A Sanctuary inspired by Gurbani in Gati Harike, Punjab:
A Spiritual Journey of Awakening

by
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A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Master of Architecture

Waterloo, Ontario, Canada, 2025
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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

This research investigates the profound connection between spirituality, architecture, and urban design, aiming to create built environments that express spiritual values and evoke deep presence, meaning, and emotional resonance. Drawing upon the universal teachings of Gurbani, the project translates the Elements of Creation and the energy of Chakras into a transformative spatial design language for a "Journey of Awakening." The thesis posits that humanity should strive for total consciousness, or Mukti (liberation), by transcending Trigun Maya to realize divine truth, emphasizing "truth in design" over mere aesthetics.

The study explores how metaphysical principles can imbue built spaces with meaning, facilitating a journey from an "enslaved (under the impact of five vices: Lust, Anger, Greed, Attachment, and Ego driven by desires) to a free (filled with Divine Virtues) person" through experiential understanding of the five elements of nature and the practical implementation of divine wisdom. It argues that architecture plays a pivotal role in shaping emotions, behaviors, and consciousness, and that a lack of spiritually attuned design contributes to modern societal issues.

Employing an interdisciplinary methodology spanning cultural history, philosophy, psychology, neuroscience, and phenomenology, this research examines the reciprocal relationship between human neural processing, architectural stimuli, and spiritual experiences.

The proposed ISHQ-E-SAT (meaning "Love is Truth") sanctuary, an eco-sensitive retreat within the Harike Wetland, Punjab, exemplifies these principles. Its design organizes the site into seven chakra-aligned nodes, integrating the Five Elements, sacred geometry, Punjabi vernacular architecture, and symbolic elements. This fosters spiritual resonance, cultural rootedness, and community empowerment through sustainable, inclusive practices. Ultimately, this work seeks to enrich architectural practice, guiding individuals toward self-reconnection, spiritual awakening, and harmonious living with nature and humanity.

KEYWORDS

Spirituality, Gurbani Architecture, Natural Elements of Creation, Seven Chakras (Energy Centers), Consciousness, Divine & Oneness, Punjab Heritage, Phenomenological Experience, Architectural Phenomenology, Well-being Architecture, Sustainable Architecture, Metaphysical Architecture, Human Body Analogy, Human Psychology (Mindset), Sacred Geometry, Environmental Stewardship, Sacred Landscapes, Ecological Design, Neuroscience (Brain Waves), Integrated Beauty & Artistry, Architectural Philosophy, Self-Transcendence, Meditative Spaces, Multisensory Design,

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my thesis supervisor, Marie-Paule Macdonald whose expertise, guidance, and unwavering support were invaluable throughout this journey.Your insightful feedback and encouragement helped me refine my ideas and brought this thesis to fruition. Despite my tendency to bring new books and research into our discussions, you kept me on track and guided me to complete this project. Your ability to balance my curiosity with the discipline needed to see it through has been truly appreciated.

A heartfelt thank you goes to my committee member, David Fortin, who took time out of his busy schedule to provide thoughtful and generous feedback that significantly strengthened my work.

I would like to thank my Mum, my Dad, my relatives and friends for all of the unconditional love, support, and encouragement sent my way during this process. This thesis is a testament to the collective effort and support of all these remarkable individuals. I am profoundly grateful to each of you.

LAND ACKNOWLEDGEMENT

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg, and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is co-ordinated within the Office of Indigenous Relations.

During my time at this University, I have studied on the traditional territories of the First Nations. My understanding, though limited, reveals a profound spiritual connection to the Land among Indigenous peoples, a reverence consistent with the teachings explored in this thesis. This research deeply honors Canadian Indigenous cultural teachings, particularly their emphasis on the Earth as Mother and the creation of harmonious, spiritually resonant spaces. Such principles echo the core philosophies found in Gurbani, which advocates for living in harmony with nature and recognizing the divine within all creation. Just as Gurbani's principles and Ayurvedic concepts are integrated into the design of spiritual pathways, this work seeks to respectfully draw parallels with the universal teachings of Indigenous cultures, recognizing their profound influence on fostering a deep respect for the environment and an understanding of the human condition's intrinsic link to the natural world.

DEDICATION

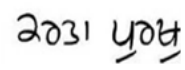
This work is humbly dedicated to the one divine source of all -*IK ONKAR*, the name of the truth *SATNAAM*, my spiritual Guru, Dassan Dass and the spiritual realm. Without their divine blessings and grace, I would never have reached where I am today. His guidance has been the unseen force behind every step of this journey, illuminating the path with wisdom, strength, and clarity.



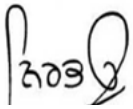
Ik Oankaar (One God)



Sat Naam (Truth is God's Name)



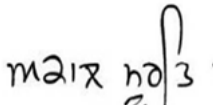
Karta Purakh (Creator Being)



Nirbhao (Without Fear)



Nirvair (Without Hate)



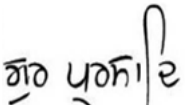
Akal Moorat (Deathless/Timeless Image)



Ajuni (Unborn)



Saibhang (Self Supported)



GurParsaad (Guru's Eternal Blessings)

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PREFACE

My spirit, like the chidiya of the Punjabi folk song "Saada Chidiyaan Da Chamba Ve," once knew only the boundless blue. My childhood home, that beloved chamba, was an open cage with no bars, where the verandas sang with the laughter of family summer vacations, weaving bonds as intricate as the patterns on Phulkari. I remember the cool embrace of tube wells and communal wells at dusk, a sweet freedom as I bathed under the vast, open sky. Our home itself breathed openness, with walls that playfully dared not touch the ceilings, letting in whispers of wind and light, making privacy minimal but connection profoundly deep.

The world outside unfolded like a vibrant tapestry: the skies ablaze with color at twilight, the green wheat fields stretching to meet the horizon, and the brilliant yellow mustard fields dancing with the breeze, where active farmers moved with timeless grace. In the community hall, the langar's warmth enveloped all, and the communal hand pumps offered crisp, life-giving water, nurturing a sense of belonging as vast as the farmlands themselves. I often think of the rivers, separated by man-made lines, calling out to the chidiya. "Oh little bird, tell me, how fares my sister river on the other side? Does she still flow with the same grace? Do the same prayers echo on her banks?" And the chidiya, carrying these silent messages across borders, embodies a freedom denied to others.

Like every girl, I harbored dreams, wishes for a beautiful home, loving relationships, and a life rich with purpose, much like the little bird in the song dreams of its future nest.
Then, a new horizon beckoned, a place that promised much but slowly began to clip my wings. The open expanse of my youth receded, replaced by the confines of closed apartments, with no connection to nature. My spirit, once a soaring eagle, found itself watching the world through the glass, feeling a strange, artificial hollowness, a painful disconnect from the vibrant identity I had known. The rivers of my homeland, the open fields, became distant yearnings, and the effortless freedom of the birds, a poignant ache.

Years drifted by, a slow, quiet struggle. But deep within, my "Jugni" spirit, the resilient bird of my soul, who understood the divine wisdom of Gurbani, emerged in silence, refused to be caged. It reminded me that I was never meant for confinement, but for vastness, for expansiveness. Slowly, deliberately, I began to unfurl my wings again. My journey became a testament to that enduring spirit, forever seeking the boundless expanse, much like the chidiya destined for the open heavens, carrying not just her own song, but the unspoken yearnings of all who yearn for freedom and connection.[1]

1 *My lived experience - Spiritual Transformation*



CHAPTER 1

INTRODUCTION

1.1 Background

Today, our modern life, driven by materialism and consumerism, has perpetuated division, individualism, and ecological degradation. This is also reflected in contemporary architecture. Despite the technological advances that make buildings now more comfortable, their primary focus has neglected the emotional, psychological, and spiritual needs, making them devoid of meaning for users because of the insufficient attention to higher-order needs defined as self-transcendence.[1] Their emphasis on materialism and lack of spiritual depth has created impersonal and isolating spaces, which, despite sustainable trends, still lack sufficient connection to nature and community, effectively stripping architecture of its spiritual restorative benefits.[2] This has prompted calls for critical regionalism to integrate with contemporary design and the wisdom of traditional architecture, which once prioritized harmony with nature and human health. This suggests that these could bring back a sense of balance and nourishment in our built environments.[3] This was evident during the recent global COVID-19 pandemic when we were stuck or locked down in our homes. What was supposed to be our refuge when facing such realities as death and disease has highlighted that material comfort alone is not enough for well-being, showing the importance of spiritual connection, well-designed spaces, access to nature, and social interaction.[4] Well-defined spaces help us feel secure and rooted. In contrast, poorly defined ones can lead to feelings of alienation because our environments affect us on multiple levels – physical, emotional, psychological, social, and spiritual.[5] I look at these conditions not just as environmental or social concerns but as reflections of a collective spiritual imbalance because Gurbani teaches that how we shape our environments is a reflection of our inner spiritual self – Ghar Sukh Vaseya, Bahar Sukh Paaya, (I dwell in peace in my home, and I am at peace outside)[6]. In my view, we're facing a real crisis, one that demands urgent attention. I believe it's time we return to our core purpose as human beings and reconnect with a deeper understanding of ourselves and the divine creation that surrounds us.[7] As society grapples with materialism and existential struggles, the role of architecture in shaping meaningful spaces has become more important than ever. Recent academics have advocated that architects should incorporate spiritual values into design practice to satisfy the need for holistically meeting human needs.[8] By returning to the wisdom of Gurbani, this thesis seeks to inspire architecture to heal, reconnect, and reawaken the spiritual in us and allow us to have that journey of awakening and transformation to live a meaningful existence.

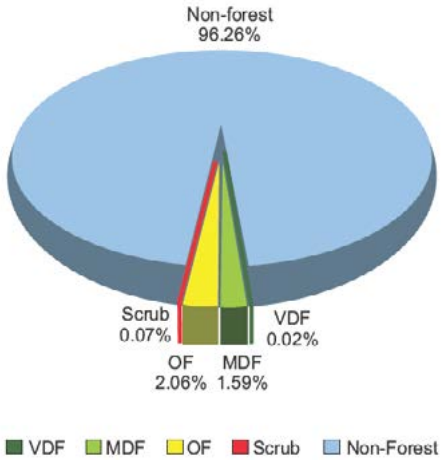


Figure 1. Percentage of Forest Cover of Punjab, India, 2023.
Source: Forest Survey of India, 2023

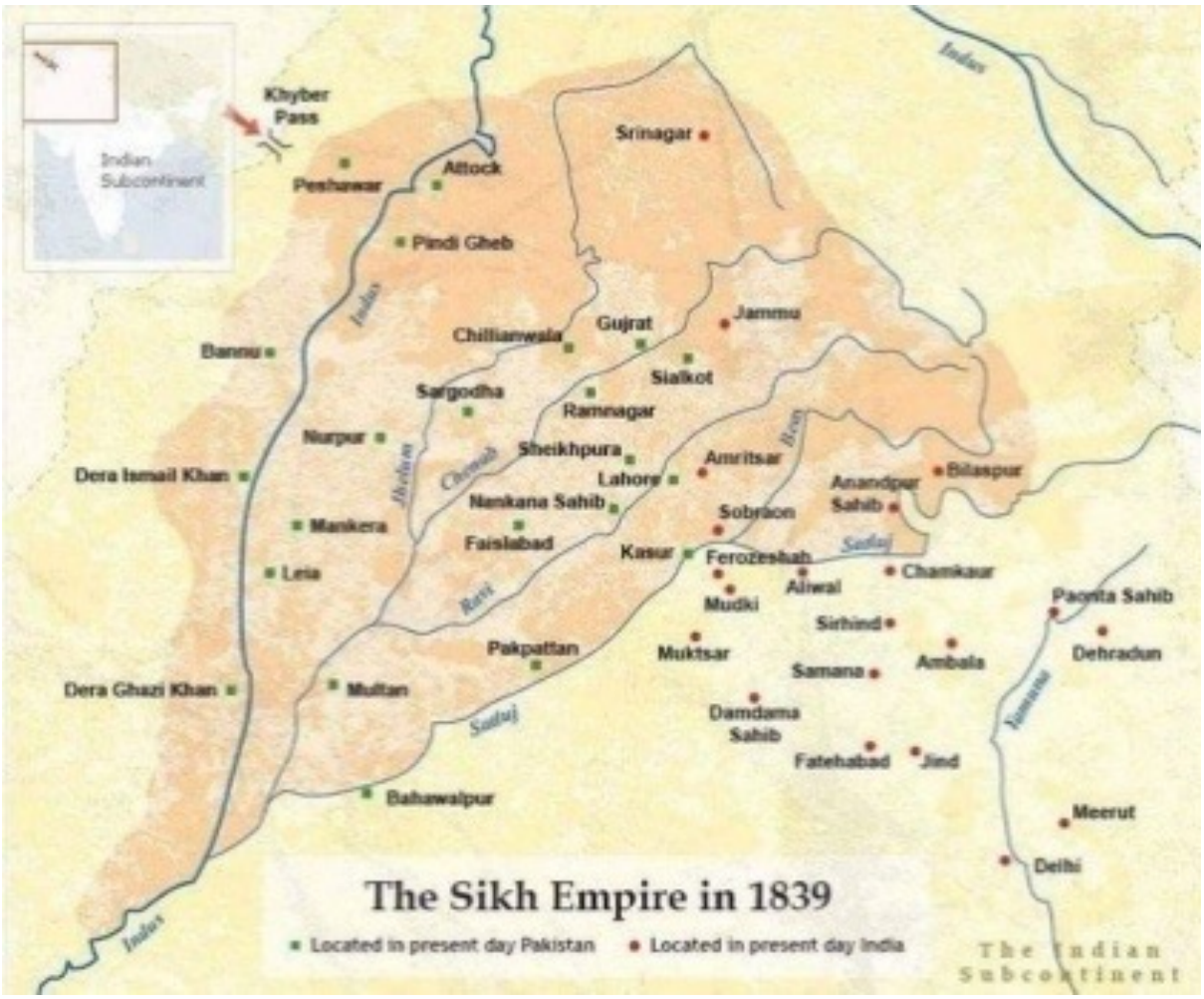


Figure 2. Map of Pakistani and Indian Punjab Showing the Five Rivers, 1839.

This is particularly important in the context of Punjab in India, the birthplace of Gurbani. Figure 1 shows a pie chart of the forest cover of Punjab, from the Forest Survey of India, 2023. This place has seen a tremendous decline in environmental degradation, with only 3.67% of tree cover. Poor air quality and contaminated water are just a few of the challenges the area is facing. This shows that the non-forest area in the Punjab accounts for over 96% while the Very Dense Forest area is only 0.02%. This current state of environmental degradation can be associated with the spiritual emptiness within the people, as stipulated by the Gurbani.[9] As opined by Christopher Day, a religious writer and commentator, what gives form to our environment resonates with our inner qualities and those of the place, especially considering nature and cultural context.[10] The name Punjab comes from the Persian words panj (five) and aab (water), to mean five waters or five rivers, because of the five rivers (Sutlej, Beas, Ravi, Chenab, and Jhelum) flowing through the area and forming tributaries to the Indus River. Figure 2 shows a map of both Punjabs in Pakistan and India from 1839, when it was under the Sikh Empire.[11] The map also shows the five rivers, hence its name, Punjab, a name that not only links to the geography but also to the agricultural and cultural antecedence of the people. The area is lush, fertile, and well-drained by several water bodies, making it rich for agricultural activities. This has made Punjab an important cradle of ancient civilization, spiritual tradition, and various cultural displays. The geographical

location of Punjab has made it to have the Hari-ke-Pattan (Harike Wetland & Bird's Sanctuary), a globally significant Ramsar site which forms part of Harike Lake, situated on the confluence of the rivers Beas and Sutlej. This area has a rich biodiversity of flora and fauna along the path of migratory birds. This shows that there are still areas in Punjab that have the potential to become a stimulus for environmental stewardship. It is interesting to note that in the Gurbani, sacred sites are commemorated by numerous species of plants like Neem, Banyan, Peepal, Tulsi, Lotus, Jasmine, Marigold, among others. It is important to state that there is an ancient jujube tree (Ziziphus jujuba) in the Golden Temple in Amritsar. The above distinct descriptions about Punjab (Gati Harike) make it fit for this study. The area is predominantly covered by plants which are linked to the teachings of the Gurbani in relation to the Five Elements and the divine. This study further holds the view that spirituality can become the impetus for environmental stewardship through architecture. Literature stipulates that the human brain and nature have a symbiotic relationship; therefore, the natural environment helps in creating built environments that can enhance well-being.[12] Spirituality has an enormous potential in promoting sustainable practices among people through theistic stewardship – a common belief among the major and Indigenous spiritual traditions, which states that we are responsible for taking care of the world that the divine has entrusted into our care.[13] Architecture, being one of the ways in which man expresses spirituality, is of essence in this regard. Spiritually engaging architecture is environmentally responsible architecture, and it celebrates resource efficiency while being culturally sensitive, ensuring that heritage values can be passed down through generations. Adopting traditional values and breaking away from the modern busy lifestyle, pause, introspect, meditate and connect with the inner self. Responding to the spiritual needs of people through architectural strategies, means reacting to their environmental and community needs – a pivotal teaching of the Gurbani. The Gurbani further stipulates that, first people need to acknowledge and nurture the divine spark in them and further do same for others and the natural environment.

This thesis further, explores how spirituality can be integrated into architecture through a Gurbani-inspired Sanctuary in the Punjab landscape of Gati Harike, India. The study further aims to translate the universal teachings of Gurbani into architectural spaces, primarily those that emphasize the Five Elements of nature, the Seven Energy Centres, the Law of Karma, Tregun Maya (illusion), and Unconditional Love, for spiritual awakening, personal growth, healing, and transformation. As stipulated in the Gurbani, man is not separate from nature, but intertwined through the Five Elements (Earth, Water, Fire, Air, Space). According to Gurbani, meditation is essential. It slows our brain waves, opens the subconscious, and helps us move beyond the analytical mind so we can recognize our divine worth and reshape our habits. Through meditation, we come to know God and realize that the Divine lives within all of us. This inner awakening naturally expresses itself outwardly in our attitudes, actions, and ways of being:

ਜਉ ਜਾਨਿਆ ਤਉ ਮਨੁ ਮਾਨਿਆ ॥੨॥੧੦॥ (ਏ੫੬-੧੨, ਸੋਰਠਿ, ਭਗਤ ਕਬੀਰ ਜੀ)

ja-o jaani-aa ta-o man maani-aa.
||2||10||

Now that I know this, my mind is pleased and appeased.[14]

On this basis, I hypothesize that architecture, when spiritually grounded, can become an instrument for spiritual awakening and transformation. This study concludes by

authenticating spiritual evolution through the progression of discovering the original self, an unfolding that takes place through transformative experiences encountered in diverse architectural spaces and activity programs during the journey through the spiritual retreat.

To achieve the goals of this thesis, the study makes use of multiple approaches, including a review of related literature, spiritual hermeneutics, scientific explanation of Gurbani through neuroscience theories, phenomenological research method, case studies, and design-based inquiry, to provide an in-depth description.

1.2 Thesis Statement:

In recent times architectural designs are deemed to be an important aspect of any group of people, which always resonates their spirituality. This is evident, based on the designs and structures that are built to serve their spiritual needs. Many researchers in attempt to link the relationship between architectural design and spirituality, concluded that, spirituality and architectural design are inseparable. Studies like (Raghani et, al 2021),[15] fused the external body with spiritual notion through architectural design. Birch et, al. (2013) in their research ***paper*** also linked the connection between spirituality and place. In both researches, they concluded that, spirituality and architectural designs are inseparable.[16]

The thesis identifies the rich spiritual heritage of Punjab and the profound teachings of the Gurbani through architectural design and spirituality, due to the limited (or a lack of or scarcity of) scholarly publications on architectural design and physical manifestation of sacred spaces at Gati Harike. This thesis further embodies the teachings of the Gurbani in contemporary Punjab. On the premise of the Gurbani, this thesis seeks to bridge the gap by exploring how physical spaces can facilitate spiritual growth and self-discovery, enhance emotional and behavioral transformation, and lastly, support reflective and meditative practices. This thesis illuminates how neuroscience and immersive sensory experiences can awaken the senses and attune individuals to higher vibrational states.

This study will incorporate Sacred geometry as a crucial factor to consider while trying to comprehend spirituality in architecture and how it affects people's spiritual experiences. The purpose of incorporating Sacred geometry is to produce quality energy balance in a given place through the complex interaction of geometrical shapes, numbers, proportions, colors, and noises. Lastly, understanding the role of sanctuaries will promote the broader discourse on spiritual architecture and its effect on individual and collective well-being.[17]

1.3 Research Questions:

- How does architectural design facilitate spiritual growth and self-discovery through immersive retreat experiences?
- How does spatial design enhance this emotional and behavioral transformation?
- What are the key architectural elements that support reflective and meditative practices?

1.3.1 Aim:

The research applies Gurbani's hermeneutics to explore how the Five Elements of Creation, also called *Panch tattavs* (Matter) and the Seven Energy Centres, also called *Sat Sarovar & Chakras* (Being) would be translated into a transformative spatial design language, leading towards the Journey of

Awakening.

My design proposal, titled ISHQ-E-SAT—meaning "Love is Truth"—is rooted in the belief that architecture can be a vessel for emotional and spiritual transformation.

1.3.2 Objectives:

- Explore architectural design to facilitate spiritual growth and self-discovery through immersive retreat experiences.
- Analyze the spatial design to enhance emotional and behavioral transformation.
- Identify key architectural elements that support reflective and meditative practices.

Five Elements:

1. ***Earth***
2. ***Water***
3. ***Fire***
4. ***Air***
5. ***Space***

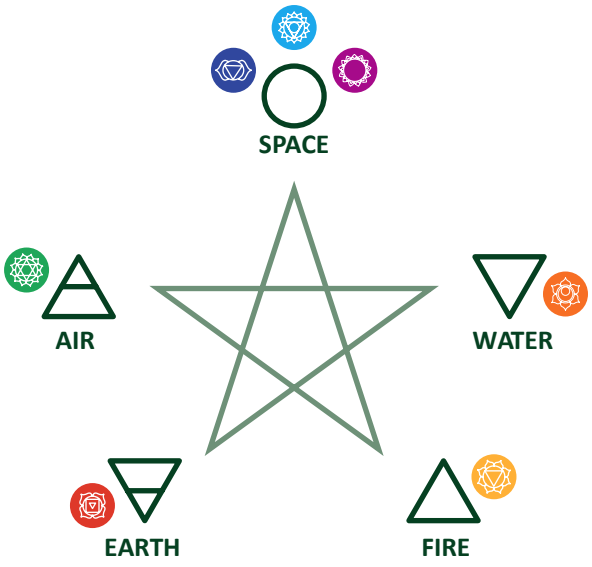


Figure 3A. Five Elements of Creation (Panch Tattavs)



Figure 3B. Gurbani Script in Gurmukhi Language

Seven Energy Centres:

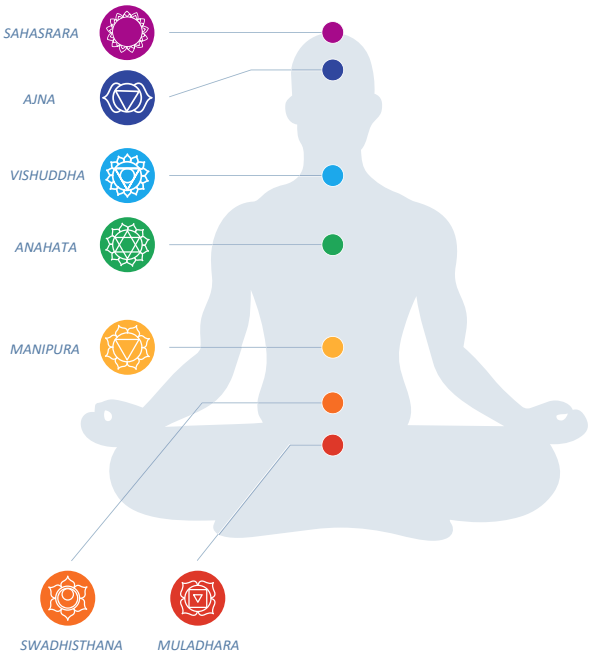


Figure 3C. Seven Chakras (Sat Sarovar)

Sahasrara - Crown Chakra (*Dassam Duaar. Sahansar Dall kanwal* – thousand petal lotus).
Ajna - Third-Eye Chakra (*Trikuti; Gyan Netter; Dib Drisht; Agyaa Chakkar*)
Vishuddha - Throat Chakra (*Visudhi Chakkar*)
Anahata - Heart Chakra (*Hirda; Anhat Chakkar*)
Manipura - Solar-Plexus Chakra (*Nabhi; Manipuri Chakkar*)
Swadhisthana - Sacral Chakra (*Swadhisthan Chakkar*)
Muladhara - Root Chakra (*Mooladhaar Chakkar. Source of the Kundalini Shakti*)

ENDNOTES

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CHAPTER 2

LITERATURE REVIEW

2.1 Architecture and Spirituality

Throughout history, architecture has been a time-tested means of expressing our innate desire for meaning, spirituality, and connection to the divine. This thesis explores the evolutionary basis of human spirituality and its architectural manifestations within a Darwinian framework. It posits that architectural forms co-evolved with human spiritual capacities, suggesting that constructing meaningful spaces was an adaptive trait for social cohesion and existential comprehension. Integrating evolutionary biology and architectural theory, this research views spiritual architectural expressions not merely as cultural constructs, but as deeply rooted manifestations of human biological complexity shaped by environmental fields. This perspective highlights the way the embodied human brain interacts with and is shaped by ecological, architectural, social, and cultural environments, thereby influencing the embodiment of spiritual concepts in built forms. The thesis will explore how architectural elements, such as proportion, light, and materiality, might tap into innate human cognitive biases and emotional responses that have been shaped by natural selection, thereby fostering experiences often described as spiritual.[1] Within this Darwinian lens, Gurbani's concept of spirituality—as aligning energy to a higher self through inner work (meditation) and fostering a positive mindset through environment—can be seen as an adaptive behavior. Such practices might have enhanced well-being and social cohesion, thereby conferring evolutionary advantages. This perspective aligns with the idea that spirituality, in a scientific sense, involves transforming oneself and one's environment to achieve a state conducive to survival and flourishing, rather than merely adhering to religious dogma or superstition.

Being spiritual doesn't mean praying in religious places or following superstitious beliefs. The Gurbani talks about it from a scientific sense of aligning the energy to the higher self (the creator), by transforming yourself through inner work(meditation) and changing your mindset through a positive environment. The mind is a separate entity, not directly connected to the body; however, it is influenced by the thoughts generated in the brain and the feelings and emotions in the body while experiencing something, whether it is happening in imagination or reality. By looking at a piece of art or listening to a certain music, we go through an experience. So, architecture plays an even more essential role in creating feelings and emotions through spatial designs, providing different experiences that can affect the human mind tremendously.

The methodology section outlines an interdisciplinary approach, drawing on neuroarchitecture and environmental psychology, to analyze the reciprocal relationship between human neural processing of architectural stimuli and the generation of spiritual affect.[2] This integrated methodology seeks to uncover the evolutionary roots of spiritual architecture by examining how specific architectural affordances might have facilitated cognitive and emotional states conducive to spiritual experiences, thereby offering insights into the adaptive functions of such built forms.

Neuroarchitecture refers to the design of

spaces and buildings based on understanding how architecture impacts the brain and human behavior. It blends architecture, neuroscience, psychology, and cognitive science to optimize spaces for human well-being, performance, and emotional health. Neuroarchitecture creates spaces that foster health, productivity, and well-being by leveraging an understanding of how the built environment affects brain activity and behavior. Integrating biophilic design, natural light, acoustic treatment, ergonomics, and human-centered approaches, neuroarchitecture aims to optimize how individuals interact with their surroundings on both psychological and physiological levels. The science behind these strategies is rooted in environmental psychology, neuroscience, and cognitive science, which informs how spaces can be designed to support human thriving.

Because of this, we shaped environments that foster contemplation, transcendence, and interconnectedness, integrating materiality, space, and light to create profound sensory and emotional experiences. Over time, and with the advent of urbanization and technological advances, came an increase in secularization, leading to a diminished sense of spirituality and divine connection.[3] This has impacted our social cohesion, moral values, and personal well-being, as it gave rise to materialism and consumerism, which have become modern society's way of creating meaning and dealing with transcendence.[4] Contemporary architecture reflects this by overemphasizing materialism with a dire absence of spiritual experiences and effective communal spaces, leading to the homogenization of global architectural designs where cultural and spiritual contexts are often disregarded. Integrating spirituality in our spaces is important because it enriches our experiences and helps us rediscover and reintegrate the spirituality we lost into our contemporary lives, allowing us to reclaim a more holistic and meaningful existence.[5] David Hume suggests that vivid sensory experiences and their corresponding ideas are foundational to spiritual architecture and that transformation begins with the direct engagement of the senses.[6] Following Hume's idea, spiritual spaces should engage the heart because, for him, emotions, not logic, drive human action.[7] The role of architecture in this context points to how our physical environments can support our need for spiritual experiences by engaging our senses and leaving us with a set of memories that will develop into better habits and lead us to spiritual awakening and personal transformation. Since our minds form meaning through habit and association, architecture can support spiritual transformation through authenticity, memory, and sensory engagement.[8] The goal is for architecture to become a medium for spiritual transcendence by creating spaces that align with the rhythms of life and spirituality, and resonate with the environmental and cultural context.[9] This type of architecture, which is imbued with spirituality, serves as a pathway that leads us toward awakening, self-realization, and a deepened divine connection that helps us to address contemporary challenges.[10]

2.1.1 Architecture as a bridge to the divine



Figure 4A. Interpretation of Heidegger's Fourfold.

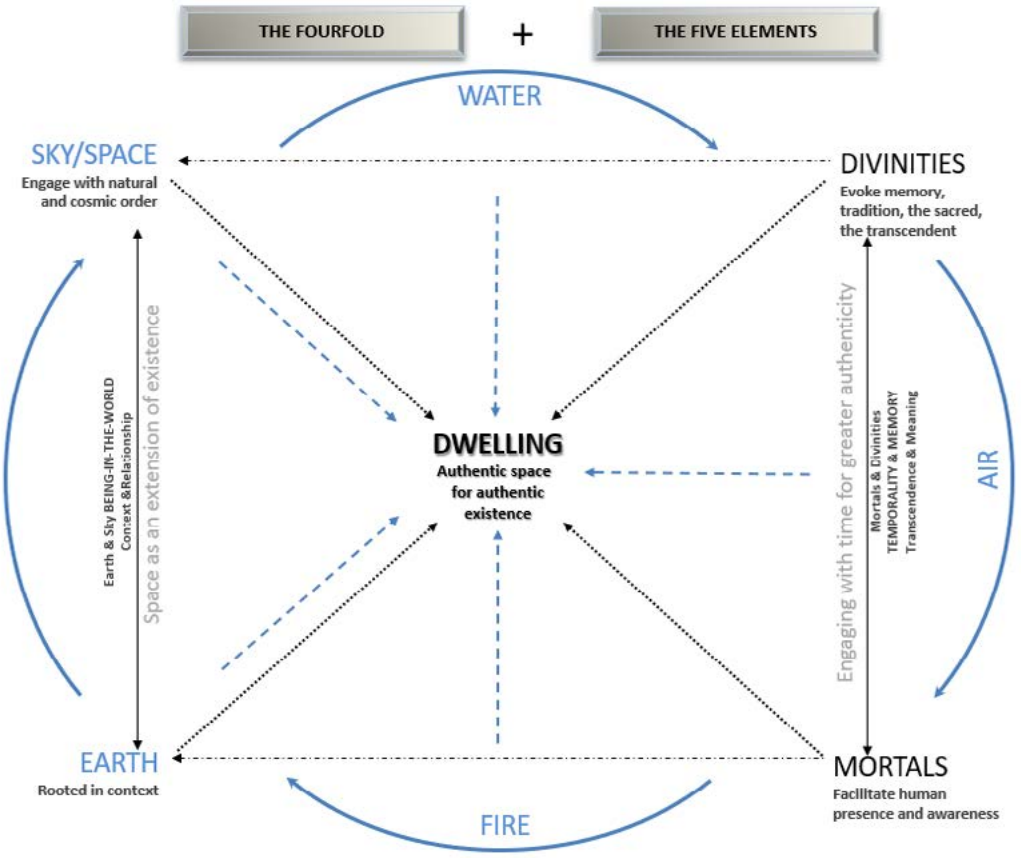


Figure 4B. By Author: Combination of the Fourfold and the five elements of nature

Architecture has long been a bridge between the physical and spiritual realms.[11] Spiritual spaces, which are often designed to evoke awe, inspiration, reflection, and connection to the divine, go beyond mere functionality, but rather establish a symbolic dialogue between us and the divine. This facilitates a shift within our awareness and the external world to our inner self, leading to spiritual transformation.[12] Based on Martin Heidegger's concept of the fourfold, as presented in Figure 4, the true dwelling should be inherently spiritual, as it should make the "divinities" present.[13] For architecture to become a true dwelling and be able to help us attain our true purpose of a state of bliss and live in harmony with the earth and all creation.[14] Architecture transcends beyond the functionality and aesthetics to spiritual context, engaged in the natural and cosmic order, to facilitate human presence and awareness.[15] This is about creating spaces that engage our senses, provoke reflection, and facilitate spiritual transformation – helping us rediscover a deeper meaning in life, and encouraging collective well-being, as elaborated in the Gurbani.[16] Architectural elements like the hierarchy of spaces, light, materials, scale, and proportion can contribute to an immersive spiritual experience that encourages personal introspection.[17] Thresholds like entrances, gateways, and corridors can indicate transitions from the ordinary to the sacred. At the same time, enclosed sanctuaries can create individual safe spaces for contemplation; openings toward the sky or tall vertical spaces can establish an axial connection between heaven and earth or divinities and man; and spatial sequencing can reflect the journey toward awakening and transformation.[18] Many of these configurations of architectural elements can be found in diverse spiritual traditions around the world, from Gothic cathedrals to Buddhist stupas, to Islamic mosques, to Sikh gurdwaras.

2.2 What is Gurbani?

Gurbani is a path to eternity based on the sacred experiences of the ten Gurus (spiritual masters) and other enlightened beings – the living incarnations of God. Gurbani is directly received from inside after attaining a Supreme state, whereas the Granth or textual form is the worldly language of the same. The Gurbani is also called Dhur Ki Bani (the speech from the Supreme House).[19] Gurbani's teachings can address the spiritual well-being of occupants and create spaces that foster personal transformation. Contemporary Architecture and Gurbani can introduce aspects of healing the body, mind, and spirit. This research is grounded in Gurbani's teachings, emphasizing oneness, truthfulness, and liberating oneself from the cycle of birth and death (and attaining Salvation -Jeevan Mukti) - ਕਹੁ ਨਾਨਕ ਤਤੈ ਤਤੁ ਮਲਿਾਇਆ ॥੮॥੧॥੪॥ This state is achieved by living authentically, truthfully, and realizing our true selves.[20] It encapsulates timeless wisdom, moral teachings, and universal truths essential for navigating life's complexities, which are often caused by the five vices (lust, anger, greed, attachment, and ego), driven by our desires. Delving into Gurbani fosters a more profound love connection with the Divine and the Universe, cultivating a sense of oneness with humanity and transcending barriers of religion, caste, or creed. These teachings offer deep insight into achieving a state of inner peace and spiritual fulfillment, which in architecture involves spaces that go beyond aesthetics and functionality to nurture the spiritual well-being of people.

It was created to provide spiritual and practical guidance that addressed the social, moral, and theological concerns of the time while offering a universal, timeless, and accessible language (poetic hymns) that reflects the lived experiences of human transformation. The Gurbani teaches us that the ultimate goal of human beings is to achieve a state of bliss and live in harmony with the earth and creation.[21] The entire Gurbani is a beautiful journey of spiritual awakening and transformation through living truthfully and in oneness with nature and humanity. It guides us to overcome vices, desires, and illusion (Tregun-Maya) to attain salvation, divine wisdom, and eternal bliss.[22] The soul enlightenment can go by different names – Jeevan Mukti (Being enlightened while alive), Moksha (release from the cycle of death and rebirth), Nirvana (a state of freedom from all suffering), Salvation, Divinization, Fana (the complete denial of self and the realization of God), Baqa (summit of the mystical manazil, destination), Devekut (closeness to God), etc. Still the essence is the same: inner transformation leads to union with the divine, ultimate truth, or a state of total consciousness, eternal peace, and bliss.[23] This is a universal spiritual goal, a core thread that connects all of our deepest wisdom in spiritual traditions. It reminds us of the sacred relationship we should have with nature and society and calls us to live in reverence, balance, and stewardship. This encapsulates timeless wisdom, which is very important in navigating the complexities of life so that we can live meaningfully. The Gurbani further emphasizes that this can be achieved through balancing and respecting the Panch Tattvas or Five Elements – air, water, earth, fire, and space – essential for both the human body and the environment, which are considered conveyors of the divine presence. Much emphasis is placed on the interconnectedness and deep relationship between us, nature and spirituality.[24] These fundamental elements can trigger spiritual experiences even in the simplest of moments like feeling a breeze, seeing light on water, encountering wildlife, gazing at the beauty and complexity of a flower in bloom.[25] These phenomena can have profound influence in architecture that contrib-

utes to healing and transformation.

Oneness is a fundamental principle in Gurbani. It highlights the interconnectedness of all creations and the presence of the divine in every being.[26] This principle encourages everyone to look beyond differences such as race, religion, and social status and recognize the divine presence. This would necessitate elements of interconnectedness and communal spaces that bring people together for interaction, cooperation, and a sense of unity.

Truthfulness is another core teaching in Gurbani. This is about living a life of integrity and honesty, aligning one's actions and thoughts with the divine truth. Gurbani teaches that truth is eternal and unchanging, and that living truthfully brings one closer to the divine, which can be achieved through materials in their authentic or raw form.

This teaching emphasizes inner purity and outer actions that are in harmony, promoting a life of ethical conduct and moral responsibility. This would encourage simplicity and clarity in the design of a retreat, symbolizing openness and honesty in living. The spiritual self can be defined as the self in complete peace, free from the vices driven by desires. This involves realizing the divine within and in every creation, experiencing inner peace, contentment, and spiritual fulfillment as one attains union with the divine. Jeevan Mukti necessitates the creation of spaces that encourage meditation, quiet time, introspection, and spiritual growth. The research would achieve this through a Retreat Sanctuary, by providing more natural surroundings.

This research would project the essence of making human life complete success, knowing, understanding, and accepting a few essential spiritual facts. The ten Sat Gurus (Guru Nanak Dev ji, Guru Angad Dev ji, Guru Amardas ji, Guru Ramdas ji, Guru Arjun Dev ji, Guru Hargobind ji, Guru Harraye ji, Guru Harkrishan ji, Guru Tegh Bahadur ji, Guru Gobind ji) have affirmed repeatedly the significance and the magnificence of the Spiritual Journey in Gurbani. The entire Gurbani consists of the magnificence of the journey of awakening through transformation by living truthfully. The whole Gurbani reaffirms only the supreme truth of how to make a success of one's birth as a human being. We perform actions of truthfulness to seek deliverance from the cycle of birth to death. The Gurbani reiterates the need for cleansing of our inner self, to attain total compliance with Sat (Truth) in our Hirda (literally meaning heart). Hirda denotes one of the seven energy centers (called Sat Sarovars in Gurbani, and is more a part of our spiritual being than of our physical body).

The five elements of nature have sacred meanings in Gurbani. The spiritual importance of air, water, earth, fire, and space are five elements of nature called "Panch tattvas.[27]" Our physical body is made from these five elements—air, water, earth, fire, and sky (space/ether). Who is the Creator of these five elements? Is it humans, or is there a superpower behind the creation of these five elements? The Superpower is the Creator of these five elements. These elements are physically incompatible with each other under normal circumstances. Despite their incompatibility, they are held together in our physical body. What is holding them together? The Superpower. What is that Superpower? The Param Jyot Atma, the life element. This Jyot (Light/Illumination) keeps these five incompatible elements together; it keeps us breathing, and this Jyot is God Himself.[28]

ਸਲੋਕੁ ॥
Salok ।।

ਪਵਣੁ ਗੁਰੂ ਪਾਣੀ ਪਤਿਾ ਮਾਤਾ ਧਰਤਮਿ ਮਹਤੁ ॥
Pavan Guroo Paanee Pithaa Maathaa Dhharath Mehath ।।
Air is the Guru, Water is the Father, and Earth is the Great Mother of all.

ਦਵਿਸੁ ਰਾਤਮਿ ਦੁਇ ਦਾਈ ਦਾਇਆ ਖੇਲੈ ਸਗਲ ਜਗਤੁ ॥
Dhivas Raath Dhue Dhaaee Dhaaeiaa Khaelai Sagal Jagath ।।
Day and night are the two nurses, in whose lap all the world is at play.

Here day can be seen as representing the element fire (in the form of Sun) and the night can be seen as representing the element akasha (in the form of night sky with its millions of stars or worlds)

In the sacred scripture, Sri Guru Granth Sahib, the five elemental forces—ap (water), tej (fire), vaaye (air), pirthmi (earth), and akash (aether)—are collectively known as panch tattva (Five Elements). Gurbani teaches that these elements emerged from the primal void through the will of the Creator. All of creation, including human beings, is composed of these fundamental elements. At death, the human body returns to them, completing the natural cycle and restoring cosmic balance.

ਅਪੁ ਤੇਜੁ ਵਾਇ ਪ੍ਰਿਥਮੀ ਆਕਾਸਾ ॥ ਪ੍ਰਤਨ ਮਪ੍ਰਿ ਪੰਚ ਤਤੁ ਘਪ੍ਰਿ ਵਾਸਾ ॥ (ਮ . 1, ਪੰਨਾ 1031)
Water, fire, air, earth and aether, in that house of the five elements, they dwell. (Mehl 1, p 1031)
In Sri Guru Granth Sahib (SGGS) [5-7], the origin of these elements is described as;

ਪੰਚ ਤਤੁ ਸੰਨੁ ਿ ਪਰਿਾਸਾ ॥(ਮ. 1, ਪੰਨਾ 1038)
From the Primal Void, the five elements became manifest. (Mehl 1, p 1038)
It is enunciated in Gurbani that the whole creation was created, from these five elements by the creator.

ਪੰਚ ਤਤੁ ਕਪ੍ਰਿ ਤੁਧੁ ਪ੍ਰਸਿਪ੍ਰਿ ਸਭ ਸਾਜੀ॥ (ਮ. 4, ਪੰਨਾ 736)
You created the entire Universe out of the five elements; (Mehl 4, p 736)

ਪੰਚ ਤਤੁ ਕਾ ਚਿਨੁ ਚਿਾਨਾ ॥(ਮ. 5, ਪੰਨਾ 1073)
The creation was created of the five elements. (Mehl 5, p 1073)

The elements of nature establish a connection with our physical surroundings and inner peace. The aim of this project is to utilize these five elements to create spiritual energy in architecture. Earth strengthens structures and bridges the connection with nature; Water provides tranquility and purification. Air fosters innovation and a sense of freedom, while Fire brings vibrant energy to a place's spirit. Space, as the element of openness and infinite potential, unites all the other elements, enhancing the sense of harmony and interconnectedness. Properly integrating these elements creates balance and harmony in living spaces and physical bodies. Additionally, inspired by Guru Nanak's teachings, these elements are considered for their profound ability to enrich lives and foster spiritual harmony. Guru Nanak's teachings of equality, respect for all living beings, and living in unity with nature align with my project's sustainability and spirituality principles. This balance with nature fosters physical and spiritual cleansing and inner peace.

2.3 Phenomenology and Spiritual Experience

Phenomenology is vital in understanding how architecture facilitates our spiritual experiences in space.[29] The potential of spiritual spaces for personal and communal

transformation is well-documented.[30] Alberto Pérez-Gómez argues that true architecture must be built upon love. Pérez-Gómez further postulates that the poetic image in architecture, with metaphor and imagination, is essential for knowledge creation to highlight the role in revealing the beauty and order in architectural works.[31] Christopher Day highlights the importance of designing spaces that foster emotional healing as a response to the alienation we experience in contemporary architecture.[32] Our brains are predisposed to experience awe, wonder, and transcendence as a response to environmental stimuli such as scale, texture, light, and sound, showing that architecture has the potential to activate the parts of our brains that engage the spiritual.[33] Understanding how our brains respond to these sensory cues allows us to design spaces that foster peace, connection, and transformative spiritual experiences.[34] When we first experience space, it is our emotions that guide our perception – the constant stimuli in the environment shape our awareness and behavior; therefore it influences how we respond and experience our surroundings.[35] Architecture has the power to shape our emotions, decisions, and even our physical and mental well-being without our conscious awareness.[36] Our memories (cultural background and past experiences) and sense of identity play an important part in how we remember and navigate the spaces we inhabit because they engage our hippocampus – the part of the brain responsible for spatial memory.[37] The form of the space also affects how we feel and experience it: high ceilings offer a sense of freedom; curved geometries evoke comfort because they are reminiscent of natural forms; sharp angles can induce anxiety, subtly reminding us of danger.[38] Nature enhances memory, emotional resonance, and learning while also evoking spiritual awakening in us, especially with the shifting dance of light and shadow throughout the day, which often stirs deep emotional responses.[39] Our senses are equally powerful: scents can trigger memories and powerful emotions, transporting us to a different time and place. Fragrance and tactile engagement with natural materials like stone or wood also promote a sensory connection to spaces, grounding spiritual experiences in material reality.[40] Similarly, excessive noise raises cortisol levels, leading to stress and mood disruptions. Areas designed with soft echoes and reverberations can help in meditation and enhance the spiritual experience because acoustic characteristics like sound pressure level enhance the spiritual sense in space.[41]

In all of this, nature is our most powerful ally in well-being. As we are biologically drawn to nature, access to green spaces has been proven time and again to reduce stress, improve mental clarity, and deepen our spiritual connection to the world around us.[42] Sensory-rich gardens offer immersive experiences that promote well-being and spiritual nourishment.[43] Metaphor and the poetry of space are also effective tools in achieving this by allowing the designer to communicate beyond the literal. Symbolism connects the conscious to the unconscious while sensory design fosters connection to the divine.[44] For example, natural light can be used to symbolize divine illumination by creating dynamic atmospheres and mystical ambiance, such as in Gothic cathedrals and Islamic mosques. The concept of genius loci, or the "spirit of place," points to the importance of meanings, and images that hold together and arrange the elements of the space to create a cohesive and understandable whole that goes beyond how important its individual components are.[45] A phenomenological approach to integrating spirituality into architecture highlights its role in shaping our perceptions and consciousness by tapping the senses to stimulate our brain's desire for spiritual experiences and spiritually engaging spaces.[46]

For an architectural design to be considered spiritually engaging and transcendent, Ardalan, et al identified fourteen (14) conditions that need to be present, shown here in Figures 5 and 6. We can treat these 14 conditions both horizontally, as tangible and measurable groupings, and vertically, as an ontological progression—from material and measurable elements (like light, scale, and tectonics) to hidden and cosmic dimensions (like time, nature, and unity) — with the goal of unity within the various architectural expressions.[47] Transcendent architecture engages the senses, space, time, and spirit to create meaningful experiences: sensory and formal-spatial conditions (light, materiality, form, scale) shape its aesthetic presence; programmatic and temporal conditions (ritual, movement, sound, time) reflect how we live and experience space; connectedness conditions link the architecture to its site, nature, and the cosmos; while holistic conditions integrate and unify these to evoke a deep sense of belonging and spiritual transformation.[48]

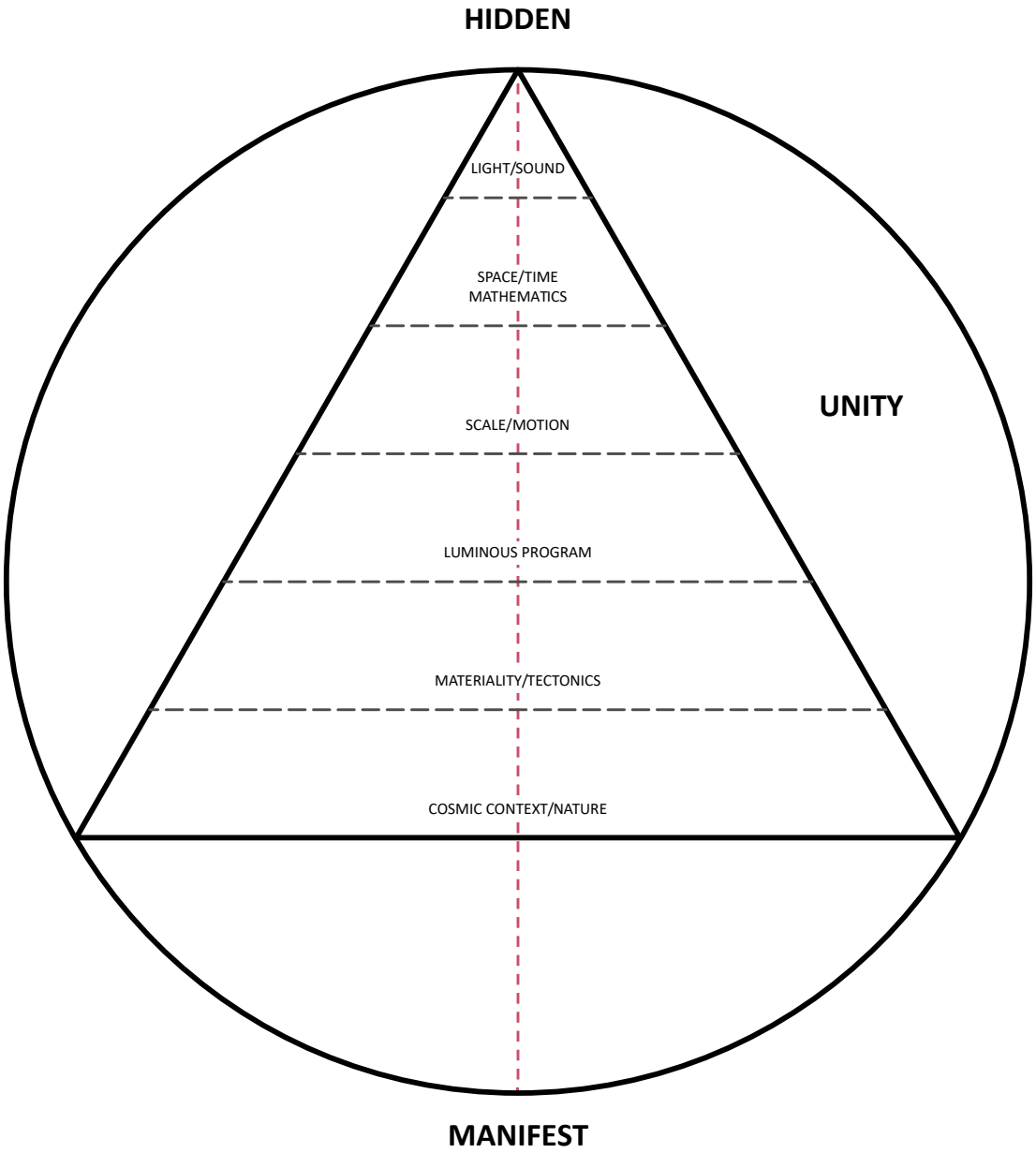


Figure 5. Vertical (Ontological) Interpretation of the 14 Conditions of Transcendent Architecture
Source: Ardalan, et.al., 2025

Aesthetic Conditions					Living Conditions				Connectedness			Holistic	
Sensual		*Formal–Spatial*			*Programmatic*		*Temporal*		-			-	
Light	Materiality/ Tectonics	Space/ Form	Mathematics (Geometry)	Scale	Luminous Program	Motion (Access, Ritual, Path)	Sound	Time	Context	Cosmos/ Nature	Ontological Axis	Unity	Hidden/Manifest Experience

Figure 6. Horizontal Interpretation of the 14 Conditions of Transcendent Architecture
Source: Ardalan, et. al., 2025

Finally, place-making is crucial in this process. David Seamon, in his book Life Takes Place, identified three place impulses—environmental ensemble (receptive impulse), people-in-place (active impulse), and common presence (reconciling impulse)—which interact to shape meaningful places.[49] He also describes six place processes: interaction (everyday happenings), identity (how we make a place our own), release (serendipitous events that break routines), realization (actualizing a place's potential), intensification (strengthening specific place characteristics), and creation (actions to improve a place).[50] These processes are essential for fostering vibrant, transformative environments.

2.4 Role of Nature in Spiritual Architecture

Nature has always played an important role in connecting architecture and spirituality. Many spiritual traditions place a high degree of importance on the integration of natural elements into sacred spaces. Nature elicits awe for many people as it were for most of us to find the vastness of the divine,[51] because awe is a powerful emotion triggered by vast stimuli.[52] Vastness here does not only mean the physical size, but also the extraordinary expression of beauty, complexity, or power. The richness and beauty of nature can be seen as a reflection of the divine's mastery as a designer, which is why it evokes awe in us.[53] Those of us who hold stewardship, beliefs recognizing nature as the divine's precious creation, may feel a heightened sense of awe toward the natural world. By incorporating nature into architecture design, architects create environments that inspire harmony between human consciousness and the natural world.[54] Nature always invites a sense of calm reflection. For this reason, architecture reflects the natural rhythms of life, making sure that the built environment resonates with the environmental and cultural context.[55] This aligns with the teachings of Gurbani on unity with nature, reinforcing the need for spaces that integrate the Panch Tattva, as part of the spiritual experience.

The Panch Tattva are the five essential elements that constitute all of creation and which are symbolic of the interconnectedness of the material and physical realms; air (vayu), water (jal), earth (prithvi), fire (agni) and space (aakash). Each element carries both physical and spiritual significance and together they form the foundation for spiritual enlightenment.[56] This presents an opportunity for architectural design to be rooted in a system of meaningful spiritual symbols. Air is the Guru, representing the breath of life and spiritual wisdom.[57] Using the element of air would encourage us to contemplate the breath as a symbol of life, divine guidance, and presence. Water is the father, often associated with purity, fluidity, and cleansing.[58] Using this element facilitates a sense of tranquility, purification, and reflection. It can also symbolize the continuous flow of divine wisdom nurturing our souls. Earth is the mother, symbolizing grounding, stability, and motherly nurturing.[59] The use of earth in architecture can encourage reconnection with the physical world, humility, balance, and help us engage in meditative practices that ground us. Fire is transforma-

tion, illumination, and divine light.[60] It fosters warmth and enlightenment that guide us on our spiritual journey. Space is often seen as the sky or the infinite and embodies the idea of vastness, consciousness, and the divine presence.[61] This element can represent openness to the divine and spiritual experience as well as allow us to reflect on the vastness of our existence and our spiritual place. Integrating the Five Elements in the design will help inform not only the spiritual, but also the sustainable and environmental aspects of architecture.

2.5 Sacred Geometry and Divine Proportions

Sacred geometry has long been an integral part of spiritual architecture, integrating the metaphysical principles into built form. Patterns created through the golden ratio, Fibonacci sequences, and mandalas align our perception with the cosmic through harmony and proportional balance.[62] Many spiritual traditions integrate the circle to symbolize infinity and divine perfection, as well as the square to represent stability and earthly existence, representing the cosmic duality of man and divine.[63] Joseph Rykwert explored the symbolic and cultural significance of architectural forms and how towns were seen as microcosms of the universe, with their layouts reflecting cosmic order and divine laws.[64] The use of mathematical ratios to achieve proportional harmony in architectural design creates an intuitive sense of balance and transcendence, guiding us toward a heightened sense of spirituality.[65]

Chakras (Energy centers), also called Sat Sarovar in Gurbani are seven centers of spiritual energy within human body. These are located at (the Vedic names are also given in brackets):

1. Mid-Forehead. (*Trikuti; Gyan Netter; Dib Drisht; Agyaa Chakkar*).
2. Throat. (*Visudhi Chakkar*).
3. Middle of the chest (*Hirda; Anhat Chakkar).*
4. Navel area (*Nabhi; Manipuri Chakkar*)
5. Above the sex organ. (*Swadhisthan Chakkar).*
6. Base of the spine (*Mooladhaar Chakkar. Source of the Kundalini Shakti).*
7. Top of the head. (*Dassam Duaar. Sahansar Dall kanwal* – thousand petal lotus).

Chakras are often depicted as geometric mandalas representing vibrational frequencies and levels of consciousness aligning with the mathematical harmony in sacred geometry and divine proportion, suggesting that our inner architecture mirrors the divine order of the universe – a tool for spiritually engaging architectural design. Figure 7 shows the chakras, the auras, their location in the body, their meaning and characteristics as well as the body organs associated with each. These are associated with specific physiological areas in our bodies and when balanced, can positively influence the physical, emotional and spiritual well-being of a person. On the other hand, when chakras are blocked, it manifests as physical ailments or emotional distress. Consequently, when architecture is designed with an understanding of the chakras and its impact on human physiology, it can also impact mood, stress levels, and overall health. By aligning the elements of a space with the energy flows of the chakras, such as optimizing natural light, ventilation, and spatial organization, we can create environments that enhance mindfulness and transcendence, which supports both our physical and spiritual well-being.

The depth of this concept in traditional Indo-Aryan societies, especially the relationship between the energy body and the spiritual aspect, makes their art and architecture timeless examples of good design that nurtures both body and spirit.[66] Traditional

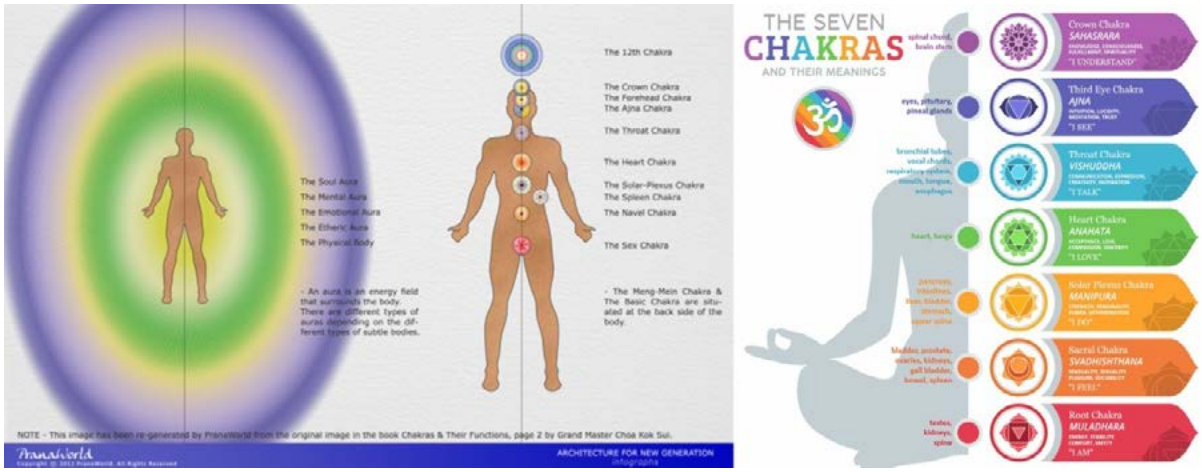


Figure 7. The Chakras in the Body and their Characteristics
Source: http://www.handsonhealthsheffield.com/wp-content/uploads/2020/01/Seven_Chakras_Featured.png

master builders use this knowledge to create spaces that balanced physical comfort with spiritual awakening. They further align energy flows through specific geometries, materials, colors, and spatial organization.[67] Sacred geometries like the mandala, lotus motifs, and chakra patterns symbolize the connection between the physical and spiritual words to invoke spiritual awakening and higher consciousness.[68] By using design elements like form, light, color, sound, and spatial hierarchies, we can create spaces that align with and stimulate the energy flow of the chakras to encourage spiritual growth and transformation.[69]

Just as the chakras correspond to a specific physiological or spiritual function of the body that calls for a balance of the energy flow, the Vastu Purusha Mandala can also be understood as a representation of this energy flow. Figure 8 below shows the Vastu Purusha Mandala with its sections corresponding to different elements, energies and directions.[70] This mandala can be used to inform the design of spiritually engaging spaces by aligning spaces with energy flows to encourage meditation and introspection. As a mandala, this also follows divine proportions to create a sense of harmony and unity among elements of a space that can resonate with spiritual and deeply engaging sensory experiences. By using sacred geometry and divine proportions, chakra alignment, and vastu purusha mandala, we can create spaces that are both aligned with physical and spiritual energies of man and the environment facilitating that journey of awakening and spiritual transformation. This allows the architectural work to serve as a physical sanctuary – a retreat that aligns with cosmic energies for a harmonious and balanced environment.

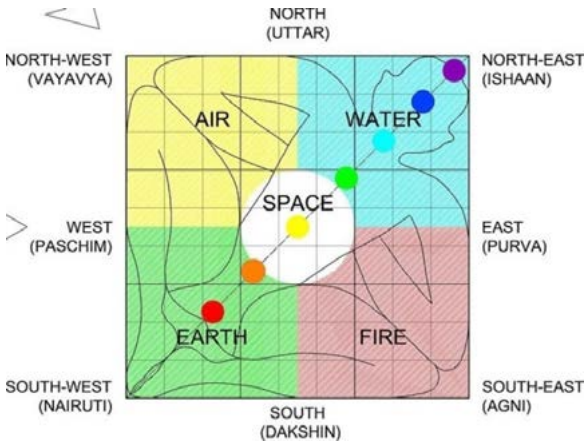


Figure 8. Vastu Purusha Mandala.
Source: https://static.wixstatic.com/media/06950f_f09d8b3b21e24a1bb3ee83b51fcbb45d~mv2.jpg/v1/fill/w_757,h_567,al_c,q_90/06950f_f09d8b3b21e24a1bb3ee83b51fcbb45d~mv2.jpg

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CHAPTER 3

RESEARCH METHODOLOGY

PROJECTED RESEARCHED PATH	*POINT OF DEPARTURE (LEADING TO ANALYTICAL PROCESS)*	*RESOURCES AND DATA*	*CRITICAL ANAL (RELATIONSHIP FR*
LITERATURE REVIEW (MODERN DAY SPIRITUALISM & RELIGIOUS RESOURCES)	GURBANI AS SPIRITUAL THEORY - FIVE ELEMENTS ETC. ARCHITECTURAL TREATISES - Golden Ratio, SPIRITUAL ARCHITECTURAL BUILDINGS RELIGIOUS SCRIPTURES: GURBANI, BUILT UPON LOVE	GURBANI, OTHER RELIGIOUS TEXTS, CONTEMPORARY SPIRITUAL THEORIES, BHAGWAT GITA	SIMILARITIES TO H NATURE, 5 ELEMENT EMOTIONS
		ONENESS, SELF REALIZATION	
LITERATURE REVIEW (SPIRITUAL ARCHITECTURE)		CONTEMPORARY ARCHITECTURAL SPIRITUAL TREATISES - VITRUVIAN; LEONARDO DA VINCI; SACRED ARCHITECTURE	PARALLEL THEO BETWEEN CLIMAT ANTHROPOLOGY, UI CONCEPTS OF BI UTILIZE AND AEST
LITERATURE REVIEW (SPIRITUAL RETREAT CENTER)	CASE STUDIES OF SPIRITUAL RETREAT CENTERS DESIGN - BASED ON HOLISTIC DESIGN, SUSTAINABILITY, DESIGN PRINCIPLES	SPIRIT AND PLACE - CHRISTO-PHER DAY; BUILT UPON LOVE - ALBERTO PÉREZ-GÓMEZ; SACRED ARCHITECTURE - A.T. MANN	WRITE WHAT YOU W FROM THE BOOK A CASE STUDI
LIVE CASE STUDY OF SPIRITUAL RETREAT CENTERS		WRITE LIVE CASE STUDIES	
SITE - HARIKE, PUNJAB	SITE SELECTION PROCESS AND DECISION	HARIKE WETLAND SANCTUARY (ONE OF THE RAMSAR SITES) - WRITE RESOURCES FOR SITE DATA AND ANALYSIS	PATTERN OF STR SOCIO-CULTU INTEGRATION - AD MORE YOU WILL GA SITE ANALYS
SITE - DESIGN PROPOSAL	BASED ON ABOVE STAGES THE DESIGN INSPIRATION AND PROCESS TAKEN UP	DESIGN AND OTHER TOOLS, DATA RESOURCES AT YOUR DISPOSAL FOR DESIGNING	REASONING OF TH

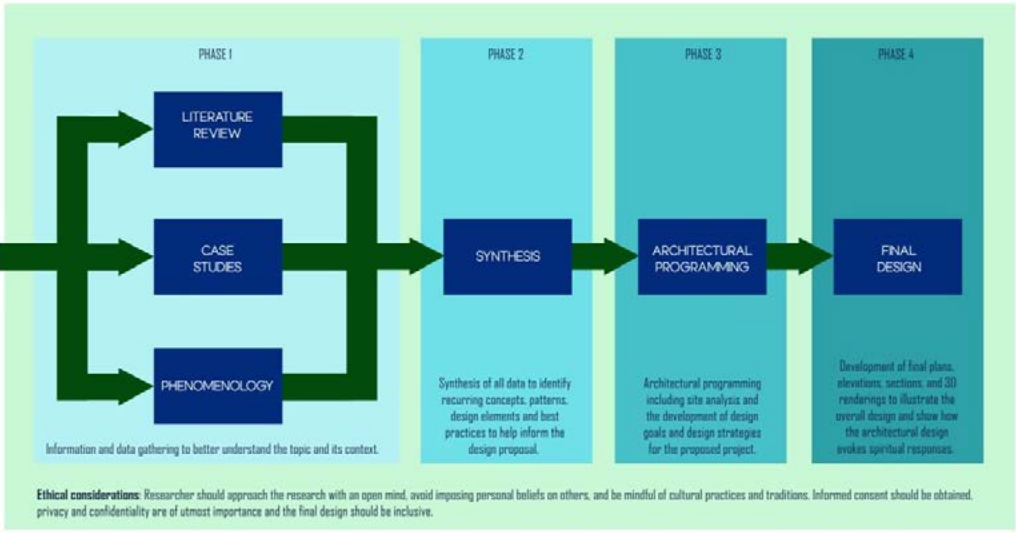


Figure 9. Research methodological diagram showing progression from inquiry to design.
Source: Author, adapted from research framework.

