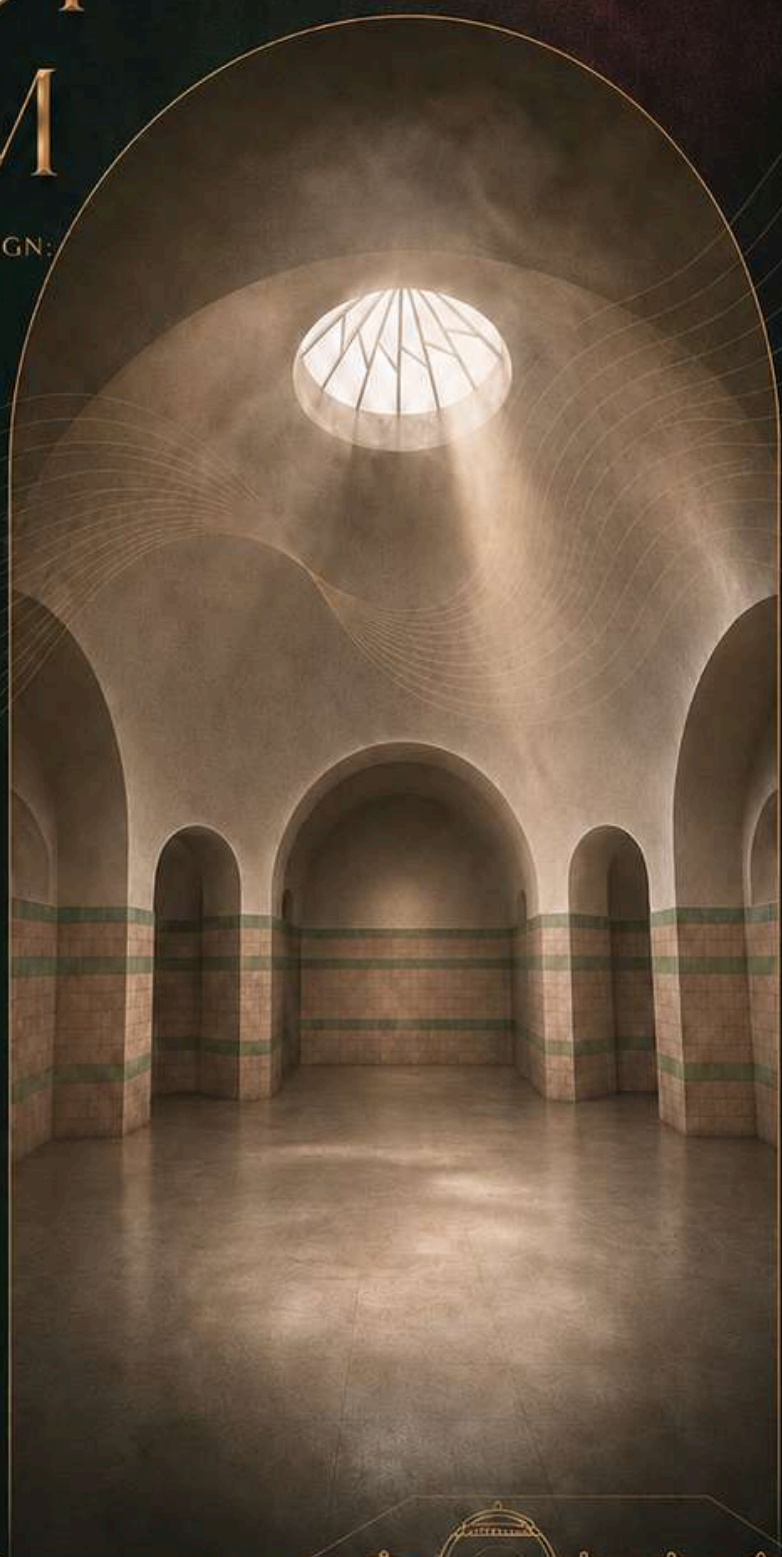


VEIL OF STEAM

REIMAGINING HISTORY THROUGH DESIGN:
THE ADAPTIVE REUSE OF THE
HAJI BATHHOUSE IN RASHT, IRAN
AS A CONTEMPORARY SPA





**Politecnico
di Torino**

Thesis Title:

Reimagining History Through Design: The Adaptive
Reuse of the Haji Bathhouse in Rasht, Iran as a
Contemporary Spa

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A B S T R A C T

This thesis focuses on the adaptive reuse of the Haji Mohammad Jafar Bathhouse in Rasht, Iran, which is a structure from the Qajar period where its use has become less relevant due to changes in the lifestyle of today. Even though it underwent restoration, it still has not been activated.

The project explores the possibilities of re-integration of the historic bathhouses by applying the same principles of space, environment and sensory experience to new uses. Through studying the type of bathhouse, Qajar period architecture and bathing rituals, key characteristics such as hierarchy of spaces, temperature changes and significance of water are determined as the essential design elements.

Through the application of the museographic approach, this thesis proposes a conservation paradigm that shifts focus from the visual aspect to experience. Through the transformation of the Haji Bathhouse to a modern spa facility, the original intention behind the design is renewed, allowing for experiential discovery of spatiality, temperature variations, and water properties. As such, instead of replicating history, the design of the project seeks to understand the underlying principles behind historic designs.

At a more general level, this thesis presents the ability of adaptive reuse as a tool for bringing together heritage conservation and contemporary design. Historic architecture can still be relevant if its logic is translated in a contemporary language. The result of this translation is a continuous reinterpretation of memory through architectural language.

In summary, the thesis proposes a new identity for the Haji Bathhouse as a live heritage site with an interface of heritage conservation, design, and human experience. Through restoring the link between space, body and water, the design project becomes an example of how to engage with the past.

01

GENERAL OVERVIEW OF THE RESEARCH

An Opening Frame
Research Gaps & Project Significance
Research & Project Background
Research & Project Objectives
Research Approach & Design Vision



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AS A CONTEMPORARY SPA

Haji Bathhouse

AN OPENING FRAME

A Continues Flow From Heritage to Wellness

Built during the late Qajar era, the Haji Mohammad Jafar Bathhouse (Haji Bathhouse) is one of the existing bathhouses located in the historic urban context of the Sāghari Sāzan Bazaar region of Rasht, Gilan Province.

As one of the examples of traditional Iranian bathhouse architecture in northern Iran, the building is of significant architectural and cultural value due to its Qajar-style tiles decorating the facade with mythological and botanical motifs characteristic for the late Qajar period (Jahani, 2019; Ministry of Roads and Urban Development of Iran, 2019).

Historically, the bathhouse was part of the neighborhood and had more roles than merely being a hygiene structure, serving as a place for socialization, cultural activity, and ritual performance (Sarmiento & Kazemi, 2012).

The plan of the Haji Bathhouse is organized in the same way as the plans of Iranian bathhouses are typically organized – it includes an entrance, hashti (entry buffer space), sarbineh (changing hall), miandar (temperature regulation and privacy zone), garmkhaneh (hot bathing hall), and khazineh (hot water reservoir), along with auxiliary water spaces (Fakhari Tehrani, 1968).

The gradual process of transition from one spatial zone to another symbolizes the preparation of the body both physically and psychologically, which means that the act of bathing had to be treated culturally and sensually, with considerations for temperature, humidity, light, and motion (Ardalan & Bakhtiar, 1974).

Within this broader cultural and architectural framework, the Haji Bathhouse may be perceived as an instance of universal Iranian bathhouses' ideas and practices of organizing social relations through spatial hierarchy and sensorial sequence of experience. With the development of urban life and introduction of private bathrooms, the initial role of many old bathhouses diminished gradually (Sarmiento & Kazemi, 2012).

In the case of the Haji Bathhouse, the process of gradual deterioration eventually resulted in the destruction of the sarbineh in the middle of the 2000s due to the bad weather conditions (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).

The restoration and conservation of the monument were performed during 2007-2012 years by the Cultural Heritage Department of Gilan Province (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).

However, despite all these measures, the building has been left inactive and isolated from modern urban life.



Figure 1- Exterior view of Haji Historic Bath in Rasht. Source: Photograph by M. S. Jalili (2016), Wikimedia Commons. Licensed under CC BY-SA 4.0.



Figure 2- Exterior view of Haji Historic Bath in Rasht. Source: Google (n.d.)

Nowadays, the bathhouse stands vacant because of improper functional adaptation and the disconnection from the present-day society requirements (Sarmiento & Kazemi, 2012). Absence of a properly elaborated strategy for an adaptive reuse poses the threat of a repeated degradation of the bathhouse, since restored but not utilized buildings tend to deteriorate easily (Plevoets & Van Cleempoel, 2011). For this reason, redesigning the structure and its new purposeful adaptation in accordance with the current societal needs are crucial.

Water is the principal element, which has always defined the architectural form and social meanings of traditional bathhouses (Fakhari Tehrani, 1968). Water in the architecture of Iran is associated with such notions as purification, regeneration and collective experience (Ardalan & Bakhtiar, 1974).

For this reason, the present research focuses on the connection between water, spatial forms and human body in traditional bathhouses. The analysis of different ways of water usage and symbolic and functional meanings of water will be conducted. The possibility of reinterpretation of the bathing rites and their appropriateness for modern users will be studied.



Figure 3- Role of water in traditional bathhouses. Source: Iransafar Tours (2021)

This research uses the Haji Bathhouse as a case study in exploring how historic bathhouses might be revived using museography as an approach. Instead of turning this building into a conventional museum that exhibits objects in fixed installations, the project explores a living heritage approach where water, the body, and memory are revitalized through active use. By combining contemporary spa functions with subtle museographic interventions, the bathhouse is reimagined as an experiential environment where architectural heritage is preserved, while cultural memory is reactivated through the embodied act of bathing.

— Research Gaps & Project Significance

Public baths have been important civic structures within different societies throughout history in that they have provided a physical structure through which social activity and culture are enacted. In Roman society, baths have gone beyond their simple purpose of providing hygienic services by acting as places where economic, political, physical, and social activity took place, placing baths at the heart of urban activities.

The multi-functionality of the baths ensured its position as the main mediator between the body of the individual and the urban community as a whole (Potter, 2004).

In the same way, baths in the Islamic cities had social and religious importance and often were located close to mosques for performing ritual washing before prayer (Fadli & Sibli, 2008).

Within this context, the hammam functioned as an integral component of daily routines, reinforcing social cohesion, shared cultural values, and collective memory. Beginning in the nineteenth century, industrialization and the expansion of modern sanitation systems gradually transformed bathing practices, fundamentally altering the social role of public bathhouses. In the United States,

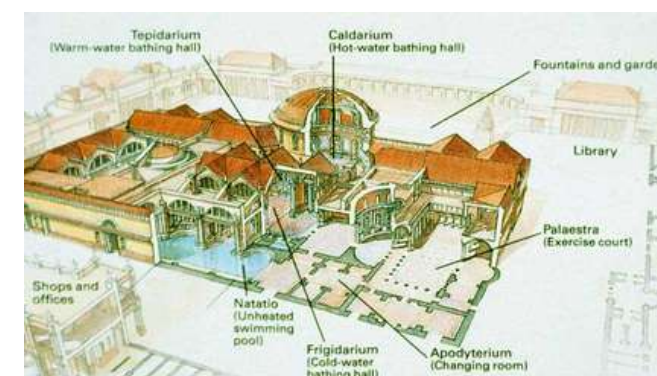


Figure 4- Roman Bath layout. Source: Iransafar Tours (2021)

public bathhouses became widespread as part of hygiene reforms in densely populated cities, particularly within working-class and immigrant neighborhoods, where they were promoted as instruments of public health improvement (Williams, 1991). In Britain, the development of municipal baths was closely tied to public health legislation; however, these facilities gradually declined as private bathrooms and indoor plumbing became standard features of domestic life (UK Parliament, 2009). This global shift toward individualized, domestic bathing practices diminished the communal, ritual, and social dimensions historically associated with bathhouses, reconfiguring them primarily as hygienic infrastructures and leaving many such spaces socially and functionally obsolete.

As a consequence, many traditional bathhouses across different regions have lost their relevance within contemporary urban systems, particularly when their original social functions are no longer compatible with present-day lifestyles (Plevoets & Van Cleempoel, 2011). While some structures have been preserved in their material form, their cultural attributes like rituals, memories, and embodied space have often been overlooked. There is a lack of academic interest on the issue of adaptive reuse of bathhouses, showing the ongoing gap between architectural conservation and cultural regeneration, especially from the perspective of the experience and living heritage (Fadli & Sibli, 2008).

The need for such research stems from filling this gap. The historic bathhouses are not just examples of architectural monuments but rather showcase the principles of environmental sensitivity, social sustainability, and integrated urban design. Conservation efforts should go beyond mere restoration into those that are able to revitalize both tangible and intangible heritage.

In contextualizing the Haji Bathhouse within an extensive historical and international context, the research will address issues concerning the topics of adaptive reuse, living heritage, and experiential preservation. The study will introduce a design-oriented approach for preserving the form and reconstituting meaning of architecture through spatial interaction.

— Research & Project Background

The study is an approach towards a contextual and design-based research on the Haji Bathhouse in Rasht. The study is conducted in a series of studies related to the geographical location and urban context of the building, its period, architectural typology of bathhouses in Iran, physical state of the building, and relevant precedents of the project.

The four interrelated topics are the following: (1) the geographical and urban context of Rasht; (2) the architecture and ornamental culture of the Qajar period; (3) the typology of traditional Iranian bathhouses with a detailed analysis of the Haji Bathhouse; and (4) precedent study and its influence on design.

First Topic: The Geographical and Urban Context of Rasht

This topic focuses on the geographical, climatic, historical, and urban Context of Rasht, which is the background for understanding the Haji Bathhouse. The building cannot be understood as an isolated architectural object, since its construction, materials used, social role, and present condition are directly related to the evolution of the city and the environmental characteristics of Gilan Province.

Such an approach provides an opportunity to develop an intervention based on the climatic, architectural, and urban character of Rasht, and not on some design that will contradict the surrounding environment.

Second Area: Qajar Architecture and Decorative Culture

In the second topic, Iranian architecture of the Qajar era will be discussed, considering that the Haji Bathhouse was constructed at the end of this period. Therefore, it is necessary to have a good knowledge about the architecture and art culture of this period in order to understand the historical identity of the building and the main original characteristics.

Such research has direct implications to the Haji Bathhouse, which has examples of tile decoration on its main facade and interior. Research of the Qajar architecture and decoration will allow making decisions on conservation measures, choice of materials and restoration methods.

Third Area: Iranian Bathhouse Typology and the Haji Bathhouse

The third part discusses the history, social functions, organization, performances, and decorations of the traditional Iranian bathhouses. The study of the typology of the bathhouse provides a background for more precise discussion of the Haji Bathhouse. The building is studied in terms of its historical development, location, entrances, dimensions, circulation, spatial hierarchy, materials, roof structure, lighting, tilework, and remaining architectural components.

The condition of the building is analyzed in relation to damaged elements, changes made to the building, previous restoration work, inaccessible areas of the building, and partial demolition. The analysis allows distinguishing between the historic architectural elements and those elements which have been changed or lost during the life of the building.

Therefore, the documentation goes far beyond the description of the building. It helps to identify the most important architectural, cultural, material, and spatial elements of the building and those which can be adapted for future interventions. Thus, the existing building becomes the main basis for the proposed design intervention.

Fourth Area: Case Studies and Design Implications

The fourth part of the study examines chosen Iranian and international precedents related to specific architectural issues raised by the project. Such examples are not considered as templates of the design, but as reference sources that facilitate the transformation of the research into design principles.

Historical Iranian precedent such as the Ali Gholi Agha Bathhouse serves as an example of the traditional hierarchy of spaces, activities, transitions, decoration and bathing process. The design of the space illustrates the way in which hashti, sarbineh, miyandar, garmkhaneh and khazineh operated together in one system.

Contemporary Therme Vals is a source of ideas for the creation of the bathing environment through mass, materiality, enclosure, control of light, temperature and movements. Its spatial composition demonstrates the possibility to create spaces for exploration, pause, social interaction and sensory experience using circulation in a way that does not involve imitating of historical architecture (Chipperfield, 1996; Zumthor, 2006).

Dipòsit de les Aigües is an example of an intervention in a monumental historic structure. Rehabilitation of the structure demonstrates the introduction of a new function without losing the spatial clarity of the structure. Its use of roof-level water, skylights, reflections and daylight provides useful lessons in the creation of an atmospheric relationship between roof and interior.

Together, these case studies inform about decision-making in regards to spatial sequence, circulation, materiality, daylight, environmental transition, relationship between historic and new buildings, and sensory aspects of the proposed spa.

Translation of Research into Design

The last stage of the research results in translation of these contextual, historical, typological, and precedent-based ideas into an architectural proposal for the Haji Bathhouse. After the documentation and analysis of its current state, historic parts of the structure will be preserved and used, while contemporary addition to the structure will be added to accommodate the destroyed and vacant sections of the site.

The historic part of the building will be left with its original spatial identity and architectural elements. Necessary functions will be inserted into the historic structure carefully without compromising the legibility of the structure. Contemporary extension will include complementary functions of spa and wellness facility that cannot be reasonably located in the historic part of the building. While being contemporary in appearance, the addition makes use of spatial principles of traditional bathhouse architecture – enclosure, transition, control of light, material consistency, and relationship between the body and environment.

The project thus avoids creating a reproduction of Qajar architecture through historical imitation. Rather, it preserves the original architectural character and translates its spatial and sensory principles into contemporary architectural language. Distinction between the historic building and the contemporary extension remains clear, while both are linked through circulation, materiality, atmosphere and programs.

Museographic approach is employed in the intervention. Rather than turning Haji Bathhouse into a standard museum with exhibits, it conveys the history of the place through the experience of the building. Architectural elements, tile-work, sequences, materials,

light, temperature, sound, and movement become the tools of interpreting the heritage of the bathhouse. People learn the heritage of the bathhouse through their experiences inside it.

**“Your town is only a perfect town when there is
a hammam in it”**

early Islamic historian Abu Sir



Figure 5- Bathhouse scene by Kamal ud-Din Behzad, 1495.
Source: Along the Silk Road (2025)

— Research & Project Objectives

This research is guided by three main goals:

- 1. To explore the context, history, architecture, and decoration of the Haji Bathhouse** based on the urban and climatic context of Rasht, the architectural tradition of the Qajar period, the typology of traditional Iranian bathhouses, and the present condition of the building. This goal should help reveal the heritage value, space quality, existing constraints, and possibilities for conservation or transformation.
- 2. To define the principles of traditional bathing architecture** based on the study of Iranian bathhouses and selected contemporary examples. Special attention will be paid to such issues as spatial hierarchy, transition, privacy, circulation, materiality, light, temperature, humidity, water, and body perception; the principles should be translated into the language of a contemporary spa environment.
- 3. To develop an adaptive reuse strategy for the Haji Bathhouse, which would provide for preservation of the historic part of the building along with a new contemporary addition.** It is hoped that the proposal will allow to revive the structure as a spa, preserving the architectural identity of the bathhouse and interpreting the fundamental principles of traditional bathing architecture. Using a museographic approach, the project will try to use existing architectural details, materials, spatial sequences, atmosphere, and active bathing activities to interpret the site.

— Research Approach & Design Vision

Based on the research objectives, the present project applies a design-based methodology, defining a museographic adaptive reuse strategy. As such, the proposal keeps the original sequence of spaces in the Haji Bathhouse, adding the contemporary spa functionality thoughtfully. In this way, the project keeps the original spatial hierarchy that starts at the entrance and goes through the hashti (entry buffer space), sarbineh (changing hall), miandar (temperature regulation and privacy zone), and garmkhaneh (hot bathing hall), leading to the khazineh (hot water reservoir).

In addition to the design methodological strategy, the architectural strategy that follows the same logic of the thick masonry walls that define the original bathhouse is applied. However, in the case of the new extension of the space, walls become inhabitable masses and define new programs of the architecture that maintain the integrity of the bath sequence.

Finally, the project proposes a gender-free interpretation of the bathhouse. In other words, the new pools with different water temperatures are added within the destroyed women part of the building. The remaining architecture is preserved, allowing for the seamless integration of the new and old parts of the building. At the same time, the new space of the bath house takes inspiration from the traditional Iranian khazineh (water reservoirs) and the contemporary European baths like Therme Vals (Zumthor, 1996). Moreover, the adjacent empty plot of the land is re-used for additional purposes, becoming a spa complex and incorporating wellness, social, and cultural programs. This move extends the cultural impact of the bathhouse in the urban environment.

