

DISCREPANCY IN REGULATORY PROVISIONS AND PRACTICES – THE DESIGN OF PUBLIC BUILDINGS IN LAHORE, PAKISTAN

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Abstract

Lack of clarity in building regulations and associated byelaws results in poor quality of building design. This is the case, particularly in Lahore, where the quality of public buildings is compromised along these dimensions namely, Building Environment, Building Comfort and Building Function which impacts both users and neighbourhoods. Unfortunately, such public buildings include as sensitive buildings as hospitals, hostels, and family homes. This study produces an account of implications of the planning approval process and practice of erecting public buildings by public and private developers in Lahore. The entailing objectives are, firstly, to review and analyze regulatory provisions and prevailing practices of erecting public buildings in the city. Secondly, to carry out non technical / social evaluation of performance of public buildings by end-user. and, thirdly, to consolidate the technical views of the concerned officials regarding regulations/byelaws and their implementation. A mixed method approach (comprising both quantitative and qualitative) is applied to capture and analyze data collected from the identified target groups. The study establishes that the building regulations/byelaws for the public buildings are not sufficient as well as generic in nature, therefore seeking enhancement in terms of categorical specification. There should be Additional regulations/byelaws also need to be devised and introduced which consider types, purpose, and activity levels in public buildings. On the other hand, in terms of practice, there is lack of appropriate building and development control, when it comes down to the erection of public buildings. This results in low satisfaction of the end-user/occupant and the general public, despite the building is for the public. Further research areas are also indicated which can attract interest of a diverse range of researchers, practitioners, and planners related to the construction and wider built environments.

Keywords: building bylaws, building performance evaluation, local planning authorities (LPAs), planning permission, public buildings.

INTRODUCTION

Background

Any person who desire to undertake a construction activity (new construction as well as addition/ alteration to existing structures), is required to obtain prior approval from the relevant authority before embarking on the same. Especially for the buildings which are meant to facilitate the public, it is imperative that they are designed in a manner to provide the buildings and spaces that fit for their purpose. To provide the public buildings which are safe, healthy and convenient to user, the design of buildings should be appropriate. In Lahore (which is the second biggest city of Pakistan) public buildings which are erected either by the public or private developers within the jurisdiction of LDA (Lahore Development Authority) has to be erected after the approval of building plans from LDA to ensure aforesaid requirements are met. This is in line with the regulatory provisions of Lahore Development Authority Act 1975 which stipulates, “Every prospective builder intending to erect or re-erect a building shall submit an application in writing for permission to carry out the work”.

Problemization and research aim

This research study reveals that the building regulations and associated bylaws are so generic in nature that they lead to an expected demand of all types of building to be meeting the same requirements regardless of specific categories of buildings, ignoring their purpose, scope and extent. The practices regarding implementation of building regulations also reveal that the building plans by the private sector are generally submitted for approval, whereas there is a general tendency that plans of public buildings by public sector neither submitted nor questioned by the associated development authorities. Additionally, public buildings erected in near past (like Jinnah Hospital, LDA Plaza, Ittefaq Hospital, etc) on one hand are catering for services to general public, on other hand they are creating problems while in use, for instance, parking and traffic flow issues. There is a substantial lack of studies in the aforesaid regard which prevents building regulations and bylaws from being improved. Furthermore, the views of the end user of public buildings, which is the general public itself, are not effectively captured. This gap results in the design and construction of public buildings which does not serve the purpose efficiently and may even cause nuisance to others in the neighborhood and the wider built environment. Theses knowledge gap is the focus of the study.

This study aims to produce an account of the implications of the building regulations (and the associated bylaws) in the context of discrepancies, lack of being building-specific, and practice of erecting public buildings in Lahore as a case study. This aim is managed by the following key objectives which reflect on the research methodology as well:

- To review the status of regulatory provisions and prevailing practices of erecting public buildings, and the gap between the two.
- To identify all the development authorities in the selected city with their respective remits. Out of them two are chosen by identifying suitable rationale for the selection process to conduct the study.
- To identify appropriate target groups which are general public and key officials. Semi structure interviews are developed for two target group identified. Public users of the building and officials of the two authorities, having both qualitative and quantitative aspects.

