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ASSESSING HOUSE-OWNERS' LEVEL OF AWARENESS ON THE NATIONAL BUILDING REGULATIONS, L.I. 1630, IN THE SEKONDI-TAKORADI METROPOLIS.

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ABSTRACT

Ignorance on Planning and Building Regulations significantly accounts for the proliferation of unauthorized buildings in most towns and metropolis in the world. Consequently, this research gives an empirical account on the awareness level of House-owners in Asakae, a suburb of the Sekondi-Takoradi Metropolis, on the National Building Regulations, L.I.1630, and suggests measures to address them. The research objectives were: to assess the awareness of House-owners on the L.I.1630 and; to suggest measures to address them. Pertinent to this research were sections related to Building Permit and Plot Development. Accordingly, 182 House-owners were sampled for the study using and questionnaire survey approach was adopted for the study. Likewise, data generated from the survey was further analyzed, using Relative Importance Index (RII). The findings of the survey indicated that, views expressed by House-owners constituted average RII values of 0.530 and 0.585 on Plot Development and Building Permit respectively. Indicating that, House-owners are not much cognizant with the provisions of the L.I.1630. It is recommended that the Sekondi-Takoradi Metropolitan Assembly should adopt educational campaigns to sensitize its populace on the provisions of the L.I. 1630, specifically on Building Permit and Plot Development. A long term measure is to entrench lessons on the L.I. 1630 in the academic curriculum of schools in the metropolis to curb the level of ignorance. Thus, a generation would be raised who would be well knowledgeable on the provisions of the L.I.1630 and will build right, thus, achieving harmonious spatial development in the Metropolis.

Keywords: Assessing, House-owners , Awareness, Building regulations.

INTRODUCTION

Construction of unauthorized buildings have been attributed to Ignorance on Planning Schemes and Building Regulations (Freiku, 2003; Owusu-Mensah, 2003; Kings-Amadi, 2004, cited in Adjei Mensah, 2010; Graphic Editorial, 2010). Consequently, some stakeholders, notably Chiefs and Landowners, see area and site planning schemes or plans by the Town and Country Planning Authorities, as "foreign" and as such, disregard them and go ahead to demarcate lands anyhow, even to the extent of allocating waterways and reserved areas to developers. As a result, developers have consistently ignored drawings and laid down plans and built haphazardly without recourse to future repercussions (Owusu-Mensah, 2003). Thus this research seeks answers to the questions:

- What is the level of awareness of House-owners on the National Building Regulations of 1996 (L.I.1630)?



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- What suggestive measures should be implemented to address the level of awareness exhibited by House-owners?

THE NATIONAL BUILDING REGULATIONS (L.I.1630) AND UNAUTHORIZED BUILDINGS IN THE SEKONDI-TAKORADI METROPOLIS

Buildings in the metropolis could be placed basically under two main Planning eras, following the advent of the Nation Building Regulations. They are: Indigenous or Traditional Era and Mandatory or Statutory Era. Under the Indigenous Era, buildings were constructed without due diligence to any building regulations, because there were not in existence such regulations. This era dates back as far as the pre-colonial time and shortly after Ghana's independence (Adjei Mensah, 2010). Likewise, under the Statutory Planning Era, it is required that buildings are built in strict accordance with the provisions of the National Building Regulations. Such buildings are expected to follow an orderly pattern which is free from overcrowding and which have adequate accessibility (*ibid.*).

Accordingly, it is mandatory, under the National Building Regulations of 1996, that before any one builds that person should have registered his or her land and based on it have received permit from the Town and Country Planning Department; and once construction of the building starts, all the requirements stipulated in the National Building Regulations should be strictly followed (Republic of Ghana, 1993; Republic of Ghana, 1996).

Accordingly, "Building permits are building development consents granted to any worthy or prospective developer or person by a statutory authority or organizations to construct buildings or related structures in an approved location,; within a set time frame and in line with local or national building regulations" (GhanaDistrict.com, 2006). Thus, a building permit provides the necessary guarantees that a proposed building is wealthy enough to be constructed at the chosen site and suitable for construction. More so, it guarantees that the proposed land on which the building shall be sited is ideal, the material specifications for the building are satisfactory, the general architectural engineering and planning standards have been met, and that in every way they are conducive whether for residential, industrial, commercial, recreational or worship activities(*ibid.*).

