

## Editorial

### Planning, Design and Management of the Built Environment

The article entitled **“In Search of an Appropriate Planning Approach for an Upcoming African Heritage City; the Case of Lamu World Heritage Site”** seeks to determine the most optimal planning approach for Lamu World Heritage site. The paper found out that the just city model, was capable of presenting a model of spatial relations based on equity and can be able to bring about equity and improved quality of life. The paper further found out that this inclusive planning model is able to accommodate the different society groups and social class to bring about urban areas that are accessible, affordable, resilient and sustainable. In conclusion, the paper argues that the ‘just City’ model is the suitable option for Lamu World Heritage Site given its unique conservation demands as it creates a framework for sustainable development. It is, therefore, recommended that the just city model be the planning model of choice for Lamu as it guarantees a safe liveable environment with affordable and equitable access to urban services and livelihood opportunities for all the city residents. This recommendation is in line with UNESCO’s thematic indicators for culture in the 2030 Agenda and appropriately demonstrates how culture and conservation has contributed to inclusion and empowerment in the City.

The paper on **“Architectural Metabletica: Transformation of the Kenyan Luo Dwelling Unit”** discusses socio-cultural changes, departing from a theoretical perspective of change, as a referential datum and anchor, to highlight transformations that have occurred in the architecture of the Kenyan Luo dwelling unit. Selection of built forms that adequately embody and exemplify these transformations is done critically, at the discretion of the author, from the various options of available artefacts. A hermeneutic (subjective) approach to architectural interpretation is adopted. Two Luo dwelling units, in a rural and urban setting respectively, are identified as units of analysis, to reveal architectural changes that have occurred since the traditional rondavel (hut) is largely abandoned by ‘modern’ Luos as a result of acculturation and shifts in architectural tastes. A critical analysis of identified seminal texts and journal articles, as secondary sources, is undertaken to embed the study in relevant theory in the research field of architectural (cultural) transformation. A semi-structured interview is conducted with a key informant, as a primary source, to reveal the architectural intentions in the Paul Achayo residence. Images (drawings) of the dwelling units, as socio-cultural texts, are read (analysed and interpreted) hermeneutically, through critical observation, to describe underlying architectural meanings and transformations within them. A comparative analysis of the two units is undertaken using themes that are generated from the theoretical frame. The study establishes that the dwelling units has deviated from traditional organization of interior layouts and adopts a pluralism of taste cultures to yield solidarity, interactive and dialectic materialist transformations.

The paper on **“Re-contextualizing Indigenous Landscape Urbanism in Relation to Contemporary Urban Projects. Case of Rwanda and Burundi”** explores the tensions in re-contextualizing indigenous landscape urbanism into contemporary urbanism. In the post-colonial African city, contemporary urban projects such as the Gahanga cricket stadium in Rwanda and Library of Muyinga in Burundi, presented a good laboratory for this exploration, considering the elaborate efforts in learning from vernacular inspirations and the differences in the socio-spatial interventions. In the end, the paper concludes that contemporary urban projects exhibit elements of context-responsive sustainable planning principles, derived from indigenous architecture and urban form. Finally, the paper recommends how contemporary landscape urbanism for the African city can re-root its mould from indigenous inspiration to achieve socially, economically, culturally, and environmentally-sound of land settling and architecture, while at the same time re-valuing the prominence based on importance of nature in the indigenous models.

The paper on **“Application of GIS and Remote Sensing in Monitoring Effects of Urban Sprawl in Urban Kenya: A case study of Eldoret Municipality”** aims at detecting land use and land cover changes within Eldoret municipality over 25 years using Landsat Thematic Mapper (TM) and Landsat Enhanced Thematic Mapper Plus (ETM+) imagery of 30m spatial resolution at 7-year intervals. GIS and remote sensing-based methodology has been adopted in supervised classification of satellite images into four classes; Built up, Bare land, Vegetation and farmlands. Post classification; Change detection analysis determined quantity and tendency of transition from one land cover class to another. The results were subjected to zonal statistics to determine nature, and extent of sprawl. The change analysis revealed general trend of increasing built-up areas from 5.382Km<sup>2</sup> in 1995 and 27.57 Km<sup>2</sup> in 2017. Depletion of green spaces is demonstrated by decrease in vegetation from 9.72% coverage in 1995 to 2.66% coverage in 2017. Eldoret municipality experienced negative growth in built environment in 2002-2009 transition due to Post Election Violence (PEV) and speculation of further unrest while there was great shrinkage of green spaces in 2009-2017 contributed by better political environment in 2013 as well as devolution. Zonal statistics analysis revealed uncoordinated development in defined land use zones. This study concludes that urban sprawl is a phenomenon that will persist in Eldoret town if left unchecked. This study recommends that; enforcement of policy framework on 0.5Acres minimum land holding size within municipality, restriction of change of user, set standard road width to 9m on residential and 15m on agricultural zones. Development of municipality’s strategic plans and follow up to implementation. This study greatly highlights efficiency of Geographic Information Science (GIS) and Remote Sensing in detecting, monitoring and modelling urban expansion or sprawl and its drivers.