- To draw comparisons between various aspects of approved and unapproved scenarios of buildings.
- To assimilate enablers and disablers of the implementation of the regulatory provisions for public buildings.

DEFINITIONS AND IMPLICATIONS

Public buildings as defined in byelaws and policies in Lahore

Public buildings dealt differently in Lahore. In Different rules and regulations there is diverse description for public buildings. In Lahore Development Authority Building and Zoning Regulations 2007, Public buildings are defined as:

- A building which is designed for public use and includes dispensaries, hospitals and clinics, bus/wagon stands, railway station, airport, terminals, town halls, libraries, post offices, police stations, mosques, fire stations, rescue centers, and places related to social agencies such as hostels, local government offices, and educational institutions, etc.
- While in Punjab Private Housing Scheme and Land Sub-division Rules, 2010 “Public building” includes a dispensary, local government office, educational institution, hospital, clinic, mosque, post office, police station, and fire station.
- “Punjab Land Use (Classification, Reclassification and Redevelopment) Rules 2008” classify land uses Residential, Commercial (including institutional), Industrial, Peri-urban, Agricultural; and Notified area, with public buildings not mentioned as separate land use. However daycare center or Pre School, primary school, secondary school, dispensary with no bed and laboratory facilities, library is permissible uses within residential areas are vaguely treated as commercial. While government and semi government offices, cultural institutions such as parks and monuments, social welfare institutions like community centers and museum, taxi stands and bus halt, police station, post office, fire station and place of worship or prayer are classified as commercial. In addition to this, theater, auditorium concert/ exhibition hall a minimum size of four kanal, bus or truck terminal and private hospitals are permissible uses within commercial area.

Agencies responsible for building control in Lahore

The building control function in Lahore is being performed by multiple agencies. Lahore Development Authority, City District Government, Cantonment and Defence Housing Authority are responsible for building control within their jurisdiction. Each authority has its own geographical remit and its own sets of building regulations and bylaws. There may be common denominators between those sets of regulations and bylaws but there are variations as well. However, in this study only two dominant authorities with their respective geographical remit, building regulations, bylaws, and public buildings are considered because have the biggest coverage of geographical remit. The officials who are interviewed come from these two authorities, which are anonymized for the confidentiality purposes and the buildings are also situated in their respective geographical area. However the end-user or the public who are using those building could be coming from different parts of the country or the world but only those are interviewed which are using those building in the area.

Lahore Development Authority

Lahore Development Authority is the principal planning and development authority. Under the LDA Act 1975, following important functions are being performed by LDA.

- Prepare, implement and revise the Metropolitan Development Plan
- Prepare, revise and maintain building regulations
- Take measures to implementation and enforcement of the provisions of the Act.

Regulatory provisions related to such use in LDA Building Regulations over time are prescribed as follows.

Table 1: Provisions for Public Building in LDA Building Byelaws

| Year | 1997 (Amendments) | 2004 (Amendments) | 2005 | 2007 (Amendments) | 2008 | 2021 (Amendments) |
|-----------------------|----------------------|----------------------|---|---|--|--|
| Regulatory Provisions | Parking Regulations | Parking Regulations | Parking and Basement for Parking, Height of Building, Clear Height of each floor, Set Backs, Guard room Byelaws Regulations | Regulations for Parking, Height of Building, Clear Height of each floor, Set Backs, | Parking Setbacks, FAR and Max. Ground Coverage, Height of Building, Clear Height of each floor Byelaws | Setbacks max. Ground Coverage, Pick and Drop Lane, Basement, Ramp, parking |

Source; LDA Building Regulations/amendments (1976, 1984, 1997, 2004, 2005, 2007, 2008 & 2021)

Public buildings sites

There are 4 types of sites where public buildings have been erected

1. Plots in designated areas of public sector housing schemes
2. Plots provided in approved private housing schemes
3. Plots provided in areas of special control
4. Building erected on converted plots

Plots in Designated Areas of Public Sector Housing Schemes

Byelaws for the public buildings erected in main civic and commercial centres, byelaws are:

