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## **Review paper on Redevelopment of Residential Building**

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### **ABSTRACT**

In most cities of developing countries, old buildings always tend to undergo redevelopment. There are one or more than one reasons for this. Such as buildings which are in dilapidated condition or uneconomic to repair or tenants are in a need of more usable floor area. This activity of building redevelopment is much visible in Mumbai city for past decade and half. Because of various constraints and considerations, this process of projects of building redevelopment is quite complex. It takes considerable efforts and time to accomplish the projects. If a proper and time bound process is not followed, or if the risks, uncertainties and challenges are not handled properly, even a seemingly simple project can fail, thereby causing great anguish and hardship to the stakeholders. Sometimes this may lead to prolonged litigation. There is a need to identify risks and challenges involved in the process of building redevelopment projects. The aim of researchers is to interact with all the stakeholders of building development projects of housing societies and identify various risks and challenges vice-versa. The study has also revealed various pitfalls and uncertainties related to these projects. This will enable concerned stakeholders to prepare to address these.

Keywords: Challenges, Housing Societies, Redevelopment, Risks.

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### **1. Introduction**

#### ***REDEVELOPMENT BUILDING***

If your Society is planning for Redevelopment, then the members of the Society should be familiar with the process for undergoing Redevelopment. The following points will make understanding the redevelopment process better.

#### ***What is Redevelopment?***

Redevelopment means demolishing the Old Structure and replacing the same with New Structure with new Dimensions and Space.

#### ***What is the difference between Restoration and Redevelopment?***

In restoration, the existing Building is extensively repaired and restored to its original condition. In Redevelopment, the existing building is demolished and new structure of different dimensions is constructed.

#### ***When should be redevelopment be considered?***

As per Bye-law no. 77, Structural Audit of the Building is to be conducted when the Building is more than 30 years old. The Report of such Structural Audit would reveal the condition of the Building and indicate whether the Society needs Redevelopment.

#### ***Who is the authorised person to conduct Structural Audit?***

The Structural Audit is to be conducted only by a Government approved Architect.

#### ***Can a Society go in for Redevelopment without conducting a Structural Audit?***

Conducting Structural Audit is mandatory since it is the first and the foremost step to be taken for deciding Redevelopment as Structural Survey is required to be carried out for both the building and the adjacent structures.

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### **2. Advantages of Redevelopment**

- Better planned and designed flats with earthquake structure with attached bathrooms in bedrooms will be available.

- Corpus fund received by each individual member will take care of increase in the maintenance cost of the Premises or could be utilised for other purposes.
- Additional area of 25-30% will be received as compensation from the Developer. Also, additional space, if available, could be purchased from the Developer at best available price.
- Modern facilities / amenities / gadgets like lifts, intercom system, smoke detectors, fire fighting alarm system, concealed plumbing, concealed wiring for electricity, telephone, cable TV etc. will be available.
- Stilt or underground parking will be available which will ease space on the ground.
- Clubhouse, Swimming Pool, Gymnasium, and Community Hall etc. will be available.

### 3. Disadvantages of Redevelopment

- Any lacuna in preparation of Redevelopment Deed would result in a great loss to the members who are eligible for many perks in consideration of giving permission for the project.
- For considerable period of time, members are required to give up possession of their flats which disrupts their age old routine.
- Residential Complexes if converted to Commercial Complexes are seldom preferred for housing purposes or dwellings.
- Additional new members would take longer time to gel with the original members, resulting in disputes on various issues.
- Additional members will require extra consumption of water creating scarcity or shortage of available water supply.
- Additional vehicles will require additional parking space.
- New construction loaded with all kinds of modern amenities which will in turn increase the cost of maintenance to be paid to the Society.
- The Tax burden is high and in case the Occupation Certificate (OC) is not procured, Municipal charges and Water charges are high
- There is increase in Property Taxes.
- Additional area received will attract Stamp Duty and Registration Charge at current Market Price.
- There is always a fear of half way stalled project resulting in Court case.

### 4. Literature Review

#### 2.1. NEED OF MANAGEMENT FOR REDEVELOPMENT CONSTRUCTION WORKS INDIA.

*Prof. Sonawane Aditi, Gursalkar Nihareeka Milind.*

The construction industry plays a vital role in development of national economy. It is a major economic activity in India. About 50% of the five year plan is invested in construction works. During last some years the construction industry has undergone some changes. These changes are in mechanization, advancements in construction practices and management of construction works. Any construction project needs management for its successful completion within given budget, time and desired quality then whether it may be new construction project, infrastructural project, industrial project or redevelopment project. The redevelopment construction project has two main categories- one is slum redevelopment project and second one is redevelopment of existing housing societies or existing building.

