

# Inadequacies of Building Construction in Relation to Development Control Regulations

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**ABSTRACT**— *Development control is a tool used by physical planners to control the use of land, character for which it can be use, appearance and the arrangement of building and facilities to ensure comfort, economic convenience and aesthetic in an environment. Development within study area is characterized by haphazard development, Narrow Street and land disputes, in accessibility and poor environmental quality resulting into slum settlement. The aim is to examine the impact of development control on building construction in Bauchi metropolis (Fadaman Mada area) of Bauchi State. Reconnaissance survey and oral interview were carried out in the study area and questionnaires are administered to Bauchi State Urban Development Board and some residents of the study area. This paper discussed inadequacies in development control application and its appropriateness to urban. Base on the reviewed existing literatures, the background of the study area and data analysis, the findings shows that, the development control regulations were not followed and there is no enforcement of the laws in the Fadaman Mada area. Which resulted into the problems of story building in midst of bungalow houses, problem of setbacks, problem of fencing walls, blockage of access road problems, conversion of land uses problem and the problem of encroachment on land uses. From the aforementioned point it can be concluded that if those problem were addressed, the quality of life in the study area will greatly improve.*

**Keywords** - Development control, Building construction, Land use.

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## 1. INTRODUCTION

The knowledge of development control and its origin can be flashed back to the 19<sup>th</sup> century in Britain, it resulted from rapid growth of cities as a result of industrialization. Abubakar (2012) states that urban science of industrial era was characterized by slums, traffic congestion blight, obsolescence and overcrowding. Physical development within study area is characterized by haphazard development, Narrow Street and land disputes, inaccessibility and poor environmental quality, resulting into slum settlement. This is a result of inadequate amenities and basic urban social services for the area (BSUDB, 2014). The nonexistence of a general policy guideline and standard development in the study area has contributed to disorderliness of the area and has adversely affected the effective enforcement of development measure in terms of zoning, density control setback and building line. Therefore, there is an urgent need for general policy guideline on physical development (BSUDB, 2014). The study is aim at examining the impact of development control on building construction in Bauchi metropolis (Fadaman Mada area) through the Reconnaissance Survey, oral interview and questionnaire which were administered to Bauchi State Urban Development Board and some residents of the study area.

## 2. HISTORICAL BACKGROUND OF THE STUDY AREA

Fadaman Mada Area is one of the neighbourhoods to Bauchi metropolis, whereby the Bauchi town is the state capital of Bauchi state as well as Local Government Headquarters of Bauchi Local Government Area having Bauchi town as the Headquarters of both Local Government Council and State Capital. In the year 2000 the Bauchi State Government laid out the area and named it as Fadaman Mada, where it mostly proposed for residential purpose with little public and semi-public land use. Fadaman Mada is situated along Bauchi Maiduguri highway; it is about 2 kilometres away from Bauchi

ancient city, it bordered to the east and north by Tudun Salmanu, to the south, west by Tafawa Balewa Housing Estate and Muda Lawal market respectively.

### **3. DEVELOPMENT CONTROL FACTORS THAT AFFECTS BUILDING CONSTRUCTION IN NIGERIA**

A number of factors come into play at various levels of governments that hinders the government from performing the roles expected of them as far as physical planning is concerned. However, the commonest of these factors are:

1. Political and Administrative Factors
2. Socio-Economic Factors
3. Lack of Adequate Publicity
4. Man-Power Factors
5. Urban Management and Governance
6. Physical Characteristics

### **4. DEVELOPMENT CONTROL PROCEDURE/TECHNIQUES IN BAUCHI**

In general master plans provide the necessary guidelines and direction for day-to-day decision making on development. The reinforcement of these decisions centered to large extent on development control with a body of specific legislation and regulation as follows:

#### **4.1 Land Use/Zoning Regulations**

Zoning is a legal method adopted by government to regulate land use in an area for the public benefit. In the overall process, a zoning ordinance divides the affected area and into major land uses such as residential area and low residential area. Within these major land uses, it regulates the use of land and density of population.