LYSIS OM DATA)	*SYNTHESIS WITH ARCHITECTURE (MY INTERPRETATION)*	*POINT OF DEPARTURE AND INSPIRATION FROM PRECEDENTS*	*THINGS I MADE (APPLICATION)*
IUMAN & TS, SPIRIT, S	TOOLS ESTABLISHED FOR STRATEGIES AND DESIGN STRATEGIES - GURBANI'S SPIRITUALISM TRANSLATED INTO ARCHITECTURAL INTERPRETATION	LIST DOWN ALL DESIGN STRATEGIES AND IDEAS GAINED AT DIFFERENT LEVELS THAT BUILD UP YOUR DESIGN VOCABULARY: WATER BODY, LIGHTING, VENTILATION, MATERIAL PATTERNS, ETC.	PUT DOWN ALL TOOLS AND TECHNIQUES OF ARCHITECTURAL ANALYSIS, FORMATS, GRAPHICS, SOFTWARES AND OTHER THINGS YOU DID BY YOURSELF TO SUPPORT EACH STAGE
ORIES TE AND NIVERSAL EAUTY, THETICS			
WILL GAIN AND LIVE ES	DIRECTION OF CONTEXT, REQUIREMENTS, NEEDS BASED ON THE DESIGN TYPOLOGY CHOSEN, SITE DECIDED, CONTEXT AVAILABLE		
REETS, RAL OD WHAT AIN FROM SIS			
E DECISIONS ON SITE AND DESIGN AND THEIR PROJECTED IMPACT			THE DESIGN OUTPUT

3.1 Conceptual Framework

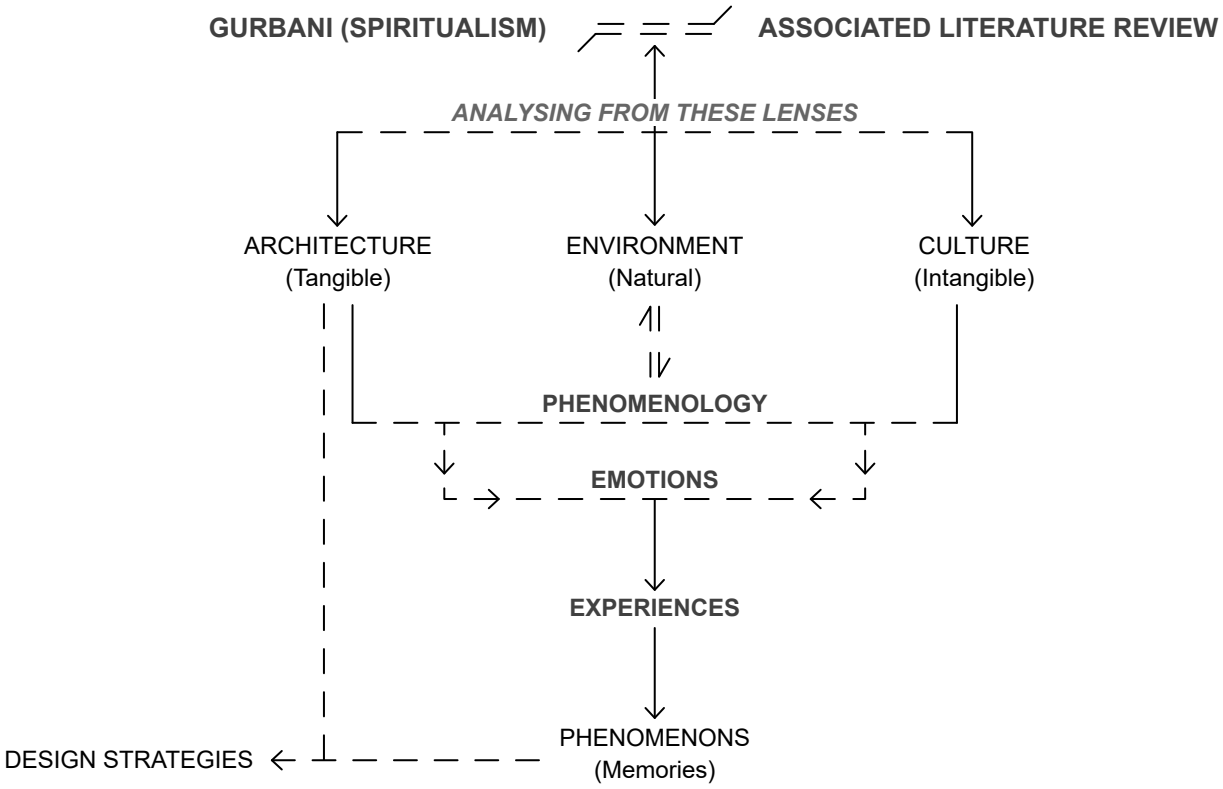


Figure 10. Conceptual framework showing integration of Gurbani's spiritual philosophy with phenomenological and architectural inquiry.

Figure 3 shows a diagram of the approach to the study. At the core of the study, is the analysis of the universal spiritual teaching of Gurbani, on the transformation of mankind. Furthermore, spiritual integration into architectural design through the Five Elements promotes a journey to awakening, healing, and transformation. A review of related literature and spiritual hermeneutics will be critical on this basis to build philosophical foundation for this thesis. Phenomenological research and case studies would explore the sensory, emotional, and experiential dimensions of the spiritual aspect of this study. The case study would help to identify design strategies that evoke awe, wonder, and reflection to foster the process of transformation. These experiences would inform the development of design strategies and design-based inquiry to support the development of a retreat-1-SAT-ISHQ, meaning; THE ONE TRUTH IS LOVE. This will translate theoretical insights into architectural design, bridging man, nature, and the divine.

3.2 Precedents/Case Studies

These case studies below based on the idea that spiritual growth is a comprehensive process that encompasses the enhancement of self-awareness, ethical awareness, and a feeling of transcendence. It builds on Fowler's (1981) faith development theory, which describes how faith progresses through stages influenced by human experiences and reflections, and Tillich's (1957) ultimate concern theology, which portrays spirituality as the main organizing principle of life.[1] Combined, these theories offer the philosophical and psychological basis for grasping how university students form their spiritual identities. The framework views spiritual development as a process involving three interconnected dimensions:

Intrapersonal Development – self-examination, ethical judgment, and the quest for significance;

Interpersonal Connections – the application of empathy, kindness, and shared community; and

Transcendent Link – the acknowledgment of and connection with a supreme force or fundamental truth.[2]

These aspects engage in a dynamic manner to create a cohesive model of spiritual development, highlighting the equilibrium among personal, social, and transcendent experiences. The conceptual model posits that as students participate more in reflective, communal, and transcendent activities, their spiritual foundation strengthens.[3]

Spiritual architecture embodies the tangible expression of humanity's quest for significance, elevation, and internal balance. It converts constructed environments into a medium for reflection and connection, where geometry, illumination, and symbolism serve as instruments for spiritual articulation.[4] In this regard, spiritual structures like temples, gardens, and meditation spaces transcend mere physical forms, acting as representations of belief systems and cultural stories.[5]

The interplay between spirituality and architecture aligns with the three dimensions specified in the study's conceptual framework: intrapersonal development, interpersonal relationships, and transcendent experiences.[6] Each architectural feature—from spatial arrangement to natural light application—acts as a bridge between the human and the divine, the singular and the collective.[7] As a result, the chosen case studies—Virasat-e-Khalsa, Pinjore Garden, Sarai of Nurmahal, and Matrimandir—demonstrate varied interpretations of spiritual architecture, highlighting how buildings within different cultural and religious frameworks continue to support spiritual awareness and shared identity.[8]

Spiritual building, as conceptualized in this study, transcends the creation of religious structures; it embodies the cultivation of environments that foster inner reflection, communal harmony, and transcendent awareness. The process of spiritual formation within architecture is therefore not limited to doctrinal expression but engages the sensory, psychological, and phenomenological dimensions of human experience.[9] Theories of sacred space suggest that architecture mediates between the visible and the invisible, transforming ordinary places into sites of encounter with the divine.[10] As Christian Norberg-Schulz argues, the essence of dwelling is the human search for meaning through place, and sacred architecture fulfills this by situating individuals within a cosmos of significance.[11] Likewise, Eliade's concept of hierophany—the manifestation of the sacred in physical form—supports the idea that certain spaces act as thresholds between the temporal and the eternal.[4] Within this framework, the design of spiritual buildings becomes an act of translating intangible faith and cultural identity into material reality, harmonizing structure, symbol, and spirit.[12]

3.2.1: Virasat-e-Khalsa

Virasat-e-Khalsa is an architectural marvel located in Anandpur Sahib, Punjab, India. This museum, planned in celebration for the 300th year of the Khalsa, is a display of cultural and monumental significance in a mix of built and natural surroundings. The creation brings the traditional, natural beauty, and historical significance together with modern architectural ingenuity. The museum stands at the rest of the nature of the Shivalik range. Here, the architectural brilliance, geographical location, and cultural importance of Virasat-e-Khalsa are considered, which bridges the tradition and contemporary design with traditional work.

Geographical Setting:

Located in the foothills of the Shivalik range, Virasat-e-Khalsa is perched on an elevated plateau, providing breathtaking views of the surrounding landscape.

The site's terrain influenced its design, with the structures integrated into the ridge to reflect the natural contours of the land. Water bodies and dams in the ravine create reflective pools, blending the built environment with nature.



Figure 12. Location of Virasat-e-Khalsa in Anandpur Sahib, illustrating integration with the Shivalik landscape.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.



Figure 11. Site layout of Virasat-e-Khalsa showing contextual placement of built forms along natural ridges.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

Cultural Significance:

Anandpur Sahib is the site where Guru Gobind Singh founded the Khalsa in 1699, making it a pivotal location in Sikh history. The museum's location underscores its role in preserving and narrating the rich cultural and religious heritage of Sikhism.

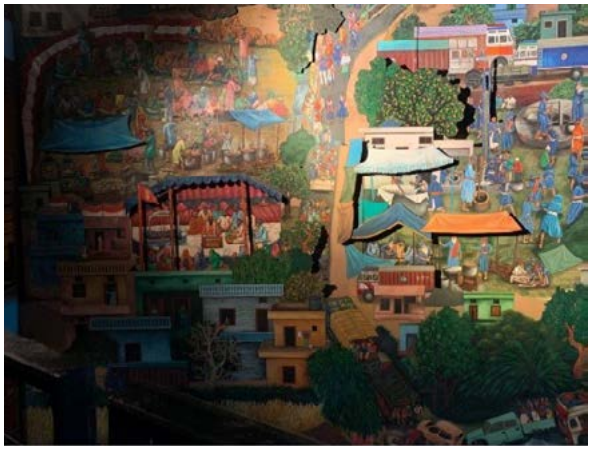


Figure 13. Interior for the museum, art painting hanging in the wall projecting as-if it's real.
Source: Sandeep Kochar, "Anandpur Sahib Heritage Complex – Virasat-e-Khalsa," Life Calling, August 2018.

Conceptual Approach:

Clad with local sandstone and evoking the fortress cities of Rajasthan, Gwalior and Punjab, the Khalsa Heritage Centre acknowledges the Sikhs' history as celebrated warriors. The upwardly curving roofs of the museum's tower-like galleries are covered in stainless steel, designed in counterpoint to the rich tradition of gold domes that crown sacred Sikh buildings such as the Golden Temple in Amritsar.

Design Planning:

The complex is composed of three functionally integrated sets of buildings.

1. Western Complex: Forms a gateway to Anandpur Sahib. Houses exhibition galleries, a two-level library centered on a grand reading room overlooking a water garden, a facility for storing rare archival materials, and a 400-seat auditorium.
2. Eastern Complex: Dedicated to permanent exhibits that narrate Sikh history and culture chronologically. Comprises 14 gallery blocks interconnected by a ceremonial bridge, symbolizing the journey through Sikhism's evolution. This section includes storytelling through multimedia and immersive experiences, guiding visitors through significant historical milestones.
3. Connecting Causeways and Landscape: The causeways link the two main complexes, with serene water bodies and landscaped gardens surrounding them. These spaces offer areas of introspection and reflection, blending functionality with spirituality.[13]



Figure 14. Conceptual Sketches of the Virasat-e-Khalsa complex showing relationship between architecture and topography.
Source: Sandeep Kochar, "Anandpur Sahib Heritage Complex – Virasat-e-Khalsa," Life Calling, August 2018.

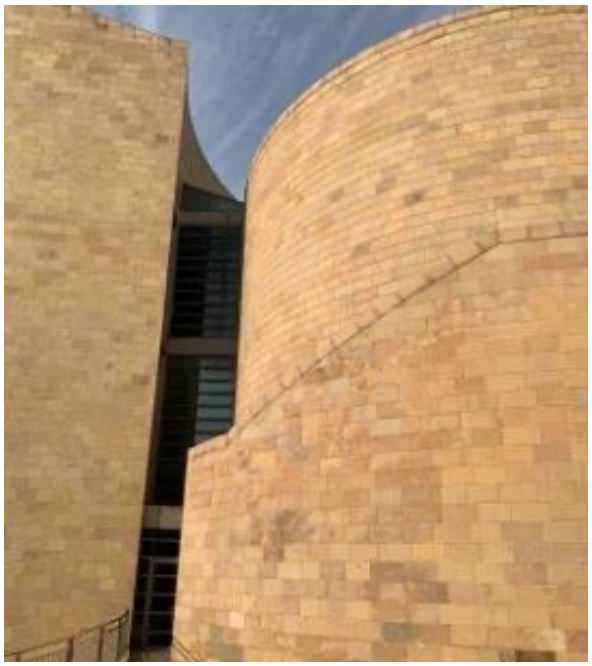


Figure 15 A. Sandstone cladding and stainless-steel roofs of Virasat-e-Khalsa reflecting regional fort architecture.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

Materials: Clad with local sandstone, the structures evoke the fortress cities of the region. Stainless steel is used for the upwardly curving roofs, reflecting the sky and paying homage to traditional Sikh architecture.



Figure 15 B. Roof design showing the double-curved stainless-steel structure symbolizing openness and reflection.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

Roof Design: The stainless steel-clad roofs exhibit a double curvature, gathering and reflecting the sky, and are designed in counterpoint to the traditional gold domes of sacred Sikh buildings.



Figure 15 C. Use of geometry and natural light to create dynamic interior spaces within Virasat-e-Khalsa.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

Geometry and Light: The design employs double-curved roofs that gather and reflect the sky, creating dynamic visual effects. Natural light is utilized to enhance the interior spaces, creating an interplay of light and shadow.



Figure 15 D. Detail of jali walls and pathways symbolizing spiritual journey and ventilation design.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

Smaller Elements: Jali Walls: Provide natural ventilation and intricate patterns of light and shadow, adding an element of traditional craftsmanship. Pathways and Bridges: Symbolize the journey of enlightenment and spiritual connection.

Rooted in Sikh values and traditions, interpreted through a modern architectural lens.
Contextual Integration: The upwardly curving roofs of the museum's tower-like galleries are covered in stainless steel, designed in counterpoint to the rich tradition of gold domes that crown sacred Sikh buildings such as the Golden Temple in Amritsar.

Sustainability Features

Water Management: A series of dams in the ravine create pools that reflect the entire complex, contributing to passive cooling and enhancing the aesthetic appeal.

Energy Efficiency: The design maximizes natural ventilation and lighting, reducing the reliance on artificial climate control systems.

Landscaping: The use of indigenous plants in the landscaping reflects the natural biodiversity of the region and reduces irrigation needs.

Visitor Experience

Immersive Journey: The museum's design leads visitors through a chronological storytelling experience. Galleries feature state-of-the-art multimedia displays.

Interactive Exhibits: Incorporate interactive displays, audio-visual narratives, and holograms to engage visitors.

Spiritual Ambience: The serene environment and architectural details evoke introspection and reverence.[14]

Cultural and Historical Context

Symbolism: The architecture is deeply symbolic of Sikh ideals like community, equality, and humility. The juxtaposition of modern design with traditional values creates a timeless narrative.
Location Relevance: Anandpur Sahib, being the birthplace of the Khalsa, adds to the museum's sanctity.

Takeaways, Inferences & Conclusion:

Virasat-e-Khalsa is more than a museum; it is a spiritual and cultural landmark that bridges the past and the present. A testament to how architecture can honor heritage while embracing modernity. It continues to inspire visitors from across the world, fostering a deeper understanding of Sikhism and its values.



Figure 16. Detail of jali walls and pathways symbolizing spiritual journey and ventilation design.
Source: "Khalsa Heritage Centre – A Mammoth Museum," MGS Architecture, accessed October 26, 2025.

3.2.2: Pinjore Garden (Yadavindra Gardens):

Pinjore Gardens, also known as Yadavindra Gardens, is a historic example of Mughal-style gardens located in Pinjore, Haryana, India. Designed in the classical Charbagh layout, the garden is a marvel of landscaping, architectural heritage, and engineering. This presentation explores the garden's rich history, design philosophy, and its relevance as a cultural and tourist landmark.[15]

Charbagh Layoutas shown below Symmetrical design with a central water channel dividing the garden into four equal sections.



Figure 17 A. View of axial pathways aligning with the central watercourse in Pinjore Gardens.
Source: "Yadavindra Gardens," Wikipedia, last modified September 25, 2025.

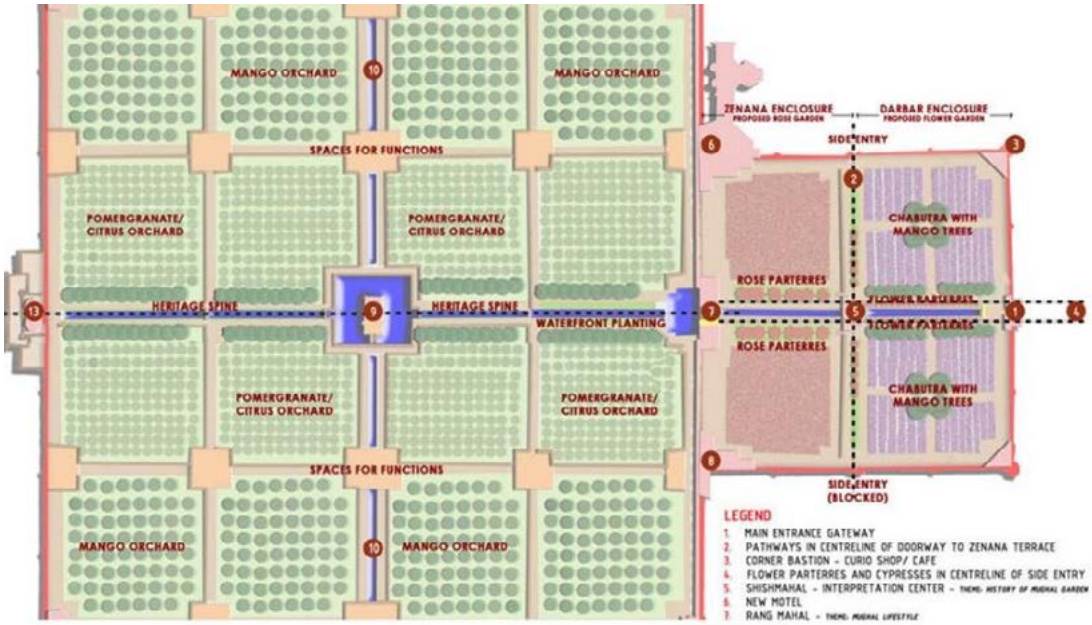


Figure 17 B. Charbagh layout of Pinjore Gardens showing a symmetrical four-part plan divided by water channels.
Source: "Yadavindra Gardens," Wikipedia, last modified September 25, 2025.



Figure 18 A. Rang Mahal pavilion featuring intricate Mughal frescoes and ornamentation.
Source: "II. The Garden at Pinjore," National Museum of Asian Art, accessed October 26, 2025.

Pavilions and Structures: Rang Mahal (Painted Palace): A central pavilion showcasing intricate Mughal frescoes and designs.



Figure 18 C. Sheesh Mahal with mirrored interiors exemplifying Mughal craftsmanship.
Source: "II. The Garden at Pinjore," National Museum of Asian Art, accessed October 26, 2025.

Sheesh Mahal (Palace of Mirrors): An ornate structure adorned with mirror work and decorative motifs.



Figure 18 B. Jal Mahal water pavilion integrated into the reflecting pools of Pinjore Gardens.
Source: "II. The Garden at Pinjore," National Museum of Asian Art, accessed October 26, 2025.

Jal Mahal: A water palace designed to integrate seamlessly with the surrounding water features, adding to the garden's charm.



Figure 18 D. Decorated gateways marking the grand entrances of Pinjore Gardens.
Source: "II. The Garden at Pinjore," National Museum of Asian Art, accessed October 26, 2025.

Gateways: Grand entrances adorned with traditional Mughal carvings, leading into the garden.

Terraced Design:

Built across seven descending terraces, creating a cascading effect.
Each terrace serves a distinct purpose, such as pavilions, fountains, and flowerbeds.

Water Features:

The water channels are fed by natural springs and engineered to create cooling effects and enhance aesthetics. Reflective pools and fountains are strategically placed to emphasize symmetry.[16]



Figure 19 A. Terraced layout of Pinjore Gardens illustrating descending platforms and water features.
Source: "Yadavindra Gardens," Wikipedia, last modified September 25, 2025.

Landscaping Features

Flora: Extensive use of flowering plants, fruit trees, and ornamental shrubs, showcasing biodiversity. Indigenous and exotic plant species contribute to the garden's beauty and aroma.

Fountains and Pools: Create a tranquil ambiance and aid in microclimate regulation. Water channels connect the terraces, symbolizing flow and life.

Pathways: Paved walkways and shaded avenues provide accessibility and comfort for visitors.



Figure 19 B. Fountains and reflective pools emphasizing Mughal symmetry and cooling design.
Source: "Yadavindra Gardens," Wikipedia, last modified September 25, 2025.

Cultural and Historical Relevance:

Symbolism: Reflects the grandeur and sophistication of Mughal architecture and landscaping. The Charbagh layout symbolizes paradise on Earth, as per Islamic tradition.

Role in Heritage: A significant example of Mughal garden design, influencing later styles in India. Represents a blend of Persian and Indian architectural traditions.
Tourist Attraction: Renowned for its light and sound shows, festivals, and historical significance.[17]

Takeaways, Inferences & Conclusion

Pinjore Gardens stands as a timeless testament to the ingenuity and aesthetic sensibilities of the Mughal era. With its intricate design, historical richness, and natural beauty, it continues to inspire architects, historians, and tourists alike. A visit to these gardens is a journey through history, culture, and art, leaving visitors with a profound appreciation for India's architectural and landscaping heritage.[18]

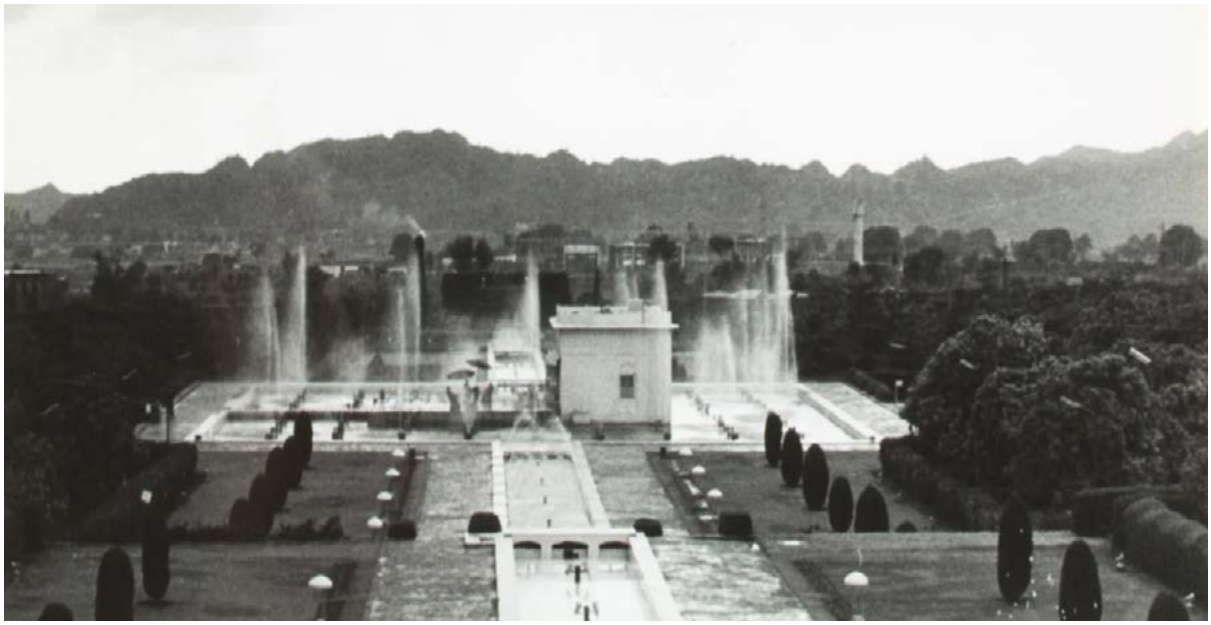


Figure 20. Floral and vegetative patterns demonstrating biodiversity in Pinjore Gardens.
Source: “II. The Garden at Pinjore,” National Museum of Asian Art, accessed October 26, 2025.

3.2.3 The Sari of Nurmahal

Serai Nurmahal, located in Nurmahal town in Punjab, India, is a stunning example of Mughal-era architecture. Built during the reign of Emperor Jahangir in the early 17th century, this serai (inn) was constructed for travelers and merchants along vital trade routes. The structure represents the fusion of Mughal architectural elegance with functionality, emphasizing hospitality and grandeur. This presentation explores the historical significance, architectural brilliance, and cultural value of Serai Nurmahal.[19]

Historical and Cultural Significance

Era of Construction: Built in the early 1600s during Emperor Jahangir's reign.

Purpose: Designed as a resting place for travelers and traders, showcasing the Mughal empire's commitment to facilitating commerce and connectivity.

Cultural Symbolism: Reflects the prosperity and influence of the Mughal dynasty. The serai served as a hub for cultural exchanges, fostering interactions between diverse communities.

Named after Nur Jahan, Jahangir's wife, highlighting her influence and contributions to Mughal architecture and culture.[20]



Figure 21. Entrance façade of Serai Nurmahal depicting Mughal arches.
Source: "Life and Legacy of Nur Jahan," StuDocu, accessed October 26, 2025.

Key Architectural Features

Gateways: Four intricately designed gateways with domed pavilions.
Ornamentation includes calligraphy, floral designs, and Mughal arches.

Courtyard: A vast open space at the center for gatherings and activities.
Lined with arched verandahs providing shaded walkways.



Figure 22 A. Plan of the Interior courtyard of Serai Nurmahal framed by arched verandas.
Source: "Nurmahal Serai, Punjab," The Heritage Lab, accessed October 26, 2025.

Decorative Elements:

Carvings and Reliefs: Intricate floral and geometric patterns adorning the walls.

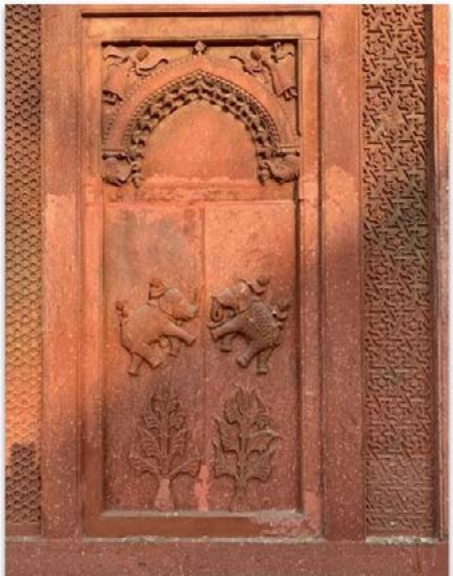


Figure 22 B. Floral and geometric carvings decorating the gateway of Serai Nurmahal.
Source: "Nurmahal Serai, Punjab," The Heritage Lab, accessed October 26, 2025.

Iconography: Detailed representations of animals, including elephants and peacocks, symbolic of prosperity and protection.

Jharokhas: Beautiful projecting balconies with intricate latticework, providing a blend of functionality and aesthetics.



Figure 22 C. Jharokhas with intricate latticework balancing aesthetics and ventilation.
Source: "Nurmahal Serai, Punjab," The Heritage Lab, accessed October 26, 2025.

Windows at the Front Gate: The front gate features finely detailed windows that allowed light and ventilation while serving as decorative elements.[21]

Symbolic motifs depicting flora and fauna, reinforcing themes of Mughal harmony with nature.

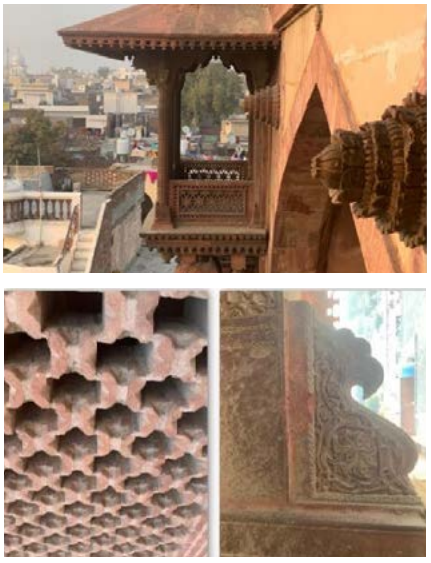


Figure 22 D & E. Window details from Serai Nurmahal combining ornamentation with functional light control & Symbolic motifs of flora and fauna reflecting Mughal harmony with nature.
Source: "Nurmahal Serai, Punjab," The Heritage Lab, accessed October 26, 2025.



Figure 23 A & B. Arched gateways displaying layered Mughal ornamentation.
Source: "Nurmahal Serai," Incredible India – Tourism of India, accessed October 26, 2025.



Figure 23 D. View of access control points showing the planned movement through Serai Nurmahal.
Source: "Nurmahal Serai," Incredible India – Tourism of India, accessed October 26, 2025.

Defensive Features: High walls with corner bastions and watchtowers to ensure safety. Limited access points to control movement.

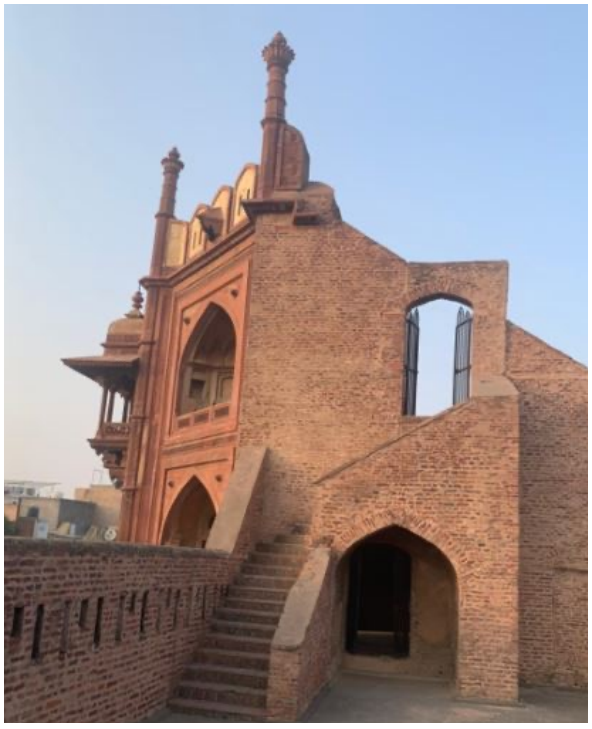


Figure 23 C. High defensive walls of Serai Nurmahal emphasizing security and boundary definition & Corner bastions and watchtowers reinforcing the fort-like structure.
Source: "Nurmahal Serai," Incredible India – Tourism of India, accessed October 26, 2025.

Sustainability Features

Passive Cooling: The thick sandstone walls and jali screens provide natural ventilation and regulate temperature.

Water Management: Presence of wells and water channels demonstrates advanced hydrological planning.

Material Efficiency: Locally sourced materials like sandstone and bricks minimize transportation costs and environmental impact.

Restoration Efforts

Current Status: Parts of the structure are in ruins, with significant deterioration due to neglect and environmental factors.

Preservation Initiatives: Archaeological Survey of India (ASI) has undertaken some efforts to preserve and restore the site. Awareness campaigns emphasize its historical and architectural significance.

Challenges: Urban encroachment and lack of funding hinder restoration progress.[22]

Takeaways, Inferences & Conclusion

Serai Nurmahal stands as a testament to the architectural brilliance and cultural vision of the Mughal era. Its strategic location, intricate design, and emphasis on functionality make it a significant historical landmark. Preserving this heritage site is crucial for future generations to understand the rich legacy of India's past. By studying Serai Nurmahal, architects and historians can draw inspiration from its sustainable practices, elegant design, and cultural relevance.[23]

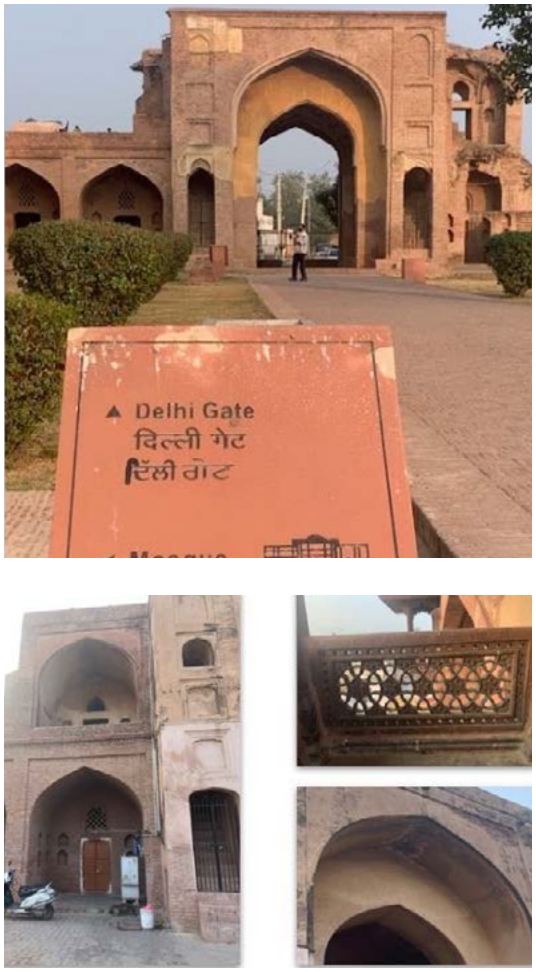


Figure 24 A & B. Current condition of Serai Nurmahal showing structural deterioration & Preservation efforts conducted by the Archaeological Survey of India.
Source: "Record Detail," Pascal-Francis INIST, accessed October 26, 2025.



Figure 24 C. Ruins illustrating the remaining masonry and spatial framework of Serai Nurmahal.
Source: "Record Detail," Pascal-Francis INIST, accessed October 26, 2025.

3.2.4. Matrimandir: The Soul of Auroville by Paulette Hadnagy

Matrimandir is devoted to the Universal Mother, revered by various names throughout ancient history. On 23 June 1965, while revealing her vision of the town to Satprem, the Mother described the future Matrimandir: "It will be the 'Pavilion of the Mother'; but not this [the Mother gestures to herself]: the Mother, the true Mother, the essence of the Mother." (I refer to 'Mother' as Sri Aurobindo chose that term; otherwise, I would have used another—like 'creative principle' or 'realising principle' or similar.)[24]

The center is located in Auroville, Tamil Nadu. The site is located in a semi-urban context. The surroundings of the Matri mandir is surrounded with dense landscape and vast green gardens and cottages. The area is also served with small eateries and shopping centers.

The inner chamber is a place meant for concentration, to "learn how to concentrate with a view to try to finding one's consciousness."



Figure 25 A & B. Exterior view of Matrimandir symbolizing the Universal Mother in Auroville & View of the inner chamber designed for meditation and concentration.
Source: "MATRI MANDIR: Gardens of Life and Power," ArchitectureLive!, December 29, 2022.



Figure 25 C. Surrounding landscape and gardens of Matrimandir representing harmony and unity.
Source: "MATRI MANDIR: Gardens of Life and Power," ArchitectureLive!, December 29, 2022.

Twelve gardens

"It must be a thing of great beauty, of such beauty that when people come, they will say 'Ah, this is it.' One must know how to move from consciousness to consciousness. It must be an expression of that consciousness which we are trying to bring down." connecting causeways"

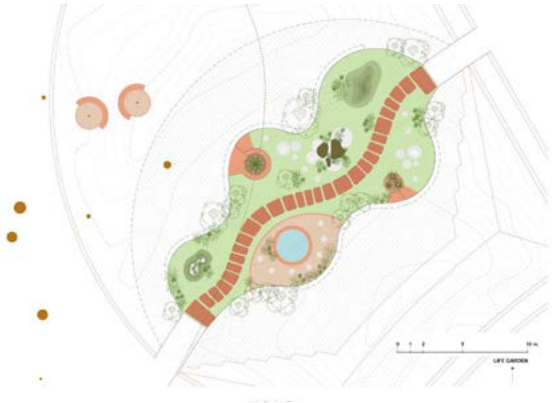


Figure 26 A. Auroville Master Plan showing circular "Galaxy" layout organized around Matrimandir.
Source: "History | Auroville," Auroville.org, accessed October 26, 2025.

Auroville master plan concept begin from a circle and a circle in architecture means unity and gathering. As the concept of this project aiming to spirituality this means that this circle should be in the centre and all the line as parks or buuling should be leading to this circle that people will go their seeking for peaceful and mindful to relax.

Role of the Masterplan:

The Auroville Foundation Act of 1988 marks a significant milestone in the development of Auroville, India. It supports the development of a Master Plan for the township, which is expected to cover 2000 hectares, with the Auroville Foundation already owning 850 hectares. The plan aims for systematic development while preventing non-conforming developments. The plan divides into four functional zones: residential, cultural, international, and industrial, with a Peace Area in the center. Approximately 25% of the township will be built, surrounded by a green belt for environmentally friendly development. The plan will include innovative models and techniques.

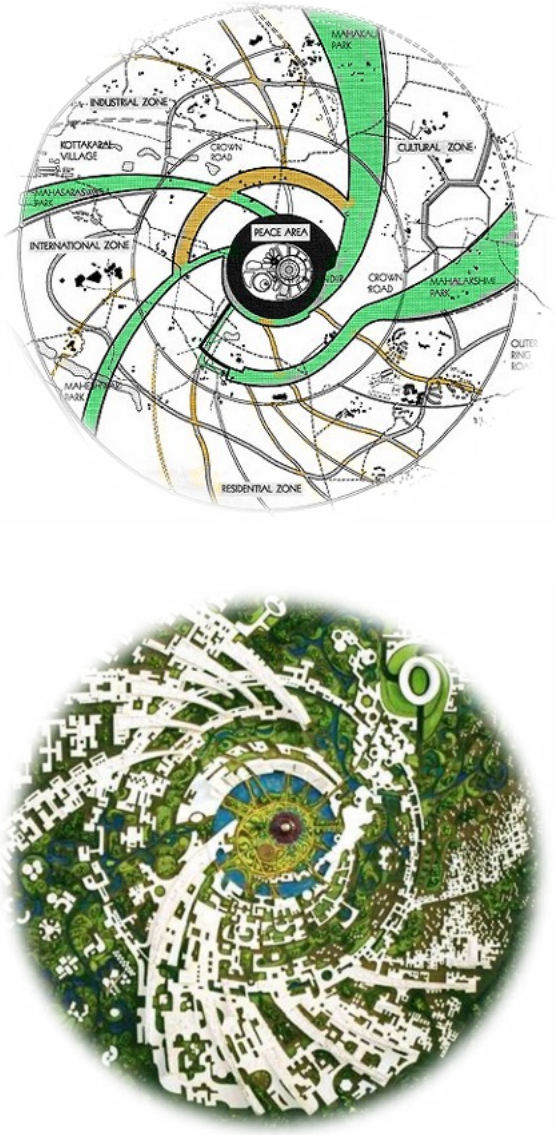


Figure 26 B & C. Line of Goodwill Project integrating green building and collective living. & Design proposal for Gateway complex emphasizing sustainable community spaces.
Source: "History | Auroville," Auroville.org, accessed October 26, 2025.

The Line of Goodwill Project in Auroville seeks to develop in accordance with the ideals and vision of Sri Aurobindo and the Mother. The project includes three components: Habitat, Gateway, and Matrimandir Visitor Reception and Access. Line of Force

1 will mark Auroville's entire radius and be a green building that incorporates nature into its design and fabric. The Gateway will serve as a vibrant learning space, exhibition space, and a variety of collective facilities for Auroville's units and activities. The project aims to reduce both carbon and social footprints. The residential area along the Line of Goodwill aspires to be a living research laboratory for a new way of collective living in accordance with Auroville's principles. The development will cater to different ages and family constellations, with accommodation for 2500 people.

Auroville is an excellent example of sustainable living and one of India's most environmentally friendly destinations. The residents there generate energy from wind, sunlight, and other natural resources, commute on electric bikes to promote sustainable development, and support a variety of other practices. The barren wasteland was transformed into sustainable Auroville by all citizens working together to create paradise. Their plan for maintaining this township was extremely important, as they focused on home-grown vegetables, including a hand-sized ladyfinger. They also use a barter system with plants and other commodities and hope to become a cashless community one day. [25]

Auroville's town planning is a unique model for holistic urban development, incorporating spiritual architecture, environmental psychology, cultural anthropology, and design proposals. The town's layout follows a spiral-like form, with the Matrimandir at the center representing the "soul" of the town. The town is divided into four zones: Residential, Industrial, Cultural, and International, encircling the Matrimandir. Sacred spaces and architecture incorporate sacred geometry, symbolizing unity and cosmic energy.

The town's environmental psychology is nature-centered, with afforestation transforming barren land into a lush ecosystem. Biophilic design ensures a connection with nature and promotes well-being. Human-centered urban spaces encourage social interaction and reduce urban stress.

Cultural anthropology involves multi-cultural integration, with the international community blending diverse cultural traditions in architecture, art, and daily life. Traditional South Indian construction techniques coexist with modern sustainable materials, reflecting a blend of global and local cultures. Auroville's participatory design process involves residents, reflecting principles from anthropological fieldwork and social design research.

The town's design proposals are dynamic and evolving, focusing on water conservation systems, renewable energy, and permaculture farms. Experimental architecture studios and architectural competitions and workshops are regularly hosted to integrate new design proposals into the evolving master plan.[26]

Takeaways, Inferences & Conclusion

Auroville is a town that promotes sustainability through a multifaceted approach that includes environmental conservation, green building, resource management, and community-driven practices. The town's "Galaxy Plan" incorporates natural elements such as forests, green belts, and water bodies into its urban design to maintain ecological balance. The town also promotes car-free zones and electric vehicles to help reduce vehicular pollution. The Auroville Earth Institute (AVEI), a global leader in sustainable construction, promotes environmentally friendly building practices. The town makes use of locally sourced materials such as clay,

bamboo, and reclaimed wood, which reduces transportation emissions and benefits the local economy. Renewable energy systems include solar panels, wind and biomass energy, as well as energy-efficient architecture. Water and waste management are also top priorities, including rainwater harvesting and recycling, eco-sanitation, agroforestry, and food sustainability.

It's a great design where people seek for peaceful and living in a healthy environment away from stress in this world.

3.2.5. Japanese Zen Gardens

Zen Garden Definition and Concept:
Zen is a state of calm attentiveness guided by intuition, often associated with Zen Buddhism.

The term "Zen garden" was coined by Loraine Kuck in 1935 and became popular in the 1950s. The correct term is karesansui, or dry garden. Zen gardens symbolize control, moderation, and simplicity. Rocks symbolize the earth's "bones," while white sand represents flowing water.

The garden is reduced to bare essentials, avoiding distractions and stimulating meditation. The minimalist design promotes reflection and reflects Wabi-sabi (the beauty of imperfection); each element in a Zen garden has a symbolic meaning, signifying water, mountains, and resilience. Zen gardens create a continuous visual and spiritual flow by blending in perfectly with traditional Japanese architecture in which modern architectural designs are influenced by the emphasis on spatial balance in spatial design.[27]

The design is dominated by natural materials, which reflects an architectural philosophy that emphasizes tactile experiences and authenticity.

The Japanese Zen garden art is defined by three fundamental elements: peace, harmony, and beauty. It cannot be defined or labeled using a single typology. There are several types, each with their own distinct and identifiable style. The goal is to give the observer a new vision of reality in which every element contributes to the creation of the landscape.

Karesansui gardens are heavily influenced by Zen Buddhism so they tend to be peaceful, simple and waterless but there is a very significant use of stones and rocks in a Karesansui garden. with people who want an authentic Zen experience at home.[28]



Figure 27. Traditional Japanese Zen Garden displaying minimalist composition of rocks and sand to promote meditation.
Source: Chicago Botanic Garden, "Zen Garden," Smart Gardener, accessed October 26, 2025.

Conclusion

This chapter ends with demonstrating a solid methodology bringing different disciplines together, trying to connect the philosophy of spirituality to architecture. Fundamentally, the study attempts to build a philosophical and psychological framework for understanding transcendence through space by fusing ideas of spiritual development and ultimate concern.

The chapter highlights the important role of previous research, including Virasat-e-Khalsa, Pinjore Garden, Matrimandir, Japanese Zen Gardens, and Nurmehal Serai, examined for their ability to evoke a sense of wonder, introspection, and change. These case studies contribute to a design language grounded in spiritual symbolism and environmental awareness, while conducting a thorough analysis of Gurbani's teachings on the Five Elements and of architectural treatises on sacred geometry. Additionally, this approach is enhanced by conducting phenomenological research that explores how sensory and emotional experiences in built environments promote spiritual development. Through this multilayered method, the chapter lays the groundwork for an innovative/ revolutionary proposal for architectural designs, ISHQ-E-SAT, a sanctuary, trying to create a balance between human experience and the natural environment and spirituality (?). The proposed strategies involve creating areas that encourage reflection, healing, and awakening through the use of water features, light, ventilation, and material patterns. Finally, this methodology aims to promote self-discovery and overall well-being by creating architecture that embodies beauty, practicality, and enduring spiritual values.

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CHAPTER 4

SITE ANALYSIS

4.1 Site and Context

This chapter will present the context of the site in Gati Harike, Punjab, India. The closeness of the study site to the globally significant Ramsar site of Hari-ke-Pattan (Harike Wetland & Bird Sanctuary), part of the site analysis, would be extended to the wetland ecosystem. The study would explore the broader history and culture of the Punjab people. The socio-cultural conditions of the people of Gati Harike will be further explored. Again, spiritual activities and how they resonate with architectural needs would be duly assessed. Each section is divided into an assessment of the current situation, analysis and design implications, and a summary table.

4.2 Culture and Community

4.2.1 Site Location

Current Situation

The proposed Gurbani-inspired retreat that integrates spirituality into contemporary architecture to explore the journey of awakening will be located in the rural village of Gati Harike. This site is located along the border of Dineke village in the Ferozepur (Firozpur) Division of the State of Punjab, India. The study is taking place here because it is strategically located at a confluence of spiritual, ecological, and cultural landscapes. These features speak well to the objectives of the study, to translate Gurbani's teachings into spatial, sensory, and environmental experiences.

The site has a total land area of 325342 square meters and is geographically located approximately at 31.14°N latitude and 74.92°E longitude, within the transitional buffer zone of the Harike Wetland and Bird Sanctuary. The wetland known locally as Hari-ke-Pattan, formed by the confluence of the rivers Beas and Sutlej, is considered to be the largest wetland in northern India and the ecological heart of this region, encompassing 41 square kilometers, and is designated a Ramsar site of International Importance.[1] This area forms part of the Indus River Basin[2] and the southwestern floodplains of Punjab, featuring fertile soils, seasonal hydrology, and rich biodiversity, including migratory birds.[3]

Punjab is a state in northwestern India that is divided administratively into five (5) divisions: Faridkot, Ferozepur, Jalandhar, Patiala, and Roopnagar. Each division is composed of districts, which are further divided into sub-divisions/tehsils, then sub-tehsils, and blocks.[4] Gati Harike falls under the jurisdiction of Gatti Harike Gram Panchayat and the Makhu Block Panchayat. It is one of the 116 villages in the Makhu Panchayat of Zira Tehsil (Sub-Division) in the Ferozepur District and Ferozepur Division of the State of Punjab.[5] Although rural, the site is strategically accessible as it is about 8km from Harike town, 10km from Makhu town, 35km from the city of Ferozepur, 40 km from the city of Tarn Taran, and 75 km from the urban and cultural hub of the region – the city of Amritsar. The site is accessible via private vehicles and occasional public buses through a rural feeder road branching from National Highway 54 (NH-54), which connects the two historic cities of Amritsar and Ferozepur. The nearest major transit hubs are the

Harike bus depot (~2.5km), Makhu railway station (~10km), and the Sri Guru Ram Dass Jee International Airport in Amritsar, which is about 65km from the site.

Culturally and spiritually, the area holds significant importance. The site's rural character has an advantage because of its proximity to pilgrimage circuits (e.g., Gurdwara Harmandir Sahib, Harike Pattan and Gurdwara Sri Tarn Taran Sahib) as well as regional conservation educational programs (e.g. Harike Interpretation Center). The nearby Harike town and wetland are part of the legendary pilgrimage routes of Guru Nanak Dev Ji, during his "udasis" (spiritual travels). Guru Nanak Dev Ji is the first guru and is considered the founder of Sikhism. The oral histories from local granthis (Gurbani readers) recount that Guru Nanak metaphorically saw the meeting of the rivers in Harike as a union of the self and the divine.[6]

The spiritual, cultural, and ecological significance of the area in a rural backdrop makes the site a very fertile location for experiencing the journey of awakening for both local, regional, and international spiritual seekers. Apart from the local area and its population, the anticipated catchment of the proposed retreat includes pilgrims and spiritual seekers from Punjab in India. Most particularly, the urban population in Amritsar, Chandigarh, Ludhiana, and Delhi; international diaspora from countries such as Canada, the UK, and the US. The place normally attracts people with emotional, cultural, and spiritual ties to Punjab; as well as academics, artists, wellness practitioners, and researchers. It is expected that visitors will likely travel from urban centers and international origins, arriving by car, taxi, bus, or organized transport.

Analysis and Design Implications

The rural nature of the site location presents a rich opportunity for integrating the spiritual teachings of Gurbani into contemporary architectural design. The convergence of natural systems, heritage values, and contemplative dimensions is embedded within. This rich transition space between farmland and protected wetland is imbued with symbolic and traditional attributes, encouraging design that emphasizes spiritual awakening. The harmony of the natural systems of nature correlates with the five elements in Gurbani – earth, water, air, sky, and fire for the purpose of this study. The reason for the correlation based on this study is that, transitional zones naturally encourage moments of meditative stillness and sensory immersion. This enables people to have the opportunity to attune themselves with natural rhythms while processing the transition between spaces. The location within the floodplain with fertile soils, seasonal water flows, and eco-sensitive also demands responsible land stewardship and sensitive architectural responses.

Therefore, one of the main design imperatives for the project would be site integration. This calls for built forms to be carefully situated along existing terrain features and natural contours, thereby preventing unnecessary disturbance to the landscape. This allows architecture to emerge organically from the terrain rather than imposing. This supports both environmental preservation and the experiential flow of the site.

Orientation is another critical consideration that aligns pathways, gathering spaces, and structures with natural solar patterns and water flows. This would enhance the reinforcement of the retreat's sense of place, ancestral wisdom, and environmental harmony. The thoughtful alignment of the elements not only promotes comfort and sustainability but also echoes Gurbani's

teachings on the importance of cosmic order and divine rhythm.

Materiality would also be important in maintaining the site's identity and integrity by using locally sourced materials and techniques that reflect Punjabi culture, to promote low-impact, sustainable development, which would be significantly considered. This would be complemented using Gurbani-inspired landscape elements, including native vegetation that holds both symbolic and regional significance.

Community engagement would be a central component of the project by collaborating with local communities, schools, and village elders to ensure authentic cultural knowledge and participatory practices, fostering a sense of stewardship and belonging. This also includes thoughtfully linking the retreat to nearby pilgrimage and conservation areas. This is to enhance an added layer of reflection, tradition, and learning to enrich the journey to discovery of meaning and awakening.

Mobility and access would be designed to support the need for sustainable transportation infrastructure. Facilities such as electric vehicle charging stations, shuttle services, dedicated bicycle paths and pedestrian-friendly lanes. Again. slow-movement circuits would be considered to encourage environmentally conscious travels while promoting a pace of movement conducive to meditation and reflection.

The summary tables in this Chapter address the regional planning aspects by detailing zoning, regulatory frameworks, and planning & design controls which function as the guidelines for the particular site location and its design program.

The tables highlights the organic spatial

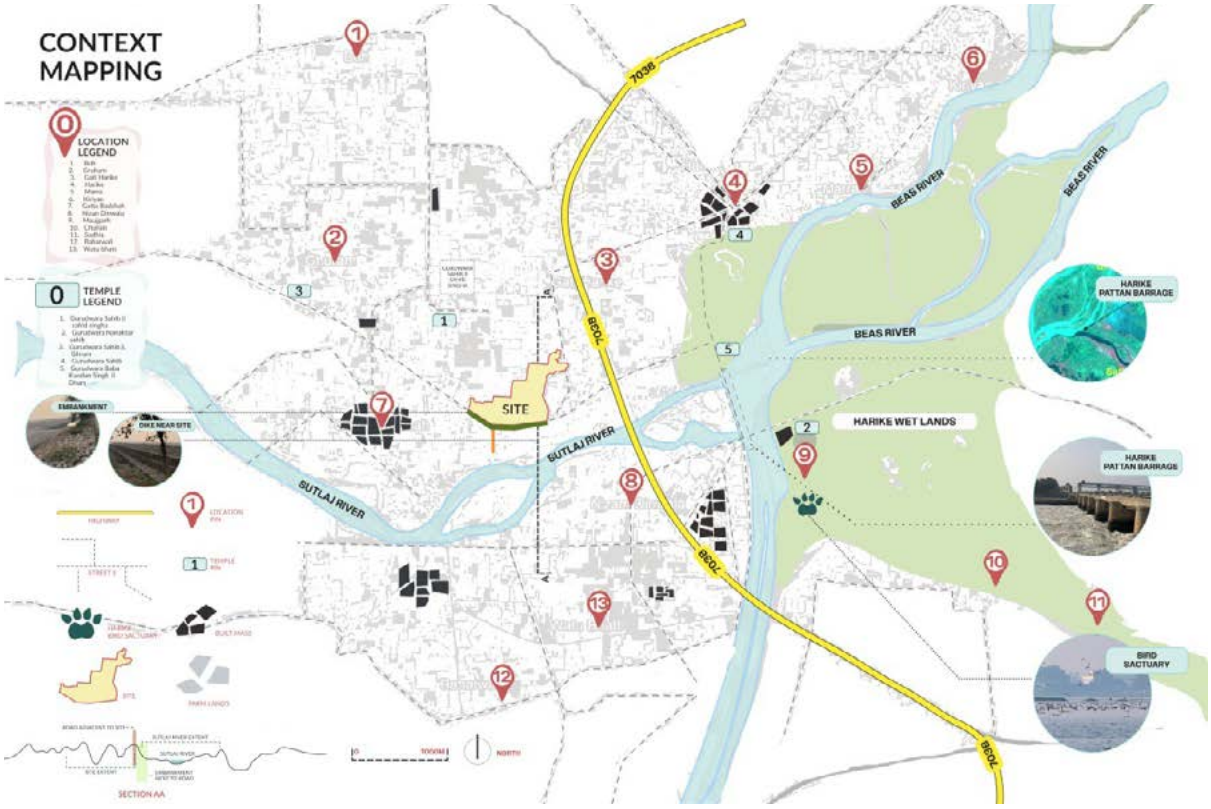


Figure 28. Site in Harike, Punjab, India showing the site context, see the enlarged view on page 108 & 109
Source: By Author

patterns, socio-spatial dynamics, and the potential for integrating a spiritual retreat into the existing rural fabric. The tables emphasize the importance of respecting the layered spatial order and fostering community engagement and also outlines strategies for creating inclusive, culturally resonant spaces that align with the spiritual and ecological context of the site.[7]

Assessment Aspect	***Current Situation***
Location	Gati Harike (majority) and Dineke, Ferozepur Division, Punjab, India; 31.14°N latitude and 74.92°E longitude
Site Total Land Area	—
Ecological Context	Adjacent to Harike Wetland and Bird Sanctuary (ecologically important, Ramsar Site), confluence of Beas and Sutlej Rivers
Administration	Makhu Block Panchayat, Zira Tehsil, Ferozepur Division, State of Punjab, Government of India
Accessibility	Near NH-54; Harike Bus Depot (2.5 km), Makhu Railway Station (10 km), Amritsar Airport (65 km)
Hydrology	Within Indus Basin; Beas-Sutlej floodplains; subject to eco-sensitive zone guidelines
Spiritual Significance	Historic Guru Nanak pilgrimage site; confluence symbolizes union of self and divine
Visitor Profile	Local and regional pilgrims, urban populations, international diaspora, academics, artists
Analysis Aspect	***Design Implications / Strategies***
Site integration	Build along existing ridges and contours to minimize impact and allow the architecture to emerge from the terrain rather than imposing upon it.
Orientation	Align pathways and structures with natural patterns to reinforce the retreat's spiritual, cultural, and ecological connections echoing Gurbani's teachings on the importance of cosmic order and divine rhythm.
Materiality	Use locally sourced materials, techniques and Gurbani-inspired elements to promote low-impact sustainable development while maintaining the site's ecological, cultural and spiritual identity.
Community engagement	Collaborate with local communities, schools, and village elders to ensure cultural and spiritual authenticity to enrich the journey of awakening.
Mobility	Provide for sustainable transport infrastructure to encourage environmentally conscious travel while promoting a pace of movement conducive to meditation and reflection.

Table 1: Site Location Summary Table: Geographic, ecological, and spiritual context of Gati Harike, with implications for accessibility and site integration.

4.2.2 Planning Context

Current Situation

The project site, located in the Makhu Block Panchayat within Zira Tehsil in the Ferozepur Division of the State of Punjab, India, is a rural area.[8] It is a uniquely layered planning environment that combines rural land-use, ecological protection, sacred geography, and emerging eco-spiritual development models.[9]

According to the Punjab Regional and Town Planning Framework 2041, as well as Environment Protection Act of 1986 and Wildlife Protection Act of 1972. The site is located within Zone II – Agricultural and Eco-Sensitive Zone, which is intended for non-urban, low-impact uses such as spiritual and cultural institutions, eco-tourism and agroforestry, water conservation and permaculture systems. Furthermore, the Punjab Urban Planning and Development Authority (PUDA) designated the areas in and around Gati Harike as a Special Character Area because of its proximity to the Harike Wetland and Bird Sanctuary. The Punjab Wetland Conservation Strategy of 2020 further promotes "wetland-compatible spiritual ecologies" as desirable land uses. The area is listed in the Punjab Sacred Circuit Development Plan of 2021 being within the "Gurbani Itihaas Corridor", a term used by historians to describe the landscapes touched by the gurus' udasis (spiritual journeys). This requires that sacred viewsheds and visual integrity must be preserved, oral histories and spiritual narratives should be incorporated in spatial programming, community-led stewardship and "sangat" (holy congregation or spiritual community) engagement should be facilitated, and spaces for "Kirtan(Devotional singing of hymns from the Guru Granth Sahib.", "Simran[Meditative remembrance of God's Name (Naam)]", "seva(Selfless service)", and "path[(Reading or recitation of Gurbani (scripture)]" should be provided. Other relevant policies include Punjab Wetlands Authority regulations, National Mission for Clean Ganga (Beas-Sutlej connection), as well as guidelines under Ramsar Convention. Furthermore, the Local Development Plan for the area has the following planning controls:

Floor Area Ratio (FAR) of 0.25

- maximum building height of 12 meters,
- ≤33% building footprint coverage,
- ≥20% green cover with native vegetation,
- encouragement of local materials, renewable energy, traditional typologies,
- provision of eco-sanitation and decentralized water management.

Analysis and Design Implications

The site lies within agricultural and protected wetland zones, requiring compliance with eco-sensitive regulations. Planning guidelines promote a decentralized, landscape-integrated approach that reflects Gurbani's values of humility, impermanence, and respect for nature. Development should be low-rise, non-invasive, and use porous surfaces and sustainable infrastructure.

The Sacred Circuit Development Plan (2021) allows for design elements like narrative paths and wayfinding inspired by Gurbani, reinforcing the site's spiritual and cultural identity. This project can serve as a model for rural, regenerative development—balancing sustainability, community, ecology, and spirituality—aligned with national goals like Atmanirbhar Bharat and eco-tourism initiatives.

Design must prioritize ecological preservation, minimize building footprints and enhance native vegetation, especially species

with cultural significance. Strict planning controls call for low-density, low-impact development with thorough environmental assessments and mitigation strategies.

Given the site's spiritual importance within the "Gurbani Itihaas Corridor," spaces for local pilgrimage and spiritual activities should be integrated using sacred geometries. Community involvement and stewardship are key.

Material choices should reflect local culture, using renewable resources, vernacular styles, and local craftsmanship. Punjabi vibrancy and Gurbani-inspired motives should enrich the architecture with cultural and spiritual depth.

Assessment Aspect	***Current Situation***
Location Zoning	Rural-agroecological Zone II; Eco-Sensitive Zone near Harike Wetland; Special Character Area designation
Regulatory Frameworks	Punjab Regional and Town Planning Act (1995); Environmental Protection Act (1986); Wildlife Protection Act (1972); Sacred Circuit Development Plan (2021); Atmanirbhar Bharat (Self-Reliant India); others
Planning Controls	FAR 0.25; Max building height 12m; ≤33% building footprint; ≥20% vegetation cover; local materials, renewable energy, traditional typologies, eco-sanitation, decentralized water management
Cultural Overlay	Gurbani Itihaas Corridor; local and international spiritual pilgrimage; sacred viewshed preservation; community engagement; local materials and traditional typologies
Environmental Sensitivities	Proximity to important Ramsar site: Harike Wetland with strict environmental guidelines and EIA requirement
Analysis Aspect	***Design Implications / Strategies***
Ecological Sustainability and Risk Management	Minimize footprint; preserve green cover enhanced with native vegetation; low-rise, low-density, low-impact development; rigorous EIA with noise, waste, water use controls; community consultation
Spiritual and Cultural Integration	Spiritual spaces for local spiritual and pilgrimage activities; narrative paths; sacred geometries; community stewardship; cultural preservation
Materiality and Construction	Local renewable materials; local craftsmanship and traditional vernacular typologies; Gurbani-inspired elements

Table 2: Planning Context Summary Table: Zoning, regulatory frameworks, and sacred overlays guiding eco-sensitive, culturally rooted development strategies.

4.2.3 Surrounding Land and Building Use

Current Situation

The surrounding land use is largely agrarian – farmlands (mostly rice, wheat, and mustard), wetlands, and sparse rural settlements. In a 2-kilometer radius, the land use pattern is as follows:[10]

Land Use Category	Approximate Coverage	Notable Features
Agricultural	62%	The site is surrounded by farmland on all sides with seasonal crops (rice, wheat, mustard) creating a seasonally dynamic landscape that changes colors, textures, and scents; farm bunds, tube wells, and traditional irrigation linked to Sutlej River canals.
Residential	15%	Layered linear village clusters with mud-brick homes and rural vernacular architecture.
Ecological Buffer	10%	Rewilded vegetation; wetland peripheries with native trees like neem and kikar, as well as bird habitats.
Sacred Infrastructure	8%	Local Gurdwaras, Nishan Sahib poles (spiritual landmarks with saffron flags), sarovars (traditional sacred water bodies), pathways for religious processions (Nagar Kirtan).
Community Amenities	5%	Schools, langar halls, water tanks, and other community facilities.

Table 3: Summary of socio-economic conditions for equitable and inclusive development in Gati Harike

The site is bordered on the south by a rural access road connecting to Gatta Badshah, Dineke, and Ghuram, with the Sutlej River just 300 meters away. About 400 meters east is NH 54, with a road to Harike Wetland and Headworks. These roads also serve as pilgrimage routes linking gurdwaras to the wetlands. Around one kilometer from the site lies Harike Wetland, with scrubland and rewilding zones that act as natural buffers for sound and air. Scattered around the site are rural homesteads built using sun-dried bricks, lime plaster, and corrugated tin roofing. Most of these structures are single-storey with open verandahs, prayer alcoves, and animal sheds – reflecting a lived spirituality where work and meditation intermingle. The surrounding building stock is reflective of the vernacular sacred-rural continuum found across Punjab, where built forms are modest yet symbolically rich. Local architectural language is responsive, not imposed, which can provide an inspiration for placemaking and building typology for the project. It usually has the following characteristics:

- Forms: rectangular or circular floor plans with central courtyards, flat roofs for rectangular buildings and pointed roofs for circular buildings, and low plinths.
- Climate responsiveness: deep eaves, shaded outdoor workspaces, and seasonal spatial migration (sleeping on rooftops in summer)
- Religious orientation: many homes face east, in alignment with morning Ardas (prayer), reflecting the cosmological significance of the sun in local spirituality.

Analysis and Design Implications

The farmland and wetland buffer allow for a serene landscape with ecological integration while potential odors and noise from farming activities as well as seasonal waterlogging should be considered. Natural buffers using sacred tree species like peepal, neem, and ber as referenced in Gurbani can

be used. The landscape reflects a harmonious integration of vernacular rural patterns, sacred nodes, ecological thresholds, and low-density settlements which are shaped by generational practices of farming, spirituality, and stewardship.

The vernacular architectural language already provides a clear precedent for material continuity and climate responsiveness. The design of the retreat should therefore prioritize earth-based materials (adobe, mud plaster, lime-washed walls, jute screens, bamboo, local wood, hand-poured concrete, etc) to harmonize with the surroundings and reinforce cultural identity. Form and massing should also avoid imposing monolithic structures because the landscape is rural, imbued with spiritual and historical significance. Instead, a non-hierarchical, low-rise pavilion system with semi-open courtyards and permeable spatial arrangement will encourage visual and acoustic porosity to preserve rural sightlines and seasonal soundscapes (birdsong, prayer chants, rustling of crops, etc.), colors, and smells. Gradual thresholds of transition from farmland to sacred spaces also facilitate a mental and spiritual 'arrival' experience.

Reclaiming or reinterpreting water features like sarovars, traditional step wells, and water wheels for ritual and meditative purposes.

Assessment Aspect	***Current Situation***
Land Use Pattern	Agriculture (62%), residential (15%), ecological buffer (10%), sacred infrastructure (8%), community amenities (5%)
Crops	Rice, wheat, mustard; seasonal and irrigation dependent which creates a seasonally dynamic landscape that changes colors, textures, and smells
Built Form Materials	Prevalence of earth-based materials: adobe, mud, lime plaster, bamboo, local wood, etc.
Architectural Features	Courtyards, flat/pointed roofs, deep eaves, east-facing orientation
Cultural Spiritual Elements	Gurdwaras, Nishan Sahib poles, sarovars, pilgrimage trails, historical and spiritual importance
Environmental Context	Wetland buffer, native tree clusters, seasonal landscape rhythms, seasonal bird migration, ecologically sensitive
Analysis Aspect	***Design Implications / Strategies***
Land-use pattern	A harmonious integration of vernacular rural patterns, sacred nodes, ecological thresholds, and low-density settlements shaped by generational practices of farming, spirituality, and stewardship.
Vernacular architecture	Material palette: earth-based local materials; form and massing: low-rise, pavilion type with courtyards and non-imposing volumes for visual and acoustic porosity highlighting seasonal landscape changes of colors, textures, and smells; gradual thresholds for an 'arrival' experience.
Cultural and eco-spiritual connectivity	Incorporate cyclical rhythms, pilgrimage and processional trails, and ritual water features into circulation and design complemented by native spiritually significant vegetation for both ecological benefits and spiritual resonance.

Table 4: Surrounding Land and Building Use Summary Table: Land use patterns, vernacular architecture, and sacred infrastructure shaping material and spatial design responses.

4.2.4 Neighborhood Structure

Current Situation

Gati Harike's lack of urban infrastructure (transport, power, water, communication, etc) is balanced by its richness in spiritual and natural amenities. Predominantly rural, it is not defined by formal urban zoning structure but by organic, evolving spatial patterns rooted in agricultural livelihoods, kinship networks, spiritual practices, and ecological rhythms.[11] Unlike grid-based urbanism, the local neighborhood fabric comes from seasonal, cultural, and spiritual imperatives. This settlement morphology is a rural nucleated typology with homesteads, farmland, and sacred/community spaces arranged in layers typical of traditional Punjabi "pind" (village) configuration.[12] The central core is usually composed of residential clusters of multigenerational dwellings arranged along gallis (narrow pathways), together with Gurdwara Sahib, panchayat bhawan (village council hall), and anganwadi childcare center). The intermediate layer includes community infrastructure like primary schools, langar halls, hand pump wells, kirana shops (local grocery stores), and shared grain storage facilities. The peripheral zone is defined by agricultural lands, small shrines, and scattered outbuildings like tool sheds and threshing yards, which also features low or no fencing, irrigation channels, and mud paths connecting field plots and neighboring villages.[13] There is no current retreat or meditative public space of this kind that exists in the area despite the presence of local temples peppered and supported by farms, ponds, and local bus stands.

Socio-spatial dynamics shaped daily life: there is kinship-based clustering, gendered temporal zoning, and spiritual spatial rhythms. The social structures of the neighborhoods are interwoven with its spatial patterns which are characterized kinship-based spatial clustering where families of the same caste or lineage occupy clusters of homes creating sub-neighborhoods or "paras". Gendered temporal zoning is showcased in women frequenting wells, gurdwaras, and fields at certain times while men dominate other public spaces. Spiritual spatial rhythms, influence acoustics and time consciousness as well as the use of spaces where dawn and dusk 'ardas', recitations, and weekly readings resonate and create spiritual fields in and around the neighborhoods.

Analysis and Design Implications

The neighborhood pattern reflects a decentralized but coherent spatial organization that supports multi-use flexibility: a field may host seasonal festivals; a path may carry both tractors and religious processions. Its organic spatial logic offers a fertile ground for integrating a spiritual retreat that is in harmony with its surroundings rather than imposing on it. This integration must respect the layered spatial order of the locality – from intimate household courtyards to communal, religious, and ecological spaces, reflecting the Gurbani teaching of spiritual progression: a journey from the external world to the internal realization.[14]

The potential for a shift in neighborhood structure over time needs to be considered. Public-spiritual interfaces to develop communal and spiritual engagement can be achieved through shared-use spaces like langar areas, stepwells, and shaded groves where the locals and visitors can interact. The project will not become part of an existing neighborhood, but can become an important node and communal meeting space for all of the nearby settlements, as it also serves pilgrims and other visitors. This projected influx of people means that exist-

ing facilities and infrastructure in the area need to be improved to be able to effectively accommodate them. This is especially true for transportation infrastructure, power and water supply, communication infrastructure, and accommodation facilities. Neighboring communities can walk or cycle to the site, but long distance visitors need reliable transportation such as quality buses, trains, and other transport options.