#### 2.2 Resent Practices of Redevelopment of Housing Societies in the Developing Cities of India: A Survey

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MAHARASTRA HOUSING AND AREA DEVELOPMENT AUTHORITY (MHADA) structures are waiting for redevelopment proposal. The repair work of a building which is already 30 to 35 years old will only increase the life of the building by 5 to 7 years. Structural repairs is not economically feasible to take care of seepage, weak walls, plastering falling down, foundations leaking, water pipes and sewage pipes, etc. The purpose of this study is to make aware the members of housing society the benefits involved in redevelopment of housing societies, solve problems/provide adequate direction, various laws applicable, different modes of development of immovable property practiced in the market and how to choose the developer

#### 2.3 Self-redevelopment & Its Anatomy- Case study on a residential property and its impact on stakeholders

*(1) Aditya Pramod Chavan, (2) Dr. Priti Pandey*

The fact that urban surroundings evolve throughout time is clear. When an ancient structure reaches the end of its useful life, it must be renovated. While a building's structure depreciates with time, land value rises. When the land is worth more than the building, it is much more acceptable to redevelop the building. This idea accurately reflects most Mumbai's structures. Old structures have a 20 to 40-year life expectancy, yet the value of land under present development control rules is significantly more than the building's current worth and utility.

#### 2.4 Study on the Concepts of Residential Buildings under the Background of Green Building.

*Lei Chen*

Predominantly residential type "no architect of the building", it is an important part of building large family in China as is a unique architectural form. Its emergence and development is the social, economic, cultural and natural factors such as comprehensive reflection. Due to the geographical climate factors, local materials and the structure of the traditional technology and the methods is different, economic conditions, customs, ethics, etiquette, interest, thinking, experience and other factors and influence of the complex interaction between different regions, different nationalities of residence has its own unique artistic style and features.

#### 2.5 REDEVELOPMENT IN CO-OP HSG SOCIETIES.

*By. CA. Ramesh Prabhu*

What is Redevelopment: - Redevelopment means demolishing the Old Structure and replacing the same with New Structure with new Dimensions and Space. What is the difference between Restoration and Redevelopment: -In restoration, the existing Building is extensively repaired and restored to its original condition In Redevelopment, the existing building is demolished and new structure of different dimensions is constructed.

### 5. Case Study

Project Details: -

Name of building	: Om Shakti Swastik CO-OP Housing Society, Ltd.
Location	: Morivali Village BhawaniChowkAmbernath East, DIST THANE-421503.
Registration no	: TNA/ABN/(TC)/21729/2009-2010.
Number of flats	: 15 Flats.
Redevelopment Company	: Sparsh group.
Area of building	: 281 sq. mtr.

**Preface: -**

Building inspection was conducted on 7 August 2019, for the purpose of evaluating the present condition of the building as desired by the Amarnath Municipal Council. These visual inspections describe the present physical condition of the building components both structural and non structural and identify areas requiring repair and rehabilitation. It is a responsibility of Society, OM SHAKTI SWASTIK CO-OP. HSG. SOC. LTD. To initiate action makes budgetary provisions etc. The report is presented in the accompanying pages.

**Introduction: -**

Building under Inspection of GROUND+ 3, storied structure in RCC, constructed/ occupied during the period 1988 as informed by the Owner. Building is located at village- Monival Village, BhawaniChowk, Ambernath (E) Since the scope of work is to check health of the building. Building is used for residential purpose. There are 7 flats in building. Generally height of the floor is about 3m (10).

**Objective: -**

Generally condition survey of any RCC structure is an examination of concrete for the purpose of identifying and defining the area of distress. Cause of distress and its source needs to be identified. Based on the extent of distress residual strength of structure and its rehabilitation is to be accessed Since, the building was constructed in 1988 and almost a period of about 30 years passed, it is mandatory to carry out structural audit as which states that, "STRUCTURAL AUDIT of the building shall be carried out by the owner/society as follows.

As per the provision of section 353B of the MMC Act 1888, it is obligatory on the part of every owner and occupier of buildings which are in existence and in use for more than 30 years to have them inspected through qualified Structural Engineer registered with Municipal Corporation of Greater Mumbai, The said period of 30 years shall be from the date of (1) issue of its completion certificate by the Corporation, or (1) issue of permission to occupy a building under section 353A; or (2) its physical occupation of at least 50 percent of its built-up area, whichever is earlier.

**Method for checking: -**

The method adopted for structural checking is through visual inspection & NDT Test The inspection of each room at Ground floor and upper floors has been carried out along with occupant member. Defects including structural defects are noted. Apart from that internal survey, inspection of staircase block, terrace, overhead water tank, pavement around building, etc. was carried out.

