The Town Planning Mechanism in Gujarat, India

by Shirley Ballanney
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Shirley Ballaney
About the Author

Shirley Ballaney is an architect and urban planner with over 12 years of experience in areas of architecture, urban planning, regional planning, area planning, urban design, land management, and urban legislation and policies. She has been associated with EPC—a not-for-profit planning firm that undertakes research, advocacy, and capacity-building activities in the area of planning—since its inception and has recently taken up the leadership of EPCDPM, a planning company set up to provide professional planning service to governments. She has conceptualized, managed, and coordinated various projects related to urban and regional planning. Through her planning projects, she has promoted modern planning concepts and used innovative methodologies and technology to improve the practice of planning.

In 2005/6, she was awarded the Hubert Humphrey Fellowship by the U.S. Department of State to pursue the Special Program in Urban and Regional Studies at the Massachusetts Institute of Technology, Cambridge. She has received several fellowships from the Netherlands government, Swedish International Development Agency, and United Nations University Japan to pursue courses and travel. In 1992, she was awarded the Michael Ventris Memorial Award for Architecture from the Architectural Association, London.
Contents

Foreword ................................................................. ix

Acknowledgments ......................................................... xi

Abbreviations .............................................................. xiii

Introduction ................................................................. 1
1.1. The Challenge of Urbanization ....................................... 1
1.2. The Need to Effectively Manage New Growth ...................... 2
    1.3.1. Land Acquisition Method .................................. 3
    1.3.2. Land Pooling and Readjustment Method ..................... 5
1.4. Scope of This Paper .................................................. 7

Chapter 2
Urban Planning Process in Gujarat ........................................ 9
2.1. Introduction ......................................................... 9
2.2. The Planning Process .............................................. 10
    2.2.1. Development Plan ......................................... 10
    2.2.2. Town Planning Schemes .................................... 10

Chapter 3
A Brief Legislative and Implementation History of the TPS ........... 13
3.1. Legislative History in Gujarat and Ahmedabad .................... 13
3.2. Implementation History in Ahmedabad ............................ 15
Chapter 4

**Case Study: TPS No. 90 Vinzol 2, Ahmedabad** ............................................... 17
4.1. Introduction to the Case Study Area ................................................................. 17
4.2. The TPS Preparation Process ............................................................................. 17
   4.2.1. Survey of the Area ..................................................................................... 18
   4.2.2. Establishing the Ownership Details of Every Land Parcel ................. 19
   4.2.3. Reconciling the Survey and Landownership Records to
           Prepare a Base Map ..................................................................................... 20
   4.2.4. Defining the Boundary of the Area ......................................................... 22
   4.2.5. Marking Original Plots on the Base Map .............................................. 23
   4.2.6. Tabulating Ownership Details and Plot Size ....................................... 24
   4.2.7. Laying Out the Roads in the Area ............................................................. 24
   4.2.8. Carving Out Plots for Amenities in the Area ...................................... 25
   4.2.9. Tabulating Deduction and Final Plot Size ............................................. 26

Chapter 5

**To Sum Up: Key Advantages, Limitations, and Potentials of the TPS** . . 33
5.1. Advantages ....................................................................................................... 33
5.2. Limitations ....................................................................................................... 34
5.3. Potentials .......................................................................................................... 35

**References** ......................................................................................................... 37

**Annex: List of AMC Town Planning Schemes** ................................................. 39

**Figures**

Figure 1. Shantigram Township, acquired land parcels ........................................ 4
Figure 2. Shantigram Township, final serviced land parcels for sale ................. 4
Figure 3. Original irregular land parcels ................................................................. 6
Figure 4. Original irregular land parcels with proposed roads and amenity .... 6
Figure 5. Final regular land parcels with proposed roads and amenity .......... 6
Figure 6. Development Plan of Ahmedabad, 1999 ............................................. 11
Figure 7. Sequence of Town Planning Schemes in the Development
           Plan of Ahmedabad, 1999 .......................................................... 12
Figure 8. Town Planning Schemes in Ahmedabad over the years ............ 16
Figure 9. Location map of TPS 90 Vinzol 2 ......................................................... 18
Figure 10. Survey of the area for preparing the Town Planning Scheme .... 19
Figure 11. Various types of records collected to establish ownership details . 20
Figure 12. Base map for preparing the Town Planning Scheme ................. 21
Figure 13. Defining the boundary of the Town Planning Scheme .............. 22
Figure 14. Marking original plots on the Survey .............................................. 23
Figure 15. F Form for the Town Planning Scheme indicating ownership details and original plots sizes ........................................... 24
Figure 16. Road network in the Town Planning Scheme .................... 25
Figure 17. Road network and amenity plots in the Town Planning Scheme . 26
Figure 18. F Form for the Town Planning Scheme indicating land values and final plot sizes ........................................... 27
Figure 19. Delineation of final plots in the Town Planning Scheme ........ 28
Figure 20. G Form for the Town Planning Scheme indicating financials . . 29
Figure 21. F Form for the Town Planning Scheme indicating betterment charges ........................................... 30
Figure 22. Notice in a newspaper inviting all owners to a public meeting . 30
Foreword

The transformation of rural and urban fringe land for intensive and higher-order urban uses poses a major challenge to city planners in most countries. Such challenges are acutely felt in India, where the pace of physical development is very rapid, demographic pressures are intense, and the institutional and administrative mechanisms are not able to respond appropriately. Additionally, since under the Indian Constitution, urban issues are a state responsibility, legal, administrative, and procedural matters concerning urban land differ between states. Very often, therefore, mechanisms under use in one state are not well known in the other states.

