

Construction KENYA SHOWCASE



MARCH 2024

Makasembo Housing Project - **Kisumu**

LAPFUND project to change face of city

ALSO INSIDE:

- THE SARUNI – A HIGH-END RESIDENTIAL DEVELOPMENT, NAIROBI
- JENNIFER MUSYIMI – IQSK PRESIDENT
- GEOTECHNICAL INVESTIGATIONS
- ADVANCEMENTS IN REVERSE OSMOSIS



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The Saruni, a high-end residential development coming up on Riverside Drive, Nairobi. (see page 24)

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COVER PICTURE: An architect's impression of a section of the Makasembo Housing Project in Kisumu.

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The Cabinet Secretary, Ministry of Roads and Transport, Kipchumba Murkomen (third from right), officially launched the KeNHA 2023-2027 Strategic Plan.



EBK recently hosted a delegation from AAK led by its President Florence Nyole (seen here with Board Chairman Eng. Erastus Mwongera) for a consultative meeting to discuss partnerships.



A section of the Ksh 2 billion Bondeni Affordable Housing project in Nakuru. The project was finally completed earlier in the year and is ready for occupation.



The contractor working on the Ksh 64b Thwake Dam recently asked for more time to complete the first phase of the project.



A team from the AAK led by President Florence Nyole presented the Association's memorandum on the Affordable Housing Bill 2023 before the Parliamentary House Committee on Finance.



Kenya Airports Authority Board of Directors, led by Chairman Caleb Kositany (pointing) inspected the newly upgraded power backup generator system at JKIA.



Members of the Kenya Association of Manufacturers on a visit to Konza City to be appraised on the project's progress and available investment opportunities.



The Bagamoyo-Tanga-Horohoro/Lunga Lunga-Malindi Road, a road connecting Kenya and Tanzania that was commissioned under the East African Community, is on course.



The IEK recently unveiled the South Rift Branch Office in Nakuru. Among the guests were senior Nakuru County officials, IEK President Eng. Erick Ohaga and EBK Registrar Eng. Margaret Ogai.



Prof. Donath Mrawira, an expert in infrastructure asset management, speaks at ACEK's Road Infrastructure Asset Management training.



Residents of Nairobi City Carton informal settlement in Eastlands address members of the press. They supported plans by KISIP and the World Bank to upgrade infrastructure and improve their welfare.



KURA officials during the inspection of Mfangano Island Ring Roads in Homabay County. The 53-kilometre project will ease movement within Mfangano Island.

AAK CENSURES KURA OVER "DISCRIMINATIVE" EXPRESSION OF INTEREST ADVERTISEMENT



AAK President Florence Nyole and KURA Director General Silas Kinoti

THE Architectural Association of Kenya (AAK) recently wrote to the Kenya Urban Road Authority (KURA) over a Request for Expression of Interest (REOI) advertisement by the latter that it deemed exclusionary and unfair to local players.

In the letter addressed to KURA Director General Eng. Silas Kinoti and copied to Roads and Transport Cabinet Secretary Kipchumba Murkomen as well as Principal Secretary Eng. Joseph Mbugua, AAK President Florence Nyole noted that REOI published in Government newspaper *MyGov* specifically stated "The bidder and all other parties constituting the bidder shall have the nationality of the Republic of China."

"It is disconcerting that such exclusionary criterion can be given in a Kenyan procurement process 60 years post-independence and against the very values that the Kenyan Constitution upholds", read a section of the letter.

The contested REOI pertains to the design and build of the Nairobi Intelligent Transport System (ITS) and Junction Improvement Project. In its advertisement, KURA announced that the Government of Kenya had received an intent of financing from China's EXIM Bank and intended to use a portion of this money towards this project.

In her letter, Arch. Nyole reminded KURA: "The Public Procurement and Asset Disposal Regulations 2020 stresses on the transfer of technology, skills and knowledge through training, mentoring and participation of Kenyan citizens, where 75% of the employment opportunities must be reserved for Kenyans for works, consultancy services and non-consultancy services, of which not less than 20% shall be reserved for Kenyan professionals at management level."

She called for KURA to withdraw the REOI and reissue "only after adhering to the established legal frameworks and upholding the principals of local content and inclusivity".

CHINESE INVESTORS LAUNCH DEVELOPERS' ASSOCIATION

CHINESE investors in Kenya's real estate sector have finally launched their association. The Kenya Chinese Property Developers Association (KCDA) was launched in Nairobi recently.

