POOR MAINTENANCE OF PUBLIC BUILDINGS IN NIGERIA

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ABSTRACT

The maintenance of building which has been relegated to the background is an essential tool to be considered both during and after construction. This study therefore involves identifying, analyzing, as well as proffering solution to the problems of dilapidation in buildings. Building professionals such as the Architects and the builders should be fully involved from design to the completion stage of the project to provide professional advice and to check contractors and defaulters. A good maintenance policy should be put in place so as to prolong the life span of the buildings. Building maintenance is a subject that has to be considered seriously if building is to live up to its expected life span. Field survey and interview was conducted. Based on this the maintenance of buildings was observed as the major problem were design resolution. Lack of funds, response time to maintain and usage were highlighted.

Keywords: Obsolescence, Maintenance and Deterioration in Public Buildings.

INTRODUCTION

The importance of the built environment to individuals and indeed to any organization or even nation cannot be over emphasized because it provides the infrastructural based for all human activities(Adejimi A. 1998).However, for any building to perform its function, it is necessary that they are maintained and kept at their optimal performance level at all times. One important factor needed for the accomplishment of such task is accurate, regular and systematic inspection of such building. Bokini (2007) classified such inspection into two: these are, ongoing which s the type undertaken by the tenant or landlord on regular basis, as the user of the building so as to detect any problem; the second type is the building survey which is within the province of the professional builder; for the fact that building is a complex

product of his professional practice and faults in buildings are in many cases. Also, Adebayo K. (2008) observed that the run Down syndrome which is an attribute of public facilities in Nigeria, due to poor or lack of maintenance of public facilities has been the heels of economic development in the country. Ghalot and Sharma(2006)noted that maintenance of building contributes significantly to the Gross National Product (GNP) of country because efficiency can be related to human, equipment and service thus, completing the cycle of better efficiency and increased production which affect the Gross National Product. Therefore, it is necessary to imbibe the culture of maintenance to preserve and prolong the life span of the existing building. In addition, the research is directed towards the cause, effect of obsolescence and maintenance of public buildings in Nigeria.

AIM AND OBJECTIVES

The aim of this research is to cross examine the lukewarm attitude of the public towards public buildings and infrastructural maintenance and also to identify the shortcomings which militate against the effective maintenance of buildings and facilities to perform its functional requirement.

The objectives of this research are:

I. Increasing awareness to the people

ii. Carrying out research on the subject matter

iii. To find out the reasons behind the nonchalant attitude of builders towards building maintenance.

Primary and secondary data was carried out on the research.

Every building has a unique service life, this is because no two properties having exactly the same use pattern or exposure conditions sooner or later, and obsolete threatens every building. Public buildings and other facilities and programmed designed, operated and maintained to provide shelter and service to meet the needs of its users. Overtime the quality of service defines from its initial level as the facility exhibits the result of normal wear, poor workmanship, and materials. Thus reducing the performance of a output and declining the morale even if the occupant are not directly ,property value may decline due to the increasing needs for more modern facilities to meet changing needs and increased expectations. Cheetham D.W. (1992).

CAUSES OF BUILDING OBSOLESCENCE

Any building or infrastructure grows to become obsolete with time. There arises a host of factors which plays a role either alone or collectively to cause obsolescence over time. There is a host of factors which play some vital role to cause obsolescence, example of these factors are not only conventional such as aging ,wear and tear, but also;

(a)Technological change making existing building unsuitable for modern production processes.

(b)Deterioration of the building's structure and fabric, this reduces its ability to satisfy both the users need and performance requirement. It's also adversely affected the appearance and thus the status of the building.

(c)Change in the industrial base of the economy, with the manufacturing sector shrinking whilst the senile sector in expanding, resultant in modified working practices.

(d)Available useable space inadequate in terms of layout or size e.g. population.

(e) Inflexible building, which is capable of easy adaption to the same or other use because of its restrictive structural configuration.

(f) Legislature/regulations; obsolescence result when there is a change in the requirement or expectation regarding the use of a particular object or idea. The danger of earthquake for instance has persuaded many communities to modify building codes to mitigate the consequence of such a disaster. This in turn has rendered many structures effectively obsolescence since they no longer comply with the most recent safety regulations. Dekker R. (2002).

EFFECT OF OBSOLESCENCE ON BUILDING

Obsolescence in public buildings results in building deterioration.

DETERIORATION IN BUILDINGS

This is a state of disrepair that buildings enter into arising from inadequate maintenance or neglect (Seeley I.H.1979) the consequence of which buildings become defaced from its initial form, in this situation, the building fails to perform its maximum function to the users. Deterioration varies, and ranges from

cracks, decays, fibrous growth and unhygienic environment to total collapse of the structure.

EXAMPLES OF DETERIORATION IN BUILDING

From the forgoing assessment of deterioration in building, it is difficult to estimate the lifespan of the building if reasonable measures are not taken to project and preserve the building. The various factors enumerated below are examples of deterioration of a building, which is another form of dilapidation, has multiple consequences on a building and the users, some of which can be enumerated below;

MOISTURE MOVEMENT

Moisture movement through the materials of which the building was constructed can occur, through the pores of the material. The source of moisture may be due to breaking of services pipes or precipitation on external surface of walls and dampness from the ground on which the building structure stands .However, all materials capable of absorbing water expand as they do so and contract as they dry out. This is termed moisture movement.