Thus, in the current proposal, history is not displayed in separate rooms only. On the contrary, the museography is implemented in the experience of spaces through the interaction of memory, water, and the human body through light, material, scent, temperature, and movement. Architectural elements and spatial sequences function as narrative devices, allowing users to engage with heritage through embodied experience rather than passive observation.

Through this vision, the Haji Bathhouse is reactivated as a living heritage environment—a contemporary wellness space where cultural memory remains active and experiential, rather than preserved solely as a static historical artifact.

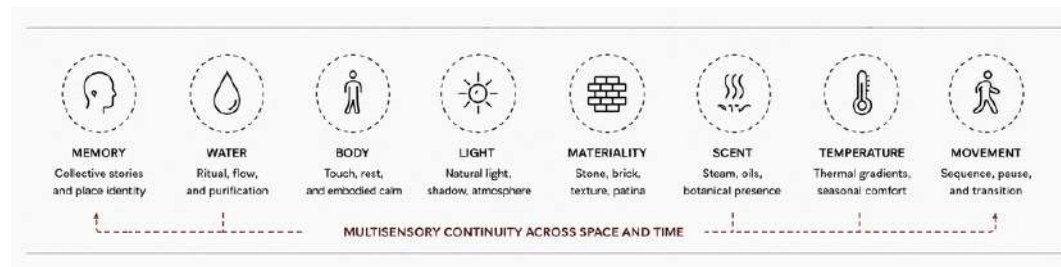


Figure 6- Museography is embedded within the spatial experience — not isolated in display rooms. Source: Authors.

02

DESIGN CONTEXT ANALYSIS

Geographical Location & Urban Structure
Architecture of Iran during the Qajar Period
History of the Bathhouse
Features of Traditional Architecture in North of Iran, Gilan
Architecture of the Bathhouse
Bathhouse Spatial Organization
Bathhouse Decorations
Tile Decorations
The Role of Tile work Motifs in Bathhouses



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Geographical Location & Urban Structure

The design context selected for this study is Haji Bathhouse—also known as Haj Mohammad Jafar Haji Bath—located in Rasht, Gilan Province, Iran. This bathhouse was built in the Qajar period and holds great historic and cultural importance in its urban setting. One of the notable features of the building is the highly decorative elements, especially the use of tile work, which improves the quality characteristics of the building (Habibi, 2008). The Gilan province is located between 36°41' and 38°27' north and 48°51' and 50°03' east latitudes on the southern coast of the Caspian sea. A large part of the province lies at or near sea level (Encyclopaedia Britannica, 2022).

The city of Rasht is situated between the Sepidrood River and the Goharrood River, on a gentle slope extending from north to south. These two rivers play a significant role in shaping the city and establish its geographical position. Rasht is located approximately 332 kilometers from Tehran and 35 kilometers from the Caspian Sea coastline, a location that places it within a humid-temperate climate zone. The main spatial axes of the city are oriented toward neighboring provinces and regional centers. Due to its flat natural terrain and geometrically aligned street network, Rasht has historically enjoyed secure and suitable routes for connection to other regions of the country (Encyclopaedia Britannica, 2022).

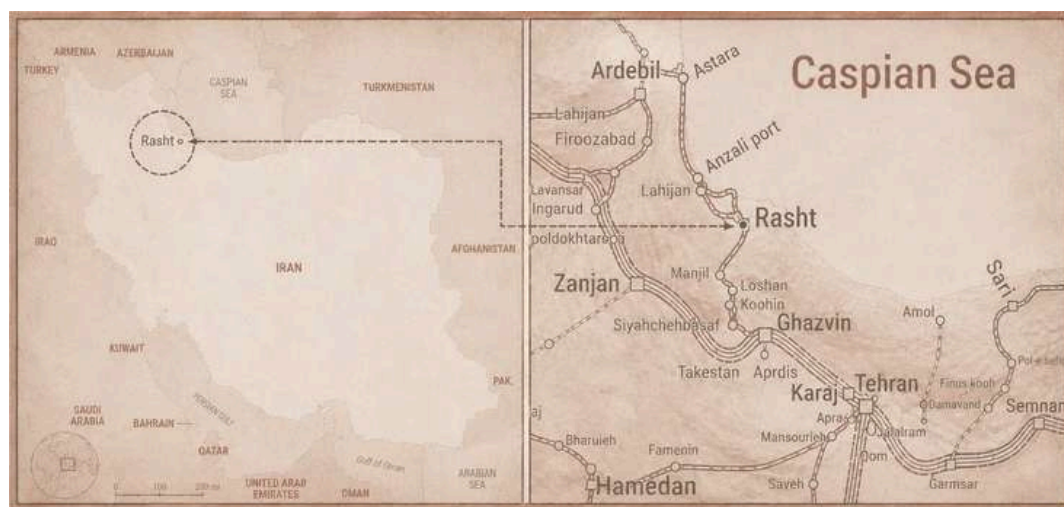


Figure 7- The geographical location of Rasht City. Source: (Encyclopaedia Britannica, 2022).

Initially, Rasht was a fortress settlement, positioned between the two rivers Goharrood and Sepidrood, and thus has considerable historical depth. However, because of its urban development and administrative importance, it officially acquired the status of a city for the first time during the 8th century AH (14th century CE) following population growth and expansion. The physical expansion of Rasht began during the reign of Shah Abbas I of the Safavid dynasty, when the city was still a fortified settlement. During this period, Rasht experienced significant growth due to commercial and economic interactions with Russia, which led to the construction of new neighborhoods beyond the original citadel. Nevertheless, the primary structure of the city still retains the identity and names of its historic neighborhoods (Taheri, 1996).

Among the most prominent and historically recognized neighborhoods of Rasht are Sagharisazan, Dorodgaran, Khoshke Bijan, Dehghan, Koozehgaran, Khaseman-e Chehel Tan, Chehel Khaneh, Chahar Sara, Ostad Sara, Bisotoon, Sarcheshmeh, Sabzeh Meydan, Zarjub, Mosallan, Kiyab, and Chahar Payeh Daran, all of which together constitute the core of the city's historic urban fabric. These neighborhoods make up the core element of the historical urban texture of Rasht. This historical texture has great cultural significance in that it conserves tangible as well as intangible elements related to the history of the city, which include customary traditions and rituals. With respect to the city's urban development, it is considered the most valuable part of the city (Taheri, 1996). Due to its increasing population and changes in social demands, Rasht underwent tremendous growth and expansion in particular after the 1960s. Subsequently, large-scale interventions aimed at renovation and transformation of the historic core were undertaken. These interventions included the widening of streets, construction of new roadways, redevelopment of squares and passages, creation of neighborhood centers and green spaces, regulation of building activities and land use controls, reinforcement of legal and cadastral boundaries, revitalization of bazaars and commercial corridors, and reorganization of major urban squares

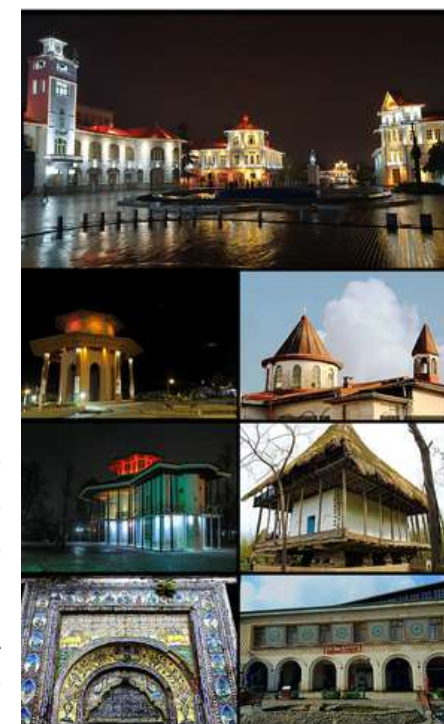




Figure 8- Selected landmarks and public spaces of Rasht, including Municipality Square, Mohtasham Garden, and Kolah Farangi Mansion. Source: Adapted from Rasht (n.d.), Wikipedia.

such as the central market square. Collectively, these measures have played a significant role in shaping the contemporary physical form of Rasht (Taheri, 1996).

According to later historical analyses drawing on Safavid-era travel accounts, Rasht's political and economic position improved markedly between 1183 and 1186 AH. Subsequently, with the establishment of a railway line, goods were transported from Pirbazar Port to Rasht, which at that time contained two main bazaars. The first was the barandaz bazaar (Sagharisazan), functioning as a center for the transfer of goods arriving from Qazvin and Tehran, while the second was the Sarough Bazaar, located in the city center around the Small and Large Squares, which served as the principal hub for the exchange of commodities between Iran and Russia. This commercial activity led to both population concentration and urban growth in Rasht (Taheri, 1996).

—Architecture of Iran during the Qajar Period

Some scholars believe that the reign of Naser al-Din Shah represented a decisive turning point in Iranian architecture and urban development. This was largely due to Naser al-Din Shah's frequent travels to Europe, which facilitated cultural exchange and expanded the connections of traditional Iranian society with the modern Western world and its visible manifestations. As a result, significant changes and transformations occurred across all social and cultural spheres of Iran, and architecture was not exempt from these developments (Floor, 2001; Azimi Yekta, 2015).

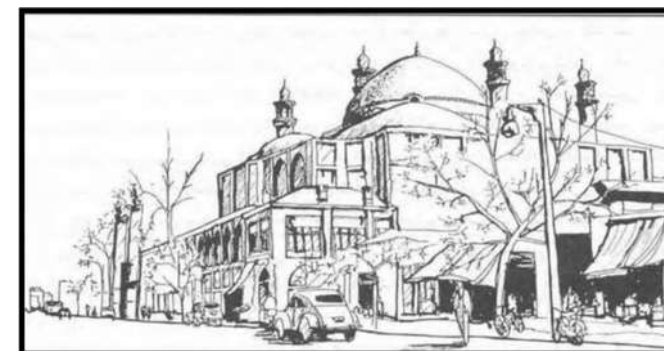


Figure 9- Sepahsalar Madrasa in Tehran, one of Qajar buildings. Source: Azimi Yekta (2015)

In reality, the reign of Naser al-Din Shah can be regarded as the beginning of a series of transformations in the intellectual foundations as well as the formal and structural aspects of Iranian architecture.

From this period onward, the traditional professional system of architecture in Iran began to change. This transformation became more evident with the arrival of the first graduates of architecture who had received their education abroad. Therefore, academic education played a fundamental role in this process. The drafting of architectural plans and the use of drawing as a technical and visual language were introduced for the first time into Iranian architecture. The first Iranian architect who produced architectural drawings in their modern form was Mirza Mahdi Khan Shaqaqi. He was among the earliest Iranian architects to receive academic education in Iran and Europe and had traveled abroad for further studies under the patronage of Naser al-Din Shah (Azimi Yekta, 2015).

If we wish to summarize the main characteristics of architectural ornamentation during this period, which also distinguish it from previous eras, the following elements can be highlighted.

Characteristic linear patterns became prevalent during this time. The use of relief tilework, warm colors such as yellow and brown, and

increased attention to political and social themes were distinctive features of this period. In many cases, images from the Shahnameh were portrayed figuratively and associated with ancient Iranian kings such as Iraj and Bahram. However, in some cases, over-ornamentation led to the loss of the sacred nature that existed in earlier times and gave the decoration an earthly feel. Furthermore, motifs from European paintings and graphics became common, pointing towards an increased interest in literary and cultural aspects. Additionally, most of the tile paintings from the Qajar period were made in workshops located in Kashan. This was mainly because of the conditions of that time when craftsmen left the control of the Safavid empire and settled near the foothills of the Alborz mountains. Since this time onwards, a large number of paintings related to the Qajar period were produced and distributed extensively. Similar trends emerged in Gilan, and even spread to other areas such as Lorestan, Fars, and some other places. Despite this widespread occurrence, the strongest influence continued to be that of court paintings.

In general, the architecture of the Qajar period can be divided into three distinct phases: the buildings of the first period, the buildings of the second period, and the buildings of the third period (Ardalan & Bakhtiar, 1973).

Buildings of the first Qajar period:

(Continuation of historical Iranian architecture from the Safavid period)

1200–1266 AH (corresponding approximately to 1799–1849 AD)

Buildings of the second Qajar period:

1298–1266 AH (corresponding to 1849–1881 AD)

Buildings of the third Qajar period:

This historical period extends from the year 1298 AH to 1344 AH (approximately 1881–1925 AD). The architectural characteristics of this phase continued until the fall of the Qajar dynasty (the declaration of deposition in 1925) (Naeemiya, 2016).

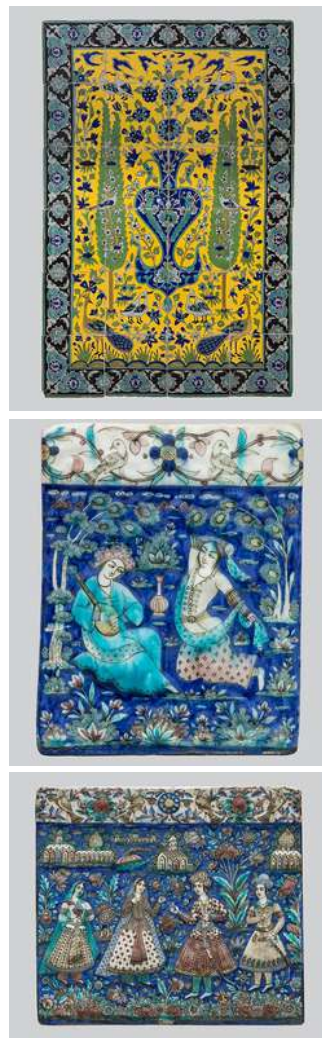


Figure 10- Underglaze-Painted Tile Panel, Qajar Iran. Source: Islamic Arts Magazine (2019)

— History of the Bathhouse

Among various peoples since ancient times, the ritual of washing, cleanliness, and purification has held particular importance. In Iran as well, from ancient traditions, bodily cleansing has been regarded as significant not only for physical hygiene but also for spiritual purity.

According to existing evidence, the background of washing rituals in Iran dates back to more than three thousand years ago. It is believed that clergy were required to perform religious rituals only after washing themselves for a specific period, lasting three days and three nights, in order to be able to participate in religious ceremonies (Boyce, 1979).

Washing and entering the bathhouse during the Mehr ritual was considered a religious obligation. Caracalla, a Roman emperor and a follower of Mithraism, commissioned the construction of bathhouses in Rome during his reign. Followers of the Mehr ritual were required to wash their bodies before participating in religious ceremonies, and therefore they entered bathhouses for cleansing. Afterward, they proceeded to perform their religious rituals (Lincoln, 2007). In Zoroastrian belief as well, similar to the Mehr ritual, the purity of body and soul held great importance. From this belief derives the name of one of the rites associated with bodily purification, known as “oshuui.” Bodily cleanliness was considered of high value for this reason, and washing was practiced to maintain purity and to remove pollution and sin. For the same purpose, fire temples were constructed specifically for washing and the preservation of water (Boyce, 1979).

Followers of Zoroastrianism were required, after waking from sleep, to wash three times in sequence: first from the head to the neck, then from the neck to the waist, and finally from the waist to the feet. Only after performing these acts of washing were they allowed to engage in religious rituals. In addition, before performing the daily prayers, believers washed the parts of the body that had been in contact with air. Washing was also required after approaching a corpse or touching a dead body, and children were ritually washed during religious festivals such as the Gahambar celebrations (Lincoln, 2007).

Despite these accounts, written evidence concerning the existence of bathhouses prior to Islam is limited. Even in some early Islamic

historical sources, the absence of bathhouses in ancient Iran is noted (Floor, 2001). Nevertheless, some sources refer explicitly to the presence of private bathhouses. For example, Masudi in *Muruj al-Dhahab*, in the chapter dedicated to Mehr and the reign of Shapur I of the Sasanian period, mentions an individual associated with the Mehr ritual who holds a staff in hand at the moment of entering the bathhouse. It is therefore assumed that the statements of some Islamic historians regarding the absence of bathhouses in ancient Iran refer specifically to public bathhouses and do not imply the nonexistence of private bathhouses (Kiani, 2009).

Based on recent archaeological investigations carried out at Takht-e Jamshid (Persepolis), it can be concluded that during the Achaemenid period the use of a form of bathhouse was common (Schmidt, 1953; Kiani, 2009). This conclusion is supported by the discovery of the remains of a private bathhouse consisting of both interior and exterior sections separated by stone slabs. This bathhouse, located within one of the Achaemenid palaces, measures approximately 1.75 × 2.35 meters and includes a water well positioned at the center (Schmidt, 1953). A stone platform measuring approximately 55 × 55 centimeters was placed above the well and used for standing, while water was directed through stone channels and conduits (Kiani, 2009).

Sasanian era evidence also points to the presence of bathhouses used privately, implying that this was a fairly prevalent phenomenon in the said era (Kiani, 2009).

In the case of the emergence of the Islamic religion in the seventh century CE, there were sweeping cultural, social, and architectural changes that took place in many areas (Creswell, 1969). With increasing numbers of people and growing urban centers, there were more diverse architectural spaces with different uses (Hill, 1997). Cleanliness and purity take on particular importance in Islamic beliefs where ablutions (wudu) and washing are practiced several times a day (Hill, 1997). Purification is seen as important not just for religious reasons but also because of its hygienic significance that takes center stage in the daily life of Muslims (Floor, 2001). This can be seen in the famous Islamic saying, “cleanliness is a part of faith.” As a result, the places where the rituals of washing and bathing took place became important in architecture.

According to historical sources, with the spread of Islam numerous public bathhouses were constructed in different cities for communal use (Creswell, 1969; Floor, 2001).

Although some individuals initially expressed doubt regarding the legitimacy of bathhouses, such objections never became widespread and did not constitute serious or fundamental opposition (Floor, 2001). Historical evidence indicates that during the early centuries of Islam, Iranian architects and master builders constructed many bathhouses in cities such as Kufa and Basra (Creswell, 1969). Among the recorded examples is the bathhouse attributed to Hajjaj ibn Yusuf in Basra (Creswell, 1969).

According to Rasul Dar al-Khilafa Sabi, it is reported that during the Abbasid period there were a large number of bathhouses in Baghdad. During the reign of al-Mu‘tadid Allah, their number was slightly fewer than five thousand, and approximately thirty thousand workers were employed in them. He also notes that private bathhouses were included among these facilities (Kiani, 2009).

Kings, caliphs, and nobles possessed private bathhouses within their palaces and residences. In the year 232 AH, the Abbasid caliph Qahir ordered the construction of bathhouses designed in a Roman style. Beyond their hygienic function, bathhouses were also used to estimate the approximate population of a city, based on the number of bathhouse users. From this data, it was possible to estimate how many households used each bathhouse and the average size of each family. Bathhouse attendants, particularly in large bathhouses, made efforts to maintain cleanliness and prevent disorder so that the quality and reputation of the bathhouse would not be diminished by the entry of individuals with an unclean or disheveled appearance. For this reason, travelers arriving in cities were sometimes refused entry, which created difficulties for them. Consequently, bathhouses were often constructed near city gates and along market areas, where they were more frequently used by caravans (Floor, 2001).

However, the Seljuk Era is considered an era that witnessed remarkable changes in terms of the evolution of public utility buildings, such as bathhouses. While many Seljuk cities fell victim to war and destruction, history shows that the architecture of bathhouses during this era was of great significance, especially in large cities. The Seljuks were significant architects of bathhouses, and consequently, these buildings became one of the most significant urban buildings (Kiani, 2009).

