



BUILDING CONVERSION IN CITIES: AN EMPIRICAL ANALYSIS OF IJAPO RESIDENTIAL ESTATE AKURE, NIGERIA.

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ABSTRACT

Purpose: This study assessed city building conversion from the perspective of the Ijapo Residential Estate Akure, Ondo State. The objectives are to identify and examine the factors responsible for residential building conversion, assess the effect of building conversion on the existing planning scheme, and ascertain the level of building plan deviation from the original design.

Design/Methodology/Approach: This article annexed primary and secondary data collection sources using Ijapo residential master plans (pre-2002, 2012, and 2022). From these, 717 residential buildings were identified using Auto-cad and SPSS. The 717 buildings were multiplied by 5hpb (household per building), which amounts to 3585 households within the study area. Ten percent of the total buildings were selected randomly for the research. Field data were analysed using descriptive methods.

Findings: This is a 47.0% reduction in the identified approved land use for residential, 65.0% increase in commercial usage, a 55.0% increase in recreational use, 40.0% increase in institutional use of the building, 62.0% newly introduced mixed-use, as a result of 58.2% of the residents agreed that the reason for building conversion in Ijapo was for profit-making, while 40.0% of the respondent only adhered to the approved plan.

Research Limitation/Implication: This research focused on building conversion in cities with a major concern on Ijapo Residential Estate Akure, Nigeria.



Practical Implication: This paper has potential baseline implications for understanding strategic planning and urban/environmental sustainability of Planning Scheme adherence in Nigerian cities and other developing countries.

Social Implications: This study will assist development policymakers, developers, and land owners in addressing the diverse effects of building conversion on present and future generations.

Originality/Value: This study is based on a creative planning concept for curbing the menace of building conversion, as well as the design and implementation of a master plan by the planning authority.

Keywords: *Building conversion. cities. estate. neighborhood. residential*

INTRODUCTION

Land use in cities is predominantly used for residential purposes, and in many Developing Countries (DCs), building conversion to other uses has increased in recent years. Globally, change in building use in urban centres is a trend occurring over time in Developing Countries (DCs). The current surge in evaluating changes in building usage stems from a concern about the demographic, economic, and environmental elements associated with an urban area's spatial structure (Irwin & Bockstael, 2004). Annually, 16 million new accommodations are needed for over 62 million people in Developing Countries (DCs) to meet the “existing housing stock” and the “trend of rapid urban growth”.

Conversion of building use from one purpose to another is now a global issue (Ojikpong et al., 2016). Building conversion is not a new phenomenon worldwide. This is perhaps why it has become a major problem when development control ministries fail to put an order in place (Jimoh et al., 2013; Ayo-Odifiri et al., 2017).

In the study by Ojikpong et al. (2016) on residential satisfaction, he identified the notion of the psychological construct of residential satisfaction. He theorised that individuals may be seen as cognitively constructing a reference condition for each particular facet of their residential situation. He stressed further that the quantity or quality of the given facet implied by the reference point will depend on the individual's self-assessed needs and aspirations. If the current situation is perceived to be in proximate congruence with (or superior to) the reference situation, a psychological state of satisfaction should be manifested. If, on the other hand, the current situation falls short of the reference situation by more than a threshold deficiency and points to two possible alternatives that are, one may attempt to reconcile the in-congruence by adaptation through redefining needs, reducing aspirations and/or altering the evaluation of the current situation, thereby producing a modicum of satisfaction like in case of the alteration/deviation from the original master plan in the study area (Anjorin *et al.*, 2022).



The conversion of the use of buildings in cities of the developing world often goes from residential to other uses, with the latter having serious impacts on the adjacent residences and their occupants (Angela & Ifeanyi, 2022). Most residents in Developing Countries (DCs) have resorted to informal businesses, transforming them into hives of activities due to recession-ridden economies (Aluko, 2010; Okosun et al., 2021). This led to building conversion, which can be seen as a change in function or change in use or adjustment and alteration from an existing usage of a building, such as converting a residential building and making it suitable for a hotel, which is a commercial use, a church also may be converted into an apartment, an apartment also may be converted into a sachet or bottle water factory to meet new requirement or use (Ademola, 2010). These city businesses are now a pit of stiff competition with residential dwellings/uses. In Nigeria, there is evidence of building conversion in residential areas to other uses in major cities (Omyebueke, 2006; Ogungbemi, 2012; Ayo-Modifier et al., 2017). The pace of urbanisation in developing countries (DCs), particularly in Nigerian cities, brought building use changes in different cities for different purposes, making it complicated to define a given area as commercial, residential, or for other uses.

