



# RESTORATION OF THE NEGLECTED GREEN SPACES IN OWERRI URBAN -THE CASE OF ALADINMA ESTATE AND EMMANUEL COLLEGE LAYOUTS IN OWERRI URBAN

**Ndidi Uchenna OKOLO**

*Department of Architecture, Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State*

Email: arc.ndidi@gmail.com

## **Abstract**

*A well-balanced urban environment can enhance living conditions and the quality of life of urban residents. The pressures of urban life in some developing countries often make it difficult for the residents to take care of the environment. Urban schemes and developments in the urban areas have created high concentration of urban residents and consequently generation and improper disposal of refuse. Planning authorities have created green spaces within neighbourhoods and layouts in order to enhance the urban environment. However, these spaces have become neglected, misused and negate the urban environment. Some of them have become refuse dump sites. The study was on the neglected greenspaces in Old Owerri urban. This paper will focus only on the conditions of the neglected green spaces in Aladinma estate and Emmanuel College layout and how they could be restored to enhance the urban environment. The study of these spaces reveals that they could be restored as useful well planned green spaces after stopping the dumping of refuse. The study was a survey research using questionnaires administered on residents of some randomly selected layouts in Owerri. Obtained data was analysed using the frequency distribution, Chi square and the Spearman Rho statistical tools. Findings reveal that if proper waste disposal system is developed these spaces could be made available as well-functioning green spaces, thereby improving the quality of urban life in these layouts.*

**Keywords:** *Green spaces, neglected spaces, neighbourhood quality, urban environment*

## **Introduction**

Planning authorities in Owerri created green spaces within neighbourhoods and layouts in order to enhance the urban environment. However, these spaces have become neglected, misused and negate the urban environment. Disposing waste into the existing green spaces in various layouts in Owerri have largely affected the use of these spaces. Green spaces in Aladinma estate and Orlu road secretariat layout have ben degraded with the dumping of refuse, thereby denying the residents the benefits of well-functioning green spaces. Green spaces have been known to positively affect the lives of urban dwellers in many ways and have existed in urban areas from the prehistoric periods to the present day. These spaces include courtyards, squares, gardens, piazzas, agora, fora, parks and green belts (Greenspace Scotland, 2011). Green spaces are part of the natural environment of a city. Research has revealed that the natural environment is important in the total functioning of the human being and further states that the physical setting (nature or built) can affect human behaviour (Kreitzer, 2013). The natural environment unites the urban dwellers with nature. Green areas

at city levels are an essential part of public spaces in uniting the urban dwellers with the natural environment. This will enhance the value of public spaces and also create openness of the physical environment and ensure higher environmental aesthetics and respiration in congested cities.

Green spaces are part of open spaces and have come to be associated with urban development, especially in the process of growth of cities. They punctuate the urban fabric of cities serving diverse functions. They occur in different sizes and locations. Generally, open spaces can be privately or publicly owned. An open space has been explained as either land not built upon, which may be either natural or manmade or land developed as garden and recreation grounds or undeveloped and which has value for recreational purposes, amenity, conservation and other natural resources; historic or scenic landscapes or areas of outstanding natural beauty such as water areas, river, valleys, hills, mountains, lakes, oceans and bays. (Mas'ud, 2004). Green spaces are therefore part of the urban environment and could be publicly or privately owned.

Benefits of green spaces include ecological benefits of supplying the cities with ecosystem services which range from maintenance of biodiversity to the regulation of urban climate (Haq, 2011). Other benefits are chemical, air and pollution control, increase in biodiversity and nature conservation as well as increase in energy savings in buildings and increase in property values. Social and psychological benefits include recreational and health benefits. Urban green spaces can be a comprehensive tool for long term protection of environmental sustainability through improving the quality of life.

