

# Context

Built, Living and Natural



Volume V Issue 1 Spring/Summer 2008

Journal of the Development and Research Organisation for Nature, Arts and Heritage

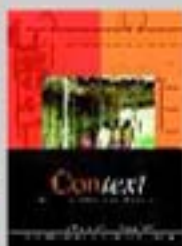


# Indian Heritage Cities Network



United Nations  
Educational, Scientific and  
Cultural Organization

highlighting the **Indian city** as a Living Cultural Resource, Preserve the uniqueness, Diversity of the cultural heritage, Promote heritage and Creativity as the driving force for urban development and employment generation and balance socio-economic and cultural development.



Dronah publishes a bi-annual refereed journal titled "Context: Built, Living and Natural", which records and evaluates the documentation and conservation methods for built and natural heritage, and simultaneously highlights people's role in the process by recording community activities. Interested subscribers, kindly use the subscription form.

**Share a vision for a better quality of life without  
foregoing strengths of the traditional**

It is our aim to actively promote sustainable development through conservation, utilisation of traditional practices and modern technologies, knowledge sharing and mutual interaction. The organisation is presently working towards the documentation, conservation and development of the built heritage, ecology and environment, communities, arts, crafts and education.



**Dronah**



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*Disclaimer: All articles included in this issue express individual views of the author and not of any organisation. All photographs are contributed by the authors unless specified otherwise.*



**Indian Heritage Cities Network (IHCN)\*** was founded by UNESCO New Delhi at an international conference held in Jaipur in September 2006. The Network provides a platform for sharing expertise and experience for the sustainable socio-economic and cultural development of India's historic cities. Established with the endorsement of the Ministry of Urban Development, Government of India, the Network currently comprises sixteen Indian member cities, seven French cities and regional partners, two university members and a number of NGO partners, with more Indian cities and European cities/regions and universities expressing interest in joining.

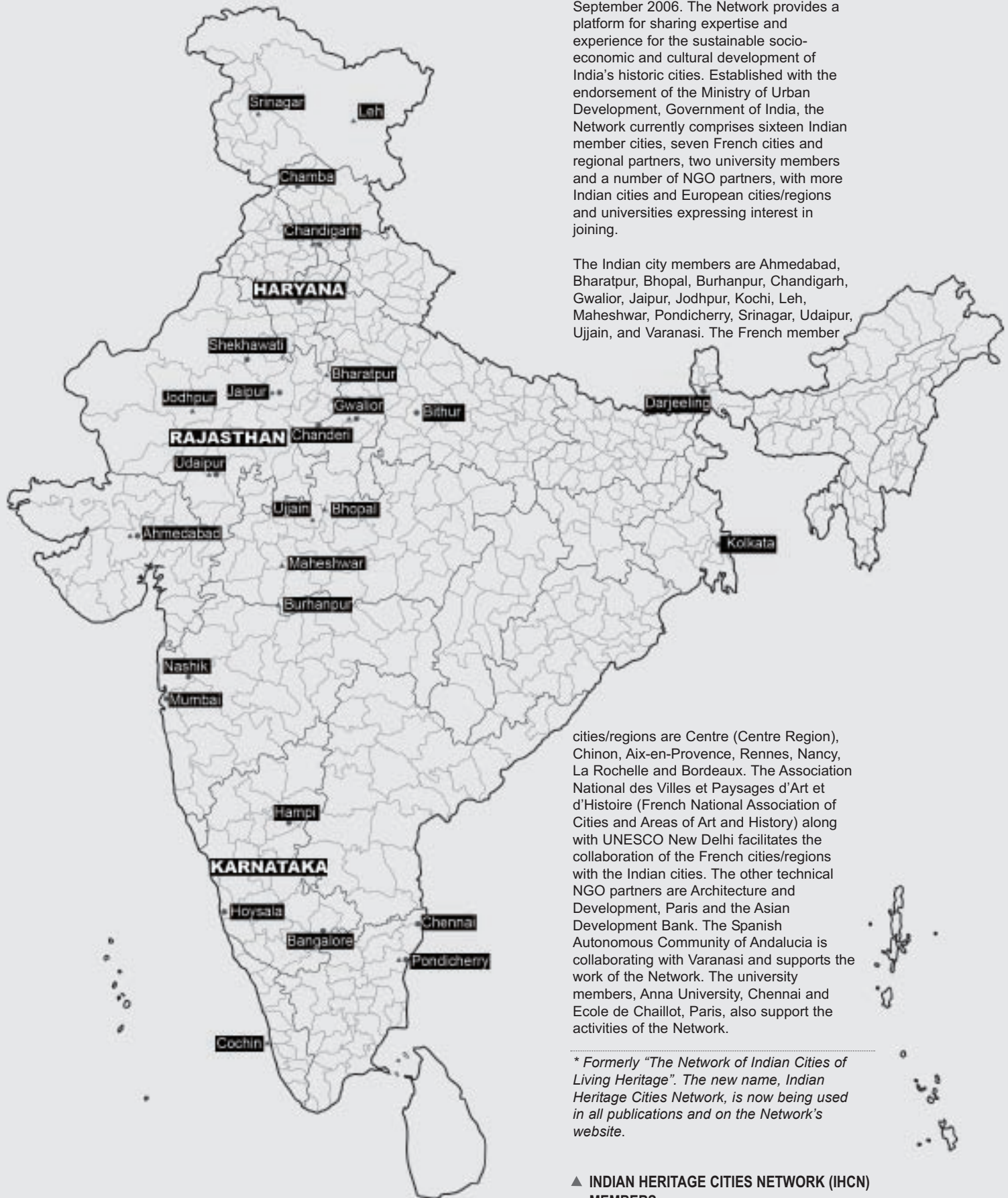
The Indian city members are Ahmedabad, Bharatpur, Bhopal, Burhanpur, Chandigarh, Gwalior, Jaipur, Jodhpur, Kochi, Leh, Maheshwar, Pondicherry, Srinagar, Udaipur, Ujjain, and Varanasi. The French member

cities/regions are Centre (Centre Region), Chinon, Aix-en-Provence, Rennes, Nancy, La Rochelle and Bordeaux. The Association National des Villes et Paysages d'Art et d'Histoire (French National Association of Cities and Areas of Art and History) along with UNESCO New Delhi facilitates the collaboration of the French cities/regions with the Indian cities. The other technical NGO partners are Architecture and Development, Paris and the Asian Development Bank. The Spanish Autonomous Community of Andalusia is collaborating with Varanasi and supports the work of the Network. The university members, Anna University, Chennai and Ecole de Chaillot, Paris, also support the activities of the Network.

*\* Formerly "The Network of Indian Cities of Living Heritage". The new name, Indian Heritage Cities Network, is now being used in all publications and on the Network's website.*

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## About the Volume

Dilapidated urban fabric, unplanned growth, insensitive new development, encroachments and a web of electric wires are constant maladies that plague the historic core of majority of Indian cities. Though India is on the road to urban conservation with several initiatives taken at the international, national and local level in the last decade, we still have a long way to go. The cultural diversity of Indian cities entwined with complex historic layers and unique geomorphology present a challenging task for conservationists, urban planners, environmentalists, anthropologists, sociologists, engineers and other associated professionals at large.

Do we really understand our historic cities? And, are we equipped to conserve these in the best possible manner? This special volume presents the history and town planning traditions through centuries and aligns them with recent efforts in urban conservation.

Documentation of physical features and cultural mapping is the first step towards establishing heritage values of the social, natural and built environment. It leads to a better understanding of evolution of a city or a town, which forms a crucial prerequisite for any conservation work. This point is emphasised in the article on Bithur, an unknown, forlorn historic settlement representative of the several small sized towns sprawled across the country laced with their own local history.

The methods and approaches to Indian town planning and to the process of conservation can be observed across India in the chronological presentation of city development. Beginning with the description of archaeological settlements in Rajasthan, the ancient hill town of Chamba, the Hoysala towns in the south, religious city of Nashik to the later Mughal, Medieval and Rajput cities of Gwalior, Jaipur and Shekhawati, we finally review the Colonial town planning of Calcutta and the post independence vision for Chandigarh.

Issues associated with heritage management, planning, legislation and sustainability of historic Indian cities are exemplified under 'sustainable solutions' with the case of an Integrated Management Plan for the Hampi World Heritage Site, Master Plan proposal for the historic *pete* in Bangalore, need for heritage resource management at Udaipur, heritage valuation in Chennai, the legislative apparatus in Haryana and finally the role models for heritage legislation and community participation i.e. the cities of Mumbai and Ahmedabad.

- Shikha Jain



# UNESCO Cultural Conventions for Sustainable Urban Development

MINJA YANG

India's 9 percent annual GDP growth and the increasing purchasing power of an estimated 150 million Indian "middle class" and the potential of the 1 billion others is both envied and feared across the world, particularly by "ageing" Europe struggling to maintain the quality of life that decades, if not centuries of growth had brought about. The much heralded "Asian Miracle" began with Japan, then South Korea - both rising from the ashes of their respective wars through the Asian Tigers of Southeast Asia, where the post-colonial Cold War brought on competition over fundamental issues of the way of life. And now the "giants" of China and India, moving from their own system of planned economies to what some call "wild capitalism" announces the "century of Asia". If there is one defining feature of economic growth whether in the North or the South, in the nineteenth century or the twentyfirst, it is the expansion of cities. By 2025, the UN projects that nearly two-thirds of the world's population will be living in cities and by 2015, the planet will count 33 mega cities (defined as more than eight million inhabitants), of which 18 will be in Asia While India's urban population is projected at merely 32.2 percent (as per UN Common database) by 2015, in terms of sheer numbers, well over 360 million individuals will be living in the cities of India, many of them among the most polluted in the world with serious shortages of housing and public services.

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To millions eking out a meagre existence on the land, cities continue to offer a vision of opportunity. Yet the rural exodus, combined with population growth, has stretched many cities of the developing world to the bush, inviting burgeoning poverty, untenable pollution and erratic construction of roads and buildings. Cities face a myriad of pressures that are cutting into their most intimate identity. Transport, housing, retail, recreation and tourism, all compete over a relatively small area.

Public works for utilities extension and widening of inner city roads have led to the demolition of entire ensembles of historic buildings, irreversibly altering the traditional urban layout. In other cases, historic buildings have been demolished and reconstructed in an incongruous manner. Meanwhile, cultural tourism has become a leading industry over the past two decades with the exponential growth in travel, giving focus to heritage cities. Yet all too often, accommodating tourists happens at the expense of local economies and inhabitants. World leaders call for sustainable development, with climate change becoming the order of the day, now giving greater focus to the consequences of uncontrolled urban growth on the global environment. But environmental protection remains low on the national agenda, given only a symbolic budget, often of modest research grants without the means for implementation.

In India, the Approach Paper of the eleventh Five Year Plan (2008-2013) foresees an acceleration of urban growth, and a hefty increase in urban public infrastructure. But at the same time, the Government projects an important growth in the tourism sector, including international visitors which today are a very small figure of some 3.6 million a year. Never the less, hotel rooms are in short supply not only in the major cities of India but also in medium-size cities, giving rise to policies in certain states of “fast-track” conversion of agricultural land to tourism facilities. Roads are also limited and often in bad need of repair and the national railway although deservedly, remains exceedingly slow and uncomfortable. Piped water systems, electricity and sewage networks are deficient in almost all cities except for in the high-end recently constructed residential and office buildings. Multi-billion rupee investments are being made for remedial measures in all these sectors for the realisation of “India Shining”. But, the big question is, will India be shining for everybody, and what will be the impact of growth on the cities of India, not only on its built heritage, but even more importantly on the pluri-cultural inhabitants of the cities? Are the traces of hundreds and even thousands of years of proud history at risk of being erased? And will the growing income disparities in the cities threaten India’s unity in diversity?

From monuments to cultural landscapes: The role of UNESCO Conventions and Recommendations for sustainable urban development

Defacing a city – places charged with spiritual, emotional and symbolic values – is tantamount to violating part of our identity. In western Europe, rapid urban growth and the destruction of the urban historic fabric led to the introduction of the notion of “safeguarded areas” within cities during the 1960s, extending heritage conservation laws beyond monuments and archaeological sites. The same decade, UNESCO adopted several recommendations concerning the safeguarding of cultural properties. This concern culminated in 1972 with the adoption by the UNESCO General Conference at its 17th session of the *Convention concerning the Protection of the World Cultural and Natural Heritage*, which took an avantgarde approach by emphasising the intricate links between heritage, conservation and harmonious development. That heritage and development are inseparable is a leitmotiv of the Convention, foreshadowing the concept of “sustainability”- preserving our heritage for the benefit of future generations. Culture, it underlined, is the bridge between the two, the vital ingredient for maintaining a harmonious balance between past, present and



Boharpatti area in Nashik  
SOURCE: DRONAH





*Chowkri Modikhana, Jaipur*  
SOURCE: DRONAH

future.

The preamble to the World Heritage Convention notes that “cultural heritage and the natural heritage are increasingly threatened with destruction, not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage and destruction.” The Convention, through its 35 years of experience, projects and partnerships, has been instrumental in bringing about a global awareness of our common belonging, and the importance of heritage, whether of global, regional, national or local significance, and above all, its economic value. The challenge for the future, however, lies in how the Convention, as a normative and operational tool can better serve the process of sustainable development, with direct benefits for the local communities hosting these sites. The benefit of heritage must be measured beyond the figures of tourist visits to monuments and beds occupied in hotels, by the qualitative improvement of life of the local communities in terms of their access to new jobs and public services including healthcare and education.

To be sure, the framers of the World Heritage Convention sought to protect natural and cultural properties of “outstanding universal value” from the destructive forces of modernisation. But it was not their intention to save only the jewels of planet earth and human creation to the detriment of, or in isolation from, the rest. Nor is it the objective of the Convention to refuse modernity or stop development. It is with a vision of the future that the Convention came into being and to meet the needs of the future by gauging the options before us.

Article 5 of the World Heritage Convention makes explicit reference to measures that State Parties should endeavour to take in order to protect their cultural and natural heritage. As such, they are relevant to historic urban areas:

- (a) to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes;
- (b) to set up within its territories, where such services do not exist, one or more services for the protection, conservation and presentation of the cultural and natural heritage with an appropriate staff (...);
- (c) to develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage;
- (d) to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and
- (e) to foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field.

In recognition of the importance of public awareness and education, the Convention in Article 27 calls upon the States Parties to “endeavour by all appropriate means, and in particular by educational and information programmes, to strengthen appreciation and respect by their peoples of the cultural and natural heritage”, and “to keep the public broadly informed of the dangers threatening this heritage and of activities carried on in pursuance of this Convention”.



***The Recommendation concerning the Safeguarding of the Beauty and Character of Landscapes and Sites***, adopted on 11 December 1962 by

UNESCO refers to the need for “special provisions...to ensure the safeguarding of certain urban landscapes and sites which are, in general, most threatened by building operations and land speculations”. It calls for “measures to be taken for construction of all types of public and private buildings...to be designed...to meet certain aesthetic requirements, (and) while avoiding facile imitation of...traditional and picturesque forms, should be in harmony with the general atmosphere which it desires to safeguard.”

***The Recommendation concerning the Preservation of Cultural Property***

***Endangered by Public or Private Works***, adopted on 19 November 1968 by UNESCO, notes that “cultural property,...the product and witness of different traditions and of the spiritual achievements of the past” is “increasingly threatened by public and private works resulting from industrial development and urbanisation.” It calls upon States to “harmonise the preservation of the cultural heritage with the changes which follow from social and economic development, making serious efforts to meet both requirements in a broad spirit of understanding, and with reference to appropriate planning.” It also calls for measures to protect not only scheduled monuments but also “less important structures, that show the historical relations and setting of historic quarters.”

In 1976, UNESCO adopted a further ***Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas***, which advances a comprehensive approach that has been refined over the years. “Every historic area and their surroundings should be considered as a coherent whole... whose balance... depends on the fusion of various parts... including human activities as much as the buildings, spatial organisation and the surroundings. All valid elements... have a significance in relation to the whole... bringing the question of integrity in addition to that of authenticity.”

***Cultural Landscape*** as a category of heritage was officially recognised by the World Heritage Committee in 1992, following the recommendation of the Expert Group on Cultural Landscapes. Defined as the “combined works of nature and of man illustrative of the evolution of human society and settlement over time, under the influence of physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal”, cultural landscapes can be:

- (i) Clearly defined *landscape designed and created intentionally by man*, embracing garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles;
- (ii) *Organically evolved landscape* resulting from an initial social, economic, administrative, and/or religious imperative and which has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories:
  - A relict (or fossil) landscape is one in which an evolutionary process came to an end at some time in the past, .... whose significant distinguishing features are, however, still visible in material form.
  - A continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time



A typical urban street in historic cities in India SOURCE: DRONAH



Ghat in Udaipur SOURCE: DRONAH

- it exhibits significant material evidence of its evolution over time.
- (iii) *Associative cultural landscape* whose inscription on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.

The Operational Guidelines for the Implementation of the WH Convention further outline the value of cultural landscapes as a reflection of specific techniques of sustainable land-use, considering the characteristics and limits of the natural environment they are established in, and a specific spiritual relation to nature". This further states that the "protection of cultural landscapes can contribute to modern techniques of sustainable landuse and can maintain or enhance natural values in the landscape; and the continued existence of traditional forms of land-use supports biological diversity in many regions of the world." While the identification, protection and enhancement of cultural landscapes are still not clearly defined under national legal frameworks, particularly in developing countries, many countries have adopted laws for coastal, riveraine, mountainous or forest regions that take into account the protection of the aesthetic value of such sites, with regulations to maintain the beauty of the landscape.

Respect for character and significance has become increasingly important for cities, going beyond groups of monuments and buildings, and defined increasingly as a cultural landscape in a continuing evolutionary process. The **1999 Nara Declaration on Integrity of Historic Cities** (resulting from a Seminar on the Development and the Integrity of Historic Cities held in Nara, Japan) which gathered mayors, governors and experts from cities across Europe and Asia, recommended the following approach for the harmonious management of historic areas.

#### *Understanding*

The value of historic areas depends on much more than the quality of individual buildings – on the historic layout; on a particular mix of uses; on characteristic materials; on appropriate scaling and detailing of contemporary buildings; on shop fronts, (...) and on the extent to which traffic intrudes and limits pedestrian use of spaces between buildings. The understanding of this value helps to provide a framework for developing other principles for planning policy.

#### *Analysis*

An appraisal should be undertaken to show how the elements make up the integrity of historic cities. The analysis and knowledge of the evolution through time, the types and forms of buildings and spaces and their mutual relationships and functions are basic references for planning tools and criteria for the management and culturally sustainable development of historic cities.

#### *Sustainability*

Cities need to remain economically, socially, environmentally and culturally viable, so that they can be passed on to future generations. Renewal, regeneration, enhancement and management require a medium-and long term vision that is both achievable and sustainable, embodying the concept of custodianship for future generations.



### *Equity and accessibility*

Cities need to be managed in an atmosphere of common local and international ownership. Action needs to be implemented on the basis of equality of opportunity and access.

The following excerpt from the *Vienna Memorandum on World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape* (May 2007) reaffirms the expanded concept of heritage in a given landscape and calls for a harmonious coexistence between past and contemporary creativity marking the urban built environment:

“ Continuous changes in functional use, social structure, political context and economic development that manifest themselves in the form of structural interventions in the inherited historic urban landscape may be acknowledged as part of the city's tradition, and require a vision on the city as a whole with forward-looking action on the part of decision-makers, and a dialogue with the other actors and stakeholders involved.

The central challenge of contemporary architecture in the historic urban landscape is to respond to development dynamics in order to facilitate socio-economic changes and growth on the one hand, while simultaneously respecting the inherited townscape and its landscape setting on the other. Living historic cities, especially World Heritage cities, require a policy of city planning and management that takes conservation as one key point for conservation. In this process, the historic city's authenticity and integrity, which are determined by various factors, must not be compromised.

The future of our historic urban landscape calls for mutual understanding between policy makers, urban planners, city developers, architects, conservationists, property owners, investors and concerned citizens, working together to preserve the urban heritage while considering the modernisation and development of society in a culturally and historic sensitive manner, strengthening identity and social cohesion.

Taking into account the emotional connection between human beings and their environment, their sense of place, it is fundamental to guarantee an urban environmental quality of life to contribute to the economic success of a city and to its social and cultural vitality.

A central concern of physical and functional interventions is to enhance quality of life and production efficiency by improving living, working and recreational conditions and adapting uses without compromising existing values derived from the significance of the historic urban fabric and form. This means not only improving technical standards, but also a rehabilitation and contemporary development of the historic environment based upon a proper inventory and assessment of its values, as well as adding high-quality cultural expressions.”

The future of cities has thus been the focus of the World Heritage Cities Programme, launched in 1996 for pilot actions in Asia then expanded as a full fledged global programme in 2001 with the approval of the WH Committee. Buttressed by the Millennium Development Goals (MDGs) that all United Nations Member States in the year 2000 pledged to meet, which call, inter alia, to reduce by half the proportion of people living on less than a dollar a day by



*Lake with Mantapa, Karnataka*  
SOURCE: JYOTI HOSAGRAHAR



Chatrapati Shivaji Terminus - A  
World Heritage Site

SOURCE: VIKAS DILAWARI

the year 2015, and the Millennium Declaration calling for environmental protection, cities have a critical role to play. UNESCO with its partners is thus renewing its efforts to promote a democratic vision for cities, where a city's cultural identity – both physical and immaterial – becomes a springboard for sustainable development including securing basic rights, environmental safety and social justice – in short, a more humane future.

The International Workshop on Partnerships for World Heritage Cities: Culture as a Vector for Sustainable Urban Development, held in Urbino, Italy as one of the thematic workshops on the occasion of the 30th Anniversary of the World Heritage Convention, declared that although there is no one model to follow as each city has its own specific challenges to identify, the approach rests upon several pillars:

*The territorial dimension: Understanding the broad picture*

Historic centres are intrinsically linked to surrounding urban, peri-urban and rural territories. All too often, fringe areas are disfigured by infrastructure servicing the safeguarded areas, rather than being integrated into the heritage-based development project. Partnerships with public and private entities to develop public infrastructure and determine land-use are crucial to ensuring that projects do not undermine a site's heritage value.

*Social development: Respecting diversity*

Maintaining or reinforcing a neighbourhood's social diversity is key to steering clear of the common pitfalls of gentrification on the one hand or poverty on the other. This calls for specific policies, such as a housing credit system adapted to revenue incentives enabling inhabitants to improve their dwellings, promoting adaptive reuse of historic buildings, ensuring the proximity of schools, stores and recreation spots, and more generally, fostering community involvement in preservation actions. Keeping craftspeople and small businesses in the city centre, encouraging creative and live arts, are all part of ensuring that cultural identity is enhanced. It also enjoins authorities to ensure that the upgrading of basic infrastructure takes into account the special character of the city.

*Empowering citizens*

Inhabitants are custodians of their city; they should be involved in preserving and promoting their heritage. Sharing information on policies and a city's special values, whether through new information technologies or mass media public education campaigns, is essential to promoting awareness and a sense of civic engagement. The business sector should also be taken on board to promote heritage within the local community. Because values are shaped early, UNESCO developed "World Heritage in Young Hands," an education resource kit for teachers that promotes awareness among youth of conservation issues, offering a journey through the world's cultural and natural heritage.

*Economic development: Reinforcing mixed use and creating jobs*

Small and micro-credit enterprises can be strengthened through public-private sector partnerships. If tourism, in particular, can stimulate economic activity in historic areas, with benefits for the city at large, it must be rooted in a concern for equity, the environment and cultural traditions, and not turn whole districts into sanitised open-air museums. Heritage can serve as an engine for the local economy, providing the "sense of place" is respected.

*Protecting the environment*



Planning must take stock of a city's natural environment, promote public spaces for encounter and exchange, and offer essential services, such as water, sewerage, electricity, and telecommunications. The modernisation of collective and private transport systems is a major challenge to stem damage caused by congestion and air pollution. All too often, under pressure from major contractors, a standardised industrial model is favoured. Instead, the system must cater to the city's specific needs.

*Capacity building: Strengthening co-ordinated management*

Decentralisation is enhancing the role of local authorities, making them pivotal actors in cities. They must be assisted in managing their city's cultural diversity, which can be an asset in a spirit of democratic governance or a divisive force giving rise to communal conflicts. For the built heritage, this involves strengthening legal and administrative frameworks to promote conservation and development, by for instance, creating heritage units within city governments, reviewing the building permit control system and training in open tender procedures in all public and private works. The inclusion of heritage issues in national law is a basis for efficient partnership, while private landowners, inhabitants and economic players in safeguarded areas should be supported by public programmes. To foster social cohesion, city authorities are urged to work with community-based organisations as well as with professionals in cultural performances and festivals to build mutual respect and opportunities for creative collaboration among different communities.

*Training and know-how*

Sharing knowledge is a cornerstone of UNESCO's mandate. Workshops and on-site training acquaint local personnel with documentary, archaeological and urban planning research, recording and analysis of heritage, digital mapping systems, traditional building and restoration techniques and knowledge of appropriate techniques and materials. Methods for "rescue archaeology" or "preventive archaeology" which are generally financed by public and private works projects and particularly important in cities, are fast replacing the traditional research-oriented archaeology which followed the period of archaeology for treasure hunting.

*Fostering co-operation at the local, national, regional and international levels*

In all these reflections and activities, UNESCO's strategy rests on building partnerships with the aim of forging a common vision among the city's numerous stakeholders. Dialogue between decision-makers, educational institutions and the local community, between local authorities and multilateral and bilateral co-operation agencies, civic groups and inhabitants, as well as with private companies, is vital in this process. UNESCO has also been actively brokering decentralised co-operation schemes which have proven a valuable means of sharing expertise and bolstering the skills of municipal authorities in historic cities. Established between regions, towns, and supported by specialised bodies (eg park authorities) and universities in Europe with cities in Asia, Africa and Latin America, these schemes typically stretch over a minimum time span of three years, allowing for frequent and fruitful exchanges, and sharing of knowledge and skills. They have successfully mobilised resources for drafting and implementing heritage legislation, establishing regulations on renovation and urbanisation, and elaborating economic and social policies around heritage. Requiring strong political commitment on the part of local authorities, decentralised co-operation schemes have served in "solution



*View from a fort, Chanderi*

SOURCE: ISHWAR DASS, MEERA I DASS



*Raja Mahal under conservation, Chanderi*, SOURCE: ISHWAR DASS, MEERA I DASS

exchange” enabling the sharing of skills and know-how covering a broad range of urban management and heritage issues relating to a city’s specific identity.

#### Agenda 21 for Culture

The Working Group on Culture of the United Cities and Local Governments (UCLG), the largest association of local governments in the world officially adopted “Agenda 21 for Culture” in May 2004 at the World Forum of Cultures held in Barcelona - a notion first coined by UNESCO to promote local democratic governance of the cultural Conventions and Recommendations.

UCLG’s recognition of culture becoming, more than ever, the centre of urban policies serves to endorse the implementation of the recently adopted UNESCO Conventions on the Safeguarding of Intangible Heritage (2003) and the Protection and Promotion of the Diversity of Cultural Expressions (2005), as well as the UNESCO Universal Declaration on Cultural Diversity (2001) and the other Conventions and Recommendations referred to above.

The notions of “culture and development” previously promoted by city authorities in addressing the economics of the creative industries, particularly the contemporary arts and festivals, joins the concerns for cultural rights as a fundamental component of human rights under the notion of “cultural diversity” contained in Agenda 21 for Culture.

The Agenda calls for cities to integrate the cultural sector in public policy within its overall pursuit for democratic governance and global understanding, as the “fourth pillar” along with concerns for economics, social inclusion and the environment.

#### The Role of Indian Cities in this Global Challenge

In recognition of the 73rd and 74th Constitutional Amendments providing the framework for decentralisation in India, and in promoting Agenda 21 for Culture, UNESCO has launched the Indian Heritage Cities Network (initially called the Network of Indian Cities of Living Heritage) and the Indian Heritage Passport Programme, with the endorsement and support of the Ministry of Urban Development, Ministry of Tourism and Culture of the Government of India in September 2006.

With the active participation of State Governments and municipal authorities, cooperation with 17 cities in India of great diversity has been initiated. Member cities range from the mountainous city of Leh with just over 27,513 (Census 2001) inhabitants in the north to the coastal city of Kochi in the south with its 1.5 million population, and Udaipur, Jaipur, and Ahmedabad in the west, across to Puri and Bhubaneswar to the east, with the living heritage of many centuries, from the ageless spirituality of Varanasi and Ujjain dating back some 5000 years to the 20th century cultural expression of Chandigarh. Despite the diversity of natural environment and setting, epoch of cultural apogee, size of population, dominant religion or main economic base, all the member cities of the Network are united in the singularity of their ambition. This is to become a striving and contemporary city without losing the invaluable heritage that nature and the city’s ancestors have left behind. These are the cities determined not to be frozen in their past nor destroyed to suit the needs of the 21st century but aiming to



survive into the future as proud testimony to India's wealth, as the identity of the hundreds of millions of Indians who will be contributing actively in shaping the future of our planet. The Indian Heritage Cities Network, whose secretariat is provisionally based at the UNESCO New Delhi Office, is opened to several categories of members: towns and cities in India; local authorities of cities around the world as international partners; Indian and international associations, institutes and universities engaged in urban planning, cultural and natural heritage, cultural industries. Individuals with expertise in any of these disciplines can also become expert members. All members must sign the founding charter of the Network, committing themselves to the objectives announced. Eight municipal and regional governments of France and two from Spain have already joined or are in the process of doing so as international partners.

The National Association of Cities and Areas of Art and History of France (ANVPAH) is also one of the founding members of the Indian network. Partnerships between universities in India, France and Britain have also been established to work on heritage inventory, mapping and planning, as well as in tourism development, craft design and production and to enhance the role of museums and festivals as a means of promoting the creative industries. The first study tour for Indian city managers is under preparation by UNESCO with the support of the Government of France and the ANVPAH, involving visits to some 7-8 cities in France to observe and learn how the challenges of the 21st century are being met and accommodated by these historic cities. Study tours to other countries in Europe and Asia, as well as to cities within India are being programmed for the members of the Indian Heritage Cities Network (IHCN). Thematic focus of these visits will range from the more general heritage conservation management tools to the specifics of urban traffic and parking, waste management, risk mitigation, contemporary design in historic urban landscape, and inner-city renewal through social housing, etc. The IHCN will also be organising periodic training workshops in India hosted by different member cities of the Network. An urban conservation management course of six weeks duration leading towards a certificate issued by the Council of Architecture, India and UNESCO New Delhi is in the process of being established for the Network members.

UNESCO looks forward to enhancing cooperation with a growing number of actors in bringing the UNESCO Conventions to life through Agenda 21 for Culture, and for the cities of India to lead the path towards sustainable human development, where by the lessons of the past can nourish the present and build the future.



*Thalvaram, Pondicherry*  
SOURCE: INTACH

# Compiling Records

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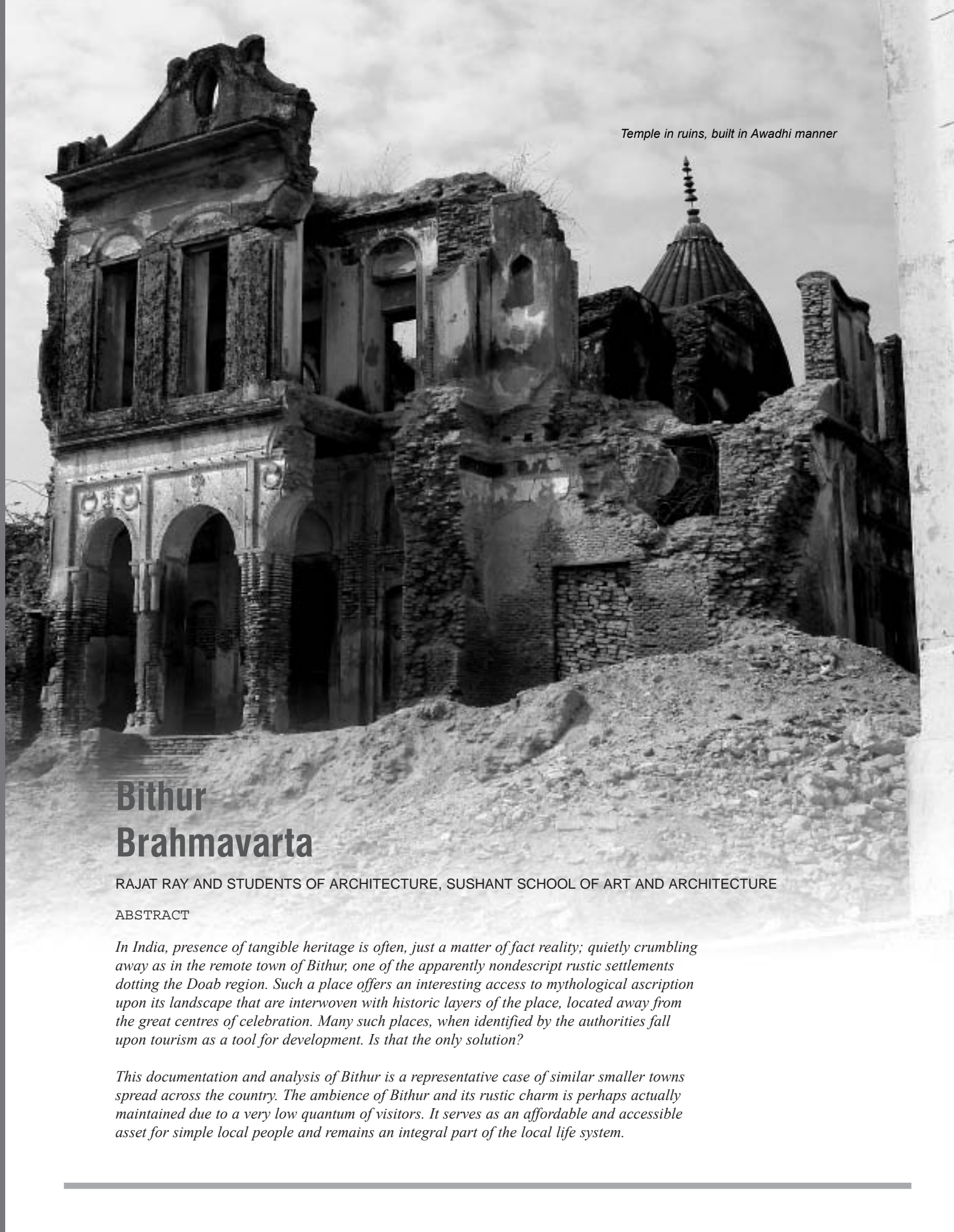
## Bithur : Brahmavarta

Rajat Ray..... pg.17

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Students of Second Year B. Arch 2008, Sushant School of Art and Architecture.





Temple in ruins, built in Awadhi manner

# Bithur Brahmavarta

RAJAT RAY AND STUDENTS OF ARCHITECTURE, SUSHANT SCHOOL OF ART AND ARCHITECTURE

## ABSTRACT

*In India, presence of tangible heritage is often, just a matter of fact reality; quietly crumbling away as in the remote town of Bithur, one of the apparently nondescript rustic settlements dotting the Doab region. Such a place offers an interesting access to mythological ascription upon its landscape that are interwoven with historic layers of the place, located away from the great centres of celebration. Many such places, when identified by the authorities fall upon tourism as a tool for development. Is that the only solution?*

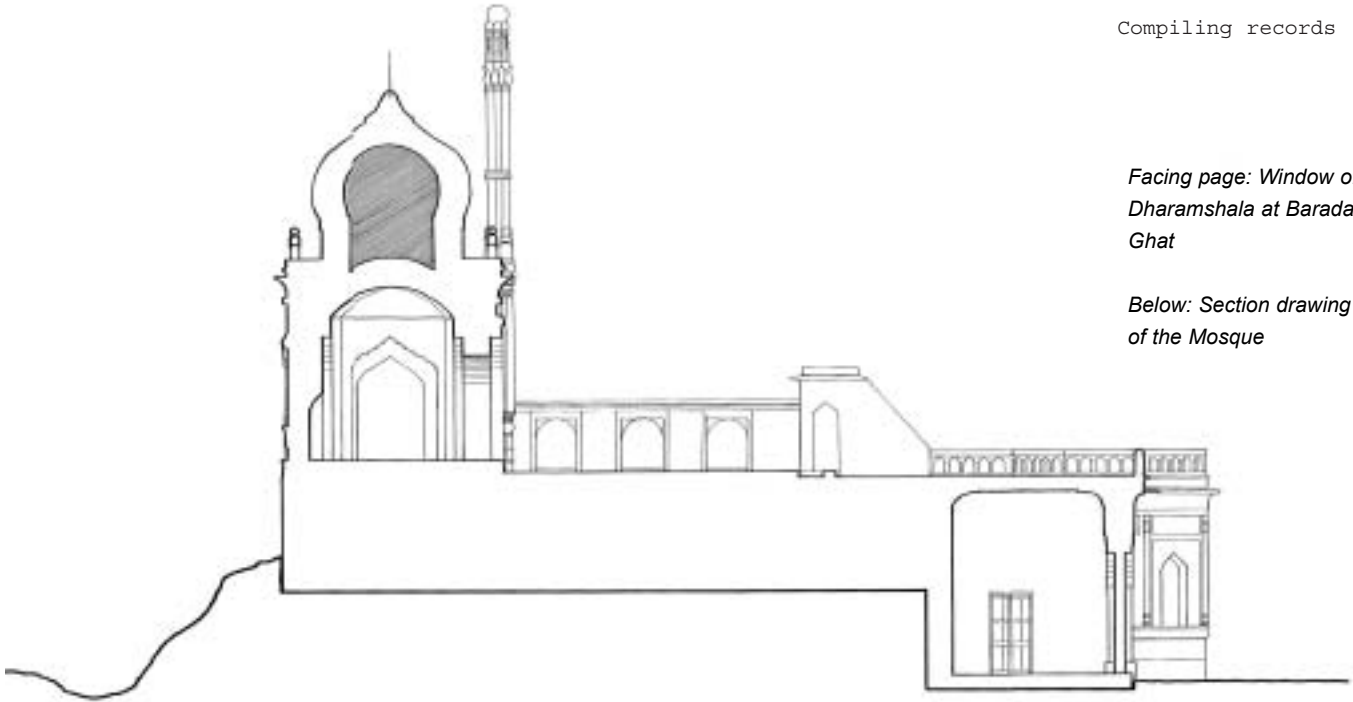
*This documentation and analysis of Bithur is a representative case of similar smaller towns spread across the country. The ambience of Bithur and its rustic charm is perhaps actually maintained due to a very low quantum of visitors. It serves as an affordable and accessible asset for simple local people and remains an integral part of the local life system.*

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Facing page: Window of  
Dharamshala at Baradari  
Ghat

Below: Section drawing  
of the Mosque



## INTRODUCTION

The present government of Uttar Pradesh (UP) has proposed construction of a new Ganga Expressway. This will connect Delhi to some parts of UP including Lucknow with a fast roadway link that is not available currently. This highway would now pass through the small town of Bithur. Till the Expressway provides an access, Bithur remains a rather unknown and obscure town in the Kanpur *dehat* (rural area). Located on the banks of the river Ganga in Uttar Pradesh, about 27 kilometres west of Kanpur, the town has a characteristic landscape intersected with myths of Brahma and Dhruva and the legends of Rama. The quasi ruinous parts of the sparse built fabric of Bithur further bear testimony to the great Indian Mutiny of the nineteenth century.

Old Bithur was conceptualised as a relative microcosmic manifestation of a religious Indian town such as Varanasi, Mathura or Vrindaban, Prayag or even Ayodhya and Haridwar. Bithur beholds the strands of the same traditions that continue to exist quietly as perpetual beliefs in the innards of this land, away from contemporary hypes of heritage and tourism.

### The Land and the Town

The older town of Bithur lies on the west bank of the river Ganga at one of those rare points, where the holy river is flowing from north to south. The area belongs

to the gangetic plains and the land form is generally flat but the river edge is characterised by local elevations with a mound of considerable height forming the northern tip of the old town. A thin and linear stretch of development creates a built edge of the town alongside the river flow with several *ghats* (stepped embankments), lined as small modules. A typical *ghat* comprises of a firm flight of steps to water and is bound by retaining walls and bastions, often incorporating changing room niches for bathers, and an occasional sprinkling of shrines. Fifty two is the popular count of the number of *ghats* of which many are in ruinous state and some completely vanished.

Beyond this linear strip of *ghats* are built structures that serve as accommodation of support facilities including permanent and temporary residences or resting places for various kinds of people ranging from destitute individuals to settled families; all these connected with pilgrim activities. These range from large low lying courtyard forms with a shrine or two and a large multipurpose open space to more compact versions of this disposition. These are predominantly residential houses, *dharamshalas* (guest houses) or *ashrams* (accommodation for saints) and temples

Almost in the middle of this one kilometre long stretch is the Brahmavarta Ghat. This is the main spot of pilgrimage. A small temple of Brahma is located right on the *ghat* steps. It rests over a metal spike embedded deep into the earth as a homological device





*Patthar Ghat*



representing an axis of rotation of the universe, of which Brahma is the creator. A large open space gives access to this *ghat* to people arriving from outside by small vehicles and on foot along the main spine of the town. They spill over to Brahmavarta Ghat and the adjacent *ghats* to the north and the south for ritualistic activities. Ferry boats carry passengers from across the river and bring them to this *ghat*.

There is only one proper street to this low key town which is the main path. This linear street has similar built structures as found alongside the *ghats*, often housing little shops with projected plinth onto the street. The street is rather narrow and dense as it departs from the large space and takes a bend towards the newer part of the town in the southern side and relatively away from the river. The built form becomes more sparse in the middle and dense again in the newer part of the town that has more contemporary facilities.

Midway between the old town and the new town lies the property of the erstwhile royals of Bithur. Only a large enclosure gateway and some fragments of the old residences exist with some recent accretions. A major chunk of land is being developed as a cultural centre in memory of Nana Saheb, son of legendary Peshwa Bajirao II. The old town area off the main street and away from the *ghat* stretch is a picture of a rustic low density settlement interspersed with remnants of old properties occasionally redeveloped and mostly in ruins.

### The Mythological Beliefs

Among the various cosmogonies carried forward in popular faith in India, one is that of Brahma being the creator of the universe. Brahma is also the creator of mankind and this creation was supposed to have happened in a mythological place called Utpalaranya. In a characteristic practice of ascription of sacredness



*Brahmavarta Ghat with shrine of Brahma in the centre.*





to geography, old Bithur is believed to have been that Utpalaranya (literally a forest of stones) where Brahma came and created the mankind. This place later became Brahmavarta or abode of Brahma after an Ashwamedha Yagna was performed here by Brahma himself. The Brahmavarta Ghat is the spot particularly associated with this tradition and it continues to be the main spot of reverence for the pilgrims and devotees.

In a subsequent tradition Brahmavarta was believed to be ruled by mythological king Uttanpad. His son Dhruva made penance here to please Brahma and the mound in the north of the *ghats* is associated with that even and is known as Dhruva Teela (mound). Next, came the age of Rama. In the legend of Ramayana, Rama sent his wife Sita in exile when she stayed in Valmiki's Ashram and gave birth to her sons Luv and Kush. A place across the river carries its name as Pariyar which is possibly a transformation of the term 'Parihaar' that means denunciation. Locals believe that

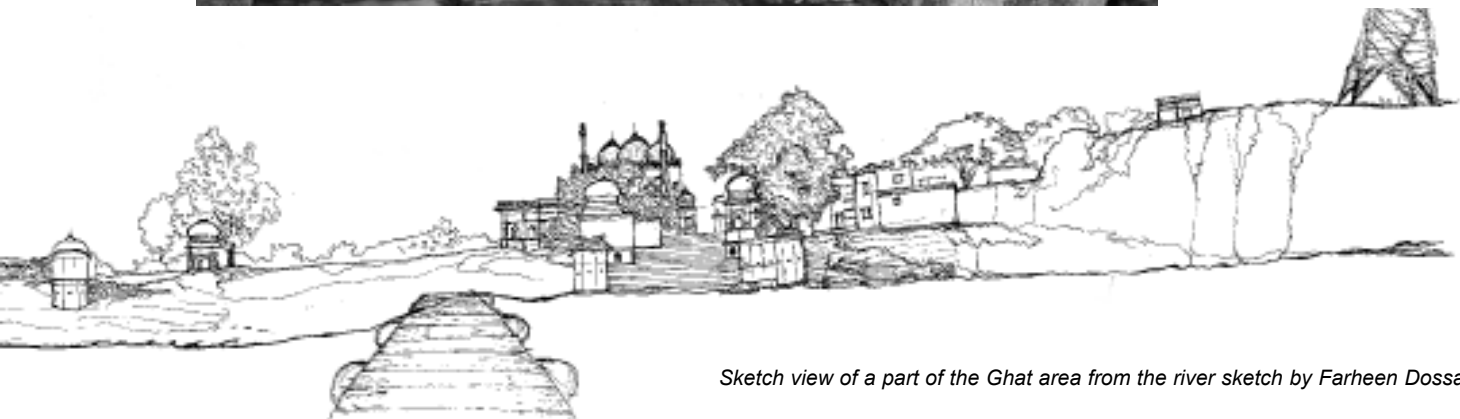
Sita crossed the river at Bithur to reach the Valmiki ashram, after she was left at Pariyar.

#### Historical Associations

It appears Bithur remained as an obscure place without much references in historical records till almost eighteenth century. It is possible that there was no settlement of considerable size for a long time. It might have developed to an extent under some faction of the north Indian Jat ruling clans whose descendants are still identifiable. It was under the control of Awadh state for some time, one Almas Ali Khan was recognised by Shuja-ud-Daula as ruler of the place and was given support. In the second half of the eighteenth century, Bithur became the capital of the Pargana. From popular belief, it appears that Almas Ali Khan originally belonged to the Jat ruling community of Bithur and converted to Islam. He built the Mosque, one of the most beautiful structures in the town, near



*Skyscrapers above the ruins*



*Sketch view of a part of the Ghat area from the river sketch by Farheen Dossa*



*Shrines on Chappard Ghat*

Dhruva Teela on the bank of the river Ganga among the *ghats*.

After the Third Anglo-Maratha War of 1817-1818 that ended in the defeat of the Scindhias and other Maratha feudatories in Maharashtra, the British sent Peshwa Baji Rao II out of Pune in exile to Bithur. The small place of Bithur was selected for this purpose because of its remoteness from Maharashtra and proximity to the British military cantonment at Kanpur from where they could keep a close watch on him. Bajirao lived in Bithur till he died in 1851 as an exiled king with a pension from the British. Bithur appears to have been about six square miles in size at that time and had a population of 15,000 according to certain Marathi historians. The dethroned Peshwa was living in Bithur perhaps as a tenant of the local rulers and devoid of any political power. Yet it is possible that many building activities were carried under his direct

patronage or by others like Tikait Rai, a minister of Awadh state who was inspired by the sacred aspects of the place. It is also possible that the Marathas tried to name the town as Bithova-pur, which later became Bithur.

Baji Rao's adopted son Nana Saheb grew up in Bithur and later he was the famous rebel leader of the great Indian Mutiny of 1857. Nana Saheb and his equally well known friend and associate Tantia Tope were joined by Rani of Jhansi in their fight with the British. It is from Bithur and nearby Kalpi that the attack and massacres of Kanpur were planned and moved forward. Bithur would have no direct historical significance for the British but finally it had to be included in the map of mutiny. After Nana Saheb's army was defeated and the British recaptured Kanpur, Bithur was attacked in revenge and the residences of the Peshwas were destroyed leaving behind only a few

*kuan* (water well) structures. The town was massacred and many properties including *ghats*, temples and large estates were damaged.

#### Life among ruins

The town of Bithur continued to exist with the intangible heritage of legends and ritualistic practices of the locals alongside the tangible remains of *ashrams*, *dharamshalas* and *akharas*.

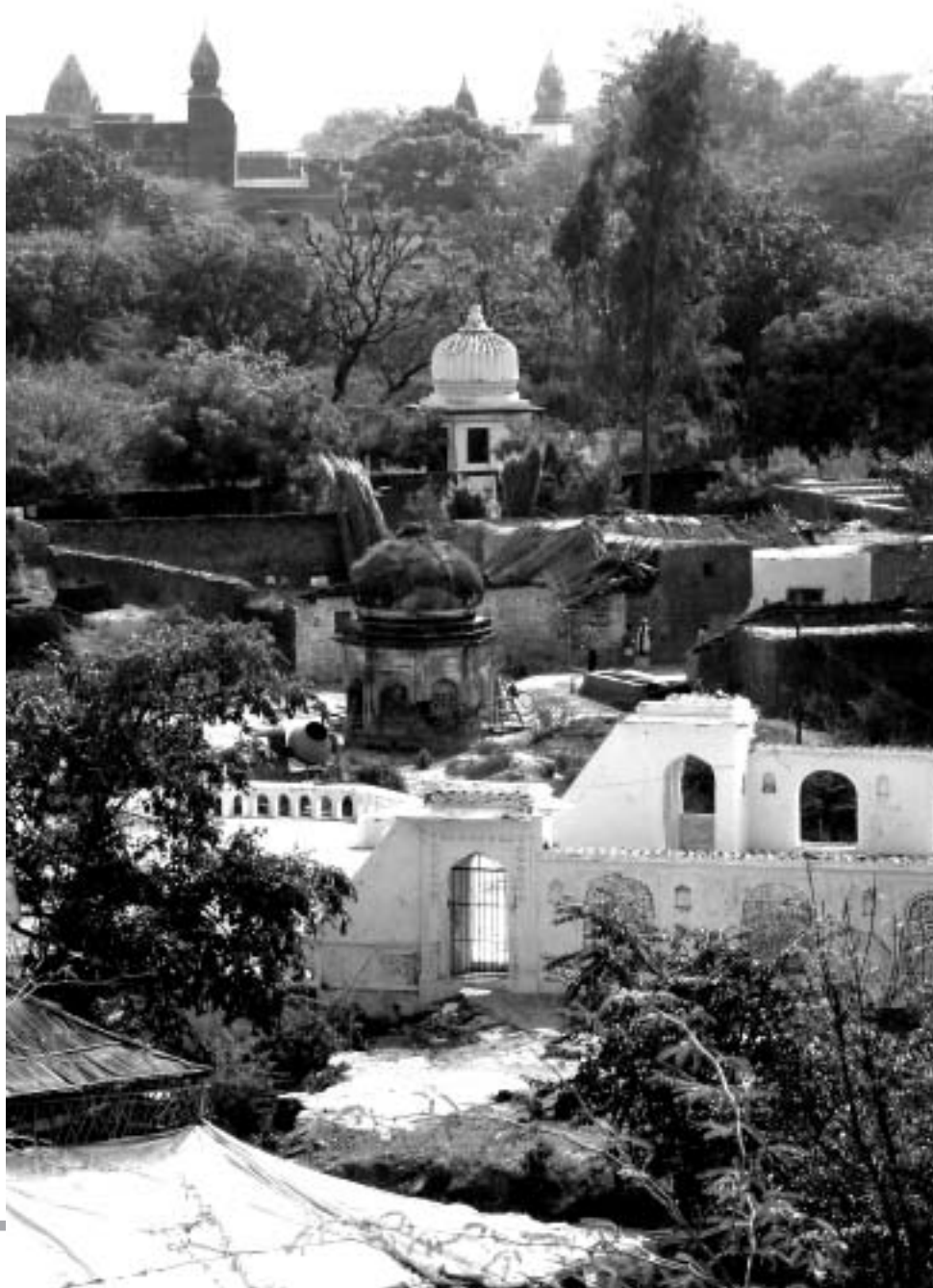
A community of Brahmins still continue to provide professional religious services to people coming here from the hinterland on specific occasions, throughout the year. There are colourful annual fairs and festivals bringing in people from the surrounding areas. There is also a regular stream of pilgrims coming to perform rituals related to deceased ancestors at the river edge. This remains a smaller yet significant component of the old town economy. The royal patronage that existed behind this tradition has dwindled but fond memories and associations still exist. One can observe visitors from Kanpur or other nearby small towns who come here to enjoy the tranquil atmosphere at the river bank. Few shops on the Brahmvarta Ghat and the main street in the old town do better business on those occasions.

#### Tangible Heritage

Maximum remnants of the old building stock of Bithur are of the late nineteenth century with a few things dating to the late eighteenth century. A birds eye view of the town presents an assembly of low buildings intermingled with vegetation with a number of temple spires puncturing the skyline. There are good examples of delicate houses built in brick with some use of metal and timber.

Typologically, the buildings are simple in plan form, keeping with the constructional constraint of brick as the local building material. The formation of

*Birds eye view of some Temple shikhars with the Mosque in the foreground near the Dhruv Tila in Bithur*







Map of Bithur

*Brahmavarta Ghat*





*Shopping place for pilgrims near the ghats*

the *ashram cum dharamshala* space structure is an application of the same type of construction modules creating arrangements of cellular covered spaces around or abutting the courtyards. When located near the river, inflection of this 'type' towards the water edge to connect with *ghats* creates interesting interfaces. Even the Mosque is a display of engaging with the ground contours while building a canonically austere and straightforward structure. Incorporation of temples into the formation of residences as an integral part is also interesting as a typological modification. In reverse, temples becoming larger than shrines by inclusion of residential and other ritualistic facilities are also characteristic.

Along the *ghat* edge, is a sense of a domain accessible to general public beyond the private enclosures. Like

many other such settlements here too one can see the effort to build steps and terraces near the river in such a manner that they respond to the need of public gatherings, particularly during occasions of ritualistic importance. These are often built as adjacent extensions of private properties. This represents the spirit of such places where noble men or women constructed public facilities as a tradition.

Stylistically, some flavour of Maratha Architecture in the structures and the local Awadhi taste is also visible in the extant fabric of the date. Some generic aspects of typology continue in a few newly constructed or refurbished *ashrams* as in the case of a newly constructed old peoples' home.

The ruins are a great educational resource to study brick construction techniques of the area and of various times. The flat ceilings of concentric brick rings in compression and arches of various configurations with brick squinches of intricate geometry are enormously informative for students of architecture and civil engineering.

While the people in the old part continue to serve the pilgrims as one main occupation, the town also continues to be a local market centre for agricultural produce of adjoining villages. The new part is a simple urban extension including the Brahmavarta Railway Station near the river. The station has been a small terminal stop in the local metre gauge network which is now being converted to broad gauge. The surrounding areas of the Bithur are generally quiet, new resorts and out of town housing areas are being built; these are locations connected to Kanpur and yet away from the hustles of a big city. Also, some socio-religious organisations have started coming here to set up their kind of institutions in recent times to contribute to contemporary expansion of various important religious centres in the country.

#### Concerns

It appears that in 2002 the Development Authority of Kanpur (KDA) had recognised the existence of Bithur as a special settlement close to their jurisdiction. KDA made provisions for Bithur in their Master Plan and approached the tourism department for funding their schemes. KDA had even consulted INTACH for this purpose. The ideas were written about in the media:

"... Taking a cue from the many social and spiritual organisations that have opened new centres on the



banks of the Ganga in the area, the KDA has taken the decision to develop it as a tourist centre... - On the cards are construction of a museum of history (where, on display will be the life stories of the patriots from Bithur), renovation of old ghats like Brahma Ghat and Gaurav Ghat and construction of a thoroughfare that will connect all temples lying on either side of the Ganga. Parks will be redone and the mela spot will be renovated. Besides all this, KDA has decided to develop various water-sports centres in Bithur. ... under the plan, KDA will also take initiatives to protect the area's aqua-life. ... If the KDA goes ahead with its plans, the Kanpurite's dreams of seeing Bithur as a tourist spot will very soon come true." ...

Kanpur Edition of *Times of India*, 13<sup>th</sup>. Dec 2002.

As far as the above proposals are concerned, after five years, one can visualise a mega project of a tourist entertainment complex including a museum nominally dedicated to the memory of Nana Saheb, under construction. This project in itself may become an asset of sorts though a strong eclectic architectural

vocabulary and sheer size might not contribute much to the feel of this place while many old *ghats* and other parts of the built fabric continue to decay.

It is perhaps a boon in disguise that nothing overwhelming has been done here in recent times in an effort to give it wider popularity and accessibility; in spite of its inclusion in the State Tourism Departments' list of destinations in Uttar Pradesh. Though the residents of the old town in particular could do with some economic up gradation but the challenge would be in approaching it without calling for readymade models.

With a view to the concerns regarding the perishing of historic fabric here, it is not an easy choice to make between the present condition of such a place that represents a natural, secluded corner of the country with its live fairs and festival colours on the one hand, and, a much publicised spot on the other, developed for tourism and economic benefits, yet stripped of the present purity of authentic experience.

### Acknowledgements

- All photographs and drawings are by students
- The authors are grateful to Dr. Neeta Das of Lucknow, Raja Saab of Bithur, Ganga Sabha, Ramdin Dwivedi and Sanjay of Bithur for their help and kind co-operation.
- Conservation Architect Sanskriti Rawat of Lucknow is known to have worked on Bithur earlier.

- The present work is part of a Design Studio at the Sushant School with Amrita Madan, R Raghavan, Indrani Basu and Rajat Ray as faculty.