The paper on **“Dynamic Urbanism and the Notion of Heritage Conservation; Lessons from Lamu”** investigates the factors impacting the built urban fabric of Lamu old town and consequently form a critical approach towards heritage conservation. Lamu was carefully selected because it is the oldest living historic city in Kenya, with over 500 years of history. Given that it is the oldest and best preserved Swahili settlement along the East African coast, Lamu Old Town World Heritage property and its surrounding setting in the Lamu archipelago contributes to its ‘Outstanding Universal Value’. Combining theoretical and philosophical frameworks with first-hand data collected through field activities, the author examines the internal heterogeneity of heritage conservation and dynamic urbanism, and the influence this has had on the built environment. The study reveals that conservation processes are based on a common philosophical commitment to public welfare. However, heritage conservation is underpinned by static connotations while the modernist vision is rooted in the unrealistic and exclusive. The findings point to inequalities, informal building practices, and a lack of appropriate policy in the urban environment. Several factors mainly economic, political and social factors have negatively impacted the built environment. The current approach of conservation practice has not had a lasting impact on the capabilities of local residents, yet it is crucial to the value of the town. The study recommends that a meaningful collaboration between heritage conservation and urban development, through partnerships, appropriate flows of funding and expertise, and policy formulation, guides the development of Lamu town.

The article entitled **“Factors Influencing Housing Afford-ability in Kigali City, Rwanda”** aims at analysing factors that influence housing afford-ability in Kigali City in Rwanda. Primary data is collected through questionnaire survey dispersed to households, key informant interviews and observations. Secondary data is obtained through a review of literature. The study results reveals that the level of housing supply in Kigali City is low amidst high demand in the city. In addition, it establishes that the significant factors that influence housing afford-ability and their level of influence. In addition, the study establishes that although cost and availability of land is significant, it is none the less; not the most significant. The study concludes that a rethinking of policy options is important particularly with respect to development control measures that are likely to contribute to reduction in housing supply.

The paper on **“The Process of Value Engineering in Construction Projects in Nairobi, Kenya”** examines the process of executing Value Engineering (VE) in construction projects in Nairobi County. The study population comprised of Construction Project Managers, Architects, Quantity Surveyors and Engineers registered in Nairobi County. Data is collected through administration of questionnaires and structured and unstructured interviews. The findings establishes that there are features of VE incorporated in construction projects but a lot improvement in its execution is required. 60% of the respondents reported that VE is facilitated by Architects instead of Construction Project Managers who may be more objective, while 96% reported that VE is extended to construction stage contrary to the expert’s recommendation. In 70% of the construction projects, the tool adopted is cost cutting measure rather than to create value and in 75% of the construction projects the exercise lacks teamwork and is carried out in informally hence limiting it effectiveness. These weaknesses in the implementation of VE may be explained by the finding that 86% of the practitioners had learnt the features of VE through their work experience hence the recommendation of its introduction in academic curricula and training and sensitization through continuous professional developments workshops and seminars.

The article entitled **“Planning for Agro-Industries in Kinangop Sub-County, Nyandarua County – Kenya”** examines how agro-industries catalyze rural development in areas with abundant agricultural raw materials, making these industries popular in poverty reduction. Data on social characteristics, agricultural production, and marketing and data on the location and siting of six agro-industries are inventoried from a study report on planning for agro-industries in the sub-county. Over 80% of respondents grow potatoes, cabbages, carrots, maize, and snow peas; and rear dairy cows to produce milk for their own consumption and surplus for the market. Myriad challenges, including exploitation by middlemen and lack of appropriate land sites for agro-industries, undermine the agricultural production efforts of the farmers and the development of agro-industries. The article recommends planning for agro-industries that disaggregates strategies and areas of action planning to sub-county level or below to address location and site accessibility needs of agro-industries as a norm of territorial rural development.

