

Work has not been carried out in order to identify the frequency where the problem is most serious. It is known that sound absorption by a material is frequency dependent. The octave or third-octave analysis, thus, can guide the choice of absorptive materials for efficiency in that frequency bands where the noise occurs with greater severity.

The general character of the spectrum obtained from the two measuring stations is more or less identical. They show that the dB(A) levels in the octave bands are above the allowable level of 90 dB(A) in the frequency ranging from 500 to 8000 Hz. At other frequencies the values indicated are below the allowable level.

In one particular spectral band (630-5000 Hz), the dB(A) values tend to be higher than the spot value of 90 dB(A) and by the 31.5 Hz band the dB(A) values are even higher. This indicates that noise problem is beyond the allowable limits in certain frequency bands and not in the entire available frequency spectrum. This indicates that noise control measures may be worked out with particular reference to the relevant frequencies.

BUILDING CONSTRUCTION REGULATIONS 1984 — AN EVALUATION

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The construction industry in Bangladesh has been virtually free from encumbrances of regulations and legislations. The East Bengal Building Construction Act 1952 is too elementary to be of any real value. The bye-laws framed by virtue of the powers vested by the Act are illconceived and arbitrary. Architects, planners and concerned citizens have long bemoaned this state of affair. A recent flicker of hope ended in smoke. The Building Construction Regulations (BCR) 1984 published and formulated by the Ministry of

Introduction

Where direction of urban growth depends on numerous individual actions taken without reference to community objectives or what others are doing, urban planning is a frustrating process. While it is generally accepted that we cannot design cities, we can structure or organise it and possibly design parts of it. Master Planning, Zoning and Building Regulations can be used either in combination or separately to structure and guide city growth.

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Works does not merit better credit than the one it replaces. This critique is in no way intended to detract from the sincerity of the public officials who have sought to change for the better the use of our scarce resource — the land. Much hard work and energy have gone into it. But to what purpose? Will the new set of regulations promote a desirable environment? This is the bottom line; the most critical question.

Regulatory Measures

Construction regulatory measures bear strongly on the physical configuration. In the extreme regulations "do actually design the environment." (1) The banality and dullness of residential and commercial areas in Chandigarh are a function of uninspiring and over-zealous regulations. (2) The setback regulations of New York (1916) changed tall buildings from straight towers to pyramidal mass. (3) Of necessity the visualization of the physical environment is a pre-requisite to formulation of building regulations. What physical forms should be encouraged? Western philosophy of development, colonial pattern of land subdivision, and the alien concepts of health, safety, and general welfare have long dominated our ideas and actions. Can it be that our culture; sense of community; and way of life as manifest in our physical environment are inadequate and devoid of merit? Can we in honesty turn our backs on the past as if it never existed? When conscientious thinkers and experts of the west are extolling the virtues of our indigenous physical environment, we are bent on either destroying it or writing obituary to it. Wholesome environment as perceived by planners, designers or experts is not the same as conceived by the users of the environment. That experts understand the needs and aspirations of the users better than the users themselves is no longer acceptable. Given the chance, the user can make positive contribution towards guiding and managing environmental growth. There are increasing evidence in support of this contention. The planning of Sri Ampang, a squatter settlement in Kuala Lumpur, Malaysia, was done — and done quite well — entirely by the settlers themselves. (4) The positive contributions of the users to the planning and design process is well documented by Jane Jacobs(5) and Christopher Alexander (6). Decisions at any scale have a better chance of success when based on users' perception of the image of the environment. (7) Regulatory measures framed in isolation of the community objectives, breed suspicion and alienation towards the authority. With the growing capability of the disadvantaged to assert themselves planning process assumes the same importance as the outcome. Gone are the days of planning in secrecy. This is recognised even in the Second Five Year Plan. Admittedly there are no easy prescription of doing this, nor can a process be identified and said, 'this is how it is done'. Methodology is useful only within a frame of reference. It loses much of its validity with the change of context. Techniques useful in a developed country may not be effective in Bangladesh. Methodology has to grow from the contextual conditions of culture, society, institutions and economy. There is no 'pure' approach in planning — perhaps the best approach is a 'hybrid' one. (8) Tools such as seminars, surveys, interviews, and workshops may be useful in obtaining community inputs. Information may also be obtained from formal studies on behaviour and attitudes of the users.

Building Construction Regulations 1984

Only on incorporation of the felt community needs can regulatory measures guide an environment to a 'desirable' state. The Building Construction Regulations (BCR) 1984 will not promote a 'desirable' environment. It is not in its nature to do so. The regulations are negative and passive in the sense that they seek to prevent the 'undesirable' but are not designed to encourage the 'desirable' qualities of an environment. Even a cursory glance reveals that the regulations are based on illusory concepts of health, safety, morals and general welfare. There has been no attempt at understanding our environment and culture or feeling the pulse of our people. The message is loud and clear. The regulations are inspired by an alien spatial concept but without the devotion and loyalty needed to translate the concept to reality. The mandatory setbacks varying with size of plots and arbitrary but uniform building coverage reinforce the view. Even on the improbable assumption that the regulations have well conceived deterministic back-up study, one fails to see the wisdom behind many of them. It is beyond the scope of this short paper to touch on all the points of concern but a few obvious examples will clearly show the points missed.

