Violation of Development Control Rules and Regulations-A Case Study at Neeladri Nagar, Electronic City Phase-1, Bangalore-560100

Dr. H. Karibasappa\textsuperscript{1}, T. Arun Raja\textsuperscript{2}, B. Jayakkumaran\textsuperscript{2}, M. Jegan\textsuperscript{2}

\textsuperscript{1}(Professor, Department of Civil Engineering, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India.)
\textsuperscript{2}(U.G Students, Department of Civil Engineering, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India.)

Abstract: Housing is the prime necessity of human beings. Government has made many policies to encourage the housing activities. Building Byelaws effect housing activities very significantly in terms of its utilization and cost. Building Byelaws controls the number of dwelling units, in some cases, that can be accommodated in a given parcel of land by implementing the essential clauses such as Built Up Area, FSI/FAR, Maximum Building Height, Margins to be kept open in front and around the buildings, etc. In the present study, an attempt has been made to study the violations of building byelaws at Neeladri Nagar, Electronic City Phase 1, Bangalore. The observed values are compared with standard values and deviations for each parameters were found out. The study reveals that the average violation in road width is 49\%, plinth height is 87.17\%, height of building is 73.32\%, front setbacks is 98.36\%, rear setbacks is 38.93\%, left setbacks is 51.61\%, right setbacks is 68.29\%, plot coverage is 53.9\%, floor space index is 208.8\%.

Keywords: Neeladri Nagar, Built-up area, Setbacks, Height of building, FSI/FAR

I. Introduction

The building byelaws are defined as the standards & specifications designed to grant minimum safeguards to the workers during construction, to the health & comfort of the users & to provide enough safety to the public in general. The regulation set out the basic requirements to be observed in the design and construction of buildings. They are applied to new building and also to extensions, material alterations, and certain changes of use of existing buildings. A byelaw is a rule or law established by an organization or community to regulate itself, as allowed or provided for by some higher authority. The higher authority, generally a legislature or some other government body, establishes the degree of control that the by-laws may exercise. By-laws may be established by entities such as a business corporation, a neighborhood association, or depending on the jurisdiction, a municipality. A building byelaw is a local law framed by a subordinate authority. It channelizes to achieve the concepts & policies outlined in the Master plans of the city, in order to give a particular architectural character to the city. Bye-laws are an integral part of many organization yet they are often misunderstood because there are different policies and procedure concerning how bye-laws can be established or govern an organization. The town planning scheme controls the uses of land, roads etc.

II. Study Area

In the present study Neeladri Nagar (FIGURE 2.1) has been considered for the study area because of the fast development in the area. Neeladri Nagar is situated at Electronic city phase 1, Doddathogur village, Begur Hobli, Bangalore south taluk and Bangalore District. The Neeladri Nagar layout consists of 17 cross and 504 sites in the layout. Almost all site in the layout are of 40*60 and few sites are of 30*40 site. The width of the roads in the layout are of 30 feet’s. Electronic city within Bangalore is the largest industrial hub in Bangalore, housing about 300 companies and a very large work force of employees. Electronic city consists of three phases: phase I, phase II, and phase III. Phase II is spread over 340 acres. Additional land of 122 acres was acquired in 2003 for the formation of phase III. While the phase I is completely to the western side of Hosur road, phase II lies on either side. To simply the area has been named as west and east. Electronic city comprises of all parts of phase I and small parts of phase II. Electronic city comprises of rest of phase II. Due to the increase in companies, the resident for the employees are highly demand in electronic city. Neeladri Nagar suffers a major development due to high demand. All the layouts in Neeladri Nagar are constructed as apartments and the value of the apartments is also very high. Neeladri Nagar sees a high traffic between Electronic city and Bannerghatta road at all hours. This road with high rise apartments on either side, is the home for lakh of E-Citizens. However Neeladri Nagaris deprived of civic amenities (road, pavement, street light, Cauvery water) due to negligence by all authorities.
The aim of this study is to identify various development control rules which are being violated. This study was conducted in Neeladri Nagar, Electronic city Phase 1, Bangalore. The necessary basic information about the Neeladri Nagar including the plot sizes, types of buildings, road facility, water supply, sanitary arrangements and the parameters which are to be considered for analyse are fixed. The parameters which are considered for analyses are,

- Floor area ratio
- Plot coverage
- Height of the building
- Plinth height
- Width of the road

The parameters taken for consideration are analysed in the site by using tape and other measuring equipments and then the values obtained in the site are compared with the standard values as prescribed by Bangalore building byelaws. At last, the results obtained from calculation are analysed and the violations are observed.

III. Methodology

![Diagram of Methodology]

Bangalore building byelaws 2003 has certain standard values for floor space index, plot coverage, height of the building, plinth height, width of the road. The standard values are given below (Figure 2.2),
IV. Results And Discussions

The calculated results along with deviations with respect to floor space index, plot coverage, height of the building, plinth height, width of the road are tabulated in the tables below, in the present work a complete set of results from analysis of violations in Neeladri Nagar is provided in above table. The following is a brief summary of these findings.

Width of the Road:
According to Bangalore building byelaws 2003, width of the road depends on the area of plot. As per code the width of the road should be 59 feet but width of the road in study area is 30 feet. Average percentage of violation is 49%.

Plinth Height:
According to Bangalore building byelaws 2003, average plinth height of buildings is 2 feet. In this study area almost most of the plinth heights of buildings are violated. Average percentage of violation is 87.17%.

Height of Building:
According to Bangalore building byelaws 2003, height of building for 30 feet road is G+2 i.e., 30 feet. In this study area almost all the height of buildings are violated. Average percentage of violation is 73.32%.

Set Backs
According to Bangalore building byelaws 2003, set backs of building depends on the width and depth of plot.

Front:
In the study area, the violation of front setbacks is mostly occurred. Average percentage of violation is 98.36%.

Rear:
In the study area, the violation of rear setbacks is less than front setbacks occurred. Average percentage of violation is 38.93%.

Left:
In the study area, average violation in left setback is 51.61%.
Right:
In the study area, average violation in right setback is 68.29%

Plot Coverage:
According to Bangalore building byelaws 2003, plot coverage depends on the ratio of built-up area to plot area. Plot coverage in study area is violated at an average of 53.9%

Floor Space Index:
According to Bangalore building byelaws 2003, floor space index depends on the ratio of total built-up area to plot area. As per code in study area floor space index is violated at an average of 208.8%
### V. Conclusion

The study also reveals that most of the buildings except individual houses are almost violated with the standard building byelaws. These violations may be due to the increase in the cost of land in the area and lack of monitoring by the authorities. This type of developments may impact on water supply, drainage, road facilities and other amenities. Planning authority need to enforce the act strictly and to strengthen the municipal council in detecting the deviation in the construction in advance of their occurrence and may be avoided by appropriate and timely action. The present development control rules should also be made dynamic by changing as per the urban development requirement and its validity must be verified periodically. This will inspire new initiatives & stimulate debate in the often neglected area of urban development control rules & regulation for sustainable development.

### Reference