Change in building use is now a new phase of change, new development in the built cities, and transformation of the urban environment (Ademola, 2010). Recently, a piece of land/building has served several purposes simultaneously, from residential to either commercial, institutional or recreational, making it difficult to define a particular use clearly. Building conversion mostly affects the livability of an environment. This research evaluates city building conversion by critically examining Nigeria's residential land use change. The study aims to assess the building conversion of the Ijapo residential estate in Akure, ascertain the level of deviation from the original design, and provide empirical-based information that could inform coordinated building use and development. The following objectives were pursued. These are to: i) examine the socio-demographic characteristics of the respondents; ii) assess the level of building plan deviation on Ijapo Master plan/building use pattern; iii) Identify the primary and secondary use of land, general level of building plan conversion/deviation; iv) examine the factors responsible for building conversion, and; v) assess the impacts of building conversion on residents to the existing planning scheme.

The high urbanisation and population explosion rate has placed a strong demand on residential infrastructure. The high cost of land for development and the high cost of rent have made the government intervene in social residential provision and delivery in Nigeria. A study conducted by Farooq (2022) revealed that, since land use sprawls, existing neighbourhoods are taken away by residential property and not replaced within the same neighbourhoods. Recently, this connotes a major problem in the research environment: a reduction in the residential provision, high land cost for development in the study area and deviation from the approved Master plan. Most urban centres are experiencing rapid economic growth phases, and continuous change in residential building use within the core area of the urban city to other building uses could consequently result in the decay of its residential neighbourhoods (Sydney, 2012). The spatial organisation within the urban centre's



core area and in our urban centre's adjoining residential areas could be traced to the operators and house owners' turnover/profit/revenue maximisation. The rapid change of building use from residential to other uses is also predominant in Akure, the Capital of Ondo State. From the previous, Ijapo Residential Estate in Akure South Local Government was selected to assess the effect of building conversion in the area on the residents of the area (from residential to other uses like hotels, schools, hospitals, playground viz-a-viz, etc.) and also to proffer sustainable solutions to menace that might arise from building conversion in the area.

LITERATURE REVIEW

Change in a building use/parcel of land could generally be referred to as a development that is dissimilar to the given use approved by the planning authority of a state that is converted into a new use type (Okosun et al., 2021). The Great Britain Building Act 2004 viewed the change of building use as a parcel of land converted into another use that required modification to complement other proximate uses. Ayo-Modifier et al. (2017) see a change in building use as an alteration of residential building use to other uses. (Ogungbemi, 2012) describes building conversion as a given land use that can be modified for other uses.

The high incidence of residential conversion is one of the major problems confronting cities, particularly in Nigeria. However, property owners in most of Nigeria's cities clamour for such conversions of residential buildings to other uses as an avenue for maximising rents. However, experts view residential conversion as an aberration to residential stock and an alteration to the physical planning scheme. Some experts have attributed residential shortages in Nigerian cities to residential conversion; others have blamed it on high rent, inadequate residential supply, etc.

Use-Conversion and Underpinning Factors in Building Convention in Cities

Like several other capital cities in Nigeria, Akure metropolis is characterised by rapid urbanisation, with a history of migrants moving into the metropolis (UN-HABITAT, 2001). In 1963, the population of the municipality Lagos rose to 1,089,868 inhabitants as against 267,407 to 665,246 between 1952 and 1963 (an annual increase of 8.6%), which amassed a further 424,622 people in the metropolis. In 1991, there were over 5 million people in Lagos state, and over 9 million in 2006, thus grew by 19.2% per annum (NPC, 2006).

In India, due to population growth in Ranchi City and its environment, the city's expansion towards fringe areas is due to increased demand for land (Rupesh, 2014). The extension mostly occurred on plain agricultural land given by the planning authority since the town is situated around plateaus and hills. This has resulted in increased differences between the demand and supply of residential sites, thus increasing the stress on the city's fringe areas, making the available agricultural land to increase industrial and residential purposes, thereby making the land cost in Ranchi city reach new heights. A similar trend of population pressure in terms of urbanisation pace was observed in China and Nigeria (Webster, 2002; Aluko, 2010; Ayo-modifier et al., 2017). Webster (2002) conducted a study



and found out that rapid urbanisation forced the agricultural communities in China to adjust to an industrial or urban way of life within a short period and invariably changed the urban building use in response to socio-economic and political factors as well as urbanisation and population growth, which has today led to illegal building use/conversion and development of informal residential use which has further resulted to dissipation of space and uncontrolled construction activities by migrants.

Aluko (2010), in a study conducted in Lagos, revealed that the increase in population growth in the 20th century was attributed to unprecedented high renter services/land cost due to inadequate residential land use delivery system. The study revealed the city's massive spatial built-up area/expansion to adjoining settlements in Ogun state. Building changes are inevitable in the global transformation of cities and any given human society, as they are part of the built environment/urban growth phenomenon. Gallant (2009) proposed an in-depth study on population growth in response to the intensity of building use change and its consequences. Turner (1990) pointed out that urbanisation is perhaps one of the most important human activities, creating enormous environmental impacts at the local, regional, and global scales. In agreement with the above perspective, Ayo-Odifiri et al. (2017) have shown that an increase in urbanisation and rapid population growth in Edo State should be linked to adequate provision of infrastructural facilities that impact human activities and their environment, thus a key variable associated with the urbanisation growth and land use conversion.