#### **4.2 Sub-Division Regulations**

This guides and controls the process of laying out land into plots and developing it for use. This is due to the fact that the arrangement of plots fixes physical features of the community; the political society is legitimately concerned about it. As subdivision ordinance providing for planning agency review of proposed subdivision of undeveloped plots of lands to ensure conformity with the general plan, adequate street and utility improvements and the establishment of proper official records. This is done to ensure good vehicular and pedestrian circulation, adequate facilities, sufficient upon space basic order.

#### **4.3 Building By Laws**

In the same way of building regulations at different stages of development are passed and administered for almost the same reasons that are to most planning standards through design to achieve some degree of aesthetics, to meet zoning goals and to forestall safety and healthy environment for life and property. The regulations are sometimes confused with zoning because they deal with provisions relating to health. By the regulation, the quality of residential is assured likewise, commercial and industrial buildings by setting minimum standards for the material used for the method at construction. For effective control measures therefore, building regulations are inferred through the following:-

- a. To achieve some degree of aesthetic.
- b. To fulfil zoning and subdivision goals.
- c. To meet minimum planning standard through proper design.

In Nigeria, as in most other countries, the bye-laws are enforced through the following measures.

- a. Density and high zoning.
- b. Minimum plot size for various types of constructions.
- c. Design standard that meet minimum space construction.
- d. Special regulation governing the construction of temporary structures.

#### 4.4 Private Deed Restriction

The restriction is occasionally confused with zoning due to the fact that both are attempts to control land use. For instance, a deed restriction may prohibit commercial activities from operating within homes in a residential neighbourhood, so may zoning. However, deed restrictions are not governmental but they are legal agreements between buyer and seller. Their standards may be higher or lower than those established by zoning regulations. Both zoning and deeds restriction are enforceable in the courts.

### 5. DEVELOPMENT CONTROL GUIDELINES

Special guidelines have been outlined for the following:

- (1) Residential Development.
- (2) Commercial Development.
- (3) Special Area Development.
- (4) Institutional Development.
- (5) Public Health and
- (6) Infrastructural Development

### 6. METHODOLOGY

The data for this study was collected through the questionnaire administered to State Development Board and developers of Fadaman Mada being the study area of this research work. To be able to assess the extent to which the developed land in the study area has matched with the required standard, the study area is divided into five (5) units and the sample of 20% households were used for field survey. The total population of the households in the study area was found to be 3025 and the 20% of the total households gives a total number of 605 to be considered for questionnaire survey.

### 7. DATA PRESENTATION AND ANALYSIS

#### 7.1 Nature of Development in the Study area

From table 1, it was gathered that 17% of the households acquired their land through government allocation, 72% of the households on the other hand acquires their through purchase from those who got allocation from government and 11% acquired their land through gift from relatives and friends.

**Table 1:** Showing the Method of Land Acquisition

S/No	Method	Number	%
1	Allocation	103	17
2	Purchase	435	72
3	Gift	67	11
	Total	606	100

Source: field survey (2014)

#### 7.2 Average Plot Size at the Study Area

From the survey conducted through oral interview, the proposed base map and the physical measurement of some sample plots revealed that, the average plot size is 50m x 75m (3750m<sup>2</sup>), in the design of the categorization of densities to low, medium and high. But the existing implementation of the development in the study area show that there is mixed up of development since income level differs.

