

THE NIGERIAN INSTITUTE OF BUILDING

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Mr. O. I. Fagbenle,
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Ijebu-Jesha
Osun State

Dear Sir,

PRESENTATION OF TECHNICAL PAPER

This is to inform you that your technical paper title " **MAINTENANCE TASK AS A RESPONSIBILITY OF A PROFESSIONAL BUILDER**" has been accepted for presentation during our forth coming 28th Annual Conference/General Meeting scheduled to hold between 22nd - 25th July, 1998 at Lagos Airport Hotel, Ikeja - Lagos.

Thank you.

Yours sincerely,

DR. AYO BAMISILE
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MAINTENANCE TASK AS A RESPONSIBILITY OF A PROFESSIONAL BUILDER

BY

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**BEING THE TEXT OF AN INVITED PAPER PRESENTED AT THE 28TH ANNUAL
CONFERENCE/GENERAL MEETING OF THE NIGERIAN INSTITUTE OF BUILDING ON
"BUILDING MAINTENANCE IN NIGERIA"**

HELD AT

LAGOS AIRPORT HOTEL, IKEJA

ON

22ND - 25TH JULY, 1998

ABSTRACT

This paper begins with a broad definition of building maintenance and an overview of its importance to all and sundry.

It lays emphasis on the works and services department/maintenance sections of some of government establishments in three key states of the south western part of the country namely Oyo, Osun and Ondo. This is also done in such a way that it cuts across all the three arms of government - Federal, State and Local via the distribution of questionnaires and direct contact with the Directors of Works and Services and heads of maintenance units of these ministries/parastatals. Fifteen government establishments were covered in each state thereby bringing the total number to forty-five and this is with a view to finding the adequacy of representation of Professional Builders in the Works and Services/Maintenance sections of these parastatals as well as the negative effect which the absence of these key professionals (Builders) might bring to the development of maintenance culture in the country.

The results indicated that 25 out of the 45 Directors of Works and Services interviewed representing 55.56% are civil engineers while only 4 representing 8.89% are builders and out of these just two are Corporate Members of NIOB. On the other hand, 16 out of 45 heads of departments of the maintenance units representing 35.55% are civil engineers while 8 are builders and out of these only three are Corporate Members.

This paper then concludes by offering suggestion on what the government, builders' registration council and the professional builders themselves can do so as to give maintenance work the priority it deserves as well as having adequate representation of professional builders in the government establishments.

INTRODUCTION

It would be recalled that a few years ago when Nigeria as a country was economically stable and the currency was still very strong, it was the normal practice of the inhabitants to change their belongings like electronics, cars, etc as often as possible simply because of their cheapness and easy availability. Today, reverse has been the case as they are now being compelled to keep their goods which have been long overdue for replacement because the cost of purchasing a new one is pretty more than what an average man can afford.

The same economic setback has not left behind construction inputs whose prices are rapidly going up everyday. Hence, everybody has now being taught the hard lesson of embracing maintenance culture of maintaining their old goods and houses.

Maintenance in an ordinary sense is an act of maintaining or taking care of any object to keep it in a functioning order (*Fagbenle* 1993). Technologically speaking, according to *Oyefeko* (1990), maintenance could be defined as the continuous upkeeps, in good condition, of a system to achieve operational reliability with maximum designed output result, endurance or stability.

This also applies to building maintenance and is defined as

"The combination of all technical and associated administrative actions intended to retain an item in, or restore it to a state in which it can perform its required function".

Maintenance can also be defined as the work undertaken in order to keep or restore every part of a building, its services and surroundings or every facility to an acceptable standard. Thus a child delivered into a family is nurtured daily with food, water etc, to keep him healthy (in growth). If at any period of time his normal actions are disturbed, a physician is invited to check what has gone wrong and after the physician has checked him up, drugs will then be prescribed for him to ensure that he comes to his normal function.