MATERIALS AND METHODS

The Study Area

Akure is a traditional Nigerian city, and like other traditional Yoruba towns in the country, it existed long before the advent of British colonial rule in Nigeria (Okosun et al., 2023). The city is situated in the southwestern part of Nigeria. It lies approximately on latitude 7°15 North and longitude 5°15 East of the Greenwich Meridian. Akure is the capital of Ondo State and the headquarters of Akure South Local Government Area. Between 1976 and now, the city has experienced enormous growth and developed independently of any spatial urban planning. Since 1976, the town has become the state capital, and its growth and development have been remarkable changes. Several developmental projects that transformed the city's physical landscape are very prominent. Akure has a projected population of 570,500 people and a land area of 991km² (SBP 2011). The research was limited to the Ijapo residential Estate in Akure, which formed the focus of the study. Akure is centrally located, surrounded by a 48-kilometer radius, and the important towns of Akure North and Akure South Local Government are located in the city (Figure 1). It is bounded by Ondo and Idanre to the south, Owo to the east, Iju/Itaogbolu to the north, and Ile-Oluji to the west (Akinbode, Okosun & Adeyemo, 2023). The city's morphology has changed over time to assume its present status with its attendant land problems, as experienced in similar medium-sized urban centres in Nigeria. Ijapo residential Estate is one of the residential estates in Ondo State, and well planned, as shown in Figure



2. It is located northeast of Akure town within longitudes 5°12.307' E and 5°16.552' E and latitudes 7°15.859' N and 7°16.552' N.

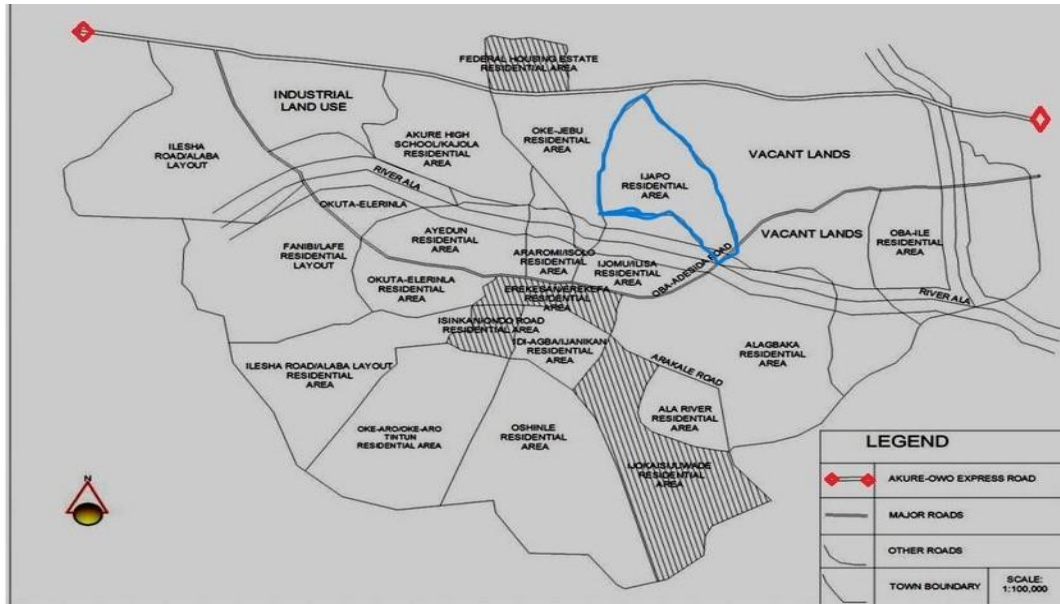


Figure 1: Akure Township Street guide showing Ijapo Residential Area

Source: Ondo State Ministry of Physical Planning and Urban Development Akure, (2023).

The study area, Ijapo Residential Estates Akure, is easily accessible by a road network and has about 717 (seven hundred and seventeen) plots of buildings (See Figure 2). Building conversion has emerged as an important activity of land owners in Ijapo. Ijapo residential Estate is situated on a gently undulating terrain with an elevation between 330 and 364m above mean sea level. The area lies in the tropical rainforest, with a mean annual rainfall of about 1300mm.



Table 1: Sampling (in the study area (Sampled Area, Total Numbers of Existing Building and Estimated HPB)

