A candid talk with AAK’s first female President

Emma Miloyo

The NCA Quarterly

September 2018

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Is There Space for Women in The Construction Industry?

President Kenyatta Visits Nca-run Affordable Housing Village

A candid interview with the first woman to rise to the top post of AAK in its 51 years of existence.

How young women are making their mark in the construction industry

Why recycling and waste management is the answer

Regulars

Tax Planning (Saving on Tax)

Demolishing Sustainably
It took the Architectural Association of Kenya 50 years to elect a woman to its top spot. Progress, considering that it is still the only major professional association within the construction industry to do so. We talk about progress and shattering of the glass ceiling but the statistics are still far below expectations when it comes to women in construction. This issue of the Quarterly highlights the pioneers, the women who have dared to go so that others may follow. Our cover personality, Emma Miloyo, is quite literally the IT woman of the moment as far as construction is concerned. We discuss her prolific career and her plans for steering the industry towards more gender inclusivity. We also had the pleasure of meeting young, female professionals in the industry, and they share their struggles and triumphs, something many of our readers will be able to relate to. One of them, Makena Ireri Wandia, was part of the project team for the world’s first ever Nuclear Emergency Response Centre and already had her Masters in Civil Engineering, all before she turned 25.

We hope you will be as inspired by their stories as we were.

The recent demolitions have shaken the industry, as our government prepares to reclaim riparian lands. John Kabuye examines the concept of ‘green’ demolitions, and why deconstructions provide an opportunity for the growth of supportive industries all while ensuring minimal degradation of the environment. In the same breath, we also examine how recycling and waste management remain the key to dealing with plastic waste; another robust industry in the making.

It truly is an exciting time for the construction industry. The recently established Affordable Housing Village at the Nairobi International Trade Fair Grounds is proof of how far the uptake of technology has gone. We are ready to build faster, more sustainably and with bigger cost savings by thinking outside the box. Read on to discover more on the same.

If you would like to join our growing family of contributors, we are happy to let your voice be heard. Write to us via quarterly@nca.go.ke. Let us know what you think of this and other past issues, and how we can enrichen your reading experience.
Brighton Amwayi
A communications graduate with a wealth of experience in the field. He is passionate about strategic and development communication and has previously worked with the Kenya Institute of Curriculum Development and the Kenya News Agency.

William Maranga
Holds a Bachelor of Commerce Degree with a concentration in Marketing and Communication. He is also pursuing a Bachelor of Mass Media and Communication with a concentration in Corporate Communications. He has gained vast experience in media relations, public speaking and presentation, communication strategy formulation and advanced writing.

John Kabuye
A Building Surveyor; Sustainability Consultant at BESIC Group where he is also the founder and MD.

Wangui Kabala
Wangui is a trained public relations professional and media personality with almost ten years’ experience in both radio and television. She is also a writer, published in both local and international publications. Wangui’s media background has equipped her with excellent writing and oratory skills, as well as creativity and attention to detail—abilities that are invaluable in the profession. Wangui holds a Master of Business Administration (MBA) degree from Strathmore Business School. She also holds a Bachelor of Arts-Communication (Public Relations) from Daystar University and Diploma in Business Administration from the Association of Business Executives (UK).

Ruth Onkangi
Ruth Onkangi is an officer at the Research and Business Development Department of the National Construction Authority. She is a nature enthusiast, very much open to matters sustainable construction and research.

Sharon Otieno
Sharon Atieno Otieno is a marketing and communications professional with a wealth of knowledge and experience from working in both public and private sector. She holds a Bachelor of Commerce (Hons.) and is currently pursuing a Master of Business Administration (MBA) both from University of Nairobi. She also has a diploma in project management from Kenya Institute of Management and is a Certified Monitoring and Evaluation Professional. Ms. Otieno is a full member of the Marketing Society of Kenya.
WHAT’S NEW in 2018?

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Central Nyanza: KISUMU
Construction site management
18 - 19 October 2018

MT. Kenya: NYERI
Project cash flow management
22-23 November 2018

Kiambu: KIAMBU
Construction risk management
6 - 7 December 2018
While testosterone is not a factor to be a player in the construction industry, for the longest time it has seemingly been a preserve for men, informally referred to as an “old boys club.” Does the labourforce within the construction industry have a gender diverse representation? Is there an unconscious or deliberate bias on gender diversity?

The National Construction Authority in the Skilled Workers’ Survey of 2015 established that majority (68.8%) of construction workers in Kenya are youth, that is aged below 35 years, with 24.9% of them being aged between 26 to 30 years. Further, of the 138,006 workers identified in the survey nationwide, only 4,089 were female. This represented a mere 4% of the labourforce.

Of the 4,089 female workers registered; 2,323 were registered in Mt. Kenya region, translating to 57.4% of the female workforce in the construction industry. The regions neighboring Mt Kenya region, Nairobi Region and Upper Eastern regions, had 13.7% (553 female workers) and 8% (322 female workers) respectively.

This mirrors women’s involvement amongst industry professionals as the female representation in these circles doesn’t shift very much from that of the skilled workforce.

The industry is teeming with exciting, challenging but rewarding professional roles ranging from building surveyors/quantity surveyors, engineers, architects, ecologists, health and safety managers, economists, accountants, sustainability consultants, construction managers, project managers, human resource managers, IT experts, construction and property lawyers, interior designers and even urban planners yet there is limited enthusiasm amongst even the brightest and most ambitious of female workers for taking the plunge into the construction labourforce.

In both recent and past times, women have handled far more challenging roles than digging holes, laying bricks, pouring concrete but they seem dissuaded from joining the construction industry.

Kenya is building momentum towards delivery of the Vision 2030 and realization the Big Four Agenda. Infrastructure underpins every sector and is an all-time top political agenda. Delivery of these goals hinges on a skilled and adequate workforce. Women form close to 51% of the population, and successful building of the nation is a collective effort which requires a greater involvement of majority of its populace as part of its workforce. Women are the forgotten but much needed labourforce. To inject dynamism as well as add muscle for delivery of innovative and sustainable infrastructure they need to be fully looped in.

The increased enrollment of women in science and construction related courses is a partial victory. However, the picture dims again as the industry is still weak in attracting and retaining women in fulfilling careers within the construction world.

Women’s retention and progression in the sector is a silent but loud cry considering the few women in senior roles in the sector as many remain in the lower job groups of the corporate hierarchy. In addition, there is a high number of women leaving the sector due to equality and diversity concerns. Studies show that many women who join the construction industry, leave it within five years of joining!

The sector plays an important role in stimulation of the economy. It
The NCA Quarterly

therefore needs a robust and reliable workforce which requires managing this outflow of talented, industrious and skilled women. The high number of women enrolling in the sector related courses shows that women are interested in construction. The same 2015 skilled workers’ survey established that there are more female construction workers in the young age groups, than in the older ones. The proportion of female construction workers decreases approximately linearly, with age. This could be attributed to the fact that more young women are changing their attitudes and perception towards construction-related jobs which have been a preserve of men. The great efforts by the world towards empowering women are finally bearing fruits and more so to the youth who are more amenable to change.” The challenge of older women shying away from the construction field can be remedied through policies that encourage career extensions for mature women in the construction industry.

Increasing the inflow of women coming into the sector is one thing but retaining them is another, many thorns choke them from thriving in this construction industry ground. The high outflow of female workers indicates that we need to create room for them to be players and remain in the sector.

Creating room involves updating of legislation and policies to compel and support best practice in leadership, supporting returners (from extended breaks due to maternity leave, further studies or other family responsibilities) and reciprocal mentoring should be encouraged. In addition, recognizing excellence by women in construction will go a long way in making them and the potential they have visible.

Further, boosting apprenticeships, tackling bias in recruitment and pay gaps will greatly uphold equality, diversity, breaking down sexism, unconscious and deliberate bias. Statistics in developed countries indicate that averagely women in construction are paid 12% less than their male colleagues with the same job responsibilities. Career path in the construction sector is highly viscous; it neither favours up skilling nor support retirement planning and flexible working. The medical and hospitality industry are some of the sectors that have made remarkable strides in gender diversity and equality, the construction industry can emulate them.

There are many initiatives put in place to create space for female workers in the construction sector to thrive but as long as they remain initiatives then we will have a slow march in progress. The ‘initiatives’ need to become second nature to usher recognizable and sustainable change.

Women can also build something that will outlive them but we need to uproot certain culture and unconscious bias in the sector to make it more gender-diverse workforce as part of space creation for females. Levelling the playing field and normalizing women’s involvement in the industry isn’t really a choice, it’s common sense.*
His Excellency President Uhuru Kenyatta on Thursday 4th October toured the Affordable Housing Village at the Nairobi International Trade fair. The village, an initiative of the State department of Housing and Urban Development and managed by the National Construction Authority, provided a platform for exhibitors to showcase various alternative construction materials and technologies that can be used in implementing the affordable housing pillar of the president’s Big Four Agenda.

On hand to receive President Kenyatta for the tour were Housing Principal Secretary Charles Hinga Mwaura and NCA Acting Executive Director Eng. Maurice Akech. President Kenyatta took time to listen to mini presentations on the merits of the various technologies which included extended polystyrene (EPS) and interlocking blocks. In recognition of the cottage industries’ place in the Big Four Agenda, the Head of State also sampled various products from the jua kali sector that will be used as implements in the housing projects.

The Authority was tasked with managing the project by Housing PS Charles Hinga earlier in the year. Different firms expressed interest in exhibiting at the village, and a few were selected by a Committee and allowed to showcase affordable, innovative building technologies and materials (IBTM) that will potentially be applied post appraisal in the construction of the 500,000 affordable housing units.

The exhibition is set to continue into 2019, with a training element being introduced in order to impart critical skills to contractors and construction workers in order to enhance adoption of the IBTM.

