

# Vedic Building Science – A Vastu Shastra Principles Approach for Planning Modern Living Environment

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## Abstract

Urbanization has led to negative consequences such as pollution, violence, sickness, and shortage of resources worldwide. Environment competitive climate degrades both qualitative and quantitative components of nature. Vastu Shastra Principles Planning Approach views settlement planning as a sacred technique that eliminates shortcomings and improves kindness in future. This paper typically discusses the main aspect of Vastu Shastra used in living environments. However, they may also apply to buildings and settlement. These principles aim to creating a sustainable living environment that is comfortable for the residents and extracts the maximum advantages and wellness of both living beings and the environment in a single step.

Study has combined, connected, and redefined the concepts of modern development and the science of Vastu Shastra to apply new ideas to current human settlement. The study's methodology involves qualitative research. It takes use of secondary data collected from previous investigations.

This paper main result is that Vedic settlement well-established infrastructure led to pleased and healthy residents, which modern Living Environment may apply.

## Introduction

Vastu Shastra, the ancient Vedic Indian science of building and spatial planning, has been important principles of Indian culture for a long time. Based on Vedic traditions, it offers principles for creating healthy working and living environments by integrating natural components and positive elements. In the perspective of Viksit Bharat, a vision for a developed and progressive India, there is increasing interest in incorporating Vastu principles into modern settlement planning, sustainable development.

As India advances in science technology and urbanization, the relevance of Vastu Shastra is being redefined to meet modern settlement demands. The combination of ancient Vedic wisdom and modern creativity provides answers for building sustainable, efficient, and energy-balanced spaces. This paper investigates how Vastu Shastra might help layout the emerging environment of Viksit Bharat, providing a holistic and culturally rich living environment for future generations.

## Literature Review

In the upcoming futuristic changing environment, experts expect science to be the most significant factor. Vedic building science principles slowly go away from people's minds, while new methods and scientific advancements emerge rapidly, decreasing the earth's core stability day by day. A careful evaluation reveals the sustainable concept that has the potential to revolutionize architectural layout without negatively affecting the environment, both socially and environmentally (Singh & Parashar, 2018). Vastu Shastra, the ancient Hindu architectural Vedic science, is derived from the Vedas, which is India's oldest sacred texts. There are four major Vedas: the Rig Veda and Sama Veda, which include hymns and poetry, the Yajur Veda, which concentrates on sacrificial rituals, and the Atharva Veda, which contains spells and prayers. There are also four subsidiary Vedas (Upa Vedas), one of which is the Sthapatya Veda, which focuses on building and its living environment. Vastu Shastra is a subset of Sthapatya Veda, which is classified as applied knowledge in the Atharva Veda. This planning and building discipline is based on Sthapatya Vedic beliefs (D & Kalluraya, 2023). Vedic Indian Vastu Shastra based on scientific building principles and rational reasoning was formerly considered sacred in Indian culture, but the public often misunderstands it. The practice of Vastu is frequently associated with religious or spiritual ideas, which might have been a strategy to guarantee people followed its standards while creating living environment. Thus, priests and astrologers advised on Vastu and guided building and settlement planning. However, despite the availability of professional architectural services in cities, many people continue to want to incorporate Vastu principles into modern living environment (Rastogi & Kaushal, 2023). This Indian ancient Vedic perspective guides the planning, development, and layout of buildings, including temples and cities, in a certain manner. Tantra is the practical application of the knowledge and principles found in the Atharva Veda (Sharma, 2002). Vastu Shastra is an approach concept with historical significance dating back to the Vedic era. Planning settlements served as the foundation for the growth of human. The principle of human settlements established a hierarchy of Man, Shell, Society, Network, and Synthesis (Shimada, 2023).