- No mandatory open space required in main civic and commercial centers.
- Height of building including parapet wall shall not exceed 70 ft.
- Max. ground coverage 7/8th and 3/4th on subsequent floor

- Max. F.A.R 1:5
- For plot up to 1 kanal, only 1 basement allowed

After 1997 regulations, noticeable public buildings got approval from LDA developed by private sector (not in private sector approved schemes) whereas there are few examples of such buildings developed by public sector. Plans of Doctors Hospital at Johar Town, Farooq Hospital at 1 & 2 Asif Block, A.I.T., Ittefaq Hospital at Ferozpur Road, Fatima Memorial Hospital Shadman are approved by LDA. It is important to mention here that LDA has taken action against unapproved public buildings developed by private sector like Masood Hospital at Kalma Chowk (demolition of 1st floor). While Childern Hospital, Jinnah Hospital developed by public sector are unapproved with no action taken against them. The school constructed by LDA at 416 E II, Johar Town is unapproved.

Plots Provided in Approved Housing Schemes of Private Developers

For the public buildings to be erected within Approved housing schemes, building by laws and regulatory provisions are shown in the table below.

Table 2: Regulations for Sites of Public Buildings in Approved Housing Schemes

| Byelaws Plot Size | Building Line | Rear Space | Side Space on Both Sides | Max. FAR | Max. Ground Coverage |
|--|------------------|---------------|-----------------------------------|-------------|----------------------------|
| Less than 1 kanal | 10 ft | 5 ft | 5ft | 1:3 | 65% |
| Above 1 kanal but less than 2 kanal | 20 ft | 10ft | 10ft | 1:3 | 60% |
| 2 kanal and above | 30 ft | 15 ft | 15 ft | 1:3 | 55% |

Source: Lahore Development Authority Building and Zoning Regulations, 2008

In private housing schemes, not only the public buildings erected without approval also sites of public buildings encroached. In Gulshan-E-Mustafa Housing Scheme, a private university has been constructed without approval of plan. In IEP Town (Sector-B), a community center is constructed in park illegally. In PIA Employees Co-Operative Housing Scheme Phase-I, a school has been constructed without prior approval of plan. All public buildings including society office in WAPDA Employees Cooperative Housing Society are the examples of such violence by developers.

Plots Provided in Areas subject to Special Control

Most of the buildings erected in areas under special control are duly approved by competent authority. Examples may include

- Aiwan-e-Iqbal Complex
- LDA Plaza
- Lahore Stock Exchange

Reason behind this approval, as quoted by a senior Town Planner is that due to its vicinity to Governor's House, (Agerton Road falls within the category of "Areas Subject to Special Control" in Regulations). Byelaws for each plot on Agerton Road is defined and approved plan of the buildings are demanded by Governor House itself. It is worth mentioning here that LDA plaza on Agerton Road when constructed in 80s got approval when there were no building byelaws prescribed specifically in regulations while LDA Plaza Johar Town and most recent Liberty Park and Ride Plaza are erected without approval even in the wake of Byelaws.

Buildings Erected on Converted Plots

Commercialization of the main roads of approved housing schemes became a widespread trend in Lahore. For the properties which are commercialized, F.A.R, height limit, setback (front, rear/ side) and ground coverage defined. Plans for the properties on converted roads (after commercialization of property) are treated as commercial in nature regardless of the type of the building. Converted properties are either legal or illegal. Some properties have got temporary permission, includes school.

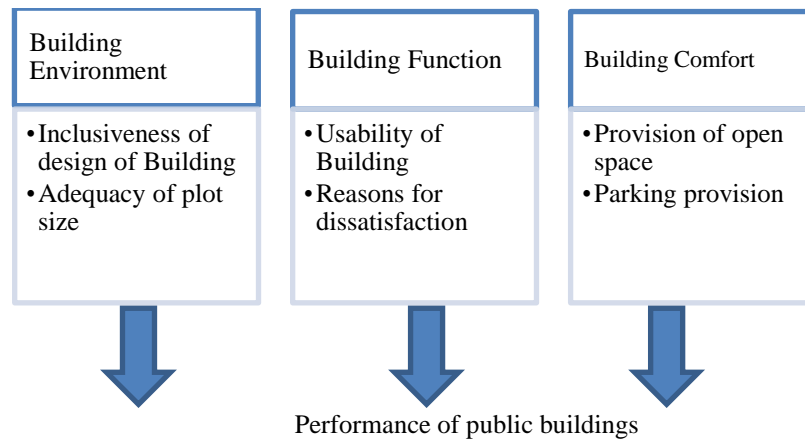
City district government Lahore

Model Building and Zoning Regulations drafted by Local Government & Community Development Department for Development Authorities are more or less same as LDA Building and Zoning Regulations discussed above in detail.