Affordable Housing is part of the Government’s ‘Big Four’ agenda towards the country’s transformation by the year 2022.

The State Department for Housing and Urban Development has been mandated with the task of structuring and delivering on this key agenda in urban areas across the country through efficient, cost effective and innovative delivery models.
A materials supplier (extreme right) explains utilisation of IBTM technology to President Kenyatta (left) and NCA Executive Director Eng. Maurice Akech (centre)
The pride of Africa
EMMA MILOYO

A candid interview with the first woman to rise to the top post of AAK in its 51 years of existence

Words by Wangui Kabala
In the local construction industry, the name Emma Miloyo has been heard for years. The newly appointed President of the Architectural Association of Kenya has risen through its ranks over the years, and, fifty one years after the association’s formation, becomes the first woman sitting at the apex position.

We meet Emma at her architectural practice, Design Source Limited. The beautifully curated space reflects the firm’s interior design offering, with fine lines and bold colour; a contemporary artist’s creative haven. Emma and I, both old girls of the Kenya High School, reminisce about the good old days and what prompted her to pursue this line of work.

“I have always been an artist and a creative, and architecture was a natural path for me,” Emma says. Her Bachelor of Architecture is from Jomo Kenyatta University of Agriculture and Technology (JKUAT), having graduated in 2006.

“My graduating class was made up of 12 students, and 4 of those were women. Now it’s better as the school has some affirmative action policies which have seen female students make up almost 50% of the student population.”

After graduation, Emma worked for a few firms, sitting her Board of Registration of Architects and Quantity Surveyors (BORAQS) exam in 2009, thereafter becoming a registered architect.

“I’ve been in private practice ever since,” she says. Emma is a co-director at Design Source, the other director being her husband, Chris. “Husband and wife firms are more common than you think,” Emma laughs. “Not just in Kenya but worldwide.” Emma and Chris met in college, where the dream for their firm was born. On their website, Design Source is listed as a ‘multi-disciplinary firm of architects, interior designers and project managers’. Emma explains, “The firm deals with corporate interiors in addition to conventional architectural projects. That certainly gives us an edge in the market as we are able to offer clients more services, and can transform their spaces both inside and out.”

So, does being a woman make her a better architect? “Gender diversity is important to any profession,” she says. “Each gender brings something different to the table. As a woman, I will bring out different aspects of a space, and a man will in turn bring out another set of qualities. Just as our different cultures see us view the world from different lenses, so does our gender.”

In 2011, the country was still abuzz with the exciting facets of the new Constitution, which has replaced the somewhat antiquated independence constitution of 1963. “It was an exciting time to be a woman, especially professionally,” Emma says. “Suddenly, there was a wave of advocacy for inclusion, and a time of vibrant change.” Riding that wave, Emma run for her first elected post within AAK. She laughs. “Not a day I’m likely to forget. I came straight from a 10 am surgery to the Annual General Meeting (AGM) at 2pm, and was elected as Vice Chairperson of the Architects Chapter.” AAK has seven chapters in total: Architects, Engineers, Town Planners, Construction Project Managers, Quantity Surveyors, Environmental Design Consultants and Landscape Architects.

Two years later, Emma naturally ascended to Chairperson of the Architects Chapter. “My tenure as Chair was very exciting. I
managed to revive the AAK Awards of Excellence in Architecture, as well as our corporate magazine.”

In 2015, Emma vied for yet another position within the association, this time being duly elected as the AAK Vice President. Interestingly enough, she was unopposed for the position of president in 2017, becoming the first woman to hold the position since 1967, the year AAK was founded.

“The time was ripe for a woman to take the lead,” Emma says. “AAK is growing, and with growth comes diversity and inclusion. We are very passionate about advocacy, corporate social responsibility and engaging with government on progressive policy formulation.”

What kind of AAK will we see with Emma as president? “AAK is a formidable actor in the private sector,” she says. “When we started The Kenya We Want campaign, the agenda was to agitate for affordable housing, which can only be realized by holistically addressing the entire eco-system. We need affordable, sustainable homes as well as jobs, schools and other social amenities that are within a reasonable radius of each other. AAK got that conversation started, and sure enough the government has now adopted it as one of the critical pillars of the Big Four Agenda.”

Emma wants her tenure to be best remembered for diversity, visibility and advocacy. “At the end of the day, we must ask ourselves how we can measure the impact of what we do. How are we changing and transforming lives? This is the first time since independence that affordable housing is being significantly addressed. The Kenya We Want is one which we have to fight for, which means constantly engaging with both the public and private sectors to address policy gaps and spearhead beneficial initiatives.”

Emma is also passionate about giving back. “At AAK, we have been involved in a CSR programme that involves doing pro bono consultancy for outreach programmes. We recognize we also have a role to play as individuals, and there is much that we can do. As President John F. Kennedy once said, ask not what your country can do for you—ask what can you do for your country.”

In addition to her private practice and leadership roles at AAK, Emma has also served on the board of the Konza Technopolis Development Authority (KoTDA), and is a co-founder and director of Women in Real Estate (WIRE). “WIRE is a networking organization which was formed to advance the achievements of women in the built industry,” Emma explains. “As female professionals in the industry, we came together to build a platform that allows us to support each other and also to mentor. We are passionate about career outreach, helping each other climb up the corporate ladder and to use our shared resources to grow our members.”

Another passion of Emma’s is education, so it comes as no surprise that she is a co-director at Kiota School. It’s easy to see how important this particular project is, as her eyes light up when she talks about it. “Education is everything, especially for children. They are just fires waiting to be lit, and we have a chance to impart values and knowledge that will carry through, and whose impact we will all feel in the future.” Kiota espouses Christian values, a reflection of Emma’s faith.

Her husband Chris is also a co-director in the school. Is it difficult working so closely with a spouse? “I think the fact that we work together strengthens our relationship,” she says. “Ours is also not a conventional nine to five as we work on different projects outside the office, thus we’re not together constantly.”

Emma and Chris share three kids, all under the age of ten. With all that she has going on, how does she manage to find a work-life balance? “Balance is not a noun, it’s a verb, meaning you are constantly trying to attain a balance. Sometimes it tips this way too much, other times it tips the other direction. I am in a constant give and take situation.”

One way through which Emma
has managed to reduce the stress level in her life is by cutting traffic time down to zero. “I live and work in the same neighbourhood, so the hours that would have been spent in traffic every day, I can plow back into work or home, whatever needs my attention the most at the time,” Emma says. The support system she has, whether at home, at the firm or at AAK has also lessened the load. “My husband is my partner in many different ways, and we have each other’s back. Conflict is reduced by the fact that our roles are defined and quite different. At Design Source, I am in charge of operations on the day to day, while Chris is in charge of design. Our roles may overlap from time to time, but we are rarely in each other’s space like that.”

Being an employer in any economy is certainly not easy, Emma notes. “We have ten employees at the firm, which means we are responsible for the well-being of the employee, their families and their own employees as well. In essence we have over a hundred people relying on us, and that is a daunting thought.”

Emma is however optimistic about the state of the built environment in Kenya, especially this year. “In the late 1990s and early 2000s, architecture in Kenya was stunted, with minimal growth and not much excitement. It picked up in the mid-2000s and has been on an upward trajectory ever since. The dip was felt in 2017, due to the speculation around the election and the interest rate cap. This year, lending trends have improved, there are more investors trickling in and the affordable housing conversation definitely has the conversation buzzing.”

Local architecture has come under criticism for its rigidity and lack of creativity, judgement Emma believes is somewhat unwarranted. “Kenya is an

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**About Emma**

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Emma is a co-director at Design Source

02

Emma wants her tenure to be best remembered for diversity, visibility and advocacy

03

Emma has also served on the board of the Konza Technopolis Development Authority (KoTDA)

04

Co-founder and director of Women in Real Estate (WIRE).

05

Co-director at Kiota School

06

Bachelor of Architecture is from Jomo Kenyatta University of Agriculture and Technology (JLUAT), having graduated in 2006.
emerging economy. We build conventionally because we don’t have the resources to incorporate all the amazing avant garde ideas we may have. Additionally, we may not have the skill set to undertake certain projects— the human resource in the construction industry in Kenya is something that must be substantively addressed.” She however admits we can do better. “That said, even if we must build a solid box, we can make it a beautiful box. Even within limits we can still be creative and innovative. It’s like we have lost the artistic eye. Back in the day, we built some beautiful structures, anywhere from the Kenyatta International Convention Centre to the City Hall buildings. We need to revert back to that.”

Emma is keen on seeing the cost of doing business in the construction industry greatly reduced. “The current demolitions we see taking place are as a result of lack of transparency and perhaps no clarity in processes. It is actually easier to break the law in Kenya than it is to comply. We must, especially the government, find ways to collapse processes and implement systems that actually work in order to promote adherence to rule of law. That way, construction, especially approvals, will be easier and cheaper, and the ripple effect is more investments and growth of the economy.”

Emma’s personal mission is to be at the fore of the built environment and to create impact, right from her community. “By the time my tenure as AAK president is over, I would like the association to be more visible and better understood, as well as to have contributed significantly to policy. I also want us to give back to our communities and society more, in any way that we can. I want a legacy of sustainability, where we have more robust people and processes with the right capacity to undertake the necessary projects.”

What kind of president is Emma? She laughs. “I listen. I am driven enough to know and understand my vision and the direction in which I want to steer the organization. I want my tenure to be less about politics and more about impact.”

Will she run for re-election? “Let’s take it one day at a time. We’ll see.”

Clearly, being a woman hasn’t stopped Emma from taking on anything, but she is aware of the glass ceiling. “That was the reason I ran for president to begin with. I needed to break the glass ceiling, so that those who come after me can just go all the way through. Never underestimate the impact of role models.”

