

The Indian Ancient Architecture And Town Planning

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ABSTRACT:

The construction industry is an important component of the modern economy. Development in engineering, more specifically civil engineering guides the present-day construction plan and execution. However ancient Indian knowledge provides a root for sustainability in the field of the construction industry. Ancient knowledge of architecture and 'Vasthu' provides an invisible value system through which the people can be more comfortable and in welfare. Therefore, there is a need to trace the root of those values related to the construction sector in the ancient Indian knowledge system. Such an attempt is made in this paper.

The main aim of this paper is to trace the guidelines that ancient Indian knowledge on architecture and town planning provides. The specific objectives are to review different aspects and ethical values of the construction industry in ancient India and to understand the concept of 'Vasthu' and town planning in Ancient India. This paper is descriptive in nature and based on reviewing various literature available on ancient Indian architecture, Vasthu, and town planning. Understanding the roots of the present-day construction industry and engineering in ancient literature would help us to go further in a sustainable manner. Various aspects involved in ancient architecture such as light, wind in general natural energy to sustain are analyzed.

KEYWORDS: Ancient Architecture, town planning, Vasthu, civil engineering, construction industry.

1. INTRODUCTION

The construction industry is an important component of the modern economy. Development in engineering, more specifically civil engineering guides the present-day construction plan and execution. However ancient Indian knowledge provides a root for sustainability in the field of the construction industry. Ancient knowledge of architecture and 'Vasthu' provides an invisible value system through which the people can be more comfortable and welfare. Therefore, there is a need to trace the root of those values related to the construction sector in the Indian ancient knowledge system. Such an attempt is made in this paper. Indian architecture dates to the Indian Bronze Age and up until about 800 CE [1]. By this time, Buddhism had significantly declined, Hinduism had taken over as the dominant religion in India, and both religious and secular building styles had developed, with significant regional variation. These styles have largely persisted despite some significant changes brought about by the arrival of first Islam and then Europeans. A large portion of early Indian architecture was made of brick or wood, both of which have frequently been removed for reuse. Because so much of the extensive Indian rock-cut architecture, which dates to roughly 250 BCE, obviously adopts forms from contemporaneous constructed buildings of which no instances remain, it is particularly

significant. There are also a number of significant locations where the floor plan could still be excavated, but the upper portions of the buildings were destroyed.

The Indus Valley Civilization saw the emergence of its first cities during the Bronze Age. Northern Black Polished Ware and the construction of walled settlements signalled the beginning of urbanisation in the Gangetic plains as early as 1200 BC. The use of stone in Indian architecture and the circulation of Indian currency were characteristics of the Mahajanapada era. The Mauryan era is regarded as the start of India's classical era of building. Early medieval architecture evolved into the Nagara and Dravidian styles because of the rise of Hindu revivalism and the dominance of Hindu temple construction in the Indian Subcontinent. Our past has a significant influence on how our future will be shaped [2]. Our own forefathers' use of antiquated technologies is incredibly iconic. An ecological balance between the natural world and people was upheld in the beginning. They believed construction and nature should coexist to produce a gorgeous scene that preserved the environment's natural beauty. India is renowned throughout the world for its diverse culture and its contributions to it.

When considering each and every heritage building, the construction method and structural stability that guarantees its survival even today despite being subjected to calamities, man-made disasters, and carelessness stand out as common factors that appear to be distinctive. This supports and contributes to our nation's unique cultural legacy. Each building has a unique originality and specialty when broken down into numerous architectural types and styles [3].

The Vedas are the source of the ancient Hindu architectural expertise known as *vasthu shastra*. The oldest religious texts in India are the Vedas. There are four Vedas: The Atharva Veda (melodies of the chants), Yajur Veda (sacrificed formulas), Sama Veda (hymns or verses), and Rig Veda (hymns or verses) (spells and incantations for the practice of magic). These Vedas also have four more Vedas (Upa Vedas). The Sthapatya Veda is one of the four Upa Vedas, and it discusses construction. Thus, the ancient art of building design and construction known as *vasthu shastra* is a branch of the Sthapatya Veda, which is a branch of applied knowledge beneath the Atharva Veda. This ancient understanding of building design and construction has its roots in Sthapatya Veda, a branch of Atharva Veda (the fourth Veda).

2. FUNDAMENTAL PRINCIPLES OF VAASTU SHASTRA

Vaastu Shastra has established several guidelines for building construction. It is essentially an art of proper setting through which one can maximize the benefits of the Panchbhutas (five elements) of nature, the earth's magnetic field, and the rotational influence of the sun, moon, and other planets surrounding the earth. Vaastu Shastra's essential concepts are used while erecting structures like homes, office buildings, industrial complexes, towns, temples, etc. The vast structure of the Vaastu science of architecture is based on five fundamental principles. They are.

