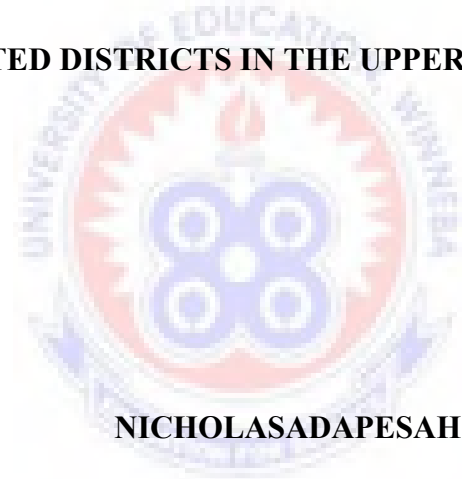


UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

**ASSESSING HOUSE-OWNERS' LEVEL OF COMPLIANCE WITH THE
NATIONAL BUILDING REGULATIONS AND BYLAWS: A CASE STUDY OF
SELECTED DISTRICTS IN THE UPPER EAST REGION**



NICHOLASADAPESAH

AUGUST, 2017

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NICHOLAS ADAPESAH

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**A project report in the Department of CONSTRUCTION AND WOOD
TECHNOLOGY EDUCATION, Faculty of TECHNICAL EDUCATION, submitted
to the School of Graduate Studies, University of Education, Winneba in partial
fulfillment of the requirements for the award of Master of Technology
(Construction Technology) degree.**

AUGUST, 2017

DECLARATION

STUDENT'S DECLARATION

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

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 project report as laid down by the University of Education, Winneba.

SUPERVISOR'S SIGNATURE:

DATE:

NAME OF SUPERVISOR: Dr. Nongiba Alkanam Kheni

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DEDICATION

This Dissertation is dedicated to my wife Aovare Judit and my children Jesse Ajegelone Kanjogi, Percy Ajegewe Kanjogi and the entire Adapesah's family for their prayers and support.



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ABSTRACT

The development of housing units is regulated and monitored to ensure quality standards, safety of occupants and the efficient function of all buildings elements in order to prevent collapse, loss of lives and property. Accordingly, the Government of Ghana through Ministry of Water Resources Works & Housing and Ministry of Local Government & Rural Development promulgated Legislative Instrument LI 1630 regulating physical development. The aim of the study was to examine house-owners' compliance with the national building regulations and bylaws in selected districts in the upper east region. Using systematic random sampling technique, survey questionnaires were administered to a sample of one hundred and eight (108) house-owners' and a response rate of 60% was achieved. The findings revealed that respondents' level of compliance with the national building regulation and bylaws is generally low. The study also revealed that respondents do not strictly adhere to the building regulations and bylaws. The findings of the study revealed the key factors influencing house-owners'/ developers propensity to comply with building regulations and bylaws in the upper east region to include; channels to obtain building permit are too bureaucratic coupled with over delayance, ignorance to L I 1630, luke warm attitude of personnel responsible for processing building documents at the Assemblies and bribery. The findings also revealed that the key barriers to house-owners' compliances with building regulations and bylaws include; the permit process is bedeviled with bureaucracies thus hindering the efficiency and the effectiveness of the permit acquisition process and lack of transparency at the Assemblies regarding permit issuance. Based on these findings the study has made suggestions which if adopted would go a long way to enhance house-owners' compliance with building Regulations and bylaws in the study setting.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Development control is one of the greatest challenges facing the world today. In an effort to contend with the problem, governments of different developing countries have risen to the global challenge by providing regulations, under their respective Town and Country Planning laws, for the maintenance of a well-planned and livable environment (Sule, 2003). The Ghana government is no exception. Taking a clue from her long history and evolution of the problems of gross violations to preceding urban development control schemes, the urban and regional planning decree of L.I.1630 of 1996 was passed into law.

The primary purpose of building regulations is to provide for the health, safety and welfare of people in and around buildings (Oloyede, 2010 and Parker, 2006). Ghana's population has increased from about 6 million in 1957 to 18 million in the year 2000 census and to 24 million in the year 2010 population and housing Census (Ghana Statistical Service, 2012). Indeed, with a 3.2% per annum rate of increase; Ghana is experiencing one of the most rapid population increases in history. One obvious impact of this population increase is a remarkable spatial development in the urban centers. The 2007 UN Report on population states that about 50 per cent of the world's population will be located in cities and urban centers. Ghana is of no exception as the six main metropolitan cities of Accra, Kumasi, Tema, Sekondi-Takoradi, Cape Coast and Tamale account for nearly 50 per cent of the nation's population (Ghana Statistical Service, 2012).

The National Building Regulation was promulgated to regulate the activities of every developer and their development in the country (National Building Regulation, 1996). The Local Authorities (Metropolitan, Municipal and District Assemblies) are also required to ensure that all development plans submitted for approval meet structural stability and soundness in line with Ghana National Building Regulation before giving out approved Building Permit for development. This is to ensure that plans approved for development are in conformity with the development schemes of the locality and also to serve as “Checks” for ensuring structural soundness of every Building, Installations and Constructions before their execution to avoid collapse (Local Government Law, 1993).

Meanwhile, the rate at which buildings are collapsing in Ghana, called for a critical look at the approved plans and their developments. If the plans submitted for approval are well designed (as checked and approved by the approving authorities), then the only reason why it could fail during or after development may be due to non-compliance with the approved plans as in the Building Permit. For the purposes of economizing land, room space/number and building resources, developers may submit one plan for Building Permit but rather develop different one on the ground, which can easily result into structural alteration and failure (Vandapuije, 2012). This research therefore desires to use quantitative and qualitative approaches to find out the level of compliance with the approved building permits by the authorities.

1.2 Statement of the Problem

Many developing countries were met with the reality of collapsed building in recent times some due to natural phenomenon and some due to human error and

negligence. In deed Ghana suffered a similar incidence recently where organizational and residential buildings collapsed. Buildings such as Melcom building in Accra, OA Travel and Tour Building in Kumasi, Dr.Mensah building at Gongnia-Navrongo and other individual buildings collapsed without any adverse occurrences such as earthquake, tsunami, etc. and the upper east region is not an exception. The question that immediately comes to mind is whether the buildings in question were actually built in conformity to the building regulations, and whether they were permitted in accordance with the National Building Regulation.

Ghana Institution of Surveyors in a press statement during Melcom disaster stated:“what we find and very often was the case is that, you see a foundation started, which in our professional point of view is for a single storey building or maximum a 2-storey building. With time, the ground floor is completed, they may wait for a while and add another floor, then another and another”(Ghana Institution of Surveyors, 2012). The GIS statement is an indication that, either developers develop without an approved building plan (Building Permit) or they do not comply with whatever has been approved in a form of building permit for them. According to Parker (2000), “Though there is little hard evidence, a growing body of anecdotes and studies from OECD countries suggests that inadequate compliance underlies many such failures. This is a common but little understood form of regulatory failure”.

Vandapuije(2012), considered developers’ attitude of converting every space available including toilets into bedroom for rentals, thereby altering approved buildings as designed as improper and must be stopped immediately. Several Researchers such as Awu (2012), have already researched into the acquisition of building permit in Ghana and

the various challenges fraught with the process, the Assembly's capability to vet permits before approval etc. The aspect that has not been critically considered and which this researcher researched into was how strictly the developers and house owners comply with the National Building Regulations Bylaws in order to ensure sound and standard buildings in the country. A building can only be sound and safe if the design approved by the authorities is strictly complied with during the execution stage.

1.3 Aims and Objectives of the Study

The aim of the study is to examine house-owners' compliance with Ghana's national building regulations and bylaws in selected municipal and district assemblies in the Upper East Region. Based on the aim, the specific objectives of the study are as follows:

- to assess house-owners' level of compliance with building regulations and bylaws in the upper east region;
- to identify key factors influencing house-owners'/ developers propensity to comply with building regulations and bylaws in the upper east region;
- to identify key constraints to house-owners' compliance with building regulations in the upper east region; and,
- to make recommendations for formalization of housing development in the Upper East Region.

1.4 Research Questions

Based on the aim and objectives of the study, the following research questions were formulated to guide the study.

- What is the level of compliance of house- owners' with the building regulations and bylaws in the Upper East Region?
- What are the key factors influencing house- owners'/developers' propensity to comply with building regulations and bylaws in the Upper East Region?
- What are the constraints to house-owners' compliance with building regulations and what recommendations can be made to formalize the housing development in the Upper East Region?

1.5 Significance of the Study

The work seeks to provide an empirical study of the National Building Regulation compliance and controls with selected Municipal District Assemblies in the Upper East Region. It will first broaden the minds of house –owners' and developers on the roles they have to play as far as the building regulations are concerned. The work will afford its readers a comprehensive and extensive literature work on the key areas under consideration as outlined in the specific objectives; that is compliance standards or levels, procedures, challenges, building permit issuance and controls.

It is important to acknowledge that (Somiah, Ayarkwa, & Agyekum, 2015) did work extensively on house-owners' level of awareness on the National Building Regulations L.I. 1630, in the Sekondi metropolis. It is the view of the researcher that similar works when carried out in the Upper East Region will go a long way to enhance the level of compliance with the national building regulations and bylaws of the people of the region and the planning agencies and co departments in the region.

1.6 Limitations of the Study

The National Building Regulation compliance for development concerns the whole country Ghana. The research is therefore expected to reflect the true compliance with the approved development plans by every individuals and or organizations in the Country. However, due to limited time and constraints, Bolgatanga municipality, Kasena/Nankana east municipality and Kasena /NankanawestDistrict Assemblies in the Upper East Region of Ghana was selected as a case study for the Research. Indigenous Building Owners and Developers were targeted for data collection for the research but data was equally solicited from the Building permit Approving Authorities to supplement data gathered from the House owners in order to have a credible and balanced data of the situation on the Region.

1.7 Organization of the Study

The study is expected to cover five chapters described and presented in the study. Chapter one of this research covered the background of the study, statement of the problem, the aim and objectives of the study, research questions, significance of the study, limitation of the study and organization of the study. Chapter two involved a review of the related literature in the format of the specific objectives and key words of the research topic which are compliance, procedures, issuance of building permits and building controls with the assemblies as the main focus. Chapter three covered the methodology i.e. how the research was conducted. This chapter included the research design, data collection techniques and tools, pre-testing of instruments, target population and sampling methods employed and the ethical considerations observed during the

study. Chapter four dealt with the presentation and analyses of the data collated. It also outlined the characteristics of the respondents and interpretations of the findings. The chapter concluded with a detail discussions of the findings. Chapter five presented the summary findings, conclusions and recommendations.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the various works that are related to the topic of the study. It is organized into twelve main sections comprising: an introduction, overview of local Government byelaws relating to physical development, building permit, institutions involved in issuance of building permit, building permit approving process, building development, developer's compliance with building permit, consequences of noncompliance, authorized professionals, building controls, certificate of completion or habitation and conclusion.

2.2 Overview of Local Byelaws Relating to Physical Development under Local Government Act, 1993. Act 462.

2.2.1. District Planning Authority and its functions

- For the purposes of national development planning, a District Assembly is hereby established as the planning authority for its area of authority.
- A District Assembly as the planning authority for the district shall perform the Planning functions conferred on it by an enactment.
- For the purposes of subsection (2), there shall be established for each District Assembly a district planning co-coordinating unit
- A district planning coordinating unit shall comprise the professional staff that the district planning authority shall, in consultation with the National Development Planning Commission, directs district development plans

- The National Development Planning Commission shall prescribe the format of district development plans.
- Subject to subsection (I), the proposed district development plans shall be submitted through the regional co-coordinating council to the Commission for approval.
- A District Assembly may with the prior written approval of the Commission, make modifications to an approved district development plan

An approved district development plan shall be complied with by the person, body or organ in the district responsible for or connected with the implementation of the plans.

2.2.2. Physical Development

- A physical development shall not be carried out in a district without prior approval in the form of a written permit granted by the district planning authority.
- The procedure and manner for securing a permit under subsection (I) shall be prescribed by the Regulations.
- A district planning authority may, prior to the adoption of an approved district development plan for the district, approve an application for a physical development in the district.

In determining an application for a permit to develop prior to the adoption of an approved district development plan, the district planning authority shall consult the prescribed public agencies and local communities.