#### 7.3 Proposed and Existing Land Use Analysis

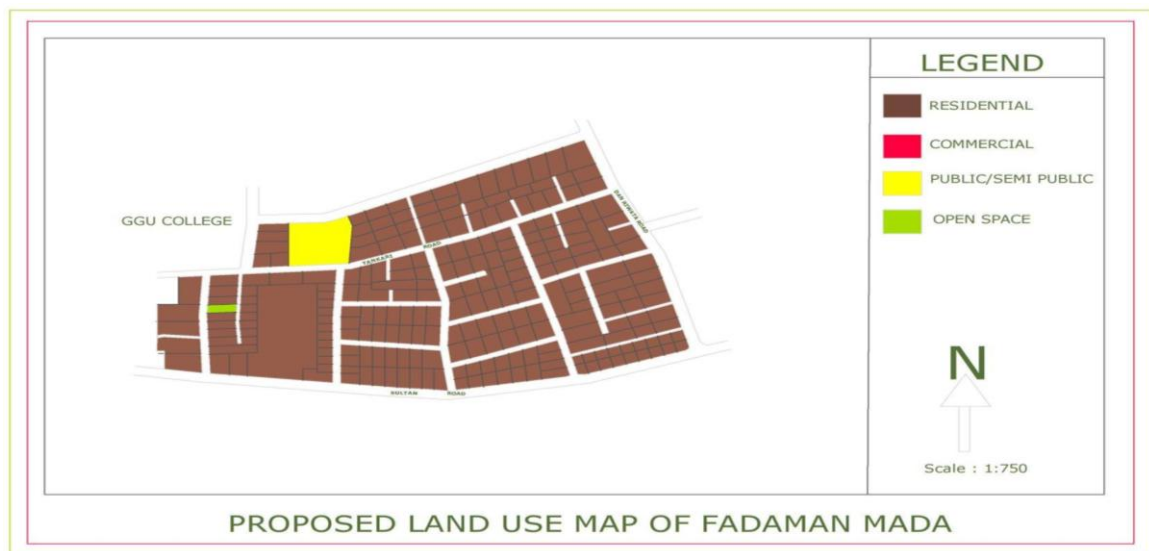
The table 2 below shows the land use analysis, it can be seen going by the proposed land use of the area, and there was no provision for the other land uses such as commercial, public and industrial land uses but in the area existing

situation its shows that commercial, public and industrial land uses are exiting in the study area. Also the designated residential land use in the proposed map has been encroached by other uses, 60% was proposed for residential use, but in the existing situation only 55% remains. Accessibility was also affected with such encroachments as can be seen in the table 2 below. The effect of encroachment has resulted to total blockage of some access roads. Contrary to proposed map educational land use was found to have spring up rapidly in the residential neighbourhood which was not in the proposed map, hence it can be said to have caused conversion of land use. This was observed to be caused by establishment of private schools.

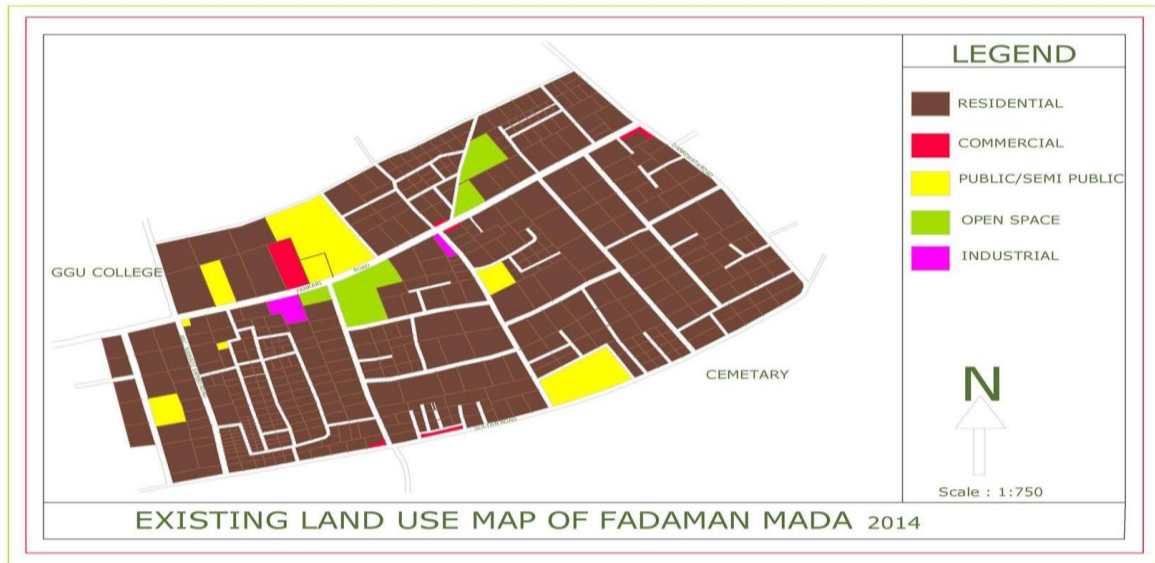
**Table 2:** Showing Proposed and Existing Land Use Analysis

