

Housing Societies Redevelopment For Old Buildings In India

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Abstract- *Redevelopment is the process of demolishing existing old society building and reconstructing it within the legal framework / rules and regulation of sanctioning / approval from the competent authority. In the developing cities of India, because of increasing population and the life of building, it is required to go for repairs, retrofitting and redevelopment of the structure. From literature review it is observed that, there is lack of knowledge regarding redevelopment of the society in the common people. Therefore this study is focused on the need of redevelopment from experts and the tenements point of view. This work can also assisted with new technique like REVIT or Autodesk Revit that can be eliminate the delay in construction as well as cost saving when future changes has occurred.*

Keywords- Redevelopment, old building redevelopment, Green building, commercial building in India,

I. INTRODUCTION

Urban redevelopment is a process which helps to regenerate an aging area. This process often involves demolition of old buildings structures, relocation of businesses and people. It also brings new urban designs and new concepts to the target redevelopment project; it redefines what “Up-to-standard” means to both the general public and the people living in the redeveloped project. Urban redevelopment also helps to maintain a suitable balance among the social, environmental, economic and cultural aspects to make sure all these dimensions are working harmoniously to enhance the sustainability of the redevelopment process for the proposed project. As part of this redevelopment process existing old housing society building are demolished and reconstructed by appointing a builder who can construct and handover new flats to the society members. However, there are many factors/questions that arise during the ongoing process of redevelopment of old houses and they are to be taken care of diligently while opting this process. This paper focuses on various issues and difficulties related with legal and financial faced by the member of housing societies while executing such type of projects. Guidelines and suitable mechanism for sustainable redevelopment of such projects in future

considering the opinion of various stakeholders are also proposed in this paper.

II. OBJECTIVES

There are several instances of Incomplete or misleading information prevailing among the housing societies and flat members about planning of redevelopment.

Controversial court judgments add to the confusion and such housing societies get stuck at some point due to lack of information and knowledge.

Therefore objective of the research is

- To study present practices for Redevelopment of Housing Societies
- To analyze need of Redevelopment in the developing cities of India.
- This research also justifies the Building Information Modelling or Autodesk Revit implementation in construction projects, with a focus on increasing the profit margin by reducing the technical issue resolution time.
- Apart from the tangible benefits, system tries to demonstrate the additional Quasi-tangible benefits that can be realized through strategic implementation of this method in propose work.

III. PROBLEM STATEMENT

Redevelopment is the process of demolishing existing old society building and reconstructing it within the legal framework / rules and regulation of sanctioning approval from the competent authority. In this work define a approach for old building redevelopment with all type of estimations. Finally recommend the benefits of builders view, customers as well as environmental views.

REDEVELOPMENT OF HOUSING SOCIETIES:

Redevelopment is the process of demolishing existing old society building and reconstructing it within the legal framework / rules and regulation of sanctioning/approval authority through a builder who can construct and handover new flats to the Society members free of cost with some additional benefits and make profit by utilizing balance plot potential by constructing additional flats and shops as per agreement between society/owners and builder. It has become quite popular in Co-operative Housing Societies since it is a most practical, economical and long term solution in a scenario where old structures are proving uneconomical or obsolete; whereas for the Builder it is a cost effective way to construct residential/commercial premises by utilizing the unused potential i.e. the Floor Space Index (FSI) – Transferable Development Rights (TDR) with gradual capital investment, in times of heavy land prices and in a situation of unavailability of land in good locations. Redevelopment of properties of existing Co-operative Housing Societies has been a subject of great interest in recent years, both to the Societies and to the Builders. With the real estate prices touching a new high, residents in old buildings are now discovering that they have an opportunity to unlock immense value from their property by offering it to a Builder/Developer for redevelopment.

A Redevelopment arrangement begins with the conception of an idea to redevelop the old building and it ends with the handing over of the agreed constructed area in new building and the corpus money or other monetary consideration to the Society by the Builder.

