

### Let's clear this first: are you Kenyan or American?

I am AmeriKen. I am an American citizen who has visited, volunteered, worked and raised a family in Kenya for 17 years.

### What does the "T" in your name stand for?

My full initials are R.T.E. My sister and I share my father's initials. My middle name is Tania.

### On your Twitter handle, you identify with "Democrats Abroad"; are you interested in US politics? If yes, to what extent are you involved?

I'm very interested in the power of people's agency and institutions serving the will of the people. That draws in me into politics, which is about the negotiated distribution of resources. I am the Chair of Democrats Abroad Kenya and have been supporting American Voters in Kenya for almost 10 years to vote from abroad. I wake up and go



to sleep watching, reading, strategising politics – US, Kenya, Africa, global. The work of an urban planner is very political and if one tries to shy away from it, one can't be effective.

### Give us some background to Robyn.

I was born October 1971, during the time of US Civil Rights and the Vietnam War. My father was a soldier in the war; I'm grateful he was able to be at my birth on the army



**Robyn as the Africa Housing Forum Manager, Habitat for Humanity, announcing the 2022 Innovation Awards Winner**



**With her co-author, Emma Miloyo, at the launch of their book.**

base. He was honourably discharged and we moved back to my parents *shags*, Kentucky, where I spent my formative years.

**Where did you go to school and college?**

I did my undergraduate studies at two historically black colleges/universities – Southern University in Baton Rouge, Louisiana where I began pursuing a pre-med degree hoping to become a pediatrician, and then transferred six years later to Huston-Tillotson University in Austin, Texas (my home city) earning a bachelor’s in business administration. Six years later, I enrolled in a master’s degree program in urban and regional planning at the University of Texas at Austin.

**You seem very passionate about real estate matters. How did you get interested in Kenya’s real estate sector?**

I’m specifically interested in people living life well. The built environment is an access to impact every aspect of life. I found myself in the Kenya real estate sector when I worked at the Kenya Property Developers Association (KPDA).

**You are the co-author of *Building in Kenya: A Real Estate Developer’s Tool Kit* and have served in many other organisations. You are heavily involved in Women in Real Estate (WIRE), Buildher, Kilimani Project Foundation, KDI, Nairobi Forum, Women’s Baseball Federation of Kenya, among others. What are your roles in these**

**organisations and how do you manage to juggle all these?**

It’s exciting to have so many innovative, bold organisations shaping various facets of the built environment. Some that I have the honour to be on their leadership teams range from resident associations – empowering residential agency and modeling participatory engagement; gender equality – policies, systems and capacity building as well as community organising. I’m the Founding President of WIRE, leading for almost seven years and will be handing over to its second president at next year’s AGM. I’m a founder or Board Member of the other organisations.

**You worked with Emma Miloyo on the handbook *Building in Kenya: A Real Estate Developer’s Tool Kit*. What inspired you two to write the book? How was it like working with Emma?**

Emma and I were lobbying Nairobi City County in 2015/16. She was Vice President of the Architectural Association of Kenya (AAK) and I was KPDA CEO. We realized the knowledge sitting in one stakeholder’s hands limits accountability and also opens the door for mischief. We took it as our personal social responsibility to make the building process and regulations easy to comprehend and open source. It’s our labour of love, a complete social enterprise with every shilling poured back into the expansion of its offering with *Mjengo*

Clinics and online courses. We’re now working on writing the second edition with updates. We’re fueled by the feedback we’ve received from developers – new and seasoned – who’ve shared with us testimonies about how the information empowered them.

**Tell us about your family. Are any of them in Kenya and are they interested in real estate or urban planning?**

I’m married to a Kenyan human rights defender, and our blended family consists of seven adult children. We have a sister and a son who are both excellent real estate professionals. Others work in a variety of fields, including economics, law, and renewable energy, acting, hospitality, environmental engineering and interior design. While we are extremely proud of them, we are overjoyed with our four grandchildren.