According to KCDA President Zhang Jiaping, the association has been established "to act as a bridge to serve society and benefit humanity." He said his association would promote the healthy development of the real estate industry. "Our mission is to provide better and more sustainable housing products," he added. He promised that his members would follow all government regulations governing the construction sector.

Nairobi Governor Johnson Sakaja who was present at the occasion noted that there had been cases of collapsing buildings in the capital as well as surrounding areas, attributable to structural problems. "This is often due to unscrupulous developers disengaging the services of key professionals. I know the Chinese are not that kind of developers," he said.

The Chinese business community has accelerated investments in real estate over the last few years and has been involved in major residential developments in prime areas such as Kilimani.

MEGHA MARKETING EA LIMITED OPENS SHOWROOM IN NAIROBI



Left: Part of the display at Megha Marketing's new showroom. Right: Mr Jeegar Jitendra Shah, Director.

MEGHA Marketing (EA) Limited, one of the largest construction products suppliers based in Mombasa, has opened a showroom in Nairobi. The showroom is located in Binaa Complex along Langata Road in Karen.

The company, which was established in 2011 and has been serving the entire Coast region and beyond, hopes to replicate its success there in the Capital City. Although Megha Marketing's main line of business is Steel, Cement and Roofing Sheets, it stocks products across the entire building spectrum, from basic items such as nails and tools, to tiles, bathroom products, kitchen fittings and locks. The Nairobi Showroom will initially feature wall and floor tiles, kitchen tops, sanitary ware and locks.

According to Mr Jeegar Jitendra Shah, a director of the company, Megha Marketing decided to have a presence in Nairobi in order to expand the reach of the brands they are representing, given that Nairobi is the convergence point of business in the country. The company is the exclusive agent for leading brands such as Simpolo, Dorset and Hindware. It is also an agent for Grohe and Kohler, both major international brands in bathroom and kitchen spaces.

Mr Shah says although the showroom contains premium products featuring the latest designs, the prices are affordable. "We want to uplift the living standards of everyone", he says. He notes that one of the things that distinguishes Megha Marketing from its competitors is the company's choice of suppliers. "We choose our suppliers very carefully, looking out for quality, value, pricing and aesthetics."

Backed by a 150,000 square feet warehousing facility in Mombasa and a team of 250 members of staff, the company says it's ready to serve the Nairobi market.



Dorset industries' General Manager of Global Business, Atul Tyagi (left), with Mr Jitu Shah of Megha Marketing.



Mr Jeegar Jitendra Shah explains a point to guests during the launch.



Lynnete Gakuru, Kohler Sales Manager in Kenya, at the event.

Makasembo - a Standard Setter in Housing

Lapfund rolls out major project in Kisumu



As the need for quality and affordable living spaces grows in the country, developers are addressing the existing deficit through innovative high-density residential developments. In Kisumu, LAPFUND is pioneering the first modern gated residential community through its vast housing project in the city – Makasembo.

Kisumu is often cited as the most livable city in Kenya. With its clean, well-maintained roads and streets backed by a sense of order across the lakeside city, many commentators have rated Kisumu highly, with credit repeatedly going to the County Government.

Kisumu has seen tremendous growth in public facilities and infrastructure, attributed to a visionary County leadership that prioritizes development and is adept at lobbying the National Government for intervention whenever necessary. The hosting of major events such as the AFRI Cities Summit in 2022 and the ongoing campaigns for it to be one of the host cities for the AFCON 2027 football tournament have helped reinforce the Kisumu brand.

As the quest for decent housing gathers steam throughout the country, majorly being driven by the Central Government's agenda of affordable housing, Kisumu has not been left behind. However, unlike in Nairobi where the concept of self-contained gated communities is common place, it is only now that this otherwise progressive city is witnessing the first such project through LAPFUND's Makasembo Housing Project.