PRESENT PRACTICES

Builders on their part are also on the lookout for properties with unused development rights where they can build a new structure of a few storey higher and sell those additional flats for a tidy profit for them. Builders/Developers, who opt to purchase land and develop the same, incur huge stamp duty cost on transfer of land. However, when it comes to redevelopment of old buildings, the stamp duty is reduced by a significant extent and this acts as a major benefit for developers. Tenants also get several benefits like hassle free execution, extra carpet area, increase in flat's value and in most cases, alternate accommodation/ reimbursement or rent compensation for the period the building is under construction. However, there are many difficulties faced by such housing society members basically related with legality and financial management during the ongoing process of redevelopment. These factors by and large are the prompt implementation of Govt. Guidelines, Delay in possession of flats in redevelopment of Housing Society, Delivery of flats in time, Bumps, Bash and Bouncers from Builders, Busting of

redevelopment projects of Housing Societies, Corrupt Members of Managing Committee, Faults, Facts and Fundamentals about redevelopment, Drafting of Development Agreement, Responsibility of Members of the Managing Committee in redevelopment, Letter of Consent to be furnished by a Member of the Housing Society, Redevelopment and sand shortage, Recovery of dues from defaulting members, Selection of a good Builder, Unauthorized constructions by Builders and many more.

IV. REVIEW OF LITERATURE

1] Kevin Fox Gotham “Urban Redevelopment past & present” Volume 27, July 2001, P.P. 1-31.

The late 1970 and continuing into 19801, a new critical approach to the studies of cities and urban redevelopment had developed. The process of redevelopment have been slow to deal with As per his studies from twentieth century areas such as law, transportation, housing policy, & local financing devices are important mechanisms for promoting urban redevelopment.

2] Kathy Arthur Son “Redevelopment of public housing Estates The Australian Experience, Volume 16, March 1998, P.P. 35-46.

“As that the action needs to be taken to improve the condition of public housing estates in Australia by going under for redevelopment .The study further states to give attention at redevelopment strategies involving sales demolition or transfer of stock and funding.

3] Michael Greenberg et.al “Brown fields redevelopment preference and public involvement :A case study of an ethnically mixed neighbourhood” Volume 37, December 2000, P.P.1-14.

In the study carried out in the city of Perth Amboy ,NJ, researcher has found that residents preferred recreation, cultural and other community facilities followed by new housing. As per the survey carried, three quarter of residents responded/desired to participate in the redevelopment process of U S brown fields redevelopment has been promoted as a way to bring industry and commerce back to inner city neighborhood.

4] Si-Ming Li from department of “Redevelopment displacement, housing conditions and residential satisfaction” Volume 5, May 2009, P.P.1090-1108.

Case Study of Shanghai. According to them Chinese cities are undergoing messier transformation in the way of glossy office towers and luxurious condominiums. Millions of people have been uprooted & forced to be relocated .The major part of their studies consulted that irrespective of all criticisms some what better than those of other shanghai residents. The absence of undertaking (nassar 2012) ,moreover the automatic takeoff cannot be produced only by REVIT.

5] Christine A. Stevens “Public Housing Redevelopment as social policy” Volume 5, JUNE1995, P.P.81-88.

This paper provides a brief review of current challenges of urban policies and public housing provision and examines some of the suggested solutions to this issue. This provides the context of a discussion of the social objectives of public housing development projects and their outcome. The paper examines the social implications and its implementation in public housing redevelopment project.

6] Anthony Gar “Public & Private partnership in urban redevelopment in Hong Kong” Volume 1, November 1990, P.P.324-361.

Examination the different roles and problems of the public and private sector in urban redevelopment in Hong Kong in the past and discusses the recent attempt of public private partnership in urban redevelopment through the new and development corporation. As per this study urban redevelopment is an important process in changing land use and improving the building stock and environment of a city. Private Redevelopment will be more active in areas where profit can be made. As per authors view the government may need to play a more active role in redevelopment of areas where the Local Development Corporation does not find redevelopment to be profitable but there is a social need for such redevelopment.

