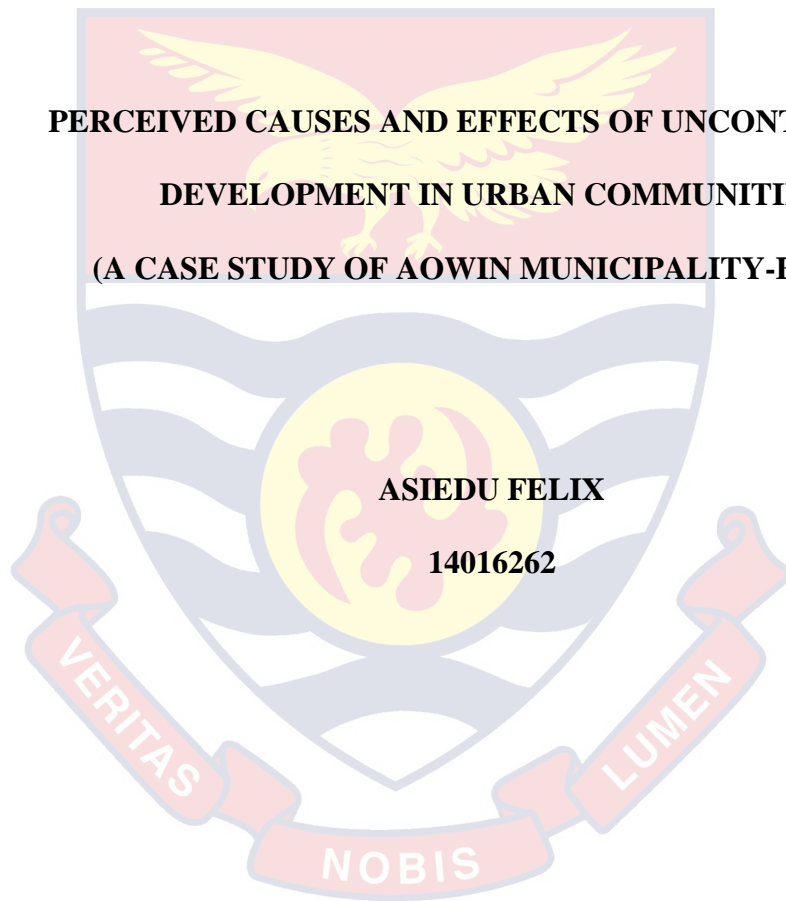


**CHRISTIAN SERVICE UNIVERSITY COLLEGE**  
**DEPARTMENT OF PLANNING AND DEVELOPMENT**  
**FACULTY OF HUMANITY**

**PERCEIVED CAUSES AND EFFECTS OF UNCONTROLLED  
DEVELOPMENT IN URBAN COMMUNITIES  
(A CASE STUDY OF AOWIN MUNICIPALITY-ENCHI)**



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**14016262**

**JUNE, 2018**

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**14016262**

**A Dissertation in the Department of PLANNING AND DEVELOPMENT,  
Faculty of HUMANITY, Submitted to Christian Service University College  
in Partial Fulfillment of the requirements for the award of Masters in  
Monitoring and Evaluation.**

**JUNE, 2018**

## DECLARATION

I, Asiedu Felix, declare that this Dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

CANDIDATE'S NAME: .....

SIGNATURE .....

DATE .....

## SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Dissertation laid down by the Christian Service University College, Kumasi.

SUPERVISOR'S NAME: .....

SIGNATURE .....

DATE .....

## HEAD OF DEPARTMENT'S DECLARATION

NAME: .....

SIGNATURE .....

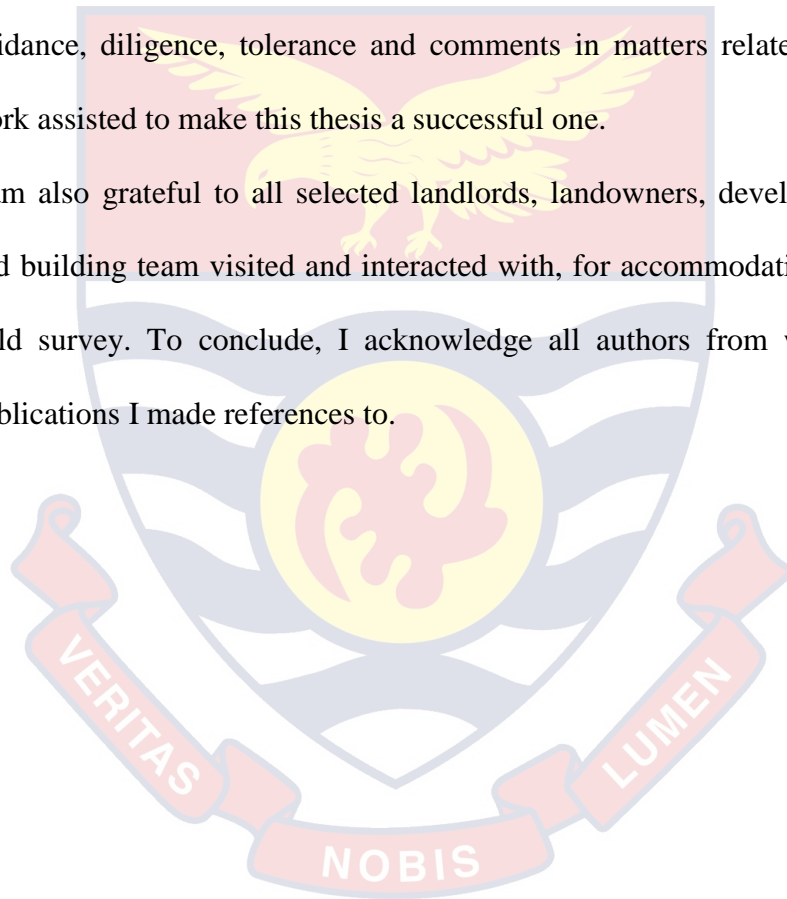
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My sincere gratitude goes to my supervisor, Dr. K.O Agyemang, a Senior Lecturer at Christian Service University College, Kumasi–Campus whose guidance, diligence, tolerance and comments in matters related to the research work assisted to make this thesis a successful one.

I am also grateful to all selected landlords, landowners, developers, individuals and building team visited and interacted with, for accommodating me during my field survey. To conclude, I acknowledge all authors from whose books and publications I made references to.



## DEDICATION

This thesis is dedicated to my lovely wife Naomi Asiedu, and my four children Richard Asiedu, Bernice Asiedu, Harold Asiedu and Janice Asiedu as a means of encouraging them to be diligent and devoted towards their academic pursuits.



## ABSTRACT

The design and arrangement of buildings of a community's built environment influences the physical and mental health of its residents. The research was aimed at ensuring effective layout of buildings at Enchi in Aowin Municipal Assembly. The study involves an assessment of views and collection of data through the use of questionnaire, personal interviews and personal observation on perceived causes and effects of uncontrolled development in urban communities.

Data derived from the field survey was analyzed using descriptive statistic and presented in tables and charts. The study population of forty (40) was used which comprises of five(5) landowners, twenty(20) landlords, ten(10) developers and five(5) individuals. Random sampling technique was used to categorize landowners, landlords, developers and individuals to ensure the desired representation of each group for the study. Among the findings are; people build without obtaining permit which lead to haphazard arrangement of buildings in the communities, inability of Town and Country Planning agency to zone communities for physical development has created congestion in terms of movement in communities, law enforcing agencies do not enforce law on people who violate building laws which has given people chance to build without considering rules and regulations in the building industry. The study among others recommended that, there is the need to produce manuals on acquisition of land, process of obtaining building permits, proper enforcement of laws prohibiting indiscriminate development and further research be conducted into the exact cause of uncontrolled development in urban communities.

## TABLE OF CONTENTS

CONTENT	PAGE
DECLARATION	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
ABSTRACT	vi
TABLE OF CONTENT	viii
LIST OF TABLES	xi
LIST OF FIGURES	xii
LIST OF APPENDICES	xiii
<b>CHAPTER ONE</b>	
<b>INTRODUCTION</b>	<b>1</b>
1.1 Background to the study	1
1.2 Statement of the problem	2
1.3 Purpose of the study	3
1.4 Specific Objectives	3
1.5 Research question	4
1.6 Significance of the study	4
1.7 Delimitation	5
1.8 Limitation	5

## CHAPTER TWO

<b>LITERATURE REVIEW</b>	<b>7</b>
2.1 Introduction	7
2.2 The Concept and Nature of Community Controlled Development	7
2.3 Issues of Uncontrolled development of Buildings in Communities	8
2.4 Spatial Development and Environmental Sustainability	15
2.5 Land Administration and Management	17
2.6 Ignorance of Rules and Regulation in Building Industry	20
2.7 Effects of uncontrolled development of buildings in Community	21
Strategies That Can Ensure Best Practices of Effective development of Buildings	25
Importance of Effective development of Communities	29

## CHAPTER THREE

<b>METHODOLOGY</b>	<b>36</b>
<b>3.1 Introduction</b>	<b>36</b>
3.2 Research Design	36
3.3 Study Setting	36
3.4 Study Population	37
3.5 Sampling Procedure	37
3.6 Inclusion Criteria	37
3.7 Exclusion criteria	37
3.8 Research instruments	37



3.9 Data collection procedure	39
3.10 Data processing and analysis	40
3.11 Study Variables	40

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSIONS 41**

#### **4.1 Introduction 41**

#### 4.2 Results of Questionnaires 41

#### 4.3 Results from developers 41

#### 4.4 Results of Questionnaires From Landowners 46

#### 4.5 Results of Questionnaires from Individuals 50

#### 4.6 Results of Questionnaires from Landlords 55

#### 4.7 Results from Interviews 58

## **CHAPTER FIVE**

### **SUMMARY, RECOMMENDATIONS AND CONCLUSION 63**

#### **5.1 Introduction**

#### 5.2 Summary of the study 63

#### 5.3 Recommendations 64

#### 5.4 Conclusion 65

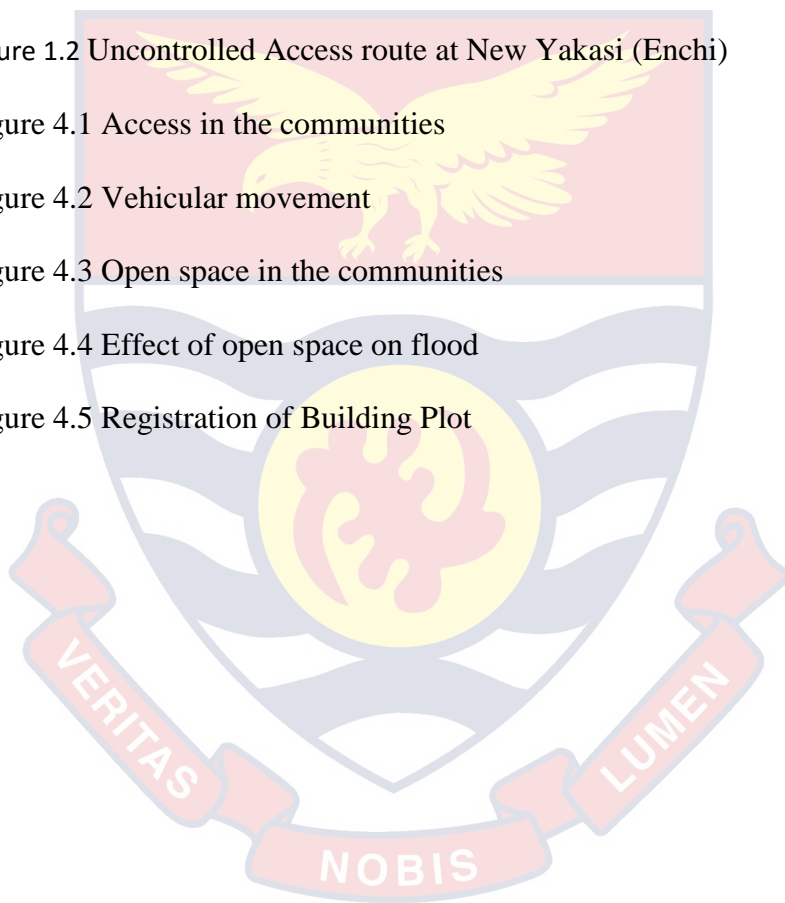
### **REFERENCES 67**

## LIST OF TABLES

	<b>PAGE</b>
Table 4.1 Duration of being a Developer	43
Table 4.2 Standard Size Of Building Plot	43
Table 4.3 Client Intentions	44
Table 4.4 Mechanism for effective layout	45
Table 4.5 Building inspectorate Agencies	45
Table 4.6 Relation between you and town and country planning	46
Table 4.7 Building Layout	46
Table 4.8 Landownership	48
Table 4.9 Landownership	48
Table 4.10 Land Demarcation	49
Table 4.11 Size of plot	49
Table 4.12 Access Routes	50
Table 4.13 Access Route	51
Table 4.14 Duration of stay	52
Table 4.15 Drainage system	52
Table 4.16 Health hazard faced	54
Table 4.17 Site Plan ownership	56
Table 4.18 Building Permit	58
Table 4.19 Road Access	58
Table 4.20 Obstacle	59
Table 4.21 Health Hazard	59

