CREATION OF OPEN SPACE NETWORK TO IMPROVE THE QUALITY OF URBAN ENVIRONMENT IN THE WALLED CITY OF BIDAR, KARNATAKA

DESIGN THESIS

Thesis submitted in partial fulfillment of the requirements for the award of the degree of

MASTER OF LANDSCAPE ARCHITECTURE

By

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2014MLA006

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DECLARATION

I **Aditi Sudhir Galande** , Scholar No. **2014MLA006** hereby declare that the thesis titled **Creation of Open space Network to Improve the Quality Urban Environment in the Walled city of Bidar Karnataka** submitted by me in partial fulfilment for the award of **Master of Landscape Architecture**, at **School of Planning and Architecture, Bhopal**, India. is a record of bonafide work carried out by me. The matter/result embodied in this thesis has not been submitted to any other University or Institute for the award of any degree or diploma.

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CERTIFICATE

This is to certify that the declaration of **Aditi Sudhir Galande** is true to the best of my knowledge and that the student has worked under my guidance for one semester in preparing this thesis.

RECOMMENDED

THESIS COMMITTEE

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ABSTRACT

The walled city of Bidar & the royal citadel were planned according to the larger landscape and systems of the plateau region. This plateau even though flat topped has small hillocks on its surface. The royal citadel is built on one such hillock and slopes down further to the north where the royal gardens visually meet the grassy landscape beyond the fort wall. But what is most stricking is that in the land in which water is scarce and climate is extreme the builders of the city through sustainable planning, knowledge of traditional water management systems and intelligent use of landscape and topography could create a magnificent city like Bidar. All of this intelligence blended with heritage components and monumental architectural marvels dominated the skyline of the city. The visual narrative of the city must have been very strong starting from the experience of entering through the gates with no idea of what lies beyond to unraveling of the place due to the dominance of monuments as landmarks orienting the travelers. The idea of open space must have been very abstract considering the traces seen today in form of tomb of sufi saints placed in large mausoleum gardens, the hierarchy of squares with a vertical element, the old marketplace, the symbol of knowledge the *Madarsa* and the private courtyard spaces enclosed by and within residential clusters. There was no space demarcated as open space but each space had multiple meaning and functions depending on time. But the city is fast loosing on this urban experience inspite of the efforts to bring the city into the heritage network and tourism circuit by the local government and various other initiatives. This is because a holistic approach is missing that takes into account the environmental approach to study the city and then develop a coherent framework. The thesis proposes to harness the idea of re-imagining the open spaces of the city and designing linkages and create experiences as one transacts through the city either as a resident or tourist.

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CHAPTER 01 INTRODUCTION

1.1Background

The physical existence of a place where an historic event would have taken place is very rarely found. Generally such places get overlapped with layers of culture over time. But the evidence does exist in literary, artistic, epigraphic sources. Historic Gardens and open spaces were culturally produced institutions that were permeable to absorb change in both function and meaning. The same garden could adapt locally to serve different purposes from political to the ritual or private pleasure. It was a living heritage that was constantly under change. This plurality of garden culture and the multiplicity of meanings and uses which the garden may have inspired in a particular geographical setting as well the political power governing it have inspired not only garden design but associative practices of hydrology, botany and architecture. The garden is conceived as a social space, a political arena where both rituals of power unfold and control of resources is at stake, a site of memory

preserved. It is also a place where the imagination or memory or belief takes a physical form. A place that appeals to all the senses provoking emotions like relief, inspiration or serenity.

Presently, the conservation concerns are centered on the built heritage (especially the monumental structures), whereas the space around which the heritage is anchored is seldom considered. In the case of conservation and development efforts, the built heritage is seldom related to the natural heritage or the intangible cultural heritage, and the architectural building traditions do not receive sufficient attention. The landscape approach includes the conservation of the intangible heritage and the management of natural and cultural resources with the

Fig 1.1 Palace grounds Vadodara
Source : Google

Fig 1.2 Temple at Maduria
Source : Google

Fig 1.3a.Streets of Fountainhas, Goa
Source : Google

Fig 1.3b Streets of Fountainhas, Goa
Source : Google

Fig 1.4 Res margos fort, Goa
Source : Google

public's participation. If people still live that culture then it adds a life to the city and its heritage. And when a person comes to the city as a tourist he is simply drawn more by the social interaction than the monument. The buildings can replicated but the culture has to be preserved. And the historic places materialize the intangible values, meanings and beliefs. The historic places need to be revived in the present context making it flexible and dynamic for the people of the city.

1.2 Introduction

The historic city of Bidar is geographically located on the brink of the Deccan Plateau, offering views of the lowlands (talghat) towards the North & East. It is 615 m (2330 feet) above the sea level. The total area of the district is 5420 sq.km out of which the area of the city is 43 sq. km.

The cities has evidences of being under the rule of the prominent dynasties of the south like the Chalukyas, Kalchuris, Yadavas & Kakatiyas. But the city experienced its most glorious period when it became the capital of the Bahamani Sultanate.

In 1347 the a rebellion by the local army sultanate in Daulatabad eventually led to the establishment of the independent Bahamani Sultanate based in the western Deccan north of the Krishna river. The capital for almost a century was at Gulburga. But in 1422 the capital was shifted to Bidar (ancient name Muhammadabad). The design of the new city and a fort for the Sultan was based on the cosmic belief of creating paradise on earth. The fortified city of Bidar, like other capitals of the period (and earlier in the Middle-East), consisted of a walled square divided into quarters with the citadel palace to one side. The royal citadel was sited at the highest elevation of the plateau and a moat was dug on all its sides.

The fortified city too was surrounded by moats and accessed by gateways. It was divided into four quarters *Mahallas* with each having an open space as the nuclei. The nucleus of each neighborhood was the *Kuliya* which consisted of the mosque, a school or *Madarssa* and *bazaar* or *hammam*(bath). The public space had further common open space which was used as gathering space for ceremonies or functions. These spaces were all linked to each other as if to form a network of public open spaces. At the neighborhood level a hierarchy of open spaces from private space inside the house to public space connecting it to the

1.3 The Need for the Project

In Bidar the original function of open spaces associated with historic structures has changed with time. For instance the Madarssa has lost its original function but is still used as a social space. The main streets abuts the Chaubara with no buffer around it still people wait in its shadow during a hot sunny day. These all important buildings once defined the skyline of the city and were a part of the larger network of open spaces. Now they and many such open spaces exist in isolation. The idea is to preserve the authenticity of the culture that the city has been living through the decades by enhancing these vital elements of the urban fabric. The ecological function of these spaces also needs to be rejuvenated. The notion is to make the overall urban experience enriching and environment legible and coherent.

1.4 Aim

Preserving the sense of continuity and authenticity of the historic city while enhancing the quality of open spaces within the city.

1.5 Objectives

I. To understand the geographic, physiography features, geology , geomophology & the climate of the region encompassing the city.

II. To study the interaction between the natural landscape of the region & the value system and beliefs of the past to understand the planning of the city and its open spaces.

III. To study the existing open spaces and the patterns (environmental, functional, visual etc) created due to their positioning in the urban fabric.

IV. To develop a classification for the open spaces based on landscape criteria (ecological, historical, social, etc).

V. To explore the possibility for categorization of open space into archetypes so as to prepare a typical model that could be replicated.

VI. To understand the inherited value (historic monument or intangible value) if any of the open spaces and its relevance in the past and present.

VII. To document existing condition of open space & surrounding heritage places and understand existing legislation for their development

1.6 Scope & Limitations

The scope and limitations would be subject to the data accquired from secondary information source.

CHAPTER 02 LITERATURE REVIEW

2.1 What is Heritage Conservation?

Heritage conservation includes preservation of physical remains like monuments, paintings and artifacts & the intangible aspect of heritage like traditional knowledge systems, historic gardens & open spaces, art and local culture (practices and activities). The tangible heritage is the marker of a certain event or time and slowly looses its significance with time. But the intangible aspect is what helps preserve its value, creation of memory, experience and identity to it.

Context that helps explain the highly positive meaning and the desirability to old forms and materials.

2.2 Urban Heritage

Urban heritage, including its tangible and intangible components, constitutes a key resource in enhancing the liveability of urban areas, and fosters economic development and social cohesion in a changing global environment. As the future of humanity hinges on the effective planning and management of resources, conservation has become a strategy to achieve a balance between urban growth and quality of life on a sustainable basis. It is a response to the need to preserve shared values and to benefit from the legacy of history. However, the shift from an emphasis on architectural monuments primarily towards a broader recognition of the importance of the social, cultural and economic processes in the conservation of urban values. It suggests a landscape approach for identifying, conserving and managing historic areas within their broader urban contexts, by considering the interrelationships of their physical forms, their spatial organization and connection, their natural features and settings, and their social, cultural and economic values.

2.3 Historic Urban Landscapes

According to UNESCO

1. The historic urban landscape is the urban area understood as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of "historic centre" or "ensemble" to include the broader urban context and its geographical setting.

2. This wider context includes notably the site's topography, geomorphology, hydrology and natural features, its built environment, both historic and contemporary, its infrastructures above and below ground, its open spaces and gardens, its land use patterns and spatial organization, perceptions and visual relation ships, as well as all other elements of the urban structure.

3. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.

4. The historic urban landscape approach is aimed at preserving the quality of the human environment, enhancing the productive and sustainable use of urban spaces, while recognizing their dynamic character, and promoting social and functional diversity. It is rooted in a balanced and sustainable relationship between the urban and natural environment, between the needs of present and future generations and the legacy from the past.

5. The historic urban landscape approach considers cultural diversity and creativity as key assets for human, social and economic development, and provides tools to manage physical and social transformations and to ensure that contemporary interventions are harmoniously integrated with heritage in a historic setting and take into account regional contexts.