- The Doctrine of Orientation
- Site Planning
- The Proportionate Measurement of Building
- The Six Canons of Vedic Architecture
- The Aesthetics of The Building

2.1 The Doctrine of Orientation

The four cardinal directions have special meaning in Indian philosophy. Vaastu Shastra's orientation principles are explained by the numerous associations provided to the eight cardinal directions (northeast, east, southeast, south, southwest, west, northwest, and north) [3].

According to Indian architects, the notion of building orientation is both secular and spiritual, and it entails positioning buildings to maximise the benefits of solar radiation. Thus, the setting of cardinal points takes centre stage in Vaastu Shastra.

2.2 Site Planning (Vaastu-Purusha-Mandala)

The Vaastu Shastra provides several recommendations for selecting the ideal place [4]. It places a heavy emphasis on examining the soil, as well as the land's size, shape, flavour, colour, and vegetation aspects. If the land allotment meets all these requirements, it is chosen for the purpose of developing a home, hamlet, industrial, town, fort, etc. The Vaastu-Purusha-Mandala blueprint is given for the grid that facilitates the creation of the design after the land is chosen. In addition to serving as the "architect's square pad," where ideas crystallise, each of its lines and divisions contains layers of meaning within which the complexities of design unfold.

2.3 The Proportionate Measurement of Building (Maana)

The proportionate measurements, or Maana, are the third fundamental tenet of Vedic architecture. The measurements are broken down into six categories: inter-space measurement, measurement along plumb lines, measurement of thickness, measurement of height, breadth, and width or circumference. In the system of measurement, Vaastu Shastra's goal is to bring the absolute and the quantifiable into harmony. Similar to the spoken word, measurement mediates finality to an architectural concept, which offers a frame over which the canvas of thought is stretched. Measurements and evaluations go hand in hand [5].

2.4 The Six Canons of Vedic Architecture (Aayaadi-Sadvarga)

A building's base (Aadhistaana), column (Paada or Stambha), entablature (Prastaara), ear or wings (Karna), roof (Shikara), and dome are its six primary parts (Stupi). Some of the factors analysed to determine the quality of the dwelling are the Ayaadi formulas¹ (Guna). Aaya is a shorthand for "building measurement = length breadth" [6].

2.5 The Aesthetics of the Building

The nature of beauty is the focus of the philosophical area of aesthetics. It can be difficult to apply aesthetic principles to buildings and other architectural structures since other considerations (including structural integrity, cost, the composition of the building's materials, and its practical utility) play a role in the design process. The aesthetic concepts of ornamentation, texture, flow, solemnity, symmetry, colour, granularity, the interaction of sunshine and shadows, transcendence, and harmony are still applicable to architects. In Indian culture, the moon is regarded as the embodiment of beauty, and poetry and buildings share a similar rhythmic inclination [7].

These ancient principles provide buildings with a variety of shapes, and they differ from one another to fit various building types and purposes. They also never show the same view. Vaastu Shastra has thus been referred to as a body of knowledge that has been preserved, expanded upon, and updated across many generations of architects. It suggests a body of knowledge that has been organised and articulated over time in a variety of texts with diverse headings and has been passed down to us as a result.

3. VAASTU-PURUSHA-MANDALA

The Vaastu-Purusha-Mandala serves as the foundation for architectural design and is regarded as a model of the cosmos. It illustrates the connection between people, structures, and nature and is a metaphor for the design of the universe. Vaastu refers to an area, a building, or a location in this context. As a notion, it encompasses a village, town, nation, or even the entire earth in all its forms. A building is considered a Purusha, the "man" of the cosmos when it is

Due to the name's three components—Vaastu + Purusha + Mandala—it is known as Vaastu-Purusha-Mandala. It typically has a square shape, which is the basic shape of Indian architecture. Vaastu-square Purusha's shape can be changed into an equal-sized triangle, hexagon, octagon, or circle while retaining its symbolism. The Vaastu Purusha-Mandala or the ground plan is then superimposed on the site once the orientation of the site has been determined. The Vaastu-Purusha-Mandala was so all-encompassing that it might be used to designate an altar, a temple, a home, a city, or the universe. Therefore, Vaastu Purusha is the form of a human in a planned location that is distinguished by zodiac signs, constellations, and planet symbols that stand in for the entire solar system. This makes the location, house, palace, village, city, etc. a micro-cosmic aspect of the macro-cosmic Purusha or Vaastu purusha [8].