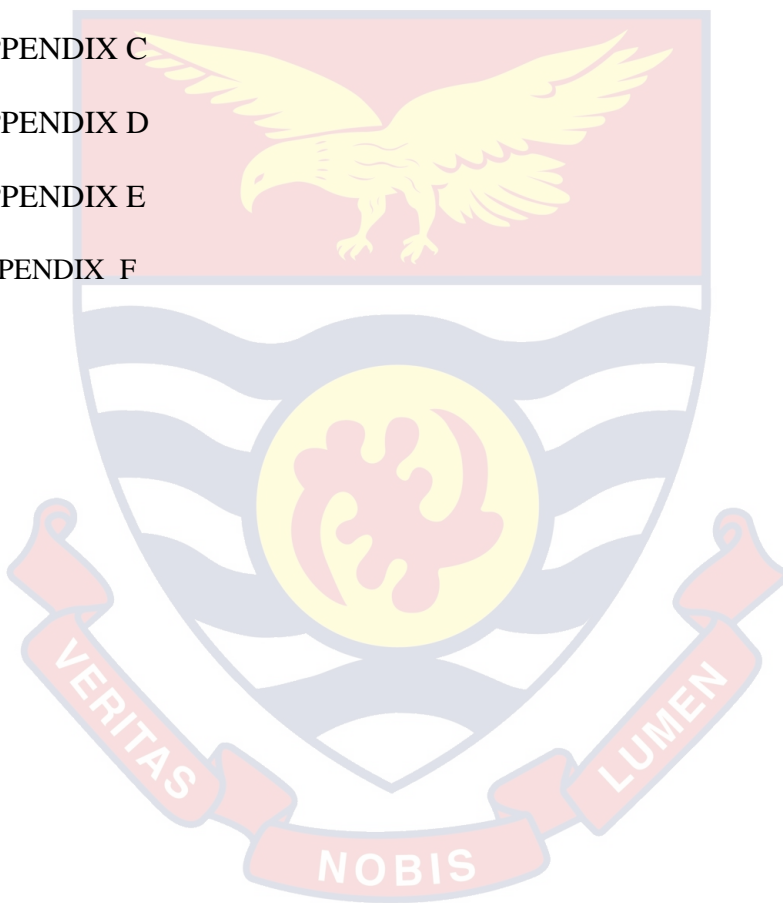
## LIST OF FIGURES

	<b>PAGE</b>
Figure 1.1 Limited spaces between buildings at Adumline (Enchi)	3
Figure 1.2 Uncontrolled Access route at New Yakasi (Enchi)	4
Figure 4.1 Access in the communities	53
Figure 4.2 Vehicular movement	54
Figure 4.3 Open space in the communities	55
Figure 4.4 Effect of open space on flood	56
Figure 4.5 Registration of Building Plot	57



## LIST OF APPENDICES

	<b>PAGE</b>
APPENDIX A	72
APPENDIX B	76
APPENDIX C	79
APPENDIX D	82
APPENDIX E	85
APPENDIX F	87



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Since the dawn of civilization, humans have tried tremendously to overcome the problem of unplanned settlements. In spite of the tremendous efforts, UN-Habitat (2003) as quoted in Ahmad & Choi (2011), about a 3<sup>rd</sup> of the world current city inhabitants still inhabits squatter and slum homes. This was found to be an approximated value of one billion and there are still expectations of this figure rising come the year 2030 without any intervention. The situation is unbearable in the case of developing countries as it has been found that above half the city population in these areas settle in unplanned settlements endangering their lives as the quality is far below standard and therefore inhuman. The uncontrolled development and arrangement of buildings in the communities has also led to poor drainage system in the community which has contributed to the spread of malaria and a idespread of other forms of communicable diseases in the Aowin Municipality which affects the wellbeing of residents in the communities (Aowin Municipal Health Directorate Annual Review Report, 2017).

In news and graphic publications many District and Municipal Assemblies in Ghana carry out exercises which call for the decongesting of buildings in towns and cities, where some structures were demolished due to reasons such as wrong acquisition of land, the closeness of structures to main roads and health hazard faced in the communities.

Hence the aim of this research was to ensure controlled development of buildings in the Aowin Municipality-Enchi as a means of identifying ways of

improvement and implementation of best development of building practices in the Municipality.

## 1.2 Statement of the Problem

There is exponential increase in the world population in the 20th century from around 1.6 billion in 1900—to around 6.1 billion today, with each additional billion people being added more rapidly than the last. The vast majority of this growth has occurred in the developing world. Over the next 30 years (i.e. 2000–2030), the world's population is projected to grow at an annual rate of 1.8 percent, or nearly double the rate expected for the total population of the world (almost one percent per year). At this rate of growth, the world's urban population can be expected to double in 38 years. By 2030, demographers predict that around 61 percent of the world's population will be living in urban areas, at which time the world's urban population will be approaching 5 billion (Cohen, 2006).

In a report by the World Bank (2015) stated that, Ghana has experienced rapid urbanization since the mid-1980s. As Ghana's total population more than doubled between 1984 and 2013, urban population growth outpaced rural population growth, growing 4.4 percent annually, and the urbanization rate rose from 31 percent to 51 percent. Over this period, Ghana's urban population more than tripled, rising from under 4 million to nearly 14 million people.

Available data suggest that in a large number of the world's poorest countries, the proportion of urban poor is increasing faster than the overall rate of urban population growth (Habitat, U. N. 2004).

Often rapid population growth shifts from rural to urban centers are associated with uncontrolled lateral expansion of urban centers, resulting in slums when the provision of housing and basic services is inadequate. Such physical outward expansion of cities is at times characterized by low densities, separated land uses, underserviced, infrastructure-deficient communities, increased congestion, high levels of pollution, loss of farmland, high-cost duplicative infrastructure, and limited employment accessibility (Wasserman 2008; Owusu, 2013). When the supply of services cannot meet the growing urban demand for services, and when urban economies do not sufficiently generate job opportunities, slums develop, with declining health outcomes, growing poverty, and increased levels of insecurity with associated uncontrolled development.

In a report by the Ghana Statistical Service (2014) stated with respect to housing that there is dominance of compound houses where three of four households were reported to be in compound houses in all urban localities in Ghana. Three percent of households in urban Ghana were also housed in kiosks and containers with two percent in uncompleted buildings. There were no serious variations by region but Greater Accra and Ashanti regions were leading in the proportion of households housed in kiosks and containers, obviously the result of slum growth and the high cost of accommodation that are the hall-marks of the two regions as the most urbanised in the country. The report also hinted that there appears to be some overcrowding at the household level considering that as high as 76 percent of the urban households had one or two rooms for sleeping, a situation which is indicative of the inability of many urban dwelling households to rent or acquire bigger apartments for use as their



dwelling units perhaps on account of the high cost of rental accommodation in the urban localities in the country.

In spite of these concerns there has not been adequate public awareness on the causes and effects of uncontrolled development of buildings in the Aowin Municipality-Enchi. Besides there has been limited empirical information on causes and effects of uncontrolled development in Ghana, it was therefore necessary for a thorough study to be conducted to ascertain the causes and effects of uncontrolled development of buildings in the Aowin Municipality and to put in place some interventions to help remedy the situation and this is what this research sought to achieve.

### **1.3 Purpose of the Study**

The aim of this study was to ensure effective development of buildings at Enchi in the Aowin Municipality of the Western Region of Ghana.

### **1.4 Specific Objectives**

Based on the purpose of the study, the research was guided by the following specific objectives;

1. To Ascertain the perceived causal issues of uncontrolled development of buildings at Enchi in the Aowin Municipality of the Western Region of Ghana.
2. To Identify the perceived effects of uncontrolled development of buildings on the health of the environment and residents at Enchi in the Aowin Municipality of the Western Region of Ghana.
3. To Develop strategies/interventions that will ensure effective controlled development systems at Enchi in the Aowin Municipality of the Western Region of Ghana.



### 1.5 Research Questions

The following research questions were used to guide the study:

1. What are the causal issues of uncontrolled development of buildings at Enchi in the Aowin Municipality of the Western Region of Ghana?
2. What are the effects of uncontrolled development of buildings on the health of the environment and residents at Enchi in the Aowin Municipality of the Western Region of Ghana?
3. How will the developed strategies/interventions ensure effective controlled development systems at Enchi in the Aowin Municipality of the Western Region of Ghana?

### 1.6 Significance of the study

The study will be of immense importance to the following stakeholders;

- The study will provide information on issues of uncontrolled development of buildings in the Aowin Municipality-Enchi and inform landowners, landlords, developers and individuals on the effects of uncontrolled development of buildings in the environment.
- It is also expected that the results of the study will provide information on the importance of effective controlled development of buildings and this will aid policy makers, planners and decision makers in the building industry to adopt strategies that will ensure effective development of buildings in their communities.
- The study will also serve as a reference for other researchers who will be carrying out similar projects in the Aowin Municipality and beyond.

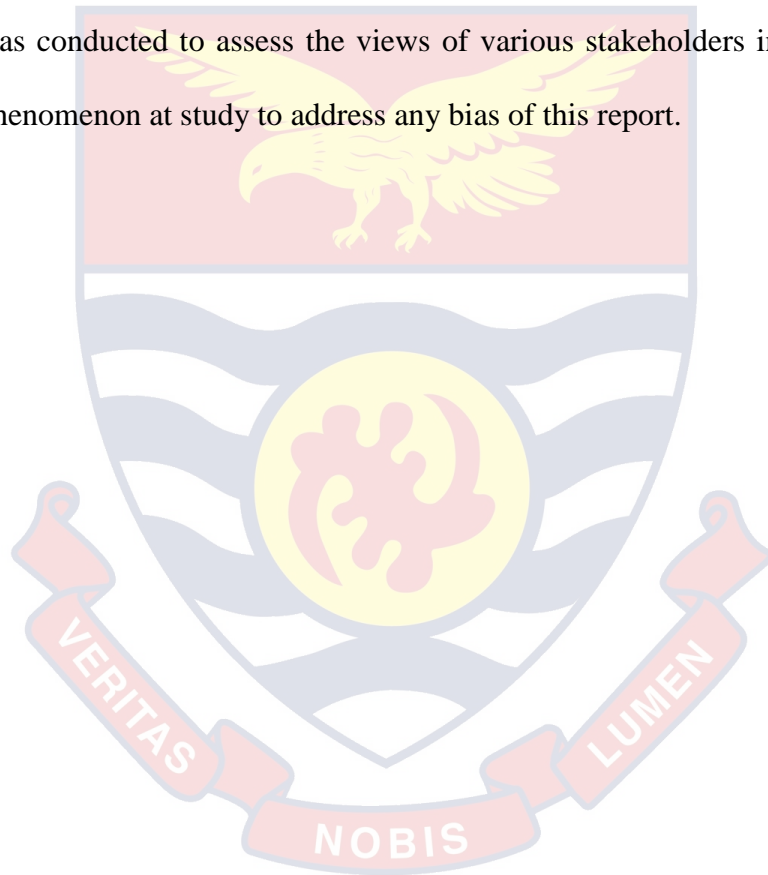
### **1.7 Delimitation**

The study was confounded to residents at Enchi in the Aowin Municipality of the Western Region of Ghana.

### **1.8 Limitation**

Data was obtained through self-report questionnaires, therefore reporting bias (over-reporting or under-reporting) could have an influence on the final results.

In lieu of this limitation of bias reporting, a qualitative approach of interview was conducted to assess the views of various stakeholders involved with the phenomenon at study to address any bias of this report.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents empirical and theoretical review on uncontrolled developments in urban communities. Review of literature was discussed under the following sub-headings:

The urbanization in developing countries, Issues of uncontrolled development, the effects of uncontrolled development of buildings, strategies that can ensure best practices of effective development of buildings and finally the case of Ghana, issues of urbanization and uncontrolled development..

The following databases was used in the review of literature, thus African journal online, Taylor & Francis, JSTOR archival Database, SAGE journals and other published journals from Google Scholar with key words “urbanization” and “uncontrolled development”

#### 2.2 Urbanization in Developing Countries

When rural settlements grow and become urban centres, and urban centres do so and become large Municipal areas, there is always increased competition in the demand for land for different purposes. This requires adequate planning and control in these settlements to ensure harmonious development and functional efficiency. To achieve this fundamental activity, layouts of various land uses such as residential, commercial. industrial, open spaces and recreation, circulation and institutional uses among others are undertaken to standardise and control physical developments and ensure harmonious growth (Aribigbola 2008)

World population has grown exponentially in the 20th century from around 1.6 billion in 1900—to around 6.1 billion today, with each additional billion people being added more rapidly than the last. The vast majority of this growth has occurred in the developing world. Over the next 30 years (i.e. 2000–2030), the world’s population is projected to grow at an annual rate of 1.8 percent, or nearly double the rate expected for the total population of the world (almost one percent per year). At this rate of growth, the world’s urban population can be expected to double in 38 years. By 2030, demographers predict that around 61 percent of the world’s population will be living in urban areas, at which time the world’s urban population will be approaching 5 billion (Cohen, 2006).

One particularly alarming trend that has been observed is the rapid growth in the number of new urban residents every year to the world’s largest urban agglomerations, although this is partly an artifact of the fact that several very large urban agglomerations in the developing world that had less than 10 million residents in 1975 have now crossed the 10 million threshold. Consequently, the number of people living in vast urban agglomerations of 10 million or more in the developing world has risen dramatically over the past couple of decades. Between 1975 and 2000, the number of 10 million plus urban agglomerations in the developing world rose from 2 to 13 and the number of people living in mega-cities catapulted from 22 million in 1975 to 165 million in 2000 (Unies, 2007).

Nevertheless, as cities grow, managing them becomes increasingly complex. The speed and sheer scale of the urban transformation of the developing world presents formidable challenges. Of particular concern are the risks to the immediate and surrounding environment, to natural resources, to health conditions, to social cohesion, and to individual rights. For many observers, however, the greatest concern is surely the massive increase in the numbers of the urban poor (Cohen, 2006).

These literatures argue that, though urbanization in developing countries are associated with massive benefits. It is also accompanied with challenges of which uncontrolled development is a part.

### **2.3 Issues of Uncontrolled development of Buildings in Communities**

#### **interface between Land, Population and Land Use Planning**

Land constitutes about one-third of the total earth surface (Miller, 1996, Brij and Muller, 1997). However, not all of the land can be inhabited because parts of the land are desert, others are mountainous and icecap (Bradshaw et al. 2004). These land areas further reduce the land size of the world. But, the world's population has been increasing at an alarming rate particularly in urban areas. According to (Miller, 2001) the number of people projected to live in urban areas worldwide by 2025 is 5.5 billion, almost equal to the world's current population.