6. The historic urban landscape approach learns from the traditions and perceptions of local communities, while respecting the values of the national and international communities.

7. The historic urban landscape approach considers cultural diversity and creativity as key assets for human, social and economic development, and provides tools to manage physical and social transformations and to ensure that contemporary interventions are harmoniously integrated with heritage in a historic setting and take into account regional contexts.

8. The historic urban landscape approach learns from the traditions and perceptions of local communities, while respecting the values of the national and international communities.

2.4 The Historic Urban Landscape gives guidelines to study the city

The Natural System

The study of landform the includes topography, geomorphology, geology, hydrology and natural features historic and contemporary. The climate of the region & local weather conditions through the temperature, relative humidity, precipitation, wind direction, etc. The Landcover the forest type, vegetation.

The Mam-made System

Urban Development – Development of the city's open spaces, land use patterns and spatial organization, traditional systems, perceptions and visual relationships.

The Value Systems

Culture, communities, religion, traditional knowledge practices and activities.

2.5 The concept of Open Space

The definition of open space has evolved with time, covering all types of opportunities to suit the various needs of human beings, plants and animal species. Ancient Indian settlements confirm that open space was either a private open space in front of the house or a common court.

The street arrangements gave a sense of enclosure contrasting with occasional open spaces dotted with either a ornamental feature or a monument. Open spaces in India were seldom designed for one function. The line between private and public domain was porous so that one could easily spill into another. Obviously the house as a unit did contain private spaces that had restricted entry. The settlement enclosed a semi-private space that was transform dynamically on occasions or even during the day. In Islamic cities, open space was an integral part of the city structure. Open space as courtyards were frequently used in madarsas, mosques and buildings of secular nature.

2.6 Role of Open Space

Functional – Historical linkages, experience creation, social function ("eyes on street"), transition space between public and private domains or open to semi-open space, recreation. Identity creation, civic pride, creation of memory, sense of place, legibility, imagibility.

Visual – Accentuation, framing, emphasizing important skylines, enclosure to space, backdrop, foreground for appreciation, defines axial lines.

Environmental – Creation of a micro-climate, nodes for preservation of nature, health of community, quality of life.

2.7 Types of Open Space

Open space can be categorized according to use, form, function, association and history. According to physical form and function the types are –

Transition Spaces - Entry foyer space that establishes the important transition, or passage, from personal domain to common territory. The entry space is a private gateway visible to a select few and announcing the individuals to their living or work or secular space. In form it can be forecourt, mews, niche, lobby or front yard. In scale it is intimate, a place where one can be both private and public.

Network of streets and squares - The primary network of streets and squares that corresponds to predominant field of blocks and that contains the active public life of the city. Historically the streets and squares were unifying structures of the city ; in modern context they have lost much of their social function and physical quality. As extensions of the home and places for discourse among neighbors. They were spaces to be spent time in. Ancient cities developed along major trade routes and road pattern with mixed landuse dictated urban form. This mixed landuse has been replaced by commercial in the recent times.

Parcels in the dense fabric - The inner void block – the enclosed space – a semi-private residential space for leisure or utility or a midblock shopping oasis for circulation or rest.

Public parks and garden - They are the larger voids that contrast with the architectural urban form. Acting as nodes for preservation of nature, they are independent landscape compositions individually. But in the larger context if planned taking into account the natural features and the heritage can contribute to ecology as well as restoring the character of the city.

Linear open space systems - These include natural systems like river, waterfronts and wetland zones. These formal and informal greenways slice through districts, create edges and link places. They give richness to the city by contrasting with urban grid and providing a pervasive presence to landscape.

But open space typologies can be well understood from its associations with people through time .

2.8 Quality of Life

The quality of life parameters are different on individual & societal scale but are inter-connected. On the individual scale they depend on the living conditions (livibility), life ability that are the personal capabilities of individual to utilize external environment (create affordances), utility of life i.e. relationship among social groups (behaviour at public spaces) and individual life satisfaction through the use of opportunities offered by the environment. On the societal or community scale it is measured as the impact on the human settlement ie. How innovative the society is or progressive and the impact on the eco-system i.e. if the society has conserved the ecological aspect of the environment the less damage it has caused.

Fig. 2.8 a Groups of factors affecting quality of life
Source : Research paper
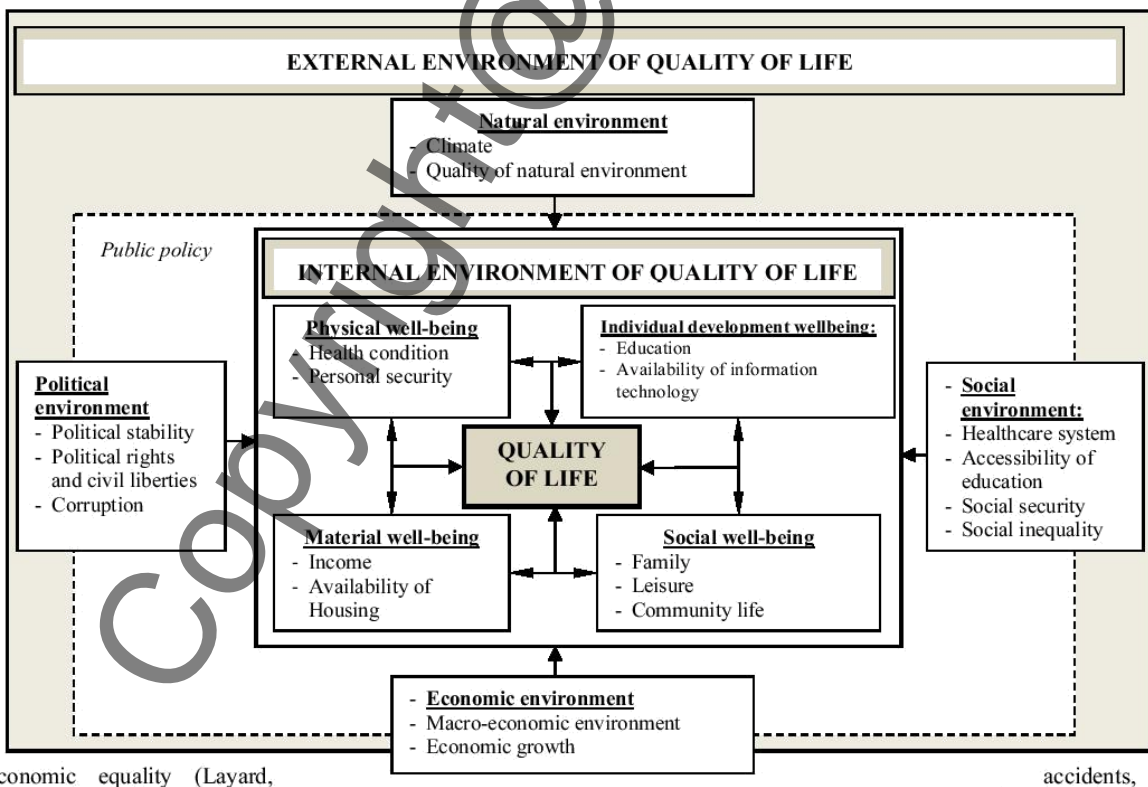
Fig. 2.8 b Factors affecting quality of life
Source : Research paper

2.9 Geography of Deccan

The Deecan maybe roughly described as that portion of the Southern India which is bounded by the Vindhya Mountains and the River Godavari to the North, and the Tugabhadara and Krishan rivers to the South; the Ghats that skirt the sea-coast on either side being the Eastern and the Western limits. Geographically it is a high-lying plateau with an elevation from 1000'-2000' above the sea level.

The ancient landscape of Deccan

The original name of the region may have been Dandaka or forest to which Rama went into voluntary banishment, but the most probable derivation is that it is a corruption of Dakkin the Prakrit form of the Sanskrit Dakshin, the south.

2.10 Historic Timeline

The Ancient Hindoo Kingdoms of the Deccan

The Deccan till the 13th century was an unknown country peopled by pagan idolaters. Hinduism as a religion had not taken ground as yet it was more of an identity of the people belonging to Hindustan and started taking root because of the invasions of the Afghans. Also for the Hindus the Nature was sacred and that generated the belief in sacred geography. Thus the geographical phenomenons were associated with myths and deities and settlements evolved around them. In Sanskrit, the word for garden, 'vata', involves recapturing a space or tree with an enclosure or fence, to make it sacred. It is the transformation of a profane (non-holy) space into a sacred space that makes vata. The basic principle in the Hindu garden is that truth is beauty, and nature is herself sacred and pure.

The boundaries of the region according to the court chronicler Muhammad Qasim Firishta can be characterized as it by linguistic heterogeneity rather than homogeneity serves. The Deccan was the region where Marathi, Telugu and Kanada were spoken. The cultural history of the Deccan is correspondingly complex which starts with the Maurayan empire extending to as far as Chitaldurg district near Mysore in the 3rd century BC. It was followed by the emergence of an indigenous polity known as the Satavahana kings at the capital city of Paithan (currently in Maharashtra) lasting for a long period until the beginning of 3rd century AD. The kings affiliated themselves with the reformed Vedic religion but their client states were overwhelmingly Buddhist. In the 4th century AD with the con-

solidation of the Gupta dynasty in the north and central India, many small local kingdoms emerged in collaboration and rivalry with the Vakatakas of the Deccan. During the 6th century due to the rise of royal lineage politics a ruler from the Calukya family based at Badami defeated the North Indian king Harshvardhana. The Calukya were supplemented by the Rashtrakutas in the 8th century where they vied with other kingdoms like – Hoysalas, Kakatiyas and Yadavas.