S/NO.	TYPE OF USE	EXISTING AREA IN HECTER	PROPOSED AREA IN HECTER	EXISTING IN %	PROPOSED IN %
1	Residential	9350	8500	55	60
2	Educational	1819	1360	10	7.0
3.	Public	1530	4550	9.0	5.5
4	Commercial	1202	3950	7.0	2.5
5.	Recreational	-	-	-	-
6.	Accessibility	3380	3400	15.2	15
7.	Agricultural/green area	4760	8500	2.8	10
8.	Industrial	1700	-	1.0	-
9.	Stream	-	1700	-	-
Total		23741	31960	100	100

Source: Ministry of Land and Survey/Field Survey (2014)



**Figure 1:** Proposed Land Use map of Fadaman Mada



**Figure 2:** Existing Land Use map of Fadaman Mada

#### **7.4 Existing Building Used**

The research revealed that 60% of the houses or buildings are used for residential purpose 20% for commercial uses such as retail shops, restaurants, etc. of which in the proposed map, there was no provision for such uses in the residential area. An educational use of buildings was also observed in the residential neighbourhood other than the designated primary school as provided in the proposed map. The accounts for 20% the most springing up schools are those private nursery/primary schools.

#### **7.5 Height of Building**

The research revealed that the storey buildings account for 4%, it can be deduced that from the above information that the zoning regulation is not adhered to. Going by the proposed map of the area; there was no designated area for high rising building. These story buildings are scattered in the midst of bungalows therefore denying the occupants of bungalows houses their privacy and also affecting the skyline of the area.

**Table 3:** Showing Height of Building

S/NO	TYPE	Number	%
1	Bungalow	581	96
2	Story building (1-3)	24	4
	Total	605	100

Source: field survey (2014)

**PLATE 1:** showing story building in midst of bungalow houses.



### 7.6 Situation of Setback

The research revealed that, 27% developed their property leaving a setback of 2m which is not adequate, 24% also leave a setback of less than 1m. Only 3% and 1% leave a setback of 4m and 5m respectively. The development control shows the basic subdivision regulation being followed (at least in theory) by the Development Control planning Authority in Bauchi as in table 4 below.

**Table 4:** Showing Situation of Setback

S/NO	SITUATION OF SETBACK IN METERS	Number	%
1	Less than 1m	145	24
2	1m	121	20
3	2m	163	27
4	3m	152	25
5	4m	18	3
6	5m and above	6	1
	Total	605	100

Source: Field Survey (2014)

**PLATE 2:** Showing the Situation of Setback



### **7.7 Situation of Fence Wall**

Research revealed that 51% of the houses in the area do not have fence wall. 30% on the other land have poor fence wall and 19% have fence wall. The implication of this information is in the security, privacy and the aesthetic nature of the general outlook of the area. The fence wall also served as demarcation to individual plot. The law provided that houses should have a fence of high of 2m or 2.5m.

**Table 5:** Showing Situation of Fence Wall

s/no	Situation	Number	%
1	No fence wall	309	51
2	Poor fence wall	182	30
3	Good fence wall	114	19
Total		605	100

Source: Field Survey (2014)

**PLATE 3:** showing the situation of fence wall



### **7.8 Record of Demolition/Punching and Contravention Notices**

The table 6 below shows that in 2010, the total number 76 houses were served with stop work and 10 houses were demolished while 910 houses were served with notice. Then in 2011, the total number of 157 houses were served with stop work and 15 houses were demolished, but only 69 houses were served with notice. Also, in the year 2012 the total number 235 houses were served with stop work and 13 houses demolished/punched, While 1183 houses were served with notice. Lastly in 2013, the total number 307 houses were served with stop work and 38 houses were demolished while 1260 houses were served with notice. Therefore, this study shows that the rate of contravention notices in the study area are increasing.

**Table 6:** Showing Record of Demolition and Contravention Notice from 2010 – 2013

NOTICE	2010	2011	2012	2013
Stop work	76	157	235	307
Demolition	10	15	13	38
Served with notice	910	69	1183	1260
<b>TOTAL</b>	<b>996</b>	<b>241</b>	<b>1431</b>	<b>1605</b>

Source: field Survey BSUDB (2014)



**PLATE 4:** showing the of Contravention notice



### 7.9 Planning Permission and Alteration

Development control by virtue of its provision makes it obligatory upon all intending developers to seek planning permission before they commence or embark on their proposed development(s).