**What is a typical day for you like?**

There isn’t one. My workdays are focused on Habitat for Humanity Africa programs – managing Africa Housing Forum and Urban Policies. With a team of people, we convened housing stakeholders for the inaugural Africa Housing Forum with over 750 people attending the hybrid event. From that I am expanding partnerships and supporting urban programmes of our national offices.

Before and after work you can find me meeting Emma super early going over book edits, meeting partners and revising our courses or working with other lovers of Nairobi to evaluate submissions for community leaders’ awards. One night a week I lead a transformational seminar coaching people on creating and living lives they love, or I’m hanging out with my husband driving to random places to explore Kenya.

**What do you do outside work especially to unwind?**

Call my mama; she’s a hoot! Laughing with her takes the significance out of whatever I consider to be so significant.

**What does the future look like? What else would you like to do before retiring?**



**At the Kilimani Street Festival with co-author Emma Miloyo and Kilimani Project Foundation Chairperson, Daniel Nyakora**



**At the 2022 Walk With WIRE (mentorship programme) closing event**



**Robyn (in yellow) as a Community and Regional Planning Graduate Student in 2009 with classmates and Providence Ministries Board members. She worked with them to create a campus and community masterplan in Lower Matasia, Ngong.**

I don’t have plans to retire; if I’m breathing, I’ll still be causing! So, the future looks like more good trouble.

# THE BASICS OF SEPTIC TANK CONSTRUCTION



Septic tanks are a crucial part of on-site wastewater and effluent disposal and treatment, and are an important component of public hygiene by keeping the environment free from pathogens in sanitary waste.

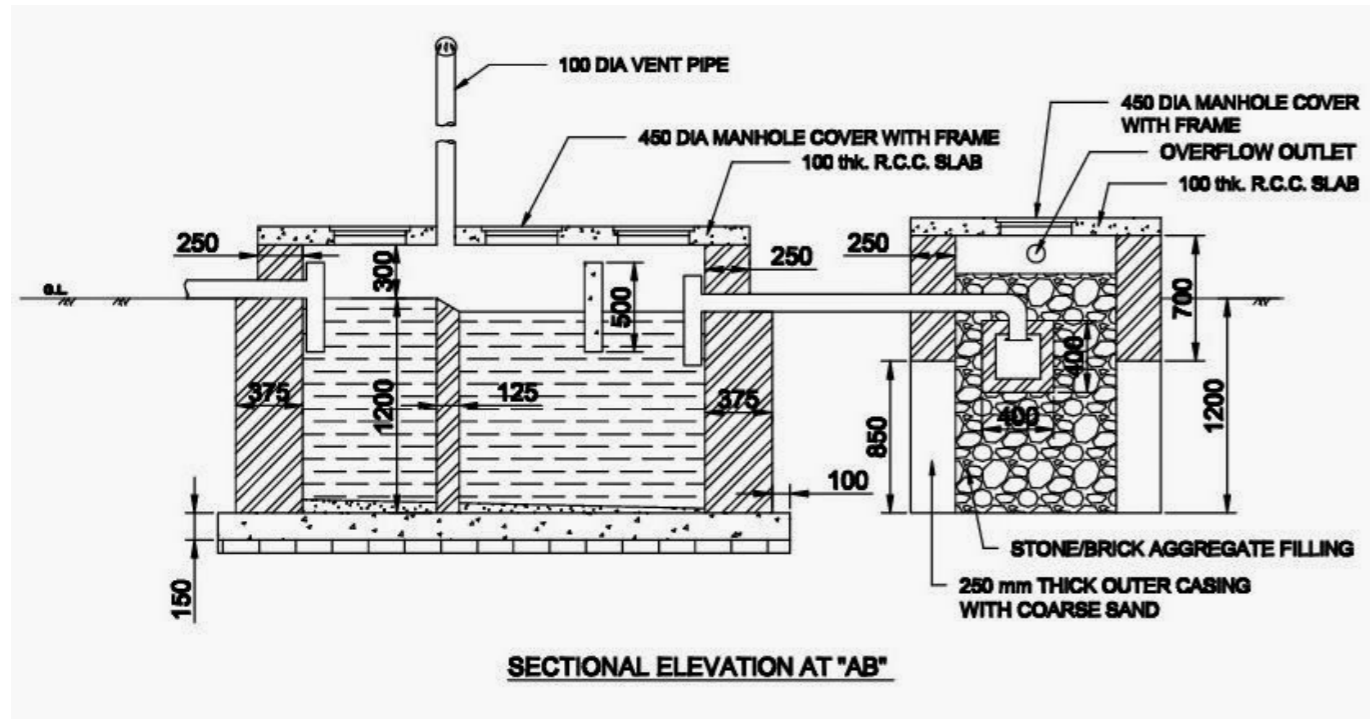
Septic tanks are used in both small residential and commercial installations, though single-unit septic tanks are more practical in smaller residential dwellings.