In the Islamic city of Gorgan, archaeological excavations led to the discovery of one of the Seljuk-period bathhouses. The remains of this bathhouse are located adjacent to one of the city’s main streets. The primary building material was brick bonded with lime mortar. Separate channels were designated for water supply and wastewater

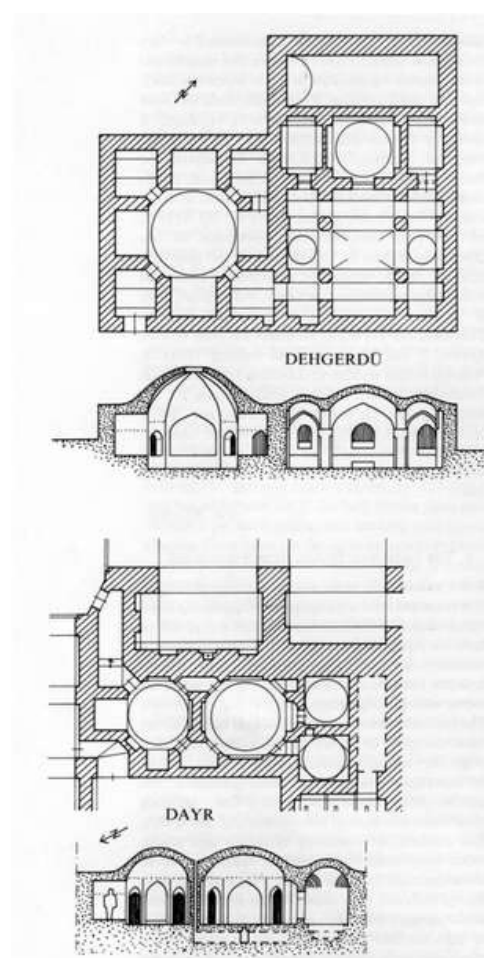


Figure 11- Typical Bathhouse structure. Source: W. Kleiss

disposal, and water was conveyed through conduits installed within the furnace chamber. In addition, glass vessels associated with cosmetic use were also discovered in this bathhouse (Kiani, 2009).

In the Ilkhanid period, utility buildings, such as baths, were built in many cities and towns, namely Tabriz, Maraagheh, Ardabil, and Soltaniyeh. Under the rule of Ghazan Khan, caravansaries and baths were constructed near one of the gates of the city of Tabriz. Caravans would inspect their cargo and pay commercial taxes; then they entered the caravansary and moved to the bath (Floor, 2001). The Safavid period is the peak time for the construction of bathhouses; these buildings have been constructed systematically in Iranian cities during the process of urban development. For example, there were 48 madrasas, 1,62 mosques

, 273 baths, and 1,802 caravansaries in the Safavid Isfahan. This shows the importance of baths in the life of the city. After the Safavid period, the construction of bathhouses continued in the same way as it had happened previously. For example, Hammam-e Vakil in Shiraz.

However, with the transition into the modern era, public utility buildings, including bathhouses, gradually lost their functional role. This was due to the provision of private individual residential units, which led to the replacement of public bathhouses by private ones in practice (Kiani, 2009).

— Features of Traditional Architecture in North of Iran, Gilan

The vernacular architecture of Gilan is strongly shaped by its distinctive climatic conditions, particularly high annual precipitation, elevated groundwater levels, and persistent humidity. These environmental factors have significantly influenced construction

techniques and architectural features, including the use of raised foundations to address groundwater, sloped roofs adapted to heavy rainfall, and circulation elements designed to manage surface water runoff. Furthermore, due to high humidity and the need for adequate ventilation, timber was widely used as a primary construction material owing to its availability and adaptability (Habibi, 2010).

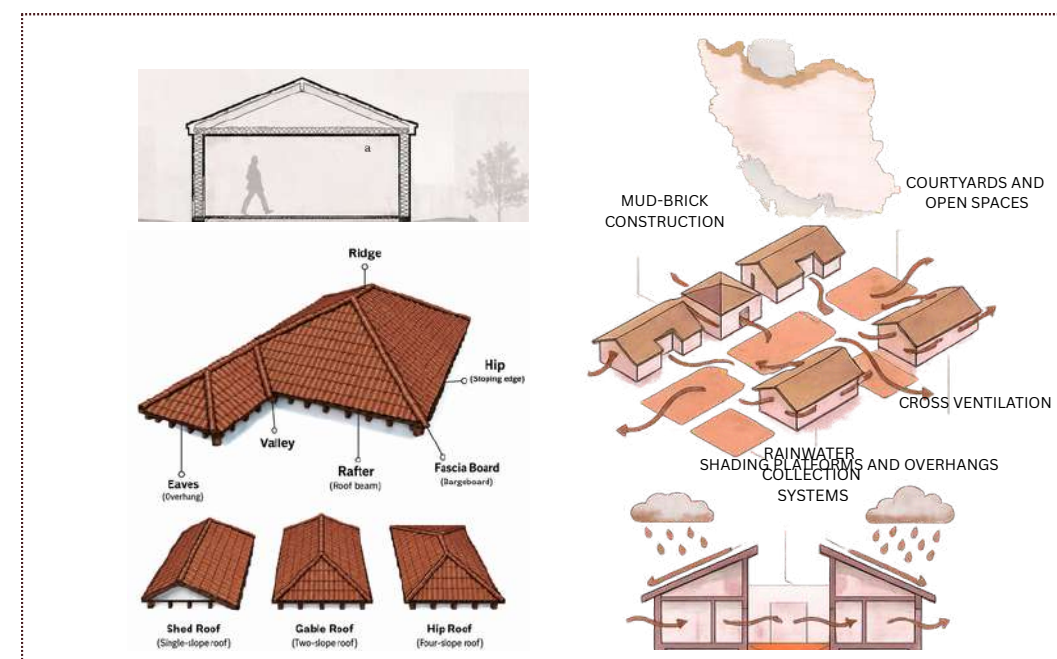


Figure 12- Typical buildings' structures in north of Iran. Source: Habibi (2010)

— Architecture of the Bathhouse

Bathhouses were regarded as one of the most important urban buildings after mosques and schools (Kiani, 2009; Soltanzadeh, 2011). From early periods, they played a significant role in the urban fabric, shaped by factors such as temperature and humidity regulation, accessibility, spatial integration, water supply, and wastewater management (Fadli & Sibley, 2008; Razavi et al., 2007). Similar to the extroverted architectural character of the region, bathhouse architecture in Gilan was also influenced by climatic conditions, resulting in adaptations in form, materiality, and spatial organization. While the general spatial pattern of bathhouses followed the typological principles observed in other regions of Iran, variations can be identified in the configuration and proportions of spaces (Habibi, 2010; Kiani, 2009).

— Bathhouse Spatial Organization

The arrangement of micro-spaces within traditional bathhouses was structured according to clear architectural principles and followed a hierarchical spatial order (Soltanzadeh, 2011; Kiani, 2009). Generally, the entrance space connected directly with the outdoors precedes a small, sometimes serpentine corridor leading to a hashti, then the sarbineh (Fakhari Tehrani, 1968). Sarbineh constitutes the largest of all spaces in regard to size and decoration. This room is usually built in octagon and quadrangular forms. Raised platforms are placed on its edges for sitting down and changing clothes. Recessed niches underneath the platform accommodate shoes (Soltanzadeh, 2011; Fadli & Sibley, 2008). Above the room, dome-like constructions have openings that enable natural lighting inside.

The link between the sarbineh and the garmkhaneh (hot chamber) is provided by the miyandar that is usually used for servicing purposes. Garmkhaneh consists of washing space and warm water storage called khazineh. Garmkhaneh usually adjoins a basin of cold water. In addition to supplying water, these reservoirs in some cases also facilitated partial water reuse within the bathhouse system (Razavi et al., 2007; Sarmiento & Kazemi, 2012).

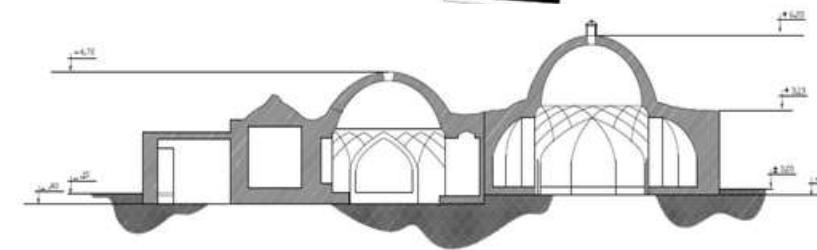
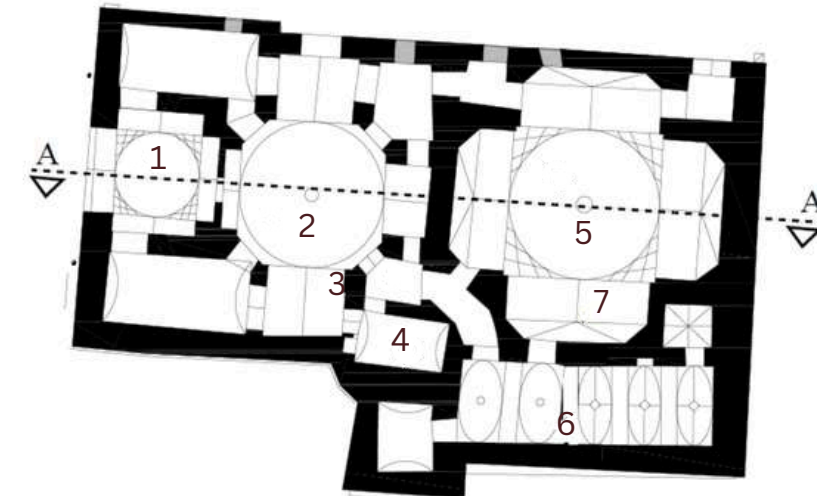
In larger bathhouse complexes with separate sections for men and women, the spatial layout of the women's section typically incorporated greater degrees of privacy. Access routes were therefore designed to be more indirect, often passing through winding paths or intermediate courtyards, ensuring visual separation before entering the internal sequence of spaces, including the sarbineh, miyandar, and garmkhaneh (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).

Following examples of historical bathhouses and their spatial organization in Iran are shown (Zarbakhsh, 2021).

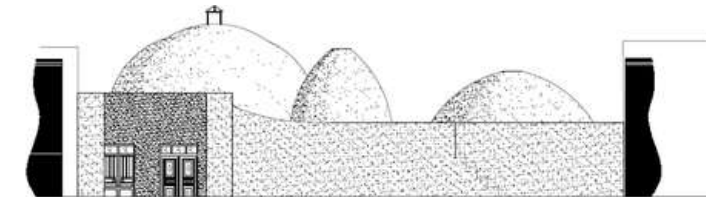
— Yaeghubieh Bathhouse

Located in Ardabil, Iran, and dates back to the Qajar era.

1. Entrance vestibule (Hashti)
2. Changing hall (Sarbineh)
3. Intermediate corridor/space (Miyandar)
4. Service rooms
5. Hot chamber (Garmkhaneh)
6. Sunken pool (deep basin (Chal-Howz))
7. Hot water reservoir (Khazineh Ab Garm)



Section A-A



South Elevation

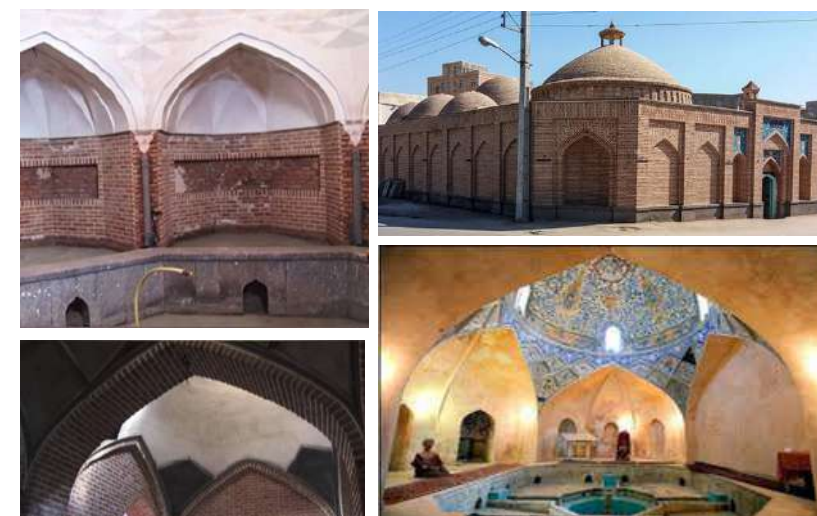
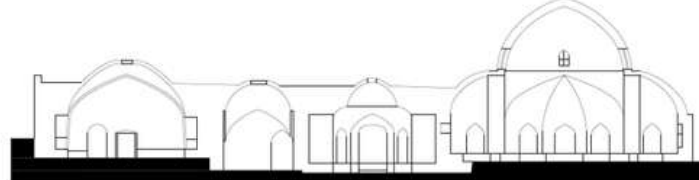
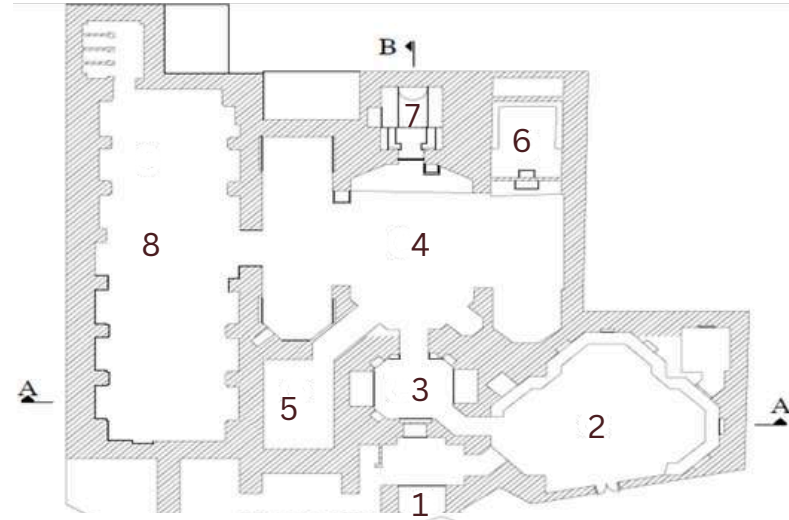


Figure 13- Yaeghubieh bathhouse. Source: Zarbakhsh, (2021).

— Agha Naghi Bathhouse

Located in Ardabil, Iran, and dates back to the Safavid era.

1. Entrance
2. Changing hall (Sarbineh)
3. Intermediate corridor/space (Miyandar)
4. Hot chamber (Garmkhaneh)
5. Royal seating area (Shah-neshin)
6. Cold water reservoir (Khazineh Ab Sard)
7. Hot water reservoir (Khazineh Ab Garm)
8. Sunken pool (deep basin (Chal-Howz))



Section A-A



Section B-B

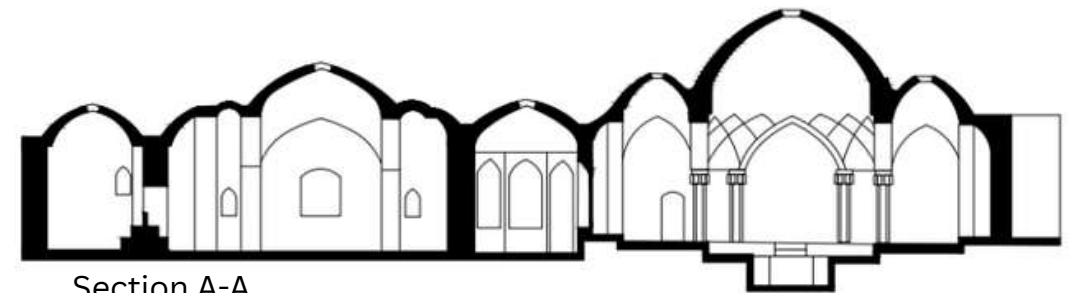
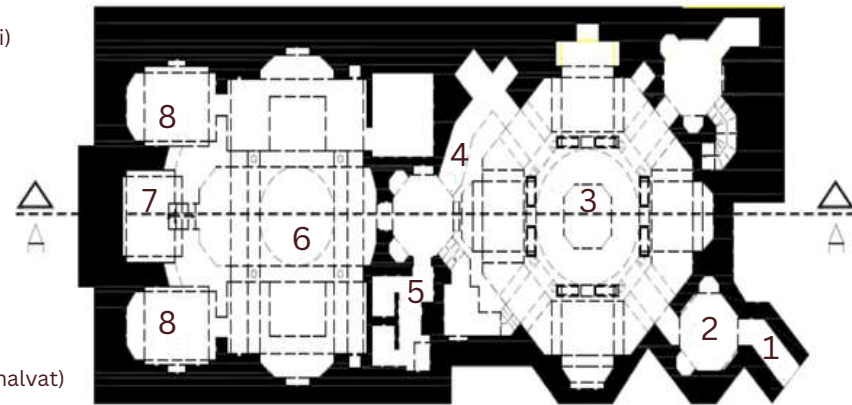


Figure 14- Agha Naghi bathhouse. Source: Zarbakhsh, (2021).

— Kordasht Bathhouse

Located in Jolfa, Iran, and dates back to the Safavid era.

1. Entrance
2. Vestibule (Hashti)
3. Changing hall (Sarbineh)
4. Intermediate corridor/space (Miyandar)
5. Service rooms
6. Hot chamber (Garmkhaneh)
7. Hot water reservoir/pool (Khazineh)
8. Private space (Khalvat)



Section A-A

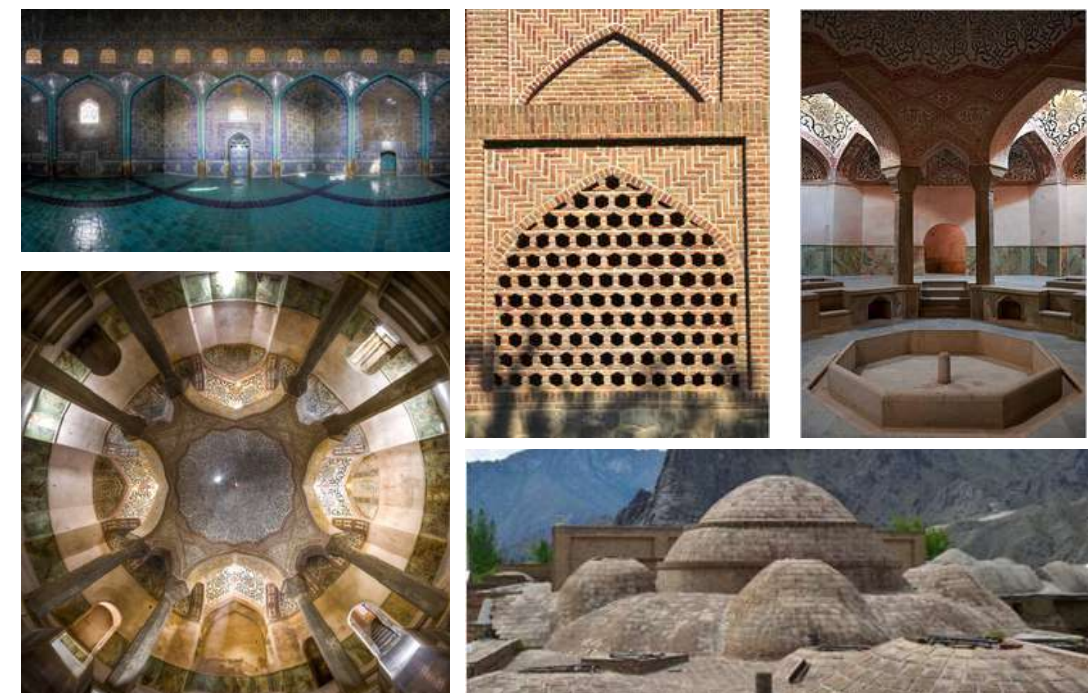
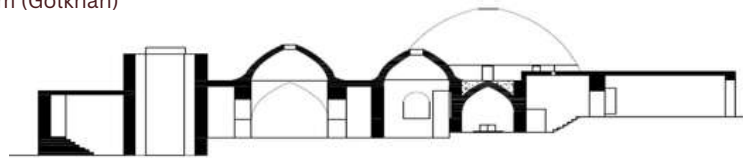
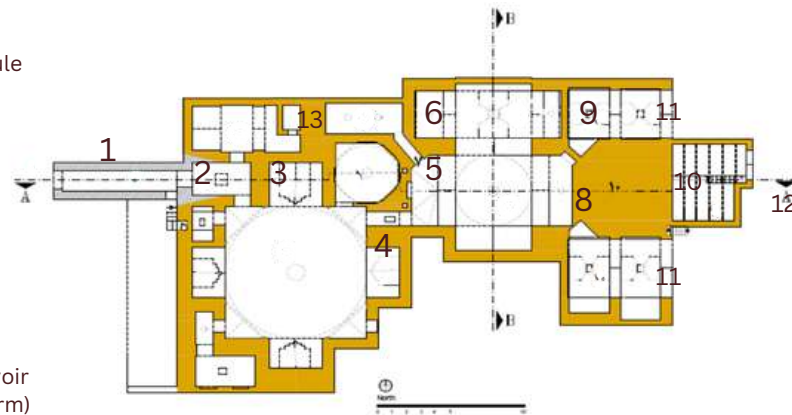


Figure 15- Kordasht bathhouse. Source: Zarbakhsh, (2021).

— Etehadieh Bathhouse

Located in Orumieh, Iran, and dates back to the Qajar era.