In response to the above concerns, the World Bank Institute is pleased to present the documentation of the Town Planning Scheme (TPS) approach, which is one of many land transformation mechanisms currently in use in Indian cities. This documentation is meant to be used in the training of city managers and urban planners and does not imply that the TPS is applicable across all cities or states of India. With this publication, we hope to encourage the documentation of other techniques as well and facilitate the assembly of a collection of land transformation mechanisms.

On behalf of the World Bank Institute’s Urban and Local Government Program, I would like to thank Ms. Shirley Ballaney for allowing us to present this documentation to a wider audience.

Barjor Mehta  
Senior Urban Specialist  
Sustainable Development Division  
Urban and Local Government Program
Acknowledgments

This paper draws on the author’s rich experience of preparing several Town Planning Schemes (TPSs) at Environmental Planning Collaborative (EPC) and EPC Development Planning and Management (EPCDPM) for the local governments and development authorities. Several concept notes and presentations made for various forums on planning issues by other professionals at EPC and EPCDPM were also referred to (a complete list is given in references).

I would like to specifically acknowledge the contribution of Ms. Bindu Nair, urban and regional planner, and Mr. Atul Patel, computer-aided design technician at EPCDPM, for helping with the paper.
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ADA</td>
<td>Area Development Authority</td>
</tr>
<tr>
<td>DP</td>
<td>Development Plan</td>
</tr>
<tr>
<td>FP</td>
<td>Final Plot</td>
</tr>
<tr>
<td>GTPUDA</td>
<td>Gujarat Town Planning and Urban Development Act, 1976</td>
</tr>
<tr>
<td>OP</td>
<td>Original Plot</td>
</tr>
<tr>
<td>SF</td>
<td>Semi Final</td>
</tr>
<tr>
<td>TPS</td>
<td>Town Planning Scheme</td>
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<td>TPO</td>
<td>Town Planning Officer</td>
</tr>
<tr>
<td>UDA</td>
<td>Urban Development Authority</td>
</tr>
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</table>
1
Introduction

1.1 The Challenge of Urbanization

India faces a truly formidable challenge in managing the rapid process of urbanization and the growth of its cities. It is the second-most-populous country in the world, with a population of 1.028 billion and, of this, 285 million (27.8 percent) live in its 5,161 cities and towns. Economic reform has given considerable impetus to the process of urbanization, and it is expected that by 2050 half of its population will be living in its cities and towns. This will mean that the existing cities will continue to grow larger and many new cities and towns will be added.

Pressures of rapid growth and years of neglect have severely stressed the condition of India’s cities and towns. This is evident in the innumerable challenges facing them—large areas not serviced by roads, water supply, sewerage and storm water networks, inadequate health and education amenities, traffic congestion, ineffective and inadequate public transportation systems, unregulated and chaotic growth, slums, poor building stock, destruction of heritage resources, etc. All of these make India’s cities and towns polluted, unlivable, inefficient, and vulnerable to disasters.

Cities and towns are crucial to the economic well being of India. For this, it is imperative that its cities and towns are transformed and pressures of new growth are dealt with so that they are more livable, efficient, and environmentally sustainable. Only then will the rapid pace of economic growth that India is undergoing be sustained and the targets of environmental sustainability of the world achieved.
1.2 The Need to Effectively Manage New Growth

To manage the transformation of India’s cities and towns and effectively manage new growth requires effective urban planning protocols, processes, and institutions underpinned by effective legislation. Taking a viewpoint that distinctive responses are required to transform the cities and towns from their present stressed conditions and managing new growth in a manner that does not result in repeating the present problems in the cities and towns, this paper focuses on the latter—managing new growth.

To effectively manage the new growth implies that the agricultural land at the periphery of the cities and towns or smaller settlements that are not yet “urban” is transformed to be made suitable for urban or nonagricultural uses. This essentially means that the irregular landholdings and plots1 will have to be given regular shapes; they must be ordered; each plot must be given access; infrastructure services such as water supply and drainage must be provided; land must be appropriated for providing roads, parks, social amenities, and low-income housing, development controls must be prescribed to result in a good quality-built form and levy development or betterment charges to offset the cost of developing the physical and social infrastructure. But most importantly, all of this must happen in a timely manner and such that it is acceptable to the “landowners” to avoid conflict in the growth management process.

1.3 Approaches to Managing New Growth: The Gujarat Model

There have been, by and large, two approaches to managing new urban growth in India. In the first approach the public planning authorities and development agencies acquire large portions of land and then replan them in a desirable or appropriate manner. This is referred to as the “land acquisition” method. In the second approach, the public planning agencies and development authorities, instead of acquiring land, bring together or “pool together” a group of owners and then replan the area by readjusting or reshaping every land parcel in a manner such that it is given a regular shape and access and in the process a portion of land parcel is appropriated to provide for roads, infrastructure, and public amenities. This is referred to as the “land readjustment and pooling” method. Both the approaches, with their merits and demerits, are briefly explained and illustrated through sketches.