Consequently, degradation of green spaces intended to enhance quality of urban life in Aladinma estate and Emmanuel College Layouts denies the residents of the environmental, social and ecological benefits. Aladinma estate is predominantly a low density development area while Emmanuel College is a mixed density development area. There are 4 neglected spaces in Aladinma estate and one in Emmanuel College layout. The two layouts are among the 7 settlements that were studied in Owerri urban. It was observed that there was the presence of activities of roadside tradesmen in and around the neglected green spaces in Aladinma Estate. Other activities such as dumping of refuse, impromptu mechanic workshops and motor parks exist in the neglected spaces in Emmanuel college layout.

The objective of this research is to examine the conditions of the neglected spaces in Aladinma estate and Emmanuel College Layouts. The hypotheses guiding this work are:

- a) There is no significant relationship between the activities of roadside tradesmen/craftsmen and the presence of waste dumps in the neglected green spaces in Aladinma Estate.
- b) There is no significant relationship between the activities in the neglected green spaces and the presence of waste dumps in Emmanuel College layout.

### ***Conceptual framework***

Green spaces perform several functions in the urban environment and researchers have evolved several concepts that emphasize the importance of the natural environment to urban life, the interrelationships between organisms and their ecosystem as well as the sustainability

of the urban environments by harnessing the potentials of the natural environment. These concepts include: urban ecology, urban nature, green urbanism, landscape urbanism, green infrastructure and urban forestry, biophilic concept. Biophilic concept and concept of urban nature will guide this work.

### *Biophilic concept*

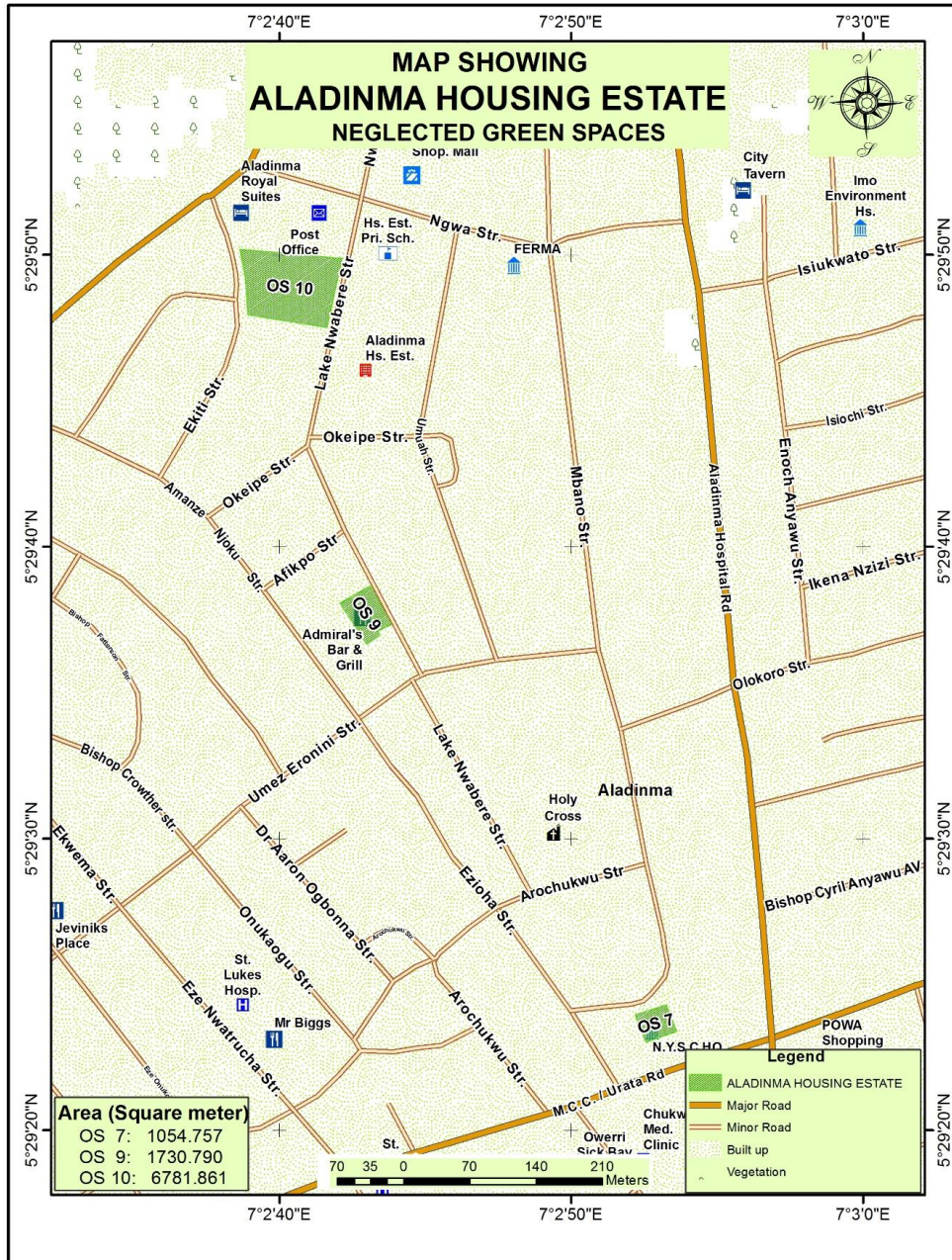
A recent concept linking human activities to the natural world is the Biophilia concept. This describes the innate affinity of man to the natural world (Kellert, 2011). Thus suggesting that there is an innate bond between man and nature (Youssef, 2014). This concept was used first by a psychologist named Erich Fromm in 1964 in which he referred to it as the passionate love of life and all that is alive (Mocha.uk.com, 2014). It was further propagated by an American Geologist named Edward Wilson. The propagators of this theory carried out convincing studies showing the benefits of interaction with nature. This concept emphasizes that the gains of this interaction with nature by human beings include the improvement of productivity, low stress levels, enhancement of learning comprehension and increase in the recovery rates from illness (Mocha.uk.com, 2014).