The two north most of these kingdoms had their capitals at **Deogiri and Warangal**. It extended to the western coast, and far away south to Mysore, and latter included Orissa and Telgu-speaking districts of Hydrabad and Madras. Deogiri was literally the gateway to the region and headquarters of the Yadava dynasty. Named as 'city of the Gods', the large city was a fortress supposed to be impregnable and dates back to the 12th and 13th century. The kingdom at Warangal built large irrigation tanks and channels & agriculture prospered. In both the cities there was enormous accumulations of wealth, consisting of gold, precious stones and elephants, all of which were found within their own boundary. There were holy shrines built and pilgrims travelled from west to east to visit them.

The Historic Garden & Landscape Practices

In the Satavahana period the first references of representation of 'gardens' or verdurous landscapes in sculpture and literature is found. The only surviving archaeological evidence of gardens and manipulated landscapes may actually come from monastic sites, where clues from activity pattern have suggested the enjoyment of landscape. By the 6th century the theistic religion doctrines of Vaisnavism and Saivism which promulgated worship in permanent temple monuments. The Calukya temples of the 6th and 7th centuries remain among the most impressive early temples and inaugurated imperial temple building projects on a grand scale.

The Deccan under the Delhi Sultanate

The news of about the prosperity and riches of the Deccan soon reached the Sultans of Delhi (Afghans ruling the North). But the sultanate at Delhi marched through the Deccan to the Southmost limits of Indian Peninsula, their invasions were for the purpose of plunder and not of occupation.

In the year 1294 Ala-ud-Din was the governor of the Bengal province.

He has heard stories of the wealth which was stored up in the cities of idolatrous Hindoos and taking religion as an excuse he plundered Deogiri.

The fortress of Deogiri at that time was situated on a isolated hill 640 feet high and fortified by walls, bastions and moats. But the army of the Hindu king Ram Deo was defeated outside the fort walls. The fort wasn't taken but the Raja had to pay a huge compensation and promise of a tribute to the invader each year. With the fall of Deogiri the gateway to the Deccan was opened.

The kings were allowed to keep their land and people since the invaders firstly lacked knowledge of the territory and were in minority. But the reparations of the unrest at Delhi were felt strongly in the Deccan.

Everytime a new Sultan was declared he would get more greedy and want more wealth to be plundered than the earlier one. The generals who were sent from Delhi to lay siege and loot the cities had seldom and respect for the local traditions and beliefs. They cut down sacred grooves around walled city, destroyed temples and burned villages on their way. The Hindoo kings under the Sultanate were so terrified of this that they sent special tributes on missions like this so as to assure safety.

Due to this there was a constant local rebellions in the Deccan. And the Sultan had to now and then send armies or personally go down to suppress them. The local governors had their jurisdictions restricted to the city since they were in minority in the region. That is when two important events occurred. Firstly the Sultan started employing the Hindoos in his court and army. Secondly during the reign of Mahomed Tughlak Shah (1325) to get a strong hold of the Deccan he transferred his capital from Delhi to Daulatabad. This was not done gradually, but, as it were at a moment's notice, whole of the inhabitants of the great city, which was capital for 180 years were ordered to leave their homes and emigrate to the new capital. The literary evidence by historian Barni describes Delhi was destroyed to force the people to migrate to the new lands. And many of the natives who didn't recover out of the long journey and shock were buried outside Deogiri in what he describes as a non-Islamic settlement land.

The Sultan continued with such rash enterprises his vast empire broke into an open revolt. One such revolt that the Sultan was unable to curb broke at Daulatabad and the rebels declared their independence and an Afghan chief named

Ismael who assumed the title of Nusrud-din as their Sultan. There are accounts that the Hindu king of Warangal assisted this event.
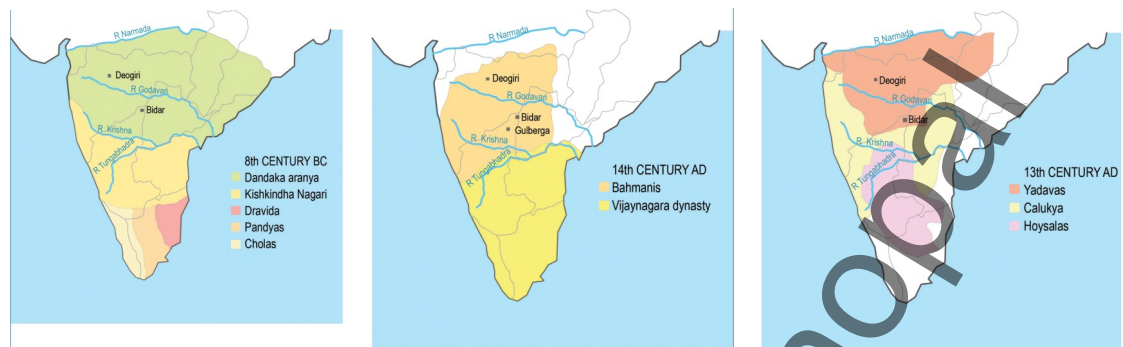
The Bahmans of Gulburga

The Sultan of Delhi who had to leave Daulatabad to go and suppress an attack in Delhi left his governor to bring peace in the region. The governor with his army marched to Gulburga which was a part of the jaghir's of Hassan Kangoh – a peasant who's honestly and hardwork had helped him earn the position from the Sultan. But with time he too fed up of the sultan's enterprises had become a part of the revolt. He crushed the governor and won the battle near Bieder. The victory earned him the support and trust of the army and the nobles. Thus Nusru din gave up his the title and bestowed it on Hasan Kangoh. This proposal was received with utmost enthusiasm and the former peasant was raised to the throne under the title of Sultan Alla-ud-Din Hassan Kangoh Bahmanee(A.D. 1347). He appointed Brahmins to high posts of authority which was a wise stroke of policy; for it had an effect of bringing the Government more in touch with the people, the vast majority of whom were Hindus.

The Bahmans of Bidar

The walled city was built by the Bahmani rulers along with the royal citadel when they shifted their capital from Gulberga to Bidar in 1325 A.D. Bidar looked to great cities like Samarkand & Herat, with high Persian culture and Timurid aesthetics & imperial ideals. They endeavoured to mimic the metropolitan Timurid style. This was characterized by colossal scale f the monuments, achieved by high drums and new vaulting techniques that enabled arches and domes to soar up. The monuments were free-standing, exterior faces lavishly glazed with mosaics of brilliantly coloured glazed tiles. These monuments were intended to make

bold and powerful visual statements and were designed to be seen from far away. . Agriculture practice prospered in the valley due presence of water from springs, fertile soil and rising power in the Deccan. Commercial ties also connected Bidar & the Middle East. The Bahmanis needed overseas trading partners to sell textiles produced in the Deccan. They needed to purchase war-horses from beyond India, since horses did not breed well in the tropical South Asia. The insatiable demand for horses in Bidar attracted foreign merchants. One such merchant Mahmud Gawan came to Bidar and aimed to use his commercial and political capital for making his adopted home a dazzling centre of Persian culture & Islamic scholarship. He patronised the building of one of the most impressive madarsas, or schools in India. Completed in 1472 the school was equipped with all facilities and had at one time 3000 manuscripts.

But in the end despite Gawan's best efforts to recruit renowned Persian scholers to Bidar nearly all of them declined. The literary life in Bidar must have been poor. In the view of a French traveller who visited the city, Bidar's rude society of adventurers & soldiers was simply not favourable for the blooming of elite scholars. Even today the city has no libraries, no archives, no known pribate collections housing texts from Bahmani era.

Considering its massive walls of stone and mortar, its 37 bastions jutting into a triple-moat dug 30 feet deep from solid laterite rock, its seven gates & adjoining draw-bridges & with the largest cannon of the day surmounting its parapets, the cities magnificent citadel hardly suggests a refuge for cultivation of mind. To the contrary, Bidar in the Bahmani times presents itself as an **armed camp**, perched on the edge of Islamic world.

In 1518, the sultanate split into five parts—Nizamshai of Ahmednagar, Qutub Shahi of Golconda, Barid Shahi of Bidar, Imad Shai of Berar & Adil Shahi of Bijapur. The real conflict was the deep rift between native Muslims of the Deccan, or 'Deccanis'and all foreign born newcomers, known as 'Westerners' (gharbian). The city of Bidar after that went into the shadows of the Adil Shahi of Bijapur & in the end the Mughal governer who declared himself as the Nizam from Golconda.

CHAPTER 03 METHODOLOGY

3.1 Broad study methodology

The following was the methodology adopted to study the area of interest and to gather information from site based on the objectives stated above.

DATA REQUIRED	METHOD OF DATA COLLECTION	
Resource map, Toposheet, climatic data	Survey of India, Local Metrological department	
Culture of the region. Guidelines on which city is designed (political, religious, caste etc)	Secondary data – Literature study, ASI archive	Observation Method: Structured – record the number, condition and use of open spaces Unstructured – record the change in use of open spaces through the day
Site study : Develop a landscape criteria for classification of open spaces and map them accordingly	Primary data collection	
History of the city and monument. Interviews of people using the space and staying in vicinity.	Interviews	Interview people who use that space occasionally Interview people who live around it (depending on the scale of the open space its average affect distance will be decided) Stratified random sample : Interview people who use that space daily
Landuse and Development plan.	Urban Development Authority	
Map showing the age of the settlement.	ASI archive or Conservation Study	
Activity mapping and Cognative mapping.	Observation Method	For recording daily activities Survey Method : Indirect approach For occasional activities

Fig 3.1 Methodology flowchart

3.2 Detail study methodology

The spacial studies were carried out on the site of the significant open spaces in the city. They were surveyed on the basis of the following points—

- The study of the physical elements in space
- The nature of the edges
- The spacial qualities of space
- The activity mapping of the space
- The associations with time & nature
- The visual study

The data collected through interview with the locals combined with the observation study mentioned above.