Vastu Shastra influences the layout, dimensions, visual attractiveness, and materials used in temple development, as well as climatic conditions and urban street and building planning. It emphasizes the importance of architecture and urban planning in influencing areas (Sachdev, 2002). This body of knowledge forms the outline and adapts to the regional, social, and economic variations it has previously encountered, serving as the foundation for its continuity and modern use (Singh & Parashar, 2018). The Vastu Shastra system serves as an excellent example of urban environment. Vastu Shastra is a literary treatise that covers topics such as urban planning, architectural typology, materials, measuring techniques, orientation, and building elements (Marshall, 2012). Understanding key elements such as home orientation, road alignment, construction materials, physiography, and geography of current cities is crucial for achieving sustainable future living environment. Vastu Shastra is an ancient Indian approach for designing a constructed living environment, whereas Feng Shui is an old Chinese and Japanese planning technique (Kharat, 2000). The Vastu Shastra approaches focuses on its pillars of sustainability to address unemployment, social and geographical segregation, crime reduction, and quality of life improvement. Quality of life is determined by environmental factors such as water, soil, air, safety, and the development of cities (Greed, 2014). Planners systematically planning building clusters

and cities, considering aspects such as orientation, climatology, and site contours(Nishant et al., 2019).

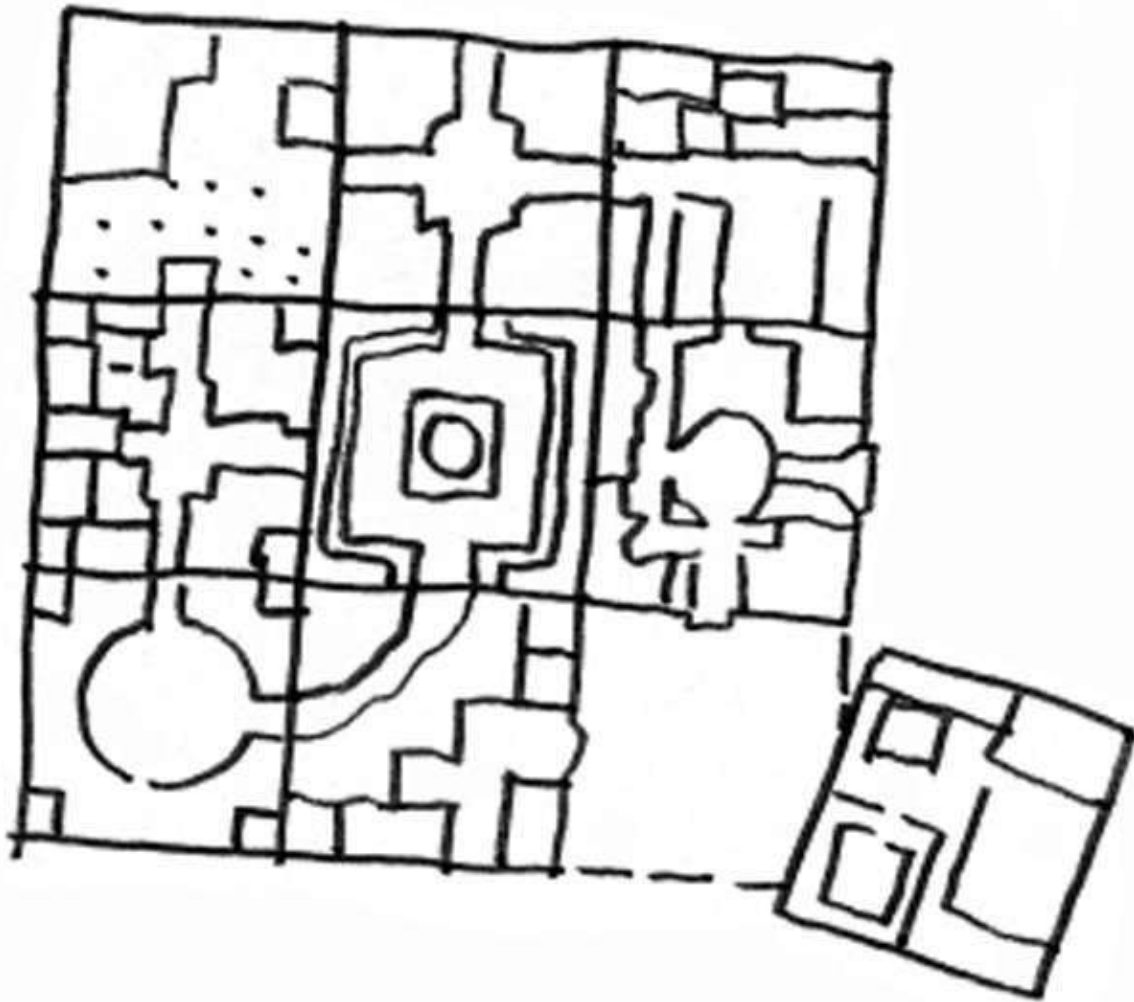
### **Methodology**

This study adopts the method of qualitative research, concentrating on existing literature. This study is based on a collection of literature from several sources, academic journals, books, and proceedings of conferences. These reliable sources provide well-documented insights and scientific discussions, adding to the research's validity and reliability. In addition to reliable sources, such as digital archives, government papers, and research publications provide significant data and crucial aspects for expanding the scope of this study. These resources assist in acquiring current knowledge, broadening the area of study, and applying modern perceptions into the living environment. A place of residence may be thought of as a smaller version of a settlement, evolving in regards to population, infrastructure, and governmental significance. Many social, economic, and physically elements affect the transition from residence to settlement. Many ancient and historical writings have explored this shift, providing thorough explanations of urban planning concepts and development techniques for Modern Living Environment.