Sample Areas (A)			Sample Areas (B)		
	Total Numbers of Existing Building	Estimated household per building @ (5 HPB)		Total Numbers of Existing Building	Estimated household per building @ (5 HPB)
BLOCK I	17	85	BLOCK XXII	22	110
BLOCK 11	21	105	BLOCK XXIII	23	115
BLOCK 111	10	50	BLOCK XXIV	16	80
BLOCK IV	13	65	BLOCK XXV	16	80
BLOCK V	14	70	BLOCK XXVI	16	80
BLOCK VI	10	50	BLOCK XXVII	12	60
BLOCK VII	15	75	BLOCK XXVIII	12	60
BLOCK VIII	20	100	BLOCK XXIX	12	60
BLOCK IXA	14	70	BLOCK XXXII	14	70
BLOCK IXD	21	105	BLOCK XX111	15	75
BLOCK X	17	85	BLOCK XXXIV	17	85
BLOCK X1	18	90	BLOCK XXXVI	10	50
BLOCK X11A	10	50	BLOCK XXVII	17	85
BLOCK X11B	24	120	BLOCK XXVIII	22	110
BLOCK X111	22	110	BLOCK XXXIX	17	85
BLOCK XV	24	120	BLOCK XL	19	95
BLOCK XVI	20	100	BLOCK XL1	18	90
BLOCK XVII	14	70	BLOCK XLII	4	20
BLOCK XVIII	16	80	BLOCK XLIII	16	80
BLOCK XIX	23	115	BLOCK XLIV	16	80
BLOCK XX	21	105	BLOCK XLVI	10	50
BLOCK XX1	12	60	BLOCK XLVIII	7	35
			BLOCK LVIIIA	10	50
Total (Area A)	376	1880	Total (Area B)	341	1,705
Total Sampled (Area A and B)					
	717	3585			

Source: Author's Fieldwork, 2023

Primary data for this study were obtained from the selected residents in the sampled buildings, especially the property owners/ head of family within the Ijapo residential estate Akure, association of landlords and landladies, Ondo State Lands and Housing, Ministry of Physical Planning and Urban Development, Ondo State development and property corporation and National population commission (NPC). Ijapo residential master plans were obtained from the Ondo State Development and Property Corporation (pre-2002, 2012, and 2022), and 717 residential buildings were identified using Autocad and SPSS. The 717 buildings were multiplied by 5hpb (household per building), which amounts to 3585 households within the study area. Out of which, 50% of the total building makes 358 buildings selected randomly for the research. The justification for using the sampled size (50%) was based on some homogeneous characteristics in the research environment, which were



subjected to frequency counts and percentages. Statistical Diagrams such as tables, figures and charts were also used to illustrate the discussion on the findings. Discrete choice analysis helps to know the choices that will be made in examining the building conversion in the study area and to use the best available alternative with more comparative advantage than the rest. As shown in Table 1, 50% of the total building (717) was selected to make a total of 358 respondents for the study.

RESULTS AND DISCUSSION

The data collected under the aim and objectives of the study covered all the set objectives. The discussion was based on the research objectives as follows:

Respondent's characteristics of existing building use pattern in Ijapo Residential Estate Akure

The socioeconomic characteristics findings of the Ijapo residents revealed that there were more female respondents 56.4% in the study area than male respondents (43.6%), as shown in Table 2, indicates that there is a slight margin between the population ratios of male to female in Ijapo residential estate of Akure. The finding also shows that most of the residents of the Ijapo estate are married (50.3%), 21.5% are single, 14.5% are divorced, and 13.7% are widows/widowers. The result in Table 2 also shows that 50.3% of the Ijapo residents fall above 45 years of age, which implies that residents in the study area were mature enough to provide adequate responses to the research variables for the study. Further findings revealed that most Ijapo residents were elite who also engaged in civil service work (Figure 3), which made the finding easier for the researchers. Since 50.5% of the respondents have tertiary education (graduates), 20.1% stopped at the secondary level of education. The study also shows that most residents in the area earned above the approved Nigeria minimum wage. The findings also indicated that the household size in the estate shows that most of the structures were occupied by 1-3 households. From the findings, it could be deduced that the estate's residents were majorly elite with the ability to read and write. It could also be deduced from the data presentation that respondents have more knowledge about the area, as many of them have spent over 20 years in the research environment, as presented in Figure 4.

Table 2: Socio-economic characteristics of the respondents

Sex of respondent	Frequency	Percentage %
Male	156	43.6
Female	202	56.4
Total	358	100
Marital status of the Respondents		
Single	77	21.5
Married	180	50.3
Divorced	52	14.5
Widow/widower	49	13.7
Total	358	100
Age of the Respondents		



18-25 years	27	7.5
26-35 years	46	12.8
36-45 years	62	17.3
46-65 years	180	50.3
Above 65 years	43	12.1
Total	358	100
Religion of the Respondents		
Christianity	219	61.2
Islamic	92	25.7
Traditional	47	13.1
Total	358	100
Level of Education of Respondents		
Illiterate	39	11
Primary Education	66	18.4
Secondary Education	72	20.1
Tertiary Education	181	50.5
Total	358	100
Household size		
1-5	202	56.4
5-10	104	29.1
Above 10	52	14.5
Total	358	100
Monthly income of the Respondents		
Below ₦30,000	26	7.3
₦30,000 – ₦60,000	60	16.7
₦60,000 – ₦120,000	55	15.4
₦120,000- ₦240,000	90	25.1
Above ₦250,000	127	35.5
Total	358	100