### Bibliographic References

- The present article is written; primarily on the basis of a recent first hand experience of the town. Bithur or Bithoor and historical writings covering Life of Peshwa Baji Rao II. General Havelock destroyed

Nana Saheb's palace in Bithur after Nana fled from there in 1857. Any detailed documentary account of the nineteenth century town is yet to be referred.

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# Methods and Approaches

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Indian Cities and Urban Conservation

# Rajasthan

## An overview of the early architectural traditions

RIMA HOOJA

### Abstract

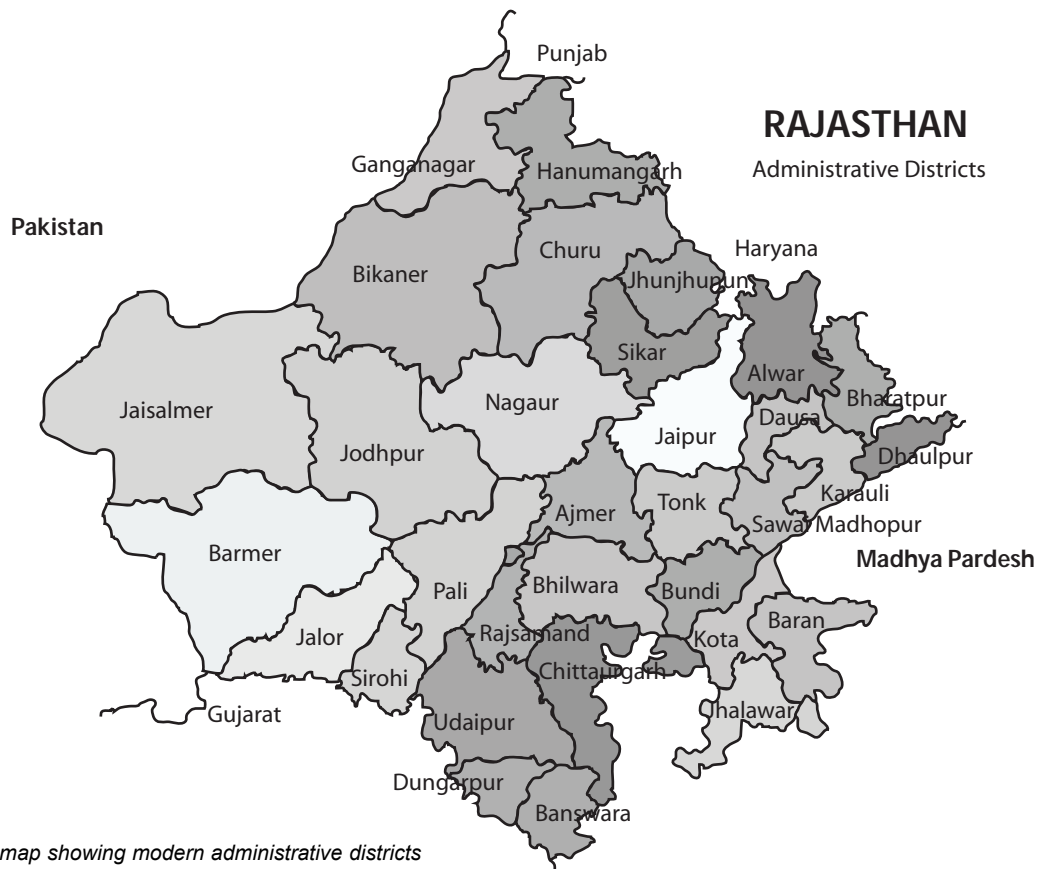
*Information regarding town planning is scarce for the prehistoric, protohistoric and early historic periods of Indian history. It is against this backdrop that this paper looks at the archaeological and complementary data pertaining to architectural traditions of a specific area, namely Rajasthan. The paper aims to understand regional notions regarding settlement layout, building materials, styles and early evidences of town planning inherent in urban settlements between 2500 BC and 600 AD. The evidence is then linked with the ensuing centuries from 600 AD to 1500 AD, so that a more comprehensive picture of the region's architectural tradition is highlighted..*

### INTRODUCTION

Archaeological, historical and literary evidence from the area now known as the modern State of Rajasthan points to a plethora of towns, temples, palaces, step-wells, fortifications and housing units, spanning the prehistoric through to the present times (Hooja, 2006), though there is scanty data specific to reconstructing notions of town-planning during

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*Rajasthan map showing modern administrative districts*

the proto-historic and early historic periods. This data throws light on probable notions regarding settlement layouts (where known), building materials and styles used, etc.

While the earliest habitation sites known from Rajasthan are ascribable to prehistoric stone-using people, the earliest known settlements with an urban character, streets and lanes intersecting at right angles, drains, and a grid-plan layout, come from about twenty-five sites dating to third millennium BC<sup>1</sup>, found along the banks of the now seasonal Ghaggar-Hakra river system of northern and northwestern Rajasthan. Categorized as belonging to the 'Early Harappan' (previously also designated as 'Pre-Harappan'), and 'Mature Harappan' civilisation, these sites are part of the well-known Harappan Civilisation. The representative sites amongst these, include Mohenjodaro, Harappa, Lothal and Dholavira.

#### DOCUMENTED SITES

The best studied example of such a site from Rajasthan is Kalibangan (district Hanumangarh), where excavations by the Archaeological Survey of India between 1961 and 1969 revealed a walled settlement dating between circa 2920 BC and 2550

BC, designated by archaeologists as belonging to the Early Harappan period. Kalibangan's Early Harappan settlement measured 250 metres from north to south, and 180 metres from east to west, in size, and was fortified by a plastered mud-brick wall. Mud-brick houses with three to four rooms and a courtyard were found. Mud bricks with dimensions of 30 x 20 x 10 centimetres were used for house construction, while sun-baked bricks were used for the drains that were an important part of Kalibangan. Excavators also found a 1.50 metres wide lane running in an east-west direction, as well as several lime-plaster lined cylindrical pits (possibly for storing drinking water), and a variety of pottery, copper and other artifacts.

Over the remains of this earliest settlement, excavators found evidence for a later 'Mature' Harappan Culture period settlement, dating between 2550-2000 BC. This Mature Harappan period settlement was in two parts according to the excavators – namely, a 'citadel' area, located over the remains of the earlier settlement, and a 'lower city' area, that lay to the east of the citadel area. Besides this, a mound located about eight metres east of the lower city yielded a structure containing five fire-altars. The citadel (a parallelogram of 240 x 120 metres), had two, almost equal, but separately patterned portions, rhomboid in shape, both enclosed

by a thick mud-brick wall, and reinforced with rectangular bastions. There were two entrances, from the north and south respectively, to the citadel's southern portion. This part contained mud-brick platforms (one with a row of seven fire-altars), while the northern portion contained remains of houses, and a north-south running road, which the excavators traced for a length of 40 metres.

The 'lower city', a parallelogram of 360 x 240 metres, fortified by a mud-brick wall, is on a grid-pattern, comparable to other Harappan sites like Harappa, Mohenjodaro and Lothal, with wide streets and lanes intersecting at right angles and dividing the town into blocks. The houses, built from mud-brick, had a courtyard surrounded on two to three sides by rooms. Tiled floors were noted. Baked bricks were used for drains, wells, door-sills and bathing platforms. The settlement remained restricted within the walled area of its original layout throughout its existence. In later phases, the fortifications of both the citadel and lower city were neglected.

A roughly contemporaneous, but quite different kind of settlement - less 'planned' and 'urban' in nature, occurs at over ninety settlements ascribable to a Chalcolithic (i.e. copper and stone using), and copper-manufacturing Ahar Culture group of sites, dating between about 2600 BC and 1500 BC, from south-eastern Rajasthan (Hooja 1988). The sites include Ahar, Gilund, Balathal, Keli, Pind, Arnoda, Nangauli, Champakheri, Aguncha, and Ojiyana. Data indicates that the Aharians lived in sizeable buildings in settlements along the rivers Banas and Berach and their tributaries in rectangular houses built from mud-and-schist, or mud-bricks.

Ahar (24° 35' N; 73° 44' E) and Gilund (25° 01' N; 74° 15' E), were partially excavated during the late 1950's and early 1960's (Sankalia *et al* 1969; Sankalia 1974). More recently, R.C. Agrawala as well as a team from the Archaeological Survey of India, worked at Ojiyana (25° 53' N; 74° 21' E), and the 1994 season saw the commencement of excavations at the site of Balathal (24° 43' N; 73° 59' E), and thereafter, fresh excavations have been carried out at Gilund by a team from Deccan College, Pune, and the University of Pennsylvania, USA.

At the site of Ahar (the first site of the Ahar Culture to be discovered, and hence the 'type-site' after which the 'Ahar Culture' takes its name, as per archaeological convention), excavations yielded fifteen structural

phases during Chalcolithic Period I, with remains of rectangular stone and mud structures, built on foundations of locally available undressed blocks of schist (Sankalia *et al* 1969). The walls were reinforced by either a bamboo screen or by the addition of quartz pieces in clay - a practice still current in the region. The floors were, variously, either of hard burnt clay, or black clay mixed with yellow silt, and were sometimes paved with a bedding of blocks of cemented gravel from the nearby river. Structures at the site of Ahar measured 9.15 x 4.60 metres on an average, although longer walls running to a length of 13.70 metres, and divided into rooms by mud or mud-brick walls, indicated larger buildings. The houses generally had north-south as their longer, and east-west as their shorter axis. Timber appears to have been used sparingly for the central upright pillars, and was probably also used for the long horizontal beams that supported the roof. Roofs were sloping and thatched with bamboo, grass and leaves. Most buildings had large-sized hearths (or *chulhas*) with two and more cooking-positions. Besides this, a circular pit, measuring 1.5 metres in diameter and 0.75centimetres in depth, and containing copper slag and ashes was excavated, and is believed to be linked with local copper-smelting process.

#### GILUND

Both burnt-brick and mud-brick structures were found at the site of Gilund, by the Archaeological Survey of India. A structural complex unearthed during the earlier excavations from the work area designated as GLD-2 covered an area of 30.4 x 24.38 metres. This had four parallel north-south walls, joining an east-west wall at the southern end. Parallel to the last were two more walls, from which, in turn, emerged another set of three parallel north-south walls. The walls ranged in thickness from 75 to 90 centimetres, and were made of mud-brick (average size being 32 x 12 x 10 centimetres) laid with mud-mortar in alternate courses of headers and stretchers. The space between the parallel walls was filled with sand, while the inner face of the innermost wall and outer face of one of the cross-walls were plastered with mud mixed with lime. The extent and alignment of these walls indicated some massive building complex, but given the small scale of excavation, its exact nature could not be determined.

Another interesting complex partially excavated in Gilund's GLD-3 area during the earlier excavations revealed a main wall, running west to east and then turning north-north-east, with a cross-wall on the inner



*Burnt brick and mud brick structures at Gilund*

side and a parallel wall, following the alignment of the main wall, on the exterior. Made from kiln-baked bricks (34.5 x 15 x 12.5 centimetres), laid over a stone-rubble foundation, and having a width of 55.8 centimetres, the main wall was traced to a length of 10.92 metres, without reaching the ends on either side during excavations. It had an inch thick reddish plaster of sand and clay mixed with lime. The outer wall, running parallel to the main wall at a distance of 1.35 metres, had two openings. One of these, 91 centimetres in width, was probably an entrance into the complex in the form of an earthen ramp consolidated by rubble pitching. The outer opening was not fully excavated. Charred remains of wooden posts were noted at three places along the main wall.

Since then, Deccan College Pune, and the University of Pennsylvania's joint work at Gilund has provided considerably more information, though a final full report is awaited. "Excavations at Gilund have produced much interesting evidence for life in southern Rajasthan during the Bronze Age. A large public building with massive parallel walls of high quality mud brick has been found. Within the walls of this building a bin which contained over 100 seal impressions of unbaked clay was found. Some of these seal impressions are very much like the seals of the Jhukar Culture of Sindh, as documented by the excavations at Chanhudaro. The Gilund seal impressions would seem to date to the early second millennium B.C." (V. Shinde and G.L. Possehl, personal communication).

#### BALATHAL

The more recent archaeological work at Balathal (Misra *et al.* 1995; Misra 1997) has yielded large multi-roomed rectangular or squarish mud, mud-brick and stone structures, including a massive stone-revetted mud-filled fortified structure dating to the Chalcolithic period. This fortified enclosure, roughly rectangular in shape, has four ramparts or walls made of rammed mud and semi dressed stones both on the inner and outer faces, enclosing a space of about 500 squares metres within them. The enclosing walls range in width from 4.80 to over 5 metres. Besides the above, other structures found at Balathal include the rectangular 'Structure No.5' showing evidence of intense burning activity, pottery kilns, ash and potsherds, leading to its tentative identification by the excavators as a potter's residence. The floors at



*Mud, mud-brick and stone structures at Balathal*



Balathal were a bedding of stone chips above which alternate layers of black clay and brown silt were laid, and then plastered with mud and cow-dung.

Skimming over various other settlements dating between third to first millennia BC (Hooja, 2006), which do not provide sufficient data regarding settlement-plans, one may focus on the third and second centuries BC period in Rajasthan; a time when the Mauryan Empire flourished over many parts of India. Mauryan and post-Mauryan period brick, wood and sometimes stone-built architectural remains have been found from various parts of Rajasthan, including remains of Buddhist stupas and monasteries from sites like Bairat, Nagari, Chittorgarh, and Lalsot.

#### BAIRAT

Bairat (now re-named Viratnagar), near modern Alwar, is popularly regarded as the ancient capital of the Matsya kingdom. Alexander Cunningham noted in his writings that the site of Bairat that he explored was situated on a sprawling mound of ruins (Cunningham, 1871:288). The ruins were about 1.6 kilometres in length by .8 kilometre in breadth, or some nearly 4 kilometres in circuit, of which the inhabited town, when he saw it, occupied less than one-fourth of the area. He further noted the existence of a number of large mounds about .8 kilometre to the east of Bairat, as well as immediately under the Bhim Doongri hill to the north, and hypothesised, rather correctly, that they were probably the remains of some large religious establishment.

Of this vast spawl, about 122 x 58 metres area at Bairat was partially excavated by Rai Bahadur Daya Ram Sahni for the Archaeology Department of the erstwhile Jaipur State in 1936. Sahni's excavation revealed archaeological remains of the Maurya and post-Mauryan period, including a circular Buddhist shrine. Lime-plastered panels of brickwork alternating with twenty-six octagonal pillars of wood were the main materials used for making the 8.23 metres diametres stupa, which was double circular in plan and had an outer path for ritual circumambulating. The entire complex was apparently enclosed at a later date within a rectangular compound containing an open space for assembly in front of the entrance. The remains of a Buddhist monastery with cloister and cells were found nearby. Excavations also unearthed a variety of other artefacts from different periods (Sahni 1936).

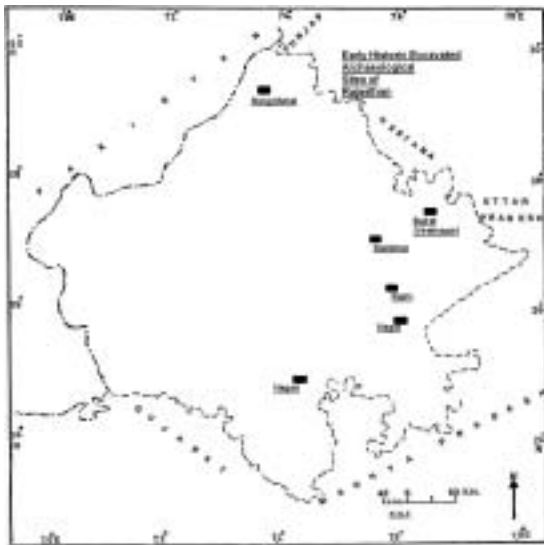


*Remains of Buddhist monastery, Bairat*

#### MULTIPLE SITES

Other excavated sites that throw light on Rajasthan's architecture from second and third centuries BC onwards include Nagar, Rairh, Nagari, Rang Mahal and Naliasar-Sambhar. Excavations indicated that these were urban centres of small chiefdoms and republics. These have yielded brick, wood and stone-built architectural remains. (The sites were partially excavated over fifty years ago, but detailed information is awaited).

Of these sites, excavations at Nagar (ancient Malava-Nagar, also called Karkota-Nagar), and at Rairh unearthed brick houses and other remains dating from second century BC. Nagar, near Uniara, was apparently a major settlement of the ancient Malava peoples - perhaps even the capital of the Malava Janapada, and in 1872, A C L Carlleyle found a profusion of over 6000 Malava copper coins covering the surface at the site of Nagar, leading him to record that the coins lay as thick as sea-shells on a shore. In subsequent centuries, like many old sites, Nagar



*Early historical period excavated archaeological sites*

appears to have enjoyed intermittent periods of decline and prosperity, as indicated by various literary references, seventh to eleventh century structures, wells, water-reservoirs, stepwells and temples, and the 'Mandkila Tal Inscription' of 987 AD (Jain, 1972, pp.108-111).

Rairh, excavated in 1938 by Dr K N Puri, apparently flourished from about the third century BC to at least the end of the second century AD, and thereafter continued to be occupied for several centuries longer. Excavations here yielded remains of parallel walled structures, terracotta soak-pits, tools and implements of iron, and large amounts of iron-slag, besides other antiquities. Among the structural remains from Rairh (which too is associated with the ancient Malavas, and has yielded vast quantities of coins and iron objects), are three small brick houses, one of which dates from the Mauryan period, while the other two are ascribed to second to third century AD. Construction was mainly of mud-bricks, with baked brick platforms. Some pottery models of houses and fragments of roof tiles, as well as pottery finials, offer a pointer to the local style of architecture at Rairh. These indicate that the better quality structures were probably located within a walled-in enclosure, and possessed slanting tiled roofs supported on gabled walls, with decorative finials on the ridge, and one or more door-way marking the entrance to the interior of the building. Drains of pottery-pipes and bricks were noted in the excavations, as was the use of 'ring-well' type of soak-pits for waste-drainage.

#### NAGARI PARTIALLY EXCAVATED

Coming now to another partially excavated site of Rajasthan, namely Nagari (ancient Madhyamika-Nagari, 13 kilometres north of Chittorgarh), where the Sibi people originally residents of the Punjab, were relocated in the wake of Alexander's incursions into the north-western part of the Indian Sub-continent. This 'MadhyamikaNagari' of the Sibis has been referred to in several texts including Patanjali's oft-quoted reference in his *Mahabhasya* (a commentary on the *Ashtadhyayi* composed by grammarian, Panini), to a siege of Madhyamika by Greeks, probably during the second century BC.

Explored by A C L Carlleyle in 1872, and excavated by Bhandarkar in 1919-20 (Bhandarkar 1920), Nagari yielded the remains of a stupa and various structures, along with inscribed stones, terracotta figurines, moulded plaques, sculpture, and moulded and ornamental bricks with figures of birds, human heads etc., and other antiquities. Excavations were renewed at Nagari in 1962 by the Archaeological Survey of India, partially in order to co-relate Nagari's defences with the habitation levels. These revealed three phases or periods, in which a cyclopean defence wall fortified the city during Period III (attributed to the early centuries AD). The 1962 excavations confirmed the occupation of the site from circa fourth century BC to seventh century AD. Besides the remains of Nagari's sprawling settlement, a substantial stone enclosure, which the local 'Ghosundi-Nagari Inscription' (datable to c. 200-160 BC) refers to as a '*Narayana-Vatika*' (the grove of Narayan) and connects with the worship of Vasudeva-Samkarshna, may still be seen in part today in the form of a rectangular enclosure of laminiferous stone, commonly known as the 'Hathi Bada'.

#### OTHER FINDINGS

Another excavated urban settlement that throws light on the early historical period towns in Rajasthan is that of Naliasar-Sambhar, about six kilometres from modern Sambhar. This dates between second century BC to about eleventh century AD. Explored first in the nineteenth century AD by the Assistant Commissioner of Inland Revenue named Lyon, it was further examined in 1885 by T.H. Hendley. He concluded that it had been a Buddhist town. During 1936-38 the site was partially excavated by Dayaram Sahni, the first director of erstwhile Jaipur State's Department of Archaeology and Historical Research.



*Hathi Bada remains at Nagauri*

The Kushan period (first to third centuries AD) architectural remains there indicate the existence of planned, straight, streets, with houses of sun-dried and kiln-baked bricks, sometimes rising up to two or more storeys for which access staircases were provided. The buildings were generally planned around a central courtyard, flanked on three, or even all four sides, by a row of rooms. A miniature pottery-model of a house is revealing. This depicts a miniature rectangular chamber with a gabled roof crowned by finials. The model's front-facing doorways are large and have horizontal lintels. These doorways are flanked by small window openings, placed high. Similar windows were depicted on the sides, with pierced lattices on the rear wall. Quantities of sculpture, coins, pottery, iron objects, beads, terracotta figurines, and other artifacts have been found at Naliasar-Sambhar from this and subsequent periods (Sahni 1940). There is evidence for on-site pottery production, bead-polishing, manufacture of terracotta, conch-shell and steatite objects, and metal-working. By the eighth century, nearby Sambhar was the capital of a Chauhan kingdom.

#### PROCESS OF TOWN PLANNING

From northern Rajasthan, we get information about local notions of town-planning between first to seventh centuries AD from Rang Mahal (two kilometres north of Suratgarh in district Hanumangarh), a site on the river Ghaggar excavated by the Lund University's

Swedish team led by Dr Hanna Rydh in the early 1950's (Rydh *et al.* 1959). Besides a variety of antiquities dating from the Kushan period onwards, excavations here revealed evidence of a broad street, portions of a drainage system using cylindrical pipes found in some structures, and various structures - some with baked brick floors. The houses were built of sun-dried bricks and were generally small - one was two-roomed. The size of the bricks varied, but approximated 32 x 23 x 7 centimetres. On the basis of bones and botanical remains, the excavators were able to conclude that cattle were numerous at the site. Remains of stupas and numerous terracotta plaques were found at various nearby sites like Bhadrakali, Munda and Pir-Sultan-ki-Tekri, etc.

Thereafter, by about mid-fourth century AD, with the Gupta Empire firmly established over many parts of South Asia, there was a proliferation of stone structures, overshadowing the previous predomination of brick, wood and mud/terracotta, including in Rajasthan. This was also the period when the spire-like 'shikhara' roof gradually became part of Rajasthan's temple architecture. It may be important to underline that architectural and other conventions established during the 300 - 600 AD Gupta period became incorporated in existing regional working traditions and eventually became part of the architectural canons and tradition which was passed on to later generations. In the post-Gupta period, the Gurjara-Pratihara dynasty, which established its own large empire across northern India in the eighth to eleventh centuries AD, and other local contemporaries, added their own touch to Rajasthan's architectural tradition. Notable architectural and sculptural remains from post-Gupta period onwards may be seen at sites like Kiradu, Barmer, Osian, Bijoliya, Bhand-Devra, Atru, Menal, Badoli, Pallu, Harshad-mata (Sikar), Abaneri, Amjhera, Dabok, Delwara-Abu and Kakuni (Hooja, 2006).

The period also saw the development of many towns and administrative bases, as various ruling dynasties added to established settlements, or built new built new ones. These include Nagda, Chatsu, Kishkindha, Arthuna, Chandrawati (Abu), Lodrava, Jhalara Patan, Bhinmal, Jalore, Mandore, Sambhar, Chittorgarh, Didwana, Dholpur, Ajmer, Jaisalmer, Dausa, Amber, Phalodi, Pali, Nadol, Ranthambore, Mandalgarh, Gagron, Bayana, Sirohi and Nagaur. In the ensuing centuries, many of these would continue to serve as capitals of kingdoms - even when the ruling dynasties of the kingdoms sometimes changed.



Some of Rajasthan's settlements developed atop older habitations, with new fortifications, palaces, gateways, temples, step-wells and reservoirs added by successive rulers, or even courtiers and merchants (Hooja, 2006). The majority of these were protected by walls or fortifications, and were often divided into wards given over to specific guilds and trades. (Thus, Ingoda *qasba* and Delwara had planned areas for different castes and occupational groups). Shops, religious structures, step-wells, houses, public buildings, gardens and palaces were common features at most sites. Traditional principles, with due recognition to local requirements and trends, were probably a factor in determining their

overall location and architecture, though it is debatable whether only canonical formulae were put into practice.

While there is no single local text that describes the ideals of town-planning in Rajasthan up to the thirteenth to fourteenth centuries AD period, it appears that the region's artisans, masons and workers were well-versed in both, the accepted working tradition, and the canonical dictums of their eras. This heritage was eventually integrated by Rajasthan's fifteenth century architect cum artisan named Mandan, into his treatises on architecture and iconography (Hooja 2001, 2006), but that is another story.

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### Notes

- 1 This author uses the BC and AD forms for dates, rather than BCE and CE

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# Chamba

## Urban evolution of an ancient town in the Himalaya

MANU BHATNAGAR

### Abstract

*The ancient town of Chamba, the capital of the ancient Himalayan hill state of Chamba, is liberally endowed with a number of monuments of varying antiquity. These landmarks, consisting of temples, palaces, colonial era buildings of the British period and some large open greens known as chowgans (rare for a hill town) and constituting the distinctive urban landmarks of the place, have emerged through a long and chequered history in a physically sound state. But in an era of rapidly changing urban context where their solitary dignity and visual impact has been encroached upon by banal constructions, it is difficult to be sanguine about their continued contribution to the urban character of the ancient town. This article briefly outlines the significant heritage of the hill town of Chamba and initiatives taken to protect this heritage.*

### INTRODUCTION

The settlements of the Indian Himalaya can be classified into five categories:

- Capital towns of the Indian principalities – scanning the Himalayas



*A modern hotel building constructed in violation of building regulations that infringes upon the traditional town scape dominated by Akhand Chandi Palace for centuries*

from east to west, the main towns in this category are Gangtok, Almora, Tehri, Nahan, Mandi, Kangra, Chamba, Srinagar and Skardu. Amongst these Kangra and Chamba can be said to be the oldest

- Summer resorts of the colonial era organised around malls and now hosting a vast number of tourists well beyond their holding capacity
- Pilgrim settlements increasingly accessible, attracting large number of visitors on pilgrimage and stressed under the weight of rapid urbanisation with inadequate infrastructure
- Smaller settlements close to the international border which have seen an influx of army infrastructure in recent decades
- Overgrown villages without significant historical antecedents now swelling due to some fortuitous development circumstance (such as a major hydro-electric project).

In 1987, the author was commissioned by INTACH to prepare a report on the 1000 year old urban settlement of Chamba in the north of Himachal Pradesh in India, with a view to conserve and restore individual monuments and heritage buildings. Assessing that the individual monuments were not in a critical structural condition but rather threatened by neighbouring developments, the approach was broadened to demarcate heritage zones. The purpose was to enhance or retain the visual impact of the individual buildings and subsequently link the zones visually or physically. The work also entailed a study of the town's evolution, an effort that was constrained as usual by the lack of documentary evidences of early history of the place.

## PHYSICAL SETTING OF THE TOWN

Chamba town is situated on a series of plateaus on the right bank of the Ravi river valley between the Dhauladhar and Zaskar ranges south of the inner Himalayas. While the Ravi river flows from south to north, forming the western boundary of the town, the Sal tributary joins the Ravi, running east - west, forming the northern limits of the town. The rivers have cut deep gorges. On the eastern side the steeply contoured Shah Madar hill forms the town limits. The town is studded with several monuments and heritage buildings and these are concentrated mainly in the old town east of the chowgangs. Few of the significant town structures are:

Akhand Chandi Palace (930 AD eighteenth century), Zenana Mahal (eighteenth century), Rang Mahal (eighteenth century), Laxmi Narain Group of Temples (tenth century - nineteenth century), Sita Ram Temple, Bansi Gopal Temple, Temples in Kharura Mohalla, Hari Rai Temple (tenth century), Chamunda Devi Temple (possibly eleventh century), Sui Mata Temple (possibly eleventh century), Temples in the Chountra Mohalla, Champavati Temple (tenth century), Temples in the Jansali Bazar, Gandhi Gate (Curzon Gate) (early twentieth century), Shiva Temple, Vajreshwari Temple (eleventh century), The Chaugans (level fields for parade, polo) (late nineteenth – early twentieth century), The Police Lines (late nineteenth – early twentieth century), The Church (late nineteenth – early twentieth century), The Shyam Singh Hospital (late nineteenth – early twentieth century), The Church (late nineteenth – early twentieth century), Library (late nineteenth – early twentieth century), The Old Suspension Bridge (late nineteenth – early twentieth century), Administrative Buildings of the British Period (late nineteenth – early twentieth century)

## URBAN HISTORY AND PLANNING

In *Architecture of the City*, Aldo Rossi states - “With time the city grows upon itself; it acquires a consciousness and a memory .... Thus from the point of view of urban structure, urban history seems more useful than any other form of research on the city.” (Rossi, 1982, p.21)

The historical record of a place assists in the development of insights as to the relationship between monuments and places. The urban form of cities contains the physical evidence of history and reflects the collective impact of individual decisions in response to environment, economic and social forces.



However, rarely does history inform us as to the builders' rationale in the evolution of urban space and this can only be fathomed. Owing to its mountainous topography and resultant inaccessibility, Chamba remained a geographically and historically peripheral state. It remained poor in resources and isolated from development in the plains. This has resulted in a very sketchy historical record and almost complete absence of the accounts of travelers.

The urban evolution of Chamba can be segregated into three phases as follows:

- From its founding in 930 AD to the arrival of colonial administration in 1862 AD constitutes a period of organic growth
- The period of colonial administration whose prevailing trends continued well into the era of representative government – a period of conscious and robust efforts at urban form making reflecting the regimental outlook of the British soldier-administrators
- The current phase of economic buoyancy where commercial and administrative exigency combined with the populist approach of elected representatives and urban pressures has led to the decline of the visual and symbolic significance of the urban heritage. This has resulted in the blurring of the urban form, accelerated dilution of the historical character and reduction in the impact of the heritage on the psyche of residents and visitors

#### THE FIRST PHASE

The original capital of the region was to the north of Chamba at Brahmaur. Around 930 AD, Sahil Varman captured the lower Ravi valley and set up the capital there in deference to the wishes of his daughter Champawati. The warmer weather at Chamba and the easier availability of water and food may have been more important deciding factors for shifting the capital. The gazetteer of Chamba reveals that it was customary for villagers to migrate to the lower valleys in winter from the Brahmaur area where the winter is severe. Most of the old palaces, temples and residential part of the original township are sited on the lower slopes of Shah Madar hill probably for defensive reasons; the site being between two rivers and a steep thickly forested mountain. The proximity of temple (Lakshmi Narain group) and Akhand Chandi Palace were probably the result of the ruler's need to impress upon the subjects the divine sanctions behind his powers.

The Akhand Chandi Palace evolved over centuries. Its northwest corner is supposed to be the most ancient as it is here that the mother deity is said to have originally manifested herself.

Most of the prominent temples (of the plains style) came to the hills with the spread of the Vaishnavite religion from 900 AD onwards. The oldest of these plains' temples - the Laxmi Narain, the Champawati, the Hari Rai and Vajreshwari all date before the twelfth century and constitute the best expressions of the local temple architecture. The main urban nodes in the pre-Mughal era were the Akhand Chandi palace (seat of administration) and the main temples. Prominent outlying spurs and heights were occupied by the temples which seem to constitute a protective ring, of which the central position is occupied by the palace. The residential areas occupied the spaces in between (the census of 1891 gives a population figure of 5905).

#### THE SECOND PHASE

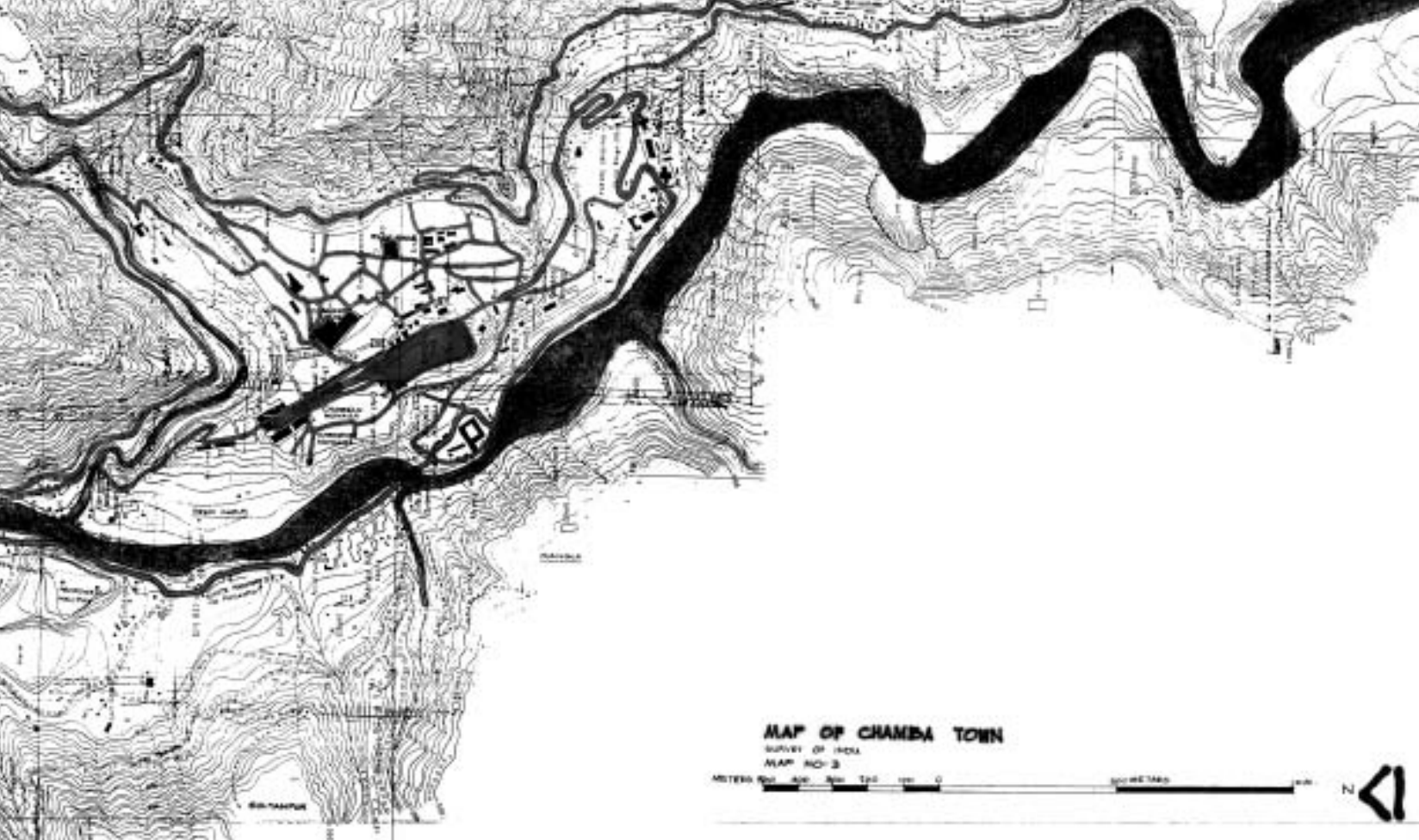
In 1846 AD Chamba was ceded to the Dogras who in turn made it over to the British in an exchange of territory and from 1862 British advisors from the Punjab Government began advising the ruler on affairs of the state. Upto that point of time it is difficult to detect a strong urban pattern in the siting of various buildings or a conscious attempt at shaping urban space. No order or axis or regularity in street pattern or focal points or orientation to cardinal points is apparent. Apart from the Rang Mahal, Akhand Chandi, Zanana Mahal and the older temples, no building could lay claim to be of imposing scale with a larger than localised impact. With effective administration, the revenues of the State steadily increased, enabling funds to be devoted to the development of new access routes and the re-structuring of the town, with significant additions to the Akhand Chandi Palace and a number of lesser civic buildings.

The re-structuring of the town took place in the following manner : prior to the British administration the town had developed almost entirely to the east of the Akhand Chandi and the Laxmi Narayan Temple group except for the Kashmiri Mohalla which was isolated on the north-west end of the chowgan. The chowgans were leveled for use as parade grounds and play grounds and given a rectangular shape with the help of the surrounding buildings. The various administrative buildings and neat rows of shops were arranged on the edges of the chowgan which now had









In this phase royal patronage declined resulting in poor maintenance of the urban artifacts. With elected governments having developmental priorities and the new generation increasingly plugged into the outside world, ignorance and indifference towards the historical aspects of the town has increased. Thus there is little local pressure on short tenure administrators to conserve and build upon the urban design aspects of the built heritage. The urban expression of the commercial surge can be seen in rising land price, encroachments around the urban artifacts, in vertical growth, increased traffic bottlenecks and parking requirement, conversion of residential buildings and even religious property to commercial use.

#### CONSERVATION PROPOSAL

The proposed plan in the study carried out by INTACH was based upon a series of heritage zones around the individual monuments, the zones being regulated to prevent visual obscuration of the monument at the street level as well as at a larger level. The zones were proposed to be linked if not visually then physically. Wherever possible the reuse functions were to reinforce the original symbolism,

thus the palace could be a seat of administration or culture but not an institution. The disciplined edges around the chowgans were to be visually emphasised and increased by one storey while restraining the vertical growth of the banal construction behind the edges. Urban planning measures were advised to increase the traffic efficiency and economic vibrancy of the chowgan edges while new urban growth was to be made in self contained neighbourhoods at suitable locations. Like many plans of that time, this report too, was kept on the backburner only to be overtaken by unsavoury developments.

#### CONCLUSION

It is in the light of the above evolution that the urban heritage of Chamba must be conserved, taking into account that the urban artifacts constitute the history and memory of the town and have exerted an urban influence larger than their physical form. How they can be enabled to continue to do so and how this waning influence can be strengthened? These issues constitute the real conservation problem in Chamba and also need to inform the core of any planning solutions for the town.

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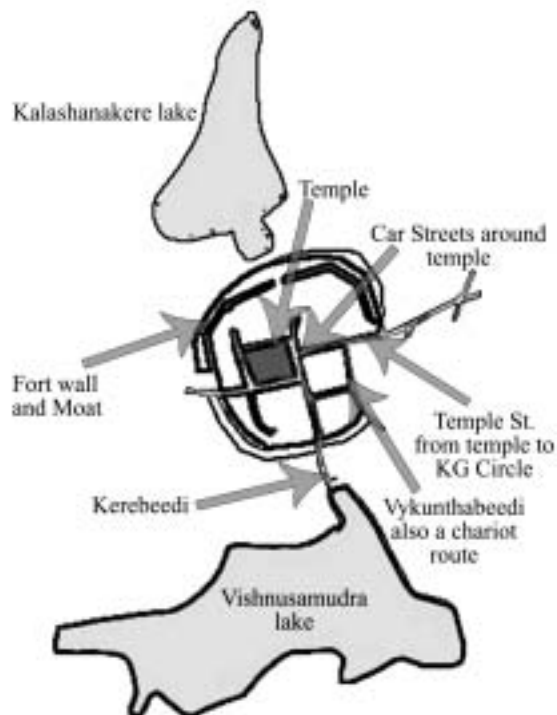
# The Hoysala heritage towns of Karnataka

## Managing the cultural identity of historic urban places

JYOTI HOSAGRAHAR

### Abstract

*The Hoysala monarchs ruled in southern India from the eleventh to the fourteenth centuries. They built numerous temples of extraordinary refinement with splendid carving. In addition to the main temples of Belur and Halebeedu, the towns and settlements of Hoysala in this region have characteristics that contribute to their distinctive cultural landscape. Lakes and ghats, the layout of the towns, social organisation of the neighbourhoods, festivals and rituals, as well as the patterns of the vernacular homes, streets, neighbourhoods and shops are rooted in the distinctive culture and environment of the region. The identity of the towns is composed of both visual and non-visual elements and the challenge is to develop a set of regulations that addresses the processes of creating such places. Managing the heritage character of the Hoysala historic towns demands not only an action plan for conservation and regulations to restrict development but, also a vision for sustainable development with heritage and cultural identity as its focus.*



*Diagram of historic core of Belur*

## Introduction

The cultural heritage of the Hoysala rulers is primarily in the settlements and towns in and around Belur and Halebeedu in Karnataka. This region is marked by several towns and settlements with grand temples as well as the remains of forts and lakes of the Hoysala and later periods. The towns studied include, Mosale, Koravangala, Doddagaddavalli, Arkere, Arsikere, Belavadi, Haranhalli, and Banavara in addition to Belur and Halebeedu. The street patterns, the vernacular houses, natural elements, and intangible cultural practices together make up the unique cultural landscape of the Hoysala heritage towns of Karnataka. A close look at the urban patterns in these towns reveals the remarkable presence of two distinct cultural landscapes, one royal and classical, and the other vernacular and everyday; intersecting and overlapping in a variety of ways to create a distinctive character. Managing the heritage character of these towns presents a challenge, as it recalls the need to address the processes of urban development as well as the future needs of the settlement in terms of infrastructure.

## The Hoysalas and Their Heritage

The Hoysala monarchs ruled in southern India from 1000 AD to about 1346 AD. The capital of the empire

was initially based in Belur and later moved to present day Halebeedu. From the inscriptions, coins, evidence of trade and revenues, temples, and depictions of daily life in the extensive sculptural work on the temple exteriors, it is believed that prosperity reigned in the empire. The native place of the Hoysalas is identified as Angadi in the Western Ghats. The founder of the dynasty was Sala. The inscriptions note that Sala was in the forests worshipping his family temple when he was interrupted by a tiger. The priest pressed an iron rod in Sala's hand saying 'hoy, Sala,' meaning, 'Go, Sala' or 'Go strike, Sala.' Sala killed the tiger on the spot with the rod earning him the title of Hoysala. The capital of the Hoysala empire was first established at Belur or Velapuri and later moved to Dvarasamudra (also referred to as Dorasamudra). The Hoysala kings built numerous temples of extraordinary refinement with splendid carving. A soft stone called soap stone was quarried from the nearby hills. They also constructed numerous tanks and buildings and established populous towns.

The Hoysala kings were great patrons of art and architecture. Religious freedom, dance, and literature, both Kannada and Sanskrit, also flourished under Hoysala rule. The temples built by the Hoysalas have a distinctive architectural style, ornamented with exquisite sculptural detail on the exterior depicting scenes from the Ramayana and Mahabharata as well as daily life. Of the 1500 structures said to have been built by the Hoysalas, about a hundred temples have survived to date. Of these, the Belur Chennakeshava and the Hoysaleswara temple at Halebeedu are outstanding artistic achievements. A mythological (or historical) event of a young boy bravely killing a tiger with his bare hands was adopted by the Hoysalas as their emblem. Present day Halebeedu was known as Dvarasamudra, capital city of the Hoysalas at the end of the eleventh century. It was a large fortified city several times the size of the present village and contained numerous temples within it. The Hoysalas constructed numerous stepped wells, canals, lakes and sluice gates. They are believed to have channeled water from the Yagachi River near Belur to bring water to Dvarasamudra more than 13 kilometres away.

Influenced by the teachings of Ramanujacharya, one of the Hoysala Kings, Ballala II converted from Jainism to Vaishnavism changing his name to Vishnuvardhana. Subsequent rulers professed both the Vaishnava and Shaiva sects of Hinduism. The Hoysalas were known for their religious tolerance as Jainism continued to flourish and receive favour from the rulers. At one

time, there are said to have been more than 720 Jain temples in the capital city alone. In 1310 AD, Ala-ud-Din Khilji, second ruler of the Delhi Sultanate, invaded the Hoysala empire, defeated and took prisoner the Hoysala ruler, and looted and ransacked the capital city of Dvarasamudra. A subsequent Hoysala king, Narasimha rebuilt the city. However, in 1326 AD, Muhammad bin Tughlaq of the Delhi Sultanate, once again invaded the Hoysala capital of Dvarasamudra and this time completely demolished it. In this city of countless temples, the only significant one left standing was the Hoysaleswara temple that is still extant today. By 1336 AD the Vijayanagara kingdom rose to power in present day Karnataka and overshadowed the Hoysalas.

#### The Temples as Marks of Hoysala Cultural Achievements

The main temple, at the centre of the typical Hoysala town was located within a fortified area. The temples were made out of *balapada kallu* or soap stone and were elaborately carved. The temples were built on a platform, 1.0 to 1.75 metres high and had a star shaped plan. The temples were not built high but were exquisitely sculpted. The structure was made up of stone columns, beams and corbelled roofs. The stone pillars were turned in lathes. The temples were located in a compound or *angala* but did not have a *pradakshina* (circumambulation) path inside. A temple had up to four *garbagriha* or shrines within the main structure. A *navaranga* was usually included as a place for people to gather and participate in cultural programmes such as music and dance performances, story-telling from mythology, and religious discourses. Visual elements such as a gently curving bell shaped *chajja* (shade), and lathe turned stone pillars with circular rings carved on them are typical stylistic elements of Hoysala architecture. The exterior walls of the numerous temples were intricately decorated with stone sculptures and carving. These sculptures are rich with religious and cultural iconography. They depict gods and goddesses, wars and victories, dance and music, hunting, games, processions, and the dress, jewelry, and daily life of people.

Beyond their religious significance, under the Hoysalas the temples served as an important centre for art, education, and classical culture in dance, music, and literature. Temple dances such as Bharatnatyam flourished under the Hoysalas. Each temple included a *navaranga* or a circular space for performance located axially to a deity. At one time, some of the temples

also had *devadasis* (dancers who dedicated themselves to the temple). Many forms of devotional music too, flourished. A variety of narrative and musical forms of storytelling from the epics have survived to this day. The temple sculptures depict numerous musical instruments and configurations of musicians. The inscriptions in the temples give evidence to the literary achievements of the Hoysalas. Throughout the Hoysala region and even in the temples, numerous stone tablets and *shasanas* have been found with inscriptions in Kannada and Sanskrit. A tablet in Halmidi shows the beginnings of the Kannada language. The religious tolerance of the Hoysalas is evident in different religious structures in the towns. The Hoysala Kings were equally generous in their support of different religious sects: Vaishnavism, Shaivism, and Jainism flourished under their rule. Remarkably beautiful temples dedicated to different gods and religious sects are still present. For example, we see a Vishnu temple at Belur, Shiva temple at Halebeedu, and Jaina Basadi at Halebeedu.

#### Belur, Chennakeshava Temple

The most prominent element of Belur is the historic Chennakeshava temple complex located at the centre of the fortified area. King Vishnuvardhana started the construction of the Chennakeshava temple at Belur in 1117 AD in commemoration of his victory over the Cholas. The finely carved temple took 103 years to build and was completed by his grandson, Veera Ballala II. Subsequent rulers, the Vijayanagaras, the Nayakas, and the Mysore Wodeyars all made additions and alterations to the temple complex to create the remarkable monument seen today.

The Vijayanagara Kings added the main *gopuram* at the entrance as well as some shrines and *mantapas* within the temple complex. An aerial view of the temple area shows the structures in the temple complex, the compound wall, the car street around the temple, the temple street to the east leading up to the main entrance *gopuram*, and the buildings around the temple in their present condition. Today the main temple has no *vimana*. This might have been removed at some point because it was falling.

#### Halebeedu, Hoysaleswara temple

Hoysaleswara temple at Halebeedu was built in 1121 AD during the reign of the Hoysala King, Vishnuvardhana Hoysaleswara. The temple, dedicated to Shiva, was sponsored and built by wealthy citizens



*Hoysaleswara Temple, Halebeedu*

of Halebeedu, then known as Dvarasamudra, sovereign city of the Hoysalas at the time. The Hoysaleswara temple is the only elaborate temple of its type that survived in a city of numerous beautiful temples during attacks by invaders from the Delhi Sultanate who laid the city to ruins.

#### Lakes, Ghats, and Mantapas

Numerous lakes, tanks, and stepped wells that were likely built by the Hoysalas as well as later rulers are evidence to a complex hydrological system. Larger towns such as Belur had more than one lake. The lakes had, and in many cases have continued to have at least in part, a social, religious, and aesthetic role in the life of the settlements in addition to the function of providing water for both domestic and agricultural use. Lakes, always in proximity to a temple, enabled devotees to take a purifying dip and offer prayers before participating in rituals at the temple. Festivals and rituals such as '*teppotsava*' were performed in the water. A public source of water with shady trees around it also made it easy for travelers and pilgrims from villages in the region to rest and stay to participate in temple festivities.

In most cases, the water bodies had stone steps going to the water at least on one side. These *ghats* made the water accessible and easily usable. *Mantapas*, or open pavilions around the water bodies also provided shelter to visitors and a place to cook, and to perform rituals. Some water bodies are vast lakes and others very small stepped wells. *Mantapas* as resting places or shelters also occur in other places away from water bodies such as one near Pushpagiri. *Mantapas* (pavilions) and shrines can be seen even today, in and around the water bodies such as at Belur around the Vishnusamudhra and around the *kere* at Haranhalli and Koravangala. Old sluice gates are also in evidence in some places such as at Koravangala.

The larger water bodies were sometimes created in low lying areas by channeling water from a river. At times, natural lakes or low lying land were expanded upon. Quarrying for stone and earth for building the temples and fort walls may also have created depressions that were lined to serve as lakes. The water bodies likely served the dual purpose of providing a source of water for irrigation and consumption as well as rainwater harvesting and recharging of groundwater. It is said that water from the Yagachi River near Belur was carried in a channel





A house with jagli, khamba, and carved entrance doorway

13 kilometres long to the Dvarasamudra Lake at Halebeedu. This channel is believed to have brought water to the new capital for irrigation and consumption. Although a dry bed today, what is considered evidence of this channel can still be seen in many places such as at C Hosahalli.

#### Other Urban Elements of the Hoysala Heritage Towns

*Spatial organisation* : The typical settlement pattern consisted of a fortified area called *kotte*, and a commercial centre called *pete*. The *kotte* was on slightly more elevated land and was surrounded by a heavy fort wall that was made of mud and stone. Historians believe that typically, a dry moat or ditch surrounded the fort wall. The main temple was located in the middle of the fortified *kotte* on an elevated platform. A wide processional path or *rathabeedi* ran around the main temple. A *pushkarani* or well was often located within the temple premises and a tank or lake adjacent to the temple. However the lakes were usually outside the fort walls. Typically, the lake had *ghats* or steps going down to the water. Residential streets were narrow with an irregular grid. Outside the fort wall and around the lake were stretches of fields.

A main street led from the temple to the *pete* forming the central spine of the town.

*Social organisation* : The houses of the temple priests were located close to the temple. Hence, the Brahmin neighbourhoods were usually near the temple and often among the older residential neighbourhoods in the town. At one time, the neighbourhoods were organised by caste and profession.

*Cultural practices* : From the daily rituals of making rice-powder patterns (*rangoli*) at the entrance to a dwelling to the annual holidays of Navaratri and Krishnashtami and Shivaratri, symbolic practices mark the experience of time and space in these towns. Different communities have different celebrations, festivals, and practices. Washing the entrance to a house and then making *rangoli* patterns with rice-powder is a daily practice in many households. Some are more skilled at it than others; a festival day demands a more elaborate display of *rangoli* than other days. Festivals are an important aspect of the cultural heritage of the Hoysala region. Each temple has specific holidays and festivals associated with them. Many of these have been carrying on for a few centuries, many others have died out.



*Lake with Mantapa*

During *rathotsava* or car festival a smaller form of the temple's deity (*uthsavamurthy*) is decorated and carried with pomp and splendour on carved wooden chariots in circumambulation around the temple. Sometimes, the festivities could last several days. The traditions of *rathotsava* go back several centuries. In addition to the grand *rathotsava*, smaller versions where the *utsavamurthy* is carried around the town and sometimes to the River Yagachi are regular occurrences. In the Theppadakola small boats carrying the deity were floated on the water for the festival. Some festivals, such as Theppotsava are no longer possible because the pond where it was carried out is now unclean and filled with silt.

#### Vernacular Architecture, Identity, and Ambience

The towns and settlements with Hoysala heritage in this region have an ambience that is both historically and culturally rich. The vernacular homes, streets, neighbourhoods and shops are an important aspect of the heritage of the region. The spatial patterns and architectural features are rooted in the distinctive culture and environment of the region. Many of the houses are 80-300 years old. The street patterns are inherited and have developed incrementally over time. The streets are paved with stone or made of rammed

earth and are largely pedestrian. The older houses are single or double storied with ornate doors. The buildings typically are made of adobe mixed with some stone. The roofs are sloping with clay tiles. The front of the houses often has a ledge for sitting or a *jagli* (porch). Decorative wooden pillars hold up the roof of the porch and main interior space. Handmade clay tiles, decorative brackets and columns add to the ambience of the historic towns.

#### *Commercial streets and structures*

The buildings on the main commercial streets in the region are rapidly being demolished to build new concrete slab structures. Double storied commercial buildings, with tiled roofs are characteristic in the region. The lower level has wide openings for shops and the upper level may be commercial or residential. A narrow covered walkway is sometimes present in front of the ground level stores. Wooden columns, brackets, and balconies are typical.

#### *Residential streets, courtyards, and roofscapes*

Curving streets are marked by single and double storied structures with double-pitched and hipped roofs. Variations in height, non-orthogonal streets, a gradually unfolding sequence of movements, and non-

symmetrical layouts result in a variety of roofscapes that are similar to each other and yet different enough to be non-monotonous. Paved courtyards are typical in many of the neighbourhoods. They connect a complex of buildings and provide private open spaces for extended families. Double pitched tiled roofs form a characteristic roofscape. The houses are usually oriented so that the long side of the pitched roof faces the street. The very large houses, some that residents say are more than 300 years old, are elaborate examples of residential buildings in the region. Often located on higher ground, they have exquisitely carved wooden columns, brackets, and doors. The layout of these houses once included a complex of buildings around several paved courtyards. A three level entrance *jagli* or verandah established both the status of the owner as well as created a space for people to gather and watch the official proceedings at the highest platform. The entrance and reception areas are particularly impressive. Wooden beams and rich wood paneling cover the ceiling.

There are numerous ordinary houses in these towns that are 80-200 years old (some even older) and have characteristic architectural features that make them unique. Earth walls painted white, contrast with red country tiles, and dark wood and red oxide or earth finished floors. An entrance verandah or *jagli* with ornate wooden columns and brackets, and ornate wooden doors and windows are typical features. While some of the larger houses have a courtyard around which the dwelling structures are arranged, for others, paved spaces between houses create community spaces and courtyards. The *jagli* verandah is often raised by .60 metres from the street and serves as a sitting area to receive people and socialise with neighbours. Although a few houses may use stone columns or *khamba*, most use wood. Some *jagli* are more like a ledge or platform in front of the house and do not have pillars or a roof over them. The entrance doors are generally emphasised with paint or elaborate carving. Wealth and status were expressed in the ornamentation of the *jagli* and entrance pillars as well as in the carving of the main doorway. In some old houses the internal doors were also carved. Balcony railings were carved of wood or wrought iron. Wooden columns and beams were used along with earth walls and floors. The sizes of the rooms depended on having a large number of columns. Some of the oldest houses have four to eight heavy pillars to create a single large space that is the main living area. These pillars were often ornately carved and surmounted with carved brackets on which the beams were supported. With

subdivisions in recent times, only a single large, ornately carved pillar and bracket are visible.

### *Craftsmanship*

Fine craftsmanship is a valuable heritage of the Hoysala region. In addition to stone carving and sculpting, wood carving, and hand made clay tiles are only some examples. Exquisite stone sculptures and carving as in the temples and equally fine woodwork in the ordinary houses. There are still a few skilled woodworkers who make temple chariots or exquisitely carved *rathas*. In addition to wood carving, relief sculptures and painting on wood is also a well developed heritage. Soap stone, abundant in the area, is carved into objects sold as souvenirs for tourists. There is no design or marketing input available to these people at the moment.

### Present Day Challenges to Historic Urban Landscapes

With economic growth and changes, increasing rural-urban migration, modernisation, the influx of new media, and burgeoning tourism, the greatest challenge to the heritage character of the Hoysala towns, is managing, guiding, and controlling both the formal and informal processes of urbanisation and development. So that in addition to conserving monuments and protecting them against encroachments and squatting, the loss of public spaces, the changing value of real estate and the visual and functional compatibility of new constructions become significant concerns. At the same time, the towns cannot be frozen in time and space as a sort of open air museum. Cities and built environments are dynamic and ever-changing rather than static and timeless. Finding a way to bridge the past, the present, the future of a city is the most difficult challenge.

### Regulating Historic Urban Landscapes

Clearly, the Hoysala heritage towns are more than a collection of isolated monuments. It includes the interconnections between the structures and the urban context or cultural landscape of which these are a part. The water bodies, terrain, the paths of the *rathothsava*, the *ghats*, social organisation of the neighbourhoods, the street patterns, and the typical elements of the vernacular architecture are all aspects that create the distinctive landscape of the Hoysala heritage towns. Visual elements such as view-lines and forms are as important as the textures, cuisine,



and temporal rhythms.

If the identity and heritage of the town is composed of both visual and non-visual elements, in that case, the regulations and building guidelines need to go beyond the accepted notions of bye-laws for protecting health and sanitation alone. The challenge is to develop a set of regulations that address the processes of creating places that have heritage and identity as their focus. Temples, palaces and forts withstand the ravages of time, neighbourhood, streets, and houses, however, evolve over time, being built and rebuilt, and carrying with them historical and cultural continuities. In recent years, the transformations in the residential and commercial environments have been so great that the historical continuities are severed and lost. Master plans need to do more than assign functional designation to land-uses. The building bye-laws should ensure that they do not nurture, bland, evenly spaced, concrete slab structures. Coordinated efforts across different government departments are essential to

develop and implement an urban site management plan for the heritage features (built and natural). A heritage-centred master plan is also essential for the success of a historic urban landscape.