Setbacks

The setback regulations suffer from absence of qualification. Setbacks have little relevance to environmental quality if height or floor area ratio (FAR) is not specified. Where light, air, and privacy are the aim (which I presume to be so) distance sufficient for light, air and privacy between two one storey buildings cannot be effective when the number of storeys increase. In mixed-use areas too, almost the same setback is prescribed without reference to the nature and the type of use. Will a setback of 1.5 meter or 4.5 meter from the centre of the road, whichever is more, as required for commercial plots, make commercial areas any better than they are now. Setback regulations alone cannot provide a congenial physical environment. Dhaka itself is a testimony to the statement. Form and configuration of the old and the newly emerging commercial areas in Dhaka are an eyesore to a trained eye. Squeezing lots with setback lines wastes land and results in an uniform building location on each lot. This uniformity gives a monotonous 'dentelated' effect as it is repeated down the street. The relation of setbacks to health, and welfare is quite obscure. The use of performance standards referring to access, space, privacy, maintenance and view will permit the abandonment of setbacks without risking substandard arrangement.(9)

Garage and Porch

How does a direct entry to the garage from the road hamper an environment? Perhaps backing into the road may be 'undesirable' but can this not happen in other ways? Even in countries with established tradition of regulatory controls direct entry into garage from road is allowed. How does one accommodate a garage or a porch within a height

of only 2.5 meters (i.e. 8'-2") from the road elevation? It is common knowledge that road elevation gradually increases in Bangladesh. Finished Ground Level (FGL) of any lot has to be above the Road Level (RL). The adverse consequence of keeping the FGL at the RL or even 6" above the RL is clear in many places of Dhanmondi Residential Area. Even if the FGL is raised to 9" (which too may be inadequate) above RL we are left with only 7'-5" to accommodate the plinth, the roof slab, lime terracing, and the parapet. Allowing 3" for garage plinth, 4" for roof slab, 3" for lime terracing and 3" for parapet we are left with only 6'-4" clearance. This falls short of even the minimum height specified for garage, not to mention the aesthetic and psychological trauma of such a low height. Can a 6'-4" high entry porch of an otherwise lavish house, be considered appropriate? The only practical implication of such an unrealistic regulation is tacit violations which have already begun.

Car Park

Parking in our commercial area is conspicuous by its absence. During office hours almost half the road is occupied by cars alone. Parking is done without respect for rules or other users of the road. BCR 1984 mandates one parking stall for every 20 users in offices, cinema halls, shopping centres, auditoriums and indoor facilities. Without going into the controversy on the adequacy of the ratio, it may suffice dealing with the anomaly alone. Parking for office, shopping and other activities that do not have fixed seating capacity, is conventionally related to square footage of built-up area. Many regulations even provide for a progressive ratio. (10) Ratio aside, BCR 1984 sets mutually contradictory parking standards. Section [20] specifies a parking area equal to the plinth area for commercial buildings five-storey and above. This seems to imply that for commercial buildings below five storey no parking will be required. How does one reconcile with two standards in the same set of regulations. BCR 1984 erroneously assumes same car ownership throughout Bangladesh. It does not need an expert to see the futility and wastage involved in providing across the board parking standard for all urban areas of Bangladesh. BCR mandates parking requirement but is silent on stall dimensions, ramp gradients and other elements that are sine qua non of parking regulations.

Discrimination

Regulatory measures should avoid discriminating against individual property owners and to relieve individual hardship, must provide for variance from any particular rule. Consequently regulations tend to be generous and non-controversial except where legislators decide that sufficient and clear public purpose exists for imposition of strong control. (11) This is an established practice necessary to maintain justice and fairplay. But BCR 1984 is biased towards certain property owners and tends to perpetuate injustice. Section [15] of the BCR categorically states that no approval for construction of buildings will be given where road widths are less than 3.5 and 4.75 meters in high and low density areas respectively. Notwithstanding the controversy on density, should property owners be penalised

for no fault of their own? The Town Improvement Act 1953 provides [Section 72 (4)] for compensation or compulsory acquisition in case of refusal to grant approval to a private scheme for development. Will this not over-burden an already impoverished authority? How was the magic number 3.5 and 4.75 achieved? On what criteria is a road width of 3.5 meters adequate for a high density area but not so for a low density one. Instances may be cited where roads below the minimum specified width were constructed by the authority. Kachu Khet in Dhaka Cantonment has many such roads constructed by the Dhaka Cantonment Board.

Authorised Officer

BCR 1984 requires that certain types of buildings be designed by professionals. This is encouraging but there is a darker side of it. No eligibility requirement is laid down for the 'authorised officers', who will approve or reject the design. In accordance to the Town Improvement Act 1953 an authorised officer may be any official nominated by the government. If past practice is any indicator, an authorised officer may even be a person not competent enough to design. To put it in mild terms, it is a professional affront to submit ones design to examination by a person of doubtful competence. In the interest of the public and the professionals the minimum requisite qualifications for an 'authorised officer' must be spelled out.

Conclusion

Bangladesh Construction Regulation 1984, like its predecessor, will not achieve anything significant. It is weak and inadequate to foster even the spatial concept that has inspired and nursed it. Based on regulatory concept originated and developed in the west, BCR 1984 takes a very narrow view of controls. The concept is ill-suited to our context of urban development. Using the environment of the west as model will not take us far. It is not self-evident that urban controls should be closely adjusted to the present social pattern and preference. Nor should the social life and our indigenous urban pattern and form be completely disrupted to fit in what the planners and urban designers may believe to be the inevitable future trend. A balance between the two points of view appears to offer the prospect of a viable policy for the present.

The path to devising regulatory controls is painstaking. It requires knowledge, skill, creativity and above all understanding and appreciation of the community needs and desires. There are no room for whims; there are no short cuts. Regulations designed to prevent the 'undesirable' cannot promote the 'desirable'. Both the carrot and the stick have to be used.

Regulations should aim to preserve, control and encourage sufficiently the activities, forms and qualities that give life and character to our environment. Or else the bland, monotonous, and sterile qualities of strictly regulated environment will overtake us. Lost for ever will be the gaiety, colour, and the lively mix of activities for which our environments are known.

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