- Identification of issues
- The possible proposal at individual & city level

CHAPTER 04 PRECEDENTS

4.1 The historic city of Buranhpur, Madhya Pradesh

3.1.1Introduction

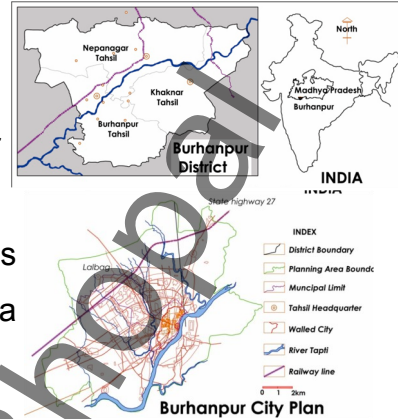Burhanpur is situated on the north bank of the river Tapti, located at 340 Km southwest of Bhopal and 540 Km northeast of Mumbai. The area of the city is 181 sq.km at an elevation of 247m above mean sea level

4.1 a Location map
Source : Research paper

4.1.1 Built Heritage

The city - The compact built environment strategy to achieve sustainability of connectivity with functionally. The indigenous planning considered the natural landscape and the climate holistically. The response to this are street width, building heights, orientation, open spaces, landuse pattern. The form, function and visual characteristics of the space enclosed by the built structures makes it a resource for the community

The topography is exploited to place important buildings at elevated positions & define the basic axial & geometric organization. Since the city is designed in response to the natural elevational profile it generates an indigenous mosaic of spaces boarded by irregular roads. Spatial organization consists of interlinked landuse patterns and open spaces, defining hierarchical relationship with size & shape depending on function performed. The important structures form visual links, whereas other elements, such as the riverfront and fortification wall, create barriers. The functional and visual connection between spaces is integral to the significant character of a landscape.

The Fortification - The fortification wall of the city, with a circumference of 5.5 km, contains nine gates and 12 windows. The principal streets running centrally along the main axes culminate at the city gates. There are secondary streets and also narrow winding lanes approaching clusters of houses through community gates. Narrow streets opening out into squares exemplify this aspect.

4.1.2 Landscape resource

Natural : Places with distinctive natural features associated with human events were developed as pilgrim centers with the association of religious saints and religious activities. The sacred landscape unit of the Ichha Devi temple, the ghats (stepped riverfront of the River Tapti) and the Kabir Panthi near Nagjhiri (Kabir Panthi is a center of learning for the followers of the religious saint Kabir).

Man-made : Historic gardens and landscape practices. The Designed landscapes into three typologies are the royal hunting preserves (for example Zainabad), the royal pleasure gardens (for example, Mahal Gulara, Shahi Qila and Lalbagh) and sacred tomb gardens (for example, the tomb of Shah Nawaz Khan and Ahukhana). The concept of planting in the historic gardens was to fulfill both ideas of leisure and as productive gardens. The tribal traditions associated with the knowledge of medicinal and herbal also developed here. In the dense urban fabric the open spaces associated with historic monuments in the city act as breathing spaces. The monuments are what provoke identity and legibility to the city's skyline.

Water systems

The14th and 17th century Mughal governor under the guidance of Persian geologist planned and constructed the "qanat system". They made use of the local geology and aquifer knowledge.
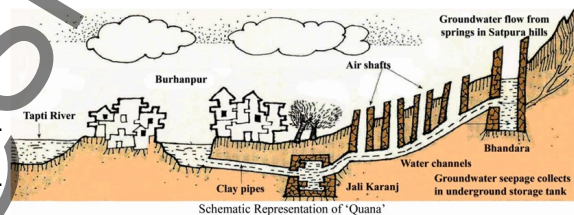

Figure 4.1 b. Typical section of qanat system
Source : Research paper

The landuse and the buildings oriented & consistant according to the slope of the terrain to allow continuous water flow by force of gravity. The system was recharged through the streams from the hill on the upper slope by construction of the 'Bhandara'.The water was collected in the 'Karanj' and distributed through quaternary channels throughout the major consumer points, such as the rest houses of the Sarais, Hammams, gardens, mosques and residential areas of the city. The system has vertical air shafts to tap the water flow. The Asirgarh fort has many artificial water harvesting tanks formed due to quarrying of stone for the construction of the palace. The tanks assure the availability of water at such higher altitudes.

4.1.3 Cultural resources

Influence on city form : The determinants of spatial organization – pedestrian pattern, social structure, community life. The rich morphology of residential clusters or traditional neighborhoods, such as the mohallas, wadas, ganjs and puras. The neighborhoods developed over time an extended joint family system, cultural aspirations and pedestrian linkages promote psychological and physical security needs.

Figure 4.1 c. Plan of the old city of Burhanpur
Source : Research paper

The festivals : Since it has both Mughal and Maratha influence both Maratha and Muslim festivals are celebrated here. There are also local festivals associated with the saints and sufis which take place at the dargahs.

Fig 4.1 d. Old building   Fig 4.1 e Arts & Crafts of Burhanpur
Source : Research paper

The Burhanpur utsav at the backdrop of the fort in the royal complex

The Art : Since the 16th century, Burhanpur is engaged in the manufacturing and export of 'kalabattu-jari' (gold-silver thread work on cloth) and 'malmal'. It is known for its fine cloth manufacturing, gold wire art and other crafts like kalamkari art.

4.1.4 Historical Significance

The historic urban landscape flourished in the 14th and 17th centuries. In 1388 the sultan of the Faruqi dynasty of Khandesh discovered the place and named it after a sufi saint. Later it became the capital and the Sultan built a number of palaces and the citadel. In 1601 the Mughal emperor Akbar conquered the city and made the capital of the Khandesh territory of the Mughals.

The Mughal emperor Shah Jahan and his beloved wife Mumtaz stayed in the city for a long time.

The construction of the Bibi ki Masjid, the Haman and additions to the Shahi Killa were done during his time.The city then was under the Maratha rule conquered by the Peshwas.

Fig 4.1 f. The ghats on river Tapti   The fort   The fort wall
Source : Research paper

Fig 4.1 g The Historic gardens in the city   Fig.4.1 h Jami Masjid Minarets
Source : Research paper

4.1.5 Present Context

The pattern of planning and design as followed under British colonial rule moved to a different course from the indigenous milieu. The ASI only preserves the built heritage and the religious monuments come under the religious trusts. The tourist influx to the religious monuments has increased over time due to development in connectivity to other cities. The fortification wall of the city is broken at several places. The new developments along the north-western side of the walled city spread as sprawl. The parks of the city are either encroached upon or not satisfactorily conserved. The rich traditional water-related heritage of Burhanpur is neglected, resulting in a complex system of interconnected problems, such as biodiversity loss, water scarcity, deteriorated water quality and depletion of the groundwater table.

4.1.6 Significant Changes & Agents causing changes

The city's infrastructure does not support the floating population. The infrastructure projects, encroachments, garbage dumping along the wall causing demolition and decay of wall. The Hoardings have covered the historic streetscape of the walled city. The new development lacks connection and consideration of the fortification wall and the old town. The new roads separate the city into a series of unrelated fragments or into areas zoned for specific uses only. The historic sites within the walled city and surroundings are facing threats of disintegration, demolition and uncontrolled urbanization. The new guidelines, projects and solutions have been proposed and implemented with no considerations to the existing tradition systems and regional context. There is a lack of appreciation and understanding of the intangible heritage. The heritage structures stand in isolation due to loss in function and connectivity. The historic gardens have vanished due to urbanization. The loss of potential green space is deteriorating the environment. Traditional systems do not form a part of heritage conservation framework

4.1.7 Interventions or solutions proposed

I. The revival of the cultural heritage landscape could contribute considerably to restoring characteristics that signify deeper socio-economic and cultural roots

II. The conservation of monumental structures will certainly help in enhancing community pride, concern for traditional culture and vernacular architecture is also required, as it is directly related to sustainability

III. The indigenous planning and design framework of Burhanpur, involving a sustainable approach on different spatial levels such as the sustainable compact built form and the city-level spatial arrangement articulated with gardens, open spaces and mixed landuse pattern, help the community physiologically and psychologically, as well as in terms of their health and productivity.

IV. Revival of the indigenous framework for planning contribute considerably to restoring characteristics signifying deeper socio-economic and cultural roots

V. The conservation of historic gardens and designed landscapes can serve as a catalyst for generating employment and revenues through the tourist industry and helping communities to regenerate. These gardens and designed landscapes also contribute positively to the compact built environment of the Burhanpur by maintaining its biodiversity, reducing pollution, promoting good health, fostering community pride, and enhancing ecological diversity and thus sustainability

VI. Indigenous water management systems, such as "Quanat", and other typologies are tested models of sustainability and can be considered as the outcome of a model relationship between culture and nature, through which a self-sustained landscape was created. Such knowledge and technology of the past is vital and can act as a catalyst for ingenious new designs.

VII. Crucial need to conserve this cultural heritage to improve community life and the quality of space, water efficiency and energy efficiency and to reconsider the dying wisdom

IX. Individual features in the landscape should never be viewed in isolation, but rather in relationship to the landscape as a whole. Burhanpur traditional landscape will be continued if the existing sustainable landuse is supported.