Finally, the Hoysala historic towns demands an action plan for conservation, regulations to restrict development and a vision for sustainable development that addresses issues of water supply, garbage, sanitation, and rainwater harvesting. Reconciling local and regional significance and meanings of a place with national and international ones is also essential. Providing exemplary models and guidelines to develop private properties would allow for phased development. It will also push local people to be active decision makers in making a positive difference to the place. Participatory planning is necessary to empower and enable local people to take care of the place and to contribute to it while deriving benefits from it in a sustainable manner.

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- Field study in the towns of the Hoysala heritage region in Karnataka by Jyoti Hosagrahar with UNESCO team, and with team of Sustainable Urbanism International.

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# Nashik

## Historic layers and complexities in conservation

DRONAH ET AL

### Abstract

*Nashik is an important holy city of western India. It is flourishing today with a sound economic base. The growth of the city is rated as the highest in urban India over the last three decades. The city displays several layers of historic fabric with significant tangible and intangible components that date from the ancient, pre-Maratha, Maratha and colonial periods; and associations even from prehistoric times. Today, Nashik, poised for a great boost in economic development and consequent population growth, is attempting to address its cultural heritage significance and enhance its inherent values in a sustainable manner. The article charts out the historical evolution of the city and reviews the current initiatives towards heritage management integrated in the city planning at various levels.*

### Introduction

The city of Nashik located on the Western Ghats, spreads along one of the most important rivers of the Indian peninsula i.e. the Godavari. The city's origins and development are intimately bound with the presence of the river. The topography of the area, the river, small hillocks and

The article is excerpted from the Detailed Project Report (DPR) on Heritage Conservation for the city of Nashik. The report was prepared by DRONAH in 2008. The team included Shikha Jain, Anuya Kulkarni, Vanicka Arora, Priyanaka Sonawane and Parul Munjal



*Nashik Municipal Corporation building - a Grade 1 listed structure*

mounds have all influenced and inspired the architecture and growth of the city.

Nashik is a major religious tourism destination especially known for its 'Sinhasta Kumbh Mela' that is held once every twelve years. The city is now an important industrial and educational centre, and is also referred to as the 'Grape City' due to its grape production and wineries. There lies an immense potential to develop it as a heritage city for tourism. The efforts such as the Deccan Odyssey Luxury Train Tour-introduced as recently as 2004, a joint venture of Indian Railways and Maharashtra Tourism, that has Nashik as one of its destinations and for that purpose opens out options for encouragement of heritage tourism and increases the need for heritage conservation in the city. Well connected by roads and rail to other parts of the country, the city has geographical proximity to Mumbai (Economic capital of India) and forms the golden triangle of Maharashtra with the cities of Mumbai and Pune. The development in the past two decades has completely transformed this traditional pilgrimage centre into a vibrant modern city, and it is poised to become a metropolis with ever increasing global links. Hence it becomes crucial to address heritage conservation as a tool for socio-economic development of the city.

#### Historical Evolution

The city has evolved over centuries and there are multiple mythological legends associated with its growth. One of the most important associations is described with the Hindu epic of Ramayana; according



to which Lord Ramchandra along with wife Sita and brother Lakshman, settled down in Nashik for the longest stay during their 'Vanwasa' (exile).

#### Ancient Period (100 AD-1318 AD)

In the ancient period, the region came under the rule of six known dynasties i.e. Mauryas, Sungas, Satvahanas, Vakatakas, Chalukyas and Yadavas. There is not much physical evidence about the city of Nashik in the ancient period. It is said that Nashik was known as the Janasthana on the bank of river Godavari and was famous for religious practices. It was surrounded by a thick forest called Dandakaranya. Archaeological sites in the city, such as the Tapovan area are potential sources of information on this period and further research is required.

#### Pre Maratha Period (1490-1752 AD)

Nashik remained a small town retaining its religious importance during this period. The city was ruled by the Nizamshahi of Ahmednagar, the Mughals from Delhi and local feudatories. During Nizamshahi rule the city adapted the Islamic style of construction as is evident in the construction of Jami Mosque. This mosque is the only standing structure of the Nizamshahi period. The area now identified as Juna Kasba in the city was established during that time. An old fortified structure called Chadarvachi Gadhi was constructed in the area near Jami Mosque.

During the reign of Mughal Emperor Aurangzeb, the name of Nashik was changed to Gulshanabad. Aurangzeb built a new fortified building called Darbar Gadhi. Along with the older Kasba, new areas came

up in this period called Kazipura, Durga, etc. During this time a seat of Sufi Saint Pirjade was established at Nashik. A part of the original structure is still present on that spot. There is no evidence of any fortification to the town in this period or even later though historic evidence of the city gates is present in few old maps (Gole, 1989).

The city limits were demarcated with gateways like Trimbak Darwaja, Asra Darwaja, Darwar Darwaja, Dilli Darwaja and Nav Darwaja. The construction of residential houses followed the locally developed traditional style and the earlier Bahamani style, with the introduction of influences from Delhi style for fenestration treatments, entrance ways and windows. After 1707 AD, the city came in the hands of local feudatories and had no significant development. The growth of the city before the Maratha period mainly took place around the Juna Kasba with the river defining its edge. The constituents of the city had a predominantly Islamic vocabulary in the Pre Maratha period.

#### Maratha Period (1752 to 1818 AD)

Under the Marathas, Nashik got the status of a second capital after Pune. The Peshwas from Pune settled in Nashik and took a keen interest in the renovation and development of the city. They invited various craftsmen to construct temples and buildings. This encouraged traders to settle and start businesses in the city. Besides, the sardars (noble heads) from the Peshwa court such as Sardar Naroshankar Rajebahadoor, Governor of Nashik contributed to the development of the area during the Maratha period. The city flourished during this period with new temple complexes constructed within the city and in its surrounding areas such as Trimbakeshwar, Sinnar and Anjaneri.

The older city from the Pre Maratha period expanded on to the plain terrain towards the north, with the establishment of the kacheri (public court), the Sarkar Wada as an institutional structure with courtyard planning and the *peths* (neighbourhoods) such as the Ravivar Peth, Kapad Peth, Somvar Peth, Tilbhandeshwar and Nagarkar lane in the vicinity. The area to the northeast of the river called Panchvati has associational significance as the place where Lord Rama stayed during his exile. This area also evolved under the Peshwas with the construction of the Kala Ram Mandir. A number of temples, *wadas* (traditional courtyard house form of Maharashtra), *ghats* (stepped

*Street elevation of Shahi Raasta showing recently constructed buildings that disturb the historic skyline*



embankments), *maidans* (open spaces) and *kunds* (water ponds), *pathshalas* (schools), gardens, stables, and *ashrams* (meditation centres) were constructed in the city mainly along the river banks. Hence, the city became an important pilgrimage centre for the region, impacting the socio-economic scenario to such an extent that a large number of members of the Brahmin community adopted *paurahitya* (performing religious practices for the people) as their main occupation.

#### Colonial Period (1818 AD till Independence)

Nashik came under the British rule in 1818. The Colonial period saw the establishment of a Municipal Corporation for the city and addition of public and institutional buildings such as theatres, schools and law courts. With the continuity of religious significance of the city under the British rule, *dharamshalas* (resthouses) and *samaj mandirs* (community temples) were constructed by the wealthy from the region and outside it. The British invested heavily in the infrastructural development of the city. They constructed the railway line joining Mumbai to Nashik in 1862, the Mumbai-Agra road and the Victoria Bridge on the river Godavari in 1894 thus increasing the accessibility of the city. This resulted in a greater influx of pilgrims and commercialisation. The city became famous for production of silver, copper and brass utensils as traditional home based industries; often observable in the built form with the conversion of ground floors of buildings along main roads into shops. Nashik became a trade centre for crafts primarily catering to the pilgrim requirements. In the year 1881, the population of the city was around 40,000 and it started growing with a steady rate in the



subsequent years.

The Mumbai-Agra road running north to south defined the new settlement pattern for the city, based on British planning principles; and became the new focal point for the city with its novel imposing stone structures constructed in neo gothic style, set away from roads and providing tree lined avenues in the administrative area. Buildings such as the District Court, Collector's Office, Police Headquarters, Town Hall and other large buildings housing war offices were part of the administrative complex. Indian professionals like lawyers, doctors, administrators and the nouveau rich, planned their residential area near this administrative complex and immediate suburbs such as Tilak Wadi, Vakil Wadi, Ram Wadi also developed. New neighbourhoods started emerging on the further west of the city. The architectural form in these areas was representative of the colonial lifestyle with the introduction of the bungalow typology and the Art Deco style, popular in Europe at that time.

British rule introduced formal education and many schools were constructed. Indian residents of the new settlement were influenced by British education. This new class of people was active and influential in political and social movements of the period, well connected to Mumbai, Pune and the rest of the world. This area later became the centre of political movement and independence struggle. A physical shift in the direction of growth, away from the old city towards Mumbai and Pune took place during this period and continued in the post independence times.

#### Urban Morphology and Heritage Components

The traditional lanes and the settlement in the Gaothan and Panchvati areas of Nashik are major heritage resources of the city. Diverse activity pattern and historic layers from different eras have given rise to various types of urban morphology that now constitutes the built heritage.

The historic morphology and building typologies in Nashik stand testimony to generations of transformation. The new areas that developed in the Colonial period reflect another distinct layer, with the planning principles and density of built fabric a complete contrast to that of the pre Maratha and Maratha historic core. Broadly, the heritage resources of the city of Nashik can be categorised into two basic kinds; tangible and intangible heritage.





View of the Godavari Ghats listed as Grade 1 Heritage Precinct

### A. Tangible Heritage

*Built Heritage:* The built heritage of Nashik is extensive and spreads across the historic core of the city and even beyond the municipal limits. The built heritage components are a result of the multiple layers of history over the natural landscape. Hence, they represent architectural styles and planning principles from various periods. The surviving heritage assets comprise of:

- i). Areas: such as *peths*, *chowks* or squares, streets, bazaars, lanes
- ii). Buildings: such as *wadas* (individual dwelling units), temples, *samadhis*, *maths*, *dargahs*, mosques, churches, *dharamshalas*
- iii). Archaeological Evidences: There are idols, sculptures, pillars and inscriptions surviving across the historic area from different time periods that have archaeological significance.

*Natural Heritage:* This includes natural features such as the Godavari river, forest areas, Tapovan, Sita Gumpha area with trees etc.

### B. Intangible Heritage

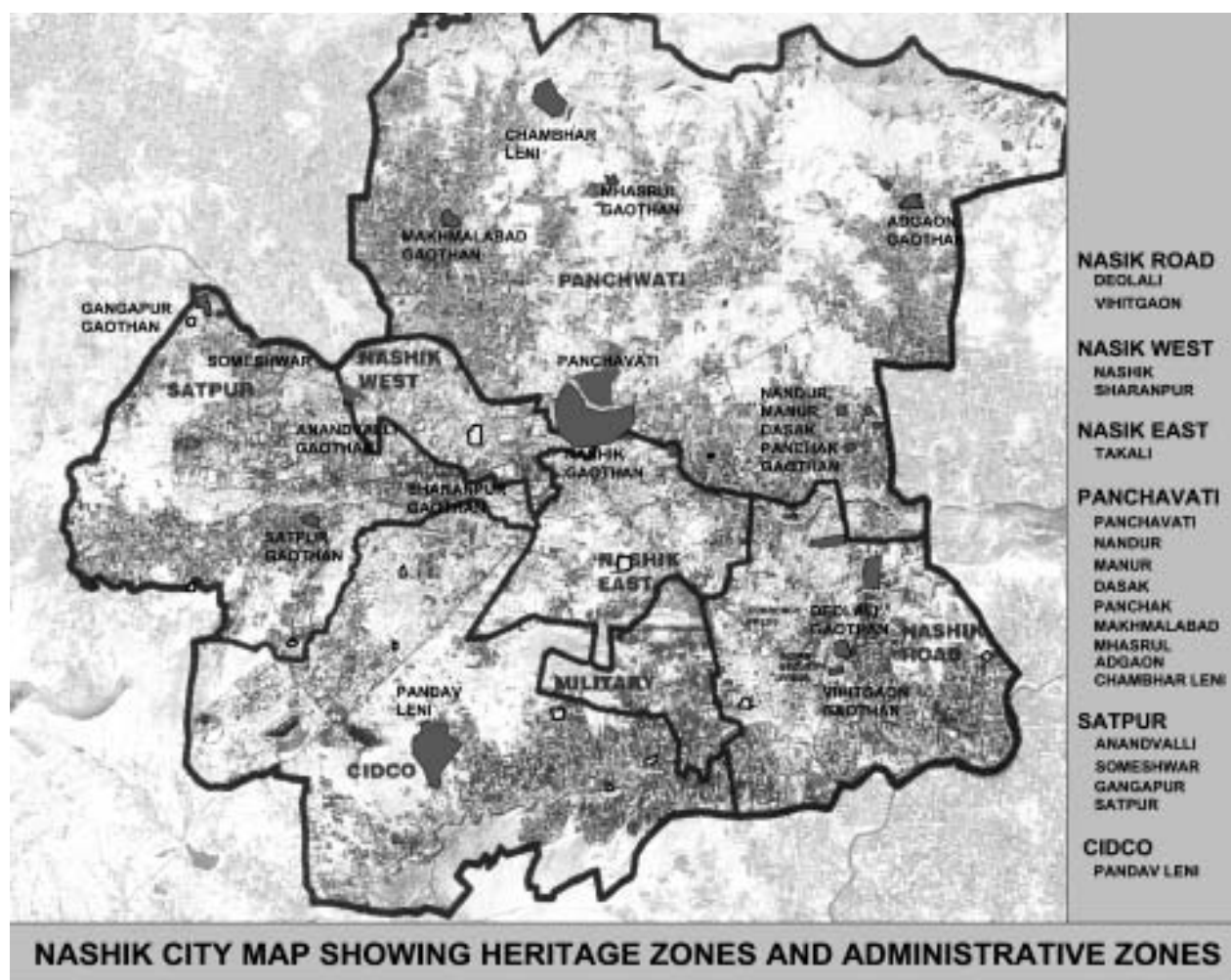
This includes oral traditions, customs, rituals, fairs and festivals of the city. The most important fair is the Kumbha Mela held every 12 years. The 15 day long celebration of Ramnavmi festival with a *rath-yatra*

(Chariot Ride) through the city with two chariots; one of Lord Rama and the other of Lord Hanuman is a significant annual event. Weekly rituals and processions are carried out in most temples such as the Kapaleshwar. The Ramkund is flocked by visitors for a holy dip in the river Godavari every day, the number reaching about 15000 in a day on auspicious occasions as per the Hindu calendar.

### Heritage Management in Nashik

Developments in the past two decades have completely transformed the traditional pilgrimage centre. In the recent years the development along the historic fabric has gone beyond its capacity increasing the pressures on infrastructure. It is observed that many of the old *wadas* are being pulled down due to lack of awareness, lack of maintenance and management and lack of heritage protection guidelines. The *ghats* are being used for washing vehicles and clothes, which further contaminate the stagnant flow of water in the kunds. There is no proper signage pattern for the streets or for the heritage features around the ghats. This historic core of the town suffers from traffic congestion, encroachments, improperly located electric poles and wires, deteriorating historic fabric, dilapidated buildings, lack of solid waste management, drainage problems and new construction in complete disregard of its historic value.

The city of Nashik has recently been designated as one of the 11 heritage cities under the Jawaharlal Nehru



Map of Heritage Zones and Administrative zones of Nashik

GRADE	State And Central Protected	Wadas	Religious	Maths/ Dharma-Shalas/ Lodges	Public Bldgs	Water Bodies, Natural Features	Bridges/ Chowks/ Lanes	Memorial	Neighborhoods	TOTAL
GRADE I	2	1	19	nil	3	4	nil	2	nil	31
GRADE IIA	nil	36	20	8	10	4	6	1	nil	85
GRADE IIB	nil	29	12	6	4	1	4	nil	nil	56
GRADE III	nil	6	15	1	4	1	7	nil	nil	34
TOTAL	2	72	66	15	21	10	17	3	nil	206

Grade wise (ward) listed structures in Nashik, Total Listed Heritage Precincts/Buildings – 206, Previously Listed Heritage Precincts/Buildings – 154

Urban Renewal Mission (JNNURM). The City Development Plan (CDP) of Nashik had identified three conservation issues for the city: the conservation of the river, the conservation of the heritage structures, and the conservation of the areas around these structures as well as the old city core. These three issues form the basis for a holistic approach to heritage conservation through the three Detailed Project Reports (DPR's) i.e. a Heritage Conservation DPR and two conjunctive ones on riverfront development and urban renewal. The Heritage Conservation DPR evaluates all aligned schemes in the CDP. It aims to present a comprehensive assessment of the Nashik heritage and recommends a specific vision and a policy framework to direct future plans and projects for Nashik heritage in alignment with parallel urban and infrastructure projects in the city. It specifically focuses on the key identified heritage resources of Nashik, the 31 listed structures in Grade 1 and the identified projects for heritage conservation works within the area limits of Nashik Municipal Corporation (NMC).

#### Listing

Revisions were made to the detailed inventories of the heritage structures prepared by INTACH Nashik Chapter in 1998. The final list of heritage structures identified 206 buildings, heritage precincts and natural heritage areas in the city. Prior to this, there were only 22 structures listed as protected under the ASI and the State Archaeology Department which were also mentioned in the CDP. Four categories of grading were formulated - Grade I, Grade II A and II B and Grade III on the basis of the significance and authenticity of the heritage components.

#### Heritage Byelaws, Planning and Design Guidelines

The Development Control Regulations of Nashik specify the laws to be followed for heritage areas. The NMC had proposed further strengthening of this article (Article 19.6, CDP, 2006). Hence, during the preparation of DPR, the heritage regulations in different areas of India were reviewed and proposed draft amendment was prepared. The amendments strengthen the definition of cultural heritage of the city by including and emphasising on aspects and components of heritage such as natural heritage and intangible heritage; the concept of 'precinct'. Means such as Transfer of Development Rights; relaxation / modification of general development, control



*The weekly (every Monday) street procession preparation in front of the Kapaleshwar temple.*

regulations for the heritage precincts; incentives for use; provision of a repair fund; have also been addressed to enable implementation of the conservation goals on ground. The attempt has been to integrate regulatory and legislative means with incentives so that the local community can work hand in hand with the government authorities towards better living and heritage conservation.

#### Institutional Setup and Capacity Building

The listing process was accompanied with regular discussions and surveys with stakeholders mainly comprising of heritage property owners i.e. NMC, other government organisations, representatives of the temple trusts, local house owners and historians. The NMC organised meetings with the Heritage Conservation Committee to present the complete listed structures. The meetings conducted at NMC office in presence of the Heritage Committee gave a lot of clarity to finalising the list of heritage structures and their subsequent conservation planning. Heritage conservation as a socio - economic process

Heritage conservation trend in recent years have gone





*Naro Shankar Temple, a Grade 1 listed temple*

much beyond the basic ideas of preservation and protection as advocated by ASI and State Archives Act. It is realised internationally that urban conservation need not be a financial burden for preserving isolated monuments but should become a tool for socio-economic development in sustainable measures. In Nashik, the urban fabric of the city if conserved in sync with the intangible heritage and promotion of existing craftsmanship can help revive lost income resources. Besides restoration, conservation and increased tourism can generate revenue for the residents in a number of ways. Though the proposed planning level activities would be funded by the Nashik Municipal Corporation (NMC), for the proposed project level activities, Public Private Partnership (PPP) has been explored. Private Sector involvement is to be encouraged in two ways:

- 1 PPP investment for enhancement, restoration and maintenance of public areas such as the Godavari Ghat Precinct and Shahi Raasta.
- 2 Contribution in restoration works of temples belonging to Private Trusts or houses belonging to

individual owners.

#### initiatives towards heritage management

The process of heritage management for Nashik city is an ongoing initiative that aims to facilitate development and growth of the city with sensitivity towards its cultural significance. The recognition of the heritage of Nashik is evident through initiatives such as focus towards heritage in the City Development Plan (2006 – 2031); the designation of the city of Nashik as one of the 11 Heritage Cities under the JNNURM; and the promotion of the city as a major tourism destination for religious and other visitors.

The inclusion of the stakeholders - the local community in the conservation process through incentives and public private partnerships should yield a positive change, with increased involvement of the community resulting in sustainable solutions for the city's heritage management. The formulation of heritage regulations with detailed study of the heritage components, cultural fabric and morphology is to be used as a tool for maintaining the character of the heritage precincts. Integration of the city's tourism potential due to its heritage significance is also an aspect to be addressed through the development of heritage walks and other tourism infrastructure; capitalised by implementation of comprehensive heritage conservation plans at the city level. The integration of heritage conservation in the planning process is an important positive step taken by the government authorities and if the approach is implemented well, Nashik could become a positive example of heritage management.

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# Chanderi

## The built heritage

ISHWAR DASS, MEERA I DASS

### ABSTRACT

*Chanderi, located adjacent to several important historic sites such as Gwalior, Datia, Orchha and Khajuraho itself has several layers of history ranging from the prehistoric era till the present day. This article summarises the centuries old history of the town and describes the rich architectural heritage of the town. It concludes by presenting 'Heritage Walk' as a method to document and disseminate the diverse built heritage of the town.*

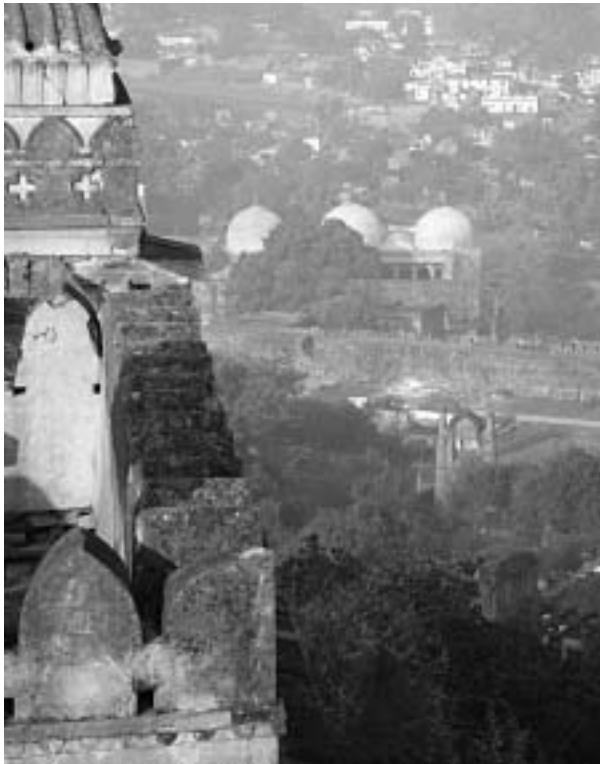
### HISTORY AND THE BUILT HERITAGE

Chanderi is situated in the heart of the region Madhyadesa or Central India, which is potentially rich in cultural heritage since the Mauryan antiquity. It is, thus, located in the neighbourhood of historic sites such as Shivpuri, Gwalior, Datia, Deogarh, Orchha, Khajuraho, Udayapur, Gyaraspur, Vidisha, Udayagiri, and Sanchi. The various surrounding historic towns are within a radius of 200 kilometres of Chanderi, a privilege that was denied to Mandu, of which it was only a dependency and an outpost during the long rule of the Mandu Sultans. Chanderi is situated on the edge of the Malwa Plateau as well as of the Bundelkhand

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View from fort



Baheti Math

region, thus being a part of both, yet maintaining its individual identity. Stone is abundantly available nearby Chanderi, a fact that has carved the unique character of its built heritage. The traditional stoneworks in Chanderi were a powerful determinant in the socio-religious life of its people and its built heritage.

#### CHANDERI AND BUDHI CHANDERI

Nannon, situated 28 kilometres from Chanderi near the Urvashi river in the south-west is a painted rock shelter site. Mr Muzzafar Ahmed from Chanderi identified and brought to our notice an accidentally excavated jaw and teeth of a mammoth by a farmer



Mammoth fossil

from the same site. This was identified as the jaw of a hippopotamus, 30,000 years old by Dr Badam of Deccan College Pune. Further investigations by the Archaeological Survey of India (ASI) are in progress<sup>1</sup>. Pre-historic man roamed about in this area but the nearest historic site is Budhi Chanderi, located 13 kilometres from Chanderi in its north-west. Though the former is certainly an ancient site, a recently discovered fifth century Gupta temple from Baheti<sup>2</sup>, 20 kilometres south-east of Chanderi, throws a new light on the importance of Chanderi region in ancient times. Chanderi also has Rajput period layers from the tenth century. A Kalyan Rai temple of the Pratihara period and several ancient Jain temples have also survived at Chanderi. The vast Kirtisagar on the hill slope is a pre-Muslim artificial lake built by the Pratihara king, Kirtipala. He also built the stone fort which is known after him as Kirti Durg. It appears that Chanderi was a flourishing town simultaneously with Budhi Chanderi<sup>3</sup>. The Muslim invaders preferred Chanderi on account of its strong fort and greater military protection, its extremely fertile valley in the otherwise rugged and rocky terrain, availability of abundant water and its wonderfully pleasing environment. Budhi Chanderi was gradually deserted and Chanderi came into prominence about the middle of the thirteenth century.

#### THE CITY AND ITS ARCHITECTURE THE PRE-ISLAMIC PERIOD

The earliest architectural evidence pertains to the rule of the Pratiharas. A stone pillar brought from Chanderi to the Gujri Mahal Museum states the names of the 13 Pratihara rulers of whom Kirtipala was the seventh. He

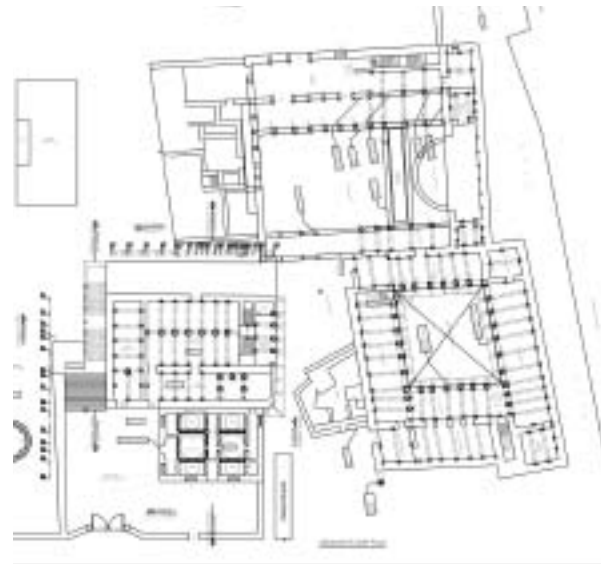
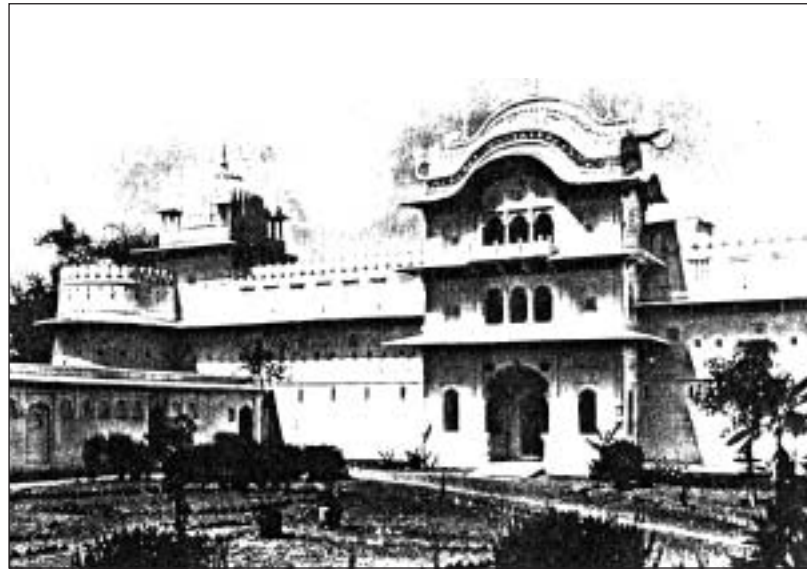
is said to have established the fort on the hill that is known as the Kirti Durg. On its south is the lake called Kirti Sagar. The Jain presence is also ancient; the Jain images have survived without desecration, possibly because the followers of that religion were, by and large, traders and moneylenders, and may have been the financiers of the rulers who needed large sums of money in order to fight their battles. These images date from the twelfth to thirteenth centuries. An inscription on a rock-cut Jain image on the adjoining Khandar Giri (hill) is dated 1280 VS (i.e. 1223 AD). Another Jain temple bears pilgrims' record dated 1316 VS (i.e. 1259 AD).

#### GROWTH AND DEVELOPMENT OF THE ANDER SHEHER (INNER CITY)

Muslim invasions on Chanderi started in 1251 AD with Balban. He, however, did not stay on. The Khalji Sultanate of Delhi took Chanderi in 1304 AD and probably garrisoned it as an outpost of the Delhi Sultanate to facilitate incursions into the Deccan<sup>4</sup>. The route from Delhi lay from the northwest and, therefore, the earliest settlement must also have come up there. Tarnapura perhaps belongs to that period. It is interesting to note that, although most of the construction and development in what today is called Ander Sheher, took place during the rule of the Sultans of Mandu, considerable development may already have taken place there to justify Ibn Batuta's observation about Chanderi in 1342 AD that 'It is a big city with thronged bazaars (market places). There lives the chief governor (Amir-ul-Umara) of this province.' Chanderi thus enjoyed the status of an important provincial capital under the Sultans of Delhi in the fourteenth century, and the town within the Ander Sheher may have developed accordingly.

However, the definitive statement of the glorious built heritage of Chanderi can be attributed only to the independent kingdom of Mandu Sultans (1401-1558). It is interesting to note that Dilawar Khan who established the independent rule of the Mandu Sultans was himself the governor in Malwa of the Delhi Sultans. It was only following the weakened hold of the Delhi rulers after the invasion of Timur that Dilawar Khan established his independent rule. It can be safely surmised that as a result there was no discontinuity in the rule of Chanderi or its importance. The town continued to prosper.

In 1558, Akbar annexed Malwa and made Chanderi into a *suba* (province) of the Mughal Empire.



(above) Panchamnagar, (below) Rani Mahal

Thereafter, Chanderi lost much of its strategic and political importance, as a much better route to the Deccan became available. As long as the Mandu Sultans had to face onslaughts from the Delhi and Jaunpur Sultans into the Malwa, Chanderi had to be defended as the main bastion to ward off incursions into the Malwa. In this, the fortified Ander Sheher became extremely important, particularly the lower area, called the Bala Kila within the lower fort<sup>5</sup>. By 1411, Chanderi had the appearance of a heavily fortified town, nestling at the foot of an impressive citadel. Under Dilawar Khan, Bala Kila was probably extended south and defences of the citadel were reinforced. The construction in 1438 of the Jama Masjid outside the inner fortified wall of inner city



*Battisi Baodi*

heralded the expansion of the town towards the south into the Bahar Sheher (outer city) with the wall around it. Apparently, it was also a time of relative safety and peace as the defences of the Bala Kila (Fort) were being weakened by the construction of the new mosque.

#### EXPANSION INTO THE BAHAR SHEHER, FATEHABAD AND THE NORTHWEST

After the expansion of the town into the Bahar Sheher heralded by the construction of the Jama Masjid, the next phase of expansion and construction came with the establishment of Fatehabad and the construction of the Koshak Mahal towards the later part of the fifteenth century. The series of large tanks, the Dhubiya Talab, the Pann Baodi Talab, the Lal Baodi Talab, and the largest among them, the Sultani Talab, may also have come up at that time. It appears that Giyat-ud-Din Shah, the Sultan of Mandu had grandiose plan to establish a New Chanderi that, however, was abandoned mid-way when he decided to spend a lifetime devoted to pleasure seeking at Mandu, leaving the actual administration to Nasir-ud-Din.

Today there are only ruins at Fatehabad. This was also the time when the water bodies in the northwestern part of Chanderi, such as the Hauz Khas, the Battisi Baodi, the Qazion-ki-Baodi, and large structures such as the Dargah of Nizzamuddin's disciples, Idgah, and the inescapable settlements associated with such construction came up. Kati Ghati, which provided a shorter route to Chanderi from Malwa (Mandu) was constructed by Jiman Khan, the son of Sher Khan in 1495. Thus, the built heritage of Chanderi during the Mandu Sultanate period is really the handiwork of its governors, albeit under the overall patronage of the Sultan. Much of it was contributed by Muzaffar Khan, and more so by Sher Khan, his son. By the end of the fifteenth century or slightly thereafter, the town had extended itself to its outermost limits and was, perhaps, at the peak of its prosperity. Unsettled conditions ensued thereafter. Babur's incursion took place in 1527 and the annexation of Malwa by Akbar in 1558 relegated Chanderi almost to oblivion.

#### BUNDELA RULE AND CHANDERI'S BUILT HERITAGE

With the assumption of the Mughal throne by Jehangir, the Bundelas became again ascendant, albeit as the feudatories to the Mughals. The rule of the Bundelas at Chanderi lasted till their defeat at the hands of the Scindia general Jan Baptiste Filose in 1818. The Bundela rule in Chanderi lasted almost two centuries (1605-1818). Many of the great buildings still standing date back to the Bundela era, including the ancient law court called Purani Adalat, the ruined haveli perched on the east wall of the Bala Kila or Hath Sal, the Raja Mahal and the Rani Mahal, many havelis of their *subedars* (caretakers), the large buildings of the administrative offices (*Purane Daftar*), and many others. The Bundelas constructed in the fort as well. The Hawa Mahal and the Naukhanda Mahal at the citadel is attributed to them. The Bundela rulers were devout Vaishnavites and the construction of a large number of temples and the rejuvenation of many, stands testimony to their devotion. The enlargement of the Jogeshwari Devi Mandir around the spring was undertaken by them, which incidentally reduced the steepness of the northern slope. Harsiddhi Devi Mandir, the Narasimha Mandir, the Hanuman Mandir were also undertaken by the Bundelas. The inscriptions at the Chaubisi Jain Mandir and the much older images at Khandar Giri show that they had the support and patronage of the Bundelas and their ministers. However, the most impressive achievement of the Bundelas is the siting of the Parmeshwari Talab





Jama Mahal

near the spot where the royal *chatris* (cupolas) are located, and the Laxman Mandir on the banks of the tank. The Bundelas created here a *tirtha* (pilgrimage) and *ghats* (stepped embankments) out of nothing, which rivaled the mosques in size, importance and visibility. To the credit of the Bundelas is also the construction of the three country residences, later restored by the Scindias: a hunting pavilion in Singhpur (Singhpur Mahal), the Ramnagar Palace, and the now submerged Panchamnagar Mahal. The Scindias also undertook the protection, consolidation and enlargement of the *talab*, especially the Dhobiya Talab with its large platform on the walk-way that is also the site of the immersion ceremonies such as of the Tazias and the images on the occasion of the Durga Utsav, the Ganesh Utsav and other such festivals.

#### JAMA MASJID

The majestic Jama Masjid is one of the largest and the oldest structures of Bundelkhand built to service the once large Muslim population of Chanderi. Located just outside Ander Sheher it may have been built here after the older one in the city was found too small. The three elongated bulbous massive domes of the sanctuary and the barrel vaults in-between are among the few that stand till today. Constructed in a unique style, stone slabs are interlocked to hold the brick outside finished with Lapis Lazuli glazed terracotta tiles. What is however unique and distinct about the mosque are the intricate, ornamental and graceful serpentine brackets supporting the bold *chajja* above the elegant ogee arches. They form the most exclusive feature of the early architecture of Chanderi and are repeated at Shahzadi-ka-Roza. Delicate *mihrabs* with leaves relieve the solidness of the otherwise blank *quibla* wall. The stone canopied *minbar* inside the



Raja Mahal under conservation



Jali work

Jama Masjid recalls those seen in the Jami mosque of Mandu.

The largeness of the courtyard shows that many more people used the *masjid* than those that are present today. The embellishments of the windows with delicate cusped festoons in the *mihrabs* with leaves delicately touching the border is the hallmark of fifteenth century Chanderi architecture and can be seen in an enlarged form on the Badal Mahal gateway. An



*Badal Mahal*

inscription on the east wall mentions a palace rather than a masjid and may have been brought from some other place.

#### BADAL MAHAL

Exclusive to Chanderi, the Badal Mahal gateway is double arched with circular and tapering slender bastions on the two sides. Incomparable and unique, the free standing structure is imposing and delicate at the same time. The origins of the gate are attributed to Tughlak architecture and often to *toranas* of Hindu temple, but lack of any precedence makes the claims unconvincing.

However, the surviving gates in Chanderi give credence to the theory that they may have been gates to the palaces of Governors as the name also suggests. There were several lofty gates of this kind in Chanderi and few remain today. This majestic gate has been painted on stamps by the Postal Department and has increased the popularity of the city. It is also used as an icon for printing on the Chanderi *saris* (Indian women wear). The monument is protected by the Archaeological Survey of India.

#### HERITAGE WALK

With the purpose of showcasing this built heritage of Chanderi, a heritage walk guide has been designed<sup>6</sup> to visit the above mentioned monuments. The guide to Chanderi published by INTACH Regional Chapter Bhopal shows the efforts made to conserve the architectural wealth of this medieval town.

#### Notes

- 1 Special reference made to Gerard, Fussman, Denis Matringe, Eric Ollivier et Francoise Piot, 2003, *Chandery du X to XVIII siecle*, (College De France, Paris
- 2 Dass, Meera I and Michael Willis, 'The Gupta Temple at Behti: A New Find', *South Asian Studies Vol. 23* (London 2007, pp 63-69). The discovery is the second Gupta temple in the past century, the last being that by Dr Promod Chandra in 1970. Well preserved Gupta period temples are

extremely rare there being less than ten such monuments in North India.

- 3 R Nath, *The Art of Chandery - A Study of the 15<sup>th</sup> Century Monuments of Chandery*, (Ambica Publication New Delhi 1979).
- 4 Laurd, op. cit. In certain important forts it is observed that in addition to the defences of the fort proper, other fortified enclosures were erected around the main residential area of the chief of the defenders, obviously to offer the last 'do or die' resistance to the attacking enemy.

This was generally called the Bale or Bala Killa or the core of the fort.

- 5 In this residential area was raised the palatial or residential buildings of the chief and of his close relations, having their place of pride in the surroundings both in respect of their commanding situation and of their intrinsic architectural qualities.
- 6 Dass, Meera I, Ishwar Dass, Huzoor Choudhry, (2008) '*Discovering Chandery A Guide*', Bhopal

# Gwalior

## Medieval heritage and conservation issues

SAVITA RAJE

### ABSTRACT

*The historical city of Gwalior has newer responsibilities after it has been designated as the counter-magnet city to the national capital of India. It faces challenges towards the integration of its spectacular architectural and urban heritage into the city of the future, in order to retain its unique image and exclusiveness. Buildings and urban spaces mainly from the fifteenth to the early twentieth centuries AD; the fort, palaces, gardens, lakes and ponds, streets, sectors, common-man's houses, shops, mausoleums, cenotaphs, institutions, industries, religious buildings and public facilities; testify about the architectural quality, beauty and splendor of the life in historic Gwalior. The city of the future must utilise the wisdom embedded in its built heritage, for its space making, for its eco-sensitive designs. A master plan of conservation and a methodology of safeguarding of the irreplaceable heritage need to be devised scientifically. Through Heritage Walks, it is proposed to design continuity with the Fort and the city, which will not only reap benefits by way of education and awareness, but will also interest the tourists. Conservation of the unique identity of the city, when heritage becomes a coveted asset, would set off a chain of events that would bring economic and developmental profits to the city.*

Savita Raje specialises in Landscape Architecture. She is the President of 'LIVING HERITAGE ALLIANCE'. She has worked extensively in the three cities; Bhopal, Gwalior and Maheshwar, that are now included in UNESCO's Network of Indian Cities of Living Heritage. Every year, she is a jury member for the Post Graduate Programme in Architecture, at the School of Architecture, Paris-Belleville, France.

## INTRODUCTION

Gwalior, an important city in the state of Madhya Pradesh, India, lies 76 miles (122 kilometres) south of Agra with a population of over 12,00,000 persons. The Gwalior Metropolitan area is the 46th most populated area in the country. It is the administrative headquarters of Gwalior District and Gwalior Division. It was the capital of the *Madhya Bharat State*<sup>1</sup> from 1948 to 1956 AD. The city has now been designated as the 'Counter-Magnet' (Gwalior Development Plan, 2005) region for New Delhi, the National Capital of India. It is the regional centre for administration, service, commerce, industries, education, social, culture, tourism, music and arts.

The city of Gwalior is composed of three sub-cities namely: Old Gwalior towards the north-northeast, Lashkar towards the south and the Morar Cantonment

towards the east. The expanding urban fabric now joins the three cities. The undulating landscape is dotted with hilly outcrops, but none as high and as imposing as the Fort hill.<sup>2</sup> The Gwalior Fort, built atop the towering tabletop hill, is the most important landmark of the city. The three cities have spread on the foothills and the valleys, with many man-made water bodies to catch the surface runoff from the catchments of sloping lands. The river Swarnrekha, which cuts through the city, has also influenced the urban form.

Gwalior has an action packed and romantic history, of which the most spectacular period in building and urban design ranged from the fifteenth to the early twentieth century AD. The city has a rich tradition of talented and ambitious warrior kings, poets, musicians, sculptors and saints. This multi faceted character is reflected in the architecture and landscape of the

India



The three cities around the Gwalior Fort, 1: Gwalior Fort, 2: Old Gwalior, 3: Lashkar, 4: Morar.



historic city, so much so that, it can be said that the buildings and places were, ‘Conceived like Giants and finished like Jewels’. (Mathur, 2005) Gwalior was named after the Sage Gwalipa and founded by Surajsen alias Surajpal, after he received the saint’s blessings.

As per a popular myth, about 84 rulers of the SurajPal dynasty ruled from the fort for about 989 years. The rule of the Pals was followed by that of the Parihars, who ruled for 102 years. In 1200 AD, the much-coveted fort came under Qutub-ud-din Aibek, in 1210 AD under Vighraharaj Pratihar, from 12 December 1233 AD under Sultan Iltutmish and from 1394 AD under the rule of the Tomars and became the centre of art and culture for more than two centuries, reaching its zenith during the rule of Mansingh Tomar (1486 AD-1516 AD). The fort was lost to Ibrahim Lodhi in 1523 AD. After his defeat in the first battle of Panipat in 1526 AD, the fort came under the rule of the Mughals. Babur visited Gwalior for nine days in 1529 AD and was greatly influenced by the revered Sufi saint Mohammed Ghaus. Ever since, the saint and his followers received the patronage of the Mughals. From 1726 AD the fort came under the rule of the Scindias. In August 1780, the British acquired the Fort during the time of Mahadji Scindia<sup>3</sup> but he conquered it back in 1783 AD. During the time of Jayaji Rao Scindia<sup>4</sup>, in 1858 AD, the British took the fort but reinstated the Scindias. The British continued to occupy the fort and the Morar Cantonment. The history of magnificence in architecture and landscape starts with the Gwalior Fort. The rocky vertical hillside along the way up to the fort is dotted with caves and Jain sculpture, excavated in the rocks, belonging to the period 1441-1474 AD.

The Fort has many palaces, temples, water ponds, step wells and institutions held within its imposing walls. Among the many *kunds* (built-up water ponds), the Surajkund built by Suraj Pal is noteworthy. This pond collected the waters of the magical spring, after taking a dip in which he was cured of his debilitating illness. The 84 pillared step well built by Mansingh Tomar, is remarkable for its Hindu architectural style.

The two temples, the eleventh century AD Sas-Bahu (Mother and Daughter in Law) temple and the ninth century AD Teli Ka Mandir (or Telangana Temple), are representative of the Hindu temple architecture. Where the former is an exquisite building, cross-shaped in plan with profuse carvings and intricate designs, the latter portrays the south Indian Dravidian style.

The Tomar King Mansingh built palaces and buildings towards the eastern face of the fort. He was an accomplished connoisseur of arts and a talented musician himself. His buildings portray a refined sense of acoustics. The *Rasmandal* at Barai can be said to be the forerunner of his acoustic genius, which reflects in the Gujri Mahal and other buildings built during his reign. He patronised the Dhrupad style of Indian Classical music and set up an institute devoted to it. The Man Mandir Palace built by him inspired the Emperor Babur to describe it as ‘the pearl amongst the fortresses of Hind’ (Mathur, 2000). This three-storied palace has large chambers and courtyards resplendent with beautiful stone tracery work typical of Gwalior, charming colored tile work, relief sculpture and typical Hindu columns with profusely carved capitals.



Sas-Bahu Temple



Teli-ka-Mandir

The Gujri Palace, built on the lower contours of the fort towards the northeast, has a well worked out network of aqueducts, which brought waters from the nearby River Rai, the hometown of the favourite queen of Mansingh. The stone tracery work, which is highly used in all the buildings, has its own long-standing tradition in Gwalior and is known as the Gwalior



*Manmandir: View towards the courtyard from the Royal chambers.*

*Jhilmili*.<sup>5</sup> Itutmish strengthened the western side of the fort. He constructed eight wells and nine *baoris* (step wells) to solve the water supply problem. Jehangir Mahal and Shah Jahan Mahal are beautiful examples of Mughal architecture. Among the many apartments in the palace, there is the celebrated stone-roofed chamber, named Baradari, supported on 12 columns on a square plan of sides measuring 15 metres each.

The exquisite Man Mandir Palace was used as an infamous prison during the Mughal and the British periods. The chambers that used to be filled with a sophisticated artistic affluence were now filled with the cries of pain of the doomed prisoners. The sixth Sikh Guru was imprisoned by Jehangir and placed there, but he tactfully got 52 of his fellow prisoners released along with him. The white marble *Gurudwara Data Bandi Chhor*<sup>6</sup>, the temple built in the memory of the event and the Guru, stands as a huge campus in front of the Teli ka Mandir.

The Residential Scindia School, established in 1879 AD as the *Sardar* (Sikh) School for the children of the Royalty and the Ministers, is a fine example of Colonial architecture, with an open-air theatre (1934 AD) and cricket pavilion (1936 AD). The school still functions in the same buildings and is renowned worldwide for its educational standards.

#### THE OLD GWALIOR CITY: fifteenth TO eighteenth CENTURY AD

The bazaars, the streets and the *mohallas* (sectors) of the old city of Gwalior are resplendent with many an interesting stories and historical facts. The major streets have been laid along the contours, parallel to the north–northeastern edge of the Fort Hill, joined by roughly perpendicular streets that have the Fort Hill as the focus. The rectilinear sectors held between these streets show an organic-accretive fabric, with narrow streets leading to the introverted houses and beautifully organised urban open spaces. These urban spaces are of a humanised scale, a complete opposite to the large monumental and extroverted urban spaces introduced in Lashkar, the nineteenth century city.

The *mohallas* or neighbourhood districts are based on different communities. For example, Rajamandi/ Rampura and Kashinaresh ki Gali (The street of the king of Varanasi), are sectors occupied by the descendents of Chet Singh, the ousted King of Varanasi and his followers, who had settled in Gwalior with him, after Mahadji Scindia gave them refuge and gifted lands in 1785 AD. Till 1950 AD, the descendents of Chet Singh, were receiving the property tax and the building work, selling or buying of properties in this sector required their permission. The residential complex of Chet Singh and family is known as Kashinaresh ka Bada, and his descendents still live there. Another example of community based sectors, is of Lakhera Street, a narrow shaded street, flanked by small houses with courtyards. Ghauspura is a historical sector named after the religious saint Sheikh Mohammed Ghaus, who came to Gwalior in 1523. His descendents and followers occupy this sector. Emperor Akbar built a beautiful



*Lakhera Street*



*Tomb of Mohammed Ghaus*

mausoleum over the grave of Mohammed Ghaus. The tomb displays an early Mughal style of architecture and the extensive use of the Gwalior Jhilmili and glazed blue tile cladding as in the Manmandir Palace.

The tomb of one of the greatest musicians of India, the Emperor of Music, one of the nine jewels of Akbar's court, Mia Tansen, built in a very modest design, has been placed near the tomb of his master (*Guru*) Mohammed Ghaus. It is the revered destination of all the musicians who opt to pursue the Indian Classical music and becomes the venue for an annual, government supported, music festival of repute. This sector displays an organic accretive urban tissue, except the tomb complex that is planned in the formal Mughal style.

LASHKAR : nineteenth TO EARLY twentieth CENTURY AD

Daulat Rao Scindia<sup>8</sup> founded the new city known as Lashkar, which lies at the southwest of the fort, after he shifted the Capital of the Scindia State from Ujjain to Gwalior in the 1811 AD. This city is totally disassociated from the fort and is complete in itself, as against the old Gwalior that had the fort as centre of power and focus. Here the centre is the *Maharajbada*, the residential and administrative sector of the King. The streets radiate from this new power midpoint. The immediate sectors held between the radiating streets have the *badas* of the *Sardars* (Generals in the Scindia Army). The planning of the city can be compared to the military formation, with the king in the middle surrounded by his Generals. The city shows spectacular urban design and architecture, an interesting integration of various Indian and European design styles.

The radiating streets, viz. Danaoli, Sarafa and Daulatganj, are lined with commercial cum residential land use dotted with institutions, temples, dharmashalas and public services. Maharajbada, the large urban square flanked by monumental buildings, can easily be compared to the Duomo of Milan. The Gorkhi Palace, the walled Palatial Complex of the King with the Royal Scindia Temple, a large forecourt and gateways, forms the southwest limit of this square. The Victoria Market, Town Hall, Royal Printing Press, Post Office, the private bank of the Scindia State called the Krishna Rao Baldev Bank, Central Library and reading rooms flank the square, each building exhibits a different architectural style. The centre of the square is designed as a garden, in the middle is the magnificent statue of the Scindia ruler set in a Gothic pavilion.

The Sarafa and Daulatganj streets retain some portions that display the original street sections and ambience.



*Gateway to the Gorkhi Palatial Complex*



*Town Hall*





*Singhi House- a typical house in the commercial cum residential street, shop at ground floor, residence at upper floors, first floor projected on stone brackets, recessing upper floors with perforated fascia.*

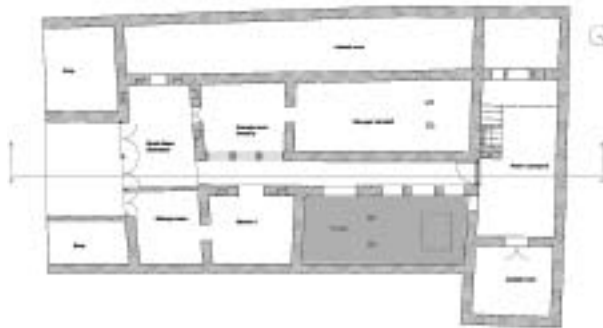


*Passage from the commercial street that leads to private residential / worship areas/ courtyard.*

The buildings abutting on these streets are three to four stories high, the upper floors recessed away from the street, forming terraces or galleries, which overlook the street through perforated fascias formed with the Gwalior Jhilmili. The balconies at the first



*Gwalior Jhilmili*



*Sarda House- Temple on street floor, residence on upper floors*

floor project out on carved stone brackets, giving adequate shade to the shoppers below. The street floor, typically, has a shop in the front and a narrow passage, independent of the shop, leads deep into interior, to a staircase leading to the upper floors. A courtyard may or may not be present near the staircase.

There are many temples and Haveli temples in this region that follow the same typology. The temple itself can either be in a widened enclosed space along the deep passage, for example Sarda House or can be next to the courtyard.

The narrow passage becomes a large space pronounced by a gateway, in case of the buildings of the affluent classes, known as the *badas*.



## *Badas*

A typical residential typology found in Gwalior is that of *badas*. They are large introverted enclosed spaces with the residence held within high walls. The entrance to this enclosure is pronounced through the monumental gateways, resplendent with profuse decoration by way of niches, sculpture and wall paintings. They also house the servicemen, like the guard and security personnel, drummers to announce the arrival or departure of the King or a *Sardar* or musicians to play during festivals or celebrations.

This gateway, a transitional space, leads to a large forecourt across which stands the residence of the *Sardar*. This forecourt is usually landscaped with fountains, plants, lawns, and has the parking facilities to park cars, horses, elephants, etc. The carefully designed residential buildings are of three categories by way of the basic building typology:

- Rooms around a courtyard, or series of courts, for example, the Dixit Bada, Jadav bada
- Rooms surrounded by deep-pillared galleries, mainly at the front, no courtyard, for example, Avad Bada
- Rooms on upper floors along the street, reached by the staircase built into the gateway, for example, Mahadik Bada.

The *bada* falling under the third category is located on the commercial streets, pillared terraces and galleries punctuating the built mass on the upper floors. The



A typical gateway to a *bada* (Private residences of the Sardars in the Scindia Army)



Dixit Bada



Avad Bada

court itself is developed as parking space, garden or fruit orchard. The interiors of these residences show a marked Colonial influence in furniture, furnishings and decor. Each *bada* has a family temple. This temple may be an independent building in the large court or a miniature temple within the smaller courtyard, or a room furnished as a temple.

Some of these *badas* still exist, though in a highly modified version. The Urban Ceiling Act, the family divides, the inability to take care of such large estates and lack of Heritage Regulations and awareness, has taken its toll. In the nineteenth century, the people of Gwalior were infused with the spirit of citizenship that



JAH Hospital

resulted in an increase in public facilities, for example, the Victoria College Building, (now MLB college), built in 1887 AD, and the JAH Hospital, with the stylistic connotation of Indo-Saracenic and extensive use of the *jhilmili*.



Miniature paintings on the walls and ceiling of the Hindu Cenotaph of the Royal Scindia Family- Seven Chhatri Complex, Lashkar

There are several gardens and urban open spaces, usually with Hindu Cenotaphs. For example the seven *Chatri* Complex enclosed within high walls with a Gateway, with cenotaphs of the Scindia family. The interiors of these cenotaphs have remarkable miniature paintings on the walls and the ceilings.



Jai-Vilas Palace Interior

One of the mint buildings, now the Janakganj Police station, reminds of the Gwalior Mint<sup>10</sup>, which attained national importance during the Mughal period, when it was minting the gold *mohurs* (coins). This red sand stone building has a roof projection running along the fascia that creates an interesting form, which reminds of coins and *mohurs*.

Gwalior has a rich tradition of music and a style named after it, the *Gwalior Gharana*. There are three music institutes in Lashkar, Sangeet Gandharv Mahavidyalya, founded in 1914 AD, Madhav Music College 1918 AD and the Ustad Hafiz Khan Trust. The latter is housed in the traditional residence of Ustad Hafiz Ali Khan, the renowned musician, after having the house conserved, though only in typology.

#### *Phoolbag*<sup>11</sup>

During late nineteenth century and early twentieth century extension of Lashkar, has been basically planned as a Royal Enclave, when the power, administrative section and the King's palaces were shifted from Maharajbada to Phoolbag. The palaces have been placed within large monumental gardens with well-resolved axis and focus, to form an overall, collective statement, which displayed power, authority and caused a spatial unity. The palatial complexes of Moti Mahal, Jai Vilas and the Usha Kiran show a marked European influence and Indo-Saracenic style.



*Moti Mahal ( Palace)*

The services of Michael Filoze, an Italian architect, were utilised for the design of the Jai Vilas palace, built during 1861-1874 AD, inspired by the palaces and gardens of Versailles in France.

During the reign of Madhav Rao Scindia-II<sup>12</sup>, the Gwalior State opted secular religious policy and respected all religions alike. A sprawling garden was developed in which the Moti Masjid (for muslims), Gopal Mandir (for Hindus), Gurudwara (for Sikhs) and the Theosophical Lodge and Church (for the Christians) were constructed in 1920 AD, providing equal status and respect to all religions. This nearness enabled people of all religions to come together and



*Italian Gardens*

share the beauty of faith in togetherness. The coming of electricity to the city during 1905 AD played an important role in the urban planning schemes. Jiwaji Club, Badminton hall, Italian Garden, Jalvihar (a pavilion to enjoy the water in all forms of movement and stillness), etc, are some other examples of the building types in this Royal Enclave.

#### HERITAGE MANAGEMENT AND REGULATIONS IN GWALIOR

The Gwalior Development Plan 2005 (draft) has proposed the inclusion of the conservation of both natural and built heritage in its planning vision, and has listed areas and buildings that need to be safeguarded. The architectural/ building/ developmental controls in these areas have been defined mainly in terms of permissible heights, Floor Area Ratio, built up areas, road, Right of Way and density. Though certain areas have been delineated for conservation but a need has been expressed to frame detailed developmental controls for these.