Source: Author's field survey, 2023

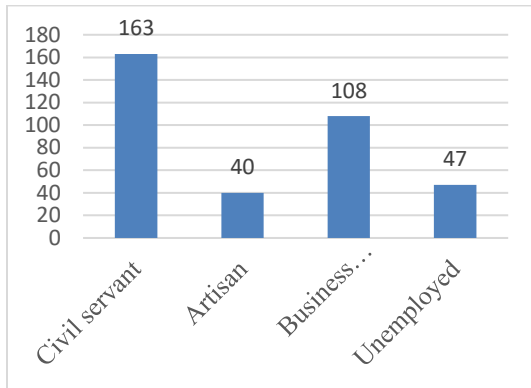


Figure 3: Occupation of the Respondents
Source: Author's field survey, 2023

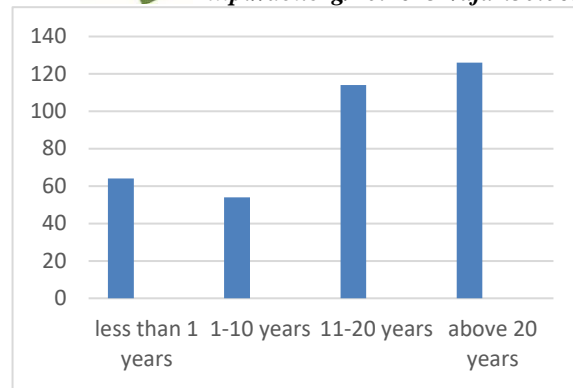


Figure 4: Period of stay in the Estate
Source: Author's field survey, 2023

Pattern of Estate Buildings

The finding, as presented in Plates 1a and b, shows that the existing building use of the estate was shifted predominantly from residential estate to mixed building use estate since other building use in the estate, as presented in Figure 5, shows that over 80 plots in the estate were converted to other uses. In contrast, some of the buildings were converted totally, as presented in Figure 6; 56 plots out of the total 717 plots in the estate were converted into mixed-use (in which some parts are being used for residential use while other parts of the plot were converted into either other use like school) as presented in Figure 6. It could be deduced that, as presented in Figure 5. The finding is supported by Kefford (2021), who indicated that the existing building use pattern of the estate has been converted to other purpose buildings, which is against the original planning scheme of the estate.