It can be seen here that the child was "maintained" by the nursing mother before he fell sick but when the child was down with illness, a physician (an expert) was invited because his situation at that material time was beyond the nursing mother.

Two clear situations can therefore be seen here.

1. Ordinary maintenance to ensure continuity
2. Major maintenance to restore object to normal function after break-down.

This description can be linked with building maintenance but unfortunately in most industries, the maintenance expert enjoys all too little status and authority from the government and the populace and one also finds out that the rightful professionals are not found in the system. It is therefore the task of this study to investigate the adequacy of representation of professional builders in the Works and Services/Maintenance sections of our various establishments.

PREVIOUS STUDIES

The nature and peculiarities of building maintenance have been deeply examined by various authors. According to *Seely* (1987), B.S 3811 recognises seven broad categories of building maintenance which are planned maintenance, Unplanned maintenance, Preventive maintenance, Corrective maintenance, Emergency maintenance, conditioned-based maintenance and Scheduled maintenance. He further classified maintenance into three separate components, namely: servicing, Rectification and Replacement. This replacement strategy has been further categorised into four types by *IKPO* (1993) and *Fagbenle* (1993). They are Block replacement which depends on the policy of individuals or firms and where a specified time is normally set aside for total replacement and this will be adhered to whether the building or component is defective or not before the specified time; optional replacement which is similar to age replacement except that if the building or part of the services is still sound, it will be left until it is defective and lastly, Group replacement where if one component is defective, every item there will be replaced. *Amusan* (1993) in his own study identified some of the general causes of maintenance works as bad workmanship or poor use of materials, errors in design and specification, normal wear and tear, abuse and damage, neglect, ignorance, poor usage and mistakes. *Sani* (1993) in his own contribution submitted that a number of case studies in the United Kingdom and Nigeria have shown that about one-third of maintenance work on buildings could have been averted if sufficient care had been taken at the design stage and during construction.

In his study on the effectiveness of technical and commercial management of a construction company's plant fleet, *Oyewande* (1990), while illustrating with figures, relates the effect of cost to the level of maintenance and concluded that at a point in time, the cost of providing the maintenance service will definitely exceed the down-time costs of the building or plant. He opined further that to effectively control the cost, there is the need for maintenance budget relating to the running of maintenance work.

To be included in the labour costs, fuel and oil, spares and overheads and all these are regarded as direct costs while the indirect costs will be the breakdown production time loses.

No literature has however revealed any work on the adequacy of representation of professional builders in the maintenance sections of government establishments especially in the south western region of the country.

DATA COLLECTION

The research findings were spread round the works and services departments/maintenance sections of some of the government establishments in such a way that the three arms of government - Federal, State and Local were covered. Three states namely Oyo, Ogun and Ondo were taken as case studies for proper accountability and reasonable conclusion. The interview/questionnaire distribution cut across Ministries of Works and Housing, General Hospitals, Teaching Hospitals, Local Governments and Institutions of Higher Learning. Fifteen government establishments were visited in each State thereby bringing the total to forty-five. In all, ninety questionnaires were distributed to the various directors of works and services and the officers manning the maintenance sections of these establishments.

RESULTS AND DISCUSSIONS

The data and their Analysis.

TABLE 1: DISCIPLINES OF DIRECTORS OF WORKS AND SERVICES DEPARTMENTS

DISCIPLINE	NO OF RESPONDENT	% RESPONDENT	ANGLE REPRESENTED BY EACH SECTOR
Civil Engineering	25	55.56%	200 ^o
Electrical Engineering	0	0%	0 ^o
Mechanical Engineering	1	2.22%	8 ^o
Building	4	8.89%	32 ^o
Town and Regional Planning	7	15.56%	56 ^o
Others	8	17.77%	64 ^o