### *Concept of urban nature*

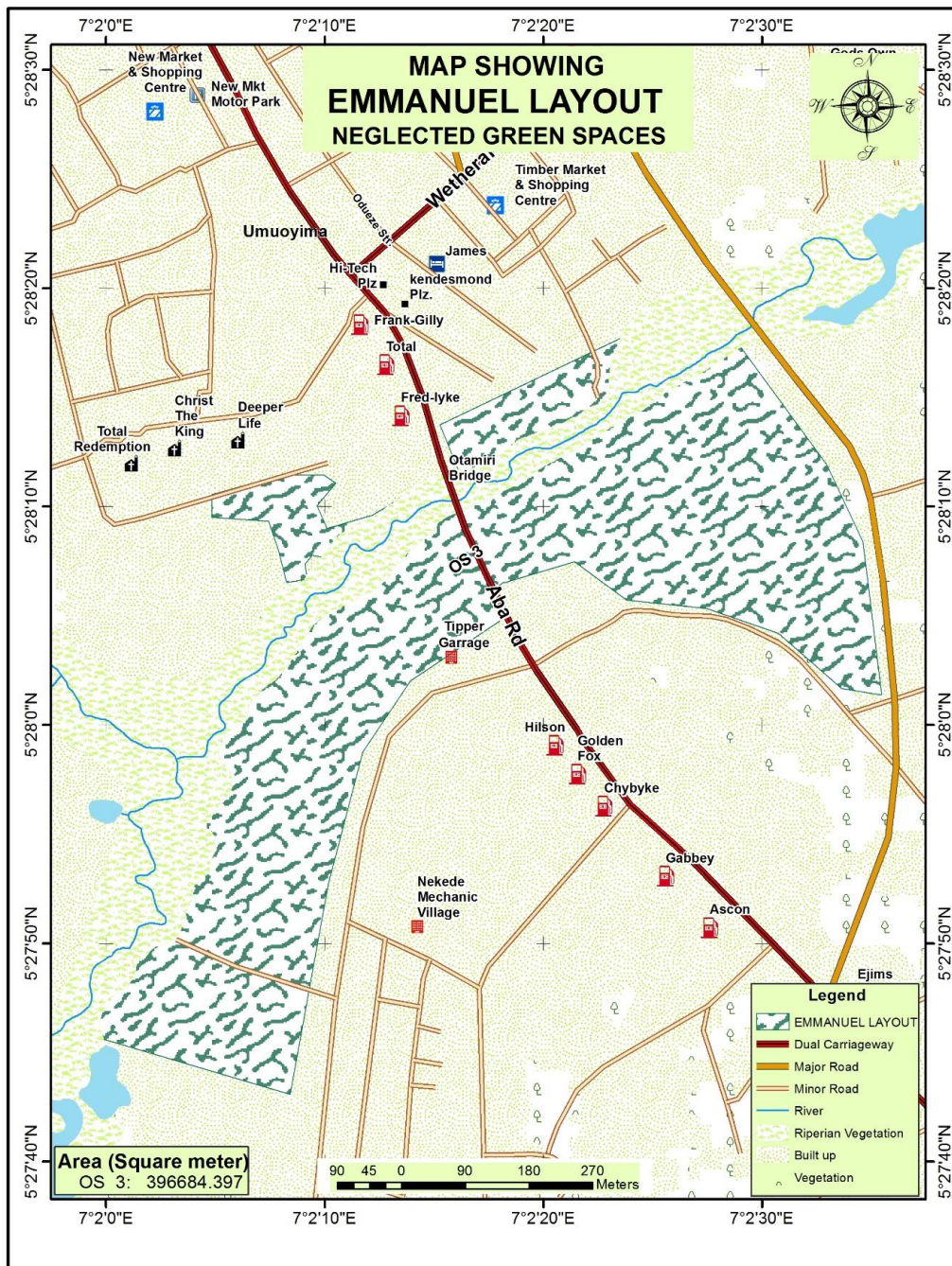
The concept of urban nature has also become another recent trend in landscape development and urban renewal. This concept encourages the return of nature to the cities by increasing landscape projects in various ways. Increased globalization, urbanisation and crisis in the environment have led to social and ecological demand for a call for return to nature in the urban areas. Consequently, sustainability concerns have led to this tendency in landscape concepts (Theatlantic.com, 2011). This tendency has led to renewal projects in landscape and industrial areas for recreation. (Theatlantic.com, 2011). There is a greater desire for nature to come into cities.