Beatley,(1991) expressed this concern in the following words, “land is a finite resource and if not conserved and wisely used can be totally exhausted before reaching very distant generations ...” A similar sentiment was expressed in the following words: “Because land is immobile, finite and absolutely necessary to human existence, control of land obviously is of crucial importance” (Davis, 1976). These sentiments are being expressed because, increased population and urbanization put much pressure on land, because, urbanization brings along with it, increase in the demand for land for a number of purposes including housing, industrial, commercial, transportation and recreational, among others, (Asenso-Okyere et al. 1993). Therefore, if measures or policies are not put in place to guide the distribution of land-use, the increased demand for land basically as a result of increased population can affect orderly spatial planning and development. For example, according to the 2010 Population and Housing

Census of Ghana, Accra was the most urbanized community in the country, (Ghana Statistical Service, 2010 Population and Housing Census). It is therefore not surprising that, in Ghana, Accra is perceived to have the greatest land conflicts and land-use problems among the urban communities in the country. However, in Sub-Sahara Africa, despite increased population, there are still abundant lands (Brink, et al. 2005) compared to advanced communities like Europe and North America. That is, the man-land ratio is still low in Sub-Sahara Africa compared to other parts of the world especially Europe where high population has made land an extremely scarce resource. The increasing population in the sub-region is unable to put pressure on land now compared to the developed countries probably because of high poverty being experienced in this part of the world. It has been estimated that about 70% of the urban population in Sub-Sahara Africa live in slums (Toumlin, 2006). In Kenya for example, 25% of the 31 million populations live in Nairobi and other urban areas. Out of the urban population about 60% live in slum settlements (Yahya, 2001). The situation is no different from other countries in the sub-region. This argument echoes the fact that, the human population as a factor cannot be ignored in any geographic studies. This is because, the human population (a key factor in geographic studies) in their numerous endeavors makes the greatest impact on the broader environment of which land forms part (Nelson et al. 1995). Mather and Needle (1998) agree with this assertion and note that, “Population is often assumed to be primary driver of environmental change in general, and change in land use/cover in population propounded in 1798 called scholars’ attention to the important relationship between population - an increasing resource and land - a limited resource.



He therefore called for careful planning in order for the land resource to be able to support and sustain both the present and future human populations. These arguments place emphasis on the fact that, in seeking for an effective land use, the impact of human population in achieving such an objective must not be ignored. For this reason, there is, therefore, the need for an effective land use planning if judicious use of land is to be made in the face of increasing human population.

Land use planning has been explained by Miller as a means “to decide on the best present and future use of each parcel of land in an area” (Miller, 1996). The Wikipedia internet free encyclopedia (2007), also defined the term as “a branch of public policy which encompasses various disciplines which seek to order and regulate the use of land in an efficient way”. Whilst the import of Miller’s (1996) definition emphasized on using land to benefit both present and future generations, the Wikipedia encyclopedia emphasized on orderliness and regulations to ensure efficiency in the use of land at each stage of human development.

In 1993, a wider and more detailed definition of land use planning was given by the FAO and has been cited in Young (1998) as “Land use planning is a systematic assessment of land potential, social and economic conditions and alternative patterns of land use, for the purpose of adopting land use options which are most beneficial to land users, without degrading natural resources together with the selection of measures most likely to encourage such uses of land...”.

Based on these three definitions on land use planning, a conclusion can therefore be drawn that in planning the land use of any region, much technique, skills and

knowledge must come into play to ensure efficiency in land use in order to benefit both future and present generations. First of all, there must be a land use policy that has to guide the allocation and development of lands in an area. Secondly, according to Beatley (1991) any land use policy must be guided by eleven (11) principles, namely:

- Strive to promote the interests of the least-advantaged in society.
- Protect the minimum environmental and other rights due to every individual irrespective of income or social position.
- sustain and protect natural ecosystems, that is, small human footprints
- Acknowledge that man is not the only specie on the planet and that there are other non-human lives.
- Hold those causing land use harms accountable for them.
- Acknowledge important obligations to posterity and to peoples and generations yet to come.
- Acknowledge that no political jurisdiction is freestanding.
- Assist individuals in pursuing their own fundamental life plans.
- Ensure that public land use authorities keep the promises they make.
- Provide the opportunity for all interested and affected parties to participate.
- Not allow for any developments that radically change the environmental integrity of the land.

These broad ethical principles when included in any land use policy would ensure a coherent and coordinated land use and also lead to a proper planning of land. This is because, these eleven principles cover the interest of all groups in land matters - present and future generations, the environment, the land



owners, the land administrators, the violators of land use plans and the vulnerable in society.

Virtanen (1992) introduces flexibility as a third factor that has to be incorporated in land use planning. He explained flexibility in land use planning as:

- (1) The ability to tolerate unexpected disturbances or changes in circumstances, and
- (2) The ability to produce new or amended plans quickly when necessary.

By Virtanen's explanation of the term, the reason for incorporating flexibility in land use plans is to take care of shocks or deviations that may arise in spatial development of a region. This would ensure that, spatial development is always brought in conformity with plan layout of a region such that the aesthetic beauty of towns and cities are not compromised.

Based on discussion of the FAO definition of land use planning, Young (1998) identified ten (10) steps in land use planning. These are:

- Establish goals and terms of reference: here, decision makers and planners jointly set out the goals or problems that the plan is intended to solve.
- Organize the work: the planning team strategizes as to how they will achieve the goal of the planning. It also involves preparing the time schedule.
- Analyze the problem: the planner goes to the field to observe the topography of the area to be planned and also interact with the inhabitants.

- Identify opportunities for change
- Evaluate Land Suitability: the planners assess the possibility of the nature of the topography (land) to fit into the plan drawn.
- Appraise the alternatives: based on the actions in steps four and five, the planners stress on the environmental, economic and social consequences of the land use plan designed.
- Choose the best option: based on step six, the planning team formulates proposal plans for the approval of the decision makers.
- Prepare the land use plan: here the land use plan is drawn with all the justifications.
- Implement the plan: at this stage, the land use plan drawn is implemented and the planners continue to meet with the local people to review progress.
- Monitor and revise plan: the plan being implemented should be monitored and the plan must be capable of being revised when necessary.

It is important to note that spatial planning is one of the core concepts in geography and it is the context of our analysis that makes the discipline unique. As attempts are being made to reduce poverty in Sub-Saharan Africa through programs such as the Poverty Reduction Strategies, Millennium Development Programs, African Growth and Opportunity Act (AGOA), and other programs, coupled with the ever increasing population, there is the need to plan land use in the sub-region particularly in Ghana. Land use plans in the sub region must include Young's (1998) ten steps as well as the three key factors – land policy, the eleven ethical principles and flexibility. This will ensure that adequate

measures are put in place before increased demand for lands as a result of improvement in the economy and population growth make land a scarce commodity, with its attendant problems.

#### **2.4 Land Administration and Management**

Land administration and land management differ in context and in meaning though there is a thin line between the two. As such, the two terms are often used interchangeably in most articles, journals and books (Odame-Larbi, 2006).

According to Wily (2003), the two functions overlap and are frequently performed by the same body or institution. The International Federation of Surveyors as cited in the F.A.O. thesaurus on land tenure defined land management as “the process of managing the use and development of the land resources” (F.A.O., 2003).

Wily (2003) gave an extensive definition of the term as “land management refers to land use regulations such as associated with zoning, placing a ceiling upon the size of holding, conditions and environmental protection measure. It will also examine measures taken to protect the land interests of selected vulnerable groups, women, children, pastoralist and hunter gatherers. These two definitions emphasize the point that land management deals with the day to day running of land use that must ensure its sustainability.

Young (1998) identified sustainability, that is, the combination of production with conservation as the fundamental principle in land management. This opinion expressed by him is consistent with the definitions of land management. This is because all the definitions of land management aimed at ensuring the careful use of the land resources for both present and future generations. Zaney(2007), defined Land Administration as “the building of infrastructures

of tenures, rights, registration, planning and valuation to support the operation of the land market”. The term was also defined and distinguished from land management by Wily (2003). as, “land administration covers institutions and processes associated with land rights, regulation and among which the recording of rights is prominent. This definition can be expanded to include those strategies and activities mainly by government agencies to control and direct the valuation, planning, utilization, transfer and development of lands. Aryeetey et al. (2007). also defined the concept as “land administration refers to the processes of determination, recording and dissemination of information about the ownership, use, and value of land”. From these three definitions, land administration could be interpreted to involve coordination and running of the various aspects (planning, utilization, development etc). of the land resource in order to create conducive atmosphere for a proper spatial development.

The administration of land creates the institutional framework within which the management of land is performed. Land management hence forms part of land administration but the administration of lands must precede land management. In Ghana, as in many parts of the world, the demand for land is greater in the urban centers or cities than in the rural areas. In rural areas, land is acquired mainly for agricultural (productive) purposes.

That is, the rural person considers the cost-benefit analysis of land by assessing how much output to be obtained from a piece of land and unproductive lands are obviously avoided. On the contrary, in the urban centers, land is acquired for profit motives (businesses of all kinds, residential, educational and religious) purposes without thinking about the future environmental and developmental consequences. That is, every piece of land in an urban Centre is highly

demanding for personal interest and every effort is made to obtain it. This put much pressure on urban lands and its administration and the skills to handle this challenge become critical. Odame-Larbi (1998), expressed similar sentiments when he said “as a result of the high competition for land in cities, the management of such competition is critical to the success or otherwise of any economy”. Since land use follows land acquisition, the processes and rules governing the disposal of land become critical to developmental processes.

The operation of the land market is central to the processes of economic growth and development, structural adjustment, careful use of the environment and the achievement of satisfactory level of social equity” (OdameLarbi, 1998). This means that economic growth, sustainable environment and social equity is a function of the land market and if the land market is poorly administered and managed, economic growth and sound environmental condition will be retarded. Likewise, if the land market is efficiently managed and administered then a sustainable growth and economic development is assured.

## **2.6 Ignorance of Rules and Regulation in Building Industry**

Government has felt it is necessary to set minimum standard for the housing industry, the notion is that certain size of household required certain sides of living space formed the basis for most standard system culminating in Parker Morris (PM) standards for various household size which applied to all post 1969 housing industry. It is generally accepted that Parker Morris (PM) standards of space and amenity meet the requirement of most housing tenants. The housing development directorate, a sociological research division has conducted many survey of housing which suggests that dissatisfaction arises now; factors out the physical confines of the houses, the more important problems appear to be in

the spaces around the houses. (Best R. H.1981). Private sector housing has not been subjected to the standards applicable to the housing industry, despite the recommendation of the Parker Morris committee that its standards should be applied to all houses. The statutory requirement of planning, public health safety etc. must be complied with in the development (Tult and Adler 1981). It seems important, open space directly connected to dwelling should be demonstrably private, no matter what tenure arrangement apply and the territorial right of the landlords and landowners should be clearly marked. Many authorities have their own specification and construction preferences as well as standardized design must also be considered before even broad design decision can be made.

In addition, the complexities of the building regulations and the changes implicit in the health and safety at work etc. Acts 1974 do not make the public sector easy. It can be seen that overall sanitation quality achieved is far from satisfactory, despite the relative simplicity of designing, the design guides issued by local planning authorities (Town and Country Planning) concerned felt in many areas about the poor quality of residential sanitation standard recommended by Parker Morris committee in homes for today and tomorrow have to receive the required publication to educate the ordinary person. The private sector housing is subjected only to those standards required by the public health Act, the local authority (Town and Country Planning) writes stop work on buildings without educating the people on standards and enforcing the law on victims (Health and Safety Act 1974).

## **2.7 Effects of Flooding**

Haphazard construction of houses has blocked many natural water ways and has led to frequent floods during the rainy seasons particularly in the months of



March, April and May of every year in Ghana. Soil erosion and landslides are strongly related to flooding which destroy houses as well as footpaths and unpaved roads (Ameyibor, 2003). Houses and other properties are being washed away by floods forcing the inhabitants to vacate the areas. A high housing density, which most of the informal settlements are characterized by, makes natural seepage of storm water more difficult due to a high share of sealed land (ibid: p24). Flooding which results in the overflow of pit latrines and septic tanks is also a major cause for pollution of water sources and marine environments. Due to the non-existence of drainage systems, storm water creates big puddles that become breeding places for mosquitoes which is the cause of malaria. What are the Effects of a Flood? Thumbnail Effects of a flood are often long-term, costly and devastating. Severe floods affect the environment, including communities, nature and construction, in tremendous ways. They can create a tremendous monetary expense for governments, businesses and individuals alike. Worse yet, if significant land erosion occurs as a result of flooding, more disasters are likely to follow, creating an ongoing cycle of water damage. The major effects of flooding include the following;

### **2.9 Physical Effects**

Massive damage can occur following a devastating flood. Homes, automobiles, buildings, historical monuments, graves, sewer systems, bridges and countless other infrastructures can be destroyed by nature's water pressure. Roadways often suffer, particularly ones already cracked and aging. While many buildings and homes might dry out to the point of being habitable again, the moisture remaining within walls, flooring and roofing may cause serious mold problems that will eventually wear the home away and create health dangers.

### **2.10 Injury, Illness and Casualties**

Major floods pose great risk for everyone in the flooding vicinity. Particularly high flooding often claims the lives of drowning victims. If people and animals residing in the flooded area cannot get to food, medications or treatments to survive, more lives can be lost. The physical damage done to buildings and cars often claims the lives of people and animals that may be trapped during the disaster. The injured may not get to a hospital, those who can overflow hospitals. The lack of clean drinking water to flood victims can cause illness.

### **2.11 Financial Effects**

Local city, county and state governments often spend large sums of money in the search, rescue, recovery and rebuilding efforts. Affected businesses are usually shut down for a long period of time. Employees and business owners alike suffer from a loss of income. Significant economic effects usually follow extremely damaging flood areas.

### **2.12 Process of Land Acquisition**

The constitution of Ghana was approved in April of 1992. According to this constitution, all public land was vested in the President on behalf of the people. Prior to this time, Customary Land had been granted to individuals and families. Customary Land is now considered to be private land. If you want to purchase private land, it is necessary to talk to the individual who owns it; otherwise, all land is purchased from the government.