Assessment Aspect	***Current Situation***
Zoning Pattern	Organic, evolving spatial patterns rooted in agricultural livelihoods, kinship networks, spiritual practices, and ecological rhythms
Settlement Morphology	Rural nucleated form with layer zones from the central core to the peripheral zones
Central Core	Residential clusters, Gurdwara Sahib, village council hall, childcare center
Intermediate Zone	Schools, langar halls, wells, and kirana shops
Peripheral Zone	Farmland, shrines, irrigation, mud paths, and other circulation pathways
Socio-spatial Dynamics	Kinship clusters, gendered temporal zoning, and spiritual spatial rhythms shape daily life and the use of spaces
Infrastructure Gaps	Limited transit, power, water, communication, and accommodation facilities
Analysis Aspect	***Design Implications / Strategies***
Neighborhood Pattern	Decentralized but coherent spatial organization supporting multi-use flexibility is fertile for integrating a locally harmonious spiritual retreat reflecting the Gurbani teaching of spiritual progression. The project can become an important node within the neighborhood and regional fabric.
Design Strategy	Reflect and support existing rhythms, and sensitivity to the site's ecological, cultural, and spiritual context; built forms should respect boundaries, while emphasizing acoustic harmony; intuitive wayfinding using local materials and familiar spatial cues; public-spiritual interfaces for communal and spiritual engagement through shared-use spaces.
Addressing Gaps	Existing facilities and infrastructure need to be improved to accommodate an influx of visitors effectively. Reliable and high-quality transportation infrastructure, power and water supply, communication infrastructure, and accommodation facilities must be provided.

Table 5: Neighborhood Structure Summary Table: Organic settlement morphology and socio-spatial rhythms informing community-responsive and spiritually attuned design.

4.2.5 Socioeconomics

Current Situation

The population of Gati Harike is predominantly engaged in agriculture, majority Sikhs (97%) speaking the Malwai dialect of the Punjabi language (written in the Gurmukhi script), with a deeply-rooted spiritual culture. The culture is rich in tradition with communal activities, vibrant colors, artisanship, and food, reflecting a strong cultural cohesion and collective participation in rituals and festivals.[15] There is a deep reverence for Gurbani, communal service, and nature. The demographics are composed of multi-generational households, although there is a prevalent youth migration, but the elders are maintaining traditions. According to the 2011 Census of India, the population is around 2,650 with a ratio of 961 females per 1,000 males, which is notably higher that Punjab's average of 895.[16] This rural village also has a substantial Scheduled Caste (SC) community which comprises about 43% of the population, indicating a marked caste stratification considering that the state average is only at 31.9%.[17] This socio-ethnic composition plays a crucial role in shaping local social structures, informing equitable design approaches.

The median age of the population is 27 years old, indicating a relatively young population. This is crucial information because it shapes socio-economic trends, like mobility, educational aspirations, labor patterns, migration, and future income distribution.[18] Gender distribution is fairly balanced at 51.2% male and 48.8% female, but underlying gender disparities reflective of rural Punjabi norms still persist especially in education and employment.[19] The overall literacy rate is 68.3% with female literacy lagging at 60.1%, both of which are below district and state averages.[20] Factors like early marriage, economic hardship, and the lack of accessible secondary schooling contribute to dropout rates especially among girls,[21] perpetuating the deficit in women's empowerment and opportunities for diversified livelihoods. However, there are local efforts by the government and the community to improve literacy, especially among women and girls, to bridge gender disparities and encourage lifelong learning.

As mentioned above, the majority of the population is engaged in agriculture, with 65% engaged in farming or allied agricultural activities like dairy and poultry farming.[22] Majority of them are small farmers owning less than 2 acres which significantly limits agricultural productivity and economic stability. On the other hand, non-farm labor like seasonal construction work and small-scale trade account for about 18% of the economic activity. Meanwhile, artisanal works, like traditional textile weaving, pottery, and folk crafts, comprise 5%. These artisanal works represent a cultural and economic asset for the area although it has limited scale and market access.

There is a growing trend of youth migration to urban centers and overseas, notably to Canada, the UK, and Italy, in search for better livelihood prospects.[23] Young men (aged 18-35) increasingly migrate abroad which creates transnational networks that influence local aspirations, consumption patterns, and social values.[24] In fact, about 13.3% of rural households in Punjab report at least one member living abroad, with Canada being the top destination.[25] Remittances from this diaspora constitute a significant source of income for many families, supporting basis consumption, education, and home improvements. Despite this inflow of money, economic vulnerabilities still persist due to fluctuating farm yields, limited diversification and exposure to market and climate

risks. This is a salient socio-economic phenomenon in rural Punjab and Gati Harike is a good example of this trend. Diaspora connections also play a role beyond economics because it helps development projects in villages and fosters a sense of pride and global linkage within the communities[26] making the proposed retreat important to be culturally resonant as well so that it can welcome international visitors while nurturing local identity. The Punjabi diaspora actively preserves cultural heritage abroad through gurdwaras, festivals, and language schools, while also contributing to evolving identities blending global and local elements.[27]

Punjab faces one of India's highest rates of drug addiction, particularly among the youth, deeply affecting the social fabric and family wellbeing. Together with the rising substance abuse, common health issues include malnutrition, and pesticide exposure.[28] Mental health remains under-addressed, with stigma and limited facilities making isolation and vulnerability worse. Access to healthcare in Gati Harike is limited, with the nearest primary health center located 8 to 10 kilometers away which is a challenge for timely and preventive care.[29] While Gati Harike enjoys low levels of violent crime, social challenges include moderate alcohol-related disturbances and youth delinquency linked to underlying social stressors. Also, concerns about poor lighting and inadequate public sanitation infrastructure contribute to perceptions of insecurity, particularly among women and the elderly. Community facilities are limited, with few dedicated spaces for health, education, and cultural activities. The area lacks specialized spaces for mental wellness, skills development, and interfaith gatherings.

As I mentioned earlier, the culture is rich in tradition with communal activities, vibrant colors, artisanship, and food, reflecting a living, evolving tapestry of faith, art, language and social values. Punjabi culture is one of the richest and most vibrant in the Indian subcontinent. Shaped by centuries of history, religion, and social interaction, it deeply tied to land, agriculture, and spiritual resilience. The Punjabi language, written in the Gurmukhi script, is the primary cultural vehicle. It is an Indo-Aryan language rich in idioms, proverbs, and poetry, encapsulating the Punjabi worldview which is warm, filled with humor, resilient, and spiritual. One of the vibrant expressions of Punjabi culture is through its festivals which are closely tied to both agricultural cycles and religious observances. Festivals like Baisakhi, Gurpurabs, Maghi, and Lohri strengthen communal ties, reinforce spiritual teachings, and sustain cultural continuity.[30] Punjabi music is known for its energetic rhythms and emotive melodies, ranging from spiritual kirtan to folk and contemporary genres. Instruments like the dhol, tumbi, and chinta accompany traditional dance forms like bhangra and giddha. Kirtan, the devotional singing of Gurbani, uses melodic structures that invoke meditative states and communal harmony, influencing cultural soundscapes of villages like Gati Harike.[31] Punjabi cuisine is hearty and flavorful, reflecting the agricultural abundance of the region, and also embodies hospitality and celebration where meals often extend into social occasions, showing food's role in bonding and cultural identity. The communal "langar" meal, served in gurdwaras, showcases the Punjabi values of sharing and equality. Staples include wheat-based breads like roti and makki di roti, lentils (dal), and an array of vegetables while traditional dishes like "sarson da saag" and "chole bhature" are well loved.

Punjabi society is traditionally revolving around extended family systems with strong kinship bonds. In fact, joint multi-generational families living under one roof

is still very common in rural areas, fostering mutual support and collective responsibility. The family is patriarchal but women are respected as custodians of culture and faith. They actively participate in domestic management, crafts, and also play significant roles in religious rituals and community decision-making.[32] The culture places great importance on hospitality, respect for elders, community solidarity, and resilience, where the concept of Chardi Kala (eternal optimism and high morale), permeates social attitudes and responses to hardship.[33] Seva (selfless service) and Vand Chakna (sharing with others) also extend beyond religious setting and into everyday life, encouraging generosity and social justice. The agricultural lifestyle and spiritual traditions are also linked to Punjabi arts and crafts. Phulkari embroidery's vibrant motifs adorns shawls, turbans and garments, while traditional pottery, wood carving, and weaving often carry symbolic patterns reflecting religious and natural motifs.[34]

Analysis and Design Implications

The significant presence of Scheduled Castes as well as the gender disparities on education, employment opportunities, and others calls for a commitment to equity and inclusivity in the design. Gurbani's principle of Sarbat da Bhala or welfare of all, demands non-hierarchical, barrier-free environments, therefore the proposed retreat should actively dismantle social segregation. These can be through universally accessible pathways and communal areas; empowering marginalized groups, especially women, in the activities and programs of the retreat; facilitating inter-caste dialogue spaces rooted in Gurbani's teachings on equity; and gender-responsive, safe, and welcoming design.

The high rate of migration shows the need for more local opportunities that can anchor the population, especially the younger generations, both economically and spiritually. The proposed retreat can have skills-building and vocational training spaces for things like traditional crafts, organic farming, and wellness therapies which they can also showcase to visitors. A cultural incubator fostering Punjabi heritage along with contemporary knowledge is also a good way for women engagement and empowerment since women are respected as culture bearers. The retreat can also be significant for the diaspora to have a site to reconnect with ancestral roots to mitigate cultural alienation.

The health and substance abuse challenges in the area show a need for the retreat to model holistic care. Trauma-informed design, nature-based therapy, and meditation gardens can mitigate mental health stigma and promote community resilience especially among the youth battling substance addiction. Quiet zones filled with communal and individual meditation areas, spaces for counseling and wellness education, and integration of traditional healing practices can be useful to address these challenges. A design that fosters embodied spirituality where it transcends beyond mere healing and nurtures the spirit and collective wellbeing is the goal.

Integrating Punjabi vernacular architecture is also important for rootedness and celebration of the vibrant cultural expression. Chowks (courtyards), charpais, jaalis (lattices), and local sourced materials such as brink and timber celebrate regional identity while ensuring climate resilience.[35] Communal rituals and kirtan can be supported by acoustically tuned meditation spaces and prayer halls. Flexible indoor-outdoor transitions create multi-use spaces for festivals, storytelling, and theater. Incorporating sacred geometry and Gurbani metaphors like

the Five Elements reinforces spiritual narratives and enhances spiritual resonance. The goal is for the retreat to be a living cultural landscape rather than a mere collection of buildings and spaces.

Although the area is relatively safe, incorporating strategies like Crime Prevention Through Environmental Design (CPTED) enhances the sense of safety and social inclusion, especially among vulnerable populations like women, youth, and the elderly. The design should also respond to climate risks like monsoon flooding by placing structures in elevated areas and employing permeable landscaping while at the same time meeting sustainable waste management and sanitation standards.[36] The project should foster community participation and stewardship for social capital and collective identity through participatory governance and inclusive programming.

Assessment Aspect	*Current Situation*
Population	~2,650; 51.2% male, 48.8% female; gender disparity in education and employment still persist; 43% schedule caste; median age 27 years old
Literacy Rates	Overall: ~68.3%; dropout due to socio-economic factors
Primary Occupations	Agriculture (65%); non-farm labor (18%); artisanal crafts (5%)
Income Levels	Rs.6,000 to Rs.30,000 monthly; Non-Resident Indian (NRI) remittances vital to local economy
Migration Trends	Significant youth outmigration; diaspora linkages influence culture and funding
Health Access	Limited local facilities; issues with substance abuse, mental health and malnutrition
Crime and Safety	Low violent crime with moderate social disturbances, but there is need for safe, inclusive public spaces
Culture and Practices	**Language:** Punjabi (Gurmukhi script); Malwai dialect; rich oral and literary traditions **Religion:** Predominantly Sikhism (97%); community-centric worship and equality principles **Festivals**: Rich in colorful and lively festivals with religious and agrarian significance like Baisakhi, Gurpurabs, Maghi, Lohri **Music & Dance:** Bhangra, Giddha, kirtan; traditional instruments (dhol, tumbi) **Cuisine:** Hearty agrarian diet; communal langar; hospitality **Family Structure:** Extended/joint families; patriarchal but women are the cultural bearers **Social Values:** Hospitality, Chardi Kala (optimism), seva (selfless service), community solidarity **Arts & Crafts:** Phulkari embroidery, pottery, wood carving; traditional theatre and storytelling **Modern Dynamics:** Diaspora influence; cultural fusion in music and identity; adaptation to globalization
Analysis Aspect	*Design Implications / Strategies*
Social Equity	Barrier-free design; caste and gender inclusivity; community dialogue spaces
Youth and Women Engagement	Skills training hubs; cultural incubators; diaspora reconnect programs
Health & Wellness	Meditation gardens; trauma-informed spaces; integrated mental health and healing programs
Cultural Expression	Vernacular materials and expression; sacred geometry; acoustically optimized halls
Safety & Environment	CPTED; sustainable sanitation; climate-resilient design
Community Participation	Participatory governance; inclusive programming; stewardship and social cohesion

Table 6: Materiality and Cultural Continuity Table: Use of local materials, artifacts and techniques to reinforce ecological sustainability and Punjabi cultural identity.

4.3 Landscape

4.3.1 Topography

Current Situation

The surrounding area is largely flat alluvial terrain with gradual sloping towards the river but the site itself experiences different slope patterns from gentle slope to steep slope. The highest point in the site is at 213 meters above sea level (masl) and the lowest point is 196 masl. The site gradient is conducive for water harvesting for water features for the development as it also experiences seasonal waterlogging. The surrounding area's low-gradient floodplain is characterized by fertile alluvial soils with sandy loam topsoil and clayey patches below which is good for agriculture and earth-based construction techniques.[37] Although the site itself is not majority low-gradient floodplain, the soil characteristic is mostly the same since seasonal groundwater fluctuations very much influence its hydrology.

The topography of the site features natural mounds, gullies, and depressions resulting from flood recession, creating micro-contours and drainage paths. Figure 2 shows the contours and site elevation map as well as indicating the lowest point which is on the extreme north of the site and the highest point which is at the extreme south. Visually, the site offers broad panoramic views, especially eastward toward the misty Harike-Pattan at sunrise, and southward toward the River Sutlej. Because the site is relatively open and free of urban vertical structures, it is considered to have a porous boundary blending into agricultural lands and canal pathways which changes colors, textures, and smells year-round.

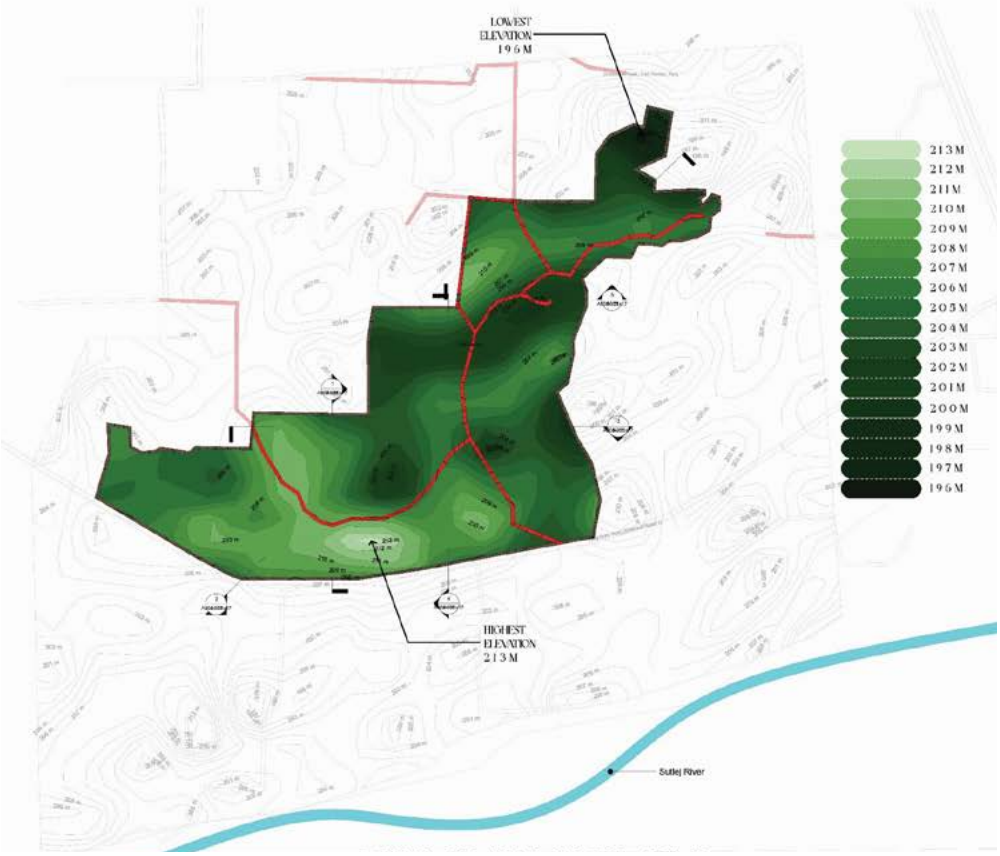


Figure 29. Site in Gati Harike, Punjab. Site Plan (from Google Pro Earth) showing the green forest area with different levels of elevation taken from the sea level, light green (213m) being the highest point and the darkest green (196m) being the lowest elevation point of the Site.

Source: by Author measured from Google Earth Pro

Analysis and Design Implications

The topography of the site offers unique opportunities to integrate ecological, spiritual, and experiential qualities into a Gurbani-inspired retreat. The slopes facilitate passive water movement, stormwater management through bioswales, and natural irrigation strategies leveraging high moisture retention zones. This supports water-edge contemplative spaces and ritual sarovars, as well as seasonal ponds resonating with Gurbani spiritual symbolism of purification and renewal.

The soil's characteristics favor sustainable earth construction techniques like rammed earth and adobe, supporting eco-friendly, lightweight structures which are ideal for meditation pavilions and ampitheaters.[38] Toporaphic zoning encourages a layered spatial diagram where higher elevation areas will have meditation pavilions and decks to highlight the visual dominance and light exposure of the site; mid-slopes will feature prayer halls, langar halls, and kirtan spaces to provide accessibility and airflow; lower elevations will be for water features, rain gardens, and natural cooling to enhance biodiversity and sensory experiences. Visual corridors oriented east and south align with the Harike Wetlands and Sutlej River. This symbolizes spiritual sunrise, allowing contemplative connection to sacred landscapes like Hari-Ke-Pattan. Seasonal gullies and depression will serve as ecological zones showcasing riparian gardens, amphibian habitats, and medicinal herb gardens to further promote regenerative landscape design and support biodiversity. It is also anticipated that migratory birds will visit the retreat site. Whenever earthworks are necessary, on-site cut-and-fill balance will be prioritized, using excess soils for berms, seating mounds, land art, and other uses to minimize carbon footprint and enhance flood resilience.

The site's ascents and descents will be highlighted in the design to echo Gurbani metaphors of inner journey – ascent toward divine unity and descent into humility – making the terrain a living narrative that shapes both physical and spiritual existence.

Assessment Aspect	*Current Situation*
Elevation Range	196 – 213 MASL
Slope Gradient	Generally 0.5 – 1.5 %, gently sloping with some steep areas
Soil Type	Sandy loam topsoil; clayey patches subsoil
Groundwater Level	6 – 12 meters seasonal fluctuation
Key Topographic Features	Natural mounds, shallow gullies, ridges
Visual Landscape	Panoramic views east (wetlands), south (Sutlej River), and around the site (fields)
Analysis Aspect	***Design Implications / Strategies***
Pathways and Circulation	Align with contours, follow gentle slopes, provide universal access, to minimize earthworks and provide intuitive navigation and accessibility
Water Management	Bioswales, ponds, sarovars in low-lying areas; consider waterwheels in higher areas; harness natural water flow
Building Foundation	Lightweight rammed earth, adobe; eco-friendly, suits soil and load capacity and provides thermal comfort
Zoning by Elevation	Meditation spaces on ridges, prayer halls mid-slope, water features in swales, enhances views, airflow, and ecological function
Visual Corridors	Orient east-south for sunrise and spiritual views for connection to sacred landscape and ritual significance
Earthworks	Balanced cut-fill; reuse spoil for berms, seating, etc. for sustainability, flood resilience, and land art
Ecological Zones	Riparian gardens, pollinator gardens, medicinal herbs in gullies for biodiversity and healing landscapes
Symbolic Topography	Emphasize ascents and descents as spiritual journey to embody Gurbani metaphors of devotion and remembrance

Table 7: Environmental Alignment Table: Design aligning built forms with solar paths, water flows, and cosmic rhythms as expressed in Gurbani.

4.4 Green and Blue Infrastructure

Being located in the ecologically sensitive buffer zone of the Harike Wetland Complex known for rich biodiversity and seasonal hydrology, this amazing green and blue infrastructure forms the ecological backbone of the landscape, sustaining diverse habitats and providing essential ecosystem services that are both ecologically and spiritually significant. The area is within the Upper Gangetic Plains moist deciduous forest biome, characterized by native trees like shisham (Dalbergia sissoo), peepal (Ficus religiosa), neem (Azadirachta indica), mango (Mangifera indica), jamun (Syzygium cumini), and ber (Ziziphus mauritiana) which has spiritual significance in Gurbani. Notably, the site supports mature indigenous tree groves along the southern boundary and northern extreme, with several peepal trees that need protection for their spiritual and ecological value. Understory vegetation includes vetiver grass and native medicinal herbs like tulsi, ashwagandha, and brahmi. These are also associated with spiritual symbolism in Gurbani. Around the site, the green infrastructure includes natural vegetation corridors, agroforestry zones, rural orchards, and riparian grasslands that contribute to air purification, carbon sequestration, habitat connectivity, and microclimate regulation. Ecological corridors are supported by windbreaks composed of neem and shisham trees while pollinator habitats support biodiversity through native flowring shrubs like Plumbago and Jasminum.

Blue infrastructures are water features which include seasonal ponds, monsoon runoffs, irrigation canals, and other perennial waterways, as well as the nearby Sutlej River which has historical significance for Punjab. The site also features groundwater

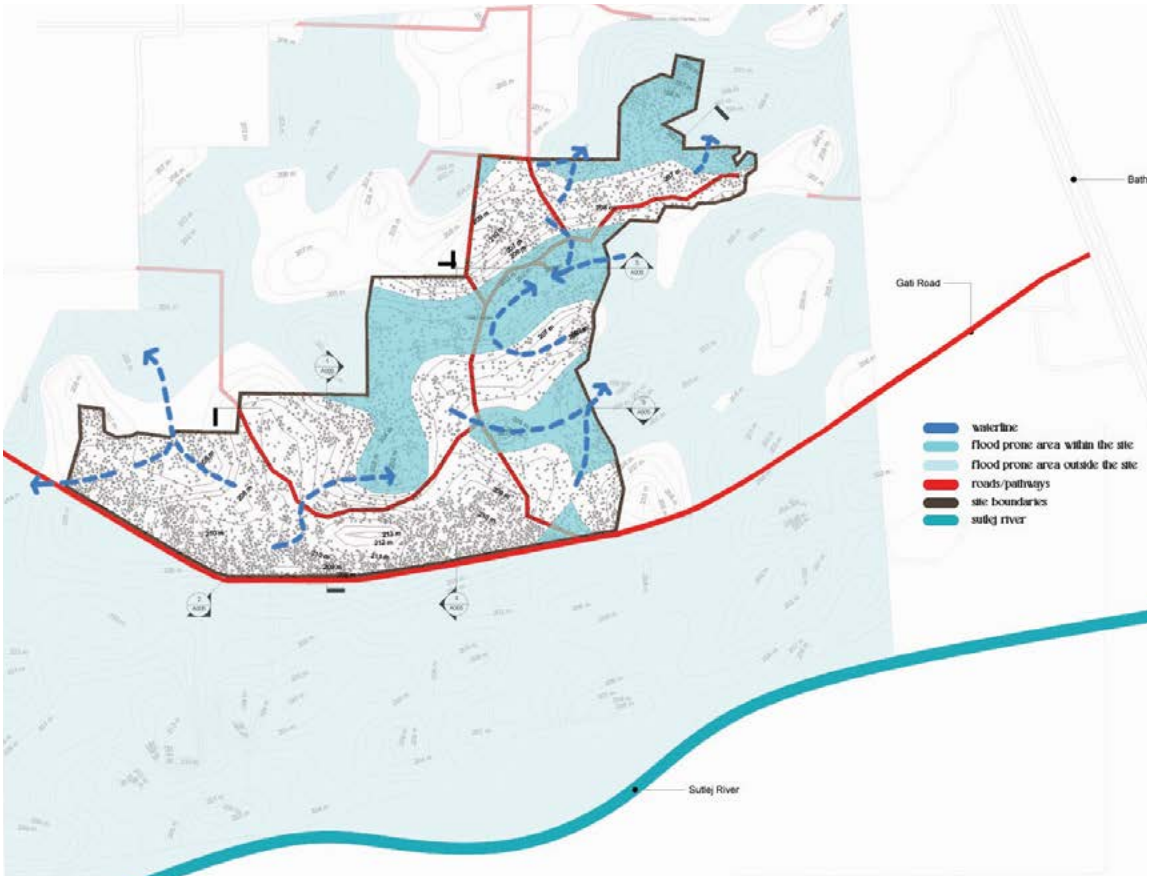


Figure 30. Site Plan showing the direction of flow and collection spots for the water on the site, especially during the monsoon season
Source: By Author.

recharge zones in low-lying clay depressions, supporting aquifer replenishment. The topography and rainfall data indicates possible flood prone areas indicated in the map below. The moderate clay content with high porosity character of the soil indicates occasional ponding during heavy rains. The nearby Harike Wetland itself functions as a hydrological sink and biodiversity refuge, controlling flooding, filtering runoff, and stabilizing the regional climate.[39]

Analysis and Design Implications

The integration of green and blue infrastructure is very important in the proposed Gurbani-inspired retreat because it will act as a regenerative system integrating both ecological resilience and spiritual resonance rooted in the Five Elements: water, air, earth, fire, and space.

Approximately 30 – 35% of the site should be preserved as green corridors and forested buffers, preserving existing mature trees and expanding native planting with species having spiritual significance in Gurbani. Another 30% of the site can be dedicated to agro-spiritual gardens integrating community permaculture zones growing medicinal and culturally significant plants alongside meditation spaces. Pollinator gardens and rewilding zones to attract birds, butterflies, and amphibians will also be spread around the entire site to complement the biodiversity goals of the project.

For blue infrastructure, at least 15% of the site will be dedicated to water bodies and features such as interpretation of sarovars, constructed wetlands, rain gardens, swales, stepped wells, and other stormwater management, erosion control, and groundwater recharge measures. A central pond which is an interpretation of a sarovar in Gurdwaras will be a significant feature of the landscape.

The design will embody neuroarchitectural principles by promoting sensory grounding, immersion in nature, and spatial stillness to enhance emotional and spiritual resonance. Open spaces will prioritize spiritual openness with at least 40% of the site remaining soft-scape, including meditation meadows, sacred tree sanctuaries, medicinal gardens, langar areas near water edges, and walking circuits aligned with natural light cycles. Sustainable Urban Drainage Systems (SUDS) will be employed including bioswales, permeable paths, rainwater harvesting, constructed wetlands, etc to mitigate flood and erosion risk as well as promote aquifer recharge. These will be designed as spiritual landscapes reflecting Gurbani metaphors of cleansing and awakening, supporting a holistic experience with environmental harmony.

Assessment Aspect	*Current Situation*
Green Infrastructure	Native forest species, agroforestry, riparian grasslands, windbreaks, pollinator gardens
Blue Infrastructure	Seasonal naala, perennial waterways, canal proximity, groundwater recharge zones, wetlands
Soil & Hydrology	Porous clay soil, occasional ponding, groundwater seepage
Ecological Corridors	Tree belts, hedgerows, wildlife corridors connecting wetlands to agricultural mosaics
Cultural Trees	Mature peepal and neem trees recommended for protection
Analysis Aspect	***Design Implications / Strategies***
Green Infrastructure	Preserve 30–35% of site for green corridors and forested buffers, native planting, agro-spiritual gardens
Blue Infrastructure	At least 15% water bodies: constructed wetlands, rain gardens, sarovar
Green-Blue Synergy	Zero discharge, carbon-negative, microclimate regulation
Spatial Programming	40% softscape, contemplative meadows, sacred groves, walking circuits
Resilience Measures	Sustainable Urban Drainage System (SUDS): bioswales, constructed wetlands, rainwater harvesting

Table 8: Site Integration Strategies Summary Table: Design responses aligned with terrain, ecology, and natural vegetation to ensure minimal impact on the Site

4.5 Climate

The Harike region is covered by CWA-Humid subtropical climate type which is characterized by seasonal rains, dry winters, and intense summer heat. The sun-path would favor south-facing openings for winter sun with the need for shading during the summers. The prevailing wind pattern is northeast during summer, creating dry heat which can be addressed by vegetation and water features throughout the site to cool down the summer microclimate.

Assessment Aspect	*Current Situation*
Climate Zone	Semi-Arid (Hot) – Transitional
Köppen Classification	Cwa – Humid subtropical with dry winters, hot summers
Temperature Range	Summer: 30–45°C; Winter: 5–18°C
Annual Rainfall	600–700 mm, mostly Jul–Sept
Relative Humidity	30–85% (seasonal variation)
Wind Direction/Speed	Summer: W/SW (15–20 km/h); Winter: N/NW (5–10 km/h)
Solar Radiation	5.5–6.5 kWh/m²/day
Vegetation Buffers	Dense trees (neem, pipal) on east boundary
Topography	Earthen mounds creating cool pockets
High Summer Heat	Thick earthen walls, shaded courtyards, ventilated roofs
Cold Winters	South-facing glazing, passive solar heating, insulation
Monsoon Rainfall	Elevated plinths, bioswales, rain gardens, permeable paving
Wind & Dust	Vegetative windbreaks, inward-facing courtyards
Solar Radiation	Solar panels, pergolas, jaali screens, optimal orientation
Microclimate Zones	Preserve shade pockets, orient outdoor spaces eastward
Spiritual Symbolism	Climate as metaphor for inner awakening, integrate rituals

Table 9: Site Integration Strategies based on Orientation & Climate

4.6 Movement and Infrastructure

4.6.1 Road Hierarchy and Access

The major access to the site from distant areas is the State Highway 20 (Amritsar-Ferozepur Road) complemented by a local road which is the direct access toward the site. There are also other rural roads with potential to be enhanced with eco-paving and signage as well as the potential to create walking pilgrimage routes linked to local gurdwaras.

Road Type	Description	Current Situation	Function
National Highway 54 (NH 54)	Major arterial route connecting Amritsar to Ferozepur	Well-maintained, high traffic volume	Regional connectivity for vehicular transport
Local Access Roads	Roads branching from SH 20 to Gati Harike and nearby villages	Narrow, varying maintenance quality	Direct access to site and local settlements
Rural Paths	Smaller roads linking rural settlements	Underdeveloped, often unpaved	Local connectivity; potential pedestrian routes
Pedestrian/Cycle Infrastructure	Minimal to non-existent dedicated routes	Limited or absent	Limited support for non-motorized transport
Analysis Aspect	**Recommendations**		**Purpose / Benefit**
Vehicular Access	Main access via local road from SH 20; secondary rural access for emergency/ services		Efficient, safe traffic management
Pedestrian & Cycle Paths	Create dedicated soft-mobility routes aligned with desire lines and pilgrimage routes		Promote sustainable, reflective travel
Pilgrimage Route Design	Develop interpretive wayfinding inspired by Gurbani; add prayer stops and shaded rest areas		Enrich spiritual experience; cultural preservation
Infrastructure Enhancements	Eco-paving, vegetative wind buffers, benches, and shaded corridors		Improve comfort, reduce heat and dust
Public Rights of Way	Preserve and formalize existing footpaths		Maintain traditional movement; enhance connectivity
Community Integration	Extend active travel links to neighboring towns and villages		Foster socio-economic inclusion; reduce vehicular dependency

Table 10: Mobility and Site Access Table: Low-impact, reflective mobility systems supporting sustainable travel and meditative movement across the site.

4.6.2 Public Transport

As mentioned above, the site can be accessed through the State Highway 20 or the Amritsar-Ferozepur Road. This means that it can be publicly accessed by bus but the nearest bus depot is at the town center of Harike which is about 2 kilometers from the site. The nearest rail station is the Makhu station which is about 10 kilometers from the site. Because of this, modest shuttle service from these main transport hubs to the site should be provided and considered during the design because it is anticipated that the development will increase the influx of people to and from the site

Transport Mode	*Location From Site*	*Key Features*	*Limitations*
Bus	2 km (Harike Bus Station)	Regular regional bus services to major cities	Moderate walking distance; limited pedestrian infrastructure
Rail	10 km (Makhu Station)	Daily trains connecting to major routes	Distance requires additional transport; no dedicated shuttle or last-mile service
Plane	65 km (Amritsar)	—	—
Pedestrian Access	From site to bus/rail hubs	Minimal dedicated walkways or shelters	Safety and comfort concerns; discourages walking
Analysis Aspect	***Recommendations***		***Purpose / Benefit***
Shuttle Service	Introduce electric/biodiesel shuttles connecting transport hubs and local sites		Improved last-mile connectivity; increased public transport use
Pedestrian Pathways	Develop safe, shaded, culturally themed walkways and waiting areas		Enhanced safety and comfort; encourage walking
Land Use Planning	Concentrate higher density near transport nodes; distribute buildings to promote movement		Reduced vehicle dependency; improved internal circulation
Sustainability	Use eco-friendly shuttle vehicles; integrate with active travel routes		Aligns with environmental goals; supports healthy lifestyles

Table 11: Site Accessibility Transport System

4.6.3 Utilities and Infrastructure

There is an existing water supply, sanitation facilities, and electricity in areas around the site but not in the site itself. Borewells, water wheels, and rainwater harvesting would be needed while there is also a potential of bio-septic tanks as well as solar microgrid for buildings. Another option for electrical supply is to also connect to the local grid. Mobile connectivity is also available in and around the site with the potential for fiber optic connection.

4.7 Built Form

4.7.1 Site Context and Spatial Integration

As mentioned above, the site is located in a rural area surrounded by rice fields, a river, and wetland, with patches of residential and farm structures with an organic pattern of access roads. As such, the project will be a standalone development in an organic rural grain. The proposed retreat can be a catalyst for the sustainable development of the area given its proximity to the Ramsar wetland Hari-ke Pattan. This provides the opportunity for an organic site layout that can be inspired by mandalas, sacred geometry and the chakras.

4.7.2 History and Archaeology

The name "Punjab" is derived from the five rivers that historically run through the state. The historical development of Punjab is intertwined with these rivers. The site's location at the confluence of the Sutlej and Beas Rivers, two of these historically significant rivers in Pubjab, which is also the location of Harike Wetland, makes it a very important site. Added to this is the fact that Gati Harike lies near historic routes used by Guru Nanak's travels.

Waterway stories, cultural motifs, and oral histories can be used as spatial narrative drivers to preserve and present these significant aspects of the Punjabi cultural tapestry.

4.7.3 Building Scale, Height, and Density

The surrounding area is characterized by small scale, low-density, low-rise (usually 1 to 2 storey) structures signifying a rural horizontal character of development. Given the proximity of the site to the Harike Wetland with significant populations of seasonal migratory birds, it would be prudent to maintain this small-scale, low-density, low-rise character for the project.

4.7.4 Building Character and Building Traditions

The prevalent building forms and architectural character of the area is typical of rural Punjab. It is characterized by the use of natural locally available materials with vernacular characteristics still very prevalent. Typical of Punjabi culture, vernacular architecture also presents vibrant colorful motifs.

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CHAPTER 5

DESIGN INTERVENTIONS

5.1 Development Concept/Design Moves

The Gurbani-inspired sanctuary in Gati Harike, Punjab, is conceived as a transformative architectural project that interweaves spiritual wisdom, cultural heritage, and ecological sustainability. Far from a conventional religious edifice, this retreat aims to facilitate an inner journey of self-discovery and connection to the divine, offering a holistic experience rooted in ancient teachings and contemporary design principles. The design strategy translates profound philosophical concepts into tangible, experiential spaces, fostering an environment for spiritual growth, cultural appreciation, and environmental harmony. The overall goal is to create a space that fosters "inner journey and transformation," rather than focusing on "outer rituals"

5.1.1 The Precendents for spatial behavior

Tregun Maya (Illusion):

The design acknowledges Tregun Maya ਤ੍ਰੈ ਗੁਣ ਮਾਇਆ ਮੋਹੁ ਹੈ ਗੁਰਮੁਖਿ ਚਉਥਾ ਪਦੁ ਪਾਇ ॥[1] as a pervasive force that distracts individuals and binds them to the material world ਮਾਇਆ ਮਮਤਾ ਮੋਹਣੀ ਜਨਿਿ ਵਞੁ ਦੰਤਾ ਜਗੁ ਖਾਇਆ ॥[2] Gurbani teaches that humans must overcome the Tregun May. The three types of Tregun Maya are [Tam Gun (Five Vices: Lust, Anger, Greed, Attachment & Ego), Raj Gun (Worldly Desires) & Sat Gun (Divine Virtues: Kindness, Forgiveness, Compassion, Unconditional Love, Care)]. These five vices reside in the body as some form of entities in different areas of our body. ਇਸੁ ਦੇਹੀ ਅੰਦਰਿ ਪੰਚ ਚੋਰ ਵਸਹਿ ਕਾਮੁ ਕ੍ਰੋਧੁ ਲੋਭੁ ਮੋਹੁ ਅਹੰਕਾਰਾ ॥[3] These five thieves dwell within the body and drain your vital energy, the inner spiritual essence known as Amrit (Ambroisal Nectar). They also rob you of God's Naam(Name), the divine source that nourishes and sustains this sacred energy.

Gurbani also called maya an "illusion" that holds people in attachment and overcoming it leads to a higher state of consciousness. This inner transformation leads to union with the divine, ultimate truth, or a state of total consciousness, eternal peace, and bliss. The poetic diction of the Guru Granth Sahib uses symbolic meanings and images from nature and everyday life to make metaphysical experiences like Maya comprehensible.[4] ਚੰਦਨ ਕੈ ਸੰਗਿ ਤਰਵਰੁ ਬਗਿਰਓਿ ॥

Five Elements and Seven Chakras:

The goal is to facilitate spiritual awakening, personal growth, and a shift from unconsciousness to consciousness. This concept is shown by mapping the progressive journey through the Seven Chakras onto the physical site, symbolizing a shift from "unconsciousness to consciousness" and from "materialistic to divine."[5] The seven chakras are presented as "energy centers in the body," often depicted as geometric mandalas representing vibrational frequencies and levels of consciousness. When balanced, they positively influence physical, emotional, and spiritual well-being. This journey represents a shift from "unconsciousness to consciousness" and from a "materialistic to divine" state. Gurbani provides vivid instructions on how to access... to achieve higher consciousness.[6]

The Gurbani emphasizes living in reverence, balance, and stewardship with these five natural elements, as they are essential for both the human body and the environment.[7] The goal is to foster "awareness" of these elements and the "need to balance them," which, in the design, is intended to be achieved through architectural spaces and activities such as earth-based activities, gardening for air, and water bodies.

Utilize the metaphor of the Nine Gates (representing physical openings in our body) leading to the Dasam Dwar (the spiritual door to the Divine). Central to the spiritual progression is the metaphor of the Nine Gates and the Tenth Gate. The five senses use the nine gates to perceive the external world.

ਨਉ ਦਰਵਾਜੇ ਕਾਇਆ ਕੋਟੁ ਹੈ ਦਸਵੈ ਗੁਪਤੁ ਰਖੀਜੈ ॥[8] The Dasam Dwar (Tenth Gate) is closely associated with the Seventh Chakra. The Gurbani emphasizes the "magnificence of the Spiritual Journey," and architectural elements like "spatial sequencing can reflect the journey toward awakening and transformation. The concept aligns with the broader Gurbani teachings on spiritual progression and transformation.

Use portals, gateways, activities related to five elements to symbolize passage through these states, culminating in a hidden, spiritual multi-faith center at highest point. Guide visitors beyond materialistic distractions towards spiritual focus and enlightenment through isolated and common meditative spaces. Conceive the entire site as a journey from the materialistic world towards spiritual union from Entrance to the end through different programs and activities like pottery, music, water therapy, herbal gardens, common gathering spaces etc. These programs would help balance the five elements within the body by generating the "mixture of neurotransmitters" like dopamine, endorphins, and endocannabinoids, noradrenaline, oxytocin, serotonin that contributes to reward and pleasure.[9]

Make the "materialistic" red chakra visible from afar, while the "divine" violet chakra (multi-faith center) is only visible up close. This deliberate obscuration fosters "faith" and "trusting the process." The sounds of falling water, bamboo rustle, and tree rustles, which help to "subdue the sound of the people" and external distractions, fostering an atmosphere conducive to inner calm and reflection. The continuous rhythms of nature help to settle chaos. Using landscape elements such as water, shade, and natural soundscapes, the design aims to guide visitors into a more "settled, reflective state" as they move through different zones. Intentional curves and variations in pathways symbolize that spiritual growth is not linear, subtly guiding the visitor's focus. Supported by divine proportions, chakras,[10] materiality, sacred geometry, ritual engagement, and phenomenology, a spiritually engaging sanctuary for restoration and transformation would be created.

The design would incorporate the geometry of circles and squares to merge the cosmos' intangible spirituality with tangible materialism. This approach transcends cultural and historical boundaries, forming a symbolic language that conveys meaning beyond typical cultural or stylistic norms.[11]

Isolated Meditation Spaces: The design includes provisions for "isolated meditative experience" within structures like stepwells, inspired by examples like Surya Kund at Modhera, which feature small cells for individual contemplation. The goal is to provide spaces where one can "sit alone and look at the water body." Likewise, each Chakra zone will feature dedicated meditative spaces and

secluded chambers, offering visitors a moment to pause, reflect, and recalibrate before engaging with the immersive experiences in the activity zones.

Connecting with Elements: Activities related to the five elements (e.g., agricultural work like plowing for earth-based activities, planting orchards, pottery workshops, playing with mud, breaking the pots) can foster a connection to nature and promote rootedness, detachment, joy, awareness, and balance, leading to gratitude for the natural world.

These design moves collectively form a comprehensive strategy to facilitate a holistic transformation, allowing visitors to shed materialistic distractions and embrace a path of spiritual growth, peace, and compassionate living, aligning with the core principles of Gurbani.

5.2 Transformation through Gurbani and Architectural Lens

Personal and spiritual growth are intertwined, and engaging in practical, hands-on experiences within specific environments can foster this. This internal metamorphosis, transitioning from negative traits to positive virtues, aligns individuals with their innermost nature, leading to a life of purpose and thankfulness.[12] This concept bridges spiritual understanding with scientific inquiry, promoting self-discovery, confidence, and compassion.[13] The aim of this transition is to create a sanctuary that not only provides physical shelter but actively facilitates a profound spiritual journey from vices to virtues, rooted in Gurbani principles, other spiritual theories and responsive to its cultural and environmental context. An intentional effort has been made in designing Figures 8 and 9 to illustrate the transition from a negative to a positive mindset across multiple levels, physical, emotional, and mental, clearly mapping each stage of the transformative process. The tables also incorporate selected theoretical frameworks and architectural components that exemplify pathways for achieving this transformation at physical, emotional, and mental levels.

Microcosm is the reflection of the macrocosm: Gurbani says that the One who pervades the Universe also dwells in the body; whoever seeks Him, finds Him there.[14]

ਕਾਯਉ ਦੇਵਾ ਕਾਇਅਉ ਦੇਵਲ ਕਾਇਅਉ ਜੰਗਮ ਜਾਤੀ ॥ (ਏ੯੫–੧੩, ਧਨਾਸਰੀ, ਭਗਤ ਪੀਪਾ ਜੀ)

kaa-ya-o dayvaa kaa-i-a-o dayval kaa-i-a-o jangam jaatee.

Within the body, the Divine Lord is embodied. The body is the temple, the place of pilgrimage, and the pilgrim.

ਕਾਇਅਉ ਧੂਪ ਦੀਪ ਨਈਬੇਦਾ ਕਾਇਅਉ ਪੂਜਉ ਪਾਤੀ ॥੧॥ (ਏ੯੫–੧੩, ਧਨਾਸਰੀ, ਭਗਤ ਪੀਪਾ ਜੀ)

kaa-i-a-o Dhoop deep na-eebaydaa kaa-i-a-o pooja-o paatee. ||1||

Within the body are incense, lamps and offerings. Within the body are the flower offerings. ||1||

ਕਾਇਆ ਬਹੁ ਖੰਡ ਖੋਜਤੇ ਨਵ ਨਿਧਿ ਪਾਈ ॥ (ਏ੯੫–੧੪, ਧਨਾਸਰੀ, ਭਗਤ ਪੀਪਾ ਜੀ)

kaa-i-aa baho khand khojtay nav niDh paa-ee.

ਜੋ ਬ੍ਰਹਮੰਡੇ ਸੋਈ ਪਿੰਡੇ ਜੋ ਖੋਜੈ ਸੋ ਪਾਵੈ ॥ (ਏ੯੫–੧੫, ਧਨਾਸਰੀ, ਭਗਤ ਪੀਪਾ ਜੀ)

jo barahmanday so-ee pinday jo khojai so paavai.

The One who pervades the Universe also dwells in the body; whoever seeks Him, finds Him there.

I searched throughout many realms, but I found the nine treasures within the body.

It also suggests the unity and interconnectedness linking each individual and the Universe. Therefore, our homes should ideally harmonize and align with the natural environment where we dwell.

PHYSICAL STATE	MENTAL/PSYCHOLOGICAL STATE	
Clutter to Immaculateness	*Indecisive to Precise*	

DESIGN STRATEGIES: INDOOR GREEN SPACES, LIVING WALL, BAL

CONTEMPORARY ARCHITECTURAL CONVENTIONS LIKE SUSTAINABILITY





Figure 31 A & B. Clay Paving



Figure 31 C.[1] Marble Floor



Figure 31 D.[2] Eugene Pandala – Artist's retreat built with earth & stone

Figure 32 A.[3]



Figure 31 E. Rubble, an assortment of stone and earth, is a common building material in the 11th and 12th century domestic architecture.



Figure 31 F. Mud bricks also a common building material for walls in domestic and humble houses.



Figure 31 G. Timber used for wall framework in ancient houses and rubble houses.



Figure 31 H.[8] 'Breathe' – An Earth House with locally-made compressed earth blocks, bricks, jaalis and courtyards

Figur



Figure 31 I. Limestone used as a finishing material in monumental building construction.



Figure 31 J. Thatch is a roofing material typically made of straw or reeds, especially in tropical regions.



Figure 31 K. Terra cotta tiles were used as a roofing material in ancient construction.

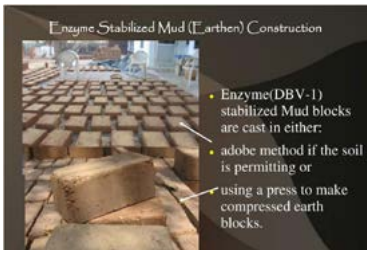


Figure 31 L.[14] Stabilized Mud Blocks (SMB) Construction

(dry inorganic subsoil, non-expansive clay, aggregate, and sometimes a small amount of portland cement)

Adobe blocks – Traditionally, adobe mud blocks are hand-shaped or made in wooden moulds and left to dry under the sun after casting.

Compressed earth blocks – The compressed earth block are made using a manual or motorised press. The method includes moistening the soil with water or stabilizer and then pouring it into a compacting steel press for compaction.

"BREATHE" is indeed an accurate name for this project. The earthen palette o
sizes an eco-living lifestyle. Here, the designers have incorporated various nte
patterns, stained windows in the staircase, perforated wall patterns in the brick
the eco-living concept, the house showcases rammed earth walls with a clever

The Jaali aids in ventilation with micro Chajjas made with waste Granite trims
ing to the overhang-less edhes of the house, and not only protecting the earth
from the western sun.

Gurbani Verse

Air, a mixture of several gases, is the invisible provider of breath. Thus it exerts
Dev procliamsin his hymns that we can learn equality and love for all from the
beings without any distinction of caste, class, colour or creed [3].

ਸੀਤ ਮੰਦ ਸੁਗੰਧ ਚਲਿਓ ਸਰਬ ਥਾਨ ਸਮਾਨ ॥ ਜਹਾ ਸਾ ਕਿਛੁ ਤਹਾ ਲਾਗਿਓ ਤਿਲੁ ਨ ਸੰਕਾ ਮਾਨ ॥

Seet mand suganDh chali-o sarab thaan samaan. Jahaa saa kichh tahaa laag
The calm and fragnant wind gentally blows upon places alike. It touches all the
bit of hesitation (Mehl 5, SGGS, p 1018).

Guru Arjan Dev articulates that a God-conscious being, like the wind, looks up

ਬ੍ਰਹਮ ਗਿਆਨੀ ਕੈ ਦ੍ਰਿਸਟਿ ਸਮਾਨਿ ॥ ਜੈਸੇ ਰਾਜ ਰੰਕ ਕਉ ਲਾਗੈ ਤੁਲਿ ਪਵਾਨ ॥

Barahm gi-aanee kai darisat samaan. Jaisay raaj rank ka-o laagai tul pavaan.
The God-conscious being looks upon all alike, like the wind, which blows equa
5, SGGS, p 272).

1 https://in.pinterest.com/nareshmannat/makrana-marble/
2 https://commons.wikimedia.org/wiki/File:Sreeraj_Gopinathan_Project_OWIYAM_45.jpg
3 https://architizer.com/blog/inspiration/collections/sacred-block/
4 https://threeblindmen.photoshelter.com/image/I0000Bbxy0ihqdqI
5 https://vikalpsangam.org/article/western-architecture-is-making-indias-heatwaves-worse/
6 https://en.wikipedia.org/wiki/File:Chandigarh_Rock_Garden.jpg
7 Both taken by Author.
8 https://www.goodhomes.co.in/home-and-design-trends/architecture/tour-this-consciously-designed-karnataka-home-that-channels-an-earthy-aura-8476-2.html
9 https://www.willseum.com/research/tadao-ando-church-of-the-light
10 https://www.archdaily.com/599780/usick-house-istudio-architecture/54e3d3cfe58eceb94e000003_brick-house-istudio-architecture_09-jpg
11 https://inhabitat.com/michael-reynolds-lands-one-of-his-self-sufficient-earthships-at-the-end-of-the-world/michael-reynolds-earthship-argentina-6/
12 https://share.google/images/ZajOv6knQRpDR9HWp
13 https://www.flickr.com/photos/earthshipkirsten/3471114403
14 https://www.slideserve.com/meira/enzyme-stabilized-mud-earthen-construction-using-dbv-1-project-funded-by-nabard

TRANSITION

Emotional Transformation	*Personal/Spiritual Experience*	*Human Life*	*Architecture*
Confusion to Clarity	• Healing • Relaxation • Interaction • Harmony • Freedom • Appreciation • Gratitude	• Clarity in thoughts • Being honest • Expressing yourself humbly or truthfully • Being authentic, not fake • Using appropriate words to resolve the matter	• Natural & Authentic Elements • Order in the new form • Void to Solid Ratio for proper ventilation and natural light

LCONIES (JHAROKAS), NATURAL LIGHT, VENTILATION, MATERIALS

PUNJAB CULTURE & HERITAGE

Place Based Conventions



Peter Zumthor – Bruder Klaus Field Chapel

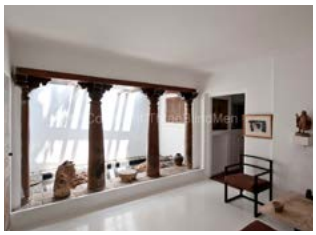


Figure 32 B.[4] Geoffrey Bawa – Balcony Space



Figure 32 C.[5] Screens (Jaalis) – Persian Architecture, Punjab



e 32 D.[9] Tadao Ando – Play of Light



Figure 32 E.[10] Curvaceous Brick House – Passive Cooling and local Materials, India



Figure 32 F.[6] Rock Garden, Chandigarh – Punjab

f chosen locally-sourced materials empha-
resting details such as; graphical flooring
s, and leaf inlays in the concrete. As part of
r tire foundation, another detail to consider.



from the quarry laid course to course adapt-
walls from weathering but also shading it



Figure 32 J & K.[7] Jharokas – Nurmahal Serai, Punjab



s an invisible force upon our lives. Guru Arjan
air, as it is a provider of breath of life to all

i-o til na sankaa maan.
e things wherever these are, without even a



on alike.

lly upon the king and the poor begger (Mehl

Figure 32 G[11], H[12] & I.[13] Michael Reynolds – Earthships

PHYSICAL STATE	MENTAL/PSYCHOLOGICAL STATE	
		Emotional Transformation
Chaos to Order	***Depressed to Optimistic***	Distress to Calmness

DESIGN STRATEGIES: CREATING PROGRAMS LIKE WORKSHO



CROWN CHAKRA - ETHER

Sahasrara



THIRD EYE CHAKRA - ETHER

Ajna



THROAT CHAKRA - ETHER

Vishudha



HEART CHAKRA - AIR

Anahata



SOLAR PLEXUS CHAKRA - FIRE

Manipur



SACRAL CHAKRA - WATER

Savdhithan



ROOT CHAKRA - EARTH

Mooldhar

Figure 33 A.[1]



Figure 33 B.[2] **FENG SHUI - BAGUA MAP**

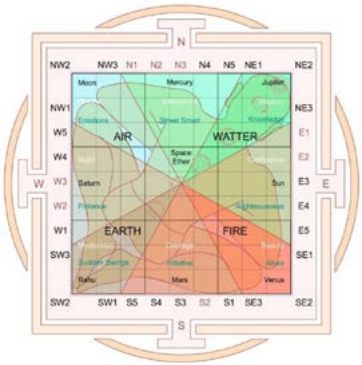


Figure 33 D.[3] **VASTU SHASTRA PURUSHA MANDALA**

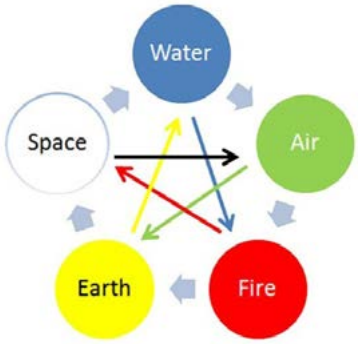


Figure 33 F.[4] **CYCLE OF CREATION**



Figure 33 C.[5] **LOTUS TEMPLE - INDIA**

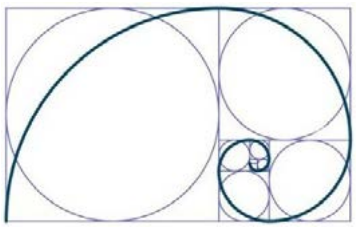


Figure 33 E.[6] **GOLDEN RATIO**

Spirals, the mathematical products of "Fibonacci sequence" and the sacred mean

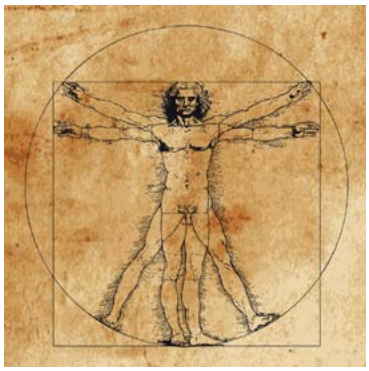


Figure 33 G.[7] **VITRUVIAN MAN - LEONARDO DA VINCI**

Leonardo da Vinci illustrated the mathematical proportions of human body, showing that human being exhibits clearly golden mean proportions in his body based on ratios of 1.618.

The Vitruvian Man drawn by Leonardo Da Vinci is based on Vitruvius, who had written that human proportions should have a relationship in architecture.

GURBANI VERSES

ਕੁੰਡਲਨੀ ਸੁਰਝੀ ਸਤਸੰਗਤਿ ਪਰਮਾਨੰਦ ਗੁਰੁ ਮੁਖਿ ਮਚਾ

kundlanee surjhee satsangat parmaana

The Kundalini rises in the Sat Sangat, t

of Supreme Bliss.

ਸਿਰੀ ਗੁਰੂ ਸਾਹਿਬੁ ਸਭ ਊਪਰਿ ਮਨ ਬਚ ਕ੍ਰਮ ਸੇਵੀਐ ਸ

siree guroo saahib sabh oopar man bac

The Supreme Guru is the Lord and Mas

ਰਾਮਕਲੀ ਬਾਣੀ ਬੇਣੀ ਜੀਉ ਕੀ (੯੭੪-੫)

raamkalee banee baynee jee-o kee

Raamkalee, The Word Of Baynee Jee:

ੴ ਸਤਿਗੁਰ ਪ੍ਰਸਾਦਿ ॥

ik-oNkaar satgur parsaad.

One Universal Creator God. By The Gra

ਇੜਾ ਪਿੰਗੁਲਾ ਅਉਰ ਸੁਖਮਨਾ ਤੀਨਿ ਬਸਹਿ ਇਕ ਠਾਈ

irhaa pingulaa a-or sukhmanaa teen ba

The energy channels of the Ida, Pingala

ਬੇਣੀ ਸੰਗਮੁ ਤਹ ਪਿਰਾਗੁ ਮਨੁ ਮਜਨੁ ਕਰੇ ਤਿਥਾਈ ॥੧॥

baynee sangam tah piraag man majan

This is the true place of confluence of th

ਇੜਾ ਪਿੰਗੁਲਾ ਸੁਖਮਨ ਬੰਦੇ ਏ ਅਵਗਨ ਕਤ ਜਾਹੀ ॥੧॥

irhaa pingulaa sukhman banday ay avg

The Ida, the Pingala and the Sushmana

||1||

ਤਾਗਾ ਤੂਟਾ ਗਗਨੁ ਬਿਨਸਿ ਗਇਆ ਤੇਰਾ ਬੋਲਤੁ ਕਹਾ ਸ

taagaa tootaa gagan binas ga-i-aa tayra

The string has been broken, and the Sk

ਸੰਤਹੁ ਤਹਾ ਨਿਰੰਜਨ ਰਾਮੁ ਹੈ ॥ (੯੭੪-੭, ਰਾਮਕਲੀ,

santahu tahaa niranjan raam hai.

O Saints, the Immaculate Lord dwells th

ਗੁਰ ਗਮਿ ਚੀਨੈ ਬਿਰਲਾ ਕੋਇ ॥ (੯੭੪-੭, ਰਾਮਕਲੀ,

gur gam cheenai birlaa ko-ay.

how rare are those who go to the Guru,

ਸਲੋਕੁ ॥ (੮-੧੦)

salok.

Shalok:

ਪਵਣੁ ਗੁਰੂ ਪਾਣੀ ਪਿਤਾ ਮਾਤਾ ਧਰਤਿ ਮਹਤੁ ॥ (੮-੧੦

pavan guroo paanee pitaa maataa Dha

Air is the Guru, Water is the Father, and

ਦਿਵਸੁ ਰਾਤਿ ਦੁਇ ਦਾਈ ਦਾਇਆ ਖੇਲੈ ਸਗਲ ਜਗਤੁ ॥

divas raat du-ay daa-ee daa-i-aa khayla

Day and night are the two nurses, in wh

1 Set of Seven Chakra Symbols Stock Vector - Illustration of line, sacral: 94373092
2 https://www.researchgate.net/figure/Five-Elements-of-Chinese-Philosophy-Traditionally-traditional-Chinese-colors-have-had_fig1_395432816
3 https://www.makemymandir.com/post/why-vastu-knowledge-is-a-game-changer-for-mandir-design-unlocking-the-power-of-ancient-wisdom
4 https://pinnaclevastu.com/BlogDetail/SCIENCE-BEHIND-VASTU-SHASTRA%20THE-THEORY-OF-FIVE-ELEMENTS
5 https://share.google/images/KcclkWPhR9hKgd02l
6 https://www.vecteezy.com/vector-art/20455519-golden-ratio-sign-logarithmic-spiral-in-rectangle-with-squares-and-circles-leonardo-fibonacci-sequence-ideal-symmetry-proportions-template-mathematics-symbol
7 https://en.wikipedia.org/wiki/Vitruvian_Man
8 Guru Nanak Dev Ji. 2025. "Siri Guru Granth Sahib, Page 973." SikhNet. Accessed November 22, 2025. https://www.sikhnet.com/oldsikhnet/sggs/translation/0973.html..
9 https://amritsar.guide/Locations/getlocationdetails/344
10 https://www.shortpedia.com/en-in/article/golden-temple-1617968436
11 https://www.accio.com/plp/italian-tiles-floor
12 https://share.google/images/EdFXfhUG0aTTK18fA
13 http://www.lajournal.in/62-2.asp
14 https://collections.vam.ac.uk/item/O17687/painting-bishndas/
15 https://in.pinterest.com/pin/18788523442182090/
16 https://www.researchgate.net/figure/b-Detail-of-Shah-Jahan-hunting-highlighting-the-draft-animals-gardeners-and-irrigators_fig6_364746035
17 https://in.pinterest.com/pin/456552480977873102/
18 https://globalinch.org/article/book-review-phulkari-from-punjab-traces-every-thread-of-punjabs-embroidery/
19 https://www.nationalwoollen.com/cotton-durries.html

TRANSITION

	Personal/Spiritual Experience		Human Life	Architecture COMBINATIONS OF FIVE ELEMENTS WHAT SENSES GET TRIGGERED AIDS – VISUAL, AUDITORY, TOUCH, SMELL, TASTE.	
	• Creative • Artistic • Happiness • Joy • Knowledge • Inspiration	• Self Esteem • Confidence • Satisfaction • Fulfillment • Accomplishment	• Organizing Routine • Getting rid of unproductive activities • Spending time meaningfully • Learning new skills for personal growth • Engaging in creative and productive tasks	• More organized spaces, forms, designs • Geometry (Sacred), Proportions, • Golden Ratio,	• Ornamentation, Engraved • Designs/Patterns • Vastu Shastra • Feng Shui

OPS FOR HANDICRAFTS, POTTERY, BASKETRY ETC., LIBRARY.

॥
nd guroo mukh machaa.
he True Congregation; through the Word of the Guru, they enjoy the Lord

ਚਾ ॥੫॥ (੧੪੦੨-੧੧, ਸਵਈਏ ਮਹਲੇ ਚਉਥੇ ਕੇ, ਗਯੰਦ)
ch krem sayvee-ai sachaa. ||5||
ster over all; so serve the True Guru, in thought, word and deed. ||5||

ace Of The True Guru:
॥ (੯੭੪-੬, ਰਾਮਕਲੀ, ਭਗਤ ਬੇਣੀ ਜੀ)
seh ik thaa-ee.
a and Shushmanaa: these three dwell in one place.
। (੯੭੪-੬, ਰਾਮਕਲੀ, ਭਗਤ ਬੇਣੀ ਜੀ)
karay tithaa-ee. ||1||
he three sacred rivers: this is where my mind takes its cleansing bath. ||1||
॥ (੩੩੪-੧੧, ਗਉੜੀ ਪੂਰਬੀ, ਭਗਤ ਕਬੀਰ ਜੀ)
an kat jaahee. ||1||
aa - O human being, how can the breaths through these be counted now?

ਮਾਈ ॥ (੩੩੪-੧੨, ਗਉੜੀ ਪੂਰਬੀ, ਭਗਤ ਕਬੀਰ ਜੀ)
aa bolat kahaa samaa-ee.
y of the Tenth Gate has been destroyed. Where has your speech gone?[8]
ਭਗਤ ਬੇਣੀ ਜੀ)

here;
ਭਗਤ ਬੇਣੀ ਜੀ)

and understand this.

, ਸਲੋਕੁ)
rat mahat.
Earth is the Great Mother of all.
(੮-੧੧, ਸਲੋਕੁ)
i sagal jagat.
ose lap all the world is at play.

PUNJAB CULTURE & HERITAGE

Place Based Conventions



Figure 34 A.[9] GATES OF PUNJAB



Figure 34 F.[10] GOLDEN TEMPLE INTERIOR



Figure 34 G.[11] MARBLED FLOOR PATTERN GOLDEN



Figure 34 I.[12] POTTERY



Figure 34 K. COPPER UTENSILS









Figure 34 B[13], C[14], D[15] & E[16]. MINIATURE LANDSCAPE PAINTINGS

Mughal Gardens



Figure 34 H.[17] WOOD WORKING



Figure 34 J.[18] PHULKARI - Needle Thread Work



Figure 34 L.[19] DHARI - like Carpet

5.3 Weaving the Spirit of Punjab

The Punjabi spirit is integrated seamlessly throughout the site. "Integrating Punjabi vernacular architecture is also important for rootedness and celebration of the vibrant cultural expression." Elements like Chowks (courtyards), charpais, jaalis (lattices), and locally sourced materials such as brick and timber celebrate regional identity. The local vernacular architectural language "provides a clear precedent for material continuity and climate responsiveness." The culture of Punjab is "rich in tradition with communal activities, vibrant colors, artisanship," and deeply tied to land, agriculture, and spiritual resilience. Traditional arts and crafts, such as Phulkari embroidery with its vibrant motifs, traditional pottery, wood carving, and weaving, often carry symbolic patterns reflecting religious and natural themes. While Phulkari embroidery's geometric patterns may approach the golden ratio organically through craft, it is not directly based on it.

5.4 The Significance of Water

Water holds immense cultural and spiritual significance in Punjab, whose name "comes from the Persian words panj (five) and aab (water), to mean five waters or five rivers." This name "not only links to the geography but also to the agricultural and cultural antecedence of the people of Punjab. The design incorporates water elements extensively for aesthetic beauty and symbolic purity, reflecting its spiritual symbolism for refreshing and cleansing the inner spiritual world. Gurbani verses also emphasize water, for instance, stating "Air is the Guru, Water is the Father. The design also draws inspiration from traditional practices of washing feet and hands before entering sacred spaces as a sign of cleanliness and respect.

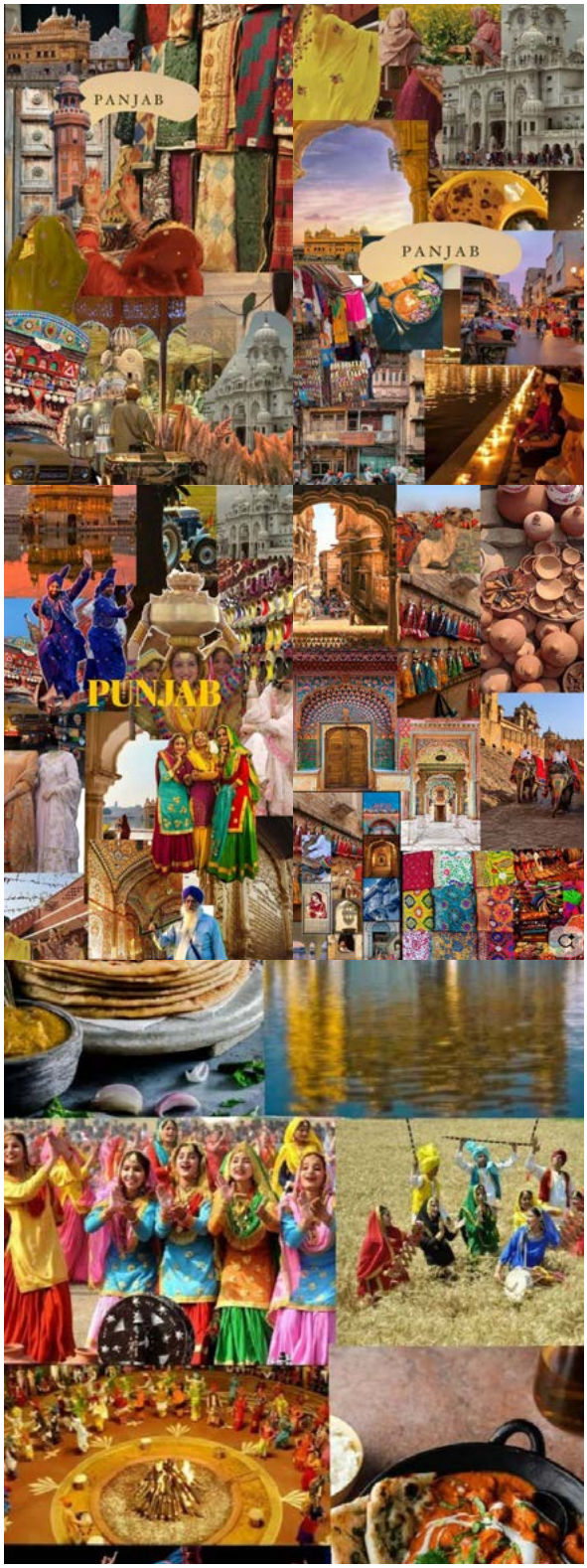


Figure 35. Mood board of Punjab Spirit & Culture;
Source: https://ca.pinterest.com/pin/347762402498024121/

5.5 Sustainable Materials and Low-Impact Design

The project is fundamentally ***a landscape-driven design*** with a strong emphasis on ***sustainability***. The site is located in an eco-sensitive area, requiring responsible land stewardship and sensitive architectural responses. Planning guidelines for the area promote a decentralized, landscape-integrated approach that reflects Gurbani's values of humility, impermanence, and respect for nature. Structures are designed to be low-profile and constructed from locally sourced materials and techniques that reflect Punjabi culture, to promote low-impact, sustainable development, utilizing materials such as adobe and rammed earth and bamboo. The design prioritizes ecological preservation, minimizes building footprints, and enhances native vegetation, with a goal of "not cutting many trees and potentially using wood from dying trees for pathways.