The future, according to Emma, is bright for women in construction. “In 2007, we were much fewer in the industry. Now, we have more women in all areas of construction. A decade ago you would struggle to find a single female artisan. Today, any trade from steel fixing to masonry can boast of having quite a few women. Mentorship programmes, such as those we have in WIRE, are important because they encourage young women right from school to join the industry. The attitude now becomes ‘if she has done it, so can I’. Education is so critical, and I am surprised that it wasn’t a pillar of the Big Four Agenda. Part of the reason I started Kiota is because I realized there is a need for schools that provide accessible education.”

Speaking of the Big Four Agenda, Emma feels the role of women needs to be amplified. “We already know that policy dictates 30% of all work needs to be set aside for the special group of youth, women and persons with disability, but how much of that is actually going to women owned construction firms or supplies businesses? Granted, we have come from quite far, but that was the beginning. Let us set targets and work towards them. Let us empower these women and build their capacity so that they can grow into reputable professionals.”
Despite the many hats that Emma wears, she is always ready to take on new projects. “Currently, I am helping with fundraising for our National Olympics Committee ahead of the 2020 games. They reached out to the private sector for help towards marketing and revamping the brand in order to have a bigger impact. That is quite exciting for me.”

How does a person that busy relax? “I read. Just concluded Jackson Biko’s Drunk. I’m in a book club that lets me catch up with my reading, and more importantly, socialize with my friends,” she says with a smile.

Famous last words from the indomitable Emma Miloyo? “Aluta continua. (The struggle continues).” We have no doubt of that.
Jane has extensive experience in the construction industry, especially in project management. She has worked on civil engineering projects in both the public and private sectors. A former board member of Kinyanjui Technical Training Institute and Amboni Secondary School, Jane is also passionate about humanitarian work, having worked with refugees in the Kakuma Refugee Camp as well as mission support for Dolo Ado Refugee Camp in Ethiopia. Jane has also worked on notable projects across the region, including emergency support for the United Nations Children’s Fund (UNICEF) in Somalia, road construction in Daadab in the Democratic Republic of Congo and water supply and reticulation projects in South Sudan. Jane has an MSC in Computer Based Information Systems from the University of Sunderland as well as a Bsc in Civil Engineering from the University of Nairobi.
Elizabeth Wangeci Chege is the CEO and co-founder of WEB Limited, a sustainable construction consultancy. She is also the chairperson of the Kenya Green Building Society. 19 years ago, Elizabeth made it her core business to be part of the solution to climate change in sustainable construction solutions and lives by the motto “What we build today will form the Africa of tomorrow.”

Through her volunteer role at Kenya Green Building Society, Elizabeth has collaboratively led the transformation of the built environment in Kenya by embedding green building practices into the industry and extending it to green schools thus mitigating greenhouse gas emission, human health enhancement and boldly stimulating the green jobs agenda. Beyond technical leadership, Elizabeth believes it is our noble responsibility, as a human community, to enhance the environment in our economic pursuits.

Elizabeth holds a dual Masters in Sustainable Design Science and Building Services from the University of Sydney Australia. She has a BTEC Higher National Diploma in Mechanical and Electrical Engineering from Reading College of Arts & Technology, UK. She is a green building champion with impeccable credentials and experience with various international green building rating systems.

She has a wealth of experience in highly integrated macro and micro level sustainable cities design. Her successful track record in senior management and lead consultant roles on a number of major projects including Airports notably Terminal 5 Heathrow UK, Brisbane Airport Cooperation Convention Centre in Australia, Residential, Retail & Commercial Developments in Australian & Oman. The wealth of sustainable engineering expertise is drawn from the Middle East, UK, USA, Australia, Nigeria and East Africa.

Elizabeth continues to strive for contextualization of the basis of design and believes we need to re-think cities for the African context.

Courtesy: worldgbc.org
Jennifer is the Managing Director of Anka Consultant Ltd, a Quantity Surveying firm in Kenya. Jennifer’s career was founded at Safaricom Ltd in 2004. She is currently serving at the Governing Council of The Institute of Quantity Surveyors of Kenya (IQSK) as the registrar where her mandate is to assure value for membership and enliven mentorship for the young professionals.

Jennifer holds a Bachelor’s Degree in Quantity Surveying, a Master’s Degree in Business Administration and is a member of the Architectural Association of Kenya, The Royal Institute Of Chartered Surveyors, and Women on Boards Network. She has attended executive programs from Strathmore University, Cranfield University, Babson College as well as the Harvard Business School. She is also a former board member of the National Construction Authority.

Qs. Jennifer Musyimi
Registrar, Institute of Quantity surveyors of Kenya (IQSK)
Jane, who holds a Masters in International Law and Development from the University of Warwick, England, was nominated to the post by the Attorney General, and thereafter appointed by the Cabinet Secretary, Transport, Infrastructure and Urban Development, James Macharia, EGH.

Jane has decades-long experience in the legal field. She worked as a litigator for years, and her firm has dealt with a lot of construction projects, giving her quite a bit of experience in the industry and making her appointment to the Board a natural transition.

The National Construction Appeals Board is quasi-judicial body that is provided for in the National Construction Authority Act. The mandate of the Board is to deal with disputes resulting from decisions made by the Board of the National Construction Authority, such as refusal to register as a contractor, suspension of a contractor as well as deletion of a contractor from the official register.

The Board is established under Section 27 to 29 of the National Construction Authority Act. The section provides for a chairperson, who must be an advocate of the High Court of Kenya and nominated by the Attorney General. The other stated members should be a person with professional knowledge and experience in architecture, quantity surveying, engineering, building surveying or project management and another nominated by the Chartered Institute of Arbitrators, Kenya Chapter.

“The Board is here to streamline the management of the registration process for contractors, and provide an avenue through which they can share their grievances. We are the arbitrator—a neutral party that will ensure fairness and equity for all, ” said Jane in the December 2017 edition of the NCA Quarterly.
Jane Afrane
Regional Head, Africa Regional Network

Jane heads the World Green Building Council’s Africa network of Green Building Councils (GBCs) in eight countries. She focuses on the creation, establishment and advancement of Green Building Councils across the Africa region. She also provides capacity building support to the Africa Network of GBCs and leads in the development of strategic local, regional and global partnerships. She further spearheads project development and advocacy initiatives in the region to raise and promote awareness of green building.

Prior to joining WorldGBC, Jane was the East Africa Advisor for the Commonwealth Local Government Forum. She has vast experience in the international development sector managing multi-lateral projects in West Africa and East Africa, driving the localisation of the Sustainable Development Goals and empowering local government as a key development partner. She also previously worked at UN-Habitat providing technical support to urban governance programming and decentralisation processes.

She holds a Masters in Urban Management and Development from the Institute of Housing and Urban Development at Erasmus University Rotterdam, and an undergraduate degree in Sociology from the University of Toronto.

Jane is based in Nairobi, Kenya.

Courtesy: worldgbc.org
STATUS OF THE BUILT ENVIRONMENT

JANUARY – JUNE 2018
According to data from the Kenya National Bureau of Statistics (KNBS) Economic Survey 2018, the following are highlighted:-

- The Construction and Real Estate sectors are still among the highest contributors to Kenya’s Gross Domestic Product (GDP) - 5.8% and 7.4% respectively, according to the KNBS Economic Survey 2018.
- The Construction sector grew by 7.2 per cent in Q’1 2018 compared to 8.2 per cent growth in Q’1 2017.
- Credit to the construction sector in Q’1 2018 increased by 7.5 per cent compared to a growth of 2.6 per cent realized in Q’1 2017.
- In Q’2 2018, the economy began to show signs of recovery. This is attributed to the stable political environment following the unity pact between President Uhuru Kenyatta and Hon. Raila Odinga.
House prices increased by 2.08% in Q1'2018 compared to a 0.68% increase in Q4'2017. The increase in price appreciation is attributed to:

- conclusion of market transactions put on hold during the prolonged electioneering period as investors adopted a wait and see approach; and
- improved macro-economic environment

Q1 2018 saw maisonettes lead the market at 56.17 percent of the total units offered for sale followed by bungalows at 39.11 percent with apartments coming third at 4.72 percent. This is unlike in the past where the apartments took an upper hand in the market. This is attributable to the increased demand for detached units by the increasing upper middle-income segment looking for privacy and exclusivity

The mall-type retail landscape performance continues to decline mostly attributable to the increased supply of mall space and slow uptake of this space. The only exception is the Two Rivers and Garden City malls which have employed strategies such as provision of high quality space and green technology buildings known to attract foreign retailers.

- There is an abundant shortage of ‘true Grade A’ office spaces amid rising demand from local and international clients.
- Despite the shortage of ‘true Grade A’ office space, there is an oversupply of vacant office spaces in Nairobi. Upperhill leads this pack with a market share of 18.0% and an oversupply of 700,000 SQFT.

- The rising demand for high quality international standard warehousing space is still growing. This is resultant of e-commerce firms demanding for warehouse space for storage as they follow shopper habits in favour of home deliveries as opposed to conventional shopping

The above data has been sourced from the Kenya Bankers Association Housing Price Index May 2018, Cytonn Investments Report and the Broll Property Group
An increased number of investors and developers have announced their interest to venture into the development of the low to middle-income housing segment. This is catalyzed by the national government’s priority to deliver half a million affordable housing units in 5 years.
Before Parliament is a Bill seeking to amend the Stamp Duty Act to exempt first time home buyers from paying stamp duty. Stamp duty tax is paid on the market value of a property at the rate of 4.0% for urban areas and 2.0% for rural areas and is payable within 30-days of signing of the sale agreement.