1. Entrance
2. Corridor
3. Entrance vestibule (Hashti)
4. Changing hall (Sarbineh)
5. Intermediate corridor/space (Miyandar)
6. Cleaning rooms
7. Hot chamber (Garmkhaneh)
8. Water pool
9. Hot water reservoir (Khazineh Ab Garm)
10. Royal seating area (Shah-neshin)
11. Furnace room (Golkhan)



Section A-A



Section B-B

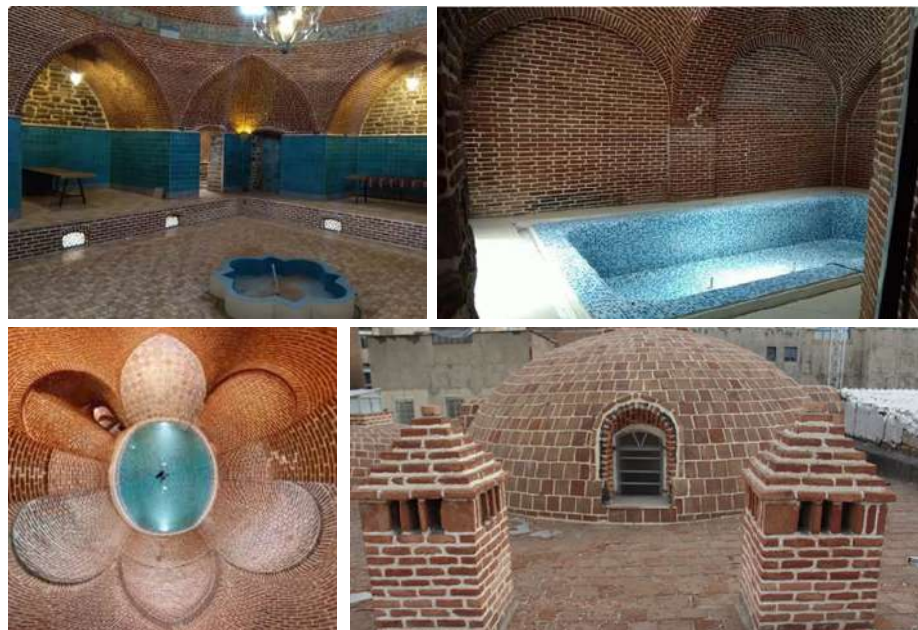


Figure 16- Etehadieh bathhouse. Source: Zarbakhsh, (2021).

— Bathhouse Decorations

The interior surfaces of traditional bathhouses were characterized by a range of decorative treatments, varying from simple finishes to highly elaborate ornamentation. Floorings were usually made of marble or some other type of stone material that offered both durability and beauty. Walls were also made of stones or bricks. However, the upper parts of walls were sometimes decorated with the help of arches and curves (Soltanzadeh, 2011; Kiani, 2009). The part of walls known as the dado was normally made of stones or tiles, whereas, in some cases, the dado also featured glazed tiles such as mosaics and haft-rang (seven color) tiles.



Figure 17- Ganjali Khan Bathhouse in Kerman. Source: Zarbakhsh, (2021).

Decorative approaches in bathhouses ranged from minimal and restrained compositions to highly intricate and richly ornamented interiors. In certain cases, surfaces were enhanced with brick or stone muqarnas-like treatments, while in more modest examples they were simply covered with plain plaster finishes. Lime-based decorative plasterwork, either in its plain form or combined with pigments, was also among the most common interior decorative techniques used in bathhouse architecture.

Many traditional baths were decorated using such decorative practices, and an example is the Kordasht Bathhouse located in East Azerbaijan, where additive decoration has been applied in great number (Kiani, 2009). The additive decorations refer to decorations that have been added on top of the main architecture after it was completed (Fadli & Sibley, 2008).

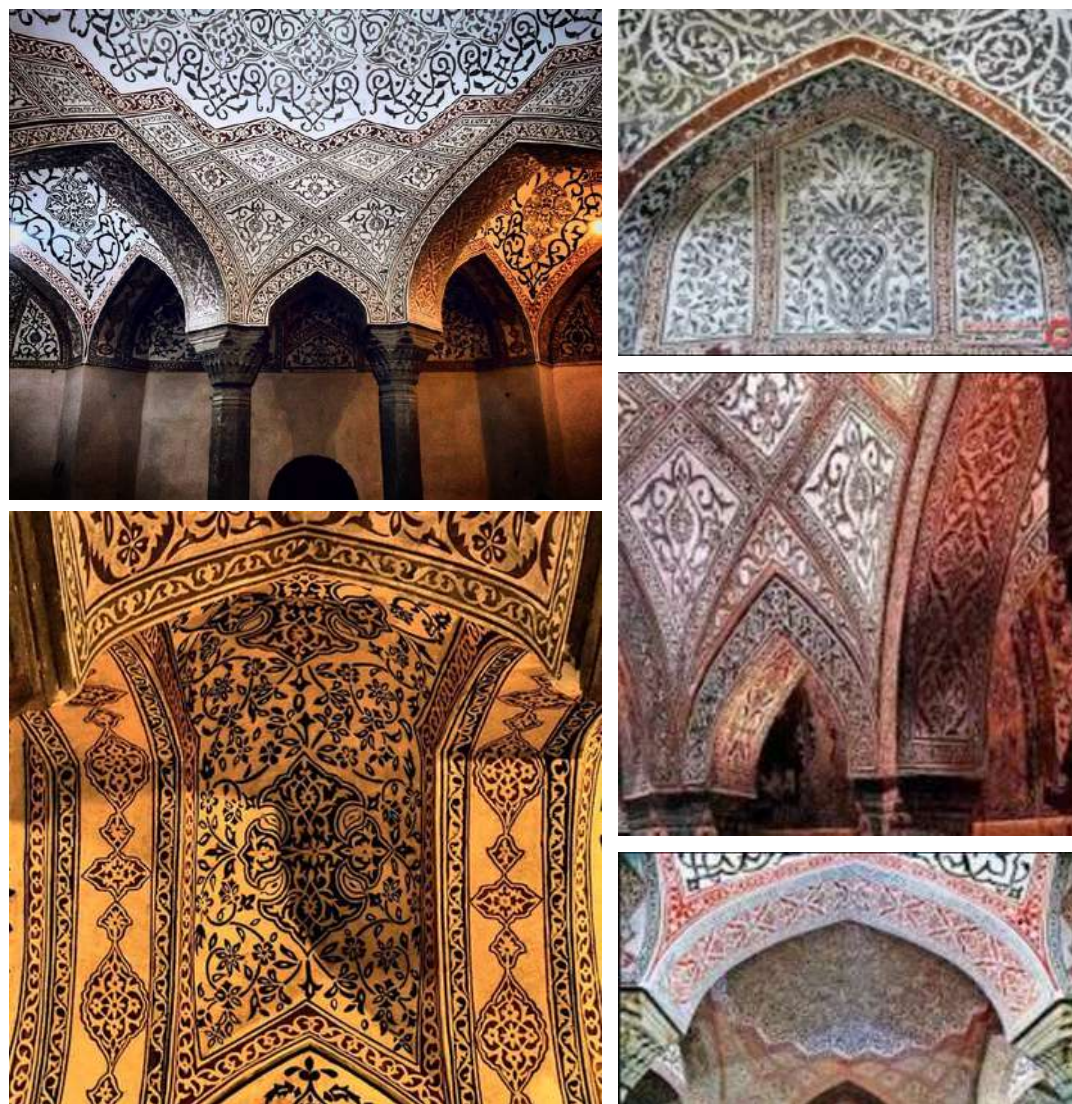


Figure 18- Kordasht Bathhouse in Jolfa. Source: Kiani (2009).

— Tile Decorations

Tilework stands out as an important form of decoration in traditional Iranian bathhouses especially in the entrance arches, sarbineh, and sometimes the garmkhaneh, where it greatly improves the aesthetics of the interior (Soltanzadeh, 2011).

While there is scant literature on the use of tiles as decoration before the Ilkhanid era, it can be seen from the architectural history of Islam that tiling was common using pattern repetitions in the lower parts of walls (Sibley & Jackson, 2012). During the Safavid era, seven-color or haft-rang tiles were used. This technique facilitated



Figure 19- Haft-rang (seven-color) tiles in Safavid & Qajar era. Source: Ghasemi et al. (2018).



the integration of vegetal, geometric, and occasionally figurative motifs, enriching both the visual and symbolic qualities of bathhouse interiors (Ghasemi et al., 2018).

This decorative approach continued into the Qajar period, during which tilework evolved further in both form and content. Increasing use of figurative and narrative imagery—such as courtly scenes and symbolic representations—reflected broader artistic and socio-cultural transformations of the period (Ghasemi et al., 2018).

—The Role of Tile work Motifs in Bathhouses

The decorative motifs employed in bathhouse tile work extended beyond purely aesthetic considerations and embodied symbolic meanings, reflecting the cultural, psychological, and social values of their time. In this sense, a close relationship can be observed between ornamental patterns and everyday life, indicating that architectural decoration functioned as a medium of cultural expression rather than mere embellishment (Ghasemi et al., 2018; Sibley & Jackson, 2012).

While taking into account economic issues, patrons and constructors of bathhouses paid attention to physical condition and mental comfort of visitors as well. In this regard, the creation of decorative details served the goal of creating an atmosphere of tranquility and balance, which positively influenced sensory impression of the space (Fadli & Sibley, 2008).

The same is emphasized in historical works such as *Hifz al-Sehhat-e Naseri* written by Mirza Mohammad Tabib Gilani. Despite the understanding of hygiene and treatment qualities of baths, these sources suggest the effect of bathhouse environment on both physical and psychological state.

In this regard, the use of proper images and decorations was recommended in order to create positive psychological effect and emotional balance. Special significance was attributed to colors used in tile decoration.

Natural pigments were commonly used in the depiction of human, animal, and vegetal motifs, contributing to the authenticity and harmony of the decorative program (Ghasemi et al., 2018; Blair & Bloom, 1995).



Figure 20- Tilework motifs include human, animal, and vegetal patterns. Source: Ghasemi et al. (2018).

03

CHAPTER 3: THE EXISTING BUILDING ANALYSIS

Accessibility of Hajji Bathhouse
Historical Background & Naming of the Building
Architectural Description of the Hajji Bathhouse
Micro-Spaces of the Hajji Bathhouse
Changing Hall (Sarbineh)
Intermediate Space (Miyandar)
Hot Chamber (Garmkhaneh)
Hot Water Reservoir (Khazineh)



VEIL
OF
STEAM

REIMAGINING HAMMAM
AS A CONTEMPORARY SPA

Accessibility of Hajji Bathhouse

The Hajji Mohammad Jafar Bathhouse is located at approximately 49°59' longitude and 37°27' latitude, at an elevation of about 21 meters below sea level. This building is found in the plain zone of the Gilan province in the center part of the Rasht city, particularly in the Saghari-Sazan neighborhood. Saghari-Sazan is one of the historical districts of Rasht that has a recorded age of more than 120 years. The name of the neighborhood is derived from the traditional occupation of its early inhabitants, as the area was historically associated with saghari-duzi—the crafting of a specific type of leather from horse hide used in shoemaking (Habibi, 2010).

The neighborhood has been viewed historically as one of the rich residential neighborhoods of Rasht. It is reflected by the architectural features of the locality including larger houses, many windows, and larger courtyards covered with vegetation as is seen in the historical residential architecture in the northern part of Iran (Kiani, 2009; Soltanzadeh, 2011).

The Hajji Bathhouse in the Qajar era is listed under plaque numbers 41836–74966 in the Saghari-Sazan locality of Rasht. The building is positioned at the intersection of Motahhari Boulevard and Badie Allah Alley.

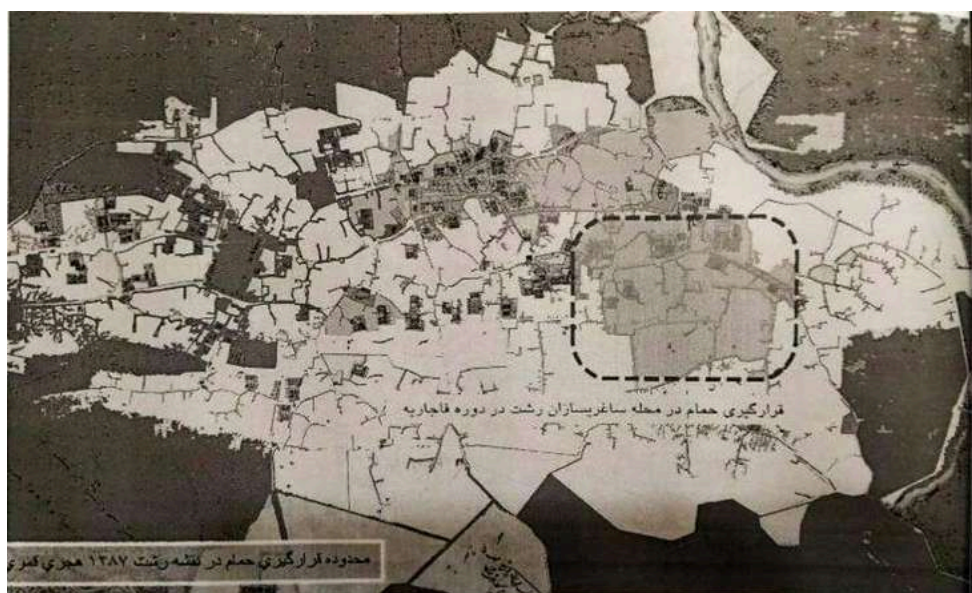


Figure 21- Location of the Hajji Bathhouse within the city map of Rasht in Qajar era, Source: Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province (2012).

Based on spatial analysis conducted using Google Earth, the distance between Motahhari Boulevard and the bathhouse is approximately 450 meters. This proximity indicates a relatively direct and accessible connection between the main urban route and the building.

The location of the bathhouse within the historic urban fabric of Rasht reflects the traditional siting principles of such structures in Iranian cities, where bathhouses were typically integrated into residential neighborhoods and placed along local circulation paths to ensure convenient access for daily use (Soltanzadeh, 2011).

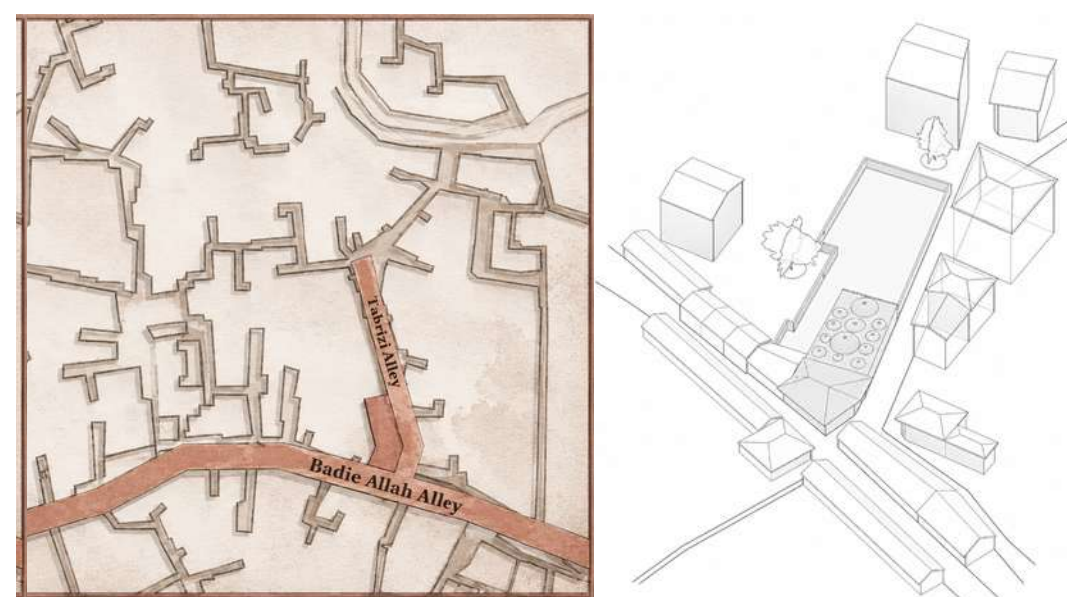


Figure 22- Location of the Hajji Bathhouse within the map of Rasht, Source: Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province (2012).

— Historical Background & Naming of the Building

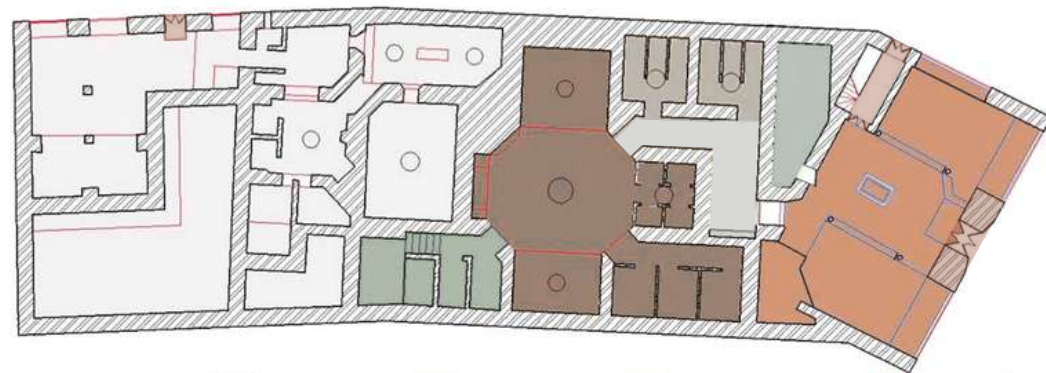
According to an inscription located on the southern facade of the main elevation, the Hajji Bathhouse dates to the late Qajar period, with its construction attributed to 1308 AH. The building is named after its original owner, who was referred to by the honorific title “Hajji,” indicating a person who had undertaken the pilgrimage to Mecca. The structure was officially registered as a national heritage site in 2004 (1383 SH) (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).



Figure 23- The Haji Bath (the south-eastern view). Source: Pourghalam Pirbazari (2018)

— Architectural Description of the Haji Bathhouse

The bathhouse comprises several spatial elements, including the entrance, the sarbineh, the shahneshin, a designated space for hanging towels, the miyandar, and the garmkhaneh. The overall form of the building is rectangular, measuring approximately 48 meters in length, 16 meters in width, and 7.5 meters in height (Handicrafts and Tourism Organization of Gilan Province, 2012).



Functional plan of the Haji Bathhouse indicating spatial components

 Entrance	 Miyandar
 Sarbineh (changing hall)	 Garmkhaneh (hot chamber)
 Towel-hanging area	 Sanitary facilities
 Khazineh (hot-water reservoir)	 Women's bath section (demolished)

— Micro-Spaces of the Haji Bathhouse

Entrance: The bathhouse is characterized by three separate entrances. The main entrance, which is connected to the men's section, is located on the south facade along Badie Allah Street. The entrance, along with the symmetrical windows located beside it, forms the composition of the south facade. The positioning of the entrance in relation to the context is in keeping with the usual practice of integrating Qajar-era baths into the local network and neighborhood structures, ensuring accessibility and daily use (Kiani, 2009; Soltanzadeh, 2011).



Figure 24- The main entrance of Haji Bath in the southern facade. Source: Pourghalam Pirbazari (2018).



