

Urban Conservation As Sustainable Development: The Work Of B.V. Doshi At Ahmedabad



Sneha Kishnadwala
Kamala Raheja Vidhyanidhi Institute of Architecture and Environment Studies, Visiting
Faculty of Masters in Urban Conservation, Mumbai, India
E-mail: snehakishnadwala@gmail.com, <https://orcid.org/0000-0002-2691-7779>

Received: 20.03.2020

Accepted: 25.05.2020

Abstract: *Urban conservation and sustainable development have been researched in isolation so far despite the mutual interdependence of both. This often leads to extreme arguments of whether a historic city should be frizzed as a memory or be allowed to adapt to the modern developments. Some contemporary interventions in historic cities done by architects without a specialization in conservation fail to understand and incorporate city's setting in their designs, however there are cases in which the background, sensitivity and skills of the architect allow to produce exemplar interventions to reflect on. This paper explores one case and tries to extract the key aspects that could guide other architects working in similar contexts. The work of B.V. Doshi in Ahmedabad is researched. The approach and methodology of the architect is analyzed and discussed on the basis of his educational background, the approach to the intervention and understanding the walled city of Ahmedabad in India.*

Keywords: *Urban conservation, Sustainable development, Sensitivity and Contemporary Interventions.*

Sürdürülebilir Kalkınma Olarak Kentsel Koruma: B.V. Doshi'nin Ahmedabad'daki Çalışması

Özet: *Kentsel koruma ve sürdürülebilir kalkınma, her ikisinin de karşılıklı bağımlılığına rağmen, şimdiye kadar ayrı ayrı araştırıldı. Bu etkileşim, çoğu zaman, tarihi bir şehrin muhafaza edilmesi mi yoksa modern gelişmelere uyum sağlamasına izin verilip verilmeyeceği konusunda tartışmalara yol açar. Koruma konusunda uzmanlaşmadan mimarlar tarafından tarihi şehirlere yapılan bazı çağdaş müdahaleler, kentin ortamını anlamıyor ve tasarımlarına dahil etmekte başarısız oluyor, ancak mimarın arka planı, duyarlılığı ve becerilerinin üzerinde derinlemesine düşünmek için örnek müdahaleler üretmesine izin verdiği durumlarda var olabilir. Bu makale bir alan çalışmasını içerir ve benzer bağlamlarda çalışan diğer mimarlara rehberlik edebilecek temel yönleri çıkarmaya çalışmıştır. Ahmedabad'daki B.V. Doshi'nin örneklem alanı çalışılmıştır. Mimarın yaklaşımı ve metodolojisi, eğitim geçmişi, müdahaleye yaklaşım ve Hindistan'daki duvarlarla çevrili Ahmedabad kentini anlama temelinde analiz edilmiş ve tartışılmıştır.*

Anahtar Kelimeler: *Kentsel koruma, Sürdürülebilir gelişme, Duyarlılık ve Modern Müdahaleler*

1. INTRODUCTION

The curriculum of architecture is focused more on new designs in an urban environment rather than in the conservation and intervention on existing buildings. Ironically, most of the graduated architects tend to work in a historic setting. Due to the lack of knowledge in this area of expertise many architects take arbitrary decisions with a poor background resulting in inappropriate interventions within historic cities. The main aim of this paper is to encourage urban planners to intervene in historic cities, but in a sensitive way. It will explore some interventions in a cultural context but carried out by a skilled architect sensitive to the importance of

history and heritage. The project taken into consideration would be seen as a successful and a desiring model where urban design and conservation are recognized as sustainable development. This project also provides evidence of world heritage assessment, which is revised yearly.

Aldo Rossi's book "Architecture of Cities" (1982) has tried to establish a process that would encourage a city to evolve than to be preserved, where the monuments are preserved with the use of other elements of development. He proposes with the help of an example of Alhambra in Granada, that instead of considering city as a "museum city", only a part of it should be preserved, and the rest of the city could be open to urbanism. Similarly, this paper with help of a case study from India, this paper explores how Urban Conservation can be seen as Sustainable Development.