---

1. Landholdings or parcels are referred to as plots in Gujarat.
1.3.1 Land Acquisition Method

In this method, the public planning authorities/development agencies acquire large areas of land from agricultural landholders (farmers) under the Land Acquisition Act of 1894. Compensation paid to farmers is based on prevailing agricultural land prices. To minimize opposition to acquisition farmers are paid prices marginally higher than agricultural land prices. Then a master plan of the area is prepared, laying out the roads, plots for social amenities, and plots for sale. Roads and infrastructure are then built, using government funds or loans. Serviced plots are then sold for urban uses at market rates, which are most often much higher than the rate at which land is acquired.

There are merits as well as demerits to this method. The merits are listed as follows:

- Adequate amounts of land for urban uses can be rapidly generated, provided that there is little opposition to bulk acquisition from farmers.
- To expedite acquisition, some states allow private developers to assemble land. In many cases, developers use extralegal means to secure farmers’ consent.
- There are very few constraints in preparing the master plan.
- The benefit of appreciation of land value on its being converted to urban use accrues to the development authority.

The demerits of this method are as follows:

- Original owners or farmers don’t share this benefit in any manner. This goes against the grain of fairness.
- In this method, farmers are essentially thrown off their land.
- Unable to wisely invest the money received as compensation for their land and deprived of a means of livelihood, they have to join the pool of urban labor. This process adds to familiar urban problems—growth of slums, increase in crime rates, and increased informal-sector economic activity.
- The development process is slow. Any person who needs land for urban use has to approach the urban development authority. The development authority ends up becoming a bottleneck for development.
- Development agencies using the method of bulk land acquisition end up being powerful large-scale land developers, controlling vast urban resources.
- This is likely to breed corruption and is antithetical to the emerging paradigm, where government plays a facilitator’s role.
Figure 1. Shantigram Township, acquired land parcels

Figure 2. Shantigram Township, final serviced land parcels for sale
This method, with some variation, is used in, for example, the states of Delhi, Haryana, Rajasthan, Andhra Pradesh, Karnataka and Maharashtra.

1.3.2 Land Pooling and Readjustment Method

In this method, the public planning agency or development authority temporarily brings together a group of landowners for the purpose of planning, under the aegis of the state-level town or urban planning act. As there is no acquisition or transfer of ownership involved, there is no case for paying compensation. A master plan of the area is prepared, laying out the roads and plots for social amenities. The remaining land is reconstituted into final plots for the original owners. The size of the final plot is in proportion to the size of the original plot, and its location is as close as possible to the original plot. A betterment charge based on the cost of the infrastructure proposed to be laid is levied on the landowners. Infrastructure is then provided utilizing these funds.

There are merits as well as demerits to this method. The merits are as follows:

- All the land, except whatever is needed for infrastructure development and social amenities, remains with the original owner. The development agency plays a limited role in ensuring planned urban growth.
- The increment in land value resulting from the development accrues to the original owner whenever the land is sold and developed for urban use. Thus the benefit of development goes to the original owner instead of the development agency.
- The original owner is not displaced in the process of land development and continues to enjoy access to the land resource. Thus the negative impact of the process of urbanization on farmers (original owners) is minimized.

The demerits are as follows:

- This method is time consuming, since the procedure prescribed for preparation and implementation of such land pooling or readjustment schemes is unduly complicated and cumbersome.
- Betterment charges are assessed at the beginning of the land pooling or readjustment scheme preparation. Due to the inordinate delays in finalizing schemes, the betterment charges levied on finalization of the scheme do not meet the cost of the infrastructure provided.

This method is used, for example, in Gujarat and Maharashtra:
<table>
<thead>
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<th>No.</th>
<th>Survey no.</th>
<th>Owner’s name</th>
<th>OP area</th>
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</thead>
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<tr>
<td>1</td>
<td>190</td>
<td>Bhupebhai</td>
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<tr>
<td>2</td>
<td>192</td>
<td>Bipinbhai</td>
<td>10600</td>
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<td>Ramabhai</td>
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<td>Vadibhai</td>
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</tr>
<tr>
<td>5</td>
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<td>Krishnubhai</td>
<td>5450</td>
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<tr>
<td>6</td>
<td>217</td>
<td>Govindbhai</td>
<td>5150</td>
</tr>
<tr>
<td>7</td>
<td>218</td>
<td>Chandubhai</td>
<td>14150</td>
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</tbody>
</table>

**TOTAL** 66000

8 Road 5400
9 Amenity 7800
Total 8+9 13200
About 20%

**Figure 3. Original irregular land parcels**

**Figure 4. Original irregular land parcels with proposed roads and amenity**

**Figure 5. Final regular land parcels with proposed roads and amenity**

<table>
<thead>
<tr>
<th>No.</th>
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<th>OP area</th>
<th>Deduction (20%)</th>
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<td>Chandubhai</td>
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<td>2830</td>
<td>11320</td>
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</tbody>
</table>

**TOTAL** 66000 13200 52800

8 Road 5400
9 Amenity 7800
Total 8+9 13200
About 20%
It is quite evident that the land pooling and readjustment method is far more equitable and democratic when compared to the method of bulk land acquisition.