5.6 Empowering the Local Community

The retreat aims to integrate the local community through active participation and employment opportunities. The design incorporates universally accessible pathways and communal areas and focuses on empowering marginalized groups, especially women. The proposed retreat can offer skills-building and vocational training spaces for things like traditional crafts, organic farming, and wellness therapies. This also includes a cultural incubator fostering Punjabi heritage for women's engagement and empowerment, as women are respected as culture bearers. The approach emphasizes that Gurbani's principle of Sarbat da Bhala or welfare of all, barrier-free environments, which intends to dismantle social segregation. This strategy involves bringing the rural people, farmers, and local skilled villagers to do jobs and activities, rather than relying on a single appointed elder or a hierarchical structure, fostering a sense that everyone is equal.

5.7 Overarching Guiding Principles

The design of the Gurbani-inspired sanctuary is underpinned by the following guiding principles, derived directly from the discussion:

Cultural Consciousness | Integral respect for Punjabi cultural heritage, woven throughout the site and its activities, fostering a sense of identity and belonging.

Participation | Empowering personal and communal engagement by involving local villagers and farmers in the project's operation and activities, promoting inclusivity and skill development.

Environmental Adaptation | Harmonizing human habitats with nature through low-impact design, sustainable materials, and a deep respect for the ecological context of the Harike Wetland.

Justice | Ensuring ethical and equitable practices through decentralized leadership and a commitment to treating everyone as equal, fostering an environment free from discrimination and hierarchy.

Ecotechnology | Innovative integration of sustainable materials like adobe, rammed earth, and bamboo, alongside practices like water channeling for gardens, to create environmentally responsible systems.

Beauty | Cultivating qualities that evoke pleasure and elevate the spirit, achieved through the application of the natural symbolism (peacock, lotus), and the aesthetic incorporation of water features

Exploration of Existence (Journey of Awakening)

The diagram explains my thesis research on a journey of awakening. The journey of awakening is a profound exploration of existence, where the soul seeks truth beyond the illusions of duality. Gurbani teaches that human life is a sacred opportunity to transcend the cycle of births and deaths by realizing the divine within and achieving Jeevan Mukti (liberation while alive). Wisdom emerges as the soul embraces nothingness, shedding ego and attachments to realize its interconnectedness with all creation.

This state of being transcends duality, uniting the self with the ultimate truth and eternal bliss. The journey of awakening is thus a path of inner transformation, where existence becomes a reflection of divine harmony and oneness. The journey of awakening intricately connects the conscious and subconscious mind, as it involves transcending illusions and aligning the soul with truth. The conscious mind, driven by logic and external perceptions, often remains entangled in duality and the illusions of Tregun-Maya (materialism and desires).

Wisdom emerges when the conscious and subconscious align, enabling the individual to transcend duality and embrace the ultimate truth.

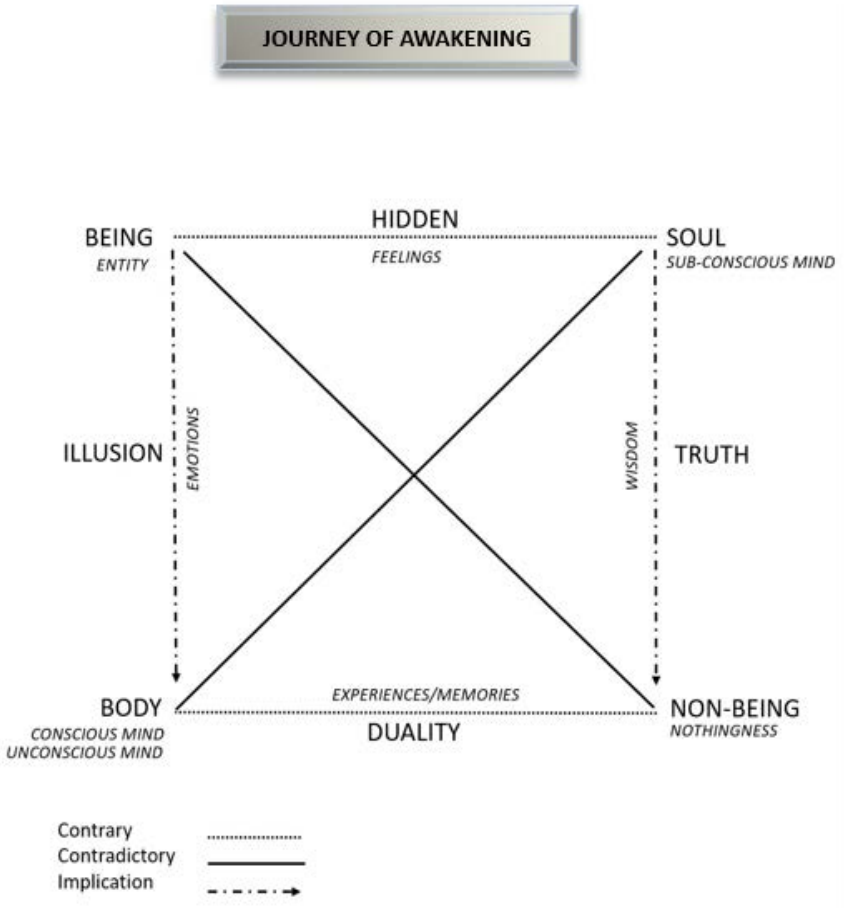


Figure 36.

Transformation (Being Conscious)

The diagram explains my thesis research on transformation. The diagram underscores the importance of aligning emotions, thoughts, and experiences to achieve authenticity and meaningful transformation by breaking the convention of modern lifestyle habits. Emotions are described as the driving force behind human action, surpassing logic in influencing decisions and perceptions.

Feelings, rooted in sensory and emotional engagement, are pivotal in fostering experiences as they connect individuals to their inner selves and the divine. Experiences, whether sensory or spatial, leave lasting impressions that shape memories, habits, and attitudes, ultimately leading to personal transformation. Thoughts are portrayed as the language of the mind, creating neural patterns that influence the electromagnetic energy field emitted by the body.

When aligned with positive emotions created by meditation or reflecting into our inner-selves by giving a pause, thoughts can

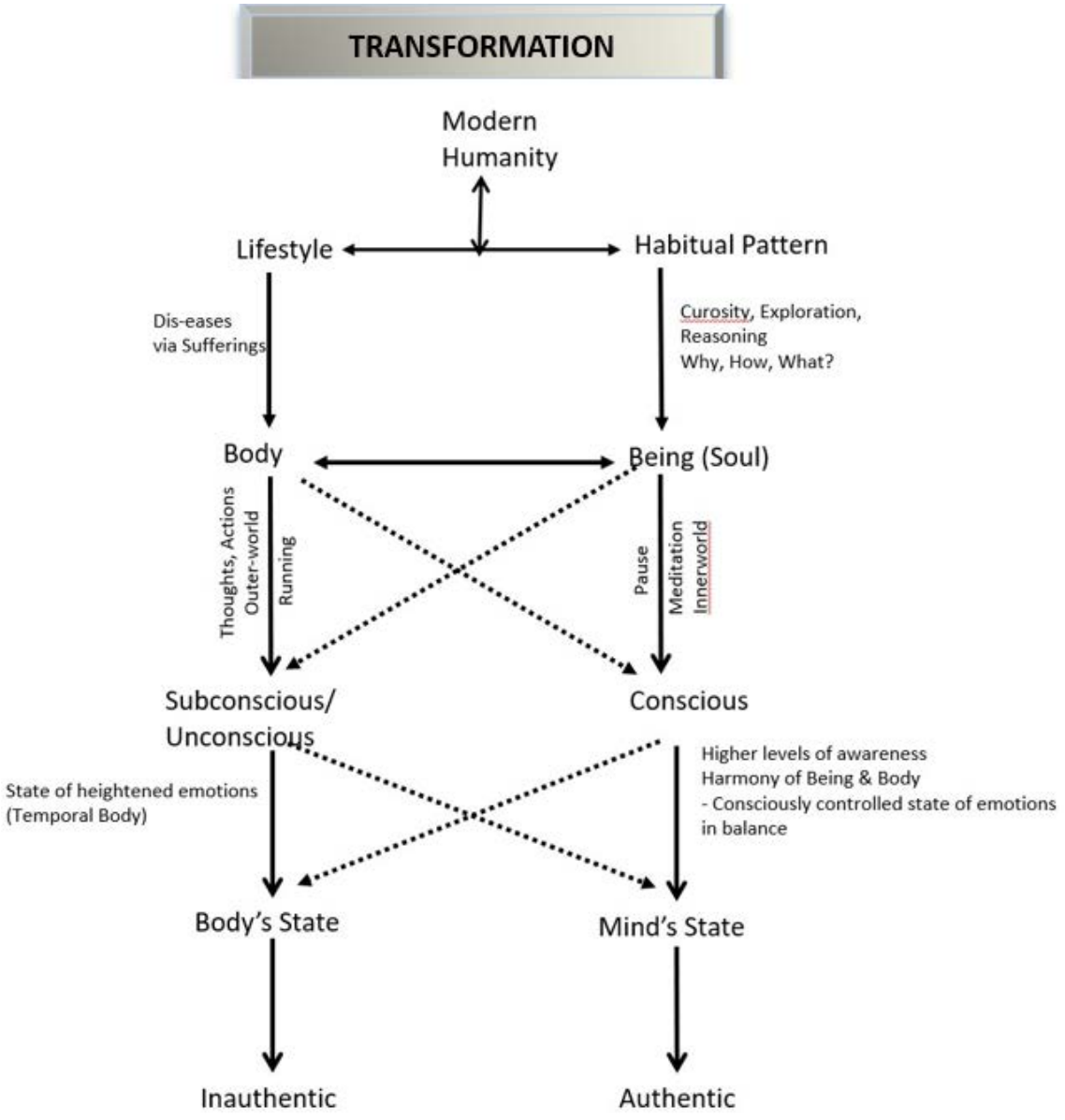


Figure 37.

foster coherence, enabling individuals to transform their reality. Authenticity emerges as a key element in this process, requiring individuals to align their inner world—thoughts, emotions, and beliefs—with their external actions and environment. Through introspection and spiritual practices, such as meditation, the subconscious mind is accessed, opening the door to deeper wisdom and transformation.

Phenomenology

Let that which shows itself be seen from itself in the very way it shows itself from itself. Heidegger's approach to phenomenology emphasizes the importance of allowing phenomena to reveal themselves as they are without imposing preconceived notions or interpretations.[15] Engaging with architecture involves openness not only to the realm of the sensory but also to the potential revelation of some truth. In his magnum opus, *Being and Time*, Heidegger most famously introduces the concept of 'being in the world' as the essence of human existence. This philosophy merely exceeds a spatial definition and suggests that human beings are most in touch with themselves when immersed in natural, everyday activities such as working, doing, sensing, etc. Heidegger uses a special word to describe the human being: 'Dasein.' This word of his own making plays on two German words: 'da' and 'sein,' roughly translating to 'there' and 'being.' In other words, the state of being is inextricably tied to place – human beings exist in the world, not isolated from it.

Figure 33. visually connects the Entity, Elements of Creation, Five Senses, Chakras, Emotions, and Experiences, showing how the interaction between Dasein and these elements, being's understanding of existence, leads to meaningfulness and spiritual transformation.[16]

The classical elements are each intimately tied to a sensory experience, revealing their deeper qualities. Earth is associated with the sense of smell, reflecting its grounding and stable nature. Water connects to taste, allowing us to sense the fluid, nourishing essence of what we consume. Fire aligns with vision—light and sight mirror fire's dynamic, transformative energy. Air corresponds to touch, through which we feel movement, texture, and temperature. Ether or Space, the most subtle of the elements, is linked to hearing and speech. It embodies the vast, vibratory field through which sound travels and meaning emerges.[17]

The five vices (Lust, Anger, Greed, Attachment, and Ego), also called the Panj Dhoots as per Gurbani, reside within the human body. The lust dwells in the organs of procreation; the anger dwells in the stomach; the greed and the attachments reside in the human chest, and pride takes the place on the head of the human being. By virtue of residing inside the human body, these vices keep the human being in their subjugation and slavery. Being under the influence of these Panj Dhoots, a human being becomes a slave to lust, anger, greed, attachment, and pride, i.e., commits all Asat Karam (untruthful deeds, deeds against Sat, Truth) as commanded by these Dhoots.

ਇਸੁ ਦੇਹੀ ਅੰਦਰਿ ਪੰਚ ਚੋਰ ਵਸਹਿ ਕਾਮੁ ਕ੍ਰੋਧੁ ਲੋਭੁ ਮੋਹੁ ਅਹੰਕਾਰਾ ॥ (੬੦੦-੬, ਸੋਰਠਿ, ਮਃ ੩)
Is dayhee andar panch chor vaseh kaam kroDh lobh moh ahaNkaaraa.
Within this body dwell the five thieves: sexual desire, anger, greed, emotional attachment, and egotism.

ਅੰਮ੍ਰਿਤੁ ਲੂਟਹਿ ਮਨਮੁਖ ਨਹੀ ਬੂਝਹਿ ਕੋਇ ਨ ਸੁਣੈ ਪੂਕਾਰਾ ॥ (੬੦੦-੭, ਸੋਰਠਿ, ਮਃ ੩)
Amrit looteh manmukh nahee boojheh ko-ay na sunai pookaaraa.

	Name of Level	Energetic Log	Predominant Emotional State	View of Life	God-view	Process
Spiritual Paradigm	Enlightenment	700-1000	Ineffable	Is	Self	Pure Consciousness
	Peace	600	Bliss	Perfect	All-Being	Illumination
	Joy	540	Serenity	Complete	One	Transfiguration
	Love	500	Reverence	Benign	Loving	Revelation
Reason & Integrity	Reason	400	Understanding	Meaningful	Wise	Abstraction
	Acceptance	350	Forgiveness	Harmonious	Merciful	Transcendence
	Willingness	310	Optimism	Hopeful	Inspiring	Intention
	Neutrality	250	Trust	Satisfactory	Enabling	Release
	Courage	200	Affirmation	Feasible	Permitting	Empowerment
Survival Paradigm	Pride	175	Scorn	Demanding	Indifferent	Inflation
	Anger	150	Hate	Antagonistic	Vengeful	Aggression
	Desire	125	Craving	Disappointing	Denying	Enslavement
	Fear	100	Anxiety	Frightening	Punitive	Withdrawal
	Grief	75	Regret	Tragic	Disdainful	Despondency
	Apathy	50	Despair	Hopeless	Condemning	Abdication
	Guilt	30	Blame	Evil	Vindictive	Destruction
	Shame	20	Humiliation	Miserable	Despising	Elimination

Figure 38 A. Map of Consciousness by David R. Hawkins
Source: David R. Hawkins, The Map of Consciousness Explained: A Proven Energy Scale to Actualize Your Ultimate Potential

They plunder the Nectar, but the self-willed manmukh does not realize it; no one hears his complaint.[18]

David R. Hawkins' "Map of Consciousness" proposes a logarithmic scale of consciousness levels, ranging from lower, destructive energy states (such as shame, guilt, and fear) to higher, expansive states (such as love, joy, and peace). He suggests that each level has a corresponding energy field that influences an individual's experiences and perception of reality, and that these levels can be calibrated through kinesiology. Program activities like cycling, treetop trekking, yoga, meditation, gardening, and music aim to orchestrate these transformative experiences, leading to shifts in mindset and enabling individuals to achieve elevated states of being and cultivate higher consciousness.[19]

Figure 38 B. shows the conceptual model that I created to show the three Levels of Consciousness. Shown through three Circular Planes – Circles are considered sacred geometry. This model posits three circular planes representing levels of consciousness. Level 1: Illusion portrays human daily life as an entanglement of cycles (like karma and reincarnation), driven by Maya (illusion),



Figure 38 B. Model of Consciousness (Enlarged view on page - xviii)
Source: By Author

This level incorporates the awakening of seven chakras (represented by colored candles), the recognition of synchronicity (dice), divine wisdom, and a staircase symbolizing Gurbani verses and chanting for enlightenment, all integrated within the five elements of nature. Finally, Level 3: Enlightenment represents the ultimate union with Nature and the Universe, achieving total consciousness.

In conclusion, the Gurbani-inspired sanctuary is envisioned as a pioneering example of transcendent design. By consciously integrating profound spiritual philosophies with culturally resonant and environmentally responsible architectural strategies, it aims to create a unique and impactful space that fosters personal transformation, community empowerment, and a deeper connection to both nature and the divine.

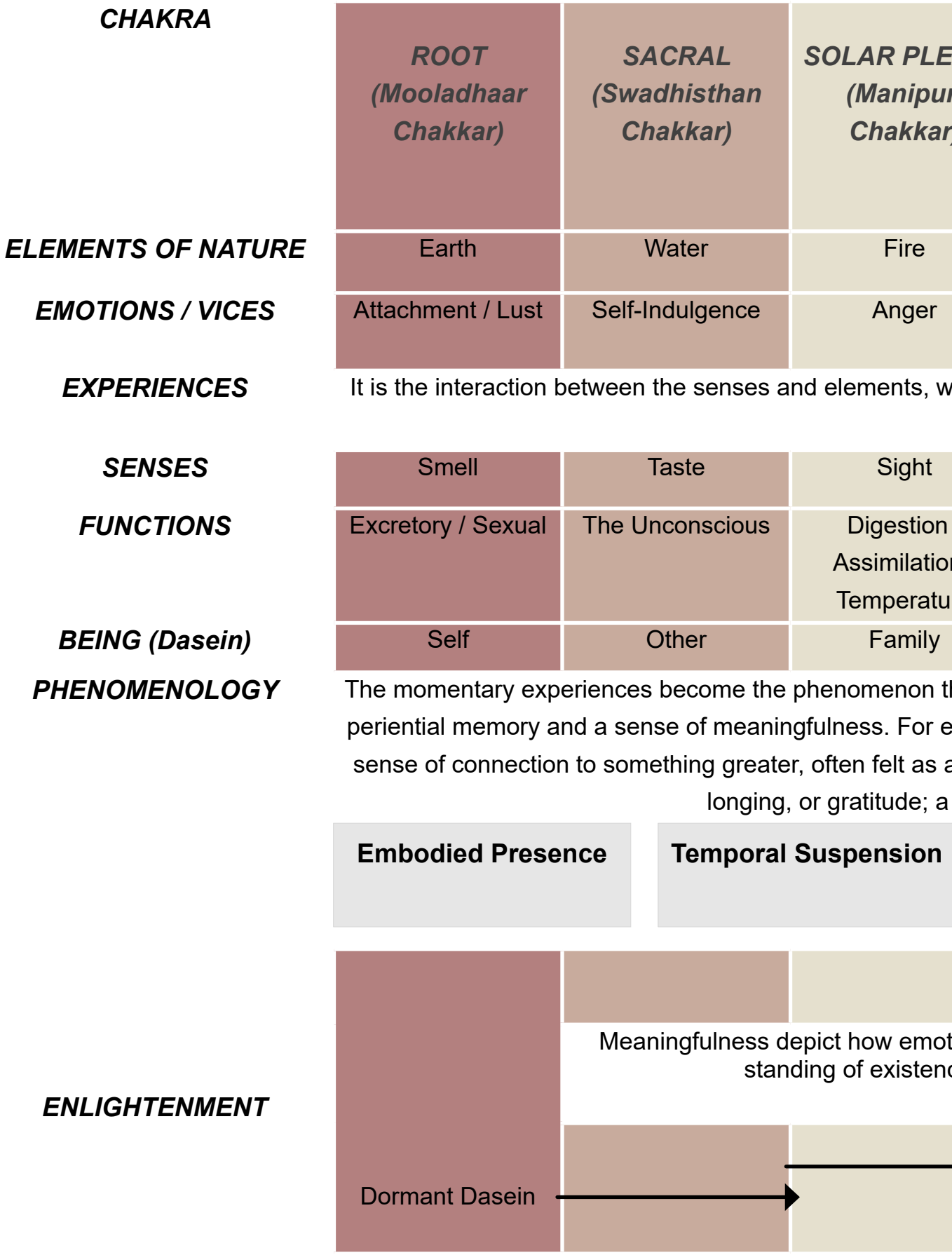


Figure 39. Phenomenology Diagram through the relationship of Chakras with Elements and Senses
Source: By Author

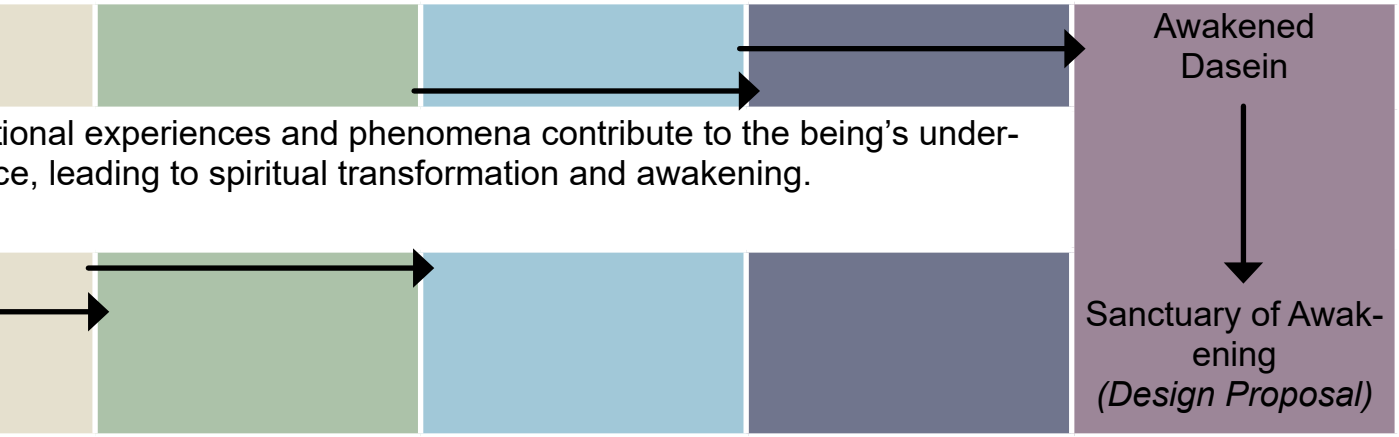
XUS ri)	*HEART (Anhat Chakkar)*	*THROAT (Visudhi Chakkar)*	*THIRD EYE (Aagyaa Chakkar)*	*CROWN (Sahansar Dall Kanwal, Daseam Duaar)*
	Air	Space	Space	Space
	Greed / Attachment	Pride	Ego	Ego

hich generates emotional experiences like curiosity, anguish, surprise, anger, peace, happiness, empathy.

	Touch	Hearing	Mind	Mind
/ n / re	Love	Expression	Psychic / Awareness / Command	Mind
	Community	World	Cosmos	Divine

hat arise from the interaction between the being and the sensory triggers. This leads to example: sensory immersion—light, texture, sound, scent; a sense of timelessness; a deep awe, reverence, or quiet stillness; subtle emotional shifts or moment's essence like peace, symbolic moment like a threshold, a revelation, a return.

	Spiritual Resonance	**Emotional Texture**	**Symbolic or Archetypal Meaning**



tional experiences and phenomena contribute to the being's underce, leading to spiritual transformation and awakening.

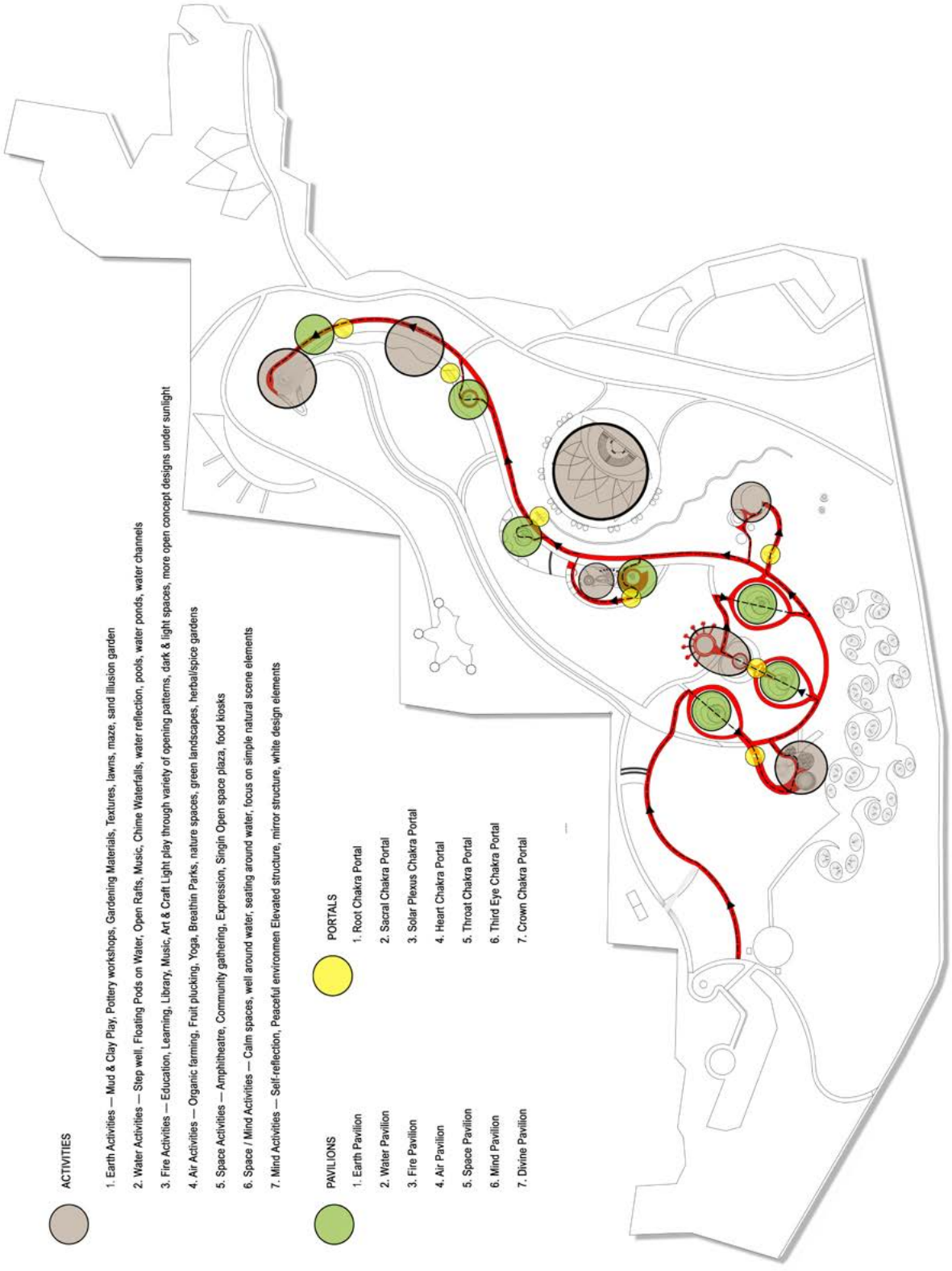


Figure 40. Bubble Diagram representing three major zones (Pavilion, Portal & Activities) of each chakra zone
Source: By Author

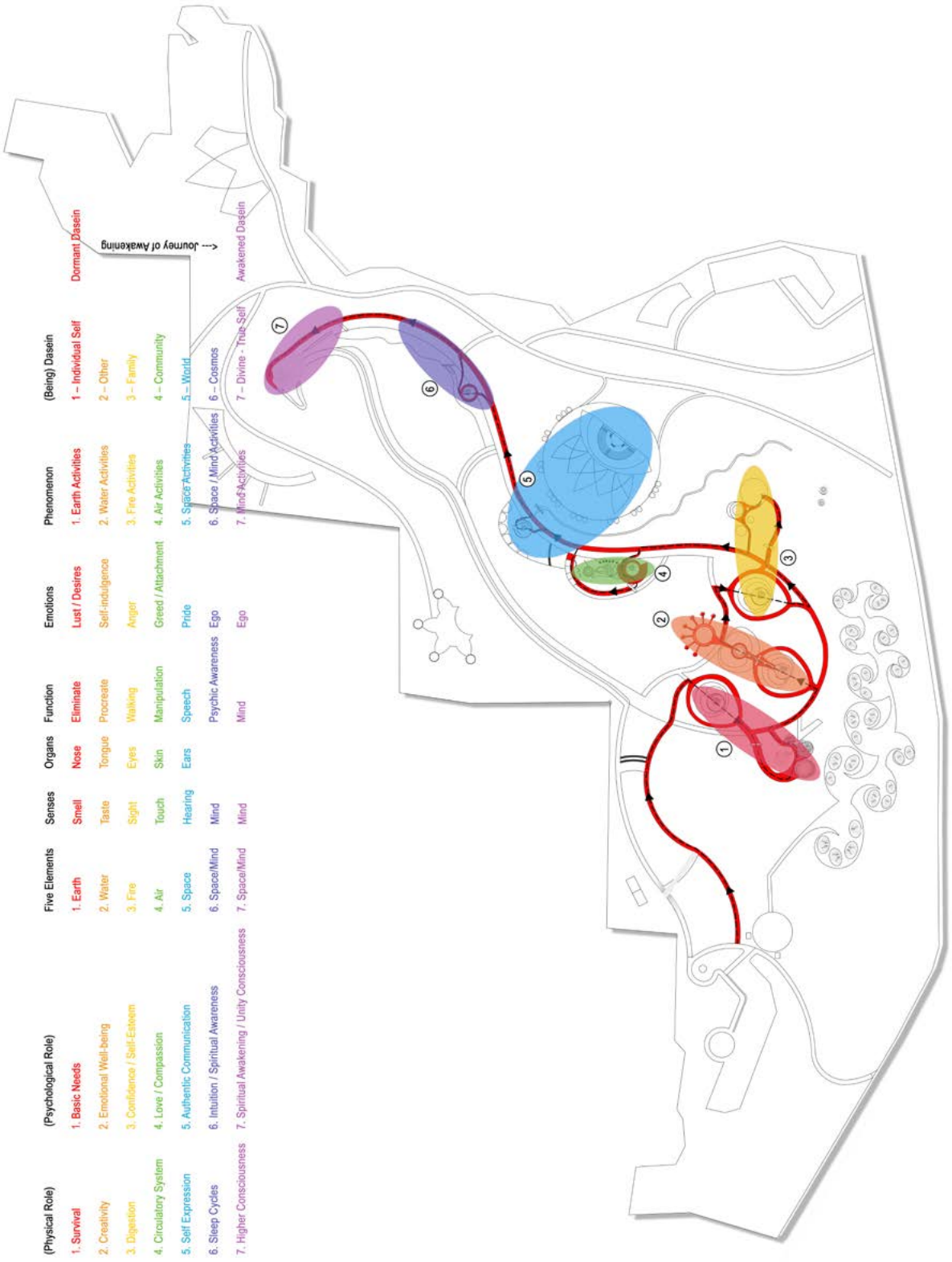


Figure 41. Bubble Diagram representing the Phenomenology Diagram onto the actual design proposal
Source: By Author

CIRCADIAN RHYTHM

Just as scientific and Ayurvedic frameworks divide the 24-hour cycle into distinct phases for optimal well-being, Gurbani also eloquently speaks of "Ath Pahar" – eight phases of time within the day-night cycle. Guru Arjan Dev Ji, in the Siri Guru Granth Sahib, encourages a mindful approach to these segments:[20]

> **ਨਿਤ ਉਠਿ ਗਾਵਹੁ ਪ੍ਰਭ ਕੀ ਬਾਣੀ ॥ (੧੩੪੦–੮, ਪ੍ਰਭਾ–ਤੀ, ਮਃ ੫)**
> nit uth gaavhu parabh kee banee.
> Rise early, and sing the Glorious Word of God's Bani.
>
> **ਆਠ ਪਹਰ ਹਰਿ ਸਿਮਰਹੁ ਪ੍ਰਾਣੀ ॥੨॥ (੧੩੪੦–੯, ਪ੍ਰਭਾਤੀ, ਮਃ ੫)**
> aath pahar har simrahu paraanee. ||2||
> Twenty-four hours a day, meditate in remembrance on the Lord, O mortal.
> ||2||

In Gurbani, we hear the word Pehar many times. To understand what this means, we must understand the Pehar System. This system is used to keep track of time. Below the system is broken down and shown how it compares to the system of hours and minutes.[21]

1 Day = 8 Pehars = 24 hrs

1 Pehar = 8 Gharis = 3hrs

1 Ghari = 60 Pal = 22.5 minutes = 1350 secs

1 Pal = 3 Chassa = 22.5 secs

1 Chassa = 15 Visuas = 7.5 secs

1 Visua = 15 Nimakh = 0.5 secs

1 Nimakh = 0.0333 secs

Twenty-four hours a day, meditate in remembrance on the Lord, O mortal." This spiritual guidance to rise early and engage in continuous remembrance throughout these eight phases resonates profoundly with the design proposal's intention to raise consciousness.

The architectural design of the research proposal aims to bridge traditional wisdom with the scientific understanding of circadian rhythms and Ayurvedic principles to enhance healing and overall experience.

The concept of organisms adapting their daily physiology and behavior in a circadian manner has a long history, typically tracing back to early observations of plant leaf and flower movements. A classic illustration of this is how mimosa plant leaves fold up at night and unfurl during the day.

Mimosa plants famously demonstrate a daily rhythm, with their leaves opening towards the sun by day and closing at dusk as shown in the Figure 42 A. This intrinsic timing was famously highlighted by Jean Jacques d'Ortous de Mairan, who observed that even when kept in constant darkness, the mimosa plant's leaves maintained their daily opening and closing cycle for several days. This observation was crucial as it suggested the existence of an internal, cell-autonomous biological clock capable of sustaining these rhythms independently of external light cues.[22]

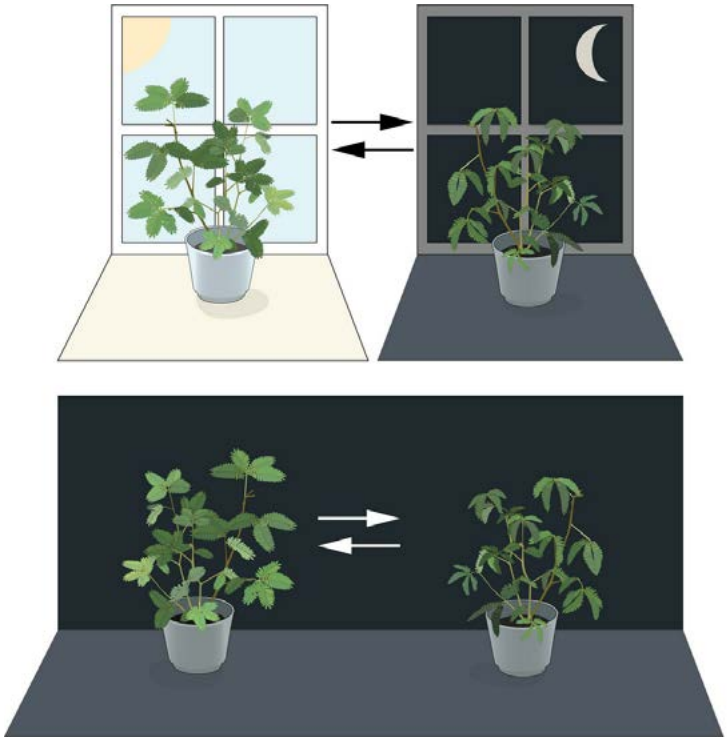


Figure 42 A. An internal biological clock.
Source: Nobel Prize Outreach. 2025. "Advanced information: Nobel Prize in Physiology or Medicine 2017." NobelPrize.org. November 11, 2025. https://www.nobelprize.org/prizes/medicine/2017/advanced-information/

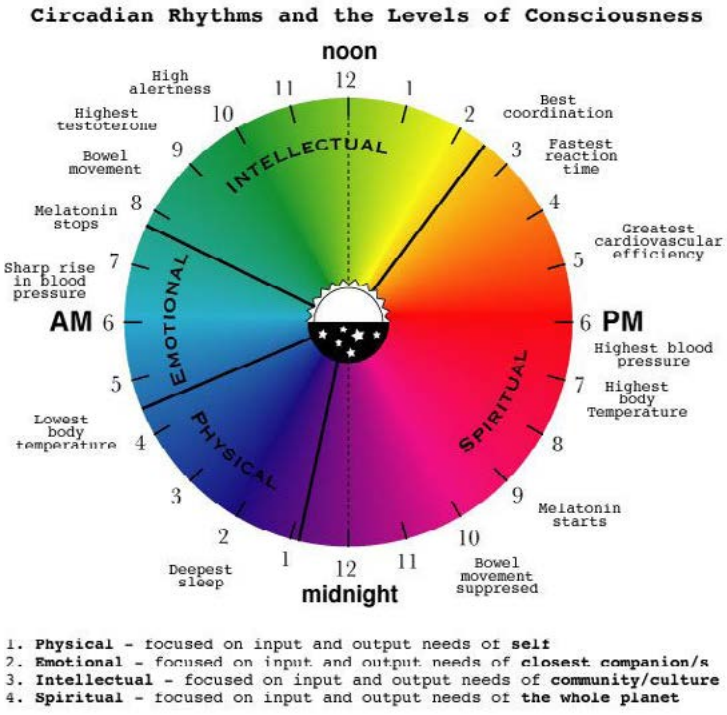


Figure 42 B. A Conceptual synthesis adapted from various sources on circadian and biorhythmic theory
Source: Ryan, Marc (@hashimotoshealing). "Resetting Your Circadian Rhythm: Part 2. Instagram. February 12, 2020. https://www.instagram.com/p/B8kkrCsgdKv/?

The circadian cycle is the body's internal 24-hour clock that regulates essential physiological processes, including sleep, hormone release, metabolism, and alertness. Scientific segmentation involves breaking this cycle into smaller stages to better understand how different biological functions unfold over time. Researchers often use an eight-stage model that divides the cycle according to the expression levels of core clock compo-

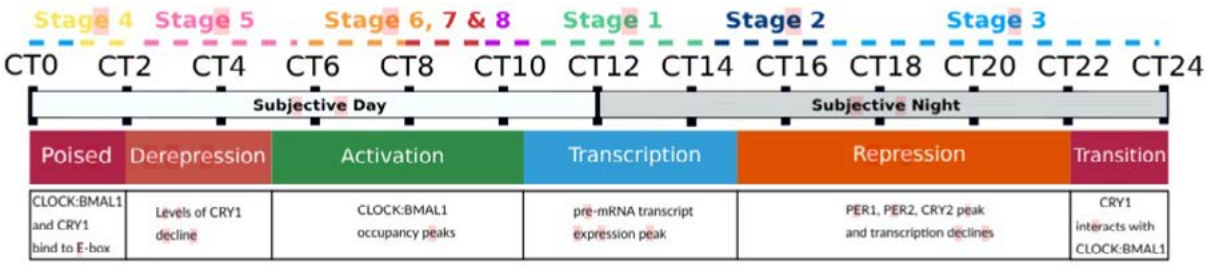


Figure 43. Temporal analogy illustrating the six circadian phases by Takahashi and the eight-stage cycle segmentation, with dashed lines approximating the temporal expression of each stage

Source: Benchmark for quantitative characterization of circadian clock cycles - ScienceDirect

nents such as CLOCK (Circadian Locomotor Output Cycles Kaput): BMAL1 (Brain and Muscle ARNT-like 1), REV-ERB (Nuclear Receptor Subfamily 1, Group D, Member 1 (for REV-ERBα, also known as NR1D1), and PER (Period):CRY (Cryptochrome). Some frameworks also employ a four-phase model, simplifying the day into morning, afternoon, evening, and night, which correlates with peaks in alertness, body temperature, and melatonin release. This segmentation provides a method for characterizing and comparing circadian cycles, identifying a sequence of stages that define their progression.[23]

Figure 43 of the document illustrates a temporal analogy, visually comparing the six distinctive phases of the circadian cycle described by Takahashi with the document's own eight-stage cycle segmentation. A dashed line within this figure approximates the temporal expression, or duration, of each of these stages, providing a comparative overview of how different models segment and represent the circadian clock's progression over time.

By structuring the activities around these "Ath Pahar" or eight segments, the design encourages an intentional rhythm of life. Subsequent earth-based workshops and afternoon nourishment, along with knowledge-seeking in libraries, can be viewed as engaging with the "remembrance of the Lord" throughout the day, fostering a continuous state of balance and mindfulness. This integration of Gurbani's wisdom not only provides a spiritual dimension to the circadian-aligned design but also underscores the timeless human endeavor to live in harmony with natural cycles for enhanced healing and overall well-being. This integration guides the scheduling of activities and the design choices for various pavilions in my design proposal.

- ***Early Morning Water Rituals:*** In the water pavilion, activities are attuned to the Amritwela—the sacred period before sunrise, echo the call to "Rise early, and sing the glorious word, when the body naturally experiences a sharp rise in blood pressure. Water flows through copper channels, imbuing it with a subtle energetic charge. As these charged droplets fall near sacred plants such as Tulsi, they amplify the plant's restorative qualities, enriching the air that participants breathe. Together, these design elements and traditional practices support the body's natural equilibrium during this vital morning phase. Gurbani talks about the importance of early morning hours *(Amritwela)*[24] *and taking the inner bath in the following verses.*[25]

ਅੰਮ੍ਰਿਤ ਵੇਲਾ ਸਚੁ ਨਾਉ ਵਡਿਆਈ ਵੀਚਾਰੁ ॥ (੨–੫, ਜਪੁ, ਮਃ ੧)

Amrit vaylaa sach naa-o vadi-aa-ee veechaar
In the Amrit Vaylaa, the ambrosial hours before dawn, chant the True Name, and con-

template His Glorious Greatness

ਗੁਰ ਸਤਿਗੁਰ ਕਾ ਜੋ ਸਿਖੁ ਅਖਾਏ ਸੁ ਭਲਕੇ ਉਠਿ ਹਰਿ ਨਾਮੁ ਧਿਆਵੈ ॥ (੩੦੫–੧੬, ਗਉੜੀ, ਮਃ ੪)
Gur satgur kaa jo sikh akhaa-ay so bhalkay uth har naam dhi-aavai
One who calls himself a Sikh (who follows teachings of truth) of the Guru, the True Guru, shall rise in the early morning hours and meditate on the Lord's Name

- ***Earth Element and Morning Workshops:*** Following water activities, mornings are designated for earth-based, hands-on tasks, aligning with the root chakra and the time when soil is considered most active. The design incorporates activities such as physically working with soil, organic farming, planting trees, and playing with clay, implying workshops like pottery. These engagements are designed to provide a grounding experience that supports healing and bodily balance.
- ***Afternoon Nourishment and Knowledge:*** During the peak afternoon hours, when the "fire element" is active, activities are centered around nourishment and intellectual engagement. This includes free lunch options available at the langar community hall or cafes in the amphitheater area. The presence of libraries also suggests that gaining knowledge and reading are beneficial activities integrated into this period, aligning with the circadian clock for optimal mental and physical processing.

The overall approach emphasizes curated experiences that synchronize with daily solar and lunar cycles, body rhythms, and chakra theories, ensuring that architectural interventions promote harmony and well-being.

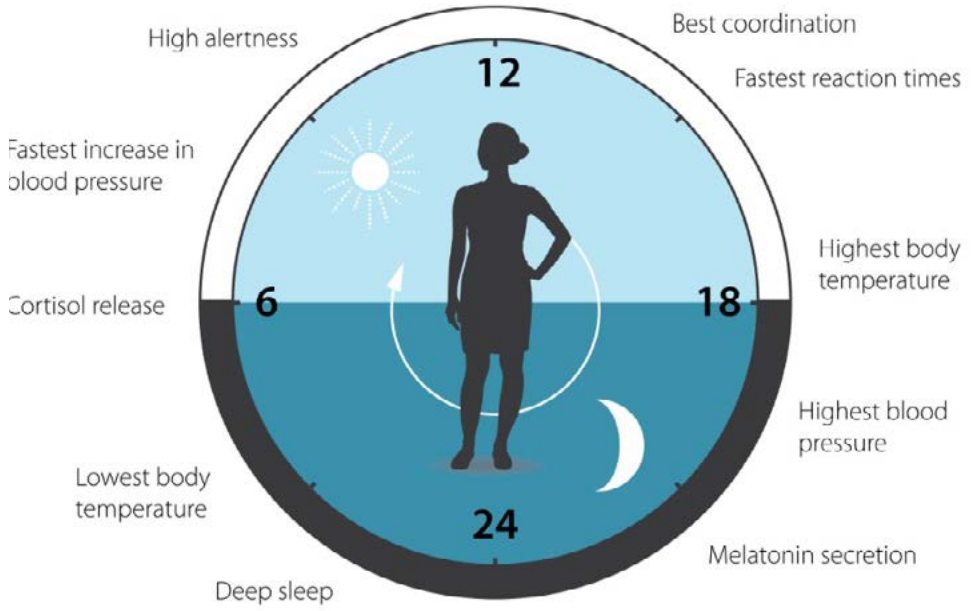


Figure 44. The circadian clock affects many aspects of our physiology.
Source: https://www.nobelprize.org/prizes/medicine/2017/advanced-information/

DESIGN PROPOSAL - *ISHQ-E-SAT* (LOVE IS TRUTH)

A Sanctuary inspired by Gurbani in Gati Harike, Punjab: A Spiritual Journey of Awakening



Figure 45. Site Plan-2D
Source: By Author

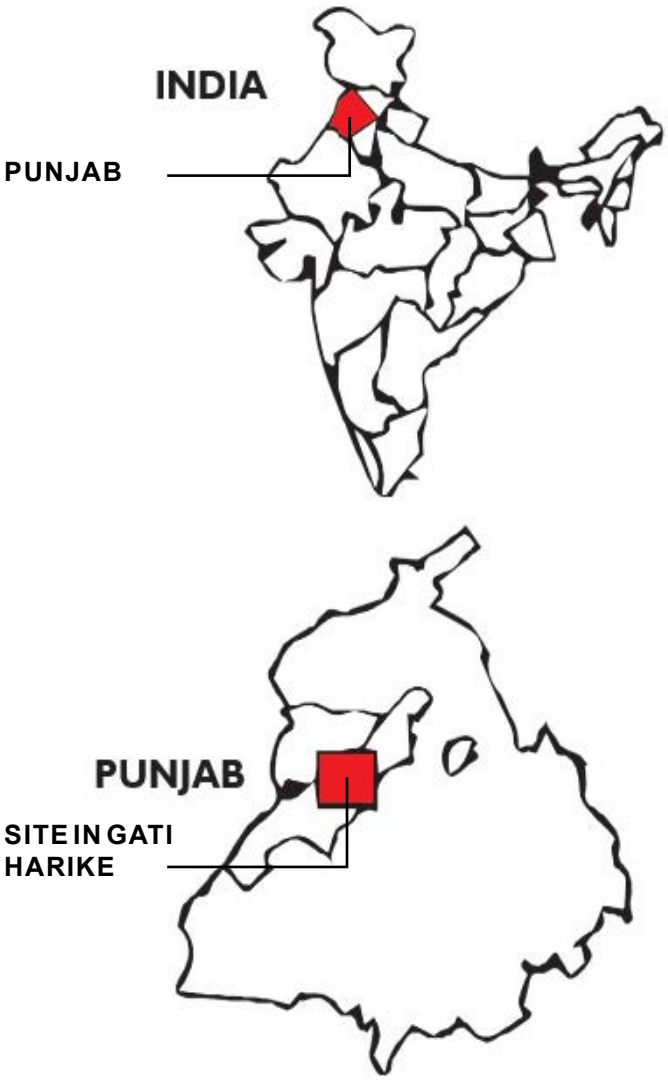


Figure 46. Maps of India and Punjab showing location of the site



Figure 46 B. The Sanctuary inspired by Gurbani in Gati Harike, Punjab.
Source: By Author - https://youtu.be/vjQGtEAUgT8

The Gurbani-inspired sanctuary in Gati Harike, Punjab, has been conceived as a transformative architectural project that interweaves spiritual wisdom, cultural heritage, and ecological sustainability. In the linked video, a visual journey through Punjab's cultural landscape is presented, showing how historical borders have divided both people and rivers. The natural splendor and ecological significance of the Gati Harike bird sanctuary are then highlighted, with its agricultural fields and diverse wildlife, including peacocks, depicted. The description concludes with a Google Maps view of the proposed site, in which the architectural vision is presented as one that integrates spiritual wisdom, cultural heritage, and ecological sustainability within the region.

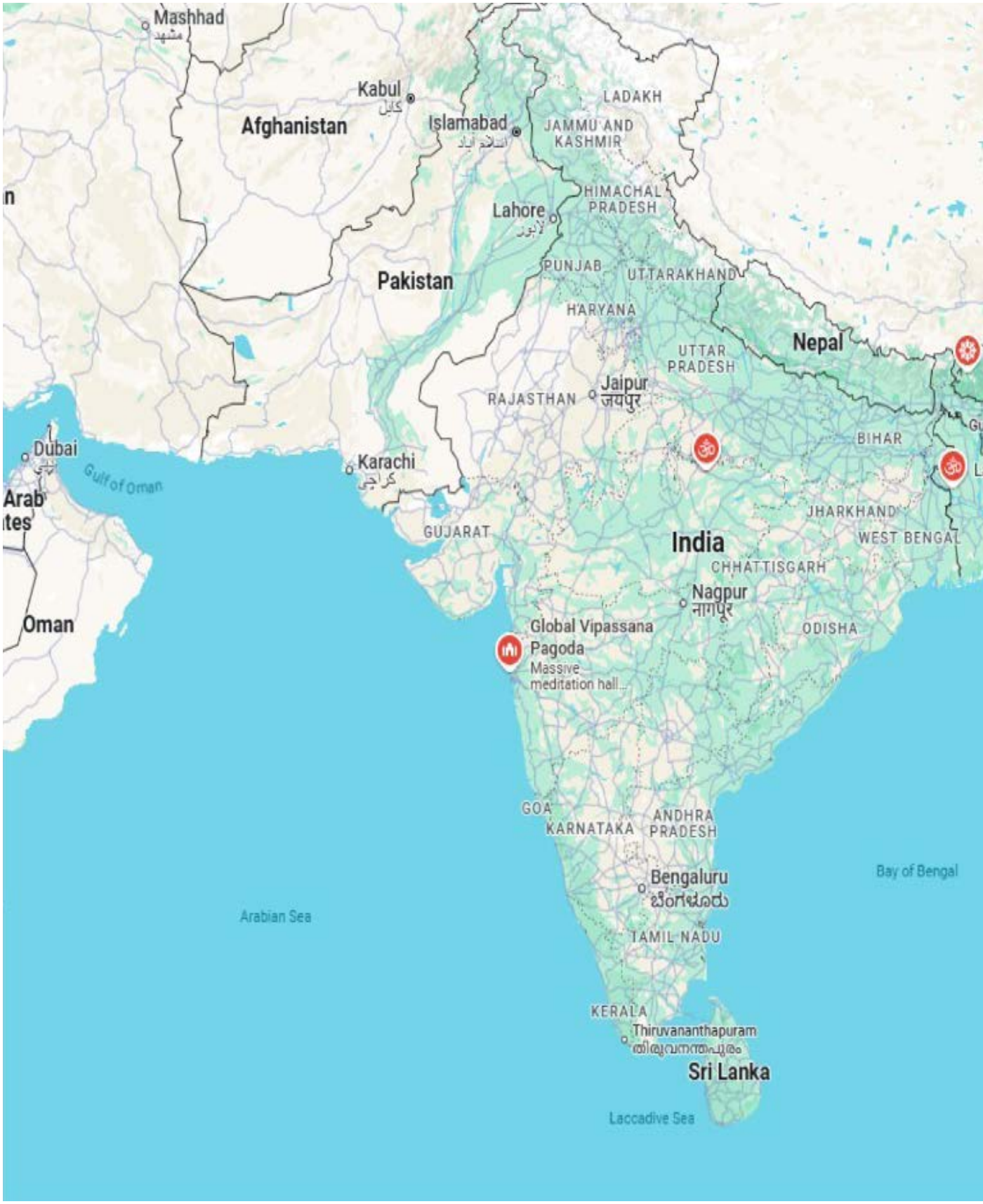
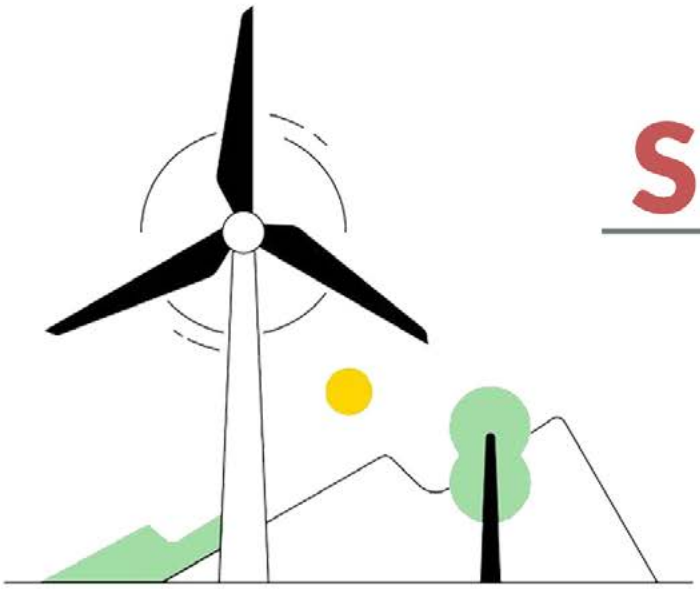


Figure 47. Spiritual Sites in context with site and South East Asia
Map shows Sanctuaries around India. There is no major spiritual sanctuary in Punjab near Gati Harike, Punjab, India.
Source: Google Earth


Lanzhou
兰州市
China
Xi'An
西安市
Yellow Sea
Shanghai
上海
Chengdu
成都市
Wuhan
武汉市
Hangzhou
杭州市
East
Jokhang Temple
Buddhist temple with a hallowed shrine
Chongqing
重庆
Paro Taktsang
Cliffside monastery with storied caves
ASSAM
NAGALAND
Kunming
昆明市
Taipei
臺北
Taiwan
TRIPURA
MIZORAM
Shwenandaw Buddhist Temple
Palace rooms turned Buddhist monastery
Shenzhen
深圳市
Wat Xiengthong
Buddhist temple with gardens & shrines
Naypyidaw
Pha That Luang
Historic gold stupa over 44 m high
Yangon
Parace Islands
Luzon
South China Sea
Vat Phou
Ruins of Hindu temple with hilltop...
Manila
West Philippine Sea
Mindoro
Philippines
Cambodia
Nha Trang
Phnom Penh
Dalat
Andaman Sea
Ho Chi Minh City
Spratly Islands
Panay
Cebu
Negros
Palawan
Wat Tham Suea
Jungle temple with historic caves
Sulu Sea
Kek Lok Si Temple
Ornate 19th-century Buddhist temple
Banda Aceh
ACEH
PERAK
SABAH
Brunei
Batu Caves



SITE ANALYSIS

WEATHER DATA

Gati Harike, located in Punjab, India, experiences a subtropical semi-arid (steppe) clim
characterized by hot summers and cool winters. While specific historical averages
Gati Harike are not readily available, nearby regions typically observe average h
temperatures ranging from 30°C to 45°C (86°F to 113°F) during summer months (Apr
June), and average lows between 5°C to 15°C (41°F to 59°F) in winter months (Decem
to February). The area receives most of its annual rainfall during the monsoon seas
spanning from July to September, with precipitation levels varying between 400 to
millimeters (16 to 24 inches) annually.

DEMOGRAPHICS

Gati Harike is a village situated in Zira tehsil of Firozpur district in Punjab. As per the Population Census 2011, there are a total of 45 families residing in the village Gati Harike. The total population of Gati Harike is 242 out of which 144 are males and 98 are females thus the Average Sex Ratio of Gati Harike is 681.

The population of Children aged 0-6 years in Gati Harike village is 23 which is 10% of the total population. There are 15 male children and 8 female children between the age 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Gati Harike is 533 which is less than Average Sex Ratio (681) of Gati Harike village.

As per the Census 2011, the literacy rate of Gati Harike is 61.2%. Thus Gati Harike village has a higher literacy rate compared to 60.5% of Firozpur district. The male literacy rate is 68.22% and the female literacy rate is 51.11% in Gati Harike village.

Population	Families	Literacy	Sex Ratio
242	45	61.19%	681

Harike Data

Particulars	Total	Male	Female
Total No. of Houses	1,620	-	-
Population	8,662	4,666	3,996
Child (0-6)	1,136	641	495
Schedule Caste	2,779	1,495	1,284
Schedule Tribe	0	0	0
Literacy	69.94 %	74.63 %	64.55 %
Total Workers	2,933	2,476	457
Main Worker	2,587	-	-
Marginal Worker	346	191	155

Demographic data HARIKE

Harike is a large village located in Patti Tehsil of Tarn Taran district, Punjab with total 1620 families residing. The Harike village has population of 8662 of which 4666 are males while 3996 are females as per Population Census 2011.

In Harike village population of children with age 0-6 is 1136 which makes up 13.11 % of total population of village. Average Sex Ratio of Harike village is 856 which is lower than Punjab state average of 895. Child Sex Ratio for the Harike as per census is 772, lower than Punjab average of 846.

Harike village has lower literacy rate compared to Punjab. In 2011, literacy rate of Harike village was 69.94 % compared to 75.84 % of Punjab. In Harike Male literacy stands at 74.63 % while female literacy rate was 64.55 %.

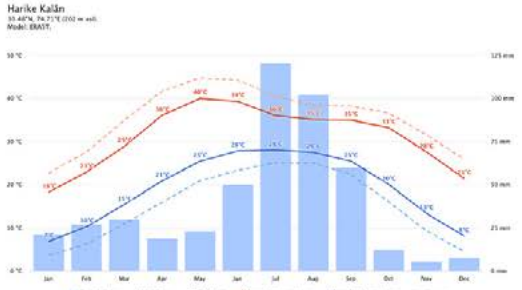
Temperature:

The average annual temperature in Punjab is approximately 27.98°C (82.36°F), which is slightly higher than the national average. Monthly average temperatures can vary significantly:
Weather and Climate

Summer (April to June): Temperatures can soar, with June averaging around 42.43°C (108.37°F).

Monsoon (July to September): While temperatures remain high, ranging from 36.75°C to 40.65°C (98.15°F to 105.17°F), increased cloud cover and rainfall provide some respite.

Winter (December to February): Temperatures drop, with January averaging around 17.04°C (62.67°F).

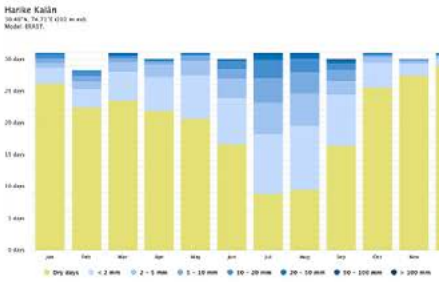


The "mean daily maximum" (solid red line) shows the maximum temperature of an average day for every month for Harike Kalān. Likewise, "mean daily minimum" (solid blue line) shows the average minimum temperature. Hot days and cold nights (dashed red and blue lines) show the average of the hottest day and coldest night of each month of the last 30 years. For vacation planning, you can expect the mean temperatures, and be prepared for hotter and colder days. Wind speeds are not displayed per default, but can be enabled at the bottom of the graph.

The precipitation chart is useful to plan for seasonal effects such as monsoon climate in India or wet season in Africa. Monthly precipitations above 150mm are mostly wet, below 30mm mostly dry. Note: Simulated precipitation amounts in tropical regions and complex terrain tend to be lower than local measurements.

Precipitation:

Annual rainfall in Punjab varies by district. For instance, Pathankot re
approximately 1,163 mm (45.8 inches) annually. The majority of this precip
occurs during the monsoon months (July to September), with some di
experiencing significant rainfall during this period.

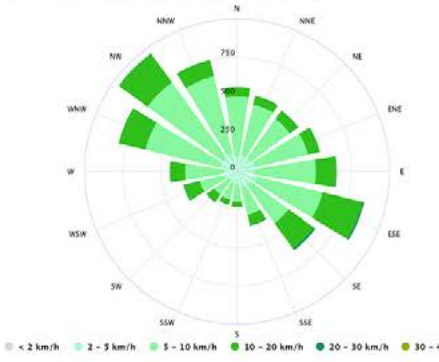


The precipitation diagram for Harike Kalān shows on how many days per
certain precipitation amounts are reached. In tropical and monsoon climate
amounts may be underestimated.

Wind:

The Wind Direction in the area is affected by the local topography due to
which the direction keeps on changing thoughout the year.

- Average Wind Speed: Approximately 10.03 km/h (6.23 mph)
- Maximum Wind Speed: Can reach up to 21.0 km/h (13.05 mph).
- Wind Gusts: May peak at around 35.0 km/h (21.75 mph).

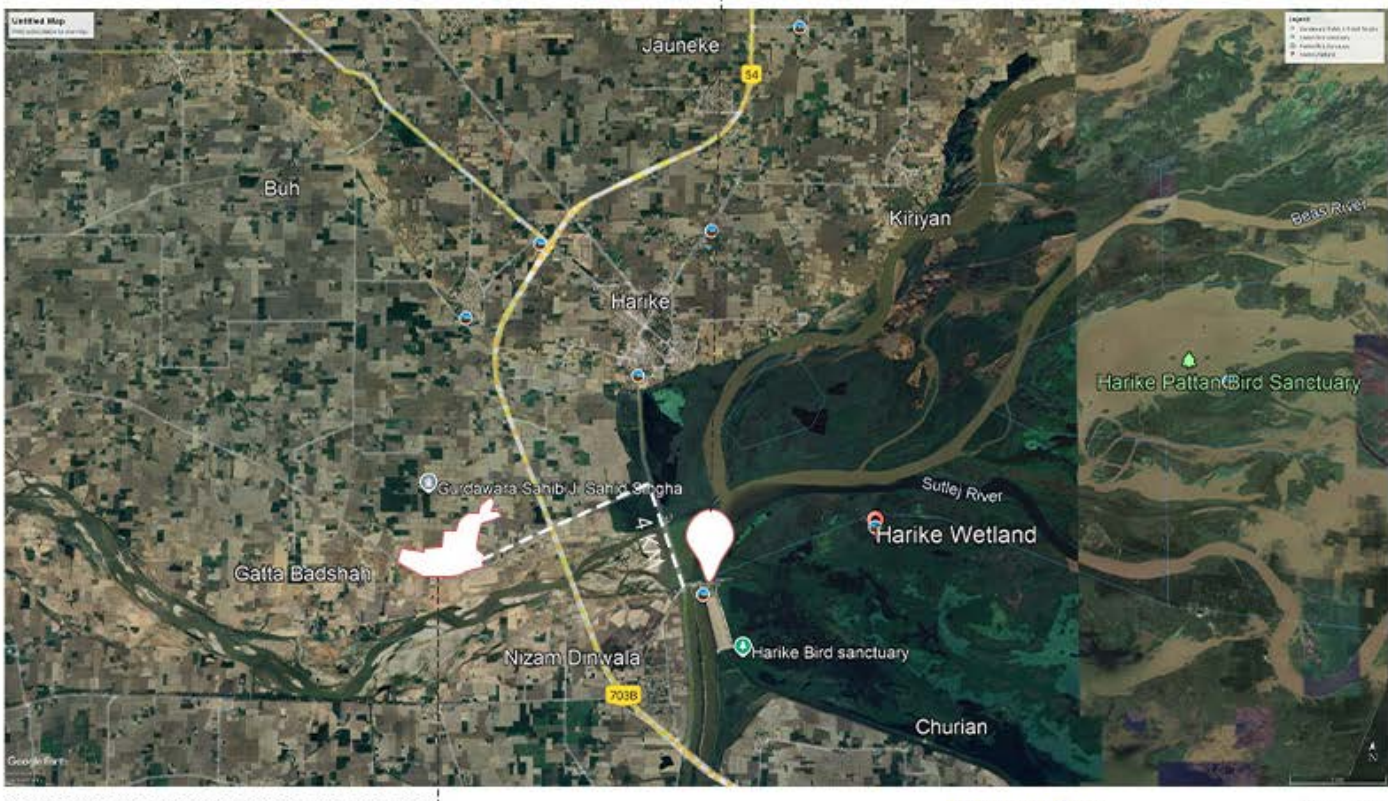


The wind rose for Harike Kalān shows how many hours per year the wind
from the indicated direction. Example SW: Wind is blowing from South-West (
North-East (NE). Cape Horn, the southernmost land point of South America,
characteristic strong west-wind, which makes crossings from East to Wes
difficult especially for sailing boats.

Figure 48 A. Site Study Analysis
Source: By Author

THE BIRD SANCTUARY

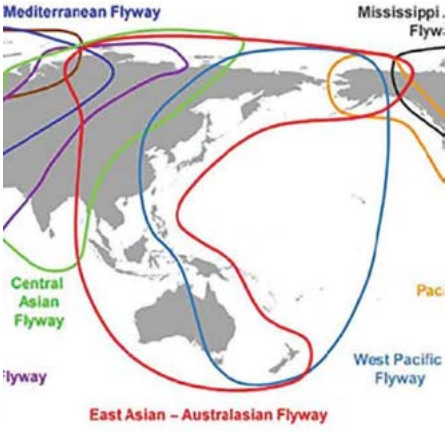
HARIKE PATTAN
BIRD SANCTUARY



SITE

The Harike Bird Sanctuary, also known as Harike Wetland, is located near the confluence of the Beas and Sutlej rivers in Punjab, India. Established in 1982, it spans across the Tarn Taran Sahib, Ferozepur, and Kapurthala districts. In 1990, Harike Lake was declared a Ramsar Site.

The sanctuary is renowned for its rich avian diversity, with around 375 bird species recorded. Notably, it serves as a wintering ground for approximately 40 long-distance migratory species.



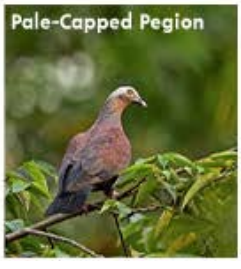












In addition to its avian inhabitants, the sanctuary is home to various other fauna, including seven species of turtles and 26 species of fish. Mammalian species such as the smooth-coated otter (Lutrogale perspicillata), jungle cat (Felis chaus), golden jackal (Canis aureus), wild boar (Sus scrofa), and common mongoose (Herpestes edwardsii) are also found within the sanctuary.