2. METHODOLOGY

This paper focuses on the work of B.V. Doshi (2008) in Ahmedabad. Aldo Rossi's book "Architecture of Cities" has been a great reference to provide context for research. In order to better understand the city, a dissertation written by students of the Centre for Environmental Planning and Technology (CEPT), Ahmedabad, has been of great assistance to understand the city of Ahmedabad.

The reason for selecting the walled city of Ahmedabad was since it is one of the most historic cities in the country and was also declared an UNESCO World Heritage City in 2017, making it an appropriate example where sustainable development was achieved without compromising the historic and cultural value of the city.

3. AHMEDABAD: CHARACTER AND SIGNIFICANCE

3.1. Ahmedabad, India

The city of Ahmedabad, founded in the 11th century was established as a small military settlement, i.e. a walled city, at that time known as *Karanvati*. As rulers changed, the city kept on changing its name. Finally, the city got its name Ahmedabad after the ruler Sultan Ahmed Khan in 1141 AD. This city unlike many other cities of India was not founded by the British and it always remained true to itself. With time it adapted to the new industrial age, and also successfully carried the skill of traditional and social organization. There are not many cities in India which has been able to carry the continuity of the past and present at the same time.

The city, being under the persistence of political dominion of the Mughals, Marathas and the British; it has their footprints left behind. With development the city adapted new techniques, materials, architectural idioms and exceptional cultural significance. Therefore, this city sees construction and architecture from the Hindu-Islamic architecture from the twelfth century and also modern architecture from late twentieth century such as; Louis I Kahn and Le Corbusier.

With new adaptations and advancement of technologies, the basic organizing principles in terms of urban development, architecture and building typology has stayed tireless till the twentieth century and is also reflected in its environmental and socio-cultural context, making the city an important attribute for its authenticity [1].

3.1.1. Character of City

The city has developed at two levels, i.e. at macro and micro levels. At macro level, is the development of the walled city and at micro level, there are 'pols' houses; the well-known neighbourhood houses of Ahmedabad. Ahmad Kahn during his reign first built the city wall with twelve gates, one hundred and thirty nine towers, nine corners and more than six thousand battlements. It was under Begda's reign, where Persian garden scheme was introduced in Gujarat. The other gates were built during the sixteenth century. The fort wall of the city, being four to five meters high and two meters wide; built in terracotta bricks, lime mortar and plaster, gave a particular semi-circular form to the city. The gates were links for the commercial hub of the town and markets to residential areas [2].

3.1.2. Development of the walled city

The Sultan, Ahmad Kahn, began with the construction of the *Bhadra* Fort (citadel), *Teen Darwaza* (three gates), the Jami Masjid and the Ceremonial Avenue, which connected these main sites of the walled city. It was in the seventeenth century roads and transport networks were built. The area around the citadel was considered ideal for defence and accessibility. Since the Muslim community was dominant at that time, the city was developed in according to the traditions of Islamic City Planning. City's main commercial hub; *Manek Chowk* was situated near the citadel along with the tombs of Kings and Queens, making it the busiest area of the city. Along the royal complex of the *Bhadra* Fort, there were many residential areas known as “*puras*” (pols). These “*puras*” were residential, self-sustained blocks, which during the eighteenth century became micro neighbourhood houses. It consisted of people from the same community. Each of these “*puras*” formed a settlement resembling a mound or “*Tekra*” at the city level [3].