LAPFUND, a retirement benefits scheme that draws membership largely from County Governments and Water Companies, has embarked on a massive



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- Sikafloor® 161/264 - Flooring System
- Sikafloor®-3 QuartzTop - Floor Hardener
- Sikaflex®-11 FC - Joint Sealant

Façade

- Sikagard®-701 W - Water Repellent
- Sikasil® SG-20 - Structural Glazing
- Sikasil® WS 305 - Weatherproof Sealant

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- SikaCeram® Joint 510 - Tile Grout
- Sikaflex®-11 FC - Joint Silicone

Living Room

- SikaCeram®-80 - Tile Adhesive
- SikaCeram® Joint 510 - Tile Grout

Bathroom

- Sikadur®-31 CF - Secure Pipe Penetration
- Sika Seal®-105 - Waterproofing Mortar
- SikaCeram®-80 - Tile Adhesive
- SikaCeram® Joint 510 - Tile Grout
- Sikaflex®-11 FC White - Joint Silicone

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BUILDING TRUST



Construction is proceeding rapidly.



Showhouses are ready for prospective buyers to evaluate.

development consisting of more than 2,000 apartments at Makasembo area in the heart of Kisumu City. LAPFUND's other housing investments include LAPFUND Gardens in Lukenya off Mombasa Road (completed) as well as Belle Vue Park in South C, Nairobi (ongoing).

Makasembo is set to transform Kisumu's housing landscape with its well-planned layout, different sizes and categories of houses to suit different budgets and a host of amenities included in the development. When complete, Makasembo will be one of the largest residential developments in Kenya.

Designed by a leading Nairobi Architectural firm, Aaki Consultants, the project is being implemented in phases with Phase 1 currently at an advanced stage and set for completion by the end of this year.

According to Harriet Kuria, Director, Southfront Properties which is the company handling sales and marketing for Makasembo, the housing project will change the face of Kisumu.



Harriet Kuria, Director, Southfront Properties Ltd



Besides creating jobs and supporting local businesses, Harriet reckons the Makasembo project will give the location a major facelift, noting that this is the first development of its kind in the city.

“It is a well-organized gated community featuring paved spaces, a kindergarten, children’s play area, ample parking, commercial spaces and a steady supply of water through boreholes,” she says. “Makasembo is setting the standards in Kisumu.”

Harriet says the County Government of Kisumu has been very supportive of the project, with the governor personally taking a keen interest in its progress. “Professor Nyong’o (Kisumu Governor) asks for and receives regular updates on the status of the project and has even made site visits.”

She adds that a major factor in favour of this project is that unlike many other residential developments where a developer tries to sell off-plan in order to raise the money to advance a project, LAPFUND has already availed the funds for Makasembo meaning that construction will continue uninterrupted.

“This means we are going to deliver this project on time”, says Harriet.



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We are proud to be associated with AAKI Consultants on the Makasembo Housing Project, Kisumu, as the Landscaping Consultants





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MAKASEMBO AT A GLANCE

- Over 2,000 units set on 11 acres piece of land
- Daycare center and nursery school
- Commercial centers below each block
- Communal playgrounds
- Adequate borehole and County water
- Capacity underground and roof storage tanks
- High-speed lifts
- Ready ICT infrastructure
- Ready MATV infrastructure
- Semi open roof terrace for clothes drying yards, views areas of Kisumu City and its environs
- Solar street lighting
- Solar water heating for medium-cost units
- Back-up generator for common services
- Ample ground and semi-basement parking
- Well landscaped manicured lawns
- Secure perimeter fencing
- Manned access and exit gates
- Central garbage collection points

What does Makasembo Entail?

PROJECT DETAILS

Makasembo is a low and medium-cost housing project set out on approximately 11 acres piece of land, right in the heart of Kisumu City near the Moi Stadium and Kisumu Polytechnic. The land where Makasembo is located was previously occupied by a few, old County Council bungalow houses. The existing residents were relocated and compensated, in order to facilitate the creation of a modern affordable housing development in line with the Kenyan Government development agenda, that could accommodate more homeowners, and with the re-located residents assured of first priority in purchasing the new houses.

According to Project Architects- AAKI Consultants, the client's brief was firstly for the project consultants to carry out feasibility studies and advise of ways to make better use of this underutilized piece of land at the heart of Kisumu City, in order to realize good returns on investment. The feasibility studies informed that an affordable housing project would be successful and fetch good returns on investment. Upon approval by the Client, the consortium team, led by Aaki Consultants, under the leadership of Architect Francis Gitau Mungai and Architect Kariuki Muraya, embarked on the designs for the Makasembo low-cost housing project. The team, having already been involved in design and implementation similar projects (most recently 872 low-cost units at

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The Quantyman Associates Team is proud to be associated with AAKI Consultants and LAPFUND on the Makasembo Housing Project Kisumu as the Quantity Surveyors



Kisaju-Kajiado for Mwalimu National Sacco), understood exactly what was required of the project.