There are distinct differences between leasehold and freehold land. When someone owns freehold land, they have exclusive rights to the land as well as the building or home on that land. Contrastingly, purchasing a leasehold property means that you purchase the rights to the building or home on a given



property for a certain amount of time – several decades, usually – but the actual land does not belong to you.

These are a few of the most important things to understand when you are in the process of purchasing land in Ghana. By following these seven steps, you will find that the purchasing process goes much more smoothly. These include:

(Land Administration Project (2005):

- Verify land ownership
- Check with the Land Commission to find out who truly owns the land
- Check seller's reputation
- Find out whether the land is a leasehold or freehold
- Ask for a transfer of ownership process
- Check the cost to transfer and register the land at the court
- Verify lawyer fees if any

## **2.13 Procedure for Acquiring Development Permit**

### **Stage1: Requirements**

#### **A. For those who want to put up a new structure or have never secured a development Permit**

- One completed copy of TCP Form 1;
- Building Permit Application Form duly completed
- Land Title Certificate or a Deed Certificate or Clearance Form duly signed by appropriate authority, that is, Lands Commission of Land Title Registry. (Copies of clearance forms are available at submission desk. Applicants with clearance forms are to attach two copies of site plans on the scale of 1:12500/1:2500 to the appropriate authority for their action and recommendation).

- 4 Sets of Architectural drawings duly signed: (Three copies of a block and site plan to a scale of 1/20 or 1/40 showing the position of the building(s) and other works on site; Three copies of plans showing the elevation and design of the building at an appropriate scale).
- 4 Sets of Structured drawings of the building at appropriate scale and duly signed.
- Five (5) self-addressed envelopes
- And any other as may be necessary  
(Republic of Ghana 1996 Legislative Instrument 1630).

**B. Application requiring Permission in Principle (AIP) would be required to submit the following**

- 3 Sets of Sketch drawings
- 3 copies of brief outline of project covering the location, design,
- Activities and operational characteristics
- Evidence of Neighborhood consultation and comments
- D. Applications seeking Change of Use of existing permit should submit the following;
- Previous permit on existing building
- Proposed amendments to drawing if relevant
- Evidence of Neighborhood consultation and comments for the new use of premises. (Republic of Ghana 1996 Legislative Instrument 1630).

**C. Development and Building permits are valid for five years.**

Applicants who are unable to complete developments within permit validity period are required to seek permit for extension of Time. Application for Extension to Existing Building should comprise;

- Previous permit
- Three copies of a block and site plan to a scale of 1/20 or 1/40 showing the position of the building(s) and other works on site.

### **Stage 2: Purchase of Forms**

Buy the Building Permit Application Form and TCP Form 1 from the District Assemblies Works Departments or the TCPD offices in the Regions and Districts.

### **Stage 3: Completion of Forms**

Complete in full, both the Building Permit Application Form and the TCP Form 1. Where you have difficulty in completing the forms, contact the District Town and Country Planning office or the district Assembly Works Department in your district for advice and assistance.

### **Stage 4: Submission**

Submit completed forms with all other attachments as specified in the Building Permit Application and TCP Form 1 to the Town and Country Planning Office in your District or Region.

On submission you shall be informed of Corrections to be made or additions if any. Date for inspection of site (if necessary) (Republic of Ghana 1996 Legislative Instrument 1630)

### **Stage 5: Processing**

The Secretary of the Statutory Planning Committee (SPC) and the Planning Committee (SPC) and the Planning Officers process the application within two (2) weeks of receipt of application.

The Technical sub-committee meets to evaluate the application, visits site and makes recommendation to the Statutory Planning Committee (SPC) within a month of receipt of application.

The Statutory Planning Committee considers the Development Application within nine (9) working days of Technical Sub-committee meeting.

The Secretary of the Statutory Planning Committee submits approved plan to District Assembly Works Department five (5) working days of approval for issue of building permit.

#### **Stage 6: Collection of Permit**

Pay approved building permit fee to the District Assembly's Works Department on receipt of approval letter. Collect building permit from the District Assembly within three (3) months after submission of development application.

Applicants may seek further instructions for commencement of building project from the Works Department of the District Assembly. Act 462 provides that any unauthorized structure of structures attached to premises shall be demolished or remove on notice by the District Assemblies. Building becomes illegal if it does not conform to what is on the approved plan.

It is important to note that the validity of a Building Permit issued in accordance with the above process is five (5) years after which a new permit must to seek.

Developers are therefore required to seek renewal of Building Permit if development is not completed within five (5) years. (Local Government Art 462).

### **2.14 Importance of effective development of communities, effective controlled development of communities encourages the creation of drainage systems**

Drainage systems can contribute to sustainable development and improve urban design, by balancing the different issues that influence the development of communities. Approaches to manage surface water that take account of water quantity (flooding), water quality (pollution) and amenity issues are collectively referred to as Sustainable Drainage Systems (SuDS). Drainage systems in the community manages runoff volumes and flow rates from hard surfaces, reducing the impact of urbanization on flooding. It also protects or enhances water quality (reducing pollution from runoff) In addition it protects natural flow regimes in watercourses. Again it provides an attractive habitat for wildlife in urban watercourses. Also drainage systems Provides opportunities for evapotranspiration from vegetation and surface water, encouraging natural groundwater/aquifer recharge (where appropriate) and finally, it creates better places to live, work and play.

### **2.15 Effective controlled development provides Open Space**

According to Lerner and Poole (1999), open space in general is the meeting or gathering places that exist outside the home and workplace that are generally accessible by members of the public, and which foster resident interaction and opportunities for contact and proximity. This definition implies a higher level of community interaction and places a focus on public involvement rather than public ownership or stewardship.

An open space is an area of land that is not developed. Open space includes working landscapes, such as forestlands, farms, parks, greenways, trails, urban

green spaces, historic areas, natural areas, scenic overlooks and wetlands. By advocating and protecting open space we are maintaining our quality of life for present and future generations.

### **2.16 Effective controlled development of communities encourages the creation of roads**

Complete Streets is a transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. (Rohin, 1981).

Complete Streets allow for safe travel by those walking, bicycling, driving automobiles, riding public transportation, or delivering goods. Proponents of Complete Streets policies believe that proper layouts of communities improve safety, lower transportation costs, provide transportation alternatives, encourage health through walking and biking, stimulate local economies, create a sense of place, improve social interaction, and generally improve adjacent property values. Opponents may consider automobile-only infrastructure to be a better use of public funds, or consider efforts to encourage other forms of transportation to be coercive.

Individual projects and policies have sometimes faced specific local opposition, typically based on concerns over traffic flow and automobile access. Other benefits of proper layout of communities include the following:

### **2.18 Effective Controlled Development Encourages Good Health**

A variety of reports and organizations have suggested that Complete Streets policies could improve public health by promoting walking and bicycling. The



U.S. Centers for Disease Control and Prevention recommend adoption of a Complete Streets policy as a strategy to prevent obesity. A report of the National Conference of State Legislatures named Complete Streets policies as the most effective policy avenue for encouraging bicycling and walking. One study found that 43% of people with safe places to walk within 10 minutes of home met recommended physical activity levels, while just 27% of those without safe places to walk were active enough (Rohin, 1981).

### **2.19 Provision of Economic Values**

Proponents of Complete Streets believe that as communities become safer, more attractive, and provide more transportation choices, local economies thrive and land values rise (Rohin, 1981).

### **2.20 Provision of Safe Environment**

Complete Streets can also have a positive effect on the environment. By providing safe options for people to walk and bike, Complete Streets can lead to fewer people driving alone in their cars. This means fewer dangerous emissions from automobiles, which benefit all residents.

The literature on roads connectivity in and out the market reduced transport cost and allow for easy access. Productivity thus increases due to the larger availability of inputs and their reduced prices. Khandker et al (2009) showed that road development led to significant reduction of price of fertilizer in Bangladesh.

Improved access to output markets leads to a rise in income to greater opportunities of sales or higher prices. Gibson and Rozelle (2003). explain that “the rate of price decline is around seven percent for each extra hour to the nearest transport facility” in Papua New-Guinea. Khandker et al (2009) showed

that road development leads to higher agricultural production, higher wages, and higher output prices. Jacoby and Minten (2009), calculate that a sharp decrease in transport costs associated with a new road would increase the income of the remotest households by almost half. However, Ruijs et al (2004). find that the direct effect of transport costs reductions on food prices, such as cereals, requires some nuance and tempered expectations in the case of Burkina Faso, notably due to the organization of markets.

Transport infrastructure can also reduce poverty by creating employment and new job opportunities (Jacobs and Greaves, 2003). The construction and maintenance of a road are labor-intensive operations and can provide job opportunities to people in the close area. However, these projects are only occasional and cannot represent a long term strategy for reducing poverty. But the provision of roads entails a greater and/or cheaper availability of labor markets.

For example, Mu and van de Walle (2007), show that road projects in Vietnam increased employment opportunities by 11% for unskilled labor. The literature also provides insights on the relationship between road access and the diversification of income sources.

First, diversification outside the agricultural sector is widely considered as a way to escape from poverty. In fact, while the majority of the poor live in rural areas where the main activity is agriculture, there is strong evidence that nonfarm activities are a major source of income and employment for the poor in developing countries. Households affected by a road project are less likely to rely on agriculture or forestry as their main source of revenues and switch to the service sector Mu and van de Walle (2007). Gollin and Rogerson (2010), show



that large subsistence agriculture sectors are promoted by a lack of transportation infrastructure in Uganda.

Diversification can also be thought as a multiplication of income sources. On this point the mechanism is twofold. On the one hand, diversification in remote areas is a way to satisfy the local demand for multiple goods and services (Barrett et al 2001; Block and Webb, 2001). Facing transaction costs, it is more profitable for households living in poorly connected regions to diversify their activities so as to satisfy their own demand. But better connectivity to markets develops multi-activities since opportunities to diversify are greater.

Finally, roads facilitate provision of basic needs such as health and education. Poor people usually suffer from inadequate access to human capital facilities that are essential to escape from poverty. Actually Njenga and Davis (2003) point out that poverty reduction needs more than economic mechanisms to be effective. Roads appear as a complementary input for these provisions of human capital formation facilities to be effective in their poverty reduction objective (Gannon and Liu, 1997). Road projects evaluations provide evidence on the roads' human capital impact. Rural roads rehabilitation in Vietnam improved primary school completion rates and enhanced the treatment of broken bones (Mu and van de Walle, 2007). Road development in Bangladesh led to higher girls' and boys' schooling (Khandker et al, 2009).

### **2.21 The case of Ghana, issues of urbanization and uncontrolled development.**

Ghana's population has witnessed not only rapid growth but also rapid urbanisation since independence. This has been fuelled by policies during the

colonial period which have been largely sustained through the post-independence era as well as the interplay between natural population increase and migration. It is thus, often perceived that development in the urban areas is relatively better compared to that in the rural places of residence because of the development bias in favour of the urban areas (Ghana Statistical Service, 2014). For example, Brown (1986) argues that after many years of political independence, the living conditions of the rural majority have not changed and consequently, the rural poor have not been able to share the benefits that have arisen from national growth.

As a result of a combination of several factors, Ghana has moved from a more rural population to urban with more than half (50.9%) of the country's population reported to be residing in urban localities in 2010. From the national population censuses, the proportion of the population urban rose from a low of 23 percent in 1960 through 29 percent and 32 percent respectively in 1984 and 2000 to its 2010 record of almost 51 percent. Comparatively, the urban population has recorded a more rapid growth than the rural. It has been recorded that the urban population grew by 4.7 percent per annum during 1960-1970, declined to 3.3 percent in 1970-1984 and picked up again during 1984-2000 with 4.6 percent annual growth rate. The corresponding growth rates for the rural population during the same periods were 1.6 percent, 2.3 percent and 1.5 percent giving a tempo of urbanisation of 3.2 percent, 1.1 percent and 3.1 percent respectively for the 1960-1970, 1970-1984 and 1984-2000 intercensal periods (Ghana Statistical Service, 2005).

In African countries, including Ghana, changes associated with independence increased the attraction of cities. The growth of civil service, attempts to

industrialise, and the abandonment of remaining relics of influx control gave a boost to rural-urban migration. The centralisation of politics and bureaucracy formed a further attraction to investors who needed access to the state machinery, resulting in the emergence of many new towns along the fringes of the main urban centres (Rakodi, 1992). In 1876, the Colonial Government enacted the Public Lands Ordinance in order to acquire lands for the new seat of government and new capital. A Town Council was set up in Accra under the Town Council Ordinance of 1876 with powers to deal with environmental sanitation, the provision of infrastructure to ensure orderly planning of the town, the control and erection of buildings and the layout of streets (Quarcopome, 1992).

On 21st April 1945, the Town and Country Planning Ordinance (Cap 84) came into force “to provide for the orderly and progressive development of land, towns and other areas to preserve and improve their amenities and for related matters.” This formed the basis for zoning and building codes which were strictly enforced in the urban centres. In Ghana, the creation of slums is associated with the continuous rural-urban migration, limited supply of land, and regulatory frameworks that are not addressing the needs of the urban poor. In 2001, the slum population of Ghana was estimated at 4,993,000 people, growing at a rate of 1.83 percent per annum and scattered in all the major cities. This population was expected to reach 5.8 million by 2010 (GoG 2005). On the issue ownership, the 2010 population and housing census report by the Ghana Statistical Service (2014) hinted that about 40 percent of all urban households in the country said their dwelling unit was owned by a member of the household; a relatively smaller proportion (37%) indicated ownership by

other private individuals while 16 percent was owned by a relative who was not a member of that household. it was shown that 60 percent of the households were in compound houses, implying that dwelling units that were said to be owned by other private individuals or a relative not a member of the household could mostly be compound houses. This is fairly consistent with the analysis on the type of dwelling for urban households in the country.



## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter presents the methodology and design of the study, description of the study area, study population, sample size, sampling method, data collection methods, data processing /analysis and ethical considerations.