X. Sustainable regeneration of the Burhanpur landscape will be accomplished by integrating natural and cultural heritage conservation. The natural values of the

4.2 Hyderabad, Telangana

4.2.1 Introduction

Golconda was a fortified headquaters of the Tilang province under the Bahmani rulers of Bidar in the mid-1490's. The city of Hyderabad was built after the Bahmnai kingdom was disintegrated in the 16th century and the then governor Qutb al-Mulk declared independence. The city currently occupies an area of 650 sq.km and is the capital of the two states Telangana and Andhra Pradesh.
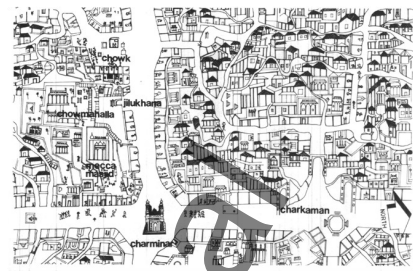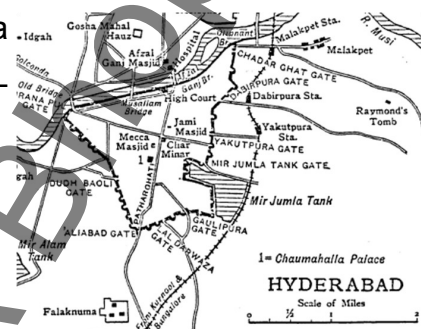
Fig 4.2 a Maps of Hyderabad
Source : research paper

4.2.2 Built Heritage

The city

Fortified city of Golconda sits besides a promontory gently rising from surrounding boulder-strewn plains Hyderabad lies unwalled (between 1495-1687), on a flat site within view of the Musi river to its north Both serves as capitals fulfilling ceremonial and practical needs Golconda developed as undistinguished military outpost and retained that character. Constructed a congregational mosque and his tomb. Mosque located just outside the entrance to enclosed palace area , accessible to public too. Tomb outside the walled city but visible from fortress. Constructed a congregational mosque and his tomb. Mosque located just outside the entrance to enclosed palace area , accessible to public too. Tomb outside the walled city but visible from fortress. Hyderabad was planned on height of power of the Qutub Shahis for symbolic purpose. The site had no prior history.

Fig 4.2 b The current pictures of the Charminar chowk
Source : web

The sultan ordered for construction of a bridge and reservoir. It was planned around two open squares with large scale, ceremonial monuments and not walled during Qutub Shahi period. The Royal and ceremonial buildings were placed at the heart of the city some had walls but all with areas of access to the public

It was designed around central core with monuments arranged on two intersecting axes : a pre-existing east–west road that lead from Golconda to the ports on eastern edge. The new north-south road lead from river in the north through city centre to the royal residences in the south. At the crossing of the axes stood the Charminar, first structure built. Adjacent to it the north was the capital's congregational mosque and to north of that large square bounded on each side by large arch (Charkaman). To the west of the structures was the Qutub Shahi palace area (entrance from west arch of Charkaman) and public maidan (aligning with the west side of Charminar)

4.2.3 Cultural Resource

Influencing city planning

Ceremonies that took place in Hyderabad for instance the Prophet's birthdays culminated in a procession led by the sultan, accompanied by elephants and his nobles, dancers and musicians started at the Charkaman continuied past the Charminar and ended at the maidan. This gives the understanding of the arrangement of buildings in the city.

Festivals

Festivals took place on religious occasions when the surrounding buildings were decorated tents were set up on the maidan. The people used to gather along the main square and the sultan used sit in the balcony projecting from one of the palaces. The maidan was place for public entertainment such as elephant fights.

4.2.4 Historical Significance

The Golconda fortification remained as a military base and the Qutub Shahi dynasty was more keen on establishing its identity by planning of a new city. The city of Hyderabad had important monuments with public access. The Charminar anchored the visual axis and was itself anchored in the maidan which acted as its foreground.

4.2.5 Significant changes & Agents causing changes

The built heritage such as the walled city of Hyderabad, with the Charminar in its centre, is a type of cultural resource that embodies architectural, design and technical knowledge systems.

Even when acknowledged as a resource, it is very often objectified as a commodity. The social value is seldom taken into account. The traditional knowledge systems are fading. The problems due to unplanned development & rapid urbanisation like heavy traffic and air pollution are causing the degradation of environment.

4.2.6 Interventions

The interventions suggested were to pedestrianize the congested Charminar area in the walled city, the new development should ensure a continuing relationship of the past to the present society, developing and interpreting the cultural significance of the heritage components of the walled city.The proposals also included designing of routes for heritage walks, pedestrianization of the main baazar streets, adaptive re-use of historic structures like police station as interpretation centre.
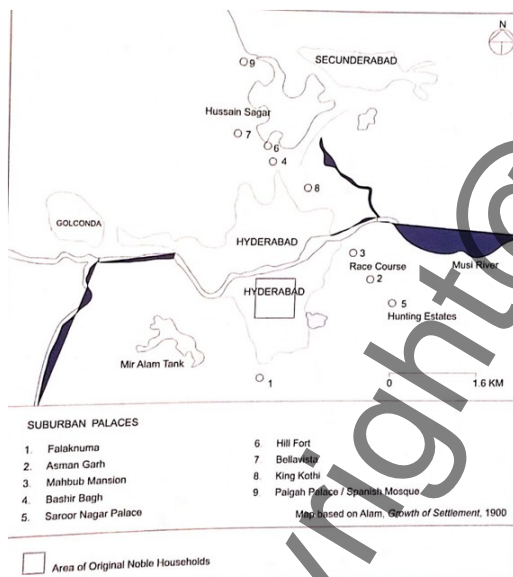

Fig 4.2 c Historic map showing Golconda & Hyderabad
Source : Silent Splender

Fig 4.2 d View from Golconda of city
Source : Self

Fig 4.2 d View from Golconda of city
Source : Self

Fig 4.2 e Old photo of gateway
Source : web

CHAPTER 05 DESIGN

5.1. Location

The historic city of Bidar in the north-eastern part of Karnataka state & geographically located on the brink of the Deccan Plateau, offering views of the lowlands (talghat) towards the North & East. The city is 670 m (2198 feet) above the sea level. Total area of the district is 5420 sq.km out of which the area of the city is 43 sq. km. The total area of the walled enclosure is about 3 sq. km.

Fig 5.1 a Karnataka location
Source : Website twitsnaps

The city is the district headquarters and is well connected by road & railway. The district shares its borders with the states of Maharashtra & Telangana. The city of Hydrabad is 200km & Solapur is 195 km from the city.

5.2 Systems

The city has been studied on the basis of the **natural systems** & **value systems**. The region for study of natural

Fig 5.1 b Location map
Source : Maps of India

systems has been demarcated as the plateau on which the city is located (approx 35km x 19km). The region for the study of value system has been taken as the extent of the Bahmani dynasty in the 13th century south of Godavari to north of Tugabhadra river. The influences from Persia that established new traditional knowledge systems are also considered.

5.2.1 Natural System

Climate and rainfall

The region experiences semi-arid climate & extreme summers. Dust storms are common are phenomenon between April & May. The monsoon occurs between June & maximum in September & rainfall is spread over 39 to 53 days. 75% - 80% rain occurs due to Southwest monsoon winds. North-east monsoon winds bring showers in December. Average rainfall – 907.5mm & actual rainfall – 762 over average rainy days of 53 (2006). The humidity - 65 - 75 % during monsoon & 30 - 40% (afternoon) during summers.
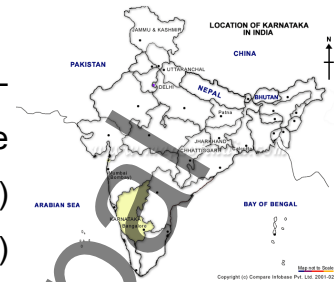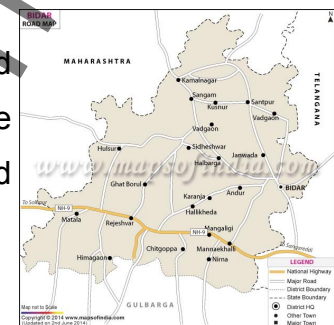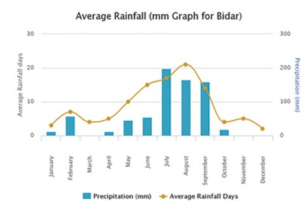
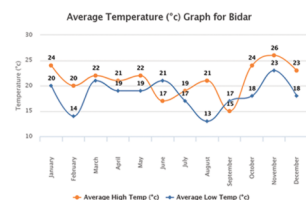Fig 5.2 a Rainfall chart
Source : climatedata.org

Fig 5.2 b Temperature chart
Source : climatedata.org

The wind direction in the monsoon season is south west to north east the summer season is from south-west to north west in mornings and from directions north & east in afternoons.

Topography

Physiograhically, the district forms a part the Deccan plateau. The area is charaterized by flat topped hills, undulating plains dissected by numerous streams. Bidar forms the southern half of the district is a high plateau and well drained towards the Majara river. The plateau on which the city of Bidar is located drains locally towards the south & east.

Geology

Bidar is located on the northern edge of the plateau, overlooking the low-lying areas to the north & east. The plateau stretches approximately 35 km in length & 19 km in width. It consists of red laterite of the Cainozoic age, hard and porous. Lateraite is explored between 570m to 684m elevation above msl. It occurs as plateau of various sizes and shape. The laterite occurring above 600m is yellowish to reddish brown & highly porous. The maximum thickness of 40m of lateraite is noticed at a well section near Bidar fort. The contact between trapped & laterite is gradational marked by thr presence of pinkish to brownish ferruginous plastic transitional clay called lithomarge.

The laterite formations when exposed to sun the uppermost layer hardens into impenetrable which does not allow water seepage. But when this armour is cracked water seeps through and gets stored in sponge like lower layer known as aquifers. Laterite formations are rich in aquifiers and the city itself was built on a vast aquifier.