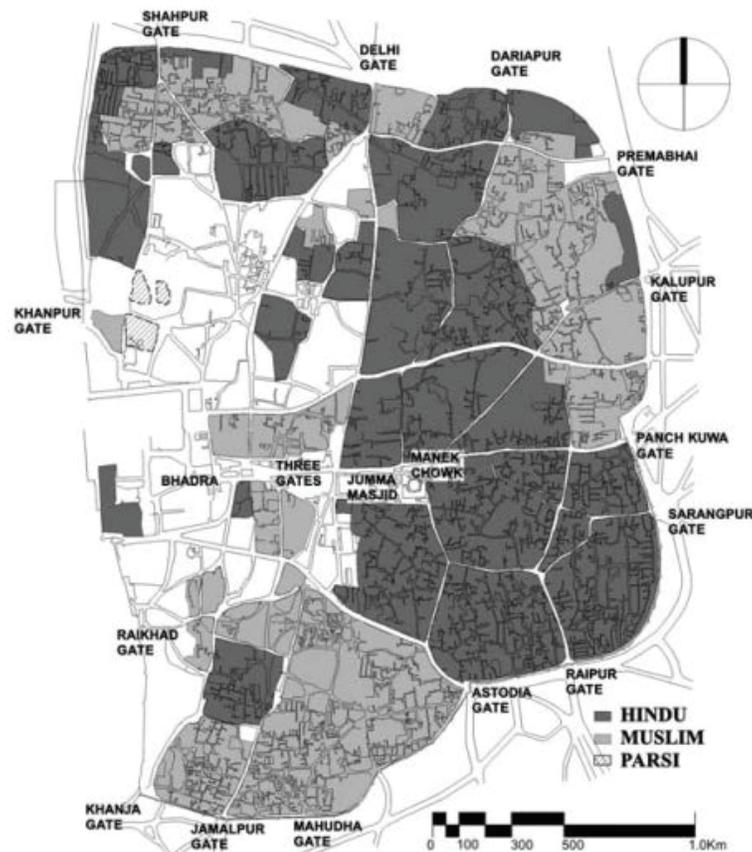


Figure 1. Plan of the historic walled city of Ahmedabad, showing the settlements of various religions



Figure 2. The Bhadra Citadel

These pols of Ahmedabad are unique for their architecture and design. They have a defined entrance through main gateway followed primary and secondary streets leading to cluster of houses. Each pol had a temple or a mosque, creating a sense of belonging. By 1872 the city had three hundred and sixty five pols, with people staying as per their castes, reflecting the social structure of the city. During the British Raj, there were a series of events that took place in the nineteenth century. In 1857, there was the emergence of the Municipal commission. The city being the prime location of trade and finance, the population kept on increasing. It was then, the city was introduced with railways and the city demanded more residential areas. In order to encourage spreading settlements and connecting the city centre to the railways, the Municipality made new roads and widened the existing roads, demolishing some pols. There were many projects which took place under the British rule, without understanding the society and their customs.

The functions of the present Municipal Corporation are similar, as framed by the British then. As a result, the city has continued to grow and today has turned into a metropolis.

The uneven growth of the city is also reflected in the spatial character of the city, and divided the city in old and new city. The elites who lived within the walled city have moved out, making the walled city occupied by the middle income families and migrants, as a result creating development pressure and resulting in loss of residential areas (pol houses). Hence, the city needs to develop a strategy for the walled city so as to continue the fabric of the city [3].

This Walled City was the first city in India to be listed as UNESCO's World Heritage Cities, 2017. UNESCO lauded the historic city's sultanate architecture, especially "*the Bhadra citadel, the walls and gates of the Fort city and numerous mosques and tombs as well as important Hindu and Jain temples of later periods. Its traditional houses and streets, finished with intricate bird feeders and community wells, celebrate the fusion of Indo-Islamic architecture and art.*" [4].

3.2. Architecture Of The Walled City

3.2.1. Sultanate architecture style of gujrat

The walled city of Ahmedabad has a unique architecture character K.V.Soundara Rajan, a scholar of Archaeological Survey of India (ASI) stated that Sultanate Architecture of Gujarat, typically Gujarat originated from this city. He mentioned that construction of this city was under the supervision of Muslims, but the craftsmen were Hindus. Therefore these buildings and monuments are of ambitious scale and composition, showcasing power, patronage and vigour of the Ahmad Shahi rulers. These Islamic structures which were built by the Hindus craftsmen bear subtle undertones of Hindu architecture principles. Rajan also mentions that these were consciously adapted by Hindu craftsmen on demand of their Muslim supervisors [2].

In 1573 A.D. the Sultanate was taken under control by the Mughals. With this, the Sultanate Architecture of Ahmedabad degenerated. In this second half of fifteenth century the Sultanate gave some best examples, these include the *Rani Sipri* mosque, known for its artistic flowering and *Muhafiz's Mosque* known for its composition, perspective and filigree work giving it a complete new dimension.