- The Ministry of Lands and Physical Planning unveiled the National Land Use Policy (NLUP), Sessional paper No 1 of 2017, in May.
- Developers who put up at least 100 affordable housing units will now enjoy 15% tax relief as the government looks to boost housing for low-income earners.
- The Sectional Properties Act is being amended to allow buyers of high-rise apartments to obtain title deeds for their property.
The national government seeks to deliver 500,000 affordable homes in five years. To this end, it has so far initiated the following to facilitate the process:

a) State will provide land to private investors who will then take advantage of various building technologies and economies of scale to deliver "truly affordable" homes for citizens.

b) 15.0% corporate tax relief to developers who put up at least 100 affordable residential houses annually.

c) Land swaps entailing the exchange of public and private land between the government and developers, enabling the developers to access development class land that would otherwise have been tied down.

d) Public Private Partnerships (PPPs) agreements between the government and the private sector, to facilitate development.

e) Creation of the Kenyan Mortgage Refinancing Company (KMRC) - an initiative by the World Bank and the Kenyan Government aimed at enhancing mortgage affordability and facilitate long term loans at attractive rates.
An increased number of investors and developers have announced their interest to venture into the development of low to middle-income housing segment. This is catalyzed by the national government’s priority to deliver half a million affordable housing units in 5 years.

**Ksh 39B**

Total cost for Phase 1 of the Dongo-Kundu bypass
# NCA Construction Data

## PROJECTS APPROVED BY NCA

1st January 2018 - 30th June 2018

## Status of the Built Environment: January - June 2018

### Type of Projects

<table>
<thead>
<tr>
<th>Type of Projects</th>
<th>Building Works</th>
<th>Roadworks</th>
<th>Waterworks</th>
<th>Electrical Works</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2,522</td>
<td>23</td>
<td>9</td>
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### Client Type

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<tr>
<th>CDF</th>
<th>County Governments</th>
<th>NGO/Social Organization</th>
<th>Parastals/Govt Agencies</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>117</td>
<td>57</td>
<td>2367</td>
</tr>
</tbody>
</table>

* M - Million
## Development Permits for Nairobi

<table>
<thead>
<tr>
<th>JAN - JUNE 2017</th>
<th>JAN - JUNE 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development permit applications approved</td>
<td>Development permit applications approved</td>
</tr>
<tr>
<td><strong>1,140</strong></td>
<td><strong>1,167</strong></td>
</tr>
<tr>
<td>Month with highest number of approvals</td>
<td>Month with highest number of approvals</td>
</tr>
<tr>
<td>June (204)</td>
<td>March (291)</td>
</tr>
<tr>
<td>Total value of development projects approved</td>
<td>Total value of development projects approved</td>
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<tr>
<td><strong>KSh 53.5B</strong></td>
<td><strong>KSh 75.5B</strong></td>
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<tr>
<td>Month with lowest number of approvals</td>
<td>Month with lowest number of approvals</td>
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<tr>
<td>March (153)</td>
<td>February (159)</td>
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<tr>
<td>Total value of permitting fees</td>
<td>Total value of permitting fees</td>
</tr>
<tr>
<td><strong>KSh 493.9M</strong></td>
<td><strong>KSh 498.7M</strong></td>
</tr>
<tr>
<td>Average number of days taken to issue approvals</td>
<td>Average number of days taken to issue approvals</td>
</tr>
<tr>
<td><strong>52 days</strong></td>
<td><strong>37.38 days</strong></td>
</tr>
<tr>
<td>Top 5 areas where most developments were carried out</td>
<td>Top 5 areas where most developments were carried out</td>
</tr>
<tr>
<td>i. Karen</td>
<td>i. Karen</td>
</tr>
<tr>
<td>ii. Westlands</td>
<td>ii. Westlands</td>
</tr>
<tr>
<td>iii. Industrial Area</td>
<td>iii. Industrial Area</td>
</tr>
<tr>
<td>iv. Kilimani</td>
<td>iv. Kilimani</td>
</tr>
<tr>
<td>v. CBD</td>
<td>v. CBD</td>
</tr>
<tr>
<td>Development classification approvals as a percentage of total approvals</td>
<td>Development classification approvals as a percentage of total approvals</td>
</tr>
</tbody>
</table>

**Source:** Nairobi City County Government

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### Top 5 areas where most developments were carried out

- i. Karen
- ii. Westlands
- iii. Industrial Area
- iv. Kilimani
- v. CBD

### Average number of days taken to issue approvals

- **JAN - JUNE 2017:** 52 days
- **JAN - JUNE 2018:** 37.38 days

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**Report Courtesy of Architectural Association of Kenya**
MANAGING THE PLASTIC CRISIS
Why recycling and waste management is the answer

Words by Brighton Amwayi
The government of Kenya effected a ban on the use, manufacture or importation of plastic bags on 28th of August 2017. This took effect after a six-month compliance window contained in a February 28 gazette notice by the Environment Ministry lapsed.

This law, however, exempts the bags used for industrial packaging, where the product is in direct contact with the plastic and is done at the source. ‘Flat bags used as waste chemicals and regular waste garbage bin liners, are also exempted from the ban,’ the National Environment Management Authority (NEMA) said in a statement.

This isn’t the first time Kenya has tried to effect the ban, and the directive comes about 10 years after the first attempt failed, perhaps due to lack of consistent follow up on the implementation plan.

In 2005, President Kibaki’s administration developed a 10-point plastic waste management strategy that saw the ban of plastics under a thickness of 30 microns and the development of plastic recycling project. Unfortunately, the project failed to take off.

Two years later, the then Finance Minister Amos Kimunya in his budget speech introduced a 120 per cent excise duty on plastic bags below 30 microns thickness, but widespread protests by traders forced parliament’s Committee on Trade and Finance to introduce a green tax instead.

Similar efforts by NEMA and the Kenya Bureau of Standards to ban plastics below 60 microns in 2011 also ran into headwinds. Last year’s ban spearheaded by the Environment Cabinet Secretary Prof Judi Wakhungu faced strong opposition, with the Kenya Association of Manufacturers (KAM) and several traders filing a petition at the High Court to block its implementation. They cited a lack of adequate stakeholder consultation, warning that the ban would be detrimental to the economy. “We have over 176 plastic manufacturing companies in Kenya which directly employ 2.89 per cent of all Kenyan employees and 60,000 others indirectly,” KAM said in a statement. The High Court however declined the request, arguing that the rights of the over 40 million Kenyans to a clean environment would not be tilted in favour of the commercial interests of a section of plastic bags dealers.

“Granting the orders sought will severely undermine the protection of the environment while serving commercial interests,” Environment and Land Judge Bernard Mweresa ruled on August 25, 2017.

Plastic materials offer a number of advantages over other conventional packaging materials. They are malleable, light, low cost and can be produced in a variety of shapes and sizes. Because of this, every year millions of tons of plastics are produced globally. Of this, one trillion plastic bags are made and used. This makes them an important feature of the packaging sector.

Plastic bag manufacturing forms a portion of the plastic manufacturing sector. It has a long history dating back to the 1930s. According to research by The East African Publication, there are over 30 plastic bag manufacturers with a combined capital investment worth over USD$77.3 million (Ksh5.8 billion). They employ up to 9,000 people, both directly and indirectly. Prior to the ban, some 100 million plastic shopping bags were given out monthly by supermarkets. This...
was a massive contribution to the plastics sector and to the country’s economy. Plastic bags also have an extremely important role in the average person’s daily life as they stand out for their excellent fitness for use, resource efficiency and low price. For Kenya, where 56% of the population lives on less than a dollar per day, plastic bags support the lower economic classes. This economy is based on the small amounts people buy - for example one cup of cooking oil, or a handful of washing powder or a squeeze of toothpaste. To take these home they need the small plastic bags. However, plastic and glass are resistant to biodegradation and cause long-term pollution to various natural environments from oceans to soil. Of the 4,000 tons of single use plastic bags that were produced each month, just about 2,000 tons ended up in Kenya’s municipal waste streams. Half of these were lightweight bags with a thickness of less than 15 microns.

Because of these issues, a variety of policy measures can be introduced to manage plastic waste. These include a ban on the production of certain plastics, levying taxes, mandatory recycling targets and adoption of anti-plastic bag campaigns. Kenya has chosen the path of a ban on use, manufacture and importation of all plastic bags used for commercial and household packaging. But research shows that plastic waste recovery and recycling is a better strategy for sustainable plastic waste management. Take for instance, Eco Blocks and Tiles Company that is a social enterprise that manufactures environmentally friendly, alternative building products using various recycled waste materials such as plastics and glass as inputs in the production. In the recycling process, plastics and sand are used as the raw materials and the end product used to make affordable and durable roofing tiles and crushed glass waste to make building blocks for local housing consumers in Kenya.

‘One option that won’t work is substituting plastic bags with biodegradable ones. First, the tear strength of biodegradable packaging bags is low compared to their petrochemical counter parts.’ notes Kevin Mureithi, Chief Executive Officer of Eco Blocks. “They also have a high rate of water absorption. Most developing countries are also not equipped with the technological capacity to produce biodegradable material. Lastly, they are still not cost effective. The cost of most bio plastic polymers fall in the range of USD$2-5 per kg, compared to approximately USD$1.3 per kg for the usual petrochemical polymers. These factors make biodegradables a poor substitution.”

Which is why the solution lies with plastic recovery and recycling. The reuse and recycling of plastic waste makes more sense as Kenya does not have a robust petrochemical industry, necessary to produce plastic. Raw materials for the plastics and polythene industries are imported from overseas. Plastic waste recycling is not a recent phenomenon in Kenya; it dates back to the 1960s. A 2001 survey shows that over 90% of Kenya’s plastic manufacturing industries have internal reprocessing capacity for their own waste and rejects.