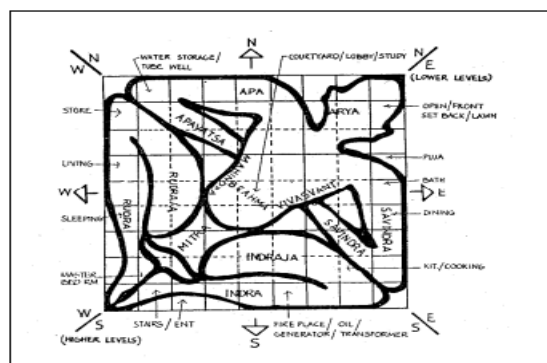


Figure 1: Vaastu-Purusha-Mandala

The Vaastu-Purusha-Mandala adapts to the shape of the site, and this practical quality of the Mandala—which was active in the designer's imagination in its ideal form of a square but took on a different shape in reality—is a prime illustration of its intrinsic flexibility. It adjusts to the site constraints as well as the parameters of design requirements for contexts as diverse as the hot and arid state of Rajasthan and the wet and humid state of Kerala. It also considers differences in building materials, functional requirements, and the social and political context in which it is used [9].

Buildings constructed in accordance with the Vaastu-Purusha-guidelines Mandala's have been discovered to be healthier [10]. In other words, the house's residents' health is protected. If we adhere to dietary guidelines that are in line with the laws of nature, our health is preserved. In a same way, if a building is constructed with adequate consideration for natural laws, its health or Vaastu can be preserved. A body's limbs should always be in their correct positions. So much so that each area in a house needs to be organised according to its intended usage. That will keep the convicts' content and the house healthy [11].

To have a tranquil location for offering prayers, pursuing peace, and to live in harmony with one another, we must bring into harmony the shared values, moral standards, individual views, ideological convictions, economic conditions, social obligations, and cultural symbolism. After

exhausting themselves in the pursuit of earthly pleasures, flawed person starts to think of God and asks for his favour to meet his social wants. He consistently works on this goal, and the method he uses is known as "Religion." It is a common way of thinking, feeling, and acting that gives any of its members a goal to aspire to and a set of rules to follow.

The intelligent may define truth in a variety of ways, but it is only one, declares the Rig Veda. Religion demands that its adherents strictly uphold moral principles and abstain from actions that are against the established moral laws [12]. Many people in this material world seek satisfaction by accumulating wealth, both movable and immovable, but they are unaware of the fact that God owns the entire world, and that man was only here in this world to serve as God's trustee with specific responsibilities. Everyone should try to understand this. In addition to acquiring land and constructing homes and workplaces, it is crucial to work, earn a living, and live strictly in line with the ancient scriptures, customs, and Dharmashstras [13].

The history of town planning in ancient India is presupposed by vastu shastra, as town planning has consistently been a major focus of all significant works on vastu shastra. Additionally, some of the most well-known excavations of ancient Indian sites, including Harappa and Mohenjo-Daro, have focused on this ancient Indian civic art and our predecessors' most sophisticated civic sensibility. The structures found at Mohenjodaro's various layers can be divided into the following categories: (1) dwelling- houses (2) public baths of religious or secular character (3) temples of some kind and (4) raised platforms possibly tombs [14].

4. TOWN PLANNING

Town planning is a civic art and civil architecture, in recent years, which has gained importance because of urbanization. The phrase refers to how different elements are put together so that the town acquires the importance of a living thing. In ancient times, urban planning was conducted on a scientific basis. Planning for a town is influenced by a number of variables, including soil type, weather patterns, topography, and wind direction. Sun-friendly orientation will also be considered as a crucial component of community planning [15]. The towns were typically situated along the bank of the waterbody and were greatly impacted by the site circumstances. Sanitary regulations called for a flowing stream. To make the most of the river, the cities along its banks were oblong in design. The main road (King/Raja Marg) was oriented east-west to benefit from the sun's cleansing rays, while the shorter roads ran north-south. Priests were only permitted on the roads that surrounded the "Mangal Vithi" settlement. Markets, streets, public structures, homes, temples, the royal palace, recreation areas, tanks, and city forks made up a typical Indian town [15].

4.1 Classification of Ancient Town planning

Ancient town planning theories and principles can be found in a variety of writings, which can be broadly divided into two categories for analysis: While the second category included Non-Architectural Adjuncts, the first category included actual Architectural Shilpa Works (such as Mansara). (as expounded in Veda's, Upveda's/Sutra's, Brahmana's, Purana's, Agama's, Tantra's etc.).

The likely location of the new village was to be evaluated, and its suitability was determined by its scent, colour, form, direction, sound, and touch, according to "Mansara." For instance,

the ground should be level and smooth, it should sound hard, the site's odour should be pleasant, and the temperature should be moderate. Any site lacking these characteristics is unsuitable for human settlement.

A southward slope was said to bring death, a south-west slope brought suffering, and if a town was built on a western slope, it would result in war, according to the "Mayashastra" (another Vastu treatise). In addition, the ground should slope towards the north-east, be fertile for all types of seeds, have a variety of tastes, and contain a mixture of sand. In India, the SW to NE wind direction is the most common. Sites that slope in this direction were rejected because the homes would be exposed to storms and rain [16].