2.2.3. Development Charges

- A development charge may be levied in respect of a planning permit granted for the carrying out of a physical development.
- A permit for the change of use of an existing building is not subject to a development charge.
- Development charges shall be utilized for the provision of infrastructure and services.
- Development charges shall be rated by, payable to, and collected by, the district planning authority to the exclusion of any other body, except in the case of land estates where other specific bodies take responsibility for providing infrastructure and services.

2.2.4. Conditional or Unconditional Development Permit

- A district planning authority may grant a permit for development conditionally or unconditionally, or may refuse to grant the permit, but where a permit is refused or granted conditionally reasons shall be given in writing in each case.
- A district planning authority may revoke a permit to develop or impose additional conditions to a permit already granted, but a revocation or modification is subject to the payment, on receipt of a claim, of the compensation determined by the district planning authority.
- Subject to this Act, and to an action, a programme or a project plan or unless the proposed activity obstructs or interferes with community right of space,

the following activities shall not require prior permit from a district planning authority:

(a) subsistence farming, (b) farming and other activities carried on in a settlement of a population of not more than five thousand, and (c) Small-scale vegetable and flower gardening.

- This section does not preclude the members of the immediate local community from regulating any of the activities specified in subsection (3) in their community.
- The Regulations may prescribe other activities that may be carried out without permit.

2.2.5. Unauthorised development

- Where (a) a physical development has been or is being carried out without a permit contrary to this Act, or (b) the conditions incorporated in a permit act not complied with,

A district planning authority may give written notice in the prescribed form to the owner of the land requiring the owner on or before a date specified in the notice, to show cause in writing addressed to the district planning authority why the unauthorized development should not be prohibited, altered, abated, removed or demolished.

- Where the owner of the land fails to show sufficient cause why the development should not be prohibited, altered, abated, removed or demolished, the district planning authority may carry out the prohibition,

abatement, alteration, removal or demolition and recover the expenses incurred from the owner of the land as if it were a debt due to the district planning authority.

- This section does not preclude a district planning authority from issuing an enforcement notice demanding the immediate stoppage of the execution of a work carried out contrary to this Act or to the terms of an approved development plan.
- A person who fails to comply with a notice issued under subsection (3) commits an offence and is liable on conviction to a fine not exceeding two hundred penalty units or to a term of imprisonment not exceeding six months or to both the fine and the imprisonment; and in the case of a continuing offence to a further fine not exceeding one penalty unit for each day that the contravention continues after written notice has been served on the offender.

2.2.6. Execution of District Plans

- A district planning authority may, for the purpose of enforcing an approved development plan,
 - (a) Prohibit, abate, remove, pull down or alter so as to bring into conformity with the approved plan, a physical development which does not conform to the approved plan, or the abatement, removal, demolition or alteration of which is necessary for the implementation of an approved plan.

2.2.7. Claims for Compensation

Subject to this Act, a person:

- (a) whose property is adversely affected by the coming into operation or the execution of an approved development plan, or
- (b) Who for the purpose of complying with an approved development plan incurs expenditure?
 - (i) By a subsequent revocation or modification of the plan, or
 - (ii) By a subsequent revocation or variation of a development permit granted to that person by a district planning authority, or
- (c) who is aggrieved by a decision, an action or a policy relating to an approved development plan or the enforcement of it, may, within six months after the date of the approval of the plan or of the revocation or variation of a permit or of the taking of the decision or action complained of, lodge a claim for redress or compensation with the district planning authority.
- (d) Prohibit the use of a land or building for a purpose or in a manner contrary to a provision of an approved plan; or
- (e) execute a work which is the duty of a person to execute under an approved plan, where delay in the execution of the work has occurred and the efficient operation of the approved plan has been or will be prejudiced.

Before taking action under subsection (I), the district planning authority shall serve notice in the prescribed form on the owner of the land in respect of which the action is proposed to be taken, and on any other person who in

its opinion may be affected by it, specifying the nature of, and the grounds on which it proposes to take the action.

2.2.8. Nuisance

- Where substantial injury to the environment, amenity, public health or the economy is caused by a nuisance or is likely to result from the action or inaction of a person, a district planning authority may serve notice in the prescribed form on, and requiring that person to abate the nuisance within the time specified in the notice.
- A notice served under subsection (I) shall specify the nuisance and the steps required to be taken to abate the nuisance.
- Where a notice issued under this section is not complied with, a district planning authority may carry out the abatement and recover the costs from the person causing the nuisance or the owner of the land where the nuisance is occurring as if it were a debt due from that person to the district planning authority.

2.2.9. Unauthorised Development of Community's Right of Space

A district planning authority may without prior notice, effect or carry out instant prohibition, abatement, alteration, removal or demolition of an unauthorised development carried out or being carried out that encroaches or will encroach on a community's right of space, or interferes or will interfere with the use of that space.

2.2.10 Appeals

- A person aggrieved by a decision or an action of a district planning authority may, within six months after receipt of the notice of the decision or action, appeal to the Regional Minister who may refer the appeal to the appeals advisory board established under section (58).
- Where the Regional Minister does not refer the appeal to the appeals advisory board under subsection (1) the Regional Minister shall affirm, reverse or modify the decision or action of the district planning authority.
- The decision of the Regional Minister under this section is subject to the operation of clause (3) of article 125 of the Constitution.

2.2.11. Appeals Advisory Boards

- There shall be appointed by the Regional Minister a number of appeals advisory boards as determined by the Regional Minister.
- An appeals advisory board shall comprise (a) one lawyer, (b) one person with expert knowledge of the subject matter of the appeal, and (c) one person with local knowledge of the subject matter of the appeal.
- The membership of an appeal advisory board shall terminate on the determination appeal referred to the board for advice.

2.2.12. Functions of Appeals Advisory Board

- The appeals advisory board shall advise the Minister on the relief or redress sought in the appeal or on the amount of compensation payable in respect of an appeal referred to it by the Minister.
- Recommendations for the settlement of a claim of compensation in respect of land and immovable property shall be made in consultation with the body for the time being charged with the valuation of public land.

2.2.13. Recovery of Betterment

- Where the provision of a plan or the execution of public works, or a decision or an action of a district planning authority increases the value of a land within the district, the district planning authority shall, on the advice of the body charged with the valuation of public land, recover from a person whose land is increased in value, where that person sells or otherwise disposes of the land, a determinable percentage of the amount of the increase.
- Financial gains on urban land transactions are liable to betterment charges.
- A sum of money recoverable under this section may be set off against a claim of compensation.

2.2.14 Non-Conforming Land Allocations and Transactions

- Recovered amounts of money under this section shall be utilized for the provision of infrastructure and utility services.

- An allocation of land is void if the purpose or use for which the allocation is made is contrary to a provision of an approved development plan; and in particular, a landowner shall not subdivide or allocate a land for use, development or occupation in a town or city or the suburb of it or in an area where there is an approved planning scheme prepared under an enactment, except with the concurrence of the district planning authority or a sub-district body acting on behalf of the district planning authority.
- A person who allocates, transfers, sells or develops land for a use or a purpose that is contrary to an approved development plan, settlement structure plan, action plan or programme commits an offence and is liable on conviction to a fine not exceeding two hundred penalty units or to a term of imprisonment not exceeding six months or to both the fine and the imprisonment.
- On an application, an approved development plan may be revised in accordance with the Regulations to accommodate an otherwise non-conforming allocation proposal, if the district planning authority is satisfied that the accommodation or revision is in the public interest.

2.2.15. Building By-law

- Subject to section 63, a district planning authority may make building by-laws within the scope of national building practices prescribed by law and shall in particular make provision for
 - (a) The control of the construction of buildings, streets, boarding, fences and Sign boards.

- (b) The execution of work on and in relation to existing building structures and streets; *drainage* and sanitation; the removal or abatement of obstructions and nuisance; and matters referred to for the guidance of district planning authorities, in the Second Schedule.
- The by-laws may be made with respect to the district generally or with respect to particular areas, buildings or works in the district.

2.2.16. By-laws by District Assembly

- A District Assembly may make by-laws for the purpose of a function conferred on it by or under this Act or any other enactment.
- A District Assembly may in the by-laws
- (a) specify as penalty a fine not exceeding two hundred penalty units or a term of imprisonment not exceeding six months or to both the fine and the imprisonment;
- (b) specify a further penalty not exceeding one penalty unit for each day on which the offence is continued after written notice of the conviction has been served on the offender in the case of a continuing offence; and
- (c) Make provision for the payment of the fees or charges which the District Assembly deems fit.
- The by-laws made by a District Assembly shall be read and construed subject to this Act and any other enactment.

2.2.17 National Building Regulations

The Minister responsible for Works and Housing may, in consultation with the Minister, by legislative instrument, prescribe national building regulations which shall be complied with by District Assemblies in making building by-laws for the districts.

2.2.18 Building Permits and Unauthorised Buildings

- A person shall, before constructing a building or any other structure, or undertaking a work, obtain a permit from the district planning authority which shall contain the necessary conditions.
- The district planning authority may give notice in writing in the form prescribed in the Third Schedule to an owner, occupier or a developer of premises, if the owner, occupier or developer
 - (a) Is constructing a building or any other structure,
 - (b) Has constructed a building or any other structure, or
 - (c) Is working or executing a work, without a permit or in contravention of a by-law made by the District Assembly.
- The notice under subsection (2) shall require the owner, occupier or developer on or before a day specified in the notice by a statement in writing signed personally by the owner, occupier or developer or signed personally by an agent duly authorised in that behalf and duly served on the district planning authority to show sufficient cause why the building, structure or work should not be removed, altered or pulled down.

- If the owner, occupier or developer, fails to show sufficient cause why the building, structure or other work should not be removed, altered or pulled down, the district planning authority shall by notice order the owner, occupier or developer within a specified time to remove, alter or pull down the building, structure or other work at the expense of the owner, occupier or developer.
- If the owner, occupier or developer fails to comply with the order within the specified time, the district planning authority may carry out the removal, alteration or pulling down, and recover the expense from the owner, occupier or developer, as if it were a debt due from that person to the District Assembly.
- Without prejudice to subsections (2) and (3), a person who contravenes a by-law made under section 61 or the terms of a permit granted, commits an offence and is liable on conviction to a fine not exceeding two hundred penalty units or to a term of imprisonment not exceeding six months or to both the fine and the imprisonment, and in the case of a continuing offence to a further fine not exceeding one penalty unit for each day that the contravention continues after written notice has been served on the offender.

2.3 Building Permit

Building permit can be said to be a permission given by Authority to any developer in carrying out any new work, alteration, abatement, extension to existing building, renovation or even change of use of existing building (National Building

Regulation, 1996). Awu (2012) defines it as a license to build, and it is required for new building works, extension to existing structures, repairs, demolition, change of use and those affecting plumbing, electrical and mechanical systems of buildings. A person to whom Building permit is issued is referred to as “developer” (National Building Regulation, 1996).

Any person who intends to:

- a) Erect any building or
- b) Make any structural alteration to any building or
- c) Execute any works or install any fittings in connection with any building, shall apply to the District Planning Authority of the District where the building, structure or works is or is intended to be and shall submit the relevant plans with the form (National Building Regulation, 1996).

Every individual is required to obtain approved Building Permit before commencing any development work. It is further emphasized that “No physical development shall be carried out in a District without prior approval in a form of written permit granted by the District Planning Authority” (Local Government Act 1993, P. 30).

To obtain Building Permit, the applicant must apply to the Local Authority (Metropolitan, Municipal or District Assembly) and must submit other relevant documents to the application such as title to the land in a form of indenture, working drawing by a qualified Architect, Calculations, soil tests, and other information as the Local Authority may demand (National Building Regulation, 1996). The Local authorities are required to scrutinize the application and ensure all requirements are fully met and that they conform to the requirements of the National Building Regulation before

approval. If approved, the developer is expected to comply fully with the conditions specified therein.

2.3.1 Institutions Involved in Issuance of Building Permits

In most jurisdictions, local authorities are mandated by law for the issuance of building permits. However this mandate is exercised through a collaboration of the local authority and a number of agencies or departments. These include the Health, Fire, Environment, Planning and Zoning and Lands agencies. The major players in the issuance of building permits in Ghana includes; the District Assemblies, Department of Town and Country Planning, Fire Service Department, Lands Commission, Environmental Protection Agency and Ghana Health Service.