Geomorphology and geohydrology

Laterite cappings occur on basaltic plateaus in the eastern and southern part. The Bidar fort, the old city and Bidri gardens to the west are located on the layer of laterite, about 30m thick. North of the fort and settlement of Bidar, the laterite formations stops abruptly. Here, a basaltic scrap overhangs the large undulating plain of black cottan soil which covers basaltic rock.
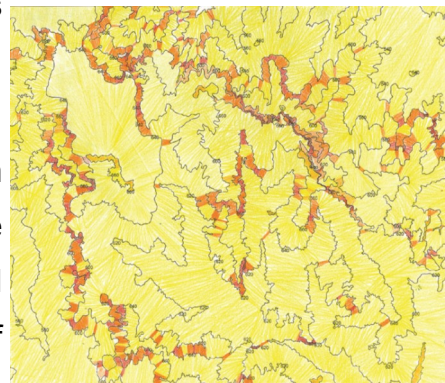
Legend
- 0-2 %
- 2-5%
- 5-10%
- 10% & above

Fig 5.2 c Slope Analysis
Source : Toposheet

Groundwater occurs in the laterite-basalt contact zones. In the region covered with laterite, groundwater in use is restricted to confined to semi confined aquifers, down to 30 m b.g.l. The aquifer lies trapped between the layers of impermeable bed (only in the presence of fissures layers that contain water) making them difficult to access through vertical wells.

Soil

The soil produced by the decay of laterite is red earth rich in clay, which is effective in preventing in water to run-off. The soil formed is developed on sedimentary rocks and older basements.

Vegetation

The top soil being shallow in most part of the district on account of laterite formations, the flora of higher order cannot easily thrive. The forests are of mixed dry deciduous type, consists of large stretches of open scrub jungle. The Honnjleera RF has dense scrub & mix plantation & also eucalyptus platation. The Chitta RF has open scrub & mix plantation. While the Shahpur RF is open jungle type. All the RF fall on the edge of the laterite plateau spread across small hills to the valley edge.

Fig 5.2 d The basalt scarp below the laterite formation covered in vegetation (valley to the east)
Source : Self

Fig 5.2 e The fort wall over the exposed laterite cliff covered with weeds
Source : Self

Fig 5.2 f The soil dept here on account of laterite formations hence species like Prosephus juliflora, acacia catachu
Source : Self

Fig 5.2 g The View of the valley to the east of the city. Agriculture is practiced extensively due to availability of black cotton soil
Source : Self

Fig 5.2.h The exposed laterite seen in the moat around the city
Source : Self

Fig 5.2 i A hill formation seen in the valley. Lower on its slopes is the Kalil-ul-lah dargah and further ahead are the Bahmani Tombs.
Source : Self

5.2.2 Value System

The people

The population of the district according to the 1991 census was 12,55.799. The average population density is 231 per sq. km. The population of the Bidar city according to the 2011 census is 9,69,941 of which male is 2,41,095 and female is 2,28,846.

Fig 5.2 k Population chart
Source : Bidar city website
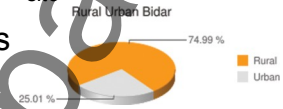
Fig 5.2 l Rural urban chart
Source : Bidar city web-

The Culture

A. Art

Bidri work : The emperor Ahmad Shah Wali Bahmani invited Persian artisans for the construction of Ragin Mahal. They knew the art of inlay of silver and gold and had sound knowledge about alchemy. They came up with the technique to inlay silver in zinc alloy which when immersed in the mixture of soil (from the fort) and water turns the zinc alloy black and the silver unaffected producing a beautiful artwork unique to Bidar. The emperor was impressed with the artwork and took keen interest in the handicraft. He organised training centre in the Mahmud Gawan Madrasa & arranged for training novices in the craft. Many craftsmen trained here took to the creation of beautiful Birdri craft.

Fig 5.2 m Birdri work
Source : Bidar city website

Fig 5.2 n Perl inlay in granite
Source : Self

Birdri-ware designs : The popular traditional designs traced on the Birdri-ware are the 'poppy flower' , 'Persian rose' and the 'phool jari'.

Wood carving work : Fine and intricate wooden carvings can be seen at the Ragin Mahal inside the fort. The entry pavilion has wooden pillars, beams and ceilings beautifully carved in designs which seem to a blend of local and Persian inspiration. Backchodi village of Bidar taluka is specialized in sandal wood carvings especially of idols of gods and godesses.

Fig 5.2 o Wooden carving work
Source : Self

Terra cota tile work : Cladding work in colourful terra cota tiles can be seen on the entrance gate to the Ragin Mahal and on the huge minarate of the Mahmud Gawan Madarsa. The designs and colour scheme is Persian.
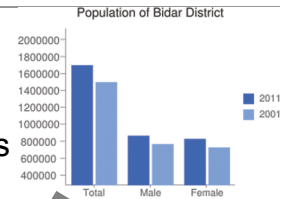
B. Cuisine—

The staple food of the people in the district are food items made from jowar eaten with vegetable and condiments. Since the region has an influence from islamic traditions as well as Hydrabad biryani, soup, kurma and cutlet also form the diet of many. The city also carries the food legecy in form of bakery items baking delicious cookies, puffs and pies filled sweet filling of dry fruits and coconut, locally called Dilkush & Dilpasand.

C. Festivals

The city lights up with celebrations during all festivals but especially during Ahmad Shah Wali Bahmani Urus(March), Jhira Narasimha jatra (December), Multani Pasha Urus and other small local temple festivals. The Bidar utsav is held at the fort each year around Diwali for three days. At the utsav there are folk dance and song performances, sports events, kite flying and film festivals. Many artists from India and abroad are invited to perform at the utsav.

Language

Kanada is the principle and common language of the district. In the 12th when the Bahmani's came into power Persian language was adopted as the official language and then in 1884 Urdu gained importance under the Nizams, till the 1948 AD. But the people had cherished Kanada as their mother tongue and used i for colloquial purposes in a subdued way.

Traditional Knowledge System

A. Education System

I. Khanaq : Schools to gather and spread of Sufi knowledge & a place for retreat of saints. Eg. Khanaq od Nur Samnani, Khanaq of Ali Hussain Qutub II.

II. Taleem : Four Taleems in four quadrants were places for people to train people to acquire certain skills.. Eg. Talim Pansal (water miller's school), Manhiyar III. Talim (Bangle sellers school), Talim Siddiq Shah (Physical training)

Madarsa : Education institute whether secular or religious. The Madarsa of Mahmud Gawan had a library with 3000 manuscripts.

B. Qanat System

Qanats tap into subterranean water in a manner that efficiently delivers large quantities of water to the surface without need for pumping. The water drains by gravity, with the destination lower than the source, which is typically an upland

aquifer. It is very common in the construction of a Qanat for the water source to be found below ground at the foot of a range of foothills of mountains, where the water table is closest to the surface. They are sometimes split into an underground distribution network of smaller canals.
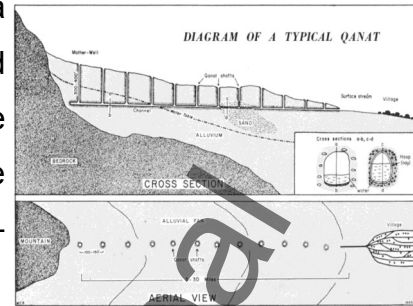

Fig 5.2 p Typical plan & section of qanat system

Source : Website dianabuja.com

There are two main Qanat systems in Bidar one in the walled city and other in the Naubad village. The system in the walled city was constructed to provide water to the settlements and also has most of the public spaces aligned along it. This severed the dual purpose of providing water for public and private use. For important places that did not fall in the line of the system water has been supplied through canals and the openings being made in the premise of the monument. The system slopes towards the royal fortress providing water to the royal enclosures. Similarly there are many vertical shaft wells in the Fort all connected by an underground system that opens out into the Bhomeshwar lake at the northern edge of the Fort.
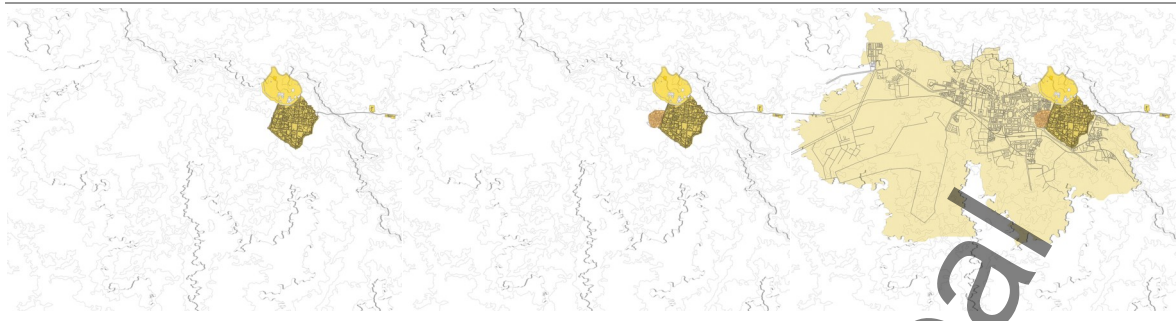
5.3 Evolution of city

The walled city was built by the Bahmani rulers along with the royal citadel when they shifted their capital from Gulberga to Bidar in 1325 A.D.

Walled city

The walled city was a trapezoidal enclosure surrounded on all sides by a stand alone moat accessed by seven gates (starting from the west Shah gunj darwaza, Naya darwaza, Fateh darwaza, Mangalpeth darwaza, Dulhan darwaza & Talghat darwaza). The royal fortress and the walled city were built simultaneously. The royal fortress had traces of an old fort from the time of the Kakatiyas of Kalyani. During the Barid Shahi period funerary gardens & magnificent tombs were planned and built on the plateau to the west. When Aurangzeb came to the Bidar the Shahgunj market area developed outside the citadel on the west and built the Farah Baug a garden along the spring. It was the first time a settlement was developing outside the city. In the post-independence era the major development has been the second biggest Indian Air Force training centre in the country. The IAF Station Bidar is used for advanced jet training of prospective fighter pilots on BAe Hawk aircraft. It was established in 1963.