The following rule was established by Mayamata to assess the stability of soil. It instructs you to create a large, deep pit and to fill it once more with earth. The ground is good if it fills the pit to a greater extent. However, if it falls short, the foundation is poor, and it is therefore discarded. Additionally, the following building regulations were implemented in ancient India:

1. When a site from the town is chosen or a house is to be built there, the "Sthapati" delineates the layout of that town and divides up the plots in accordance with specific planning principles [17].
2. Trees must be planted when the town and its layout are finished before construction can begin. This is crucial for the townscape's aesthetic appeal [18].
3. Indian homes from antiquity were constructed around a specific court. These residences were called "Salas." "A long construction of one span" is what Salas means. Brahmin homes were made up of four of these spans arranged around a closed-off central court. This is referred to as "Chatur sala." The "Trisalas," or Kshatriya homes, occupied three of the four corners of a rectangular site. For Vaishyas and Shudras, respectively, there were "Dwisalas" and 'Eksalas' [19].
4. Road width and building height were correlated. This made it easier to maintain consistency by regulating the elevation of buildings along a street.
5. Individual residential structures were not allowed to exceed the maximum dimensions established by structures belonging to separate "Varnas" [20].
6. Houses must have plinths that are higher than the street level and must have verandahs, or "Aliandas." A set of steps must be supplied to get from the plinth to the ground level.
7. On either side of the house's entrance road, there was a "Vedika," or raised seat.
8. On either side of the road, there were footpaths called "Vithikas" that were paved with materials like stone slabs.
9. Both sides of the street were equipped with storm water drains.
10. According to Mansara, the footpath needs to be elevated above the street level [21].
11. All homes should have narrow service lanes running behind them and facing the royal highways.

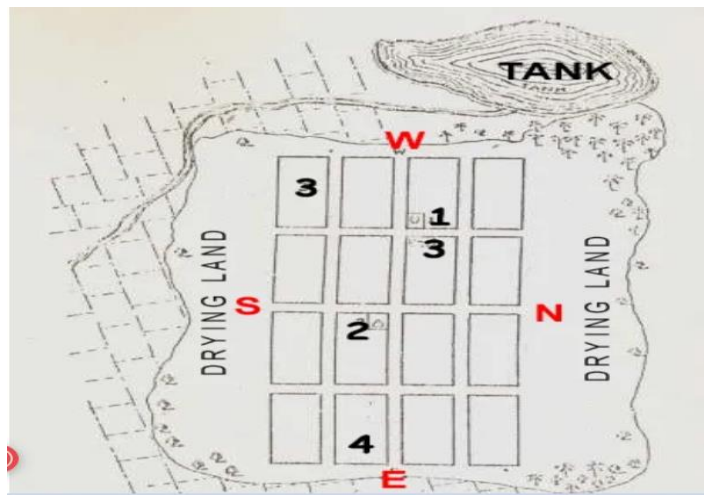
4.2 Different Town Forms as Mentioned in 'Mansara'

'Mansara' divided towns into eight categories based on factors like shape, street design, temple layout, etc. 'Dandaka', 'Sarvathobhadra', 'Nandyavarta', 'Padmaka', 'Swastika', 'Prastara', 'Karmuka', and 'Chaturmukha' are some of the significant town categories of ancient India.

4.2.1 Dandaka

This village's layout is based on a ribbon development along the main roadway. Its literal meaning is "a staff that resembles a village." Straight streets that travel from west to east and south to north intersect at right angles at the city's centre. Two primary entrance gates are

included in this style of town layout, which is typically used to create small towns and villages. Street widths in the village range from 1 to 5 "danda," making it a rectangular square. In the east is where the village office is. Male deities are typically found in the northern part of the hamlet, while female deities (Gramadevata) are typically outside.



1. Vishnu temple
2. Shiva temple
3. Monasteries and garden
4. Town offices

Figure 2: Dandaka

4.2.2 Sarvathobadra

This form is appropriate for larger cities and villages that must be built on oblong or square lots. All of the homes in the community should be occupied to capacity by residents of all socioeconomic classes. The temple dominates the community. A Shiva, Vishnu, or Brahma temple stood in the middle of the community. Two streets in the village crossed each other in the centre. At the village's outer rings were structured for pilgrims to rest and schools. Shudras and Vaishyas lived in the southern region. On the north-east side, Chamunda Devi's temple was built. A wall and a ditch served as the village's defences. From sunrise to dusk, the sun's rays cleaned the main roadways [22].

