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Architect's Perspective in Remedy of Housing Deficit in Owerri, Nigeria

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Abstract
Housing is one of the three basic needs of man. It is the most important factor for physical survival of man after provision of food. A deficiency in housing can profoundly affect the health, welfare and productivity of man. It is an indispensable necessity without which man's survival is impossible. Housing as important and relevant as it is from the above premise however has not been accorded the attention it deserved. Nigeria's housing deficit nonetheless is unacceptably high and needed to be reduced. This is because as at 1991, when the National Housing Policy was promulgated, Nigeria was said to have a housing deficit of seven million units. For close to a decade now, the figure has been at 17 million, because the population is increasing daily and needs urgent intervention to forestall the deteriorating trend. Furthermore unprecedented urbanization resulting from high rural – urban migration has created large demand for affordable housing accommodation which in turn gave rise to slum population in the urban areas and consequential inadequate infrastructural facilities in the rural areas. This paper seeks to address the deficit in housing by developing an architectural design techniques that will utilize available building materials, local artisans/skilled workforce to deliver housing units that are environment friendly and sustainable.
Keywords: *House, environment, sustainable, archtecture, ambience, design*

INTRODUCTION

Housing, literally is defined as buildings of other shelters in which people live, a place to live, a dwelling and to nations a critical component in social and economic system. It is however, erroneous and myopic to mistaken housing as building only, rather more appropriate and all embracing by including the environment around the building and infrastructural facilities that service the building.

Housing therefore, is one of the three basic needs of man. It is the most important factor for physical survival of man after food. A deficiency in housing can profoundly affect the health, welfare and productivity of man. Before the fabric, services and the contents of the building housing compasses all that surround the building to stimulate healthy living. Housing has to be quantitatively and qualitatively adequate to fulfill it basic purposes (Aderamo and Ayobolu, 2010).

Almost half of Nigeria's population live in cities, with 64.2 percent living in slum conditions. The rapid growth of cities has engulfed nearly towns and villages, and pushed back mangrove, while the lack of adequate infrastructure and planning have caused deforestation, congestion, poor health and poverty.

The Nigerian real estate is growing fast and is now the sixth largest sector in the economy. Yet, Nigeria still has a low home ownership rate of 25 percent, lower than that of Indonesia (84 percent), Kenya percent) and South Africa (56 percent). Home purchase and rent prices have grown ahead of general inflation, a standard three bedroom middle income apartment currently commands a rent of 300,000 NGN per annum and a purchase price of 10 million NGN. The major issues that continue to affect housing in Nigeria include inadequate access to finance, slow administrative procedures, the high cost of land registration and titling. Even some government policies on housing in Nigeria are not favourable.

STATEMENT OF THE PROBLEM

Housing demand has witnessed unprecedented increase in the past decades. The low level of economic development, physical, social and cultural factors have created, among others immense obstacles to the provision of adequate housing to the majority of population. The population growth rates are growing faster than the provision of new housing and housing infrastructure. This has resulted in intensive usage of the existing stock of housing and deterioration of housing environment.

Housing in all ramifications is more than a shelter since it embraces all the social services and utilities that make a community or neighborhood a livable environment. The result is manifested in growing overcrowding in homes, neighborhoods and communities as well as increasing pressure on infrastructural facilities and rapidly deteriorating environment (National Housing Policy, 2006).

However, this paper will utilize housing brief requirements that is environmentally friendly to proffer architectural solutions that will add to existing housing stock as a contribution to other stakeholders efforts to sustainably and drastically reduce housing deficit in Owerri Nigeria.

AIM OF THE STUDY

Aim was to architecturally create a housing design that is sustainable, environment friendly with a view of utilizing local building materials, artisans and skill workforce and locally constructed as a model to be replicated in reducing housing deficit.

OBJECTIVES OF THE STUDY

The aim will be achieved with the following as to:

i. create a brief requirements that generate room facilities with appropriate spaces;
ii. design the room layouts in line with their functional requirement and aesthetes;
iii. develop the building working drawings with requisite specifications to construct on site and
iv. administering the various artisans and workforce required to deliver the housing project.

Project Data/Information: A story/duplex residential building for renting to the public at Uhu Umuome, Umuodu Mbieri outskirt of Owerri, Nigeria.

Architect/Author: Asikogu, L.O.

