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## Redevelopment of Textile Industries: A Critical Review of Industrial Shifting Zone in Surat

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### ABSTRACT

The Urban population in India has significantly increased from 62 million in 1951 to 285 million in 2001 and is estimated to grow 540 million by the year 2021. In this growth scenario of the population, Surat is an 8th largest city in terms of population and among non-capital cities in India. Surat is 4th fastest growing city globally with a decadal growth of 55% to 60% in the last four decades. With this rapid growth, the major challenges are also affected to city development including globalization, urbanization, transportation issues, the vulnerability of infrastructure. To overcome this challenge in a city like Surat it must require new development in outskirt area as well redevelopment in already developed area. In Surat major economic activity is belongs to textile and diamond business. With growth of city this industries area fall under old urban areas. so the objective of this paper is to find out location of industries which is to be shift and to find out potential the textile industrial area for redevelopment and give recommendation to redevelop industrial as well as surrounding area of that industries. Rapid growth, infill developments which include vacant and underused industrial sites are becoming more desirable to the development program. By the idea of redevelopment program, the city also expects to create more development opportunities and economic return on the developed land.

**Keywords-** Urban decay, Redevelopment, Industrial Shifting, Landuse, Textile,

### 1. Introduction

Redevelopment is the generic process. City grows and declines with time. It is important to recycle the urban stock of land as an alternative development in suburbs. Revitalization is the process that changes a disused or ineffective item into a new item which can encourage redevelopment program. It is majorly depending on the communities need. Urban voids are spaces that are useless, underutilized, abandoned, or in-between spaces among public and private realms. Reuse is the process to develop these types of spaces within the city/town. Unused industrial buildings are well suited for reuse program because of their large open spaces. Unutilized open land and industrial buildings promote crime and corruption in the city. Slum development and illegal activities got increased in dead or leftover spaces. Acute urban decay is evident in large number of abandoned, underused or ruined buildings, deserted shopping streets, desolate community facilities and soon. These spaces can be reused for public purpose like parks or gardens, small street markets, green belt provision, affordable housing scheme etc.

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Some of the opespaces can be used as a congregational ground. Urban voids help to resolve parking problems, reduce crime and corruption in the city and Reuse program helps to reduce slum expansion.

Reuse of the closed mill compounds for redevelopment could improve physical environment of the area which could generate job opportunities within city and it leads to commercial development. The process of study starts with listed properties of closed mills and to find out the potentiality of area and how this helps to fulfil the local people needs. In a physical sense of planning, closed mills land can shape up the existing community present around them.

## 1.1. Introduction of city

Surat is the 9th largest city in India. As per 2001 Census, the population of Surat was 2.89 million. This includes a total of 1.09 million workers, driven by pull migration induced by the growth of textile and diamond industries especially since the 1970's. The city has seen an unprecedented growth in last four decades, recording one of the highest growth rates in the country and a 10-fold population rise over four decades. Coupled with this, the spill over of population into the periphery has also been observed especially towards the coast and Hazira in the west and the National highway towards East. The city area has expanded with time (major expansion being in 2006) and presently covers 326.515 sq.km. The estimated population of the city in 2011 is about 4.5 million.[1].

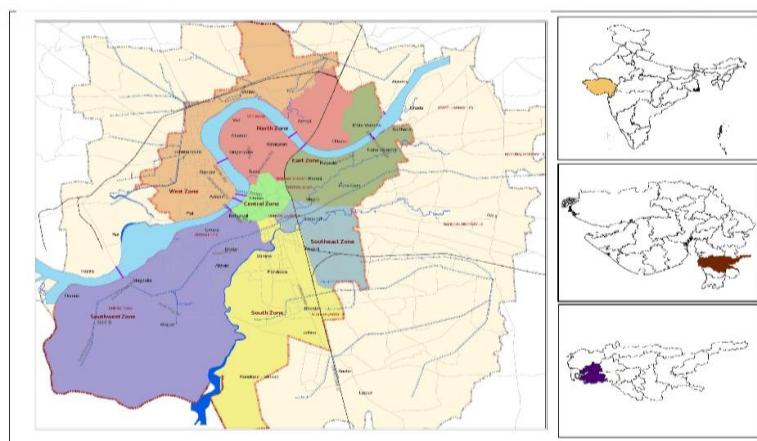


Fig.-1. Index map of Surat

## 1.2. Research approach

The objective of this study is to see how the land-use is changing from an industrial area to a highly organised residential and commercial area. How the land-use has changed over the time from textile mills will close after their expired period of use to lack of facilities. How the government and other stakeholders have initiated to change the industrial landuse for new use.