Several recognizable and ancient treatises offer holistic approaches for Living Environment, focusing on geographical organization, resource management, and layout of buildings, settlement, and the quality of life. Scholars and planners from various eras have written the literature, which focus on the orderly growth of settlements and the factors that contribute to their sustainability over time. The next sections of this review explore the ancient planning ideas and their relevance to settlement.

### **Case study - Jawahar Kala Kendra**

Jawahar Kala Kendra is a gallery of crafts and artwork in Jaipur, India, founded by the Indian government in 1986-91 to preserve India's spiritual and cultural beliefs while also displaying its rich craft tradition. The building plan's geometry is inspired by traditional Hindu Vedic architecture as it follows self-similar squares (Mandalas are sacred) found in ancient writings (Vastu Shastra) going back to 1500-500 BC. These squares are geometric abstractions of the universe, with architecture serving as a link in between the cosmos and man - the "cosmic man" Approach (Vastu Purusha Mandala).



**Figure 1** Layout of Jawahar Kala Kendra, source: (Singh & Parashar, 2018)

### **Chandigarh Settlement**

Vastu Shastra philosophy, founded on time-tested scriptures and principles, operates on the premise that proper arrangement of various activities in the right direction and in appropriate zones under the direct impact of respective bodies is certain to provide happiness, wealth, and peace of mind. The idea extends to all types of buildings and emphasizes the interaction between humans and nature. According to Vastu, the industrial region is well suited to the southeast belt and is ruled by Agni, which represents fire. In the scenario of industry, Agni (fire) represents the usage of electricity, energy, and power. Finally, according to Vastu, the south and west directions are ideal for dwelling. Residential structures are situated in the southwest regions south, and west zones of the settlement(Singh & Parashar, 2018).