TABLE 2: DISCIPLINE OF THE HEAD OF MAINTENANCE SECTION IN EACH ESTABLISHMENT

DISCIPLINE	NO OF RESPONDENT	% RESPONDENT	ANGLE REPRESENTED BY EACH SECTOR
Civil Engineering related line	16	35.55%	128°
Electrical Engineering related line	6	13.33%	48°
Mechanical Engineering related line	8	17.78%	64°
Building related line	8	17.78%	64°
Town and Regional Planning related line	3	6.67%	24°
Others	4	8.89%	32°

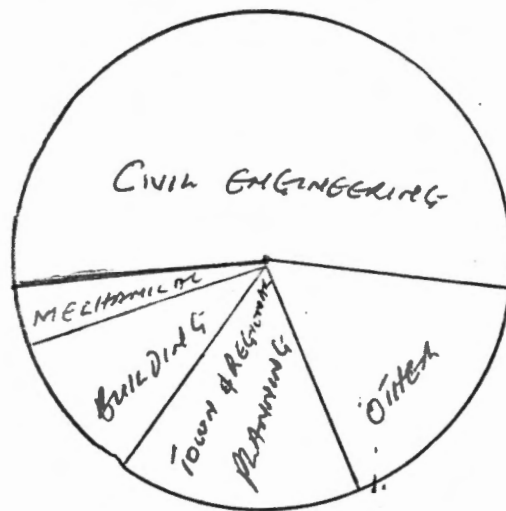


Figure 1: A pie chart representing the Disciplines of Directors of Works and Services Departments.

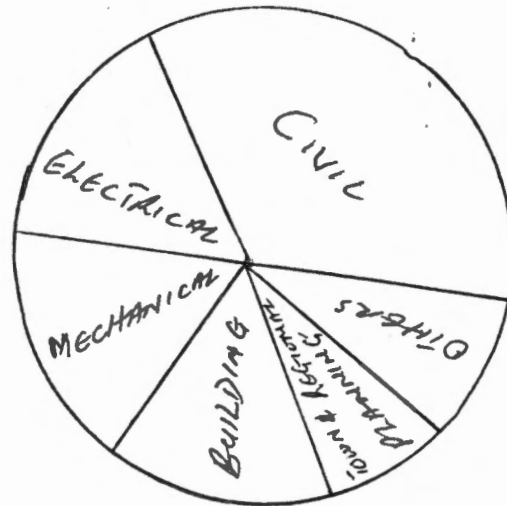


Figure 2: A pie chart representing the Disciplines of the Heads of Maintenance Sections in each Establishment

TABLE 3: STAFF STRENGTH (MAINLY MAINTENANCE SECTION)

STAFF STRENGTH	NO OF RESPONDENTS	% RESPONDENTS
None	0	0
1 - 4	10	11.11%
5 - 8	55	61.11%
9 - 12	15	16.67%
13 and above	10	11.11%

TABLE 4: METHOD OF PERSONNEL RECRUITMENT

STAFFING METHOD	NO.OF RESPONDENT	% OF RESPONDENTS
Open Advertisement in the dailies	18	20%
Open Advertisement in the dailies coupled with connection	0	0%
Screening direct from Institutions	0	0%
Through Labour Office	50	55.56%
Through Training School	0	0%
Internal Recruitment	22	24.44%

Information from Table 1 indicates that 8.89% of the Directors of Works and Services in the various government establishments surveyed specialised in building profession while a whopping number of 55.56% did civil engineering. Also, figure 1 reveals that civil engineering field takes the largest angular sector of 200° while building profession occupying only 32° . Another information which was gathered from some of the respondents revealed that most of the government establishments normally attach conditions that favour engineers in their advertisement for the post of Directors of Works and Services.

Table 2 shows that only 17.78% of the maintenance officers actually tends towards building field. In other words, out of the forty-five establishments covered, only eight heads of the maintenance sections specialises in building related line. This is also represented in the pie chart shown in Figure 2 with building related line having 64° angular sector while civil engineering related line takes the largest angular sector of 128° .

Table 3 has also pointed to the fact that more than 60% of the maintenance sections have staff strength of between 4 and 9. This further confirmed the information gathered from the oral interview that most of the maintenance departments are understaffed.