Figure 25- The main entrance of Haji Bath in the southern facade. Source: Authors

The main entrance is decorated with tilework and features a historical inscription. The tiles used in this section are attributed to the craftsman “Yousef Kashisaz of Mashhadi” (Jahani, 2019)



Figure 26- The main entrance of Haji Bath in the southern facade. Source: Pourghalam Pirbazari (2018)

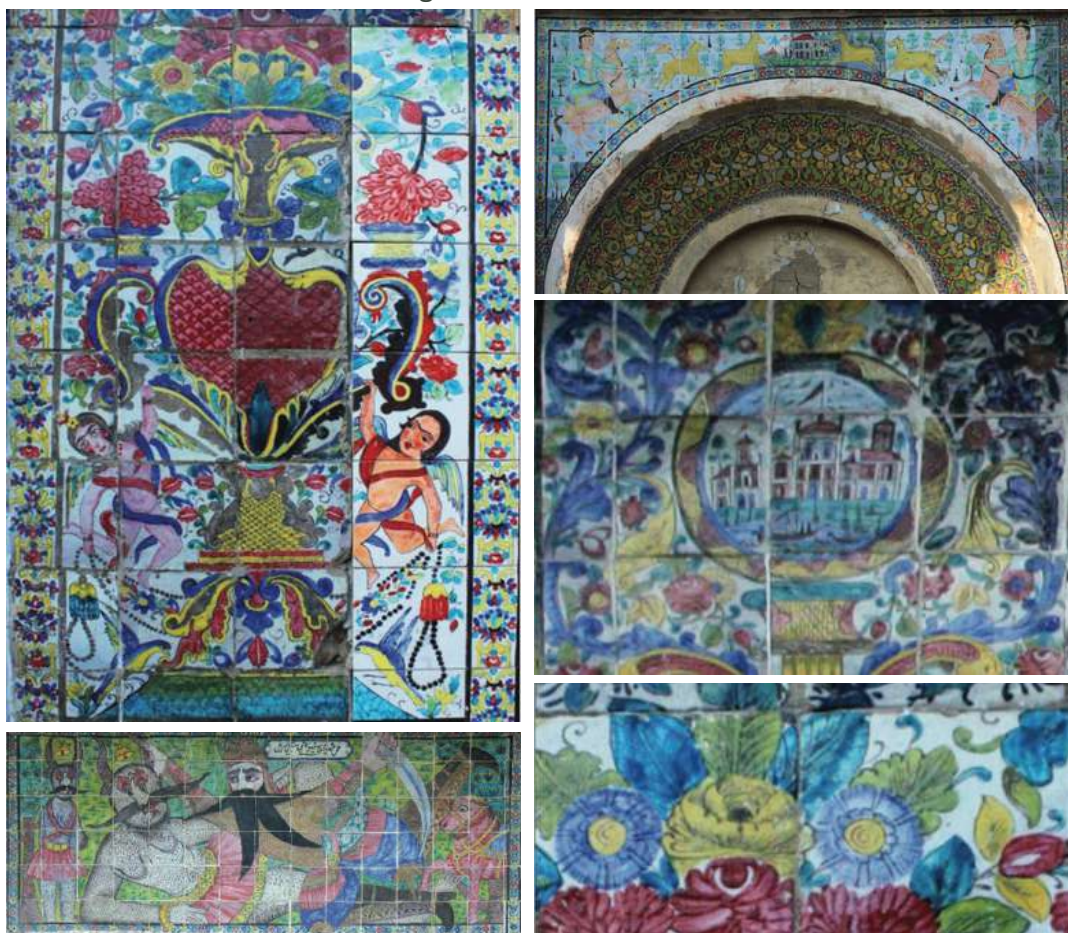


Figure 27- Tilework Motifs of the Hajji Bathhouse in the southern facade. Source: Jahani (2019)

The women’s entrance is located on the eastern side of the bathhouse and is accessed from Tahvili Alley. At present, the women’s section of the bathhouse has been demolished, and its original brick facade is concealed beneath the current exterior surface. This condition reflects the partial loss and transformation of the building over time, a phenomenon commonly observed in historic bathhouses subjected to neglect and urban change (Jahani, 2020).



Figure 28- The Women entrance of Haji Bath in the eastern facade. Source: Pourghalam Pirbazari (2018)

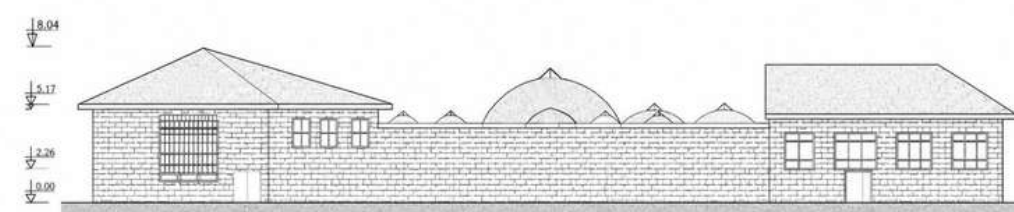


Figure 29- Eastern facade of the women entrance of Haji Bath. Source: Authors.

— Men’s Changing Hall (Sarbineh)

Immediately after the entrance, a rectangular space with a slight level difference is encountered, forming the sarbineh (changing hall) of the bathhouse. This space represents the first stage in the internal spatial sequence and functions as a transitional zone between the exterior and the more thermally controlled interior spaces.

The sarbineh of the Hajji Bathhouse is composed of three distinct sections. The two lateral areas are positioned at a lower level and are separated from the elevated central space by approximately 80 centimeters, accessed via two steps.

This spatial configuration reflects the typical hierarchical organization of traditional Iranian bathhouses, in which level variation and spatial differentiation are used to define functional zones and regulate movement within the building (Soltanzadeh, 2011).

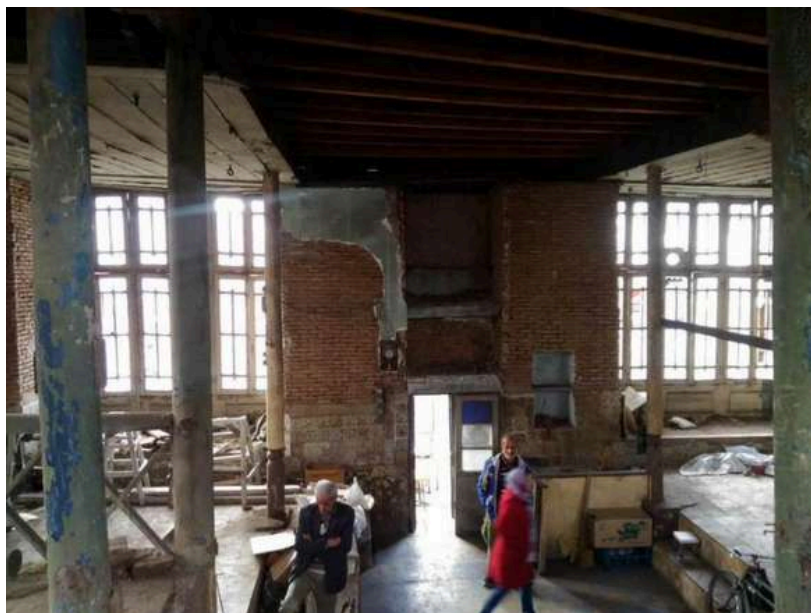


Figure 29- Interior view of the sarbineh space in the Hajji Bathhouse from the mezzanine level. Source: Pourghalam Pirbazari (2018).

In the central area of the sarbineh, a small stone basin measuring approximately 0.9×1.4 meters is positioned at a depth of around 1.4 meters. This element functioned as a foot-washing basin, used both before entering and after leaving the bathing spaces. Such features reflect the hygienic practices and ritual sequencing embedded in traditional Iranian bathhouse architecture (Fadli & Sibley, 2008; Soltanzadeh, 2011).



Figure 30- Stone basin in sarbineh space in the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).

In the northwestern part of the sarbineh, a space with a vertical difference of five steps provides access to the mezzanine level.

Similarly, in the northeastern section of the sarbineh, adjacent to the towel-hanging area, a wooden doorway is located on the eastern side. Beyond this entrance, a narrow corridor approximately two meters in length leads to another wooden door, which serves as an exit from the sarbineh (Soltanzadeh, 2011).

For the northern side of the corridor, stairs have been built in order to reach the mezzanine floor. There is ornamental tile work on the steps and the walls. Also, for the northeastern side of the mezzanine, there is another staircase built to reach the roof (Soltanzadeh, 2011). The natural light coming into the sarbineh is mainly provided through openings that are found in the south and east facades. There are two large wooden windows on the south facade, which have measurements of about 3.2 meters wide and 4 meters high and are symmetrically placed around the entrance gateway (Soltanzadeh, 2011).

On the eastern facade, a large wooden window is installed at a height of four meters, similar in form to those on the southern side. In addition, four smaller windows are incorporated within the upper level (mezzanine). Further small openings are also located in the northern part of the mezzanine to enhance daylight penetration.

This arrangement demonstrates a careful integration of circulation, light control, and vertical spatial organization, reflecting the functional and environmental considerations characteristic of traditional Iranian bathhouse design (Fadli & Sibley, 2008).

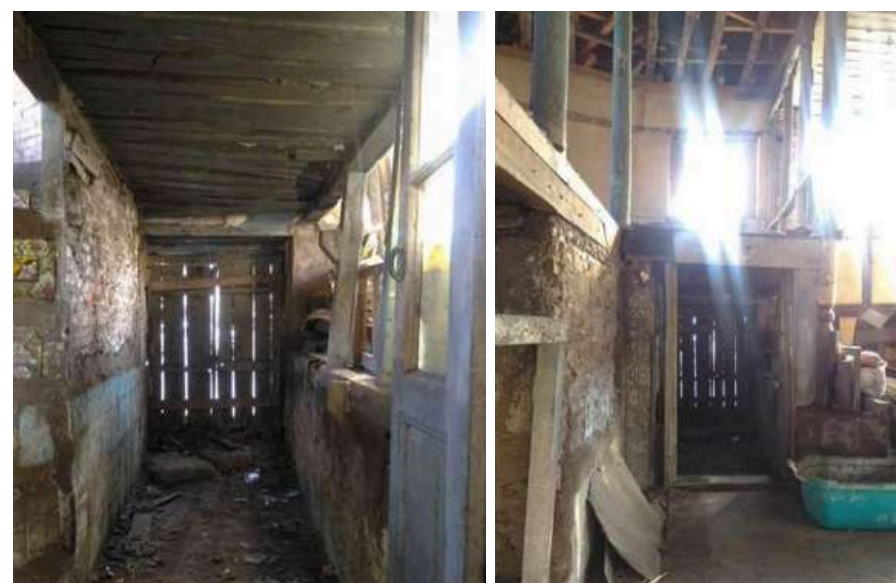


Figure 31- Corridor leading to the eastern exit and the roof of the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).



Figure 32- staircase to access to the mezzanine level and roof. Source: Pourghalam Pirbazari (2018).



Figure 33- Interior view of the Hajji Bathhouse from the mezzanine level. Source: Pourghalam Pirbazari (2018).



Figure 34- View of the northern part of the sarbineh and the mezzanine level. Source: Pourghalam Pirbazari (2018).



Figure 35- Interior door of the sarbineh featuring haft-rang (seven-color) tile decoration in the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).



Figure 36-View of the eastern part of the sarbineh from the mezzanine level. Source: Pourghalam Pirbazari (2018).



Figure 37- View of the western part of the sarbineh and the staircase providing access to the mezzanine level. Source: Pourghalam Pirbazari (2018).



Figure 38- Panoramic views of the sarbineh space in the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).

The internal ceiling of the sarbineh in the Hajji Bathhouse is constructed using timber paneling (lambek-kubi). In contrast, the external roof is covered with clay tiles, forming a sloped roofing system characteristic of vernacular architecture in humid northern regions of Iran. This dual construction reflects adaptation to climatic conditions, particularly the need for durability and effective water drainage in high-rainfall environments (Soltanzadeh, 2011; Fadli & Sibley, 2008).



Figure 39- Interior ceiling finish of the sarbineh in the Hajji Bathhouse, showing timber paneling (lambek-kubi). Source: Pourghalam Pirbazari (2018).



Figure 40- External roof finish of the sarbineh in the Hajji Bathhouse, showing clay tile roofing. Source: Pourghalam Pirbazari (2018).

Along the lateral walls adjacent to the windows, recessed niches with semi-circular arches have been designed at an elevation of approximately 0.8 meters above the floor level. These niches are accentuated by the use of haft-rang (seven-color) tilework applied beneath them, enhancing both the decorative and spatial qualities of the interior (Soltanzadeh, 2011).



Figure 41- Recessed niche with a semi-circular arch in the sarbineh. Source: Pourghalam Pirbazari (2018).

The decorative scheme of the sarbineh in the Hajji Bathhouse incorporates three distinct types of tilework: haft-rang (seven-color) tiles adorned with bird motifs, haft-rang tiles organized within irregular octagonal compositions likewise depicting bird forms, and monochromatic blue tiles. This variation in tile typology reflects both aesthetic diversity and the integration of figurative and geometric decoration characteristic of Qajar-period architectural ornamentation (Jahani, 2020; Soltanzadeh, 2011).

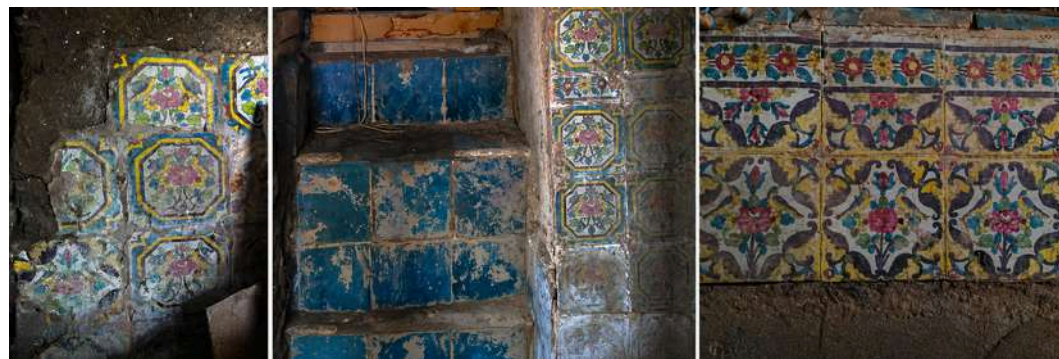


Figure 42- Typology of Tilework in the Sarbineh. Source: Pourghalam Pirbazari (2018).

Based on the apparent form and material composition of the walls, it can be inferred that modifications and alterations were carried out

in this space in the years following the original construction. Evidence of such changes is particularly visible in sections such as the western side of the changing hall, where later interventions have altered the original structure.

As a result of these interventions, the rear part of this space is now defined by partition walls containing a staircase and tile decorations. In addition, wooden railings have been introduced, creating a mezzanine level that overlooks the changing area (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).

Entrance to the miyandar exists in the northern part of the sarbineh, indicating the existence of a continuation of the conventional spatial organization (Pourghalam Pirbazari, 2018).

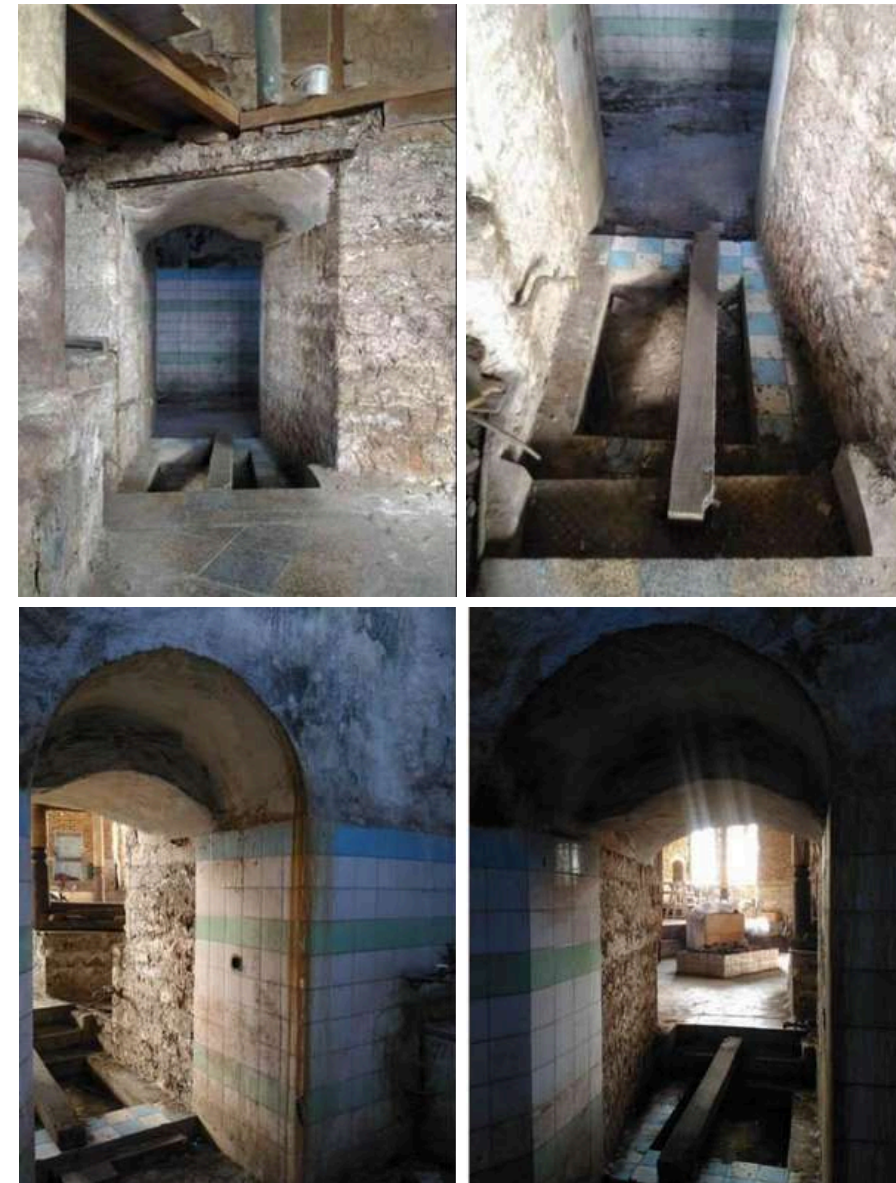


Figure 43- Entrance from the sarbineh to the miyandar in the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).

— Intermediate Space (Miyandar)

Entrance to the miyandar exists in the northern part of the sarbineh, indicating the existence of a continuation of the conventional spatial organization. The role of the miyandar in this house is to be an intermediate space that serves the purpose of transition between spaces. This space includes a narrow corridor whose size is about 5 meters long, 2 meters wide, and 4 meters high. In this space, the ceiling is formed in the form of a vault that helps to emphasize the linear movement through the space. Basin is included in the western side of the corridor that is meant to wash towels.

This spatial organization implies that the role of the miyandar is to be an intermediary space facilitating circulation and environmental transition from the sarbineh to the garmkhaneh (Soltanzadeh, 2011; Fadli & Sibley, 2008). At the end of the miyandar corridor, a doorway is located on the eastern side, leading to the sanitary facilities.



Figure 44- Towel-washing basin in the miyandar of the Hajji Bathhouse. Source: Pourghalam Pirbazari (2018).



Figure 45- Access to the sanitary facilities from the miyandar. Source: Pourghalam Pirbazari (2018).

At the northern end of the miyandar corridor, a short passage has been designed to provide access to the garmkhaneh (hot chamber) (Soltanzadeh, 2011).



Figure 46- Entrance from the miyandar to the garmkhaneh. Source: Pourghalam Pirbazari (2018).

— Hot Chamber (Garmkhaneh)

The spatial geometry of the garmkhaneh in the Hajji Bathhouse is centered on an octagonal form accompanied by four adjoining rectangular subdivisions, a configuration consistent with the building's overall spatial organization as identified in previous architectural studies. The central chamber is described as being a hall in octagonal form, occupying an approximate floor space of 32 square meters. The hall contains various functional compartments such as compartments for water reservoirs (khazineh) and for bathing. Also, additional bathing compartments can be seen attached to this main compartment, thus forming a spatial organization (Jahani, 2019).

The principal garmkhaneh space rises to a height of approximately 7 meters and is covered by a dome having a skylight. In this way, controlled natural light is introduced into the inner space. Structurally, the dome has two vaulted compartments on either side that is, eastern and western sides, making lateral niches of 2.65 meters deep each. These semi-enclosed spaces provide areas for more private bathing activities, thereby reinforcing both functional efficiency and spatial hierarchy within the bathing environment (Pourghalam Pirbazari (2018).

In such zones, the bath attendants managed the bathing and cleansing rituals, leading the visitors through an organized series of actions.. The spatial organization enabled bathers to move progressively between the pool, resting areas, and washing spaces, reflecting the regulated and ritualized nature of bathing practices in traditional Iranian bathhouses (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).



Figure 47- Main dome and central skylight of the hot chamber. Source: Pourghalam Pirbazari (2018).

Adjacent to the entrance of the garmkhaneh, two semi-private bathing chambers are located along its western side. The spaces mentioned above are similar in their function to those in today's private bathing rooms, allowing for a more private setting during the bathing process.

In the north of the garmkhaneh, there is a special space where the people rested before entering the water baths.

After cleansing through the procedures carried out by bath attendants, they went to the khazineh situated in the east and west parts.

Thus, we can see the orderliness of bathing activities performed within the structure of the Iranian garmkhaneh (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).



Figure 48- Semi-private bathing chambers. Source: Pourghalam Pirbazari (2018).