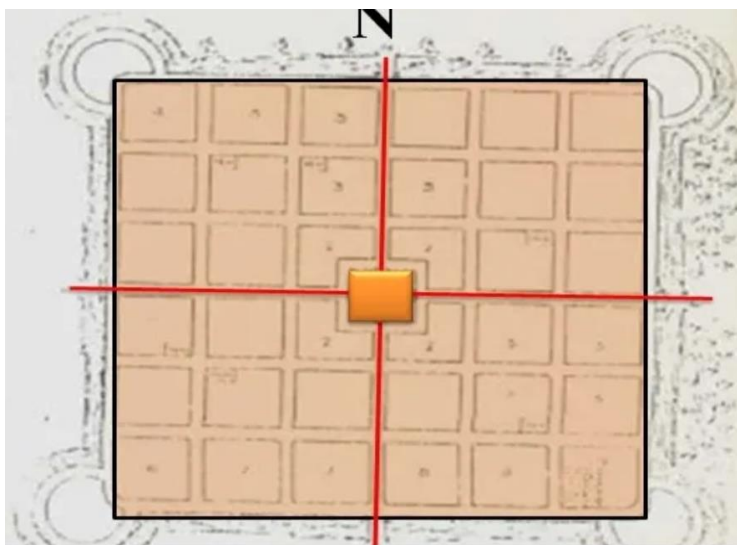


Figure 3: Sarvathobadra

4.2.3 Nandyavarta

This strategy followed the shape of flower petals. This was referred to as the home of joy. It was designed to house a population of various social classes. Many shrines honoring various deities might be found in the Nandyavarta kind of settlement, and Mansara has provided directions to their locations. Bazaars were positioned on exterior blocks close the entrances. It is mostly utilised to build towns, not villages, and is chosen for locations with 3000–4000 houses with a circular or square shape. With the temple of the presiding deity in the middle of the town, the streets run parallel to the adjacent central streets. The word "Nandyavarta" is derived from a flower, and this layout mimics its shape [23].

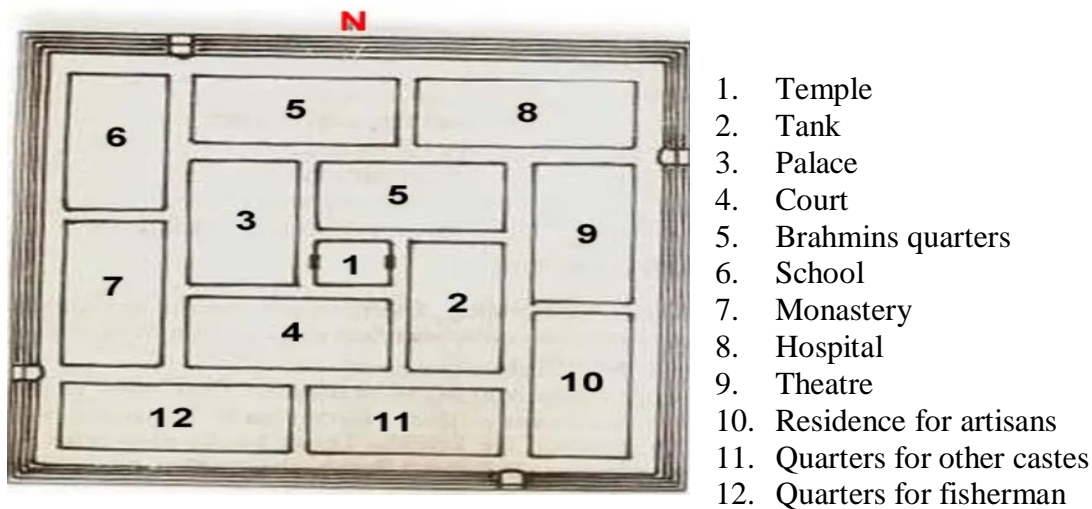
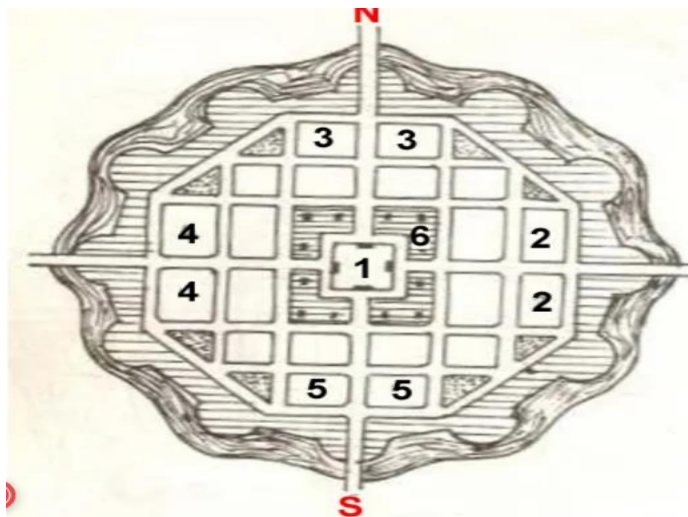


Figure 4: Nandyavarta

4.2.4 Padmaka

The layout of the plan is organized like the petals of a lotus flower, which radiate from the centre. For the construction of the fortified towns that surrounded them, this type of plan was used. The city was once an island encircled by water, with limited room for expansion. Although the shape of the padmaka can differ, the length and breadth must be equal. In the East-West and North-South directions, there were two primary highways in the plan. At the centre was a temple, while the plan's perimeter included a palace, shops, a market, and a tank. According to Mansara, the village's length and width must be equal, and its walls may be circular, quadrangular, hexagonal, or octagonal in shape [23][24].