## 2. Literature review

### 2.1. Approach of industrial shifting zone by Surat urban development authority

There is hardly any scope of industrial development due to consumption of industrial zone. There are also various polluting industries located within residential zones, negatively affecting the health standards, environment and overall

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liveability. The existing polluting industries within the residential area proposed to be shifted admeasures about 4.3 sq.km. (1075 acres). For such industries to be shifted outside and to cater the potential of development, 136 sq.km. of area is proposed as industrial zone in the Development Plan- 2035, which includes about 9 sq.km. (2200)acres) of Obnoxious and Hazardous Industrial Zone in the newly added Pinjarat village. The location is on the north of existing Hazira area, under huge Government vacant land with access to waterbodies. The site is in vicinity of 120 Regional Ring Road, 90 m ORR and the Utility Corridor. Only 22acres of the land is under the private ownership while rest is the Government land.[2]

## 2.2. Case study

### 1) Urban Rejuvenation through Property Redevelopment – Reusing Lands of Textile Mills under Liquidation in Ahmedabad City[3]

In October 1992, for overall development of city Prof..Barjor E. Mehta prepared a report ‘Urban Rejuvenation through Property Redevelopment – Reusing Lands of Textile Mills under Liquidation in Ahmedabad City’ with support of Gujarat Foundation for Development Alternatives and Gandhi Labour Institute.

In this report of redevelopment of land, public private partnership was shown as a feasible solution. That could generate enough resources so that not only workers and other creditors can pay their dues but also create job opportunities.

In this report, 15 mills were taken for redevelopment which officially has gone under liquidation. Total liabilities of these 15 units come to around Rs. 155.18 cr. For redevelopment, large holding are broken into smaller plots. Study shows that 398 and 193 plots could be developed for industrial and commercial purpose respectively. 86 ha. Of land will be developed from 15 closed mills. This process will pay itself and in return, it could generate more than 50000 jobs at very convenient inner city locations. These 15 mills were divided in 4 groups on the basis of their physical location. Based on this, industrial and commercial land use was allocated. In many cases, new roads or small missing linkages were proposed to provide better access to the area.

This report has very good statistical information regarding the finance part of the project. Aim of the report was to try to create job opportunities as much as possible but, Land allocation for road and other services was very less. Especially, allocation for public open spaces was very low. Land use allocation was on the experience basis. It was not supported by any statistical or scientific data.

This report was for 15 textile mills, which has gone under official liquidation. By the time report gets completed, number of mills under liquidation was almost reached double i.e. 28. Proposed land use plan may change drastically because of change in total closed mill number.

### 2) Case Study: Rock Hill, South Carolina (U.S.A)[4]

#### • Background

More than 100 years, Rock Hill, South Carolina, was an important cotton market for county farmers. Nearly 20 textile mills were located in the area at the peak of the cotton manufacturing era. The Rock Hill Cotton Factory opened in 1881 as the first steam driven textile mill in South Carolina and played a leading role in the city’s industrialization. The Highland Park Mill, Arcade Textile Mill, and Rock Hill Body Company Mill all opened in the 1890s. A gradual decrease in cotton crop production

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and an increase in labour costs spurred the decline of the area's textile industry until it virtually ceased to exist in the early 1980s.

As a result, Rock Hill lost its major economic driver and faced a citywide unemployment rate of 17 percent. In addition, the neighbourhoods that existed as mill communities for generations suffered severe economic and community impacts, including declining housing and infrastructure, and rising crime and health concerns.

- **Redevelopment Process**

Rock Hill needed a strategy to quickly address the loss of its economic driver to prevent further social and economic decline. Two partnerships emerged to develop and support this strategic approach. The Rock Hill Economic Development Corporation (RHEDC) formed in 1983 to combat the area's economic decline and spearhead redevelopment. The Rock Hill Council of Neighbourhoods was incorporated in 1999 to preserve and promote the integrity of the city's neighbourhoods and assist with the transformation of former mill communities. In 2003, project partners developed the Textile Corridor Master Plan that included a feasibility study and physical assessment for the redevelopment of Old Town Rock Hill and four associated mill sites. In 2004, the city and county worked with the Rock Hill Council of neighbourhoods to develop the Neighbourhood Master Plan to restore infrastructure, provide amenities, and spur investment.

The RHEDC successfully stabilized the city's economic situation, enabling the city to focus on improving neighbourhoods and redeveloping the mill sites. In 2002, the city and the council worked together to revitalize the former Arcade Textile Mill site. A fire at the property in 1996 destroyed the mill building and heightened environmental concerns. RHEDC and the city jointly acquired the property through foreclosure and demolished the remaining structures. Assessment and clean-up of the property are ongoing. Once completed, the site is scheduled for redevelopment as single-family homes that will complement the surrounding neighbourhood.