Looking at the prevalent status of heritage management and regulations in the city, the need and the method for a sustainable and profitable safeguarding of the city's heritage and the historic





*Contemporary building intervention at the foothills of Gwalior Fort.*

urban landscapes are urgently required. This would play a significant role in improving the environmental quality and preserving the great cultural identity of Gwalior. The built heritage forms an important component of the environment. Gwalior needs an integrated approach to contemporary architecture, urban development and the inherited landscapes. Conservation involves sustaining, revealing or reinforcing the heritage values of a place in its setting. Conservation of the links with the past reflects the complex patterns of change and recurrence across the ages, including the present. The government should safeguard this irreplaceable heritage and integrate it into the social life of our times. The regulations and measures listed in the Gwalior Development Plan are not sufficient to retain the unique identity of the historic city. Regarding the list of heritage areas as given in the development plan, it is pertinent to mention here that the city holds much more than what is listed.<sup>13</sup> The ideal approach should be from the

‘whole to the part’. Only the ‘part’ approach results in number of pockets disassociated with its context and interrelationships.

The building byelaws with only restrictions of heights, built-up-areas, Floor Area Ratio are not enough to conserve the ambience of a street/ an area of heritage value; such restrictions may churn out flat, faceless vertical boxes of built mass. The river Swarnrekha, the natural heritage, was duly recognised in urban planning of the city of the yesteryears. Yet, in the current Development Plan, there is no special reference to it, nor it can be found in the given list of conservation areas/ spaces. Not long ago, the waters in the river were a-plenty and unpolluted. But the modern planning has confined the river within impermeable and high concrete walls; the catchments areas and natural drainage network suffocated, with the result that this river is now converted into a polluted, smelling and sickly trickle of brackish water.





*Janak Taal ( Man-made lake) with pavilions at the foothills of the fort.*

A network of sewage tanks and manholes has been placed in the river. Though no building activities are permitted on the slopes of the Fort Hill, there are no regulations or architectural control over the buildings coming up at the foothills. The historical buildings, however, show sensitivity towards the majestic rise of the fort hill through the architectural vocabulary and landscape design.

The Janak Taal (pond) with its pavilions is a heritage asset, but due to lack of any regulations to protect its catchments or the setting, a colony has developed right next to it with a high boundary wall towards the pond.

#### GARBAGE MENACE

The city garbage is being dumped in an ecologically and visually sensitive valley at the foothills of the Fort Hill. The traditional system of the garbage recycling and segregation, which was much effective till the 1970s is totally lost to the modern system of incessant garbage production. What a waste of the traditional, time-tested knowledge systems; the modern planners made no attempt to release and utilise the embedded wisdom in the built heritage of the city. It is proposed that a Master Plan of Conservation be designed and pilot projects be formulated to showcase the positive impacts of heritage conservation.

#### CONCLUSION

The heritage walks need to be designed, with at least three durational options, to raise awareness and educate the people about their treasure, the city heritage. These heritage walks shall bring the tourists into the city, as against their present tendency of making a beeline to the Fort and go back. They stay either in Agra or Delhi. They have nothing to do with the city of Gwalior nor are aware of the beautiful built heritage of remarkable character that the city holds within its folds.

The continuity of the Fort with the city, demonstrated through the Heritage Walks, will interest the tourist immensely and they would try to stay back in Gwalior. This would set off a chain of events that would reap economic and developmental benefits for the city. The framing of the byelaws and regulation tools to properly assess urban development schemes and contemporary or future architectural / urban design interventions in the historic urban landscape context, must be undertaken, after a scientific study and analysis of the design of the historical buildings and landscapes. 'Janak Taal' with its pavilions, a heritage asset, but due to lack of any regulations to protect its catchments or the setting, the high boundary wall and insensitive architecture of a newly developed colony destroys the ambience.

The places of heritage value must also be protected from the disfigurement caused by electricity and telephone poles, pylons, electricity/ telephone cables, transformers, large scale advertising signs, bill-posting, neon signs, commercial signs, street pavements and furniture. These should be designed to harmoniously fit into the whole. The prevalent regulations listed under the “Sampatti Virupan Adhiniyam”<sup>14</sup> need to be reviewed.

A detailed traffic analysis must be undertaken and the prospects of pedestrianising the historic core, or resorting to an efficient public transport system should be explored.

The Municipal Corporation should set up an active Heritage Cell for an effective heritage management. Permissions should be required to carry out any

demolition of buildings of heritage importance. The government should encourage the private owners to conserve their buildings and spaces of heritage value by giving incentives, maybe, by way of tax relaxations, etc.

The rich architectural and landscape heritage of Gwalior needs an urgent action by way of formulation of the heritage regulations and laws, education, awareness and public participation, so that the city's heritage is not totally replaced by faceless and alien architecture.

A huge hoarding set at the foot of the Gwalior Hill, reads: ‘Gwalior of the 21<sup>st</sup> century’, showing glass box-like buildings that could well have been in New York! We need to act and think whether we want Gwalior in Gwalior or New York in Gwalior!

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- 2 The Fort Hill measures 2.4 kms from the northeast to southwest, 820 m wide and 104 m high at the northern end.
- 3 Real name Madhav Rao Scindia-I, ruled from 1761-1794 AD, born: 1730 AD, died: 1794 AD
- 4 Jayaji Rao Scindia ruled from 1843-1886 AD, born: 1835 AD, died: 1886 AD.
- 5 There is an inscription near the *Urwahi* Gate of the Fort, which was inscribed by one *Khedu Sutradhar* (Master builder) who proudly proclaims himself to be an expert of the art of Gwalior *Jhilmi*. The inscription is dated 1496 AD.
- 6 Means the generous Guru who caused release of the otherwise doomed prisoners.
- 7 Lashkar, a Persian word, means ‘the Army.’
- 8 Daulat Rao Scindia ruled from 1794-1827 AD, born: 1779 AD, died: 1827 AD.

- 9 Temples made in the memory of the departed souls belonging to the Royal family or the families of the Sardars.
- 10 During Mahadji Scindia's rule, the coins bore the flower as mintmark of Gwalior. Daulat Rao Scindia had built a mint at Danaoli in Lashkar. During the reigns of Madhav Rao Scindia-II and Jiwaji Rao Scindia ( 1925-1947 AD ) , the coins were minted by using imported European machines, replacing the conventionally casted ones. The coins of Gwalior State were widely used within its territories till as late as 1950 AD.
- 11 The word ‘Phoolbag ’ means the garden of flowers.
- 12 Madhav Rao Scindia-II ruled from 1886 to 1925 AD, born: 1876 AD, died: 1925 AD.
- 13 Based on the systematic surveys for identification of buildings and places of heritage value and detailed documentation with measured drawings of the representative examples have been undertaken by NGO Living Heritage Alliance in association with the Schools of Architecture of Paris-Belleville, Strasbourg and Nagpur, in 2007-2008.
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properties from disfigurement, published by the Government of Madhya Pradesh, India.

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# Amber and Jaipur

## The territorial demarcation of a city

REMI PAPILLAUT

### ABSTRACT

*Jaipur remains an urban planning benchmark in the history of Indian cities. The town planning of Jaipur has inspired several debates amongst researchers including its association with the traditional Vastu Purusha Mandala (Sachdev, Tillotson, 2002). The author proposes another discourse to the planning of Jaipur through a firsthand documentation and analysis that is presented in this article.*

*The article presents the conception and planning of Jaipur in the wider context of its geographical surroundings and its linkages to the earlier capital of Amber. It also proves that the planning of Jaipur is dimensionally rooted in the complex geometry of the Jantar Mantar, the first monument designed by Sawai Jai Singh II in Jaipur.*

### INTRODUCTION

Historians who have studied the city of Jaipur, built by Jai Singh II in 1728, often agree that they see in it a manifestation of the principles of the Vastu Shastra (the ancient Indian treatise on building harmonious living environments) which is believed to be the inspiration behind the

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regularity of the city's road system and sectoral divisions. The city appears to follow a ground plan divided into nine square blocks. Moreover, the construction of the city seems to have been at the expense of the earlier capital of Amber, that was the home of Jai Singh II's ancestors since the tenth century.

To arrive at the town planning principles for Jaipur, we have tried, in collaboration with the Aayojan School of Architecture, Jaipur to measure the links that bind the two cities of Amber and Jaipur and the nature of the regularity of the new city, both at the architectural and urban level. There is an extremely precise plan of the city; in the Jaipur City Palace archives, following a scale of 1/4000, drawn up by the military engineers of the British Raj between 1925 and 1927<sup>1</sup>. The plan shows all buildings, mentioning the number of floors and any set-backs for terraces, as well as the porticos along the bazaars and the wide commercial avenues that cut the city into squares. Symbols are used to indicate temples, private and public wells and gardens. Though plots are not demarcated on the map, but they can be inferred as the buildings occupy the entire plot. Based on this document, we could arrive at an understanding of the layout methods followed by Jai Singh II in designing the city.

The focus here, is on the issues regarding the creation of the city during the reign of Sawai Jai Singh II. What aspects formed the basis of the town's plan? How was the overall layout conceived? Was there a hierarchical system of roads, a regular rhythm to the creation of plots of the land? What rules were followed in deciding the arrangement of the porticos, the bazaars and squares?

#### JAI SINGH II, THE ASTRONOMER AND THE CARTOGRAPHER

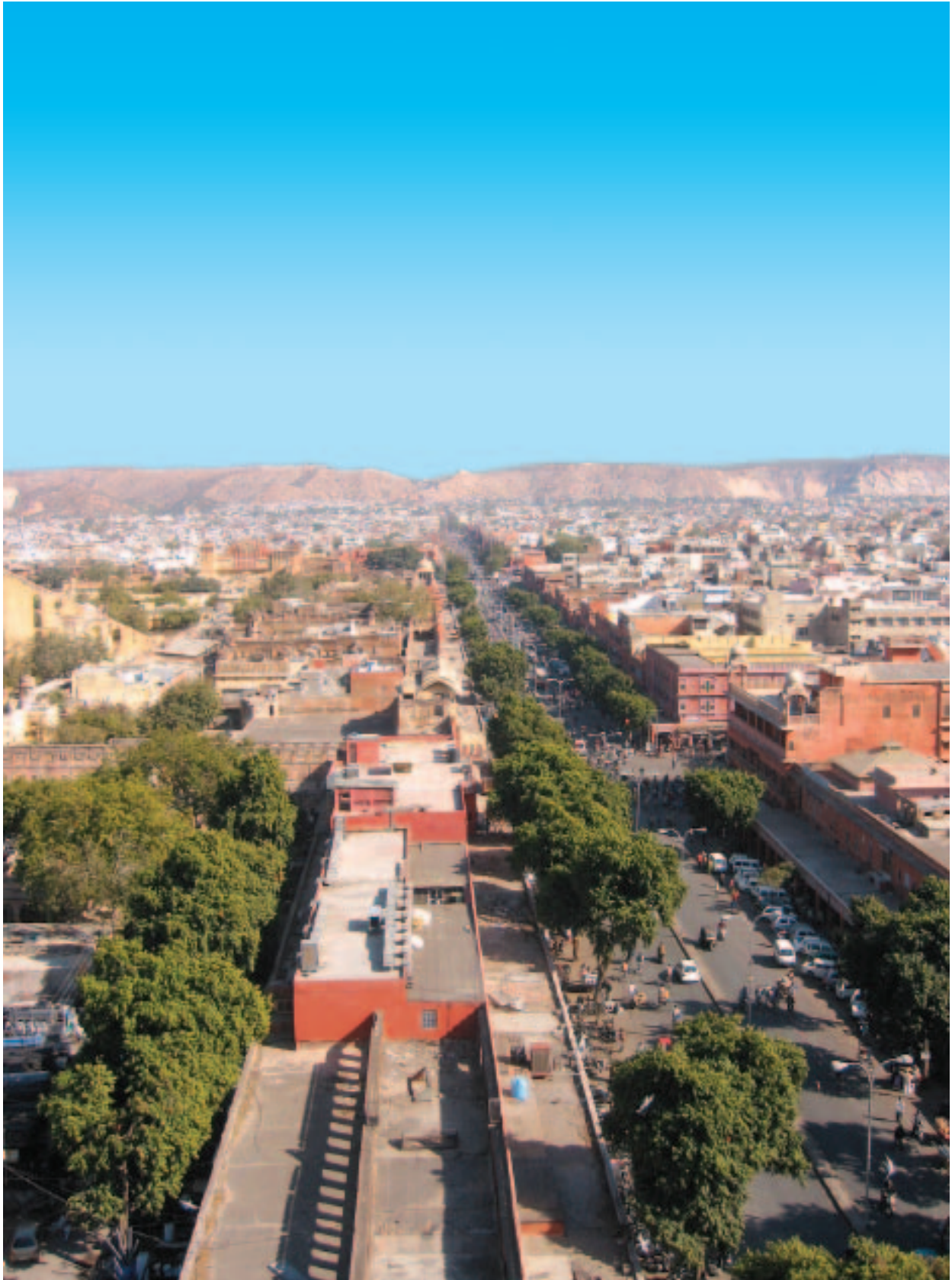
Jai Singh II followed in the path of his ancestors in offering his allegiance to the Mughal emperors. After Akbar's tolerance (1556-1605) and Jahangir's indifference (1605-1627), began the persecution of Hindus under the reign of Shah Jahan (1627-1658). Under Aurangzeb (1658-1707) Hindus were not allowed to be part of the Mughal administration and were punished if they did not convert to Islam. The emperor ordered the destruction of all forms of Hindu temples and Muhammad Shah (1719-1748) perpetuated this discrimination, although to a lesser degree. Given the circumstances, it is easy to understand why it was in the interests of the Rajput

chiefs of Amber to ally themselves with the Mughals, in military defense as well as in marriages and, to build mounments like the Akbari Mosque. In exchange, they won relative freedom, which made Amber, and later Jaipur, one of the most sought after destinations for persecuted wealthy families.

In 1699, at the age of eleven, Jai Singh II succeeded his father to the throne of Amber but it is probably his namesake, his great grandfather, the well read builder Jai Singh I, who was his role model. A few years later, he left to serve the Mughal emperor in numerous campaigns which took him to the high cultural places of the Empire and Persia. The death of Aurangzeb, in 1707, marked the decline of the Mughal emperors and Jai Singh II, seizing the opportunity presented by their relative weakness, unified the Rajputs and strengthened the economic and military might of his clan. Following the example of the Mughals, he restructured the administration of his territory creating a hierarchy of districts called '*nizamats*' and 36 functional workshops called '*karkhanas*', some of which exist till today. Amber, the city of his forefathers, protected by its precipitous topography, was no longer sufficient as all its constructible lands were already saturated. Thus came the decision to create a new city or rather an extension to the existing city, on a large plain traversed by the road to Ajmer a few kilometres to the south. Jai Singh II named his creation after himself: Jainagar which became Jai-pur, the city of victory.

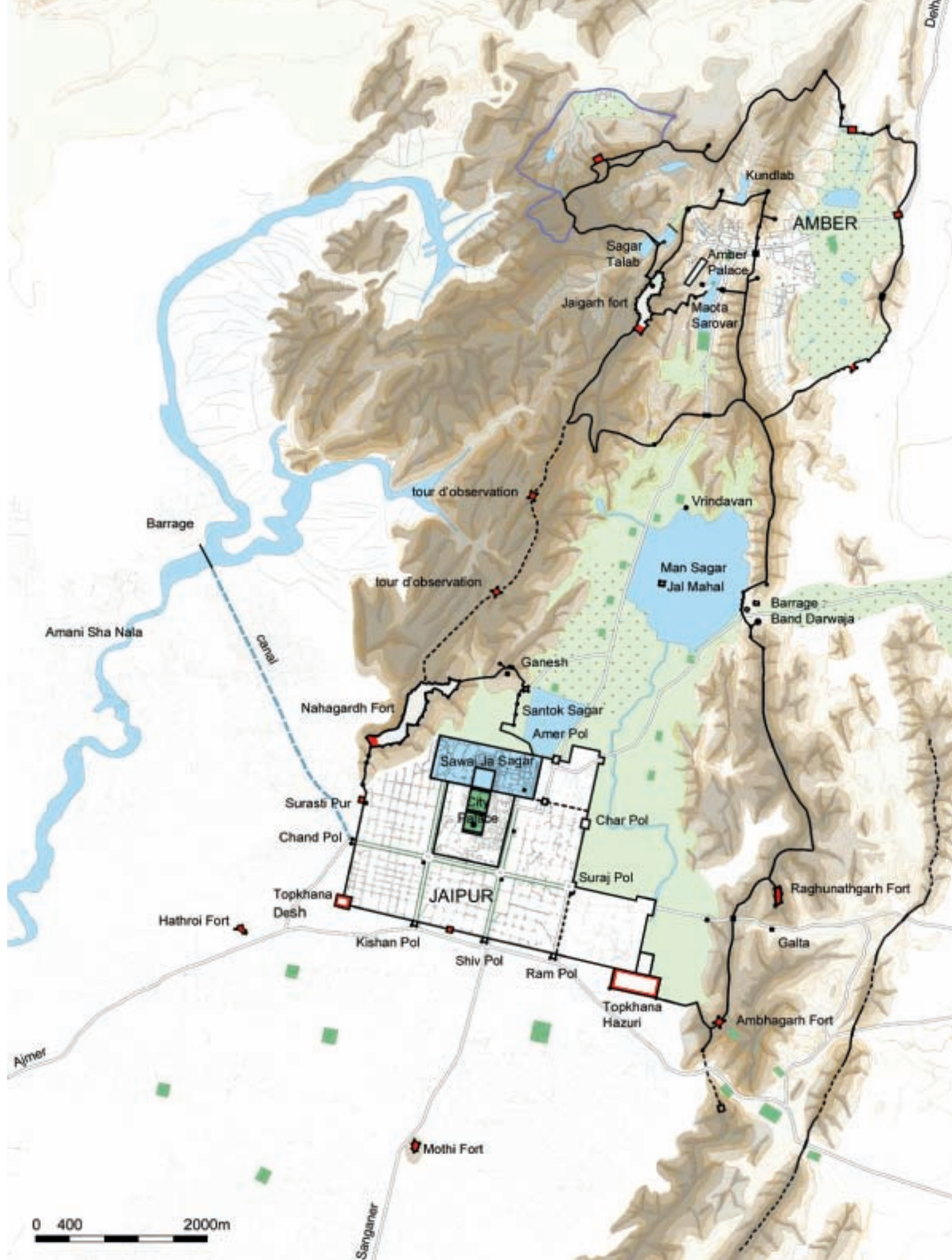
In 1719, while participating in a discussion on the astronomical calculations for determining a favourable date for the new Emperor Mohammed Shah to commence a long journey, Jai Singh II realised how inaccurate the existing instruments were and decided to build several observatories. With the permission of the emperor, he had an astronomical observatory built in Jaipur in 1718, much before the creation of the city and another one in Delhi in 1719 that was completed in 1724. The astronomical observatories of Mathura, Ujjain and Varanasi followed. The observatory of Jaipur is built at a latitude of 26°55'27', a figure that is used on the hypotenuse of the triangle of different instruments most of which are oriented due north. The measurements made from these observatories enabled him to publish in 1733, his own astronomical table which corrects the ancient Indian treatises. He could achieve this feat with the assistance of his guru and teacher the Pandit Jagannath, a brahmin from South India. Jai Singh II dedicated one of his treatises to emperor Muhammad Shah asking him to correct the

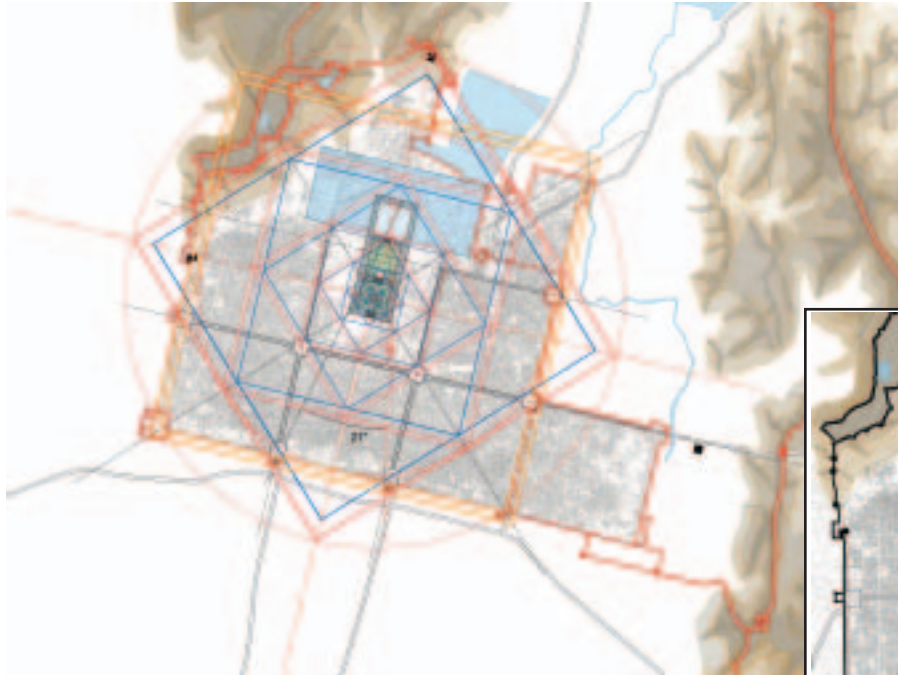




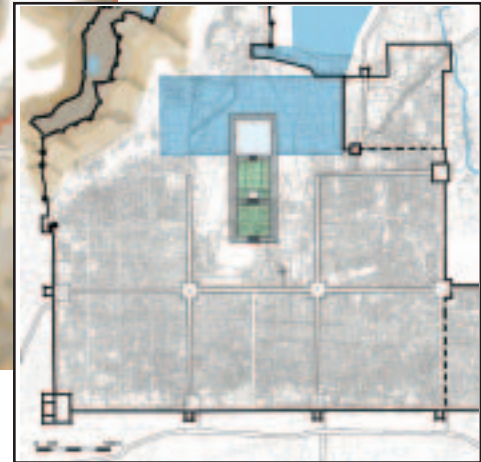
*Chandpol Bazaar as viewed from the Suraj Pol*







*Jaipur planning grid and its rotation at 45° showing co-relation with Jai Niwas*



*Plan of Jaipur, 1925*

calendar of political and religious affairs, which was directly dependant on the accurate measurement of time. He also determined the value of the obliquity of the ecliptic as  $23^{\circ}28'$ , very close to its true value of  $23^{\circ}27'$ .

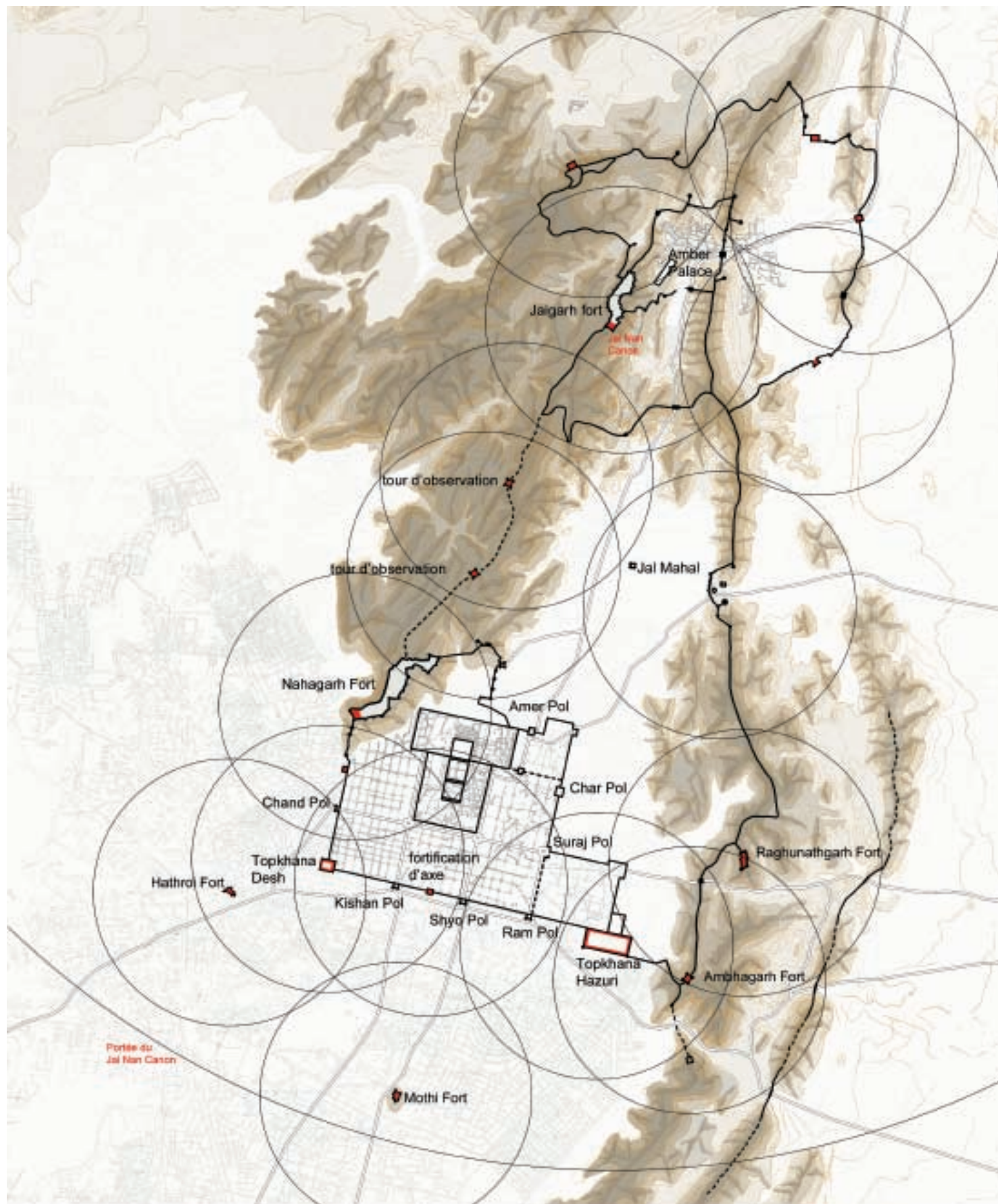
Parallel to these advancements in astronomy, Jai Singh II had drawn up a map and town plan, calling on the expertise of various specialists. His interest in cartography also led him to decorate the *bhojanshala*, his private dining room in the Amber palace, with a series of views of the holy cities<sup>2</sup>. Jai Singh II's passion for astronomy and for terrestrial mapmaking explains, why nothing could be left to chance in the planning of the new city that he intended to build.

#### JAINAGAR (JAIPUR) : THE RATIONALITY OF THE GROUND PLAN

In order to understand the layout of the city one must refer to the first palace structure built on the site. Between 1711 and 1713, Jai Singh II gave orders to construct a hunting palace called the Surya Mahal (Sun Palace) and a garden, the Jai Niwas Bagh<sup>3</sup> on the edge of a little lake, on the plains south of Amber. To access these, one had to leave the city of Amber by the

south gate, called the Ghati Darwaza. The gate opened into a pass that formed the ancient route to Ajmer descending straight into a valley, as can be observed even today<sup>4</sup>. At the foot of the descent, near the marshy region was the Kanak Vrindavan temple<sup>5</sup>. The Mughal gardens called the Ghati Bagh were created adjacent to the temple, around 1707 - 1710, and the statue of Govindji Dev hailing from the eponymous town of Mathura<sup>6</sup> was later installed here. This was an important spot in the low lying area, at 414 metres. The monsoon rainwater collected here, and it later came to be known as the Jal Mahal Talav or Water Palace Pond after the water palace was built by Jai Singh II in 1734 at its centre<sup>7</sup>. The survey maps of this period show suburban residences set amidst garden are protected by high walls<sup>8</sup> around this area. The advantages of this site lead one to imagine that this may have been the site of the first phase in the setting up of Jaipur. Past this swamp, the road opened on to a vast space bordered on the east and west by high hills of altitude up to 620 metres. Some villages were villages like Brahamipuri, Nahagarh, Talkatora, Santosh Sagar, Moti Katla, Galtaji, and Kishanpol were located in this area, few whose traces are evident till date. All these names are references to the unusual topographical features, wells or monuments of earlier





— rampart

— gate

○ cannon range

■ artillery

- - - ridge path

— basin wall

0 400 2000m



times and few of these, were incorporated into the city. All earlier temples in the town have survived and provide a cue to the planning of Jaipur. The temple traditions continue even today, with people worshipping in the temples amidst the traffic jams and crowded bazaars.

Towards the south, the route goes back up gently till a fracture line in the earth, which forms a slight crest that traverses the plain from east to west, marking the boundary of the catchment area, that descends towards the north till the marshy zone. This is the spot where Jai Singh II built Jai Niwas on the north facing slope with sufficient water and vegetation.

The plan dating back to 1711-13 shows us the garden layout that was conceived and implemented. It is a *charbagh* or four square garden style composition forming a double *charbagh*<sup>9</sup> like that of the Shalimar Bagh of Lahore, commissioned by Shah-Jahan in 1637 which was recreated later with the same name, in Delhi and Srinagar. In Jai Niwas one observes alternating pavilions and gardens along the main axis. The first three bay pavilion opens onto a 210 square metre garden, followed by a second  $80 \times 210$  square metre pavilion with seven bays<sup>10</sup> that further opens onto a second garden at the end of which is built the Badal Mahal (Cloud Palace) which has five bays. The square ornamental lake at the end, called Tal Katora completes the composition. This lake is situated in an enclosure surrounded by high walls in which Jai Singh II kept tigers and crocodiles. Numerous wells and a water canal system is installed along the long boundary wall of the garden.

The square garden to the south was selected to be the centre of the city composition. In time, it probably came to represent the empty centre corresponding to Brahma, the Creator in the holy Hindu trinity, as well as the central fountain of the Mughal garden composition. However, it is not known at what point exactly Jai Singh decided to make Jai Niwas the centre of the composition of his new city...before or after the creation of this garden?

#### Astronomical Measuring Instruments and the Ground Plan of the City

1718 is the year inscribed on the semi-spherical sundial or Nadivalaya Yantra<sup>11</sup>, the instrument of Jai Singh II's astronomical observatory. His passion for cartography, and the presence of these observation structures as early as 1718, indicate that these

instruments were probably used to mark the city or at the very least to determine the precise axis of the palace (Jai Niwas) garden and to position it correctly with respect to the north. It is also feasible to say that they had a more important role to play in the layout of the city.

In Jaipur, if the zenith distance of a celestial body is more than  $27^\circ$ , it is located in the southern hemisphere and if it is less than  $27^\circ$ , it is situated in the northern hemisphere. The Brihat Samrat Yantra, the colossal equatorial sundial, makes an angle of  $27^\circ$  and measures almost 27 metres in height. This sundial which indicates the north with a two second error margin is so precise that it enables an almost perfect plotting of the north as compared to any modern day instruments. It also enables precise laying out of the axes of the city with respect to the north with an angle of  $13^\circ 5'$ , i.e. half the value of the latitude<sup>12</sup>. The benefits of this orientation, as discovered by some researchers, apparently are that the oblique rays of the sun are not parallel to the axes of the roads in the mornings and evenings, and yet the roads receive the winter morning sunlight and are protected against the evening summer sun. It also conforms to orienting the roads in the direction of the main winds<sup>13</sup>.

Was the Jai Niwas also positioned with the help of these instruments? Was the city conceived at the same time as the palace? Was the temple of Ganesh built by Jai Singh II, on the principal axis of the town at the top of a hill to the north of the composition; to mark the high sighting point as sacred? These queries assist in understanding the layout of the town.



Chandra Mahal



Velo tank

From the centre of the Jai Niwas garden on the perpendicular axis, on the west is Balanandji ka Math temple or Surani Pur, situated at the edge of the town, in the Purani Basti district, again at a very high point on the western hills. Unlike the rest of the town, this temple is not pivoted at  $13.5^\circ$  but it is oriented completely to the east. Parallel to this direction, based on the light transversal crest line of the site, the east-west axis of the town was laid out, ending in the east in another high point, marked at a certain distance from the city, by the Surya Mandir (Sun temple)<sup>14</sup>. This was constructed around 1720, half way up the hill. The terrace of this temple is located exactly on the axis of the crest line that joins the Galta Darwaza (the Galta Gate) in the east to the Chand Pol Darwaza in the west. It is interesting to note that the Suraj Pol Gate was situated in the eighteenth century, on a part of the rampart located to the right of the Ram Ganj Chaupar, and thus the district of the Topkhana Hazari was outside the walls at that time. It is even possible that this district did not exist initially at the time when the town was first laid out. This spot can be found on a map of the city from 1775, where it shows as a district outside the walls called Mohan Bari. Between the eastern and the western ends of the town,

the distance from one city gate to another was approximately one *kosha*. At the territorial level, the *kosha* was equal to 2000 *dandas*, the equivalent of 3660 metres. The avenue located following this axis was meant to be the big bazaar which crossed the entire city. The intersection of this main road with the axis of the palace in front of the Tripolia Gate, corresponds to the highest point of the town, at 445 metres. From there, one can descend on all sides, towards Chand Pol which is at a height of 440 metres, towards Suraj Pol at 438 metres, to the north towards the Tal Katora depression at 425 metres, or to the south towards what was to become Naya Pol at 440 metres. The natural crest line on which this large avenue was located was probably raised and banked up to constitute a rectilinear path.

The Brihat Samrat Yantra, in the observatory of Jai Singh II allowed the completion of the city layout by determining the location of the northern and southern edges of the town. It can be observed that by extending the Yantra's axis towards the south, the Shiva Pol (Sanganeri Gate) is located at the place where it intersects the Johari Bazaar axis. Towards the north, at its intersection with the axis of the palace, the median point of the southern bank of the Tal Katora lake. This thus enables the positioning of the main axis as well as the limits of the town. This study indicates that the layout of Jaipur was controlled in two different ways firstly, through a series of specific high points on the surrounding hills such as the Ganesh Mandir (the Ganesh temple) on the north, Surya Mandir (the Sun temple) on the east and the Balanandji Temple on the west. On the other hand, from the centre, it was the Brihat Samrat Yantra, that entirely defined the six sections or *chowkries*, i.e. six square blocks taking into account the subdivision by an avenue of the central block opposite the palace.<sup>15</sup>

#### other systems of the layout

Jai Singh II further elaborates a syncretism between Indian and Mughul references in the design of Amber and Jaipur gardens. A schematic diagram that dates to the middle of the eighteenth century<sup>16</sup> conserved in Jaipur city palace, shows the layout of a town starting from the centre of the composition called *Sri avanti/praram* (departure point). It is based on a series of squares that fit together, rotating at  $45^\circ$  in relation to each other, thus increasing by the square root of 2. This system of interlocking is also described in the traditional Indian treatise of Mayamata. Some texts also suggest that if the centre is occupied by the palace



*Collomades on the commercial streets*

of a king, his importance is measured by the number of concentric enclosures that separate the exterior and, thus the number of doors one needs to go through to arrive at the most private parts of the palace.<sup>17</sup>

In case of Jaipur, if one rotates the squares by 45°, starting from the centre of the composition i.e. the fountain of the southern garden of the Jai Niwas; first an internal layout of the garden is obtained followed by the borders of the garden itself, the edge of the palace district, and finally the positioning of the facades of the bazaar on the palace side (indicated in blue on the map). The external facades of the bazaars draw a second square (indicated in red on the map) which gives by rotation, the median of the *chowkri* (the districts occupying an entire square in the layout) marked by a path on Purani Basti and Topkhana Desh. By a new rotation of the red and blue squares, the positioning of the doors on the ramparts becomes clear, in the interior for Chand Pol and Suraj Pol, and on the exterior for the Sanganeri and Amber gates. In the north, the intersection of the tip of the square with the axis of the town corresponds to the location of the Ganesh temple.

This kind of composition, based on the use of the

diagonal of the square is typical of the Mughal civilisation, noticeable mainly in the gardens and the tombs. One can cite for example, the Humayun's tomb in Delhi or Akbar's tomb in Sikandra. In Mughal architecture, this kind of layout is found in various scales, from the detail of ornamentation to a town. The point of intersection of the north-south axis and the east-west axis in Jaipur forms a rectangle  $3/2$  constituted by the six square sections or *chowkries*. In the north, the rectangle rests on the big lake of Jai Sawai Sagar. This rectangle can be broken down based on the geometric possibilities of the diagonals that gives so many points to cling on to for the layout of the paths, the positioning of the gates or of any other city landmarks.

#### THE INVENTION OF THE GARDEN TOWN

"I arrived at the Bagh-I-Wafa. This is precisely the season during which it flowers in all its splendour."<sup>18</sup> The Bagh-I-Wafa (Garden of fidelity) in Kabul, that of Agra and many other horticultural projects of the emperor Babar (1526 -1530) were equivalent to paradise on earth for the Mughals. The layout of *charbagh* (four gardens) that came from Persia, is its



paradigm composed around five elements.<sup>19</sup>

The partition of the garden into four by the intersection of two perpendicular axes with a centre as the place for the meeting with divinity and a boundary, which isolates 'paradise' signifying the 'enclosed garden' from the rest of the world.<sup>20</sup>

The place of nature in the conception of an Indian city is also very important, in whatever form it is, wild, agricultural or pleasure gardens. The different types of ancient Indian gardens such as *davana*, (the natural garden), *nandavana*, (the artificial garden or the forest of happiness) were already present in the earlier capital of Amber, for example, the Bharmal-ri chatri or Maqsum Shah ka Maqbara (the tomb of Maqsum Shah) as a garden-cemetery constructed between the sixteenth and seventeenth centuries. Another example of Hindu garden is the Shyam Bagh, a vast garden of four hectares, constructed around a temple with a sophisticated irrigation system in the form of an aqueduct wall that gives water to all parts of the garden. This garden culture later witnessed in Amber and Jaipur, the most sophisticated *charbaghs* of the Persian civilisation.<sup>21</sup>

Jai Singh II had certainly seen the gardens of the tombs of the Mughal emperors and the *charbagh* of the Red Fort at Shahjahanabad. He also knew of the superb *charbagh* at Agra that Shah Jahan made in front of the mausoleum of his wife Mumtaz Mahal, the

Taj Mahal.

In Amber, the most skillfully created gardens are the Kesar-Kyari Bagh, located on the Mauta Sarovar Lake and Dilaram Bagh situated a bit lower. The latter, constructed by Jai Singh II was built on either side of the dam on the lake, in an axial composition which alternates fountains and pavilions covered by *bengaldar* stone roofs<sup>22</sup>. The garden in the marble courtyard of the Jai Mandir and the one in the Jaigarh Fort are also composed in a sophisticated manner, with water channels along ramps, ornamental lakes that serve as reservoirs and small sloping reliefs that assist water cascades. On the road to Agra, eight kilometres to the east of Jaipur, Jai Singh II had the Sisodia Rani ka Bagh constructed (the garden of the Sisodia queen), for his second wife. This was a Mughal style garden with fountains and water games at different levels. The theme of Radha and Krishna is also seen in the pavilions and paintings.<sup>23</sup>

The Shalimar Bagh (Shalimar Gardens) in Srinagar, then in Delhi and Lahore are probably the models chosen by Jai Singh II first for his garden at the Jai Niwas. A miniature, representing a double *charbagh* conserved at the Jaipur City Palace shows the influence of the composition of the gardens on the layout of the town. The importance of this drawing can also be seen in the immense carpets spread out on the internal and external marble floors of the Amber palace during the reign of Mirza Raja Jai Singh I, then



during that of Jai Singh II.<sup>24</sup> It can also be seen on the cartographic representations of Sanganer. It is in a map that dates back to the second half of the eighteenth century that one can clearly see the town as composed in the image of the garden with a square in the centre and the intersection of two principal paths.<sup>25</sup>

This principle of composition was followed by Jai Singh II for Jaipur. He multiplies the *charbagh* system as often as required all along the long east-west path that follows the line of the crest. The three squares or chaupar, named Ramganj Chaupar, Badi (the Big) Chaupar and Choti (the Small) Chaupar are centred on large fountains, but there are smaller ones all along the bazaars, based on the Chandni Bazaar model of Shahjahanabad (Delhi).

Initially, the bazaars were planned to be generally tree lined, one can still see this represented in the maps of 1975 and on the photographs that date back to the beginning of the twentieth century. Trees such as the Ashok, the Neem, and the Gulmohur can also be found at intervals in the bazaars starting from Choti Chaupar.<sup>26</sup> In the narrowest roads in the interior of the *chowkri* (districts), one observes beautiful plantations linked to temples, such as Banyans and Pipals, the sacred Indian trees.

Thus Jai Singh II defined a vast territory from Amber to Jaipur that comprised not only of urban pockets, but also areas around lakes, temples, agricultural zones and gardens. The earlier accounts mention that, at the

entrance of Jaipur, just opposite the large Jal Mahal lake, there were several small enclosed gardens<sup>27</sup> with pavilions for pleasure, covered by *chatri* (cupola) sometimes flanked by an observation tower to view the surrounding countryside. Some of them follow the *charbagh* principle, multiplying it as many times as required to adapt it to the site. The 1775 map gives the names of a few such as Durgapura and Lunkaranko Bagh. Within the walls, one can also find the Raghukavan, Khalsako, Hanwat Bari gardens which are variations of the Mughal gardens.

The current old city of Jaipur is more densely populated than before, surrounded by modern extensions and the absence of a garden is more strongly felt today.

The article proposes multiple themes or discourses regarding the composition of Jaipur, such as:

- Natural and artificial fortifications.
- Catchment, conservation and distribution of water in the town
- The location of temples in the cities: Jaipur / Amber as religious centres.
- Shops: Bazaars and *chaupars*
- Living in the town: from the *chowkri* to the mohalla.

Jaipur, the eighteenth century city in Rajasthan remains the subject of sophisticated analysis with its complex layers of architecture and urban fabric.



The contours and hills

## HERITAGE CONSERVATION

Since the inception of Jaipur, the city has been an international tourist destination more so, in the post independence period. These factors have increasingly put pressure for the conservation and sustenance of this historic city. Moreover, recent trends in heritage conservation globally, visits of international celebrities such as President Clinton from USA in 2001 and, Prince Charles in 2006 as well as central urban renewal incentives such as JNNURM (Jawaharlal Nehru Urban Renewal Scheme) have revived local

administration's and local NGO's interest in the conservation of the historic city. A number of conservation projects and programmes are being undertaken in the city supported by UNESCO New Delhi Office, the World Monuments Fund (WMF) and government departments such as the Department of Art and Culture, Amber Development and Management Authority, Jaipur Municipal Corporation and Rajasthan Urban Infrastructure Development Project (RUIDP).

## Notes

- 1 Author thanks colleague Sanjeev Vidyarthi, Professor at the college of architecture of Rajasthan, in Jaipur, who found these plans.
- 2 These cities have not yet been identified.
- 3 Sachdev and Tillotson, (2002) *Building Jaipur, The Making of an Indian City*, Oxford, p 39. According to Jadunath Sarkar Jai Niwas was built in 1725, (1984), *A History of Jaipur*, Orient Longman Limited, New Delhi. Arya Roy fixes the year at 1726.
- 4 Later, under the British Raj, a new gate and a new road were built. The new road gently slopes down the undulating levels starting from a pass cut into the hill in the form of trenches.
- 5 Also called Kanak Ghati.
- 6 Before its transfer to the central pavilion of Jai Niwas, (1986), Ford Foundation, Jaipur City, p 26, (1996)
- 7 Nath, Aman, *The Last Destination*, Jaipur, IB Tauris, p 95. Sachdev and Tillotson refer to plan no.1 of the Jaipur City Palace collection which leads one to revise Aman Nath's affirmation according to which the Jal Mahal palace dates back to the era of Madho Singh 1st (1750-1768).
- 8 Madhovilas, cat. No 53, Jaipur, City Palace Museum. Reproduced in Susan Gole's, *Indians Maps and Plans*, pp 197. Ford Foundation, (1986), *Jaipur City: Conservation of Historical Buildings*, p 11.
- 9 Petruccioli, Attilio (1995), *Dar el Islam*, Mardaga, also called char bagh.
- 10 It is in this pavilion that Jai Singh would later have the statue of Govindji placed. Sachdev and Tillotson have declared that it was in 1713 that work on Jai Niwas was completed and the statue placed. Another theory is that it is following a dream that Jai Singh II had in 1735, Govindji apparently asked to be placed at the center of the city.
- 11 1718 is the year set by several researchers. See: Sachdev and Tillotson, (2002) *Building Jaipur, The Making of an Indian City*, Oxford. Singh, *Prahlad (1991) Les observatoires de pierre*, Holiday Publications, Jaipur. Volwahren, Andreas (2001) *Cosmic Architecture in India*, Prestel Mapin, Ahmedabad.
- 12 Some authors read this deviation of degrees as an orientation of the city towards the sign Leo, which was apparently Jai Singh's sign, like Aman Nath, *Jaipur, The last destination*. Others attribute it uniquely to the topographical constraints such as Sachdev and Tillotson, *Building Jaipur*, p 60.
- 13 *Jaipur city* (1986), Ford Foundation, p 61.
- 14 The map of the temple is conserved in the City Palace, LS/14, quoted by Sachdev and Tillotson, p 53.
- 15 See the hypothesis of Aman Nath on the composition of the seven blocks, arguing that the number seven is that of Jai Singh II. 7 compartments, 7 floors of the palace, 7 doors, 7 planets, Jaipur, the last destination, p 60
- 16 Gole, Susan (1989) *Indians Maps and plans*, op. quotation, pp 50-51.
- 17 Sachdev, Tillotson, (2002) *Building Jaipur*, p 16.
- 18 Quoted by Andreas Volwahren, *Islamic India*, Universal Architecture Coll. Books centre, Fribourg. 1971, pp 92
- 19 Sommer-Houdeville, Antoine (2004) *The gardens of Amber*, ENSAT and Virginie, Duberos *Jaipur, Chahar bagh city*, Urban Strategies Seminar, ENSAT 2004, p 9.
- 20 The Persian term '*paradeiza*' is translated as a garden enclosed in a wall.
- 21 Andréas Volwahren gives the hypothesis of the meeting between Persian know-how of gardens, and the compositions of the towns of ancient India, with the division of a square into 4 parts.
- 22 Aman Nath gives the two versions, that of a construction by Raja Bharmal in 1568 to pledge allegiance to Akbar, as the place for imperial rest... during pilgrimages towards Ajmer, or to Jai Singh with the name " garden for the heart to rest" in *Jaipur the Last Destination*.
- 23 Not far from there, the Vidyadhar Bhattacharjee gardens are situated.
- 24 These can be seen today in the Albert Hall Museum of Jaipur.
- 25 The manufacturers of paper were compelled by Mirza Man Singh, to move out of the region towards Amber. They stayed initially at Brahmipuri to the north of Talkatora and they were subsequently moved to the south, to the town of Sanganer. Curiously Sachdev and Tillotson give this map as a paradigm of the definition of the shastra with 9 sections. See *Building Jaipur...* pp 26 figure 19.
- 26 Duberos, Virginie , *Jaipur Charbagh city*. p 34
- 27 Madhovilas, catalogue no 53, Jaipur, City Palace Museum reproduced in Susan Gole, p 197



# Shekhawati

## Contours of urbanisation

URVASHI SRIVASTAVA

### Abstract

*The semi arid region of Shekhawati in Rajasthan is dotted with small towns and villages renowned for their grand havelis, temples, chatris and wells. The magnificent havelis in the towns built by rich marwari merchants are so profusely painted with beautiful frescoes that the region is a veritable open air art gallery. The urbanisation of the region took place over a span of several centuries culminating into a network of well laid out towns. The towns in the region follow a distinct planning philosophy greatly influenced by that of Jaipur yet maintain a unique identity. This article traces the habitation of the region and gives an account of the political and economic environment that fashioned the growth and development of the settlements outlining the planning concepts of a typical Shekhawati town. It also presents a brief of the recent heritage conservation initiatives taken for these towns.*

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### INTRODUCING THE REGION: TOWNS, VILLAGES AND THE DESERT TRACT

Traditionally, the Shekhawati region was an administrative entity covering western part of the present Sikar district and entire Jhunjhunu



*Shekhawati an extension of the Thar Desert*

district. It was bordered in the northwest by the Bikaner State and in the southeast by the Jaipur State. The cultural boundaries of Shekhawati however extended beyond its administrative borders into Bikaner State bringing the district of Churu within its fold as well. The semi arid region of Shekhawati, an extension of the Thar Desert, has sustained a unique cultural environment within its settlements both in its humble villages and modest towns amidst an adverse environment.

#### FORMATION OF SHEKHAWATI

Habitation of Shekhawati can be traced back to the Harappan times. It is said that in ancient times Saraswati River flowed through parts of the region that is known as Shekhawati and the Kantli River flowing east of Jhunjhunu was a tributary of Saraswati River. Kantli seems to have been a major river during the pre-Harappan period. A supply node from the

Khetri copper mines in Jhunjhunu district through Kantli River was accessible to Harappa on the banks of Beas. Evidences obtained from excavations at Ganeshwar, a third millennium settlement, about 60 kilometres from Khetri has yielded a rich collection of copper objects like flat celts, arrow-heads, fishhooks, blades, spear-heads, nails, bangles, chisels pointing that the region was inhabited in those times. However the recorded history of Shekhawati dates back to the thirteenth century. An inscription found in Harshnath temple near Sikar and another dated 1215 V.S. (*Vikram Samvat*) reveal that this area was under the suzerainty of Chauhan rulers of Ajmer. In the fourteenth century, Karamsee, a Rajput forcibly converted to Islam by Feroz Shah Tughlaq was named Kayamkhan who became the chief architect of the Muslim rule in the region. Later his son Muhammad Khan moved from bordering area of Haryana and conquered area in and around Jhunjhunu while Fateh Khan his nephew founded Fatehpur town in 1451 AD. During the

fifteenth century there are references of inroads in the area from Dhoondhar and Amber region (present Jaipur district) by Rao Shekha (1433-1488 AD) a Rajput related to Kachhwaha dynasty of Amber. During Akbar's reign, areas falling under the Parganas of Jhunjhunu and Narhad were under command of the Mughal Emperor's resident representative based in Narnaul, while Ajmer was the provincial capital of the entire area.

Shekhawats, descendants of Rao Shekha, continued to be active in Shekhawati. Their area of influence, mostly to the east of the Aravalli hills was greatly due to their amicable relationship with Kachhwaha Rajputs of Amber and the Mughal Emperor. From time to time they were commissioned by the Emperor as members of the Mughal army and sent for expeditions. Shekhawats received several *jagirs* (estates) from the Mughal Emperors but the region around Jhunjhunu and Fatehpur was out of bounds for them. Kayamkhani Nawabs of Fatehpur and Jhunjhunu often made attempts to occupy each others' territories. During the time of Rohilla Khan, the last Nawab of Jhunjhunu, the Nawab of Fatehpur usurped Rohilla Khan's territory. After regaining his territory from the Nawab of Fatehpur, Rohilla Khan welcomed Shardul Singh, estranged son of Jagram Singh, a descendent of Rao Shekha. Shardul Singh not only became the Nawabs confidant but later succeeded him after his death. Shardul Singh having acquired areas covered by Jhunjhunu, Narhad and Udaipur in 1732 AD made Jhunjhunu the capital of an extended Shekhawati kingdom. He allied himself with Sheo Singh of Sikar (who also belonged to a branch of Shekhawats) and together they evicted the Nawab of Fatehpur ending the long reign of Kayamkhanis lasting almost three centuries. Slowly almost the entire region came under the control and command of Shekhawats.

#### RAMIFICATIONS OF THE BUILDING OF A RAJPUT CAPITAL : JAIPUR

Political change and reorganisation of power in Shekhawati was not an isolated phenomenon, it was part of the larger political scenario of north India. Since the death of Aurangzeb in 1707 AD, the Mughal Empire was on the decline. Successors of Aurangzeb were not powerful enough and their grip over their territories was loosening. While the Rajputs were raring to go, the Marathas were dreaming of bringing the whole of north India under their control. The early half of eighteenth century saw the laying of foundations of a new capital of Dhoondhar in the

plains beyond the Amber valley. With conducive conditions, security and financial strength, Sawai Jai Singh embarked on establishing the city of Jaipur in 1727 AD. Since important trade routes passed through Rajasthan and Pali, Nagaur, Phalodi, Bhinmal, Merta, Jaisalmer, Rajgarh (Churu), Reni (Churu), Chittor, Udaipur, Bhilwara, Ajmer, Pushkar, Sirohi, Kota, Sambhar, Amber and Sanganer had already become established centres of business and trade in commodities from far and wide; Jaipur soon emerged as an important centre for economic activities.

Around the same time that Jaipur was established, Shekhawati had also come under the control of the Shekhawats. After the death of Shardul Singh in 1742 AD, his estates were divided amongst his five sons. Each of the *thakur* (baron) embarked on consolidating his *thikana* (principality) and streamlining his administration by establishing new administrative centres. Planning of these new centres was in all likelihood to be influenced by the planning principles and architectural vocabulary of Jaipur, the grandest and the newest capital being built in the vicinity of Shekhawati.

#### TRADE DYNAMICS : STATE VERSUS THIKANAS

Initially the Shekhawats paid tribute directly to the Mughal emperor just like the Kayamkhanis. Later Sawai Jai Singh acquired the *ijara* for Ajmer from the Mughal Emperor and received the right to administration and revenue collection of the Shekhawati region. Shekhawat rulers became tributaries of Jaipur State and accepted its suzerainty and administrative system.

In the late eighteenth century, with political instability and a burdened treasury, the rulers of Jaipur who had earlier promoted business imposed heavy duties on trade and commerce in their territories. Similarly rulers of Bikaner also increased taxes on trade in their terrain. Caravans that previously took long detours to stay away from the inhospitable region of Shekhawati looked for new trade routes to avoid heavy taxes imposed by the states of Jaipur and Bikaner.

Shekhawati though ruled by a number of *thakurs* was quick to take advantage of this situation. The *thakurs* provided and facilitated an easier access and detour to traders through their areas. Combined taxes imposed by various *thakurs* as the caravan moved through their respective territories proved to be lesser than the tax





*Fort as the nucleus of a typical Shekhawati town*



*The bazaar near the fort formed the main commercial spine of the town*

laid by Jaipur and Bikaner States. Thus trade was largely diverted from Jaipur and Bikaner areas to routes falling in Shekhawati region. Subsequently *thakurs* of Shekhawati encouraged merchants to settle in their newly established towns promising them economic benefits and security. This set the ball rolling for a great era of building activity in Shekhawati.

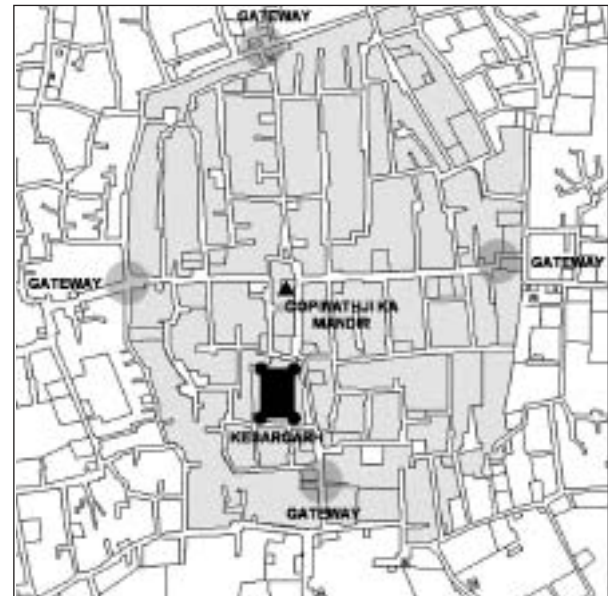
#### STRUCTURING AND RESTRUCTURING OF SHEKHAWATI SETTLEMENTS

The system of land grant and the system of equal division of property amongst the ruler's sons coupled with increased trade through Shekhawati started the process of urbanisation in the region. Land in the region was sectioned into *jagirs* or *thikanas* (fiefdom) comprising of several towns and villages and granted to *jagirdars* or *thikanedars* (baron) from the Rajput clan. The *Thikanedar* levied the royal share on yields from the land under his control and exercised jurisdictional rights and responsibilities on behalf of the ruler of Jaipur State. After the death of the *Thikanedar* his fiefdom got divided equally amongst his sons. Largescale urbanisation of Shekhawati, especially area falling under *Jhunjhunu Thikana*, was triggered off with the division of an area of about 1000 villages together with connected *kasbas*, (small townships) including *Jhunjhunu town*, the head quarters of the Shekhawats, into *Panchpana* (five units) after Shardul Singh's death in 1742 AD amongst his five sons.

*Jhunjhunu town* after its division into five units came to be known as *Panchpana Jhunjhunu*. The town witnessed a major restructuring. New urban elements were added to its landscape which initially exhibited morphological features peculiar to a Muslim settlement being the seat of *Kayamkhanis*. With this restructuring the original morphology of the town was modified. Each of *Shardul Singh's* sons owned a sector in the town and they constructed palaces and forts in their respective sectors. *Zorawar Singh* constructed *Zorawar Garh* and *Akhey Singh* constructed *Akhey Garh* in the central part of the town which was later completed by *Nawal Singh* after his death. *Kishan Singh* constructed *Khetri Mahal*, and *Kesri Singh* who had inherited *Barragarh* also known as *Badalgarh* constructed *Bissau Mahal* to its south.