#### 3.2 Research Design

The descriptive method of research design was used to collect data to describe the phenomenon at stake. Specifically, the study was carried out under the cross-sectional method of the descriptive design. The purpose of descriptive study is to observe, describe and document aspects of the phenomenon as it naturally occurs. The research design employed a descriptive cross-sectional study with a quantitative and qualitative approach to ascertain the perceived causal issues of uncontrolled development of buildings, to identify the perceived effects of uncontrolled development of buildings and to develop strategies/interventions that will ensure effective controlled development systems at Enchi in the Aowin Municipality of the Western Region of Ghana.

#### 3.3 Study profile

The place for study was the Aowin Municipality-Enchi in the Western Region of Ghana. Aowin Municipality is located in the mid-western part of the western region of Ghana sharing Boundaries with Jomoro in the South, Wassa Amenfi-West in the East, Sefwi Akontombra and Suaman District in the North and the Republic of La-Cote d'Ivoire in the West. The Aowin Municipality covers a total land area of 2,610.301km<sup>2</sup> endowed with forest reserves, water bodies and

other streams. Aowin Municipality population is 130,543 with growth rate of 2.0 based on the 2010 population and housing census.

### **3.4 Study Population**

The population of the study comprises five(5) landowners, twenty(20) landlords, ten(10) developers, five(5) community residents and building inspectorate team made up of four(4) members at the Municipal Assembly.

### **3.5 Sampling procedure**

The non-probability purposive sampling technique was used to conveniently categorize the landowners, landlords, developers and individuals. Specifically, the typical case purposive sampling method was used which is a type of purposive sampling useful when a researcher wants to study a phenomenon or trend as it relates to what are considered "typical" or "average" members of the effected population., This technique was used by grouping landlords, landowners, developers, and community residents in five suburbs in Enchi community within the Aowin Municipality. Purposive sampling method may prove to be effective when only limited numbers of people can serve as primary data sources

### **3.6 Inclusion Criteria**

Inclusion criteria used for sampling the respondents for the study was that the individual must be a resident of Aowin Municipality.

### **3.7 Exclusion Criteria**

An exclusion criterion was respondents who refused to give consent to the study.



### 3.8 Research instruments

The following instruments were used to collect data for the study:

- Questionnaire
- Interview
- Observation

The questionnaire was vetted and refined by the researcher in consultation with the supervisor. The decision to use the questionnaire was the fact that, it is widely used and useful for collecting numerical data that can be subjected to statistical analysis.

#### 3.8.1 Questionnaire

Questionnaire was used by the researcher to collect data from landowners, landlords, developers and individuals at Enchi in Aowin Municipality. The issues in landowner's questionnaire include land demarcation, standard size of building plot, and access route. Concerning the landlords, the issues were: land acquisition, land registration, effects of buildings layout and land development. The content of issues in developers and individual's questionnaire are drainage system, road network, health hazard, open space and duties of building agencies.

#### 3.8.2 Interview

Interviews were conducted for a building team comprising building engineer, representative of health service, chief director of town and country planning and technical director of land registry at the Municipal Assembly. The researcher aims to gain additional information by means of individual interview. A benefit of conducting interview is that it enables the researcher to gain participants cooperation by establishing a relationship with them, which therefore facilitates the production of high response. The interview focused on issues like duties of



building team, processes of giving building permit, education on process of building and inspection of building site.

### 3.8.3 Observation

Visits were paid to some suburbs in Enchi community to gather additional information for the study. These suburbs were Yakase, Ayigbetown, Fante-Newtown and Ohenebronum .

- At Ayigbetown the researcher observed drainage systems and arrangement of buildings.
- Ohenebronum was visited to observe open space and access route.
- Yakase was visited to look at the drainage system, easy vehicular movement, and arrangement of buildings.
- Fante Newtown was visited to view flow of surface water during rain and easy vehicular movement. This technique was used to provide the researcher with empirical data about the research.

### 3.9 Data Collection Procedures

In order to satisfy the ethical demands of the research, various ethical considerations were looked at during the study. Before data collection, the researcher (myself) requested for permission from the Municipal Chief Executive through the director of department of town planning. The data was collected by the researcher (himself) ensuring a better understanding of the wording of the questionnaire during its administration to the study respondents. The consent of participants was sought before the administration of the questionnaires; the researcher did not use pressure and inducement of any kind to encourage individuals to participate in the study. Participants' freedom to

partake or withdraw from the study at any time was respected, and confidentiality and anonymity of respondents was guaranteed.

### **3.10 Data Processing and Analysis**

Descriptive statistics was used to analyze the data collected from the respondents. But data was first prepared for analysis by editing coding and then analyzing with the help of the IBM Statistical Package for the Social Sciences (SPSS) software version 16. Frequencies and percentages were used to explain the outcome of the responses. Tables and charts were used to illustrate the findings of the study.

### **3.11 Study Variables**

From the research topic under study, “Perceived causes and effects of uncontrolled development in urban communities (a case study at Aowin Municipality-Enchi). The dependent variable is the uncontrolled development in urban communities and the independent variable is the perceived causes and effects.

### **Study Limitations**

Data was obtained through self-report questionnaires, therefore reporting bias (over-reporting or under-reporting) could have an influence on the final results. In lieu of this limitation of bias reporting, a qualitative approach of interview was conducted to assess the views of various stakeholders involved with the phenomenon at study to address any bias of this report.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter deals with the results and discussion from questionnaires, interviews and observations. The results and discussions are presented in accordance with the order of the objectives of the study.

#### RESEARCH QUESTION ONE

In answering the research question one: What are the causal issues of uncontrolled development of buildings at Enchi in the Aowin Municipality of the Western Region of Ghana, the following results and discussions were made.

#### 4.2 Results of Questionnaires

This section presents results on a total number of forty (40) questionnaires designed and refined by the researcher in consultation with the supervisor and distributed to landowners, landlords, developers and community residents. The results of responses from the questionnaires are presented in tables with the analysis of the study attained from the members on the issues of layout of buildings in communities.

### 4.3 Results from developers

**Table 4.1: Duration of being a Developer**

Duration	Frequency	Percentages (%)
1-5 years	5	50
6-10 years	3	30
11years and above	2	20
<b>Total</b>	<b>10</b>	<b>100</b>

**Source: Field Survey March, 2018**

From table 4.1 above, it can be realized that five(5) representing 50% of the developers sampled have been in the business for a duration of 1-5 years with three(3) representing 30% indicated 6-10 years in business as well as two(2) representing 20% had been in the development business for 11 years and above. The implication for these responses was that, the average developer who responded to the questionnaire was of adequate experience to validate their responses.

**Table 4.2: Standard Size of Building Plot by developer**

Statement	Yes	No	Total
Do you build on standard size (100/80) of land?	8(80%)	2(20%)	<b>10(100%)</b>
Has the land size have effect on contract project you do?	6(60%)		
Do you have any problem trying to enforce standard?	7(70%)	4(40%)	<b>10(100%)</b>
		3(30%)	<b>10(100%)</b>

**Source: Field Survey March, 2018**

From table 4.2 above; it can be seen that majority of the developers 8(80%) build on standard size of land. Only 2(20%) of the developers built without the standard land size. When questioned whether land size has effect on contract project they do, 6(60%) responded positively whilst 4(40%) responded negatively. In addition 7(70%) of developers hinted that they have problem trying to enforce standard whilst 3(30%) of the developers responded otherwise. One can imply from the response above that, a substantive number of respondents adhered to the standard land size as stipulated by law which influenced their project outcomes.

**Table 4.3: Client Intentions**

Statement	Yes	No	Total
Do landlords consider provision of access route important?	6(60%)	4(40%)	<b>10(100%)</b>
Will public awareness influence the level of effective layout of buildings in the community?	8(80%)	2(20%)	<b>10(100%)</b>
Have you built according to the building plan of your client?	1(10%)	9(90%)	<b>10(100%)</b>

**Source: Field Survey March, 2018**

From table 4.3 above; 6(60%) out of total developers sampled hinted that they consider provision of access route important whilst 4(40%) of them think otherwise. Also majority of them 8(80%) indicated that public awareness will positively have an influence on the level of effective layout of buildings in the community with 2(20%) of the developers responded negatively. Nine (9) developers representing (90%) testified that they do not build according to

building plan in which one developer representing (10%) indicated buildings are developed according to building plan of their clients. Implication drawn from this data was that, effective layout is a joint effort on the part of both developers and the public through awareness and enforcement of laws.

### RESEARCH QUESTION TWO

The following data gathered sought to answer research question two; What are the effects of uncontrolled development of buildings on the health of the environment and residents at Enchi in the Aowin Municipality of the Western Region of Ghana?

**Table 4.4: Mechanism for effective layout**

Item	Frequency	Percent (%)
Education	7	70
Enforcing the law	3	30
others	0	0
Total	10	100

Source: Field Survey March, 2018

The results in Table 4.4 above indicate that seven (7) representing seventy percent (70%) of the respondents see education as the appropriate mechanism for influencing effective layout of buildings in the communities while three (3) representing forty percent (40%) indicated enforcement of law as the appropriate mechanism. After review of this data above, implication drawn implies that uncontrolled development in the community could be well resolved through effective education and law enforcement as accented by the respondents.

**Table 4.5: Building inspectorate Agencies**

Statement	Yes	No
Do any building agencies inspect the site as you build?	2(20%)	8(80%)

**Source: Field Survey March, 2018**

In order to determine whether building agencies visit building sites before commencement of any building project, in Table 4.5 revealed that eight developers representing eighty percent (80%) admitted that building agencies do not visit site before commencement of any project whilst only two representing twenty percent (20%) deny that fact. This data affirms the fact of uncontrolled development as inspectorate agencies within the Aowin municipality are lackadaisical towards enforcement of the law against unhealthy layouts.

**Table 4.6: Relation between you and town and country planning**

Statement	Yes	No	Total
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Is there any relation between you and town and country planning?	0(0%)	10(100%) <b>10(100%)</b>
Do you have any education on rules and regulations in the building industry by any agency?	3(30%)	7(70%) <b>10(100%)</b>

**Source: Field Survey March, 2018**

On the relation between Town and Country Planning and the developers, Table 4.6 above indicated that ten developers representing hundred percent (100%) indicated that there is no relation between Town and Country Planning and the developers. This shows that buildings are constructed without any inspection and proper documents.

Also on the issue of any education on rules and regulation in the building industry by any agency, table 4.6 above indicated that 3(30%) responded positively whilst 7(70%) deny the fact. Implication deduced from this data gathered implies that, there exists a construed relationship between developers and inspectorate agencies like the town and country planners which do not foster effective layout. Hence, the effects of uncontrolled development.

**Table 4.7: Building Layout**

Statement	Yes	No	Total
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Do you know anything about		
sector plan or layout?	3(30%)	7(70%) <b>10(100%)</b>
Does layout of buildings have		
effects on the environment?	9(90%)	1(10%) <b>10(100%)</b>
Do you have problem with layout		
of buildings in the community?	8(80%)	2(20%) <b>10(100%)</b>
Has inspection team stopped you		
from working on site before?	6(60%)	4(40%) <b>10(100%)</b>
Should unauthorized structures be		
pulled down?	6(60%)	4(40%) <b>10(100%)</b>

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**Source: Field Survey March, 2018**

To ascertain whether the developers have any knowledge about sector plan, Table 4.7 shown that seven respondents representing seventy percent (70%) indicated that they have no knowledge about sector plan and three of the respondents representing thirty percent (30%) show that they have an idea about sector plan.

Concerning the effects of layout of buildings on the environment indicated in Table 4.7, almost all the developers nine representing ninety percent (90%) accepted that it has effects on the environment while the remaining one developer representing ten percent (10%) denies the claim.

Table 4.7 shows clearly that the majority of respondents eight representing eighty percent (80%), reported that they have problem with layout of buildings in the community while two representing thirty percent (20%) show that they have no problem about the layout of the community. Also, 6(60%) of the

developers hinted that inspection team have stopped them from working on site before whilst 4(40%) deny the fact.

On structures without permit in the community as indicated in table 4.7, six of the developers representing sixty percent (60%) indicated that structures without permit should be demolished and four respondents representing forty percent indicated that structures without permit should not be demolished. However, on the part of suggestions to improving upon the development process in developing communities majority of the sampled developers hinted the need for collaborative effort between stakeholders in the industry thus stool land administration, town and country planning department and the Municipal assembly. This implies a clear view of the need for inspectorate agencies within the Aowin municipality to intensify their activities in order to control indiscriminate developments.

#### 4.4 Results of Questionnaires From Landowners

**Table 4.8: Landownership**

Category	frequency	Percentage (%)
Landowner	5	100
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

From table 4.8; majority of the respondent 5(100%) indicated they belong to the category of landowners with no other category. Implication of this was that all respondents had their own land and understood land acquisition procedures.

**Table 4.9: Landownership**

<b>Statement</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Do you own land in Enchi?	4(80%)	1(20%)	<b>5(100%)</b>
Do you have indenture prepared and endorsed legally?	1(20%)	4(80%)	<b>5(100%)</b>
Have you registered your land at land commission?	3(60%)	2(40%)	<b>5(100%)</b>

**Source: Field Survey March, 2018**

Responses from landowners in Table 4.9 on whether they have a land in Enchi within the Municipal assembly, 4(80%) Of sampled landowners hinted they had a land in Enchi with 1(20%) deny the fact. On the acquiring of land, 2(40%) acquired land through inheritance whilst 3(60%) acquired land on their own through lease hold system.

To verify whether landowners have indenture on their land, almost all the respondents four representing eighty percent (80%) indicated that there is no indenture on their land and one respondent representing twenty percent (20%) revealed they have indenture on their land.

Moreover, 3(60%) made it known that they had not registered their land at the land commission and 2(40%) said it had registered. Implications drawn from this data gathered was that, majority of land owners fails to seek legal redress towards their land.

**Table 4.10: Land Demarcation**

<b>Response</b>	<b>Frequency</b>	<b>Percent (%)</b>
Demarcate for building purpose	3	60
Not demarcate for building purpose	2	40
<b>Total</b>	<b>5</b>	<b>100</b>
Employed surveyor	0	0
Not employ surveyor	5	100
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

Regarding demarcation of land for building purposes shown in Table 4.10 sixty percent (60%) admitted that they have demarcated their land for building purpose as the remaining two representing forty percent (40%) indicated that they have not demarcated their land for building purpose. As whether they employed the service of surveyors during the demarcation of land for building purposes indicated in Table 4.10, all the respondents show that they do not employ the service of surveyors during the demarcation of land for building purposes. Implication was that, respondents do not patronize the services of certified surveyors which confirm the rampant uncontrolled development within the Aowin municipality.