Figure 2. Elements of Hindu Architecture at Jami Masjid



Figure 3. Intricate jali work at Sidi Sayed Mosque

3.2.2. Pol houses of Ahmedabad

The pol houses of Ahmedabad were the heart of the city. These are known for their neighbourhood planning and intricate wooden carving on facades. These are longitudinal residential units, each with courtyards arranged along a narrow street with a cul-de-sac at the end. Most of these “pols” have “chowks”, i.e. a community space, a place of worship, i.e. a temple or mosque and bird feeder known as a ‘chabutaro’. When a number of these “pols” come together they form a “pur”, i.e. a larger settlement, which is defined with boundaries of a “bazaar” making them self-sufficient on a larger scale as well as on smaller scale.

The traditional facades of these houses had elaborate wooden carvings, symbolizing the cultural beliefs of the owners. The wooden constructed pols had central courtyards, underground rain water harvesting cisterns, known as “tankas”, and projecting features on the exterior, in order to maintain the interior temperatures during summers in this hot and dry climate. The traditional construction technique, i.e. use of partial timber framing and timber laced brick masonry on lower floors and light weight timber posts and joists on the upper floors, have been earthquake resistant even till today.

These pol houses saw excellent craftsmanship and cultural expression, catering to the different individual needs of the residents to the hot and dry climate of the region, creating an exceptional example in an urban system.



Figure 4 and 5: Typical facades of pol houses

4. UNESCO'S WORLD HERITAGE CITY

UNESCO defines cultural heritage as “legacy of physical artifacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations”. It is this universal application by UNESCO to heritage that makes cites like Ahmedabad more unique. These cities not only have a recognized identity but also funding for its preservation and protection. Once a city is declared a World Heritage City, it boosts the tourism, which indirectly helps the economy of that country [5].

The cities which contribute to architectural and historical aspects, they are declared as UNESCO World Heritage Cities. For a city to be listed as a World Heritage City, needs to be of “outstanding universal value” and meet at least one of the criteria mentioned in the Operational Guidelines for the Implementation of the World Heritage Convention. It was until 2004 where for a city or site to be listed as World Heritage had to fulfill six cultural and four natural criteria. The criteria mentioned by UNESCO, are the main working tool for selecting World Heritage, which is revised annually by the Committee. It is because of this evolution of criteria and guidelines that today there more than eight hundred world heritage cities [5].

4.1. OUV for Historic City of Ahmedabad

The criteria for selecting these nominated cities changed after 2004, and among these criteria's Ahmedabad satisfied criteria (ii) and (v) mentioned under Operational Guidelines for the Implementation of the World Heritage Convention.

Criteria (ii) referred to the important interchangeable human values, which over a span of time developed in terms of architecture, monumental arts, town planning and landscape. And, criteria (v) referred to an outstanding example of human settlement and land use [5].

The Historic City of Ahmadabad or the old Ahmadabad as commonly known was nominated as a World Heritage City by UNESCO in the year 2017. As UNESCO writes; *“The historic walled city of Ahmadabad represents a unique synthesis of Islamic culture of its founder and the indigenous traditions of Hindu and Jain culture, pervading through all aspects of urban life. The rich building traditions of local craftsmen and artisans profoundly influenced the early buildings of Islam in the region giving birth to highly acclaimed Gujarat Sultanate idiom of Architecture unparalleled in its beauty as well as structural prowess as exhibited by the famous shaking minarets of some of the mosques. The traditional Islamic city planning combined with the local traditional of community associations resulted in the unique community based residential settlements ‘pol’ with its most refined and homogenous expression in the historic city of Ahmadabad. The traditional pol houses of Ahmedabad, while being structurally and climatically adapted to the context are also significant as the expression of the culture of the inhabitants exhibited in the exquisitely carved wooden facades, which are some of the finest examples of the wooden craftsmanship in the world”* [6].

After declaration of a World Heritage City, it is UNESCO's part responsibility to protect these cities. For the same UNESCO framed Charters and Recommendations for these cities, so as to help them to maintain their status. These Charters and Recommendations encouraged appropriate development in these listed cities.

But since every city has a different character, it was difficult for the authorities to review these cities under the same perspective. After which City Councils were given the responsibility to maintain character of their cities. For the same they framed of Legislations and Regulations at national level.

Therefore, after the Ahmedabad was declared as WHS, it is now also the responsibility of the Indian Government and the Ahmedabad Municipal Corporation's (AMC) to maintain the city's Outstanding Universal Value, so as to maintain city's nomination as a WHS. For which they need to establish management plans, make sure that their city is safeguarding the World Heritage [5].