In 2012 Nassar [7] conducted research related to revit application in estimating. The research based on statistics collected from students functioning on project with REVIT/Estimating, a course offered for graduate students, outcomes from the actual projects were used and examined as follow: The application of REVIT for estimating purposes can dramatically improve time savings and quantities’ accuracy at any time during the construction process. Since the 3D model is based on updated documents by the side of the relevant data, yet, this process is still delayed by the absence of understanding (Nassar, 2012). Moreover, the automatic takeoff cannot be produced only by REVIT. Findings by Stanley and Thurnell (2014) show that “5D

REVIT takes place outer the core REVIT model by live linking it to a third party.

V. METHODOLOGY

In this study, we use a triangulated method which involved both qualitative and quantitative methods for a multi-dimensional view of the subject. The research procedure involves survey of construction and Architecture Company, interview with contractors and a case study of using AUTODESK REVIT for approximating and shop drawings, decision-makers related to using AUTODESK REVIT for cost estimating.

- Step1:-**Survey and analysis of old buildings in Pune city.
- Step2:-**Selection of five buildings for redevelopment.
- Step3:-**Detailed analysis and survey of selected buildings.
- Step4:-**Out of five one building has been selected which is more complicated for Redevelopment.
- Step5:-**Preparation of billing order of quantity (BOQ) of all selected buildings.
- Step6:-**Use of Autodesk Revit design software.
- Step7:-**Comparison of Revit and Conventional method for designing.
- Step8:-** Successful redevelopment of the complex building in the simple and economic construction.

VI. RESULT AND DISSCUSION

Table 1: Duration required for whole Construction

Sr. No	Description	Duration
1	Sub Structure (Excavation, Foundation, Plinth)	58 days
2	Super Structure (Column, Beam, Slab, Wall)	470 days
3	Painting and water proofing	55 days
Total Duration		573 days

Profit Calculation

Here we construct the (G+5) building with 36 different flats including 50% flats are 1 BHK and remaining 50% are 2 BHK. As per the initial procedure we need to distribute ten 1 BHK and six 2 BHK flats to old building owners. Now here we calculate the market rate of remaining flats as below

Total 1 BHK flats: 18

1 BHK Remains: 18-10 (given to old building owners) =8

Total 2 BHK flats: 18

2 BHK Remains: 18-6 (given to old building owners) =12

Now calculate the overall cost of each flat

Total Parking lots =20

The overall revenue generated from market of this building is around 7, 37, 49,237 INR and the expenses has considered around 5, 27, 54,612 INR. The profit after the completion of overall building reconstruction is 2, 09, 94,425 INR

Table 2: Cost Calculation

Table 2 : Overall cost calculation	Area	Cost	Marker Cost
1 BHK	705.40	4500	3174300
	705.40	4500	3174300
	705.40	4500	3174300
	705.40	4500	3174300
	650.66	4400	2862992
	650.66	4450	2862992
	652.92	4450	2862992
	662.85	4480	2969568
2 BHK	940.20	4480	4212096
	940.20	4480	4212096
	940.20	4480	4212096
	940.20	4480	4212096
	981.06	4500	4414710
	981.06	4500	4414710
	981.06	4500	4414710
	981.06	4500	4414710
	981.06	4500	4414710
	988.47	4500	4358115
	988.47	4500	4358115
	988.47	4500	4358115
Parking	20 (total)	300000 (per parking)	6000000
	17010.24 Sq. Fr.		7,37,49,237 INR

Table 3: Overall Revenue Generation of Project

Resources	Total cost
Material Cost	3,00,44,901
Labour Cost	1,18,23,839
5% Contingencies	20,93,437
Vat, Service Tax etc. @ 20%	1,34,400
Total Cost	5,27,54,612