**Table 4.11: Size of plot**

<b>Views</b>	<b>Frequency</b>	<b>Percent (%)</b>
Known standard size of plot	1	20
Do not know standard size of plot	4	80
<b>Total</b>	<b>5</b>	<b>100</b>

Effect on layout	3	60
No effect on layout	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

Talking about standard size of building plot revealed in Table 4.11, four of the respondents representing eighty percent (80%) of the landowners revealed that they do not know the standard size of building plot while one representing twenty percent (20%) admitted knowing the standard size of building plot.

On the issue of whether the size of building plot has effect on building layout in Table 4.11, two of respondents representing forty percent (40%) indicated that it has no effect on the building layout in the community whiles three representing sixty percent (60%) show that it has effects on the layout of buildings in the community.

### **RESEARCH QUESTION THREE**

The following gathered data seeks to answer research question three; How will the developed strategies/interventions ensure effective controlled development systems at Enchi in the Aowin Municipality of the Western Region of Ghana?

**Table 4.12: Access Routes**

<b>Item</b>	<b>Frequency</b>	<b>Percent (%)</b>
Provision for access route	1	20
No provision for access route	4	80
<b>Total</b>	<b>5</b>	<b>100</b>
No education on rules and regulations	5	100
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

The data in Table 4.12 reveal that eighty percent (80%) of landowners do not make any provision for access route during the demarcation of land for building purpose whilst the remaining twenty percent (20%) indicated that they made provision for access route during demarcation of land for building purpose.

In terms of respondents' responses regarding information on rules and regulations in the building industry, all the five respondents representing hundred percent (100%) indicated that they have no education on rules and regulations in the building industry. Implication was that, respondents attested to the fact that access route within the layouts were not of priority to land owners. Hence, the uncontrolled development and sought for further education to emphasize the need for the access routes within layouts.

**Table 4.13 Access Route**

<b>View</b>	<b>Frequency</b>	<b>Percent (%)</b>
Effect on community	4	80
No effect on community	1	20
<b>Total</b>	<b>5</b>	<b>100</b>
Adding beauty to environment	5	100
Do not add beauty to environment	0	0
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

In Table 4.13, a section of landowners made up of four representing eighty percent (80%) responded that access routes have effect on the community as



one respondent representing twenty percent (20%) indicated that the access routes have effect on the community.

In view of whether access routes add beauty to the environment in the community and allow for easy movement as indicated in Table 4.13, all the respondents representing hundred percent (100%) admitted that access routes add esthetic feature to the environment and allow free movement in the community. Implication for data gathered was that respondents appreciated the need to maintain the access route which depicts the very beauty of the environment.

#### 4.5 Results of Questionnaires from Individuals

**Table 4.14: Duration of stay**

Item	Frequency	Percent (%)
1 -10 years	3	60
11 and above	2	40
<b>Total</b>	<b>5</b>	<b>100</b>

**Source: Field Survey March, 2018**

The results in Table 4.14 above Show the duration of stay for respondents in the community, ranged from one to ten years and above. The majority of individuals representing sixty percent (60%) had stayed in the community from one to ten years whereas two of them representing forty percent (40%) revealed that they have stayed in the community for more than eleven years.

This means that individuals have stayed in the community for long.

Implication from this data depicted that most of the respondents had much stay time within the community and affirms their reliable response to the questions

asked. Hence, they appreciate the effects of uncontrolled developments and can recommend some interventions.

**Table 4.15 Drainage system**

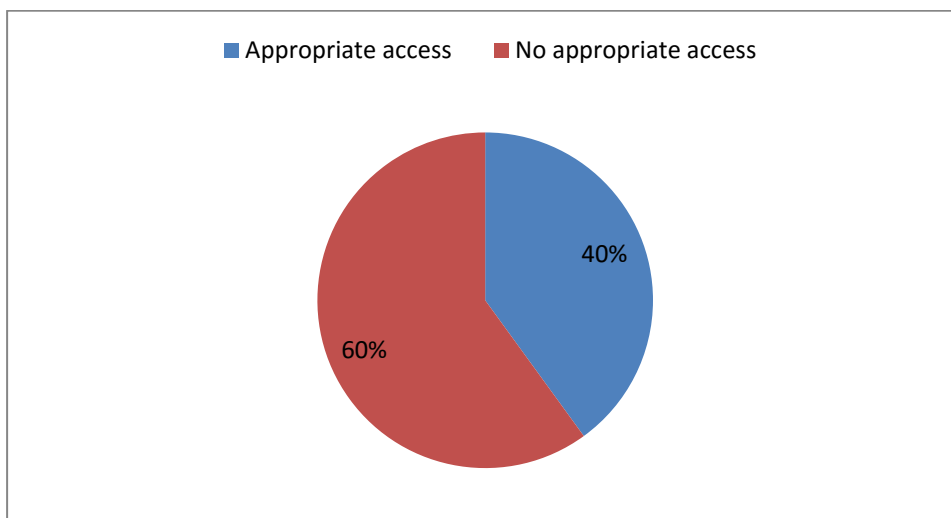
Item	Frequency	Percent
Have drainage	0	0
No drainage	5	100
Total	5	100
Water stag in ponds	4	80
Water do not stag in ponds	1	20
Total	5	100

**Source: Field Survey March, 2018**

Table 4.15 shows whether individuals have drainage system in their communities or not. Five respondents representing hundred percent (100%) claimed that there is no drainage system in their communities.

Concerning water staging in ponds in their area, four of the respondents representing eighty percent (80%) indicated that water stay in ponds and one respondent representing twenty percent (20%) reveals that water does not stay in ponds in his area.

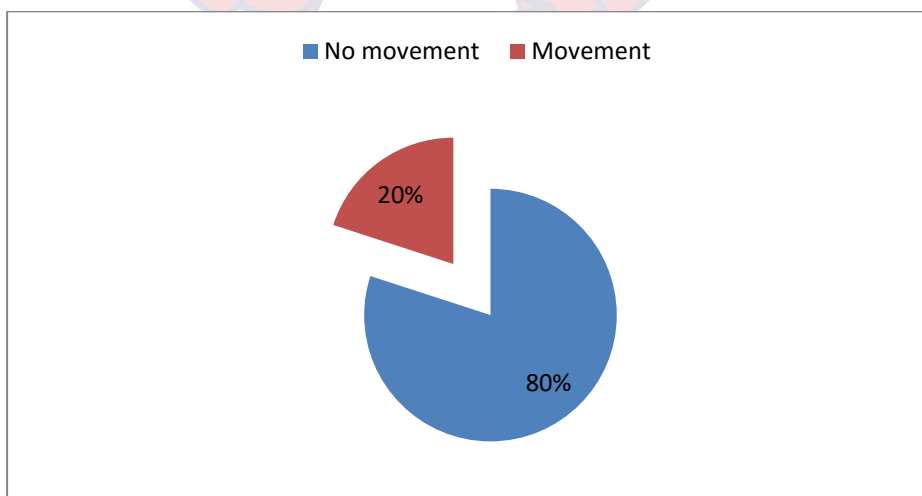
**Figure 4.1: Access in the communities**



**Source: Field Survey March, 2018**

As regarding appropriate access route in the community shown in figure 4.1, three of the respondents representing sixty percent (60%) responded that there is no appropriate access route in their community whereas two representing forty percent (40%) of the respondents indicated that there is appropriate access route in their community. This implies that, the lack of access route as hinted by a majority of the respondents affirms that layouts are not effectively demarcated.

**Figure 4.2: Vehicular movement**



**Source: Field Survey March, 2018**

In figure 4.2, on the issue of whether vehicle can get to their houses, four of the respondents representing eighty percent (80%) reveal that vehicle cannot get access to their houses as compared to one respondent representing twenty percent (20%) indicated that vehicle can get access to his house. This shows that there is no appropriate access route in the community. To verify the space between buildings allows for vehicular movement, all the five respondents representing hundred percent (100%) admitted that the spaces between buildings do not allow for vehicular movement. This data implies that in case of emergencies like domestic fires, community dwellers have difficulty assessing the services of the Ghana National Fire Service (GNFS).

**Table 4.16: Health hazard faced**

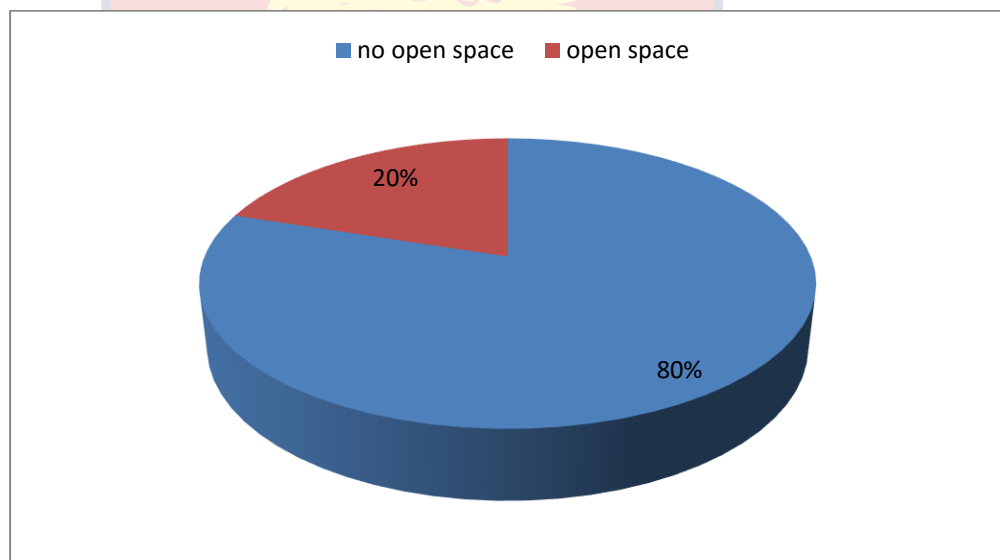
Response	Frequency	Percent
Sanitation	2	40
Flood	2	40
Pollution	1	20
Total	5	100
No free flow of surface water		
water	3	60
Free flow of surface water		
water	2	40
Total	5	100

**Source: Field Survey March, 2018**

The results of Table 4.16 reveal that three respondents representing sixty percent (60%) show that there is no free flow of surface water during rain in their area while two respondents representing forty percent (40%) reveal that there is free flow of surface water during rain in their area.

In terms of health hazard faced in the area shown in Table 4.16, two of the respondents representing forty percent (40%) indicated sanitation as the health hazard faced, two respondents representing another forty percent (40%) reveal flood as health faced whereas the remaining twenty percent (20%) indicated health hazard faced is pollution. The evidence of uncontrolled development within the Aowin municipality was affirmed by the data gathered implying that, sanitation, flood and pollution is on the ascendancy as reported by respondents.

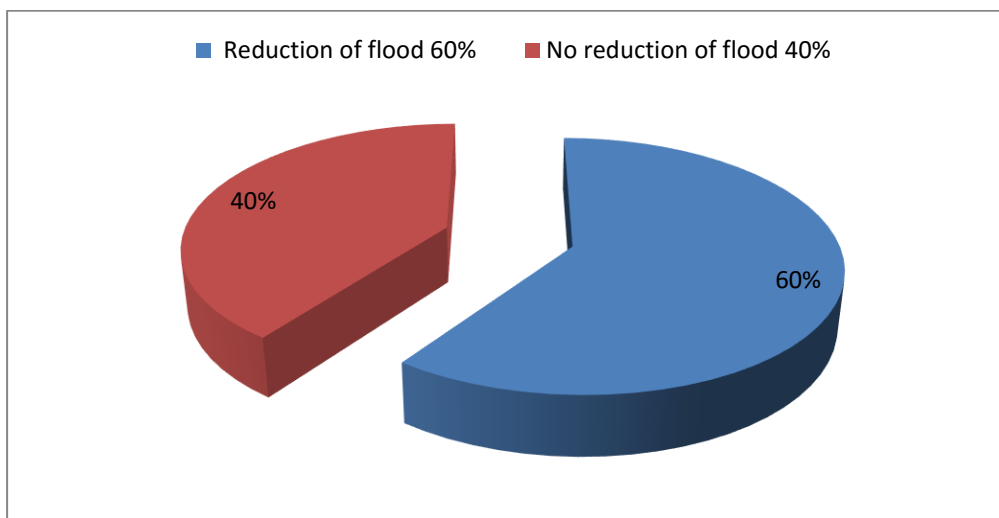
**Figure 4.3: Open space in the communities**



**Source: Field Survey March, 2018**

On the responses from individuals on open space show in figure 4.3, four of the respondents representing eighty percent (80%) indicated that there is no open space in their community as against twenty percent (20%) and the results show that there is open space in the area. The evidence of uncontrolled development within the Aowin municipality was affirmed by the data gathered implying that, sanitation, flood and pollution is on the ascendancy as reported by respondents.

**Figure 4.4: Effect of open space on flood**



**Source: Field Survey March, 2018**

In figure 4.4, regarding whether open space has effect on the community, all the five respondents representing hundred percent (100%) admitted that open space has effect on the community. In addition, with regard to open space reducing flood in the community, three respondents representing sixty percent (60%) indicated that open space reduces flood in the community while two representing forty percent (40%) reveal that open space does not reduce flood in the community. The evidence of uncontrolled development within the Aowin municipality was affirmed by the data gathered implying that, sanitation, flood and pollution is on the ascendancy as reported by respondents.