UNESCO also has the power to declare any site or city under threat, if the national government fails to protect their listed World Heritage City. For example, the city of Liverpool is declared to be in threat due to the urban development happening around the docks.

5. WORKS OF B.V. DOSHI

Balkrishnan Doshi, also known as B.V. Doshi, is called a living legend in contemporary architecture history. In the late nineteenth century, he worked under Le Corbusier for four years in Paris. It was under Corbusier where Doshi was inspired with his works and style of architecture of that time. When Corbusier was appointed in Chandigarh and Ahmedabad, Doshi also came to India to supervise Corbusier's projects. With his experience under Corbusier, he merged principles of modern architecture and local Indian traditional resources and implemented them in his works. In many interviews he mentions that, *“Le Corbusier was like a guru to me, he taught me to observe and react to climate, to tradition, to function, to structure, to economy and to the landscape”* and same approach is seen in his own work. He believes that one should have a deep understanding of the past and after which it is possible to design for the present. This was the only way where India would have a sustainable future. In 1955 Doshi established his own firm, *“Vastu Shilpa”* which meant environment friendly. The name refers to the Shastra, i.e. Hindu metaphysical. The same is seen in his designs; a blend of environmental cosmology, proportions and directional alignments [7].

His designs comprise of typical features, such as the semi vaulted ceiling, skylights with diffused light entering the building, sandwiched vaults, envelope design, subterranean spaces for building's passive heating systems and landscape well designed with water channels and cascades. The exterior walls of his buildings' are generally clad using local materials, i.e. stone or mosaic and sometimes have used exposed concrete. An example of the same is his office building, *“Sangat”*.

This typical style of Doshi is seen in most of his buildings. Another most discussed project of his is IIM Bangalore. IIM, Ahmedabad was designed by Louis Kahn, which was supervised by him. There were a lot of speculations on him for taking a similar approach. In an interview where he was questioned regarding the same he answered saying that, “*my lighting is different from that of Corbusier and Louis Kahn. Contrast IIM Bangalore with that of Kahn at Ahmedabad IIM Bangalore is more walking through a garden*”. The reason for this different approach was the inspiration that he took from the old palace, Fatehpur Sikri of sixteenth century. He adopted similar principles from this palace, such as the interlocking courts, pavilions, terraced gardens and connections within the palace. The construction of IIM, Bangalore was simple, standardized and he used modern materials like exposed concrete.

5.1. Revitalization of the *Bhadra* Precinct

The *Bhadra* Fort area is one of the historic sites within the walled city of Ahmedabad. The city was designed on a central axis, starting from the Sabarmati River to the main town. It connected important buildings of that time such as mosques, temples, gardens and other important buildings. This central axis was known as the Central Avenue of the walled city. Originally there was a plaza or an outer courtyard, outside the *Bhadra* Fort, known as the *Maidan-e-Shahi*, meaning a Royal Square, now known as the *Bhadra* Precinct. This plaza had a platform at the center. The function of the same was to use it as the seat of the sovereign with ambassadors sitting under the fragrant trees and fountains surrounding them.

The Ahmedabad Municipal Corporation (City Council) under the JNNURM (Jawaharlal Nehru National Urban Renewal Mission) decided to get this plaza back to its original grandeur and make this area portraying as a true city centre of the historic city. With the help of this project AMC tried to address the issues faced by countries, due to the rapid developing economies, as also seen in India. Their main concern was to revitalize the city centres of these old cities, and also to encourage development by providing economical profitable areas to the citizens of the walled city, instead of conserving individual buildings. It wouldn't be wrong to say that the City Council made use of the old “City Beautification Moment” of the late twentieth century [8].

5.1.1. Scenario of the *Bhadra* Plaza before Revitalization

Originally the outline of the plaza was traced using archives of the city. The study showed the encroachment of this plaza over time. As the city grew, this area suffered a lot of issues related to traffic congestion and unutilized open spaces, encroachment by hawkers and homeless people. The other problems included no proper pedestrian demarcation, haphazard parking, dense built fabric and unorganized informal activities added to congestion issues of the plaza.