### 7.10 Record of Planning Permission

The research revealed that 65% of the households have altered their plans during development after securing approval from Bauchi State Urban Development Board and only 35% were found not to have altered their plans.

**Table 7:** Showing Record of Planning Permission before Alteration

s/no	Status of alteration	Number	Percentage
1	Alteration	110	65
2	No alteration	59	35
	Total	169	10

Source: field survey (2014)

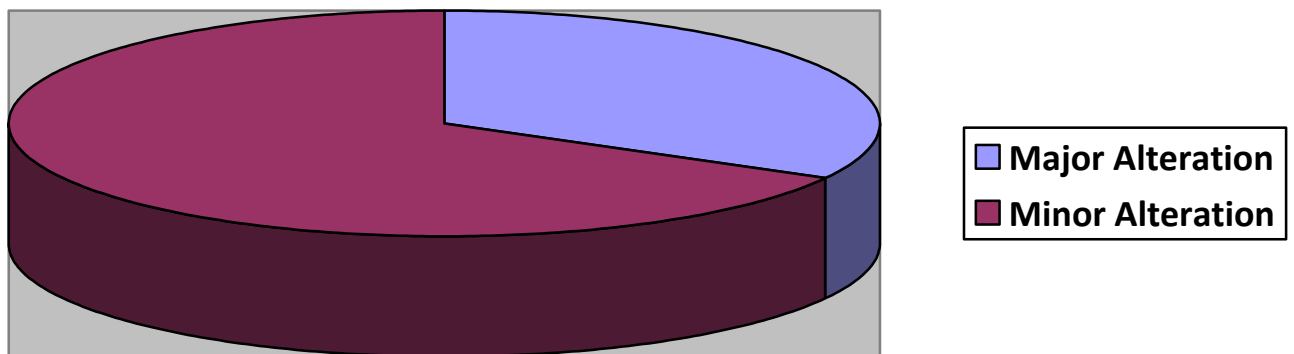
### 7.11 Nature of Alteration

Major alteration, which account for 33% involve complete change of land use, minor alteration on the other hand accounts for 67% which involves such changes as addition or reduction on the approved building plans by households, which was observed to be common in the study area. For instance, if a plan of 4-bedroom has been approved by the board and the developers divides to make it 3-bedroom on reason best known to him that is said to be minor alteration.

**Table 8:** Showing Nature of Alteration

S/NO	Types Of Alteration	Number	%
1	Major alteration	36	33
2	Minor alteration	74	67
	Total	110	100

Source: Field Survey (2014)



**Figure 3:** Major and Minor Alterations

**PLATE 5: Showing the Nature of Alteration**



### **7.12 Level of Building Construction**

The relevance of the information of development control aspect is in the area of which notice were served in the study. The law provides that before a household embarks on development, he or she must acquire approvals from development control board. But it wonders why building that have been constructed for years are now being served with contravention notice. The table 9 below shows that 68% of the houses in the study area are completed and occupied, 21% of the houses are under construction and 11% were completed but not occupied.

**Table 9: Showing Level of Building Construction**

S/No	Level of construction	Number	%
1	Completed and occupied	411	68
2	Completed but not occupied	67	11
3	Under construction	127	21
	Total	605	100

Source: field survey (2014)

### 7.13 Frequency of Visit by Development Control Official to Site

The research revealed that, 34% of the households were visited on site during construction but 66% of the developers on the other hand were not visited. This therefore implied that control activities are not effective. This is because according to the provision of BSADB every development embarked upon must be visited at least three times before completion.