NON-TECHNICAL / SOCIAL EVALUATION OF PUBLIC BUILDINGS - END-USERS PERSPECTIVE

A building should attain good performance to support the activities of its occupants. And among various types of buildings, the public buildings should perform especially well because they are meant to serve a large amount of people. The main objective of evaluating the public building performance is to determine the extent to which the existing structure caters the needs of people and the impact of buildings. Furthermore, performance evaluation is also necessary to analyze the demands for rebuilding or remodelling of byelaws related to such buildings as well as to serve as a fundamental measure for ensuring that the buildings offer good environment. For an objective and consistent evaluation of the satisfaction level of end-users in connection to building performance, a comprehensive yet simple performance evaluation interview is devised. The performance feature consists of three main categories, which includes; building environment, building function and building comfort. In performance evaluation for public buildings, indicators such as size of space, design of building, parking provision, open spaces and usability of structure are included. The performance features and indicators are shown in Fig.1.

Fig 1: Performance Features of Public Buildings



The next step is to define the performance grade for measuring the degree or level in which the performance indicators are met. For evaluating the performance of buildings, the following three levels of performance grade for quantifying the overall performance scores are used.

- Null The performance cannot meet the user's basic needs.
- Deficient The performance can meet the user's basic needs but not satisfactorily.
- Satisfactory The performance can completely support the requirement of users.

In evaluation, characteristics of the building considered significant to determine performance and the performance grades according to the people's level of satisfaction are assessed. Table 2 shows the evaluation criteria and performance grades for indicators.

USERS' PERSPECTIVE ABOUT PUBLIC BUILDINGS ERECTED WITH PRIOR APPROVAL OF PLAN (APPROVED PUBLIC BUILDINGS)

The approved buildings selected for detailed study are educational institutes, health related buildings, offices and include Community Centre at New Muslim Town, ShaukatKhanum Memorial Cancer Hospital and Research Centre at 7A-RIII, J.T, Doctors Hospital atJohar Town, Farooq Hospital at 1 & 2 Asif, Allama Iqbal Town,LDA Plaza, Stock Exchange andAwan e Iqbal atAgerton Road.

Table 3: Comparison of Users' Perspective for Approved and Unapproved Public Buildings

| Indicators | Evaluation Criteria | Approved Public Buildings | Unapproved Public Buildings |
|----------------------|-------------------------------------|---------------------------|-----------------------------|
| | | %age of Satisfaction | %age of Satisfaction |
| Building Environment | Inclusiveness of design of building | 68 | 62 |
| | Adequacy of plot size | 84.2 | 75 |
| Building Function | Reasons for dissatisfaction | Parking shortfall | Parking shortfall |
| | Usability of Building | 60 | 87.5 |
| Building Comfort | Provision of open space | 57.9 | 54.2 |
| | Parking provision | 39.5 | 41.2 |

Study reveals that level of satisfaction of people about the design of building and plot sizes are slightly more satisfactory in public building erected after plan approval. However open spaces and parking are deficient in both types of buildings. For the buildings erected after approval of plan, mostly parking is provided. As these are public buildings, a lot of traffic is generated Except Shaukat Khanam Hospital, deficient parking is observed and service road is encroached with the parked vehicles.

TECHNICAL/REGULATORY EVALUATION OF PUBLIC BUILDINGS – OFFICIALS PERSPECTIVE

The questions in the semi structured interview are asked from these two authorities however they are responding in corresponding in correspondence with their respective geographical remits, building regulations, bylaws, and the buildings whether coming from private developer or the public developer. Following the interviews with the officials from the associated two development authorities (DA1 and DA2, actual names are purposefully anonymized), it is established that they all agree that the plans of public buildings should get prior approval from development authority. Almost all senior planners said the plans are generally submitted by private sector whereas the public sector has a general tendency of not getting the building plan approved from the competent authority. In general the plans of educational institutions are being submitted for approval and few cases of clinics are also observed. While the plans of police stations, rescue centres and post offices have never been submitted.