The article entitled **“Towards A Co-Design Framework for Sustainable CBTES in Homabay County”** elaborates on the term co-design refers to a philosophical and political approach to designing, which is grounded on the belief that all people are creative and that users, are assumed experts in their domain, thereby bringing in different points of view that inform design and direct innovation. Involvement of users in co-design ensures their inclusion in knowledge development, idea generation and concept development of products and systems whose ultimate goal is to serve the interests of the same users. Building on the tenets of participatory design and being a relatively new approach to designing, desktop research was done that looked at co-design information published in journals, books, reports and Internet blogs. The focus of this article is to highlight some of the methods and techniques used to enable co-design. The findings show that three approaches, along which tools are developed, have been used for co-design namely; telling, making and enacting activities. Telling activities include use of narratives and storytelling, gaming and future workshops. Making activities include use of prototypes, probes and generative tools. Enacting activities include use of theater techniques and scenario building. From the exemplars in the article, it was noted that tools are not used in isolation but are often used

in combination. In conclusion, the article proposes a framework for co-design participation, that can be used by designers in determining the choice of co-design tools based on intent of use such as for probing participants, for priming participants in order to immerse them in the area of interest, to better understand their experiences and lastly, for generating ideas for design concepts.

The article on **“Locational Effects of Petrol Filling Stations on Environmental Safety and Health in African Cities: A Case of Lagos, Nigeria”** examines the locational effects of petrol filling stations on the environmental safety and health. Specifically, the study examines the distances of the petrol filling stations from the residential buildings, safety and health conditions of the environment in assessing the effects. A survey approach combines with the use of Global Positioning System (GPS) and Geographic Information System (GIS) was adopted where 384 residents are selected from the estimated 1,002 buildings located 100m from the petrol filling stations to collect data using multi-stage sampling technique. Data collected is analysed using frequency, percentages, mean and correlation analysis. Findings showed that the petrol filling stations location does not comply with planning standard, mostly located between 0 – 25m from residential buildings; with oil leakages as the perceived hazard and respiratory diseases being mostly prevalent. The findings show that skin diseases, respiratory diseases and sight problems with increase in the perceived oil leakages and diseases associated with decrease in distances of the stations from residential buildings. The conclusion is that risks and diseases perceptions increase with the location of the petrol filling stations near to the residential buildings. The study recommends strict compliance to the planning standards by the filling stations operators and activation of their social corporate responsibilities in the safety and health services to the cities as well as compensation for the affected persons.

The paper on **“Urban Transport Policy and Land Use Planning Accessibility: Nexus in Nairobi City”** evaluates the integration of urban transport policy and land use planning in Nairobi City. The study analyses accessibility characteristics of journey time, travel time, travel speed, cost of travel, and journey length in Nairobi city. The independent variables measured included journey time, levels of service on roads during peak times, transportation cost decay analysis, and changes in built-up areas along the Thika Road and Ngong Road Corridors against accessibility. The institutions responsible for urban transport policy and land use planning in the study area were also studied. The study found out that despite the urban transport policy and land use planning efforts, there is poor integration of urban transport policy and land use planning that has led to poor accessibility in the study area. The study has recommended a model using a systems approach based on Transit Oriented Development (TOD) for the integration of urban transport policy and urban land use planning in order to achieve accessibility in Nairobi City.

The final paper in this issue is entitled **“Impacts of Covid-19 Pandemic on Accessibility in Nairobi City”** This paper evaluates the impacts of COVID -19 pandemic on accessibility to land use sites such as work environments, education, shopping centres, recreational and conference facilities among other services in Nairobi City. The study analyses accessibility factors of travel time, length of journey, cost of travel behaviour. The study focuses on periods before COVID -19, during lock-down and after lock-down (normalcy) in Nairobi City. The independent variables measured against accessibility includes travel time, travel cost and frequency of travel. The household questionnaires were to collect data along the Ngong Road and Thika Road corridors. The study established that COVID -19 had significant impacts on physical accessibility to land use sites, particularly during peak lock-down period. Moreover, social households opted to use online modes as a substitute to physical access to work, schooling, shopping, worship, recreation, meetings, conferences and other socio-economic activities. This study recommends the increased and complementary use of both virtual and physical modes as a means of access in normal urban living. The planning of residential neighbourhoods should be done with- spaces and facilities that support alternatives to physical access to various socio-economic activity sites.

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