Trading in plastic waste has been practiced in Kenya since the 1980s. Waste pickers and small-scale traders started to sell unprocessed plastic waste directly to plastic producers for use as a raw material in the manufacture of new plastic products. This plastic waste collection, by informal actors, presents a more realistic and sustainable solution to plastic waste management in Kenya. The waste becomes a source of raw material for the production of plastic materials, creating an interdependent relationship between solid waste management systems and plastic production.

Kenya needs to create an integrated plastic waste management system. It already has three well-established categories of plastic waste recycling industries, which need to be
properly linked to plastic waste collection and separation chains. This would need the support and coordination from government, industry and civil society at all levels. Important measures towards this include separating plastic waste from other waste streams and the further separation of various plastic materials for effective use of different polymer wastes in production, protection of waste pickers and those who add value including washing and sorting to plastic waste as well as allocation of space for waste separation centers. Further measures include technological and financial support for waste processing, education outreach programs, plastic product marketing to popularize the diverse products, introduction of deposit and return systems in supermarkets and improved transport logistics for plastic products and plastic waste so that such can reach their destinations in time.

Additionally, Kenya needs to pursue waste management strategies such as waste separation and the development of rules that require plastic industries to take back certain quantities of plastic waste from the solid waste management system to enhance recycling.
Karibu upate Huduma!
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Queries: info@hudumakenya.go.ke
Is it possible to marry career and passion? Makena Ireri is living proof. By the age of 25, Makena had graduated with a Masters in Civil Engineering from the University of Manchester, was working with the biggest consultancy firm in the United Kingdom and was a part of the design team for the first ever Nuclear Emergency Response Centre.

Q: Tell us about your educational background
A: I graduated high school from The Kenya High School, and was accepted to the University of Nairobi to study Electrical Engineering. Around the same time, my Mum had been accepted into a doctorate programme in Britain. I realized I had a chance to complete my studies much faster as well as gain an international outlook. It was also much cheaper as we were moving as a family. Thus, I enrolled in the University of Manchester to study the same course.

Q: But your degrees are in Civil, not Electrical Engineering?
A: Yes. One of the reasons I decided to pursue engineering was because I have always been fascinated by machines. Growing up, my Dad and I used to tinker with cars together, and I would get right under the car and change the engine oil. That experience gave me a love of machines. In high school, my physics teacher Mrs. Mulwa sealed the deal for me—she was a wonderful instructor. I’m also a problem solver by nature, so engineering was a natural choice. The good thing about my alma mater is that they expose you to the different fields within engineering, and after a while I realized electrical engineering was too theoretical and abstract for me. I wanted to be able to build things and have tangible results. Something you can leave your mark on. So I switched to civil, and haven’t regretted it a single day. It took me three years to do my undergraduate degree and another additional year to finalize my Masters.

Q: What was your college experience like?
A: It was amazing. Manchester is a very student oriented city, so everything around you is conducive to your student life; convenient and affordable. The school itself has a rich engineering and research history. The world’s first computation engine, nicknamed Baby (precursor to the modern computer), built by Charles Babbage, was right there in our lab! The school has produced 25 Nobel laureates, either from the student body or staff, winning in the fields of physics, chemistry, medicine and economic sciences. On the student campus, there is a statue of Archimedes and his “Eureka!” moment when he discovered the hydrostatics principle. There’s something to be said about studying in a place where so many have done incredible things.
Q: Was there adequate female representation in your class?
A. Unfortunately, no. I had the distinction of not just being a woman, but a black woman and an African at that. Women made up about a quarter of the class. We were 5 black people in the class, two men and three women. I’m proud to say that all three of the women, myself included, were Kenyan! That bonded us in a unique way. I can’t say I was openly discriminated against, but you will feel the subtle differences, for example when you’re appealing a grade score with your teachers, and you have a slightly harder time than your male British counterpart. If you have not studied under the British education system, you have to do a foundational year, where you take classes that are basically our equivalent of high school physics.

Q: Describe your transition into the field:
A: In my final year of study, I won a Happold Trust scholarship, usually awarded to outstanding students in their respective fields. As a result, I got an internship at Burohappold, a design company, in my final year. During the period, I had the chance to design the foundation of the Cooperative Bank Building Headquarters in Manchester. Every time I pass the building I am filled with a sense of pride knowing I had a hand in its creation. Once I graduated, I automatically qualified for a two-year visa extension which allows you to work. It’s a good opportunity as you have a chance to practice in the country in which you studied, allowing you to apply everything you learnt, as your own county may be slightly different. I had applied to the two biggest engineering consultancy firms in the UK, Atkins and Arup. I applied to Arup first, and unfortunately wasn’t picked, which was very discouraging. Nevertheless, I applied to Atkins, and was thrilled when I was hired to work there.

Q: What kind of projects were you working on at the time?
A: As soon as I was hired, I was attached to the civil nuclear energy section. We were doing a lot of work with EDF, a French utility company that owns and maintains all the active nuclear power stations in the UK. I worked on structural modification, as well as physical security. The most exciting project I was a part of was the Emergency Response Centre. If you can recall in 2011, an earthquake in Japan triggered a tsunami, which eventually caused a catastrophic accident at the Fukushima Daiichi Nuclear Power Plant. It was classified as the most significant nuclear incident since Chernobyl in 1986. It later emerged the whole incident could have been avoided. Thus, the project we were working on was an Emergency Response Centre to increase UK resilience against a similar type of accident. I was involved in the structural design of the building that can withstand enormous forces from large environmental disasters and remain operational as a base to deploy emergency response. The team also led the engagement and communications work to review the robustness of their fleet of reactors and create and deliver a holistic range of innovative safety enhancements for these power plants. The response center is one of only two such centers in the world, and it was truly gratifying work.

Q: When did you leave Atkins, and where did you move to next?
A: I worked with Atkins from 2012 until 2016. By 2016, and though I enjoyed my time there, I had starting feeling like my work was becoming routine. I was designing yes, but there was no connection to the people I was designing for. I couldn’t measure a real effect my work was having on the society. I had joined Engineers Without Borders-UK (EWB UK) while I was in university, and I decided to take a sabbatical from work to see what volunteer work I could do. There is a programme at EWB_UK which pairs engineers with non-governmental organizations that need technical support, and I signed up with one called Energy 4 Impact (E4I). It was the only NGO on the list that was dealing with energy, and even more attractively, was doing it at home in...
Kenya.

Q: What kind of work were you doing for E4I?
A: I basically advised clean energy small to medium enterprises [SME’s] on how to structure business models, pilot products, find partnership ad and raise capital. I also worked on stand-alone project like the Moving Energy Initiative, where we were seeking ways to better deliver clean energy in refugee camps and humanitarian situations. Currently this is mostly limited to diesel fuel and firewood collected by women and children under precarious security situations. The better alternative, of course, is decentralized renewable energy. It’s safer and affords its users a higher quality of life. To this day, I am still involved and passionate about that sector, as I sit on the Technical Advisory Board of the HEED (Humanitarian Engineering and Energy for Displacement) Project, run by Coventry University. HEED came about to address the fact that over a billion people across the world lack access to electricity and other forms of energy for cooking, heating and lighting, and that those displaced from their homes are at an even bigger disadvantage.

Q: Where are you working currently?
A: After my sabbatical ended, I went back to my old job for about 3 months, but after my year with E4I and in the off-grid energy sector, I found that I couldn’t settle back into my old job and routine. Thankfully, E4I called me and asked me to manage a programme on innovation prizes for energy access, and I jumped at the chance for a number of reasons. One was the projects I would be taking on, which was the running of various competitions where companies from all over the world are challenged to develop off-grid, energy efficient appliances, specifically refrigerators. The potential impact is mind blowing, because off-grid energy efficient appliances have the potential to dramatically improve quality of life and also increase livelihoods.

Another reason is that I got to work with Simon Collings, at the time E4I’s Head of Innovation. Simon, who also lectures at Oxford University, is a bit of a rock star in the off-grid sector, one of the most brilliant minds we have and a chance to work with and learn from him was too good to pass up.

At E4I, I got to enable off-grid penetration of companies like Sundanzer who created the refrigerator that was used by NASA in space. I also worked on the Off Grid Cold Chain Challenge, an international competition to stimulate advances in cold chain technology in order to develop an innovative and energy efficient cold storage facility to meet cold storage requirements for fresh produce in Sub Saharan African countries. I was pleased to see Kenyan companies, such as Fresh Box, not just participating but doing well.

Soon after that, I developed an interest in research, given how very little data we have in the off-grid energy sector especially impact and consumer data. This led to me to my current position at CLASP, where I am a Senior Associate and Research Lead for the Low Energy Inclusive Appliances Programme. CLASP is an organization that works on energy efficiency policies for appliances as well as market acceleration initiatives. My research currently involves low energy-inclusive appliances, especially those that are off and weak grid appropriate and have potential to benefit marginalized groups in developing countries. We’re currently working on refrigeration, solar water pumping and solar powered milling among others. My job is to find what new thing we can tell the market that will enhance performance, increase sectoral investment, reduce costs and overall develop the market for these technologies.
**Q:** Having worked in both markets, what differences if any did you identify?

**A:** In the UK, they have been there and done that; all that’s left is a few tiny tweaks to existing innovation. Kenya is a developing market, and we are constantly innovating. We are moving so fast—what was new two years ago is already redundant. The whole world is coming here and it’s exciting. The only problem is that the money doesn’t always trickle down to Kenyan companies and our local labour force. The off-grid sector is also frustrating as there is limited uptake due to a lack of facilitation. Another major problem that I have personally encountered is how difficult it is to register as a professional engineer in Kenya. It’s actually quite straightforward in the UK, but the bureaucracy in Kenya really impacts the cost of doing business, negatively.