Outside *Jhunjhunu town* each of the five sons of *Shardul Singh* started reorganising their territories. *Nawal Singh* the fourth son of *Shardul Singh*

established the *Thikana* of *Nawalgarh* as his separate kingdom at the site of the village *Rohelli* where he had already established a fort named *Balaqila* in 1737 AD. as a prince. He raised the village of *Mandu Jat* to the status of a town which later came to be known as *Mandawa* and founded a fort in 1756 AD. *Kesri Singh* the fifth son of *Shardul Singh* founded a town in 1746 AD. on the site of a small village known as *Bisale ki Dhani* which later came to be known as *Bissau*. He expanded the village of *Dundlod* with the construction of a fort in 1750 AD. and also built a fort named *Kesargarh* at *Bissau* in 1751 AD. Similarly several



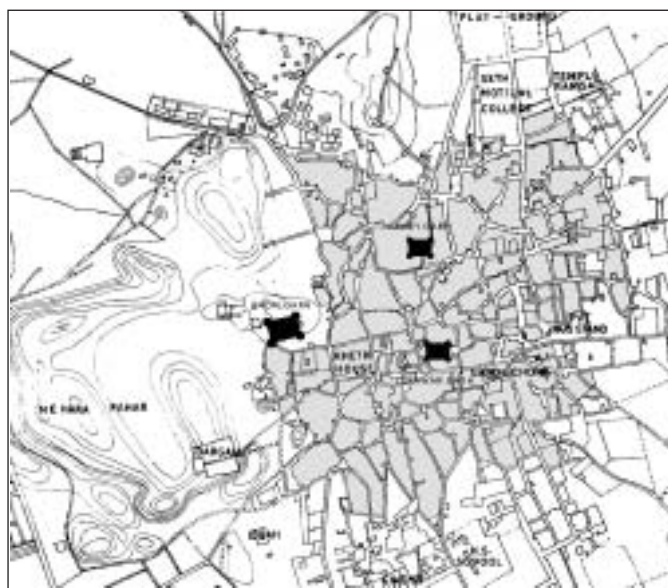
Bissau layout

other new towns came into existence. Around each newly founded town several villages sprung up apart from the existing ones. These villages developed a symbiotic relationship with the town providing for the primary needs of the town and, the town in turn provided the villages with amenities of life.

The shift in political power from *Kayamkhanis* to *Shekhawats* as well as diversion of trade from *Jaipur* and *Bikaner States* into the territories of the *Shekhawats* initiated the structuring and major restructuring of settlements in *Shekhawati*.

#### SETTING UP OF A SHEKHAWATI TOWN

*Shekhawat Thakurs* as tributaries of *Jaipur State* were often invited to attend the royal court at *Jaipur*. As regular visitors to the city they were exposed to the planning of *Jaipur* with its concepts of distribution of administrative, religious and commercial functions



*Jhunjhunu layout*

over space. They witnessed its development over the years and many of them even built palaces and other structures in the city. In their fiefdoms they experimented with these concepts and ideas within their constraints of topography, availability of skilled artisans and building materials.

Defining elements of Jaipur city, the palace, family deity Govindevi's temple, bazaars and grid iron layout of streets were adopted while planning the layout of a typical Shekhawati town. For the purpose of setting up head quarters in a village or town the *thikanedar* foremost built a strong *garh* or fort along with associated ceremonial spaces at a strategic location, preferably at a higher level than the rest of the surrounding area. Most of the towns in Shekhawati had a fort in the centre of the town, with habitation all around the fort enclosed within a fortification wall enforced with bastions, crenellations and huge gateways. This provided security to the *thakur* as well as people of the town from attacks. Thakurs of Shekhawati were tributaries of Jaipur State and in this administrative scenario it was not very uncommon to have fights amongst themselves for the desire to expand their area of influence or with the State for reasons of disputes in paying taxes.

The fort, as the administrative cum residential base, as the symbol of power, along with its associated institutions such as the *Topkhana*, *Shuturkhana*, *Hathikhana* etc. constituted the nucleus of the town. Near the fort was built the temple of Gopinathji the principal deity of the Shekhawats.

Subsequent to the setting up of the fort and the temple of Gopinathji, the Thakur proceeded to colonise other parts of the village. He invited merchants and people from other communities to settle in the town. The main street of the town leading to the fort functioned as the main commercial spine while the rest of the streets were mostly residential in character. Narrow streets lined with built to edge buildings either followed a grid iron pattern of development and seem to have been conceived at one point in time being greatly influenced by the planning of Jaipur as in the case of Bissau, Lakshmangarh and Ramgarh or developed organically as in Mandawa, Jhunjhunu and Fatehpur.

Different classes of people closely associated with the various functions of the fort also settled in the town. The fort sustained livelihood of these communities. Spatial organisation of various castes depended upon their status, religious beliefs and values. Generally people of similar caste stayed together as a close group giving rise to distinct neighbourhoods or *mohallas*. The wealthy and upper caste people had their mansions close to the fort while the dwellings of the lower caste people were towards the periphery of the town.

Economic privileges granted to the trading Marwari merchant community influenced the size of their *havelis* (that form the bulk of the built environment of the town), location of shops, *dharamshalas* or guest houses, temples, cenotaphs and water harvesting structures like wells, *baoris* and *joharas* built by them. Traders and merchants were also honoured in royal courts with presents given by the State in the marriage of their sons and daughters. Some traders were allotted land for shops and houses to settle down with concession in land revenues. Some of them were also invited to attend royal court on festivals such as Diwali and Dusshera.

Special places for organising fairs were earmarked in the town. These fairs held at regular intervals, on festive dates or otherwise, dedicated to a deity or temple in the town was a blessing for the locals as well as the merchants. Traders and merchants were invited from far and wide in these fairs. Merchants invited in the fair were also granted remission in taxes, protection during the journey and full facilities in the fair. In addition, loss suffered by the traders due to heavy rain or military movement was compensated. *Parwans* (orders) were issued for their safety enroute. Besides these, weekly markets or *hatwada* and regular





*Grand havelis of Marwari merchants line the streets*

commercial *mandis* in the towns were set up that facilitated the growth of commerce.

Apart from the fort and palace, temple of Gopinathji, main bazaar, havelis of merchants and houses of the other residents, several social, religious and recreational institutions like *baithaks* (reception space for guests), *dharamshalas* (guest houses), *gaushalas* (cattle shelter), community temples, *chattris* (cenotaphs) and *bageechis* (pleasure garden) also formed an integral part of the fabric of a typical Shekhawati town. Natural topography of the land was tapped to construct *kuan* (well), *johara* (tank), *baori* (stepped well) and other water harvesting structures that formed the life line of the towns.

#### EMERGENCE OF A NEW ECONOMIC ORDER

The years between 1740 - 1800 AD witnessed a multiplication of settlements in Shekhawati. In the late eighteenth century there was a change in the political and economic environment that had supported this trend of urbanisation. Flourishing cross desert commerce started declining with the decline in the power of the Mughal Empire. Taking advantage of the lack of central authority at Delhi the Marathas and Pindaris disturbed and intermittently disrupted trade in the region.

Late eighteenth till early nineteenth century saw the

consolidation of British power. States of Bikaner and Jaipur signed treaties accepting British sovereignty in 1818 AD. On advice of the British Resident at Jaipur, States of Bikaner and Jaipur reduced taxes on trade in 1822 AD and trade passing through Shekhawati which was already affected due to the prevalent banditry suffered a sudden slump as it was no longer cheaper to travel through the region. Formation of the Shekhawati Brigade under the command of Major Forster in 1835 AD curbed the rampant banditry in the region but trade never recovered.

The British increased their control over India through the East India Company and by 1860 AD, British power was firmly felt all over India. Changes in the modes of transportation from caravans to steamships in 1819 AD, and later to the railways in 1853 AD, coupled with the setting up of the ports by the British through East India Company at Bombay and Calcutta changed the pattern of trade. Trade shifted from land to sea crushing the indigenous economy which had previously depended largely on traditional land routes with their network of towns some of which functioned as important trade centres. Trade became dominated by the East India Company leaving the Indian rulers with practically no control over its dynamics.

Impacts of these developments were felt deep down in



*An ostentatious well built by a merchant family*



*Chatris of Marwaris emulating the royal cenotaph*



*Larger havelis displaying the wealth of the merchant*

the Shekhawati region. Marwaris who had contributed to the economic and physical growth of towns suffered the most but were quick to adapt themselves to changing conditions of the nineteenth century. Heads of these Marwari families migrated eastwards to ports on the Ganges and finally some of them settled in Calcutta, the capital of the rising British Empire while others moved to Bombay and beyond, fashioning themselves as middlemen playing an important role in the import and export of commodities taking place on these ports. Eventually with time, these Marwari merchants attained a remarkable level of economic prosperity.

#### RE DENSIFICATION, EXPANSION AND FLOURISHING OF ARTISTIC EXPRESSION

Shekhawati region, after having seen significant growth during the period starting with the Shekhawats gaining control till the end of the eighteenth century witnessed another surge of development which began in the mid nineteenth century with the migration of the Marwari merchants to big cities of the British till the 1930s. During this period the already established towns in Shekhawati started expanding and underwent re densification. The rich Marwari merchants started pumping money in their hometowns and villages in Shekhawati commissioning not only private structures such as their *havelis* but also community facilities such as temples, schools, *dharamshalas*, wells, water tanks, leisure gardens, cenotaphs, etc. With the growth in the wealth of the Marwari merchant the number of *havelis* in the town grew and



*Profusion of frescoes on the walls of the haveli*



A cluster of four havelis

the size of the *haveli* was also greatly enlarged. At first vacant areas within the original boundaries of the towns were utilised, later newer quarters of the towns were developed with lavishly planned mansions displaying the recently acquired wealth of the merchants. There came into existence havelis with as many as six courtyards locally known as Cheh Chowk Haveli. In the early twentieth century havelis began to be planned in clusters around a cul-de-sac like the Char Haveli (four havelis) complex, the Cheh Haveli (six havelis) complex and the Aath Haveli (eight havelis) complex. Interactions of these merchants with Europeans and Britishers resulted in modifications in the design of the later *havelis*, inclusion of new typologies within the local cultural paradigm and fusion of traditional Indian and western themes in frescoes.

Changes in the political and economic scenario not only resulted in the expansion and growth of towns

and villages in Shekhawati, it also brought about a thirst for artistic expression. With the Marwari merchant community growing in power and wealth the style of painting and decorating interiors of buildings that had reached Amber from the Mughal courts and later to the palaces of Rajput barons of Shekhawati, struck the imagination of the merchants as a means of creative expression. Soon the painting of *havelis*, temples, and cenotaphs became a popular type of expression achieving the status of an art form with its own unique style and vocabulary. It documented in great detail the finer nuances of everyday life as well as the innovations that were taking place in those times. Initially, the paintings were done very discreetly in between the brackets and later on, the frescoes covered up every available space on the façade of the *haveli* proudly proclaiming the newly acquired wealth and power of the Marwari merchants.

CONCLUSION



After Independence when the British left India, they sold their factories and Marwari merchants were quick to acquire them. Descendents of these Marwari merchants are still today controlling a significant portion of the Indian economy as owners of main trading and industrial houses. They have however gradually severed their ties with their homeland leaving behind the legacy of their forefathers frozen in time.

The proclamation of the wealthy Marwari merchants, still echoes in the streets of Shekhawati, in the empty spaces of the innumerable grand havelis, splendid wells, majestic temples and chatris that stand till this day as mute spectators bearing testimony to the economic prosperity, expansionist ambitions and creative urges of a bygone era.

In the present times, drastic changes are severely impacting the cultural heritage of Shekhawati towns. Population pressure and urban transformation have put the traditional built environment under increased stress. Modern urban development processes insensitive to the environment are eroding natural resources. Built environment of the towns and villages in the region is being modernised disrupting, displacing and overlaying the local cultural traditions. Regional architectural identity is being gradually erased by anonymous modern architecture. Unplanned development, inappropriate additions, alterations, disuse and misuse of heritage properties over the years has accelerated the process of decay. Modern

infrastructure has been mindlessly inserted in heritage properties damaging beautiful frescoes. Excessive use of modern materials especially cement for repair of traditional structures has caused further damage. Unused spaces inside heritage properties are being converted into shops with openings on the façade damaging the painted walls. *Havelis* are being pulled down to give way to modern structures and the salvaged components are sold in the antique market that is flourishing in the region.

Despite all the pressures of unplanned urbanisation the quaint little towns and villages of Shekhawati do not fail to entice the modern day travellers. Heritage tourism is gradually picking up in the region with more and more visitors coming in every year. However in the absence of a planned strategy for tourism and development its ill effects have started becoming evident. In a bid to entice the visitor renovation and modernisation of heritage properties especially havelis is very rapidly catching up as a trend in place of well planned restoration.

If immediate action is not taken, continued negligence could lead to a point of irreversibility and the cultural diversity of the region would be lost forever. Conserving the heritage of Shekhawati is therefore, critical and so is the promotion of sustainable tourism for ensuring continued use of traditional built and unbuilt spaces existing in its towns and villages.

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# Darjeeling

## History and the challenges of conservation

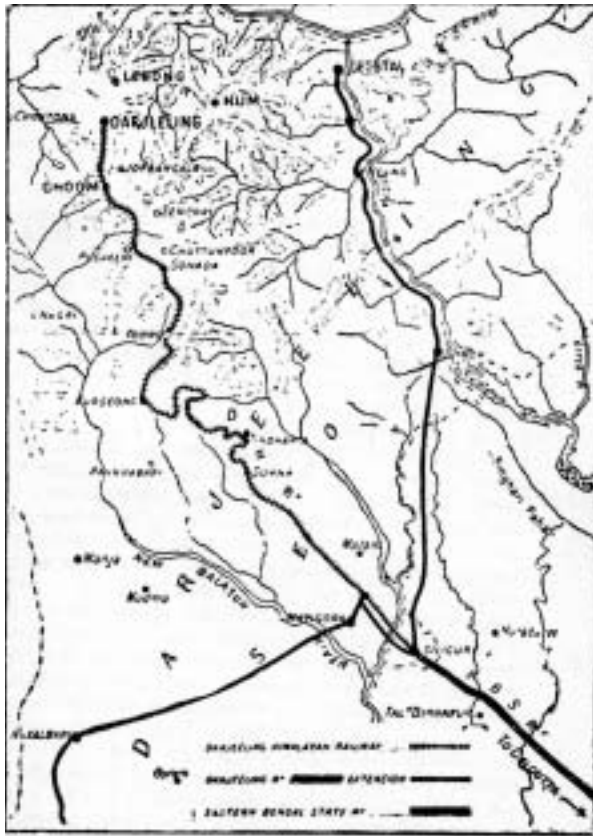
KAI WEISE

### Abstract

*Darjeeling town sprawls along a ridge at an elevation just over 2000 metres overlooking the spectacular view of the world's third highest peak: Mount Kanchenjunga (8591 metres). The history and socio-economic development of Darjeeling is closely linked to its environmental setting and transportation links. The location of the hill station allowed it to develop as a sanatorium and centre for quality education. The forests and tea estates that now restrain the town in all directions were the basis for its economic growth. Socio-economic growth in this remote location was, however, only possible with good accessibility achieved by means of the Darjeeling Cart Road and the Darjeeling Himalayan Railway.*

*The article presents the history of Darjeeling in three periods; from 1835 to 1881 as 'Formation of the Settlement', from 1881 to 1934 as 'The Golden Years' and from 1934 to 1999 as 'The Challenged Town'. The paper concludes with highlights of recent efforts to conserve the town, its historic buildings and cultural properties. It emphasises that the challenge for Darjeeling is to maintain the balance of the fragile environment.*

Kai Weise is a Nepali national of Swiss origin, who studied Architecture at the Swiss Federal Institute of Technology in Zurich and is a member of ICOMOS and PAHAR. During the past 15 years, Kai Weise has been working in the field of Architecture, Urban Planning and Heritage Conservation in the Himalayan Region.



Location Map of Darjeeling with the railway lines (Dozey, 1922 plate XIX)



Darjeeling Town with Kanchenjunga in the backdrop

## INTRODUCTION

‘Darjeeling’ is derived from the fusion and distortion of ‘*Dorje*’, the Buddhist thunderbolt and ‘*Linga*’, the Hindu symbol for Lord Shiva. Throughout its history, Darjeeling has embraced a diverse range of influences and unique developments, assimilating them and creating a distinctive character. Darjeeling, the Queen of the Hills, located on a ridge overlooking Mount Kanchenjunga is world renowned for its tea and mountain railway.

## THE ESTABLISHMENT OF DARJEELING AS A HILL STATION

The area today known as Darjeeling belonged to the domain of the Chogyal of Sikkim until 1780, when the Gurkhas conquered the lands up to the Teesta River. In 1813, war broke out between the Gurkhas and the East India Company, which led to the Treaty of Segoulie in 1816, whereby, Nepal ceded large tracts of land, including the tract of land between the Mechi and Teesta Rivers which was then restored to Sikkim by the Treaty of Titalya in 1817. In 1828, Captain Lloyd was deputed to the area to settle a dispute, whereupon in February 1829, he spent six days at “*the old Goorka station called Dorjeling*” (O’Malley, 1907, p.20). Captain Lloyd proposed that this strategic location would be ideal for a sanatorium.

The seasonal migration between the lowlands and the highlands is a phenomena found throughout the world. However, the British in India developed this to an extreme by building hill stations that functioned as administrative capitals during the hot summer months. The hot tropical climate was considered to be unhealthy and the cause of major life-threatening diseases. The British were further discomforted by their reluctance to adapt their lifestyle to the prevalent climatic conditions by means of appropriate clothing, diet and building construction. Locations were sought for sanatoriums for the convalescence of military and administrative staff as well as for boarding schools. The sites were chosen based on various factors; altitude, climate, accessibility from administrative centres, views and possibilities for recreational activities and in certain circumstances locations that were strategic for military purposes. On signing the Treaty of Segoulie in 1816, large tracts of land along the Himalayan foothills were brought under the domain of the British leading to the establishment of a series of hill stations during the nineteenth century.

This land encompassing the Darjeeling Hills, had been

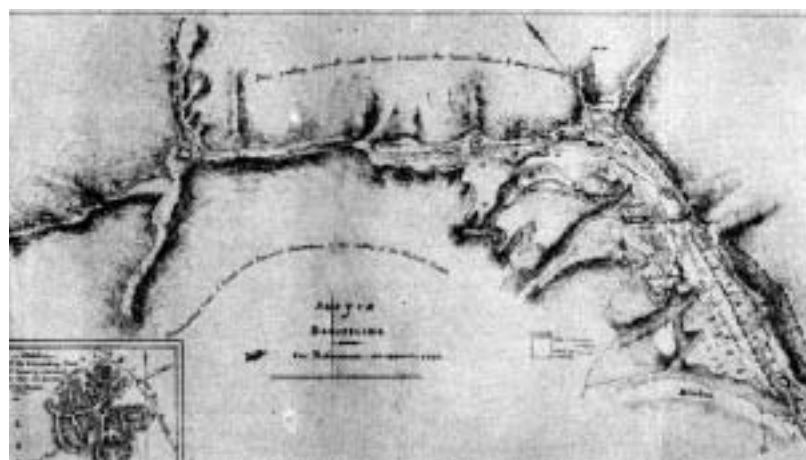


restored to Sikkim by the Treaty of Titalya in 1817. However, Captain Lloyd presented the East India Company with a somewhat questionable deed of grant signed by the Chogyal of Sikkim dated, February 1, 1835 for the unconditional cession of the tract of land 36 kilometres long and 7.5 to 9 kilometres wide encompassing Darjeeling. The area was again surveyed by Captain Lloyd and Dr. Chapman during 1836 – 37. “The Court of Directors (of the East India Company) approved the project, on the ground that it might prove a valuable depot for the temporary reception of European recruits, and even a permanent cantonment for a European regiment.” (O’Malley, 1907, pp. 20,21) In 1850, after further conflicts with Sikkim, the area south of the Ramman river and between the Nepalese border and the Teesta was officially confiscated from Sikkim. In 1865, the Duars was annexed from Bhutan and Kalimpong was added to Darjeeling district in 1866.

#### GROWTH OF THE SETTLEMENT

The settlement was developed from 1835 to 1881. When Captain Lloyd and Dr Chapman visited the old Gorkha Station of ‘Darjeeling’ in 1829, “all they found was some huts recently erected by the Raja of Sikkim... Darjeeling itself, though formally occupied by a large village and the residence of one of the principal Kazis, was deserted, and the country round it was sparsely inhabited...” (O’Malley, 1907, p.20) However other accounts observe “the village of Darjeeling consisted of a monastery on Observatory Hill around which clustered a few huts with a population of about 100 souls”. (Dozey, 1922, pp.37-38) The terrain creates a Y shaped ridge with the focal point being Observatory Hill what is today known as Mahakal Dara. This was the location of a former Buddhist monastery which was then converted to a Shaivite temple when the Gorkha army conquered the area. As per the research carried out by N P Subba this is also where the fusion of the Buddhist and Hindu names ‘*Dorje*’ and ‘*Linga*’ originated from. (Previous interpretations suggest that Darjeeling means ‘*the Land of the Thunderbolt*’ however ‘*Ling*’ is not found in the vocabulary of any of the local languages). Slightly further along the ridge towards the northwest was where the old Gorkha station was located. (Subba, 2005)

As soon as the decision was taken to adopt Darjeeling as a sanatorium, Captain Lloyd was appointed ‘Local Agent’ with power to deal with the applications for land which soon began to pour in from the residents of



Sketch Map 1941 (Penn, 1986 p.24)



Darjeeling 1852 (Penn, 1986 Frontispiece)

Calcutta, and the new settlement progressed rapidly”. (O’Malley, 1907, p.21) In 1839, the post of local agent was scrapped and Dr Campbell, previous British Resident in Nepal, was appointed first superintendant of the hill station. The same year Lieutenant Napier of the Royal Engineers “was deputed to lay out the town and construct a hill road which would connect at Siliguri with the Grand Trunk Road.” (Dozey, 1922, p.3) The first road constructed between 1839 and 1842 was aligned from Punkhabari, to Kurseong and over Senchal Ridge to Ghoom, before descending along the spur to Darjeeling ending at Chowrasta.

By 1840, the roads around the hill station were completed, which included the present day Alubari Road, Gandhi Road - INA Bypass and Birch Hill roads. Dr Campbell started his first experiments with planting tea in 1841. Between 1839 and 1849, the



*St. Andrews Church constructed in 1870*

population rose from about 100 to 10,000. By 1852 “an excellent sanitarium has been established for troops and others a Hill Corps has been established for the maintenance of order and improvement of communications, no less than 70 European houses have been built, with a bazaar, jail, and buildings for the accommodation of the sick in the depot.” (O’Malley, 1907, p.22) In 1846, Irish nuns established Loreto Convent, then at Birch Hill.

In 1850, the remaining portions of the area between the Teesta and the Nepali border was confiscated by the British. In the same year, the Darjeeling Municipality was constituted and the first administrative rules and laws put into place. The Municipality originally constituted the whole area then ceded by Sikkim, which was approximately 357 square kilometres. This was then changed to an area of approximately 12.56 square kilometres extending along the ridge from Jore Bungalow to St. Joseph’s college. (O’Malley, 1907, p.165). The existing Pankhabari and Old Military Roads were not considered adequate and for the development of Darjeeling and improvement of trade, the construction of the Darjeeling Cart Road was begun in 1861. At the time, hill schools were being advocated and in 1864, St. Paul’s School was transferred from Calcutta to Darjeeling. The tea industry was established, “companies were formed, until in 1866 there were no less than 39 gardens with over 10,000 acres under tea and a turnover of nearly half a million pounds.” (O’Malley, 1907, p.28)

After 1866, with the new treaty with Sikkim and the annexation of the east bank of the Teesta, stability ensued bringing about accelerated growth. The



*The Railway station at Darjeeling constructed in 1944  
(Collection N.P. Subba)*

construction of the Darjeeling Cart Road encountered numerous difficulties. The entire stretch from Siliguri to Darjeeling was completed by 1869. The Darjeeling Cart Road was a feat of engineering; considering that the 7.60 metres wide (average), 78.4 kilometres long road had a ruling gradient of 1:31. This led to further improvements of the town with various important structures being constructed; the old Cemetery and the Jail in 1865, Jalapahar Cantonments in 1867, Planters Club (at the present day Thorn Cottage) in 1868, Union Chapel in 1869, St. Andrew’s Church in 1870 (on the site of the first Church built in 1843), the Government House (then known as the Shrubbery) in 1879 and Bhutia Busty Monasteries in 1879. Parks and gardens were also laid out; Birch Hill Park in 1877 and Lloyd’s Botanical Gardens in 1878. There was also rapid extension of the tea industry and the establishment of cinchona cultivation and the manufacture of *cinchona febrifuge* or quinine the prevalent cure for malaria, which was distributed at an affordable price. The Darjeeling Improvement Fund was constituted in 1868, which included a grant for the Darjeeling Town Improvement Fund. (O’Malley, 1907, p.157) These funds were used for running public services, the upkeep of parks and gardens and general beautification of the town.

Forest conservancy was introduced in 1862. Early British prospectors into Darjeeling found the hillsides covered from summit to base with virgin forests, which rapidly disappeared as the hillside was cleared for development. But with the advent of forest conservancy, all felling within a radius of five miles from the centre of the town was stopped and the crop regenerated by planting the quick growing *Cryptomeria japonica*, which now predominates the

vegetation of Darjeeling. The introduction of this alien species was chiefly due to timber and it also had an aesthetic value for the British. Unfortunately, this species became a monoculture; the needles cause acidification of the soil, minimising undergrowth and exposing the topsoil to erosion.

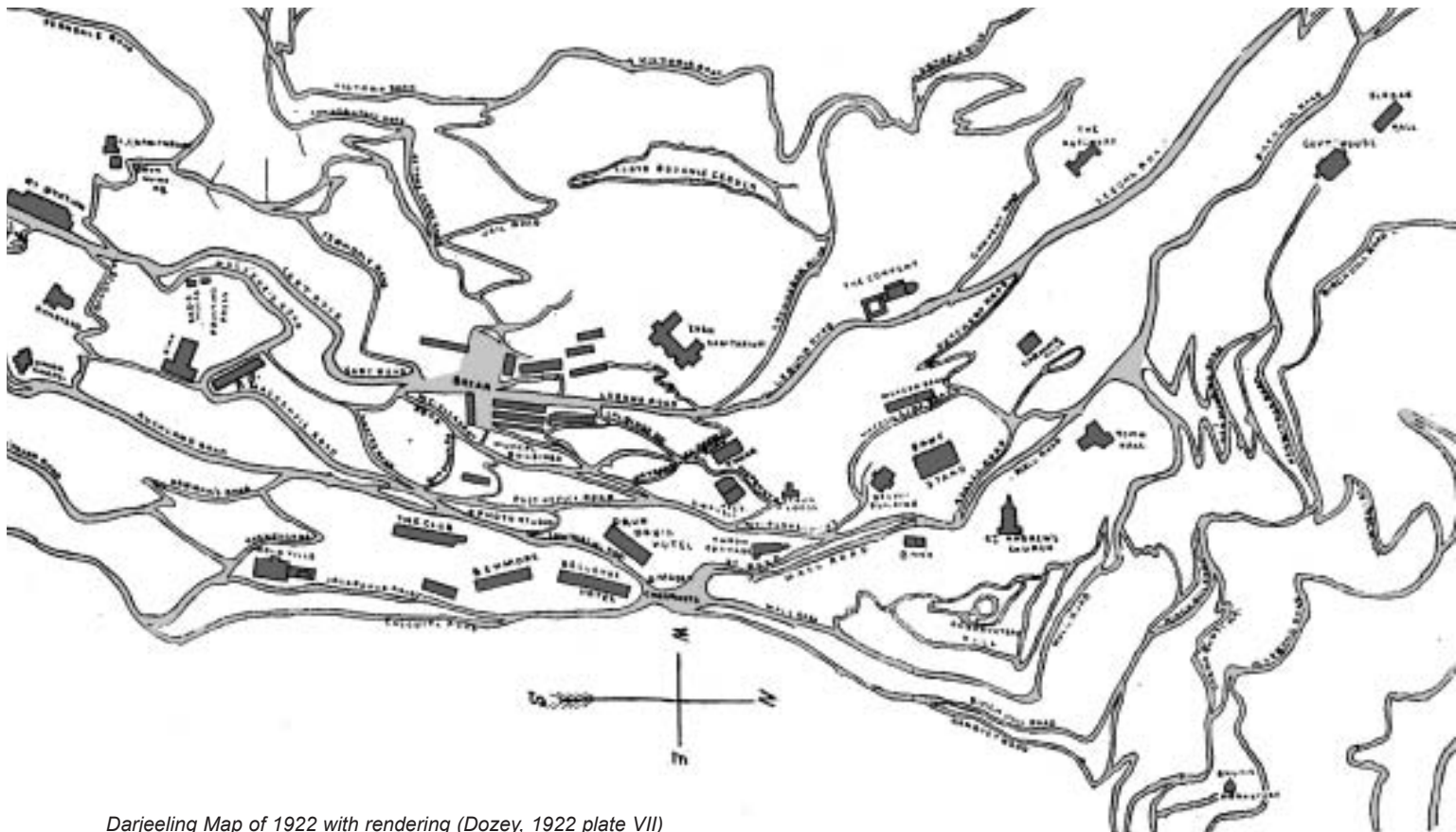
The socio-economic growth of Darjeeling town and the surrounding tea estates demanded better communication and transportation infrastructure. The suggestion soon arose of building a 'tramway' from the plains to the hill station, using principally the alignment of the recently completed Cart Road. The Darjeeling Himalayan Railway was constructed between 1879 and 1881, heralding the forthcoming 'golden years' of Darjeeling.

#### THE GOLDEN YEARS FROM 1881 TO 1934

Darjeeling was now a well organised municipality with good road and railway connections to the plains. The main structure of the town was defined with a well laid out road network. By the end of the century, the infrastructure was further improved and expanded with the construction of the Lebong Cart Road,

Mackenzie Road (present day Laden la Road), and the widening of the Chowrasta and erection of the old Bandstand. According to the 1901 census, the population had increased to 16,942. "An enumeration carried out in the preceding September showed, however, a population of 23,852 or 50 percent more than in the cold-weather months, the difference being due to the fact that, during the hot weather and rainy months, Darjeeling is the head-quarters of the Bengal Government, and is crowded with visitors who escape to its cool bracing climate from the stifling heat of the plains". (O'Malley, 1907, p.185) Some of the important buildings that were constructed during this period were Railway Station (reconstructed in the 1940's), Eden Sanatorium (the front wing still remains) in 1883, Lewis Jubilee Sanatorium in 1887, St Joseph's College at North Point in 1892, Kutchery in 1897, Bengal Secretariat Office in 1898, Rink theatre in 1900, and the Victoria Hospital (present day Sadar Hospital) in 1903. The power station at Sidrabong was constructed introducing electric lighting to Darjeeling.

The increased human intrusion into the fragile environment and unstable geological setting exposed



*Darjeeling Map of 1922 with rendering (Dozey, 1922 plate VII)*





*The Planter's Club with extension constructed in the 1920s*

Darjeeling to even greater threats of natural disasters. The cyclone of 1899 and resulting landslides caused extensive damage and a large number of deaths. A committee was formed to investigate the cause of the disaster. "In their report the Committee showed clearly that the landslips were confined to the soil-cap, and that there was no reason to entertain any apprehension as to the stability of the site of the station, which is founded on massive rock and is thus secure". (O'Malley, 1907, p.107) This resulted in the implementation of extensive protective works and a comprehensive set of building provisions in the form of the Darjeeling Municipal Act of 1900. "Up to that time, the municipal law in force in Darjeeling was the ordinary Municipal Act, III (B.C.) of 1884, which had been framed with reference to the requirements of towns in the plains, and was in many ways unsuitable to the circumstances of a town situated on a steep hillside." (O'Malley, 1907, p.165) The new Act gave the Municipalities full authority to take required measures to ensure the safety of the town. This included the construction, maintenance and repair of roads, revetments and retaining walls, drains and buildings. In extreme cases, the municipality had the authority to remove buildings that could be a threat to the stability of the hillside.

By 1921, Darjeeling was renowned as the Queen of the Hill Stations and the town was planned for a population of about 20,000. Due to the fragile environment, the British authorities felt the need to appoint an engineer for the post of Municipal Chairman - the first one in India. The population had by now stabilised and the town had a water supply



*Municipal market with Eden Hospital in the fog*

scheme with the completion of the North Lake at Senchel. The town of Darjeeling was supplied with water from 26 springs in the Senchel Catchment Area, which collected in the large lake from where the conduit lines conveyed the water to the reservoirs established at St. Paul's School and Rockville. The Darjeeling Protection Committee and District Board (1922) were constituted. The town acquired further important additions in the form of buildings and public services; Imperial Bank (present day State Bank), Small Pox Hospital (present day I D Hospital at Happy Valley) in 1914, Natural History Museum within the Botanical Gardens, Hotel Mt Everest and Bloomfield Barracks in 1915, the Town Hall and new Municipal Offices in 1921. Further recreational facilities were established such as the Golf Links at Senchal in 1905 and Pleasance (present day Gorkha Rangamanch Bhavan) in 1909. The 1920's brought with it a series of modern buildings such as Keverters and the extension to the Planter's Club.

The idyllic image of the hill stations must, of course, also be seen within the overall perspective of these settlements being created to cater to the 'Europeans'. Segregation; between the 'whites' and the 'natives' was infused not only in the social norms, but also in the physical planning of the hill stations. The ridge and upper parts of the slope were layout with generous roads, parks and public facilities. The Bazaar was laid out at a lower level, where the local population lived in a more congested environment.

THE CHALLENGED TOWN BETWEEN 1934  
AND 1999



*The 1956 Cadastral Map of Central Darjeeling*

The great earthquake of 1934 which caused extensive damage throughout the town seemed to be a premonition for a gradual decline of Darjeeling. The growth in population outstripped the development of urban services and infrastructure putting an ever growing strain on the functioning of the town. This was further aggravated by the increasing mass tourism with low spending capacity, creating a floating population of more than 50 percent. There was no corresponding improvement on the state of urban infrastructure, except for the addition of Sindhap Lake at Senchel. This was followed by haphazard construction in inappropriate and risky areas, destroying the character of the town. With the town being confined by forests and tea estates, it could only expand along the highways and by encroaching on the remaining open spaces and natural *jhoras* (drainage).



*Structure of Darjeeling Town (rendered on Google Earth image)*

The strain on the environment led to numerous major landslides with heavy loss of life and property. The 1950 landslide brought about the total breakdown of water and electricity supply. The 1968 landslide was responsible for the loss of 677 lives, further destroying municipal infrastructure. Similar disasters in 1980, 1984, 1988, 1991, 1993 and 1997 showed a recurring picture of loss of life and property as well as the disruption of essential services. The Darjeeling hills also experienced a decade long debilitating political unrest which greatly affected development and controlled growth. After independence in 1947, Darjeeling district was integrated into the state of West Bengal. After 1950, thousands of Tibetan refugees settled in and around Darjeeling. Various factors led to the growing demand for a separate state, which debilitated Darjeeling during most of the 1980's.



*Landslide that demolished part of the Locomotive Shed in July 2007*



*The Leborg Spur flanked by Tea Estates*

Pressures subsided with the formation of the Darjeeling Gorkha Autonomous Hill Council in 1988.

However, under the veil of chaotic growth and increasing environmental degradation, the underlying beauty and mystery of Darjeeling is still apparent. The evident degeneration of Darjeeling, both physically as well as functionally, led to various initiatives towards the end of the millennium. One such event was the workshop in December 1997; 'Darjeeling: Past, Present and Future' which was the catalyst for a series of initiatives to improve Darjeeling. The workshop and exhibition 'Darjeeling: Past, Present and Future' which was organised in collaboration with the Government of West Bengal, Darjeeling Gorkha Hill Council and Darjeeling Municipality, led to a resolution with ten main objectives. The objectives focus on surveying and mapping the status of potentials of Darjeeling in respect to its environment, culture, urban landscape, services and setting up the required institutional framework to coordinate at all levels of authority. The

workshops also initiated the discussions on inscribing the Darjeeling Himalayan Railway on the List of World Heritage, which came about in 1999. The workshop moreover led to the preparation of a supplement to the West Bengal Municipal (Building) Rules: Development Control Regulations for Municipalities in the Darjeeling Hill Areas. These were some of the activities that gave Darjeeling an optimistic drive to move into the new millennium

#### THE NEW MILLENNIUM

The history and socio-economic development of Darjeeling is closely linked to its environmental setting and transportation links. The location of the hill station allowed it to develop as a sanatorium and centre for quality education. The forests and tea estates that now restrain the town in all directions were the basis for its economic growth. Socio-economic growth in this remote location was, however, only possible with good accessibility achieved by means of the Darjeeling Cart Road and the Darjeeling Himalayan Railway.

Darjeeling town sprawls along a ridge at an elevation just over 2000 metres overlooking the spectacular view of the world's third highest peak: Mount Kanchenjunga (8591 metres). The Darjeeling – Jalapahar range originates in the south from Jore Bungalow / Ghum, extending along the ridge up to Mahakal Dara. Here the ridge bifurcates, to the north-east towards Leborg and to the north-west towards North Point. Though initially situated principally on the western flank of the range, the town now sprawls over and along the ridges and the access roads. According to the 1991 census, the population of Darjeeling Municipality was 73,062 the majority of ethnic Nepali background, with an added floating population of 30,000 per year which included tourists, students and service people. The population as per the 2001 census had climbed up to 107,530, a 47.18 percent increase.

#### THE CHALLENGES

The main challenge for Darjeeling is to maintain the balance with its fragile environment. The mountains along Himalayas are young, which is reason for the intermittent tectonic movement and unstable geological structure. The annual total rainfall in Darjeeling town fluctuates between 1870-3690 millimetres. Long duration along with heavy down pour may cause deeper infiltration and overland flow, which ultimately may result into the





*Darjeeling Town Hall gutted by fire in 1996*

occurrence of landslides on weaker slopes.

The fragile and volatile environment is easily pressurised by human activities. Darjeeling town is spatially confined by its natural setting and surrounding forests and tea estates. Rapid urbanisation and growth in population has therefore led to increased density and construction activities in risky zones; fault lines, previous landslide locations, steep slopes and encroaching on natural drains and *jhoras*. The major portions of the forests are today found at elevations of 2000 metres and above. The area between 1000 and 2000 metres was cleared either for tea plantation or cultivation. The forest cover itself is in a precarious state, leading not only to the destabilisation of the land due to high surface runoff, but also to the drying up of streams and aquifers during most of the year.

The construction and upkeep of infrastructure and services in such an extremely fragile environment is a daunting task. The town and its infrastructure had been planned for a population of 20,000. However, today it has to deal with five times the number. The water supply, sewerage and drainage, solid waste disposal

and even the electricity supply are stretched to their limits and in many instances have collapsed.

#### CONSERVATION

Darjeeling's future depends on development through conservation of its cultural and natural heritage. The character of the town is constantly changing, regrettably with the loss of historic buildings, streetscapes and public spaces. The rise of building on open spaces like in Albert Park, Victoria Park, and encroachments on Donovan Park has stripped the town of its much needed open spaces and greenery. Historic buildings are still being raised to give way to concrete structures; the most recent being the loss of the Rink Theatre to a gigantic commercial building.

However, over the past decade, several examples of this struggle have been noticed and efforts made to preserve prominent landmarks of the town that were on the verge of disappearing.

*Town Hall:* The foundation stone of the Town Hall was laid in 1917 and the building was completed in 1921. A fire gutted the stone structure of the Town Hall in 1996 and plans were already hatched to fully demolish and construct a new town hall. However it was possible to stop this process and a concrete structure was cast into the massive stone shell of the historic building. Though, there is a modern internal structure, the external structure of the building is still authentic.

*Eden Hospital:* The Eden Sanatorium was opened in 1883. A World Bank funded project planned to upgrade and enlarge Eden Hospital. The original plans were to demolish the historic building to make place for a completely new structure. Concerned citizens



*Eden Hospital before the expansion project*



*The Darjeeling Himalayan Railway inscribed on the List of World Heritage in 1999*

reacted to this plan and it was possible to save at least the front wing of the historic building.

*Darjeeling Himalayan Railway:* The most prominent example of a cultural heritage property that was saved as it was on the brink of being shut down was the inscription of the Darjeeling Himalayan Railway on the List of World Heritage.

The supplement to the West Bengal Municipal (Building) Rules: Development Control Regulations for Municipalities in the Darjeeling Hill Areas which was prepared in 1998 makes provisions under article 4.7.5 for the preservation of Listed Heritage Buildings

and Conservation Areas. However, in practice, Heritage Buildings have not been listed and are not protected. The dramatic economic advances of the past decade have been driven in part by a culture of materialism, and accelerated growth seems to be a universally accepted goal. But as environmental activist Edward Abbey once said, “Growth for the sake of growth is the ideology of the cancer cell”. In future, Darjeeling will have to focus on the quality of growth, and this quality lies in its heritage.

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# Calcutta

## A case of colonial planning

MONIDEEP CHATTOPADHYAY

### ABSTRACT

*Being a little over three hundred years old, the city of Calcutta does not offer much lessons in traditional Indian town planning. Nevertheless, it offers graphic portrayal of a metropolis rising from marshes, thereby transforming three villages comprising of 1,692 acres only in 1707, into a giant urban agglomeration of 253,488 acres in 2001. During this metamorphosis, Calcutta experienced some of the best planning initiatives representative of the Colonial era. Two such initiatives; one under the Lottery Committee in the early part of nineteenth century and the other under the Calcutta Improvement Trust, in the first half of the twentieth century, are presented here to emphasise the significance of the historic urban planning in the city.*

### INTRODUCTION

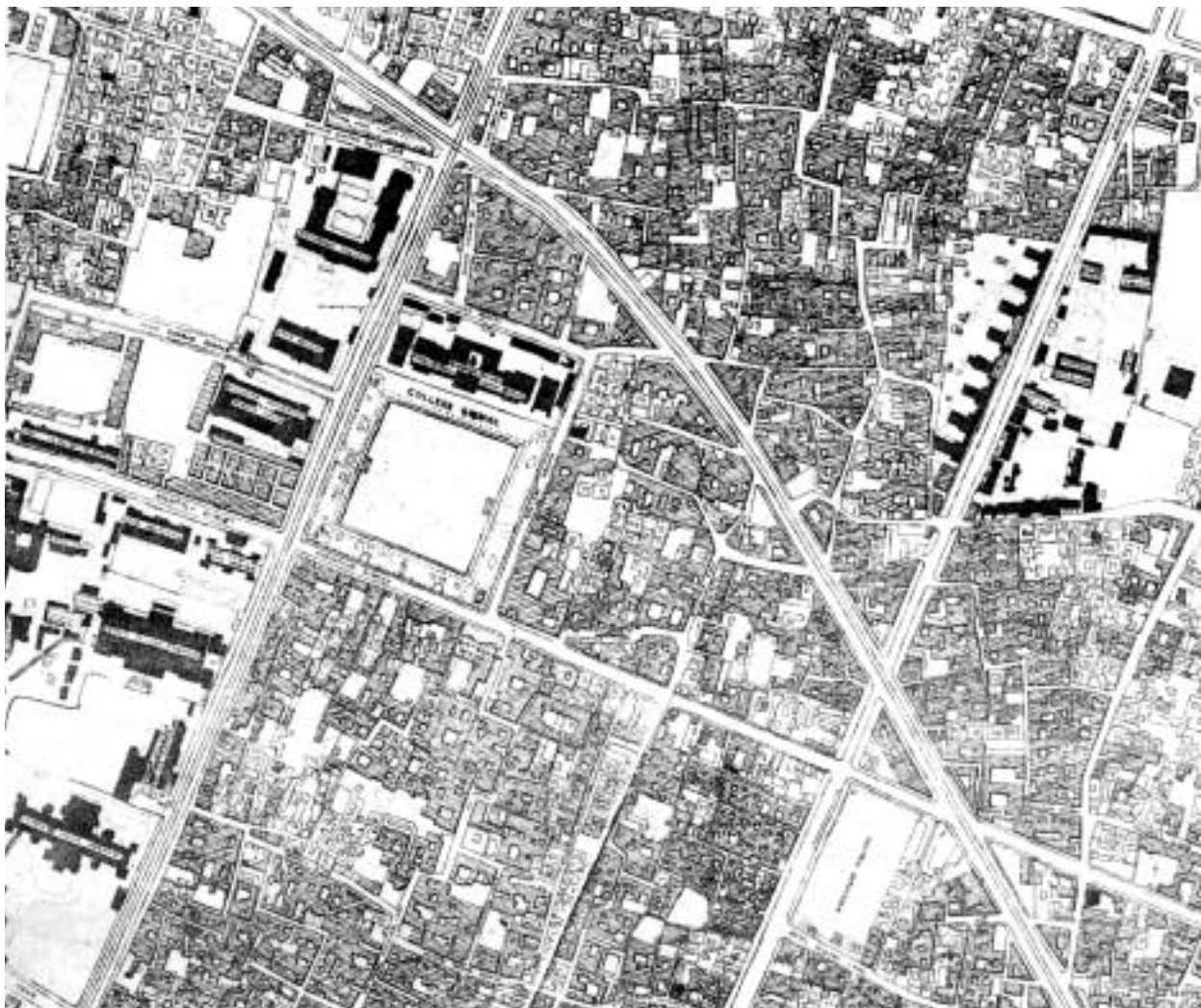
Calcutta's (now named Kolkata) town planning history could be traced back to the early part of the nineteenth century, while the origin of the settlement may be attributed to the middle of the seventeenth century. During this early period, traders of Saptagram (a port-city on the upstream of river Hooghly, at the confluence of river Saraswati, now

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*A view of Old Fort Ghat on River Hooghly (Views of Calcutta by W and T Daniells, 1787)*



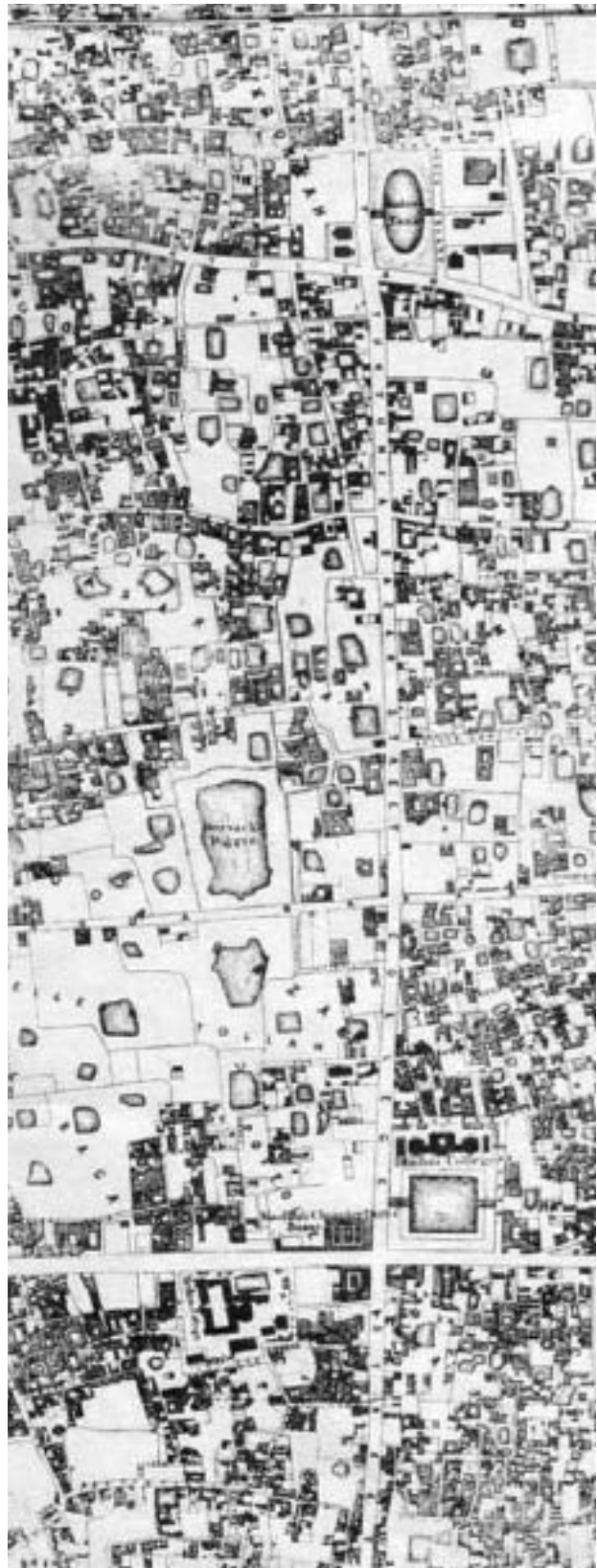
*(From a map of 1910) showing Presidency College on north-west and medical college on south-west*

defunct) began to seek fresh markets as their original seat declined owing to the caprices of the river. A few families of *Sheths* and *Bysaks* moved southward nearer to the sea-route to Bay of Bengal and founded the village of Gobindapur on the east bank of the river Hooghly, named after the Sheths' deity Gobindaji. They proceeded to set up the *Sutanati Hat* (or cotton and yarn market) northwards by the side of Sutanati Ghat. In between Sutanati and Gobindapur was the lesser settlement of Kalikata. These three villages became the site of the original British holdings that grew into the city of Calcutta. The right of renting these three villages was granted to the British East India Company by the Sabarna Roychoudhuri family of Barisha-Behala, who were holding the *zamindari* (land ownership) rights of the area, on 10<sup>th</sup> November, 1698 for Rs.1300 only. The Company paid regular rent to the Mughals for these villages till 1757 AD when the Battle of Palassy was fought and the Nawab of Bengal was defeated by Lord Clive of the East India Company. The extent of the settlement, as mentioned in a survey in 1707 AD, was only 5,077 *bighas* or 1692 acres. Only 280.6 acres ( 16.6 percent ) of this was somewhat inhabited and might be called as semi-urban, the remaining 1,411.4 acres was rural, having plantations and even paddy fields. This is depicted by Upjohn in the map of 'Calcutta and its Environs', based on an accurate survey taken in 1792 - 1793 AD. There were no signs of planned development in the original settlement as evident in the observation made by Mrs. Kindersley in June 1766, ".... it is as awkward a place as can be conceived; and so irregular that it looks as if all the houses had been thrown up in the air, and fallen down again by an accident as they now stand. People keep constantly building; ....without any regard to the beauty or regularity of the town".

It is amazing that in around three hundred years, this unassuming settlement developed into a massive conurbation, the Calcutta Urban Agglomeration, covering 253,488 acres and holding population size of 13.22 million by 2001.

#### ORDERLY GROWTH OF THE TOWN AND SUBURBS: THE EARLY ATTEMPTS

For the initiation of any kind of architecture and town planning policy for the settlement that was called Calcutta which became 'seat of supreme authority in India' during the period of the Marquise of Wellesley, Governor-General of India from 1798 AD to 1805 AD, one has to wait for his celebrated Minutes of 16 June,



College street Axis showing college square on the south and Azad Hind bagh on the north (From a map of 1860)



1803 which gave new direction to development of the settlement. It was indeed a historic document evincing the British Government's first genuine concern for the ordered development of the settlement and setting into motion the actual course of planning and development over the major part of the nineteenth century. The Minutes proclaimed:

"It is primary duty of Government to provide for the health, safety and convenience of the inhabitants of this great town, by establishing a comprehensive system for the improvement of the roads, streets, public drains, and water courses; and by fixing permanent rules for the construction and distribution of the houses and public edifices, and for the regulation of nuisances of every kind."

Wellesley, thereafter, proposed a committee of thirty members and invested them with ten specific tasks. Four related to the survey, resuscitation and maintenance of 'drains and water courses', and others to the burial grounds; to the markets and slaughter houses; to 'all existing nuisances' and how to remove them; to a survey for new roads; and to any other 'plans and regulations' that the committee might suggest. Lord Wellesley thus initiated the development process for the city, with part commitment of fund from the government and other portion by raising fund through lottery.

#### THE TOWN IMPROVEMENT COMMITTEE

As the Minutes directed, the Town Improvement Committee was set up – also known as Lottery Committee from its chief means of obtaining funds.



*The New Court House (Views of Calcutta 1787)*

Over a period of thirty years up to 1836, the committee gave Calcutta its first taste of town planning and improvement in accordance with the best canons of contemporary Europe.

The finest application of colonial planning was the creation of a great central road (average twenty three metres wide) running north to south through the entire length of the city forming a grand axis of the town, which was flanked by grandiose squares having large water reservoirs, often located at the intersection of the east-west arterial roads. Thus there came into being, from north to south, Cornwallis Street (now Bidhan Sarani), College Street and Wellington Street (flanked by College Square and Wellington Square respectively), and Wellesley Street (now Rafi Ahmed Kidwai Road). It may be argued that the Bengal Renaissance found its expression on this first planned axis, through the imposing architecture of public and private buildings alongside these streets. Many of those buildings still exist : Bethune College (first girls' college), Scottish Church College, around public swimming pool and club called Hedua Square (now Azad Hind Bag) and then Brahmo Samaj Mandir, the Star Theatre, (which has been rebuilt recently) and other theatres.

A unique institutional hub was created surrounding the College Square, where Calcutta University Senate Hall (since demolished) once stood with its imposing Doric columns. The Sanskrit College, where renowned scholar Vidyasagar used to teach, was located on its north with Calcutta Medical College on its southwest and Presidency College on its northwest. The Coffee House was located across the street with Calcutta University Institute and Mahabodhi Society on its east. Swami Vivekananda's Ancestral House and Cultural Centre was recently added on this axis. This entire development along the axis constitutes the unique urban heritage of the city which needs to be preserved.

This new axial route was planned to relieve the traditional north-south route along Chitpur Road, the old pilgrim's path to Kalighat Temple in the south. While Chitpur Road was flanked by temples and mansions, the new axis was chiefly adorned with planned public places embodying the new ethos of the city. This nineteenth century 'Renaissance' reverberation in the city acted as epicentre of Bengal upsurge. Moreover, the axial road also adapted European town-planning practice to Indian conditions. For example, ever since the Renaissance, European town planning had incorporated squares which were





*Calcutta and its Environs by Upjohn, 1792*

essentially public parks, sometimes with tall monuments and pavements around. In Calcutta, these planned squares were accommodated with tanks, admirably suited to the demands of local climate, hygiene and recreation. The model was probably set at the beginning of the settlement by the formation of the Tank Square, later known as Dalhousie Square (now Binoy-Badal-Dinesh Bag) in the centre of the original European town and it is the hub of city's commerce and administration till date. These two hubs namely, Tank Square and College Square are part of the unique urban heritage of Calcutta.

#### SYSTEMATIC PLANNING EFFORT BY CALCUTTA IMPROVEMENT TRUST

The creation of the Calcutta Improvement Trust (CIT), under the Calcutta Improvement Act of 1911 on 2<sup>nd</sup> January 1912, marked a clear watershed in the development of Calcutta that was otherwise devoid of any operative planning policy. Although the formation of CIT almost coincided with the shifting of the Capital of British India from Calcutta to New Delhi, nonetheless, it ushered a new era of planned development of the city with limited resources, responses and commitment from the authorities.

The creation of CIT may also be considered as a fallout of the out-break of epidemic plague in Calcutta that alarmed the Government regarding the health problems of the city and particularly, its congested parts. A special plague commission was appointed in October 1886. The following year another commission was set up to report on building bye-laws and the best means of opening out congested areas. The outlines of a scheme to open the congested north Calcutta was first made public in April, 1903. But, in the meantime, the experience of Bombay having Bombay Improvement Act 1898, influenced the events in Bengal which culminated in the enactment of Calcutta Improvement Act, 1911. The object of the enactment of the Act was to provide for the improvement and expansion of Calcutta in an orderly manner by constituting a Board of Trustees, empowered to undertake schemes in order to safeguard the health of the inhabitants of the localities affected (by the epidemic of plague) or to provide building sites, remedy defective ventilation or improve the means of communication or facilities of conservancy.

In line with above objectives, E P Richards, who joined as Chief Engineer to the Trust, published the first planning report for the city, under the title,



*Tank Square, 1910, showing Governor's house in the south and Writer's Building*

'Report on the Condition, Improvement and Town Planning of the City of Calcutta and Contiguous Areas', from England in 1914. This report proved a historic benchmark in initiating the planning process for the city. The report derived benefits from the European town-planning thoughts emerging in the early twentieth century.

In the next forty years or so, after the presentation of Richards' Report, the Trust carried out more than hundred schemes of road improvement, area development, slum-rehousing, parks and playgrounds and made a heroic effort in improving the situation within the municipal limits. Although the Trust could not open up any major diagonal road, as suggested by Richard, it extended Park Street, improved Shyambazaar Street and created Bhupen Bose Road,

One of the biggest achievement of the Trust in road improvement was the construction of the north-south arterial road parallel to Cornwallis Street-College Street axis, originally called Central Avenue, and latter named as Chittaranjan Avenue which was only north-south corridor wide enough to carry metro rail tunnel underneath. Similarly, in the new area development, Southern Avenue along with Dhakuria Lake (now Rabindra Sarovar) and East Calcutta along with Beliaghata Lake, (now Subhas Sarovar) added new horizon in Calcutta planning and development. No less important was the Area Improvement Programme of Bhawanipore, by which an old residential suburb was upgraded to modern town planning standards. The latest landmark of the Trust is the creation of new civic centres at Ultadanga and Dhakuria, the first of its kind in Calcutta. By the middle of the century, new developments in the political and economic horizon of the country, put the operations of the Trust, completely out of gear and, of course, out of finance. Its capability to carry out viable schemes was further restricted due to lack of patronage from the present policy makers. Finally, with the emergence of the Calcutta Metropolitan Development Authority (CMDA) during 1970's, CIT was overshadowed and ultimately overpowered and in the process one of the finest apparatus of planning in Calcutta was forsaken forever.