### *Study Area*

Aladinma estate and Emmanuel College layouts are two layouts in Old Owerri urban. The residents in Aladinma estate are mainly civil servants (22%), businessmen (32%) and others (46%). Emmanuel College layout has civil servants (35%), business men (22.5%) others (41.4%). Residents live with their families and dependents. The house types are predominately flats and a smaller number of family houses. Household sizes of 2-5 people and 6-10 are present in the layouts. It is important to enhance the green spaces in order to improve the quality of life of the urban residents. Neglected green spaces within the two layouts are shown in Figure 1 and Figure 2.



**Figure 1: Aladinma Estate neglected green spaces**  
Source: Fieldwork 2015



**Figure 2: Emmanuel College neglected green spaces**  
Source: Fieldwork, 2015

## Research methodology

This study is part of a wider research. The data for this research was obtained through survey method. Data gathered consisted of primary and secondary data. Secondary data was obtained from existing government records, books, published and unpublished related materials, maps, drays, archives. It was obtained through records of planning authorities on these lost green spaces and documented records on the status of these lost green spaces. There was a study of the status of the government planned green spaces that are neglected or lost in these layouts due to the pressure of urban expansion. The planning areas/settlements of these two layouts structured by the planning authorities in Owerri were the study blocks. Primary data was gathered through questionnaires administered on the residents of 7 randomly selected settlements in Owerri among which were Aladinma estate and Emmanuel College layout.

The research assumed a 95% confidence level, 0.5 standard deviation and a margin of error (confidence interval) of +/- 5% sample size expressed numerically for this study. The calculated respondent size was 385 respondents. For the 7 layouts that were studied, questionnaire were administered on these respondents.