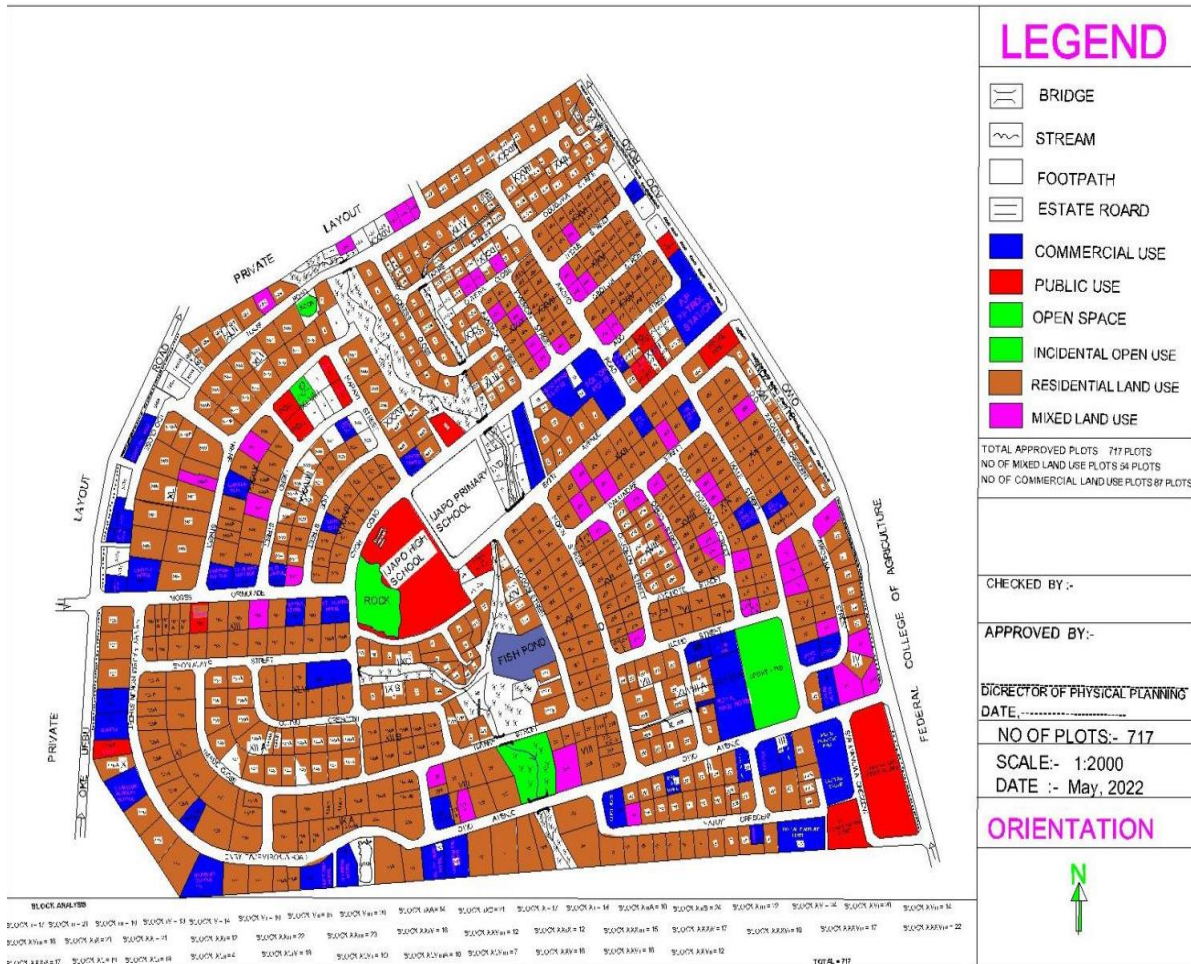


Figure 6: Deviated Landuse Plan of Ijapo Estate
 Source: Author's field survey, 2023



Plate 1: A Residential building totally converted into mixed-use along Eyemoin Street, Ijapo Residential Estate.

Source: Author's field survey, 2023



Plate 1: A Residential story building converted into Institutional use along Ondo Road Street, Ijapo Residential Estate.

Source: Author's field survey, 2023

Primary use and present use of the land

From findings on the primary use of the land, the study shows that 73.5% of the land of those respondent's building use was primarily designed for residential land, strictly building plan for liveability, 5% of the land was primarily designed for commercial just the Ijapo Shopping mall, 11.5% were designed for recreation which comprises of Ijapo Sports Complex and other Open Spaces. In comparison, 11% were primarily designed for institutional facilities, which are Ijapo



High School and Ijapo Primary Caring School, to create educational services for the children of Ijapo residents.

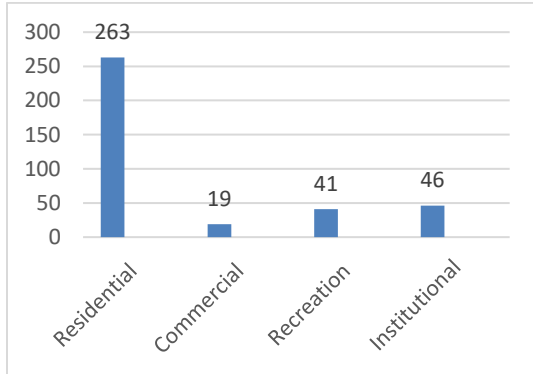


Figure 7: Primary use of the land
 Source: Author's field survey, 2023

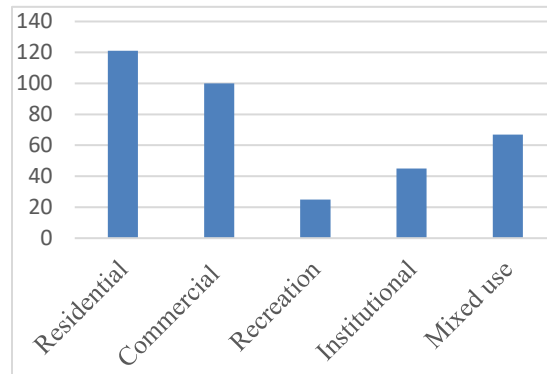


Figure 8: Present use of the land
 Source: Author's field survey, 2023

However, findings from the study have illustrated a decline in the percentage of residential building use within the estate, making it uneasy about getting accommodation and making those available expensive for lease. The study also shows that there is presently a shift to another usage of the building for mixed use within the Ijapo residential estate, as shown in Figures 7 and 8. This implies a difference in the land's original use and present use of the land, neglecting the planning scheme of the layout plan (Pineo et al., 2024). This reflects the effort the physical planning department put in place through its development control unit to curb this menace.

The general level of building plan deviation in the study area

Comparing the general level of building plan deviation from the approved planning scheme of 717 total approved building plans allocated to allottees in the study area as shown in Tables 3 and 4, reveals that, Ijapo residential estate had shifted mainly from its original residential use of 98.3% in pre-2002 to 75% in 2012-2022, pre-2002 there was no mixed building use previously, but currently risen to 7.5% (Plate 2a), commercial use had shifted from 0.3% pre-2002 to 12.2% on the current land use (Plate 2b), institutional use had risen to 4.6% from its initial approval 0.8% while open spaces meant for recreational purposes had reduced from 0.6% to 0.1% as a result of deviating to other profitable uses for profit making causing a partial shift from residential usage to commercial and mixed-use in the study area, thereby residential use scarcity and rent increment.