1.4 **Scope of This Paper**

The state of Gujarat has been practicing the land pooling and readjustment method since early 20th century to manage the process of new growth that addresses the undesired consequences of growth in a fairly successful manner. This is called the Town Planning Scheme (TPS). It has worked extremely successfully and has many crucial lessons to offer to not only other parts of India but other countries too so as to address some of the planning problems. Among the many reasons it works are the following:

- The process has a long history—it was introduced in 1915 by legislation and since then the legislation has been continuously improved to make the process more responsive to the changing context of development.
- The process is democratic—participatory with a built-in mechanism for dispute resolution—the landowners are involved in the process of planning and have ample opportunity to present their views on the proposals and place on record their objections.
- The process is fair—all owners loose the same proportion of land.
- The process facilitates equitable and inclusive development—a portion of land is appropriated for accommodating urban poor.
- The process respects property rights and nondisruptive—the landowners are not thrown off their lands and are given a better shaped land parcel, usually very close to the original land parcel.
- It is noncoercive and nonauthoritarian—the proposals are reviewed at several stages that are formally prescribed in the Act.
- Overall, the process has been a “win-win” proposition for both the landowners and the planning agencies—both gain from the appreciation in the land values.
- The process is transparent—very clearly described in legislation, planners have mastered it, and people understand and accept it.
- The process has been tested in law courts—it has been challenged in law courts and has withstood these challenges successfully.
- The cost of infrastructure is in a sense paid for by the owners directly, and the planning agency or development authority is not required to make huge investments upfront.
Overall, this manner of urban planning sees government and government agencies as being facilitators rather than providers of infrastructure. Although conceptually very well envisaged at this point, it also must be mentioned, however, that it is not perfect. There are several areas that can be improved to strengthen the process and extend it to achieve a lot more in terms of managing land appropriations in a manner whereby large parcels of land are available for key public social and physical infrastructure, achieving a better built form by incorporating urban design concerns, etc.

This paper attempts to elaborate on some of the above in the TPS process as practiced in Gujarat in the following manner:

- A brief introduction to the planning process in Gujarat is given so as to place the TPS in legislative and institutional perspective.
- A brief legislative and implementation history of the TPS in the city of Ahmedabad is given to demonstrate that the entire city has been developed in this fashion and that there have been continuous improvements in the legislation. Because of this, there is acceptability among people and a realization of much-better detailed planning. At the same time, there do continue to exist some of the obvious lacunae and limitations in the present legislation.
- A simple step-by-step explanation of this process with a case study of a TPS, prepared and implemented by EPCDPM with drawings, is presented next as prescribed in the legislation.
- Some of the lacunae and limitations, scope for improvement, and the potential of the TPS mechanism are presented.
2 Urban Planning Process in Gujarat

2.1 Introduction

Gujarat has a fairly good and robust legislative framework for urban planning as compared to other states in India. This is, the Gujarat Town Planning and Urban Development Act (GTPUDA), enacted in 1976 by the parliament. The act derives from early 20th century planning law devised by the British to improve and manage Indian cities. It also has been amended from time to time to keep pace with the changing requirements (section 3 describes this further).

The GTPUDA mandates the delineation of a “Development Area” around a city or a town for planning purposes. It encompasses a much larger area around the city or town that is likely to see development. This ensures and allows for better planning and for guiding the development in the area. A village is the basic spatial unit and every development area is an agglomeration of numerous villages, or may also include portions of villages. Each village is an agglomeration of land parcels or plots.

The GTPUDA also mandates the creation of a special planning authority—the Urban/Area Development Authority (UDA/ADA)—which is charged with the task of undertaking planning within the delineated Development Area.

Urban planning in Gujarat is a two-step process and is prescribed in the GTPUDA and its Rules. The first step is to prepare a “Development Plan” (DP) for the entire city or development area. The second step is to prepare “Town Planning Schemes” (TPSs) for smaller portions of the development area for which the Development Plan is prepared.
2.2 The Planning Process

2.2.1 Development Plan

The DP is a macro strategic plan document that defines the direction of growth and envisions the citywide infrastructure for the entire development area. It is a comprehensive document that looks at all components of development and makes specific proposals with respect to each. These include the following:

- Land development—land use zoning, areas to be opened up for new growth, development control regulations (which determine the built form), and allocation for public uses
- Road network and transportation
- Water supply
- Sewerage
- Storm water drainage
- Open spaces, green areas
- Environment and pollution control
- Reclamation of areas
- Any other

The DP is revised every 10 years and is varied (updated) in the interim whenever a need arises to respond to the changing context.

The process also includes limited public participation—after a draft DP is prepared by the Development Authority it is published and kept open for public inspection for a period of two months and objections and suggestions are invited. Each objection and suggestion is responded to and, if required, the DP is modified. It is published again to invite further objections and suggestions. These are again taken into account and the DP is modified. It is then sent to the State Government of Gujarat for approval and oversight. The State Government may suggest modifications, keeping the overall public good in view if required, before approving the DP.

2.2.2 Town Planning Schemes

The DP is a broad-brush development vision for the city—a dynamic document which then is detailed gradually. Most importantly, the new areas for growth to be opened up for development are clearly marked and divided into smaller areas of about 100 to 200 hectares. Each such area is called a TPS. The TPS are micro plans prepared for about 100 to 200 hectares typically involving 100 to 250
Urban Planning Process in Gujarat

landowners. The TPS are numbered starting from one, two, three, etc., and are usually named after the “village” they fall in.

A complex system is used to simultaneously reorganize land parcels or plots, provide access to each land parcel or plot, set aside land for public uses by taking a portion from each landholding, and appropriate increments in land values for infrastructure development. Detailed infrastructure is designed and cost estimates are prepared. The process involves intensive public participation and consultation at several stages.

Figure 6. Development Plan of Ahmedabad, 1999
The various stages are explained in Section 4.