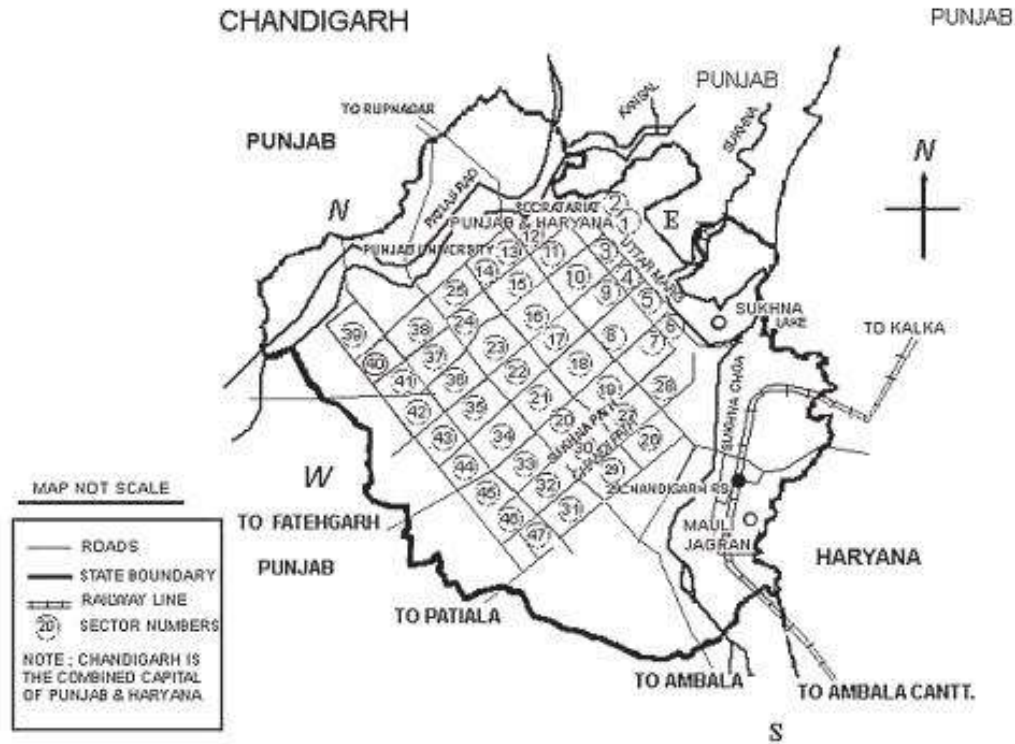


Figure 2. The Chandigarh master-plan overlaid by the Vaastu-Purusha-Mandala: (1) Capital Complex symbolizes the head; (2) Sukhna Lake occupies the E/NE corner; (3), (4) the PGI and Panjab University located in the north; (5) the city centre, Sector-17 occupies the heart of the city; (6) cremation ground, placed in NW direction; (7) industrial area located in the southeast; (8) southwest, south and west zones for living purposes

Figure 2 Chandigarh Settlement, source:(Singh & Parashar, 2018)

**Findings/Results**

The planning principle aspect of Vastu Shastra settlement layout, the central area of a settlement is known as the Brahman. This core area has both cultural and practical significance. People frequently keep it open and use it as a community space for meetings, religious events, and social activities. Alternatively, it can be transformed into a dedicated gathering place known as a courtyard or mandapa, serving as a focal point for social events, conversations, or spiritual practices.

Similarly, the residents of the settlement know the main roadway as Brahmavithi. This road is the settlement's primary means of transportation and connection. Because of its central location and significance, it is also known as the "navel of the settlement." This approach is consistent with Ancient settlement-planning theories that emphasize the harmony of spatial organization and cultural values, ensuring that important social, economic, and spiritual functions are properly incorporated into the settlement's structure(K. Vatsyayan, 1988). In both Vedic and modern towns, streets were laid either parallel or at right angles. These roadways develop square or oblong enclosures around the buildings. These settlements had gridiron-style streets that enclosed a

number of building blocks. The old settlement had a square or almost square form, similar building blocks, and a chess-board-like layout. Instead of squares, oblong housing blocks created a geometric and rectangular planning, similar to that of the board used for chess. The main road should be eight dandas broad, while the smaller roads would be four dandas broad. Vastu Shastra planning improves the efficiency of input variables such as natives' well-being and comfort status, leading to increased social growth and economic growth in a settlement, indicating a sustainable future(Haverfield, 1913).