2.3.2 District Assemblies

The establishment, duties and functions of the district assemblies started after the Local Government Act 1993, Act 462 came into being. They are part of the local government structure which has the Regional Coordinating Council at the top followed by the District Assemblies, Urban, Town, Area, Zonal Councils and the Unit Committees. There are 170 Assemblies in Ghana. Six are Metropolitan (population over 250,000), 40 Municipal (population over 95,000) and District Assemblies (75,000).

These assemblies are to function as a basic unit of government administration 'assigned deliberative, legislative as well as executive functions in order to achieve an equitable allocation of power, wealth and a geographically fair distribution of development in Ghana. Composition of the assembly is made up of Chief Executive and

- a. 70% of directly elected members
- b. Not more than 30% of members appointed by the president in consultation with traditional authorities and interest groups in the district.
- c. Members of parliament representing constituencies within the district

2.3.3 Town and Country Planning Department (TCPD)

The Town and Country Planning Department was formed in 1948 with the sole prerogative of planning and Zoning of the Gold Coast. The department is a service establishment of the Central Government, Regional Coordinating Councils and Metropolitan/Municipal/District Assemblies and is charged with functional and spatial integration of development in the country. The main functions at the district assembly levels include the following

- i. Preparation of land use plans-structure plans (sector plans) of parts of settlements, towns, cities and management systems that provides zoning framework to direct and guide the growth of settlements.
- ii. Assist Assemblies to formulate and implement policies on human settlements
- iii. Processing development and building permit application documents for consideration by the statutory planning committee
- iv. Coordinating of diverse physical development promoted by departments, agencies of government and private developers
- v. Providing spatial framework and strategies for the integration of socio-economic and physical development of urban and rural areas

vi. Providing advisory services to public private organizations / individuals on matters relating to planning and management of physical development

2.3.4 Fire Service

The Ghana National Fire Service was established by Act 537, (GNFS Act of 1997) to perform the following functions

- Organize public fire education programmes
- Create and sustain awareness of the hazards of fire
- Heighten the role of the individual in the prevention of fires
- Provide technical advice for building plans in respect of machinery and structural layouts to facilitate escape from fire, rescue operations and fire management
- Inspect and offer technical advice on fire extinguisher
- Co-ordinate and advice on the training of personnel in firefighting departments institutions in the country
- Train and organize fire volunteer squads at community level
- Offer rescue and evacuation services to those trapped by fire or in other emergency situation and
- Undertake any other function incidental to the objective of the service

Since these functions of the fire service are crucial they have representations on both the technical sub-committee and the statutory planning committee. It is mandatory for applications for permit for commercial buildings to be accompanied with report from Fire Service.

2.3.5 Lands Commission

The lands commission was set up by the lands commission (Act 483). The following are its main functions

- Manage public (state/government) lands and any land vested in the president in trust for respective stools and families;
- Advise the government, local authorities and traditional authorities on the policy framework for development of particular areas;
- Ghana to ensure that the development of individual pieces of land is coordinated with the relevant development plan of the area concerned;
- Formulate and submit to government recommendations on national policy with respect to land use and capacity;
- Advise on, and assist in the executive of a comprehensive programme for the registration of title to land throughout Ghana in consultation with the title Registration Advisory Board;
- Provide information on land transaction to guide operation of the land; and
- Compulsory acquisition of land for government (LI 230 1962).

2.3.6 Environmental Protection Agency

The Environmental Protection Agency is the main body established to protect the environment for the sustainable usage of many generations to come. Important among its functions include the following

- To advise government on the formulation of policies on all aspects of the environment and in particular make recommendation on the protection of the environment;
- To promote effective planning in the management of the environment; and to issue environmental permits and pollution abatement notices for controlling the type, volume, constituents and effect of waste discharges, emissions, deposits or other sources of pollutant hazardous or potentially dangerous to the quality of environment.

2.3.7 Health Service

The Ghana health service is an autonomous Executive Agency responsible for implementation of national health policies. Its functions include

- Develop appropriate strategies and set technical guidelines to achieve national policy goals / objectives;
- Undertake management and administration of the overall health resources within the service;
- Promote healthy mode of living and good health habits by people;
- Establish effective mechanism for disease surveillance, prevention and control;
- Determine charges for health services with the approval of the Minister of Health;
- Provide in-service training and continuing education; and

- Perform any other functions relevant to the promotion, protection and restoration of health.

2.4 Building Permit Approving Process

According to UN-HABITAT (2011), the process starts with acquisition of Land title, Block and site plans, fire report, soil investigation report, EPA report and other relevant documents as the particular Assembly may demand on the type building or structure. This is followed by submission of application for Building Permit by the applicant together with all necessary documents to Municipal/Metropolitan/District Engineer. The Engineer then passes it on to the MMDA Planning Committee for approval. According to the process, unsuccessful applicants may re-apply using the process again.

The process however omitted a very vital step where a Technical sub-committee is expected to scrutinize the documents to ensure all the minimum standard requirements and specifications are fully complied with

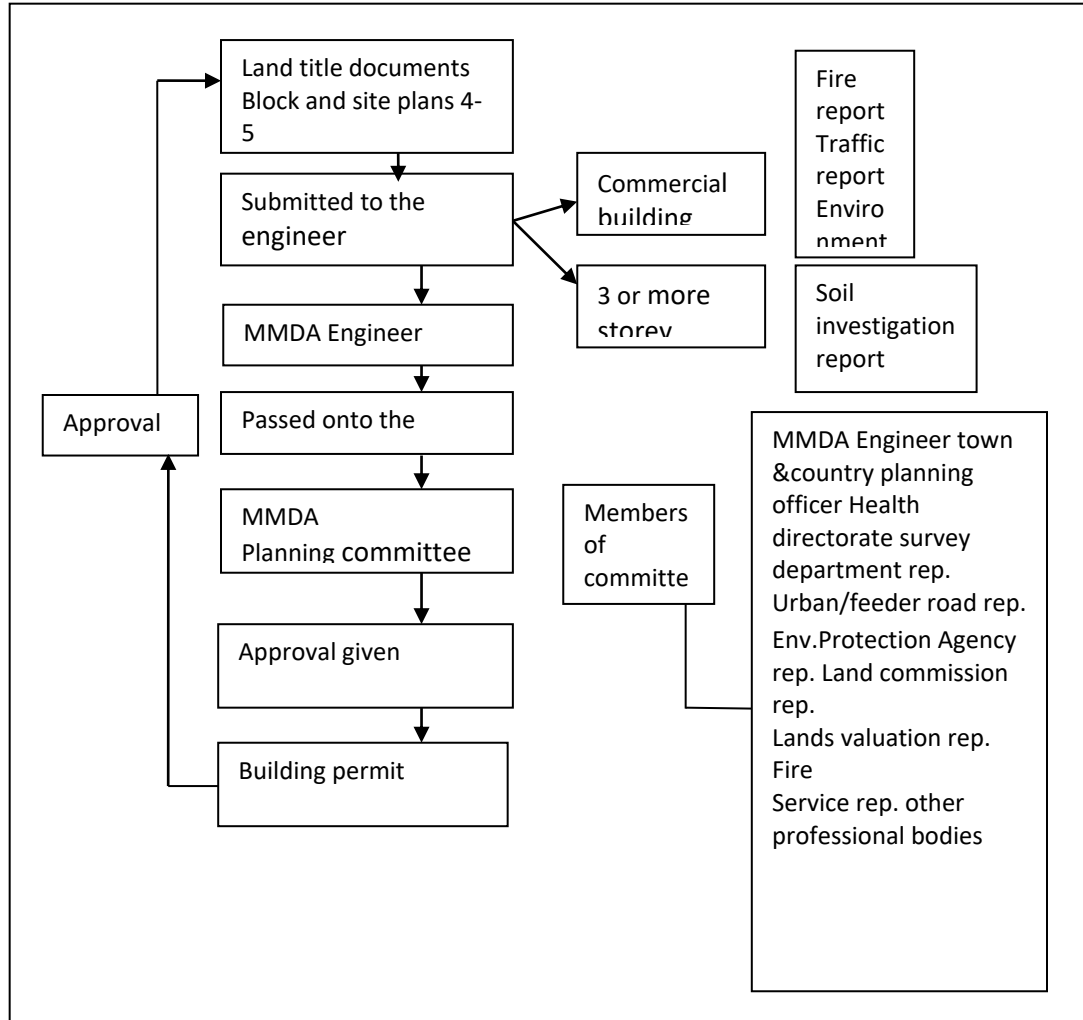


Figure 2.1 Building Permit Approval ProcessChart: UN-HABITAT (2011)

Meanwhile, in the United Kingdom, the Building permit process starts with engagement of Building Surveyor and ends with Final Inspection Certificate or Certificate of Occupancy (Victoria Auditor General, 2011). The process however, kept silence on the procedures that go into the approving the permit, including vetting of plans, site inspection and endorsement of permit.

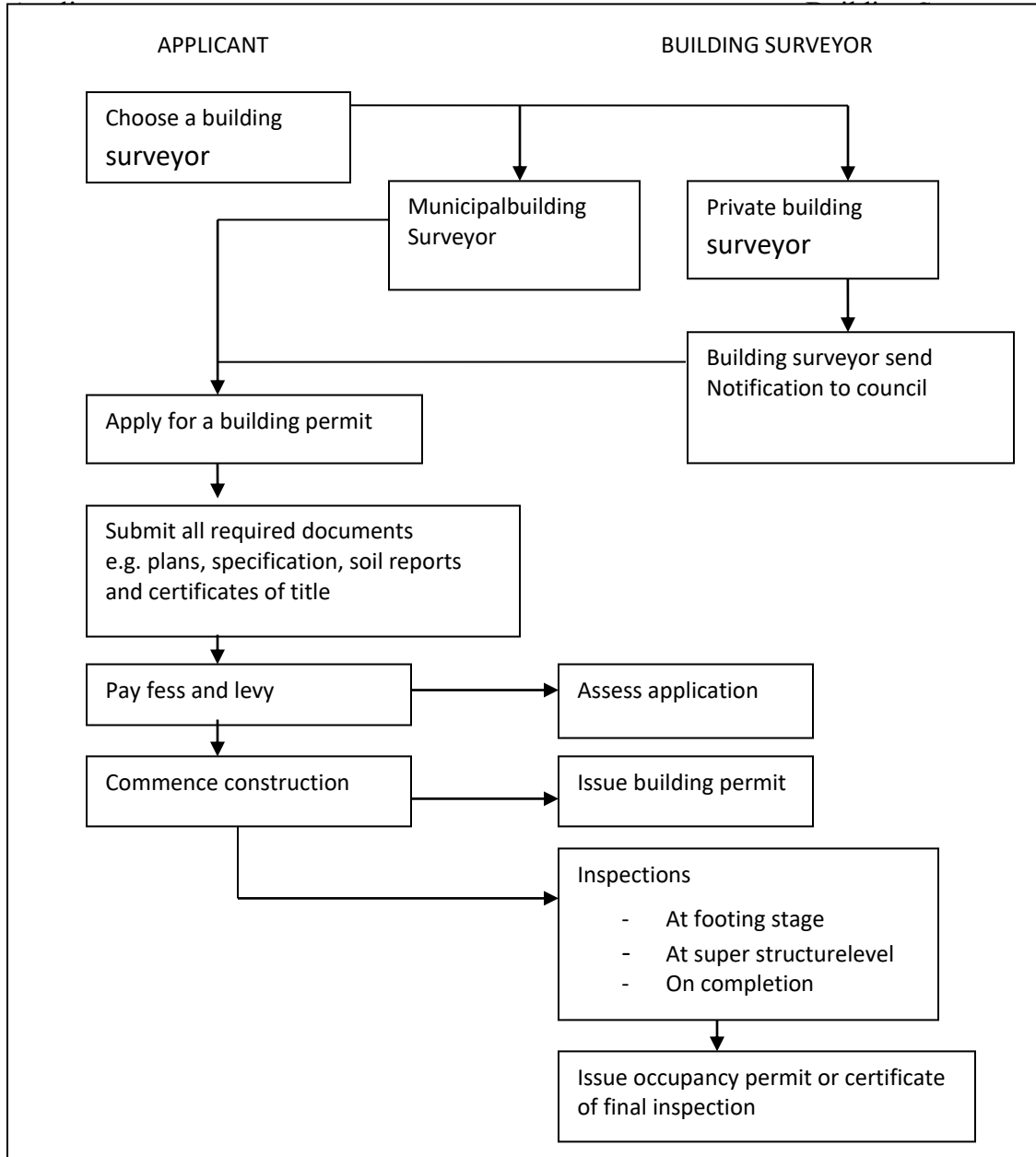


Figure 2.2 Building Permit Process Chart Flow: *Victoria Auditor General report 2011, P.4*

Awu (2012) however categorised the process into five (5) main steps. His process also started with application by the applicant with the relevant documents, followed by assessment by the Technical sub-committee & site inspection and consideration and approval by the Planning Committee. This is followed by notification to pay fees and issuance of permit to developer. His process is very coherent, important, and includes another vital point to ensure compliance. That is site inspection before submission to the planning Committee for approval. However, the process flow is simple.