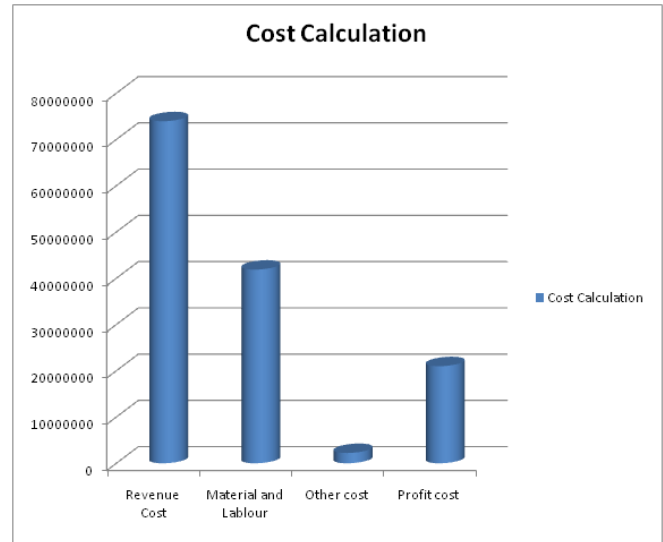


Figure1:-Cost Calculation of Resources

VII. CONCLUSION

With this work we have been carried out by selecting redevelopment approach with given estimates. Below are the points which we find with current work.

- Planned redevelopment can be an alternative to the unlimited horizontal growth of the city
- This work can indicate that redevelopment of the housing society can give cost effective, alternative to the user and also beneficial to Government and local Municipal Corporation.
- At the planning and implementation stage of redevelopment of housing society members should be aware about all the rules and regulations of the government. In many cases due to less understanding from society member builder have taken undo advantage.
- Rules and Regulations for development should be in the favour of the society. It should become a bottle neck for growth. Such rules need modification with reference to the location, plot size, width of the approach road, length of the road etc.
- From the questioner survey it is revealed that most important aspect for such project is need of appointment of technical persons / firm. ie. (PMC Firm) Project Management Consultant Firm.
- Construction contract and tender document should be formed by considering all the possible issues so as no legal issues should delay in the progress of the project
- It should also be the responsibility of construction management consultant to take cost management of the material at the site.

- h. Tender document and consultant role will be very important in achieving the financial management.
- i. Finally conclude how REVIT has upgraded the organizations capability. Basically the nature of the construction business is also set to witness a sea change in the operating styles and will lead to the coming together of various entities to cater to this massive demand.

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REFERENCES

- [1] Fox Gotham K. Urban redevelopment, past and present. In *Critical perspectives on urban redevelopment* 2001 Jul 27 (pp. 1-31). Emerald Group Publishing Limited.
- [2] Arthurson K. Redevelopment of public housing estates: the Australian experience. *Urban Policy and Research*. 1998 Mar 1;16(1):35-46.
- [3] Greenberg M, Lewis MJ. Brownfields redevelopment, preferences and public involvement: a case study of an ethnically mixed neighbourhood. *Urban Studies*. 2000 Dec;37(13):2501-14.
- [4] Li SM, Song YL. Redevelopment, displacement, housing conditions, and residential satisfaction: a study of Shanghai. *Environment and Planning A*. 2009 May;41(5):1090-108.
- [5] Stevens, Christine A. "Public housing redevelopment as social policy." (1995): 81-88.
- [6] Yeh AG. Public and private partnership in urban redevelopment in Hong Kong. *Third World Planning Review*. 1990 Nov 1;12(4):361.
- [7] Nassar, K. (2012). Assessing Building Information Modeling Estimating Techniques Using Data from the Classroom. *Journal Of Professional Issues In Engineering Education & Practice*, 138(3), 171-180. doi:10.1061/(ASCE)EL.1943-5541.0000101