The project broke ground in June 2022.

Makasembo housing project consists of 4 blocks of low-cost housing and 2 blocks of medium-cost housing units rising to between 10 and 11 floors. Each of the blocks has 2 levels of parking, i.e., ground floor and semibasement level and has adequate high-speed lifts. The design is in such a way that the sub-basement parking is slightly elevated from the ground level thus allowing for openings which aid in natural ventilation and daylighting. Besides the parking, the ground floors of each block also have conveniently located commercial areas to cater for the needs of the house occupants. Each block will have roof terrace area to be used as clothes drying yard as well as offering areas for roof water tanks and magnificent views of Kisumu City and its surrounding. Additionally, each of the medium-cost units will be served with solar heated water in kitchens and bathrooms.

In terms of finishes, external walls and internal walls will be plastered and painted, the units' floors will be finished with ceramic floor tiles and ceramic wall tiles in wet areas while the staircases and high traffic areas will be finished in terrazzo, which is a hard wearing floor finish.

In addition to the housing units and commercial areas, Makasembo will also have a daycare centre and a nursery school for the use of the residents and public. The estate is also served with two high-yielding boreholes, capacity underground

and roof storage tanks as well as solar powered street lights. With a ground coverage of just about 40% for houses, roads and parking areas, 60% of the rest of the grounds area is well landscaped, with designated play grounds areas.

Phase 1 of the project is currently at an advanced stage and is expected to be complete at the end of this year. Phase 2 and 3 of the projects are expected to commence this year and are expected to be ready for occupation by 2026", says Architect Douglas Mugo of AAKI Consultants.

So far, the project has run smoothly albeit a few challenges which are normal and manageable. Arch. Mugo attributes this situation to the synergy among all the members of the project team and all involved stakeholders.

One of the challenges that the team has faced is the situation of rising of the exchange rates between Kenya Shilling and foreign currencies which has had a negative impact on the cost of goods and materials. "Procuring materials and labour for a project of this magnitude has also been a challenge since not everything is available in Kisumu", he says. "Some materials and skilled labour have to be brought in from other counties to supplement local availability." It was however the project team's wish that locally available materials and labour should be used on the project.

When complete, Makasembo housing estate will consist of more than 2000 houses of 1,2 and 3-bedroom typologies but differentiated through size, design features and pricing.



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Low-cost Units:

- 1-bedroom units measuring 30 square meters
- 2-bedroom units measuring 45 square meters
- 3-bedroom units measuring 80 square meters

Medium-cost Units:

- 2-bedroom Standard units measuring 60 square meters
- 2-bedroom Premium units measuring 80 square meters
- 3-bedroom units measuring 80 square meters

"The uptake has been amazing", says Harriet Kuria, who is in charge of Sales and Marketing. "We sold an entire block of the low-cost apartments, in just eight months", she says. There has been immense interest from the market with buyers snapping up the units to live in or use as investment. A significant portion of customers are also coming from the diaspora, reveals Harriet. "We even got a client from as far as Korea", she discloses.

"A number of those buying the units are former residents of Makasembo and are doing so partly because of sentimental attachment to the area." Other buyers include organized groups such as *Chamas*.

Harriet stresses that the houses are available to anyone who wishes to purchase and are not reserved for any particular group or government employees. The showhouses of the different typologies are ready and Harriet assures that what potential buyers see in the showhouse is what they can expect. "With us, what you see is what you get," she says. The terms of payment are flexible and are available from the selling agents.

PROJECT TEAM

CLIENT: LAPFUND

CONSULTANTS

Architects: **AAKI Consultants**
Quantity Surveyors: **Quantyman Associates Ltd**
Electrical & Mechanical Engineers: **Norkun Intakes Limited**
Civil & Structural Engineers: **Professional Consultants Limited**
Landscape Architects: **Lariak Landscapes Limited**
Sales and Marketing: **Southfront Properties Limited**
EIA Experts: **Hope Urban Environmental**

CONTRACTORS

Main Contractor: **Kisumu Concrete Products Ltd**
Electrical, Generator Supply and Installation Subcontractors: **Central Electricals Ltd**
Plumbing, Drainage and Fire Fighting: **Aqualine Plumbing Limited**
Borehole Drilling and Equipping Subcontractors: **Aqualine Plumbing Limited**
Lifts Supply and Installation Subcontractors: **Skymax Elevators Ltd**

About the Architects - Aaki Consultants



From left: Arch. Gitau Mungai, Arch. Kariuki Muraya (Partners, AAKI Consultants) and Arch. Douglas Mugo, Project Architect.