STAGE 1

Apply for Building Permit-Submit all requirements e.g. Plans, Title Certificate, and Reports etc.

STAGE 2

Assessment of Applications by Technical Sub-Committee and Inspection

STAGE 3

Approval of permit by Statutory Planning Committee

STAGE 4

Notification and Pay Fees after Approval

STAGE 5

Issue Building Permit by KWMA



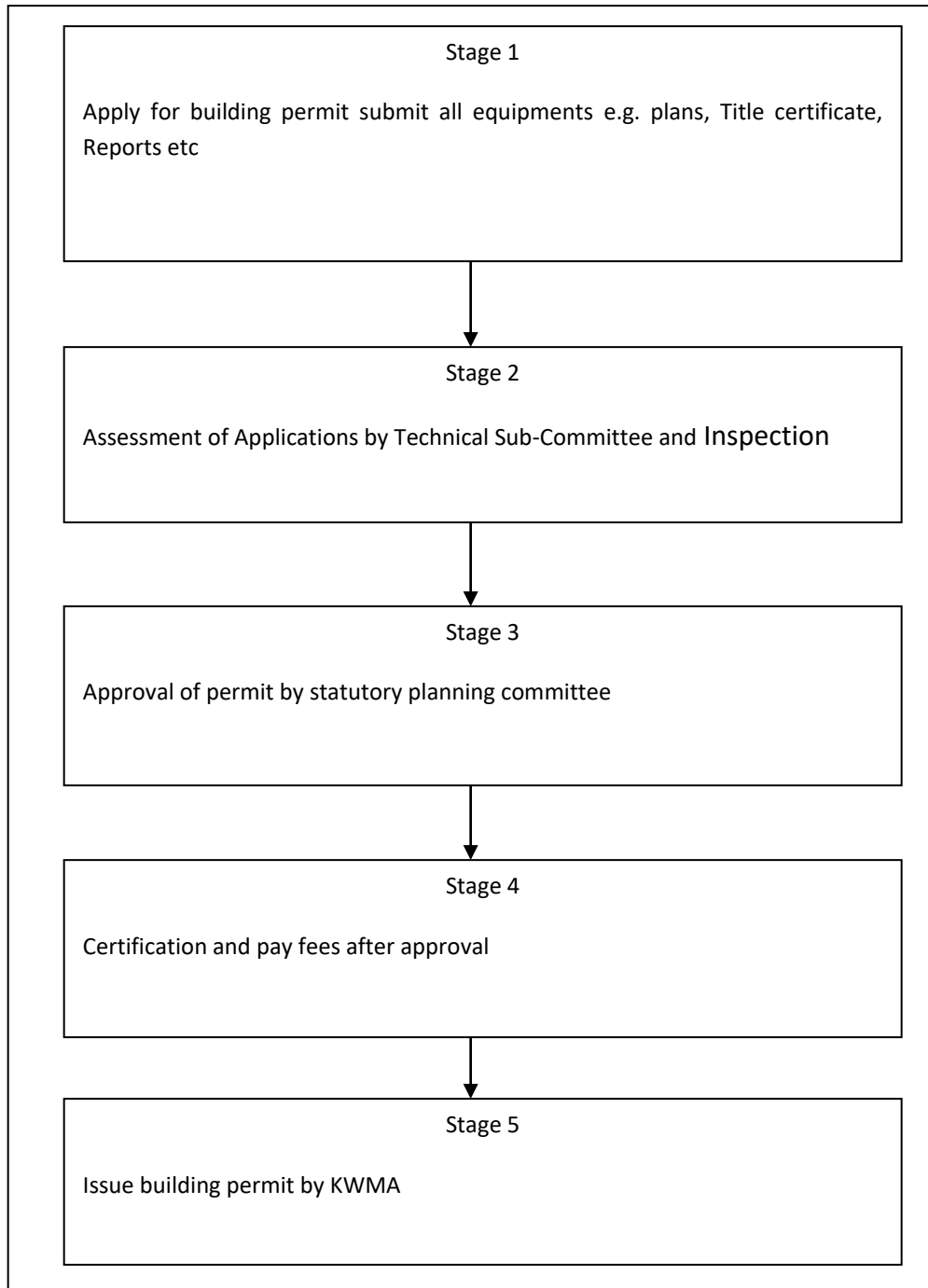


Figure 2.3 Building Permit Process Chart: Awu Bruce (2012)

The National Building Regulation (1996) however did not state a clear cut process for approving the building permit. The non-availability of a clear cut process in obtaining Building permit and its implementation may contribute to some Local Authorities

omitting some vital steps in the approving process and therefore resulting in none compliance. This may also result in non-uniform process of approving building permit in the country with one District Assembly's approving process being different from the other.

In the year 2010, the Ministry of Local Government and Rural Development of Ghana in its effort to improve service delivery in Metropolitan/Municipal/District Assemblies set a task force to come up with a clear assessment of procedures and processes involved in obtaining permit. The Task force came up with a document detailing the processes and procedures including monitoring of projects and issuance of certificate of Habitation to completed projects (Local Government Service Improvement Program, 2010). This process as shown is seen to be the most appropriate processes observed so far, but whether the Metropolitan/Municipal/District Assemblies are fully complying with these recommendations, this research is seeking to find out.

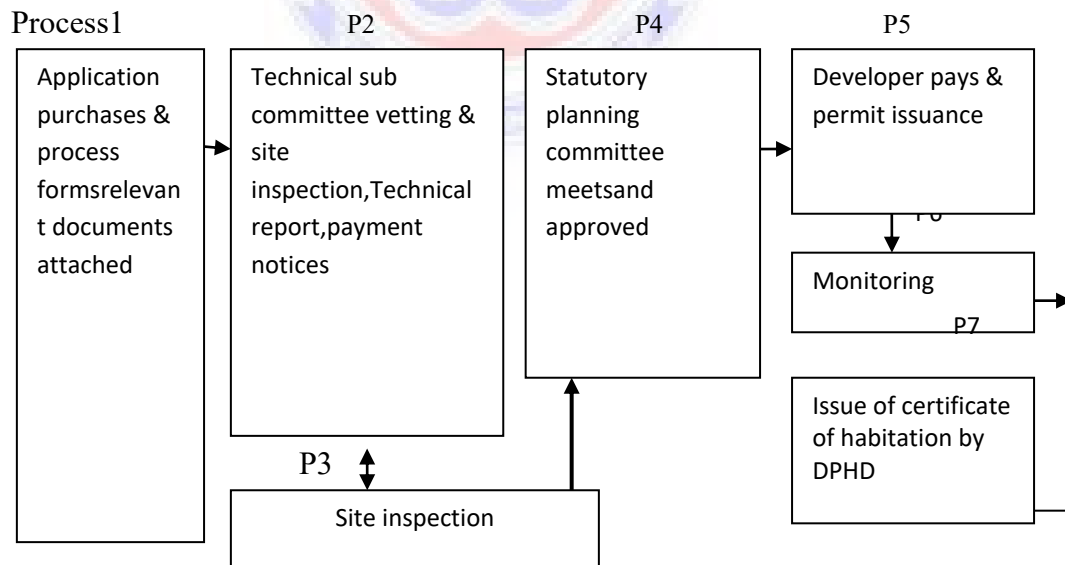


Figure 2.4 District Assembly Service Improvement Program (DASIP 2010)

2.4.1 Permit Issuance Process

Permit issuance periods need to be considerably low to help developers undertake projects smoothly and swiftly. For example in the USA simple projects, can opt for a fast-track service offered by the New York City Department of Building (DOB), called the Professional Certification Programme. The programme, introduced in 1996, enables registered architects and professional engineers to certify, through an affidavit signed by the owner, contractor, and all responsible professionals (Architects,

Engineers, Plumbers, and the like) that the plans they file with the department are in compliance with all applicable laws. This reduces the amount of time a builder normally would wait for a DOB permit by eliminating the process of DOB examination and approval of the plans (Doing business, 2009).

2.5 Building Development

Building development or estate development which is sometimes called property development is a process of making changes and enhancement to a piece of real estate so that the property is capable of supporting a desired function (Tatum, 2013). In recognizing the importance of sustainable building development. Ashworth, (2010) indicated that the construction industry is challenged to provide built assets that:

- Regenerate and revitalize town centers and other urban areas where decay has taken place
- Plan communities to place less reliance on the motor car
- Use energy more efficiently
- Minimise mineral extraction

- Cause minimum damage to the natural and social environments
- Provide training through schemes such as Welfare to Work and the New Deal
- Enhance the quality of life
- will be acceptable to future generations

Whether involving residential or commercial property, the process of property development involves compliance with local standard and the need to make space functional within the area (Tatum, 2013).

Slough however, recommended the use of local developers as there was not much difference between National Planning Policy Framework for development (Slough Borough Council, 2013).

2.5.1 Developers

Developer or a real estate developer is a real estate professional who specializes in creating new developments or renovating existing ones, marketing them successfully, and selling them (Elizabeth, 2013). These developers according to Elizabeth (2013), Soften work with partners to share the risk and the workload, and they may work for big companies which conduct real estate development on a large scale or use real estate development as one investment tool in a diverse portfolio. People can approach a career as a real estate developer from a number of perspectives; developers may hold degrees in real estate development, or come from a background as a real estate agent, contractor, or architect.

2.5.2 Indigenous Developer/Contractor

Indigenous development according to Asian Development conference is defined as “the growth or progress of an indigenous community in their originality or within the context of their ethnic identity in a holistic way” (UN Economic and Social Council, 2010). Indigenous People are custodians of some of the most biologically diverse territories in the world and they are also responsible for a great deal of the world’s linguistic and cultural diversity, and their traditional knowledge has been and continues to be an invaluable resources that benefits all of mankind (DESA OF UN, 2009). Furthermore, “Indigenous peoples have vital contributions to make in addressing the contemporary challenges to renew ecological and social ethics and relationships, and in the fulfillment of peace, human rights and sustainable development.” (DESA OF UN 2009, p.7).

According to Laryea and Sarfo (2010), Local or indigenous construction firms are those established and owned by locals and citizens of a country whereas foreign firms are owned by foreign nationals. An indigenous developer is regarded as a person or a group of persons or firms contractors who offer with special skills and services and accept the challenge of executing the works in exchange for financial reward within their own country or community from which they come (Ugochukwu&Onyekwena, 2014).

It was further observed that the common challenges facing indigenous contractors are in the area of working capital management are low awareness of the need for working capital management, one-man business setbacks, under-capitalization, poor funding and cash flow problems, high cost of construction finance, economic recession, reckless spending and diversion of funds, poor project planning and control. Factors affecting the

level of working capital requirements comprises: inflation, delays in interim payments, taxation at source and deduction of retention funds and they also recorded a low level of participation on major public contracts (Ugochukwu&Onyekwena, 2014). These indigenous contractors or developers unlike UK and elsewhere are not clearly documented and therefore may not be monitored to see whether they are in compliance with the standards and lay down rules (Laryea&Sarfo, 2010).

2.5.3 Evolution of Indigenous Contractor/Developers

It is evidenced in Laryea and Sarfo (2010) that Ghanaian indigenous contractors or developers dated back in the early days of Ghana. With the advent of independence from British colonial rule on the 6th of March 1957, more local people were encouraged to go into contracting. In fact, right from the time preceding independence when Dr Kwame Nkrumah became Leader of Government Business in 1951 more local people were encouraged to go into construction. The Public Works Department (PWD) had grown in capacity in terms of number of skilled workers and operatives. As a result, some master craftsmen and technical supervisors who were employees of the PWD decided to set up their own private construction firms (Laryea&Sarfo, 2010).