Figure 7. Sequence of Town Planning Schemes in the Development Plan of Ahmedabad, 1999
A Brief Legislative and Implementation History of the TPS

3.1 Legislative History in Gujarat and Ahmedabad

Modern urban planning in India did not evolve from a preexisting ideology as it did in the West. There was a break in the process of city planning and design traditions with the introduction of British colonial rule. Modern town planning emerged from the British intervention in Indian cities. These were modeled heavily on the prevailing ideologies and movements in town planning in England.

During British colonial rule, a number of measures were undertaken and laws were enacted. These were then continued by Indian planners after independence. It was not until very recently, however, that the legislation was amended to recognize the emerging situation in India. This has resulted in chaotic and unplanned growth of cities and towns.

In the early 1900s, town planning or urban planning was regarded to be part of the municipal administration. As the problems in urban areas took on greater proportions both with regard to scope and complexity, however, improvement trusts addressing portions of cities and towns were set up under various improvement trust acts to formulate and implement town improvement schemes.

These gradually gave way to town planning acts to prepare town improvement schemes by some states. Different states enacted different legislation for town planning, and there was no continuity or uniformity across states. Thus,

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2. This review is based on discussions with Mr. N. R. Desai, former town planner with the Ahmedabad Municipal Corporation, and “Planning the Urban Form: A Study of Town Planning Schemes in Ahmedabad,” by Saloni Kaji, unpublished dissertation at School of Architecture, Center for Environmental Planning and Technology, Ahmedabad.
different states had different legislation for town planning either under municipal acts or town planning acts.

The Bombay Town Planning Act, 1915, was the first to be introduced in India and was applied to the present states of Maharashtra and Gujarat. Such laws empowered the local authorities to control the use of land and development through the instruments of zoning and building regulations, acquire land for public purposes, and recover betterment contributions in respect to land parcels benefiting from improvements.

This act largely came about as a response to remedying the chaotic and unhealthy environment created by industrialization in the form of textile mills in Ahmedabad. Its objective was sanitation, some social amenities, and orderly development of the area. The local authorities were given the powers to prepare TPSs.

Both types of acts—improvement and town planning—did not provide for comprehensive planning of cities and towns, but only improvements for portions from the viewpoint of public health, sanitation, and safety. Further, the Bombay Town Planning Act was voluntary and depended on the initiative of the local body.

A Town Planning Handbook published by the Public Works Department of the Government of Maharashtra published in 1876 was the main sourcebook for preparing TPSs. It provided new models for layouts. Recommending Ebenezer Howard’s garden city concept, it reproduced only the physical elements of the plan while ignoring the social and economic content. Consequently, the concept as understood by Indian planners translated into low-density suburban dormitories. Instead of the self-contained towns as envisaged by Howard, only the elements of zoning, neighbourhood units, and greenbelts were incorporated and absorbed in the local planning vocabulary.

Soon after independence, town planners realized that suburban developments were not solving problems. To enable local authorities to tackle the issues of growth and planned development in a comprehensive and integrated manner for the entire city or town based on surveys, studies, and analysis of physical, social, and economic conditions, more comprehensive legislation was required. The Bombay Town Planning Act was enacted in 1954 keeping this objective in view by the State of Maharashtra. It replaced the 1915 Act and was applicable to the states of both Maharashtra and Gujarat. It came into force in 1957. Under this act, it was mandatory for every local authority to carry out a survey of the area within its jurisdiction and to prepare and publish a development plan.

Even the 1954 Act was heavily modeled on the Britain’s Town and Country Planning Act of 1947 and did not emerge in response to the local planning problems. While the British legislation and planning ideologies continued to evolve,

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3. At this time, both states were one, known as the Bombay Province. Gujarat was created as a separate state in 1960.
in India they unfortunately remained more or less frozen in 1947. There were a couple of clear drawbacks:

- The process of preparing TPSs took very long, as physical planning proposals and the financial proposals were required to be resolved prior to implementation.
- The jurisdiction was limited only to that of the local authority. With the increasing pace of urbanization and migration, the pressure of development just outside the limits began to be felt. The periphery or the fringe began to see unplanned development and could not be left unattended.

This act was eventually replaced in by the more recent act—the GTPUDA enacted in 1976 by the State of Gujarat. It came into force in 1978. It is a far more comprehensive legislative act and responded to the local challenges of growth. The above two drawbacks were addressed:

- the act allows for delineation of a large planning area around the jurisdiction of the local authority; and
- the physical planning proposals and financial proposals in TPSs were unlinked. The process of preparing a TPS was divided into three parts—draft TPS, preliminary TPS, and final TPS—to expedite implementation.

Apart from this, the act has been amended several times to improve the process of planning.

### 3.2 Implementation History in Ahmedabad

Most of Ahmedabad has been developed using the TPS mechanism. The process began as early as 1915. TPSs were prepared continuously under the various acts described above. Figure 8 shows the total number of TPSs built over a period of time under different legislation. Annexure 1 gives a list of the TPSs, year, and the act under which they were prepared.

Clearly, there is a long history of implementation of the TPSs, which has made the process acceptable to the people. There have been continuous improvements in the content of the proposals over the years.
Figure 8. Town Planning Schemes in Ahmedabad over the years
4

Case Study:
TPS No. 90 Vinzol 2, Ahmedabad

4.1 Introduction to the Case Study Area

The TPS No. 90 Vinzol 2 is taken as a case study to explain the process. The TPS area is located in the southern portion of the city of Ahmedabad very close to the junction of Ahmedabad Mehmedabad Highway and the 60-meter-wide Sardar Patel Ring Road. This is one of the most rapidly developing corridors and is predominantly an industrial area. It falls in the village of Vinzol (see figure 9).