AAKI Consultants is one of Kenya's leading architectural firms. It is based in Westlands, Nairobi, and has vast experience in East Africa. AAKI Consultants offers services in Architectural Design, Project Management, Urban Planning, Feasibility Studies and Financial Analysis both for public and private organizations.

For the over 30 years that it has been in existence, AAKI Consultants has championed a sustainable approach to design through various projects, ranging from Urban Masterplans, Office Blocks, Hospitality and Housing Projects, Educational, Religious, Financial, Civic and Cultural Buildings, Health Care Projects, Individual Homes and various Interior Design projects. This has emanated from the effective leadership of the firm's partners Arch. Francis Gitau Mungai and Arch. Stephen Muraya Kariuki, who have over the years built a synergistic relationship with the Technical and Administrative staff.

Some of their notable projects include: The Iconic Kenya National Library, Library for East Africa School of Aviation (EASA), Enashipai Resort and Spa, Lake Naivasha Resort, Glee Hotel- Nairobi, City Cabanas, Doctors Plaza, CIC Plaza, Mayfair Centre, Kenya Police Sacco Headquarters, One Padmore Place (JKUAT-SRBS) Office Block and Headquarters for Agriculture and Food Authority (AFA). Others are National Intelligence Academy, South Eastern University of Kenya (SEKU) – Kitui Town Campus, Kenya Institute of Management (KIM) – South C, Makasembo Housing Project for LAPFUND, Mwalimu National Housing Scheme in Kisumu, Apartments for BRITAM, Hazina Close Milimani Apartments for NSSF, Various branches of Family Bank, Cooperative Bank and various Religious Institutions among many others.

AAKI Consultants is undertaking the Makasembo Housing Project in Kisumu for LAPFUND as the Lead Consultants in a Consortium that comprises of the following reputable indigenous firms:

Quantlyman Associates Limited – Project Quantity Surveyors and Financial Advisers

Professional Consultants – Project Civil and Structural Engineers

Norkun Intakes Limited – Project Services Engineers

Lariak Landscapes Limited – Project Landscape Architects

South Front Properties – Project Marketers

Hope Urban Environmental – Project EIA Experts

About the Main Contractor - Kisumu Concrete Products



Kisumu Concrete Products Limited is one of the best-known companies operating from the western city of Kisumu.

A giant in the construction industry, the company offers a wide range of precast concrete products, serving the needs of all types of building contractors. With a dedicated concrete laboratory and wide range of equipment including quarry machinery, Kisumu Concrete Products Limited leverages not only on these important assets but also on exemplary customer service that sees customers seeking its products repeatedly.

The company's vision is to be a one-stop shop/supplier of premium concrete products. The company also has a large fleet of trucks ensuring timely supply of materials to mega projects in the region.

Since Kisumu Concrete Products was established in 1978, it has achieved tremendous growth and has been involved in supply of construction materials and services to numerous projects in the region. Among them are Jomo Kenyatta Stadium, the CFAO Motors Kenya Mega Showroom Kisumu, Lake Basin Mall, Kisumu Port, Kakamega Hill School, West End Mall, and many others.

As the main contractor for the LAPFUND Makasembo housing project, the award-winning Kisumu Concrete Products Limited will use its extensive experience in the construction industry as well as excellent relations with its partners to deliver the project to the best of customer expectations, and to maintain its reputation as one of the leading players in the construction industry in Kenya.



Mr Vimal Rabadia, Chief Executive



Mr Arvin Rabadia, Operations Director

The Saruni

A high-end residential development in Nairobi

Riverside Drive is considered one of Nairobi's most prized real estate locations. Its lush greenery and tranquility, a well-maintained road network and proximity to amenities has attracted the cream of local and international residents, businesses, diplomatic missions and international organizations.

Recognizing this status, developers have continued to invest in the area through high-end residences and Grade A offices.

One of the upcoming residential properties to watch on Riverside Drive is The Saruni.





Expected to set standards in apartment development, The Saruni has been described as a masterpiece of contemporary living, richly detailed, masterfully blending the indoors and outdoors with an alluring charm and a distinct touch.