#### **4.6 Results of Questionnaires from Landlords**

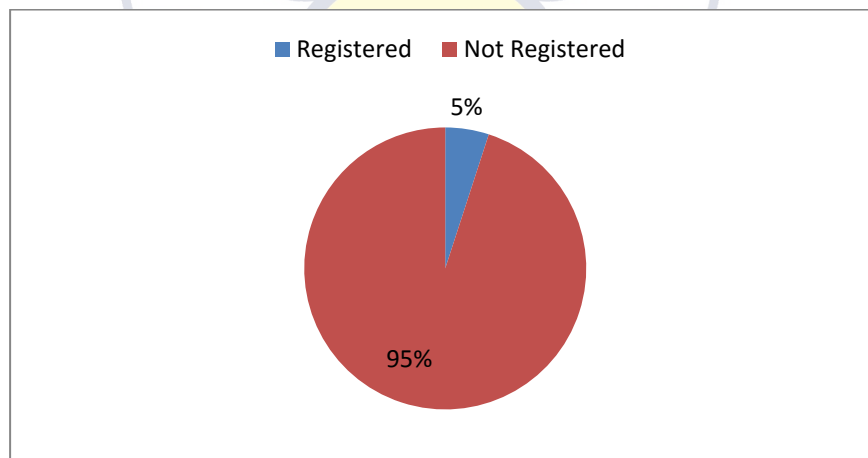
**Table 4.17: Site Plan ownership**

View	Frequency	Percent (%)
Own Site Plan	3	15
Do not own Site Plan	17	85
<b>Total</b>	<b>20</b>	<b>100</b>

**Source: Field Survey March, 2018**

Table 4.17, shows that seventeen respondents representing eighty –five percent (85%) indicated that they do not have site plan for their plot while three respondents representing fifteen percent (15%) reveal that they have site plan and employed the service of surveyor. This shows that landlords build without site plan for the plot.

**Figure 4.5: Registration of Building Plot**



**Source: Field Survey March, 2018**

On registration of building plot at the land registry department show in figure 4.5, nineteen respondents representing ninety – five percent (95%) indicated that they did not register their building plot at the land registry department but one respondent representing five percent (5%) revealed that he had registered the building plot at the land registry department. One can deduced that landlords do not register their building plot at land registry department.



To determine whether landlords have building plan for their houses, sixteen respondents representing eighty percent (80%) of the landlords indicated that they do not have building plan for their buildings and four representing twenty percent (20%) admitted that they have building plan for their buildings.

**Table 4.18: Building Permit**

Item	Frequency	Percent
Obtained building permit	2	10
Do not obtain building permit	18	90
<b>Total</b>	<b>20</b>	<b>100</b>

**Source: Field Survey March, 2018**

Responding to obtaining building permit from district assembly before building a house in Table 4.18, eighteen of the respondents representing ninety percent (90%) indicated that they did not obtain building permit before they built their houses whilst the remaining two of the landlords representing ten percent (10%) revealed that they obtained building permit from the Municipal assembly before they built their houses. The results reveal that landlords build without obtaining building permit from the Municipal assembly. Hence, the implication of respondents affirming that there is a gap in landlords seeking proper permit before embarking on developmental projects leading to uncontrolled developments.

**Table 4.19: Road Access**

View	Frequency	Percent
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Easy access	6	30
No easy access	14	70
Total	20	100

**Source: Field Survey March, 2018**

Table 4.19, indicates that fourteen respondents accounting for seventy percent (70%) agreed that there is no easy road access to their houses as compared to six respondents representing thirty percent (30%) who revealed that they have easy road access to their houses. From the results it can be deduced that landlords do not have easy road access to their houses.

**Table 4.20: Obstacle**

response	Frequency	percent
Closely built houses	12	60
No provision of access road	8	40
Total	20	100

**Source: Field Survey March, 2018**

Describing the obstacles in the way to their houses in Table 4.20 above, the results have shown that twelve respondents representing sixty percent (60%) indicated the obstacle in the way to their houses to be closely built houses whereas eight respondents representing forty percent (40%) revealed that the obstacle is non-provision of access road in the community.

**Table 4.21: Health Hazard**

Item	Frequency	Percent
Sanitation	13	65
Pollution	4	20

Flood	3	15
Total	20	100

**Source: Field Survey March, 2018**

To ascertain whether landlords face health hazard in their area as shown in Table 4.21, thirteen of the respondents representing sixty –five percent (65%) indicated the health hazard in their area as sanitation, four representing twenty percent (20%) of the respondents admitted the health hazard as pollution while the remaining fifteen percent (15%) of the respondents indicated the health hazard as flood in their community. The evidence of uncontrolled development within the Aowin municipality was affirmed by the data gathered implying that, sanitation, flood and pollution is on the ascendancy as reported by respondents.

#### **4.7 Results from Interviews**

The researcher also carried out face to face interaction (interviews) with four members of the building team at Aowin Municipal Assembly. This team comprised Health Service representative, Town and Country planning representative, land registry representative and building engineer.

Below is some of the information gathered from the interview:

- Most of the interviewees interacted with during the study indicated that their responsibilities are to ensure safe built structure in the environment for residents.

- The building engineer gave the process of giving building permits as inspection of documents on the structure from land commission, town and country planning, visiting the site to consider water system, sanitation, access and environmental friendliness before permits are issued out.
- The Director of town and country planning and director of land registry department of the building team admitted that no education has been given to people on process of building a structure in the Municipality.
- The Building inspectorate team revealed that they do inspect the site to write Stop Work on buildings (structures) which they think do not have building permit “to produce permits”.
- During the interview, it was revealed that laws were not enforced on victims who violate the laws and gave reasons as municipality is financially handicapped thus has no funds to pay for any demolition.
- Representative of health service revealed that landlords do not consider the distance between cesspit tanks (soak-away) and dug wells or boreholes.
- The building engineer and director of Town and Country Planning admitted that landlords do not obtain permit before they build the houses.
- The director of land registry department and director of town and country department revealed that laws have not been enforced on victims who do not obtain building permit before they build.

#### 4.8 Results from Observations

In order to add more information to the data needed for the research work, a number of visits were made to some selected suburbs of Enchi in the Aowin Municipal Assembly to ascertain issues of layout of communities.

During the visits, the following observations were made:

These suburbs were Yakase, Ayigbetown, Fante-Newtown and Ohenebronom

- At Ayigbetown the researcher observed drainage systems and arrangement of buildings.
- Ohenebronom was visited to observe open space and access route.
- Yakase was visited to look at the drainage system, easy vehicular movement, and arrangement of buildings.
- Fante Newtown was visited to view flow of surface water during rain and easy vehicular movement. This technique was used to provide the researcher with empirical data about the research.

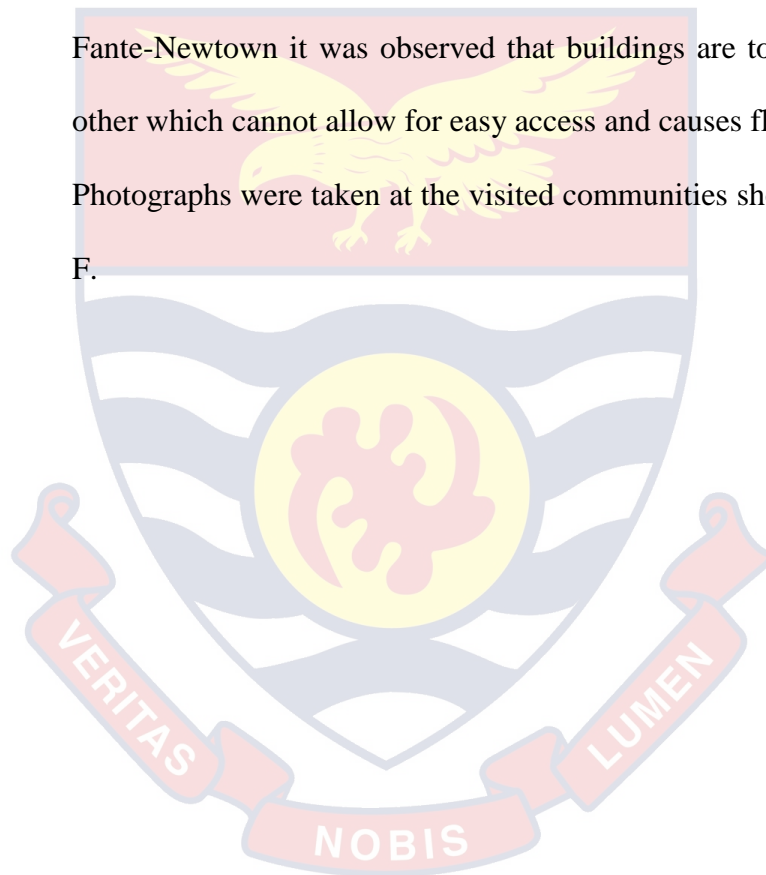
In reality almost all the selected suburbs do not have easy access for vehicles to and within the suburbs; distances between buildings are not more than one meter (1m) which could not allow movement of vehicles.

- There is no drainage system at Yakase and Ayigbetown suburbs which causes most buildings foundations to rise like story buildings. Wells which serve suburbs like Ayigbetown and Fante-Newtown do flood during rains; waste waters discard openly which stage in ponds to bleed mosquitoes.
- It was also discovered that there is no open (public) space in Ohenebronom and Ayigbetown suburbs which lead to community congestion and poor sanitation system as Zoomlion company places

refuse collecting containers close to houses and at far distances. This gives rise to dumping of refuse haphazardly and cause health problem.

- During the visits, buildings (houses) were found not to have been built on standard size of plots as landlords built on the exact boundaries of plot which do not allow space between buildings for easy access in the suburbs.

- At all the communities visited, Yakase, Ayigbetown, Ohenebronum and Fante-Newtown it was observed that buildings are too closed to each other which cannot allow for easy access and causes flood during rains. Photographs were taken at the visited communities shown in Appendix F.



## CHAPTER FIVE

### SUMMARY, RECOMMENDATIONS AND CONCLUSION

#### 5.1 Introduction

This chapter seeks to present a summary of the study as well as the key findings that emerged from the research. The chapter also continues the conclusions and recommendations that were made on the findings of the study.

#### 5.2 Summary of the study

The following summarizes the findings based on the results of the study:

- The study revealed that haphazard arrangement of buildings in the communities is as a result of non-employment of surveyors to demarcate the land for building by landowners.
- The study has proven that, inability of Town and Country Planning department to zone the communities for physical development has created congestion in the communities.
- Due to lack of education people build without obtaining building permit.
- Ineffective drainage system has caused building foundations hanging on the surface of ground in the communities.
- The study proved that law enforcing agencies do not enforce the law on people who violate building laws this has given people the chance to build without considering rules and regulations in the building industry.
- Due to lack of knowledge in the building industry people build without leaving spaces around buildings which cause congestion in the communities.



- The study confirmed that, non-provision of open space by landowners has created congestion in the communities.
- Inability of the Municipal Assembly to construct all approved road networks has made difficult movement in the communities.



### 5.3 Recommendations

The following recommendations are made to address the findings which are mostly underpinned by enforcement of laws and political will:

- Landowners should employ the service of surveyors to demarcate their land for building purposes to avoid haphazard arrangement of buildings in the communities.
- Town and Country Planning agency should zone all communities for physical development to ease congestion in the communities.
- The Municipal Assembly should educate landlords to obtain permit before any physical development in the communities to give clear position for each structure.
- The Municipal Assembly should construct drains in order to reduce erosion of building foundations left hanging in the communities.
- People who violate building laws should be brought to book to discourage people from doing same.
- Education should be given to landowners for provision of open space in the communities to avoid congestion.
- The Municipal Assembly should construct all approved roads network for easy access in the communities.
- Town and country planning department should approve building drawings on standard size of building plot to enable landlords to build according to rules and regulations in the building industry.

- Building inspectorate team at district assembly should inspect building site before granting permit to build on the site to ensure standard in the building industry.
- Landlords should leave spaces around their buildings when building houses to ensure easy access in case of emergency in the community.
- The Municipal Assembly assembly should take concrete action on her bylaws governing layout of buildings and development of land to ensure efficient layout of buildings.
- Further research be conducted into the exact cause of uncontrolled development in urban communities. This will help inform the appropriate policies to remedy the situation.

#### **5.4 Conclusion**

To conclude, the study informed that there is congestion in the communities due to non-utilization of the service of surveyors to demarcate the land for building purpose, inability of planning agencies to zone the communities, lack of education on part of municipal assembly to landlords to obtain permit before commencement of any physical development and law enforcement agencies not enforcing the law on victims who violate the building regulations. In addition lack of drainage system, non-provision of open spaces and lack of access road network in the communities lead to erosion of building foundations, flood during rains and non-vehicular movement in the communities.

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**APPENDIXES**

**APPENDIX A**

**CHRISTIAN SERVICE UNIVERSITY COLLEGE**

**FACULTY OF HUMANITY**

**DEPARTMENT OF PLANNING AND DEVELOPMENT**

**QUESTIONNAIRE FOR DEVELOPERS**

Dear Respondent,

This questionnaire is designed by a final year students of the above named institution offering Masters in Monitoring and Evaluation to solicit information “Perceived Causes and Effects of Uncontrolled Development in Urban Communities (A Case study in Aowin Municipality-Enchi)”, the information collected will be used solely for this study and as such remains confidential.

Kindly respond to these questions by ticking [] in the box or write where appropriate.

**STANDARD SIZE OF BUILDING PLOT**

1. For how long have you been a developer? a. 1-5 yrs b. 6-10 yrs c.11 and above

2. Do you build on standard size (100/80) of land? a. Yes [  ] b. No [  ]

3. If no why  
.....

4. Has the land size have effect on contract project you do? a. Yes [  ] b. No [  ]

5. Do you have any problem trying to enforce standard? a. Yes [  ] b. No [  ]

6. If yes specify.....

**CLIENT INTENTIONS**

7. Do landlords consider provision of access route important? a. Yes [ ] b.

No [ ]

8. Will public awareness influence the level of effective layout of buildings in the community? a. Yes [ ] b. No [ ]

9. Have you built according to the building plan of your client? a. Yes [ ]

b. No [ ]

10. If no why? Specify

.....

11. What mechanism do you think may positively influence landlords on proper layout of buildings in the community?

a. Education [ ] b. Enforcing the law [ ] others specify

.....