**Table 10:** Showing Frequency of Visit by Development Control Officials

s/no	Visit	Number	%
1	Normal visit	206	34
2	Never visited	399	66
	Total	605	100

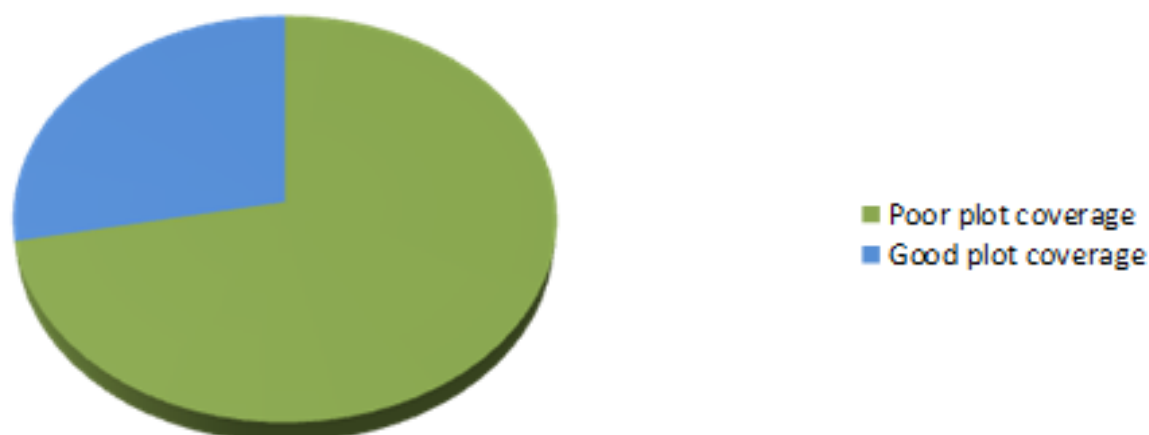
Source: field survey (2014)

### 7.14 Percentage of Plot Converge (Development Ratio)

The research revealed that 64% plats have poor development ratio and 36% have good development ratio. This indicated that developers do not adhere to standards for development of their property in the study area.

**Table 11:** Showing Percentage of Plot Coverage

S/NO	Plot coverage	Number	%
1	Good plot coverage	218	36
2	Poor plot coverage	387	64
	Total	605	100



**Figure 4:** Showing percentage of plot coverage (development ratio)

### 7.15 PROCESS OF PLAN APPROVAL

Submission of building plan, at this stage the validity of all submitted document are checked and verified for functionality, fitness, safety and conveniences. The next processing stage should be a site inspection of the plot meant for the proposed development. This is undertaken to ascertain its degree of harmony with the relevant development existing or proposed.

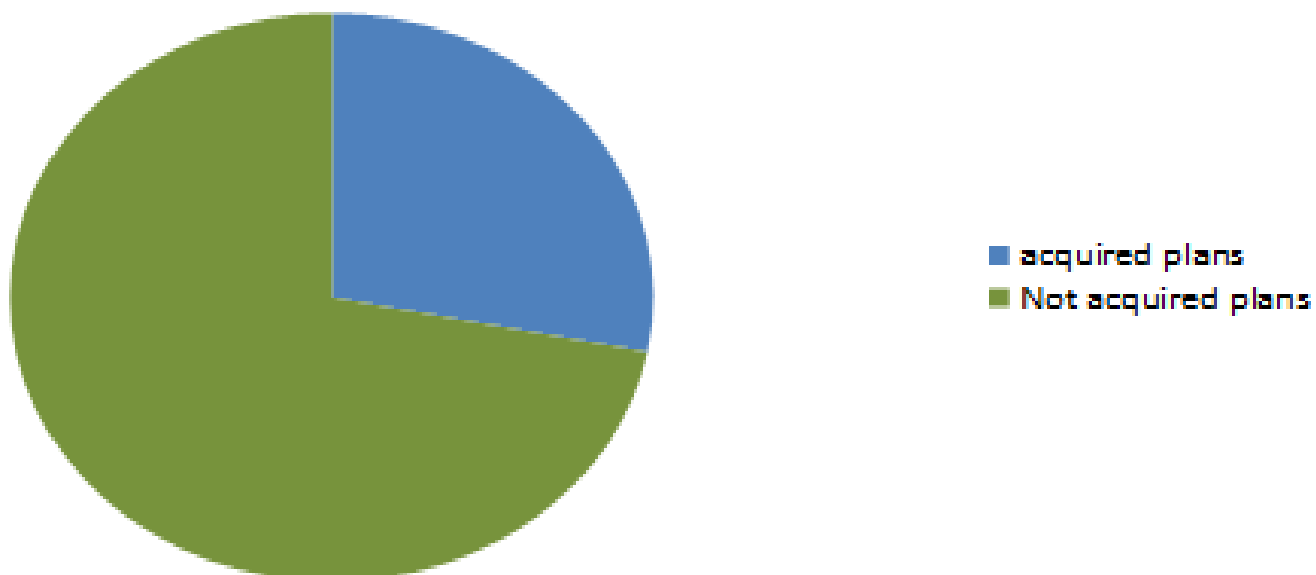
### 7.16 THE ACQUISITION OF APPROVED PLANS BY HOUSEHOLDS

The table 12 below shows that only 28% of the households have acquired approval for building plans, 72% of the households were observed to have embarked on development control board. Here, it can be seen that, in the table 12 below the spring to illegal structures as against legal ones is ratio 3:1.