**Q:** Have you ever felt disadvantaged in your profession due to your gender?

**A:** Yes! Sometimes it’s the little things that matter most. I’m a petite woman, and I wear a size 3 shoe. You will very rarely find Personal Protective Equipment (PPE) that you must wear on site in smaller sizes that are more suited to women. Neither will you find a size 3 safety boot. As it is, you are fighting to be an authority in a male-dominated field, where your colleagues and even workers regularly call you ‘babe’, never mind you are just as if not more educated and experienced. Trying to do the same dressed in an oversized and ill-fitting overall which makes you look like a child is downright impossible.

Then of course, there’s the ‘mansplaining’. This is when your male colleagues feel they need to explain something to you in ‘easier’ terms so that you can understand. Even when you were top of your class. Civil engineering is still a boys’ club, with more women preferring to take up mechanical or electrical engineering. You feel it the most when it comes to pay and promotion, when you tend to earn less than your male colleagues or are passed up for a promotion because your potential is not as easily identifiable to senior management [mostly men and mostly white—in the UK anyway] who are busy looking for a copy that looks like them, talks like them and rides the same bike to work as them!

**Q:** How do you cope with discrimination in the workplace?

**A:** As a woman, you have to be better to be the same. This is unfair. We need a quorum of diversity especially in upper management in order to change things. Otherwise you’ll end up as the token woman, or the token African and that doesn’t really advance the cause.

**Q:** What’s next for you?

**A:** I’m always searching for the next stepping stone. I want to explore, in depth, the off grid sector, especially the payment mechanisms that support it. Is the pay-as-you-go (consumer debt) model leading to a net benefit for poor and marginalized consumers? It’s an interesting journey.

**Q:** How do you attain work life balance?

**A:** Currently, I’m not doing too well. I need to learn how to say no more often, because you need some mental space that is not occupied by your job in order to breathe and be creative. My hobbies are my escape; I love do it yourself projects, and I enjoy knitting and crocheting as well as painting.

**Q:** What advise do you have for upcoming engineers?

**A:** There’s nothing like seeing something for yourself. Everyone offering their experience or advice is doing it from their own lens, you can only trust what you have seen and experienced. You need to know it’s ok not to know, read, research, travel and seek your own answers. I would love to see the government implement mentorship programmes, and require all international companies working in the country to establish fellowships to allow us to learn as much as possible.
Be Sure, Jenga Smart
Young, Female and Professional

Photo: Joan Cheruiyot
BA Public Relations & Communications
Young, Female and Professional
how young women are making their mark in the construction industry

At 34-years of age, Melanie Wituka, managing director of Suleco Company Ltd, took home the 2014 Woman Contractor of the Year award and was also recognized as the top woman contractor in innovation as well as second best female contractor in Africa at a continental award ceremony. Melanie, like other young women in the construction industry, are scaling the height in the built environment through their hard work, wealth of knowledge and mentorship programmes.

The construction industry has come of age and is continually recognizing the contributions of female professionals towards Africa’s built environment. A number of women have been recognized and awarded in different notable forums that are being organized across the continent.

The increasing number of women empowerment initiatives has largely attributed to the steady growth of women joining the construction industry. Education, training, skill development and specialization are among the major factors that have allowed women to close the gap that is so often felt within the Industry.

According to a McKinsey Global Institute Report- Sept 2015, advancing women’s equality can add up to $12 trillion to the global growth. The report further underscores that if women—who account for half the world’s working-age population—do not achieve their full economic potential, the global economy will suffer.

This is an interesting finding considering that fact that gender parity remains both a social and economic issue to date. It has to be appreciated that women make up half of Kenya’s demographic dividend as per the Kenya National Bureau of Statistics (KNBS). This is an opportunity that the country can leverage on through women empowerment. If we can succeed in giving women the right tools to take up careers that are perceived male oriented, women can not only become financially independent but also be the engines that fuel Kenya’s future growth. Pradeep Prauna, Managing Director of local cement manufacturer ARM Cement, emphasized that women, who make up the majority of the population, need to be enabled in order to be active players in the quest to attain Kenya’s Vision 2030.

Beryl, Marilyn, Edel and Lucy are exceptional young women who have manged to make a mark in traditionally male professions, taking their places in an industry that for a long time has grappled with gender stereotyping.

Read their inspiring stories ahead.

Words by Sharon Otieno
What has your career journey been like?
My career journey started back in 2013 and has been filled with a lot of lessons and much fulfillment. I graduated with a Bachelor’s degree in Quantity Surveying from The University of Nairobi. Growing up, I always wanted to be a pilot, but I am convinced choosing this career path has been one of my best decisions.

I started out as an Assistant Quantity Surveyor at the University of Nairobi’s Department of Clinical Medicine & Therapeutics, working on a project called CRISSP (Central Response Integration Strengthening and Sustainability Project). I was part of the team charged with overseeing the construction works within the project. I have since moved to Songa Ogoda & Associates as a Quantity Surveyor since 2015.

What are your career achievements so far?
My successful registration with BORAQS as a Quantity Surveyor has been the highlight of my career. This has enabled me venture into new frontiers and gain international experience by getting assigned projects out of the country that has opened my mind to both regional and global markets.

My training in mediation on alternative dispute resolution methods (ADR) with the Royal Institution of Chartered Surveyors (RICS) has also made me appreciate quantity surveying as more than just costing. It’s an appreciation of the different individual preferences and matching their needs.

What are your thoughts about being registered with a professional body?
Professional recognition, networking opportunities during Continuous Professional Development (CPD) seminars and events, career development and access to information such as industry news, reports, jobs and events are some of the benefits. The major challenges lie with the fees and expenses involved; it can be quite expensive for a young person who has not been engaged in any
form of employment or business. Events such as CPD seminars, industrial site visits and global tours, though important for networking and access to information on industry news, can also be expensive when costs are added up.

**Who has mentored you through your journey?**
Of great significance has been my boss, Qs. Emmanuel Odhiambo of Songa Ogoda & Associates. I have also looked up to Frank Gehry, a Canadian-born American architect. Although an architect by training, his design principles cut across all fields. His philosophy is all about creativity and innovation—these I believe, should be the driving force of all our quests.

**Which projects have you been a part of?**
The notable projects that I have been part of include the UAP Tower in Juba, South Sudan, KCB Bank Fitout in Kololo, South Sudan, Mwalimu Sacco Headquarters in Upperhill, Nairobi and renovations at the Kenyatta National Hospital.

**What do you love most about the construction industry?**
I love the uniqueness and diversity of each project. Right from the project location, the design and construction team to building techniques and materials, no two projects are ever the same. I have to appreciate the contentment that comes with every project that comes to a successful completion.

**Do you own any businesses?**

**I am also a shareholder at HES Marketing and Consulting; the consulting package is on electrical and mechanical engineering services whereas the marketing aspect deals with fuel monitoring and fleet/asset management solutions.**

**What are the challenges you face in the construction industry?**
Some of the challenges include trying to be ethical in an industry generally marred by fraudulent practices and cost-cutting measures as well as lack of innovation in building materials and construction techniques. The environment is still largely about ‘Who do you know?’ rather than ‘How good are you?’ Over time, I have learnt not to take things personally and instead accept constructive criticism and learn from what makes sense.

**What is your vision for the Kenyan construction industry?**
My dream is for a future where each Kenyan can have access to good quality and affordable housing. In European countries like Germany, even the lowest income earners live in quality housing and have access to quality infrastructure. This calls for innovation in both the manufacturing of building materials, building processes and financing methods. I intend to be part of the team that will implement the President’s Big 4 agenda through my profession.

**What is your advice to young women in the construction industry?**
I have learnt a lot in this industry. I can put it in three ways: first, young women venturing into the construction industry must get rid of the ‘Imposter Syndrome’ or the feeling of ‘I’m not good enough’. The imposter syndrome has a lot of women selling themselves short when it comes to negotiations on remuneration, project allocations, tendering for jobs among others. This also translates to valuing your time by getting proper compensation for services that you offer.

Secondly, the networks you build over time become your net worth eventually. These same networks will go a long way to building your career and business through referrals and recommendations.

Finally, femininity never goes out of style—a male-dominated field, there can be the tendency to want to act or ‘dress up’ as a man. But this doesn’t have to be the case. There is beauty in femininity. Embrace it!

**Where do you see yourself in the next 5-10 years?**
I see myself transitioning to a private consultant and a commercial property developer.
What has your career journey been like?

I graduated with a Bachelor of Technology in Production Engineering from Moi University. I have a wealth of knowledge in the automotive industry, engineering design software sales, and project management. The last eight years of my career have seen me focus on environmental engineering where we offer onsite wastewater recycling systems.

What are your career achievements so far?

My greatest career achievement was setting up my firm, Ecocycle Ltd. I have been able to roll out wastewater recycling systems that save the environment from sewage pollution while providing reclaimed water for reuse in maintaining green spaces. Our systems are able to treat one million litres of wastewater per day. Through Ecocycle Ltd, I have managed to create employment, mentor, train and promote other small to medium enterprises that we work with in the provision of this service.

What are your thoughts about being registered with a professional body?

Registration with professional bodies comes with an array of benefits. Some of them being professional recognition having
attained a certain level of expertise in your career; hence your credibility as a professional is assured. There is also networking opportunities and career development through continuous professional development (CPD). It also shows that you are serious about your career.

Who has been your mentor?
My mother. Now a retired teacher, her wisdom is out of this world.

Who do you look up to career wise?
I look up to different quarters, senior engineers with years of experience and expertise, peers with whom we share and exchange knowledge. I am very keen on connecting with experts from the developed world who are experts in their respective fields. Of great inspiration are the successful entrepreneurs that have built businesses from scratch.

What organisations have you worked for?
Many! I am honored to have worked with DT Dobie, Toyota East Africa, General Motors, Gath Management Ltd, Continental AG (Germany), CESP Ltd, Biobox East Africa Ltd, and Exclusive Ltd. The experience I got from these noble companies formed the basis of EcoCycle Ltd.