**AGENCIES**

12. Do any building agencies inspect the site as you build? a. Yes [ ] b. No [ ]

13. If yes which agency?

- a. Town Planning [ ]
- b. Municipal Assembly [ ]
- c. Surveying Department [ ]
- d. Land Commission [ ]

14. Is there any relation between you and town and country planning?

a. Yes [ ] b. No [ ]

15. If yes, what is the relation.....

16. Do you have any education on rules and regulations in the building industry by any agency? a. Yes [ ] b. No [ ]

**BUILDING LAYOUT**

17. Do you know anything about sector plan or layout? a. Yes [ ] b. No [ ]

18. Do layout of buildings have effects on the environment? a. Yes [ ] b. No [ ]

19. Do you have problem with layout of buildings in the community?  
a. Yes [ ] b. No [ ]

20. If yes state the problems.....

21. Has inspection team stopped you from working on site before? a. Yes [ ]  
b. No [ ]

22. If yes what reasons was given.....

23. Should unauthorized structures be pulled down? a. Yes [ ] b. No [ ]

24. If yes give reasons  
.....  
.....  
.....

25. How were you able to complete the construction in spite of stop work notice?  
.....  
.....

26. Any suggestions to improve upon land development process in developing communities?

.....

.....

.....

.....

.....

.....



APPENDIX B

CHRISTIAN SERVICE UNIVERSITY COLLEGE

**FACULTY OF HUMANITY**  
**DEPARTMENT OF PLANNING AND DEVELOPMENT**  
**QUESTIONNAIRE FOR LANDOWNER**

Dear Respondent,

This questionnaire is designed by a final year student of the above named institution offering Masters in Monitoring and Evaluation to solicit information about “Perceived Causes and Effects of Uncontrolled Development in Urban Communities (A Case study in Aowin Municipality-Enchi)”, the information collected will be used solely for this study and as such remains confidential.

Kindly respond to these questions by ticking [] in the box or write where appropriate.

**LANDOWNERSHIP**

1. Which category do you belong?  
a. Landowner []    b. Landlord []    c. Developer []    d. Tenant []
2. Do you own land in Enchi?    a. Yes []    b. No []
3. If yes, is it through:    a. Inheritance []    or    b. leased hold system []
4. Do you have indenture prepared and endorsed legally?    a. Yes []    b. No []
5. Have you registered your land at land commission?    a. Yes []    b. No []

**LAND DEMARCATION**

6. Do you demarcate your land for building purpose?    a. Yes []    b. No []



7. If yes which method do you use in demarcating the land for building purpose?

.....

8. Is technical advice sought during the demarcation of land for building purpose?

a. Yes [ ] b. No [ ]

9. If yes which department is/ are involved?

- a. Town Planning [ ]
- b. Surveying Department [ ]
- c. Land Commission [ ]
- d. Other's specify .....

10. Has your land demarcation appear on Town and Country zoning? a. Yes [ ] b. NO [ ]

**SIZE OF BUILDING PLOT**

11. Do you know the standard measurement of a building plot? a. Yes [ ] b. No [ ]

12. If yes specify the size of standard building plot.....

13. Do the sizes of plot have effects on building layout? a. Yes [ ] b. No [ ]

14. Are there any problem facing landlords with others during development of the land you gave to them? a. Yes [ ] b. No [ ]

15. If yes what are the problems  
.....

**ACCESS ROUTE**

16. Do you make any provision for access route during demarcation of land for building purpose? a. Yes [ ] b. No [ ]

17. Have you received any information on rules and regulations in the building industry?

a. Yes [ ] b. No [ ]

18 If yes which agency was involved?

a. Town Planning [ ]

b. Land Commission [ ]

c. Surveying Department [ ]

d. Municipal Assembly [ ]

19 Does access route have effects on the environment? a. Yes [ ] b. No [ ]

If yes what are the

effects.....



APPENDIX C

CHRISTIAN SERVICE UNIVERSITY COLLEGE

FACULTY OF HUMANITY

**DEPARTMENT OF PLANNING AND DEVELOPMENT**

**QUESTIONNAIRE FOR INDIVIDUALS**

Dear Respondent,

This questionnaire is designed by a final year student of the above named institution offering Masters in Monitoring and Evaluation to solicit information about “Perceived Causes and Effects of Uncontrolled Development in Urban Communities (A Case study in Aowin Municipality-Enchi)”, the information collected will be used solely for this study and as such remains confidential.

Kindly respond to these questions by ticking [] in the box or write where appropriate.

**DRAINAGE SYSTEM**

1. How long have you lived in the community?
  - a. Below 5yrs []
  - b. 5-10yrs []
  - c. 11-15yrs []
  - d. 16-20yrs []
  - e. 21 and above []
  
2. Do you have problem with layout of buildings in the community?
  - a. Yes []
  - b. No []
  
3. If yes state the problem  
.....
  
4. Do water stag in ponds in your area? a. Yes [] b. No []
  
5. If yes why  
.....

**ROAD NETWORK**

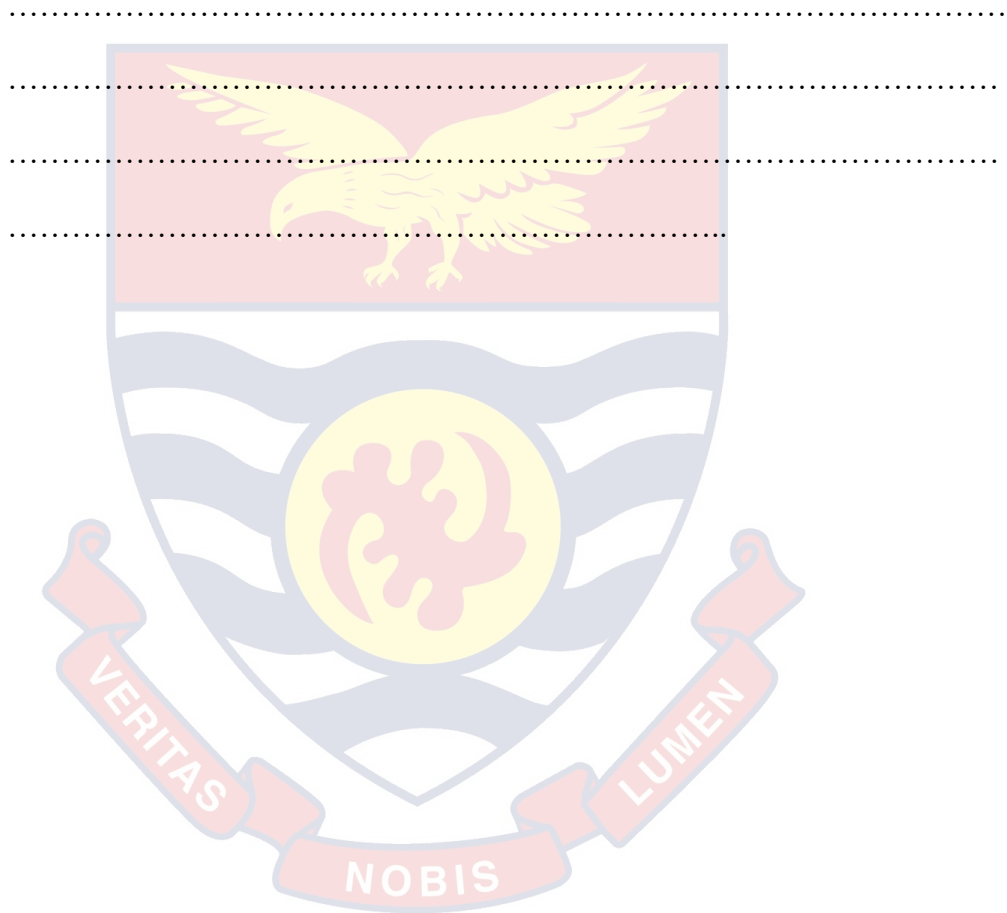
6. Is there road network in your community? a. Yes [ ] b. No [ ]
7. Can car come to your house? a. Yes [ ] b. No [ ]
8. Do space between buildings allow for vehicular movement?  
a. Yes [ ] b. No [ ]
9. If no why  
.....
10. Do you appreciate the access routes in your community? a. Yes [ ] b. No [ ]

**HEALTH HAZARD**

11. Do you have free flow of surface water during rain in your area?  
a. Yes [ ] b. No [ ]
12. If no why  
.....
13. Do you have increased bleed of mosquitoes in the community due to stagnant water?  
a. Yes [ ] b. No [ ]
14. What health hazard do you face in your area?  
a. Sanitation [ ] b. Pollution [ ] c. Flood [ ] d. none [ ]
15. If there is, what effective development control measures can reduce the health hazard in your area?  
.....  
.....  
.....  
.....

**OPEN SPACE**

16. Do you have open space in your community? a. Yes [ ] b. No [ ]
17. If no can it have effect on the community? a. Yes [ ] b. No [ ]
18. Can open space stimulate commercial growth? a. Yes [ ] b. No [ ]
19. Do you agree that open space reduce flood in community?  
a. Yes [ ] b. No [ ]
20. How can open space be beneficial to the community



APPENDIX D

**CHRISTIAN SERVICE UNIVERSITY COLLEGE**

**FACULTY OF HUMANITY**

**DEPARTMENT OF PLANNING AND DEVELOPMENT**

## QUESTIONNAIRE FOR LANDLORD

Dear Respondent,

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Kindly respond to these questions by ticking [] in the box or write where appropriate.

### LAND ACQUISITION

1. Are you a landlord? a. Yes [] b. No []
2. If yes is it through a. Inheritance [] or b. self-acquired []
3. Do you have site plan for your land a. Yes [] b. No []
4. If yes did you employ the services of surveyor for the preparation of the site plan?  
a. Yes [] b. No []
5. If no why

.....

### LAND REGISTRATION

6. Do you know the measurement of your building plot? a. Yes [] b. No []

7. If yes what is the measurement for your building plot? Specify  
.....

8. Do you have indenture for your building plot? a. Yes [ ] b. No [ ]

9. If yes did you register the plot at land commission? a. Yes [ ] b. No [ ]

10. If no why  
.....

### LAND DEVELOPMENT

11. Do you have a building plan for your building? a. Yes [ ] b. No [ ]

12. If yes was it approved by town and country planning? a. Yes [ ] b. No [ ]

13. If no why  
.....

14. Do you have building permit? a. Yes [ ] b. No [ ]

15. If yes from who did you obtain the building permit?

a. Municipal assembly [ ]

b. Town and Country Planning [ ]

c. An Agent [ ]

16. Did you face any problem in obtaining a permit for your building?

a. Yes [ ] b. No [ ]

### EFFECTS OF UNCONTROLLED DEVELOPMENT

17. Do you have easy access by road to your house? a. Yes [ ] b. No [ ]

18. If no what is/are the

obstacle(s).....



.....  
.....

19. What health hazard do you face in your area?

- a. Sanitation [ ]
- b. Flood [ ]
- c. Pollution [ ]
- d. Stagnant water [ ]

20. Is there any public space in your area? a. Yes [ ] b. No [ ]

21. What might be the reason for the absence of the public space?

.....  
.....  
.....

22. What can you suggest to improve upon land development process?

.....  
.....  
.....  
.....  
.....

APPENDIX E

**CHRISTIAN SERVICE UNIVERSITY COLLEGE**

**FACULTY OF HUMANITY**

**DEPARTMENT OF PLANNING AND DEVELOPMENT**

## Interview Guide for Building Team at the Aowin Municipal Assembly

Dear Respondents,

This is interview guide designed by a final year students of the above named institution offering Master in Monitoring and Evaluation to solicit information about “Perceived Causes and Effects of Uncontrolled Development in Urban Communities (A Case study in Aowin Municipality-Enchi)”, the information collected will be used solely for this study and as such remains confidential.

I would be very grateful if you could provide answers to questions on the item.

Thank you.

1. When were you employed by the Municipal Assembly?
2. Do you have building team at the Municipal Assembly?
3. Do you belong to building team at the Municipal Assembly?
4. What specific job do you perform at the Municipal Assembly?
5. How do they perform the duty as a team to give permit?
6. Do building team work as a team to give permit?
7. Do you have a sector plan for the community?
8. How do you see the arrangement of structures in conformity with the sector plan?
9. Is there any division which inspect sites as people build?
10. Does building team inspect the approvals of site and building plan from town and country planning department before giving permit?
11. How do you create awareness of proper procedure of building a house in the communities?
12. Do you enforce the law on people who build indiscriminately?
13. How do you enforce the law on people who build indiscriminately?

14. Any suggestions as to how things should be done?



APPENDIX F  
POOR DRAINAGE SYSTEM



Field Survey March, 2018



**POOR DRAINAGE SYSTEM WHICH CAUSE BUILDING  
FOUNDATION TO RISE LIKE STORY-BUILDING**



**Field Survey March, 2018**

**WATER STAG IN PONDS**

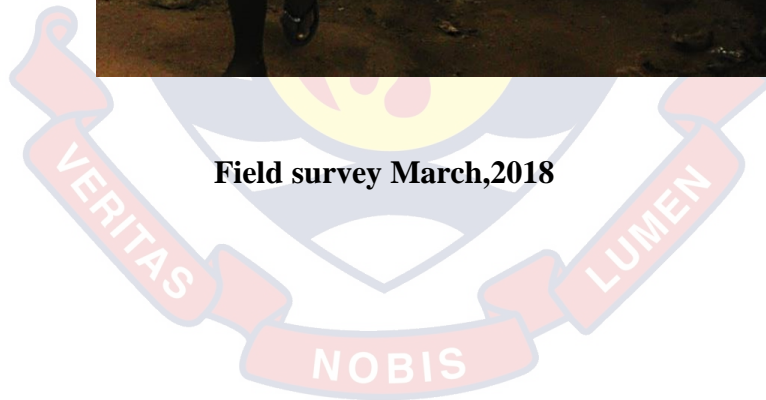


**Field Survey March, 2018**

**ACCESS ROUTE**



**Field survey March,2018**



## LIMITED SPACES BETWEEN BUILDINGS



Field survey March, 2018





## LIMITED SPACE BETWEEN BUILDINGS



Field survey March, 2018