In scrutiny of plan FAR, ground coverage, building height, setbacks and parking is checked. Majority of officials are of the view that some changing should be made in existing byelaws to improve the efficiency of public buildings and to facilitate the public. These improvements may the introduction of category and level wise byelaws for each type of use like separate byelaws for educational institutions and health care facilities, and within educational and health institutions separate bye laws for schools, colleges and clinics & hospitals respectively.

Most of the public buildings are erected without approval from LDA. Usually action taken against confined to the issuance of challan and notices against such

developments. Demolition occurs rarely when matters comes to public buildings and mostly complaints by the neighbors are the main reason for such sever action, as mentioned by a senior town planner.

Public buildings which are erected on converted plots or in residential areas create nuisance because the locality is not originally planned for converted use of land. They generate traffic, raise parking demand and thus inconvenience to neighbors and create pollution. Although these facilities are meant to facilitate the public but the same time such buildings deprived users the basic facilities as in case of schools, no open space/ play area is left.

When discussed with Town planners from CDGL, it is revealed that plans of public buildings never been questioned by CDGL especially the one erected by public sector. However, the plans which are submitted by the developers by their own are further processed for approval. It is interesting to mention here that the above stated examples of public buildings approved by the CDGL officials have no provision in master plan of Lahore. But because the plans were submitted, they got approval. Rationale for not questioning the government departments the approval of plans as quoted by a senior Town Officer Planning & Coordination is that there is no reason to demand the plans from the government departments as they are working under one provincial government and it does not seem appropriate to take action against the government department.

CONCLUSIONS AND LOOKING AHEAD

Review of regulations for public building in Lahore shows that there are no specific building regulations for the development of buildings meant for different categories of use and level of activities whereas the byelaws related to public buildings in DHA are detailed and use specific. Byelaws should be framed explicitly for each category of public buildings which deal with the requirements of that particular use specifically. A clear distinction has also to be made between variant level of activities and the design aspects have to be specified against the recommendatory ones.

Public buildings (schools, clinics, hospitals) erected by private developers on commercialized roads are dealt as commercial (commercial policy), and the same erected on designated sites are dealt under the category of public buildings. And for the same public building erected on different type of plots, there is discrimination in building byelaws.

Study reveals that the building regulatory system encompassing the “building regulation” and “building control” system. Weak building control system observed in Lahore especially in case of public buildings. Approval of public building plans was left on the will of developers instead of embracing the same in the main stream of building and development control process. Apart from the areas under special control and alike, public building plans which were submitted by public developers on their own processed further for approval. Buildings which are constructed in the areas under special control are generally approved. Reason behind is that the byelaws for such development are explicitly prescribed in regulations even in the absence of any regulation for other public buildings erected elsewhere in Lahore. For rest of the buildings especially erected by public developers there is a general tendency that plans neither submitted nor questioned by the relevant authorities. Construction of Public buildings belonging to various departments of the Government should be permitted only if the plans are duly approved by the Development Authority.

Research study reveals that unapproved ones impeding development works meant to benefit the common public creating nuisance and discomfort for the users and neighbors. For the public buildings which are already been erected without approval of plan, parking provision, provision of open spaces or other facilities alike may be ignored if enough space is not available now. As they are meant to facilitate the general public, demolition or heavy penalty may not be the solution. But the safety of people cannot be compromised at any cost and to ensure the same, structural stability, fire and electricity safety of the existing structures should be ensured on immediate bases.

Involvement of Public in the approval procedure of the buildings of high level activities likes Hospitals, Colleges, Jamia Masjid, etc should be ensured at initial design stage so that concerns of public regarding such buildings may be addressed who are also the ultimate of that facility. One of the main ways to overcome the gap between the users and the designer is to engage the public in the design process and not only render the regulations and bylaws more building-purpose specific.

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