**Table 12:** Showing Positions Of Approved Plans By Households

s/no	Acquired status	Number	%
1	Acquired plans	169	28
2	Not acquired plans	436	72
Total		605	100

Source: field survey (2014)



**Figure 5:** Showing position of approved plans by household

### 7.17 Reasons For Not Acquiring Plans Approval

The table 13 below shows that 43% of the developer’s attributes their reasons to the high cost of approval, 24% on the other hand said, delay is the main factor discourages them from acquiring plans. 17% and 16% attributed theirs to being not necessary and ignorance respectively.

**Table 13:** Showing Reasons for not Acquiring Plan Approval

s/no	Reasons	Number	%
1	Very costly	187	43
2	Delay	105	24
3	Not necessary	74	17
4	Ignorance	70	16
Total		436	100

Source: field survey (2014)

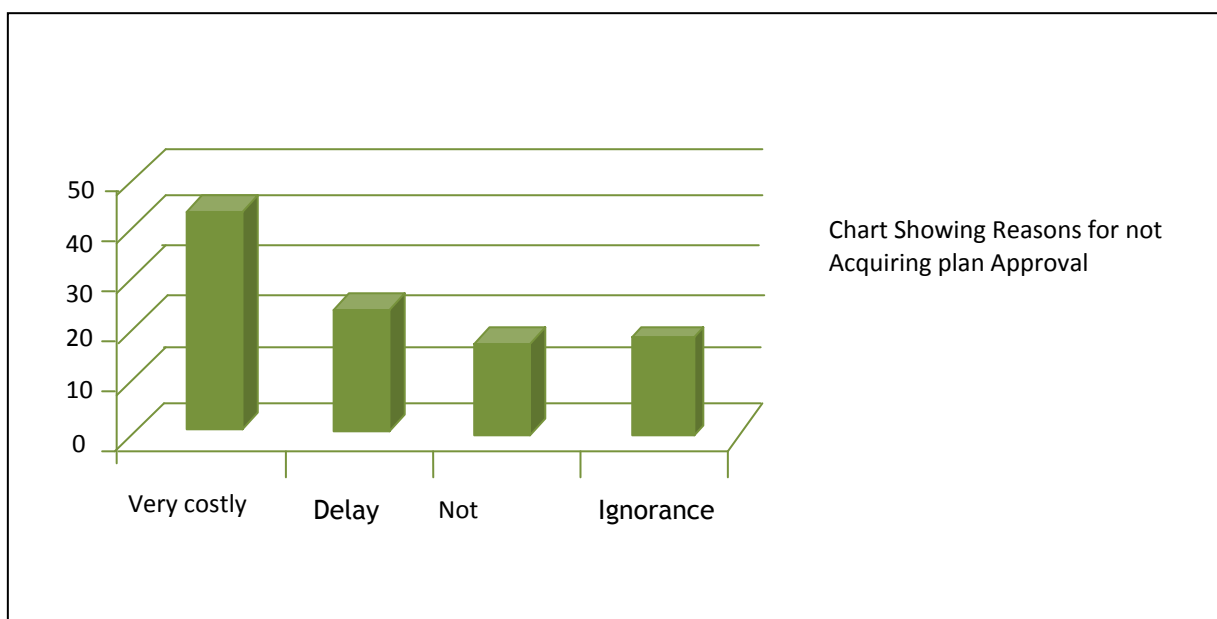


Figure4. Showing reasons for not acquiring plan approval

### 7.18 Cost Of Approval

From the field survey shows that 54% of the households acquired their building plans at the cost of (N41, 000 – N60, 000) and 25% got approval at the cost of (N21, 000 – 40,000) which 16% and 14% acquired theirs at the cost of N1,000 – N20,000 and 61,000 and above respectively.