Table 3: Building use on approved Ijapo planning scheme for Pre year 2002

Building use	Pre 2002	Percentage
1. Residential building use	705 plots	98.3
2. Commercial use	A filling station and a shopping complex (2 plots)	0.3
3. Institutional use	Ijapo High, Ijapo caring model school with four places of worship (6 plots)	0.8
4. Recreational	Ijapo Sports complex and 3 open spaces (4plots)	0.6
Total	717	100

Table 4: Building use of deviated building plan on Masterplan for year 2012-2022

Building use	2012-2022	Percentage (%)
1 Residential building use	542 plots	75.6
2 Commercial use	New 87 plot converted to other	12.2
3 Institutional use	New 11 plot to school with 22 place of worship	4.6
4 Recreational	Ijapo Sport Complex(1)	0.1
5 Mixed use	54 plots	7.5
Total	717	100

Source: Author's Field survey, 2023



Plate 2 a: Showing residential building converted to the office along Moses Orimolade Street

Source: Author's Field survey, 2023



Plate 2 b: Showing residential building completely converted to a laundry hub in Ikafe Street

Source: Author’s Field survey, 2023

Factors responsible for building conversion

Building conversion, a change in building use from one usage to another is discussed in Table 5. The reason for building conversion in the study area was deduced from the table that 58.2% of the residents agree that the reason for building conversion in the Ijapo residential area was profit-making, abandoned properties and personal motive. In comparison, 18.1% of the residents agree on personal motives, 13.6 agree on abandoned properties, and 16.0% agree on profit-making. This implies numerous reasons for building conversion in the study area, as shown in Table 5. This finding is corroborated by Garboden and Jang-Trettien (2020), who claimed that the major reason was profit-making, i.e. the resident wants to generate more income from his/her existing structure by converting part of a residential building to other uses like a church.

Table 5: Reasons for building conversion

Reasons for building conversion	Frequency	Percentage (%)
Abandoned properties	49	13.7
Personal motive	82	23
Development guideline	60	16.7
Profit making	167	46.6
Total	358	100

Source: Author’s field survey, 2023



13.7% reported abandoned properties, and this is a situation whereby some owners abandoned their buildings, which were also converted to other uses to discourage the area from harbouring crime. In contrast, some intentionally converted their buildings to another use for a personal motive. Among them were those who could not manage the building environment alone, needing neighbours within the building, among others, to avoid loneliness and other personal motives.

Effect of building conversion on the study area

Figure 9 shows that the effect of building conversion in the study area was rated fair with over 29.6%, 29.1% as good, and 21.5% as very good, respectively, due to some residents who, as a result, benefited greatly from converting their properties from residential to other use, 19.8% rated the building conversion on the study area being poor due to the adverse effect of building conversion in the study area which includes noise pollution, environmental pollution among others as shown in figure 10. This is consistent with the study of Madeddu and Clifford (2023), who argued that the type of pollution resulted from other usage within the plot or non-compatible use from another plot. However, some of the residents in the estate also agreed that there was no pollution within their location since almost all plots in their area were occupied by residential.

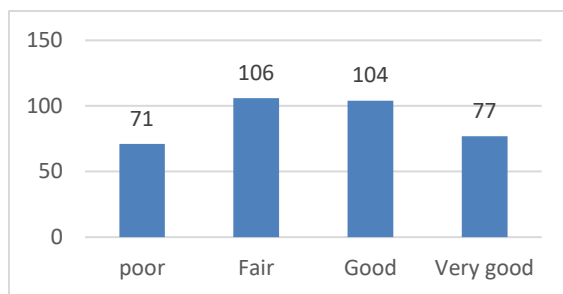


Figure 9: Rating the effect of conversion

Source: Author's field survey, 2023

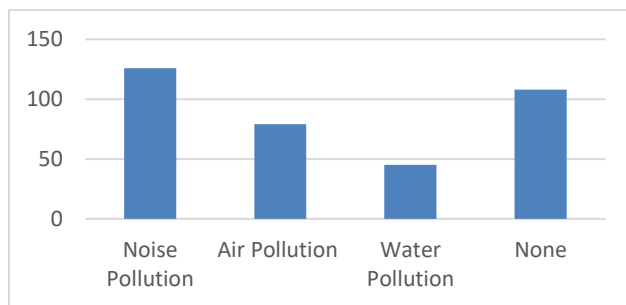


Figure 10: Environmental pollution from the adjoining site

Source: Author's field survey, 2023

CONCLUSION AND RECOMMENDATIONS

The baseline information provided in this study is crucial to improve strategic planning in all residential estates and urban/environmental sustainability of Planning Scheme adherence in cities across the globe like Akure, Nigeria, where building use planning faces similar challenges to address the haphazard usage of approved building plan patterns and deviation control using the restrictive and creative planning concept in curbing such menace.



Practical Implication

This paper has potential baseline implications for understanding strategic planning and urban/environmental sustainability of Planning Scheme adherence in Nigerian cities and other developing countries.

Social Implications

This study will assist development policymakers, developers, and land owners in addressing the diverse effects of building conversion on present and future generations.

This study is based on a creative planning concept to curb the menace of building conversion and the design and implementation of a master plan by the planning authority.