5.1.2. Proposal by BV Doshi

The brief provided by the AMC to the design team, i.e. *Vastu Shilpa* Consultants and CEPT University, the Redevelopment of the *Bhadra* Precinct was to make this historic core a walkable precinct, by developing the pedestrian, existing parks and conserve the surrounding heritage monuments making it suitable for the cultural and religious background of the society [9].

Doshi according to the brief, proposed the plaza to be a pedestrian precinct. The design aimed at beautifying the precinct and demarcating the public, private and other informal activities which took place in the past, but now to be used in the modern context.

As mentioned earlier, the city was developed on a central axis that was connected from River Sabarmati to the main market. Doshi proposed a pedestrian walkway from the gate of the Fort to Teen Darwaza, connecting River Sabarmati through a pedestrian bridge. The revival of this central axis connected the Manek Chowk, (which was an open area surrounded by small shops, and hosted leisure activities) to the River.

This proposal left an impact of an old walled City, and also enhanced the World Heritage City status. With help of ASI, Doshi is trying to restore the facades of the buildings, whose elevations were facing in the plaza. For the same he has provided guidelines to the residents for elevation treatments. Along with this the proposal also included the conservation and redevelopment of the main attractions of the plaza i.e. *Bhadra Fort* by the ASI and *Lal Darwaza* Bus terminus.

Doshi also planned at micro level, i.e. he addressed the issues related of street vendors and other elements such as signage, lighting, landscape and street furniture. He proposed to relocate the street vendors, and allocated different areas for these vendors depending on their vending patterns, location, movement, types and typology of their stalls and their sizes, in order to protect the livelihood of these weaker citizens. To differentiate these new stall locations, he designed portal columns and aligned them to separate market space and walkways. These vertically designed elements added to the ambiance of plaza and provided lighting to stalls.

Even though the project was complex with multiple parameters which ranged from the brief provided by AMC to public policies, all were well addressed in his design. His design encouraged the informal and formal activities of that area. He designed open areas to encourage many cultural events to be celebrated. He was also able to maintain the quality and character of this public space, rather sees the old *Bhadra Plaza* to facilitate the modern. This project in 2012 received first prize in the category of Conserving and Heritage at HUDCO (Housing and Urban Development Corporation), 2012 Award for Practising and Improving the Living Environment [8, 12 & 13].

6. DISCUSSIONS AND ANALYSIS

6.1. Approach and Methodology of the Architect

B.V. Doshi treated this historic setting as a medium of sustainable development rather than preserving it. The same is discussed further here under the following heads.

6.1.1. Influence of Twentieth century Architecture

Balkrishnan Doshi was influenced, and many of their contemporaries, by Le Corbusier. He was a senior architect in Corbusier's office and supervised his work in Chandigarh and Ahmedabad. Le Corbusier was a French architect and an urbanist. Like other modern architects, he had adopted industrial design. He too among others architects of this period was convinced that architecture played a social role in the society.

This was also an era where many changes took place on the social and political front. Due to this he too perceived architecture as a crucial instrument, and raised questions for the contemporary society. He used to believe that architecture could prevent revolution. This can be seen in his book "*Architecture and Revolution*" which he wrote in 1922, where he writes that "*a building is the root cause for social unrest today; architecture or revolution.*" (Le Corbusier, *Towards a New Architecture*, Frederick Etchells (trans.), London: Butterworth Architecture, 1989, p. 269. '*Architecture ou Révolution*' was to be the original title of *Vers Une Architecture*) In spite of his modernist approaches, some of his sketches, he took inspiration from some historic cities in his work and tried to achieve the same character in his projects. For example the Phillips Pavilion in Brussels was inspired from the vaults, and he applied the same principles of construction for his project. Same was the case for Palace of Assembly in Chandigarh. From his sketches we can see that during his visit in India, he took inspiration from old forts and palaces for his designs at Chandigarh.

This similar influence of modern architecture was seen in Doshi's work, as it is discussed above. He too favoured the spirit of time over the spirit of place. He aimed to create architecture of this period, which would be marked as a mile stone in the history of architecture.