The following variables were studied for Aladinma estate:

- a. Availability of Roadside tradesmen/craftsmen- V1
- b. Presence of waste dumps—V2

The following variables were studied for Emmanuel College layout:

- a. Locations of waste disposal and refuse dumps in the neighbourhood.-V3
- b. Level of use of neglected spaces for activities-V4
- c. Availability impromptu mechanic workshops-V5
- d. Availability of Motor parks-V6

Univariate and Bivariate analysis were conducted on the results. The univariate analysis conducted was on the frequency data for the all the variables in the respective layouts. The bivariate analysis was conducted using the chi square statistical tool to test the variables in Aladinma estate and Spearman Rho to test the null hypotheses Ho1 and Ho2.

## Presentation of Data, Discussion and Analysis

### *Aladinma Estate:*

The neglected green spaces are a total of 9,567.408 m<sup>2</sup>. The frequency distribution tables for the 2 variables examined under Aladinma Estate are shown in Tables 1-2. Table 1 shows that there were activities of roadside and craftsmen located in or around these neglected spaces (50.5%). Table 2 shows there were some waste dumps located around or inside these neglected spaces (49.5%). It becomes important to find out whether the presence of these activities of the roadside tradesmen/craftsmen has a significant relationship with the presence of the waste dumps.

**Table 1: V1- Availability of Roadside tradesmen/craftsmen**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	49	49.0	50.5	50.5
	No	48	48.0	49.5	100.0
	Total	97	97.0	100.0	
Missing	System	3	3.0		
Total		100	100.0		

Source: Fieldwork, 2015

**Table 2: V2- Presence of waste dumps**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	48.0	49.5	49.5
	No	49	49.0	50.5	100.0
	Total	97	97.0	100.0	
Missing	System	3	3.0		
Total		100	100.0		

Source: Fieldwork, 2015

***Emmanuel College Layout:***

The neglected space in Emmanuel College is a very large space of 396,684.397m<sup>2</sup> running along the shores of the Otamiri River. The frequency distribution tables for the variables examine under Emmanuel College are shown below in Tables 3-6. The frequency distribution tables for the 4 variables examined under Aladinma Estate are shown below in Tables 3-6. Table 3 shows that there were locations of waste disposal and refuse dumps in gutters (22.55), neglected space (62.5%) and refuse collectors (15%). Table 4 shows there were different types of activities taking place in that neglected space these neglected spaces (52.5%).

Table 5 shows that there is an impromptu motor park and Table 6 shows that there is an impromptu mechanic workshop.

**Table 3: V3- Location of waste disposal and refuse dumps**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gutters	9	22.5	22.5	22.5
	Refuse dumps in the green spaces	25	62.5	62.5	85.0
	Refuse collectors	6	15.0	15.0	100.0
	Total	40	100.0	100.0	

Source: Fieldwork 2015

**Table 4: V4-Level of use of neglected spaces for activities**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fairly large	18	45.0	45.0	45.0
	Large	21	52.5	52.5	97.5
	Others	1	2.5	2.5	100.0
	Total	40	100.0	100.0	

Source: Fieldwork 2015

**Table 5: V5-Availability of motor parks**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	87.5	87.5	87.5
	No	5	12.5	12.5	100.0
	Total	40	100.0	100.0	

Source: Fieldwork 2015

**Table 6: V6 -Availability impromptu mechanic workshops**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	40	100.0	100.0	100.0

Source: Fieldwork 2015

***Aladinma Layout***

Ho1: In this hypothesis the following variables were examined:

- i) Availability of Roadside tradesmen/craftsmen- V1
- ii) Presence of waste dumps—V2

The Chi-square analysis shows (Ho1)-there is a significant relationship between the activities of roadside tradesmen/craftsmen and the presence of refuse dumps in the neglected spaces. The statistics obtained for the pair of variables V1/V2 is significant at 95 % confidence level (= .006). The null hypothesis is therefore rejected. This is shown in Table 7.