All parts of the garmkhaneh are covered by domed ceilings, each incorporating a skylight to provide natural illumination. The central space is distinguished by a larger dome, while the domed coverings of the surrounding areas vary in size according to the dimensions of each space, reflecting the hierarchical organization of the interior. This variation in dome scale also contributes to the regulation of light and internal conditions within the bathhouse, a characteristic feature of traditional Iranian bathing architecture (Soltanzadeh, 2011).

The tiles used in the miyandar, garmkhaneh and sanitary space differ from those in the sarbineh, as they are generally simple and monochromatic. Observations indicate that the dominant color is

s white, while blue and green tiles are employed more sparingly, primarily as horizontal bands along the lower parts of the walls (Jahani, 2020).



Figure 49- Domed ceilings in garmkhaneh.
Source: Esmailpour Shalamani (2023)



Figure 50- The tiles in garmkhaneh.
Source: Esmailpour Shalamani (2023)

— Hot Water Reservoir (Khazineh)

In the northwestern part of the garmkhaneh (hot chamber), an access point leads to the khazineh (hot water reservoir) through a level difference of four steps. Additionally, the western side of the khazineh contains spatial elements comparable to those found in contemporary bathing facilities.

However, a partition wall has been constructed in front of the basin area associated with the khazineh, which currently prevents direct access and observation of this space.

In traditional Iranian bathhouse design, the khazineh was normally positioned right next to the women's bathing section. This layout made it easy for the efficient distribution of heat, allowing a single heating system to serve both the men's and women's sections simultaneously (Kiani, 2009; Soltanzadeh, 2011).

The Cultural Heritage, Handicrafts and Tourism Organization of Gilan province has provided documentation according to which the khazineh (hot water reservoir) consists of a basin with an approximate measurement of 2 by 1.9 meters. The space is covered by a perforated domical ceiling rising to a height of approximately 1.5 meters above the floor level (Cultural Heritage, Handicrafts and Tourism Organization of Gilan Province, 2012).



Figure 51- Entrance from the garmkhaneh to the khazineh. Source: Pourgholam Pirbazari (2018).

The environmental regulation system of traditional bathhouses was designed to create a gradual transition of temperature and humidity. These conditions increased progressively from the hashti, entrance, and sarbineh—characterized as semi-warm and semi-humid—toward the garmkhaneh (hot chamber), which was warm and moist, and ultimately to the khazineh (hot water reservoir), where the environment reached very high levels of heat and humidity.

In fully developed bathhouses, the khazineh typically consisted of three sections: one designated for hot water, another for cold water, and an intermediate basin containing lukewarm water. Notably, direct immersion in the hot or cold reservoirs was generally avoided (Pirnia, 2011).

The ceiling of the khazineh, similar to other sections of the bathhouse is constructed in a vaulted form. Natural lighting in this space is provided through openings in the roof (Soltanzadeh, 2011)



Figure 52- Part of the khazineh.
Source: Pourgholam Pirbazari
(2018).



Figure 53- Ceiling of the khazineh.
Source: Pourgholam Pirbazari
(2018).



Figure 54- External roof covering of the Haji Bathhouse. Source: Esmailpour
Shalamani (2023)

04

CASE STUDY ANALYSIS

Case Study Analysis & its role in shaping the design approach
Case Study: Ali Gholi Agha Bathhouse in Isfahan, Iran
Case Study: Thermal Baths at Vals, Switzerland
Case Study: Dipòsit de les Aigües in Barcelona, Spain



VEIL
OF
STEAM

REIMAGINING HAMMAM
AS A CONTEMPORARY SPA

Case Study Analysis & Its Impact on the Design Process

The analysis of case studies plays a fundamental role in shaping the design approach of this project, particularly in the context of restoring and reinterpreting a historical bathhouse. In this research, a select number of both examples of Iranian architecture and of international scope have been studied in order to create the conceptual foundation of the project, incorporating heritage preservation, spatial experiences and contemporary design techniques.

The first part of case studies includes traditional Iranian bathhouse (Ali Gholi Agha Bathhouse in Isfahan), which offer valuable information on the original structure, environmental characteristics and significance of these buildings. This building features a hierarchical organization of the spaces—sarbineh, miandar, garmkhaneh and khazineh—designed to regulate temperature and humidity as well as the movement of individuals and producing gradual sensory transitions. Restoration examples give the understanding of ways of maintaining such qualities while adapting the building to new functions (Kermani, 2017).

Besides the study of historical examples, international projects have been studied in order to understand modern design strategies related to the project. In this regard, the example of Therme Vals designed by Peter Zumthor was chosen for its use of heavy stone walls and layered spatial organization, where architecture becomes defined by its weight and enclosure, controlled light and air. In this case, space is created through the interplay of solid and void, producing immersive space focused on water and sensory experience (Zumthor, 1996).

Also, the Edifici de les Aigües is analyzed for its adaptive reuse strategy and the presence of water not only as functional but also as an architectural and spatial element. Specifically, the use of water in the roof area was chosen for its influence on environmental performance and perception of space. This strategy serves as a direct inspiration for the design of the extension to the Haji Bathhouse, where water is reintroduced as an active architectural component, enhancing both the climatic behavior and the experiential quality of the new intervention (Plevoets & Van Cleempoel, 2011).

By combining these case studies, this research establishes a dialogue between tradition and contemporary architecture. The traditional Iranian bathhouses create a basis through the principles of hierarchical spaces and continuity of culture, but the international precedents bring new ideas regarding the aspect of materiality, atmosphere, and the concept of water in architecture. All the mentioned ideas are implemented in the design process, which leads to the redesigning of the Haji Bathhouse into a modern spa.

— Case Study: Ali Gholi Agha Bathhouse in Isfahan, Iran

Ali Gholi Agha Historical Public Bath (ali gholi agha hammam) is located in Isfahan, a province of Iran. Ali Gholi Agha is located on the northern part of the Zayenderood River and downtown Chahar Bagh (a neighborhood in Isfahan).

Ali Gholi Agha's public bath is a part of a larger structure that includes a bazaar, mosque, caravansary, public school, Zour Khaneh (a gym where Iranian men practiced a type of sports that is closely related to the modern form of bodybuilding), and Charsoogh (a place in the middle of bazaar where four halls were introduced to one each of which one chose would lead one to a different part of the bazaar) (Sarmiento & Kazemi, 2014; Kermani, 2017).



Figure 55- 360-degree panoramic view of the intricate ceiling inside the Ali Gholi Agha Hammam. Source: Derakhshani (2025).

Ali Gholi Agha Public Bath was built in 1713. It is located in the Bid Abad's (a place filled with willow trees) neighborhood of Isfahan.

It consists of two bathes, one spacious and the other slightly smaller in size, and it has a Chal Hoze (a structure that was built at the center of public baths to store water which functioned as a pool where visitors could jump in and enjoy the feeling of warm water on their skin) at that center of it.

Each of the two bathes had its changing hall (traditionally called "Sarbineh") and a hot chamber (traditionally known as "Garm Khaneh") which reminds one of the modern saunas.

People stayed in the warm house to relax and wash up. Because of the magnificent heating system of the bath, the floor was always warm to the degree that one would never feel their feet getting cold once walking around the bath (Sarmiento & Kazemi, 2014; Derakhshani, 2025).

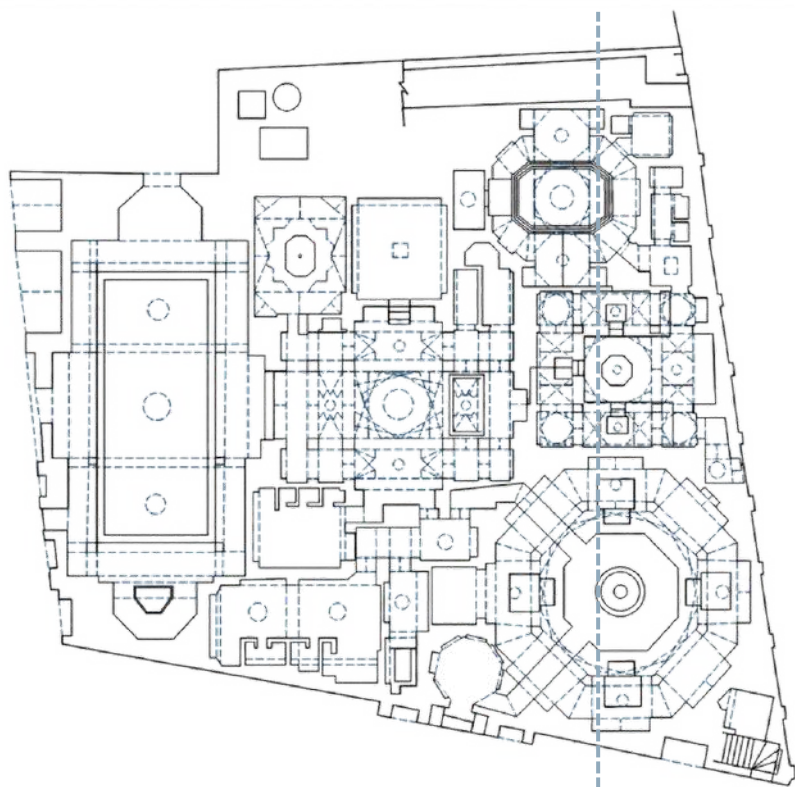


Figure 56- Plan of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

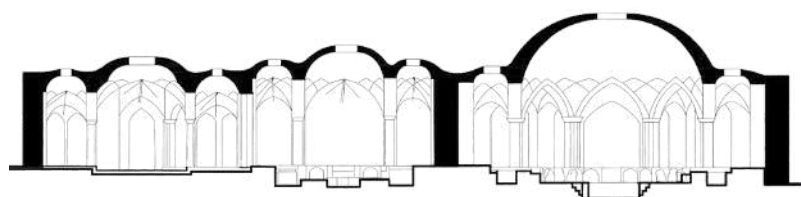


Figure 57- Section of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

— Spatial Organization of the Ali Qoli Agha Hammam

Entrance Sequence: The main bathhouse is accessed through an octagonal entrance chamber known as the hashti, which serves as an intermediary transitional space. From this space, two perpendicular corridors guide visitors toward the changing hall (sarbineh) (Kermani, 2017).

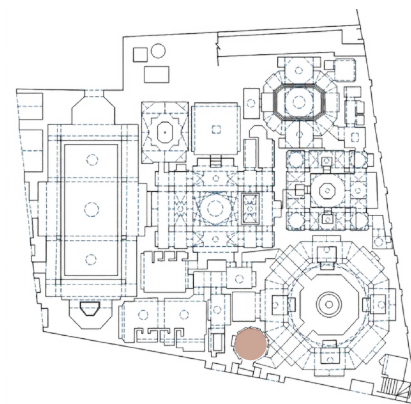


Figure 58- Entrance of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

Changing Hall (Sarbineh): The sarbineh itself is designed as a complete octagonal volume, crowned by a dome supported by eight stone columns. Each bathing unit includes a heated chamber (garmkhaneh), functionally comparable to a sauna, where users engaged in washing and relaxation. Natural illumination is provided through glass openings known as jam-khaneh. The lower walls of the building are decorated with seven-color tiles, depicting floral and geometrical designs. The upper walls consist of lime plaster relief carvings and figure paintings, some of which belong to the Qajar era (Sarmiento & Kazemi, 2014; Kermani, 2017).

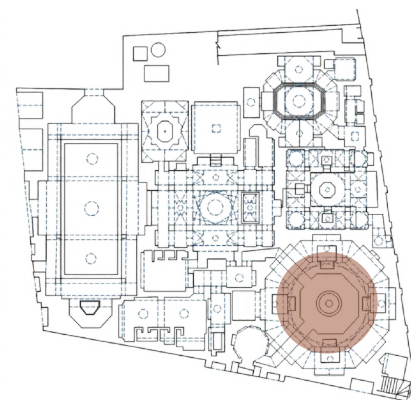


Figure 59- Sarbineh of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

The sarbineh also played an important social role. It was used as a discursive space for relaxing and socializing, where one could stay before and after the bathing process. Regulated entry and exit by users helped in regulating the temperature changes and made it possible to gradually adjust the body to the environment of the bathhouse. Not only that but besides its practical function, the sarbineh was also used as a social space for socializing, discussing, and pausing. Overall, all these qualities made the sarbineh very important in traditional bathhouses. (Sarmento & Kazemi, 2014).

Intermediate Space (Miandar): The connection between the changing hall and the hot bath room is achieved through an intermediary transition area designed for regulating movement, heating, and adaptation. Such intermediary areas tend to be indirect, narrow, and even curved, often including a vestibule that breaks the continuity of view and heat transfer between the two main rooms. Such spatial configuration helps to maintain heat in the segment and prevents the sudden drop in temperature.

Functionally, this transitional zone acts as a thermal buffer between the cooler changing area and the hotter bathing chamber. By moderating airflow and circulation, it prevents abrupt temperature fluctuations that could cause physical discomfort. The gradual environmental transition demonstrates a sophisticated understanding of human physiology and climatic adaptation (Kermani, 2017).



Figure 60- Entrance view of Miandar from sarbineh of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

Hot Chamber (Garmkhaneh): The hot chamber is normally smaller and more closed off compared to the changing hall and is mainly meant for bathing and cleaning. This room is normally organized in different alcoves or sub-rooms each having a particular function.

In most cases, the hot room in the traditional baths has a square or octagon shape and includes features like small pools, large basins, and private areas.

The presence of water, steam, and moisture helps create an enclosed, warm and intimate setting that favors bathing. Water is an important feature in this room, since besides being used for washing, it is used to control the temperatures and moisture in the room.

As opposed to the changing hall which is well-lit, the hot room is normally dimly lit and has lighting through small openings on its roof. The combination of the light and steam helps create privacy in the room (Kermani, 2017).

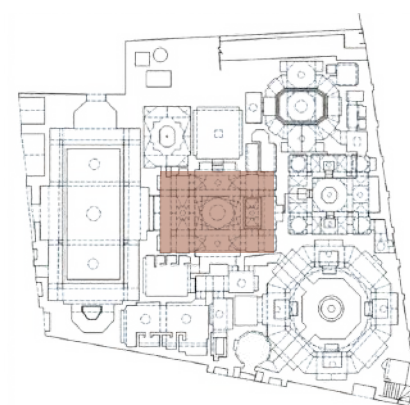


Figure 61- Garmkhaneh of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

Water Reservoir (Khazineh): Khazineh was usually located at the farthest end of garmkhaneh and separated from the main bathing hall with very short partitions. It served as the main hot water storage place for the bathhouse.

Traditional bathhouses used the khazineh system, which was heated from below through a furnace system, so the water could be always kept warm. If the bathhouses were large enough, two different khazinehs would often be used – one for hot water and the other for cold water. In some cases, a bigger main pool was constructed in the bathhouse, and it was used both as a bath and a backup water resource in case of emergencies. Access to khazineh was usually provided through steps, and the water in it was usually warm.

In winters, this part played an important role as the place where people could heat up their bodies and get used to changing temperatures before moving to other parts of the bathhouse.

On either side of khazineh, there were small bathrooms for individuals called shahneshin. These areas allowed bathers to immerse themselves in water with greater privacy (Kermani, 2017).

The khazineh played a central role in regulating the water temperature and completing the bathing ritual, especially during colder seasons.



Figure 62- Khazineh of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

The spatial organization of traditional Iranian bathhouses, as shown in Figure 63, is structured as a hierarchical sequence—from vestibule to sarbineh, miandar, and garmkhaneh with its associated khazineh and service spaces—that orchestrates a gradual transition in temperature, humidity, and privacy; the sarbineh functions as a social and temperate space, while the miandar acts as an environmental buffer controlling heat loss and visibility, and the garmkhaneh forms the thermal and functional core supported by integrated water-heating systems, collectively producing a calibrated sensory progression and efficient environmental performance, while also reflecting the bathhouse's role in ritual and communal life, a spatial logic that restored examples demonstrate can be preserved and adapted for contemporary uses without losing its experiential and cultural integrity (Mohammad Moradi & Akharkavan, 2008).

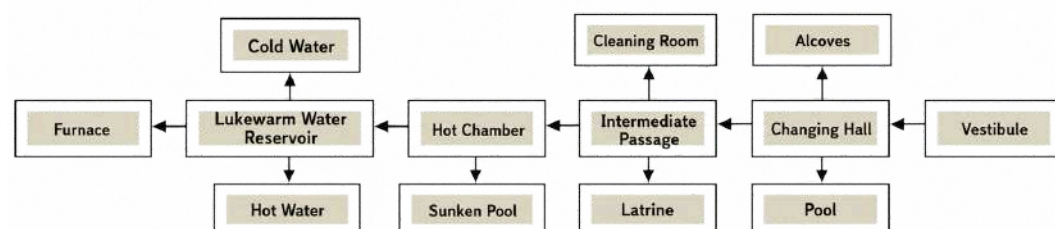


Figure 63- Spatial organization of traditional Iranian bathhouses. Source: (Mohammad Moradi & Akharkavan, 2008)

— Lighting and Ventilation in Traditional Bathhouses

One of the most unique features that set traditional Iranian bathhouses apart from other buildings was the roof openings, known as goljam skylights, which were installed above the bathing chambers. Not only did the design of such an opening allow for the intake of sunlight, but it helped regulate the air quality in the space. Unlike in the case of Roman bathhouses, Iranian bathhouses preferred smaller and controlled roof openings, allowing them to control factors such as privacy, lighting, humidity, and temperature. The goljam skylights served a major function in terms of regulating the internal conditions of the bathhouse. With help of such roof structures, excessive steam and hot air was released from the space, allowing fresh air to come inside. Such an exchange of air reduced the need for forced ventilation in the bathhouse. In addition to roof openings, small windows and vents were sometimes positioned at higher levels of the walls to support air circulation, particularly during warmer seasons. Together, these architectural elements created a passive environmental system that provided soft, diffused light and continuous air movement, while preventing the accumulation of excessive humidity and contributing to a healthier interior atmosphere (Kianersi & Ahmadi, 2012).



Figure 64- Roof skylights (goljam) of the Ali Gholi Agha Bathhouse. Source: (Kermani, 2017)

— Case Study: Thermal Baths at Vals, Switzerland

The Thermal Baths at Vals, commonly referred to as Therme Vals, are located in the alpine village of Vals in the canton of Graubünden, Switzerland. Designed by Peter Zumthor and completed in 1996, the project is widely recognised for its integration of architecture, landscape, materiality, and sensory experience. The baths were constructed adjacent to a hotel complex developed in the 1960s, originating from the exploitation of local thermal springs (Chipperfield, 1996).