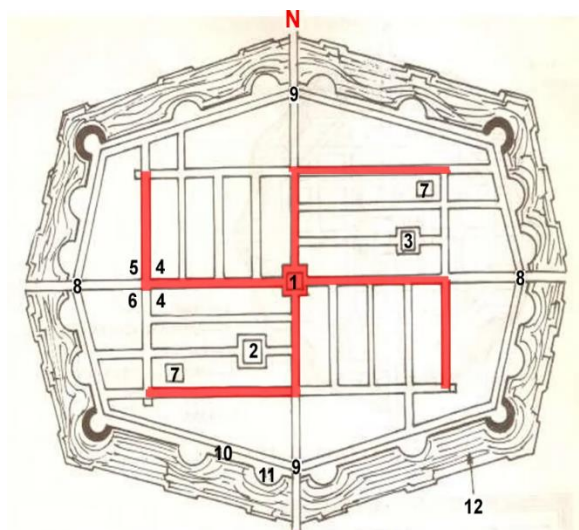


1. temple
2. shops and vegetable stalls
3. palace
4. meat market
5. shops for other articles
6. tank

Figure 5: Padmaka

4.2.5 Swastika

The strategy has a swastika-like pattern. The site would be divided into several triangular plots by a few diagonal streets in this type of plan. Any shape is possible for the site. A rampart wall with a moat at its base encircles the settlement. East-West and North-South running main streets intersect at the middle. In the middle is a temple. In the south-west cell is a Jain temple. The branch streets must adhere to the swastika design. The wall was strengthened with missile defences. A swastika was a defensive formation employed to guard the four portals, which contributed to its charm [23][24].



1. Shiva or Vishnu temple
2. Jaina temple
3. Buddhist temple
4. Office and court
5. King's palace
6. Prices palace
7. Tank and Garden
8. Ganesh temple
9. Kali temple
10. Rampart wall
11. Bastion with armoury
12. Moat filled with water

Figure 6: Swastika

4.2.6 Prastara

These Vedic settlements were more advanced. The site can be either square or rectangular, but not triangular or circular, which is what makes this layout distinctive. The city was divided into four main sections by main streets running north-south and east-west, each of which had narrower streets than the main one. The websites are divided into sections for the very rich,

wealthy, middle-class, and destitute. Depending on each person's ability to buy or build on the site, its size grows. Compared to other layouts, the primary highways are substantially wider. The city was surrounded by walls and had four portals at the cardinal points, while the town may or may not have had a fort around it. For example, the city of Jaipur[24].

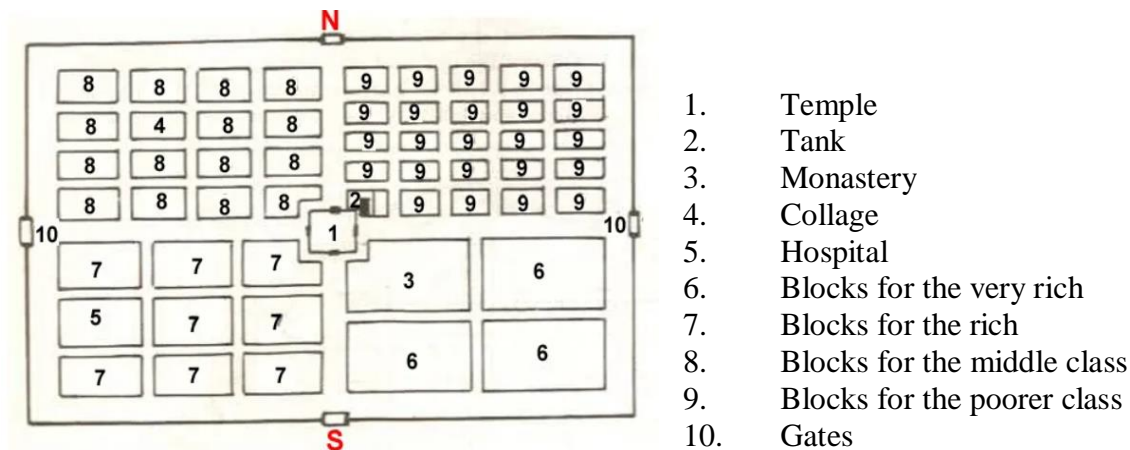


Figure 7: Prastara

4.2.7 Karmukha

This layout is appropriate for locations where the town's site is shaped like a bow, semicircle, or parabolic, and it is typically used for towns that are situated along rivers or the coast. Two main gates were located on the north and south sides of the city's wall perimeter, which was shaped like a bow. The town's main streets go from north to south or from east to west, while cross streets go at a right angle to those main routes. The entire land is divided into blocks by this, and for defence, there was a moat (a deep, wide canal filled with water). In any convenient location, a temple will have a female deity placed [24][25].