His architectural design was based on three main principles; function was the main source for their design, new technologies gave rise to industrial design and lastly they tried to understand the decorations of these buildings, like themes, forms and motifs. This may be a reason that Doshi used a modern intervention and not adapt the Hindu-Islamic style of Ahmedabad in this project.

6.1.2. Designing for locals

Doshi did not get involved with the locals at a personal level, but he did take into consideration the behavior of end-users. He tried to weave the lifestyle, culture, activities and habitat all together. He also gave attention to minor points of human behavior and their response to space. For example, the benches he designed in the plaza are inclined on both sides, with no flat surface. This because he realized that the prescient being an open area, it would be occupied by many homeless people for sleeping. He designed street furniture taking care that it wasn't misused. The project also involved rehabilitation of many street vendors. Doshi incorporated their movement and priorities of their market sale and allocated them space accordingly.

6.1.3. Theory of conservation

Even though Doshi did not have a conservation background, he was appointed to do a project in this historic area. And may be therefore, one could not see any application of conservation theories in Doshi's work, but it cannot be denied that he well understood the city and designed responding to its climate and settings.

Doshi had to revitalize a plaza to solve issues like traffic congestion and mismanagement of the space. The plaza being in a historic setting, Doshi asked the ASI, to; clad the facades of residential houses which are facing the plaza. Here Doshi doesn't seem to have taken conservation approach like to identify the stone used or matching the identified stone that is to be used for cladding.

Doshi talks about revitalizing a water fountain that was present during the reign of Ahmad Shah. For the same, evidence in archives was unidentified. Doshi in his attempt of developing the Bhadra Plaza does not give any importance to the conservation of the Bhadra fort. But, for a conservation architect, conservation of the Bhadra fort would be the first proposal in his project. Instead Doshi involves ASI to maintain the fort.

Again, he mentions about the conservation and adapting the Hindu-Islamic styles in his design, but implication of the same is not seen. Yet, his complete modern approach blends with the historic fabric of the walled city.

6.1.4 Aldo Rossi's Approach for Historic Cities

Aldo Rossi (1931-97) explained the importance of historic cities and proposed theories to protect their historic character. He mentioned that any historic city should not be treated as a "skeleton" or be "mummified" to a particular era, but should encourage progress and development [10].

For Rossi (1982) these cities have lost their function and are preserved only to keep the memory lane alive. He mentions these cities were designed during that period to accommodate future functions, and therefore urbanism is needed in these cities which would not damage the city's character, if done responsibly. He considers a city as a theatre of human arts, where every part of the city grows with time, integrating the past with present. He explains the need for a city to be conserved than to be preserved.

He feels that these cities are always in dilemma because they have two main functions to maintain; i.e. evidence of time and acquire a status with modern culture and modern life. In other words they have to incorporate the past, present and the future. Also, these cities have now been a part of timeline of an era, have become icons of global cultural tourism, and have been promoting cultural experiences for millions of people [11].

This similar approach was seen in Doshi's design too, he too understood the importance of the historic setting but, also used a sustainable approach in his design and not frizzing the precinct to an era.

6.2. Discussion about project

If one notices closely, Doshi not only conserved the tangible but also the intangible aspect of the precinct. The *Bhadra* precinct which was once used by king's subjects and his public was once again opened to the public. In his design, he brought the central axis of the old walled city that had been lost because of encroachment. He attempted in bringing back this strong connection back to being. He understood the small-scale heritage buildings surrounding the plaza and did not propose anything that was dynamic or bold to hamper the ambiance of that space, without understanding the theories of urban conservation, but by just respecting the historic environment.

Doshi's approach in this project, was to do what he knows and can react to, he not been having an education background in urban conservation did not hamper the historic fabric and involved the professions who had the expertise to do so.

7. CONCLUSION AND RECOMMENDATIONS

The paper emphasizes the need to find a balance between urban conservation and sustainable development. The work of B.V. Doshi in these respective historic settings is a model for architects and urban designers to design in such settings with lack of knowledge in architectural or urban conservation. This model of work explains the readers to get inspired from their historic setting and then to interpret this understanding through their modern approach. B.V. Doshi's work in Ahmedabad was able to synchronize a path that encouraged sustainable development while conserving the built heritage.

This paper also finds it important to include at least one module of architectural or urban conservation in the architecture degree curriculum. Here, aspiring architects or planners could gain knowledge of theories of conservation, making them conscious while designing in historic settings.