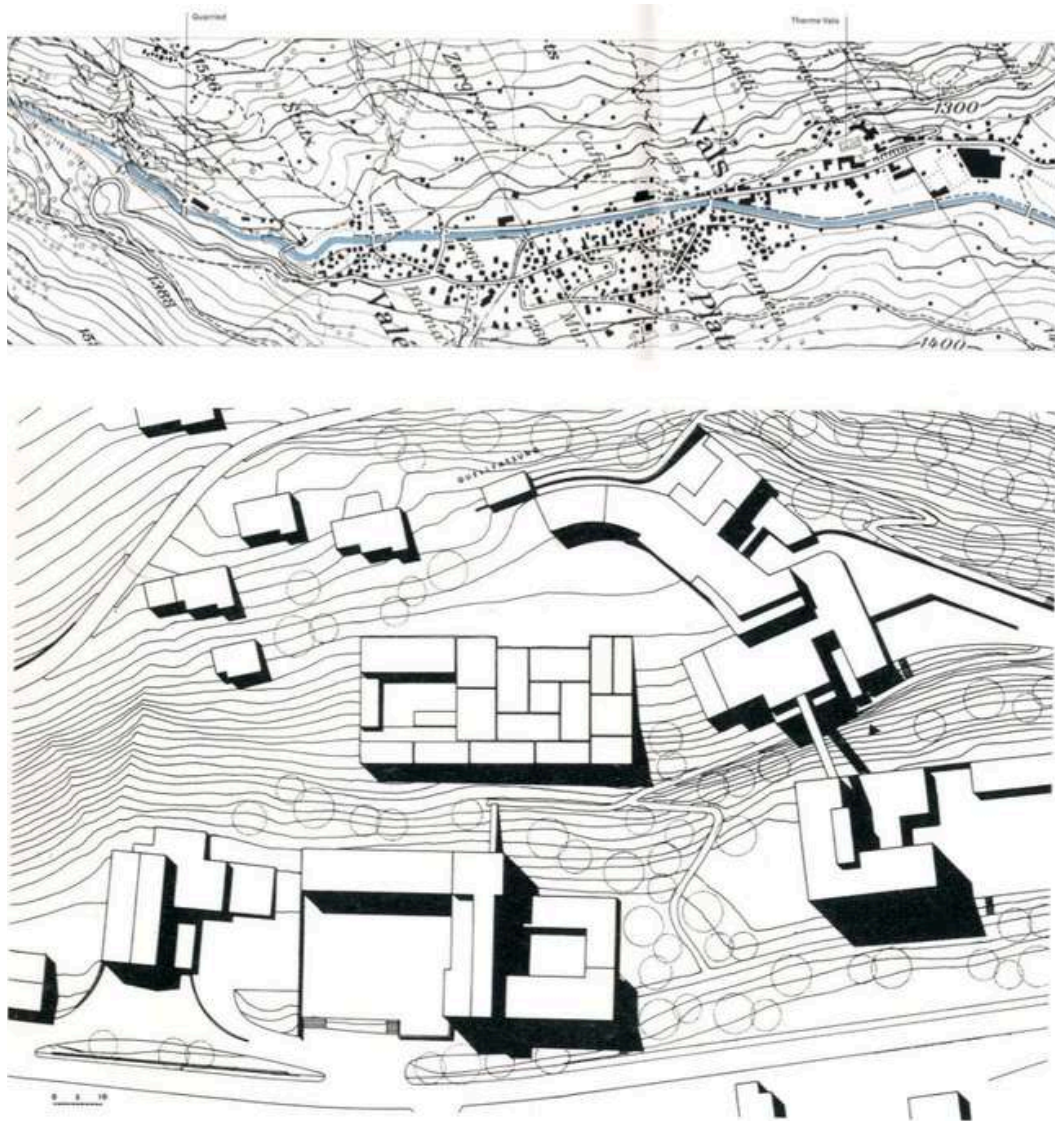


Figure 65- Site plan of Therme Vals, showing the thermal-bath complex in relation to the surrounding hotel buildings and mountainous topography. Source: Escola Tècnica Superior d'Arquitectura del Vallès (2008)

St. Peter's spring has supported the tradition of bathing at Vals for over a century, making it an enduring tradition. Unlike most architectural designs that focus on the creation of a dominating building, Zumthor chooses to embed the building in the mountainside. Partially burial and use of grass on the roof top make it possible for the landscape to run over the building. This serves to define the building as a part of the natural landscape and not as an object (Zumthor, 2006; Chipperfield, 1996).

The idea behind this project lies in the interrelation of mountain, stone, water, light and human body which plays a very important role in the design philosophy of this architect.

For construction, Valser quartzite extracted from local quarry has been used. The stratification of stone material resembles geological stratification of the site which helps situate the architecture into the context of the place. Material choice is not purely aesthetic but tectonic one as well (Zumthor, 2006).



Figure 66- Therme Vals: integration of the exterior thermal pool with the alpine landscape. Source: ArchDaily (n.d.)

As Chipperfield (1996) notes, the project develops material, construction, and space as interrelated systems rather than isolated decisions, resulting in a building of notable “material sophistication” and “physical power.” Thermal water further defines the architecture, functioning simultaneously as programmatic core and experiential medium, shaping movement and perception. Together, these elements establish a coherent relationship between architecture and the geology, climate, and cultural identity of Vals, reflecting a phenomenological approach grounded in construction and experience (Chipperfield, 1996; Zumthor, 2006).

The Thermal Baths at Vals reinterpret ancient bathing traditions through an architecture that supports ritual and sensory engagement. Instead of discrete rooms and corridors, the building is conceived as a continuous spatial landscape of pools, chambers, and places of rest (Zumthor, 2006; Chipperfield, 1996). With parts of it set into the hill and hidden under a grass covered roof, the building has a low profile that is consistent with the surrounding mountainous environment. Seen from above, it is mostly invisible; conversely, the eastern facade opens itself up to the valley. Within the building, an array of massive stone forms is laid out in one large space. These forms, reminiscent of quarry stones, contain small pools and sensory rooms, while the spaces in between serve as circulation paths. As Zumthor himself puts it, this is a “meander” that allows for movement, pause, and exploration in an unrestricted way (Chipperfield, 1996).

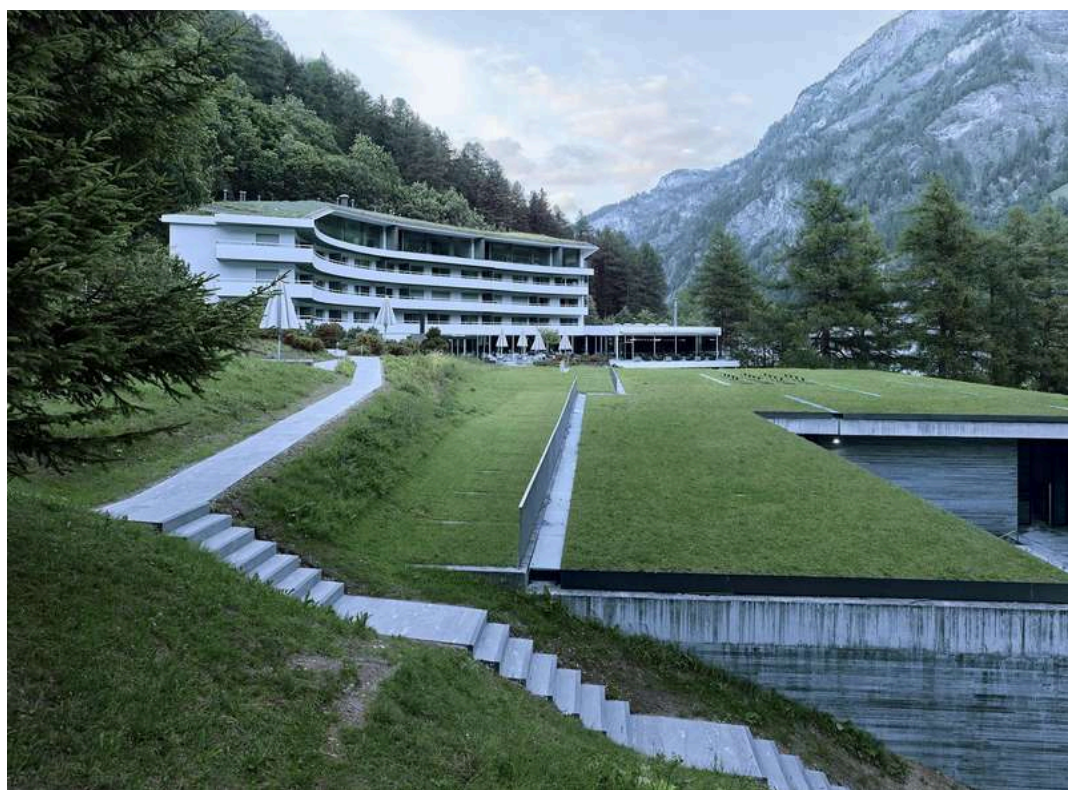


Figure 67- Therme Vals: integration with the alpine landscape and the exterior thermal pool. Source: ArchEyes (2024)

This strategy establishes a balance between formal order and experiential freedom. The geometry of the stone volumes provides structural and spatial clarity, while the interstitial spaces accommodate movement, water, light, and social interaction.

The resulting interplay between solid and void becomes the primary generator of spatial experience, defining the baths’ architectural character (Zumthor, 2006; Hauser et al., 2007).

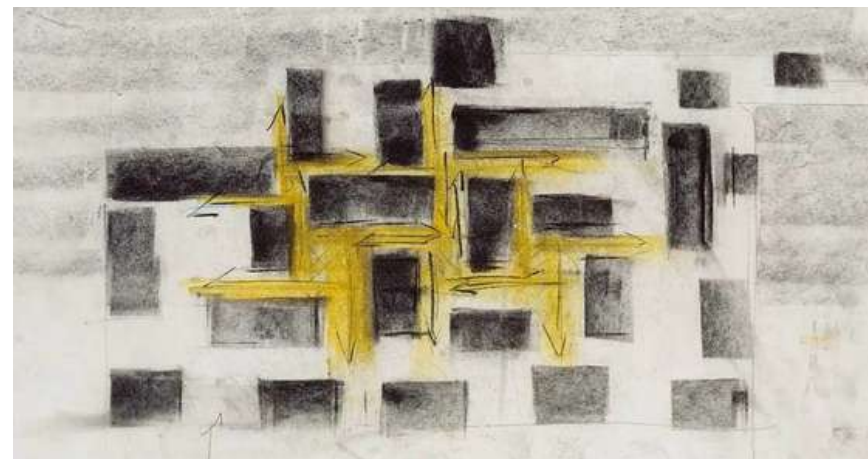


Figure 68- Conceptual sketch of Therme Vals, illustrating the arrangement of stone volumes and circulation. Source: ArchEyes (2024)

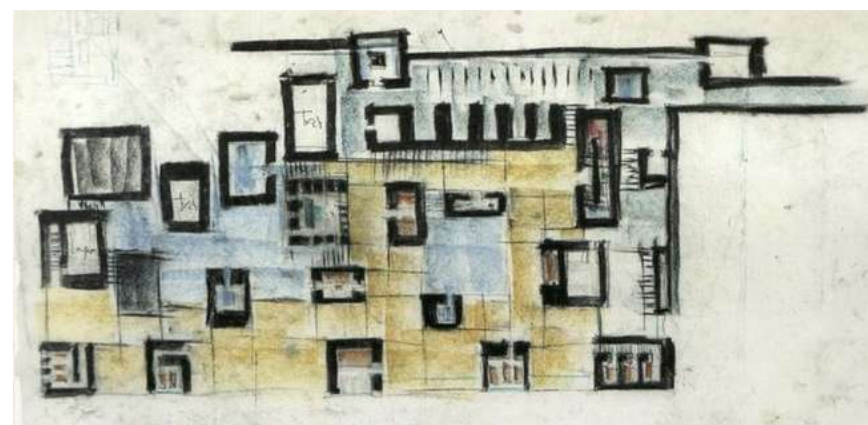


Figure 69- Conceptual plan sketch of Therme Vals, illustrating the fragmented arrangement of bathing spaces. Source: ArchEyes (2024)

— Spatial Organization of the Thermal Baths at Vals

Entrance Sequence: Access to the thermal baths originally occurred through the adjoining hotel, from which visitors descended into a dark, subterranean passage leading to the bathing complex. The absence of daylight, combined with enclosed stone surfaces and the presence of flowing water, gradually detached visitors from the everyday environment of the hotel, initiating a sensory transition (Zumthor, 2006; Murray, 2007).

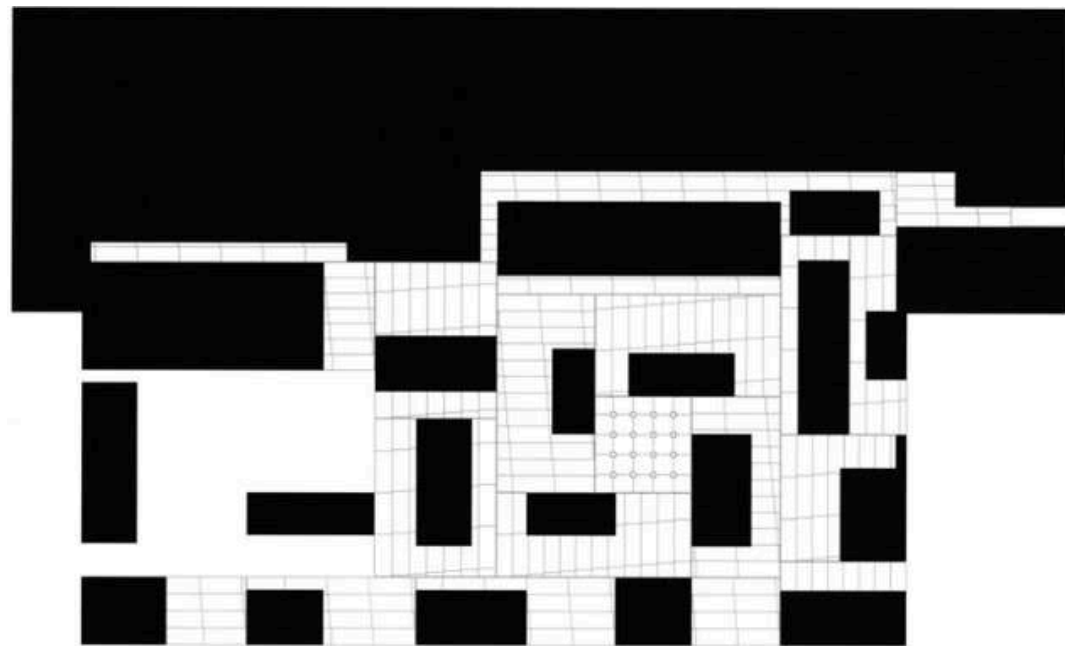


Figure 70- Block structure at the bathing level, showing the skylights, ceiling slits, and formwork pattern of the ceiling slabs. Source: Escola Tècnica Superior d'Arquitectura del Vallès (2008)

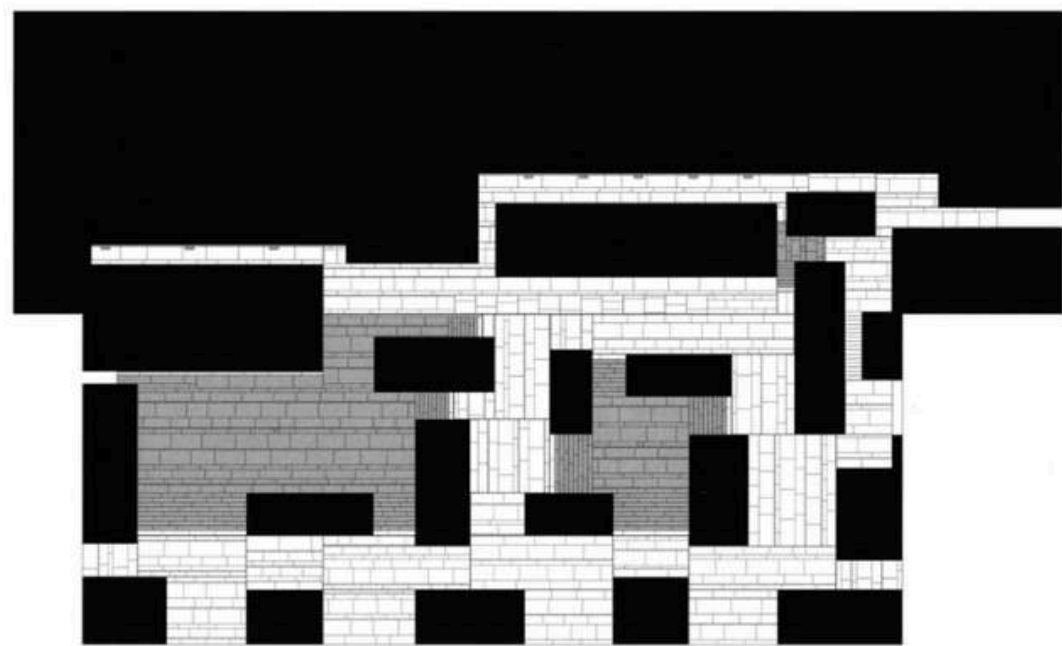


Figure 71- Block structure at the bathing level, showing the stone flooring pattern. Source: Escola Tècnica Superior d'Arquitectura del Vallès (2008)

Along one side of the entrance hall, thermal water emerged through bronze outlets, introducing the spring before the bathing spaces became visible. Encountered first through sound, movement, and taste, water establishes an early sensory presence that anticipates the bathing experience. Openings on the opposite side lead to the changing facilities.

The journey begins from there on a raised platform offering views of the main bathing area, where various key features, namely the pool itself, the solid masses of rock, the roof openings, and the filtered views of the alpine landscape, are revealed gradually rather than immediately. (Chipperfield, 1996).

A sequence of steps and ramps then guides movement downward to the level of the water. This controlled descent slows the pace of movement and reinforces the perception of entering a carved interior landscape. The entrance sequence thus operates as both a spatial and psychological threshold, mediating the transition from everyday routine to the ritualised experience of bathing (Murray, 2007; Zumthor, 2006).

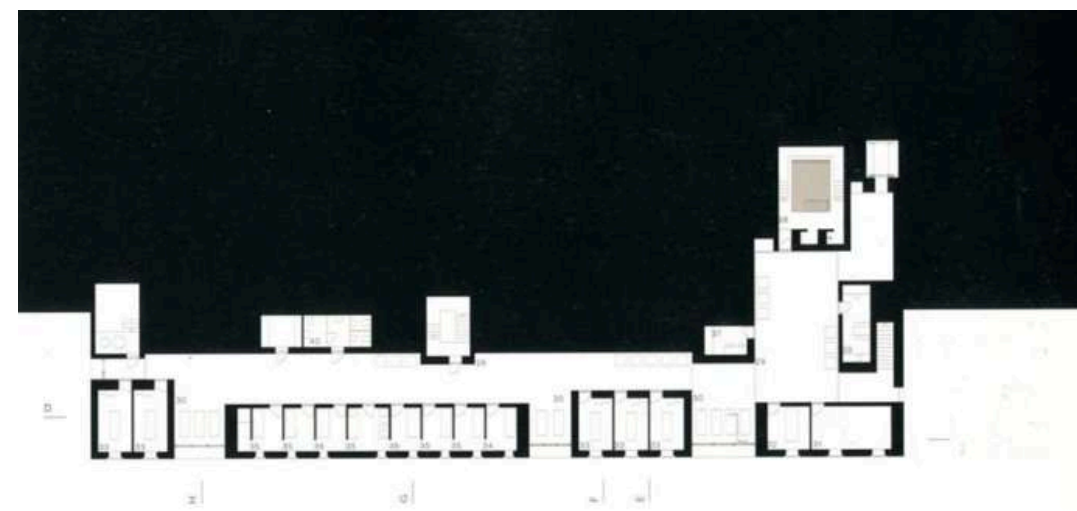


Figure 72- Floor Plan - Therapy Level
With areas open to the public

Floor Plan Spaces

- Waiting areas
- Rest areas
- Physiotherapy
- Underwater massage
- Massage
- Stretching bed
- Fango treatment and preparation room
- Medicinal baths
- Inhalation
- Hydrotherapy bath, 32°C / 90°F
- Kitchen
- Restrooms



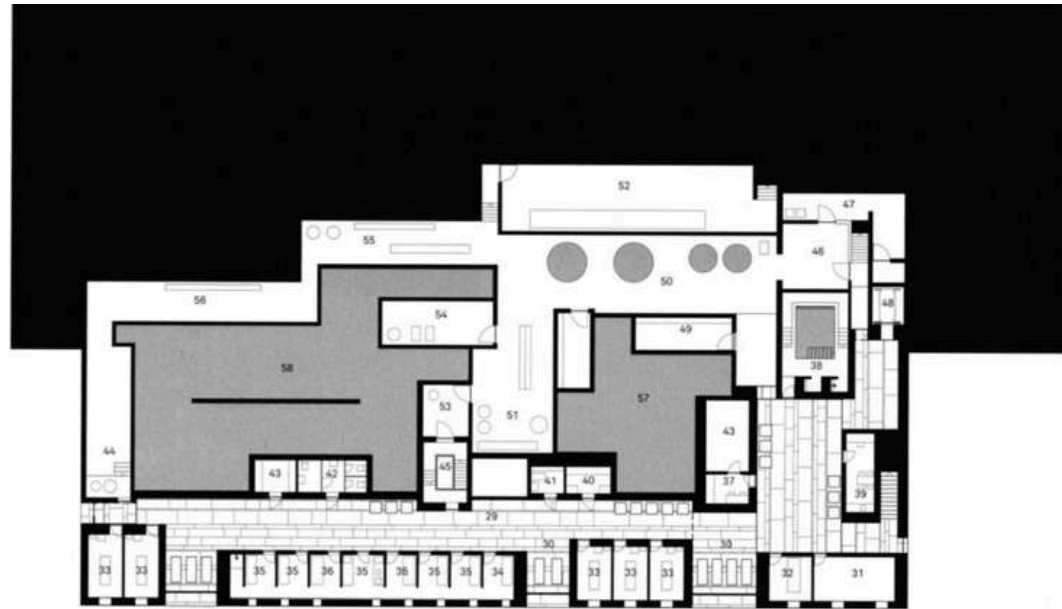


Figure 73- Floor Plan: Building Services and Therapeutic Facilities



- Waiting areas
- Rest areas
- Physiotherapy
- Underwater massage
- Massage
- Orthopaedic bed
- Fango, fango prep room
- Medicinal bath
- Inhalation
- Aquatherapy 36°
- Tea kitchen
- Laundry store
- Cleaner's storeroom
- Toilets
- Storeroom
- Plant access
- Plant stairs, sub-floor
- Flower bath equipment
- Chemicals
- Lift machinery room
- Electricity plant
- Water treatment
- Main sanitation plant
- Air-conditioning plant
- Carbonic acid
- Fire bath plant
- Ozone treatment
- Secondary sanitation plant
- Freshwater tank
- Wastewater tank

— Spatial Organization of the Thermal Baths at Vals

Entrance Sequence: Initial access to the thermal baths took place at the nearby hotel. Guests walked out of the hotel lobby and through a dark underground corridor leading towards the bath area.