Before constructing any structure that will have human occupants, it is necessary to work out the sanitary waste disposal, treatment, and recycling mechanisms as part of the initial structural design. Septic tanks constructed on-site may have a relatively lower initial investment cost compared to other sanitary waste disposal mechanisms. It should however be noted that this cost is wholly dependent on the size and complexity of the said system.

## What is a Septic Tank?

A septic tank is a relatively large chamber used to collect, and in some cases, treat and recycle effluent and semi-solid human waste. Septic tanks are constructed with T-type inlets and outlets, with a set of internal separators or baffles and accesses called manholes. For small residential units, a single septic tank can therefore be divided into three separate internal chambers using these baffles. Most septic systems use gravity, although some systems serving larger premises such as commercial properties and gated communities can be emptied using mechanical pumps.

The size of the septic tank will depend on the number of users generating effluent, for example, single residential units with separate tanks and commercial properties will have differently sized tanks. The amount of daily waste generated by each person must be calculated to obtain the size requirements. Septic tank systems must also have a means of waste removal or recycling. For single-unit residential dwellings, the method of treatment may



be to pump out the waste using a vacuum pump to another designated area or collector. For larger installations such as gated communities, malls, and industrial facilities, it would be more practical to treat the waste onsite and dispose of the treated waste in a leachate field, or recycle it.

The constituent waste inside a septic tank is separated by baffles into blackwater and solid sludge or scum; the former is transmitted to a leachate field while the solid scum or sludge can be pumped out. This leachate must be treated first before being disposed into the environment, otherwise, it may have a detrimental effect on the groundwater in the area. Other secondary forms of effluent treatment include disposal into wetlands, soak pits, anaerobic filters, etc.

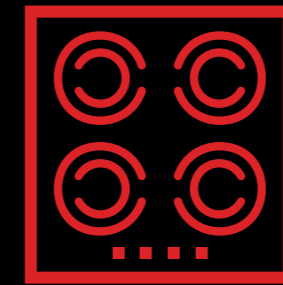
### Considerations When Building a Septic Tank

Septic tanks can be cast on-site using concrete, or they may be prefabricated using concrete or plastic and installed once the earthworks excavation is completed. The method chosen wholly depends on the available budget and the builder's intent. The amount of space

available for construction is crucial for the tank design as not all dwelling units have sufficient space to construct a septic tank. An alternative to this would be to build a septic tank below the dwelling as a basement, although this would in effect increase the earthworks costs.

The traditional system of connection for a septic tank is a building sewage pipe outlet, connected through a manhole with the septic tank. The septic tank is then connected to an external disposal system such as a leachate field or a vacuum pump collector. The simplest types of septic tanks usually provide manhole covers that can be removed and a vacuum pump inserted to eject the indigestible waste and black water.

It is important in the plumbing design of the building to separate grey water and black water and to not allow greywater to enter the septic tank. Greywater, simply put, is any water generated that isn't from toilets. Similar to stormwater, greywater can be disposed of directly into the environment as it doesn't contain harmful solid waste.



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