Settlement streets are based on building height, and no buildings from various societies can be put on the same street. This indicates that only a specific set of people may reside on the same street with the same building height. Views from building heights provide a clear understanding of society and streets. Mahakala or Vamana refers to the longest arm aligned in both the east and west directions. Ring roads that encompass a whole city or town are referred to as Manglavithi(Nishant et al., 2019). Street pattern-based planning includes Dandaka, Sarvatobhadra, Swastika, Prastara, Chaturmukha, Padmaka, Nandyavarta, and Karmuka. Vastu Purusha Mandala is an aspect of Vastu Shastra that focuses on building layout by restricting vertical and horizontal bounds to shape the architectural form. In the 6th century AD, two Indian architecture educational institutions emerged Nagara as well as Dravidian. Marking the crossing places of the site's shadow in the morning and evening determines its east–west orientation. After finalizing the site orientation, overlay the Vastu Purusha Mandala, which serves, as the planning's master grid. In general, mandalas are square-shaped. Each square of its mandala represents a certain practical value of the building. The total quantity of squares might vary depending on the house's scale. Building units are often planned using Manduka (64 square grid) or Paramasayika (81 square grid)(Chakrabarti, 1998).

## Discussion

The fundamental principles of Ancient Vastu Shastra Planning in Modern Living Environment, which come from past traditions, continue to influence Living Environment. Today's planners draw influence from ancient Vedic Vastu Shastra approaches, including environmental, economic, and social factors into modern settlement. The utilization of zoning restrictions, sustainable infrastructure, green areas, and efficient transportation networks represents historical town planning that has been updated to fit the demands of modern environment. Furthermore, with rising worries about urbanization, pollution, and climate change, the need of sustainable settlement planning has grown. To develop habitable and resilient places, modern settlement today prioritizes eco-friendly development, renewable energy sources, waste management systems, and smart city technology.

Understanding the progression of living environment from ancient Vedic settlements to modern settlements allows planners to create methods that support long-term growth while maintaining cultural and historical value. Settlement is still guided by the concepts of site selection, zoning, and resource allocation, which ensure that building and living environment are well-structured, efficient, and flexible to future difficulties.

Application of Vastu Sastra in Modern Living Environment According to Vedic Vastu Shastra writings that explore the relationship between the Mandala and settlement planning, the Mandala's spiritual geometry provides a foundation for establishing harmony and balance in a constantly changing environment. Ancient Vedic architecture and settlement planning ideas are strongly

rooted in the Mandala, a geometric symbol of cosmic order. It ensures that the developed settlement stays in harmony with the surrounding environment by offering an organized method for creating settlement that are in harmony with spiritual and natural forces. The science of Vastu Shastra, an ancient Vedic Indian architectural discipline, defines an ideal environment as one in which all need—natural and cosmic—are perfectly balanced, generating a sense of well-being, prosperity, and harmony. This equilibrium is accomplished by carefully analysing building location, building orientation, and energy movement across settlement. The integration of many elements, such as land, water, air, fire, and space, is critical to a settlement's long-term viability and positive outlook. Furthermore, the interrelated nature of the built environment underlines the significance of properly planning transitions, perspectives, and spatial arrangements. The arrangement of rooms, the direction of entrances, and the placement of significant Vastu Shastra features are all precisely planned to ensure quality of life. These principles not only improve the visual appeal of settlement, but they also contribute to their utility, ensuring that they promote the well-being and quality of life of their people

### Conclusion and future directions

Vastu Shastra is essential for sustaining balance in both individual building and Living Environment. Every conceptual approach—from a single building to an entire settlement—that follows to Vastu principles may create an environment in which people can live happily and free of chronic disorders. Vastu Shastra focuses on balance, proportion, and rhythm in architectural building planning and settlement, ensuring that places encourage good health, well-being, along with positive energy. This offers a methodical strategy to structuring building, clusters, and settlement arrangements. To maintain a sustainable and well-functioning environment, a variety of important aspects are considered, including orientation, climatic conditions, and the natural elements. These values have been carried around through centuries and are still applicable now, helping to avoid sickness, social disorder, and harm to the environment.

Modern and Future cities may be planned to promote by considering these Vastu Shastra approach. Following to these approach not only improves quality of life, but also guarantees that living environment are strong and peaceful, resulting in a healthier and more stable for future generations.

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