The Harike Bird Sanctuary's diverse ecosystem makes it a significant site for biodiversity conservation and a popular destination for birdwatchers

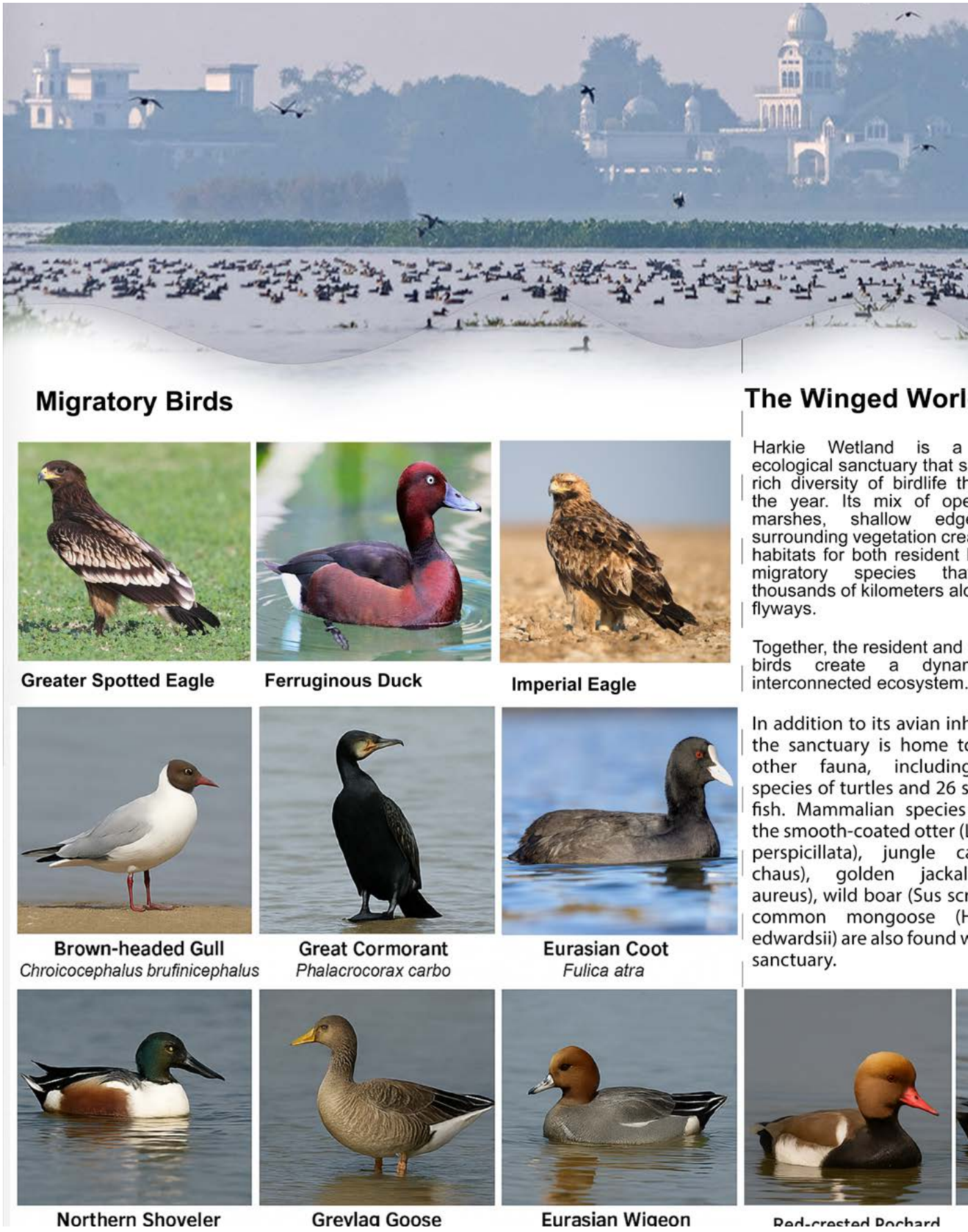


Figure 48 B. Migratory and Resident Birds in Gati, Harike

Source: By Author



d of Harkie Wetland

thriving
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birds and
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migratory
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habitants,
o various
g seven
pecies of
such as
Lutrogale
at (Felis
(Canis
rofa), and
Herpestes
within the

During the winter months, the wetland becomes especially vibrant as it welcomes flocks of migratory waterfowl and waders such as gulls, ducks, coots, and geese. These birds rely on the wetland's abundant food sources—fish, aquatic plants, insects, and invertebrates—to rest, feed, and regain strength for their long journeys.

At the same time, a variety of resident species make the wetland their permanent home. These include elegant egrets, herons, storks, kingfishers, and moorhens, which breed, nest, and hunt in the area year-round. Their presence highlights the ecological importance of the wetland as a stable and healthy habitat supporting breeding, feeding, and shelter.

The Harike Bird Sanctuary's diverse ecosystem makes it a significant site for biodiversity conservation and a destination for birdwatchers and nature enthusiasts.



Gadwall



Pied Kingfisher

Resident Birds



Pallas Fish Eagle



Skyes's Nightjar



Pale Capped Pigeon



Black Bellied Tern



Oriental Darter
Anhinga melanoggaster



Grey Heron
Ardea cinerea



Purple Heron
Ardea purpurea



Little Grebe
Tachybaptus ruliccollis



White-throated Kingfisher
Halcyon smymensis







FLORA (Vegetation)





























Aquatic Vegetation: The wetland's aquatic ecosystem supports various plant species, including:

Floating Vegetation:

_Eichhornia crassipes (Water Hyacinth): Dominates approximately 50% of the wetland area.
Bharatpedia
_Azolla species: Sparsely distributed in open water zones.
Bharatpedia
_Nelumbo nucifera (Lotus): A prominent rooted floating plant.
Bharatpedia

Emergent Vegetation:

_Typha species: Serve as the dominant emergent marsh plants.
Bharatpedia
_Ipomoea aquatica: Commonly found along the lake's periphery in shallower regions.
Bharatpedia

Submerged Vegetation:

Species such as Najas, Hydrilla, Ceratophyllum, Potamogeton, Vallisneria (eelgrass), and Charales thrive beneath the water surface. Additionally, tiny floating islets formed by Eichhornia crassipes and other grass species are scattered throughout the wetland.

Terrestrial Trees:

The surrounding terrestrial landscape features a variety of tree species, including:

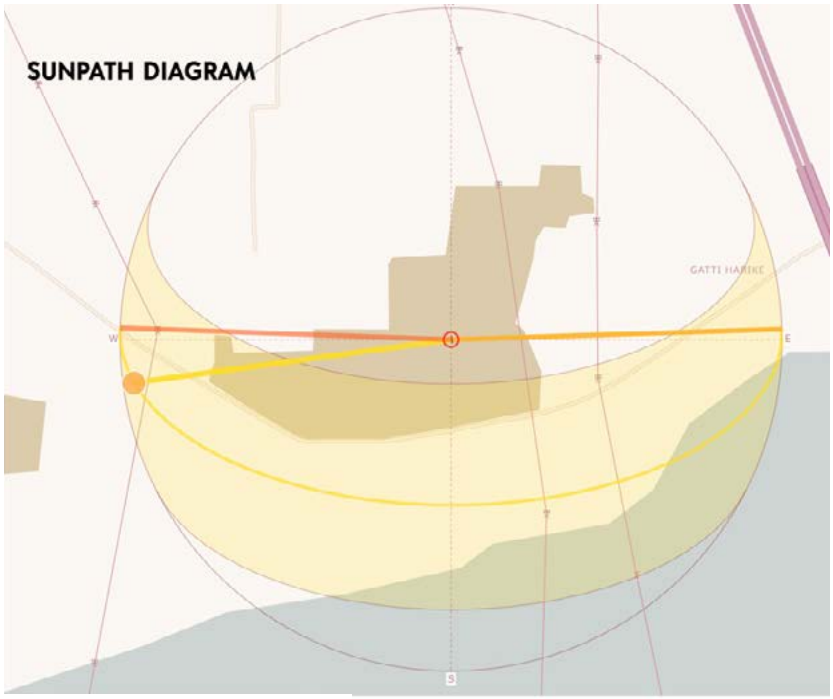
_Acacia nilotica (Indian Gum Arabic Tree)
_Dalbergia sissoo (Indian Rosewood)
_Albizia lebbeck (Siris Tree)
_Ficus religiosa (Sacred Fig)
_Azadirachta indica (Neem)
_Ficus benghalensis (Banyan)
_Mangifera indica (Mango)
_Prosopis spicigera (Khejri Tree)
_Dawyck beech tree
_Eucalyptus species.

These trees not only enhance the area's biodiversity but also provide essential nesting sites for various bird species.
wildlife.punjab.gov.in

The diverse flora of Gati Harike plays a crucial role in maintaining the ecological balance of the region, supporting a wide array of fauna and contributing to the overall health of the wetland ecosystem.

Figure 48 C. Site Study Analysis - Flora
Source: https://en.wikipedia.org/wiki/Harike_Wetland#Flora

SUNPATH DIAGRAM



SUN DATA

Location: 142044, IND
Time: 23.Mar.2025, 17:33 UTC+5.5

Solar data for the Location
Dawn: 06:06:19
Sunrise: 06:30:12
Sun peak level: 12:36:51
Sunset: 18:44:00
Dusk: 19:07:55
Duration: 12h13m48s
Altitude: 14.25°
Azimut: 262.72°
Shadow length: 3.94 _at an object level: 1m

Height: 204m
Latitude: N 31°8'44.52" 31.14570°
Longitude: E 74°55'23.24" 74.92312°
Timezone: Asia/Kolkata IST



VEGETATION

The vegetation in the Gati Harike area is influenced by the presence of the Sutlej River and the nearby Harike Wetland, resulting in a mix of riparian flora, wetland vegetation, and agricultural fields. The region supports reeds, grasses, and aquatic plants in marshy areas, while surrounding farmlands cultivate wheat, rice, and mustard. The wetland also fosters diverse biodiversity, including trees like shisham (Dalbergia sissoo) and babul (Acacia nilotica), which thrive in the semi-arid climate.

INTERNAL PATHWAYS (PAGDANDI)

Primary pathways through the site majorly made by people passing through know as pagdandi's in the local. These can also serve as the natural walkways for the project





SUTLEJ RIVER

The Sutlej River, one of the five major rivers of Punjab, flows near the village of Gati Harike, sustaining the region's agriculture and feeding into the Harike Wetland, a crucial ecological reserve.

PRIMARY ACCESS

Primary road connecting to the nearby Highway - 703B which also induces the primary traffic flow to the site



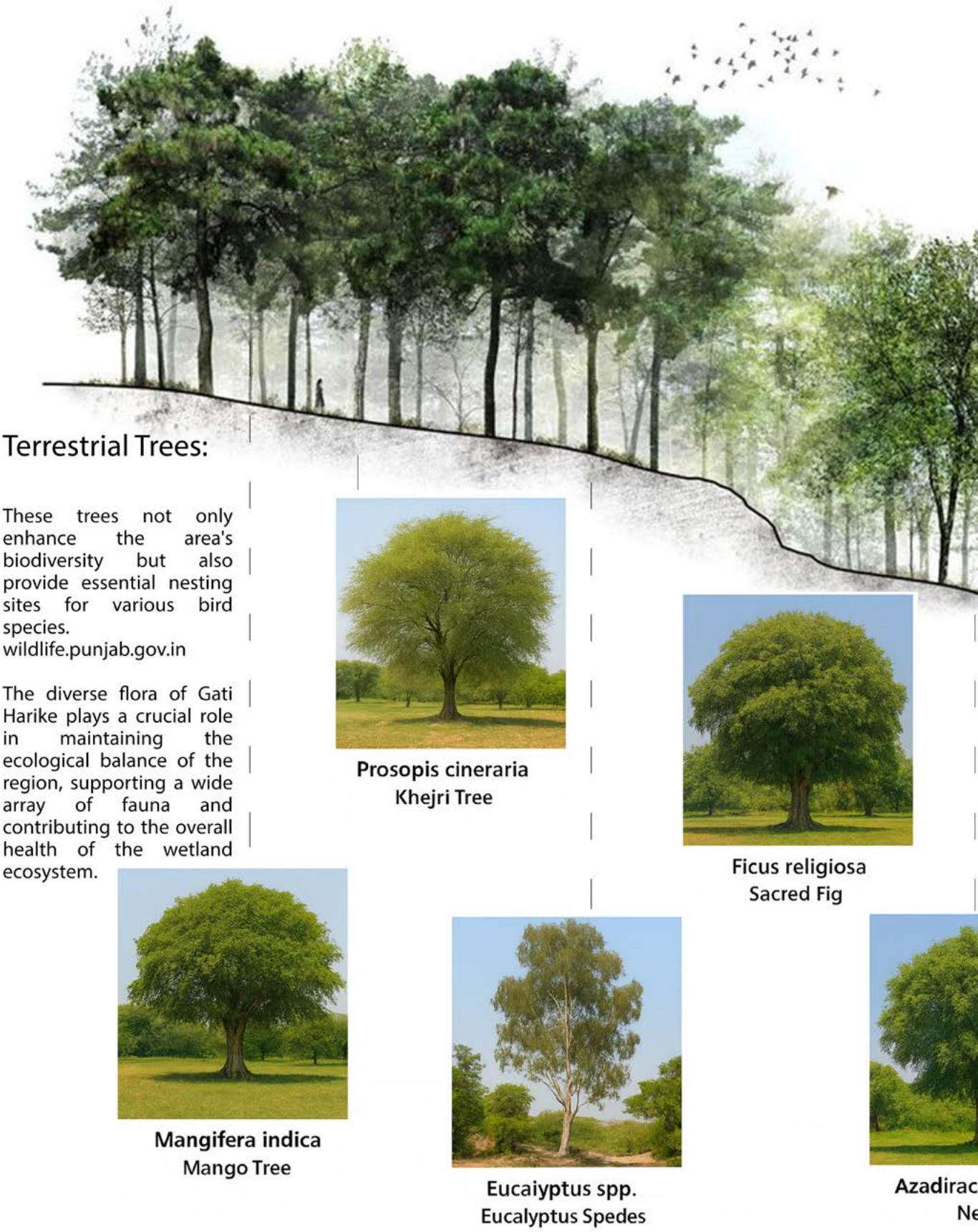


Figure 48 D. Trees in Gati, Harike and in the surrounding areas
Source: https://en.wikipedia.org/wiki/Harike_Wetland#Flora





Dalbergia sissoo
Indian Rosewood



Ficus benghalensis
Banyan Tree



Albizia lebbeck
Siris Tree



Acacia *nilotica*
Indian Gum Arabic Tree



hta indica
eem

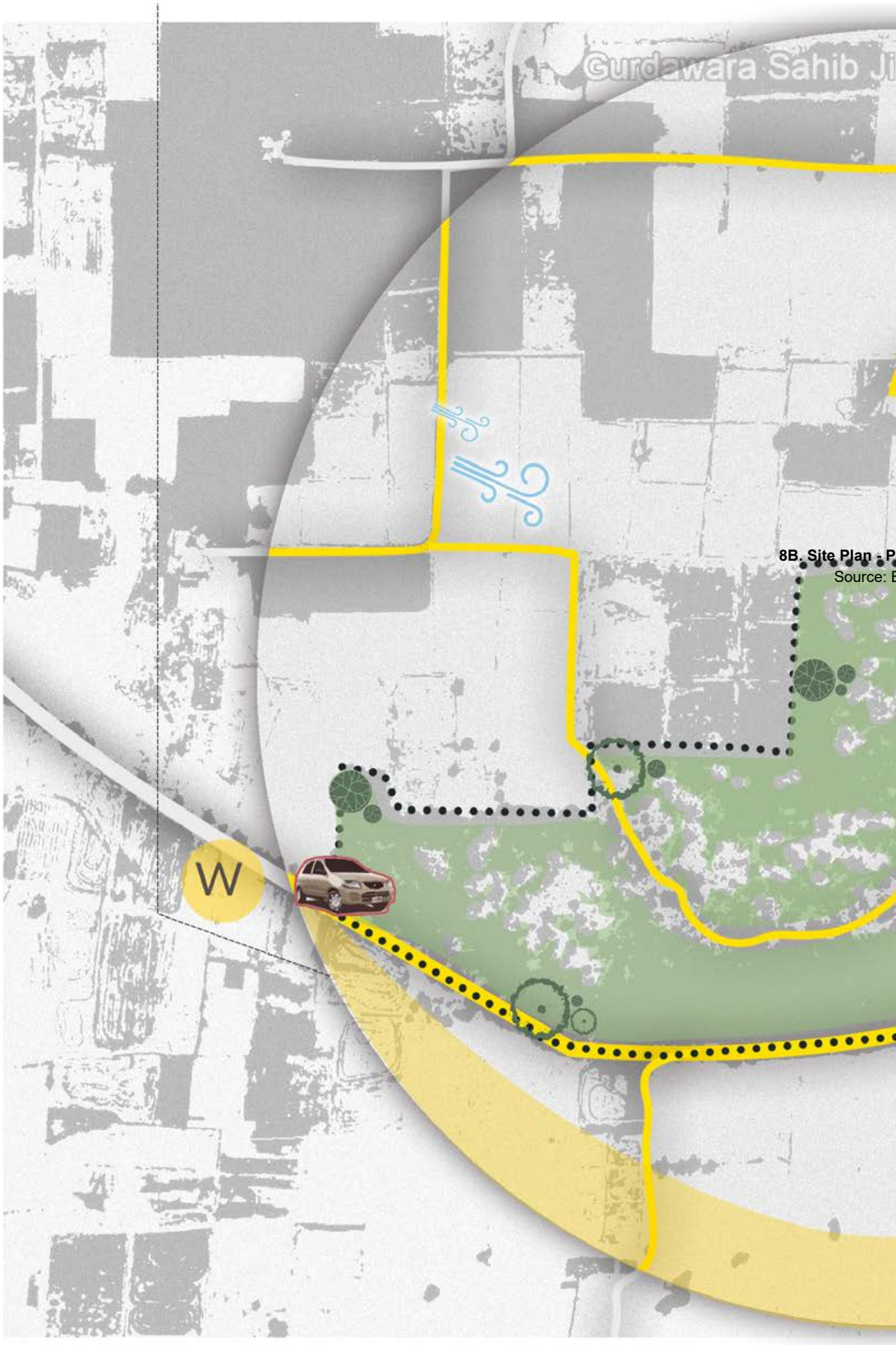


Figure 48 E. Site Study Analysis
Source: By Author



rograms Zoning
By Author



Figure 49. Site Context Mapping
Source: By Author


703B
6
5
BEAS RIVER
BEAS RIVER
4
4
3
HARIKE
PATTAN BARRAGE
703B
BEAS RIVER
5
HARIKE WET LANDS
2
9
8
HARIKE
PATTAN BARRAGE
703B
10
13
11
BIRD
SACTUARY
703B

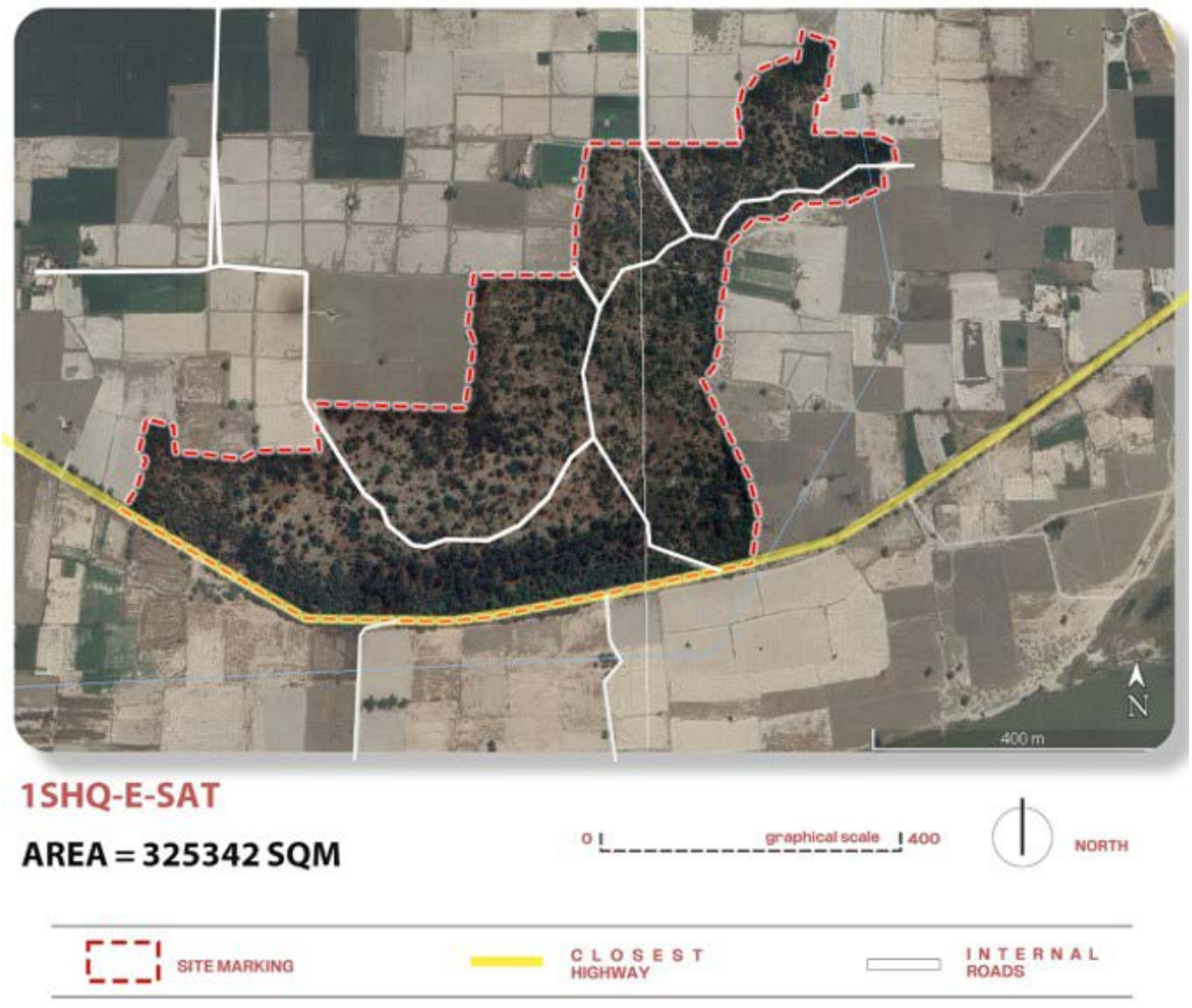


Figure 50. Site Map with graphic scale, showing the boundry, orientation, highway, internal existing pathways & the total area of the site.

Source: Satellite Image taken from Google Earth Pro.



Figure 51. Pictures of the actual site taken from different directions as shown by arrows in the top rightimage.
Source: By Author

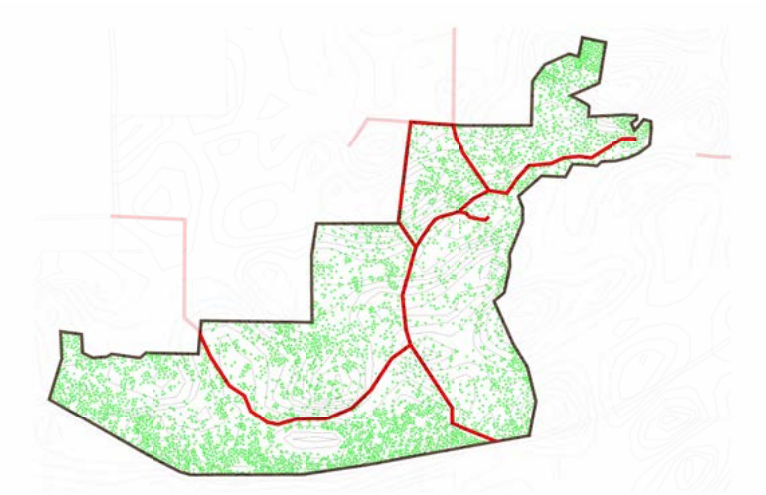


Figure 52 A. Site Plan showing the existing trees & vegetation
Source: By Author



Figure 52 B. View of the site from bridge
Source: Satellite image by Author taken from Google Earth Pro

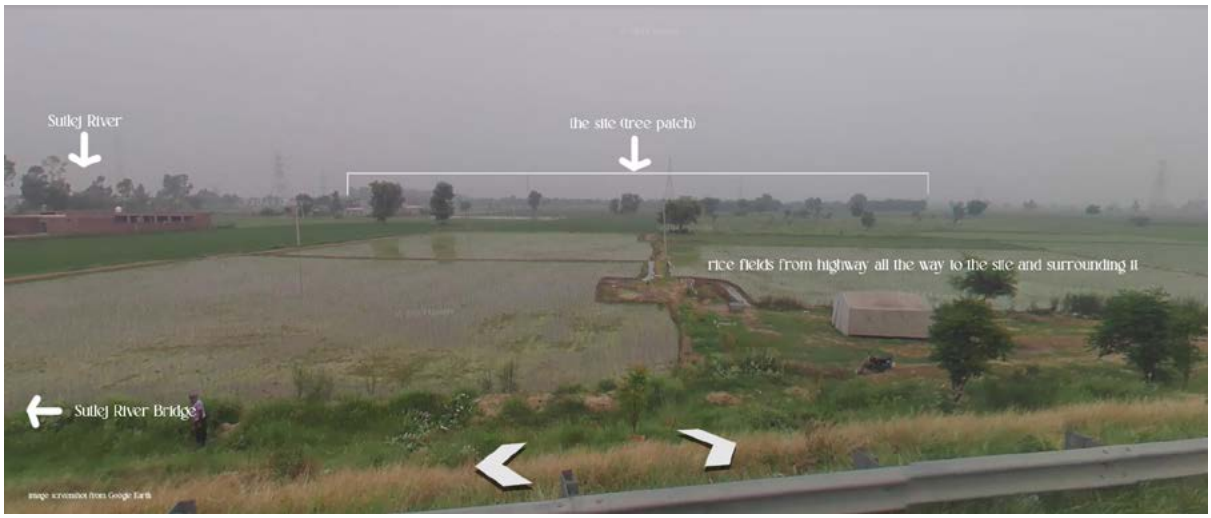


Figure 52 C. View of the site from Highway.
Source: Satellite image by Author taken from Google Earth Pro



Figure 52 D. Site Elevation Map showing different levels of elevation taken from the sea level, light green (213m) being the highest point and the darkest green (196m)being the lowest elevation point of the Site.

Source: By Author measured from Google Earth Pro

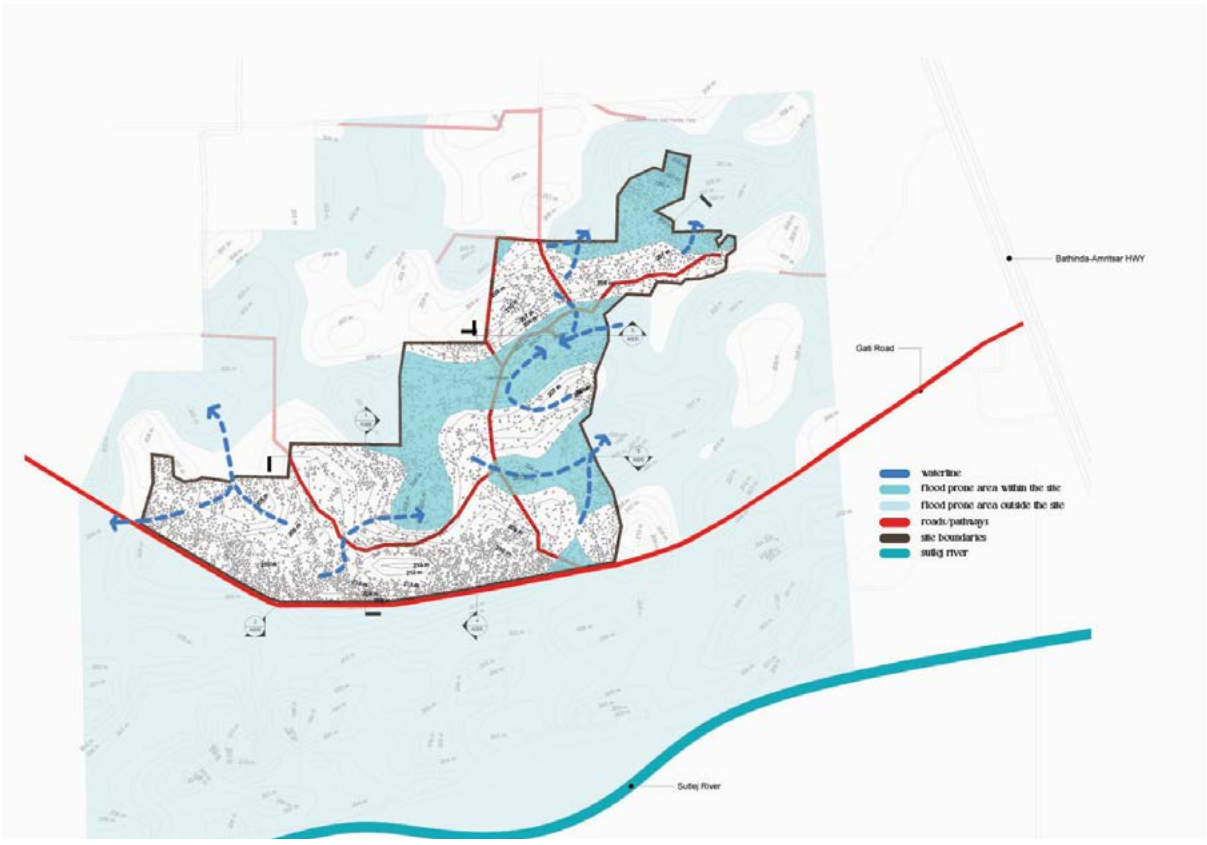


Figure 52 E. Surface water runoff & flood hazard map

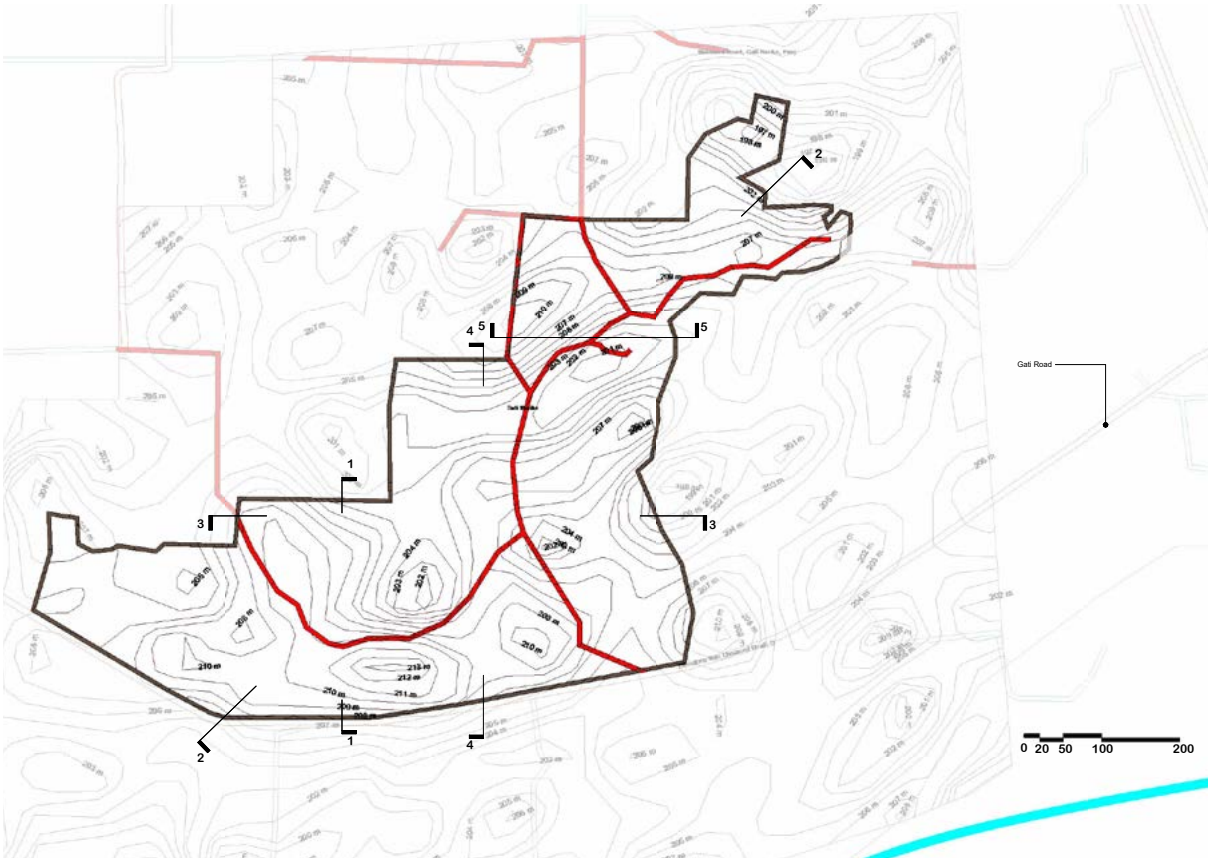


Figure 53 A. KEY PLAN SHOWING THE SECTION CUTS.
Source: By Author

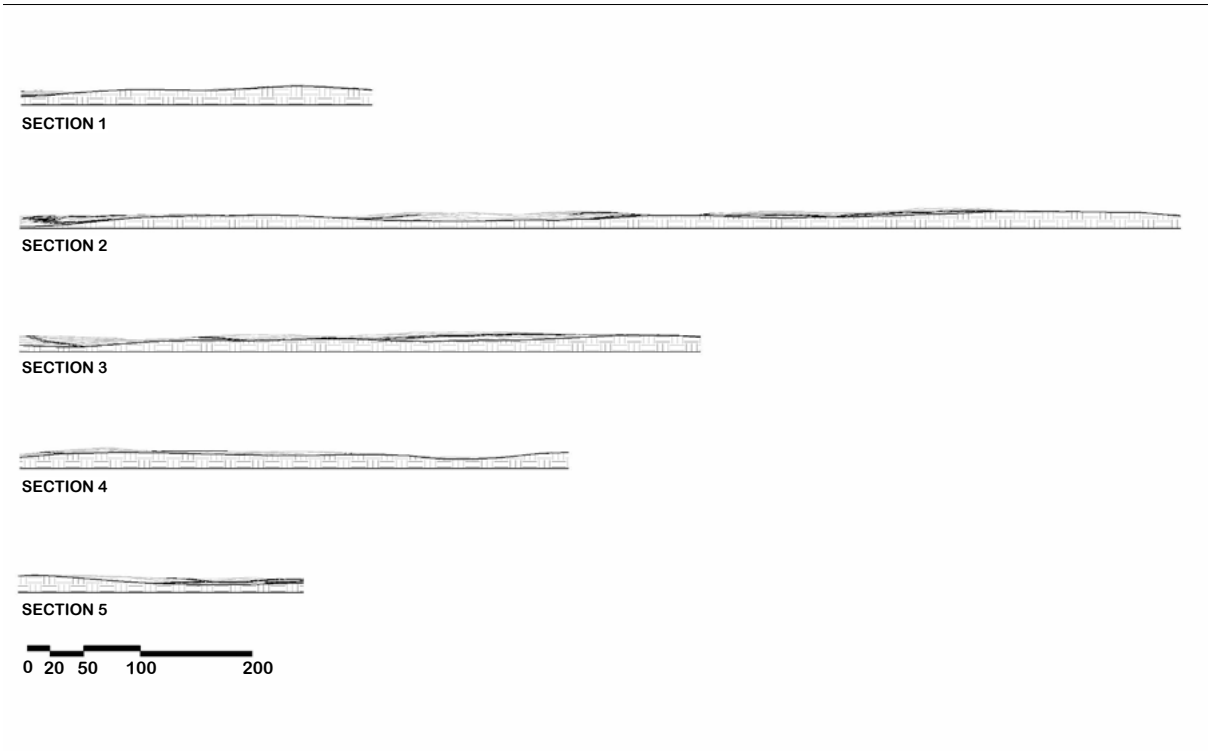


Figure 53 B. TOPOGRAPHY SECTIONS OF THE SITE.
Source: By Author

FLOOD - RESILIENT ARCHITECTURE

Infrastructure in India, South Asia & Global Context

1. Elevated and Flood-Resilient Foundations

How It Works:

Structures are built on stilts, raised platforms, or artificial land reclamation to stay above flood levels.

Advantages:

- Prevents water damage by keeping structures above flood levels.
- Allows urban expansion in flood-prone regions.
- Can be adapted for both rural and urban areas.

Small-Scale Examples:



Figure 54 A.[1]

Modern International Example: Houses in New Orleans, USA – After Hurricane Katrina, many homes were built on raised platforms with concrete stilts to protect against future flooding.



Figure 54 B.[2]

Neighboring Country Example: Stilt Houses in Bangladesh (Sundarbans India & Bangladesh) – Traditional homes in the Bangladesh Delta region are built on elevated wooden stilts to withstand flooding and cyclones.



Figure 54 C.[3]

India-Specific Example: Chang Ghar Houses – Assam, India – Built by the Mising tribe, these bamboo houses rest on wooden stilts to survive Brahmaputra River floods.

Large-Scale Examples:



Figure 54 D.[4]

Modern International Example: Eko Atlantic, Nigeria – A massive coastal city built on reclaimed land, designed to resist rising sea levels and flooding.



Figure 54 E.[5]

Neighboring Country Example: Teesta Barrage Project, Bangladesh & India – A cross-border flood management system controlling river flow and preventing seasonal floods.



Figure 54 F.[6]

India-Specific Example: Polavaram Project – Andhra Pradesh, India – A major dam project on the Godavari River designed for flood control and irrigation.

2. Amphibious & Floating Infrastructure

How It Works:

Buildings are designed to float or rise with floodwaters, preventing water damage.

Advantages:

- Reduces flood damage by adapting to changing water levels.
- Ideal for river and coastal communities.
- Scalable from single homes to entire floating districts.

Small-Scale Examples:



Figure 54 G.[7]

Modern International Example: Elburg Floating Neighborhood, Netherlands – A floating residential district where houses sit on buoyant concrete platforms, rising with water levels.



Figure 54 H.[8]

Neighboring Country Example: Floating Houses in Bangladesh – Built using bamboo rafts and plastic barrels, these homes float during floods and return to the ground when water recedes.



Figure 54 I.[9]

India-Specific Example: Amphibious Housing in Kerala, India – After the 2018 floods, prototypes of houses with buoyant foundations were introduced in flood-prone villages.

Large-Scale Examples:



Figure 54 J.[10]

Modern International Example: The Lilypad Floating Cities (Concept) – Proposed flood-resilient, self-sufficient cities designed to adapt to rising sea levels.



Figure 54 K.[11]

Neighboring Country Example: Floating Villages on the Tonlé Sap Lake, Cambodia – Entire communities live on houses that float on water, adapting to seasonal floods.



Figure 54 L.[12]

India-Specific Example: Floating Solar Power Plant – Ramagundam, Telangana – Asia's largest floating solar plant, designed to generate power while preventing land flooding.

1 https://earthbound.report/2016/01/08/five-ways-to-build-a-flood-proof-home/

2 https://www.ucl.ac.uk/bartlett/climate-resilience-cities

3 https://ridhisidhigroup.com/blog/assams-traditional-houses-design-ikora-chang-ghar/

4 https://www.haskoning.com/en/projects/a-new-coastal-city-built-on-reclaimed-land-from-the-sea

5 https://www.mergili.at/worldimages/picture.php?/12966

6 https://commons.wikimedia.org/wiki/File:Spillway_Polavaram_Head_Works.jpg

7 https://archello.com/project/floating-houses-ijburg

8 https://www.dhakatribune.com/bangladesh/291506/floating-houses-in-sunamganj-to-combat-flood

9 https://solve.mit.edu/solutions/75391; https://hindi.thebetterindia.com/sustainable-homes/floating-houses-for-flood-prone-areas-made-by-nest-abide/; https://www.researchgate.net/figure/Amphibious-house-and-its-Figure-3-Comparison-of-a-normal-house-and-an-main-components_fig2_350776538

10 https://archello.com/project/lilypad-a-floating-ecopolis-for-climatical-refugees

11 https://ap-plat.nies.go.jp/inas/goodpractices/research/9.html

12 https://www.tndindia.com/ntpc-commissions-more-capacity-at-ramagundam-floating-solar-project/

3. Sponge City Concept

How It Works:

Instead of draining rainwater away, sponge cities absorb, store, and slowly release floodwaters through green spaces, permeable pavements, and natural retention areas.

Small-Scale Examples:



Figure 55 A.[1]

Modern International Example: Permeable Pavements in Copenhagen, Denmark – Roads made with permeable concrete allowing water to seep into the ground, reducing urban flooding.



Figure 55 B.[2]

Neighboring Country Example: Rain Gardens in Bangladesh – Small water-absorbing gardens are used in homes and cities to slow down rainwater runoff.



Figure 55 C.[3]

India-Specific Example: Rainwater Harvesting Pits in Tamil Nadu & Rajasthan, India – Groundwater recharge systems reduce urban flooding and groundwater depletion.

4. Flood Barriers & Temp

How It Works:

Uses levees, floodgates, and seawalls to block or redirect floodwaters away from cities.

Small-Scale Examples:



Figure 55 D.[7]

Modern International Example: AquaFence & NOAQ Boxwall, USA & Europe – Temporary flood barriers that protect homes and buildings from floodwater.



Figure 55 E.[8]

India-Specific Example: Rainwater Harvesting Pits in Tamil Nadu & Rajasthan, India – Traditional protection systems reduce urban flooding and groundwater depletion.

5. Underground Flood Sto

How It Works:

Massive underground tunnels and storage tanks collect floodwater and redirect it away from urban areas.

Small-Scale Examples:



Figure 55 F.[12]

Modern International Example: Smart Drainage Systems in Tokyo, Japan – Uses underground tanks to store excess floodwater.



Figure 55 G.[13]

India-Specific Example: Subsurface Gravel Drainage, Rural India – A natural way to store and filter rainwater.

1 https://www.archdaily.com/902399/climate-tile-designed-to-catch-and-redirect-excess-rainwater-from-climate-change/5ba3e1a3f197cc369f0007d3-climate-tile-designed-to-catch-and-redirect-excess-rainwater-from-clima
2 https://www.allianceforthebay.org/2022/06/rain-gardens-are-effective-tools-to-reduce-stormwater-runoff/; https://innservices.co/learn-and-save/water-conservation/rain-gardens
3 https://en.wikipedia.org/wiki/Taanka
4 https://growgreenproject.eu/wuhan-sponge-city-programme-achieving-harmony-among-people-water-city/
5 https://www.researchgate.net/figure/Hatirjheel-Lake-Infrastructure-Impact-The-new-east-west-infrastructure-will-have-a_fig9_265941623; https://bangladeshpost.net/posts/protect-beauty-of-hatirjheel-lake-162568
6 https://economictimes.indiatimes.com/industry/services/property-/-cstruction/sobha-group-founder-pledges-rs-1000-cr-for-sabarmati-riverfront-development-in-ahmedabad/articleshow/104133604.cms
7 https://www.floodbarriers.in/image/Flood%20Barrier%20catalogue%20%281%29.pdf
8 https://www.newindianexpress.com/cities/vijayawada/2022/Aug/02/cm-jagan-to-launch-15-km-flood-safety-wall-soon-2483237.html
9 https://www.londonfestivalofarchitecture.org/blog-post/thames-connections-past-present-and-future/
10 https://www.concern.org.uk/news/four-things-you-need-know-about-floods-bangladesh
11 https://marathi.ndtv.com/cities/mumbai-coastal-road-likely-to-be-opened-fully-only-in-2025-6240512
12 https://www.japantimes.co.jp/news/2024/06/03/japan/society/tokyo-underground-flooding-tunnel/
13 https://www.dynamicnonwovens.co.in/geotextile-fabric-for-drainage.htm
14 https://www.tokyoupdates.metro.tokyo.lg.jp/en/post-1361/
15 https://www.freepressjournal.in/mumbai/mumbai-bmc-re-starts-ten-years-old-veravali-powai-ghatkopar-water-supply-tunnel-project-to-cost-around-rs-350-crores-now

& Green Infrastructure		
		Advantages: • Reduces urban flooding without expensive barriers. • Improves water quality and green spaces in cities. • Creates aesthetic public spaces that double as flood management areas.
	Large-Scale Examples:	
 **Figure 56 A.**[4] Modern International Example: China's Sponge Cities (Shanghai, Wuhan, Shenzhen, etc.) – Designed with parks, wetlands, green roofs, and underground storage to manage rainwater.	 **Figure 56 B.**[5] Neighboring Country Example: Hatirjheel Lake Project, Bangladesh – A revitalized wetland system that prevents flooding in Dhaka while serving as a public park.	 **Figure 56 C.**[6] India-Specific Example: Palava/ Navi Mumbai Project – Andhra Pradesh, India – A riverfront system designed for flood control and irrigation.
orary Protection Systems		
		Advantages: • Provides immediate flood protection. • Can be temporary or permanent, depending on needs. • Essential for coastal and riverfront cities.
	Large-Scale Examples:	
 **Figure 56 D.**[9] Modern International Example: Thames Barrier (UK) – A movable floodgate system that protects London from storm surges.	 **Figure 56 E.**[10] Neighbouring Country Example: Embankments Along the Padma & Jamuna Rivers, Bangladesh – Strengthened levees to prevent riverine flooding.	 **Figure 56 F.**[11] India-Specific Example: Mumbai Coastal Road Project, India – A proposed seawall and raised expressway to mitigate rising sea levels.
orage & Drainage Systems		
		Advantages: • Prevents flash floods in cities. • Works underground, saving surface space. • Stores floodwater for reuse in irrigation or utilities.
	Large-Scale Examples:	
 **Figure 56 G.**[14] Modern International Example: Tokyo's Underground Flood Tunnel (G-Cans Project), Japan – The largest underground floodwater diversion system.	 **Figure 56 H.**[15] India-Specific Example: Mumbai's Stormwater Drainage System (Brimstowad Project) – A major underground network to prevent urban flooding.	

te-change-image

Design Philosophies

1. Experiential Journey and Gradual Revelation: The design orchestrates a deliberate and sensory-rich journey that guides visitors through emotional and spiritual transitions.

Sequential Experience: The entire site is conceived as a progressive narrative, with experiences unfolding from arrival to the ultimate destination. This includes considering the approach to the site, not just the formal entrance, as part of the designed experience.

Sensory Modulation: Utilize natural elements like landscape, water, shade, and specific natural soundscapes (e.g., falling water, bamboo rustling to transition visitors into a more settled and reflective state gradually. This aims to subdue external "chaos" with "white noise" from nature, preparing them for deeper spiritual engagement.

Purposeful Pathways: Pathways are designed with varying characteristics, including curves and different textures, to create distinct zones that support both communal interaction and individual introspection. Architectural elements such as thresholds, entrances, gateways, and corridors are employed to signify transitions between the ordinary and the sacred.

Anticipation and Discovery: Elements like the multi-faith center are not immediately visible, fostering a sense of faith and trust in the process of discovery. The journey itself becomes part of the spiritual experience.

2. Inclusive and Compassionate Design: The sanctuary is designed to be accessible and welcoming to all individuals, demonstrating compassion towards both humans and the natural environment.

Universal Accessibility: Design elements will cater to diverse needs, including tactile features, braille murals, varied seating heights for children and the elderly, and universally accessible ramps. The philosophy is to design for both extremes and everybody else fits automatically.

Environmental Empathy: Architecture will be adjusted to coexist with nature, such as designing around existing trees rather than removing them. This includes creating "dark zones" in forested areas at night to accommodate nocturnal wildlife, reflecting a compassionate approach to all living beings.

Community Integration: The design will incorporate spaces and opportunities that encourage interaction and participation from the local community, promoting concepts of "Sarbat da Bhala" (welfare of all)

3. Contextual and Eco-Responsible Planning: The design respects and integrates with the unique ecological and cultural context of the site, prioritizing sustainability and authenticity.

Site Integration: Built forms are carefully situated along existing terrain features and natural contours to prevent unnecessary disturbance to the landscape. This allows architecture to emerge organically from the site.

Natural Element Preservation: Key natural elements, especially existing trees, are identified, preserved, and integrated into the design rather than being arbitrarily moved. The design should actively engage with these natural features to create unique moments.

Sustainable Materiality: Locally sourced materials and traditional Punjabi techniques are prioritized to promote low-impact, sustainable development, maintaining the site's identity and integrity. This aligns with

Gurbani's emphasis on living in reverence, balance, and stewardship with the five elements.

4. Spiritual Alignment and Symbolic Representation: The architectural and landscape design will embody the core principles of Gurbani and spiritual awakening, using symbolism to deepen meaning.

Gurbani-Inspired Concepts: Key philosophical concepts such as the "Nine Gates and the Dasam Dwar," and the "Five Elements and Seven Chakras" are translated into tangible architectural and experiential spaces (Redefining Spiritual Retreat / Designing Spiritual Landscape)

Symbolic Elements: Water elements, pathways, and visual cues are used symbolically to represent spiritual purification, journey, and progression towards higher consciousness.

Focal Elements: The design will incorporate focal points and elements that draw attention and aid in meditation and reflection, such as elements of surprise through sculptures to evoke contemplation.

This is particularly important in the context of Punjab in India, the birthplace of Gurbani. Figure 1 shows a pie chart of the forest cover of Punjab, from the Forest Survey of India, 2023. This place has seen a tremendous decline in environmental degradation, with only 3.67% of tree cover. Poor air quality and contaminated water are just a few of the challenges the area is facing. This shows areas at night to accommodate nocturnal wildlife, reflecting a compassionate approach to all living beings.

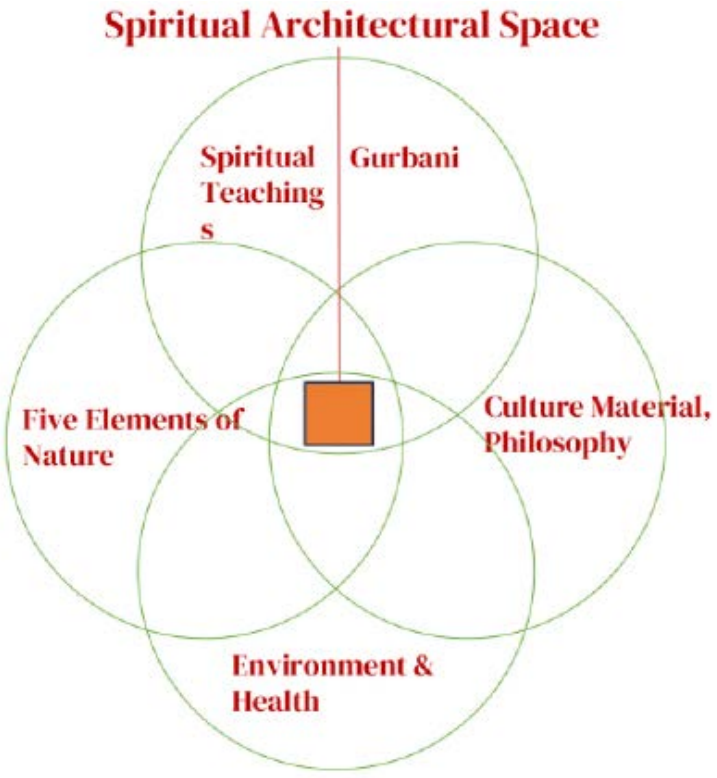


Figure 57.

Designing a Gurbani-Inspired Retreat & Sanctuary (ISHQ-E-SAT) in Gati Harike, Punjab, India: Integrating Spirituality into Architecture to Explore the Journey of Awakening language, leading towards the Journey of Awakening.

The Research applies Gurbani's hermeneutics to explore how the Elements of Creation (Matter) and the energy of Chakras (Being) can be translated into a transformative spatial design .

GURBANI, aka (Guru Granth Sahib), is a sacred scripture of Universal Teachings on following the Truth, living the Truth, and becoming the Truth. Below is the process of tranformation when the Chakras get activated:

1. Engraving *Sat* (Truth) in our memory.
2. Engraving *Sat* (Truth) in our Mind / Consciousness (Surat).
3. Remembring *Sat* (Truth)with love in our divine heart (Hirdha).
4. Making Rom-Rom(each cell) of our body merge with *Sat* (Truth).
5. Becoming of *Sat* (Truth)Roop of mind and Hirdha.
6. Becoming *Sat* (Truth) Naam by ourself (Har Ka Naam Junn Ka Roop Rang).
7. Getting absorbed in *Sat* (Truth).
8. Merging with *Sat* (Truth)[26]

Architecturally, I explored the phenomenology of space by designing programs that encourage hands-on, physical engagement, alongside meditative zones that invite reflection and stillness. These environments are intended to foster prolonged interaction, allowing users to form a lived experience that gradually influences their emotional state, supports personal growth, and further enhances their spiritual development.

By doing these activities in spaces designed around the five natural elements—earth, water, fire, air, and space, people can connect more deeply with their surroundings. These elements aren't just symbolic; they influence how we feel and function. When balanced, they help restore harmony within the body. So spending time in these thoughtfully crafted environments doesn't just feel good, it can actually support emotional healing and physical well-being. It's a gentle, immersive way to help people feel more centered, grounded, and spiritually nourished. There is a Gurbani verse related to this:

ਅਪੁ ਤੇਜੁ ਬਾਇ ਪ੍ਰਿਥਮੀ ਆਕਾਸਾ ॥ (੩੨੭-੯, ਗਉੜੀ, ਕਬੀਰ ਜੀ)

ap tayj baa-ay parithmee aakaasaa.
Water, fire, wind, earth and ether

ਐਸੀ ਰਹਤ ਰਹਉ ਹਰਿ ਪਾਸਾ ॥ (੩੨੭-੯, ਗਉੜੀ, ਕਬੀਰ ਜੀ)

aisee rahat raha-o har paasaa.
- adopt such a way of life and you shall be close to the Lord.[27]

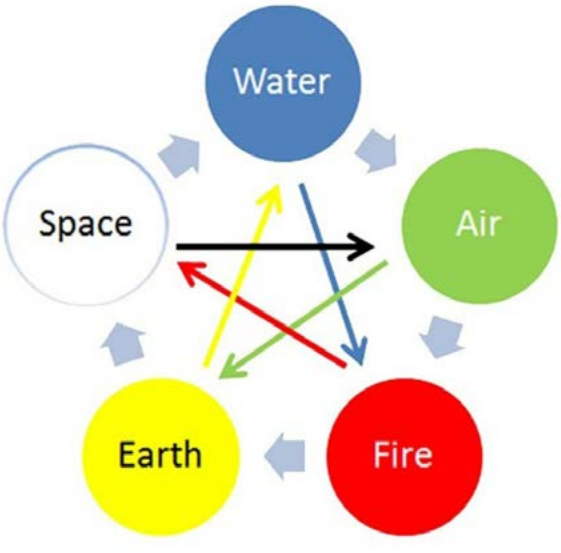


Figure 58. Cycle of Creation of Five Elements
Source: https://pinnaclevastu.com/BlogDetail/SCIENCE-BEHIND-VASTU-SHASTRA%20THE-THEORY-OF-FIVE-ELEMENTS

Seven Sat Sarovar (Seven Source of Ambroisal Nectar of Truth (Chakras or Energy Centre)

Top of the head.
(Dassam Duaar. Sahansar Dall kanwal – thousand petal lotus).

Mid-Forehead.
(Trikuti; Gyan Netter; Dib Drisht; Agyaa Chakkar)

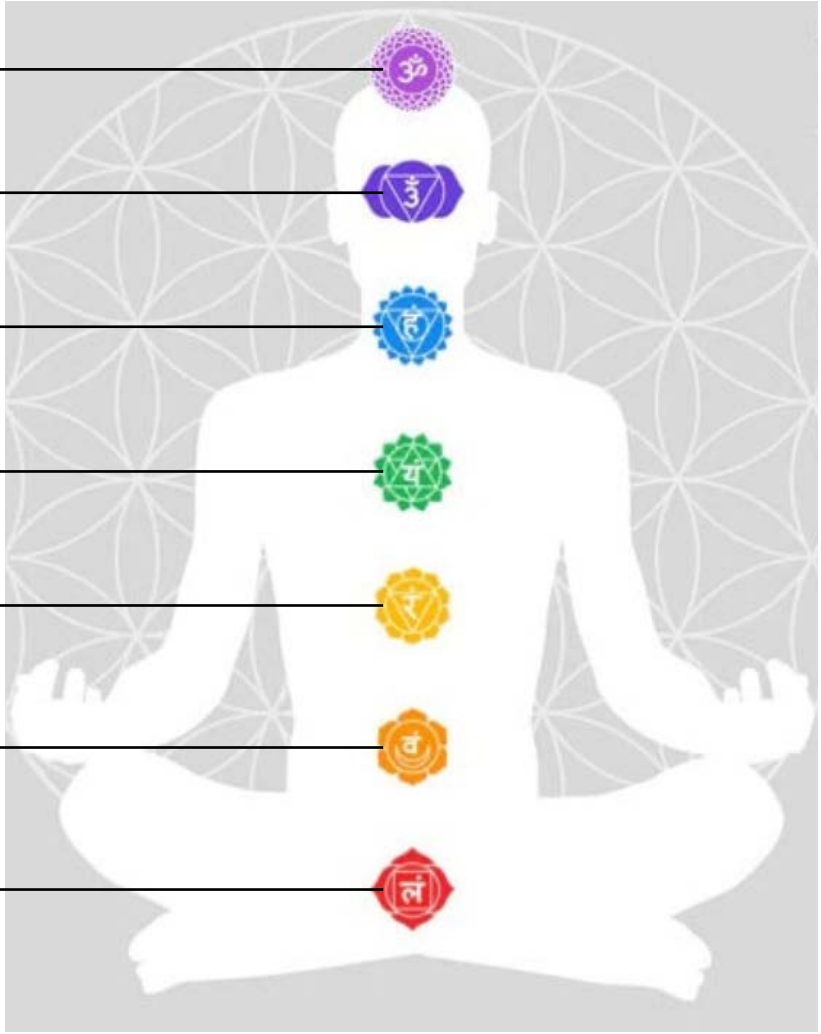
Throat.
(Visudhi Chakkar)

Middle of the chest.
(Hirda; Anhat Chakkar)

Navel area.
(Nabhi; Manipuri Chakkar)

Above the sex organ.
(Swadhisthan Chakkar)

Base of the spine.
(Mooladhaar Chakkar. Source of the Kundalini Shakti)



ਸੁੰਨਹੁ ਸਪਤ ਸਰੋਵਰ ਥਾਪੇ ॥

Figure 59. The seven Sat Sarovar (Chakras or Energy Centers and their locations on the body)
Source: https://pinnaclevastu.com/BlogDetail/SCIENCE-BEHIND-VASTU-SHASTRA%20THE-THEORY-OF-FIVE-ELEMENTS

THE CONCEPTUAL ILLUSTRATION OF THE DESIGN

LEGEND:

1. Cottages for Tourists
2. Site
3. Multifaith Center
4. Five Elements
5. Seven Chakras
6. Peacock as Symbolism
   (Inspiration from a Miniature Persian Landscape Painting)
7. Birds Sanctuary

The conceptual illustration presents a speculative, peacock-inspired spiritual design that blends surrealistic elements—such as the human body with a peacock—to depict a transformative journey from unconsciousness to consciousness. Rooted in Gurbani teachings and regional architecture, the site guides visitors through Seven Portals representing chakra energy centers. Beginning at Point 1 with cottages for spiritual seekers on elevated terrain and culminating at Point 3 in a multi-faith center, symbolizing the uncoiling of kundalini energy via a surrounding ramp. The design integrates the five elements, Persian and Mughal influences, and the peacock's symbolic dance, reflecting spiritual awakening. Tangible and material aspects are represented through square forms, while circular shapes express the intangible and spiritual dimensions. Water flows through the site as ambrosial nectar, enhancing purification and connecting sensory experience to spiritual transcendence, ultimately emphasizing unity, illumination, and oneness with the divine.

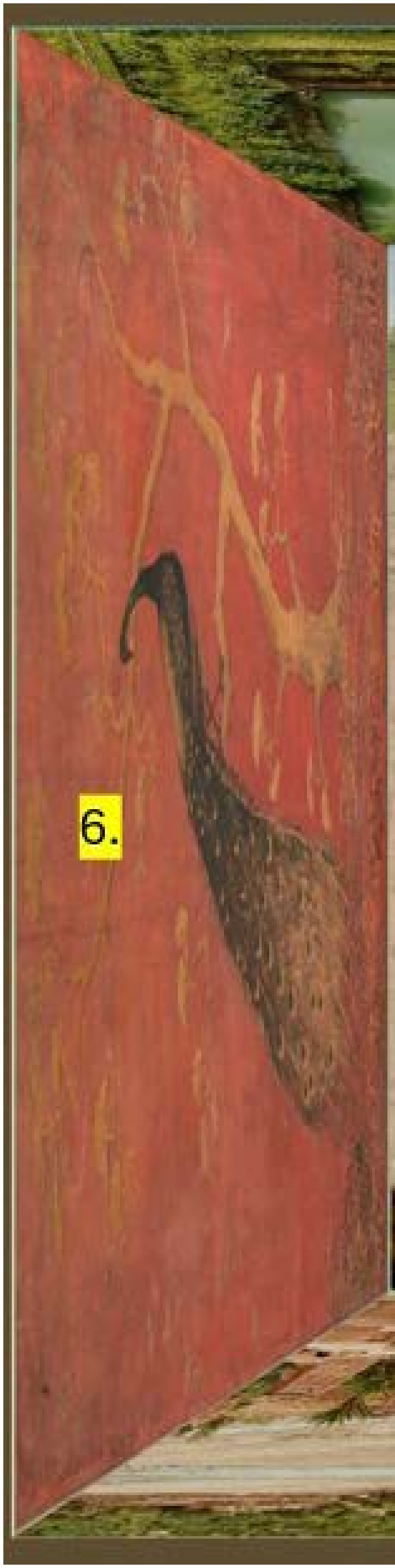


Figure 60. THE CONCEPTUAL ILLUSTRATION OF THE DESIGN


3.
8.
7.
2.
4.
5.
1.

THE INITIAL INSPIRATION AND GRAPHIC FRAMEWORK FOR MY DRAWING

These initial sketches were created intuitively and, interestingly, they mirror the natural patterns found in a peacock feather—particularly the eye motif within its plumage. This visual resonance led me to draw inspiration from miniature landscape paintings featuring peacocks, which became the conceptual and graphic framework for my design exploration. The peacock holds particular relevance to the nearby bird sanctuary, adding ecological context to the design.

Spiritually, the peacock holds deep significance in Gurbani and across various religious and mythological traditions, symbolizing beauty, grace, and divine presence. Moreover, the eye motif in the plumage, which reflects the golden ratio, reveals hidden divine proportions and order within an otherwise chaotic world—offering a profound metaphor for harmony through design.



Figure 61 A. Initial Intiutive Sketch 1
Source: by Author

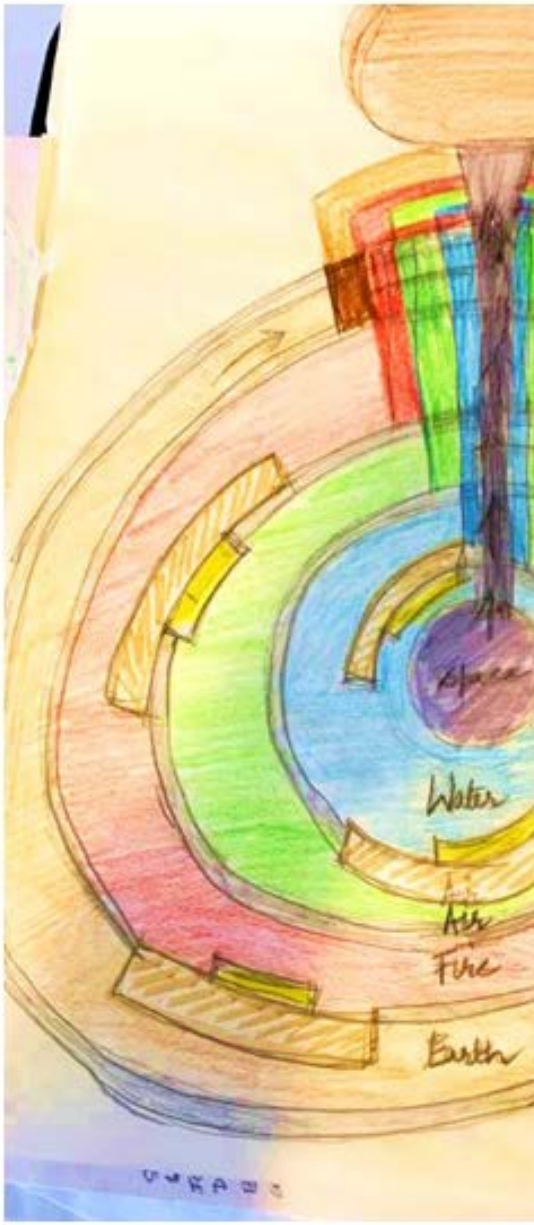


Figure 61 B. Initial Intiutive Sketch 2
Source: by Author



Figure 62. Painting titled Peacock Screen (No. 5), created in 1900 by the American artist Robert Winthrop Chanler.

The drawing envisions the juxtaposition of the human spine with a peacock displaying its open plumage, symbolizing the alignment of chakras and the unfolding of spiritual consciousness.

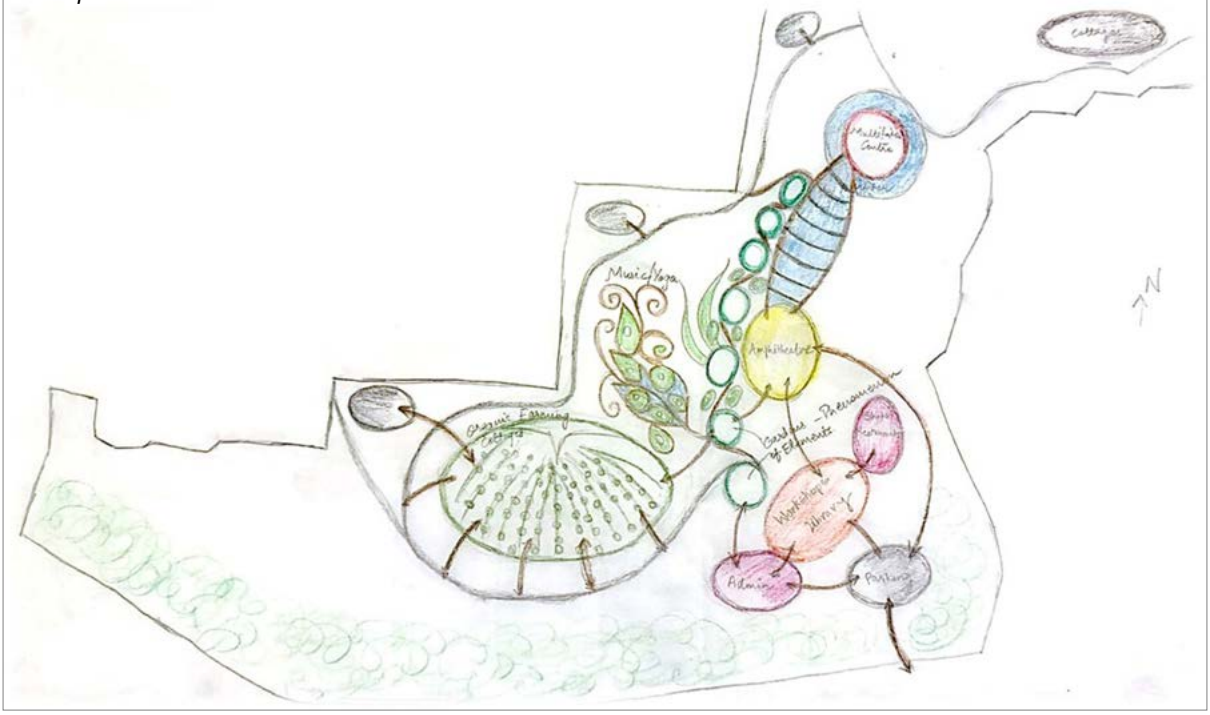


Figure 63. Conceptual Zoning Plan showing the alignment of Chakras on the existing path that resembles with the human spine
Source: by Author

After analyzing the site conditions (refer to Figure #: Surface Water Runoff & Flood Hazard Map), I positioned the water body at the site's natural low points—areas where rainwater would naturally accumulate during the monsoon season. Water is a fundamental element in the site's design, influencing both the layout and the experiential journey. Water has played a vital and multifaceted role throughout my design process, shaping everything from the initial concept to the finer experiential details.