Consequently, unauthorized buildings denote: any building which has been constructed without a permit or any building which has been constructed without the conditions incorporated in a permit fully complied with (Republic of Ghana, 1993; Republic of Ghana, 1996; Potsiou and Ioannidis, 2006, cited in Ioannidis *et al.*, 2007). Thus Kahraman *et al.* (2006) further explained that, unauthorized buildings are constructed without authorization, legal bureaucratic sanction and without regular engineering control and checks by the appropriate authority.

Consequently, Adams (2012) reported that, proliferation of unauthorized buildings in the Sekondi-Takoradi Metropolis is assuming alarming heights without recourse to future effects. More so, Owusu-Mensah (2003) argued that, unauthorized buildings are even constructed on access roads, waterways, and other unapproved places. Likewise, developers have consistently ignored laid down schemes and built indiscriminately, resulting in near slums



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situations. Whereas some attribute the blame to the inefficiencies in the operations of the city authorities (*ibid.*); others such as, Adjei Mensah (2010) and Adinyira and Anokye (2013), attribute it to ignorance on the part of developers on Building and Planning Regulations.

Thus the need to carry out this research to empirically ascertain the level of awareness of House-owners in Asakae, a suburb of the Sekondi-Takoradi Metropolis, on the National Building Regulations, L.I.1630, and suggests measures to address them.

Overview of the National Building Regulations (L.I 1630)

The sections of the building regulations reviewed for the study were application of regulations and building plans (Part I) and plot development (Part II).

Application of Regulations and Building Plans

The National Building Regulations applies to the erection, alteration or extension of a building as defined (in the building plan), unless otherwise provided in the Building Regulations of Ghana. More so, the District Planning Authority (DPA) to which plans have been submitted, may in the exercise of its power under section 64 of the Local Government Act, 1993 (Act 462), grant the Building Permit and may attach to the Permit any conditions, with respect to the proposed building or work, that is inconsistent with the regulations. The period of validity of a Building Permit shall ordinarily be five years (Republic of Ghana, 1996).

Accordingly, whenever a person applies for a Building Permit, the DPA shall notify him within 7 days on the receipt of the application and shall within a period of 3 months, notify the applicant whether the application is granted or refused. Otherwise, the applicant, after the expiry of the 3 months, may commence construction on the assumption that the application is acceptable to the DPA (Republic of Ghana, 1996).

Similarly, no construction work shall be covered until it has been inspected and approved by the DPA, otherwise, the DPA may serve a notice requiring the owner to cut into, lay open or pull down as much of the building work as may be necessary to ascertain whether the provisions in the L.I.1630 have been complied with. More so, there shall be issued, respectfully to a building completed to the satisfaction of the DPA, a certificate of completion for habitation or use (Republic of Ghana, 1996).

Plot Development

Under the 1996 National Building regulations (L.I.1630), no building should be erected inside a drain, culvert, or watercourse, under a high tension cable or near a sewer, except that, the DPA has approved the building plans. Furthermore, under section 14 (2), no dwelling house together with its out-buildings, other than block of residential flats, must exceed 80% of the total area of the plot. Boundary and fence walls shall not exceed 2 metres in height. No building shall be allowed to intrude into areas reserved for improvement lines (Republic of Ghana, 1996).

RESEARCH METHODOLOGY

This paper is based on a single case study of Asakae, one of the sub-towns in the Sekondi-Takoradi Metropolis. The strategic location of the town has made it an alternative resident of



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choice to a section of the populace who are desirous of living in prime areas in the Metropolis, such as Takoradi, Anaji and the likes. Asakae was chosen for the study because, it is one particular area that has spectacular number of unauthorized buildings. According to Lai and Ho (2001) and Ahmed and Dinye (2011), unauthorized buildings may cause spatial disorders, obstruct fire escape routes and lead to high casualties in case of fire. Owing to unavailability of most current data on the research population, the research population was based on data from the 2000 Population and Housing Census, obtained from the Western Region Statistical Department, Takoradi. Thus, the research population size (number of houses) was about 693 (Ghana Statistical Service, 2005). Accordingly, houses were used to select House-owners because houses were appropriate avenues through which household heads and House-owners can easily be located (*c.f* Melesse, 2006; Adjei Mensah, 2010; Adinyira and Anokye, 2013).