Saruni is Samburu for sanctuary. The Saruni is therefore envisaged as a place where one can retreat in peace and comfort amid luxury.

According to Mr Henry Wambaa of Turner & Townsend, who is the project manager tasked with delivery of this magnificent project, the client, Riverside Strand Property Development Company Ltd, desired to develop a distinctive facility in a lush leafy setting with modern amenities and unrestrained spectacular views from generous balconies. Thus, The Saruni, comprising a variety of 1, 2, 3-bedroom apartments and 4

duplex penthouses, each with its rooftop terrace, was conceived. Additionally, two airy sky gardens spread over different levels will provide a serene space for appreciating nature.

In total, there will be 95 units of various configurations. One bedroom has a plinth area starting from 61 sqm, 2 bedroom starting from 105 Sqm and 3 bedroom starting from 193 Sqm. The four duplex apartments start from 555 Sqm.

The building has 20 floors, 3 basements and 2 sky gardens.

According to Arch. Moses Ngari of Innovative Planning & Design Consultants (IPDC), who are the architects, each floor plan has been meticulously curated and designed



with the perfect integration of indoor spaces in mind, establishing an aura of homely warmth and relaxation.

“The architecture and interior design strategy pays keen heed to match the desires of potential home-makers looking to find their perfect sanctuary.”

One of the key features of the project’s design that helps establish this warm and convivial atmosphere is the inclusion of large windows in every apartment. “These windows don’t just provide aesthetically pleasing views, but also allow a generous infusion of natural light into the living quarters”, says Arch. Ngari. “This not only augments the brightness of the apartment but also imparts a sense of openness and connectivity with the outside world.”

Furthermore, every apartment plan includes a stylishly designed kitchen equipped with premium appliances. This offers residents the opportunity to enjoy a high-end culinary experience within the comfort of their own home, thereby consolidating the overall atmosphere of luxury and sophistication offered by the project.

In addition, the whole apartment features high-quality fittings and furnishings. Arch. Ngari underlines that these additions are not accidental but are carefully chosen to supplement the overall aesthetics of the apartment, laying the foundation for residents to lead a serene, luxurious lifestyle.

“The high-quality fittings and furnishings throughout the apartments ensure a uniform theme of premium, resplendent living that is as functional as it is attractive”, he adds. Overall, the project is designed to offer a complete, high-end living space forged with careful planning, superior design aesthetics, and top-of-the-line amenities.

with a proven record of delivering this kind of project. The team is currently executing the project and is expected to hand over in January 2025.

PROJECT TEAM

- Client – Riverside Strand Property Development Company Ltd*
- Project Manager – Turner & Townsend*
- Architect – Innovative Planning & Design Consultants Ltd*
- Interior Designers – Grasp Design Ltd.*
- Quantity Surveyor – Tower Cost Consultants Ltd*
- Civil & Structural Engineer – Abba & Wandu Engineers*
- Mechanical and Electrical Engineer – Infraplus Ltd*
- Main Contractor – Solitaire Construction Ltd*
- Plumbing Subcontractor – Jaisham Ltd*
- Electrical Subcontractor – Master Power Systems Ltd*
- Lift Installation Subcontractor - Euro Lifts Ltd*

Facilities

The Saruni offers a myriad of amenities to enhance and give resident a heightened living experience. These include:

- Two Sky Gardens, each with a spectacular view of the city. The Sky Gardens are a social space with lush greenery, observation decks and an open-air terrace.
- Heated Swimming pool
- Steam Room
- Sauna
- Fully Fitted Gym
- Ample parking spaces
- A courtyard of Ground Floor level.
- 24 Hour CCTV Surveillance
- On-site management facilities

Project Team

A highly experienced project team is behind this development, underscoring the developer’s commitment to ensure quality delivery.

The project managers, Turner & Townsend, are an award-winning global consultancy with extensive experience. “We have been in the East Africa Market for over 35 Years. Turner & Townsend has been in operation for 75 years across the globe with a global presence of 125 offices in 48 countries”, says Mr Wambaa.

The architects, IPDC, are well known and are behind some landmark projects in the country such as The Address Office Building, Park Inn Hotel, One General Mathenge and The Marquis just to mention a few.