ACKNOWLEDGMENT

I would like to express my sincere thanks to Dr. Cristina Gonzalez-Longo, Director of M. Sc. Architectural Design for Conservation of Built Heritage at University of Glasgow for her helpful critics and guidance coordination during the study on this research. This research was a part of research dissertation at University of Strathclyde, Glasgow.

REFERENCES

- [1] **Shah, K. (2015).** Documentation And Cultural Heritage Inventories Case Of The Historic City Of Ahmadabad. *Isprs Annals Of Photogrammetry, Remote Sensing & Spatial Information Sciences*, 2.
- [2] **2008.** *Annals Of Reinventions: Rediscovering Ahmadabad*. [ebook] Ahmadabad: Ahmadabad Municipal Corporation, last accessed on 14 July 2017
- [3] **Sejpal, S. (1987).** *Theory and city form: the case of Ahmedabad* (Doctoral dissertation, Massachusetts Institute of Technology).
- [4] **Qamar, Z. (2017).** Ahmedabad becomes India's first UNESCO Heritage city. <http://edition.cnn.com/travel/article/ahmedabad-first-unesco-city-india/index.html>, last accessed on 23 Aug. 2017
- [5] **UNESCO, (2017).** *Historic City Of Ahmadabad*, Whc.unesco.org, <https://whc.unesco.org/en/list/1551/>, last accessed on 19 July 2017
- [6] **Unesco.org. (2017).** *Tangible Cultural Heritage | United Nations Educational, Scientific and Cultural Organization*. <http://www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage/>, last accessed on 12 Aug. 2017

- [7] **Doshi, B., Tsuboi, Y. and Raj, M. (2017).** Architecture and Attitudes. [online] South Asia. Available at: <https://architexturez.net/doc/az-cf-172365>, last accessed on 14 Aug. 2017
- [8] **Worldarchitecture.org., 2017.** Exclusive: Balkrishna Doshi Unveils the Details of the Revitalisation of Bhadra Fort., http://worldarchitecture.org/articles/cevzg/exclusive_balkrishna_doshi_unveils_the_details_of_the_revitalisation_of_bhadra_fort.html , last accessed on 22 Aug. 2017
- [9] **Vimeo., 2017.** Revitalisation of Bhadra Fort Precincts by Dr. Balkrishna Doshi, <https://vimeo.com/164689319>, last accessed on 14 Aug. 2017
- [10] **Canniffie, E., and profile, V. (2017).** Aldo Rossi (1931-97): The Architecture of the City. Architectureandurbanism.blogspot.co.uk., <http://architectureandurbanism.blogspot.co.uk/2011/01/aldo-rossi-1931-97-architecture-of-city.html>, last accessed on 14 Aug 2017
- [11] **Rossi, A., & Eisenman, P. (1982).** *The architecture of the city* (p. 111). Cambridge, MA: MIT press.
- [12] **Doshi, B. and Vasavada, R. (2017).** Bhadra Square Redevelopment Plan. South Asia, <https://architexturez.net/doc/az-cf-172437>, last accessed on 14 Aug. 2017
- [13] **www.narendramodi.in., 2017.** Dynamic Project of AMC – Bhadra Revitalization wins HUDCO award. <http://www.narendramodi.in/dynamic-project-of-amc-%E2%80%93-bhadra-revitalization-wins-hudco-award-5117>, last accessed on 14 Aug. 2017

SNEHA KISHNADWALA, M.Sc., B.Arch.

She has worked with the Indian National Trust for Arts and Cultural Heritage (INTACH) Heritage Academy in New Delhi, India since 2018. Along with this she is also a visiting faculty at Kamla Raheja Vidhyanidhi Institute of Architectural and Environmental Studies (KRVIA) at their Masters in Urban Conservation programme in Mumbai, India. She holds a B. Arch from University of Mumbai and M.Sc. in Architectural Design for Conservation of Built Heritage from University of Strathclyde, Glasgow, Scotland, UK. She moved back to India after completing her Masters to contribute to the Conservation profession in her country. She carries detailed research on Balance between Sustainability and Heritage Conservation, Climate change and Heritage, Heritage and well-being amongst many others.