Moisture particles in air are deposited on building surface in the form of condensation. The effect of condensation is generally severe on the walls and finishes of kitchen, toilets and bathroom, but with adequate ventilation especially by natural means, the effect can greatly be reduced in all the find effect of both moisture movement and condensation is surface deterioration, this may be noticed by cracking, hacking and peeling away of plaster and subsequence exposure of the building structure fabrics to damage and wear. Champion S. (1991).

CRACKS

A crack may be defined as a thin mark or a dividing line on the surface of an object but which does not separate it into two parts. This on the building surface can be in the form of an indent on the surface of a structural member wall plaster or bricks but not across the thickness. The London department of scientific and industrial research (1965) asserts that cracking occurs whenever the tensile stress in a material exceeds its tensile strength. Most cracking on building is probably due to induced stress arising

from restraint to shrinkage chemical action such s corrosion of steel reinforcement, thermal and moisture movement.
Champion(1991) said in the same way that changes in temperature cause changes in volume, a moisture change in concrete will result into volume change when this is restrained, a stress will develop which leads to two types of crack solitary and patent crack.

UNEQUAL SETTLEMENT OF FOUNDATION

Poor soil condition without adequate compliance with design specification may result to uneven settlement of foundation. The major effect of this is the entire collapse of the building which will cause the client lots of expenses to restore.
Settlement is the gradual and downward movement (sinking) or lateral displacement of soil beneath the building, this movement is initiated by the gradual expulsion of water from soil due to squeezing out of water when soil is loaded by the weight of the building, it is the most usual cause of settlement.

DESTRUCTION TO LIVES AND PROPERTY

The gravity of the deterioration is greatest when it eventually lead to the collapse of the building and such may lead to loss of lives and properties. This effect has a devastating impact on the owner as well as the user and cannot be easily qualified or even quantified.

ENVIRONMENTAL NUISANCE

The mere collapse of the building in environment may indirectly cause social inconvenience to the surrounding by way of road blockage, road deviation, and health hazards e.t.c.

TIME AND ECONOMIC WASTAGE

Time is money. The time taken to reconstruct a building and the amount of money expended is of serious negative impact on the part of the user. The cost of replacement of the deteriorated building cannot be imagined taken into consideration the continuous inflationary trend on the cost of building materials.

BUILDING MAINTENANCE

Maintenance is the act of putting into proper shape, restoration, and the management of a building in order to ensure its durability, stability, and longer lifespan. Ibrahim Y.S. (2010) maintaining a building is an essential aspect of design which completion, construction takes the next stage. This is because hardly will there be a building that is maintained. Although much can be done at the design stage to reduce the amount of subsequent maintenance works. All element of building deteriorate at a greater or lesser rate depending on materials and estimated 30% of all maintenance work come out a building could have been avoided at the design stage and during construction (Bokini's S.K. (2007).

CLASSIFICATION OF BUILDING MAINTENANCE

Plant preventive maintenance

This is carried out within the life span of the building does not fall. Arayela O.& Adams J.J.(2011) proposed that maintenance a planning should start at the design of any building project and should from there be continued throughout the life of the project and should from there be continued throughout the lifespan of the project to maintain their optimum operation from the point of insulation or completion under this planned preventive maintenance. Speight B.A.(2000).

Planned corrective maintenance

The planned corrective maintenance is work coined out in order to restore facility into operation or to an acceptable standard. The basic is that they are all planned.

Unplanned maintenance

This is work carried out arising from unexpected failure or breakdown or damage of a facility due to external cause. The cause if this breakdown is beyond the control facility manager.

NATURE AND MAINTENANCE

Maintenance work as three basic concepts namely;

SERVICING

This is done on a daily basis e.g. cleaning windows, painting, repairing and polishing carpet at regular interval.

RECTIFICATION

Realized at early stage in life of a building, they are faults which may arise due to non suitability of the component of a building due to damage in transit.

REPLACEMENT

Building element is made up of different materials which may decay at anytime. So replacement is done according to life span and sometimes for aesthetic purpose. Replacement occurs either by adding to or removing some element. It could also happen in the case of material disaster.

RENOVATION

This is carried out to restore a structure to service or equipment by a major overhaul of the structure to the original design and specification. It could also be necessary when you want to improve on the original design. Renovation work may be adding functional requirement to the structure.

CONCLUSION

We all have a role to play as the problem affects us all. There arises the need to discipline ourselves in all areas and aspects towards a better and meaningful environmental development, not only in creating it, but also maintaining it in order .It is only when quality decisions are made that the design of any building can have less maintenance and then create a homogeneous environment that will be useful for human settlement. The achievement of this great concern to building industry were good quality of workmanship should be insisted. Similarly the organization and builders should pay more attention to maintenance rather than huge sum of money on buildings structures whereas that amount could have been useful for the maintenance of such already existing projects. Supervision of all projects is highly recommended to ensure the use of quality materials, good and better workmanship; this will prevent having

newly constructed project showing signs and defect even before occupying it.

RECOMMENDATIONS

Adequate supervision of public building projects is highly recommended to ensure the use of quality materials, good and better workmanship; this will prevent having newly constructed project showing signs of defect even before occupying it.

At design stage a workable maintenance program should be provided by the builder. At the construction stage of the project the building standard should be adhered as that would reduce the amount of maintenance. Proper drainage should be provided to take the problem of surface water within the facility.

Each primary school should have a maintaining unit or department and provision of adequate finance and well supervised in terms of maintenance of public school towards greater Nigeria.

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