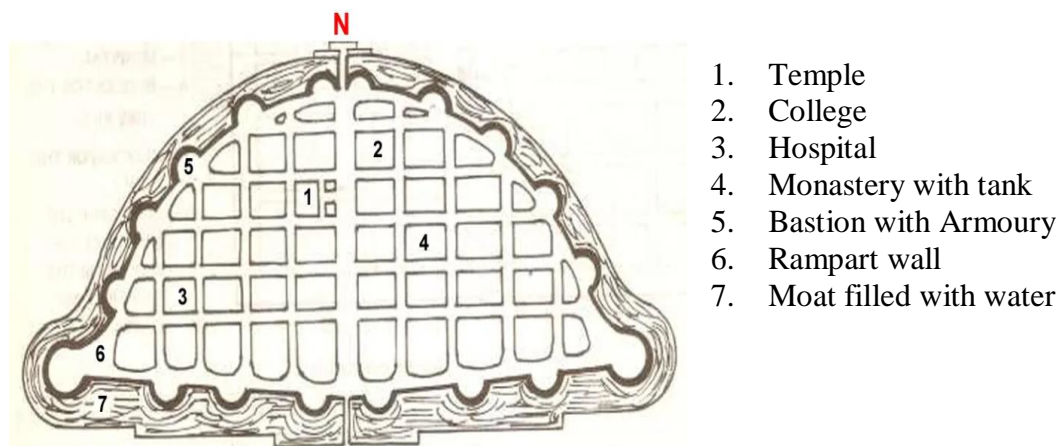


Figure 8: Karmukha

4.2.8 Chaturmukh

This holds true for all kinds of towns. The sites might have four faces and be either square or rectangular. With four main streets, the town is arranged lengthwise from east to west. Always

in the middle is the temple dedicated to the presiding deity. It featured four main entrances at the ends of streets, as the name would imply. The Shudras lived on the outer edges [25].

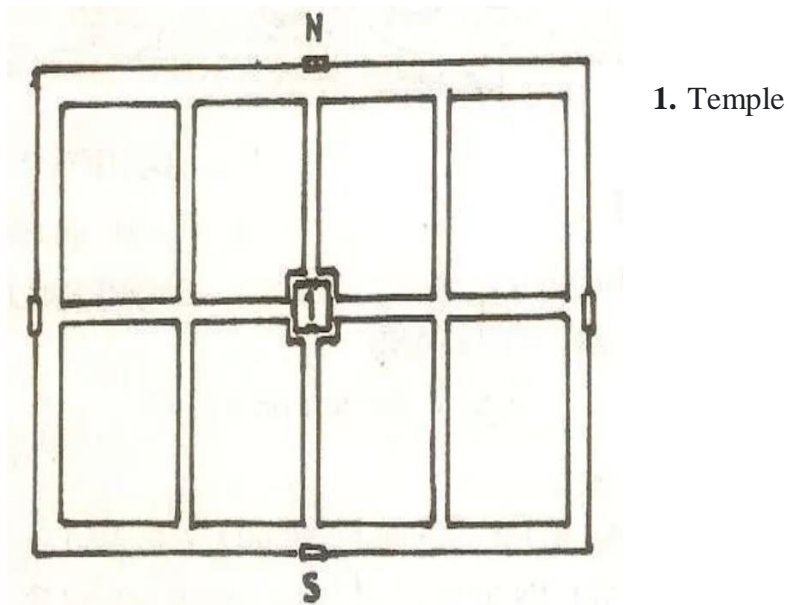


Figure 9: Chaturmukh

5. CONCLUSION

Sanitation, light, and ventilation—the three basic necessities of life—are part of the purity that serves as the foundation of good planning. These three things can easily be provided in structures created in accordance with the Samarangana Sutradhara or any other ancient text. Many may challenge the applicability of the laws governing the construction of homes, moral behaviour, and other matters of law found in ancient religious writings to the present day when conditions have completely altered. In general, planning can relate to the deliberate and efficient utilisation of all available resources. Planning, building, and managing human settlements is a task that is taking on more significance today.

The planning of cities and regions has grown highly complex because of technological development and globalisation of societies and the economy. Therefore, to offer new choices for the growth and management of human settlements, which include not only metropolitan areas but also small cities, towns, and villages, professional planners are required. This obviously necessitates the study of history to avoid the mistakes that have already been made and to progressively learn from them, as settlement planning and management remain key characteristics of intelligent behaviour. History doesn't repeat itself, but it does rhyme, as Mark Twain famously quipped. By utilising their tools, we may quickly connect our old ideals to the current situation. Every place provides an eminent part.