## CONCLUSION

Activities of CIT through several decades reflect meticulous planning process in detailed scheme formulation for the city, where even the 'conservative surgery' concept of Patrick Geddes (who came to India in 1914 and prepared nearly fifty town planning reports) found expression. Unfortunately, the era of meticulous, socially sensitive planning process has gone into oblivion. One way of preserving our planning heritage could be the revival of such planning processes where man, society and environment together strive towards a sustainable future.

## Acknowledgements

- All images are sourced from Archer, 1980, Cotton, 1990 and Ray, 1991.

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# Corbusier's Chandigarh

## Urban planning and legislation

KIRAN JOSHI

### ABSTRACT

*Built to compensate the post-partition 'loss' of Lahore, India's modern city of Chandigarh was conceived as a material symbol of the new republic's socialist agenda and a utopia "... that would serve as a model in city planning for the nation, if not the world." Among the various tools devised to translate this dream into reality were a series of architectural controls that defined volumes, façades, materials, textures, fenestration — even boundary walls and gates. These legislative measures, which constitute the primary source of Chandigarh's distinctive urban image, were based as much on the post-colonial Indian interpretation of modernisation as on the exigencies of the situation. As Chandigarh grows and grapples with forces of urban transformation, questions are also being raised about the present-day relevance of its original controls.*

### INTRODUCTION

One of the most important developmental schemes planned on India's independence was the building of Chandigarh — a new capital for its truncated Punjab Province — a symbolic gesture towards the country's

Kiran Joshi, architect, has been working since 1997 on identification, promotion and conservation of Chandigarh. Has lectured extensively on the subject, has authored several articles, papers and four books on various aspects of the architectural heritage of the city.



future course in history, a utopia representative of a democratic social order, fresh notions of urban living and an appropriate aesthetic idiom. The extraordinary circumstances of the enterprise triggered a truly outstanding urban landscape, regulated by an extensive range of development laws, continues to retain its potency to this day.

One of Le-Corbusier's earliest letters, dated 24 April 1951, to the Chief Administrator, Chandigarh Capital Project, mentions his preoccupation with "a study of building profiles aimed at regulating the totality of constructions of the city from the most rudimentary house to the palace." Thus, the most important tool devised to control the new city's urban form was an extensive series of 'Architectural Controls' that prescribed volumes, facades, materials, textures, fenestration, and, even boundary walls and gates. Projecting the idealistic aesthetic, and social order enshrined in the city's manifesto, their formal vocabulary depended as much on the architects' interpretation of available technology and local climate.

The article introduces this largely unknown but, nevertheless, the primary source of the city's unique modernist identity. Tracing the original forms of various aesthetic controls in Chandigarh, an attempt is also made to assess their current value vis-à-vis complex urban transformations and the city's potential role as a World Heritage property.

#### THE CONTEXT

The prime-enabling factor for creating a new modernist town *ex nihilo* was the resolute support of Prime Minister Nehru as also his vision of a future "unfettered by traditions of the past." The entire mood of the time was to construct a better future, create a "...model in city planning for the nation, if not the world". Noteworthy is Le Corbusier's fervent advocacy of Chandigarh as an "enterprise whose value will soon be proclaimed all over the world," a realisation of "new techniques, new architecture, new art of life," and "a landmark in modern times." (Corbusier, 1953, 1957, April 1958)

#### *The Master Plan*

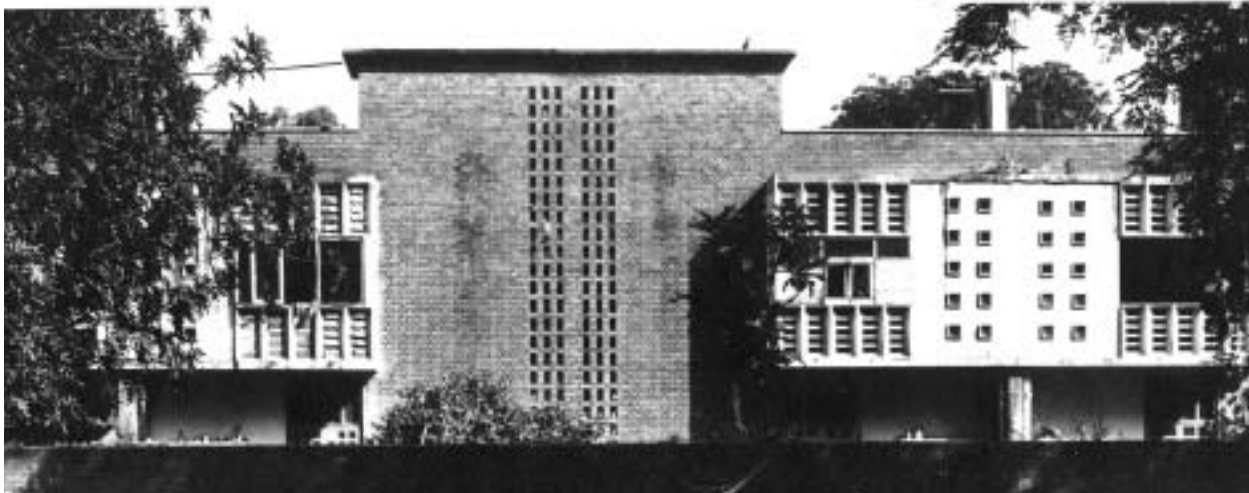
Chandigarh's aesthetic image is primarily drawn from Le Corbusier's Master Plan. The city, thus, comes across as a well-ordered matrix of the generic, 800 x 1200 metres 'Sector' and the hierarchical circulation

resulting from Le Corbusier's rule of the 7Vs. (The network of vertical roads, a circulatory system, comprising of seven different roads.) (Corbusier, 1961) The extent of the city, distribution of its major functions and the resulting accents in its urban matrix (such as the Capitol, the City Centre) were determined by the physical attributes of the site. Connecting these accents, were the V2s, of which the Jan Marg ('People's Avenue') was designed as the ceremonial approach to the Capitol. The second V2, Madhya Marg ('Middle Avenue') cuts across the city, connecting the railway station and the Industrial Area to the University. The 'Sector' itself was a self-sufficient, introverted unit, making contact with the surrounding fast traffic roads (V3s) at four specified points. Meandering bazaar streets (V4s), running northwest-southeast, string them together.

Recognising the aesthetic role of trees in urban design, a comprehensive plantation scheme was also devised in order to establish appropriate patterns of greenery throughout the city. The V2 and V3 roads were considered in relation to their function as arteries for fast moving traffic, and the foliage pattern was planned in accordance with varying sun conditions. The V4s or shopping streets were intended to convey an individual quality of urban liveliness. To give a separate character to these streets, each V4 would be planted with a different color of flowering trees, as well as with other trees. 'The Trees Preservation Order, 1952' regulates, restricts or prohibits the cutting down, topping, lopping or willful destruction of trees, and monitors the planting and replanting of any trees or kinds of trees in any site or location. The object of preventing unsolicited urban sprawl and defining the city limits led to the formulation of the 'Periphery' — a protected green belt of 16 kilometres radius around the Master Plan Area — and the notification of the "Punjab New Capital (Periphery) Control Act, 1952". The stage was set for the idyllic "...park wherein one does not see the automobile, where one sees the nature... the only city in the world which has at disposition contact between nature and the working inhabitants..." (Corbusier, 1960)

#### *A Government City*

The next important aspect to set the tone of the city's visual image was its being built primarily as a government city. In the absence of an existing housing stock on the site, speedy construction of housing for all categories of its employees was given the top priority by the Punjab Government, with over 20,000



*House Type 10 in Sector 22 by Maxwell Fry: Derived from constraints of cost, climate and technology, pioneering designs of Government Housing in Chandigarh were the prime determinant of the city's image*

people moving into permanent buildings within the first three years. Designed by Pierre Jeanneret, Maxwell Fry and Jane Drew — the three Senior Architects of the project — the ‘government housing’ was the largest and the most innovative component of the Chandigarh Capital Project and played a very significant role in defining the constructed volume, architectural expression, the urban grain and texture of the city.

The formal determinants of these structures can well be traced to the economic, social and climatic constraints. The most compelling of these was the stringent budget, which dictated choice of locally made bricks as the chief material of construction. Struggle with temperatures and light angles led to devising sun-breakers and *jalīs*. Thus was born the

‘Chandigarh Style’ — an all-pervasive vocabulary of exposed brick and lime-washed plastered walls, sunshades to protect small openings, simple geometric lines and uncluttered massing. The house of the Chief Minister was given the same vocabulary as that of a lowly peon. Division of class in the Chandigarh society was thus obliterated by the common idiom of materials and minimalist designs. As envisaged by the leaders of the new republic, the notion of a utopian classless society was set in motion.

#### THE IDIOM OF THE IMAGE

The urban image of Chandigarh was to be controlled at three levels — the Periphery, the Master Plan, and, the Architectural Controls.<sup>1</sup> The Punjab New Capital (Periphery Control) Act, 1952, the purpose of which



*Shop-cum-Flats in Sector 22 by Jane Drew : Originally built to 'Full Architectural Control' that specified the design of both interiors and facades, shops along the V4 streets have now been permitted modifications within their interiors. façade controls, however, continue to be flouted with impunity.*

was “to prevent the creation of bad semi-urban conditions on city boundaries, ... protect the rural community from degeneration by contact with urban life, and to lead it towards a harmonious partnership ...” and which prohibited the establishment of additional towns and villages in a 16 kilometres agricultural belt around Chandigarh, could never become effective, especially after a further division of Punjab in 1966. (Chandigarh Administration, n.d.) On the other hand, the essence of Le Corbusier’s Master Plan, even in the absence of a prescribed legislative

backing, continues to be adopted without change. It is the ‘Architectural Controls’ that have been most affected by the socio-economic and demographic transformations in the city. These, therefore, are the focus of this article.

#### *Genesis of ‘Architectural Controls’*

It was hoped by the government architects that ‘good taste’ as set forth by them would prevail and ‘good architects’ would settle in Chandigarh to fulfil the





needs of private builders. (Prakash, 1961, p 40) “The ruthless onslaught of speculation and business interests has reduced architecture today to a subsidiary level, exploiting it for advertisement. Due, also, to other complexities of contemporary life, the art of architecture has become disassociated from the art of town design [...] the individual architect regarding his building as an abstract composition, having nothing to do with its surroundings. [...] ...architectural control is, therefore, a foregone conclusion, if these fundamental values in the art of town-design are to be restored to our contemporary cities.” (Prabhawalker, 1961) A variety of aesthetic controls were, thus, introduced in the early years, each for a different size

of plot, building use, etc. These can broadly be considered under larger heads of ‘commercial’ or ‘residential’ areas.

Chandigarh’s commercial areas are of three distinct types – the City Centre (Sector 17), the two major V2s, (Madhya Marg and Jan Marg), and the Bazaar Streets (V4s). All constructions in the City Centre are governed by the ‘System of Construction and Architectural Treatment of Exterior Controls’ that, like the rest of the city, was determined by limitations of economy and technology. A uniform four-storey height and reinforced concrete frame of the most economical bay size (17’-3”) and capable of interior modification was established for all commercial buildings. This was based on the lack of elevators, the size of buildings that most owners were assumed to be able to afford, and the height affording reasonable safety in the event of earthquakes. Around every building block would be a 12’-0” wide compulsory verandah and a unifying exterior pattern of columns and standardised concrete balustrades. Building facades behind the verandahs might be designed according to the desires of the occupant, but again, only according to the established controls. Within the formula set by the architectural controls may be seen a number of variations. The principal boulevards, the two V2s, also presented totally controlled image with punctuated blocks of standardised facades, volumes and heights that were also subject to the same set of controls as the City Centre. A Schematic Design produced by the Capital Project Office governed special buildings such as cinema halls and petrol pumps.

The shops along the Bazaar Street (V4) were built to ‘Full Architectural Control’ requiring construction strictly as per the given design, signage control being an integral part of their façade design. Although some variety is provided from sector to sector, the picture adheres to the basic design established in the early years. “The architects, who had a better sense of the importance of physical environment than the administrators, laid down that the main part of this centre should be...strictly architecturally controlled.” (Drew, 1961) No structure can carry an advertisement except in the areas shown on the Zoning Plan/Architectural Control Sheet/Standard Design. ‘The Advertisement Control Order, 1954’, in general, restricts or regulates the display of advertisements in the city.

Unlike commercial zones, there was little attempt in the early days to control private residential



*All constructions in the City Centre continue to be governed by the 'System of Construction and Architectural Treatment of Exterior Controls'. Exposed concrete surfaces of most verandah balustrades, however, have been used as signboards and advertisement panels.*

construction except through 'zoning plans' and the customary building byelaws. "In order to control the character of development, we have evolved a system of zoning plans upon which are shown graphically the building lines, the building zones, protected areas, trees and so on, and these plans form part of the legal conveyance of the land and are as binding upon freehold owners as are the building by-laws. Certain areas along main roads are subject to architectural controls, but mainly in respect of height and roof, floor levels and choice of materials. We are not great believers in external control of architecture." (Fry, 1953) However, confronted with the unpredictable vagaries of private housing — uneven roof lines, varied patterns of fenestration, overcomplicated form and decoration, application of varicoloured, occasionally raucous external ornament (Evenson, 1966), the desire to develop an apparatus that could prevent visual anarchy in the public domain and ensure realisation of the modernist spirit which the architects had sought to establish began to take root, and, private residential development too came under controls.

The most common regulation here was the Frame Control applied to terraced housing that forms the bulk of the private enterprise. The Frame Control fixes the height and extent of the party walls and a top course connecting these, thus forming a frame. The built portion stays behind the frame, with all external walls of exposed brick, all projections plastered and lime-washed and doors and windows chosen from a specified range. Further conditions prohibiting exposed pipes, visible chimneystacks and water storage tanks, sloping or vaulted roofs, "applied decorations, like crosses, swastikas, names of persons and houses"<sup>2</sup> make the total street a consistently modernist one.

The first private houses to come under control were those along the shopping streets — the key public domain of the Sector. Set against the totally designed facades of shops across the street, they too were placed under the *Full Architectural Control* applied to the shops, the only variations permitted being in the interior layouts. Although there are variations of design throughout the sectors in the V4 houses, the

plans consistently provide for terrace groupings of identical three-storey buildings employing the customary brick with white trim seen in government housing and relating in general aspect to the frame control houses.

Maintaining a close control over the design of detached houses on large plots was considered less important, since these "...good or bad do not influence the street picture so much, as they are surrounded by trees and are visible in glimpses." (Prakash, 1961, p.41) However, houses on certain important streets — the avenue forming the upper boundary of the city (Uttar Marg), the areas bordering the Leisure Valley, and certain of the V3s — were under a system of *Architectural Control* specifying that the design must be produced by a 'qualified architect' in consultation with the Chief Architect of the Capital Project Office.

The above descriptions convey the spirit and the substance of the original Architectural Controls of Chandigarh. While certain minor variations were introduced later, the established idiom of the 'Chandigarh Style', with the insistence on three-storied construction, exposed brick facades, white plastered trim, flat roofs and horizontal lines has largely remained unaltered.

#### PRESENT STATUS THE IMPACT OF GROWTH AND CHANGE

*"The money, not immediate but certain in the future, lies in Chandigarh itself. Certain parts of Chandigarh are a gold mine...The people will come when they see life in the City and will bring their activities to the general economy."* (Corbusier, December 1958)

In many ways, Chandigarh can be said to have fulfilled its utopian agenda. Whatever conception of 'ordinariness' might have inspired its origin, it has today become an 'icon'—elevated to an extraordinary level, not merely due to the various levels of heroism it represents, but through ordinary civic appreciation of being the 'most livable city' in India, a locus of education, medical, cultural and economic activities.

However, with just about 1,000 acres available at the turn of the century, severe population pressures, parallel demands for enhanced employment opportunities, state-of-the-art social infrastructure, and a 6,000-fold escalation in land values have, of recent, also resulted in demands for allowing additional covered area, subdivision of commercial and

residential premises, going vertical and increasing density of the existing low-density sectors. All these actions, if permitted, could have serious implications as regards the authenticity and integrity of the historic image of the city.

"A characteristic deficiency of modern city planning [...] was its inability to provide images of cultural continuity [...] the new creation, however imaginative, was oversimplified and lacked the complexity of life and the past which any old bungled city with all its faults possessed." (Jencks, 1988) It is thus quite common for the users of Chandigarh's early architecture to be unaware of, or unconvinced by, its cultural importance. They are understandably more preoccupied with the value of the building as an operational amenity, and may well find that its usefulness — as well as attractiveness — is constrained by the same characteristics that are the basis of its cultural significance. It is very difficult to explain why a non-descript, low-cost, flat-roofed cubic house merits the status of a historic monument — especially so, when the more 'informed' intelligentsia continue to rant about the 'crimes of the modernists' and attack the pioneers of the 'Chandigarh Style' for importing ill-suited patterns from the West.

'Obsolescence' in Chandigarh, it would appear, is not based on ageing alone — the original architecture is unequal to absorbing the stresses resulting from a rapidly increasing population, greater degree of affluence, technological advances and correspondingly altered lifestyles. With programmes for diversifying economic activity, restructuring traffic and densification on the anvil, the historic architectural controls of the city's heritage areas are seen as impediments — their cultural value conflicting with imperatives of development and growth. The banality of the 'purist' modern forms, coupled with the bureaucratic mass re-production of 'standard designs', has discredited many of the city's early buildings. The common people prefer Postmodernism, organic or regional style, or anything which is decorated. The greatest impending visual change in the historic urban landscape of Chandigarh is entirely due to non-acceptance of architectural controls, which the popular opinion does not hold to be the domain of the city authorities. The noble objectives of the new nation of the 50s are certainly out of tune with the present times of free market society. The consequent turbulence of the social order has brought about new visual paradigms. The simply fashioned facades that implied notions of a classless society are being replaced by





*Emerging transformations in areas of 'Frame Control'. Consistency of the original modernist townscape is beginning to be severely challenged by visual assertions of individual identity, wealth, and struggle for a higher niche in the emerging materialistic order.*

rebellious versions – visual assertions of individual identity, wealth, and struggle for a higher niche in the emerging materialistic order. A similar trend is visible in the commercial buildings, where the signage and advertisement control that specifies the place and size of signboards and the design of show windows has always been a bugbear with trading community. Among the disadvantages of placing commercial establishments behind a uniform façade is that an individual shopkeeper has no way of distinguishing his premises. Such display panels may be seen in the V4 bazaars but not on the major buildings of the City Centre, where the pristine look of the columned verandah has been transformed by competing neon signs, loud signboards and kitschy displays.

Taking cognisance of 'people's will' and changing times, various legislative alterations are now underway. Commercial development along Vikas Marg, the new V2 binding the southern edge of Phase Two, would be eight storeyed, dispensing also with the characteristic architectural controls of V2s of Corbusier's Chandigarh. In addition is the ongoing large-scale conversion of plots within the Industrial Area (originally restricted only to light manufacturing,

non polluting industries and low-rise modernist brick and concrete structures) to mega Shopping Malls-cum-Multiplexes. However, the most significant change within the historic Phase One and, one that may well prove to be irreversible is the official approval given to several aspects of the original architectural controls, such as the mandatory use of exposed brick on facades and adoption of simple lines of the modern idiom.

#### CONCLUSION

The period of construction of Chandigarh was one of politico-social turnover from colonial slumber to an enthusiasm for building an independent nation. What may have then been accepted as utopian is being questioned today. The city's well groomed image is certainly under threat by populist demands — on the one hand, for additional living space by the have-nots, and on the other, for unbridled freedom to pronounce their material status by the well-off section of society. The visual transformations witnessed at both ends of the spectrum not only suggest a discernible shift in architectural values, but also re-articulate the age-old social divide that the makers of Chandigarh had sought to abolish.

The value of the distinctly coherent and consistent character of Chandigarh becomes apparent when one sees the contemporary development in the other cities in India; a mindless repetition of anarchical, kitschy designs. Today, Chandigarh is not only a symbol of aspirations of a newly independent nation, but also an icon of the Modern Movement. The forces of change also have to be regulated towards understanding that the conservation of its exclusive image is also the moral responsibility of its citizens and custodians alike. Undoubtedly, it is these factors that should inform the future management of the 'ordinary' yet the

most significant part of the Chandigarh Legacy. Today, when the city is on the fast track for becoming a World Heritage site, we should remember that the continued life of the 'ordinary' in Chandigarh depends both upon a shared recognition of its cultural and social value, as well as its continuing economic viability. While being made relevant and responsive to a more realistic set of factors is necessary, the people of Chandigarh need to realise that, what is considered 'obsolete' is also 'historic' and that useful survival need not exclude conservation values.

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### Notes

- 1 In general, all urban development in Chandigarh is governed by Le Corbusier's Master Plan of 1964. Le Corbusier's "Edict of Chandigarh," though not a

legislative act, also continues to act as a customary guiding force. The regulations in force within the city include The Capital of Punjab (Development and Regulation) Act, 1952; The Capital of Punjab (Development and Regulation) Building Rules, 1952; The Chandigarh Trees Preservation Order, 1952, and, The Chandigarh Advertisement Control Order, 1954. More detailed guidelines (Special Area Controls) are provided for structures sited along major roads, such as the V2s, V3s and V4s. Comprehensive Zoning Plans and Architectural Control Sheets are available for each sector.

- 2 This is an excerpt from the text on a Frame Control Sheet of 1958.

# Sustainable Solutions

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Heritage Management, Planning  
and Regulation



# Hampi

## Statutory spatial planning tools for sustainable and value-based development of World Heritage Site

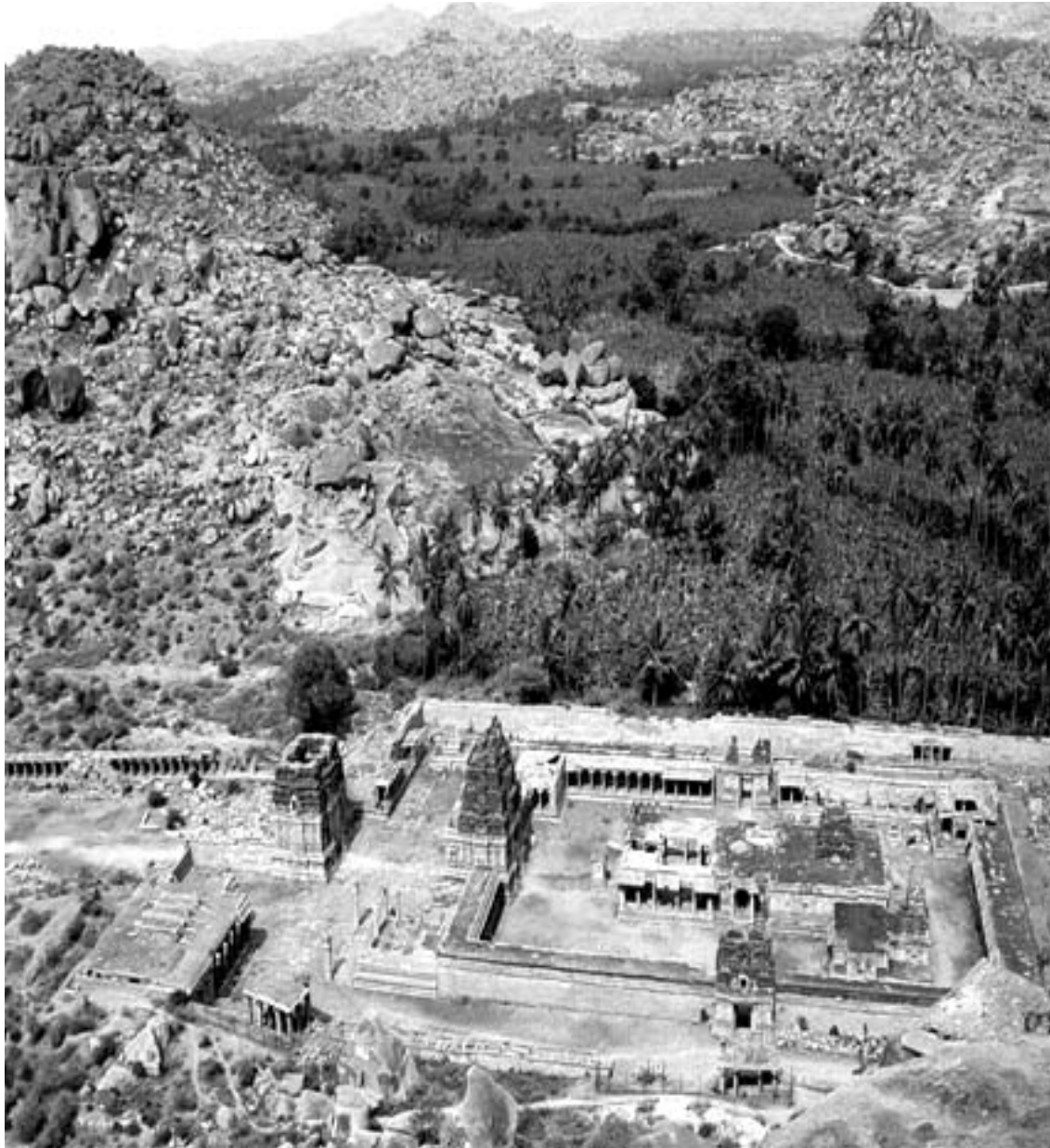
NALINI THAKUR, SHUBHRU GUPTA

### ABSTRACT

*A Management Plan is mandatory as per the directives of the Operational Guidelines for the implementation of the World Heritage Convention '72. It became a necessity for Hampi in 1999 when the site was put on the List of World Heritage in Danger upon the construction of two new bridges across the river Tungabhadra, that were deemed to adversely affect the outstanding natural setting and integrity of the inscribed site. Preparation of the Integrated Management Plan (IMP) for Hampi World Heritage Site has served as an "atelier" for development of integrated systems and management practices in heritage management in the South Asian Region with joint international, national, regional and local cooperation. The IMP traverses from international to local levels articulating a common understanding of the site for its management. The technical effort of the IMP transcends the present systems and develops distinct framework for management of living heritage sites in the Indian context, within the constitutional and legal framework of the country.*

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*Archaeological remains of Hampi*

## INTRODUCTION

The IMP has endeavoured to introduce a paradigm shift towards value based protection and management of living heritage sites in the country demonstrating the initiatives required for an 'Area' as opposed to 'Monuments'. Balancing the requirements of archaeological protection with genuine requirements of new development has been the primary focus of the IMP's planning sector that most significantly resulted in bridging gaps across sectors especially between

spatial planning and local governance and subsequently, translated as streamlined actions on ground.

The article describes the process of achieving this interface, called Integrative Management, addressed in a bi-disciplinary manner in the IMP and accommodated within the overall management structure to streamline with the ensuing system. This includes application of the Karnataka Town and Country Planning Act, 1961 for preparation of the

statutory Master Plan, landuse plan, zonal regulations and architectural guidelines for planned development of the Hampi World Heritage Site.

Other aspects addressed through innovative use of existing planning tool include:

- Defining the 'spatial dimension' as the foundation for integration of heritage management and planning.
- Statutory planning as the tool for clamping measures for spatial protection on ground that takes care of the vast unprotected cultural heritage of Hampi.
- Innovative utilisation of specific planning tools for the regulatory aspects of heritage management; use of statutory landuse plan to define compatible uses in the vicinity of monuments and archaeological heritage in lieu of prevalent land acquisition and other administrative measures.

#### THE CONTEXT

Hampi, inscribed as World Heritage in 1986, is spread over the two districts of Koppal and Bellary in Karnataka along the banks of River Tungabhadra. Hampi, capital of the Vijayanagara Empire, originated around 1368 AD, flourished into a vast metropolis by the sixteenth century and abruptly met its end in 1565 AD after the battle of Talikota whence it was pillaged, looted and burnt by the victorious army of the Sultanate Confederacy of Central India and the vagabonds alike. With the Vijayanagara rulers shifting

base to other parts in South India, the abandoned city continued to languish further into the ruins that today provide excellent and expansive archaeological evidence of the glorious sixteenth century metropolitan culture. The same has been inscribed as a World Heritage Site.

With time, a new living layer comprising villages, smaller hamlets and subsistence agriculture was added that has its own cultural vibrancy and venerates Hampi as a Sacred Landscape, associated with the mythological contexts of Pampakshetra<sup>1</sup> and Kishkindha<sup>2</sup>, an aspect that holds significance for a much larger region including parts of Andhra Pradesh.

The site is dissected by the mighty river Tungabhadra with the ruins of the metropolitan capital strewn on both sides. It forms interesting 'edge country' manifest in subtle differences in cultural, regional and economic development aspects on either sides of the river. This can be accounted to the historic dimension that the two districts were rarely united under one political rule except during the Vijayanagara period and most notably under the subsequent Mughal rule. During the nineteenth century, the site in Koppal district to the north of the river was part of the Nizam's Dominions while the site in Bellary was part of the Madras Presidency. Thus, the entire area constitutes one of the most spectacular landscapes and settings for the World Heritage Site; an expansive archaeological area superimposed with a culturally vibrant living layer that



*Hampi Village on the banks of river Tungabhadra*





*Anegundi Bridge*

requires a protection and management strategy to balance heritage requirements with the needs of new development.

#### STATUS OF HAMPI WORLD HERITAGE SITE

Inscribed as World Heritage in 1986 as ‘the most magnificent, extensive and varied ruins of a metropolis (Vijayanagara) of the sixteenth century, Hampi was declared as World Heritage in Danger by UNESCO in 1999 due to construction of two bridges across the Tungabhadra that were deemed to adversely affect the outstanding natural setting and the integrity of the inscribed site.

A series of actions were undertaken by the central and state governments to minimise the damage and to undertake value based protection and management of Hampi. The central government through the aegis of Archaeological Survey of India (ASI) undertook preparation of the Integrated Management Plan (IMP) for Hampi World Heritage Site to direct value based protection and management of the inscribed site; while the state government enacted a special legislation, namely Hampi World Heritage Area Management Authority Act 2002 (HWHAMA Act 2002) and constituted an authority, Hampi World Heritage Area Management Authority (HWHAMA) to ensure conservation of Hampi World Heritage Site. In view of these efforts by the Indian State Party, the site was removed from the List of World Heritage in Danger in 2006.

#### CORE ISSUES

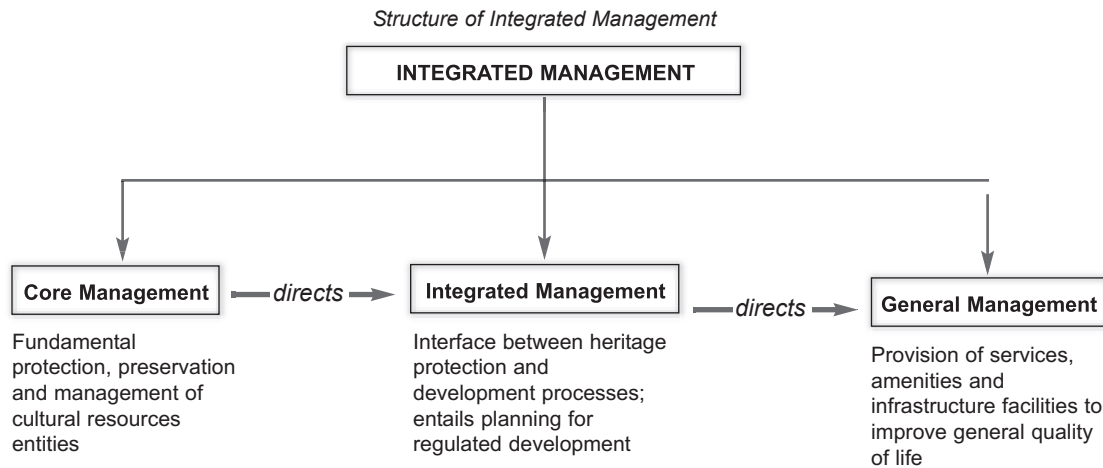
The listing as World Heritage in Danger in 1999 brought to fore numerous conflicts amongst the various stakeholders that had never been discussed or resolved earlier. Most notable of all were the disparities in perception and definition of the inscribed site and its included heritage resources among the various official agencies, from international to local levels: Hampi as a Group of Monuments, a Site or a Cultural Landscape.

The ASI always deemed 56 protected monuments of national importance as World Heritage. However, the inscribed information with UNESCO Paris referred to a much larger area, rich with archaeological evidence, both surface and sub-surface; but this aspect remained largely neglected until the challenge of effectively protecting and managing the site after 1999 ensued. The state legislation of HWHAMA Act 2002 deemed to resolve the conflict by declaring an area as Hampi World Heritage. However, the boundaries of the area identified so were irrational for the protection and management purposes on ground. Further, the World Heritage Convention 1972 directs delineation of inscribed site as Core Zone and a Buffer for its protection; the HWHAMA Act 2002 identified ‘Core’, ‘Buffer’ and ‘Peripheral Zones’ that were not in consonance with international terminology. Thus, bringing about a common understanding of inscribed site became the foremost task for the IMP, both from heritage as well as development point of view.

The allied problem with irrational definition and multiple perceptions of recognition, cognisance and priority of the site led to issues such as lack of basic information on the site for any action and, lack of information on heritage resources leading to inadequate protection. Another issue relates to the genuine development needs of the local community overshadowed by the tourism promotion goals of the central and state governments, imposing demands that are unsustainable from point of view of heritage as well as development.

The complexity of this World Heritage Site can be deduced where many stakeholders are involved in its protection and management. The underpinning challenge is the need to build comprehensive heritage resource management systems that are commonly followed by all. With all this happening in a rapidly globalising India, commitment at the highest levels is required to bring about effective management.

INTEGRATED MANAGEMENT PLAN (IMP) FOR



*Model for Integrated Management (source: Integrated Management Plan for Hampi World Heritage Site)*

#### HAMPI WORLD HERITAGE SITE

The Integrated Management Plan for Hampi World Heritage Site bears the unique distinction of being the ‘atelier’ for development of appropriate integrated systems and practices for heritage management such that they are integrated and streamlined within the larger framework and systems in the country. This is in consonance with the principles of the World Heritage Convention 1972 and the Operational Guidelines for its implementation that comprise international directives for protection and management of World Heritage Sites, directives that India is bound to follow being a signatory to the Convention. This is also in accordance with the Constitutional mandate and Indian legal framework as it is obligatory and our national duty to root this IMP within this framework.

In consequence of rooting international directives within Indian reality, new interfaces have been realised with several sectors including planning, infrastructure development and local governance, and established as compulsory for the entire heritage management exercise. The special law for the site, Hampi World Heritage Area Management Authority Act 2002, becomes a critical tool to this end and is recommended to be strengthened further to enable the aforementioned interface towards demonstrating how varied sectors can work together for the purposes of heritage management.

Protection and management of historic living areas is an emerging sector in the country. From cultural resource perspective, the interests of the wealth of unprotected, vulnerable and irreplaceable heritage come first. Thus, holistic comprehension and protection of cultural resource entities becomes the

first step, classified as Core Management in the model of Integrated Management.

Spatial planning is seen as the link that ties heritage management to new development. Classified as Integrative Management, it integrates Core Management with other sectors through statutory planning process, directed as per the Karnataka Town and Country Planning Act 1961 (KTCP Act 1961) at Hampi where directives of Core Management are translated into regulations and guidelines ensuring that the ensuing development does not affect the cultural resources of the site. It endeavours to build interface between heritage management and other sectors of development to formulate mutually supportive strategies and achieve the much needed lateral co-ordination so that the ensuing development is complementary and not a threat to the heritage resources on site, while ensuring simultaneously that the local community has sufficient opportunities for development and growth.

General Management refers to development, maintenance and management of basic services and infrastructure facilities that help in maintaining a good standard of living such as electric supply, sanitation and sewage disposal, garbage collection and disposal, drinking water supply, water supply for irrigation, lighting, telecommunication services et al and ensues from the regulations of integrative management. Therefore, such a processing leads to a common programme for development where aspects like social, cultural and economic ethos and carrying capacity of the site, both environmental and social are taken into consideration, encouraging a pattern of sustainable development that is community based. It becomes important to inform the concerned stakeholders of the

importance and requirements of cultural heritage, people and environment so that it becomes the basis for all future actions for development.

The IMP is the core document directing the overall system for protection and management of this inscribed site; hence, it becomes the principal directing document for the planning process as well. The contents of the IMP Volumes I to VI lay down fundamental processes, principles, policies and other directives for effective heritage management of this inscribed site; and the statutory Master Plan is intended to process the relevant IMP directives into planning regulations for the site to ensure harmony between heritage management and planning.

#### COMMON DEFINITION AS THE FIRST STEP IN MANAGEMENT

In view of the 'Monuments' versus 'Site' standoff as discussed earlier, providing a common definition of the extents and contents of the inscribed site becomes the first task for the IMP. This articulation of the 'spatial dimension' that emanates from redefinition of the inscribed site, done purely from cultural resource point of view, becomes the foundation for integration of heritage management with planning. The IMP recognises the site to be managed as a much larger cultural landscape of a metropolitan capital of the sixteenth century, surpassing other contemporaneous cities of the world in size and complexity covering an area over 1000 square kilometres. This was necessary to enable a full comprehension of the Outstanding Universal Values (OUVs) of the inscribed site in accordance with the provisions of the Operational Guidelines. An output was prepared in 2005 on redefinition of the site that identified the varied components of this cultural landscape, including its unique geographic setting, vernacular building systems and living traditions. This redefinition has been a paradigm shift in how to approach the site; the cultural landscape designation potential has been accepted but has to be shelved for the present, as a re-nomination as World Heritage Cultural Landscape will be required. However, it is hoped that this enables a comprehension of a much larger area that needs to be considered in all future actions.

#### Extents

The dialogue for a common rational definition was concluded after two decades of inscription following the submission of IMP Volumes 1 to 6 in 2005 with a

commonly agreed upon Core area of 41.8 square kilometres with a combined buffer (comprising Buffer and Peripheral Zones) of 194.66 square kilometres, the latter achieved after the rationalisation of buffer zone extents as per planning principles. The same is soon to be notified as the Local Planning Area to be regulated in the impending Master Plan for planned development of Hampi. In view of all the aforementioned aspects, the critical spatial boundaries for protection and management at Hampi are:

- 56 ASI protected monuments and regulatory jurisdictions as per AMASR Act 1958 and Gazette Notification 1992
- Core Zone as per 1988 Government of Karnataka gazette notification (the same, including the 56 ASI monuments, representing an area of the inscribed site in written form)
- Common Buffer (Buffer and Peripheral Zones as per HWHAMA Act 2002) that becomes Local Planning Area for regulation on ground through statutory Master Plan
- The Cultural Landscape, as Hampi National Heritage Region, yet to be recognised officially.
- District boundaries of Koppal and Bellary for integration with regional development enabled through the constitutional tool of district planning and Double District Plan.

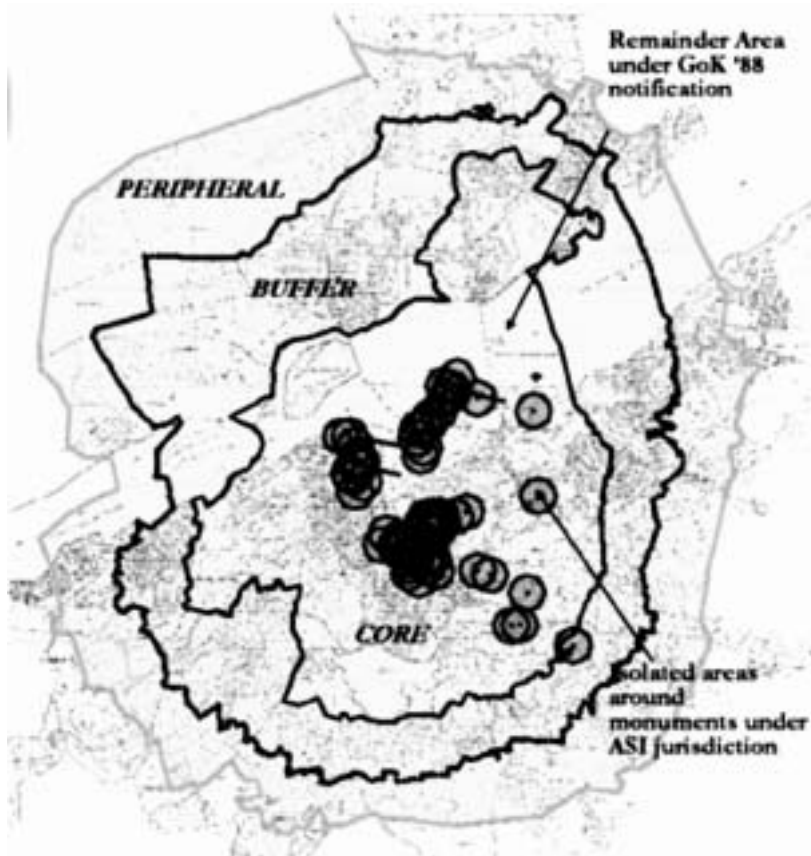
#### Contents

As discussed, in the course of IMP preparation, it was realised that the site was a distinct cultural landscape of World Heritage potential and included various cultural resources including intangible heritage comprising traditional knowledge systems, rituals and other living traditions that needed to be recognised. The implementation strategy for their protection and management has been recommended through a Joint Programme for Heritage that is a component of Core Management and shall not be discussed further. Vis-à-vis planning and development, these resources, their potential and vulnerability affect the carrying capacity of the site, directing the nature of ensuing development.

#### STATUTORY PROTECTION OF THE REDEFINED SITE

Besides the AMASR Act 1958 and the State Monuments Act, a great advantage with Hampi is the availability of spatial measure for protection; the 1988 Gazette Notification for protection of the inscribed





*Critical spatial limits at site level  
(before rationalisation of buffer)*

Core Zone. However, its application is component based, limited to individual monuments and surface archaeological remains only. There is no protection mechanism in place for the natural setting nor is the status clear on the sub-surface archaeological evidence, both being integral to defining the OUVs of the inscribed site. Further, as our national responsibility, no protection measures exist for sustenance of the living heritage of Hampi that as defined above, has the potential to enable redefinition of the Site as World Heritage Cultural Landscape.

The HWHAMA Act 2002 deemed for the conservation of Hampi World Heritage Site does not help in protection of its heritage. Besides being limited in its definition of the contents of the inscribed site, restricted to the 56 ASI protected monuments, the nature of regulatory measures is more administrative than legal. It has led to the constitution of an Authority, which was a necessity, but its constitution is more bureaucratic with no interface with local governance.

IMP analyses the law in detail and recommends

measures for its strengthening. One of the critical recommendation that has emanated in discussion with the Government of Karnataka is to append the IMP to the Act so that all the provisions of the IMP become statutory, including redefinition and protection. Besides, a Joint Committee of Panchayats in the Hampi World Heritage Site has been recommended to achieve interface with local governance in accordance with the provisions of the Karnataka Panchayati Raj Act 1993. It is absolutely essential that statutory protection is applied at Hampi in a spatial manner to include all the known as well as unknown, embedded cultural resources of Hampi for posterity.

#### INTERFACE WITH PLANNING SECTOR

As with other sectors, the IMP strictly views interface of heritage management and planning with a bi-disciplinary approach for each is a specialised sector and no compromise can be made in articulation of any recommendation, as it would adversely affect our already vulnerable heritage. Therefore, a town planner with experience and amenable to the requirement of heritage, E F N Ribeiro was included in the core group



*Intangible heritage of Hampi*

of experts to guide the way in achieving the interface, to formulate mutually supportive strategies and achieve the much needed lateral co-ordination.

Interface with planning falls within the component of Integrative Management. Integrative Management propagates integration of cultural resource protection and management with existing legal frameworks and mechanisms to develop systems for planned development of the inscribed site in a heritage friendly manner.

At Hampi, this includes the application of the KTCP Act 1961 and preparation of a statutory Master Plan for regulation of new development. A Master Plan may be defined as "... the long term perspective plan for guiding the sustainable planned development of the city. This document lays down the planning guidelines, policies, and development code and space requirements for various socio-economic activities supporting the city population during the plan period. It is also the basis for all infrastructure requirements." (Delhi Master Plan 2021).

For Hampi as World Heritage, the most critical aspect is that all regulations should emanate from the cultural context, traditional architecture, building and other knowledge systems prevalent on the site such that the projected direction for development is in consonance with traditions for sustainability and the cultural values of the site are maintained. Heritage management propagates the model of Sustainable Development that is the internationally accepted model of development where aspects like social, cultural and economic ethos and carrying capacity of the site, both environmental and social become the forces guiding the direction of development to be undertaken.

Therefore, the form of the Master Plan for Hampi World Heritage Site shall be as per planning principles but its content shall reflect the requirements of heritage protection and management through suitable adjustments in objectives and outcomes. Directions have been laid down in the IMP under Core Management for spatial protection that should be processed as measures for spatial regulation in the Master Plan. The ensuing regulations that are usually treated as development oriented in Master Plans in the country shall be utilised for heritage protection and management. Most importantly, this will help in clamping protection on the entire site for operational purposes and harmony with new development. Listing the IMP aspects that need to be processed in

the Master Plan for Hampi:

- Delineation of Core Zone, Buffer Zone and National Heritage Region as regulatory zones,
- Processing of the IMP guidelines for spatial protection of the inscribed site,
- Processing of the IMP guidelines on various categories of heritage components for protection,
- Processing of the IMP guidelines for cultural resource information mapping,
- Processing and preparation of Village Regeneration Plans for every settlement, that ensue in accordance with the distinct cultural nature of each,
- Interface strategy with local Governance: for local participation,
- Articulation of the Working Group for this sector for coordinated decision making with HWHAMA at helm and implementation on ground.

The statutory landuse plan has been envisaged as an innovative but effective way to regulate uses in areas around the protected monuments in lieu of measures such as land acquisition that shall enable better maintenance of the OUVs, 'Authenticity' and 'Integrity' of the World Heritage Site and follow the management priorities; Heritage first, Community based development second and Commerce based development last. The Hampi National Heritage Region has been identified as the larger region that shall provide an additional buffer for the inscribed site and shall balance opportunities for greater development including critical nodes for connectivity and linkage such as an airport recommended at Koppal.

## CONCLUSION

The technical effort of the IMP transcends the present systems and develops distinct framework and system for management of living heritage sites in the Indian context, developed so within the constitutional and legal framework of the country to mainstream the same within the larger system. However, the potential of the IMP has not been realised. No progress has been made towards the Joint Programme for Heritage Management, a critical aspect of Core Management.

Significant progress has been made in the planning sector since the submission of the IMP (Volume VI) in November 2005. The first draft of a Master Plan has been prepared that is currently under review after the mandated process of public objections, suggestions and observations. However its review indicates that the present planning process is unable to realise its



own potential. It has not been able to make use of the flexibility within planning to integrate with cultural significance and values of the inscribed site. Planners who prepared the Master Plan's first draft did not integrate the contents of the IMP; the regulations proposed are generally development oriented and against interests of the inscribed site. While Core and Buffer have been identified so, the potential of the Hampi National Heritage Region planning as larger region to accommodate new development has not been realised. This affects the nature of regulations included in the draft Master Plan where many undesirable activities have been introduced within the inscribed site. Land acquisition remains popular for regulation of surrounding development despite the IMP demonstrating the effectiveness of the statutory planning process in regulating the same in a better informed and democratic manner.

It is essential in the case of Hampi World Heritage Site with its unique cultural values and the wide range of resources contributing to the same that the conventional vision for development as increasing the capacity to meet new challenges be discouraged and that recommendations emanate from the vulnerability of the site and its cultural resources to guide new development as per the carrying capacity of the site. Heritage management is a comparatively new, post independence phenomenon in India. The acceptance and endorsement of the larger society from international to local and, wilful implementation by the official agencies is essential to the success of heritage management plans.

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### Acknowledgements

UNESCO played a catalytic role and the ASI commissioned the management plan. The Hampi Management Team is grateful to the Government of India, Archaeological Survey of India, Government of Karnataka, World Heritage Commission, ICOMOS International and UNESCO for the continued support.

### Notes

- 1 Associated with Lord Virupaksha (Shiva) and his consort Pampadevi (Parvati)
  - 2 The mythical kingdom of the monkey kings, Bali and Sugriva, from the Hindu epic of magnanimous proportions, the Ramayana.
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# Bangalore

## The informal economy of the Historic Pete

CHAMPAKA RAJAGOPAL

### Abstract

*This paper endorses urban design methodologies established on the paradigm that the city is an intertwined landscape of varied societies and economies (Nair, 2005); that the city is a matted relationship between cultural identity, social history, economic geography and urban design (Hayden, 1995); that space is a product of economic production and social reproduction (Lefebvre, 1991). Through an understanding of the equation between socio-political, economic, cultural practices and the built form of the Pete in Bangalore, this paper explores the formulation of urban design methodologies towards devising place specific development frameworks for this informal economy.*

### INTRODUCTION

Post economic liberalisation in India (1991), Bangalore City has experienced unprecedented social, economic and urban transformations. Meanings of places have suddenly changed. Top down urban planning practices over the last few decades have effected regulations disparate from ground realities. The paper investigates these processes within the transforming historic precinct of the *Pete* (1537 AD), the origin and the

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largest informal economy (square kilometers) of the now Information Technology (IT) Hub of India, Bangalore (1305 square kilometres).

The *Pete* skirts formal legal systems imposed on it and continues to develop in an alternative way, opaque, dense, cavernous, locked, apparently less livable. Slow traditional activities are currently being replaced by warehouses as the younger generation moves out to pursue speedier lucrative occupations that the IT city offers. The paper maps this thicket and the gaps between these local forces and generic landuse / development regulations imposed by exclusionary master planning processes of the development authorities. The author explores in what ways informal economies currently appropriate themselves to master planning processes. What would be an appropriate language to shape the uncertain futures of the *Pete*? Reading and mapping the *Pete* endorses traditions that emphasise the intertwined relationship of social history, economic, cultural and political geography to the built form, in an effort towards understanding eternal negotiations and the politics within informal economies. Finally, ways are explored in which this mapping could be used in shaping inclusive and more realistic development frameworks for the *Pete* through combined engagement of urbanists, authorities and various actors of informal geographies.

#### A PLACE OF ETHNIC AND LINGUISTIC DIVERSITY

Established by Kempe Gowda III in 1537 AD (Narasimaiah, 1924) the *Pete* was originally a territory marked by ethnic and linguistic, regional and national diversity (GIKS, 1990, p.337; Heitzman, 2004, pp 51, 52; Nair, 2005, pp 35, 63). Bangalore, like other major cities around the world, has continued to embrace and adapt to the rapid demands that new economic and cultural dimensions pose, yet not without wresting back the control of its local forces (Jacobs, 1996, p32) its communities, activities, economies and its built form (Bangalore Population: 1971:1.6 million; 1991: 4.1 million; 2001: 5.6 million; Census of India 2001).

Located at the geographical centre of Bangalore, the *Pete* forms a distinct entity. It is bound by major roads which are formed on the original footprints of the fort wall. Historically, streets oriented along the cardinal directions led to the four gates of the fort wall. Dense and cavernous networks of streets form the historic and indeed the contemporary fabric of the *Pete*. Main streets formed several *petes* or markets which were

associated with various trades and professions of the inhabitants, viz., Tharagupete-market for grains, Balepete-musical instruments, Chikkapete, Nagarthpete- textile trade, Ballapurpete, Ganigarapete-market where oil is extracted by people of the Ganiga Pete community, Tigalarapete- gardener's flower market, Cubbonpete- textile manufacture by people of the Devanga community. (GIKS, 1990, pp 266, 277; Nair, 2003, pp 40, 62).

Even today, industrial and trade activities spill over on to the streets of these *petes* / markets, and incredibly negotiate public space. The prosperous textile industry in Bangalore provided impetus for the growth of parallel trades such as textile printing, dyeing, gunny manufacture and oil pressing (Nair, 2004, p38). Early twentieth Century migrants (Gujarati, Marwadi and Jain communities) from north western parts of the country, generally bankers gradually diversified their trade from pearl market to textile, garments, jewellery, paper, chemists, druggists, cutlery, metal, hardware, electrical goods (GIKS, 1990, p168; Heitzman, 2004, p167, Nair, 2004, p35) and in the last decade electronic industry related products that supply from and to various parts of goods and now the IT to the country. Today, these trade and manufacturing activities, which lay outside of regulations, form the primary means of livelihood for most inhabitants, making the *Pete* a mixed use area (Residential: 37.5%; Commercial: 34.6%; Industrial: 6.1%; PDR, RMP 2015). With a population of 1,12,076 persons



*Pete map*





Private activities negotiate public space; Photo: SCE

inhabiting an area of 2.24 square kilometres, the *Pete* has become the largest informal economy for the Bangalore region. In the first part, it is attempted to bring forth the various socio-cultural and political factors which govern the economies in the *Pete*.

#### REGULATIONS OF THE INFORMAL ECONOMY OF THE HISTORIC PETE.

Much work has been done to understand the complex equations within informal economies in historic contexts in South Asia (Kamil Khan, A G K Menon, K T Ravindran, Benjamin, Nair, Harriss -White, Jhabvala, Kanbur and many more). For the *Pete*, two key aspects have been identified and studied that govern socio-economic regulations in informal economies: family and community (taking cognisance of gender and religion as studied by Harriss -White, 2004). With an intrinsic relationship between occupation and community, even today, the *Pete* is entrenched in traditional patterns of living. Through involvement in preparation of Revised Master Plan 2015, Bangalore, the author conducted studies over a period of two years to understand the patterns of this place which is presently, inhabited mainly by people from the Devanga, Tigala, Marwari, Gujarati, Jain and Muslim communities. The Marwari community dominates the cultural setting and controls most of the business in the *Pete* today.

Among the Marwaris, family still regulates inheritance and management of their own business. As a means to promote cooperative competition through sharing of competencies, capital, infrastructure and profits (tax benefits through Hindu Undivided Family, Income Tax Act), the Marwari family pays less attention to

education (Interviews; GIKS, 1990, p 496; Harriss -White, 2004, p269). Businesses handed over in partnership through 'goodwill' within the community support the transformation, expansion and perpetuation of trades. Today the Marwaris of the *Pete* have diversified into several trades - including assembly of computers - that new economies offer. Employees do not sign formal contracts. Family run businesses support livelihoods, by employing informal labour from their community and providing housing, food and hence security. Generally, transactions between economic actors belonging to different groups are more exploitative than within group ones (Interviews; Harriss-White, 2004, p 272). Money is lent but not borrowed from outside the community. The community regulates creation and protection of rent (Interviews; Harriss-White, 2004).

Shared competition and bonding through family and community/caste helps maintain socio-economic compatibility and promotes social accrual. Several older Muslim communities of Kumbarpete, such as the *takaras* (maintained household stone equipments), *chapparband* (repaired roof tiles), *sikkalgar* (maintained copper/ brass vessels) and *phuleras* (flowers traders) have over time adapted to the construction industry, as new practices replace older ones (Siraj). Today, hardware dealers of the Tharagupete area, mostly dominated by Muslims, claim they are benefiting immensely by the rise in global markets which has in turn boosted the construction industry.

Despite diversification of trade and industry, strong presence of community based occupation ensures that most of the areas within the *Pete* have retained their

meanings as places of specialised activities such as Avenue road in garments and textiles, jewellery and pawn brokering; KR Market in vegetables, fruits, flowers, iron and steel utensils; Sultanpete in paper and, Cubbonpete in textile industry etc.

These informal industries and markets have made large contributions towards providing livelihoods in the city. Heitzman brings forth a study conducted by P Thippiah on employment in Bangalore region, in 1993, which revealed that the informal economy provided more jobs than any other category and that this component was continually increasing until the 1990s; 50% to 65% in 1971 and 65% to 72% in 1991 (Heitzman, 2004, p 173). The garment industry for instance although was registered but informal till 2000. It was leading the volume of exports – more than Information Technology (Heitzman, 2004, p 175).

#### UNEVEN AND COMBINED DEVELOPMENT

Post economic liberalisation in India (1991 AD), Bangalore city experienced unprecedented social, economic and urban transformations due to its new positioning as the IT capital of India. The turnover of the IT sector Bangalore was 4,964 million Indian Rupees (INR) in 1997 and 22,578 million INR in 2000 (Heitzman, 2004, pp181, 199). At the same time, the Bangalore region supported 8,308 handlooms and 58,887 power looms in 1996, which declined to 4,960 and 42,030 respectively, in 2005 (Srivatsa, 2006). Saskia Sassen (Sassen, 2006), explains, "...the existence of a dynamic growth sector, such as the IT industry here (in India), feeds the expansion of what appear to be declining and backward economic sectors such as the downgraded manufacturing sector and the informal economy." Hence, formal and informal economies are inextricably connected and interdependent. In Bangalore, the large minority of the

populations coming from 'the highly advanced information society' requires provision of low wage, low skilled or semi skilled services (monthly earning: INR 1,20,000 vs. 2000; RMP-2015), including maintenance, portage, provision, catering, domestic help, and a substantial manufacturing or assembly component (assembly of electrical and electronics goods, including computers, small scale household industries) which are by and large provided by the informal economy. While acknowledging the gross disparities in access to basic resources between the two extreme economies, Heitzman supports D'Costa in viewing the development pattern as 'uneven and combined development' (Heitzman; 2004, p209).