This happened when Ghana had independent and there was the need to develop the country. Dr. Kwame Nkrumah encouraged individual professionals to engage in construction of public buildings in PWD, who later left to form gangs to engage in private development. It was also clear that, because professionals such as Engineers and Architects were paid well and they could not come out of the Public Works Department to join the gangs in providing quality and acceptable service to individual. This led to the

gang's inability to deliver acceptable service and Government organizations and professionals having high demand.

According to Laryea&Sarfo (2010), as the years developed, strong private construction firms started to evolve alongside the state-run State Construction Companies (SCC) and State Housing Companies (SHC). The private firms grew as a result of expanding construction activity in the country. With time, some of the private contractors were able to compete and even provide better remuneration for staff in comparison to the state institutions. They were thus able to attract more skilled and experienced staff. As a result, state institutions like the SCC started to decline around the early 1990s and privately owned construction firms now dominated the construction market in Ghana. This was how indigenous developers evolved in Ghana.

2.6 Compliance with Building Permit

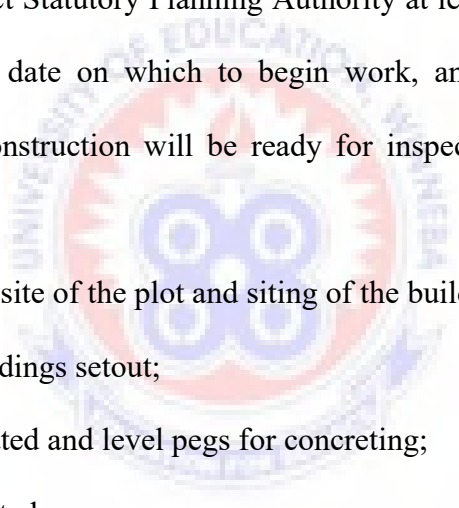
Compliance according to Parker, (2000) is defined as obedience by a target population with regulatory rules or with government policy objectives. Compliance with building permit can be said to be strict adherence with the dictates and conditions approved in the permit (National Building Regulation, 1996).

2.6.1 Compliance by Developer

All approved development plans shall be complied with by any person, body or organ in the District responsible for or connected with the implementation of the plan (Local Government Act 1993, p.30).

Compliance with approved Building permit refers to adherence with the terms, Conditions and standards specified in the approved Building Permit during development by the developer. The responsibility for compliance with the requirements of the approved Building Permit is placed first and foremost on the owner and the builder/developer of a building (Department of the Environment, Community and Local Government, 2011).

Section 10(1) of the National Building Regulation (1996) provides that “a person to whom a Building Permit has been issued referred to in these regulation as ‘developer’ shall give to the District Statutory Planning Authority at least forty-eight hours’ notice in writing indicating the date on which to begin work, and of the dates on which the following stages of construction will be ready for inspection by the District Planning Authority:

- 
- (a) Demarcation of the site of the plot and siting of the building;
 - (b) Foundations of buildings setout;
 - (c) Foundations excavated and level pegs for concreting;
 - (d) Foundations concreted;
 - (e) Trenches for drainage work excavated to levels and gradients
 - (f) Drains laid and jointed and ready for testing;
 - (g) Reinforcing steel fixed in position before concreting;
 - (h) Concrete shuttering ready for striking;
 - (i) Walls completed to wall plate levels;
 - (j) Roof framed-work completed before covering”.

This requirement is further emphasized that “No construction shall be covered until it has been inspected and approved by the District Planning Authority” (National Building Regulation 1996, p.11). In addition to that, “it is the responsibility of anyone carrying out building work to comply with the relevant requirements of the Building Regulation” (UK Department of Communities and Local Government 2007, p.8).

In the United Kingdom however, to effectively ensure compliance, the developer is permitted to propose a Building Surveyor (Building Inspector) for the approved development plan, who supervises the project according to the approved permit. “If approved Inspector is engaged, the person intending to carry out the work (the developer) and the Inspector must jointly give to the Local Authority an initial notice. The Local Authority has five days in which to accept or reject the notice. If the Local Authorities have neither rejected nor accepted the notice by the end of the period, the notice is deemed to be accepted” and the Inspector is required to supervise the development according to the approved plan (UK Department of Communities and Local Government 2007, p.8). This is different from the practice in Ghana where the Building Inspector is always a staff of the Local Authority and who doesn’t supervise day to day construction of the project, till the stage of completion (National Building Regulation, 1996).

In Ghana, to ensure that the requirements in the approved Building Permit are fully complied, it is required that a Certificate of Completion for Habitation should be issued in respect of buildings completed in accordance with the Regulations before occupation (National Building Regulation 1996, p.12). This is further emphasized that “after the final construction, the building is inspected to ensure the internal and external structures comply with the Building Code and the drawings submitted earlier. Other

works inspected include fire exits points amongst others and the certificate of habitation is issued” (Local Government Service Improvement Program 2010, p.16)

The Researcher is however, yet to see a copy of such certificates issued in accordance with the above provisions in Ghana. This Research however has brought to light the extent of compliance with these requirements.

Indigenous Developers’ Compliance with Building Permit According to Keith (2008), under sub-clause 1.12 of FIDIC, the indigenous contractor is required to provide all such confidential information as the engineer might reasonably require verification that the contractors comply with the contract and conditions. It is also clear that Indigenous developers’ compliance is hampered by lack of skilled capacity and ability to source funds for projects executions (McAllister, 2013). Due to lack of trust, indigenous Companies or developers are made to go through about five times compliance reports as against that of the other developers (McAllister, 2013). To ensure Indigenous developers comply and grow up Olayeni&Omuh (2013) suggested the following:

- i. Indigenous Contractors should network with other Regional & District centers worldwide in order to develop competitive knowledge and maintain updates on new discoveries and inventions.
- ii. Indigenous Contractors should consciously set money aside for R&D activities.
- iii. Indigenous Contractors should intensify their use of ICT so as to keep abreast of latest innovations in Construction.

They further concluded that the conceptual framework developed by Malaysia model shows the strategies to be employed for improving indigenous contractor capacity which will ultimately improve their participation in R&D. It concludes that Government

has a major role to play in improving indigenous contractor participation in R&D. It is anticipated that the recommendations made based on the Malaysian Construction Industry Model will improve the participation of indigenous contractors in R&D in Nigeria. Ogbecchie (2012) concluded that government has put measures in place to guide against non-compliance but these were not adequate.

2.6.2 Extent of Compliance

The extent of compliance is the extent to which the developer or Permittee adhere to the terms and conditions including structural requirements of an approved permit. This can be measured in percentage or in decimal forms with full compliance equating to 100% or one (1). Every developer is expected to comply fully with the conditions of his/her approved permit before certificate of habitation is issued.

On the contrary however, if as a result of one reason or the other the developer decided to make any change in the permit as approved, he or she is required to confer with the Local Authority for any alteration during construction before the final as-built drawing is prepared, and the change or changes so effected shall not contradict any of the requirements of the Building Regulations (UK Department of Communities and Local Government, 2007). The Ghanaian Local Government however, did not make provision for any alteration after permit has been issued and clearly stated that, “once the Statutory Planning Committee by law has approved a building permit application no further amendments are expected to be made to the building drawings / plans” (Local Government Service Improvement Program 2010, p.15)

2.6.3 Consequences of Noncompliance

In every society, it is the consequences of breach of law that deter people from breaching it. If the consequence of noncompliance with the approved building permit is not deterrent enough, it will naturally lead to persistent and deliberate non-compliance.

2.6.4 Preapproval Stage Noncompliance

If an applicant who failed to comply with the requirements for grant of permit, shall face the consequence of not getting approved permit. For instance, section 3(2) of the National Building Regulations (1996) states “No approval shall be granted to any applicant who does not have good title to the land, and for the purpose of this regulation, good title shall be in accordance with a certificate issued by the Chief Registrar of Lands Titles or any other agency so authorized”. Consequently, refusal to grant permit means restricting the applicant from development or carrying out with the work. This is because, “No physical development shall be carried out in a District without prior approval in a form of written permit granted by the District Planning Authority” (Local Government Act 1993, p.30)

The Local Authorities are also expected to ensure that every Building Permit approved complies fully with the minimum standards and specifications set out in the Building Regulations. Unfortunately, there is no specific provision that provides for punitive measures for Local Authorities who do not comply with the Building Regulation in granting permit in Ghana. Victoria Auditor General (2011) in providing solution to the problem recommended institution of reforms to establish the Building Commission (the commission), as a new statutory authority to oversee building control, including the

competitive building permit system. The commission's functions among other things include:

- enforce compliance with the Building Regulation by the Local Authorities
- participate in the development of national building standards
- monitor developments relevant to the regulation of building standards in the country
- monitor the building permit levy collection system
- inform and train the industry stake holders
- Resolve disputes etc.

If the field survey proved the fact that there is no specific punitive measure for developers who did not comply with the regulation in issuing Building Permit to Permittees, then the above recommendation by Victoria Auditor General Report would be very relevant.

To ensure that the designs submitted by the applicant for the Building permit application fully comply with the Standards and the requirements of the National Building Act, the Australian Building Act (2011) provided for issuance of certificate of design compliance before the applicants submit drawings for Building permit (Australian Building Commission, 2012).

2.6.5 Post Permit Approval Non Compliance

Once the Statutory Planning Committee by law approved a building permit application no further amendments are expected to be made to the building drawings / plans (Local Government Service Improvement Program, 2010). The Permittee is required

to strictly comply with the minimum standards and specifications indicated in the permit. To ensure that this is effectively done, section 11 of the National Building Regulations (1996) provides for appointment of a Building Inspector to oversee and inspect daily works on building erections and installation of all developments issued with Building Permit. In the United State of America, any person who negligently violates permit conditions implementing of the Building Acts is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to further criminal penalties (United States Environmental Protection Agency, 2012). In Ghana however, “where conditions incorporated in a permit are not complied with, a District Planning Authority may give written notice in such forms as may be prescribed by regulation to the owner of the land requiring him on or before a date specified in the notice to show cause in written addressed to the District Planning Authority why the unauthorized development should not be prohibited, altered, abated, removed or demolished” (Local Government Act 1993, p.32). The Local Government Act 462 (1999) further provided that, if the owner of the land fails to prove evidence of approval of any development compliance as approved in the permit, the District Assembly (Local Authority) may demolish the structure and recover the cost of the demolishing from the developer as if it were debt due to the District Assembly. This aspect of the Regulations is normally not enforced as the various Assemblies only carryout the demolition without recovering the cost from the unauthorized developer as a punitive measure.

2.7 Authorised Professionals

L.I 1630 states among others a “building with floor area in excess of 120mm² and of two storeys and above in height shall be designed by an architect or any of the following a) Civil Engineer b) Structural Engineer or c) a Professional Builder”. It further stresses that a building within a metropolitan or urban area shall be designed by an architect in consultation with other professionals mentioned above.

Nyanteh(2010) beliefs, architects are very influential in building projects and they are ones first point of call before construction. Architects are involved in the planning, design and oversight of buildings construction. The Architects would act in one’s interest to provide cost effective options in the planning process based on one’s requirements. However, according to him, there is a growing trend in the country whereby home owners only seek the services of architects to put together drawings to enable them secure building permits.

Although property owners ultimately bear the legal responsibility for obtaining the correct permits for their job, most arrange for their contractors to procure the necessary documentation on their behalf before a job begins. The contract between the owner, contractor and any design professionals should clearly state who will obtain the permits (Hedderman, 2004).

2.8 Building Controls

The main function of Building Control is to ensure that the requirements of the Building Regulations are met in all types of non-exempt development. Generally they examine plans, specifications and other documents submitted for approval and survey

work as it proceeds. Most building Control Surveyors are now actively involved at design stage for many schemes and are acknowledged to provide valuable input at all stages of development. In the USA a permit is required for any person and or company performing any construction, maintenance, engineering survey and all other work on, adjacent to, above, below or near any city and county street or highway, which is under the jurisdiction of the Department of Transportation Services (DTS), which may temporarily obstruct any portion of a roadway or sidewalk.

All building and construction in Holland must comply with the Housing Act, and thus with the Building Decree. However, some minor construction work is exempted from assessment and does not require a permit. The “exempt from assessment” category is often misunderstood. When planning to build in Holland, it is suggested to consult with the local building control authority. Under the Housing Act, municipalities issue building permits, supervise construction work and check permit applications for new developments against the Building Decree. Municipalities are also required to check permit applications against zoning regulations. In Johannesburg, any new building and any alteration that adds on to or changes the structure of an existing building must go to the City’s (Planning) Development Management Department for approval. If home owners redecorate their kitchen, or re-plaster their house, they don’t need permission, because they haven’t moved any walls around or altered the drainage system. But if one makes a change to the structure, for example, add on a carport, or even just move the front door, permission is needed (Joburg, 2009).