The water element is not merely an aesthetic addition but an integral design component that shapes the site's layout, orchestrates the visitor's sensory and emotional journey, and is woven into both the natural and built elements of the sanctuary. Visitor's sensory and emotional journey, and is woven into both the natural and built elements of the sanctuary.

The site development plan images illustrate how pathways have been organically shaped by the natural contours of the land, along with the strategic placement of the large water body at the site's lowest points.

The seven Chakras shown in green rectangles are then placed along this path

Finally, it was very interesting to find that how all the concepts came together in forming the peacock shape plan.

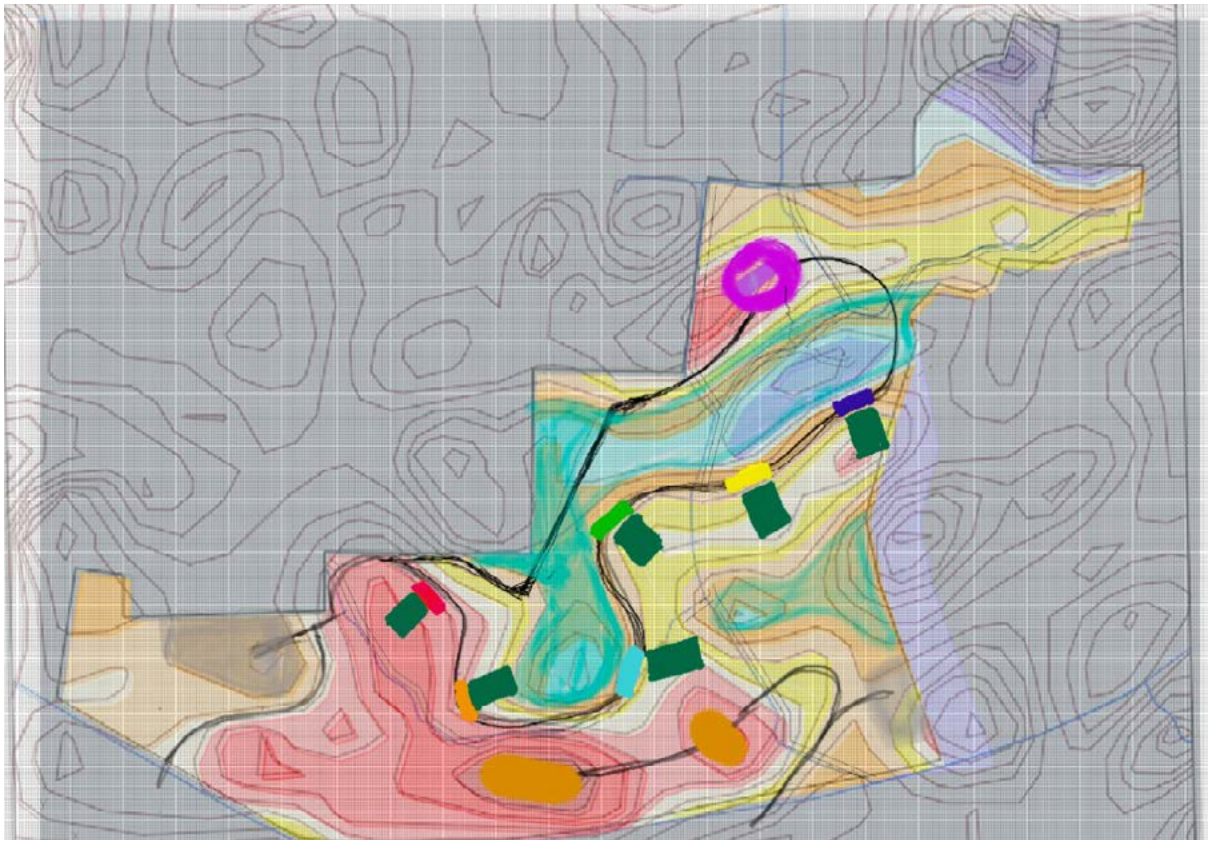


Figure 64 A. Site Development Plan showing the zoning of the Water Body at the lowest elevation points on the site
Source: by Author



Figure 64 B. Site Development Plan showing zoning of programs following the site contours
Source: by Author

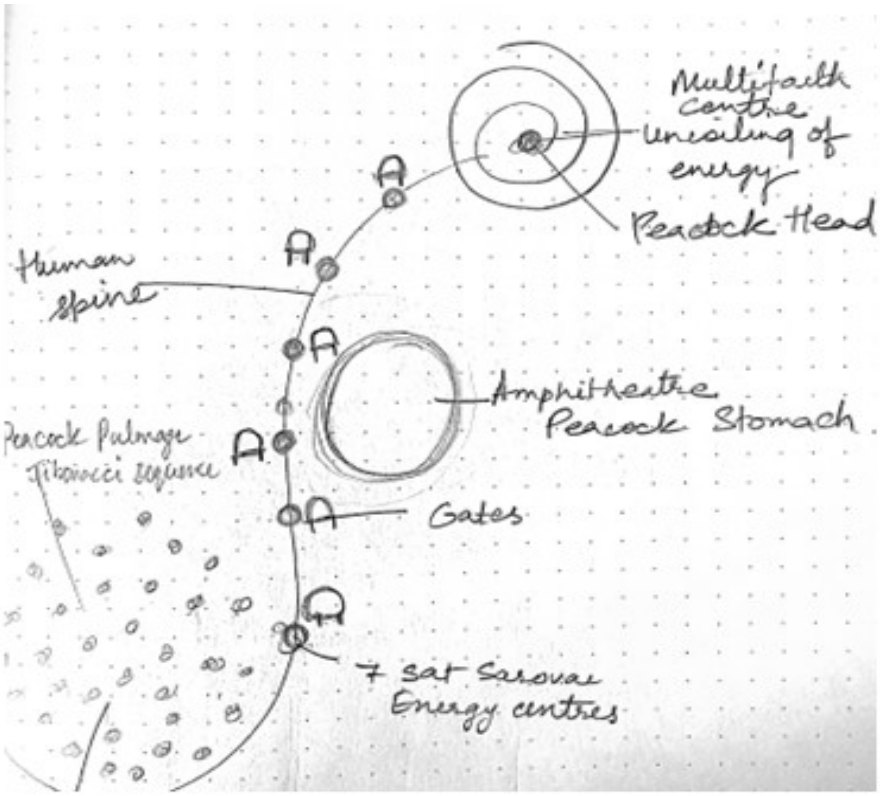


Figure 65 A. Zoning Plan started by defining the seven Chakras as the seven node points.
Source: By Author

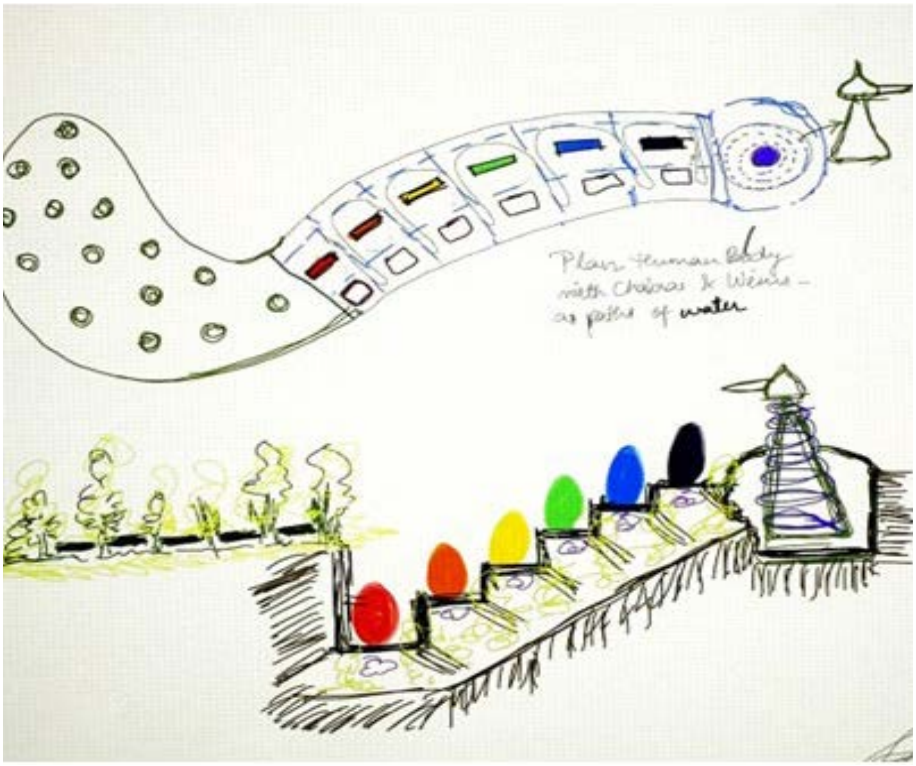


Figure 65 B. Conceptual Plan & Section showing the placement of Chakra Nodes in the increasing order of consciousness.
Source: By Author

The site is organized into seven nodes or gates, each representing a chakra and offering spaces for meditation and elemental balancing. Visitors can choose from three types of journeys: direct, exploratory, or immersive, catering to different levels of engagement. Each chakra node integrates all five elements—earth, water, fire, air, and space—while emphasizing its primary element through spatial design, material choices, and sensory experiences through the space design and program activities to evoke specific emotions. I've designed the final chakra to sit atop a mound-like structure, symbolizing elevation and reflection. At its peak stands a mirrored installation, inviting visitors to look inward and reconnect with their true selves. The height of the mound offers a panoramic view of the entire site, tracing the path one has taken to reach this point. It's a metaphor for life: when we achieve something meaningful, we often pause to reflect on the journey that brought us here. We look back at the years gone by, the challenges we faced, the obstacles we overcame, and the growth that came from it all. That sense of accomplishment is not just about reaching the top—it's about understanding what it took to get there. This mirrored installation is embodied in the built form of a multi-faith center, representing spiritual awakening and unity with the Divine, Ik Onkar (One Life Source Energy). The spatial ascent and descent throughout the journey reflect life's fluctuations, guiding visitors through personal and spiritual growth as they pass through each Chakra Portal, ascending toward higher consciousness.

The three paths symbolize the three meridians (Ida, Pingla, Sukshmna as described in Gurbani) used as metaphor to depict three personas as defined below:

Three Paths, Three Personas in the Design Proposal

1. The Unconscious / Non-Faith / Distracted with a Busy Lifestyle

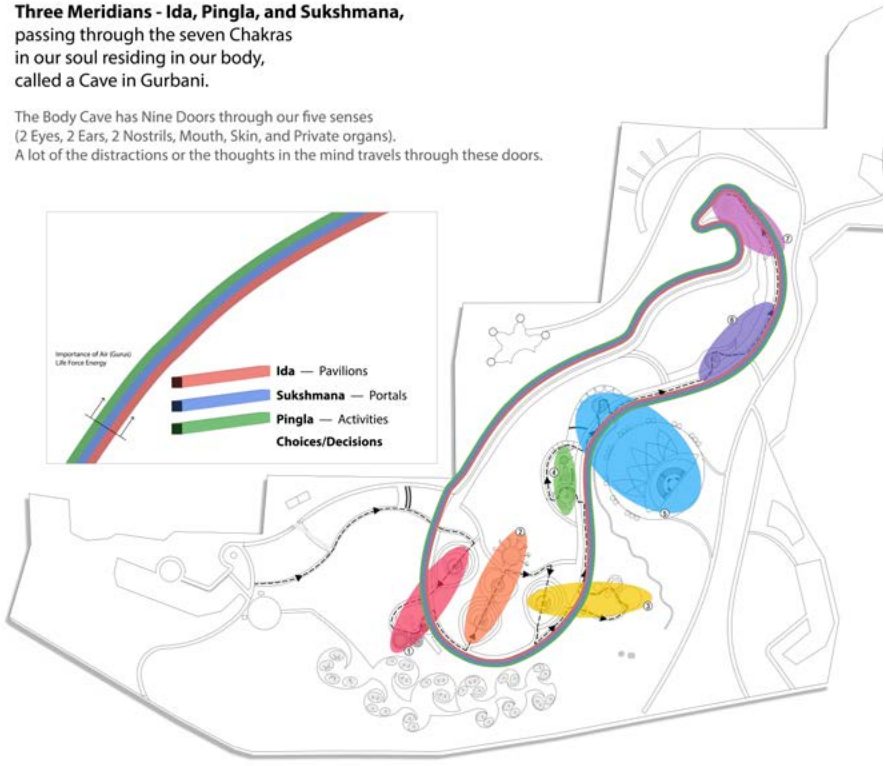


Figure 66. Conceptual Plan showing the three meridians run through the chakras used as a metaphor for paths depicting the three personas
Source: by Author

Symbolism in Design: These visitors choose to ride the boat directly to the Multifaith center, bypassing the experiential journey and losing the opportunity to grow personally and spiritually. They are unintentionally destroying the quality of their lives by continuously staying in the lower energy states. As a result, they will only attract the similar low energy people and circumstances and make themselves more vulnerable to negativity in their lives.

Philosophical Meaning: They represent those who are outcome-driven, seeking the destination without engaging in the process. Their path reflects a life lived in distraction, where spiritual depth is overlooked in favor of speed and convenience.

2. The Conscious Ones / Curious to Explore the Purpose

Symbolism in Design: These visitors pause along the way, exploring the pavilions you have designed. They gather information, observe, and reflect, but their engagement remains surface-level.

Philosophical Meaning: This path mirrors people who read or recite sacred scriptures daily as ritual, yet rarely embody the teachings in practice. Their curiosity is genuine, but their transformation remains incomplete because knowledge is not yet lived.

3. The More Conscious / Dedicated Spiritual Seekers

Symbolism in Design: These visitors immerse themselves fully in the journey, engaging in hands-on activities that activate chakras and balance the elements associated with each.

Philosophical Meaning: They represent those who strive to integrate spiritual wisdom into daily life. For them, the journey itself is the practice where each activity becomes a step toward inner alignment, self-realization, and conscious living.

The Gurbani verses that align with these three philosophies are:

Suniye (First listen), maniye (Then implement).....

ਸੁਣਿਐ ਸਾਸਤ ਸਿਮ੍ਰਿਤਿ ਵੇਦ ॥ (੨–੧੯, ਜਪੁ, ਮਃ ੧)
suni-ai saasat simrit vayd.
Listening-the Shaastras, the Simritees and the Vedas.

ਨਾਨਕ ਭਗਤਾ ਸਦਾ ਵਿਗਾਸੁ ॥ (੨–੧੯, ਜਪੁ, ਮਃ ੧)
naanak bhagtaa sadaa vigaas.
O Nanak, the devotees are forever in bliss.

ਮੰਨੈ ਮਾਰਗਿ ਠਾਕ ਨ ਪਾਇ ॥ (੩–੮, ਜਪੁ, ਮਃ ੧)
mannai maarag thaak na paa-ay.
The path of the faithful shall never be blocked.

ਮੰਨੈ ਪਤਿ ਸਿਉ ਪਰਗਟੁ ਜਾਇ ॥ (੩–੮, ਜਪੁ, ਮਃ ੧)
mannai pat si-o pargat jaa-ay.
The faithful shall depart with honor and fame.

ਮੰਨੈ ਮਗੁ ਨ ਚਲੈ ਪੰਥੁ ॥ (੩–੯, ਜਪੁ, ਮਃ ੧)
mannai mag na chalai panth.
The faithful do not follow empty religious rituals.

ਮੰਨੈ ਧਰਮ ਸੇਤੀ ਸਨਬੰਧੁ ॥ (੩–੯, ਜਪੁ, ਮਃ ੧)
mannai Dharam saytee san-banDh.
The faithful are firmly bound to the Dharma.

ਐਸਾ ਨਾਮੁ ਨਿਰੰਜਨੁ ਹੋਇ ॥ (੩–੯, ਜਪੁ, ਮਃ ੧)
aisaa naam niranjan ho-ay.
Such is the Name of the Immaculate Lord.

ਜੇ ਕੋ ਮੰਨਿ ਜਾਣੈ ਮਨਿ ਕੋਇ ॥੧੪॥ (੩–੯, ਜਪੁ, ਮਃ

੧)
jay ko man jaanai man ko-ay. ||14||
Only one who has faith comes to know such a state of mind. ||14||

ਮੰਨੈ ਪਾਵਹਿ ਮੋਖੁ ਦੁਆਰੁ ॥ (੩-੧੦, ਜਪੁ, ਮਃ ੧)
mannai paavahi mokh du-aar.
The faithful find the Door of Liberation.

ਮੰਨੈ ਪਰਵਾਰੈ ਸਾਧਾਰੁ ॥ (੩-੧੦, ਜਪੁ, ਮਃ ੧)
mannai parvaarai saaDhaar.
The faithful uplift and redeem their family and relations.

ਮੰਨੈ ਤਰੈ ਤਾਰੇ ਗੁਰੁ ਸਿਖ ॥ (੩-੧੦, ਜਪੁ, ਮਃ ੧)
mannai tarai taaray gur sikh.
The faithful are saved, and carried across with the Sikhs of the Guru.

ਮੰਨੈ ਨਾਨਕ ਭਵਹਿ ਨ ਭਿਖ ॥ (੩-੧੦, ਜਪੁ, ਮਃ ੧)
mannai naanak bhavahi na bhikh.
The faithful, O Nanak, do not wander around begging.

ਐਸਾ ਨਾਮੁ ਨਿਰੰਜਨੁ ਹੋਇ ॥ (੩-੧੧, ਜਪੁ, ਮਃ ੧)
aisaa naam niranjan ho-ay.
Such is the Name of the Immaculate Lord.

ਜੇ ਕੋ ਮੰਨਿ ਜਾਣੈ ਮਨਿ ਕੋਇ ॥੧੫॥ (੩-੧੧, ਜਪੁ, ਮਃ ੧)
jay ko man jaanai man ko-ay. ||15||
Only one who has faith comes to know such a state of mind. ||15||

ਗਉੜੀ ਮਹਲਾ ੫ ॥ (੧੮੮-੫)
ga-orhee mehlaa 5.
Gauree, Fifth Mehl:

ਦੁਲਭ ਦੇਹ ਪਾਈ ਵਡਭਾਗੀ ॥ (੧੮੮-੫, ਗਉੜੀ, ਮਃ ੫)
dulabh dayh paa-ee vadbhaagee.
This human body is so difficult to obtain; it is only obtained by great good fortune.

ਨਾਮੁ ਨ ਜਪਹਿ ਤੇ ਆਤਮ ਘਾਤੀ ॥੧॥ (੧੮੮-੫, ਗਉੜੀ, ਮਃ ੫)
naam na jaapeh tay aatam ghaatee. ||1||
Those who do not meditate on the Naam, the Name of the Lord, are murderers of the soul. ||1||

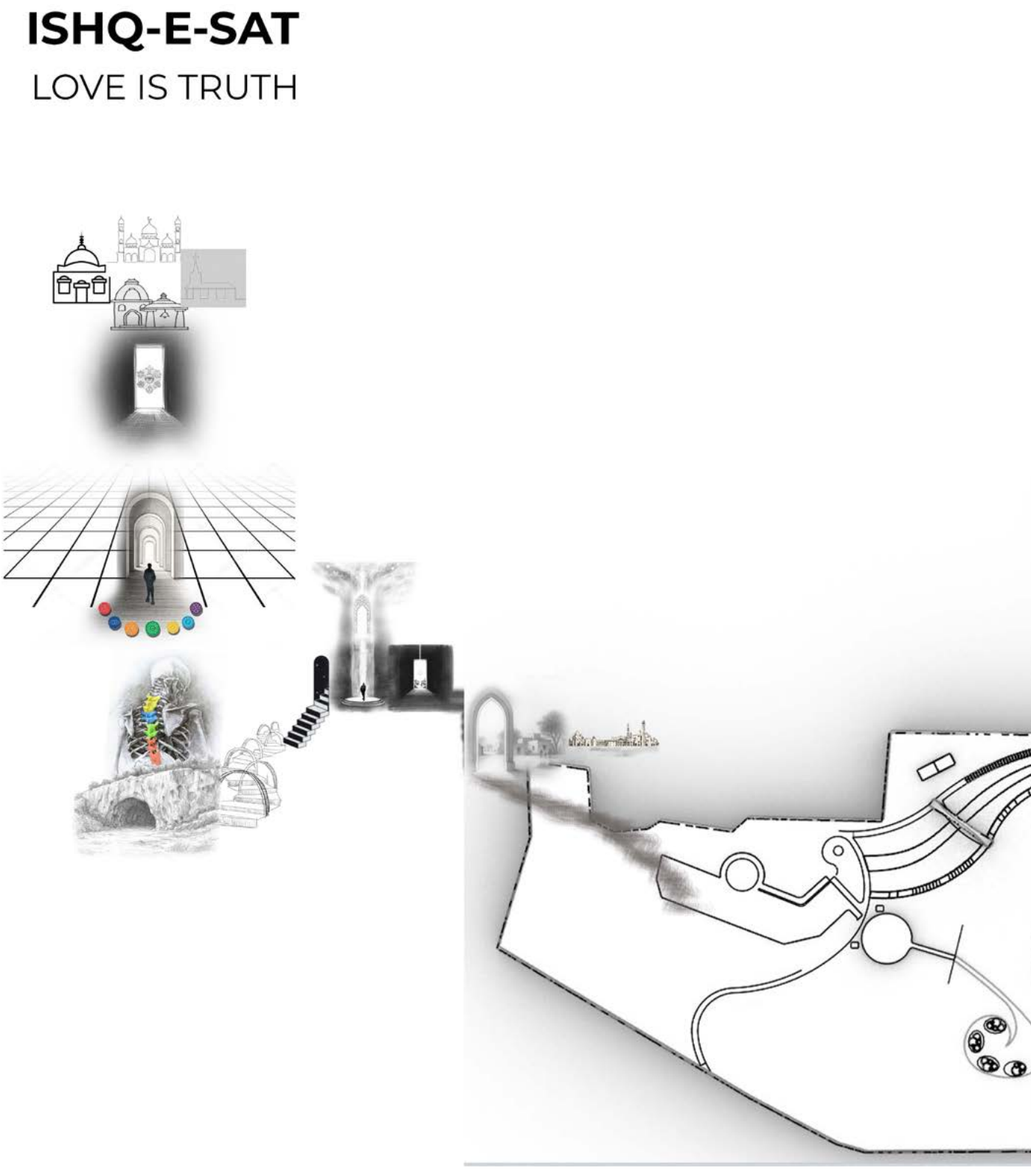
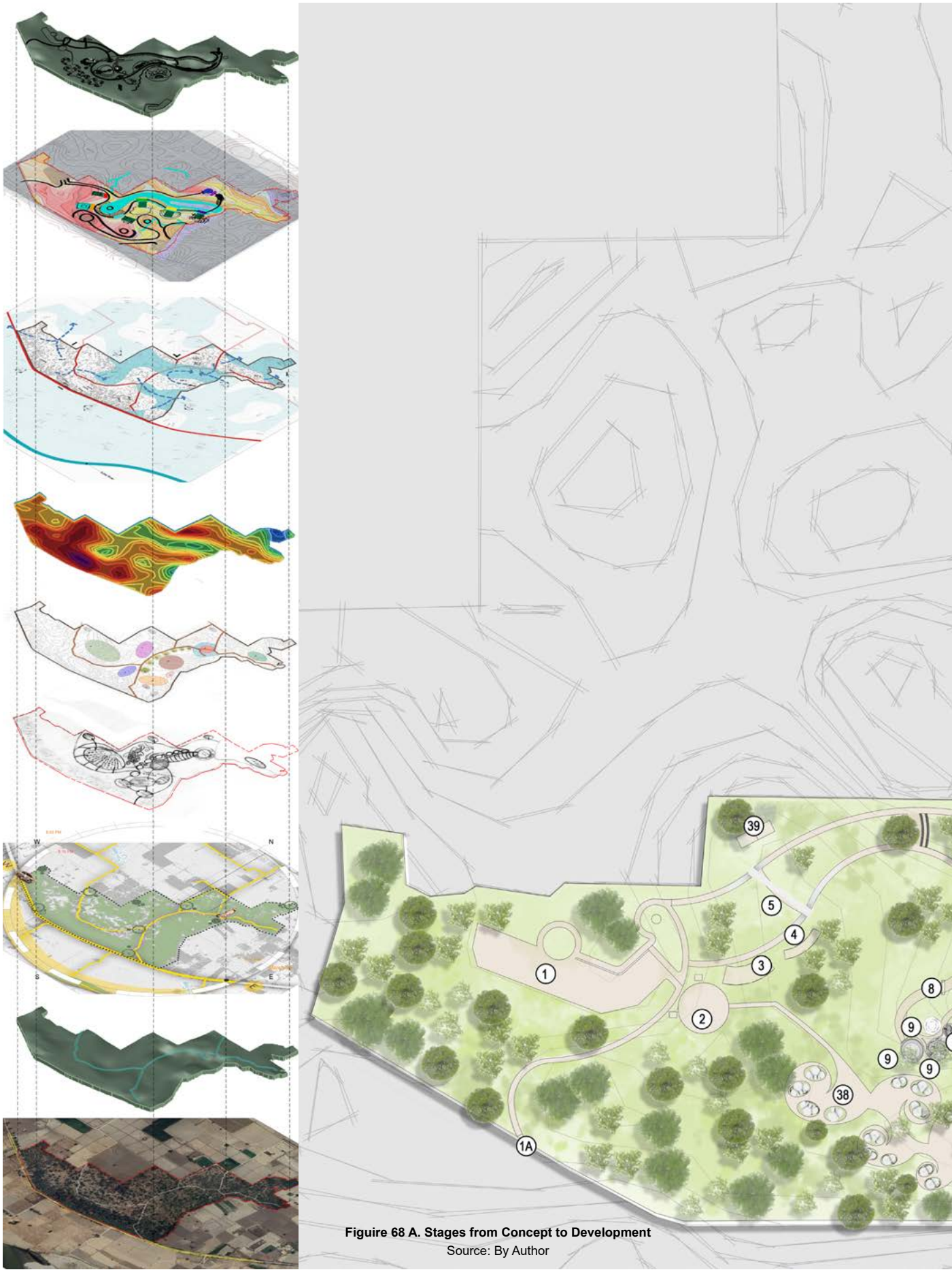


Figure 67. Final Site Plan overall view showing the six Pavilions and the Multifaith Center
Source: by Author





Figuire 68 A. Stages from Concept to Development
Source: By Author



Figuire 68 B . Site Plan - Spatial Layout of Programs — Refer to Numbered Legend on Pg 137

Source: By Author

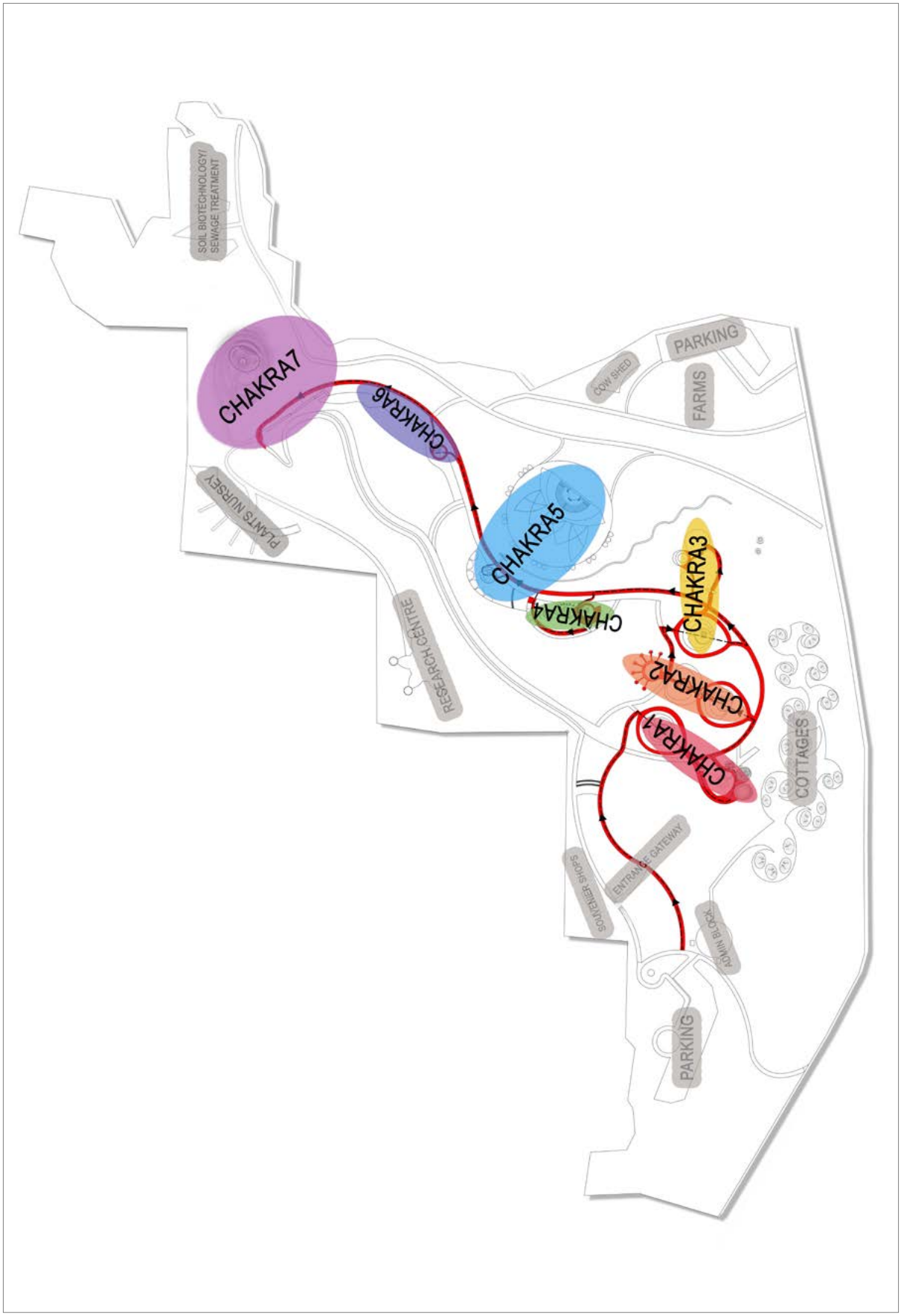


Figure 69. Site Plan - Programs Zoning
Source: By Author

AREA PROGRAMMING LIST

1A. Main Gate Entry
1B. Service Road Entry
1. Main Parking (7:00 am)
2. Administration Block
3. Ticket counter (7:10 am)
4. Tour Introduction Area (7:30 am)
5. Entrance Gateway – Nishan
6. Boat Dock (7:45 am)

ROOT CHAKRA - 1 ZONE: (7:45 AM)

7. Earth Pavilion
8. Root (Earth) Chakra Portal 1
9. Earth Activity Zone 1:
   Pottery Making
   Clay Sculpting
   Maze with Bukhari *(Cone-shaped or cylindrical mud structures, sometimes bamboo-reinforced)*
   Gardening
   Sand Garden *(Raked like water waves)*
   Tea Stalls – *Tea served in earthen cups*
   Food Thelas – *Wooden push carts*
   Organic Food

SACRAL CHAKRA - 2 ZONE: (11:00 AM)

10. Water Pavilion
11. Sacral (Water) Chakra Portal 2
12. Water Activity Zone 2:
    Swamp with Flowers & Birds
    Helical Stepwell
    Floating Pads
    Rafts in Water
    Fountain Shows
    Rehris – *street vendor carts*
    Liquid foods

SOLAR PLEXUS CHAKRA -3 ZONE: (1:00 PM)

13. Fire Pavilion
14. Solar Plexus (Fire) Chakra Portal 3
15. Fire Activity Zone 3:
    Library
    Art Workshops
    Langar – *Community Kitchen*
    Free Lunch

HEART CHAKRA - 4 ZONE: (2:30 PM)

16. Air Pavilion
17. Heart (Air) Chakra Portal 4
18. Heart Activity Zone:
    Musical Botanical Gardens
    Herbs Garden
    Butterfly Garden
    Treetop Trekking
    Dense Trees
    Garden Trails

THROAT CHAKRA - 5 ZONE: (5:00 PM)

19. Space Pavilion
20. Throat (Space) Chakra Portal 5
21. Space Activity Zone:
    Yoga Space
    Mudra Sculptures
    Open-Air Amphitheatre, Public Square
    Plaza with Gardens
    Musical Instruments *(raagas)*
    Musical Concerts
    Festivals *(celebration ground, kiosks/booths/restaurants)*
    Cycling track

THIRD-EYE CHAKRA - 6 ZONE: (8:00 PM)

22. Mind Pavilion
23. Third Eye (Mind) Chakra Portal 6
24. Mind Activity Zone:
    Open Walking Space near Water
    Guided Meditation in Bamboo Structure
    Open Natural Landscape elements

CROWN CHAKRA - 7 ZONE: (9:30 PM)

25. Crown (Cosmos) Chakra Portal 7
26. Cave
27. Bridge over Water

28. Multifaith Pavilion of Oneness (Awaened Mind Pavilion)

OTHER PROGRAMS:

29. Soil Biotechnology Centre
30. Sewage Treatment
31. Plants Nursery
32. Research Centre
33. Cowshed
34. Irrigation Wheel
35. Parking 2
36. Bird-Watching Towers
37. Rural Cottages
38. Embellished Cottages
39. Souveneir Shops

CURATED STAY PACKAGES FOR SHORT, EXTENDED, AND LONG-TERM VISITS

The decision to remain in the retreat cottages and the length of each visitor's stay will vary according to their level of consciousness and the stage of their soul's journey. To honor these differing needs, the retreat will offer flexible packages, including a one-night stay, a two-night stay, and a week-long immersion, allowing each individual to choose the rhythm of retreat that best aligns with their spiritual evolution. Spirituality cannot be imposed on anyone, no matter how earnestly we try to guide or convince them; it unfolds only when one's awareness is ready. It is a deeply personal choice. The intention of my sanctuary is simply to awaken the divine spark that already resides within each of us.

In light of the hermeneutic drawn from Gurbani.[28]

> **ਬ੍ਰਹਮ ਗਿਆਨੀ ਕੀ ਗਤਿ ਬ੍ਰਹਮ ਗਿਆਨੀ ਜਾਨੈ ॥ (੨੭੩–੧੬, ਗਉੜੀ ਸੁਖਮਨੀ, ਮਃ ੫)**
> barahm gi-aanee kee gat barahm gi-aanee jaanai.
> Only the God-conscious being can know the state of the God-conscious being.

The sanctuary embraces a posture of humility and non-interference. It does not seek to define, evaluate, or categorize anyone's spiritual state. Instead, it offers a space of quiet reverence, where each soul is free to unfold at its own pace, guided not by external persuasion but by its own inner light.

THE INTERSECTION OF SOUND, SPACE, AND SPIRITUAL ANATOMY

Chants and mantras tuned to the frequency of each chakra will be played within their corresponding pavilions, especially in the isolated meditation chambers, to help activate and harmonize the respective energy centers.

A Gurbani Perspective

The Cosmological Mirror: "Jo Brahmandey, soi Pindey"

This fundamental principle from Gurbani,

> **ਜੋ ਬ੍ਰਹਮੰਡੇ ਸੋਈ ਪਿੰਡੇ ਜੋ ਖੋਜੈ ਸੋ ਪਾਵੈ ॥ (੬੯੫–੧੫, ਧਨਾਸਰੀ, ਭਗਤ ਪੀਪਾ ਜੀ)**
> jo barahmanday so-ee pinday jo khojai so paavai.
> Whatever exists in the cosmos exists within the body. [29]

It provides a beautiful framework for understanding how external architectural acoustics can resonate with internal energetic systems. The pavilion becomes not merely a structure, but a microcosm where cosmic vibrations can be experienced as bodily awakening.

In my sanctuary design, the pavilions are conceived as acoustic vessels, the spaces where architecture, sound, and consciousness converge. When visitors gather within

these pavilions, each calibrated with specific acoustic properties and infused with musical frequencies of that specific chakra, played on traditional classical instruments, they are invited into an encounter with what Gurbani describes as Anhad Naad: the unstruck sound, the primordial vibration that exists beyond ordinary auditory perception. This experience emerges only when the visitor consciously focuses on the sound, allowing their awareness to attune to subtler layers of vibration. In this way, the design directly engages the chakric understanding of Nada (sound) as a medium for inner expansion and heightened states of consciousness.

> **ਅਨਹਦ ਸਬਦੁ ਦਸਮ ਦੁਆਰਿ ਵਜਿਓ ਤਹ ਅੰਮ੍ਰਿਤ ਨਾਮੁ ਚੁਆਇਆ ਥਾ ॥੨॥ (੧੦੦੨-੬, ਮਾਰੂ, ਮਃ ੫)**
> anhad sabad dasam du-aar vaji-o tah amrit naam chu-aa-i-aa thaa. ||2||
> The unstruck sound current of the Shabad vibrates and resounds in the Tenth Gate (*Seventh Chakra*); the Ambrosial Naam trickles down there. ||2||[30]

Gurbani Verses on Divine Sound. There are several verses from the Guru Granth Sahib that illuminate this relationship:

> **ਅਨਹਦ ਸਬਦੁ ਵਜੈ ਦਿਨੁ ਰਾਤੀ ॥ (੯੦੪-੭, ਰਾਮਕਲੀ, ਮਃ ੧)**
> anhad sabad vajai din raatee.
> The unstruck sound current of the Shabad vibrates day and night.[31]

> **ਅਹਿਨਿਸਿ ਬਾਜੇ ਅਨਹਦ ਤੂਰ ॥ (੩੪੪-੪, ਗਉੜੀ ਥਿਤੰਨੀ, ਭਗਤ ਕਬੀਰ ਜੀ)**
> ahinis baajay anhad toor.
> Day and night, the celestial bugles vibrate the unstruck melody.[32]

These Gurbani term "*Anhad Naad*" refer to a pervasive, divine sound that precedes language and all physical creation, serving as the very essence and source of existence.[33] It is this "unstruck sound" that continues to resonate throughout the universe.[34]

THE SHAPE AND FORM OF THE PAVILIONS

The shape and form of the pavilions are intentionally designed to incorporate sacred geometry: circular plans, spiral movement expressed through the ramps, and semi-domical envelopes. The overall plan is inspired by the form of the brain, reflecting the project's central theme of transforming the mindset.

As the journey progresses from the 1st Pavilion (Earth) to the 2nd (Water), 3rd (Fire), 4th (Air), 5th (Space), and 6th (Mind), the architecture gradually becomes lighter, less materially defined, and increasingly open to the surrounding landscape. This transition symbolizes the surrendering of the mind—its dissolution back into the landscape and the five elements. The sequence expresses the consciousness of the brain through architecture, subtly reshaping the subconscious experience of the landscape and reinforcing the project's underlying idea of transformation. The path ultimately leads to the 7th Pavilion of Oneness (Cosmos), where the five elements converge and consciousness is understood to have fully risen through the journey of awakening the seven chakras.

My design philosophy is deeply rooted in Frank Lloyd Wright's conviction that truth and beauty are inseparable mentioned in his book Frank Llyod Wright's Sacred Architecure (Faith, Form, and Buiding Technology), finding their ultimate expression in the inherent order and geometry of nature. This approach aims to manifest a sacred architecture that fosters self-awareness and a profound connection to the environment, aligning with Wright's transcendental ideals. Embracing the peacock as a central symbol, which across diverse cultures represents beauty, integrity, immortality, and even the

cosmic vault with its myriad "eyes," my design integrates pure geometric forms like circles and domes. These architectural elements, historically symbolizing the heavens and embodying perfection and eternity in sacred spaces, translate a unified vision of beauty and truth into tangible form, allowing the inherent mathematical elegance of nature and the symbolic richness of the peacock to create a resonant and profound experience.

THE DAILY ROUTINE AND SCHEDULES AT THE GATI HARIKE SANCTUARY:

At Gati Harike, the spiritual center is thoughtfully designed with diverse daily schedules to optimize visitor experience and healing. While all activities are accessible to general visitors, exclusive early morning and midnight sessions are reserved for dedicated residents in the cottages, fostering a deeper spiritual journey. Each activity is intentionally timed to maximize its benefits for physical well-being and mental health. Upon arrival, visitors receive informational flyers outlining the daily schedule, along with color-coded wristbands corresponding to their chosen package. These packages define access to activities and dining options, ranging from all-inclusive deals to choices allowing guests to purchase food separately at on-site stalls and kiosks.

These slow-moving electric carts are intended to encourage environmentally conscious travels. Integrating bullock carts would offer visitors a unique, culturally authentic, and serene transportation experience that complements the spiritual and reflective atmosphere of the sanctuary, reinforcing the local heritage and promoting a slow, contemplative pace.

The sanctuary will involve local residents, including farmers, in various work departments such as gardens, kitchens, and general community care. These roles could offer stipends or in-kind transfers, providing valuable skills for community living and project work.



Figure 70 A. Electrical Buggy Carts like these will be used on the site
Source: https://www.youtube.com/watch?v=FsIbjDRol7w



Figure 70 B. Bullock Cart ride is another option on the site
Source: https://i.pinimg.com/originals/9d/19/fa/9d19fac7cce7bb-c114a94b64f94b934f.jpg

A cultural incubator fostering Punjabi heritage, including traditional crafts, can also empower marginalized groups, especially women, and create economic avenues. This supports the idea of diversifying economic activities beyond traditional agriculture, which is crucial for rural development and doubling farmers' incomes. By making these varied employment opportunities, my project can help mitigate the economic vulnerabilities faced by rural households in Punjab, which often stem from fluctuating farm yields and limited diversification



Figure 70 C. Tall & Huge Entrance Gateway used as a metaphor for Nishaan (Sign) in Gurbani
Source: By Author

ENTRANCE GATEWAY - NISHAN

From the entrance, the Multifaith Center appears in the distance, serves as a symbolic guidepost, gently indicating to visitors the spiritual destination or culmination point of their journey. As one progresses through each portal and Chakra, the evolving view of the Multifaith Center reflects the transformation of our inner perspective acting as a visual metaphor for the rising energy and expanding consciousness experienced along the path.

The Arch Gateway in my design skillfully combines with Eero Saarinen's renowned St. Louis Gateway Arch, creating a striking architectural and experiential statement. Both structures function as vital gateways. One signifying sacred space, and the other embodying aspiration and transition. By thoughtfully reinterpreting Saarinen's elegant curve with significant Gurbani motifs, such as the Khanda & Ik Onkar symbol, the gateway instills a deep sense of awe and reverence, guiding visitors on a transformative spiritual journey. Its impressive scale and graceful form represent the transition from the ordinary to the sacred, establishing it as an inspiring entry point into the spiritual realm.

The grand arched structure at the entrance serves as a metaphor for the Nishaan Sahib, the symbolic mark on the forehead referenced in Gurbani, representing those destined and devoted on the spiritual path. Here it is kind of an invitation to the visitors to embark on the spiritual journey to earn that divine mark on their foreheads.

ROOT CHAKRA

Related Element - **EARTH**
Specific Mantra - **LAM**
Frequency of Mantra (Hz) - **261.6, 523.3, 1046.5, 2093, 4186.**[35]



Figure 71A. Muladhara Symbol
Source: Endnote reference 35

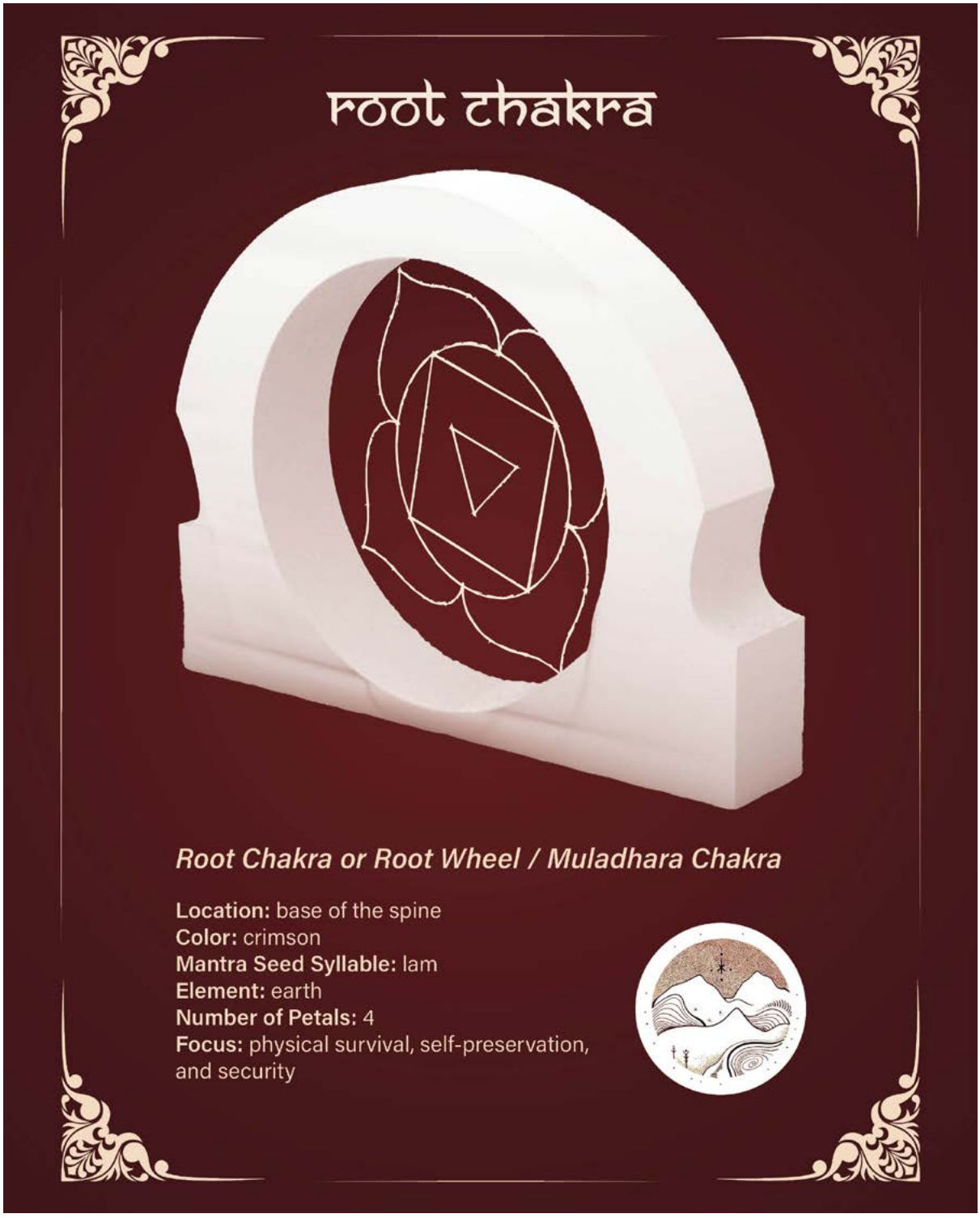


Figure 71B. 1st Chakra - Root Chakra Description
Source: By Author

Root Chakra Frequency

Positioned at the base of your spine, this energy center serves as your foundation, connecting you to the earth and providing a sense of security and confidence. Through the resonance of the seven chakras, it anchors your energy and supports your physical and emotional stability. The term Bija refers to monosyllabic mantras because they serve as the essential seed, the core element from which the mantra's spiritual potency, or siddhi, emerges. According to the Maheshwar Sutra, the earth element arises from the sound "LAM," recognized as the Beej Mantra or Beejakshar of the Muladhara Chakra. In this context, the mantra itself is understood as the deity.[36]

To cultivate balance in this chakra, trying grounding techniques would strengthen our connection to the earth. Engaging in activities such as walking barefoot on natural surfaces, practicing grounding yoga poses like Mountain Pose or Tree Pose, getting in touch with natural earth materials like mud and clay, can help promote calmness, release stress, and alleviate anxiety.[37]

Additionally, incorporating the 396 Hz frequency into our meditation can further support grounding and stability. Known for its ability to release fear and negative energy, this frequency helps deepen our connection to the earth, fostering a sense of security and inner peace.

In pavilion acoustics, low-frequency resonance chambers or sub-harmonic installations could provide grounding vibrations. The Gurbani concept of "Adh Jugaad" (the primal beginning) connects to this foundational frequency, the sound that underlies all manifestation. Gurbani extensively describe this ultimate, creative sound principle through terms such as "dhur ki bāṇī" (the original sound) and "anhad śhabad" (the unheard or unstruck sound).[38]



Figure 72. Root Chakra - Earth Pavilion - Zoning Diagram
Source: By Author

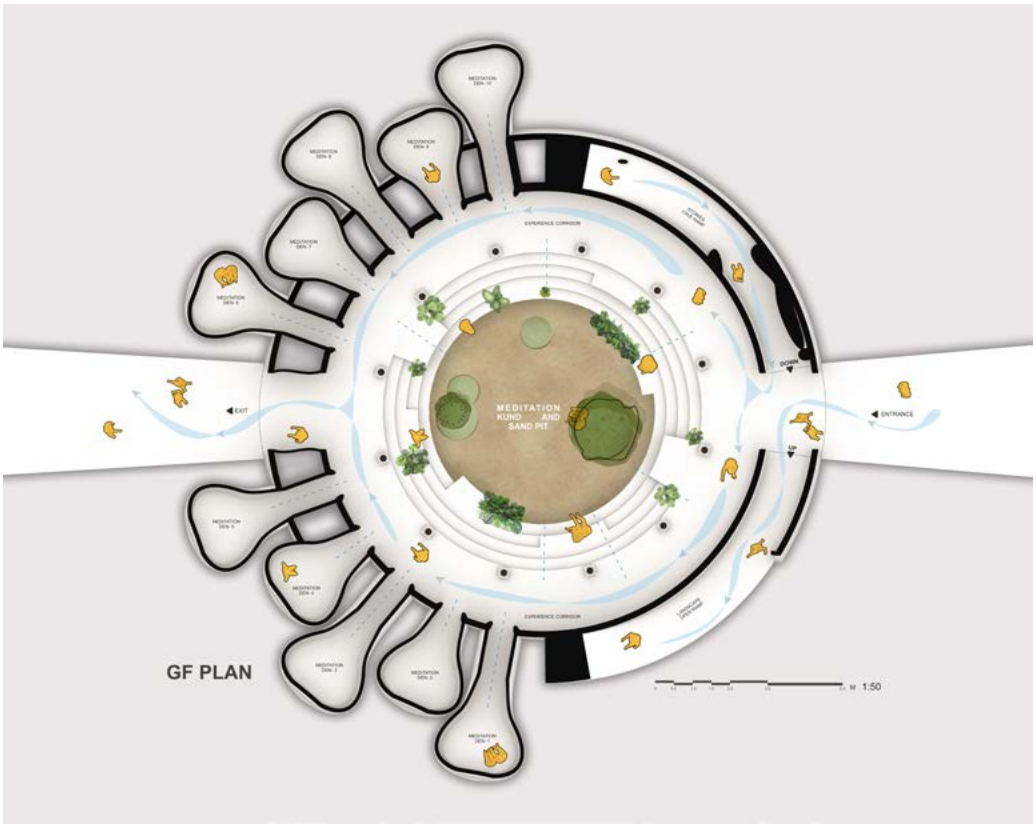


Figure 73 A. Root Chakra - Earth Pavilion - GROUND FLOOR PLAN
Source: By Author

EARTH PAVILION

The Earth Pavilion experience is designed to be deeply grounding and restorative, embodying the inherent stability and transformative qualities of the earth element. The pavilion's materiality prominently features natural substances such as grass, stone, rocks, rammed earth, clay, lime plaster, adobe, and straw. These materials create a sensuous tactile experience through their varying textures and warm, sedimentary tones, allowing visitors to connect with the earth's fundamental durability and grounding essence, engaging all senses and elevating spiritual and physical interaction.[39]

To further enhance this experience, the pavilion features a closed, cave-like structure accessed via a gently sloping ramp. As visitors move through this space, the tactile quality of the natural and grounding walls is intended to foster a sense of being rooted, connected to the physical world, and encouraging humility and balance. Organic-shaped columns define the path, creating an interesting and mysterious journey through the space, reflecting fluid but organized lines found in nature. Throughout this cave-like ascent, strategically placed openings will allow sunlight to filter in at different angles, creating a dynamic interplay of light and shadow. This phenomenological experience of shifting light is intended to evoke spiritual awakening, enhancing memory and emotional resonance, and contributing to a mystical ambiance within the sacred space.[40] Along the side walls, verses from Gurbani will be intricately engraved, complemented by murals and paintings that offer universal explanations of these spiritual teachings, fostering personal transformation. A large chakra symbol, rendered in its geometry, will be engraved on the inner curved wall to familiarize visitors with the pavilions.

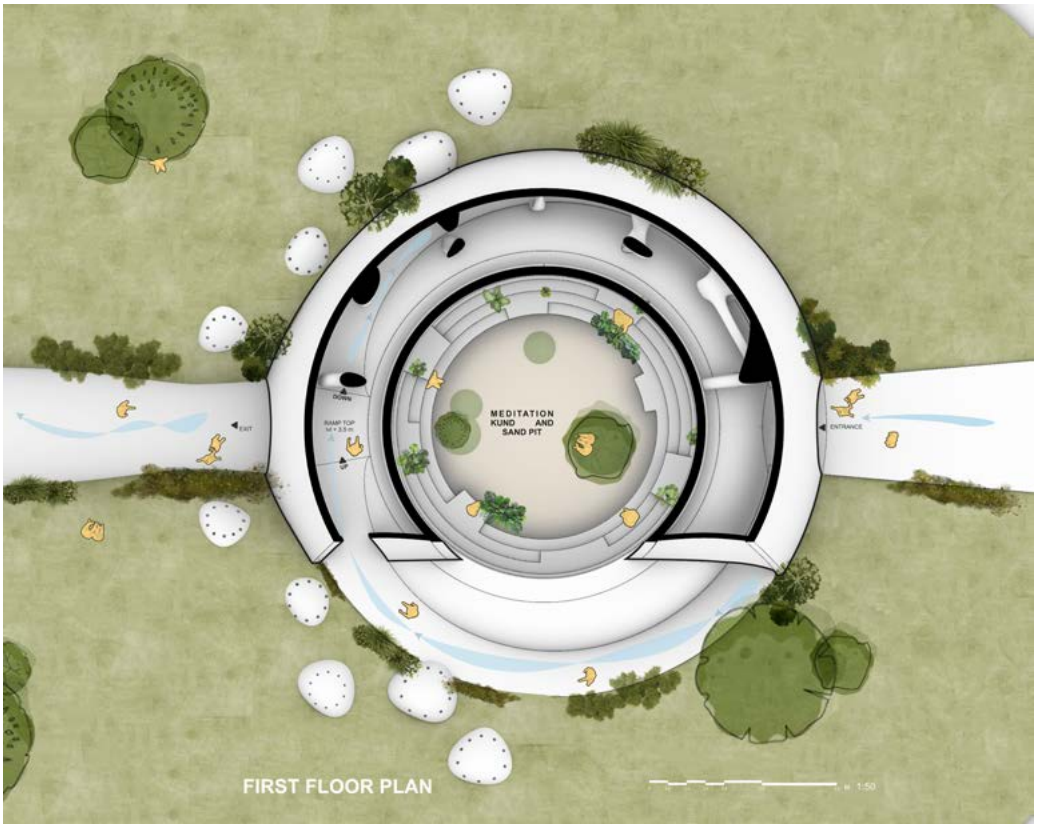
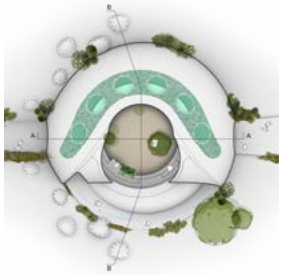


Figure 73 B. Root Chakra - Earth Pavilion - FIRST FLOOR PLAN
Source: By Author



Figure 73 C. Root Chakra - Earth Pavilion - SECTION AA
Source: By Author



ROOF PLAN & KEYPLAN

showing Sections Cuts
Source: By Author



Figure 73 D. Root Chakra - Earth Pavilion - SECTION BB
Source: By Author

This journey will also impart knowledge about balancing the earth element, which symbolizes grounding and stability, and information on activating the root chakra, aligning with the architectural aim of facilitating chakra alignment for harmonious and balanced environments.

Building upon the essence of the Earth Pavilion, a central open courtyard serves as a serene focal point, designed as a tranquil sand garden reminiscent of Japanese Zen gardens, which emphasize peace, harmony, and tactile authenticity through natural materials like sand, stones, and rocks. Steps around the perimeter invite visitors to sit and reflect, while a surrounding circular corridor features jaalis and screens, creating a dynamic interplay of light and shadow. Within this corridor, floating columns provide an illusion effect, contributing to an engaging and mysterious ambiance. This open-to-the-sky courtyard, a traditional element in Punjabi architecture known as a 'chowk,' facilitates gathering and communication, serving as a multi-use space for communal rituals, festivals, and storytelling.



Figure 74 A. Glass Bottles Inspiration from Michael reynolds
Source: https://estrellandolaestrella.blogspot.com/2011/06/monografico-sobre-eco-arquitectura-i.html



Figure 74 B. Root Chakra - Earth Pavilion -Rendered 3D View
Source: By Author

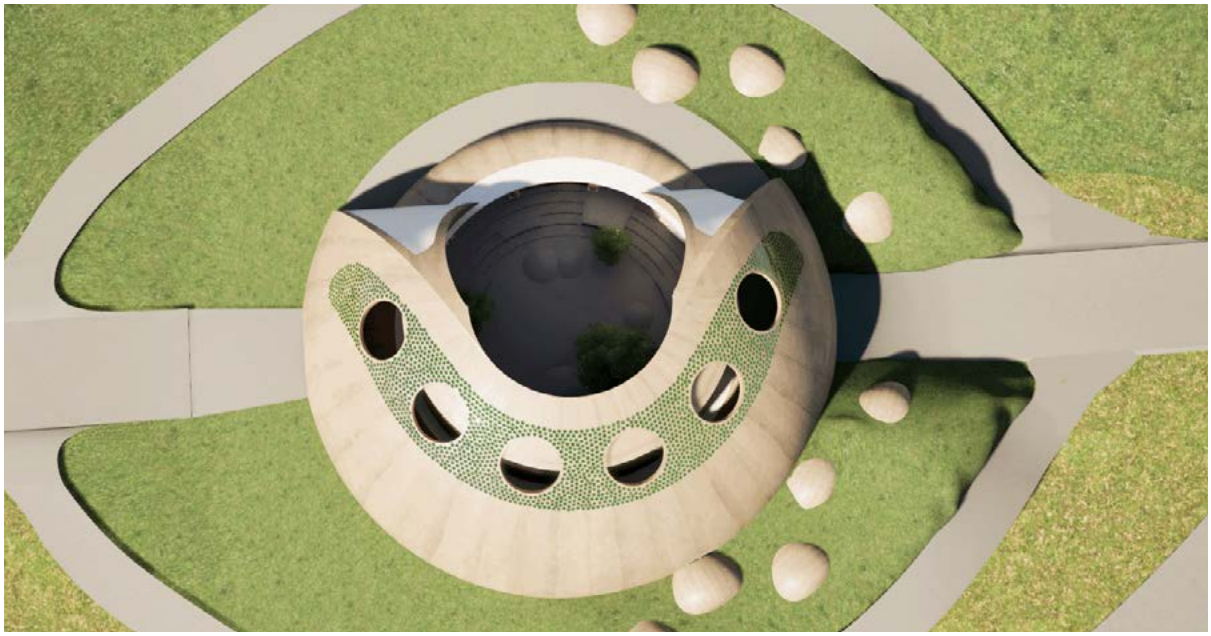


Figure 74 C. Root Chakra - Earth Pavilion - Top View
Source: By Author



Figure 74 D. Root Chakra - Earth Pavilion -South View
Source: By Author



Figure 74 E. Root Chakra - Earth Pavilion East View
Source: By Author



Figure 75 A. Bottom up view of the Earth Pavilion from the central courtyard showing Chakra symbol
Source: By Author



Figure 75 B. Entrance to the Earth Pavilion
Source: By Author



Figure 76 A. Circular Corridor & Courtyard with Brick Jaalis, Phulkaris as Entrance Curtains for the individual chambers
Source: By Author

Narrow, humble entrances leading to vast courtyards symbolize the journey from worldly constriction to spiritual expansion. The architecture seems to inhale, gently pulling the visitor into awareness. Jaalis—screen openings that frame the sky create a hidden-to-revealed sequence, guiding a gradual unfolding of space through curved circulation paths.



Figure 76 B. Inside of the Cave like structure through the ramp showing engraved verses
Source: By Author



Figure 77 A. Entrance of the Cave like structure through the ramp
Source: By Author

The walls of the cave will be engraved (as shown in the images above) with Gurbani verses, accompanied by English translations, murals of spirituality, Punjab culture, and symbolic paintings. Each pavilion corresponding to a chakra is designed to offer knowledge about that specific chakra and the elemental force associated with it, creating an informative and immersive progression through the journey.



Figure 77 B. Meditation Chamber in Earth Pavilion
Source: By Author

ISOLATED MEDITATIVE CHAMBERS

From this circular corridor, visitors gain access to isolated meditative chambers located underground, allowing them to retreat into solitude and directly experience the grounding texture of the earth. Entrances to these chambers will be covered with vibrant phulkari fabric, embracing Punjabi cultural heritage and offering a soft, inviting threshold rather than conventional doors.

Within these subterranean chambers, light filters through small circular openings, creating focused natural illumination that enhances the lived experience and emphasizes the grounding texture of the earth. The acoustics of these chambers are specifically designed for musical chants to echo, providing a deep, immersive auditory experience that promotes spiritual well-being and aids in meditation, orchestrating a profound multisensory engagement that connects visitors to the earth's essence and fosters spiritual reflection.

ROOT CHAKRA PORTAL 1

After completing the journey through the Earth Pavilion, visitors will reach a pivotal moment: a choice between proceeding directly to the next pavilion or entering the Earth Chakra Portal 1. This portal is specifically designed to facilitate deeper physical engagement with the earth element and further exploration of earth-related activities. This choice underscores a core metaphor: that life is shaped by individual decisions and that spirituality is not an imposed destination but a continuous process of personal exploration and cultivation, much like a journey that requires ongoing commitment rather than a one-time event.

The Chakra Portal, followed by its geometric symbol on the floor, acts as an architectural element serves as a bridge, offering an opportunity for profound sensory connection with the earth activities, reinforcing grounding and stability through direct interaction with natural materials and spaces designed for awe, wonder, and introspection



Figure 78. Root Chakra- Portal Entrance
Source: By Author



Figure 79 A. Earth Activity Zone (Pottery worshops, Maze, Sand Garden), after entering through the Root Chakra Portal,
Source: By Author

EARTH ACTIVITIES:

Pottery workshops where participants shape clay with their hands, experiencing the joy of creation. Playful engagement with mud—forming, molding, and eventually breaking pots to symbolize the cycle of reward, detachment, and impermanence.

The circular areas designated for each activity are proportionally related according to the golden ratio (approximately 1:1.618). This relationship ensures a sense of harmony and visual balance within the spatial composition, creating an aesthetically pleasing and naturally organized layout that aligns with principles of design and human perception

Illusionary Journey: A maze constructed from closed storage huts made of mud, straw, and bamboo evokes the feel of traditional rural enclosures. As participants navigate the narrow, earthy pathways, they encounter a sudden transition from the maze, representing an unwinding path surprisingly opens into a serene Japanese-style sand garden. The raked sand patterns mimic flowing water, creating a striking illusion of a hidden oasis, an invitation to reflect on perception, illusion, and inner stillness.

These activities emphasize sensory experience (touch, sight, movement) and ties the activities to philosophical themes like impermanence, detachment, and illusion. It also creates a smoother narrative arching from earthy engagement to confined maze further to an expansive garden.



Figure 79 B. Render of Earth Activities like Maze leading towards Sand Garden
Source: By Author

SACRAL CHAKRA

Related Element - **WATER**
Specific Mantra - **VAM**
Frequency of Mantra (Hz) - **293.7, 587.3, 1174.7, 2349.3, 4698.7.**
(endnote reference #35)



Figure 80 A. Swadhisthana Symbol
Source: Endnote reference 35

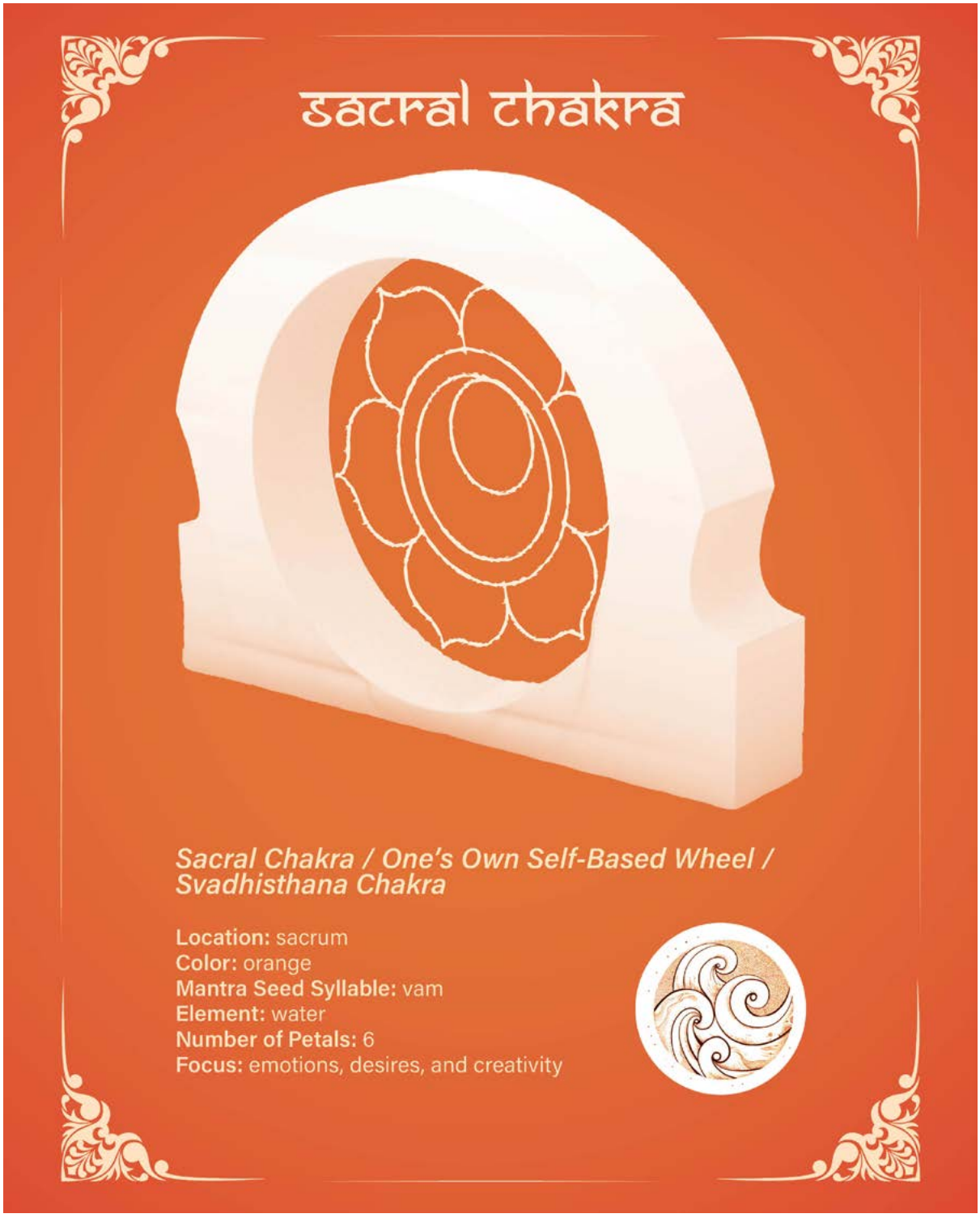


Figure 80 B. 2nd Chakra - Sacral Chakra Description
Source: By Author

Sacral Chakra Frequency

The Sacral Chakra, located just below your navel, is a center of creativity, pleasure, and emotional balance.[41] It plays a vital role in emotional balance and is one of the energy centers that, when in harmony, contribute to overall well-being.[42]

It resonates at a frequency of 417 Hz, a tone known to foster emotional healing, release past traumas, and encourage personal growth.[43]

When the Sacral Chakra is in harmony, you'll feel more connected to your emotions and creativity, allowing you to express yourself freely and embrace life's pleasures.[44] This energy center is symbolic of fluidity and adaptability, guiding you toward a deeper understanding of your desires.[45]

To nurture this chakra, engage in creative activities, dancing, or mindfulness practices. These actions help you reconnect with your passions, allowing you to experience life with greater joy and authenticity.