The TPS falls within the jurisdiction of Ahmedabad Municipal Corporation. River Khari abuts the entire northern portion and passes through the TPS. To the west is the Mumbai Ahmedabad Railway line. To the east is the TPS No. 91 Vinzol 3. To the south are TPS Nos. 71 Vinzol Hathijan and 72 Vinzol 1. Most the area is vacant and includes the village settlement of Vinzol. The total area of the TPS is approximately 82 hectares and it has 80 land parcels.

The case study is interesting because in this TPS, there is a village settlement that needed to be integrated, a large water body that needed to be responded to, and a nonperennial river that passes through the area.

4.2 The TPS Preparation Process

The process for preparing a TPS is prescribed in GTPUDA, 1976, and its Rules. It is quite a complex and long process involving over 50 steps that can take a maximum of four years and one month as provided by the act, but in practice takes much longer. It is described in a much simplified and concise manner, drawing from experience in preparing over 20 such TPSs for various planning authorities. Each stage is illustrated by relevant drawings and documents.
4.2.1 Survey of the Area

A very detailed and accurate topographical survey of the entire area for which the TPS is being prepared is undertaken using high-accuracy equipment called the Total Station Survey, which records all physical features on the ground—structures, trees, fences, compound walls, electric poles, water bodies, drains, etc. Figure 10 shows the physical features surveyed.
4.2.2 Establishing the Ownership Details of Every Land Parcel

All cadastral records are collected to reflect the ownership details, extent (area), tenures, and encumbrances for every land parcel and are compiled in a prescribed format. The type of tenure for each land parcel is noted; this is crucial as it has a direct implication on the change of use and transfer of ownership, and usually the same tenure is retained while giving back the newly shaped land parcel. This process is extremely tedious and time consuming, as the land records are of several types, are spread across various agencies, are noncomputerized, and are in different formats. Figure 11 illustrates some of these types of records.
4.2.3 Reconciling the Survey and Landownership Records to Prepare a Base Map

Along with the cadastral records, all types of spatial records (maps) are also collected. As in the case of cadastral (area) records, these are of several types, spread across agencies, and noncomputerized, using not-to-scale drawings and in different formats. The spatial records are vectorized and reconciled with the
physical survey of the area. At this point, the area from the maps and records are compared and finalized. This is called the “melavni” in the local language and literally translated means “to match.” This process is a major bottleneck, as it must be certified by the Land Records Department. This department has limited staff and is unable to cope with the pace. The base map of the area is now ready for undertaking planning. Figure 12 shows the base map.
4.2.4 Defining the Boundary of the Area

On the final base map of the area that shows the survey, the boundary of the TPS area is clearly marked. At this stage, the intention to prepare a TPS for the area is publicized in a clear fashion in local newspapers. Figure 13 shows the area with the TPS boundary.

At this point, the information pertaining to the land prices is collected from the register of land transactions. Based on the information on relevant sales of land, a sales map is prepared. Obviously, sales are not available for all parcels and hence, based on the available transactions and valuation principles, land
values are attributed to each plot. This is called the original plot (OP) value; it is the value of the land parcel before any kind of planning intervention.

4.2.5 Marking Original Plots on the Base Map

All the OPs are marked on the base map. If more than one land parcel or plot belongs to one owner or group of owners with exactly the same tenure status, then such land parcels or plots are consolidated and given one OP number. The land parcels need to be contiguous. Thus, at this stage landholdings within a TPS are also consolidated as far as possible. Figure 14 shows the OPs within the TPS.
4.2.6 Tabulating Ownership Details and Plot Size

The task of tabulating the information is commenced in a format prescribed in the GTPUDA Rules called the F Form. The first few columns are filled—name of the owners, land tenure, revenue survey numbers, OP number, OP area, and OP value. Figure 15 shows the F Form at this stage.

![Figure 15. F Form for the Town Planning Scheme indicating ownership details and original plots sizes](image)

4.2.7 Laying Out the Roads in the Area

The planning of the TPS area begins and at this stage the TPS is called a draft TPS. The first major step is laying out the roads. If a road that is shown in the DP passes through the TPS area, it is usually respected. It may be slightly modified, keeping in view the findings of the survey. While designing the road network, the transportation planning principles are followed, a planning pattern (e.g., a grid or a radial pattern) is devised, and appropriate connectivity with the arterial road network identified in the DP, and the DP roads passing through the TPS is established, if a natural feature such as a water body is present, it is addressed and, most importantly, care is taken to ensure that each OP gets access to it. The GTPUDA indicates a tentative percentage of areas under roads to the total scheme area of about 15 to 17 percent. Figure 16 shows the road network within the TPS.
4.2.8 Carving Out Plots for Amenities in the Area

Plots providing adequate social infrastructure such as schools, hospitals, dispensaries, clinics, open spaces, housing for the poor, etc., are marked on the base map along with the roads. The areas to be allocated for such uses are indicated in the GTPUDA as tentative percentage to the total area of the TPS is about 20 percent. Figure 17 shows the road network and amenity plots within the TPS.
4.2.9 Tabulating Deduction and Final Plot Size

The total percentage of area that goes under roads and amenities is about 35 to 40 percent. The GTPUDA allows this to go up to 50 percent. The F Form is continued to be filled further. From each OP this percentage is deducted and a final plot (FP) size is arrived.
At this stage, the process of valuation is continued further. A semifinal (SF) value to the OP is also assigned. Usually, this is the same as the OP value. In some instances, however, there can be a change in the value of the OP before the provision of infrastructure—it may increase or decrease owing to the planning proposals such as zone changes, changes in plot shape, changes in the plot size that are impacted certain development control regulation, a substantial shift in plots, and proximity to features that may negatively impact development, such as a high tension lines, eroded lands, etc. Figure 18 shows the F Form at this stage.