All the other consultants, main contractor and subcontractors have been selected from a pool of distinguished organizations

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Website: www.euroliftsealtd.com

We are proud to be associated with The Saruni as the Lifts Sub-contractor

Jennifer Musyimi, President, IQSK

“Ambition is the fuel that keeps you alive”

JENNIFER MUSYIMI is a well known figure in the Kenyan construction industry. A quantity surveyor by profession, she is a self-confessed go-getter and stops at nothing to streamline things everywhere she works. We asked her a few questions about her career and the industry.

CKS: Please introduce yourself

JENNIFER: I am Jennifer Musyimi, a quantity surveyor and project manager. I am the currently President of the Institution of Quantity Surveyors of Kenya (IQSK).

I was born in Machakos, where I went to school before joining the University of Nairobi for my first degree. Later on, I enrolled for my Masters.

When did you develop an interest in the construction industry and specifically quantity surveying?

As a student, I never desired to pursue Medicine (a popular career for many students who are good in sciences). I loved Math and Physics and that's how I ended up in the construction industry, which I totally love. It's the best thing that happened to me.

“

Quantity surveying is a very versatile career that makes you a good fit in the construction industry. The profession is well-regulated for the benefit of the public. It's no surprise that it's grown in popularity in schools, with over 2,000 practitioners as of today.

”



Do you have siblings or other relatives who are in the industry who might have inspired you?

I come from a big family of seven, and I'm the first born. None of my family members are in this field but of late there is uptake from my mentees who get inspired by my talks during High School career days.

Take us through your journey as a quantity surveyor and project manager

My journey has been exciting right from my internship days and my first job with Safaricom, where I learnt corporate management skills that aided my big ambition to go for top seats in the industry. I have been a board member at the National Construction Authority (NCA) where I headed several committees and left an indelible mark in setting corporate strategy. Privately, I run a quantity surveying and construction firm where I oversee operations when I'm not busy with leadership at IQSK.

What are some of the most interesting projects you have handled in your career?

I have been involved in the rollout of Java restaurants and Airtel shops, besides several iconic buildings like the one-stop border post in Moyale, Xinhua News Agency headquarters, the Covid Centre for Nairobi Hospital as well as the Kidney Centre for Kenyatta National Hospital.

You are currently President of the Institution of Quantity Surveyors of Kenya (IQSK). What have you been able to achieve during your term so far?

It's been incredible leading this great institution where I have streamlined operations to serve members better. In addition, I have been instrumental in lobbying for affordable housing projects for our members.

What is your take on the quantity surveying profession in Kenya?

Quantity surveying is a very versatile career that makes you a good fit in the construction industry. The profession is well-regulated for the benefit of the public. It's no surprise that it's grown in popularity in schools, with over 2000 practitioners as of today.

Recently there have been murmurs by a section of the Project Management fraternity to the effect that they are being emasculated by fellow professionals especially Architects and Quantity Surveyors. Do you think their concerns are legitimate?

Project management is a great career for those who enjoy taking on project leadership. This means anyone can be a project manager with or without core competence. The concern is to ensure quacks don't invade this space.

What does Jennifer Musyimi do away from construction sites and BoQ/tenders preparation? How do you unwind? What are your hobbies?

Jen plays golf, and is a mother and loves to hang out with her loved ones whenever there is a chance.

What are your future plans? Do you intend to retire or venture into other activities? How about politics?

Retire? *Ulisikia wapi?* (where did you get this idea?) I will most likely become a developer so that I can manage bigger teams and ventures. And don't be surprised if you hear of my appointment as an envoy somewhere!

What can you tell young women who see you as a role model having achieved so much while still young?

Education sets a woman free. Ambition is the fuel that keeps you alive. Get a balance between society dogma and your life goals.

Why Geotechnical Investigations are Crucial

Geotechnical site investigations give information on the subsurface conditions of a construction site.

Groundwater conditions, soil or rock types, and soil thermal resistance are among the factors considered. The findings determine several aspects such as possible cost of the construction project, the type of foundation required, the structure's construction method, and so on.

Before beginning any building project, geotechnical investigations are required. They entail investigating the soil, rock, and groundwater conditions on the construction site. Here are a few crucial points:

Site Characterization

Soil Composition: Determine soil types, their properties (density, grain size, moisture content), and their bearing capacities.

Rock Strata: Assess the depth, type, and stability of underlying rocks if present.

Groundwater Level: Identify the depth and fluctuation of the water table as it affects foundation design and construction.

Purpose:

Foundation Design: Understanding soil conditions helps engineers design appropriate foundations that can bear the expected loads safely.