What kind of projects that you have executed or supervised?
I have supervised over 170 onsite waste water recycling systems. To mention a few, Enashipai Hotel in Naivasha, Sirville Lodge in Elementaita and several residential homes, apartment blocks and offices.

What are the challenges you face in the construction industry?
My biggest challenge is having to work with project teams that do not prioritize health and safety at the work place. So many lives are lost at the work place due to ignorance of the same. Delayed payments after completion of works remain an obstacle to the growth of small business/consultancies.

What is your vision for the Kenyan construction industry?
A sector and space that is safe, profitable with a record of quality projects executed by ethical professionals.

What is your advice to young women in the construction industry?
My biggest advice to young upcoming women in the industry is to put God first, remain true to one-self, uphold one’s identity, beliefs and principles while taking advantage of the fact that if you are good at what you do, you will definitely stand out.

Where do you see yourself in the next 5-10 years?
I envision myself a successful Engipreneur who will have mentored thousands of people. I also intend to hit the one thousand mark of installations of waste water recycling systems and above all, expansion of my company into all counties and neighboring East African countries.
What has your career journey been like?
I can describe it as exciting and challenging. My work entails valuing investments including land, crops and structures. I started my career at Real Appraisal Ltd, which opened up doors to Kenya Electricity Transmission Company (KET-RACO) where I value assets for *wayleave compensation.

What are your career achievements so far?
I credit myself with being registered as a valuer and obtaining full membership to the Institution of Surveyors of Kenya all within three years of finishing my undergraduate degree.

What are your thoughts about being registered with a professional body?
There is a lot of value that comes with being registered by a professional body. It gives you the credibility as a professional and it makes you competitive in the job market. The biggest challenge with registration is the high costs incurred during registration and maintaining membership annually. In addition, the professional bodies are created to defend member rights and safeguard member’s interests yet often times they do not fulfill that mandate.

What kind of projects that you have executed or supervised?
I was largely part of the project implementation team for the
Kindaruma-Mwingi-Garissa transmission line, which connected Garissa and the Mombasa-Nairobi transmission line to the national grid. This project has in time increased the access to electricity and addressed the issues of low connectivity among locals.

Who has been your mentor?
I actually have two mentors; my mum who is a valuer and my biggest champion. My friend, Victor Olonde, has also played a big role in my career as my mentor. I have seen both of them rise through the ranks in the construction industry as professional valuers, which has been my inspiration.

What are the challenges you face in the construction industry?
My biggest challenge revolves around people viewing me as a 'young woman' hence not qualified as a professional valuer. There is a general perception among men that as a young woman, I do not understand the value of owning property hence my judgment is not solid especially during valuation. All you need to have is a keen eye for details and properly informed decisions.

What is your vision for the Kenyan construction industry?
I envision a corruption-free industry that provides an equal opportunity to both men and women. Our country is at a point where graft and impunity is rampant. It is upon us as professionals to uphold our ethics; this will mark the beginning of journey to curb this worrying trend.

What is your advice to young women in the construction industry?
Young women in the construction industry must to stick to their guns and be recognized and certified professionals. They must strive to be the best at all times so that detractors do not pull them down with their words and/or actions. This is the only way they can get a seat at the table.

Where do you see yourself in the next 5-10 years?
I intend to start a valuation firm of my own. By doing this I can be able to mentor other young upcoming women in the industry.
What has your career journey been like?
I had never envisioned myself as an architect or a professional in the built industry. My friend’s career indecisiveness led me here. After her mother organizing a meeting with an architect to give her career advice, my interest in architecture was piqued. I worked for three companies prior to starting my own consultancy firm. Over time, I have gained a lot of experience and also created networks with the different professionals in the industry.

What are your career achievements so far?
My greatest achievements are my professional registration as an architect and starting my own consultancy firm, InSync Designs Ltd, dealing in architecture and interior design. I know that starting and running a successful consultancy firm or a business is not easy, so I do not take it for granted that I have come this far.

What are your thoughts about being registered with a professional body?
Professional registration gives you wings to fly as there is no limitation to designing and implementing your ideas. Most of all it comes with a lot of responsibility and accountability in terms of the quality and integrity of your designs.

What kind of projects that you have executed or supervised?
I have handled a variety of projects ranging from single
and multi-dwelling residential units, commercial institutions and hospitality projects which has given me vast experience.

Who do you look up-to career wise?
Through my employment period I have had people, especially my more experienced colleagues, whose invaluable advise and insight I sought on a number of issues. Reading widely has also contributed to my wealth of knowledge.

What about your consultancy firm?
The idea of being your own boss sounds like a road to relaxing and taking vacations when you want to, but to my utter surprise I find that I have to work harder. You are more committed to work than when you were employed and you continuously have to put your best foot forward.

What are the challenges you face in the construction industry?
Architecture is still a male dominated career, so being a woman in this field means you face some form of discrimination. The only trick to thrive in this industry is to be good at what you do in order to position yourself as the ‘go-to’ person.

Vision for the construction industry?
I envision a corruption free industry, where systems are streamlined and work faster. I also hope for an industry where professionalism and ethics are upheld to eradicate the issue of quacks and where the myth of ‘professionals are expensive and have no value’ can be put to rest.

What is your advice to young women in the construction industry?
From the onset of your career, choose a job that gives you more opportunities to learn over earnings. This doesn’t imply working for free but the experience you will gain will be more valuable than the money gained over a short period. Above all, allow yourself to fail but learn from your failures.

Where do you see yourself in the next 5-10 years?
I expect that my company will be a formidable member in the industry, and we will grow beyond our borders. I also want to be known as a trusted partner by my clients, one who provides quality, innovative and creative solutions for all projects.
In September 2018, President Uhuru Kenyatta signed into law the Finance Bill, meaning that Kenyans will now be additionally taxed for petroleum products, bank transfer fees as well as the newly introduced National Housing Development Fund.

The burden is being felt by the average consumer, and these economic circumstances are forcing individuals to device ways to survive.

Living is not just about surviving, but thriving. One way to do that is to take advantage of provisions of the law in regards to taxation. This article takes you through some of those provisions that will allow you to add a few more zeros to your salary.

Tax planning evaluates various tax options and frame works to determine how to conduct business and personal transactions in order to reduce or eliminate your tax liability. Two words come to mind: TAX AVOIDANCE and TAX EVATION. These words are near half rhyme but their meanings are fundamentally worlds apart.

**Tax Avoidance** is a legitimate tax mitigation measure to lower your tax liability and reap benefits as provided in the Income Tax Act Laws of Kenya while **Tax Evasion** is a criminal stratagem of reducing the tax liability by deceit and concealment. Tax avoidance in the extreme with intent to defraud is criminal as well.

How can one mitigate the tax burden legally?

Chargeable income includes wages, salary, leave pay or payment in lieu of leave, gratuity and allowances paid in respect of employment or services rendered.

Pension Relief

The law provides that any contribution to a registered pension scheme is an allowable deduction upto a maximum of Kshs. 20,000 per month or KShs. 240,000 per
annum. An individual benefits by having a savings plan for retirement and reduction in the taxes paid. Your taxable income is net of the pension contribution to the National Social Security Fund (NSSF) to a maximum of Kshs. 20,000. On retirement, the pensioner may receive a lump sum where the first Kshs. 480,000 is deductible and the balance taxed under applicable tax bands for individual income. This is greatly applicable and advantageous to individuals who are employed and if there is no defined contributions to a pension scheme, a person can decide to contribute individually and save a great deal on tax. To further avoid tax it is advised you earn your pension at the age of 65 for total exemption.

Home ownership Savings Plan
Popularly known as HOSP it is provided in the Income Tax Act that contributions geared to ownership of a home are an allowable deduction of up to a maximum of Kshs. 4,000 or Kshs.48,000 per annum. Further, for deposits aimed at home ownership schemes, a maximum of Kshs. 3,000,000 earned in interest is tax free.

The most popular financial institution offering this product is Housing Finance Company Limited. Interest incurred on mortgages is deductible up to a maximum of Kshs.12, 500 or Kshs. 150,000 per annum. There is limited knowledge or strict enforcement of this Act by parties involved. It is advisable to familiarize with the tax laws for a greater benefit.

Provided an individual has taken a life policy or an education policy with a maturity of 10 years or a health policy for oneself or spouse or child, the law provides for a tax relief of 15% on premiums paid to such policies. This is an area most individuals have not explored with their respective insurance providers and human resource management within corporates. The insurance provider should avail a certificate that states the policy is liable for relief. The relief allowable is 15% of the premiums paid up to a maximum of Kshs. 5,000 per month or Kshs. 60,000 per annum or whichever is higher.

Charitable Donations
Donating to charitable organisations or foundations isn’t just good for your soul, it’s good for your wallet, too.

Income tax laws provide that the income from these trusts or foundations is tax exempt, and consequently donations to charitable foundations are as well. However, benefiting from this tax relief is more difficult where donations are not regular and individuals are advised to exercise caution not to misuse this provision within the law. You can benefit from this form of relief if you provide proof of such contributions and arrangements made prior for the deduction to reflect in your organisation’s payroll.

While this is not a saving plan or an investment vehicle, it is worth noting that individuals with disability are allowed tax exemption on their income for the first Kshs. 150,000 per month or Kshs.1,800,000 per annum. In addition to this, the Finance Act (2009) provides that a person living with disability is allowed to deduct from his chargeable income any expenses in respect of ‘home care’ and ‘personal care’ to a maximum of Kshs. 50,000 per month. This exemption is valid for 3 years subject to renewal.

The above options are not exhaustive, we shall cover more options in part II relating to various investment vehicles that are either tax exempt or offer tax reliefs.