Figure 18. F Form for the Town Planning Scheme indicating land values and final plot sizes

4.2.10 Delineation of Final Plots

After the roads and amenity plots are worked out, each OP is reconstituted or redrawn. At this stage, the irregular shapes of the OPs give way to regularly shaped FPs with the new areas. Figure 19 shows the proposed road network, amenity plots, and FPs.
4.2.11 Tabulating Infrastructure and Betterment Charges

At this stage, costs for a TPS are worked out. These include the following:

- Costs of key infrastructure—roads, water supply, drainage, and street-lights—are calculated
- Compensation to be paid to each landowner for the land is appropriated based on the SF value
- Administrative costs of implementing the TPS are accounted for
• The final value for each plot is systematically assessed
• A portion of this increase in land value is taken as betterment charges
• A “G Form” summing up the inflows and outflows for a TPS is prepared summarizing the overall financial strategy of the TPS
• The “F Form” is completed—each landowner is given compensation for the land taken and a portion of the land value is taken as betterment; based on the two, the net demand is computed for each owner

![Figure 20. G Form for the Town Planning Scheme indicating financials](image)
4.2.12 Owner’s Meeting

Landowners are consulted and heard at this stage for the first time when the work on the draft schemes is completed. A well-publicized landowner’s meeting is prescribed in the GTPUDA.

4.2.13 Modification of the Draft TPS and its Approval

Based on the suggestions and objections received from each landowner, the draft TPS is modified and published. It is again thrown open for objections and suggestions from the landowners. Based on the second round of objections and suggestions, it is modified and then submitted to the State Government for approval. Once approved, the draft TPS is now called the sanctioned draft TPS. The proposals for roads can be implemented.
4.2.14 Appointment of the Town Planning Officer (TPO)

After approval of the draft TPS, a quasi-judicial officer called the town planning officer (TPO) is appointed. The TPO’s task is to deal with each landowner both on the physical planning proposal—the shape and location of the FP and the financial proposal—the compensation and betterment issues, and eventually demarcate the FP on ground and hand it over to the owner. The TPO divides the sanctioned draft TPS in two parts to facilitate his or her functioning: a preliminary TPS to deal with the physical planning proposal and a final TPS to deal with the financial proposal.

4.2.15 Individual Hearings to Each Landowner on the Preliminary TPS

The TPO gives individual hearings to each landowner and revises the preliminary TPS if required. Inputs from the State Government and local authority and development authority are sought. The preliminary TPS may be modified if required, and the TPO gives a second round of hearings. These hearings, as mentioned above are on the physical planning proposals.

4.2.16 Finalization of the Preliminary TPS and Its Approval

The preliminary TPS is again modified based on the second hearing. At this stage, demarcation of FPs commences. The TPO finalizes the preliminary TPS by writing his or her decisions with regard to every plot. This is referred to as the award of the preliminary TPS and is published in the local newspapers. At this stage, the preliminary TPS is sent to the State Government for approval. It must be approved within two months. The preliminary TPS comes into effect from the date of sanction and all plots appropriated for public purpose vest with the local authority or development authority.

4.2.17 Individual Hearings to Each Landowner on the Final TPS

At this stage, the financial proposals are taken up with each owner. These pertain to the compensation and betterment charges. The TPS at this stage is called the final TPS.
4.2.18 Finalization of the Final TPS, Its Approval, and Implementation

Once the hearings are done, the financial proposals may be modified and sent to the State Government for opinion. There may be some modifications. The TPO then finalizes the TPS and publishes it in the local newspapers. This is referred to as the “Award of the Final TPS”. A Board of Appeals for further issues on financials is constituted. Once all appeals are resolved and the final TPS is modified, it is sent to the State Government for approval. The State Government is required to sanction it within three months, but it usually takes longer. Once approved, the drawings and documents are sent to the State’s Revenue Department to update the records.
This section briefly sums up the advantages, limitations, and potentials of the TPS process.

5
To Sum Up: Key Advantages, Limitations, and Potentials of the TPS

5.1 Advantages

- **Long history**: The process has a long history—it was introduced in 1915 by legislation, and since then the legislation has been continuously improved to make the process more responsive to the changing context of development.
- **Democratic and participatory**: The process is democratic and participatory, with a built-in mechanism for dispute resolution—the landowners are involved in the process of planning and have ample opportunity to present their views on the proposals and place on record their objections.
- **Fair**: The process is fair, as all owners lose the same proportion of land.
- **Equitable and inclusive development**: The process facilitates equitable and inclusive development; a portion of land is appropriated for accommodating urban poor.
- **Respects property rights and is nondisruptive**: The process respects property rights and is nondisruptive; the landowners are not thrown off their lands and are given a better-shaped land parcel, usually very close to the original land parcel.
- **Noncoercive and nonauthoritarian**: The process is noncoercive and nonauthoritarian; the proposals are reviewed at several stages that are formally prescribed in the act.
• **Win-win proposition:** The process has been a “win-win” proposition for both the landowners and the planning agencies—both gain from the appreciation in the land values.