2.9 Certificate of Completion for Habitation

The National Building Regulation (1996) decreed that a certificate of completion for habitation shall be issued in respect of a building completed to the satisfaction of the District Planning Authority before occupation. This is quite different from Certificate of design compliance, which is issued a short time before the application for a building permit to indicate that the design complies with the National Building Regulation (Australian Building Commission, 2012).

Certificate of completion for habitation or certificate for habitation, which is also called certificate of Occupancy, is “a document issued by a Local Building or Zoning Authority to the owner of premises attesting that the premises have been built and maintained according to the provisions of building or zoning ordinances, such as those that govern the number of fire exits or the safety of electrical wiring. A certificate of occupancy is evidence that the building complies substantially with the plans and specifications that have been submitted to, and approved by, the local authority. It complements a building permit a document that must be filed by the applicant with the local authority before construction to indicate that the proposed construction will adhere to zoning laws” (FarlexIncorporation, 2008). An applicant is required to apply for this certificate after practical completion of the works, and after complying fully with the conditions stated in his / her approved plans (Paulo, 2010).

2.10 Summary of Review of Related Literature

This chapter reviews the literature that is related to the focus of the study. It began by looking at the overview of the local government Act and bylaws that relates to

physical development. It also reviewed the various processes involved in the application and issuance of a building permit including the institutions and agencies involved. The chapter again dealt with building development issues as well as developers and identified the various classes of developers. Building regulations compliance and the consequences of noncompliance were all discussed. Finally, the chapter also discussed the professionals who are charge with the responsibility of enforcing the building regulations and bylaws .Certificate of completion for habitation were looked at to end up the chapter.

It is apparent from the literature review that to ensure compliance with the Building Regulations and bylaws, various certificates must be issued at various stages of development process. These include Certificate of design compliance, Construction Compliance certificate or certificate of Completion and certificate of Habitation.

It is also observed that the building inspectors' work of supervising development is not very effective to ensure house owners and developers' compliance as corroborated by Boamahet. al (2012) cited by Oppong and Badu (2012). It is also obvious that there is no strict and enough punitive measure in place for house-owner's and developers who do not comply with the approved byelaws to serve as deterrent to the others, apart from demolition by the local authorities.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Methodology is a body of knowledge that enables researchers to explain and analyze methods indicating their limitations and resources, identifying their presuppositions and consequences and relating their potentialities to research advances. Moreover, it underpins the types of questions that can be addressed and the nature of the evidence that is generated (Saunders *et al.*, 2007). Therefore, research methodology is important to any study.

This chapter presents the scientific and analytical framework for the study. The chapter involves the approaches and methods adopted and used for the study. The research design adopted and the processes involved in conducting the research are presented and discussed in this chapter. Issues on sample size and sampling technique, data collection instruments, research procedures and data analysis are captured under the chapter. This chapter is relevant to the study because it shows how the research was conducted to obtain empirical evidence on the field.

3.2 Research Design

One of the important components of methodology is the research design as it provides an overall guidance for the collection and analysis of data of a study (Churchill, 1998). The researcher used quantitative research strategy using a structured questionnaire. Quantitative research as defined by Creswell (1994) cited in Naoum (2007, p.38) is an inquiry into a social or human problem, based on a hypothesis testing or a

theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the hypothesis or the theory hold true. Since the research is aimed at assessing house- owners' level of compliance with the approved building regulations and bylaws, it would therefore be appropriate to use quantitative approach in attaining the overall goal of the research.

In addition to the quantitative approach used in eliciting information from the respondents, qualitative approach was also used to gather information during physical observation of the development, in order to complement the outcome of the data received from the questionnaire survey. This was premised on the fact that, the use of qualitative approach equally helps in the area of education in historical and philosophical research to uncover what is unknown (Singh, 2006). Therefore, the use of qualitative approach to elicit information during field survey would help to uncover philosophical believes of the house owners which are unknown to the Researcher from the beginning.

3.3 Target Population

The population for this study was people who own houses or residential facilities in the three district assemblies. According to kaoul (2002), population is a collection of specified group of human beings or non-human entities.

The target population consist of registered house owners from the three district assemblies Bolgatanga, Kasena/Nankana east and Kasena/Nankana west. In all 150 registered houseowners were identified to represent the population thus; Bolgatanga =60 house-owners' Kasena/Nankana east =50 house-owners' and Kasena/Nankana west=40 house owners respectively.

3.4 Sampling Technique and Sampling Determination.

According to Babbie (2004), “a sample is a small subset of a population whose selection is based on the knowledge of the elements of a population and the research purpose”. The selection of the subset is done strategically and systematically so that the units or persons that meet a specific criterion are identified and selected (Merriam and Simpson, 2000; Sapsford and Jupp, 2006).

Curwin and Slater (2010) argued that the higher the sample size, the more accurate the results obtained but were quick to explain that it is not a simple linear relationship, meaning that findings may not necessarily be representative of the entire population. The researcher adopted systematic random sampling technique so that results obtained will be the true representative of the population. Thus using the Krejcie and Morgan (1970) sample size selection table, for population size of 150, a sample size of 108 is suggested.

For Bolgatanga municipal assembly, the sample size is $\frac{60}{150} \times 108 = 43.2$

For Kasena/Nankana east municipal assembly, the sample size is $\frac{50}{150} \times 108 = 36$

For Kasena/Nankana west municipal assembly, the sample size is $\frac{40}{150} \times 108 = 29$

3.5 Data Collection

Data collection is a term used to describe a process of preparing and collecting data and purpose of these processes is to obtain information to keep on record, to make decisions about important issues, and to pass information on to others. The developed questionnaires were distributed to and retrieved from house owners. This process of distribution and retrieving of the questionnaires in person was taken for two reasons as suggested by Ahadzie (2007), first, to make sure that the questionnaires gets to the

intended recipients and secondly, to help improve the response rate. In all some of the questionnaires were collected back on the same day while others were collected later from the respondents.

3.5.1 Questionnaire Development

The questionnaire was developed in accordance with the objectives of the research which was to assess the level of compliance with national building regulations and bylaws by house owners. The questionnaires designed and used in collecting data were quantitative and qualitative in nature. The questionnaires were used to collect data from house owners in the three Assemblies selected in region. Open-ended questionnaires and close-ended questionnaires were used to solicit responses from respondents because Glasow (2005) had indicated close-ended questions are easy for respondents to answer and it also help researchers to analyze their data easily. Salant and Dillman, (1994) are also of the view that closed-ended questions with unordered choices, for example the multiple choice questions are useful for ranking items in order of preference. The questionnaires were administered by the researcher personally. This was deemed appropriate in order to get closer to the respondents and be able to solicit information which may not be divulged on the questionnaire.

3.5.2 Validity and Reliability of Data

To ensure that the data gathered are well-founded and dependable for the study, the questionnaires were pre-tested with a sample of five (5) respondents who were randomly picked in the case study area. This was expected to identify the deficiencies in

the questions asked so that they can be addressed before the actual collection. Pre-testing measured the extent to which the research instruments would yield consistent results

3.5.3 Ethical consideration

The study included certain ethical issues to improve the validity of the findings. For instance the identity of the researcher was made known to all the communities visited. The research topic was well explained to the house owners or their representatives as well as the departments and agencies visited. Confidentiality and privacy were observed during the research process and name of respondents were never asked. The assemblymen and other opinion leaders within the research catchment areas were contacted to seek their permission before the data collection. Aside these community leaders, each house visited were informed about the study before it commenced.

3.6 Data Analysis

Data collected from the respondents was analyzed using statistical package for social science (SPSS) Tools, such as, frequency distribution, means, proportions, charts etc. Pie charts and frequency tables were used to analyze the data on demographic characteristics of the respondents and assess the house-owners' level of compliance with national building regulations and bylaws in the three selected Assemblies. Under this method, data collected were edited, sorted and coded. Microsoft Excel software was then used to present and analyze the data. This result from the analysis provided the basis for finding out patterns and common trends existed in the data collected.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter deals with analysis, discussion and presentation of results of collected data. Statistical Package for Social Sciences (SPSS) was employed to derive descriptive statistical tools in the form of tables and charts. The analysis is presented in four sections; the first section discussed the personal data or information of the respondents. The subsequent sub-sections addressed research objectives; House owners level of compliance with the national building regulations and bylaws, factors that influence house owners propensity to comply with building regulations and the constraints that house owners go through in a bid to comply with these building regulations.

4.2 Response Rate

Out of the 108 questionnaires distributed, 80 were retrieved. Fifteen (15) of the returned questionnaires were found to be badly completed to be useful for the analysis and were therefore discarded. This brought the responses effectively to 65, representing a response rate of 60%. This response rate is considered adequate as, according to Oladapo(2005), Newman & Idrus (2002) and Ellhag and Boussabaine (1999), a response rate of 30% is good enough in construction studies.

4.2.1 Demographic Data of the Respondents

This section of the analysis presented the demographic data of the Respondents. The emphasis were on gender, level of education, nature of work, age category and the number of years respondents have been house owners. Table 4.1 and Figures 4.1, 4.2, 4.3, 4.4 and 4.5 presented the gender, their level of education, occupational status, age category and then duration of ownership ashouse owners respectively.

Tables 4.1:Personal Information about the Survey Respondent

Demographic characteristics	Frequency	Percent
Gender		
male	52	80.0
female	13	20.0
Level of Education		
tertiary	32	49.2
secondary	31	47.7
basic	2	3.1
Nature of Work		
civil servant	7	10.8
public servant	29	44.6
security service	3	4.6
farmer	11	16.9
business	8	12.3
others	7	10.8
Age		
less than 20 years	7	10.8
20-30	6	9.2
31-40year	14	21.5
41-50years	16	24.6
51-60years	22	33.8
Duration of Ownership		
less than One year	1	1.5
1-4 years	11	16.9
5-8years	13	20.0
9-12years	10	15.4
13-15years	7	10.8
over 15 years	23	35.4

Source: Field study, 2017

4.2.2 Gender of Respondents

The dominance of the male in the housing industry was revealed by the data as shown in figure 4.1 four out of five (80%) of the respondents were males, only (20%) were females.

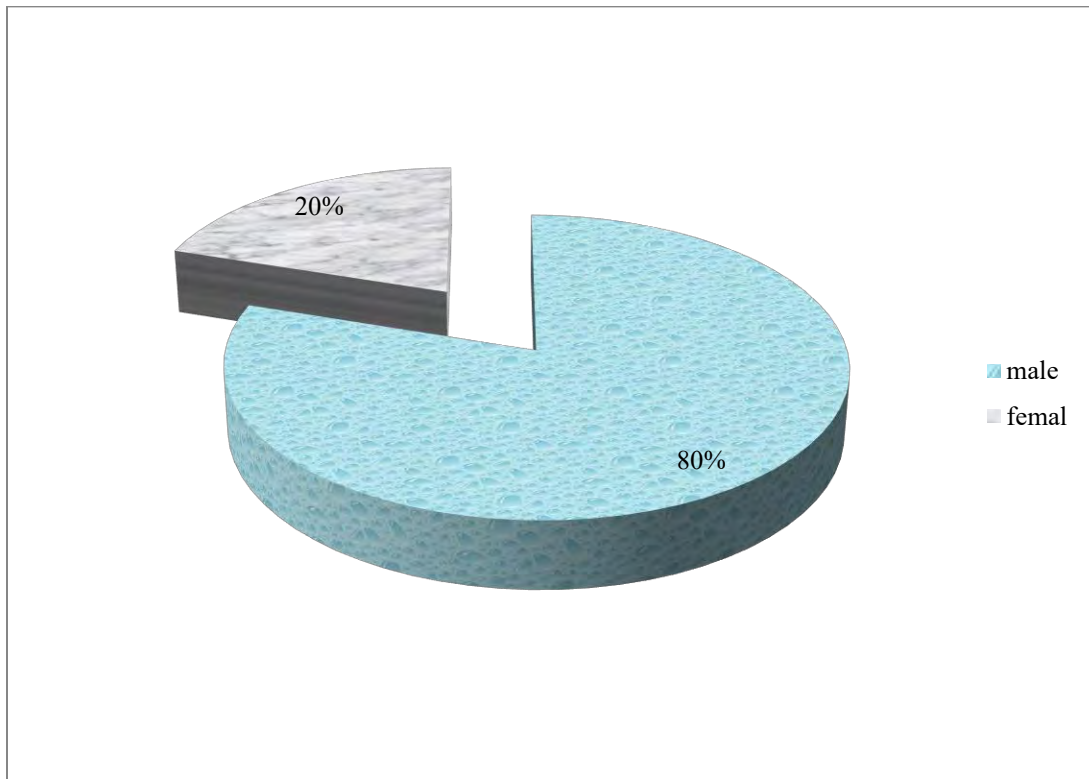


Figure 4.1: Distribution of Respondents by Gender

Source: field study, 2017

4.2.3 Level of Education of the Respondents

Out of 65 respondents, whiles 32 out of the respondents were those who had tertiary education, 31 of the respondents had secondary education and only 2 of the respondents belong to basic education category as shown in Figure 4.2. This showed that About a third (49.2%) of the respondents had pursued higher educational courses.