Two other mills in Rock Hill were restored to preserve their historic architecture. In 2001, a private developer worked with the City of Rock Hill and formed a public/private partnership with the York County Council on Aging and the Rock Hill Housing Authority to redevelop the Highland Park Mill into 116 apartments for the elderly. In May 2006, the RHEDC sold the five-acre former Rock Hill Cotton Factory to Williams & Fudge, a national college loan agency, and Bryan Barwick, a Charlotte developer, for office and retail space that will bring 200 jobs to the area. The fourth mill, the Rock Hill Body Company, is privately owned and plans for redevelopment are in place.

- **Results**

Rock Hill's textile mill sites remain important landmarks and symbols of the city's industrial heritage. Targeting these properties for clean-up and redevelopment is eliminating environmental health hazards, decreasing crime, creating housing and retail space, and improving and updating the infrastructure of the community. Clean-up of the Arcade Textile Mill property will eliminate a major blight on the neighbourhood and allow the property to once again benefit the community it supported for generations.

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### 3) Case of Mumbai[5]

In Mumbai, land is the major constrain for any kind of development, and release of mill lands has solved this issue to a great extent. The recent trend of e-auction has brought in transparency in the auction process and helps regulate on any kind of malpractices. The actual development process is very tedious matter which takes time for the approvals to be sanctioned. Also it should be noted that there has not been any provision for social amenities and infrastructure development in the DCR58 for the development of mill lands, which is of prime concern taking into account the real estate supply.

The last decade saw rapid construction of high rises in the heart of Mumbai's C.B.D. It is the courts that have appeared to direct the debate on Mumbai's development. In Mumbai the NTC mills and other privately owned mills occupy nearly about 600 acres of prime industrial estate in posh central Mumbai. Though most of the land in these regions is under varying phases of redevelopment assisted with investment from the major real estate companies around the world.

In 1996, the Charles Correa committee prepared a comprehensive blueprint for the development of central Mumbai's mill lands, which recommended a vibrant mix of land usage. In 1991, section 58 was enacted which decreed that the land-use could be changed, and the property developed at an FSI of 1.33, provided that 1/3 is given for affordable housing, 1/3 is given to the city officials for amenities and open spaces. The remaining 1/3 to the owner with the right to use the FSI on the land surrendered to the city.

### 2.3. Comparison between case of Mumbai and Ahmedabad

Table 1 Comparative Process Study of Mumbai & Ahmedabad

Parameters	Mumbai	Ahmedabad
Role of Local body	Acquisition of land	Acquisition of land
Division of Land	1/3 for public amenities 1/3 for developers 1/3 for MAHDA	80% of the developers and rest 20% to the A.M.C.
Usage of Land	Commercial, Residential areas	Commercial, Low cost housing, Institution etc.
F.S.I allowed	Around 5	Varies with places
Provision in Development plan	Housing for the mill workers, EWS housing, Public space	For EWS housing, Institution, Commercial space
Saleable Land	BIFR Guidelines	BIFR Guidelines
Liquidation	BIFR Guidelines	BIFR Guidelines

### 3. Study Area

Major textile industries are located mainly next to the walled city of Surat which is in Tunki, Katargam, Navagam, Ashwinikumar, Laldarwaja, Phulpada, Kapodra, Umarwada, Anjana, Dumbhal, Magob, Limbayat, Udhana, bhatar, Godadara etc. This industry is located in East, South east and South zone of Surat city.