Bahmani layer (1429-1538A.D)   Mughal layer (1656-1754A.D)   Post independence

Fig. 5.3 a Evolution of the city

THE WALLED CITY OF BIDAR

01. Old Fort
01a. Ragin mahal & Gumbad darwaza
01b. Garden with fountain
01c. Tarkash & Gagan Mahal
01d. Solah Khambah Mosque
01e. Diwan-e-aam
01f. Takht Mahal
02. Royal Gardens
03. Bhoomgonda Lake
04. Three layered Moat
05. Shah Gunj Darwaza
06. Munda burj
07. Fateh Darwaza
08. Mangalpeth Darwaza
09. Dulhan Darwaza
10. Talghat Darwaza
11. Madarsa of Mahmud Gawan
12. Jami Masjid
13. Khas Mahal & Chitta Khanna
14. Chaubara
15. Tomb of Multani Padshah
16. Tomb of Shaikh Ibrahim
17. Osmanganj Market
18. Vegetable Market
19. Bagh-e-Hamam
20. Bagh-e-Ibrahim

LEGEND

Historic Structures

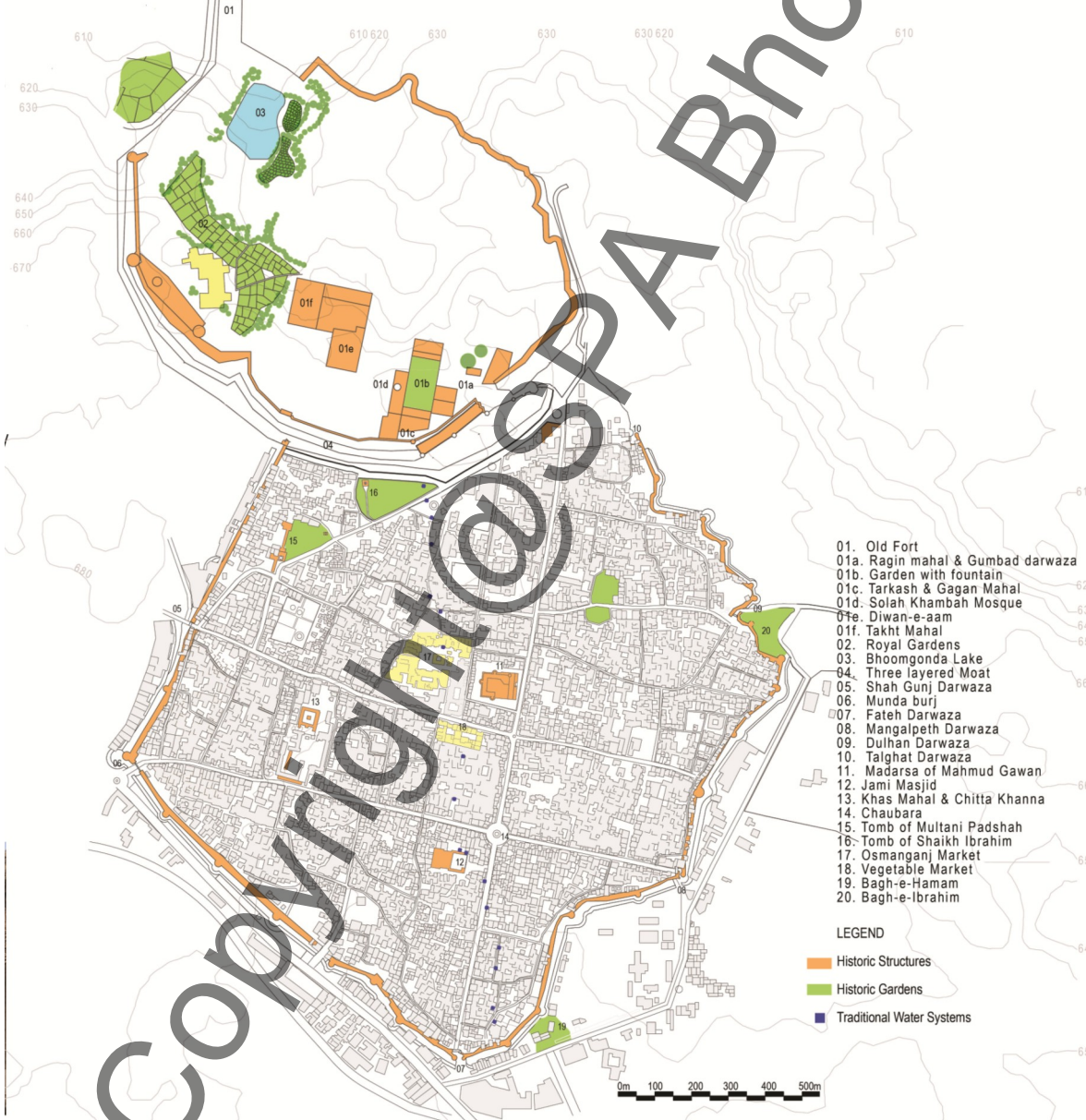Historic Gardens

Traditional Water Systems

Fig. 5.3 b Heritage Mapping

5.4 Site Analysis

The site analysis is based on the series of mapping done on the basis of secondary data from different agencies, the interview of the natives and observation.

Fig 5.4 a Figure Ground Map
Source : Self

5.4.1 Figure Ground Mapping

Figure Ground Mapping : This mapping determines the relation between the built to open of the city. Trees cover is also shown to understand the vegetation pattern of the city.

5.4.2 Observed Landuse Mapping

This mapping determines the activity pattern of the city. The everyday work spaces, schools, institutes are the active & dynamic spaces changing throughout the day. The historic structures and open spaces are temporal spaces for recreation. The residential clusters are passive spaces which enclose intimate semi-private active spaces.
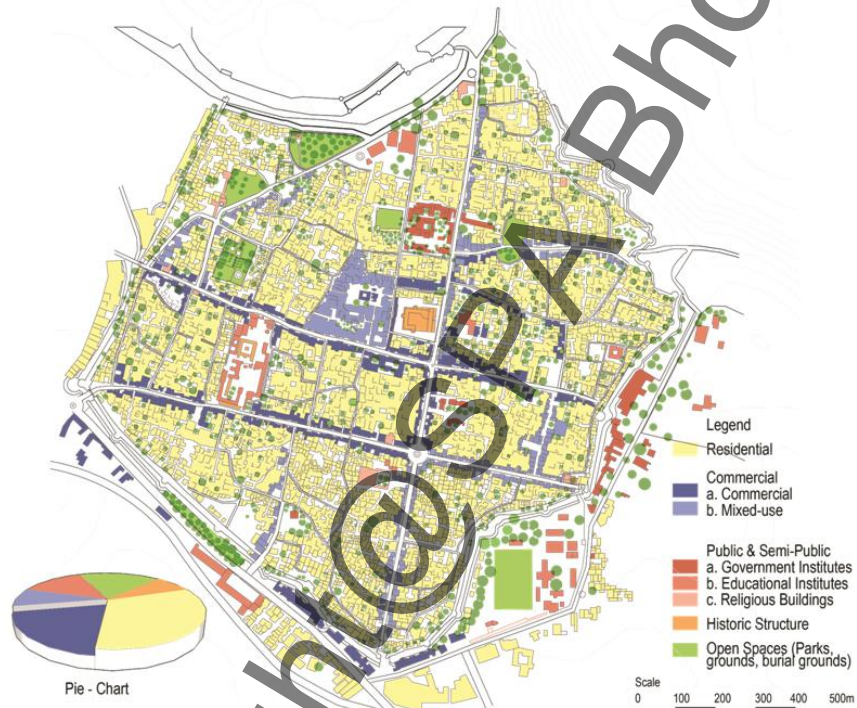

Fig 5.4 b Observed Landuse
Source : Self

5.4.2 Building Heights Mapping

The mapping determines the spacial organisation of the open spaces of the city. This will help in determining the relationship of building height to void (open space). It also helps in understanding the changing skyline of the city.
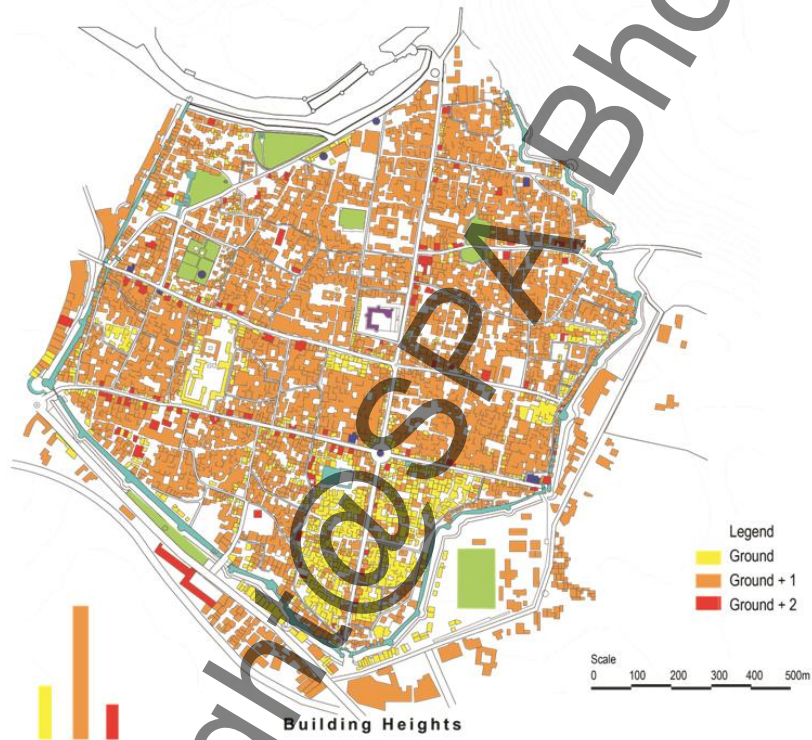

Building Heights

Fig 5.4 c Building Heights
Source : Self

5.4.3 Value Mapping

Values are enduring beliefs about what is socially or personally preferable, affect both perception and cognition of landscape in the city. Based on the mapping & observation of open spaces their historical, locational and associational values have been determined. These would bring forth the significant open spaces of the city.