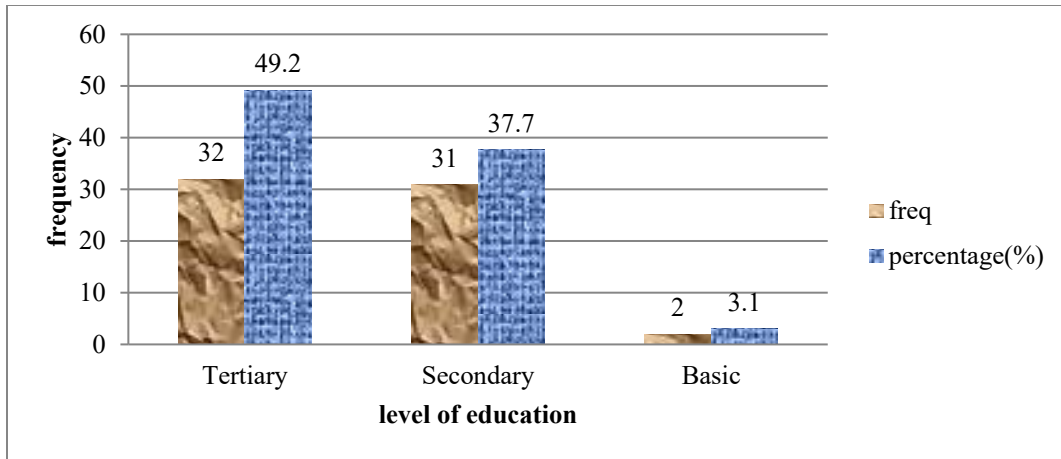


Figure 4.2 Distribution of Respondents by Educational Level.

Source: Field study, 2017.

4.2.4 Occupational Information of the Respondents

About a third (45%) of the respondents were said to be public servants while one-fifth (16.3) were farmers. The information in figure 4.3 suggests that public servants owned more houses than any category of workers.

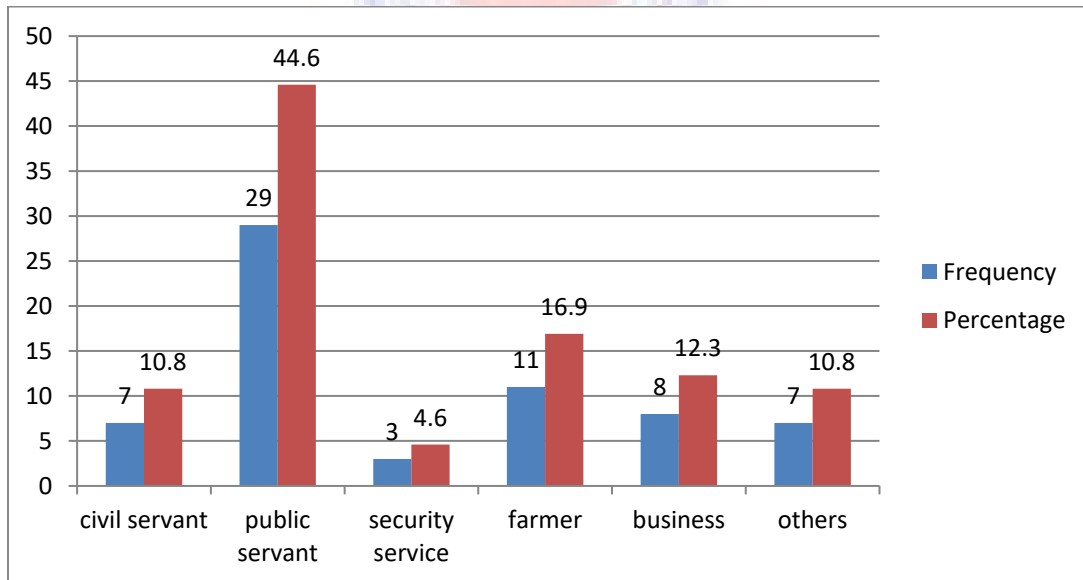


Figure 4.3 Distribution of the Respondents by Occupation

Source: Field study, 2017

4.2.5 Age Category of Respondents

While about less than half (42%) of the population of the house owners were relatively young (between the ages of 18 to 40 years) and are in active service, more than half (58%) were in the advance age category (40 to 60 years) as shown in Figure 4.4.

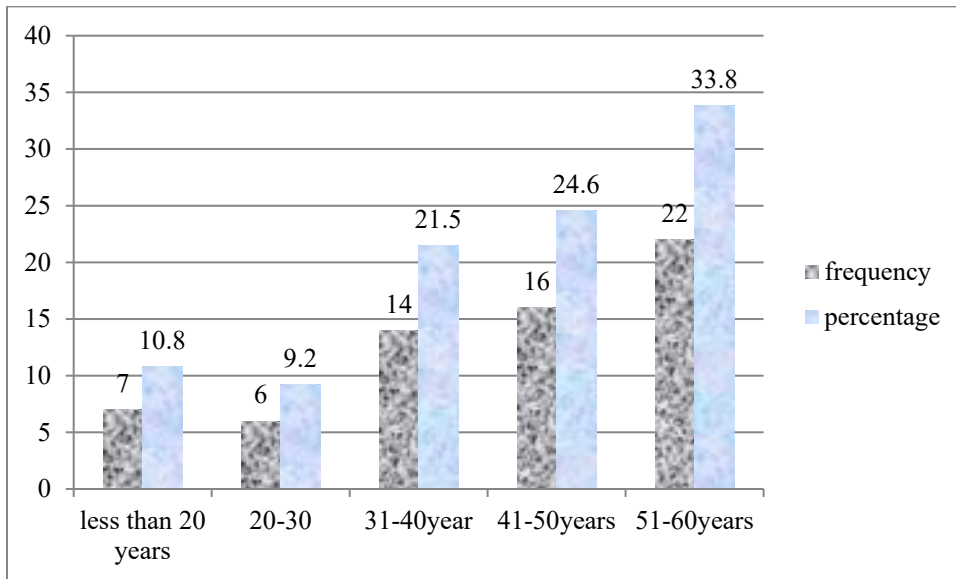


Figure 4.4: Distribution of the Respondents by Age Category

Source: field study, 2017

4.2.6 Duration of Ownership of the Respondents

Most of the respondents were relatively adults who owned houses for about 9 to over 15 years. About more than half (62%) were those who owned houses for long whiles just about a third (38%) owned houses owned houses 5 to 8 years respectively as shown in figure 4.5.

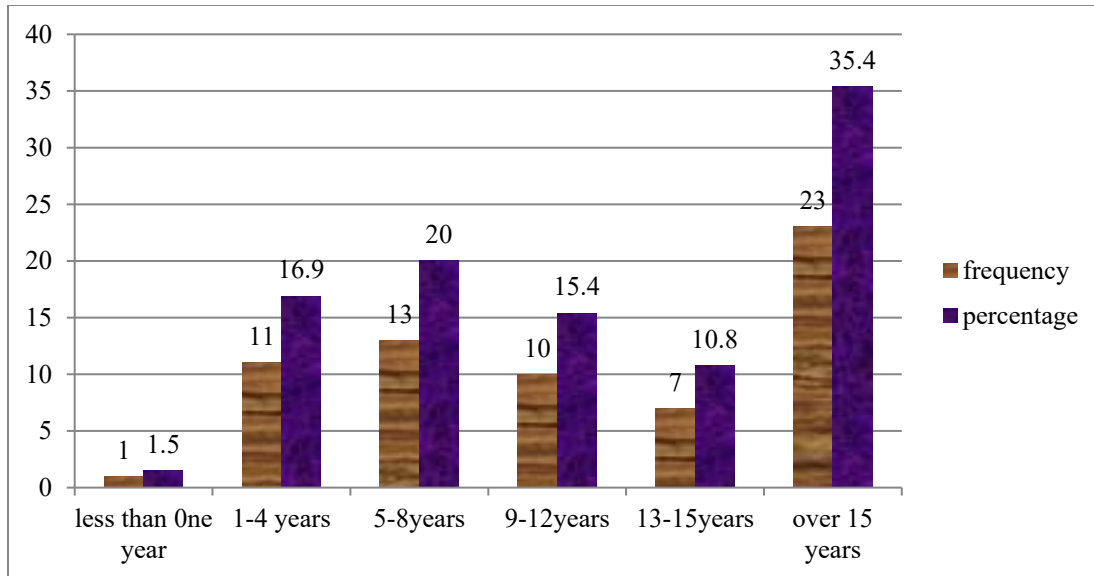


Figure: 4.5 Distributions of the Respondents by Duration of Ownership

Source: field study 2017.

4.3 Level of Compliance

The researcher sought to find out from respondents their view on the level of compliance with the national building regulations and bylaws in selected districts in the upper east region of Ghana. The following were some views expressed by the respondents. From Table 4.2 it is evident that house-owner's responses indicate they do not comply with regulations. This backed by the analysed items on the following relating to compliance:

- i. respondents disagreed that they comply with building regulations and bylaws;
- ii. respondents agreed that there is no strict adherence to building regulations; and,
- iii. respondents disagreed that their building plans were vetted by Town and Country Planning Department and the Assembly prior to approval.

Further Table 4.2, the responses further indicated that building inspectors are lacking in most districts and there is inadequate information on building regulations available to house owners among others. These responses are possible reasons why the level of compliance is low or best described as lack of compliance.

Table 4.2 House- owners' level of compliance

Statement	N=65	Mean	Standard	Comment
		Score	Deviation	
House owners comply with national building regulation	65	1.554	1.302	Disagree
Building regulation is enforced by the district Assemblies	65	2.543	1.332	Disagree
House owners equally comply with building bylaws of District Assemblies	65	1.643	1.132	Disagree
There is no strict adherence to all building regulations.	65	4.252	1,223	Agree
Building inspectors are lacking in most districts.	65	4.335	1.323	Agree
Inadequate survey maps in the districts.	65	3.564	1.211	Agree
No proper coordination between building agencies. E.g. survey, town & country planning	65	3.325	1.202	
There is inadequate information on building regulations available to house owners	65	4.486	1.432	Agree
Physical developments do take place without prior approval from district planning authority.	65	2.453	1.211	
House owners should have knowledge about building Permit	65	4.356	1.344	Agree
Building permit is important prior to building development.	65	2.856	1.321	Uncertain
My building plans are designed by architects.	65	2.664	1.354	Disagree
The town & country planning and the Assembly vetted my building drawing before approval	65	2.066	1.366	Disagree
One must obtain certificate of completion and habitation from the district assembly before moving into residence.	65	1.336	1.232	Disagree

4.4 Key influential Factors

From Table 4.3, the respondents asserted that the under stated are the key factors that influences their level of compliance with the national building regulations and bylaws.

- i. channels to obtain a building permit are too bureaucratic coupled with unnecessary over delayance.
- ii. Ignorance to the L I 1630 with respondents was also identified as well as corrupt and lukewarm attitude of some official responsible for processing building documents.
- iii. It was also highlighted from Table 4.3 that one often has to pay bribe before his or her documents are processed.