By tuning into the Sacral Chakra frequency, you align with your true essence, unlocking a new realm of emotional and creative possibilities. Allow this vibrant energy to flow and watch how it transforms your life.[46]



Figure 80 C. Sacral Chakra - Water Pavilion - Zoning Diagram
Source: By Author

WATER PAVILION

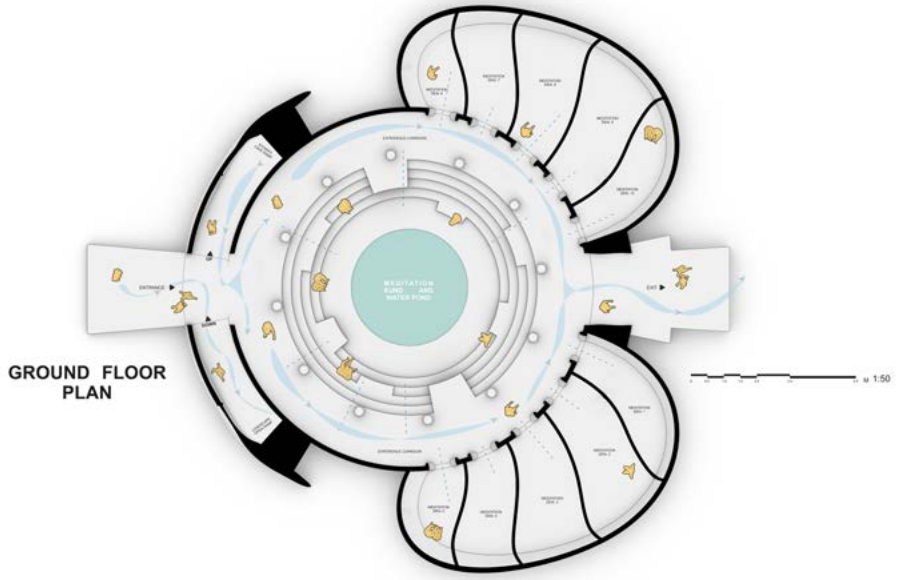


Figure 81 A. Sacral Chakra - Water Pavilion - GROUND FLOOR PLAN
Source: By Author

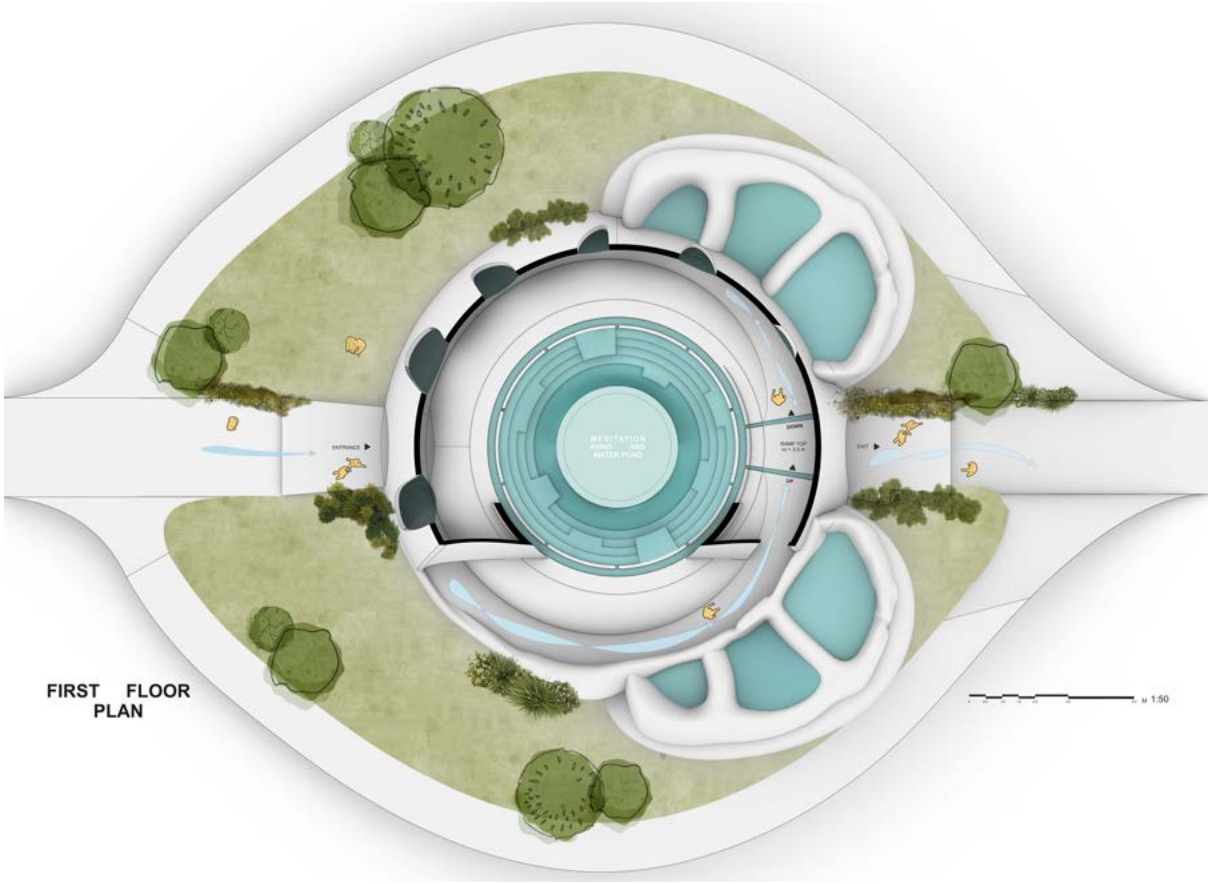


Figure 81 B. Sacral Chakra - Water Pavilion - FIRST FLOOR PLAN
Source: By Author



Figure 81 C. ROOF PLAN & KEYPLAN showing Section Cuts
Source - By Author



Figure 81 D. Sacral Chakra - Water Pavilion - SECTION AA
Source: By Author

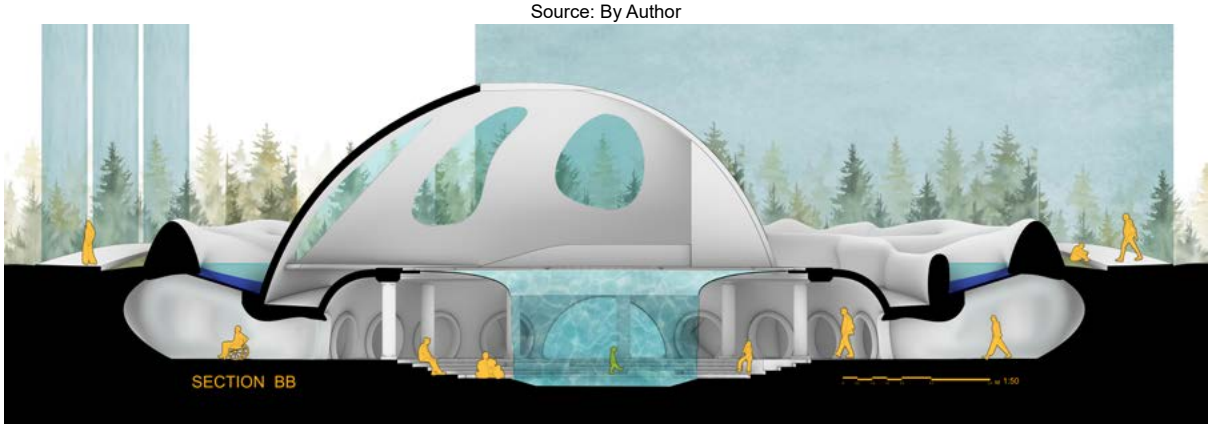


Figure 81 E. Sacral Chakra - Water Pavilion - SECTION BB
Source: By Author

WATER PAVILION

The Water Pavilion extends the elemental design philosophy, featuring a central open courtyard where water is the primary focus. This serene space is characterized by water gently cascading from a top-level copper channel, gathering on a glass surface, and then slowly falling into a basin below. This continuous flow generates natural, calming sounds that contribute to a tranquil atmosphere. Strategically placed plants, such as Tulsi, known for their medicinal and therapeutic qualities, are integrated into the environment, offering health benefits to visitors. The experience is most effective in the early

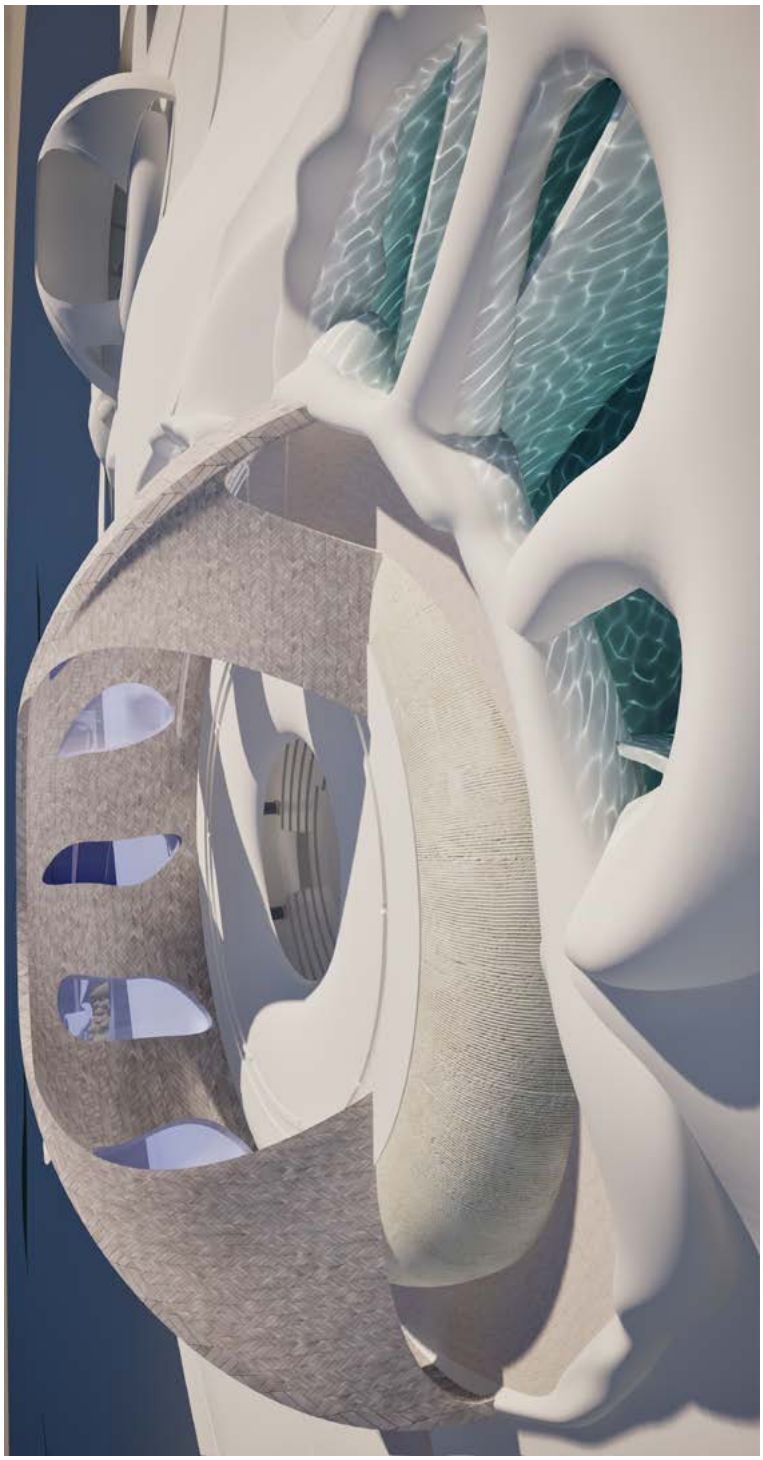


Figure 82. The Exterior 3D view of the Water Pavilion
Source: By Author

morning, when the body's circadian rhythm is naturally attuned to heightened clarity and receptivity. As daylight filters through this falling water, a slight rainbow has the chance to emerge. The design of this pavilion will draw parallels with the Earth Pavilion in its overall structure, but will distinctly manifest the qualities of water through its chosen elements, forms, and color palette, emphasizing fluidity, purity, and sensory engagement to evoke a unique and immersive experience.[47]

The walls of the Water Pavilion will feature verses from Gurbani, which eloquently articulate the profound spiritual importance

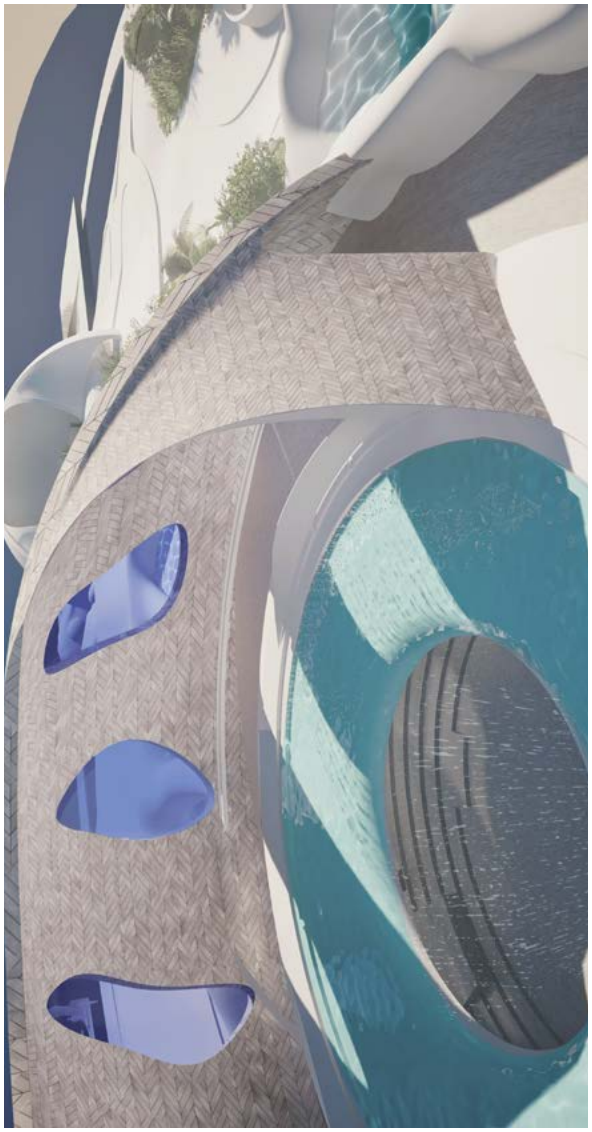


Figure 83. Close up view of the glass pouring down the water
Source: By Author

of water, symbolizing purity, fluidity, and cleansing, and representing the continuous flow of divine wisdom that nurtures the soul. Alongside these verses, murals and paintings will depict the vital role of water in the broader Punjabi region, a land whose very name, "Punjab," signifies five rivers. Water becomes the storyteller, carrying the visitor deeper into the narrative of reciprocity.

These visual narratives will highlight both the ecological and cultural significance of water bodies in Punjab, reflecting its rich history as a cradle of civilization and spiritual tradition. This integration of Gurbani teachings and regional artistry will create a deeply immersive experience, connecting visitors to the spiritual and cultural essence of water.

MEDITATIVE CHAMBERS IN WATER PAVILION

The meditative chambers in the Water Pavilion are meticulously designed for a profound multisensory experience. They will feature a distinctive double-glazed roof structure, with a shallow layer of water held in the bottom layer. As natural light filters through the upper glass and into the water-filled lower layer, it creates captivating water reflections that dance across the chamber floors. This dynamic interplay of light and water will infuse the chambers with a mystical ambiance, creating an appealing, life-invigorating glow. To further enhance this immersive experience, continuous meditative music will fill the space, designed with soft echoes and reverberations to aid in meditation and enhance spiritual experiences, as acoustic characteristics like sound pressure level can enhance the spiritual sense in a space

Complementing the auditory and visual elements, the subtle, refreshing scents from

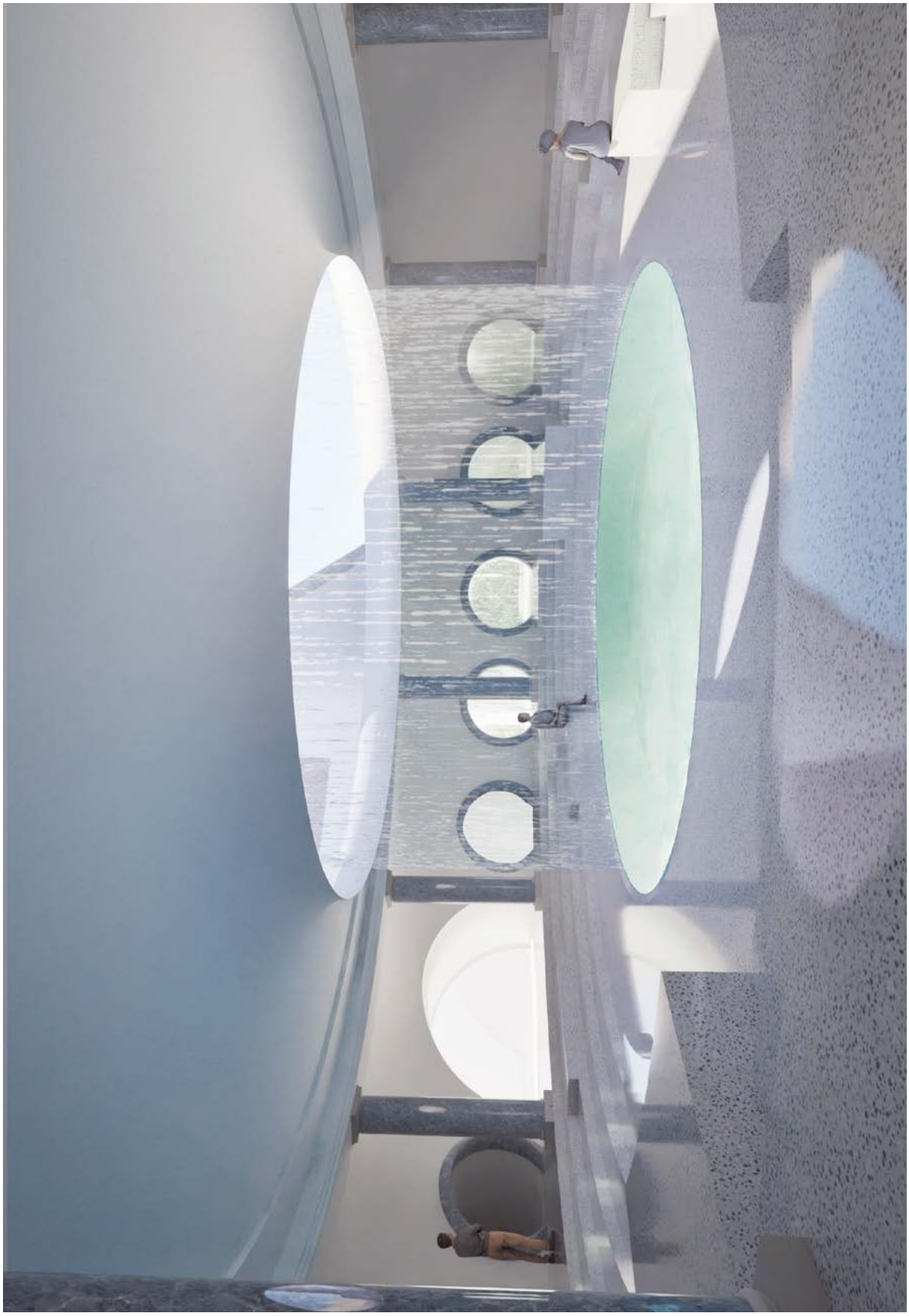


Figure 84 A . Sectional Perspective of the Courtyard with falling water inside the Water Pavilion
Source: By Author



Figure 84 B. Chambers in Water Pavilion showing water reflection on the floor
Source: By Author

specially curated plants and flowers will be diffused throughout, offering therapeutic qualities and contributing to a holistic sensory experience. The healing and restorative effects of the smell of flowers and plants in gardens are well-documented, contributing to overall well-being and spiritual nourishment.

This orchestration of light, sound, and aroma is intended to create an immersive, memorable environment that fosters deep tranquility and spiritual contemplation. These sacred texts, such as those found in Gurbani, use powerful analogies, like the lotus remaining unattached in water or a fish immersed in water, to illustrate profound spiritual concepts, such as detachment from worldly temptations and deep absorption in divine love.[48] To allow visitors to experience these teachings tangibly and foster a deeper resonance with the texts, the design will integrate these metaphors into the physical environment. Lotuses will be deliberately placed within the swamp area surrounding the stepwell in the water activities zone, embodying the spiritual lesson of remaining unsullied amidst the material world. Concurrently, fish will inhabit the larger water body, symbolizing unwavering devotion and absorption.



Figure 85 A. Helical Step-Well (Part of Water Activity Zone), surrounded with swamp pond with lotus
Source: By Author

WATER ACTIVITIES

STEP-WELL

Beyond its spiritual symbolism, this quiet swamp area will also serve as a vital ecological habitat, acting as a natural rewilding zone designed to attract migratory birds to the site. This ecological setup is particularly effective given the proximity of the Harike Wetland, a significant hydrological sink and biodiversity refuge, and the nearby



Figure 85 B. Swamp with lotus around the Step Well for community gathering and isolated meditative spaces within
Source: By Author



Figure 85 C. Close up View of Swamp with lily and lotus, an inviting area for birds.
Source: By Author



Figure 86. The Helical Stepwell of Walur: A Rare Architectural Marvel
Source: https://archeology.dalatcamping.net/the-helical-stepwell-of-walur-a-rare-architectural-marvel/

bird sanctuary. By creating such a rich and integrated ecosystem, the pavilion offers not only a profound spiritual experience that connects visitors to the wisdom of Gurbani but also promotes ecological resilience and fosters a deep connection between the human and the natural world.

Reclaiming and reinterpreting water features like sarovars, traditional step wells, and water wheels for meditative purposes and sustainability practices. Helical stepwells are historically significant as rare architectural marvels that combined water engineering, social life, and spiritual symbolism, embodying India's open, reverent



Figure 87 A . Water Activity Zone- Floating pads - close up view of screens (jaalis), further connected to seven pathways leading to rafts in water
Source: By Author



Figure 87 B. Water Activity Zone- Floating pads in the indoor water pool surrounded with walls like screens or jaalis, further connected to pathways leading to rafts.
Source: By Author

relationship with water. It is not just utilitarian but functioning as community hub, for people gathering, resting, and performing mediative pratices, especially into the isolated chambers within the walls of the helical step-well.

FLOATING PADS ATRUCTURE WITH RAFTS

Floating pads placed in an indoor pool invite participants to recline and let the water gently support them. As they lie on their back, meditative music surrounds the space, guiding the mind into calming brainwave states. This immersive experience encourages deep relaxation, helping visitors release tension and drift into a peaceful, restorative state by the end of the session.

This activity highlights the sensory journey of floating, listening, relaxing and connects it clearly to the psychological effect of calm brainwaves, peaceful feeling. Gently drifting rafts add a sense of journey and surrender to the flow of water.

The meditative experiences designed with floating pads and drifting rafts deeply resonant with Gurbani's profound teachings on acceptance (Hukam), equanimity (Sehaj), and surrendering to the divine will while embracing the present moment.

The floating pads in the indoor pool symbolize the initial act of letting go. As participants recline, supported by water and guided by calming music, they are invited to release control and tension. This stillness and receptivity directly align with Gurbani's call to quiet the mind and prepare oneself to receive divine wisdom, fostering an inner environment of peace and acceptance.

The gently drifting rafts, accessed via individual pathways, powerfully extend this spiritual metaphor. Stepping onto a raft becomes a symbolic act of surrendering to Hukam, the divine order and will and embracing Sehaj, an effortless state of equilibrium. The journey of drifting with the water's flow, rather than resisting it, teaches acceptance of life's currents and the understanding that true peace is found not only in static stillness but also in moving gracefully with

change. This experience encourages participants to be fully present, engaging with each moment as it unfolds, trusting the process.

Design of controlled pathways and individualized portals, where each step and transition prepares the visitor, naturally guides individuals towards this state of mind. By manipulating the senses and focusing attention, these architectural elements complement the water experiences, encouraging a transformative journey of self-realization and acceptance as espoused in Gurbani.

IRRIGATION WHEEL

The traditional Persian Wheel irrigation method, whether animal-powered or manually operated in a rural setting, is deeply ingrained in Punjab's agricultural heritage and spiritual ethos. The region's name, "land of five waters," signifies its profound connection to the water element. Gurbani teaches that all of creation, humans, animals, insects, birds, and the environment is composed of five fundamental elements: air, water, earth, fire, and space. It coneys that we are all interconnected in some way with the divine presence.[49]

> **ਪੰਚ ਤਤੁ ਮਿਲਿ ਇਹੁ ਤਨੁ ਕੀਆ ॥ (੧੦੩੯–੨, ਮਾਰੂ, ਮਃ ੧)**
> panch tat mil ih tan kee-aa.
> From the union of the five elements, this body was made.

> **ਪੰਚ ਤਤੁ ਕਰਿ ਤੁਧੁ ਸ੍ਰਿਸਟਿ ਸਭ ਸਾਜੀ ਕੋਈ ਛੇਵਾ ਕਰਿਉ ਜੇ ਕਿਛੁ ਕੀਤਾ ਹੋਵੈ ॥ (੭੩੬–੬, ਸੂਹੀ, ਮਃ ੪)**
> panch tat kar tuDh sarisat sabh saajee ko-ee chhayvaa kari-o jay kichh keetaa hovai.
> You created the entire Universe out of the five elements; if anyone can create a sixth, let him.

My personal childhood experience of manually rotating the wheel highlights an intimate engagement. As buckets fill and lift water from the source, a steady flow is created. This physical interaction, coupled with the rhythmic sounds of the wheel and moving water, fosters a deeply contemplative atmosphere. These vivid sensory experiences, from the tactile feeling of moving water to its authentic sounds, facilitate profound, lived spiritual phenomena.

Strategically placing these irrigation wheels at the lowest point of my site is both practical and profoundly symbolic. This location ensures consistent water flow by utilizing gravity, maximizes energy capture, and guarantees a steady supply from natural runoff, simplifying maintenance. The way water collects in valleys, so blessings bend toward the humble; pride, like a peak, cannot hold them.

The irrigation wheel is envisioned as site's lived experience when visitors are invited into direct, bodily engagement. In phenomenological terms, this encounter situates the body within a cycle of effort and renewal, where perception is shaped by touch, sound, and movement. Such embodied participation transforms a functional device into a profound experience of persistence and humility. It is through this sensory immersion that visitors carry away a memory that is not only visual but deeply lived, inscribed in the body as much as in the mind.



Figure 88 A. Site Plan shows the location of Irrigation wheel at the lowest point
Source: By Author



Figure 88 B. Irrigation Wheel Traditional Irrigation Method Of Canal Water Lifting With Bulls | Persian Wheel Irrigation Method
Source: https://www.youtube.com/@punjabtube.official Accessed October 2025

SOLAR PLEXUS CHAKRA

Related Element - **FIRE**
Specific Mantra - **RAM**
Frequency of Mantra (Hz) - **329.6, 659.3, 1318.5, 2637.1, 5274.1.**
(endnote reference #35)



Figure 89 A. Manipura Symbol
Source: Endnote reference 35

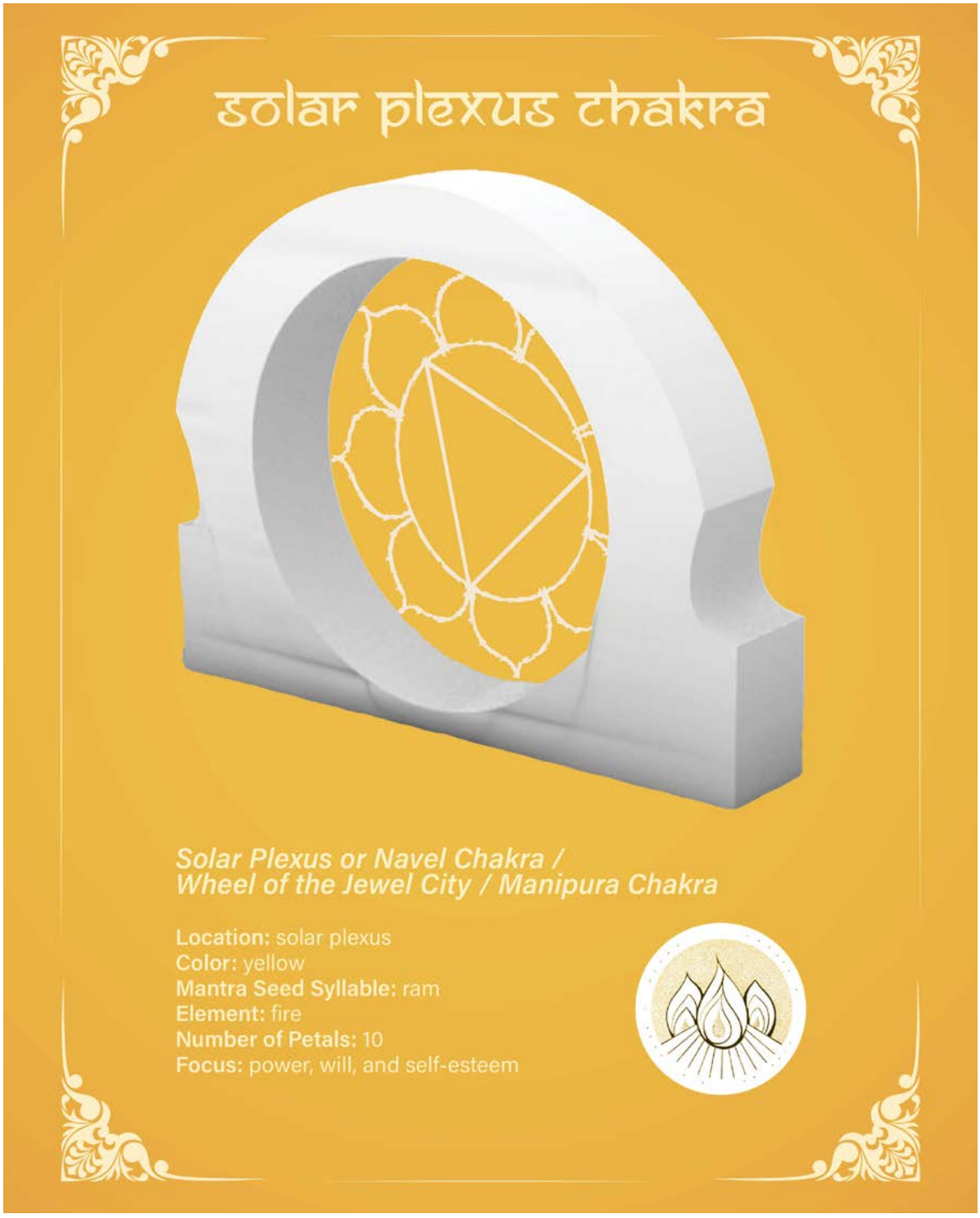


Figure 89 B. 3rd Chakra - Solar Plexus Chakra Description
Source: By Author

Solar Plexus Chakra Frequency

The Solar Plexus Chakra, located in the upper abdomen behind the navel, is a vital energy center often linked to ambition, will, self-assertion, and vital energy.[50] It governs personal strength, confidence, and self-es- teem, forming part of the foundational chakras that relate to an individual's sustenance, stability, and security n.d.. When balanced, this chakra contributes to emotional stability and resilience, empowering you to navigate challenges with greater determination. With a well-balanced Solar Plexus Chakra, you'll feel a surge of emotional stability and the empowerment needed to face life's challenges with renewed determination and focus.[51]

To enhance this balance, incorporating spe- cific frequencies can be beneficial. The 528 Hz frequency is recognized as a solfeggio frequency and is associated with healing and transformation. Research indicates that music tuned to 528 Hz can lead to a decrease in stress-related hormones and an increase in happiness-related hormones, thereby reduc- ing tension and anxiety and promoting emo- tional well-being.[52] Listen- ing to such frequencies can help realign your energy, revitalize your spirit, and support overall emotional wellness.[53]

Additionally, nurturing the Solar Plexus Chakra has positive effects on your digestive health. This energy center is closely connected to digestion and assimilation, and some systems consider the pancreas, a key organ for digestion and energy maintenance, to be its endocrine correlate. As this energy center strengthens, it supports the body's processing of nutrients, contributing to both physical and emotional well-being.[54]

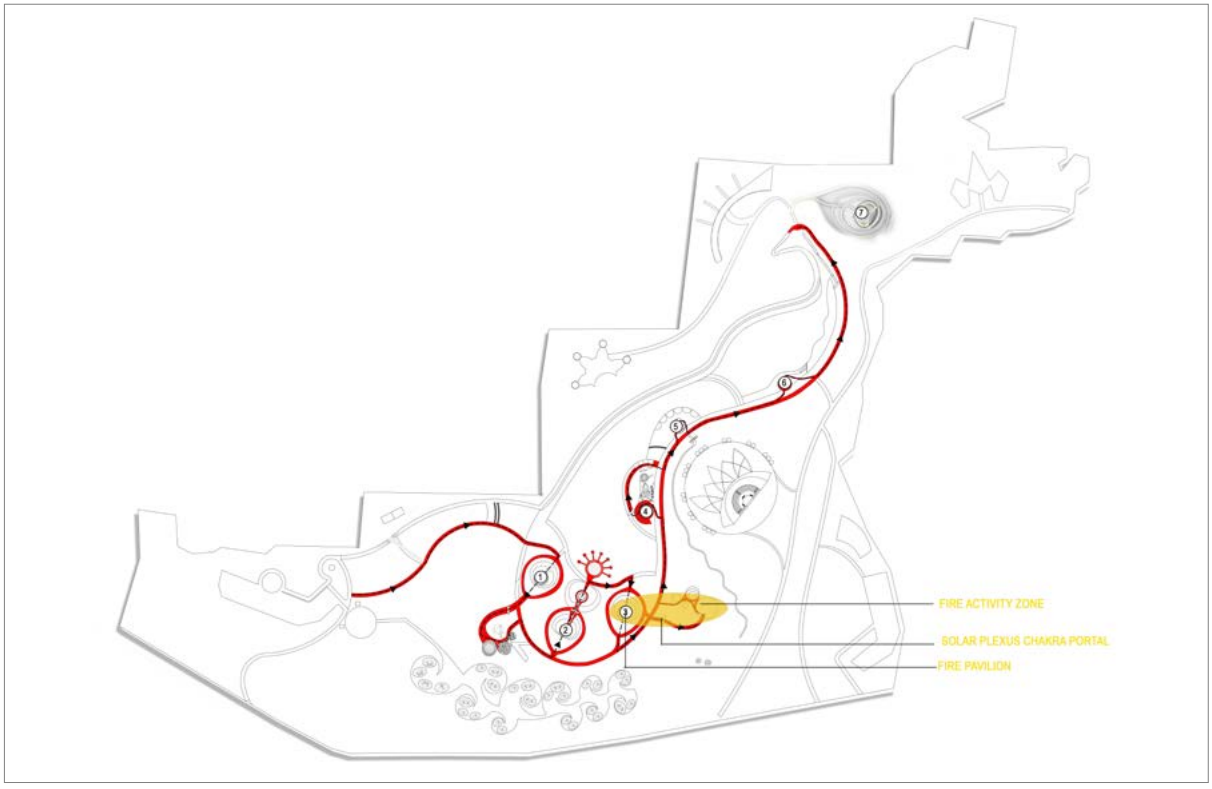


Figure 89 C. Solar Plexus Chakra - Fire Pavilion - Zoning Diagram
Source: By Author

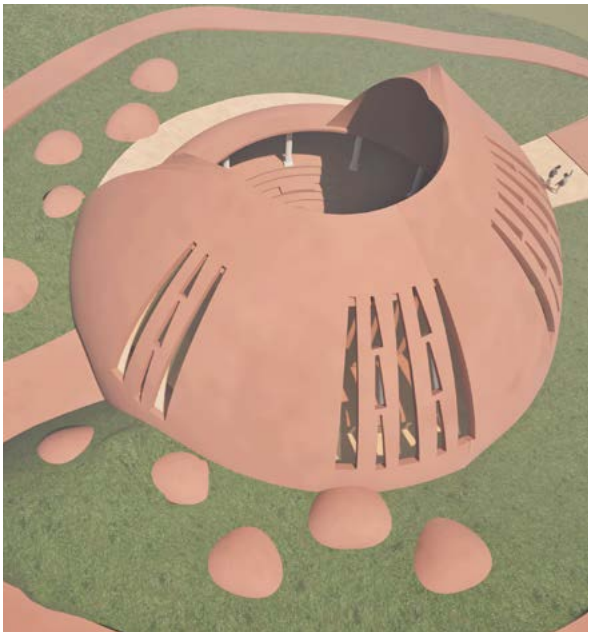


Figure 90 A. Fire Pavilion Day time Exterior View-showing different number of openings in each section divided by dark zones
Source: By Author

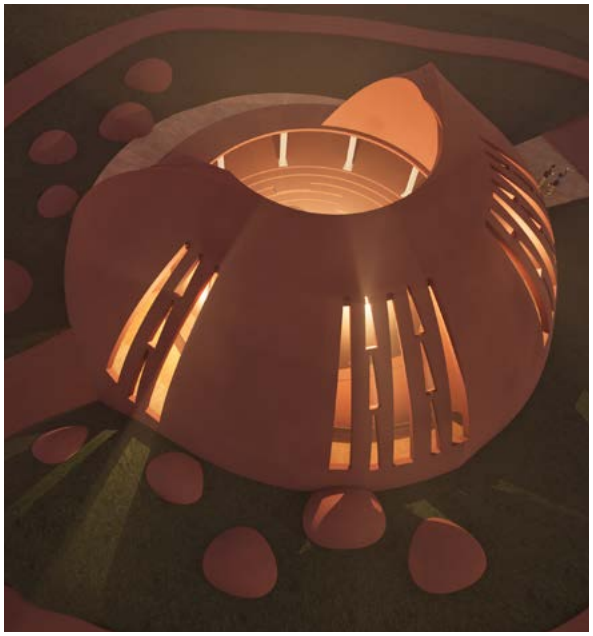


Figure 90 B. Fire Pavilion Night time Exterior View-showing different number of openings in each section divided by dark zones
Source: By Author

FIRE PAVILION

The Fire Pavilion is thoughtfully designed as an architectural journey that mirrors life's profound challenges and the subsequent appreciation of enlightenment. Visitors will begin their experience in a deliberately dark and narrow space, then entering into a space with only a few openings allowing a minimal shaft of sunlight as shown in the Figure 102. This initial darkness symbolizes the struggles and obscurities one faces, emphasizing that the full value of light, or goodness, can only be truly grasped after experiencing its absence.

As one navigates through this section, the exposure to daylight gradually increases, reflecting a spiritual progression. Moving along the ramp, visitors will encounter spaces with progressively more openings, allowing more light to flood in, representing the gradual overcoming of obstacles and the dawning of understanding and clarity. This architectural choreography of light and shadow is intended to facilitate an ontological shift, guiding individuals from a state of contraction to one of spiritual expansion. In Gurbani, fire symbolizes the day (sunlight), representing illumination, warmth, and transformation.

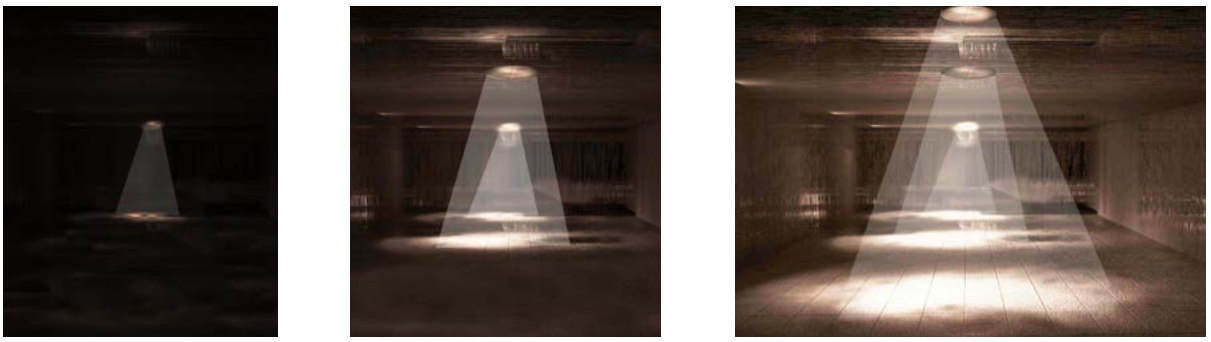


Figure 90 C. Experience in Fire Chakra Pavilion
Source: By Author

FIRE ACTIVITIES AFTER CROSSING THE FIRE CHAKRA PORTAL

Adjacent to this, a library is provided, offering a space to gain inner knowledge and spiritual light, thereby removing the "darkness of ignorance" and fostering a deeper spiritual engagement. This integrated design ensures that the Fire Pavilion provides a holistic experience, connecting physical progression with spiritual awakening through the symbolic power of light and communal knowledge. Outside the library, separate study chambers, designed for both individual and group work, open to the sky and surrounding landscape are provided.

This concept extends to the Fire Activity Zone's function, where the internal 'fire' in Ayurvedic philosophy, Agni, relates to digestion and the breakdown of food. Aligning with this idea, one of the fire activity houses a community langar hall, a space for communal eating that nourishes the body, reflecting the transformative power of internal fire.

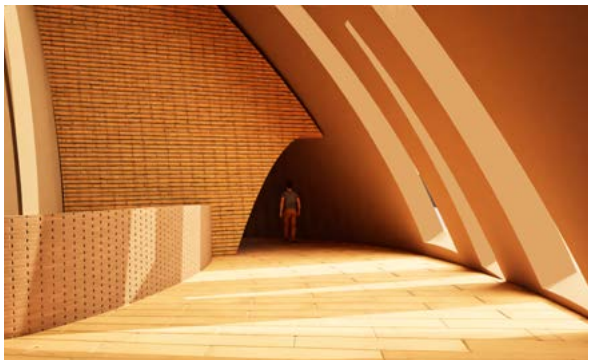


Figure 90 D. Inside view of Pavilion showing the sunlight coming in and the dark zone entrance
Source: By Author



Figure 90 E. Sunlight Chamber Enlarged View
Source: By Author



Figure 90 F. Library on the right and Sunlight Chambers designed for sitting around the Library
Source: By Author

HEART CHAKRA

Related Element - **AIR**
Specific Mantra - **YAM**
Frequency of Mantra (Hz) - **349.2, 639, 698.5, 1396.9, 2793.9, 5587.7.**
(endnote reference #35)



Figure 91 A. Anahata Symbol
Source: Endnote reference 35

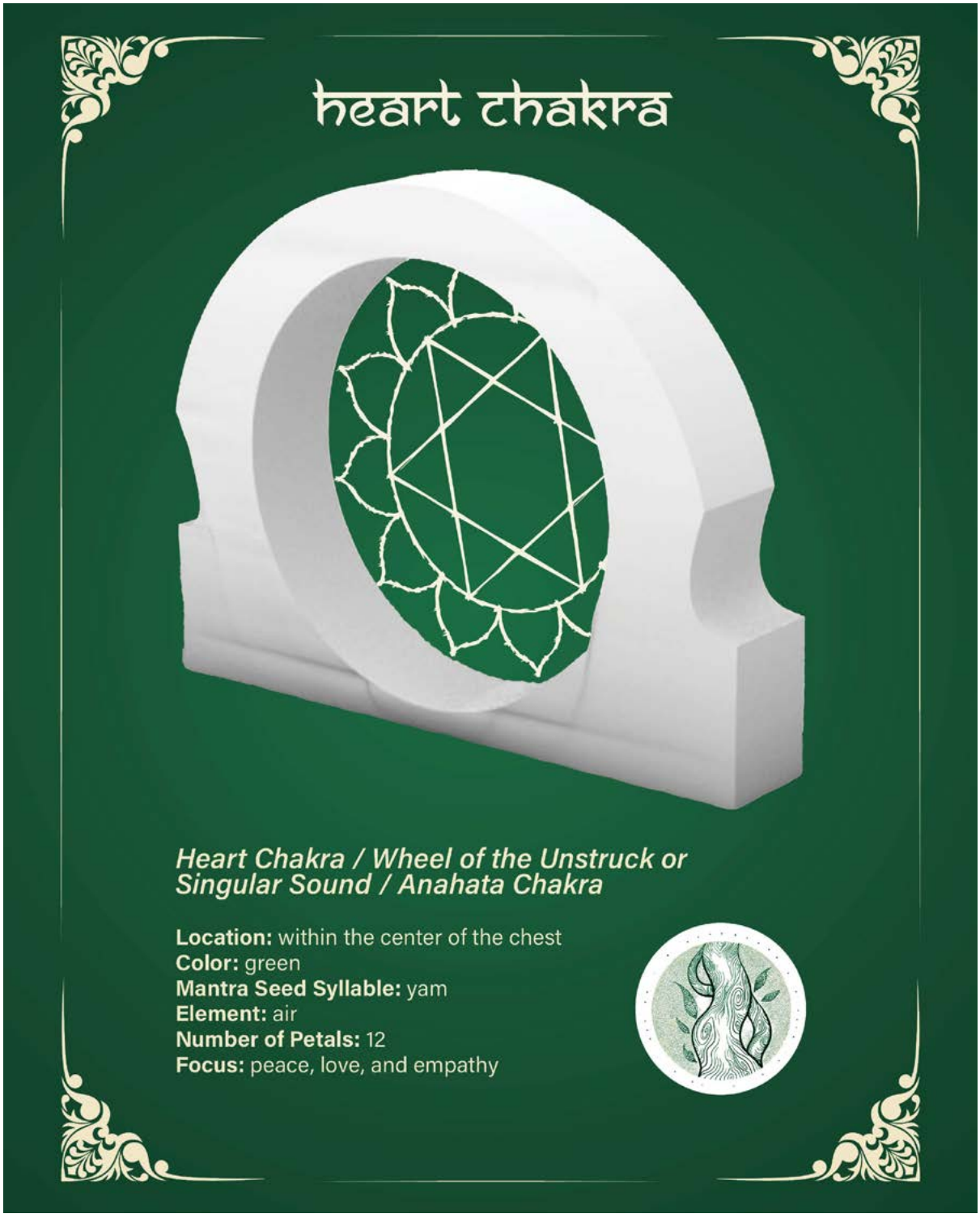


Figure 91 B. 4th Chakra - Heart Chakra Description
Source: By Author

Heart Chakra Frequency

Located in the center of the chest, it is specifically associated with feelings of love, empathy, and forgiveness. When its properties are engaged through heart-centered meditation, deeper emotional connection and enhanced well-being can be supported, as opening the heart can lead to elevated emotions like gratitude and joy, transforming one's energetic field.

Attunement to this frequency is understood as a transformative process rather than passive listening, serving as a gateway to vibrational healing, fostering emotional resonance, and energetic alignment. Through sound therapy and frequency-based meditation, holistic health can be supported in several key ways by its therapeutic qualities. Its deep resonance generates healing vibrations that uplift the spirit, improve emotional states, and enhance overall well-being. Music and pleasant sounds directly influence brain activity and emotional regulation, reducing anxiety and fostering a sense of peace.[55]

The heart chakra frequency, particularly at 639 Hz, is associated with reinforcing relationships, emotional release, connections, and increasing empathy and harmony.[56] This attunement creates space for compassion and emotional healing.

Regular exposure to sound frequencies, through techniques like singing bowls or specific vocalizations, is recognized for its ability to resonate with and balance the chakras, thereby stabilizing the energetic sys- tem and promoting overall well-being.[57]

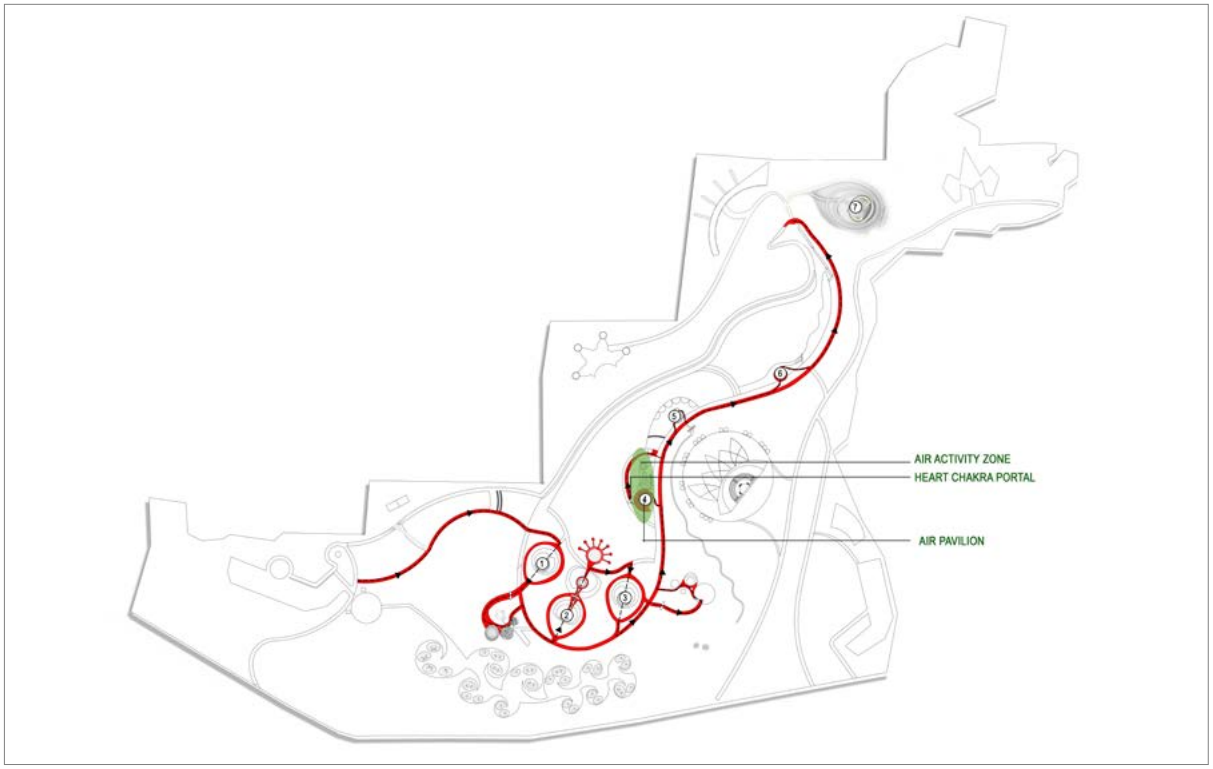


Figure 91 C. Heart Chakra - Air Pavilion - Zoning Diagram
Source: By Author



Figure 92 A. Heart Chakra - Air Pavilion -Rendered 3D View
Source: By Author

AIR PAVILION

The Heart Pavilion is designed with generous openings that allow the wind to be felt directly on the skin, emphasizing the presence and importance of the air element. Increased ventilation is achieved through an open central courtyard, which reinforces this sensory experience. The courtyard surrounded with living walls, itself is envisioned as a soft, green landscape—fully grassed and planted with abundant vegetation, to create a calm, breathable environment that supports the pavilion's connection to air and emotional openness.



Figure 92 B. Heart Chakra - Air Pavilion -Rendered 3D View
Source: By Author

AIR ACTIVITIES AFTER CROSSING THE HEART CHAKRA PORTAL

A Heart Chakra activity is designed to foster emotions of love, compassion, and well-being by designing botanical gardens, butterfly gardens, herbs gardens and musical gardens. Sound therapy, involving instruments like chimes, singing bowls, or specific vocalizations, is recognized for its ability to resonate with and balance the chakras.[58]

Research postulates that music affects brain function by acting as a nonverbal medium that can move directly through the auditory cortex to the limbic system, an important part of the emotional response system, and may stimulate the release of endorphins.[59]

Gurbani provides a profound path for spiritual awakening and transformation through its poetic hymns, guiding individuals toward a state of bliss and universal oneness. Gurbani's hymns (often set to Raagas) is understood to resonate with energetic centers, clearing blockages and promoting spiritual alignment.

The Lord Himself is the creator of the



Figure 92 C . Musical Instruments as sculptures in the Heart Chakra activity zone
Source: By Author

Raag. The Raaga (Raag) itself is the feed for the soul, and the soul flourishes when it absorbs the heavenly music of the Lord. The Raag is a medium of pure state that connects us to the pure one. It acts as a catalyst (enhancer) for the spiritual seeker, and thus helps in connecting with the Almighty. The true understanding of this occurs when one is moving towards the purity (true worship of the Lord) with devotional worship (prema bhagti), and total truthful living (puran sachiari rehat). The Anhad-Naad as described in *Sri Guru Granth Sahib* (SGGS) Ji is a Raag of various unique sounds blended in a harmonious manner.[60]

ਵਾਜੇ ਨਾਦ ਅਨੇਕ ਅਸੰਖਾ ਕੇਤੇ ਵਾਵਣਹਾਰੇ ॥ (੬–੫, ਜਪੁ, ਮਃ ੧)
vaajay naad anayk asankhaa kaytay vaavanhaaray.
The Sound-current of the Naad vibrates there,
and countless musicians play on all sorts of instruments there.

ਅਨਹਦ ਧੁਨੀ ਦਰਿ ਵਜਦੇ ਦਰਿ ਸਚੈ ਸੋਭਾ ਪਾਇ ॥੩॥ (੪੨–੩, ਸਿਰੀਰਾਗੁ, ਮਃ ੪)
anhad Dhunee dar vajday dar sachai sobhaa paa-ay. ||3||
The Unstruck Celestial Music vibrates for them at the Lord's Door,
and they are honored at the True Door. ||3||

The positive effects of sound and music on stimulating nerves for positive chemical reactions, reducing anxiety, and creating peace suggest an influence on physiological processes.[61]

Integrating botanical gardens provides a natural setting that significantly enhances spiritual connection, reduces stress, and improves mental clarity. Plants actively improve air quality by re-oxygenating, moderating temperature and humidity, absorbing pollution, and producing beneficial ions.[62]



Figure 92 D. Heart Chakra - Air Pavilion -Rendered 3D View
Source: By Author

THROAT CHAKRA

Related Element - **SPACE**
Specific Mantra - **HAM**
Frequency of Mantra (Hz) - **196, 392, 784, 1568, 3136**
(endnote reference #35)



Figure 93 A. Vishuddha Symbol
Source: Endnote reference 35

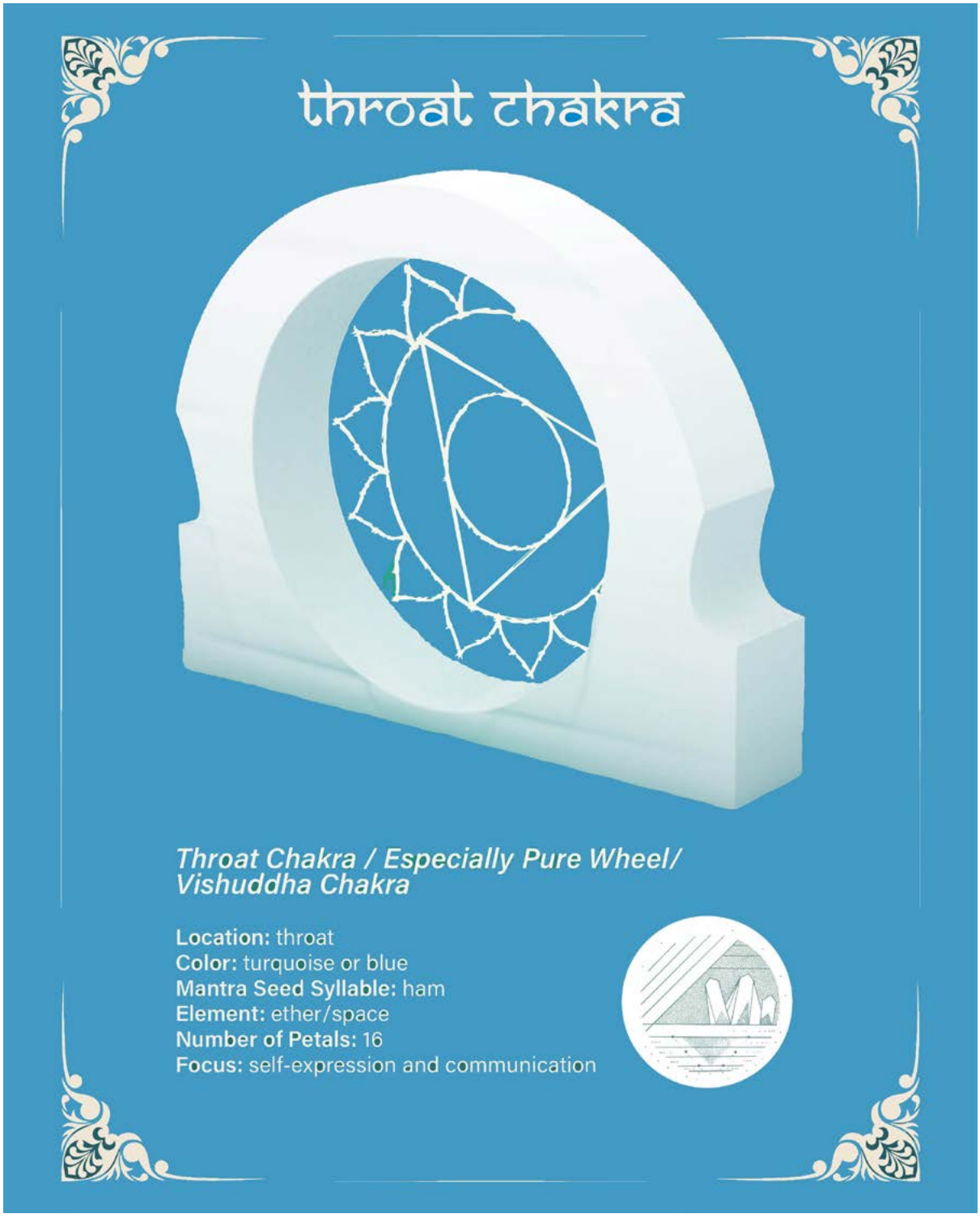


Figure 93 B. 5th Chakra - Throat Chakra Description
Source: By Author

Throat Chakra Frequency

Located at the center of the neck, the Throat Chakra governs communication, self-expression, and the ability to articulate thoughts and feelings. Expressing truth is a liberating experience, and the Throat Chakra frequency plays a key role in supporting this process.[63] When it is balanced, communication becomes clearer and more authentic, as aligning one's inner world with external actions and environment promotes authenticity.

Sound therapy is especially effective for throat chakra healing, as vibrational fre- quencies help release blockages related to expression. Modern sound healing tech- niques, such as using Tibetan singing bowls or chanting specific vowel sounds, are employed to resonate with and balance the chakras. Using your voice for chanting or singing as a tool for emotional release. Mantra recitation, involving chanting specific mantras, is believed to resonate with the chakras, clearing blockages and promoting energetic alignment. This practice encourages creative flow and helps clear any emotional block- ages, allowing you to express your true self more freely and connect with your soul voice. Listening to sound healing tracks can also promote healing and balance within the chakra.[64]

By incorporating these practices into a daily routine, a deeper alignment with inner truth can be noticed, allowing the voice to flow more freely and expression to feel more authentic.

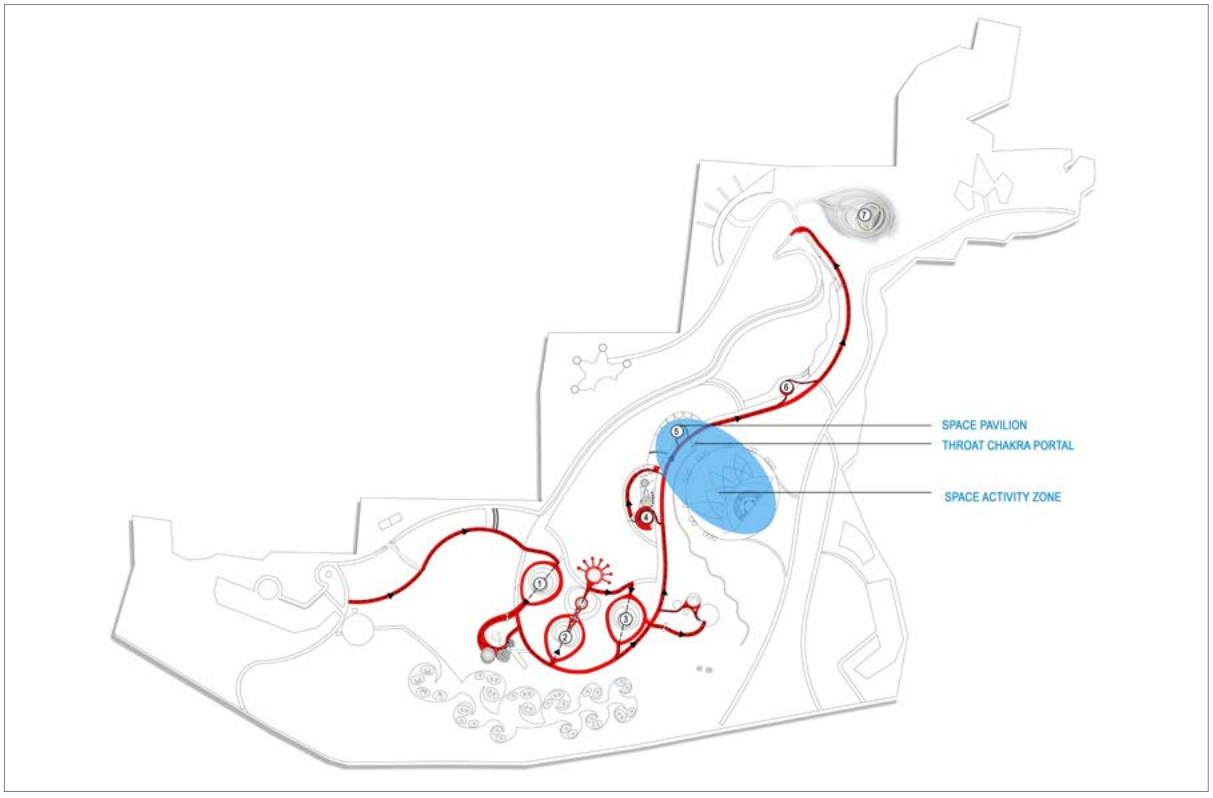


Figure 93 C. Throat Chakra - Space Pavilion - Zoning Diagram
Source: By Author

SPACE PAVILION

The space pavilion in your thesis embodies an architectural philosophy that prioritizes "immateriality" and minimalism, deliberately reducing material enclosures to shape and define space. This design emphasizes the profound utility of "what is not," highlighting voids and open areas as essential elements for contemplation and engagement. A prominent rock, carefully integrated, creates a purposeful void within the structure, symbolizing emptiness and inviting introspection. This use of a natural element, reminiscent of Zen gardens where stones represent deeper meanings, grounds the design while evoking a spiritual connection to the earth's core essence, transforming a physical object into a portal for metaphysical experience. The overall effect fosters a sense of serene, uncluttered space conducive to reflection and spiritual awareness.



Figure 94 A. Throat Chakra - Space Pavilion -Rendered 3D View
Source: By Author

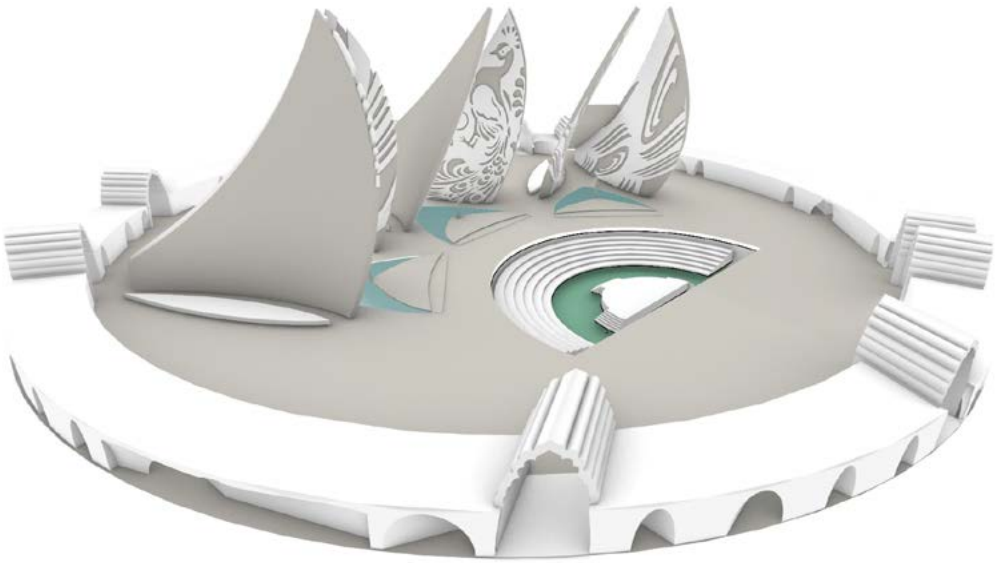


Figure 94 B. Amphitheatre with Public Square Plaza and shops
Source: By Author

SPACE ACTIVITIES AFTER CROSSING THE THROAT CHAKRA PORTAL

Space activities are designed to foster communal and spiritual engagement. A central amphitheater serves as a dynamic venue for performances, cultural events, and storytelling, drawing visitors into shared experiences. Adjacent to this, various shops and skill-building spaces are integrated, offering opportunities for traditional crafts and supporting local commerce. These elements coalesce around a public square plaza, envisioned as a lively communal meeting point. This multi-use area facilitates casual gatherings, and diverse activities, thereby extending the pavilion's internal journey of spiritual awareness into a collective, experiential realm contributing to the social vitality and holistic integration of public life within the sanctuary. Another activity is a bike trail that leads from the plaza to the bird-watching towers and the cottages.