Table 4 clearly reveals that more than 50% of the Works and Services/Maintenance sections have their personnel staffing through labour offices while about 25% staffed their organisations through internal recruitment.

CONCLUSION AND RECOMMENDATION

Judging from the analysis of the data collected, it can be rightly said that the impact of professional builders has not been so much felt in the maintenance/work departments of the various government establishments. If the information gathered from the oral interview and the questionnaires is anything to go by, it implies that both the Council of Registered Builders of Nigeria (CORBON) and The Nigerian Institute of Building (NIOB) have major roles to play in correcting the impression from the "top" so that conditions for selecting capable men to Head Works and Maintenance Departments of any government establishment should not be made to favour engineers alone.

It is not surprising to see from the information gathered from the questionnaires that some of the maintenance jobs with the inclusion of building jobs are contracted out. Though, many of them attributed this to urgency of the work at that material time; still want to believe that complexity of the job normally accounts so much for this and in confident that this problem can be greatly reduced, if not

eliminated provided that a round peg is put into a round hole. In other words, the maintenance departments need the headship of people who are well trained in that aspect. That is, building maintenance task is a responsibility of professional builders.

Moreover, there must be more positive response towards maintenance culture/jobs from the professional builders. This is limited not only to government parastatals but also to both personal properties and private companies because experience has shown that many qualified builders prefer to go into construction and a few go into academics. Even a few who find their ways into government establishments prefer to be in-charge of construction works to maintenance units as this was revealed during my visits to the establishments.

Towards effective maintenance of building and its services, the following recommendations are hereby given.

1. The government at federal, state and local levels should start the enlightenment campaign to the people about the danger arising from lack of maintenance of building and its services.
2. The head of the maintenance unit or department must be accorded the appropriate status - not only this, management must also give him adequate and commensurate recognition.
3. Professional builders should also be allowed to head the works and services departments of various government establishments and should not be limited only to engineers.
4. Professional builders are advised to show more positive response towards maintenance culture/jobs by spreading round the maintenance works departments of the various government establishments.
5. There must be a maintenance policy - not a static policy but a living one. This policy should state clearly management thinking, attitude and decisions on preventive maintenance, repairs and replacement of building components.
6. The designers should give priority attention to the problems of future maintenance during the designs stage.

REFERENCES:

1. Amusa, J. O. The role of Design and Construction Defects in Maintenance. Paper presented at the National Seminar on strategies for maintenance of buildings and infrastructures held at Abeokuta. Organised by the Nigerian Institute of Building, April,1993.
2. Fagbenle, O. I. Organising for Effective Maintenance. Paper presented at a training seminar for members of Jaycée Club, Kongi Lom, Ibadan and held at Royalty Restaurant, Bodija, Ibadan, April,1993.
3. Fagbenle, O. I. The Need for Maintenance Culture of Buildings in a Depressed Economy. Paper sent for publication in the Builders' Magazine, July,1996.
4. Ikpo, I. J. Copying with Management problem in the construction industry. Proceedings of the National Seminar held on Effective Contract Management in the Construction Industry". Organised by NIOB and held at Lagos Sheraton Hotel, Ikeja. August,1991.
5. Oyefeko, S. T. The role of maintenance culture of Buildings in the Economic Development of Nigeria. Journal of Nigerian Institute of Building, Vol. 1 No.2 Sept.,1990.
6. Oyewande, B. The Effectiveness of Technical and Commercial Management of a Construction Company's Plant Fleet. Journal of Nigerian Institute of Building, Vol.1 No. 2. September,1990.
7. Sani, H. Procedure for carrying out maintenance works. Paper presented at the National Seminar on strategies for maintenance of buildings and infrastructure. organised by the Nigerian Institute of Building and held at Abeokuta, April,1993.
8. Seeley, I. H. Building Maintenance. Macmillan, 2nd Edition, 1987.