• **Transparent:** The process is transparent: it is very clearly described in legislation, planners have mastered it, and people understand and accept it.

• **Tested in law courts:** It is tested in law courts; it has been challenged in law courts and has withstood the challenges successfully.

• **Making development pay for the cost of infrastructure:** The cost of infrastructure is in a sense paid for by the owners directly, and the planning agency and development authority is not required to make huge investments up-front.

**5.2 Limitations**

Despite the TPS mechanism being well articulated in the GTPUDA, prepared by the planners in the State Government since 1915, and widely accepted, there are a few shortcomings, which result in the growth not being managed in time, renewal of areas, although possible, becomes difficult and development occurs before the provision of infrastructure in some instances. The following are a few of the limitations:

• **Lengthy time frames:** The timelines proposed in the regulatory framework—four years—are far too long. The State Government actually takes much longer to approve the various stages. The TPSs thus take far too long to prepare and implement. These time frames were determined when computerization was nonexistent, communication technologies were cumbersome, and there was virtually no private sector in place to assist the public sector. In view of changes in technology, the timelines can be easily reduced.

• **Inadequate attention to substantial issues:** Substantial issues are dealt with in an inadequate manner. These need to be supported by preparing manuals and guidelines.

• **No asset management framework is in place:** The significant land assets generated by the local authority are not managed in an appropriate manner. Most local authorities or development authorities do not even have a comprehensive list of all such land assets created.

• **Centralized processes:** The processes are far too centralized—too much power is vested in the State Government to approve and sanction the DPs and TPS. The State Government is responsible for undertaking both substantial reviews and procedural reviews of each and every DP (there are about 150 urban areas) and for innumerable TPSs. There are no limits on the time it takes for this and there is a tremendous amount of corruption.
To Sum Up: Key Advantages, Limitations, and Potentials of the TPS

that takes place at this stage. Inadequate capacities in terms of lack of staff and qualified planners add to the problem.

- **Disconnect with the city budgeting process:** At the moment, there is no clear linkage of the DPs and TPS with the city budgeting process.

## 5.3 Potentials

The TPS has tremendous potential that needs to be demonstrated effectively to the planners practicing in the public sector. This will considerably reinvigorate the urban planning system that is so critically required at this stage to transform Indian cities.

- **TPS as an infrastructure financing tool:** Although several TPSs have been done and a land bank is being built up with the planning authorities, there is no systematic asset management framework in place. As a consequence, valuable land parcels created are not efficiently leveraged to finance infrastructure in cities. The present manner in which land valuation is done needs to be overhauled and made more systematic and rational so that it is realistic and in sync with the market prices. At present, land valuation is dictated by the concern to match the revenue in the form of betterment charges to the expenditure incurred by the Development Authority to develop the infrastructure and compensation.

- **TPS as a tool to introduce innovative planning concepts:** Until now, the task of preparation of DPs has been restricted to land use zoning and the arterial road network structure. The TPSs have until now been treated as mechanical exercises in reconstituting land parcels, and not enough attention has been paid to planning concerns, be it in terms of the road network or responding to special site features. Three dimensional aspects are not addressed. Although the GTPUDA has a provision for introducing special regulations and urban design guidelines to regulate development, these are never exercised. Further, the manner in which the land for public uses is appropriated is highly fragmented. The TPS tool offers an opportunity to consolidate public lands. This has happened partly because this potential has never been demonstrated and partly because, the technical capacities of the town planning staff are severely constrained.

- **TPS as a tool to build accurate maps and land records for the city:** The city of Ahmedabad does not have an accurate surveyed map of the city after 60 years of independence. While a DP is prepared, the first task is to prepare a base map. When the TPSs are prepared, very accurate cadastral maps and landownership details are developed. The cadastral maps and records are now maintained by the Revenue Department, and these are then procured.
by the planning agencies to prepare maps and databases. Both of these function separately, however, and they maintain and update their own records, resulting in considerable confusion and duplication of efforts. Again, the spatial records are not linked with the databases. The planning department itself has not collated individual TPSs and created accurate maps and databases. The lack of maps and the absence of databases has hindered planning and management functions by different line departments. Hence, while the DPs and TPSs are prepared, there is an opportunity created to build a fairly accurate GIS-based base map and land record system that can be used by both the planning and revenue departments.

All of the above issues can be addressed via a process of systematic reform. The urban planning system in Gujarat can be easily reinvigorated and has significant lessons for other states in India. A series of reforms in the form of amendments to the act have already taken place, but a lot more needs to be done.
6
References


9 The following TPS prepared by the EPCDPM Team

- ATPS 62 Narol Ranipur
- ATPS 90 Vinzol 2
- ATPS 91 Vinzol 3
- ATPS 93 Vinzol 4
- ATPS 94 Hathijan Ropda
- ATPS 95 Geratpur
- GTPS 1 Koba
- GTPS 2 Koba Kudasan
- GTPS 12 Shertha
- GTPS 13 Vavol
- GTPS 19 Raysan
- GTPS 20 Koba
7

Annex: List of AMC Town Planning Schemes

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Note: TPS Nos. 32, 33, 34, 35, 38, 69, 73 have been marked on the map of Ahmedabad to be taken up for preparation but no details were available.