**Table 7: The results of Chi square test of independence**

Variable			Chi square	Significance	Remarks on hypothesis
Ho1	V1	V2	7.669	0.006	Rejected

Source: Fieldwork, 2015



**Emmanuel College Layout:**

Ho2 was tested with the Spearman Rho correlation coefficient

In this hypothesis the following variables were examined:

- i.) V3- Locations of waste disposal and refuse dumps in the neighbourhood.-V3
- ii.) V4- Level of use of neglected spaces for activities

The Spearman Rho correlation analysis shows that there is a significant relationship between the locations of waste disposal and refuse dumps in the neighbourhood and level of use of neglected spaces for activities. The statistics obtained for the pair of variables V3/V4 has a correlation coefficient of 0.534\*\*. The result implies a moderate, positive relationship exists and the correlation is significant at the 0.01 level (2-tailed) i.e. 99% compliance. This is shown in Table 8.

**Table 8: The results of Spearman Rho correlation analysis**

Variable			Corr Coefficient	N	Sig.(2 tailed)	Remarks on hypothesis
Ho4	V3	V4	.534**	40	.000	Rejected at .534**corr. coefficient

Source: Fieldwork, 2015

The results show that the activities in these 2 layouts cause the dumping of refuse in the neglected green spaces. The dumping of refuse should be stopped in these layouts and these spaces should be properly reworked and developed into well-functioning green spaces to enhance the environmental quality of these layouts. There is the need to improve the interaction of nature with the urban residents to improve of productivity, achieve low stress levels, enhance earning comprehension and increase in the recovery rates from illness. This will also improve the interaction between man and nature. This is in line with the Biophilic concept and the concept of urban nature.

## Conclusion

The research reveals that the neglect of the green spaces in these layouts gave rise to the dumping of refuse, impromptu motor park and mechanic workshops. These spaces have been affected in various ways in the urban built environment in Owerri through rapid urbanisation. These resultant open spaces have been turned into neglected green spaces whose spatial functions need to be redefined. This has affected the urban environmental quality in these layouts. Quality of air and the noise pollution from the activities are also factors that have affected the urban environmental quality. It becomes important that these activities that negate these green spaces be moved out of these places so that they can be enhanced as well-functioning green spaces in these layouts.

More efforts should be made to relocate these undesirable activities to other parts of Owerri urban. However, the vitiation of these spaces might continue if steps are not taken to properly develop these spaces into well-designed green spaces that enhance the quality of the urban environments in these layouts. Developing these spaces into green spaces will bring nature back to the urban environment.

## References

- Greenspace Scotland. (2011). *Greenspace definition*. Retrieved from Transforming Urban Spaces into People Places: <http://greenspacescotland.org.uk/definition.aspx>
- Haq, S. M. (2011). Urban Green Spaces and an Integrative Approach to Sustainable Environment. *Journal of Environmental Protection*, 2, 601-608. Retrieved November 9, 2014, from [www.scirp.org/journal/PaperDownload.aspx?paperID=5881](http://www.scirp.org/journal/PaperDownload.aspx?paperID=5881)
- Kellert, S. (2011). *Program in Biophilic studies*. Retrieved June 9, 2014, from Stephenkellert.net: <http://www.stephenkellert.net/uploads/1/1/4/7/11479124/programbiophilicstudies.pdf>
- Kreitzer, M. J. (2013, July). *What impact does the environment have on us?* Retrieved from Taking Charge of Your Health and Wellbeing: <http://www.takingcharge.csh.umn.edu/explore->
- Mas'ud, A. (2004). Contemporary issues in Urban Landscape design. *Journal of Nigerian Institute of Architects, vol.4*.
- Mocha.uk.com. (2014). *What is Biophilia? and why you need Biophilic Design in your home*. Retrieved January 20, 2016, from Mocha.uk.com: <http://blog.mocha.uk.com/biophilia-biophilic-design/>
- Theatlantic.com. (2011, September 14). *Urban Nature: Where Green Has Made Its Way Back Into the City*. Retrieved April 5, 2018, from The Atlantic: <https://www.theatlantic.com/international/archive/2011/09/urban-nature-where-green-has-made-its-way-back-into-the-city/244612/>
- Youssef, J. (2014). *The Biophilia Hypothesis-kitchen-theory*. Retrieved February 15, 2015, from Kitchen-theory.com: <https://kitchen-theory.com/the-biophilia-hypothesis-is-nature-healthier-fo...>