More so, comprehensive literature was carried out based on the objectives of this research. Questionnaire survey approach was adopted for this research. Questionnaire was administered to House-owners of the study area, to elicit their level of awareness on the L.I.1630. Accordingly, 182 House-owners were sampled for the research using the Fisher *et al.* (1998) formula. The snowball sampling technique was adopted to select House-owners since there was no adequate sampling frame for House-owners (developers) to be selected from.

The House-owners were selected because they were the actual actors or agents whose buildings contravene the provisions of the L.I. 1630. Accordingly, the respondents were asked to rate the extent to which they agree to the statements on the questionnaire, based on a five-point Likert scale, where 1 represented Strongly Disagree, 2 – Disagree, 3 – Undecided or Uncertain, 4 – Agree; and 5 – Strongly Agree. In the analysis of the extent of their agreement to the various statements, in order to ascertain their level of awareness on the National Building Regulations, the Relative Importance Index (RII) was used (*c.f* Fugar and Agyakwah-Baah, 2010). Individual frequencies were multiplied by their corresponding values of factors under each rank of 1-5. The sum was divided by the product of the total number of respondents and the highest figure or integer on the five-point Likert-type scale (5) (*c.f* Fugar and Agyakwah-Baah, 2010; Nkyi, 2012). For a five-point response item, RII produces a value ranging from 0.2 – 1.0 (*c.f* Badu *et al.*, 2013). In the calculation of the Relative Importance Index (RII), the formula below was used (*c.f* Badu *et al.*, 2013):

$$RII = \frac{\sum W}{A * N}$$

Where, *W*: weighting given to each statement by the respondents and ranges from 1 to 5; *A* – Higher response integer (5), and *N* – total number of respondents.

RESULTS AND DISCUSSIONS

According to Adjei Mensah (2010) and a Graphic Editorial (2010), construction of unauthorized buildings occurs due to lack of enlightenment and ignorance of people about Building Regulations. In view of this, 182 House-owners at Asakae were sampled to answer questions



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which were formulated from the National Building Regulations. The questions were categorized under two main headings namely: Awareness on Building Permit, and Awareness on Plot Development, which related to relevant sections of the L.I.1630.

Table 1: Awareness on Building Regulations-Building Permit (Relative Importance Index-RII)/ Average RII value = 0.585

No	BUILDING PERMIT Statement(Variable)	Rating					ΣW	RII	Rank
		1	2	3	4	5			
1	One must be notified on the receipt of his/her permit application by 7 days and decision on his/her permit application by 3 months	8	72	27	4	71	604	0.664	2 nd
2	Anyone who wants to build any structure must inform the Planning Authorities on the date he intend starting	17	89	32	16	28	495	0.544	6 th
3	I can proceed to build if I do not hear of the outcome of my building permit after 3 months	59	42	22	25	34	479	0.526	7 th
4	There is validity period after which my permit expires	6	57	57	8	54	593	0.652	3 rd
5	Every stage of construction must be certified by Authorities before another stage's work commences	45	37	39	14	47	527	0.579	4 th
6	A building completed to the satisfaction of the District Planning Authority would be issued with a certificate of completion for use before you assume occupancy	42	72	24	13	31	465	0.511	9 th
7	Once I have building permit I can choose to construct any building on the land	13	28	41	61	39	631	0.693	1 st
8	Planning Authorities can stop me from building, if I don't have the required land documents	5	101	16	33	27	522	0.574	5 th
9	Approval is needed for extension, modification and additions to buildings	42	65	29	18	28	471	0.518	8 th



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Table 2: Awareness on building regulations-Plot development (Relative Importance Index-RII)/Average RII value =0.530

No	PLOT DEVELOPMENT Statement(Variable)	Rating					ΣW	RII	Rank
		1	2	3	4	5			
1	No site liable to flooding must be built upon without adequate provision for flood control.	38	66	23	24	31	490	0.538	4 th
2	No building should be erected inside/over a drain, culvert, or watercourse, under a high tension cable or near a sewer	17	89	32	16	28	495	0.544	3 rd
3	Boundary walls shall be erected 2 metres from the building in question	39	42	8	36	57	576	0.633	1 st
4	Total floor area of residential buildings must be within 80% of the total area of the plot	42	59	22	25	34	496	0.545	2 nd
5	No building shall be allowed to intrude into areas reserved for improvement lines	71	72	27	4	8	352	0.387	5 th

Awareness of Building Permit

House-owners displayed very low level of awareness on Building Permit at Asakae with average RII value of 0.585. Most of them expressed views that were contrary to the L.I.1630, in relation to the various questions that were asked on Building Permit as shown in Table 1. Accordingly, ranking the variables with respect to the extent of ignorance exhibited by House-owners, the variable, *once I have building permit I can choose to construct any building on the land*, ranked 1st with RII value of 0.693. In addition to this, *one must be notified on the receipt of his/her permit application by 7 days and decision on his/her permit application by 3 months*, ranked 2nd with RII value of 0.664. Ranking 3rd was the variable; *there is validity period after which my permit expires*, with RII value of 0.652.