Client: Chief Daniel Chigbu Jason

Project Date: 2017

Project Cost: N300,000,000 =

Project Location:

The project is located at about 100 meters left to Rochas Foundation College of Africa. The site is moderated elevated 3 meters above the level of the access wad which gave advantage to successful storm water drainage to public gutters at the edge of access road. It also offers a good platform form a beautiful landscape design.

Preamble

The site was expected to accommodate four prototype buildings with a gate house and rental shops. Also an elaborate space for car parking.

Design Objectives

In achieving the design goal, the following objectives were adopted as follows:

i. maximize the use of site by using theodolite to set out the four prototype buildings and provide effective circulation in between the various unit on the site.
ii. provide and incorporate boy quarters attached to each unit to conserve space.
iii. provide a liveable forecourt for optimum landscaping, accessibility and security surveillance.
iv. use basic architectural design tools and compositional principles to achieve pleasant exterior and interior that will naturally ventilate the living spaces.
v. Coordinate various local artisans/Skill workforce required to the delivery of house projects.

The Project Brief

The client has intention to develop four prototype duplexes in a plot of land of ……. For commercial purposes by providing the following;

(a) One large living room
(b) One Carport
(c) Self contained guest room
(d) One dining room
(e) One kitchen
(f) Visitor WC
(g) Three Bedrooms as boys quarter

First Floor

(a) Family Longe
(b) Terrace above carport
(c) Master Bedroom self content
(d) Two other bedrooms self-content
(e) Box room

Design Strategy

A strategy was adopted and tailored to achieve the design goal using simple geometric shape that was cutoid to greatly employ various elements and principles of design to meet the user's functional and aesthetic needs.

Site Analysis/Planning

Site planning as an integral part of the lamb use process were employed to study the site and its characteristics first to ascertain its potentials, and also, its deficiencies. This site analysis were explored under the following:

Location: The site is located at Uhu, Umuome, Umuowdu Mberi at the outskirt of Owerri Urban. It occupies an area of approximately square meters. The position of the sun was also checked during the site visit the directions of the cardinal points established in relation to the site.

Accessibility: The site endowed with two access roads. One is major which emanates from the popular Rochas

Foundation College of Africa Avenue to Governor Rochas Okorocha's Wife NGO building and the other from the back of the site in which an emergency exist gate is located.

Site Planning: In planning the site, the peculiar features of the site were utilized to elegantly position four (4) duplex buildings as an estate. With a gateman house, a shopping outlet, positions for boreholes, generator house and beautifully landscaped forecourt.

Building Orientation: It is advantageously the South-West and North-East Trade Winds direction for maximum natural cross ventilations and also minimum solar radiation exposure.

Site Coverage – In order to allow enough space for outdoor environmental activities and observe development control restrictions not to over built 67% of the entire plots of land were left undeveloped and only 33% built.

Power Supply – Electricity supply were connected directly to the already existing public mains along the access roads. Solar Painds will be installed and made accessible to the favour building to augment electricity power supply.

Water Supply – Presently, there is no public water supply in Owerr Urban. The alternative means is through sinking of Boreholes which is implanted. To supply water for the construction through overhead tanks with structural supports for sufficient preserves, to reticulated to each building.

Storm Water Drainage – The building elegantly will sit on a site with geille scope. Storm water will easily be drained through gutters properly located within the site and channeled to the main secret gutter along the major access road.

Recommendations

- It is very relevant in architectural design to integrating brief requirements of the client in line with users space dimensional needs.
- Implementation of site analysis using site data/information for optimal space distribution of architectural facilities in accordance to accurate site orientation to maximize wind flow direction.
- Economy in the use of space by tactically merging to the main building, the boys quarters/security aide rooms for appropriate environmental surveillance and sanitation.
- Provision of adequate outdoor spaces for optimal ventilation and communal activities.
- Creation of housing project that is both functional, aesthetic and result oriented meeting the minimum specifications in line with city government approval standards.

Conclusion

In conclusion, it has been an exciting exercise in the process of delivery these projects. The site is quite ambient, science and luxuriant, to live in when completed. The client is optimistic of the housing project will be a huge success of the project. The architect and other requite engineers, the building contractor, suppliers and artisans in their synergy will definitely make the projects a befitting dwelling environment that is sustainable and environment friendly to assist to ameliorating housing deficit in Nigeria.

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