6. REFERENCES

- [1] Lawler, A. (2008). Indus collapse: The end or the beginning of an Asian culture? *science magazine*, 320(5881), 1281-1283. [Google Scholar](#)
- [2] Jeratha, A. (2000). *Forts and Palaces of the Western Himalaya*. Indus Publishing 1- 145. [Google Scholar](#)

- [3] Chakrabarti, V. (2013). Indian architectural theory and practice: Contemporary uses of Vastu Vidya. Routledge. [Google Scholar↗](#)
- [4] Desai, M. (2012). Interpreting an architectural past: Ram Raz and the treatise in South Asia. *Journal of the Society of Architectural Historians*, 71(4), 462-487. [Google Scholar↗](#)
- [5] Manandhar Sabina. (2014). A superstitious belief in Vastu Sastra is a science of Sustainable Architectural. 1(1), 1-7. [Google Scholar↗](#)
- [6] Patra, R. (2009). Vaastu Shastra: towards sustainable development. *Sustainable Development*, 17(4), 244-256. [Google Scholar↗](#)
- [7] Yadav, N. K., & Sagar, I. C. V. (2021) Rethinking Tradition-Principles of Vastu Shastra or Modern Building Science. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 9(3), 30-50. [Google Scholar↗](#)
- [8] Pusalkar, S. A. M. I. D. H. A. (2022). Understanding the Vastu shastra: city planning in walled city of Jaipur. *EDA. ESEMPI DI ARCHITETTURA*, 9(1), 61-71. [Google Scholar↗](#)
- [9] Bramble, C. (2007). Architect's guide to feng shui. Routledge. 1-17. [Google Scholar↗](#)
- [10] Patra, R. (2006). A Comparative Study on Vaastu Shastra and Heidegger's 'Building, Dwelling and Thinking'. *Asian Philosophy*, 16(3), 199-218. [Google Scholar↗](#)
- [11] Sinha, A. (1990). Social and spatial order in villages in India. *Landscape Research*, 15(3), 12-19. [Google Scholar↗](#)
- [12] Branfoot, C. (2001). Indian Architectural Theory: Contemporary Uses of Vastu Vidya. By Vibhuti Chakrabarti with a foreword by Giles Tillotson. pp. xxii, 212. Richmond, Curzon Press, 1998. *Journal of the Royal Asiatic Society*, 11(2), 300-302. [Google Scholar↗](#)
- [13] Kaul, S. (2019). Eloquent Spaces. Routledge India. 1-179. [Google Scholar↗](#)
- [14] Kramrisch, S. (1976). The hindu temple, Motilal Banarsidass Publications.1-363. [Google Scholar↗](#)
- [15] Nathan, V. (2015). Vastu geometry: Beyond building codes. *Architecture and Mathematics from Antiquity to the Future: Volume I: Antiquity to the 1500s*, 375-388. [Google Scholar↗](#)
- [16] Tillotson, G. H. R. (1993). Farangi and Babu: Two early theories of Indian architecture. *India International Centre Quarterly*, 20(1/2), 209-224. [Google Scholar↗](#)
- [17] Tillotson, G. H. R. (1995). Architecture and anxiety: The problem of Pastiche in recent Indian design. *South Asia Research*, 15(1), 30-47. [Google Scholar↗](#)
- [18] Dash, N., & Vasudev, G. D. (1998). *Vāstu, Astrology, and Architecture: Papers Presented at the First All India Symposium on Vāstu, Bangalore, Held on June 3-4, 1995*. Motilal Banarsidass Publications. [Google Scholar↗](#)
- [19] Heitzman, J. (2008). The City in South Asia. Routledge, 12-13. [Google Scholar↗](#)
- [20] Pusalkar, S. (2021). Reviewing the value assessment of Vaastu Shastra in the Walled city of Jaipur. *Academia Letters*, 1(1) 1-7. [Google Scholar↗](#)
- [21] Brown, P. (2013). *Indian Architecture (Buddhist and Hindu Period)*. Read Books Ltd, 2-9 [Google Scholar↗](#)
- [22] Kramrisch, S. (1991). Space in Indian Cosmogony and in Architecture. *Concepts of Space: Ancient and Modern*, 101-104. [Google Scholar↗](#)
- [23] Wagoner, P. B. (1999). Ananda K. Coomaraswamy and the Practice of Architectural History. *Journal of the Society of Architectural Historians*, 58(1), 62-67. [Google Scholar↗](#)
- [24] Ramanujan, A. K. (1989). Is there an Indian way of thinking? An informal essay. *Contributions to Indian sociology*, 23(1), 41-58. [Google Scholar↗](#)
- [25] Boner, A., Śarmā, S. R., & Bäumer, B. (1996). *The essence of form in sacred art*. Motilal Banarsidass Publishe. 1-59 [Google Scholar↗](#)