The small scale silk sari industry, located mainly in the Cubbonpete area of *Pete* is under decline. Unable to cope with competition from the flood of imitation art silk saris (pure silk sari: 2500 INR, art silk sari 500 INR), the Devangas, engaged in weaving of traditional silk saris, are encouraging their progeny to pursue other professions and employment opportunities (Srivatsa, 2006). Practiced as a specialised craft, they do not find it viable to diversify into other forms of weaving. Diversification means making large investments (48,000 INR per loom). Broadening their production to silk upholstery involves modifying their current loom to a larger width that produces silk cloth of a larger width (*panna*). Currently, the looms of size, three metres length, one and a half metres width and three metres height are located within rooms that are only slightly larger. The power of the locality seems weak unless the local producers are able to connect with larger markets. As national attire, the silk sari generates limited demand from large multi-national corporations. Pure silk saris produced in various parts of South India, viz., Mysore silks (also manufactured in the *Pete*), Kanjeevaram silks, Dharmavaram silks have deep-rooted historic and geographic identities. In the absence of a larger market, the declining industry

Avenue Road, 1880, India Office Library Photo, Avenue Road, 2007, Photo: CR



has thus compelled several weavers to pursue jobs that the IT city produces - as auto-rickshaw drivers, construction labourers and security guards (Interviews; Sassen, 2006; Srivatsa, 2006). In the last fifteen years joint families of the Devangas have bifurcated into nuclear set ups. The crowded and divided built form is a testimony. Gradually, as the progeny moves out, they rent their houses out as godowns, for commerce or residential use.

Socio-economic patterns of the Marwaris and the Devangas indicate cohesion and division. Informal trades and industries of the Marwaris, which have expanded diversified according to the needs of the new markets of the advanced economies, have thrived.

Specialised informal manufacturing sectors such as the silk sari industry; which have little or no mobility with the formal sector, are declining. Their labour force is in turn transforming and getting rapidly absorbed into low skilled or semi-skilled manufacturing, assembly or services generated by the formal economies. While the traditional communities such as Marwaris, continue to live in 'social accumulation' (Interviews; Harriss-White, 2004, p 266) either within the *Pete* or outside of it, in contrast, the Devangas have consciously divided their joint family structure, although within the same plot of land they occupy. They are now desirous of shifting not only their residential but also their professional terrains, away from the politics of communal spatial proximity and from the unlivable conditions of the *Pete* (Interviews). Kaushik Basu has contended that culture and social norms are not immutable features of society; communities respond to changing global environment and advancement of technologies, under normal circumstances. People adopt norms that may seem valuable or discard those that may have become redundant (Basu, 2004, p 4). Changing community values, increasing demand for

*Rooms built around the looms; Photo: SCE*



commercial space and poor livability conditions is causing a reduction in the residential population of the *Pete*, over the last decade (CDP 95; PDR, RMP-2015). The rapid pace of residential out-migration may mean the eventual loss of a safe and sustainable mixed area.

The second part of this paper looks at how the socio-economic patterns of communities in the *Pete* have determined its built form, considering the regulations established by the authorities, and how the informal economies have negotiated these regulations to their advantage.

#### ARCHITECTURE OF ACCRUAL

Typical of an Indian old city precinct, streets and *chowks* (town square) of the *Pete* have been used by the inhabitants both for professional activities and as an extension of the private realm. The architecture of the historic *Pete* strongly depicted this dual character. *Jagalis* or platforms outside of houses which were places of production and repose transitioned the street into homes. Jagged streets appear to have been residual spaces that emerged after the houses and commercial establishments were located (Nair, 2001, p46). Neighbourhoods and their streets became bazaars and factories, revealing their activities and depicting a blurred distinction between the private (gender, caste, class) and the public (economy and the built form).

Typologies of live work units varied according to local structures of communities, their caste based occupations and property ownership pattern. Historically, while the Ganigas required large open spaces in front of their houses, abutting the street, to press oil in the traditional way, joint families of the Devangas, engaged in textile manufacture had open to sky internal courtyards, and shared public open spaces for dyeing and other related activities.

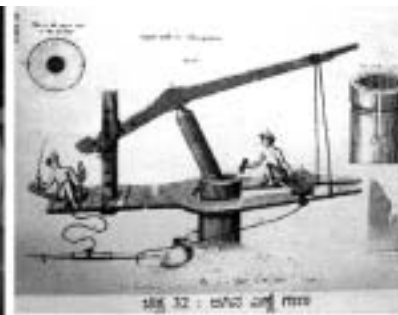
With the formation of nuclear families among the Devangas, current ownership patterns indicate multiple bifurcations of original plot, based on equitable property divisions made amongst sons. The unified courtyard house representing a joint family has given way to multiple multi-storied small houses with nuclear families, compressed into the original plot. With no possibility of further subdivision, the present generation is forced to move out to 'more livable' areas within the city.

Live-work units inhabited by joint families of the

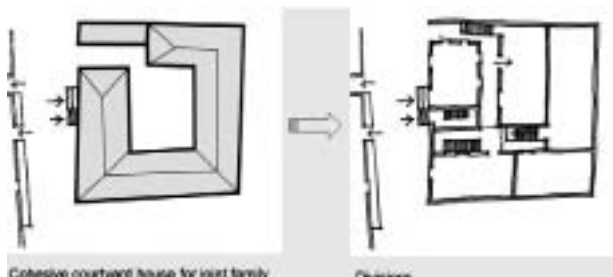




*Blurred distinction: public-private; Photo:CR*



*Traditional oil pressing; Source: Bengalooru Darshana*



*Bifurcations of land among devanga family*

Marwaris are layered with commercial use on the ground floor, warehouse and housing for labourers on the first floor and residential use for the family on the upper floors. With 100 percent ground coverage and shared property walls, the development is homogenous. Spatially, trade activities that often spill over onto the streets demand negotiation and congeniality between neighbours, often of the same community.

#### DEVELOPMENT CONTROL REGULATIONS VIS A VIS GROUND REALITIES

While we discuss the characteristics of the existing built form, it is imperative to gain an understanding of the development control regulations established for this area and the gaps that exist with ground realities. The Comprehensive Development Plan of Bangalore, 1995, (CDP-1995, determines zoning, land use and transport proposals within Bangalore Metropolitan Area, 1306 square kilometres) of the Bangalore Development Authority, has zoned the city into intensely developed (Zone A), moderately developed (Zone B) and sparsely developed (Zone C) areas. The *Pete* falls within the intensely developed zone.

Wholesale trade attracts intense activity resulting in a very high net density of 1334 persons / hectare (RMP, 2015) and a gross density of 499 persons / hectare (density: Bangalore Development Authority's

residential layouts: 110 to 180 persons / hectare) (RMP 2015). CDP-1995 prescribed least development in Zone A and maximum in Zone C. Land use is determined per plot, although, mixed use is permitted in the wards that comprise the *Pete*. In Zone A, the regulations prescribe one metre setback in the front and on the right for properties up to a depth and width of six metres. Incongruously, maximum ground coverage is set separately for residential and commercial buildings- at 65 percent and 60 percent respectively- for plot size of up to 240 square metres, whereas most, buildings in the *Pete* are mixed in use, i.e. residential, commercial, and industrial. As a remedial to the high density of the place, the CDP '95 stipulates a floor area ratio of 0.75 (residential use) and 1.0 (commercial use); although most properties are mixed in nature, for plots up to 240 square metres (sqm) and on roads of six metres right of way, these regulations change with plot sizes and street widths; this implies most buildings are regulated to build up to ground + 1 (G+1) floors.

Governed mainly by norms of socio-economic accrual, the new developments invariably bypass the regulations which stipulate sparse development. The Town and Country Planning Act of the State (KTCPA 1961) does not mandate participatory planning. In reality, most of the properties are below the size threshold for regulation (50 square metres: RMP 2015) due to bifurcations among family. The smallest property occupies a dimension of 1.5 x 6.0 metres (average property size 20-50 sq. metres), for example on Avenue Road. Building footprints on bifurcated plots, cover the entire plot (stipulated coverage: 60-65 percent), with minimum access and common walls on three sides. Buildings abut the street. Traditional street networks host dimensions between three metres (Huriupete Road) to seven metres (Avenue Road). New developments now rise up to a height of Ground+3 floors to G+6 (as opposed to the

permissible G+1). With bare minimum access and very poor natural light and ventilation, for both buildings and the streets, the reproduction of this typology in the *Pete* has resulted in less livable conditions.

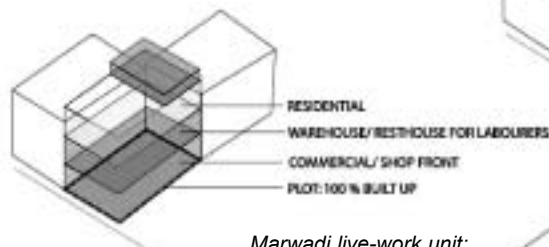
Formulation of realistic regulations may mean flexible and adaptive laws. However, the apprehension of the authorities is that looser laws could be easily abused. As a means to achieve flexible and adaptive rules, the RMP 2015 makes a positive departure from the CDP 1995 in defining zone based permissible use - mixed land use for the *Pete* (as opposed to plot based land use). Still, it merely acknowledges the existing trends of development with high built up and people density, by prescribing Ground+4 floors on main roads and Ground+3 floors on internal roads. The building byelaws of the municipal corporation need to result from a detail study of the changing socio-economic patterns that may in reality imbue different

development patterns.

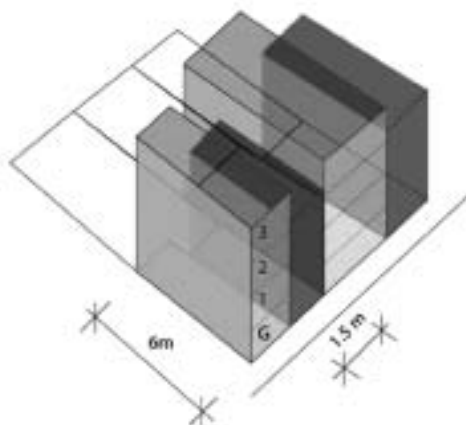
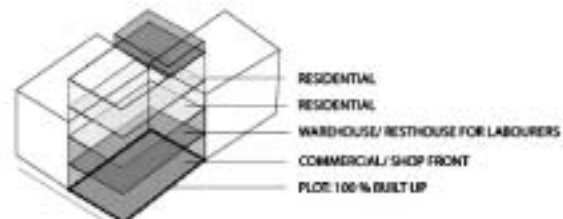
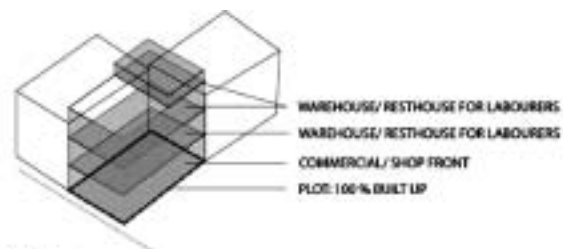
#### COMPLICIT ENFORCEMENT

Local politics in the *Pete* are very strong. Therefore, the *Pete* skirts formal legal systems imposed on it and continues to develop in an alternative, less livable way. The authority is tolerant of these deviations through negligent enforcement. Top down planning and the informal sector's resistance towards imposition of any regulation thus translates into 'complicit enforcement' (Hariss -White, 2004, p284). Different groups of the *Pete* have thus formed different equations with regulations. While characteristics of communities that inhabit the *Pete* still link cultures, histories, economies and public memory to the built form, change is also evident in compelling ways.

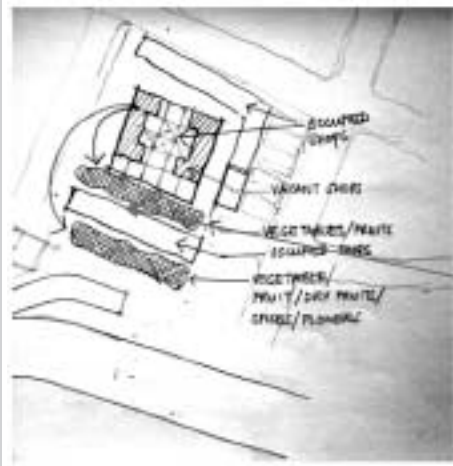
#### URBAN DESIGN FOR THE PETE



*Marwadi live-work unit;  
mixed use typology*



*Avenue Road: Bifurcated plots, 100% ground coverage; Photo: SCE*



*Vendors: politics of  
inside - outside;  
Photo: CR*

An apt example of ‘complicit enforcement’ is the City Market, which supplies vegetables, flowers, fruits, items for religious ceremonies, iron and steel vessels etc., at wholesale prices, to dealers in the region. Originally, an enclosed market surrounded by a strip of shops, which still exists; the new market was built in 1997 with 1600 shops, on three disconnected levels. The Corporation charges a nominal 125 INR as rent for these shops allotted to the earlier occupants of the market. However, approximately 500 shops, located to the less accessible posterior / interior are used as godowns by the allottees, since they do not obtain any business. These allottees now occupy more accessible spaces outside the market and threaten the business of those who occupy shops inside.

Oligopolies with petty traders thus check and balance the functioning of these ‘interior’ and ‘exterior’ groups through control of contracts, prices of commodities and facilities such as transport, portorage, sweeping, wages, terms and conditions of work/ labour, labour disputes, spatial configuration and territory of

markets, monitoring of rents and rental sharing with state officials and politicians and finally ensures collective security against state officials (Interviews: vendors, state officials; Harriss- White, 2004, p 279).

Control of access to public amenities also regulates labour and crowds (Harriss- White, 2004, p 277). The Silver Jubilee Park that defines the sothern edge of the *Pete* and flanks NR Road flyover is a guarded, inaccessible public open space. Part of the park may serve as an ideal location for the bus station currently located adjoining the City Market. Shifting the bus station along the park which implies perpetuation of informal activities is unsuitable to shop owners that front the park. The shop owners benefit from the spartan street environment while the state officials, profit from their vested interest. An artificially crowded environment at the City Market eases control by power groups and supports spatially concentrated reproduction of business and labour (Interviews).



*“Complicit  
enforcement”;  
Silver Jubilee Park  
and the City  
Market*



### *Reading and Mapping the Evolution of Place*

For a place with dichotomous values of cooperation and competition, cohesion and division, and of uneven and combined development, urban design guidelines would have to emerge from the characteristics and the landscapes of negotiations of the place. The methodology must entail an inseparable reading and mapping of social history, cultural and economic geographies, communities, language, changing values and aspirations and their relationship to the built form (Lynch, Appleyard, Hayden, Tuan et al). A mapping of these geographies could then be used for setting a more inclusive urban design framework, this would entail:

A series of mappings of the place through primary and secondary surveys, interviews and first hand observations (Lynch, Appleyard, Jane Jacobs, Allan Jacobs, Marans, Rapoport, Zeisel et al), of socio-historic landscapes, economic and political geographies-spheres of influence, demography, migration, behavioural patterns (also anticipated behaviour), social and physical infrastructure, built form- buildings transport networks, natural environment- watersheds and the impact of urbanisation of tanks around it, land tenures, ownership patterns, rental patterns, occupation patterns that are in this case directly linked to socio-cultural patterns and land. Mapping of land tenures would be critical in integrating urban design with ground realities. However, as Nair explains through the work of Benjamin and Bhuvaneshwari (Nair, 2005, p259), the area around City Market has the most tenuous of rights to property and ownership is constantly in a state of flux. She explains that since many of these areas are outside master planning, rights to ownership are sought not only through markets but also through ethnic and political routes.

Therefore, in addition, the process would require mapping the terrain of flux. It implies gaining a thorough understanding of the legalities and the relationship of the extra-legalities of negotiations, conflicts and aspirations of the place to it.

### *Participatory Urban Design*

Urban design guidelines would need to permit adaptability and flexibility for a terrain of flux. Rigid impractical top down planning processes and resultant complicit enforcement have resulted unlivable places. For shaping development frameworks suitable to

people's aspirations planning processes must involve consultative processes and citizens' participation (CIVIC, CASSUM, INHAF, Bangalore; Benjamin, Nair, Heitzman, Hayden, Castells, Appleyard, Lynch, Craik, etcetra ) with representation from residents' groups, trade organisations, socio-religious institutions, sociologists, economists, lawyers, planners, urban designers, environmentalists, historians, linguists, architects, government bodies, and NGOs.

An informal economy such as the *Pete* claims concessions by influencing policy inputs through its implementation rather than its formulation (Harriss - White, 2004, p 279). For a place of complicit enforcements, it is imperative to devise planning processes that would enable dialogue among all actors, public authorities, citizens, related trade and residents' associations and professionals in an attempt towards shaping shared relationships between the public and the private realms.

### CONCLUSION: NEGOTIATED RULE MAKING

For a place as intricate and complex as the *Pete*, formulation of regulations through public participation would be sensitive and challenging. Communities, religions and economies have coexisted here but not without tensions (Nair, 2004, pp 35, 70). Yet, a seeming dichotomy between different socio-economic groups, formal, informal and illegal may be mutually constitutive (Nair, 2005, p 126). It may be essential to explore participatory planning methodologies that transcend as negotiated rule making where collective accountability of communities renegotiates with the structure of the authorities (rather than opposing community to state; Nair, 2005, p 126). Debates in urban design (New Urbanism - looking beyond critique on its imagery) favour 'seeking solutions to complex environmental problems through extensive and substantive cooperation' between actors, and a process that reflects 'formative aspirations', through design, rather than 'inclusiveness' through building social capital which acts 'as a counterbalance to bureaucratic state and the effects of global markets' (Brain, 2006). While urban design processes for the *Pete* would maintain a cooperative approach among actors, it would invariably need to rely on 'social capital' (Coleman, 1988, family, kinship networks, religious institutions create trust and reciprocity) as a means towards negotiated rule making. It is here that design could become a significant tool. Accordingly, possible design alternatives will need to be demonstrated to the various inhabitants / groups of



Demonstrating alternatives.

the *Pete* (Discussions: Meta-Culture). Community values of cooperation and negotiation may result in new development patterns that ensure livability through shared amenities and land pooling of bifurcated lands, wherever possible. For example, shared open spaces may allow ventilation to two separate properties or guidelines for fenestrations on building facades may result from mutual agreements between inhabitants that may provide requisite light, ventilation and privacy or visibility as per the need.

Through organised and coordinated efforts of all actors, at the micro level, it is hoped that an inclusive

urban design approach may help shape place specific development frameworks for a livable *Pete* that supports continuity and transformations. Finally, the author advocates that an inclusive methodology would help direct the role of the urban designer as a 'less cavalier' coordinator, addressing diverse disciplines and negotiating the efforts of various groups that shape urban places, especially for informal urban settings such as the *Pete*.

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# Haryana

## Review of urban planning and development control acts

R L BAWA

### Abstract

*Haryana, a small state in the northern India has always pursued a progressive image with scant attention to its heritage. Though the State boasts of several protected archaeological and architectural sites dating from the Harappan period and later centuries, the conservation of these is a piecemeal approach through the specific Monuments and Antiquities Act. Despite the fact that inner areas of Haryana towns and villages show continuous urban fabric, there is no recognition of the urban heritage of the region by the government authorities. This article evaluates the existing Acts in Haryana that can impact urban conservation and that need to integrate heritage regulations. It also emphasises that rather than having several acts enforced by different authorities, a single overarching Act that allows for a Comprehensive Development Plan is essential to ensure sustainable urban development.*

### INTRODUCTION <sup>1</sup>

The State of Haryana adheres to a large number of interdependent town planning laws. While, the jurisdiction of some of these laws is extended

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*Jal mahal, Narnaul, with causeway in front*

to the entire state, others have limited jurisdiction in specific local areas. However, amongst all these, there is no single Act or Law that is comprehensive and covers all aspects of planning, land acquisition, development and enforcement rules for the entire area under the proposed urbanisable limits of a town or city under jurisdiction of different local bodies, private, public and government agencies. Thus, there is no Act that advocates the preparation of a comprehensive development plan for the entire urban area and can supersede individual jurisdiction of different agencies.

Late B K Thapar, the first Secretary of INTACH, (1984 to 1994) New Delhi and Director General (Retired) of ASI, in his study, "Our Cultural Heritage: A Reappraisal of the existing Legislation and the role of INTACH in its Preservation", reviewed the legal position at the national level, has also brought out this fact that comprehensive town planning is not yet available in Rajasthan, Punjab and Haryana. Punjab has since enacted "the Punjab Regional and Town Planning and Development Act, 1995.

While reviewing the existing situation vis-a-vis the state laws, Thapar (1991) has said that the Archaeology, dealing with the preservation of ancient monuments, etc. is a concurrent subject and the land use including unprotected land around monuments is a state subject. Thus the framework for dealing with the conservation aspects of buildings and areas of historical, architectural and archaeological interest and

the areas around, has therefore, to be directed through the State Town and Country Planning Acts. He identified the following three aspects for which adequate provisions have to be made in the State Town and Country Planning Acts:

- Safeguarding the environments of the protected monuments.
- Declaring certain 'conservation areas' and indicating proposed land use for them.
- Listing and protecting historic buildings and indicating their proper usage to ensure against loss of cultural continuity.

The existing Acts in the State of Haryana show clear demarcation in planning for the existing urban areas and, the new areas required for the expansion of the urban settlements. The planning of the latter is covered under the Punjab Scheduled Roads and Controlled areas, Restriction of Unregulated Development Act, 1960.

The essential requirement for the formulation of Comprehensive Development Plan can only be met, when the survey encompasses both the existing as well as the new areas falling within the proposed urban limits. Due to this basic lacunae in the existing planning laws, the development plans so far prepared for various urban settlements in Haryana, merely indicate the development proposals of the vacant areas around the settlement and, the municipal area without making any detailed study of the existing socio-

economic and physical conditions. Thus, the Master Plan Documents which are presently being prepared of such areas under the present Acts comprise only of generalised existing and proposed land use plans supported by seven to eight page report containing proposed Zoning Regulations applicable to new areas. These plans lack justification for the proposals made therein. A total of eight Acts, currently applicable in various areas of Haryana have been identified. These are related to planning, land acquisition, development and control of land. These have been grouped under two main heads:

#### *Acts under the State Jurisdiction*

- The Punjab Scheduled Roads and Controlled Areas Restriction of unregulated Development Act, 1963 and rules of 1965.
- Haryana Urban Development Authority Act. (Haryana Act No. 13 of 1977).
- Haryana Development and Regulation of Urban Areas Act, 1975.
- Haryana Housing Board Act, 1971.
- Haryana Municipal Act, 1973 ( Haryana Act No. 24 of 1972).

#### *Acts with limited Jurisdiction*

- Faridabad Complex (Regulation and Development) Act, 1975.
- The Punjab New Capital (Periphery) Control Act, 1952 (Also applicable to Haryana around Chandigarh i.e. Panchkula and Mansa Devi Complex).

The salient features of each Act pertaining to the planning, development, land acquisition, development control and conservation aspects of natural and built heritage comprising of buildings of special historic or architectural interest and conservation areas, are given as under.

#### *Acts under the State Jurisdiction*

##### *The Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963*

The main object of this act is to restrict unregulated development along scheduled roads by way of control over direct access to the plots everywhere and to ensure a planned development of controlled area. This Act only deals with new areas around the municipal boundaries and the provisions of this Act do not operate even in the unbuilt areas falling within the notified Municipal limits of a town. However,

provisions of Section 203 of Haryana Municipal Act are not inconsistent of this Act.

Under the provisions of this Act, the State Government has the power to declare by notification as controlled area the whole or part of any area adjacent to or within a distance of:

- eight kilometres on the outer sides of the boundary of any town, or
- two kilometres on the outer sides of the boundary of any industrial or housing estate, public institution or an ancient and historical monument.

This Act further provides for the preparation of the plans showing; the controlled area and signifying there in the nature of restrictions and conditions, proposed to be made applicable there. Such plans are to provide division of any site into plots, reservation of land for roads, open spaces, gardens, recreation grounds, schools, markets and other public purposes, development of any site into township or colony; erection and re-erection of buildings on any site, prohibition and restrictions regarding erection or re-erection of shops, workshops, warehouses or factories etc.

Presently the Master Plans in the form of a proposed land use plan, a set of development controls, zoning regulations and planning standards, are being prepared under this Act. The main drawback of this Act is that it is not comprehensive and does not cover the municipal areas comprising of existing development. Hence, the Master Plan for the expansion of the existing settlement is often prepared without any study of the socio-economic and physical condition of the existing population and its settlement. Based on this analysis of insufficient data, various projections are made and proposals framed to project the urban growth (of a town or city) for the next twenty to twenty five years period. Such projections and plans are completely unrelated to the future requirement of the existing town. The rules framed under this Act, provide for the study of special areas of aesthetic, sentimental and historical value, which require protection. But the scope of this study has not amplified in the rules. The rules lay down the procedure for approval and development of colonies falling within the 'Controlled Areas' for lands owned by the private developers.

##### *Haryana Urban Development Authority Act, 1977*

The main objects of the authority created under this Act, Haryana Urban Development Authority, (HUDA)

is to promote and secure development of all or any of the areas comprised in an urban area and for that purpose it is empowered to acquire, plan, develop and dispose of land either by sale, lease or transfer. The Urban Area, under this Act, is defined as an area comprised within the jurisdiction of any local authority and also any such area in the vicinity required for likely urbanisation and notified by the State Government for this purpose and may include any area declared as controlled area under provisions of the Punjab scheduled Roads and Controlled areas (Restriction and Development) Act, 1971.

Thus the HUDA is required to prepare 'zoning plans' which are defined to mean the detailed layout plans of the sector or part thereof showing the sub-division of plots, open spaces, streets, position of protected trees and other features and in respect of each plot, permitted land use, building lines and restrictions with regard to the use and development of each plot in addition to those laid down in the building rules. The zoning plans are to be prepared by HUDA only for those areas which are acquired by it or in its possession and, potential pockets available within the municipal limits. These plans have to conform to the Development Plans of controlled areas prepared under the Punjab scheduled Roads and Controlled areas (Restriction and Development) Act, 1971. The authority has been getting the layout plans prepared from the Town and Country planning department, Haryana on payment of service charges.

For taking up construction on plots disposed of by HUDA to various agencies, Co-operative Societies and individuals, permission has to be obtained from HUDA which is granted within the framework of its Zoning Regulations and building byelaws. The Authority, however, is not empowered to prepare a Development Plan covering the existing town \ city or a Regional Plan of city region. HUDA can however, be delegated powers to prepare an Improvement Scheme for built-up areas by extending the provisions of the Municipal Act. The provisions of the HUDA Act are enforced by the Chief Administrator who is generally the Director, Town and Country Planning Department.

*The Haryana Development and Regulations of Urban Areas Act, 1975*

The main purpose of this Act is to regulate the use of land in order to prevent ill-planned and haphazard urbanisation in or around towns in the State of Haryana. The main tension appears to be to regulate

development undertaken by the private colonisers, or to achieve comprehensive development of neighbourhoods through private sector. This Act provides for licensing of private developers with strict controls and norms for desirable development of lands owned by private developers. Though the Act is not clear but it implies that an over all Development Plan shall be available to the licensing authority which in this case is the Director, Town and Country Planning, Haryana. This Development Plan would provide the basis for the approval of layout plans of various colonies and ensure their development.

*Haryana Housing Board Act, 1971*

The scope of this Act is limited. The Haryana Housing Board is empowered mainly to acquire, plan and develop land, provide housing sites and construct dwelling units for various income groups and then dispose of plots or dwelling units, as the case may be.

While planning the housing area, the Board is required to make adequate provision for various community facilities and services. However, the board is not empowered to prepare a Development Plan at town or city level. Normally the Board is given pockets of land by HUDA in its sectors which are either already developed or under development.

*Haryana Municipal Act, 1973*

The matters concerning land sub-division, control over construction activities and framing of building schemes, are provided under Sections 201 to 211. However, Section 203 is more relevant to land planning. The scope of the Act pertaining to land development is very limited. The most important function is to exercise development control under the construction of buildings within the municipal area. No provision however, exists for the preparation of Development Plans for the town \ city areas and its environs. The provisions pertaining to the conservation of buildings of historic and architectural interest have also not been made in the Act.

Acts with limited Jurisdiction

*Faridabad Complex (Regulation and Development) Act, 1975*

The reason for the enactment of this Act was to devise a set-up for the administration of Faridabad complex which would eliminate the present multiplicity of local

authorities and thus would meet the objectives of rapid and integrated development and prevent haphazard development.

This Act pertains to the planning, acquisition, development and control of lands falling in the area is notified for the development of Faridabad Complex only. Certain powers of taxation, etc. enshrined in the Municipal Act, are proposed to be vested in the Chief Administrator of the complex. Similarly all powers and functions of the Director, Town and Country Planning, Haryana which vest with him under various Acts are to be exercised by the Chief Administrator of the Complex.

The Act provides for the declaration of Controlled Areas and also for the preparation of a Development Plan for the same. The present Master Plan of Faridabad has been prepared by Faridabad Chief Administrator under the provisions of this Act. The plan lacks the approach required for the comprehensive development of all existing settlements falling within the complex area.

The contents of the Development Plan given in the Faridabad Complex Controlled Areas (Restriction of Unregulated Development) Rules, 1974, do not provide scope for the preparation of a Comprehensive Development Plan. Under these rules the FCA is required to prepare one existing land use map and one proposed land use plan, a note explaining the proposals illustrated on the plan and zoning regulations providing a frame-work for exercising control over the development. There is no provision for making comprehensive study of all socio-economic and physical aspects of the existing population and the existing settlements falling within the area. The Act, therefore, also suffers from the same short comings which have been identified in case of the Punjab Schedule of roads and Controlled Areas Restrictions of Un-regulated Development Act, 1963. Recent inclusion of Faridabad as the 63 cities selected under the central urban planning scheme of JNNURM has benefited the city in preparing City Development Plan (CDP) that covers the analysis of the social, economic and physical conditions of the existing city and provides more realistic projections than the Master Plan. Conservation projects have been addressed under the section on 'river conservation' and city beautification of old areas in the CDP though more rigorous tourism and conservation projects could be outlined taking into account the significant monuments in the area.

### *The Punjab New Capital (periphery) Control Haryana Amendments Act, 1971*

This Act extends to the controlled area notified up to a distance of ten miles (approx. 6 kilometres) on all sides from the outer boundary of the land acquired for the Capital of the state at Chandigarh. The Deputy Commissioner is the 'Controlling Authority'. The basic objectives of this Act are to maintain a rural periphery around Chandigarh for supply of food and agricultural products including poultry, dairy, etc for the consumption of the Chandigarh's population.

The scope of this Act is limited to the extent of exercising development control on the building activities within the controlled area. After the reorganisation of the Punjab State, the controlled area has fallen within the jurisdiction of three governments, i.e. Punjab, Haryana and Chandigarh Administration. The development controls in fact are now being exercised by respective State Governments in keeping with the basic objectives of the Act and within the framework of a Master Plan prepared under some other Act.

It is evident from the study of the above mentioned eight Acts that the scope of all the Acts is limited and in some cases the scope is confined to development control in new areas only. There is an over-lapping of functions which are being exercised by different officers under different Acts. Necessary provisions for the comprehensive study of the existing population are sadly non-existing without these; projections at City level for land for housing, commercial, industrial, institutional, recreational areas, etc. cannot be made.

It has also to be realised that no settlement both small and large, can function in isolation. The functions of these settlements within a planning region are complementary to each other which call for planning at the regional level. Like in some other States, a new Act, namely, The Bihar Regional Development Authority Act, 1981, currently in force in Bihar provides for planning at three levels i.e. regional level, town or city level and at zonal or area planning level.

Due to shortage of qualified personnel in urban and regional planning, creation of planning and development authorities at district level covering many city level planning regions, would in the long run prove to be much more economical, if such plans are to be prepared for all regions in a state.



## conclusion

It is suggested that rather than having multiple Acts dealing with different partial aspects of planning such as land acquisition, developments and development controls and administered through different sets of authorities, it would be more effective and economical to enact a comprehensive planning law under which similar kind of Development Authorities with wide powers and extended scope of functions could be created for different areas in the state. Their work could be coordinated by a State Planning Board also created under the provisions of the same Act. In order to provide a model to the states, the Government of India prepared a Model Town and Country Planning Act in the year 1962, the copies of which were supplied to all the State Governments. Even this Model Act needs to be modified on the basis of experience now gained by various State Governments which enacted new planning laws based on this Model Act.

The Model Act, besides making no provisions for the preparation of Regional Plans, re- constitution of plots, etc., initially also lacked provisions for the listing and conservation of buildings of special architectural and historic interest, for the preservation of trees and areas of natural and scenic beauty. This was later modified and a Model Act for heritage structures and precincts was included by the Ministry of Environment and Forests (MOEF) in 1995. Sir Bernard M Feilden, renowned conservation architect practicing in UK and a frequent visitor to India and INTACH, on my request, had advised that a detailed guidelines and Zoning Regulations should be formulated for such buildings and areas for which relevant provisions should be incorporated in the Act. In my opinion, the relevant provisions in respect to our built and natural heritage should be incorporated in the Town and Country Planning Act on the following aspects:

- Listing of buildings of special architectural, archeological or historic interest for which a

proforma prescribed by INTACH or ASI could be utilised. Some of these areas requiring preservation and enhancement of the character or appearance should also be identified for designation as heritage zones. The list of such buildings and areas could form not only part of the Development Plan Report but the same should also be shown on the existing land use plan.

- Areas up to a certain depth around these buildings and area of archeological importance and natural beauty should be identified for special controls on development; after making a detailed study of each area and the same should form part of the proposals, described not only in the Development Plan Report but also shown in the proposed land use plan. As ASI is also the controlling authority for such sites, it would be desirable for the ASI to prepare the development plans for each site which may then be notified under the provision of “The Ancient Monuments and Archaeological Sites and Remains Act, 1958”, for the information of the owners of the adjoining plots affected by the restrictions imposed under this Act.
- Special Zoning Regulations should be formulated for such areas and the same could be enforced by constituting a team of representatives of ASI, State Department of Archaeology, Planning and Development Authority and a representative each of the State Departments of Architecture and Town and Country Planning and two Non - Government Organisations concerned with Built and Natural Heritage, such as INTACH and Indian Heritage Society.

INTACH was recently instrumental in the formulation of heritage legislation in the state of Punjab through an amendment in the Town and Country Planning Act. However, its applicability needs to filter down to the municipal level byelaws for effective implementation. The Haryana Chapter is pursuing a similar mandate with the government authorities in defining heritage legislation for the State.

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## Notes

- 1 This article was first written in 1993, and this is a revised and updated version in 2008.

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# Chennai

## Sustaining urban pressures of heritage demolition

SUBASH CHANDIRA, RECHNA SASHIDARAN

### Abstract

*The metropolis of Chennai (earlier Madras) has several heritage buildings of significance entwined within its urban fabric that require specific consideration in future development and growth of the city. The city however, lacks heritage regulations and has subjugated to demolition of important heritage structures in the past such as the Moore Market and Capper House. The recent controversy regarding the demolition of Queen Mary's College has brought forth the urgency of heritage legislation in the city. This article reviews the status of heritage protection in Chennai and outlines some pragmatic approaches and strategies such as valuation methods and heritage incentives for long term and sustainable heritage conservation.*

### INTRODUCTION

Historian S Muthiah (Muthiah, 1981) refers to Chennai as a “city of firsts”, a place that played a pivotal role in the origins of the British Empire. He points out that Madras (now Chennai) was the first major British settlement in India and, until 1774 it was the capital of the entire

British Empire in the east that stretched from India to Indonesia. The Madras municipality, founded in 1687, was the first such governing body to be setup outside Europe.

The Madras Eye Infirmary, founded in 1819, is Asia's first Infirmary and even the Indian Army traces back its antecedents to the Madras Regiment. The erstwhile Guindy Engineering College, now Anna University, was the first institution outside Europe to teach engineering. British law and its courts functioned for the first time in India in Madras in the mid-1600s. Like many other Indian cities, Madras was a British creation. Villages such as Mylapore, San Thome and Poonamalee existed well before the British arrived but the beginnings of the city of Madras can be traced back to 1639.

Until independence, Madras remained the capital of the Madras Presidency, an area that encompassed the whole of South India as well as parts of Maharashtra and Orissa. The British imposed their identity on the city but traditional structures coexisted with colonial creations. Madras may not have had the flamboyance of Edwin Lutyens' Delhi or imperial Bombay and Calcutta but, its quiet charm was unmistakable. Apart from traditional architecture, Indo-Saracenic, Colonial, Classic, Gothic, Romanesque and other styles can be seen in Madras. Many early examples of the highly regarded Indo-Saracenic style, which culminated in Lutyens' magnificent planned portion of Delhi, can be found in Madras.

#### CHANGES AFTER INDEPENDENCE

Today, few recognise the historic and architectural importance of Madras or Chennai as it is called now. Hidden by the ocean of hoardings and the chaos of the overflowing streets the fascinating past of Madras lives in its many buildings - public, institutional and private. Former Chief Minister Jayalalithaa's decision to demolish the historic Queen Mary's College (QMC) (Frontline, April 2003) has created much controversy and spurred tremendous public interest in heritage buildings. The QMC contains heritage buildings - the Pentland, Stone and Jeypore Houses. Capper House, an older building, was demolished earlier this year. The government has claimed that the QMC buildings have little artistic merit. It has failed to recognise that heritage buildings are not only those structures with 'artistic merit', which in itself is a subjective criterion, but any building or precinct associated with historical events or figures which deserve to be preserved. The

QMC's role in women's emancipation in India definitely makes it worthy of recognition. The QMC is located on a beautiful seafront campus and its simple yet elegant buildings 'depend more on the solidity of their mass and simplicity of elements rather than complicated details for expression.

The Tamil Nadu government does not even protect heritage precincts such as the Marina in their entirety. The buildings on the Marina seafront, along with the surrounding environment, make it a unique heritage area and recently proposed multi-storey structures will adversely affect its character.

In recent decades, many of India's cities have been transformed significantly as a result of economic and population pressures. The pressure on land in urban areas has drastically increased its value and often a city's heritage buildings have been sacrificed for more financially lucrative enterprises. On the pretext of urban development, new constructions, which often have scant regard for local conditions and context, have damaged the very quality of life they were intended to improve.

#### A CASE FOR HERITAGE CONSERVATION

There is strong cultural and historical rationale behind building conservation. Indian politicians often claim that many heritage buildings in India are symbols of colonial power and do not deserve to be saved. History, however, has to be preserved in its entirety, not merely the more acceptable portions. The Auschwitz concentration camp, where an estimated 1.5 million people were gassed and tortured, is listed as a World Heritage site by UNESCO.

Besides cultural, historic or social reasons, there is a more pragmatic economic rationale for conservation. Preservation efforts world-wide have proved that heritage preservation can be economically rewarding. Through 'adaptive reuse', old structures can be upgraded and brought into mainstream activity. The use of heritage buildings and areas for tourist purposes has been perfected in the west but several States in India are now beginning to recognise the fact that value can be added to old buildings through creative use. In Chennai, there are many areas that are ripe for such reuse. Already some old buildings are used as film sets. Moore Market, a Chennai landmark which was demolished in the late 1980s, could have been saved and used as a passenger concourse for the Central railway station's suburban terminal. The Senate House

on the Marina is a magnificent structure owned by the University of Madras. Today, it is deserted and has been allowed to deteriorate. The best way to preserve heritage buildings is to use them and surely the Madras University can put Senate House to some use or even rent it out.

Many believe that it is always more economically viable to destroy old buildings and put up modern constructions. This is not necessarily true. Many heritage buildings are located in older parts of the city where the streets are typically narrow. Development rules prevent the construction of multi-storey structures on such streets. Building rules in Chennai permit greater floor space index (FSI) for any additions or improvements made to existing structures. New structures are permitted a smaller FSI. As such owners of heritage buildings may not be optimising land use when they choose to pull down old structures and build modern constructions. In many places, heritage buildings have acquired the 'antique' tag and appreciated in value when restored to their original condition.

About 70 percent of heritage buildings in Chennai are owned by the government and almost all the others are owned by institutions and entities having the resources to carry out basic maintenance. Some heritage buildings require greater care, but conservationists believe that such buildings can pay for their own maintenance if put to the right use.

#### HERITAGE REGULATIONS

Heritage regulations for the city of Chennai are long overdue. Cities such as Hyderabad and States, including Maharashtra, Punjab and West Bengal, have taken significant steps. Goa, Chhatisgarh and Madhya Pradesh are looking to emulate these soon.

In 1958, the Ancient Monuments and Ancient Site and Remains Act (AM and ASR) was enacted to protect all monuments/sites of national importance and as on date more than 4,000 monuments across India, are covered by it. Developments are prohibited within a radius of 100 metres from the monuments and permission is needed for any development within a radius of the next 200 metres. However, structures that have existed before the Act came into force are exempt but no additions or alterations can be made in them. These rules apply only to a few monuments in Chennai those protected by the ASI.

The Delhi Assembly passed the New Delhi Ancient

and Archaeological Site and Remains Act 2004 providing protection to any structure, erection or monument or any cave, rock sculpture or scripture of historical, archaeological or artistic interest and which has been in existence not less than 100 years. The Act will help protect buildings that are not currently protected by the Archaeological Survey of India. On April 22, 1997 notification by the Union Ministry of Environment and Forests banned demolition and reconstruction of heritage and historic buildings and buildings of public use, including those used for educational purposes on coastal stretches without prior permission from the Ministry. The notification issued under the Environment Protection Act and Environment Protection Rules also prohibits activities with an investment of rupees 5 crore or more within coastal regulation zones.

Chennai turned 368 years old in August 2007, and is reliving its heritage with a passion. The momentum generated by these celebrations has rekindled the debate on the need to have a Heritage Act to protect historic sites, something which conservationists have been fighting for over a decade.

#### VALUATION OF HERITAGE BUILDINGS

The usual methods; land and building method, income capitalisation method or comparison of sale instances cannot be applied to heritage structures except in cases when the owner needs to be compensated for a privately owned building. For example, the funds required to preserve the Madurai Meenakshi Temple or the Mysore Palace will exceed the original cost of construction. A different approach is needed to justify the preservation and maintenance expenditure.

The inflow of a large number of visitors will directly benefit the growth of many trades and the economy in general. Such trades include tourist hotels and related businesses. This kind of development has a multiplier effect. Hence the valuation to be adopted should be the benefit approach method. In this method, heritage buildings benefit the businesses as well as residents in the neighbourhood. Many professional groups, including construction firms and skilled and unskilled workers get economic benefits. The benefits can be estimated by determining the enhanced capital or rental values of the properties in the neighbourhood. Heritage buildings recognised as World Heritage sites attract tourists from all over the world and help earn valuable foreign exchange.

There are several methods of evaluation, including



Stated Preference method, Travel Cost method and Hedonic Property Value.

In the Stated Preference method, an enquiry is made amongst the local people and the tourists on the amount they are willing to pay to get the building recognised as a heritage structure. This enquiry may be made without any guidance to a possible figure or inviting people to choose between nominated options, including a monetary element, or seeking people's approval for a certain expenditure or policy like a one-time payment or instalments paid with the property tax. This process was reportedly followed in the valuation of the Royal Theatre at Copenhagen by contacting about 1,800 people.

The Travel Cost method is based on the number of persons visiting the site and the cost of transport. This method was used to estimate the demand for museums in Quebec, Canada in 1994.

As for the Hedonic Property Value method; the prices of houses with different characteristics are compared to show how the prices change with variation in characteristics. By this method it was found that house prices in Boston, USA were significantly affected by architectural styles.

#### MASTER PLAN and regulations

Historian S. Muthiah recalls a consultation initiated by the Town and Country Planning Department about 12 years back, resulting in a Heritage Act draft, along with guidelines suggested by the Union Ministry of Environment and Forests. When the draft was forwarded to the government, it was suggested instead that the CMDA regulations could incorporate appropriate regulations. In consultation with the CMDA, another set of draft regulations were prepared about five years back and soon forgotten in the controversy of the Queen Mary College. Though the CMDA's second master plan draft does incorporate a set of regulations regarding heritage buildings, it needs to be supported by a comprehensive

inventorisation of all heritage structures in the city. There are possibly about 1,500 buildings in the city that are heritage class but no official list is available, especially for those structures that do not fall under the national monuments covered by the central Ancient Monuments and Archaeological Sites and Remains Act, 1958.

#### CORPORATE SOCIAL RESPONSIBILITY

Government of India needs to consider tax concession on the amount spent in conserving heritage buildings by corporate bodies. Further, heritage buildings can be leased out to corporate bodies and societies to promote conservation and tourism. They will be responsible to provide all infrastructure facilities and information to the public. In order to generate revenue for maintaining the heritage buildings a heritage cess needs to be collected along with the property tax. This will supplement the centre and state government grant and entry collection from the tourists.

Since master plans are the only legal provision that looks into local area development in towns and cities across India, it is necessary that heritage management plan be integrated into the master plan to conserve the heritage structures along with budgetary programmes. All the IT/ITES and SEZ sectors in India are exempt from income tax as an incentive to compete in the world market. Hence, they may compulsorily be asked to adopt heritage buildings for maintenance.

With the example of successful conservation projects such as the Senate House restoration in Chennai, conservationists firmly believe that organising funds for heritage preservation is possible with support from corporate bodies that seem willing to pitch in now. Legislative intervention is only part of the battle won and locals need to get more involved in conservation. For conservationists and the concerned citizens, the 'Madras Week', a one week celebration of the city's heritage, is a small but firm step in reminding the government of its responsibility.

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# Udaipur

## Sustainable urban development of the heritage city

PRAMOD PALIWAL

### Abstract

*Cities make an important contribution to social and economic development. In the process they often get thwarted by persistent environmental degradation inside the city core as well as the surrounding areas. The heritage city of Udaipur founded in the sixteenth century is under tremendous urban pressures and craving for sustainable development. The rapid growth of the city has become a serious threat to the existence of the river Ayad and its man-made lakes along with the beautiful hilly surroundings of Udaipur in an otherwise semi-arid climatic zone of north west India.*

*Cultural ethos and traditional wisdom play a crucial role in carrying forward the spirit of sustainable development of any region. Udaipur has traditionally been maintaining the sustainable systems that were the basis of the city's founding and planning. The paper brings forth the environmental threats to this heritage city and demonstrates how public initiatives are crucial to achieve sustainable development in the city.*

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*Lake Pichola dried up in 2003 and 2004 leading to lack of water in the city and recession in tourism*

### Introduction

Cities absorb a sizeable portion of the population growth in developing countries; they offer significant economic opportunities. Environmental degradation threatens economic efficiency in the use of scarce resources, social equity in the delivery of development benefits and costs, sustainability of hard-won development achievements and yield in the urban economy for provision of goods and services. However cultural ethos and traditional wisdom play a crucial role in carrying forward the spirit of sustainable development<sup>1</sup> of any region.

Udaipur, situated on latitude: 27.42 N, longitude; 75.33 E, spanning over 37 square kilometres at 577 metres above mean sea level is settled on the bank of ancient river Ayad in a valley surrounded by Aravalli hills next to the clear blue waters of Lake Pichola. With its network of seven manmade lakes across centuries, it has been titled as the 'City of Lakes'. A series of canals connect the several artificial lakes of

Udaipur. The old city within the walls is built on smaller hills with narrow medieval twisting lanes and small temples at crossings that lend a charisma to the city. Interspersed with old dwellings, temples and palaces are new and modern shops, houses, markets and down-to-earth bus-stands. Udaipur is home to various art and cultural centres as well as promoting and supporting rural and local crafts being a hub of jewelry and fabrics. The narrow winding lanes lined with historic Mewari architecture of havelis and temples faces tremendous vehicular pressure from the growing city and increasing tourism activity. The history and evolution of the city is documented as interesting historic layers of varying architectural forms and styles from the earliest period of sixteenth century to the later transformations with Mughal and British alliances. However, Udaipur as the capital of Mewar is renowned for its resistance to external influences of all kinds, a fact that is observable in its planning and architecture, which still retains the authentic Mewari character with its unique cusped arched openings and use of local stone.

Since this paper focuses more on the present urban issues and their impact on heritage, the urban history of the city is not elaborated here.

#### Traditional Water Resource Management

The city boasts of unique examples of sustainability with the formation of its manmade lakes built in a time span of 400 years, conservation of all the natural resources and the strong political will to maintain the natural balance along with the co-existence of its people. It was the foresightedness of the erstwhile rulers of this city that they could anticipate the water requirement of this region centuries ago, and they built a network of water resources that continues to serve the city.

Udaipur is settled around the river Ayad. Erstwhile rulers and the masses ensured that the growth of the city should not come to the detriment of the existence of this vital source of sustenance. It is a natural consequence that when a city grows geographically and demographically, the pressure is on the natural resources. Ayad river was no exception but for the commonsensical and futuristic outlook and actions of the earlier generations. They were aware of the fact that if the river undergoes a disastrous transformation, the existence of City will be in question. The perpetual water flow took care of all the other aspects of growth; development and existence of the city including irrigation, drinking water, *baoris* (stepwells), maintaining the water level of lakes, ground water level, salubrious climatic conditions, and conservation of forests.

A unique network of water resources was developed along with the lakes of the city. Parallels can only be drawn from the ancient civilization of Indus Valley and Roman Empires where the concept of manmade smaller water reservoirs was adopted within the city dwelling areas. Udaipur has a unique set of water reservoirs called *baoris* (stepwells), built from the sixteenth century to the nineteenth century and were spread across the city in various localities. These were being recharged by availability of ample water from the lakes of the region. The *baoris*, around 50 in number, are a unique architectural and technological marvel of an era when not many scientific tools existed. Water remained in an open square or rectangular tank accessed through a flight of broad steps. Building of a *baori* was regarded as a noble gesture and a great status symbol for a family.

#### Issues in Sustainable Urban Development of Udaipur

The city's economy has traditionally been agrarian and commercial in nature. With technological developments and new wave of awareness in the last 50 years, the economic and occupational patterns of the region have undergone tremendous change. The thrust areas for economical sustenance today are tourism and mining.

Tourism opened new vistas for employment of the people of this region. With tourism becoming a thrust area of development, the hotel industry witnessed a boom and, the explosion of hotel industry led to a further increase in the number of tourists. The city saw several controversial constructions where the land reserved as green belt i.e. conserved for natural wealth and vegetation was used to construct new hotels. Further natural areas surrounding the lakes were encroached upon and the lakes often used as the disposal conduits for such hotels. With the mushrooming of hotels the demand for land too increased. As a result these lakes have been seriously polluted. These lakes, which are also a source for drinking water supply, are gradually ceasing to be a source of potable water (Judev, 2003). Hotels can exist only when tourists keep on coming in large numbers. The arrival of tourists depends on the serene, salubrious historical surroundings of Udaipur. Due to the ecological-imbalance, if Udaipur was shorn of this distinctive feature, the adverse consequences will not be difficult to envisage.

This situation was experienced by the city of Udaipur in 2003 and 2004 when the lakes were completely dry and the tourism as well as the city economy took a *Lake Pichola with Hotel Uda Vilas on the western edge and Sajjangarh on the hilltop beyond*





deep plunge.

Relentless exploitation of mineral wealth of the region has become a money-spinner for the mining industry. The largely unorganised and mechanised mining industry is a source of employment for a large number of people. But at the same time, it is also a serious hazard to the forest cover and adds to the environmental pollution viz. air and water. The increase in average atmospheric temperature in the past few years in Udaipur area has been attributed to the development of the mining industry. This has in turn resulted in the deterioration of water resources.

Intensive marble mining has emerged as a major problem in Udaipur region. This disrupts the natural watershed by leaving behind gaping holes and piles of rubble. The cutting of marble also creates a fine white powder, which settles on and destroys the surrounding vegetation. Marble cutting consumes large quantities of water, usually tapped from deep underground sources. Since there is a lucrative market for marble,

the mining continues unabated regardless of its social and ecological consequences. (Bakshi, 2001, Lodha et al, 2002).

India's largest white and green marble mines are situated in Udaipur and nearby areas. The emergence of mining business has brought about substantial economic benefits for mine-owners, traders, workers, heavy machinery, and diamond tool industry. The government earns huge revenue from royalty, excise duty and sales tax. The mining industry provides direct and indirect employment to thousands of people too.

Mineral wealth on the one hand has generated enormous economic opportunities in Udaipur, on the other indiscriminate mining activities have taken their toll. Semi mechanised, open cast mining has even come up in the areas reserved for forests. It has seriously hampered the already endangered forest cover. Most of the marble mining activity is in the private sector and there is no liability defined in any perspective plan for either afforestation or re-greening

*An aerial view of the expanding city*





*The lake, island palaces and the hills are significant heritage resources of the city*

of abandoned quarries. The result is havoc with the environmental balance manifested in climatic disturbances and drying up of water resources. A chain reaction had been triggered off and the ultimate consequence could be dreadful. (Paliwal, 2005)

#### Water Management

With further growth in the population more severe environmental dangers are feared. The water resources are inadequate to sustain the strain of growing number of inhabitants. With forest cover and 'green-belt' in peril, the water resources are dilapidating. The recharge-basins responsible for perennial availability of water in the traditional baoris have given way to the concrete jungle. Thousands of tube-wells both for agricultural use and urban domestic consumption are the primary cause of the falling water table. Bakshi, (2001), quoting a World Bank study, depicts the facets of increasing consumption of water with population-rise and over use of underground water resources and the perils thereof. The ground water level has receded alarmingly with the increase in general demand for water. Indiscriminate underground boring for water is

a common phenomenon and has led to a drastic decrease in the underground water table (Chakravarty, 2003). Most of the baoris have been destroyed. The unplanned haphazard growth of the city has become a serious threat to the existence of the river and lakes along with the beautiful hilly surroundings of Udaipur. The river Ayad has become convenient channel for the disposal of industrial waste and sewerage. It also carries enormous quantities of sediment, which is killing the river and filling up the water reservoirs with silt in which it flows down (Lal). The people of this city boast of modern development though they have used the embankments for residential settlements at the cost of recharge basins and have attained industrial development by using Ayad River as a conduit for waste disposal. The deforestation in the hills surrounding Udaipur and the adjoining forests has meant that each year's monsoon washes down tonnes of silt into the lakes. Approximately hundred thousand people live around the lakes and nearly 60-70 hotels are located on the periphery of these lakes. Domestic sewage and wastewater from the hotels is pumped into the lake Pichola, Rangasagar and Swaroopsagar. Defecation on



*Even with the dried up lake, traditional rituals such as bathing of the ladies after a death in the family is being carried out on the lakebed by ordering a tanker from the municipality*

the banks of Lake Swaroopsagar is a widespread practice. Solid domestic waste amounting to scores of tonnes per day is also dumped close to the lakes. This finds its way into the lakes during the rains. Besides, people living around the lakes always attempt to encroach upon the lakes. The 73 *ghats* (marble/concrete embankments) on Lake Pichola are used by the public for bathing and washing, which includes infected linen from hospitals. A huge amount of detergent goes into the water, increasing its phosphate content.

The poor quality of drinking water here has resulted in higher incidence of water-borne diseases. Between 1978 and 1982 a partial sewage system was constructed (without a sewage treatment plant) to cover 30-35 percent of the population living around the lakes. However, due to certain design limitations and improper maintenance, the system does not function and raw sewage flows directly at places, into

Pichola and Rangsagar.

The civic authorities are so myopic and callous in their approach to manage the affairs of a heritage city like Udaipur that they have made a blunder by setting up a new sewage network on the lake bed. The lake bed has been dug out to set up the sewage network, without being repaired properly. The quality of construction materials used is inferior with leakages leading to mix of sewage with the lake water. This is surely going to result in gradual death of a vibrant lake. Also, in the last few years, the walls of the lake had begun to crumble, they had developed huge gashes, but the authorities ignored the conservationists' demand to repair the embankment walls.

The situation could get worse if there was even a slight quiver or a blast. The sewage system would then crack, leaving the entire lake contaminated.

The people of Udaipur



*Aerial view of the expanding city*

In contrast to this apathy, a worthy initiative has been taken up by the people of Udaipur. The citizens of Udaipur have joined hands with a leading newspaper to address the ever important issue of utilising traditional wisdom towards water management. Underscoring the dangers of ignoring traditional knowledge, Kasbekar (2001) comments about ‘Rootless Growth’ which relates to destruction of historical and cultural values that are essential to sustainable development. Certain studies have been conducted deliberating on the aspect of ecology and cultural patterns. Cultural patterns and regional customs manifest in the form of religious practices, societal norms or day-to-day behaviors. They get absorbed with subtlety in the societies, leading to the development of a body of knowledge, which draws its inputs from these intricately rooted cultural-ecological practices.