**Deficiencies and disorders: -**

The deficiencies and disorders noted can be classified as functional, structural, manmade etc. Generally, all the disorders are caused due to planning and design deficiencies, materials, workmanship, environmental aspects, natural and mechanical causes and finally manmade causes In the case under consideration, the certain disorders are noted and same could have been caused due to quality of construction materials, natural causes, environmental causes, and manmade errors. It to be pointed out that structural drawings, are not available. In fact the analysis must have been worked out based on methods / practice then available. Generally grade of concrete used before Thirty year was M15 (1:2:4). The list of the deficiencies is given room wise in annexure along with drawings showing the defects / modifications etc. Following points explain about the situation and reasons about the disorders, noted at the time of inspection

**A) STRUCTURAL DISORDER AND OTHER POINTS:**

1. As there is no access, the foundations cannot be observed/ checked.
2. In certain flats, the ceiling slab when tamped gives hollow sound. It indicates partial detachment of cover to the reinforcement. On loss of bond with concrete said portion is likely to fall and can cause injury. Reduction in depth reduces load carrying capacity of slab. As such any excess loads in room are required to be avoided considering present status of slab at all floors.
3. Another area of structural defect is column and beams. Some of the columns and beams visually appear to be in major bad condition. Generally damage to beams is observed, in this building and needs polymer treatment at earliest to avoid further deterioration.

**Evaluation of structural health: -**

The life of each structure is far from being monotonous and predictable. Much like our own Evaluation aspect incorporates a) understanding of damage to structural and non-structural components b) deterioration defects due to aging c) identifying degradation mechanism and the associated risks.

**6.a. Structural assessment:**

In absence of "structural plans from the society under report, actual locations of columns and beams etc., as observed on site.

**Limitations: -**

While carrying out the inspection there were limitations to the observation. Like

- a) No inspection of foundations possible.
- b) No inspection of the areas covered by interior (false ceiling)/ stored material on loft, in the buildings possible.
- c) External plaster at heights not possible to check However the areas above the ceiling tried to inspect as nearly as possible.

**This report is based only on visual health survey/testing of the building & the following are beyond its scope:**

- a. Assessment of structural stability in absence of RCC data.
- b. Seismic assessment

This report is valid for three months and does not constitute a certificate of structural stability.

**6. Methodology and discussion: -****STEPS FOR INITIATING REDEVELOPMENT OF A BUILDING**

The society must conduct a structural audit of the existing structure before deciding to pursue redevelopment. An audit of a building's structural integrity i.e "STRUCTURAL AUDIT" is similar to how a doctor checks a patient in terms of general health and performance. It makes sure the structure and its surroundings are risk-free and secure. In order for the buildings to function better during the course of their service lives, it analyses the situation and recommends the necessary repairs and retrofitting. An expert and certified structural consultant conducts the structural audit. Structural audit's goal is to protect lives and structures and to comprehend the state of the building. It also helps to discover crucial places that need rapid repair and to adhere to statutory criteria. One must take into account the following actions once the above mentioned process of structural audit is completed.

**1. Organise a special general assembly meeting (SGM)**

A special meeting of the members should be called by the managing committee to go through the redevelopment plan. The bye-laws stipulate that for the rebuilding project to be officially launched, 75% of the total number of members must support it. (A change to Maharashtra's redevelopment law stipulates that older and smaller buildings only require 51% of members' agreement.) Additionally, it is advised that a unique redevelopment committee be formed to oversee the entire procedure. For the Redevelopment to take place, each and every member of the Society must give their written consent. In contrast to the S R A Project, a Registered Co-operative Housing Society must receive the unanimous approval of all of its members before redevelopment can begin. The authorization for redevelopment will not be granted by the relevant authorities, such as the Dy. Registrar of Co-operative Societies and the BMC, if all of the Society's members do not consent to it. The members' consent is unconditional and stamped with a Rs.100 bill. Therefore, once consent has been granted by a member, it cannot be withdrawn. A member must follow the legal process to prove his point of dissatisfaction in order to retract his consent only if he has a compelling basis to do so.

**2. Request price quotes from architects and project management experts (PMC)**

Before choosing one of them in a subsequent SGM, the Committee should solicit bids from at least five architects and PMCs and present their prices to the members. They should have a solid track record in real estate development and be accredited with the government or another recognised entity. Throughout the process, the members are permitted to offer insightful thoughts and suggestions.

**3. Submit a building redevelopment project proposal**

The committee must submit a proposal for the project after agreeing on terms and conditions and the project's scope of work with the architect or BMC.

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#### **4. Obtain the project report**

The architect/BMC shall deliver a Project Feasibility Report to the committee within two months of their appointment. The Floor Space Index (FSI) and Transfer of Development Rights (TDR) are two factors that are taken into account in this study while analysing the total residential area, communal areas, gardens, etc. Before any approvals are given, ideas are requested and the Report is made available to all society members.

#### **5. Request developer tenders**

In order to receive competitive bids from developers, the Architect/PMC creates a Tender document. There is a decided primary requirement that cannot be altered. This could be a corpus fund or a carpet area (an amount paid by the developer due to redevelopment). All of the bids are reviewed in a following SGM that is attended by developers' representatives.

#### **6. Pick a developer**

The Architect/BMC compares the tenders while taking into account elements like financial costs, market repute, technical soundness, and successful projects of each developer, and then narrows the field to at least five. A developer is chosen by a 3/4th majority of the members, and the project can begin once an agreement has been reached with that developer.

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