Risk Assessment: Identify potential risks such as landslides, soil liquefaction, or settlement issues that may affect the structure's stability.

Construction Methods: Choose suitable construction techniques and materials based on the site's geotechnical characteristics.



Methods

Boring and Sampling: Drill boreholes to collect soil samples at various depths for laboratory analysis.

In-situ Tests: Conduct tests on-site to measure parameters like soil density, moisture content, and bearing capacity.

Geophysical Surveys: Use methods like ground-penetrating radar or seismic surveys to map subsurface conditions without drilling.

Report and Recommendations

Geotechnical Report: Summarizes findings, suggests foundation types, and provides recommendations for construction based on the soil's characteristics.

Engineering Solutions: Recommend mitigation strategies if any issues or risks are identified, ensuring safety and stability during construction.

Importance

Risk Mitigation: Avoid unforeseen issues during construction that may lead to delays, increased costs, or structural failures.

Structural Integrity: Ensure the stability and durability of the constructed facility by designing foundations suited to the site's conditions.

These investigations form the bedrock of a safe and stable construction project, helping engineers and architects make informed decisions to ensure the longevity and safety of the structure.

Advancements in Reverse Osmosis



Reverse Osmosis is a multi-stage water treatment process that removes contaminants from unfiltered water by forcing it through a semipermeable membrane. In this article, Davis & Shirliff's Water Treatment Sales Engineer MOHAMED OMAR (pictured) delves into the subject and discusses best practices and latest technology.



In today's rapidly evolving global landscape, the quest for water security transcends mere access, extending to the imperative need for purified water for diverse applications. Surface water bodies, contaminated by domestic and industrial waste, pose unprecedented challenges to conventional treatment methods leading to a growing reliance on groundwater. However, excessive groundwater abstraction, exacerbated by climate change, is greatly impacting water quality.


The World Health Organization's (WHO) stringent standards for water quality combined with the ever-deteriorating water quality highlight the need for advanced treatment methods. To address these challenges, a paradigm shift toward innovative solutions, particularly Reverse Osmosis (RO) technology, has been ongoing. RO technology has been, for a long time now, a viable solution for treating water with high levels of salinity, as well as specific contaminants such as fluoride, hardness, bicarbonates, and heavy metals to acceptable standards, although misconceptions persist regarding its perceived high capital and operational costs.

Understanding the fundamental principle of osmosis is crucial in demystifying RO technology. The process involves forcing raw feedwater with high dissolved solids through a membrane against the natural osmotic process, resulting in purified water.


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Achieving a balance between high recovery (ratio of purified to feed water) rates and maintaining acceptable purified water quality is vital for system efficiency and sustainability.

RO units are categorized based on raw water salinity levels, ranging from low brackish, high brackish to seawater, each requiring specific membrane types and operating pressures, subsequently determining the energy requirements and costs. The capital and operational costs increase with rising salinity levels, emphasizing the importance of selecting the correct RO unit.

Effective pre-treatment before feeding water to the RO unit is critical to prevent damaging the heart of the system which are the membranes. Anti-scale chemical injection into the feedwater of the reverse osmosis unit plays a vital role in preventing scale deposition, ensuring the system's optimal performance. However, periodical cleaning of the membranes may be necessary to restore system performance, especially after long periods of operation resulting in scale deposition which consequently reduces the production capacity of the RO unit.

In off-grid areas, power supply to RO systems is a challenge which has led to increased adoption of renewable energy sources, particularly solar power. Advancements in solar technology offer alternatives like solar grid-tie systems and off-grid battery-less RO units, to minimize energy costs and address power deficiencies. This alternative is also applicable to either supplement or replace grid power, where available, as a cost-reduction measure.

The latest advancement, the Closed-Circuit Reverse Osmosis (CCRO), operates in a closed-loop configuration, optimizing water recovery thus minimizing waste to between 10 – 20%. Traditional RO units can waste up to 70% of the feedwater depending on the salinity levels. While characterized by higher investment costs compared to traditional RO configurations, the CCRO enhances overall system efficiency and sustainability, resulting in significantly lower operational costs in the long run.

As the demand for purified water intensifies, demystifying RO technology becomes pivotal in the quest for water stewardship. A comprehensive understanding of different RO configurations, raw water quality classifications, energy requirements and alternatives, and pre-treatment processes is key to managing the water-energy nexus globally, especially in developing countries which are disproportionately affected by challenges of water insecurity.



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