In the same vein, the variable, *every stage of construction must be certified by Authorities before another stage's work commences* ranked 4th with RII value 0.579. Furthermore, the statement, *planning authorities can stop me from building, if I don't have the required land documents*, ranked 5th with a RII value of 0.574. More so, the statement, *anyone who wants to build any structure must inform the Planning Authorities on the date he intend starting*, ranked 6th with RII value of 0.544. Again, the statement, *I can proceed to build if I do not hear of the outcome of my building permit after 3 months*, ranked 7th with RII value of 0.526.

In addition, the statement, *Approval is needed for extension, modification and additions to buildings*, ranked 8th with RII value of 0.518. Lastly, *a building completed to the satisfaction of the District Planning Authority would be issued with a certificate of completion for use before you assume occupancy*, ranked 9th with RII value of 0.511. The results from Table 1 indicated that, House-owners at Asakae had low level of knowledge with respect to Building Permit. Thus, supporting the observations Adjei Mensah (2010) and Graphic Editorial (2010) that, construction



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of unauthorized buildings occurs due to lack of enlightenment and ignorance of people about building regulations.

Awareness on plot development

The level of awareness of House-owners on plot development at Asakae followed similar pattern as the awareness on Building Permit with average RII value of 0.530. Similarly, most of the answers that the House-owners gave were contrary to the provisions of the National Building Regulations. Accordingly, Table 2 gave a summary of the answers given by respondents, indicating the extent of their agreement and a rank of their level of awareness on Plot development. The L.I.1630 clearly emphasizes that: *Boundary walls shall be erected 2 metres from the building in question*, however, this statement ranked 1st with RII value of 0.633.

In addition to this, the statement, *Total floor area of residential buildings must be within 80% of the total area of the plot* ranked 2nd with RII value of 0.545. Furthermore, the statement, *No building should be erected inside/over a drain, culvert, or watercourse, under a high tension cable or near a sewer* ranked 3rd with RII value of 0.544, while the statement, *No site liable to flooding must be built upon without adequate provision for flood control*, ranked 4th with RII value of 0.538. Accordingly, the statement, *No building shall be allowed to intrude into areas reserved for improvement line* ranked 5th with RII value of 0.387. Accordingly, the distributions of Table 2 indicated that, the level of awareness of House-owners about plot development at Asakae was very low.

In addition to this, it could be concluded that, following the distributions of Tables 1 and 2, the level of awareness on the National Building Regulations (L.I.1630), exhibited by house-owners at Asakae was very low (*c.f* Adjei Mensah, 2010; Adinyira and Anokye, 2013). Again, the finding supported a Graphic Editorial (2010) that, construction of unauthorized buildings occurs due to lack of enlightenment and ignorance of people about the National Building Regulations. Accordingly, it is expedient, that awareness creation be vigorously intensified by the Sekondi-Takoradi Metropolitan Assembly to avert this course.

CONCLUSION

Based on the findings of this paper some measures have been suggested to address the level of ignorance exhibited by House-owners in Asakae. Accordingly, the Sekondi-Takoradi Assembly, in collaboration with Chiefs, Assembly members, Unit committee members and the media should intensify educational campaigns on the provisions of the National Building Regulations with much emphasis on Building Permit and Plot Development. Continual undertaken of educational campaigns will help residents in the Metropolis to be well informed on the provisions of the National Building Regulations. In the long run, to achieve sustainability and harmonious physical development, education on the National Building Regulations should be entrenched in the academic curriculum, at least from Junior High level, to educate the populace.



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This has the implication of raising a new breed of persons who will be knowledgeable in the regulations and abide by them.

Accordingly, this paper concludes that construction of unauthorized buildings is to a greater extent influenced by ignorance of House-owners or developers on the National Building Regulations, thus, policy makers, academics, and local authorities should look into that angle and resort to, among other measures, intensive educational campaigns.

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