Associational Value

Fig 5.4 d Associational Value
Source : Self
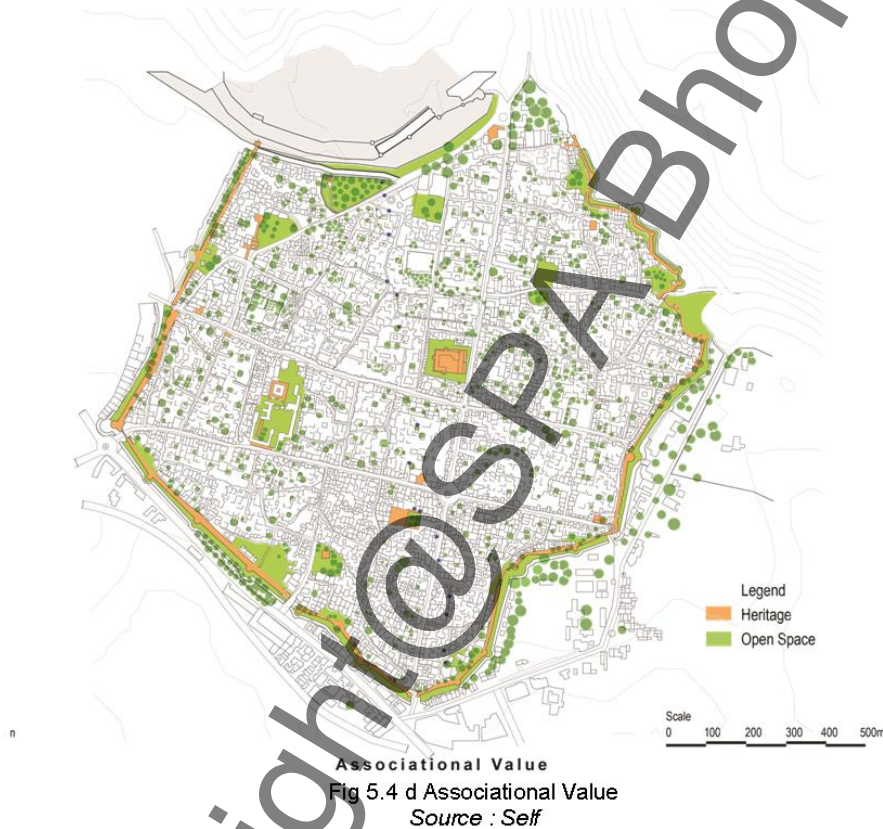
5.4.3.1 Associational Value Mapping

Associational value has been determined by the presence of any historical structure or occurrence of any event in the open space. Both tangible and intangible associations are present in open spaces in Bidar and are mapped. For instance the historic open spaces have monuments anchored in them but the mausoleum gardens are associated with tombs of Sufi saints who at one point influenced the Deccani politics.

5.4.3.2 Historical Value Mapping

Historical value has been determined depending on change in settlement pattern through time. The open space character has been preserved where there are still old settlements. But where the settlements are developing rapidly the open space needs to be protected and designed to act as a resource in the changing urban landscape. It also maps the change in idea of open spaces in old settlements to new ones.

Historic Value

Fig 5.4 e Historic Value
Source : Self

5.5 Open Space Mapping

The different types of open spaces in the city have been mapped according to the timeline of change in settlement or association to historic structure or event as also change in value due to location. The maximum open space falls in the category of cultural space post independence. In this there are open spaces that differ in scale, function but have been created due to events & development in the contemporary times.

Fig 5.5 a Open Space Map
Source : Self

5.6 Study of Significant spaces

The significant open spaces were identified on the basis of their size, value & function. The issues were identified on the basis of the individual space and on the city level.

Study of one such sample significant space has been presented here as follows—

1.   Mausoleum garden

Physical elements :

Enclosing elements - The mausoleum garden has

a residential cluster to its east & faces the fort in

the north .

Fig 5.6 a Plan
Source : Self

Elements in space - Gateway, tomb of sufi saint,

pathway to tomb, tomb of followers & family,

trees.

Edge - The garden is surrounded by a low height

old compound wall (0.6m) of exposed laterite to the south & a masonry wall finished with plaster (1.8m) to the north.

Spacial qualities :

Sequence - Gateway, tomb, garden.

Activities :

Type & Intensity - The space hardly draws any people except for on festivals generally in the month of march.

Associations :

with period - Sufi saints were dominant personalities in the Deccani court. Their word was considered as the will of god and hence after death they go from being mortal to divine.

with nature - Earlier these gardens were social green spaces for public recreation. They expressed emotions like memory of ancestors and hope of new life.

Visual :

Visual range - The tall compund wall restricts view from the north.

Vegetation :

Type & number : The trees have been planted by the government. There are about 10 trees of Azadirachta indica (neem), 4-5 trees of Ficus benghalensis (Banayan) and 7-8 Annona squamosa.

Fig 5.6 b The mausoleum garden & surroundings
Source : Self

Issues-

The mausoleum gardens are looked at as left over spaces in the city. They are a rich ecological resource & can act as green pause points in the dense fabric.

Proposal -

At city level to establish a connection between adjoining mausoleum gardens either physical or visual.

To design the space as a visual repose & pause point. The space can also be made to frame views of the fort beyond.`

5.7 Significant Open Spaces

Each of the open spaces marked in the plan were studied according to the sample space above.

Fig 5.7 a Significant Open Space Map
Source : Self

5.8 Issues

Environmental

1. The significant open spaces identified in the study need to be connected either visually or by means of a physical connector to restore the environment of the city & make them the identity of the urban landscape.

2. The open spaces function in absolute isolation and introvert.

3. The city lacks legibility to interpret the presence of the open spaces, their inherit value & the traditional practices & activities associated to that place. They lack the legibility and coherence in the urban landscape. eg. madarsa, some structures in the high school, wall, gates.

5. Mausoleum gardens are neglected open spaces since they do not provide the affordances for use.

4.The fortification wall is being encroached upon & parcels of open space is remaining along it on both sides.

5. The moat is been used as a dump yard. Sewage from houses is been let out directly into the moat. The open spaces around the moat are degraded due to dumping or depleting due to encroachment.

6. The groundwater table is depleting (current water level 18 - 20 mt bgl). Also the quality of groundwater is poor & not potable. Since the city has an open drainage system the mixing of sewage and storm water after the rains is causing the contamination of groundwater.

Functional

1. The market streets of Shah Gunj and Siddhiqi Talim have issues of congestions during peak hours. The footpaths are broken at many places & the open gutters are in poor condition.

2. These east-west roads due to the road width lack shade on one side especially during peak market hours. They also lack tree cover.

3. The heritage walk routes need to be designed to include maximum open spaces of the city.

Visual

1. The new development along the major roads has no uniformity in facade, heritage around it and open space along it.

2. The skyline that was once dominated by historic structures is now slowly being replaced by tall buildings and water tanks.

CHAPTER 06 CONCLUSIONS

6.1 Design Program

There are two types of open spaces (according to form) in Bidar walled city the linear open spaces & non-linear open spaces. The idea was to get the open spaces to link by designing the linkages in way to enhance the overall experience of the city. The design would propose the sequence in which each space unfolds while one is accessing the city. The comprehensive landscape plan would be developed at the city level. A broad design idea for the linear & non-linear open spaces would be proposed depending on their function, form and association strictly keeping their associated value intact.

6.2 Design Policies

Environmental

1. Pockets of open space along the town wall should be preserved and protected from being encroachment. In the first phase proposal of native grasses and small shrubs to be planted in the pocksts minimum width of 2m. The space can act as a viable neighbourhood park keeping with the inherit value of the fortification.

2. The moat along the city to be cleaned of all the garbage dumped in and along it. All the sewage lines of residential units built on the wall to be re-directed to new sewage line laid out for the city. The moat to be proposed as a jogging track.

3. Proposal of cultural events like Poet's society gatherings, Birdri art workshops, children's innovative education workshops to be organised and properly scrutinized in the open space around the Mahmud Gawan Madarsa, Chitta Khana, etc. so as not to compromise on the heritage value.

4. Segregation of garbage into wet and dry waste to imposed. Provisions for point source treatment of wet garbage (through vermi culture pits built by community participation in neighbourhood open spaces in residential clusters) to be encouraged. For garbage collection the town could be divided based on its how it was planned historically & a collection drive twice in the week could be organised.

Functional

1. The culturally vibrant streets of Shah Gunj darwaza road and Siddhiqi Talim road proposed to be pedestrianized as an attempt to reduce the congestion due to vehicular traffic & bring to focus the traditional markets and artwork markets of the city. The streets would begin to function as open spaces in themselves. The pedestrianization is proposed to be from 10am to 12am so as to facilitate loading & unloading in markets in mean time.

Visual

1. Building facade guidelines to be prepared for all the major historic spines Fateh darwaza road, Killa road, Siddhiqi Talim road, Shah Gunj darwaza road and Multani Dargah road. The facade norms could be executed in stages starting from new construction.

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A Resource Map of Bidar District