Worldwide the ‘other knowledge systems’ are today

referred to as traditional ecological or indigenous knowledge. They encompass the sophisticated array of information; an understanding and interpretation that guides human societies around the globe in their innumerable interactions with the natural milieu (Nakashima et al). Verwymereu (2003) discusses the ‘link’ between sustainable development and religion. Similarly the ‘discussions on sustainable development and religious practices’ (Agromisa, 1997) further strengthen the argument that sustainability has strong bondage with deeply embedded cultural-religious ethos. Worth and Rowe (2002) delineate the role of occupational communities in implicitly pursuing the objectives of sustainable development.

Examples abound where the communities and their social patterns have exhibited the ethos of sustainable development in Udaipur. The people of Udaipur rejoice the traditional festival of “Hariyali (Green) Amavasya (Dark Night before New Moon)”. This





*A resident of Udaipur is taking out water from the well on the embankment while the lakebed is completely dry*

festival is celebrated on the onset of rainy season. The entire community observes this festival on the bank of lakes, rivers and on the hillocks surrounding the city - spreading the message of the significance of lakes and plant life for a sustainable Udaipur. This deeply embedded tradition of sustainability is aptly complemented by the physical aspects related to urban infrastructure.

Perhaps this spirit motivated lakhs of readers of Rajasthan Patrika, the prominent newspaper from Rajasthan to revive dead ponds, baoris, tanks and wells in Udaipur. After decades, the one-time dead baoris once again started showing signs of life. The management of the state's oldest newspaper, Rajasthan Patrika thought of an innovative plan. It started a daily campaign in the paper called Amritham Jalam (water

is nectar) urging people to come to the fore and clean up all traditional water harvesting systems that were lying dead and idle. It started a fundamental water revolution of sorts. Hundreds of years ago, rulers in the princely state had created scores of traditional water storage systems so that rainwater could be harvested and it could be put to use all through the year. It also helped to recharge groundwater channels. But, with piped water becoming a reality, these traditional structures lost their importance. Down the years, they just crumbled or became rubbish pits. Thus, traditional ponds fell into abandonment and became torpid, foul, polluted areas. People, from all walks of life, worked hard towards de-silting tanks and restoring the traditional wells. Through Amritham Jalam campaign, thousands of volunteers learnt the importance of respecting traditional wisdom. It broke

down caste and communal barriers that are so strong in Rajasthan. Many of the reservoirs that were de-silted were lying unused for over 20 years. When the rains came, the first signs of wonder appeared. Water slowly started trickling into the reservoirs and wells. The same newspaper has now taken up the task of reviving the ancient river Ayad that was once the lifeline of Udaipur.

#### The road ahead

The public action to maintain sustainability has no parallel (Bakshi, 2001) and has no alternative. A noteworthy initiative in this direction has been taken by the local Udaipur Municipal Council (UMC). In response to the centrally sponsored JNNURM programme UMC has gone a step beyond its current requirement as a medium sized urban centre and already prepared a comprehensive report outlining the long term vision under the City Development Plan. This has been reviewed by an expert panel set up by UNESCO India office at Delhi and handed back to UMC for incorporation of strategies to overcome gaps and deficits. As recognition of the spirit of people of Udaipur and their various initiatives in preserving its rich heritage UNESCO encouraged the UMC to formally sign up to its Indian Heritage Cities Network and Udaipur became the first member of this privileged network in 2006. The network is also



*Use of Gangaur Ghat with vehicles reaching right up to the steps and people*

supported popularly through representation of the local NGO, the Maharana of Mewar Charitable Foundation.

Any amount of government action and seriousness is meaningless without the active participation and enterprise of people. Although there has been apathy towards this cause since a long time, with increased awareness and advances in public initiatives, sustainable development of the city can become a reality rather than a dream.

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### Notes

- 1 The discussion on Sustainable Development was first brought in the development vocabulary in 1980 in the 'World Conservation Strategy' introduced by the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF) (Heerings and Zeldenrust 1995). The coinage of the phrase was an outcome of 'limits to growth' theory. The World Commission on Environment and Development's (WCED), report, popularly known as the 'Brundtland Report', popularised the phrase and at the same time gave the most widely accepted definition: "development that meets the needs of the present generation without compromising the ability of the future

generations to meet their own needs" (WCED 1987).

The phrase 'Sustainable Cities' too is multifaceted in light of the above discussion on the concept of Sustainable Development. However, the UN has recognized the Sustainable City Programme (SCP) launched in early 1990s, as a medium for implementing Agenda 21 at the city level. In the early 1980s, UNCHS (UN Habitat) and United Nations Environment Programme (UNEP) decided to jointly prepare Environmental Guidelines for Settlements Planning and Management for the cities. In the early 1990s, this assignment was transformed into Sustainable City Programme (SCP). Sustainable development of the city habitats has important linkages with the issues of water resources. Dwelling the concept of sustainable development and water resources, Brookfield & Byron (1993) elaborate on the issues of threat to the water-resources and hence to the sustainability of development by the peril of growing population, persistent demand for water and increasing pollution. Some studies have thrown light on the growing importance of the development of traditional water resources. Global Applied Research Network (2003) mentions an evaluation conducted by independent consultants of the works undertaken in South India during 1984-1995 in which the development of traditional water resources and ground water recharge in connection with drinking water have been given due weight.

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# Mumbai

## An overview of policies and their impact on the historic fabric

VIKAS DILAWARI

### ABSTRACT

*Mumbai has a dual approach to conservation. Though the city spearheads the conservation movement in India, practitioners are yet debating on whether it is progressive to the tenets of conservation or does it exemplify only a few isolated attempts at conservation. Despite the so called legislation protection, the historic urban fabric of the city is being systematically eroded. It raises an alarming and pertinent question, 'Whether the other Indian cities and small towns should follow similar legislation or learn from Mumbai's experience and reframe legislation accordingly?' This paper attempts at a chronological presentation of the facts impacting the built heritage conservation works in Mumbai. It incorporates pre and post heritage legislation scenario for the reader's understanding and evaluation.*

### Introduction

Mumbai is a city of dualities. While the city is named Mumbai, there also exists a part of the city called 'Bombay'. This part, essentially South Mumbai is reminiscent of the city's colonial legacy reflected in its planning and architecture. It was the vision of Sir Bartle Frere, the





*Victorian Mumbai ( late nineteenth Century)*

governor of Bombay, who restructured the city in the nineteenth century as one of the finest places east of the Suez. This proud legacy of Mumbai imparts it a distinct identity with monuments like the Chattrapati Shivaji Terminus (CST) station, the Gateway of India, the BMC head office building, etc. Whereas the post independence modern 'Mumbai' in the central and northern part has haphazard rapid development with no holistic vision, lack of open spaces and matchbox architecture.

Mumbai's antiquity and modernity go hand in hand. For example, the Mahakali caves that date back to the first century BC in the northern suburbs house at its foothill, the Santacruz Electronics Export Promotion Zone (SEEPZ) as a silicon hub of Mumbai. The city has unique distinctions of having two World Heritage Sites, an ancient and modern one namely, the ancient Brahmanical Elephanta Caves (sixth-seventh century AD) on an independent island amidst Thane Creek and the nineteenth century Gothic Revival CST station in the island city area of Mumbai. It is the only city in the world to have a national forest park within its municipal limit serving as lungs to the city. It is also a high density metropolis often referred to as a chaotic, concrete jungle of development. There are many positive and negative impacts of the so called heritage movement of Mumbai. Other cities while planning their legislation can learn from the achievements while avoiding the pitfalls of Mumbai. This heritage movement and, its impact on the built heritage is presented from 1990's to 2008 in four sections; the draft legislation phase from 1991-1995, final legislation phase from 1995-2000, post legislation phase in 2000-2005 and present day situation from 2005 onwards.

#### Draft Legislation Period 1991 -1995

The urban conservation movement in the country has been pioneered by Mumbai, the first city to formulate legislation for the protection of built heritage in its Development Plan. This came into effect in a draft form from 1991 and, as final legislation from 1995.

In 1990s the term 'heritage' was relatively unknown and conservation was merely associated with monuments and its prime custodians i.e. the Archaeological Survey of India (ASI). The significance of the historic urban fabric was not recognised and it could be easily destroyed and redeveloped. Significant public buildings, currently in the heritage list were often repaired with new additions and insensitive modifications such as addition of a lift shaft on the front facade of a heritage landmark such as the High Court and Magistrate Court. Some of these landmarks were even demolished to give way to new developments like the original CTO's annexe offices now replaced by the BSNL building or changes made in the Stock Exchange building.

Conservation architects were part of the development scene as this discipline was just evolving in independent India. The initial awareness started as a people's movement with environmental issues, led by concerned eminent citizens initially, later supported by several NGO's like the Bombay Environmental Action Group and the Indian Heritage Society. 'Save Bombay Committee' and INTACH managed to create inroads with the government through their activism. Support of sympathetic bureaucrats like Mr B G Deshmukh further helped as they realised that significant landmarks do need protection. A quick list was prepared for these significant buildings i.e., Grade I with the help of Mr Foy Nissen<sup>1</sup>. Later, elaborate lists of Grades II and III were published by INTACH Mumbai Chapter as the first draft, containing 400 items. During this period, the new Development Control (DC) Regulations were being framed and the Urban Development Secretary, Mr D T Joseph asked the local NGO's to submit a list which could be added to the new DC Regulations. This was the beginning of the Conservation Movement in Mumbai. Environmentalist Mr. Shyam Chainani<sup>2</sup> pursued the listing and legislation with the government and achieved success. The NGO's commissioned a professional survey to broaden the existing list of significant heritage structures. As a result; about 624 entrances, were suggested to the Urban Development

Department, Government of Maharashtra, to be declared as heritage structures or precincts. Since this was done within a stipulated time period, the content was limited and a lot of the buildings lacked proper description, cultural significance and correct dates. The intention was to provide more accurate details before it became final legislation (1995) though this exercise never took place.

The media played a crucial role and conservation work started with the support of multinational companies, who could now own heritage sites in South Mumbai due to liberalisation in the Indian government's economic policy. The initial patrons of conservation were companies like the American Express Bank, ANZ, Grindlays, Jardine, Fleming etc. These companies knew the importance of skillful repairs. On the other hand the government, semi-government institutions and Corporate India were unaware of conservation. The major drawback was shortage of skilled and sensitive contractors or structural engineers.

An advisory heritage committee was formed that appointed people from various backgrounds, NGO's, conservation professionals, urban designers and people from institutions like the Prince of Wales Museum, Director of the State Archaeology Department and eminent citizens and city historians. This was a positive start though marked by an unfortunate episode. While the draft list was being prepared to bring the legislation, the same government proposed its State Guest House in place of the 'The Sahyadri' at posh Malabar Hill, a listed Grade III structure. Though the media and the concerned NGO's attempted to save the site, they were not successful and succumbed to the pressure. Efforts were concentrated to protect the remaining 623 buildings, which were now under great threat.

An analysis of the draft list revealed following data:

Grade I constituted: 9 percent, Grade II constituted: 26 percent and, Grade III constituted: 65 percent of the listed heritage entrances

At this stage the government as per procedure under the Mumbai Regional Town Planning (MRTP) Act of 1969 and subsequent heritage list notification norms did call for suggestion and objection from the public on the listing. These public hearings were accommodated during 1991-95, before the list became final heritage regulation. Many builders / developers,

architects were against listing and many owners did not want their properties to be in the list or even preferred to have a lower grading than recommended to allow more change in the structure.

As a parallel activity, various colleges, professionals and few NGO's such as the Urban Design Research Institute were extensively documenting the urban fabric. A seminar in 1993 on the subject of the Fort Area highlighted the fact that apart from the listed heritage buildings, the precincts need protection too and specific guidelines regarding this were published. This was the beginning of urban conservation and had a lasting impact.

The Cotton Mills, the backbone of Mumbai's growth went through a decline and many mills closed. Architect Charles Correa along with the Kamla Raheja Vidyanidhi Institute carried out a study of NTC Mills and listed about 60 mills with significant structures. Despite efforts, these mills could not be listed officially and many have been pulled down subsequently. With conservation movement in a nascent stage and lack of political patronage, buildings that could be reused imaginatively for the growing city were now lost.

#### Post Legislation 1995-2000

The scenario changed once the legislation became an act in 1995 as per regulation No 67 Resolution No DCR 1090/3197/RDP/UD-11 dated 21st April 1995. A pink book was brought out which had the final listing, decided after the necessary public hearings. The new booklet had about 101 buildings removed



*Concrete jungle versus green*



Fort Area precinct

(which was unfortunate, as many of them were significant like the Godivalla Bungalow at Bandra) from the original draft (1991) list. The grading was changed too. Many uninhabitable urban artifact elements like water fountains or smaller structures were given higher grades. Similarly religious structures were lowered in their grade to allow flexibility in intervention based on the respective associated religious philosophy. Two new sub categories were introduced in Grade II i.e., II A and II B. Grade II B included the buildings with surrounding open spaces having development potential. Few significant Grade III buildings were rightly upgraded to Grade II B.

The de-listing and changing of grades was done

YEAR/PERIOD	GRADE 1	GRADE II	GRADE III
Draft legislation 1992- 1995	9 percent	26 percent	65 percent
Post legislation 1995-2000	9 percent	40 percent	51 percent
		IIA 20 percent	
		IIB 20 percent	

without involving professionals. Seven new precincts and fifteen milestones were added. The biggest precinct was the Fort Area that included fourteen sub-precincts. This was due to Mr D T Joseph, Urban Development Secretary who was influenced by the

presentations in the Fort Precinct seminar. However, the subdivision within the Fort precinct was and the sub-precinct boundaries is debatable on account of historical facts. The entire stretch of the maidans (open spaces) and the ensemble of public Gothic Revival buildings is divided zone-wise rather than being integrated as per the architectural style or typological characteristics. This major lacuna results in lack of proper guidelines for the precincts. The precincts were easily accepted because these conformed to the permissible FSI.

The emerging trend between 1991-1995, for proposals made to the Mumbai Heritage Conservation Committee (MHCC) involved more reconstruction and, less repairs. Thus the role of Heritage Committee became remarkably similar to an Urban Arts Commission though limited only to the listed heritage sites. Some major issues in the functioning of the Heritage Committee were red tapism, lack of transparency in decision, lack of qualified technical committee members, lack of staff, lack of time and personal bias for specific projects.

The 'pink book' has a provision on page 70 under Section 4.2: to prepare a supplementary list of buildings, precincts, areas, artefacts, structures of historical, aesthetical, architectural or cultural value to



which Regulation No 67 would apply and, Section 4.3: to advise whether any relaxation, modification alteration or variance of any of the Development Control Regulations of Greater Mumbai, 1991 is called for under Regulation 67 (4) etc.

However, such powers were never utilised. The major drawback is that the heritage committee is only advisory in nature and has no powers of enforcement.

With more awareness of conservation with a healthy market economy, the focus shifted to architectural conservation with individual conservation projects taking shape. The conservation professionals focused on architectural conservation with patronage from Indian Corporate Houses. Tata Sons Ltd was the first to completely restore the Army and Navy Building, a tenanted property located in the Fort area. This successful restoration triggered a snowball effect with the adjacent building i.e. David Sassoon Library undergoing restoration followed by Elphinstone College. In effect, the entire Kala Ghoda square was gentrified and today, it is a prominent cultural node with Kala Ghoda art festival held annually. Examples of public- private partnership were observable in the restoration of Rajabai Tower and Library building

project. In these projects, the Department of Trade and Industry, UK brought British expertise and materials to train the Indian craftsmen and revived the lost art of stained glass. These projects were instrumental in reviving lost traditions and with time, a niche for such specialised skilful repairs has been created in the contracting market. Funds were always a constraint; hence the focus was on a façade restoration or on the interiors rather than comprehensive repairs. Few selected Mumbai buildings; the DBS House at Fort and the Library building of University of Mumbai were restored and internationally acknowledged, receiving the UNESCO Asia Pacific Heritage Awards.

As a positive move, the Commissioner of Mumbai Metropolitan Region Development Authority (MMRDA), Mr Devrath Mehta established a Heritage Conservation Society in 1996. Two cells including one for natural heritage and, the other for man-made sites were established and several urban level studies of Mumbai were commissioned. This gave a much-needed public body impetus to the movement. Many precincts were studied, architectural controls and guidelines were drawn for these. Few were published and given to the government for notification. The architectural controls and guidelines could have



*Rapid, out of scale development in the city*





*Chatrapati Shivaji Terminus - A World Heritage Site*

benefited from more professional and public debate. Interestingly, the government has never taken any action such as official notification, even several years after receiving these documents.

#### Post Legislation 2000 to 2005

Not much authentic restoration occurred in this period as the focus was more on the reconstruction of heritage buildings specifically Grade III or in the precinct. A major flaw in the Mumbai heritage legislation is that it does not mention that heritage structures in fair structural condition cannot be destroyed. The developers exploit this rule and in the process many heritage buildings are unduly lost. Contractors would imitate architectural character after demolishing the original building resulting in pastiche. In some cases the architect's proposal has retained the old shell as the lobby and piggy-backed up on is a new high-rise development. Supposedly the retention of base is a favour being done to the heritage movement. Cessed properties, mostly in Grade III and precincts became the next target. A cessed property is a tenanted property prior to 1940 where even if there is a single residential tenant then the maintenance is paid through a 'repair cess' to the Housing Board. This was on

account of the frozen Rent Control Act affecting the landlords in maintaining their tenanted properties. Hence a cess was collected to allow the repair when required by the Board or with the No Objection Certificate (NOC) from tenants. With lucrative salvage prices and ease of conventional construction, the Repair Board was known for its insensitive repairs of removing Burma Teak and replacing it with steel, removing the intricate architectural details and replacing it with ordinary, inferior materials.

Another major loophole in the Rent Control Act was that it discouraged local repairs and encouraged complete demolition. Hence buildings that had portions in poor structural conditions had to be pulled down completely, and be reconstructed. To bear the cost of reconstruction, FSI incentives were introduced by the previous elected government and hence DCR 33(6) and 33(7) were modified. These properties were exempted from the heritage approval by choice of the owner seeking redevelopment. This was another major setback, an irreplaceable loss to this vital conservation movement. Cessed buildings provided a texture of their time on the sites where they stood, and it was this grain that gave Mumbai its local distinctiveness. The redevelopment that came in place

of a cessed building did not follow the conservation guidelines but followed the DC Regulations of leaving front and side setbacks, providing large minimum accommodation and thus the new fabric is completely alien to the original one. This incompatibly stands as an eyesore disturbing the historic skyline as well as disrupting the capacity of utilities and services of the locality. Even the Fort precinct, touted with prime inclusion in the final list aimed for protection with the 1995 legislation, has not been spared and cessed property redevelopment occurs through these indifferent policy loopholes.

On the other hand, professionals were experimenting with skilled and authentic conservation in the city. Fortunately the market economy was healthy, awareness was aplenty and hence many public private initiatives were taken up. This was followed by several projects such as the restoration of Oval Maidan project, Corporation Hall, Kala Ghoda square, the Dr Bhau Daji Lad Museum project, J J School of Arts, and restructuring of the Gateway of India square to mention a few in chronological order. By now there were specialists in stone cleaning, stained glass and lime mortar repairs and many more contractors were willing to work in this field.

The government as owners of major heritage buildings also felt a need to look after their buildings properly and they commissioned conservation architects to prepare reports for their properties like the BMC, KEM hospital, Bombay University, the Railways and the Navy. Many of them constituted heritage cells in their respective Civil Department like the BMC. The Central Railway went a step further and got its CST (erstwhile VT station) nominated as a World Heritage Site with help of INTACH Mumbai chapter. This is the only singular nineteenth century Gothic Revival building to be listed as a World Heritage Site in India, the other, being the Palace of Westminster, UK.

#### The Present State - 2005 onwards

From 1995 till date, Mumbai saw several changes of government with each having its own political manifesto and agenda. The previous government had slum rehabilitation and redevelopment of cessed properties as its main focus while the present government aims to make Mumbai into a world class city with Shanghai as the benchmark. Thus following the Shanghai growth model, the State Government is keen on redevelopment on a very large scale. With redevelopment in cessed properties under Grade III

and precincts already absolved from heritage permission, it is the Grade I and II listed entrances that are at stake. When the legislation was made, it was mentioned that heritage rules can overrule the prevailing rules but after 12 years of the legislation, the reverse seems to be happening. The prevalent rules seem to be overruling heritage rules. Transfer of development right (TDR) was introduced to compensate owners of heritage structures where new development gets affected due to listing. Of current trends, the Crawford Market, a Grade I building with an FSI of 4 is being applied for redevelopment instead of the limit of FSI of 1.33, by none other than the owner, the BMC (Bombay Municipal Corporation). If this is implemented then a precedent, albeit wrong, shall be set for other Grade I buildings like the University of Mumbai, the Chhatrapati Shivaji (Prince of Wales) Museum etc. This would be a mockery of Mumbai's heritage movement.

With loss of Grade III cessed properties, the demolition of Mumbai's industrial past of the mills, what remains is a few significant buildings. In the scheme of things it would not be surprising that the Mumbai Heritage Conservation Committee is abandoned and a new body for redevelopment or a parallel of Urban Arts Commission is formulated. This is a sad reality for a city that boasts of eight projects receiving the UNESCO Asia Pacific Heritage Award, of which the restoration of Dr Bhau Daji Lad Museum bagged the highest Award of Excellence.

The experience from 1991 to date has been mixed. It is a matter of pride that the rest of India looks at Mumbai as a role model for urban conservation and legislation. However, it is also a disturbing fact that conservation has never been considered a part of the city's development.

#### Way Ahead

Conservation in India has never got political patronage neither has it become a people's movement as yet. Conservation it still considered as anti-progress and is not a money spinner like real estate. For Mumbai to be the true role model of conservation for the country there, a stronger implementation mechanism of the legislation with a full fledged dedicated department is required. This department should review the existing listing and guidelines and should incorporate new precincts as reviewed by professional under the aegis of a wider public body such as the MMRDA. Harshad Bhatia, the urban designer has observed,



*Grade I Crawford market a landmark of Mumbai which wants to undergo redevelopment with higher FSI*

“Conservation and Development are two sides of the same coin. Just as a coin with heads or tails on both sides has no value, a city is valued when it protects and produces with sensitivity and sensibility.” Conservation should address the contemporary needs but arrest the greed of temporary gains. It should take the path of sensitive development.

An amendment aiming on the Rent Control Act for listed Heritage sites towards their protection is a step that needs to be taken without further delay. There should be legislation to encourage genuine restoration through skilful repairs by giving timely permissions for much needed sites. With legislation, policies should be framed towards economic incentives. There should be transparency in the workings of the MHCC and accessibility to their findings. To

encourage conservation works with prompt approvals a three tier committee is recommended:

- For an Urban Commission to determine the type of development in and around a historic site
- For major structural alterations of listed buildings
- For minor repairs and maintenance of listed buildings

Since its modest beginnings in Mumbai, conservation has come a long way from the struggle of listing buildings to getting World Heritage Site recognition. This is attributed to the commitment of citizens, NGOs, Corporate bodies and dedicated professionals who have set exemplary benchmarks. There is a continuing hope that it should now get unbiased governmental support.

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#### Notes

- 1 Chainani, Shyam , (2007), Heritage & Environment : An Indian Diary, UDRI publications, p 45
- 2 Chainani, Shyam , (2007), Heritage & Environment : An Indian Diary, UDRI publication.

# The Case of Ahmedabad

## Heritage regulations and participatory conservation

DEBASHISH NAYAK, ANAND IYER

### ABSTRACT

*The most daunting task in Indian cities is the survival of the densely populated, centuries old, city areas that face the impact of rapid industrialisation and modernisation. The challenges of Heritage Conservation (both at urban and building level) lie in reframing existing legal instruments derived from archaic British laws and to conform these, to the changing land use patterns, unregulated commerce, loopholes in the land and tax policies. These aspects allow heritage owners to succumb to short term profit instead of encouraging conservation. There is a complete lack of awareness amongst the citizens about the benefits and means of conserving heritage. This article presents the solutions that have emerged over the years from the Ahmedabad experience. It emphasises that heritage conservation cannot survive unless it translates into a public movement with a variety of communities activities stimulating belief in conservation. There has to be dedicated ownership of the conservation programme by the local municipal authorities. The article presents heritage walk as a replicable conservation tool and supports formulation of a comprehensive policy and statutory framework to ensure sustained Heritage Conservation.*

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### INTRODUCTION





*Jada Bhagat Ni Pol*



*Jada Bhagat Ni Pol Plan*

The aspirations of modern India have taken a tragic toll on the accumulated knowledge and examples of built heritage in all Indian cities. The only pre-independence legislation in India, for the protection of heritage structures was enacted by the Archaeological Survey of India, and organisation initiated by Sir Alexander Cunningham in 1861.

Due credit must also be given to a nationwide drive led by expert British surveyors initiated around 1880s, under which a majority of ancient Indian towns had been thoroughly surveyed. Today, these very survey sheets have become the resource for further works in preserving the traditional Indian towns and implementing heritage regulations.

#### THE CHALLENGES

The Indian Town and Country Planning Acts, derived from older British laws, which were the prime tools for regulating growth and change within the cities themselves, however, were never completely sensitive to the traditional Indian town plans. The colonial rulers understandably had very clear and strong 'administrative' reasons of control, as a rationale. The present town planning regulations are essentially based on these



*A street elevation in the historic core*

## For the First Time in India Loans Made Available for Conservation of Historical Buildings.

It is a strange fact that till now it was impossible to avail a loan for conservation or repair of a 15 year or more old house. But now under an MoU by HUDCO Bank and the Government of Gujarat, the residents of the walled city can get a loan at a subsidised interest rate of 5% for conservation and repair of their old houses. As a result, it has been possible to restore or repair houses as old as 100-150-200 years. They are provided free architectural guidance and supervision which would otherwise cost them fee at the rate of 10 to 15 percent.

The first of its kind in India, the scheme implemented will establish a financial system for the cause of heritage. Other Cities will benefit by following it in restoration of heritage buildings within their jurisdiction.

SATURDAY, NOVEMBER 22, 2007

### અમદાવાદની કલાત્મક પોળો માટે ફાન્સ સરકાર અને હુડકોની નવી આર્થિક યોજના

અમદાવાદ, ગુજરાત  
અમદાવાદ શહેરના નવું વિકાસ પામી રહેલા પોળોમાંથી એક એવા પોળોમાં સરકાર અને હુડકોની નવી આર્થિક યોજના અમલમાં લાગુ પડી છે. આ યોજના અંતર્ગત અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર લોન આપવામાં આવશે. આ લોન અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર આપવામાં આવશે. આ લોન અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર આપવામાં આવશે.



અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર લોન આપવામાં આવશે. આ લોન અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર આપવામાં આવશે. આ લોન અમદાવાદના પોળોના રક્ષણ અને સુધારા માટે 5% સબસાઇડાઇઝ્ડ ઇન્ટરેસ્ટ રેટ પર આપવામાં આવશે.

Newspaper clipping from a Local Gujarati paper November 22, 2007

acts, and hence they fail to address the city's built heritage and at times even pose a threat to the heritage.

For example, an essentially British idea is that of the 'Road Line', that has been imposed on all traditional cities in India with an intention of broadening the narrow winding lanes of old Indian cities, that are 'unhygienic' and need 'light and ventilation'. While the administrative undertones are very clear, these ideas also show that British town planners had no idea about the unique conception and planning principles; where the predominantly hot and dry climate (particularly in North India), was controlled through the combination of narrow lanes and open courtyard systems which created a unique micro climate cooling the entire habitation. Unfortunately, till today the Indian cities are victim of this antiquated 'Road line'

system, with the local and state governments using it indiscriminately (the most recent example in Ahmedabad is the widening of a one kilometre street in 2007).

In most Indian cities, similar building regulations are applicable in the traditional as well as the new area. As a result, the traditional planning principles which are essentially different from those that support newer and 'progressive' ideas of single use zoning, nuclear living and sprawled growth are never respected. The impact of these common laws has been tragic with great loss of traditional character in a city. Additionally in the old/ traditional parts of the cities, there is no control on land-use (leading to excessive commercialisation in order to meet the growing population stress), lack of maintenance of the traditional areas, lack of

awareness, unavailability of traditional craftsmen and many social factors led into a total collapse of traditional towns in India.

A major symptom of such deficiency in the system is the continuous demolition of traditional structures, often by the owners themselves. Though permissions are required for any engineering or developmental changes, people demolish their own houses illegally or even sell them to developers for short-term profit.

#### THE CASE OF AHMEDABAD

The walled city of Ahmedabad is a typical representative of an Indian city with a densely populated core area and urban fabric of strong heritage value. The *pols* (small cluster of courtyard houses, usually gated into a neighbourhood, named and bearing a strong character) are a particularly interesting feature of Ahmedabad, in addition to the various monuments of different phases of its chequered history. Without describing the city's heritage which is well documented by researchers (Nanda:1998), we proceed to address issues in the city's conservation and regulations. In the initial phase, an attempt was made to identify the various conservation issues in the walled city area. Some of the specific issues in Ahmedabad are listed here:

#### Problems in regulations and policies

**Floor Space Index (FSI):** The permissible FSI in the walled city, except for the 'City Centre' area was 3.0. The traditional neighbourhoods normally consume much lesser, owing to lesser pressures, more mixed-use and being self-contained communities. Faced with growing pressures, this additional FSI was actually being used for constructing utterly incongruous multi-storied buildings by amalgamating three or four smaller plots and demolition of the heritage properties therein. This has destroyed the character of the area, and while this is restricted now, illegal practices still continue.

**Tax Structure:** Many aspects of the existing tax structure on properties do not favour heritage conservation. While there is no special exemption till date for heritage, several seemingly innocent provisions also affect heritage. For example, vacant properties are taxed lesser than occupied properties, leading to buildings of heritage value preferred to being locked up by the owners (if not occupied) and consequently subject to deterioration and ruin. Another

ironic example, is that *Chabutaras* (bird feeders) are actually considered as commercial buildings under law and are taxed on such rates! The matter is not taken seriously and even the financial instruments have no special concern for this heritage.

**Increase of commercial activities:** Both wholesale and retail, in the old fabric, (especially after the so called 'Relief' Road was cut crudely through the existing fabric linking the railway station with the city centre) created a lot of undesirable changes in the land-use. The shops along the newly created 'main' road generated a different culture and character along its length. Storage warehouses coming up inside the *pols* to support the street commerce greatly disturbed the residential character, with its size, nature of activities and character of the built form.

**Social problems:** The closure of textile mills and ensuing mass unemployment in traditional local residents, newer migrant population, communal tensions leading to migration have all contributed to weakening the close-knit strength of the fabric of the old city. These areas despite their strong heritage value and traditional character are not the preferred residential areas as earlier.

**Lack of awareness:** People lacked awareness and were not aware about the benefits of conservation. Proper building materials were unavailable and there was lack of skilled persons for repair works. Hence, easily available new materials were preferred. Proper maps and drawings of the walled city were not accessible, which made the exact identification and proper planning with development alternatives difficult.

#### THE SOLUTIONS

Before attempting to streamline the regulations, it was necessary to create a need and awareness among various sections of the society starting from administrators, politicians, municipal councillors and citizen groups to understand the role of the built heritage structures particularly in the walled city area in their daily life, and create a situation and a context for them to appreciate and participate in this process. The Heritage Cell of the Ahmedabad Municipal Corporation (AMC), formally set up in July 1996, has been the chief nodal body that coordinates all the heritage activities in the public realm. A few examples of all the activities are listed.

#### Community Participation



Heritage Conservation cannot survive through the efforts of a single person or institution. It has to translate into a public movement, and for that stimulating belief and pride through widespread participation amongst a variety of stakeholders is necessary. A series of activities were organised to elicit community participation and make it a movement. Some of these are described below:

**A meeting at Khadia:** A citizens' meeting was held in the *Khadia* area of the old city to discuss the possibilities and strategies of conservation and development of walled city of Ahmedabad. This was organised by AMC (Ahmedabad Municipal Corporation) and attended by many citizen groups, renowned personalities and AMC officials. This was the first of many more such meetings at different scales and locations in the old city.

**World Heritage Week celebration at *Desai-ni-Pol*:** The first public programme organised jointly by citizen's groups and Municipal Authorities entitled 'Preservation of the Past and Glimpses of History' was launched at *Desai-ni-Pol* in *Khadia* on 19<sup>th</sup> November 1996 on the occasion of World Heritage Week celebrations. The residents of the *pol* released a booklet, listing the historical houses, personalities who lived there, and a chronicle of important events in the past.

**Krantidarshan Padyatra (Freedom Walk), Gandhi Jayanti and Netaji Jayanti:** On 14<sup>th</sup> August 1997 a Freedom Walk was organised where twenty eight houses connected with the history of Indian freedom struggle were identified and citizens along with elected and government officials visited the same. On 2<sup>nd</sup> October 1997, many *pol* groups celebrated Gandhiji's birthday and buildings associated with his life in the city were visited. A similar celebration marked the birthday of Netaji Subhash Chandra Bose on 23<sup>rd</sup> January 1998 at the 'United Bengal Home' in *Dhobi-ni-Pol*, which was established in 1905, and was the centre of action where revolutionaries from Bengal stayed and trained local people in revolutionary activities of the freedom struggle. During a public meeting on this occasion again, the need for preserving cultural heritage was stressed.

**Kavi Sammelan (Poets' meet):** A *Kavi Sammelan* was organised on the death anniversary of a famous local poet, Kavi Dalpatram on 25<sup>th</sup> March 1998, in the *pol* where he used to live. A prominent open space in the *pol* which lay along the Heritage Walk anyway, was



*A Pol meeting in progress in Ahmedabad*

renovated and renamed *Kavi Dalpatram Chowk*, with an impressive statue of the poet himself. Organisations like *Gujarat Sahitya Parishad* also worked together with the authorities and local persons to make it a success.

**Revival of Traditional Local Governance System – the *Panch*:** A street play called '*Pol – Etale molun dahin ne upar katke gor*' was developed with an intention to remind the residents of the strong community sense in the *pol*, where in every *pol* an elected body of elders, the *panch* would take decisions for the welfare of its residents. It also described the life and culture of the people of the *pol*. It tried to discourage the breaking down of the traditional *pol* house with the *otla*, *chowk*, *tanka*, wooden carved facades etc. that was going to be replaced by concrete and brick structures. Thus the play was an effort to encourage people in the *pol* to revive their effective system of local governance.

Volunteer involvement is very crucial for long-term sustenance of any movement. Official recognition of citizen efforts is also vital. The AMC has recognised this role and a proper certification process is also established for volunteers as guides for the Heritage Walk and other programmes.

#### *Street signage programme*

The name of an area, particularly in historic inner city neighbourhoods is very significant for the local residents. They closely identify with the name and have strong associations with its historical and symbolic values. This was recognised as a simple, effective element for awareness. AMC has started to display name plates of each area or street with municipal symbols and appropriately inaugurates them in the presence of AMC officials, local political





*Initiation of Heritage Walk*

representative and elderly persons of the neighbourhood, thus re-establishing a sense of pride and belonging amongst the locals.

#### *Role of media*

The role of media is very important for wider publicity and to create awareness at all levels of society. During all these activities, different forms of the media like local and vernacular newspapers, radio, television, theatre, art schools, folk art forms, festivals and other stand-alone programmes have played an important role to disseminate the information.

#### *Heritage Walk : A key tool for urban revival*

One of the key tools for creating this interface was the 'Heritage Walk' which helped on a day-to-day basis to continue the process of heritage appreciation. The Walk was started in 1996 and then formally launched in 19<sup>th</sup> November 1997. It takes the visitors through specific routes in the inner residential and public areas, exploring temples, monuments, *havelis*, *pols*, houses, shops and many more aspects of the traditional life of the people.

The Heritage Walk is owned and operated by the AMC itself for several years now, including all the related activities. In addition to raising local and other awareness, the Walk has other advantages. For example, the conversion of a part of the heritage building into a cafeteria or into a paying guest accommodation allowed tourists to have an authentic experience of the cultural heritage along with interaction with the local persons. This can allow a socio economic upgradation of the area wherein heritage and tourism related activities can generate revenue for sustenance.

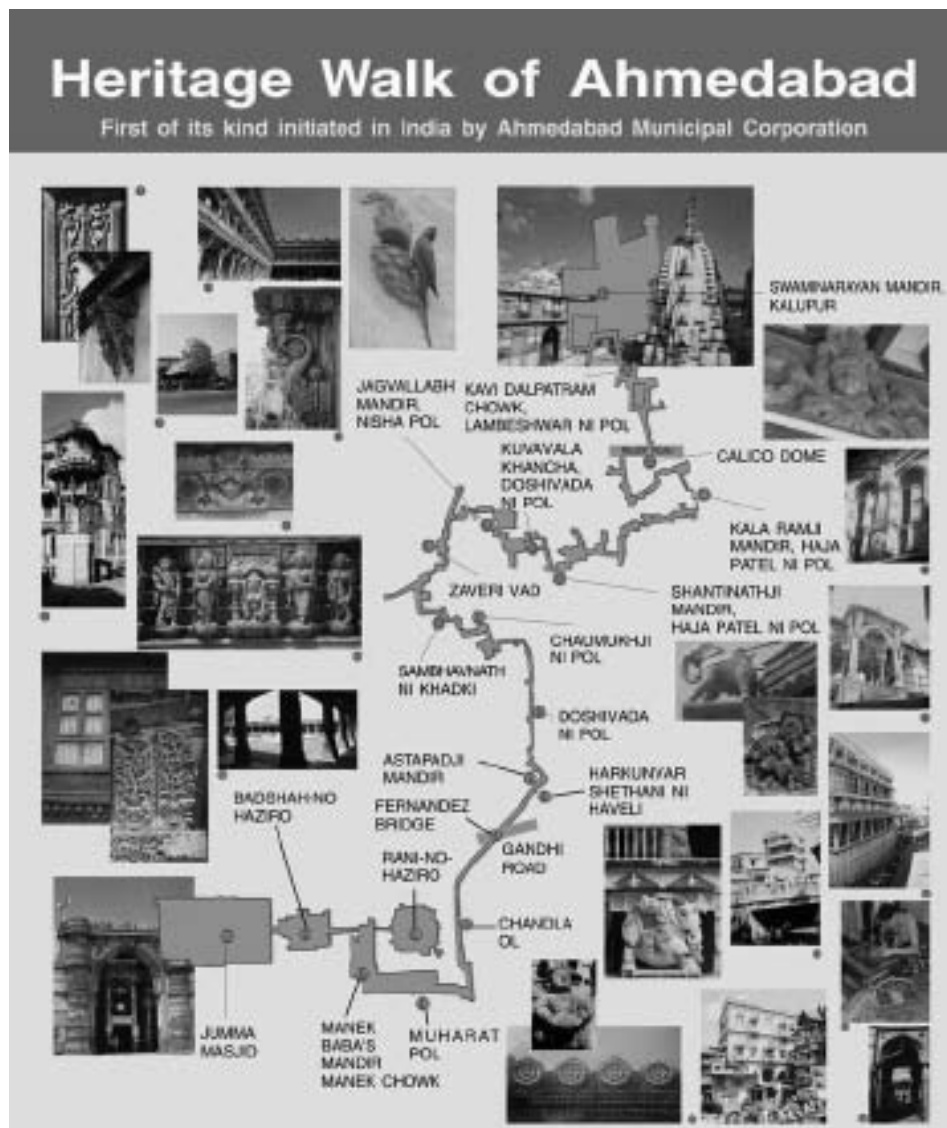
#### *Other Ideas*

Some other interventions were also considered, for example, to prevent citizens from selling off their houses and shifting to newer areas, free consultancy was given to adapt newer functions to their houses sensitively, ways to restore their buildings, means for providing a subsidised bank loan for repairing the houses (this included convincing many banks to actually extend a loan to a building that was more than 50 years old, in the first place; a fact that is a drawback for conservation in the country's banking system itself). Often road-widening in the old city is justified stating difficulty in access for essential services like fire-fighting etc. Hence, a special fire-fighting mechanism was developed, that was mounted on a motorcycle, and could easily manoeuvre through the narrow lanes and access a building very soon. Many such vehicles could easily put off fires detected early or work till a larger tender with hose arrived. This helped in saving many heritage properties. Hence, it is other aspects beyond heritage regulations that can make a difference to the urban conservation process.

Many other parallel regulatory initiatives were taken where legal changes were incorporated in the existing General Development Control Regulations (GDCRs) which also aided heritage conservation. These included reduction of FSI in the old city areas from 3 to 1.8 which was a big deterrent to the consolidated purchase and development of properties. Other measures were: reduction in property tax of traditional residential buildings that are taken up for adaptive reuse, a new list of allowed uses incorporated in the building tax system etc.

This process led the AMC to appoint a lawyer and urban planner Shri. Jaydev Nansey to coordinate and draft heritage regulations for Ahmedabad. Shri. Shyam Chainani of Mumbai, known for his pioneering role in drafting the first Heritage Regulations for the city of Bombay (Mumbai) was continuously consulted for necessary changes and additions. Several consultation workshops were also conducted involving prominent architects, planners, NGOs and academic institutions of Ahmedabad, eventually resulting in Draft Heritage Regulations for Ahmedabad in 2002.

In 1998, with the French Government participation, a series of workshops were held with Indian National Trust for Art and Cultural Heritage (INTACH) and Indian Institute of Management (IIM) for managing



Map showing Heritage walk of Ahmedabad

the cultural heritage of traditional cities. On 14<sup>th</sup> January 2000, an agreement was signed between Ahmedabad Municipal Corporation and Government of France to prepare a Walled City Revitalisation Plan. As a part of the initial survey, nearly 15,000 buildings were listed under heritage category which was an important step in the process of identifying the heritage buildings in a comprehensive list. However, the list was not included legally into the General Development Control Regulations (GDCR), due to various reasons beyond control. But an important thing that resulted from the French collaboration was an arrangement, where Housing and Urban Development Corporation Ltd (HUDCO) would offer soft loans to heritage property owners at subsidised rates to the market rates, and they were in turn helped by a French government grant that would offset the difference.

Many house owners have benefited from this scheme, and many exquisite houses have been restored to their old glory and saved from deterioration. A joint office consisting of French and Indian architects and students worked for many years right in the *pols*, on several such projects, resulting in a rich cultural exchange.

#### Change in Regulations

While the above initiatives were ongoing, changes in the Building Control regulations were being relentlessly pursued. A modification was made in the year 2001 in the Gazette, for a point in the statutory GDCRs covering Heritage Buildings and precincts; protecting them from any change without permission from the competent authority. Though it was only brief and not enough to make conservation legally

enforceable, as essential definitions, identification mechanisms, and a gazetted list of heritage structures were lacking to which the law would apply, it was nevertheless a step in the right direction.

The conservation attempts have also been supported. The Heritage Walk route passes through a structure called the Calico Dome which has a Geodesic dome and a space-frame, both built for the first time in India. Although built in late 1950s, the Calico Dome was also incorporated in the AMC listing of heritage structures to preserve it as a part of national engineering history. As the Calico mill was liquidated, the property came out for sale and eventual demolition. The AMC put an affidavit in the Gujarat High Court declaring it as a heritage structure which could not be demolished. But, as the heritage list was not yet officially gazetted, the High Court ordered AMC to do the necessary formalities and officially declare the heritage list. The critical order by High Court Judge, Honourable Shri M R Shah's order dated 07/02/2007, AMC requested the Government of Gujarat (Urban Development Department) to do the necessary formalities. So, under the advice of Chief Town Planner, Government of Gujarat, the draft Heritage Regulations were sent for approval of the ministry; which on 5<sup>th</sup> May 2007 was notified for objections and finally on 20<sup>th</sup> September 2007 it was gazetted.

Although the Ahmedabad regulations have evolved from the Bombay regulations which are considered a national model, several major changes have been incorporated due to the existing Heritage Cell's on ground experience and the process of implementation. Few major features in the gazetted Heritage Regulations are presented below:

17.20.4 Note: "any list which is in draft form and pending for approval will, in the interim period, also be deemed to be a part of the heritage list for purposes of development permission."

17.20.6 Applicability of development proposals to listed heritage buildings, listed heritage precincts

"overrules any other development proposals including road widening" with detailed points preventing further damage.

17.20.8 Creation of new incentives for heritage conservation allows for "Transfer of Development Rights, the creation of a Repair Fund, Tax incentive etc." that can be taken up by the authority to positively promote heritage conservation, instead of restrictive conditions only.

Special criteria for listing heritage site have also been added as a guideline for Heritage Conservation Committee, so that there is scope for local application and the list can be expanded.

## Conclusion

This entire process has eventually motivated the Government of Gujarat to draft the Gujarat Built Heritage Policy (GBHP) which will enable all town and cities to replicate the above process at their own local level and in the most appropriate manner, to conserve the buildings of heritage value. The draft policy has been prepared and is presently under the government's active consideration.

It is by no means being suggested that the above process is the ideal one. It only highlights the path that Ahmedabad has taken in Heritage Conservation in the public realm, and recounts the many steps and stages that have contributed to the present condition. The transformation is evident with the heritage regulations in place, a lot of awareness at all levels from the government officials to local authorities to general populace and, right down to the heritage house owners and neighbours. The path has not been smooth, and there have been many obstacles, but the good work and good faith in the minds of the residents of the *pols* and numerous other persons have continued to fuel the Heritage Conservation movement in Ahmedabad, which has a strong momentum now.

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## Acknowledgements

- All images are provided by the author

# Heritage Album

## *Text and Images:*

Indian National Trust for Art and Cultural Heritage (INTACH) is committed to make people aware of Pondicherry's unique architecture, and the threats it is facing. It has taken the initiative in close collaboration with the government and the citizens of Pondicherry to preserve the fast disappearing heritage. The organisation works in close collaboration with the Departments of Art, Culture, Tourism and Town Planning. It also collaborates with Ecole Francaise de Extreme Orient and the Institute Francaise Pondicherry. The initial listing of the heritage buildings was carried out with these institutions.

## A TALE OF PONDICHERRY

'Pondicherry' is the French interpretation of the original name 'Puducheri' meaning 'new settlement'. Many pilgrims used to visit the city on their way to Rameshwaram. excavations at Arikamedu, about seven kilometres to the south of the town, show that Romans came there to trade in the first century AD. The findings are now displayed at the local Museum. Pondicherry was part of the Pallava, the Chola, and the Pandya empires from the fourth to the fourteenth centuries, and later it became part of the Vijayanagara Empire. This was followed by Islamic conquest and, in 1521 the Portuguese moved into the town for the purpose of textile trading.



Kazy street





### Montorsier street

Pondicherry has two distinct parts, the French and the Tamil. The French quarter has structures in the European classical style, whereas the buildings in the Tamil quarter adhere to the vernacular style of Tamil Nadu. The two styles have influenced each other with the result that many buildings in both parts of the town are a harmonious blend of European and Tamil architectural patterns.

The French quarter developed along the beach around the present Bharati Park that is surrounded by stately government buildings. In general, the buildings are of two main types; 'residential' which form the majority, and 'public' set amidst large plots with fenced enclosures. French building models were adapted to suit local climatic conditions.

Originally, the native Tamil town developed around the nucleus of a group of temples in the northern section and the streets were laid along the east-west axis onto which the back-to-back row houses opened. These streetscapes with continuous wall-to-wall construction are very different in character from the French streetscapes. Their exterior façades mainly feature a *thalvaram* (street corridor with platform and lean-to-roof over wooden posts), a social extension of the house and a *thinnai* (semi-public veranda space) with masonry benches for visitors.



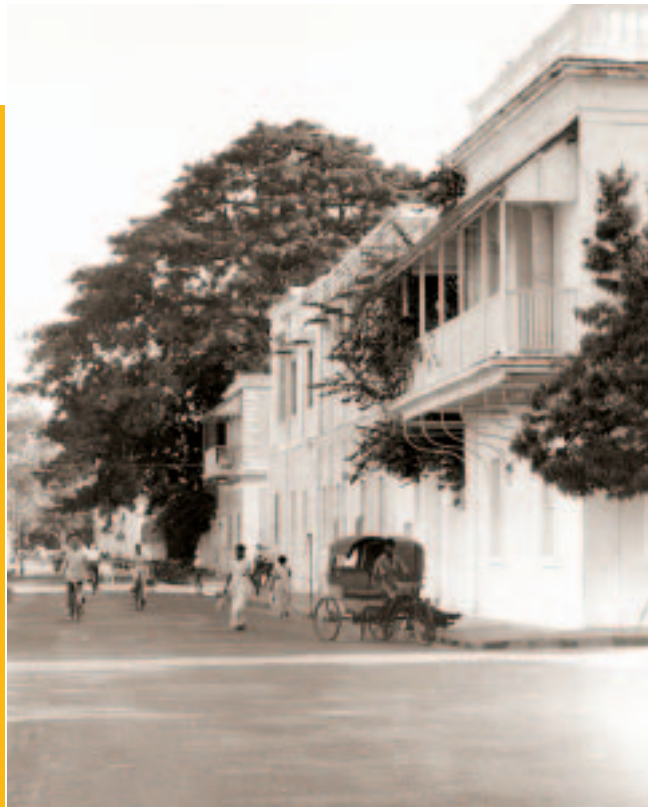
## Saint Gilles

These 'talking-streets', so-called because of their intimate scale and interactive nature are typical of the vernacular Tamil architecture and the entire street stretch is homogeneous because of connecting elements like lean-to-roofs, cornices (horizontals), pilasters and engaged columns (verticals) and ornamental parapets defining the skyline. All houses are similar, but no two houses are alike. On the whole, a conspicuous synthesis of two varying styles is evident in many buildings, especially in the case of two storied Tamil buildings.

It is this cross-influence of building patterns that gives the old town its distinct architectural vocabulary'.

### Legal Protection for Heritage Buildings

As of now, there is no legal protection for the listed heritage buildings. One proposal, under consideration of the government of Pondicherry is preparation of a Detailed Development Plan (DDP) to provide legal protection and financial support along with other incentives for heritage buildings. According



## Francois Martin road



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Thalvaram

to the DDP, the old town; contained within the four boulevards and comprising of Tamil and French Precincts is proposed to be declared as a heritage zone.

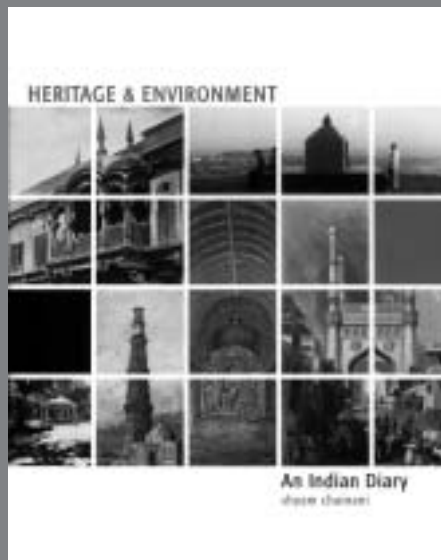
Pondicherry could become a pioneer and a model to other cities in this direction. Its size and architecture, French and Tamil, are ideal ingredients. The primary aim should be to make the city beautiful and liveable for its citizens and tourism will prosper subsequently.

Pondicherry requires a comprehensive approach synergising improvements in urban infrastructure, architectural heritage protection, lighting, landscaping, pollution-free traffic and solid waste management, improving and strengthening tourist facilities, and to create a new quality of urban experience. This scheme will complement the already ongoing schemes of the government of Pondicherry like the Programme: 'Achieving Urban Economic and Environmental Goals through Heritage Preservation Initiatives', being carried out with the help of European Commission.

# Book Review

A K JAIN

*"Heritage and Environment : An Indian Diary" by Shyam Chainani, published by Urban Design Research Institute, Mumbai, 2007, Pages-532, Price-Rs.995/-*



India is a unique repository of diverse heritage. The variety of its built environment – settlements, villages, heritage structures, artifacts, streets, parks, water bodies and precincts of historic, aesthetic, cultural and religious significance is amazing. Unfortunately in the modern times, in a zeal to develop the modern cities, the treasure of our heritage and traditional urbanism has often been trampled upon. Borrowed concepts of urban 'aesthetics' have overlooked the rich historic, cultural and symbiotic contents of the heritage.

The consequence is evident in overall decay of the traditional settlements. The reasons for this state of affairs are beyond the demographic, economic and physical forces, these include the lack of awareness, sensitivity and concern for the traditional values, incapacity of institutional framework, non-responsive organisations, flaws in planning, design and development, legal and enforcement inadequacies and deficiencies in implementation and maintenance. The fall-out of market oriented development are exhibited by indiscriminate and massive constructions with little regard to the heritage, ugly hoardings, and outdoor advertisements which deface and damage the Indian cities and heritage.

Article 48A of the Constitution of India enjoins the State, which includes the Parliament and the Legislatures of the States, to protect and improve the environment and to safeguard the forests and wild life of the country. Article 49 of the Constitution makes it an obligation, both on the Parliament as well as the State Legislature, to protect every monument or place or object of artistic or historic interest, declared by or under law, to be of national importance, from spoliation, disfigurement, destruction, removal, disposal or export, as the case may be. Article 51A imposes on every citizen of India to value and preserve the rich heritage of our composite culture. At present the monuments and artifacts of historical interest are protected under the Ancient and Historical Monuments Act, 1958, and also under different State Acts, enacted for the same. Antiquities and Arts Treasures Act, 1972, protects certain categories of moveable properties, which fall within the definition of that Act.

Shyam Chainani, in his book *Heritage and Environment* clearly brings out the fact that inspite of legal protection, the conservation of heritage in India lacks a consistent and effective approach. There are many places of historical or artistic interest which are not covered either by the Central or the State laws. The legislations enacted in States are found inappropriate or inadequate and do not afford sufficient protection to areas of natural beauty or areas of architectural or historical interest. At the National or State level, there is lack of a clear policy for conservation of the heritage.

The author started his work few years back when, except for the Archeological Survey of India's list of few protected monuments, there was no documentation of heritage areas, precincts or buildings in India. As such, often the development plans conflicted with the objectives of heritage conservation. The subject matter of heritage conservation suffered from lack of capacity and professionalism. The monument centric approach often ignored the larger picture of the cities and towns as a whole, and the ecology of natural heritage i.e. rivers, mountains and the landscape.

In this context, the author clearly brings out that the first step towards protection of our heritage is the development of



heritage policies, regulations and guidelines at the national, state, regional and local levels which should cover the heritage cities and towns, archaeological sites and precincts, coastal areas, natural sites, hill stations and other sites of historical and cultural significance. The policy should imbibe 'Heritage Rules and Regulations', which are consistent with the Constitution, Archaeological Acts/Rules, Building Bye-laws, Town Planning and Environment Laws. These should be people friendly, so as not to let history and heritage be a burden, but a matter of pride.

A pre-requisite in this regard is to identify the heritage resources and listing of such assets which should be the basis of the preparation of any development proposal or plans. The purpose of 'listing' is not to freeze the development, but to make the heritage cities, villages, precincts and buildings accessible to the public, to initiate eco-tourism projects and to develop heritage understanding, appreciation and education.

With the efforts of people like Shyam Chainani and organisations like INTACH, a slow paradigm shift is discernible in the approach. Whereas in the earlier Master Plans, conservation of heritage was a minor issue, in the new Master Plan of Delhi-2021 a whole chapter is devoted to heritage conservation. Dedicated departments such as Urban Heritage Foundations have been created within the government set up in order to give focused attention on conservation of heritage. However, the efforts are at a nascent stage, which need to be further institutionalised. It is necessary to develop new partnerships and public participation in a structured framework of the conservation of heritage, which should encompass the following:-

- Creating a data base and public information system for documentation of heritage buildings, areas and precincts and creating awareness.
- Developing organisational capacity for heritage management and to integrate the roles of concerned departments, agencies and stake holders.
- Defining and reviewing the organisational structure and responsibilities.
- Preparation of manuals/guidebooks, etc. to deal with the conservation of heritage zones, archeological parks,

buildings and complexes.

- Preparing a comprehensive legal framework and guidelines.
- Preparing financial plans and developing new partnerships.
- Devising an implementation, enforcement and monitoring, framework.

The book brings out the fact that in a context where people are involved, the 'legislation' is to be seen in a broader context. There are various examples of 'para-legal' measures, which have been successfully adopted for conservation of the heritage by way of a participatory process. These require concerted actions by the government, local bodies and the community.

As summed up by Shyam Chainani, his "book is neither a research effort, nor an exercise by a scholar. It is emphatically not an autobiography nor an account of the work of the Bombay Environmental Action Group, since the campaigns dealt within the book constitute only a fraction of our work. It is essentially an account of some heritage and environmental conservation campaigns as seen through my eyes..... This is a personalized history, pure and simple, focusing on heritage legislation and environmental decision making. The book is an aide memoire for presentations about the heritage movement and/or Heritage Regulations of Bombay and from a monograph describing the various legal methods of obtaining heritage protection".

The book in its eleven chapters gives a graphic account of the dogged struggle, campaigns and battles of a conservationist. In an interesting way, it analyses and records how decisions are taken by the government, which include personal factors – friendships, animosities, social status, lobbying, understanding, patience, arguments, conflicts, and court cases.

I wish that the publication is read by the policy makers, planners, architects and all those interested or involved with the heritage. This will certainly benefit the reader in developing a better and deeper understanding of the heritage and traditional urbanism in India.

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A K Jain is Commissioner (Planning), Delhi Development Authority. He has been involved with the preparation of the Delhi Master Plan – 2021 and is part of the Delhi Urban Heritage Foundation. He is on Advisory Board of UN-Habitat (HS-Net) and has been in the Executive Committee of INTACH.

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