Disclaimer ....while this article is aimed at helping individuals plan on their tax it is not necessarily legal reference for purposes of litigation.
During the months of August and September, Kenyans woke up to the destruction of several buildings that had been built on riparian wayleaves and road reserves. The “Green SANY” as it came to be popularly known by Kenyans, became the most talked about and most feared “monster”, crushing and leaving construction and demolition (C&D) materials in its wake on the ground.

The Nairobi Regeneration Multi-Agency team consisting of officials from the National Environment Management Authority (NEMA), the National Youth Service (NYS) and the Nairobi City County Government has already made it clear Green SANY’s work is not yet finished. There is more to come as 4000 buildings face demolition.

Underlying all these demolition activity is something that should not go unnoticed: the sustainable management of construction and demolition because this is an opportunity to achieve green growth while protecting the environment. Green growth is the means by which the current economy can make the transition to a sustainable economy while reducing pollution and greenhouse gas emissions, minimizing waste and inefficient use of natural resources, maintaining biodiversity, and strengthening energy security.

Kenya is a signatory to several international treaties like the Paris Climate Change Agreement, Sustainable Development Goals and a raft of national...
policies to direct her in that pathway and among the leading documents, specifically, the Green Economy Strategy and Implementation Plan (GESIP) that sets Kenya’s transition to a resource efficient, low carbon and inclusive green economy.

The strategy aims to strengthen the country’s third medium term plan by increasing economic growth to at least 10 percent per year. One of the policy’s thematic areas is infrastructure and the built environment. However, these policies alone cannot transition us into that direction without commitment, actions and the right systems in place.

C&D materials are generated when new building and civil-engineering structures are built and when existing buildings and civil-engineering structures are renovated or demolished (including deconstruction activities). Civil-engineering structures include public works projects, such as streets and highways, bridges, utility plants, piers, and dams. C&D materials often contain bulky, heavy materials such as: concrete, wood (from buildings), asphalt (from roads and roofing shingles), gypsum (the main component of drywall), metals, bricks, glass, plastics, salvaged building components (doors, windows, and plumbing fixtures), trees, stumps, earth, and rock from clearing sites.

Construction and Demolition (C&D) materials consist of the debris generated during the construction, renovation and demolition of buildings, roads, and bridges.

Kenya needs to prioritize a Sustainable Materials Management (SMM) approach that identifies certain C&D materials as commodities that can be used in new building projects, thus avoiding the need to mine and process virgin materials. Kenya’s rate of recycling and reuse of C&D is still quite low yet demolition has a decidedly earth-friendly air. Residents and contractors alike are generally aware of the opportunities to reuse building materials from demolition sites. Green demolition can include salvaging materials for resale, reusing materials on site, and donating materials to local building recycling centers. There is need to have multiple companies specializing in construction and demolition recycling because they can employ and or create jobs for many Kenyans.

This will have to start with the conscious efforts of diverting construction waste to material recovery facilities and planning demolitions in a way that salvages as much material as possible. The ongoing demolitions were a clear indication that with properly planned demolition many materials can be salvaged and reused. Even with rudimentary demolition techniques while using SANY, many young men were gainfully occupied for long periods (still working as we write this article), salvaging demolition materials and in the process keeping the circular economy revolving. These youths would have otherwise been out of work probably planning to commit crime as their families crumble.

There are more benefits to reusing the disposed C&D materials, such as:

- Creation of green economic activities in recycling industries and provision of increased business opportunities within the local communities, especially when deconstruction and selective demolition methods are used;
- Reduction in overall building project expenses through avoided purchase/disposal costs. Onsite reuse also reduces transportation costs;
- Fewer disposal facilities, potentially reducing the associated environmental issues;
- Offsetting of the environmental impact associated with the extraction and consumption of virgin resources and production of new materials;
- Conservation of landfill space.

That being case, what you can do is: reduce, re-use, recycle
and re-buy C&D materials.

One can help by practicing source reduction, salvaging, recycling and reusing existing materials, and buying used and recycled materials and products.

Source reduction
Source reduction reduces life-cycle material use, energy use and waste generation. Zero waste policies give it the highest priority for addressing solid waste issues. While re-use and recycling are important methods to sustainably manage waste once it has already been generated, source reduction prevents waste from being generated in the first place.

Examples of C&D source reduction measures include preserving existing buildings rather than constructing new ones, optimizing the size of new buildings, designing new buildings for adaptability to prolong their useful lives, using construction methods that allow disassembly and facilitating re-use of materials; employing alternative framing techniques, reducing interior finishes and more.

In addition to changing the design of buildings, building systems and materials, C&D source reduction efforts incorporate purchasing agreements that prevent excess materials and packaging from arriving to the construction site.

Salvaging and reusing materials, demolishing existing buildings and disposing of the debris is not a resource efficient practice. Recovering used but still valuable C&D materials for further use is an effective way to save money while protecting natural resources.

Deconstruction for Re-use
Deconstruction is the process of carefully dismantling buildings to salvage components for reuse and recycling. Deconstruction can be applied on a number of levels to salvage usable materials and significantly cut waste. Deconstruction has many benefits, including maximizing the recovery of material, conserving finite, old-growth forest resources and providing many employment and job training opportunities. When coupled with traditional demolition methods, deconstruction allows communities to create local economic activities around manufacturing or processing of salvaged materials and diverts demolition debris bound for disposal. It also preserves resources through re-use.

What Materials Can Be Reused?

The major benefit of re-using materials is the resource and energy use that one saves by reducing the production of new materials. Some commonly reused C&D materials and applications include:

- Easy-to-remove items like doors, hardware, appliances, and fixtures. These can be salvaged for donation or use during the rebuild or on other jobs;
- Wood cutoffs can be used for cripples, lintels, and blocking to eliminate the need to cut full length lumber. Scrap wood can be chipped on site and used as mulch or ground cover;
- De-papered and crushed gypsum can be used, in moderate quantities, as a soil amendment;
- Brick, concrete and masonry can be recycled on site as fill, sub-base material or driveway bedding;
- Excess insulation from exterior walls can be used in interior walls as noise deadening material;
- Paint can be remixed and used in garage or storage areas, or as primer coat on other jobs;
- Packaging materials can be returned to suppliers for reuse;

Many building components can be recycled where markets exist. Asphalt, concrete, and rubble are often recycled into aggregate or new asphalt and concrete products. Wood can be recycled into engineered-wood products like furniture, as well as mulch, compost, and other products.
Metals, including steel, copper, and brass, are also valuable commodities to recycle. Additionally, although cardboard packaging from home-building sites is not classified as a C&D material, it does make its way into the mixed C&D stream, and many markets exist for recycling this material.

Sometimes, materials sent for recycling end up being poorly managed or mismanaged. Asking your recycler a few questions, such as whether they are in compliance with state and local regulations, state licensing or registration, and/or third-party certification, can ensure the proper and intended management for your materials.

Buying used C&D materials and recycled content products for use in new construction can boost the local economy as recovered materials are typically locally sourced. This can also lower construction and renovation costs while maintaining building function and performance, and ensure materials collected from reuse and recycling programs are used again in the manufacture of new products and/or new construction, thereby fully realizing the benefits of reuse and recycling efforts. Used C&D materials reserve local architectural character and historic significance (in cases of preserved or restored buildings).

Recycled building materials can earn green building certification (Green Star, LEED or EDGE) points for projects considering certification. For example, projects may earn a minimum of one point for using 10% recycled content; an additional point can be earned for using 20% recycled building content. A project can also earn a minimum of one point for diverting 50% of demolition materials from landfills; if 75% of materials are diverted, two or three points may be earned depending on the rating system used. One point is earned for using 5% salvaged materials (according to cost) and two points for using 10% salvaged building materials.

To summarize it all, there is a myriad of activities and policies which will drive Kenya towards more construction and demolitions. More than 80% of the buildings in Sub-Saharan Africa that are projected to have been constructed by 2050 are yet to be built. These buildings will need materials to be built. At the same time, most of the demolitions that will take place in future are likely to be voluntary as building owners try refurbish or renovate their buildings to compete with newer, smarter buildings. Counties and cities too will roll out their urban renewal plans that will necessitate activities that will generate plenty of C&D material waste.

It is therefore imperative to our nation that proper systems and policies should be in place so that economic opportunities can be created to incentivize and accelerate entrepreneurship in this yet to be exploited sector that will spur the growth of the green economy. There is no better time and opportunity than yesterday. Our success towards growing the green economy will be dependent on how fast we move within the built environment sector.
1. NCA Ag. Executive Director Eng. Maurice Akech with Big 5 Events officials during the National Construction Week Press conference at the InterContinental Hotel

2. NCA Ag. Executive Director Eng. Maurice Akech, Housing Principal Secretary Charles Hinga and NCA Corporate Strategy Manager Paul Gesora listen to an Exhibitor at the Nairobi International Trade Fair

3. NCA manager Corporate Communications Wangui Kabala and Elisha Dessune of DMG Events during the National Construction Week Press conference at the InterContinental Hotel

4. National Cereals and Produce Board Chairman Mutea Iringo with NCA Ag. Executive Director Eng. Maurice Akech at the affordable housing village during the Nairobi International Trade Fair

5. Newly inaugurated NCA board members take a group photo with Public works Principal Secretary Prof. Paul Maringa (Front row Centre)
6. NCA Ag. Executive Director Eng. Maurice Akech (centre) and NCA Managers and Regional Coordinators engage Solai Assistant County Commissioner Vicky Munyasia (in black) during a fact finding visit on the Solai Dam collapse.

7. Kibra Huduma NCA staff attends to a client during a Huduma Mashinani exercise at the Kibra Chief’s grounds.

8. Kibra Huduma NCA staff attends to a client during a Huduma Mashinani exercise at the Kibra Chief’s grounds.