Figure 94 C. Projection screens mounted on the ceiling enable immersive film viewings within the peacock-patterned, curved-wall enclosure.
Source: By Author

THIRD EYE CHAKRA

Related Element - **SPACE / MIND**
Specific Mantra - **OM**
Frequency of Mantra (Hz) - **110, 220, 440, 880, 1760, 3520. 136.1**
(endnote reference #35)



Figure 95 A. Ajna Symbol
Source: https://symbolsarchive.com/ajna-symbol-history-meaning/

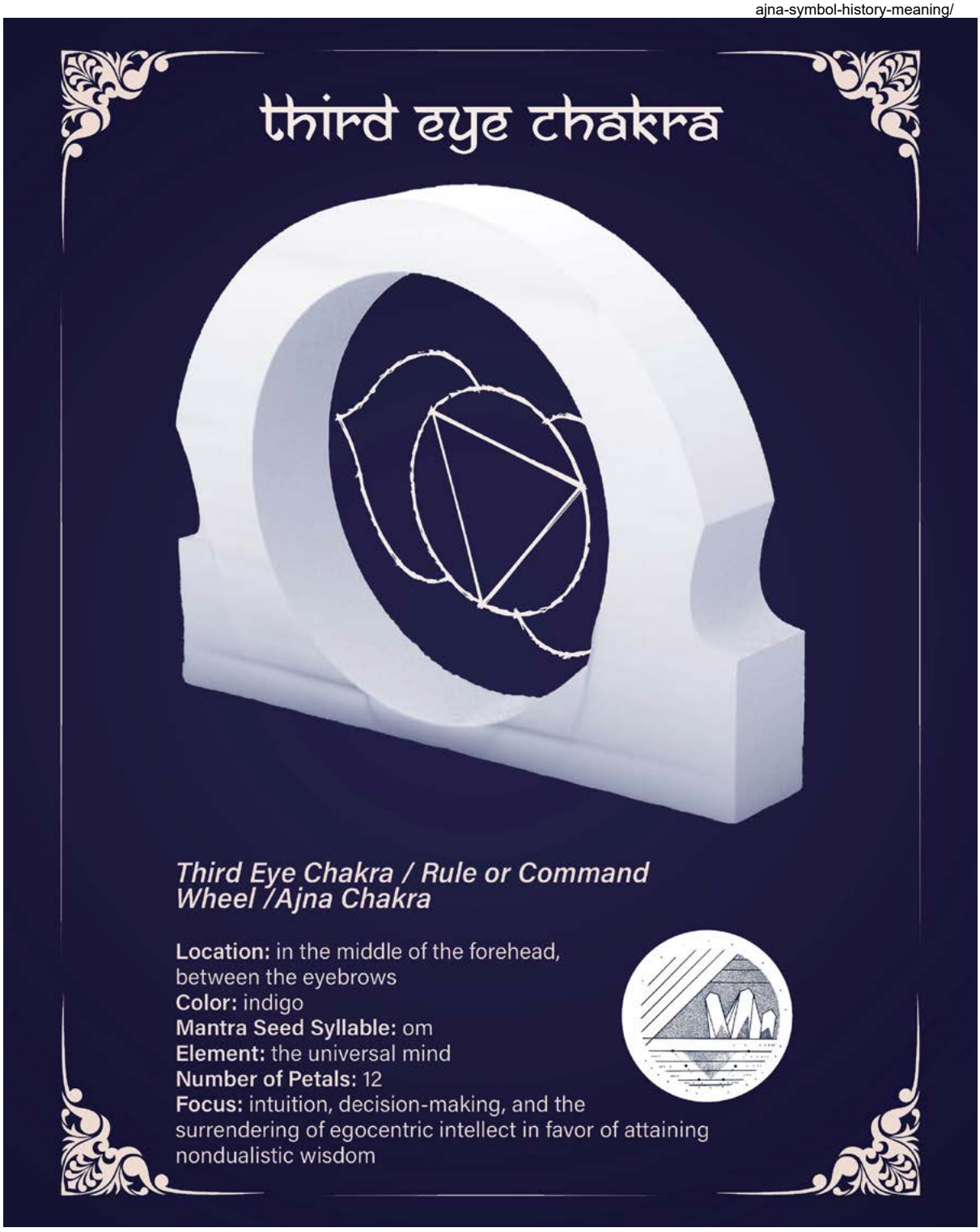


Figure 95 B. 6th Chakra - Third Eye Chakra Description
Source: By Author

Third Eye Chakra Frequency

Located at the center of the forehead and is often referred to as the psychic center. It is associated with intuitive insight and expanded perception, as yogic lore links it to the pineal gland, considered the third eye or "seat of the soul" in Western traditions, and the command chakra. It serves as a gateway to deeper awareness, helping one see beyond the ordinary, enabling a connection with everything that exists and fostering responsi- bility beyond personal bonds.[65]

When this chakra is balanced and function- ing optimally, inner wisdom becomes more accessible, supporting clarity in perception and decision-making.Various meditation techniques, including focused attention on specific chakras or visualizations of their corresponding colors and symbols, help to bring awareness and balance to the chakra system.

Sound healing techniques, such as using Tibetan singing bowls or chanting specific vowel sounds, are employed to resonate with and balance the chakras, as each chakra is associated with a particular sound frequency.[66]

Certain frequency music, including 852 Hz, has been noted in claims to awaken intuition and contribute to spiritual self-fulfillment.[67]

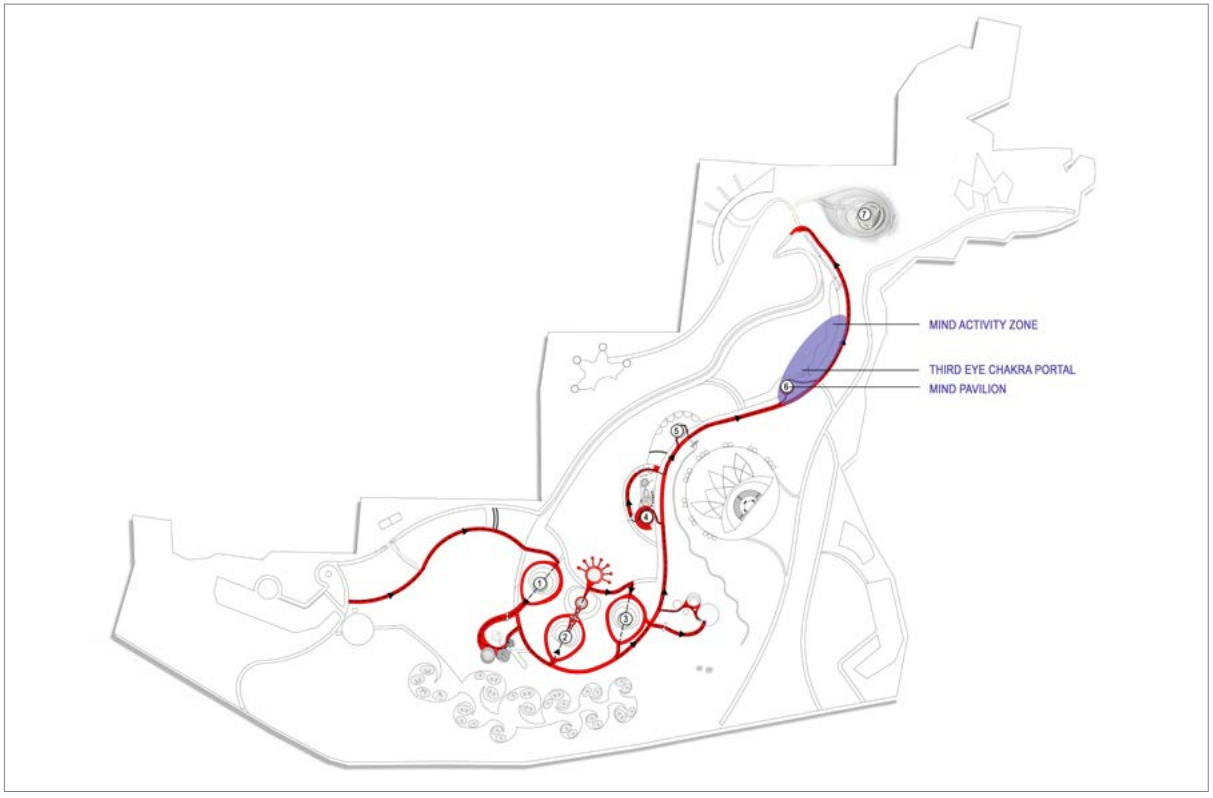


Figure 95 C. Third Eye Chakra - Mind Pavilion - Zoning Diagram
Source: By Author



Figure 96 A . Third Eye Chakra - Mind Pavilion -Rendered 3D View
Source: By Author

MIND PAVILION

The Mind Pavilion, embraces an even more radical degree of openness and dematerializa- tion, reflecting a profound connection to the nature and the landscape. Its design intention- ally reduces physical enclosures to their absolute minimum, creating an "uncluttered and unimpeded space" that symbolizes boundless open-mindedness, a crucial prerequisite for an unhindered spiritual journey. By shedding material constraints and embracing this "im- materiality," the pavilion encourages visitors to transcend mental barriers and foster a deep connection to their inner selves, transforming the built environment into a sanctuary where the soul can rejuvenate for its divine purpose



Figure 96 B . Space promenade with Bamboo Meditative Structure for Space Chakra Activity
Source: By Author

MIND PAVILION ACTIVITIES AFTER CROSSING THE THIRD EYE CHAKRA PORTAL

The act of walking alongside the waterbody, enclosed by a wall of arches, is conceived as a profound space activity, an immersive architectural experience designed to engage the senses and foster introspection

As individuals move through this space, the rhythmic sound of water, combined with the subtle play of light and shadow across the arches holding jaali patterns, creates a multisensory environment that transforms an ordinary walk into a journey of embodied presence and connection. A bamboo structure at the end of the path offers a quiet, open setting for meditation beside the gentle movement of the water.

CROWN CHAKRA

Related Element - **NO ELEMENT**
Specific Mantra - **NO SOUND**
Frequency of Mantra (Hz) - **123.5, 246.9, 493.9, 987.8, 1975.5, 3951.1**
(endnote reference # 46)



Figure 97 A. Sahasrara Symbol
Source: https://www.deviantart.com/chrismc373/art/Crown-Chakra-964303893

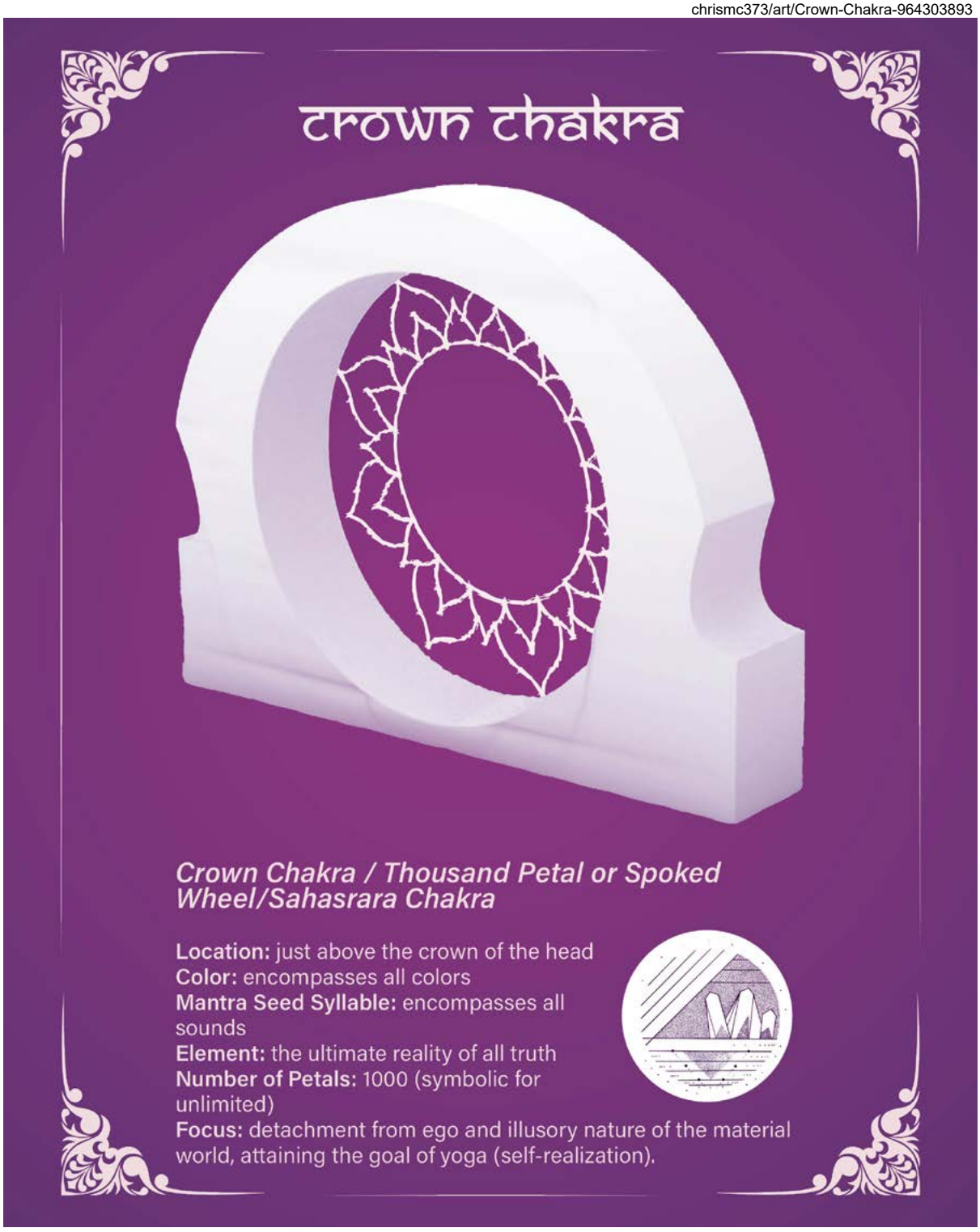


Figure 97 B. 7th Chakra - Crown Chakra Description
Source: By Author

Crown Chakra Frequency

The Crown Chakra, also known as Sahasrara or the "thousand-petal lotus," is situated at the top of the head.

The Crown Chakra governs access to higher states of consciousness, and its activation is linked to highly spiritually developed people and the blossoming of higher consciousness from the mud of ignorance.[68] Resonating with frequencies, including some associated with spiritual self-fulfillment, this chakra is linked to heightened intuitive insight, spiritual illumination, and an expanded understanding of purpose.[69]

In the Multifaith Pavilion of Oneness, representing the seventh chakra and the spiritual journey's culmination, the chanting of "*Satnaam*" takes on a profound significance.[70] As Gurbani elucidates the Beej Manter is "*Satnaam*" understood as the name God gave to Himself, signifying that Truth is the inherent essence of the Divine and *Sat* (Truth) the very womb from which all creation emerged. This makes "*Satnaam*" not merely a sound, but the primal, divine vibration and the source of all existence.[71] Through the practice of *Naam Simran (meditating on Satnaam)* and Gurbani *Kirtan* within this sanctuary, visitors engage with this fundamental Truth, allowing the vibrational quality of "*Satnaam*" to transcend quantifiable frequencies and induce deep spiritual, psychological, and physiological shifts. The silent repetition of "*Satnaam*" within the surat (mind/consciousness) is considered particularly potent, symbolically connecting one to the 'unstruck sound' of the universe, the very sound of God himself.[72] This profound engagement fosters a connection to the divine, aligning with the sanctuary's ethos of "Love is Truth" and facilitating a journey of self-realization that culminates in loving oneself and others, ultimately echoing Guru Gobind Singh Ji's profound shalok: "*Jin Prem Kiyo tin hi Prabh Paayo*," those who have loved, have found God.



Figure 97 C. Crown Chakra - Multifaith Pavilion of Oneness - Zoning Diagram
Source: By Author



Figure 98 A. Multifaith Pavilion of Oneness (MPO) on the top of a landscaped mound approached by a spiral ramp and staircase
Source: By Author



Figure 98 B. Multifaith Pavilion of Oneness and its surrounding landscape on the top of the mound
Source: By Author



Figure 98 C. MPO-Interior view looking up at the play of sunlight from the holes in the enclosure
Source: By Author

THE MULTIFAITH PAVILION OF ONENESS (MPO) - DAYTIME

It embodies the seventh chakra, the culmination of the journey after passing through the six chakras in sequence. At the summit of this mound awaits a natural, open landscape, thoughtfully designed to incorporate all five elements. This area will be illuminated with lights and adorned with mirrors, and small, shallow pools of water symbolizing enlightenment and encouraging self-reflection to reveal one's true essence. There will be a harmonius blend of sculptures and water.

Before embarking on the ascent towards unity, visitors must first navigate a dark and narrow cave structure. This passage symbolizes the human body, and traversing

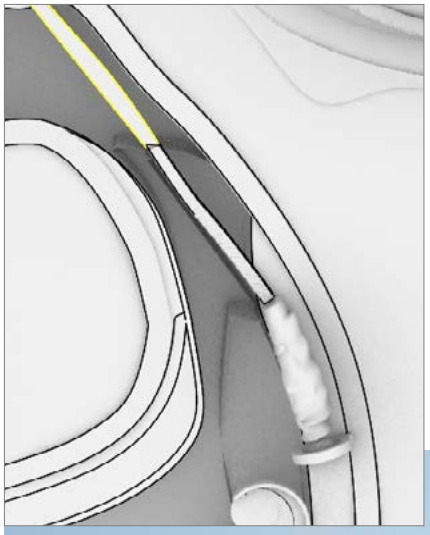


Figure 99 A. Cave and Rope Bridge zoomed in Plan view
Source: By Author

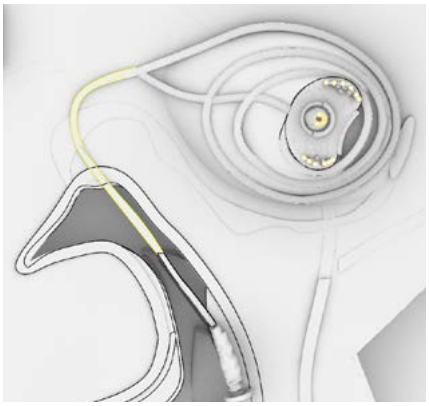


Figure 99 B. Cave and Rope Bridge to Multifaith Pavilion of Oneness (MPO) in the Plan view
Source: By Author



Figure 99 C. Enlarged view of the Cave entrance before the bridge to Multifaith Pavilion of Oneness (MPO)
Source: By Author



Figure 99 D. The wooden bridge fenced with ropes leading to the Multifaith Pavilion of Oneness (MPO); side view of Water Fall shown
Source: By Author

it signifies a detachment from the physical self, preparing individuals for the subsequent stages of their spiritual journey. Upon emerging from the cave, visitors will cross a bridge before beginning their climb up the mound.

It is reached by crossing a narrow, fragile-looking wooden bridge, with ropes on either side serving as delicate fences over the water. This bridge reflects the verse from Gurbani:[73]

> **ਖੰਨਿਅਹੁ ਤਿਖੀ ਵਾਲਹੁ ਨਿਕੀ ਏਤੁ ਮਾਰਗਿ ਜਾਣਾ ॥**
> **(੯੧੮-੧੯, ਰਾਮਕਲੀ, ਮਃ ੩)**
> khanni-ahu tikhee vaalahu nikee ayt maarag jaanaa.
> The path they take is sharper than a two-edged sword, and finer than a hair.

To attain the highest power, the divine life force, the Supreme Lord, one must walk a path sharper than the edge of a sword and finer than a strand of hair.

Crossing this bridge symbolizes the inner struggle of moving toward total consciousness, a state achieved when all chakras are awakened and the dormant energy (Kundalini Energy) at the base of the spine uncoils and rises upward. The spirals formed on the mound represent this uncoiling of kundalini energy, guiding the seeker toward the MPO on the top of the mound. Here, the journey becomes about dissolving man-made boundaries, erasing separation, and awakening to the true connection with all creation having the profound realization of oneness and interconnectedness.

This state, however, is only attained by overcoming Maya, the final phase of the journey. The MPO itself represents this ultimate phase: transcending illusion, shedding vices, cultivating divine virtues, and finally merging with the One that embodies the same qualities of purity, love, and truth.

This journey sets a narrative that the MPO is not just the destination, but the symbolic final phase of overcoming Maya and uniting with the Divine.



Figure 99 E. Water Fall on the back side of the MPO at the top of the mound,
Source: By Author

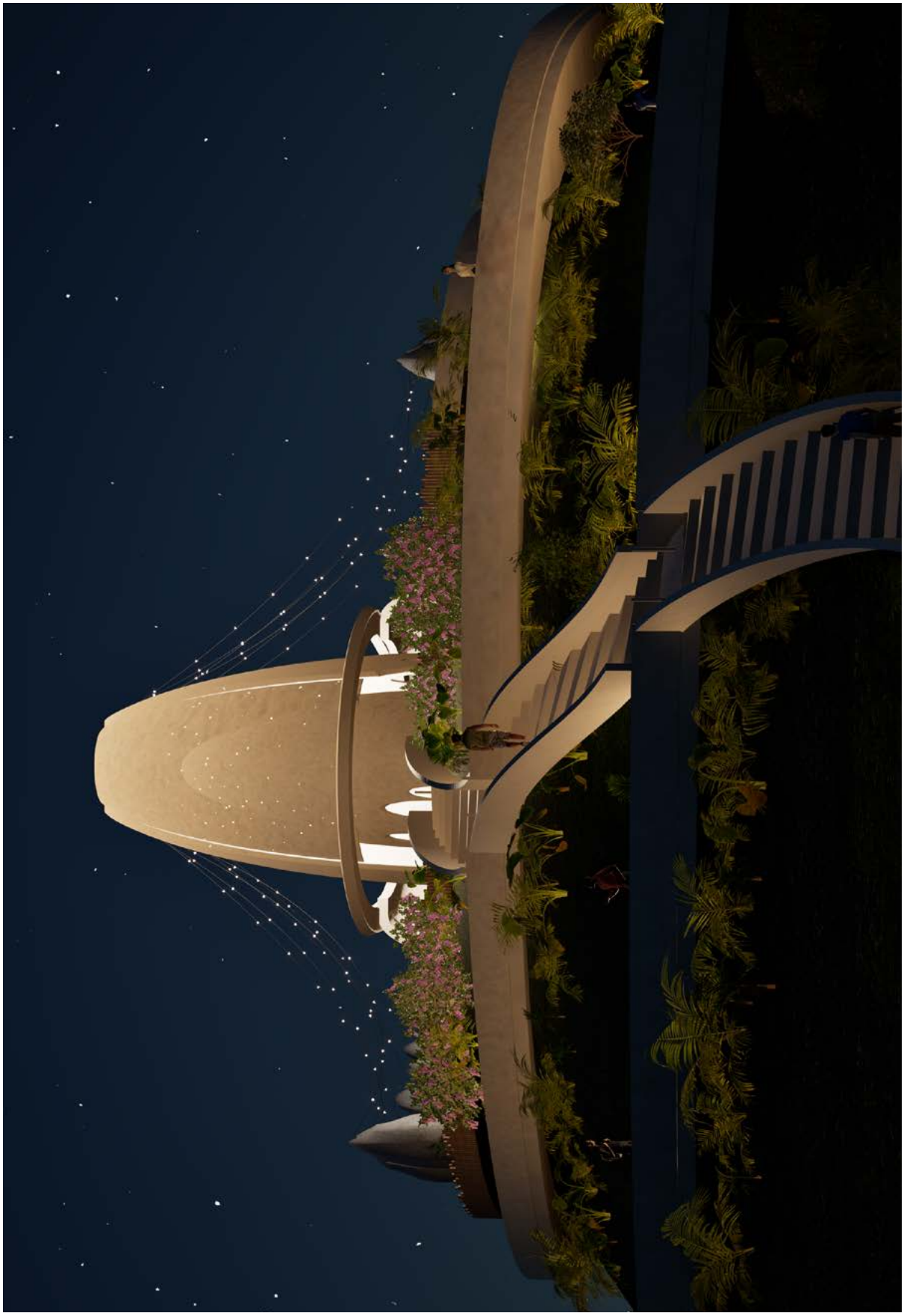


Figure 100 A. Enlightened view of the MPO at Nightime approached by staircase
Source: By Author



Figure 100 B. MPO and its surrounding landscape at Night time, along with the hanging lights;
Source: By Author

THE MULTIFAITH PAVILION OF ONENESS (MPO) - NIGHT TIME

After moving through all the chakra pavilions, visitors finally arrive at the Pavilion of Oneness around 9 p.m. The illuminated structure, its light filtering through carved openings and glowing from the suspended ropes stretching from the MPO to the rocks along the mound's edge, appears to merge with the stars in the night sky, evoking a profound sense of dissolving into the cosmos.

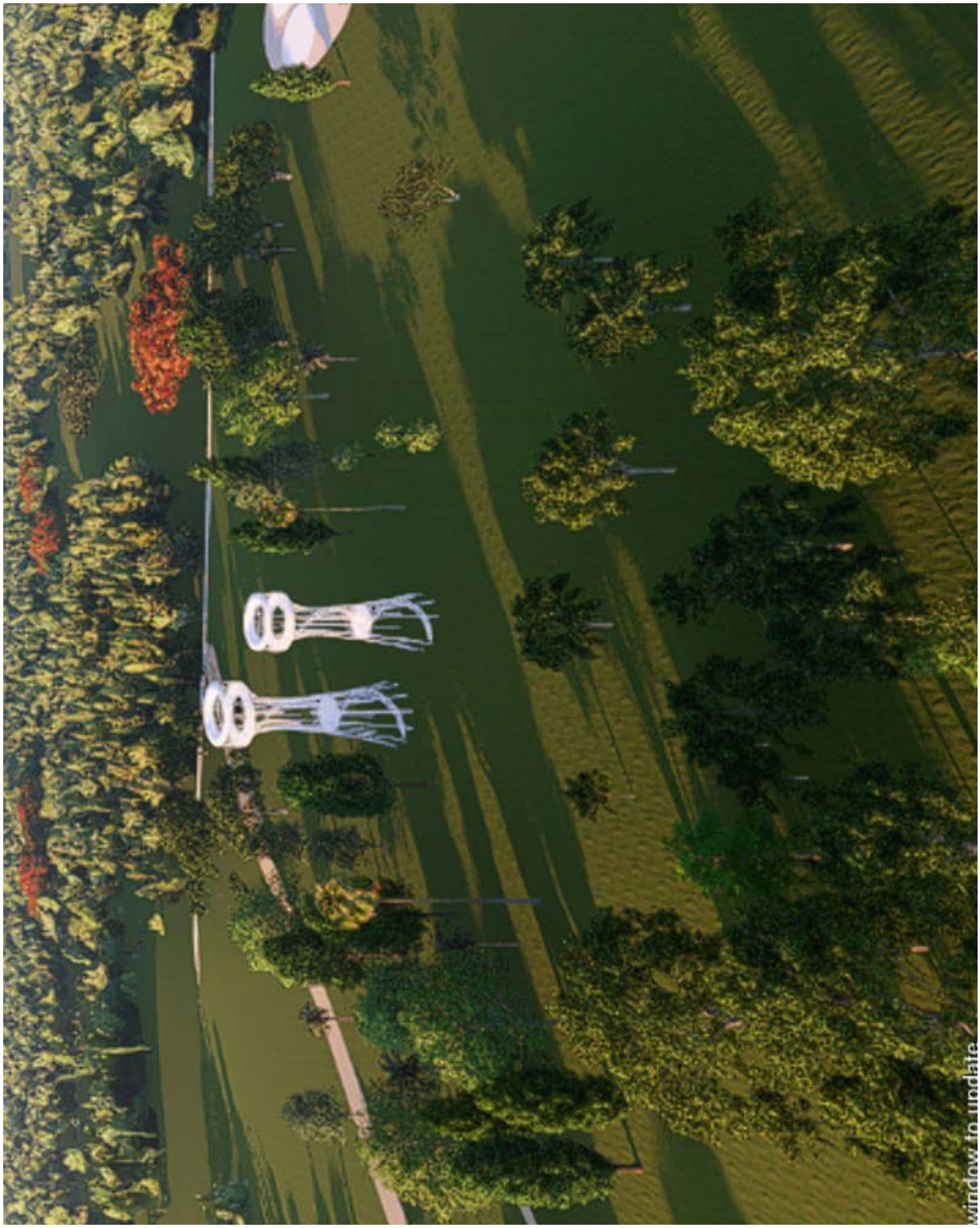


Figure 101 A. Bird Watching Tower in the Site Landscape
Source; By Author

BIRD WATCHING TOWERS

The Bird Watching Towers are placed to provide sweeping views across the site. From their height, the peacock-inspired master plan becomes visible in its entirety including the farmlands, while the swamp pond around the stepwell reveals flocks of birds gathering in their natural habitat. Looking further south, visitors can also observe the dramatic meeting point of the Sutlej and Beas rivers, a striking natural feature that enriches the overall experience.

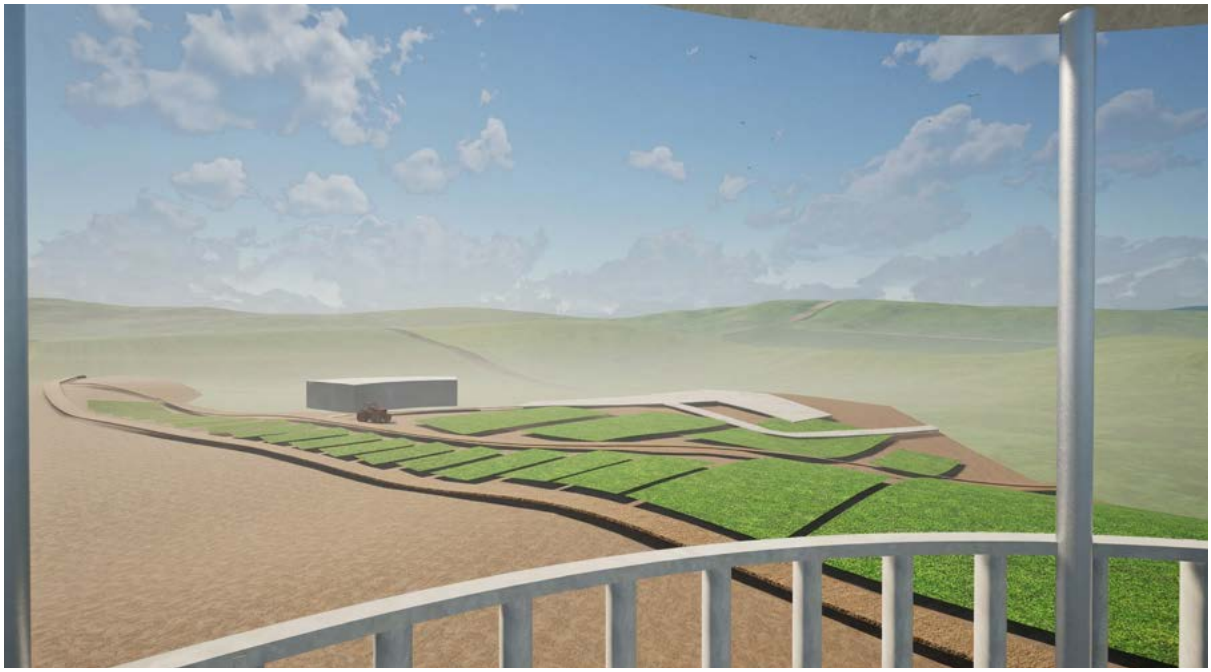


Figure 101 B. Agricultural farmlands viewed from the Bird Watching Tower
Source; By Author



Figure 101 C. Enlarged 3D View of the Bird Watching Tower
Source; By Author



Figure 102 A. Rural Cottages
Source; By Author



Figure 102 B. Embellished Cottages
Source; By Author



Figure 102 C. Interactive Communal Space within the Cottages Area
Source; By Author



Figure 102 D. Cottages Overview in the Site Landscape
Source; By Author

RURAL AND EMBELLISHED COTTAGE

The differentiation between cottage types within the sanctuary does not rely on altering the core material palette or architectural style. Instead, it is expressed through the degree of embellishment and spatial generosity. All cottages, whether rural or embellished, are rooted in Punjab's vernacular traditions, and both rural and royal heritage, using the same authentic materials and cultural references. What distinguishes the embellished cottages is the richness of detail. They are more elaborately adorned with Punjab's traditional arts and crafts and offer a greater scale of spatial experience. This approach allows for a spectrum of dwelling experiences while maintaining a unified architectural language.

The embellished cottages feature expanded spatial programs such as Room + Seater Space + Dining Space + WC—while the more modest ones may include only Room + WC or Room + Seater Space + WC. Each variation reflects a different level of comfort and privacy, yet all remain deeply connected to the cultural ethos, material honesty, and spiritual intent of the sanctuary.By designing this range, we honor both inclusivity and tradition, offering spaces that cater to diverse needs without compromising the integrity of the architectural vision.

THE ARCHED BRIDGE

The arched bridge is positioned roughly halfway along the journey, serving as a memorable landscape marker. It also symbolizes a renewed moment of choice, whether to continue forward or to turn back, crossing the bridge to the opposite side and following the path exiting the sanctuary. Yet, even pausing at the center of the bridge can shift one's intention: watching the boats pass quietly beneath may inspire visitors to reconsider, encouraging them to continue the journey and see it through to completion.



Figure 103 A. 3D Render View of Arch Bridge
Source: By Author



Figure 103 B. Sketch of Arch Bridge from the opposite side of the above rendered view
Source: By Author

ELEMENTS OF AWE, WONDER & ILLUSION

Inspired by the impactful interplay of elements found in works like Subodh Gupta's and the artistic principles of juxtaposition and fusion, the sanctuary's landscape design seeks to evoke profound awe and wonder through carefully crafted illusions. The environment will integrate seemingly disparate elements in unexpected unions, fostering a surrealist irony where natural and invented forms merge to create a sense of intrigue and delight.

This intentional design will create moments of wonder that are akin to an overwhelming first impression, amplifying the experience of the surroundings and prompting a deeper engagement with the space. The illusionary aspects will encourage a fresh perspective, inviting contemplation and revealing the harmonious unity that can emerge from the blending of diverse elements, ultimately fostering a connection between the human spirit and the landscape.



Figure 104 A. Sculpture by Subodh Gupta - Using similar sculptures in my garden as elements of Illusion (against gravity), Aww & Wonder.

Source: https://www.gettyimages.ca/detail/news-photo/indian-artist-subodh-guptas-sculpture-ray-that-is-part-of-news-photo/462980235?adppopup=true, accessed 17th October



Figure 104 B. Elements of Aww & Wonder - 3D Dolphin Bridge 1894 Floor Wallpaper Murals Self-Adhesive Removable Waterproof floor Mat Print.

Source: https://www.etsy.com/ca/listing/861827639/3d-dolphin-bridge-1894-floor-wallpaper

SITE SECTIONS

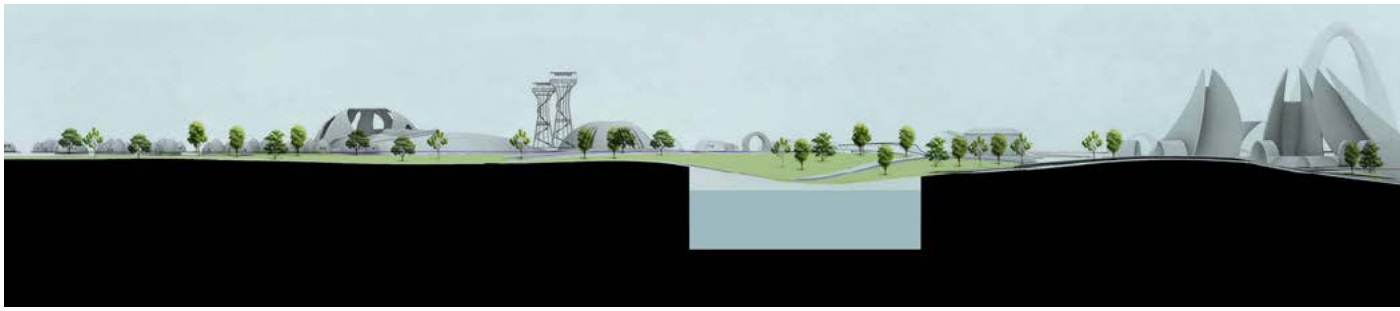


Figure 105 A. SECTION AA
Source; By Author

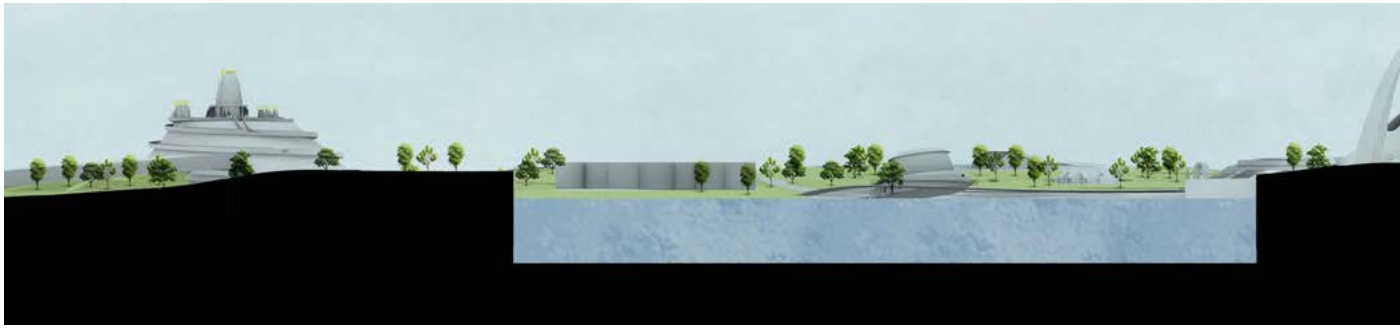


Figure 105 B. SECTION BB
Source; By Author



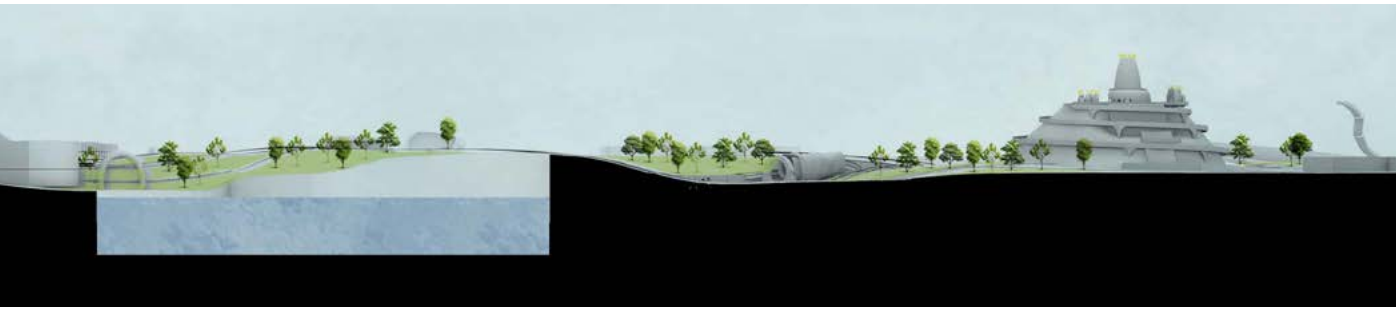
Figure 105 C. SECTION CC
Source; By Author

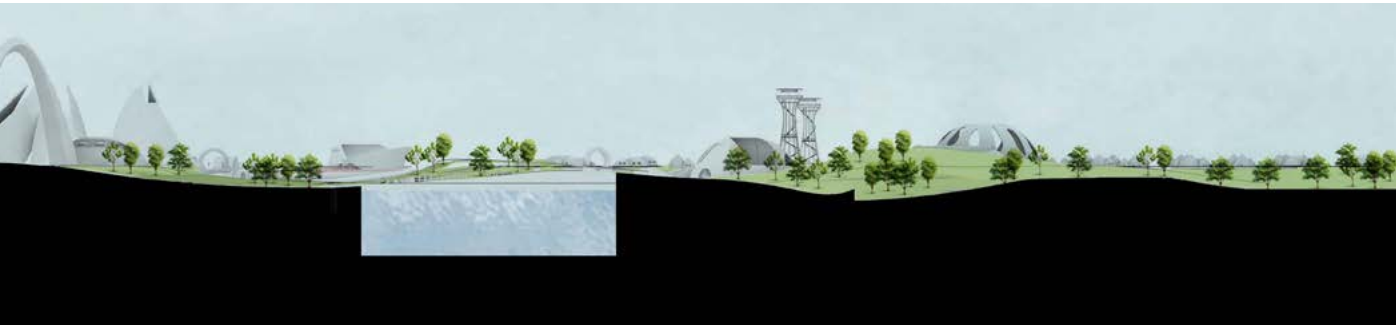


Figure 106 A. SECTION CUT AA
Source; By Author



Figure 106 B. SECTION CUT BB
Source; By Author







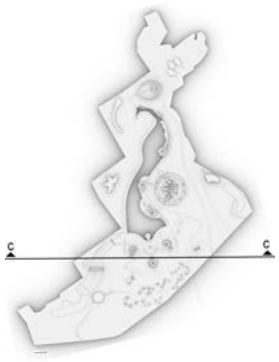


Figure 106 C. SECTION CUT CC
Source; By Author



Figure 107 A. Moodboard of local sustainable materials
Source: https://www.pavingdirect.com/media/catalog/product/g/r/grasspark-main.jpg

SUSTAINABLE MATERIALS

The combination of these five elements supports and strengthens each other to create durable construction materials. For example, water binds sand and mud, and when this mixture is fired, it transforms into solid clay bricks. Each element plays a role: earth provides the base, water enables mixing, fire hardens, air allows drying, and

INVESTIGATE MATERIALS USED IN PUBLIC AND THEIR SYMBOLIC SIGNIFICANCE



Rubble, an assortment of stone and earth, is a common building material in the 11th and 12th century domestic architecture.



Mud bricks also a common building material for walls in domestic and humble houses.



Timber used for wall framework in ancient houses and rubble houses.



Limestone used as a finishing material in monumental building construction.



Thatch is a roofing material typically made of straw or reeds, especially in tropical regions.



Terra cotta tiles were used as a roofing material in ancient construction.

Figure 107 B. Sustainable materials and their uses

space gives room for the process to occur. In my design proposal, incorporating local materials is fundamental to establishing an authentic connection between the spiritual retreat and its regional identity. Rooted in Punjabi heritage and guided by Gurbani's emphasis on harmony with nature, the architecture is envisioned as a living cultural landscape rather than an imposed structure. By prioritizing earth-based materials—such as adobe, mud plaster, lime-washed walls, jute screens, bamboo, local wood, straw and brick, the design draws inspiration from the vernacular traditions of Gati Harike, ensuring that the built environment resonates with its surroundings and reinforces cultural continuity.

This approach not only promotes sustainability and reduces environmental impact but also embodies truthfulness and integrity through the authentic use of indigenous materials. The architecture emerges organically from the terrain, fostering a sense of belonging and timelessness. In doing so, it enriches the contemplative journey for visitors, allowing them to experience spirituality as a process of reflection and connection with the elements of creation, rather than something imposed.



Figure 108. 3D Render showing the 3 Pavilions - Earth (Right), Water(Middle), & Fire(Left); Water Floating Pads Structure, Rafts, Boat dock and the landscape
Source: By Author





Figure 109. Site Plan Rendered View 1
Source: By Author



Figure 110. Site Plan Rendered View 2
Source: By Author







Figure 111 A. Site Plan Rendered View 3
Source: By Author

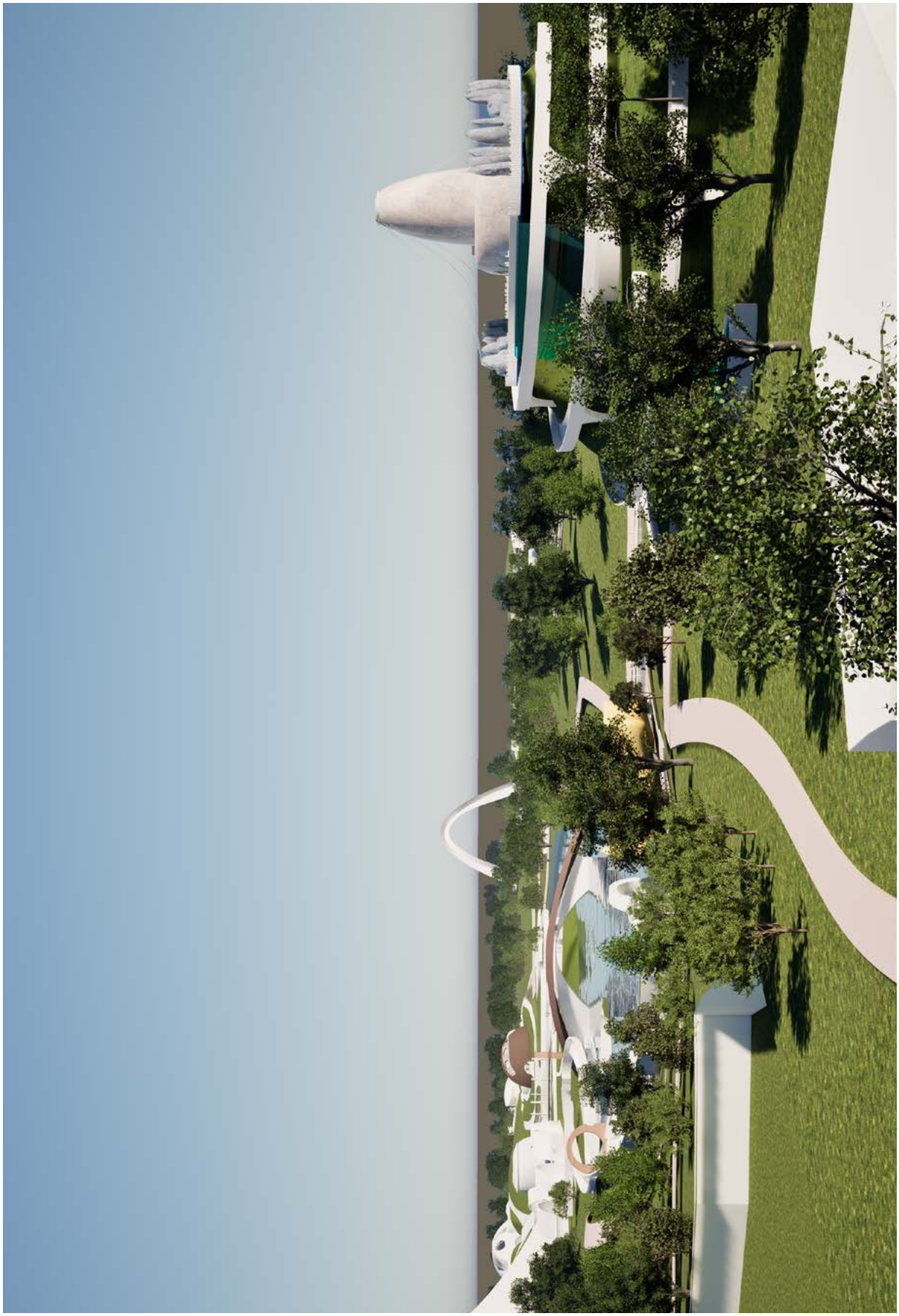


Figure 111 B. Site Plan Rendered View 4
Source: By Author



Figure 112 A. Site Plan Rendered View 5
Source: By Author



Figure 112 B. Site Plan Rendered View 6
Source: By Author

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CHAPTER 6

CONCLUSION, FINDINGS, & RECOMMENDATIONS

Architectural designs must focus on creating phenomenological experiences in architectural spaces that encourage people to adopt positive habits aligned with the teachings of their holy scriptures. In this regard, architecture would become a tool for practically implementing the divine wisdom of holy scriptures, transformation, and connection to the divine. Architecture, then, would not just be a shelter but a sanctuary, where the soul can rejuvenate to its divine purpose and where healing can begin with the development of a positive mindset. This transformation is only possible when we learn to master the mind **ਆਈ ਪੰਥੀ ਸਗਲ ਜਮਾਤੀ ਮਨਿ ਜੀਤੈ ਜਗੁ ਜੀਤੁ ॥**, recognizing that we are not our thoughts, but the awareness and consciousness that observes them.

Architectural design can create spaces that align with and stimulate the energy flow of the chakras through elements like form, light, color, sound, and spatial organization. By balancing the five natural elements in our environment, we can try to balance them inside our bodies, too.

The design strategy conceptualizes mapping chakra colors to wavelengths using a "Doppler shift" analogy, where the red chakra (representing materialistic) is "visible from far off" and the violet (representing divine) is "seen only up close," implying that higher spiritual states require proximity to be truly perceived. This aligns with the Gurbani aspect of viewing the divine through spiritual truth and not necessarily an image, as nature itself is a manifestation of God.

My design proposal thoughtfully maps the journey of consciousness through the chakras using a visual and conceptual analogy to VIBGYOR wavelengths. Just as red light has the longest wavelength and is visible from a distance, the root chakra, associated with red, represents material awareness and sits at the base of the human energy system, farthest from the Dasam Dwar (Tenth gate) or higher consciousness.

As the journey ascends through the chakras, the colors shift toward violet, which has the shortest wavelength and requires closeness to be perceived. This mirrors the crown chakra, associated with divine awareness, which lies closest to the tenth gate, the subtle portal to spiritual realization.

In my design proposal (ISHQ-E-SAT SANCTUARY – SPIRITUAL RETREAT, this progression is not just symbolic but strategically placed to reflect the inner ascent from gross physicality to refined spirituality. The use of a "Doppler shift" metaphor reinforces this idea: lower chakras resonate with broader, more material frequencies, while higher chakras vibrate at finer, subtler frequencies that demand spiritual proximity and inner stillness to be truly experienced.

This approach aligns beautifully with Gurbani, which teaches that the Divine is not perceived through external images but through spiritual truth and inner awakening. By integrating theoretical models and architectural elements, my design visually and conceptually guides the viewer through this transformative journey from red to violet, from instinct to insight, from separation to union.

6.1.1 Gurbani and Neuroscience

Meditation, Brain Waves, and Learning Absorption in the Light of Gurbani.

Neurological Basis of Inner Mastery **ਮਨ ਤੂੰ ਜੋਤਿ ਸਰੂਪੁ ਹੈ ਆਪਣਾ ਮੂਲੁ ਪਛਾਣ**[1]

The Gurbani principle of "Man jeete jag jeet" (conquer the mind, conquer the world) highlights the supremacy of inner control. Meditation serves as a powerful technique to

achieve this, fostering states of mental clarity, focus, and emotional regulation, which are directly reflected in specific brainwave patterns. The thesis explores how physical spaces can facilitate spiritual growth and self-discovery, aiming to create environments conducive to these meditative and transformative practices.

Meditation and Brainwave Modulation

Meditation has been shown to induce significant changes in brainwave activity, shifting the brain into states highly beneficial for learning and cognitive processing:

Alpha Waves (8–12 Hz): Relaxation and Focused Awareness

Meditation practices, including Zen, Yoga, and Transcendental Meditation, consistently show increased alpha brainwave activity.[2] Alpha waves are associated with a relaxed yet alert state, characterized by reduced sensory input processing and enhanced internal focus.[3]

This "alpha state of mind" is considered ideal for learning and memory retention.[4] Studies suggest that inducing an alpha state, even through methods like music, can enhance memory retention.[4]

Meditators demonstrate better regulation of attentional processes, with alpha desynchronization reflecting engaged attention.[3]

Theta Waves (4–8 Hz): Deep Relaxation, Learning, and Memory Consolidation

Increases in theta band activity are a common finding across various meditation practices, particularly in the frontal midline regions of the brain.[3]

Theta waves are strongly associated with learning processes and memory consolidation. The increased theta power observed in meditators may explain improvements in memory and attention.[3]

Frontal midline theta activity is believed to play a role in maintaining the meditative state.[5]

Mindfulness meditation training has been specifically linked to increases in theta oscillations during episodic memory retrieval, suggesting a direct benefit for memory function.[6] Even novice meditators can experience significant shifts into coherent theta brainwave patterns.[7]

Intensive meditation training in individuals with attention deficit disorder has shown enhanced brain function by increasing the phase consistency of theta-band oscillatory neural responses, leading to reduced response time variability.[8]

Gamma Waves (30–100 Hz): Higher-Order Processing, Insight, and Consciousness

Long-term meditators are known to self-induce sustained high-amplitude gamma-band oscillations and phase-synchrony during meditation.[9]

These gamma oscillations are hypothesized to support complex cognitive functions, perception, and mnemonic processes (memory formation).[10]

Research indicates that meditation is not merely a passive relaxation state but involves active states of cognitive restructuring and learning, which are associated with synchronized gamma oscillations.[11]

Increased gamma brainwave amplitude has been observed across various meditation traditions, correlating positively with the

meditator's experience.[12] This suggests that sustained meditation practice can lead to a baseline elevation of gamma activity, even in a resting state.[8]

Beta Waves (13–30 Hz): Reduced Mental Clutter

While beta waves are associated with active, alert states and high cognitive activity, excessive beta can indicate stress and overthinking.[4]

Intensive meditation training has been shown to lead to longitudinal reductions in resting-state EEG beta band power, suggesting a calmer, less cluttered mental state that is more receptive to learning.[13]

Enhancing Learning Absorption through Meditation

The intentional modulation of brainwave activity through meditation directly translates into enhanced learning absorption and cognitive benefits:

1. Optimized Brain State for Learning: By promoting alpha and theta states, meditation creates an ideal mental environment for receiving and processing new information. This state of relaxed alertness and deep focus allows for better encoding of memories and understanding of complex concepts.[4]
2. Improved Attention and Focus: Meditation training strengthens the capacity to sustain attention over extended periods.[14] This enhanced attentional expertise, reflected in regulated brainwave patterns, is crucial for deep learning and avoiding distractions.
3. Enhanced Memory Consolidation: The increased theta and gamma activity during and after meditation supports memory consolidation and retrieval.
4. Neuroplasticity and Brain Changes: Mindfulness meditation has been shown to increase regional brain gray matter density, indicating structural changes in the brain that support improved cognitive functions.[15] Meditation effectively "specializes brain/mind functions" by leveraging neural plasticity.[11]
5. Reduced Stress and Emotional Regulation: Spiritual practices, including meditation, are effective coping mechanisms that reduce stress, improve emotional regulation, and enhance mental clarity.[16] A calm and balanced mind is far more receptive to learning than a stressed or anxious one.

In summary, the wisdom of "Man jeete jag jeet" finds strong scientific validation in the neurophysiological effects of meditation. By training the mind, individuals learn to consciously shift their brainwave patterns into optimal states for focus, relaxation, and cognitive restructuring. This, in turn, directly enhances their ability to absorb, process, and retain new knowledge, fostering a deeper, more profound learning experience that can lead to spiritual awakening and inner transformation. Your thesis's architectural approach, by designing spaces that encourage these meditative practices, inherently supports this neurocognitive pathway to enhanced learning and self-discovery.

6.1.2 Gurbani and Psychology

The Gurbani verse **ਆਈ ਪੰਥੀ ਸਗਲ ਜਮਾਤੀ ਮਨਿ ਜੀਤੈ ਜਗੁ ਜੀਤੁ ॥**"Man jeete jag jeet" ("conquer the mind, conquer the world")[17] through the lens of psychology and my thesis research highlights a profound intersection between spiritual wisdom and modern psychological understanding. This verse is central to the concept of inner mastery, directly impacting well-being, self-esteem, and the very design of environments that foster authentic living.

The Gurbani verse "Man jeete jag jeet" encapsulates the essence of spiritual and psychological control that true victory and dominion are achieved not by external conquest, but by mastering one's own mind. The mind, often described as wandering, requires discipline and spiritual divine wisdom to be brought under control.[18]

Gurbani provides explicit instructions for this journey, guiding individuals through wisdom, attention, disciplined & honest living, and humility to attain higher consciousness.[19] This journey of internal transformation shifts one from an ego-centric view to a realization of universal oneness, fostering a state of exaltation and a quickening of moral sense that transcends ordinary perception. The Gurbani also teaches that the entire Gurbani is a beautiful journey of spiritual awakening and transformation through living truthfully and in oneness with nature and humanity leading to inner transformation that leads to union with the divine, ultimate truth, or a state of total consciousness, eternal peace, and bliss.

Contemporary psychological science increasingly validates the benefits of spiritual practices, echoing the wisdom of Gurbani. Research indicates that spiritual beliefs and practices are potent coping mechanisms against stress and adversity, offering a framework to understand life's challenges and reducing their psychological impact.[20]

Spiritual practices like meditation and mindfulness, rooted in various traditions, are shown to reduce stress, improve emotional regulation, and boost mental clarity, fostering inner peace and balance.[21] This ability to achieve inner peace and balance further aids individuals in navigating life's complexities with greater resilience and clarity.

Spiritual beliefs often provide a broader perspective, emphasizing meaning and purpose beyond material success, which serves as a powerful motivator for psychological resilience.[22] The journey of spirituality and transformation is about awakening to your true self and recognizing that you are a being here to realize your true purpose. **ਭਈ ਪਰਾਪਤਿ ਮਾਨੁਖ ਦੇਹੁਰੀਆ ॥ ਗੋਬਿੰਦ ਮਿਲਣ ਕੀ ਇਹ ਤੇਰੀ ਬਰੀਆ ॥**[23] This perspective shift cultivates compassion and understanding, enabling individuals to respond to situations rather than react to or retaliate against them. This transformation aligns you with your true essence, leading to a life filled with purpose and gratitude.[24]

Psychology recognizes spirituality as a significant motivational element in human life, even considering it a distinct dimension of personality.[25] In practical life, spirituality is linked to individual freedom, independence, self-esteem, social responsibility, and characteristics such as facing fears, insight, forgiveness, love, compassion, and awareness. Abraham Maslow, a key figure in humanistic psychology, considered spirituality an essential element for transcending conventional consciousness to "being values" like truth, beauty, and love.[26]

The thesis research, particularly the creation of ISHQ-E-SAT, directly translates the principle of "Man jeete jag jeet" into an architectural experience. The sanctuary is conceived as a physical manifestation of this inner journey, designed to facilitate spiritual awakening through transformative inner work and a conducive environment.

Gurbani talks about aligning the energy to the higher self (the creator), by transforming yourself through inner work (meditation) and changing your mindset. This highlights that spiritual practice is not

merely ritualistic but a scientific process of self-alignment. Spiritually grounded architecture, as expressed through the meditative spaces and elemental balance in my design proposal, becomes a transformative instrument for awakening, inner harmony, and sacred connection.

The research posits that architecture plays an even more essential role in creating feelings and emotions through spatial design, which can affect the human mind tremendously. These emotional shifts are considered "transformative, enriching the brain and consciousness and bringing individuals closer to their divine self.

The concept of "being" is intricately connected to neuroscience, transformation, and manifestation.[27] Profound emotional experiences lead to chemical changes in the brain, creating a sensory transformation that enriches brain functioning and consciousness. These transformative moments bring individuals closer to their authentic or divine self, shedding ego and other barriers. This process results in a fundamental paradigm shift, leading to elevated states of being and an understanding of one's true essence, ultimately emphasizing the importance of blending scientific principles with mystical experiences to understand and manifest one's authentic self. Profound emotional and spiritual experiences are associated with demonstrable transformations in brain structure and function. These changes can be investigated through various neurophysiological studies, including those examining neurotransmitter systems, hormone function, and brain imaging.[28] For instance, emotions are known to involve specific neural structures, circuits, and neurotransmitters, as detailed in neurobiology research.[29]

Therefore, the sanctuary's architecture is a tool for cultivating the psychological states necessary for mind mastery, such as stillness, reflection, and sensory awareness. Thoughtfully designed architectural spaces, combined with intentional activity programs, can evoke and nurture a wide range of emotions and inner experiences and help reshape habits and attitudes.

The research hypothesizes that spiritual evolvement occurs through discovering the original self, an unfolding that takes place through transformative experiences encountered in diverse architectural spaces and activity programs. This supports the idea that architecture can foster transformation through phenomenological experiences, leading to shifts in mindset. The emphasis on meditation, gratitude, and consistent daily practice, guided by a mentor, is crucial for personal transformation, transcending ego, and developing wisdom and higher consciousness. Ultimately, architecture in this context is "not just shelter but a sanctuary, where the soul can rejuvenate to its divine purpose."

In essence, the thesis bridges the timeless wisdom of Gurbani, as encapsulated by "Man jeete jag jeet," with modern psychological insights. It proposes an architectural solution where the built environment actively supports the journey of inner transformation, enabling individuals to master their minds and, by extension, profoundly and meaningfully engage with the world to achieve spiritual awakening.

6.1.3 Gurbani and Philosophy

Martin Heidegger's philosophy on "being," especially his concepts of Dasein and authentic dwelling, strengthens the philosophical underpinnings of ISHQ-E-SAT. Inspired by the teachings of Sri Guru Granth Sahib, this sanctuary is built on the understanding that happiness is not a destination, but a

fundamental way of being. True happiness, as Gurbani reminds us, is the key to spiritual awakening. It arises not from escaping life, but from engaging with it fully—with remembrance, integrity, humility, and love.[30]

In this spirit, the architecture of ISHQ-E-SAT seeks to transform everyday experience into sacred encounter, inviting us to an authentic mode of being within the world. This approach deeply resonates with Martin Heidegger's philosophy, which critiques treating buildings as "mere shelters or passive utilities" and instead advocates for spaces that foster "attentive, meaningful living." Through this lens, ISHQ-E-SAT is designed to guide the inhabitant, or Dasein, towards a deeper engagement with their own existence. It is an environment where one can genuinely dwell, in Heidegger's sense to reside authentically and thoughtfully, allowing the true meaning of being to unfold.

Heidegger's concept of the fourfold: earth, sky, mortals, and divinities, is subtly mediated within ISHQ-E-SAT. The design fosters a direct connection between the natural world and human action, reflecting an interrelationship that is far from a metaphysical decoration, but rather a profound interplay that a building can encapsulate. The architecture does not impose itself upon the landscape but rather emerges seamlessly from it, blending into the surrounding environment and reflecting what Heidegger calls authentic dwelling.

Each space within ISHQ-E-SAT is meticulously crafted to evoke stillness, presence, and emotional resonance. The architecture instead cultivates a phenomenological sensitivity that fosters genuine human connection. This is achieved by creating spaces that are attuned to our emotions and senses, designed not merely to provide shelter, but to resonate with lived experience, evoke moods, preserve memories, and sustain rituals.

The sanctuary invites visitors to move through space as they would through a prayer: slowly, intentionally, and with open hearts. It is a place where love is not just felt, but embodied in the textures, light, and rhythms of the built environment, fostering a profound sense of reciprocal relationship between the individual and the sacred space.

6.1.4 Gurbani and Physics

The research bridges ancient spiritual wisdom, particularly Gurbani, with contemporary scientific understanding, focusing on the phenomenology of chakras and the physics of electromagnetic fields.[31] For the realization of universal oneness and elevated consciousness through activated Sat Sarovar (Seven Energy Centers, aka Chakras), Gurbani emphasizes cultivating a positive mindset and divine virtues as a pathway to inner transformation, leading to this spiritual practice.[32]

ਬੈਰਾਗੀ ਰਾਮਹਿ ਗਾਵਉਗੋ ॥ (੯੭੩–੧, ਰਾਮਕਲੀ, ਭਗਤ ਨਾਮਦੇਵ ਜੀ)
bairaagee raameh gaav-ogo.
Becoming detached, I sing the Lord's Praises.

ਸਬਦਿ ਅਤੀਤ ਅਨਾਹਦਿ ਰਾਤਾ ਆਕੁਲ ਕੈ ਘਰਿ ਜਾਉਗੋ ॥੧॥ ਰਹਾਉ ॥ (੯੭੩–੧, ਰਾਮਕਲੀ, ਭਗਤ ਨਾਮਦੇਵ ਜੀ)
sabad ateet anaahad raataa aakul kai ghar jaa-ugo. ||1|| rahaa-o.
Imbued with the unattached, unstruck Word of the Shabad, I shall go to the home of the Lord, who has no ancestors. ||1||Pause||

ਇੜਾ ਪਿੰਗੁਲਾ ਅਉਰੁ ਸੁਖਮਨਾ ਪਉਨੈ ਬੰਧਿ ਰਹਾਉਗੋ ॥ (੯੭੩–੨, ਰਾਮਕਲੀ, ਭਗਤ ਨਾਮਦੇਵ ਜੀ)

irhaa pingulaa a-or sukhmanaa pa-unai banDh rahaa-ugo.
Then, I shall no longer control the breath through the energy channels of the Ida, Pingala and Shushmanaa.

ਚੰਦੁ ਸੂਰਜੁ ਦੁਇ ਸਮ ਕਰਿ ਰਾਖਉ ਬ੍ਰਹਮ ਜੋਤਿ ਮਿਲਿ ਜਾਉਗੋ ॥੨॥ (੯੭੩–੩, ਰਾਮਕਲੀ, ਭਗਤ ਨਾਮਦੇਵ ਜੀ)
chand sooraj du-ay sam kar raakha-o barahm jot mil jaa-ugo. ||2||
I look upon both the moon and the sun as the same, and I shall merge in the Light of God. ||2||

ਮਨ ਤੂੰ ਜੋਤਿ ਸਰੂਪੁ ਹੈ ਆਪਣਾ ਮੂਲੁ ਪਛਾਣੁ ॥ (੪੪੧–੩, ਆਸਾ, ਮਃ ੩)
man tooN jot saroop hai aapnaa mool pachhaan.
O my mind, you are the embodiment of the Divine Light - recognize your own origin.

ਮਨ ਹਰਿ ਜੀ ਤੇਰੈ ਨਾਲਿ ਹੈ ਗੁਰਮਤੀ ਰੰਗੁ ਮਾਣੁ ॥ (੪੪੧–੪, ਆਸਾ, ਮਃ ੩)
man har jee tayrai naal hai gurmatee rang maan.
O my mind, the Dear Lord is with you; through the Guru's Teachings, enjoy His Love.

This spiritual practice brings our energy alignment with the concept of higher vibrational energy, fostering emotional stability, synchronicities, and a deeper connection with the universe.

Through phenomenological inquiry, the research explores how architectural spaces can foster experiences that encourage individuals to adopt positive habits aligned with spiritual teachings.[33] By designing spaces that promote gratitude, faith, and truthfulness, individuals can eliminate vices, cultivate divine virtues, and achieve inner peace and balance. This transformation prepares the inner self for spiritual awakening and higher consciousness.

The work also connects spirituality with physics, particularly quantum physics, which suggests that thoughts and emotions are forms of energy.[34] Positive emotions generate coherent electromagnetic fields, which interact with the quantum field to shape reality.[35] Chakras, as energy centers, mediate the flow of life force energy, influencing physical, mental, emotional, and spiritual well-being.[36] Staying in a state of gratitude, especially toward God, is highlighted as an effective self-transcendent emotion that enhances well-being, reduces stress, and generates coherent electromagnetic patterns.[37] These patterns may broadcast higher frequencies, aligning with harmonious experiences and manifesting Gurbani's teachings of living in oneness with the divine.[38]

6.1.5 Gurbani and Ayurveda

The research highlights the profound connection between Ayurveda and Gurbani, emphasizing the shared recognition of the human body composed of five fundamental elements: earth, water, fire, air, and space.[39] Both systems stress the importance of maintaining a harmonious balance of these elements to achieve physical health, mental clarity, and spiritual well-being.[40] Ayurveda, through personalized practices such as diet, lifestyle adjustments, herbal remedies, and alignment with natural rhythms, seeks to restore internal balance and preserve the body as a divine temple.[41] Gurbani, on the other hand underscores the spiritual significance of these elements, reflecting their role in fostering a deeper connection with the divine and promoting holistic wellness.[42]

ਪੰਚ ਤਤੁ ਕਰਿ ਤੁਧੁ ਸ੍ਰਿਸਟਿ ਸਭ ਸਾਜੀ ਕੋਈ ਛੇਵਾ ਕਰਿਉ ਜੇ ਕਿਛੁ ਕੀਤਾ ਹੋਵੈ ॥ (੭੩੬–੬, ਸੂਹੀ, ਮਃ ੪)
panch tat kar tuDh sarisat sabh saajee

ko-ee chhayvaa kari-o jay kichh keetaa hovai.
You created the entire Universe out of the five elements; if anyone can create a sixth, let him.

Furthermore, Ayurveda aligns with the concept of circadian rhythms,[43] which govern daily physiological and behavioral patterns, such as sleep-wake cycles and hormonal secretions.[44] Disruptions to these rhythms, such as those caused by modern lifestyles, can lead to physical and psychological imbalances.[45] By harmonizing internal biological processes with external natural cycles, Ayurvedic practices inherently support the balance of the five elements, resonating with Gurbani's teachings on living in harmony with nature and recognizing the body as a sacred vessel.[46]

ਪੰਚ ਤਤੁ ਕਾ ਰਚਨੁ ਰਚਾਨਾ ॥ (੧੦੭੩–੧, ਮਾਰੂ, ਮਃ ੫)
panch tat kaa rachan rachaanaa.
The creation was created from the five elements

6.1.6 The Auditory studies of Chakra and Gurbani

The verses mentioned on page 142 and 143, speak to the continuous nature of divine vibration, something a pavilion could honor through design that allows ambient resonance to persist and evolve throughout daily cycles.This reinforces that the pavilion's acoustic environment should work because the divine frequency already exists within each person, the external sound merely awakens what is already present.

I have incorporated research on chakra frequencies and selected Gurbani lines that resonate with those vibrational qualities. Including this material gives the thesis a sense of completeness, ensuring that no essential aspect or dimension of the chakric framework is overlooked. While a full auditory study remains beyond the scope of this submission, however, the connections I have drawn provide a meaningful foundation for future exploration. I recognize that this area holds immense potential for future development.

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Sutlej–Beas Rivers Confluence

T
Tactile Engagement (Earth Pavilion)
Terra Cotta Tiles
Theta Brainwaves (4–8 Hz)
Throat Chakra (Space Pavilion)
Third Eye Chakra (Ajna)
Transcendence (Gurbani & Psychology)
Transformation (Architecture)
Truthful Living (Gurbani)

U
Unity (MPO)
Universal Oneness (Gurbani)
Unstruck Sound (Anhad Naad)

V
Vibgyor Chakra Mapping
Vibrational Healing
Virtues (Gurbani)
Visual Symbolism (Chakras, Geometry)
Void (Space Pavilion)

W
Water Element (Ayurveda)
Water Pavilion (Sacral Chakra)
Wind (Air Pavilion)