**Table 14: Showing Cost of Plan Approval**

s/no	Amount in (N)	Number	%
1	100,000-20,000	30	16
2	21000-40000	47	25
3	41000-60000	84	45
4	61000 and above	26	14
Total		187	100

Source: field survey (2014)

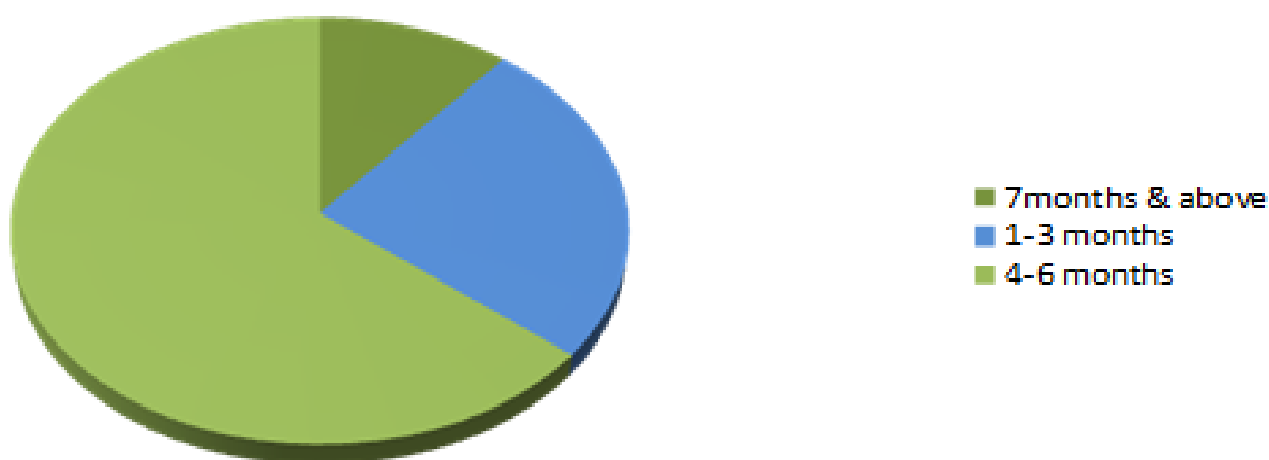
### 7.19 Duration Of Building Plans Approval

The table 15 below shows that 65% of the developers got their approval from 4-5 months period, 28% got their approval from a period of 1-3 months and 8% got there approval of 7 months and above. This implies that there is delay in approval process by Development Control Board. The Nigerian Urban and Regional Planning Degree No 88 of 1992 stipulated the period of not more than 3 months for accomplishment of approvals for households under normal condition.

**Table 15: Showing Duration for Approval of Building Plans**

s/no	Duration	Number	%
1	1-3 months	46	27
2	4-6 months	109	65
3	7 months & above	14	8
Total		169	100

Source: field survey (2014)



**Figure6: Showing duration of building plans approval**

## 7.20 Major Offences

### I. Blockage of Access Roads

During the field survey, 19 houses were observed to have blocked access roads. This shows the attitudes of households towards developing plot which does not belong to them.

### II. Encroachment on Land Uses

It was observed that other land uses such as residential land use have been converted to other land uses this mean some residential land were converted to public uses such as educational, public, mosques etc.

## 8. CONCLUSION

Physical planning is all about improvement of the quality of life and the environment. This paper therefore discussed development control application and its appropriateness to urban physical development in Fadaman Mada developing area. Base on the results, it shows that high percentage of land acquisition were not made directly from government allocations, it was purchase after alterations by people, in which it affects land use. Also lack of controlling the heights of buildings resulted to inappropriate positioning of storey buildings in the midst of bungalows, which made some residence feels their privacy is encroached. Setback is another issue in relation to building construction, where adequate setbacks were not allowed for proper drainage and ventilation. Likewise fencing walls are not positioned adequately according to the regulations. These were all caused by irregular visit of the development control officials to construction sites, delay in plans approval, and the high cost of the approval fees. The general appropriateness of development control is explained by defects in the regulations and the enforcement of the regulations. It can be concluded that if those problem were addressed the quality of life of the people in the study area will greatly improve.

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