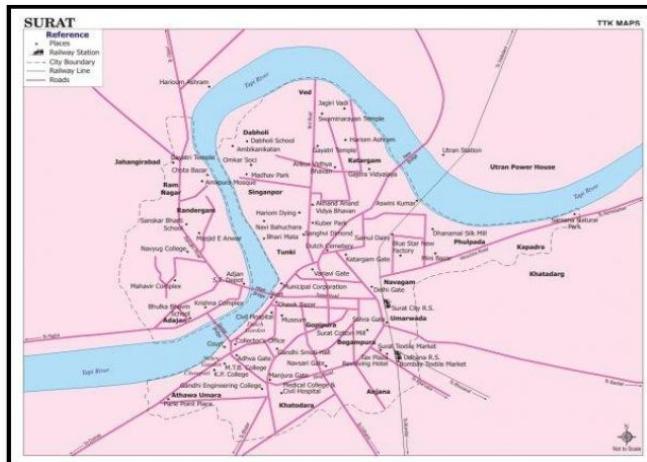
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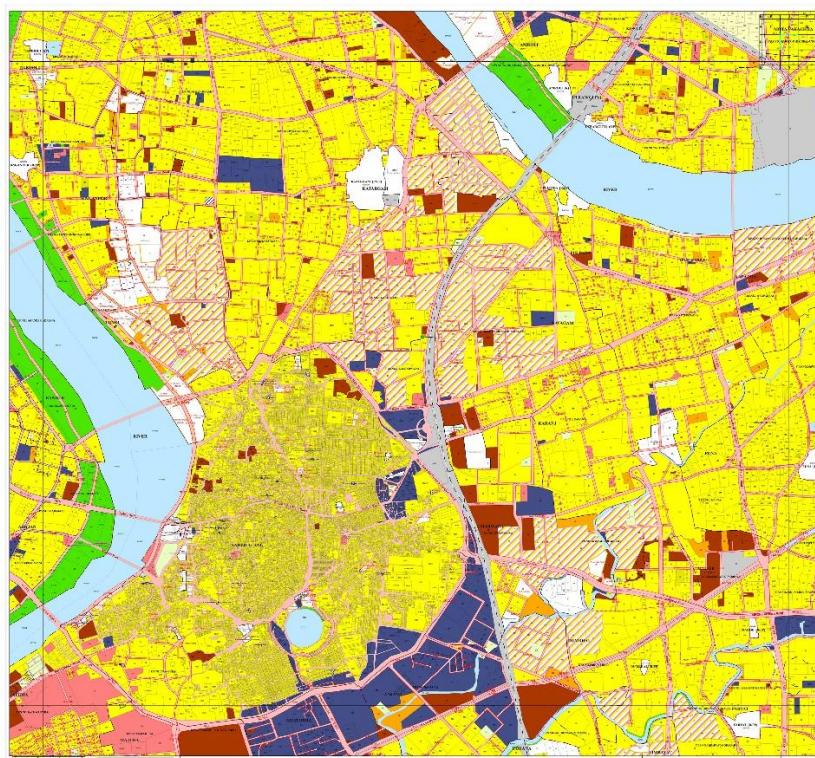
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**Fig.2-Location of Textile Industries.**

(Source-South Gujarat Textile Processing Association)

Surat urban development authority proposed 4.3 sq.km area to be shifted which consist general and hazard industries.



**Fig-3 Industrial Shifting Zone in Surat.**

(Source-Development Plan-2035, Surat Urban Development Authority)

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This total shifted area is divided in to 6 nos of clusters based on different area.

Cluster no.	Area Name	Area (in Ha)
1	Tunki-katargam	69.14
2	Katargam-Ashwinikumar-Navagam-phulpada	187.77
3	Kapodra	12.45
4	Umarwada-Magob	49.53
5	Anjana-Dumbhal	31.44
6	Udhana-Limbayat-Godadara	43.165
	<b>Total</b>	<b>393.52</b>

## 4. Result

The concept of Redevelopment internationally is been practiced in most of the places toconvert the existing old industries and dockyards into spaces which merge with the presentlandscape and give the space a different character. In case of India, many major industrial townsare also converting their defunct mill lands in strategic locations.The downtownrevitalization in many places has resulted in increase in the land prices around theareas of development but at the same time the change in the land use patterns have deterioratedthe overall urban space in some places.[6] So care should be taken to see that the new developmentsdo not disturb the fabric of the space at micro level and the city at macro level. Indian scenario ofmill land development shows upcoming of pure real estate ventures taking into consideration thepresent market conditions in terms of feasibility of the project and the expected returns and so on forthe reasons being high purchase value of the prime land parcel in most of the cities.

## 5. Recommendation

After studying the area I could understand the transformation of industrial landsare successful subject to strict decision to be taken by local body.

After brief study of the industrial areas, the following recommendation can help for sustainabledevelopment with economically better transformation of the area.

- 1) State government of Gujurat has already made DCR for redevelopment of closed textile mill compounds but almost all the closed mills are in the liquidation process. None of them haveclear title of ownership so local body should take initiative for fast title clearance process.
- 2) “Development Plan” of Surat city should be revised with new land-use proposal for Shifted industrial lands by local area planning.
- 3) The local government should make a local area plan of the Shifted industrial area for land-use change
- 4) from required survey, analysis and future needs.

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- 5) As 393 hectares of urban land lying in this domain, those land should be sustainably used for commercial, residential and other use to support & raise economy of the city.
- 6) There should be provision of open spaces, green areas, other recreational spaces and other basic infrastructure facilities in the future development.
- 7) The overall infrastructure of the city should be improved with new land-use proposal and high FSI.
- 8) It should be transformed according to the final format of local area plan and land-use proposal.

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