Recommendations

- a) The planning scheme must be followed using the restrictive technique of planning to maintain the original building use of the estate;
- b) Intensive enforcement and recruitment of professional staff to curb building plan deviation before, during, and after any development is completed and those completed should be redressed;
- c) Profit-making ventures should not be approved since the Estate is 99% designed for housing residential use alone, but since some have been partially converted, the issue of zoning new use of some part of the estate to commercial and institutional use can be adopted in the estate;
- d) There should be no more room for conversion either legally or illegally within the estate due to its negative impact of noise pollution on peaceful dwellers, and mixed-use structures should be addressed accordingly;
- e) The corporation should ensure that they monitor any new development or redevelopment within the estate to ensure that they comply with the approved planning scheme and
- f) For the situation to be redeemable, periodic public enlightenment with the Ijapo Resident Association on the adverse effect of building conversion on the environment must be conducted.

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REFERENCES

- Ademola, F. (2010). Land use conversion in Surulere Local Government, Lagos, Nigeria. *Nigeria Urban and Regional Review*, 2(1), 1-14.
- Akinbode, T., Okosun S. E. & Adeyemo, A. (2023): Safety regulations compliance by sawmill operators and the perception of regulators and residents in Akure, Ondo State, Nigeria. *Journal of Geography and Planning Sciences, AAUA*. 4 (1), 1- 15.



- Aluko, O. E. (2010). The impact of Urbanisation on residential development, The Lagos Experience. *Nigeria, Ethiopian Journal of Environmental Studies and Management*, 3.
- Angela, E. O., & Ifeanyi, E. F. (2022). Analysis of the Effects of Building Use Conversion on Property Values in Ogui-Enugu (2011–2021). *Iconic Research and Engineering Journals* 422-436.
- Anjorin, O. D., Okosun, S. E., Samuel, I. I. & Akubo, S. (2022): Housing satisfaction in the Nigerian Cities: An empirical analysis of residents in core area of Ado-Ekiti. *International Journal of Advance Research in Social Sciences, Environmental Studies & Technology*. 7(1), 1-16.
- Ayo-Odifiri, O. S. Egenti C., Bada, A. & Okosun, S. E. (2017): The planning implications for changing the use of residential buildings in Auchu, Nigeria. *Peaks Research Journal of Physical Science and Environmental Studies*. 2(4). 306-316
<http://pearlresearchjournals.org/journals>
- Farooq, H. (2022). *Analysis of Building Use Changes in Bida Town, Nigeria*.
- Garboden, P., & Jang-Trettien, C. (2020). “There’s money to be made in community”: Real estate developers, community organising, and profit-making in a shrinking city. *Journal of Urban Affairs*, 42(3), 414-434.
- Kefford, A. (2021). Actually existing managerialism: Planning, politics and property development in post-1945 Britain. *Urban studies*, 58(12), 2441-2455.
- Kitchin, R., & Tate, N. (2013). *Conducting research in human geography: theory, methodology and practice*. Routledge.
- Madeddu, M., & Clifford, B. (2023). The conversion of buildings to housing use: England’s permitted development rights in comparative perspective. *Progress in Planning*, 171, 100730.
- Ogungbemi, O. A. (2012). Factors influencing change of use and its attendant problems: case study of Yaya Abatan Ogba, Lagos State. *Journal of Emerging Trends in Economics and Management Sciences*, 3(6), 901-906.
- Ojikpong, B. E., Agbor, E. A., & Emri, S. I. (2016). The impact of building use conversion on residential accommodation in Calabar, Cross River State, Nigeria. *International Journal of Science, Environment and Technology*, 5(3), 1445-1462.
- Okosun, S. E., Omodehin, A. O., & Ajayi, I. S. (2021). Environmental Management in Cities: A Perspective from the Akure Solid Waste Management Authority, Ondo State, Nigeria. *Society for Science and Education, United Kingdom; in Advances in Social Sciences Research Journal*, 8(4). 06-18. DOI:10.14738/assrj.84.9929.
- Okosun, S. E. & Ukoje J. E. (2023). Assessment of the performance of local government council in infrastructure delivery in Ilawe-Ekiti, Nigeria. *African Research Journal of the Environment (AREJOEN)*, 6(1), 74-83.
- Pineo, H., Clifford, B., Eyre, M., & Aldridge, R. W. (2024). Health and wellbeing impacts of housing converted from non-residential buildings: A mixed-methods exploratory study in London, UK. *Wellbeing, Space and Society*, 6, 100192.



- Rupesh G. (2014). The Pattern of Urban Land-use Changes: A Case Study of the Indian Cities. *Environment and Urbanisation Asia* 5(1):83-104
- Turner, M.G. (1990) Spatial and Temporal Analysis of Landscape Patterns. *Landscape Ecology*, 4, 21-30. <https://doi.org/10.1007/BF02573948>
- UN-Habitat. (2001). Milestones in the evolution of human settlements policies.1976-2006. State of the world cities. Report 2006/2007. The MDGs and urban sustainability. 30 years of shaping the Habitat Agenda. Earthscan. U.K.
- Webster, J. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, 26, 13-23.