Table 4.3 Key Influential Factors

Influential Factors	N	Mean Score	Standard Deviation	Ranking/ comments
Ignorance to building regulations.	65	4.321	1.616	3 rd
Channels to obtain permit are too bureaucratic.	65	4.601	1.045	1 st
Lack of effective communication between building inspectors and clients.	65	1.717	1.273	7 th
Lukewarm attitude of some assembly officials in Charge of processing building documents.	65	2.154	1.707	Disagree 6 th
Over delayance of obtaining building Permit.	65	4.466	1.815	Disagree 2 nd
Departments to process building documents are often not located close to each other.	65	1.108	1.446	8 th
One often have to pay bribe before his/her documents are processed.	65	3.938	1.616	Disagree 4 th
Political interference usually link to documents preparation	65	2.41.5	1.400	5 th Disagree

Scale: = 1 strongly disagree 2 = disagree = 3 neutral 4 = agree 5 = strongly agree Source:Field study, 2017

4.5 Constraints faced by house owners

From Table 4.4, majority of the respondents admitted that there are constraints in their quest to comply with the national building regulations and bylaws from the assemblies. Only about a few of the respondents disagree that there are no constraints in abiding these regulations. The following were revealed:

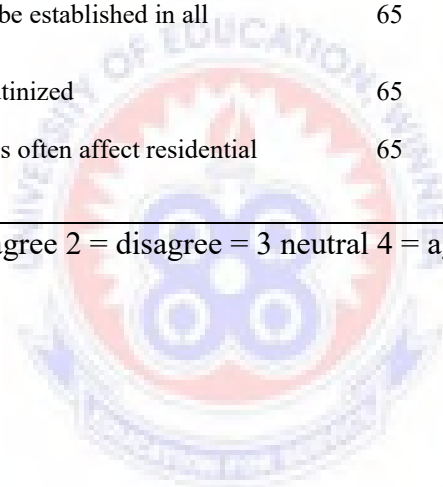
- (i) That the building permits processes is bedeviled with bureaucracy thus hindering the efficiency and the effectiveness of the permit acquisition process. It is also evident from Table 4.4 that respondents confirmed the three district assemblies had no holistic mapping on the ground to facilitate easy positioning of buildings.
- (ii) Finally, issues regarding transparency in permit issuance in the Assemblies were also identified as one of the factors influencing house-owners' propensity to comply with building regulations and bylaws in the study area.

Table: 4.4 Constraints

Constraints Faced by House owners	N=65	Mean Score	Standard Deviation	Ranking/ comment
The process is to bureaucratic	65	4.321	1.772	3rd
Improper positioning of state buildings	65	2.341	1.432	6th
Statutory personnel doing their individual zoning	65	2.243	1.123	8 th Disagree
Lack of a holistic district plans	65	3.66	1.542	4th
Issues regarding transparency in permit issuance in the assemblies	65	4.334	1.654	2nd
The permit process is bedeviled with bureaucracy thus hindering the efficiency and effectiveness of the permit acquisition process	65	4.664	1.553	1st
Lands commissions should be established in all assemblies	65	2.364	1.652	5th
Building plans are well scrutinized	65	2.314	1.453	7 th
Appendages to market stores often affect residential building	65	2.223	1.322	Disagree 9 th Disagree

Scale: = 1 strongly disagree 2 = disagree = 3 neutral 4 = agree 5 = strongly agree

Source: Field study, 2017



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Following the analysis and discussion of the survey data in chapter four, this chapter summarizes the major findings from the study. Based on the obtained results. Conclusions were drawn from house-owners' level of compliance with the National building regulations bylaws, the key factors influencing their propensity to comply with these regulations and bylaws and the constraints they faced in attempt to comply with these regulations and bylaws. Recommendations and suggestions for further study were outlined.

5.2 Summary of Findings

After a careful study and analysis of the results of the study, the following findings were deduced and summarized to enable the reader to get a comprehensive idea of the whole study. The summary of findings is presented under the following themes;

5.2.1 House Owners' Compliance with the Building Regulations and Bylaws

The main findings of study in relation to house- owners' level of compliance with building regulation and bylaws were:

- Majority of house- owners' do not comply with building regulations and bylaws.
- There is no strict adherence to the national building regulations and bylaws. The study also showed that respondents do not equally agree that building permit be issued before development commences.

- Finally, it is evident from Table 4.2 that the respondents also disagree that building plans be vetted by Town and country Planning before approval.

5.2.2 Key Factors Influencing House Owners Propensity to Comply with Building Regulations

- Ignorance to the National building regulations and bylaws with respondents was revealed, corruption and lazy attitude of some officials responsible for processing building documents were also identified.

5.2.3 What are the Constraints to House Owners Compliance with Building Regulations and Bylaws in the Upper East Region?

- Issues regarding transparency in permit issuance in the Assemblies was also highlighted as having an influence on respondent's propensity to comply.
- It was also evident that if the assemblies could have a holistic mapping on the ground it will help Lessen the constraints of house owners.
- The findings showed that the permit process is bedeviled with bureaucracies thus hindering the efficiency and the effectiveness of the permit acquisition process.

5.3 Conclusion

The study aimed at assessing house- owners' level of compliance with the national building regulations and bylaws in some selected municipal and districts assemblies. Three objectives were set based on the objectives, it was realized that, some of the processes and procedures that are currently in operation does not foster avenue for

compliance with building regulation and bylaws in the country. Developers are very much aware of the building laws but enforcement agencies are not in the field to ensure strict compliance. Finally, it was realized that, the process and procedures of the issuance were very bureaucratic.

5.4 Recommendations

Based on the findings and the conclusions drawn, the researcher has formulated the following recommendations to help up-lift the level of compliance with the national building regulations and bylaws in the Upper East Region.

- The Government must institute National Building Commission to have National, Regional and District offices to enforce compliance with building regulations and bylaws with stiffer criminal penalties for none compliance to deter offenders.
- Decentralizations of the lands commission to the municipal and districts levels
- Introduction of Information and Communication Technology. The increase use of ICT in the process would greatly enhance the entire process. Though assemblies' websites much is not being done to incorporate the use of ICT in the processing of building permit and its compliance.
- Finally the situations in the Upper East Region being one of the fast growing Regions in the country, the findings from this Research which is compliance with the national building regulations and bylaws i is applicable to other fast growing Regions and the country as a whole.

5.5 Suggestions for Further Research

- This research was limited to the level of compliance with national building regulations and bylaws. Another research is therefore recommended to unravel the level of permit acquisition by all developers.



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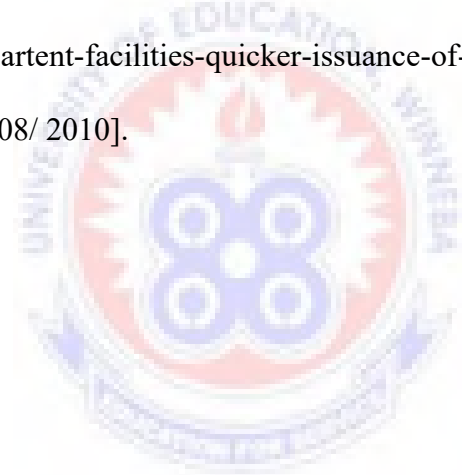
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APPENDIX

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COLLEGE OF TECHNOLOGY EDUCATION

DEPARTMENT OF CONSTRUCTION AND WOOD TECHNOLOGY

SURVEY QUESTIONNAIRE

ASSESSING HOUSEOWNERS LEVEL OF COMPLIANCE WITH THE

NATIONAL BUILDING REGULATIONS AND BYLAWS IN SELECTED

DISTRICTS IN THE UPPER EAST REGION.

Dear Sir/Madam,

This questionnaire forms part of an MTech. Research project which aims to **Assess house owners level compliance with the national building regulations and bylaws in selected Districts in the upper east region.** I would like to invite you to participate in the above project. Completion of the questionnaire is completely voluntary and returning the completed questionnaire will be considered as your consent to participate in the survey. Please you are kindly being asked to respond to this questionnaire frankly as possible as you can. The questionnaire will take you about 5 minutes to complete. I appreciate that you are already busy and that participating in this survey will be another task to add to a busy schedule, but by contributing you will be providing important information. **All data held are purely for research purposes and will be treated as strictly confidential.**

Thank you for your time and valid contribution in advance.

Yours faithfully,

Adapesah Nicholas

Email: nicolynadaps2@gmail.com Mobile-0246224172/0206662764

Part 1: PERSONAL DATA OF RESPONDENTS

1. Please indicate your gender. *Please tick [√] the appropriate option.*

a. Male []

b. Female []

2. What is your level of education? *Please tick [√] the appropriate option.*

a. Tertiary []

b. Secondary []

c. Basic []

3. What is your occupation?

a. Civil servant []

b. public servant []

C. Security service

d. Farmer

e. Business man/woman

f. Others please specify _____

4. What age category do you belong? *Please tick [√] the appropriate option.*

a. Less than 20 years []

b. 20-30 years []

c. 31- 40 years []

d. 41-50 years []

e. 51-60 years []



5. How long have you been a house owner? *Please tick [✓] the appropriate option.*

a. less than 1 years []

b. 1 - 4years []

c. 5 - 8years []

d. 9 - 12years []

e. 13 - 15years []

f. Ove15 years []



Part 2: LEVEL OF COMPLIANCE

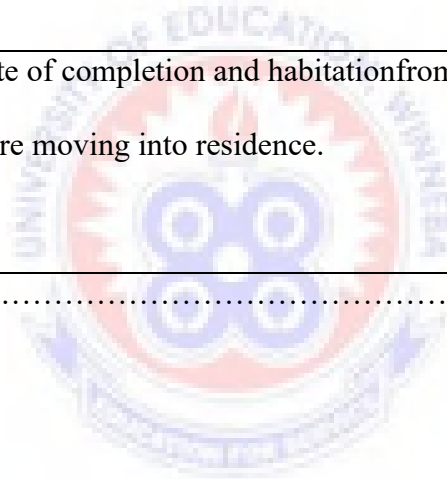
6. How will you rate the following statements in terms of house owners level of compliance to the national building regulations and bylaws. Please use a scale of 1 to 5 where; 1 = strongly disagree, 2 =disagree, 3 =neutral, 4 = agree, 5 = strongly agree.

Please tick [] the appropriate cell.

Compliance level	Rating				
	1	2	3	4	5
House owners comply with national building regulation					
The regulation is enforced by the district Assemblies					
House owners equally with building bylaws of District Assemblies					
There is no strict adherence to all building regulations.					
Building inspectors are lacking in most districts.					
Inadequate survey maps in the districts.					
No proper coordination between building agencies. E.g. survey, town & country planning					
Inadequate information on building rules available to house owners					
Physical developments do take place without prior approval from district planning authority.					
House owners should have knowledge about building Permit					

Building permit is important prior to building development.					
Permit are obtained from the district assemblies.					
Rooms must be of standard dimensions as indicated in the working drawings.					
Building plans are designed by architects.					
The town & country planning should vet drawing before approval					
One must obtain certificate of completion and habitation from the district assembly before moving into residence.					

Others please specify.....



PART 3: KEY FACTORS

7. There is a general assertion that the following are the factors that influence house owners propensity to comply with building regulation.

Please use a scale of 1 to 5 where; 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. Please tick [√] the appropriate cell.

Influential factors	Rating				
	1	2	3	4	5
Ignorance to building regulations.					
Channels to obtain permit are too bureaucratic.					
Lack of effective communication between building inspectors and clients.					
Lukewarm attitude of some assembly officials in Charge of processing building documents.					
Over delayance of obtaining building Permit.					
Departments to process building documents are often not located close to each other.					
One often have to pay bribe before his/her documents are processed.					
Political interference usually link to documents preparation					

Others please specify.....

PART 4: CONSTRAINTS

8. Please in a scale of very important to not very important, indicate the extent to which the following statement are factual about the constraints house owners faced in complying with building regulations and bylaws. Please use a rating scale of 1 to 5 where 1= strongly disagree, 2= disagree, 3 neutral, 4 agree and 5 strongly agree. Please Tick the [√] appropriate cell.

Constraints	Rating				
	1	2	3	4	5
The process is to bureaucratic					
Improper positioning of state buildings					
Statutory personnel doing their individual zoning					
Lack of a holistic district plans					
Issues regarding transparency in permit issuance in the assemblies					
The permit process is bedeviled with bureaucracy thus hindering the efficiency and effectiveness of the permit process.					
Lands commissions should be established in all assemblies					
Building plans are well scrutinized					
Appendages to market stores often affect residential building					

Others please specify.....