Darkness, narrow stone walls, and the sound of running water made guests feel farther away from the typical hotel setting. On one side of the hall, the thermal water flowed out of the holes made in the bronze walls; in this manner, the presence of the spring was announced before entering the bathing area. Water could be sensed by people using auditory, tactile, and gustatory senses (Zumthor, 2006).



Figure 74- Floor Plan – Bathing Level

- Entrance and exit area
- Utility room
- Make-up room
- Hall with drinking fountains
- Changing room
- Showers
- Restrooms
- Sweat stone with Turkish showers
- and sweat chambers, 42°C / 107.6°F
- Indoor bath, 32°C / 90°F
- Outdoor bath, 36°C / 96.8°F
- Island of stone
- Stone terrace
- Spring grotto, 36°C / 96.8°F
- Fire bath, 42°C / 107.6°F
- Cold bath, 14°C / 57.2°F
- Shower stone
- Drinking stone
- Sounding stone
- Flower bath, 30°C / 86°F
- Rest space 1
- Outdoor shower stone
- Rest space 2
- Massage
- Rest space 3
- Accessible restroom
- Accessible cloakroom and first-aid room
- Accessible entrance
- Bath attendants



Openings on the opposite side lead to the changing facilities. From there, visitors arrive on an elevated platform overlooking the main

bathing hall, where key elements—the central pool, monolithic stone volumes, roof apertures, and filtered views of the alpine landscape—are gradually revealed rather than immediately exposed (Chipperfield, 1996).

A sequence of steps and ramps then guides movement downward to the level of the water. This controlled descent slows the pace of movement and reinforces the perception of entering a carved interior landscape. The entrance sequence thus operates as both a spatial and psychological threshold, mediating the transition from everyday routine to the ritualised experience of bathing (Murray, 2007; Zumthor, 2006).

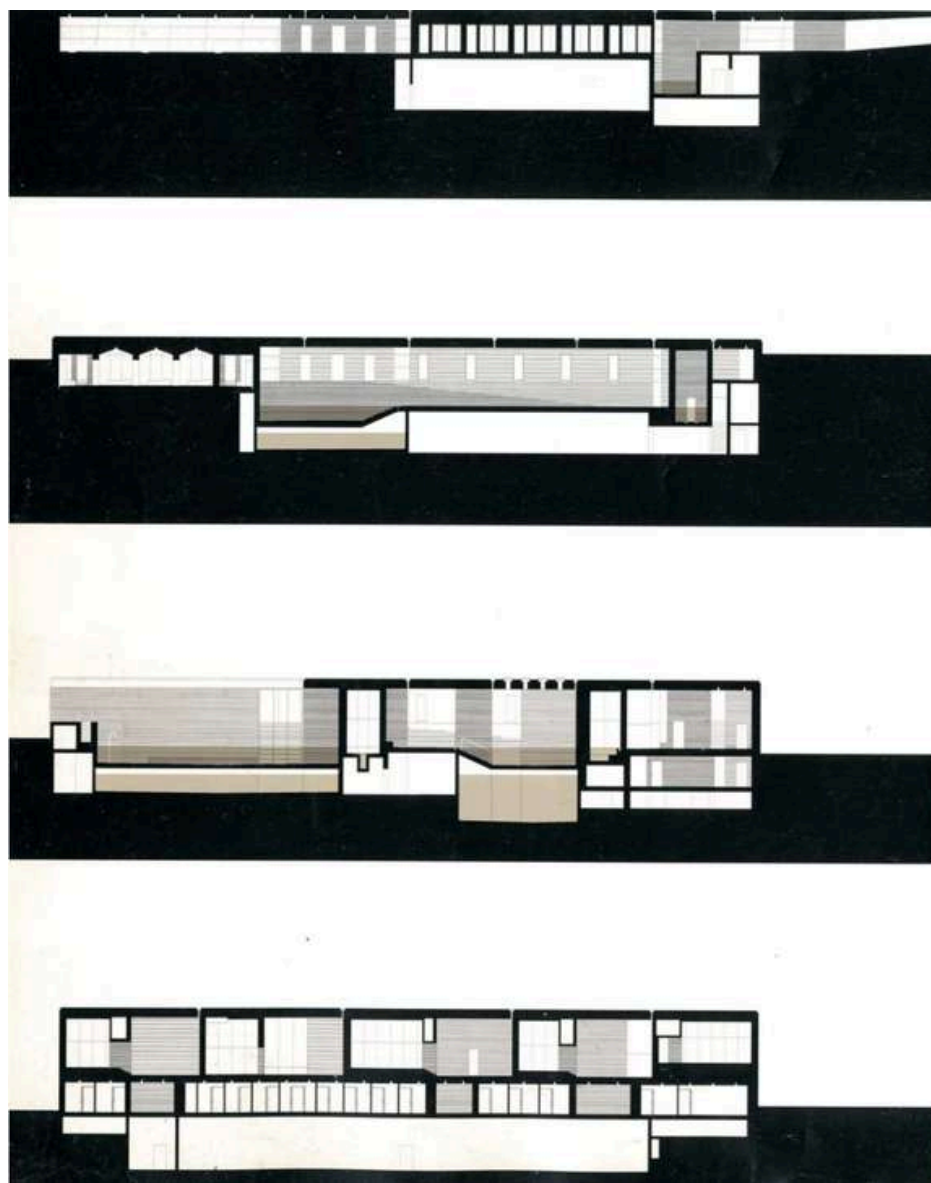


Figure 75- Selected sections of Therme Vals, illustrating its integration with the sloping terrain and the internal spatial arrangement. Source: Escola Tècnica Superior d'Arquitectura del Vallès (2008)

Changing Facilities and Transitional Threshold: The changing rooms represent an intermediate place between the dry entryway and the wet bathing environment. Located at the end of the underground path to the baths, these areas are defined by low light levels, dark surfaces, and small dimensions (Zumthor, 2006).

Apart from their functional role, these places provide a transitional experience for the visitor in which his/her clothing and individuality are removed, thereby moving from everyday life to bathing.

The process takes place step-by-step as visitors are introduced to heat, humidity, stones, water, and light (Chipperfield, 1996).

These intermediate spaces, like those of historic bathhouses, work to mediate environmental changes. In Vals, this mediation takes place by means of more modern mediations, such as the changes in level, enclosure, light, sound, and materials, as opposed to formal hierarchies. The mediation is finally realized at the entry point to the main hall, which is an overhead entry, in contrast to the traditional water level entry point. The entry point allows for orientation to the total space before any movement occurs (Chipperfield, 1996).

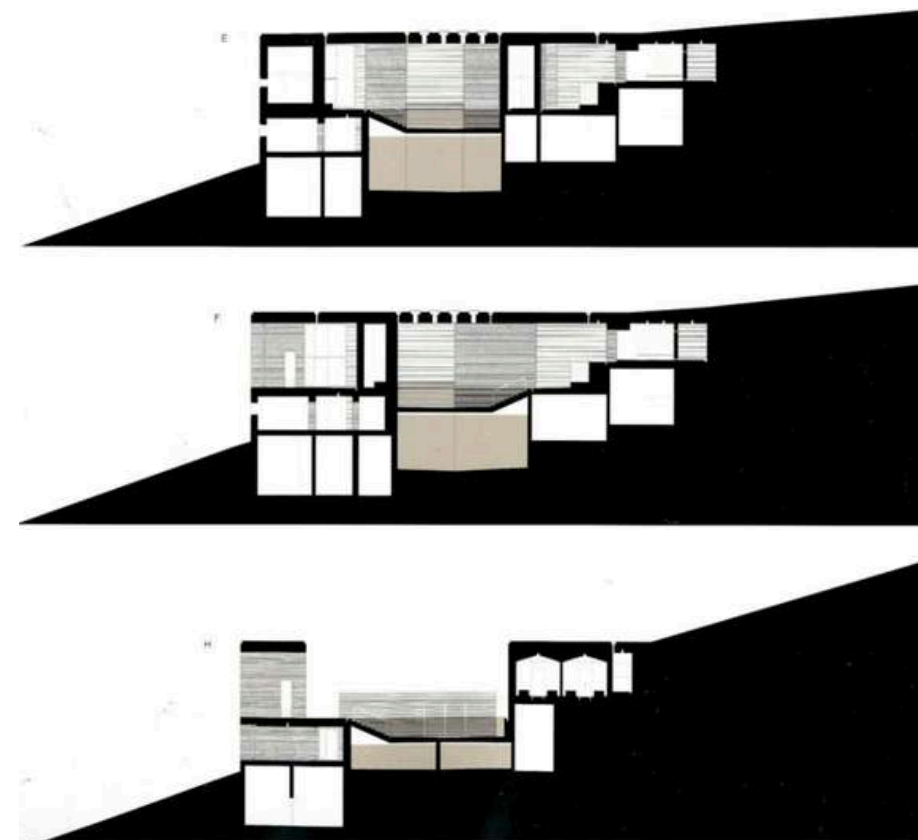


Figure 76- Selected sections of Therme Vals, illustrating its integration with the sloping terrain and the internal spatial arrangement. Source: Escola Tècnica Superior d'Arquitectura del Vallès (2008)

The Meandering Circulation System: Movement through the baths is structured by the continuous space between the stone blocks rather than by conventional corridors. This circulation expands and contracts, turns, opens toward pools, and leads into more intimate chambers, producing a fluid spatial sequence. The movement is directed not by any formal means but by perception: it depends on seeing parts, on reflections, acoustics, changes in temperature, and even glimpsing water. Some places are obvious right away, while others are concealed behind the stone masses (Chipperfield, 1996).

Although spatial organization affects movement, it does not dictate a fixed path of travel. Individual paths are created by individuals moving around pools, repeating routes, or switching between sociable and isolated situations. Such flexibility allows for a personalized bathing experience while maintaining coherence in space through the recurring use of stone, water, and light.

The winding path creates different degrees of privacy since larger pools and corridors are suited to shared use while small rooms provide isolated conditions. Therefore, there is a balance between orientation and discovery, as well as sociability and seclusion (Hauser et al., 2007; Murray, 2007).

Main Indoor Pool: The major indoor pool forms the core of the baths both spatially and socially. The pool is maintained at around 32°C, and it is marked out by stone plinths, circulation paths, and monoliths with small rooms within (Zumthor, 2006).

The pool forms an integral part of the entire composition as it runs underneath and between the stone blocks. Its reflective surface animates the interior, mirroring light, stone, and movement. Functioning as both bathing space and spatial anchor, the pool recurs throughout the sequence, linking the various chambers. Its openness supports collective use, while adjacent spaces provide more intimate conditions. Glazed openings connect the interior to the alpine landscape, where the contrast between warm water and external climate heightens bodily awareness and reinforces the relationship between architecture and environment (Chipperfield, 1996).

Thermal and Sensory Chambers: There is an arrangement of subterranean chambers within the stone structures surrounding the central pool, where each room has a unique condition of heat, sensation, or space. Temperature, materiality, sound, and light become the essential building blocks of the design process and not merely decorative features (Zumthor, 2006).

The fire bath, at around 42°C, provides a clear experience of warmth and enclosure, while the cold tub, at about 12°C, involves the sharp sensation of coldness that triggers the body senses.

This transformation from cold to hot makes temperature one of the architectural experiences, which, in turn, amplifies sensory awareness (Chipperfield, 1996).

Other rooms include the flower room and the drinking water room, which involve the sense of smell and touch via infused water and access to the mineral springs respectively. The so-called “sounding stone” is an example of a sound architecture that is accentuated by dark and enclosed spaces (Zumthor, 2006).

Since they are often small and enclosed, such pools create a sensation of discovery through narrow and indirect access. The ambiance of such chambers derives from the combination of temperature, texture, light, and sound instead of ornamental design. Such spaces form bathing as a process involving specific environmental conditions. Architecture does not merely serve as a container for the body but rather as a tool mediating between the body and water (Zumthor, 2006).



Figure 77- The material, light, and water elements used at Therme Vals represent the atmospheric properties of stone, sunlight, thermal baths, and landscape views of the Alps. Source: ArchEyes (2024)

In Therme Vals, circulation is seen as an important component of the bathing experience and not just a mere system. The transition sequence, viewing positions, changes in floor height, and the gradual presentation of water help form the process of movement as an experience. It does not immediately present the entire project to the users but instead reveals the whole place to them step by step. Indeed, through the Therme Vals example, it becomes clear how current architecture is capable of redefining ancient bathhouses' practices in a different way than simply imitating the style. With regards to the Haji Bathhouse project, while the existing building retains its historical character of space and culture, the suggested addition will redefine the essence of the bathhouse in terms of contemporary architecture.

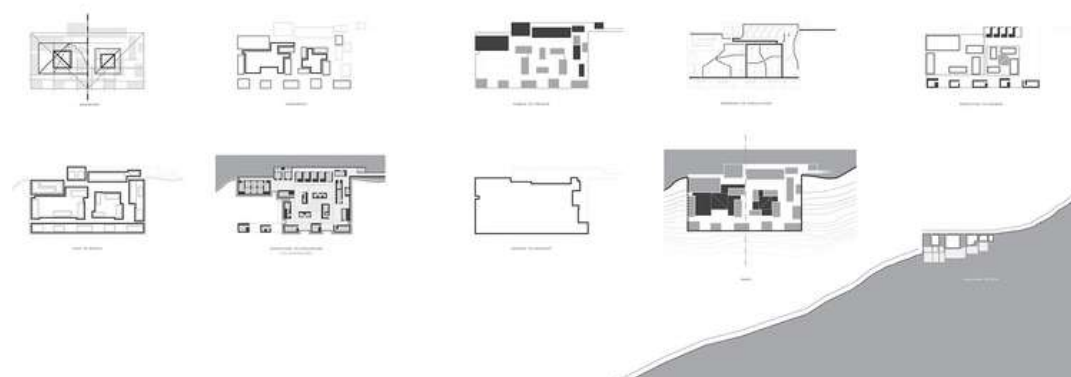


Figure 78- Therme Vals spaces. Source: ArchEyes (2024)

— Case Study: Dipòsit de les Aigües in Barcelona, Spain

The Dipòsit de les Aigües, located beside Parc de la Ciutadella in Barcelona, is a former water reservoir designed in 1874 by Josep Fontserè. Antoni Gaudí, then an architecture student, contributed to the project by carrying out the structural calculations for the reservoir and its supporting system (Universitat Pompeu Fabra, n.d.; Arquitectura Catalana, n.d.). Construction began in 1876, and the building was inaugurated in 1880 to regulate water for the park's monumental waterfall and to irrigate its gardens (Universitat Pompeu Fabra, n.d.).

The structure was conceived as a monumental load-bearing system capable of supporting a large volume of water above its interior. Its lower level is organized as a hypostyle hall formed by parallel rows of brick arches approximately 14 metres high, extending to a depth of about 65 metres (Arquitectura Catalana, n.d.; Universitat Pompeu Fabra, n.d.). The repetition of columns, arches, and barrel vaults establishes a strong spatial rhythm, giving the interior the character of a vast underground cistern inspired by Roman precedents (Arquitectura Catalana, n.d.).



Figure 79- Aerial view of the Edifici de les Aigües and its rooftop water reservoir, Barcelona. Source: Dovel, "Edifici de les Aigües," Barcelona, Ahora y Siempre, 4 December 2013.

Having served various purposes, the building became a property of Universitat Pompeu Fabra in 1992 and was subsequently used as its main library. The rehabilitation, carried out by Lluís Clotet and Ignacio Paricio between 1993 and 1999, preserved the structural integrity of the original building while adapting it to contemporary academic functions (Universitat Pompeu Fabra, n.d.; Metalocus, 2021).

— Adaptive Reuse Strategy

The rehabilitation strategy prioritized the recovery of the reservoir's original spatial clarity rather than subdividing the interior into conventional enclosed rooms. Subsequent partitions and portions of the intermediate floor were removed, revealing the continuity of the brick structure and emphasizing its monumental height (Metalocus, 2021).

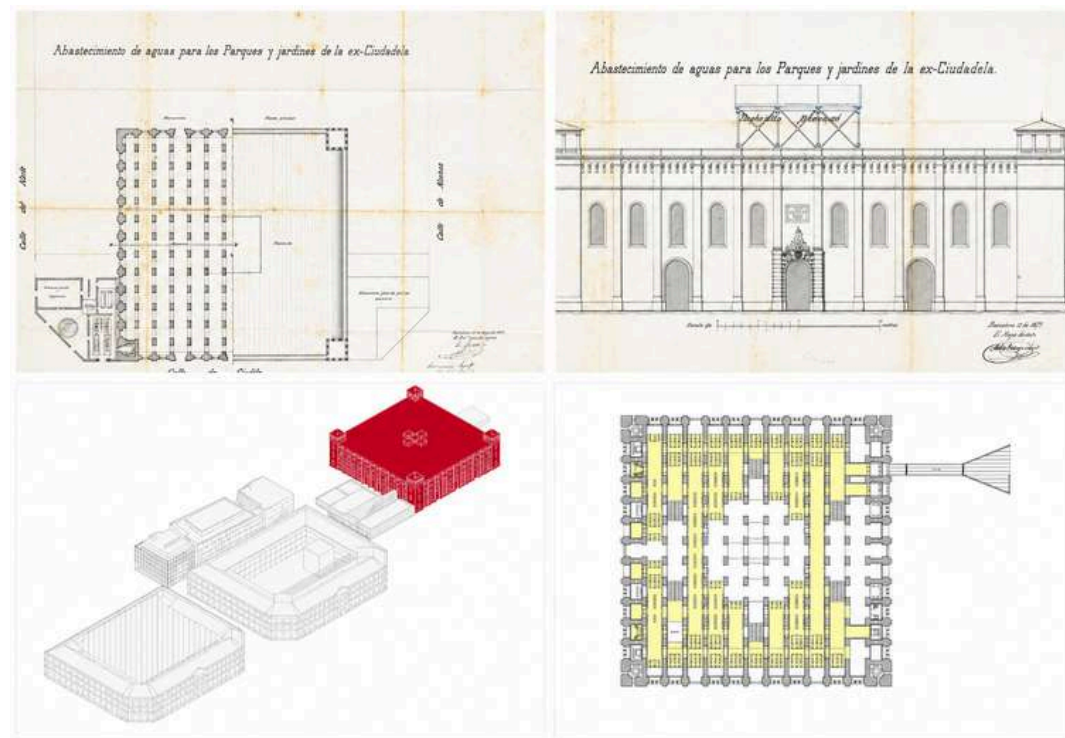


Figure 80- Architectural drawings of the Edifici de les Aigües, Barcelona. Source: Metalocus (2021).

The new library functions have been achieved through a series of mezzanine levels, which are placed about three meters above the main floor. The mezzanine levels are prefabricated sections, similar to furniture-like objects that fit into the historical space. They offer spaces for reading as well as technical operations without interfering with the original stone structure (Metalocus, 2021).

— Roof, Water and Natural Light

The roof originally functioned as the base of the elevated water reservoir. During the rehabilitation, the large volume of stored water was replaced with a thin, shallow layer positioned at the upper surface of the roof. This intervention reduced the structural load and improved waterproofing and seismic performance while preserving the historic association between the building and water. Five skylights were introduced at the geometric centre of the roof. These openings balance the daylight entering from the perimeter and establish a visual relationship between the interior hall and the water surface above. Daylight passing through and reflecting from the shallow roof pool produces dynamic patterns of light within the interior, creating what has been described as a “kaleidoscopic” relationship between the reservoir, the roof, and the vaulted space. Water therefore remains an active architectural element rather than functioning solely as a reference to the building’s former use. Its movement, reflection, and interaction with daylight animate the heavy brick structure and introduce a constantly changing atmospheric quality into the library (Metalocus, 2021).

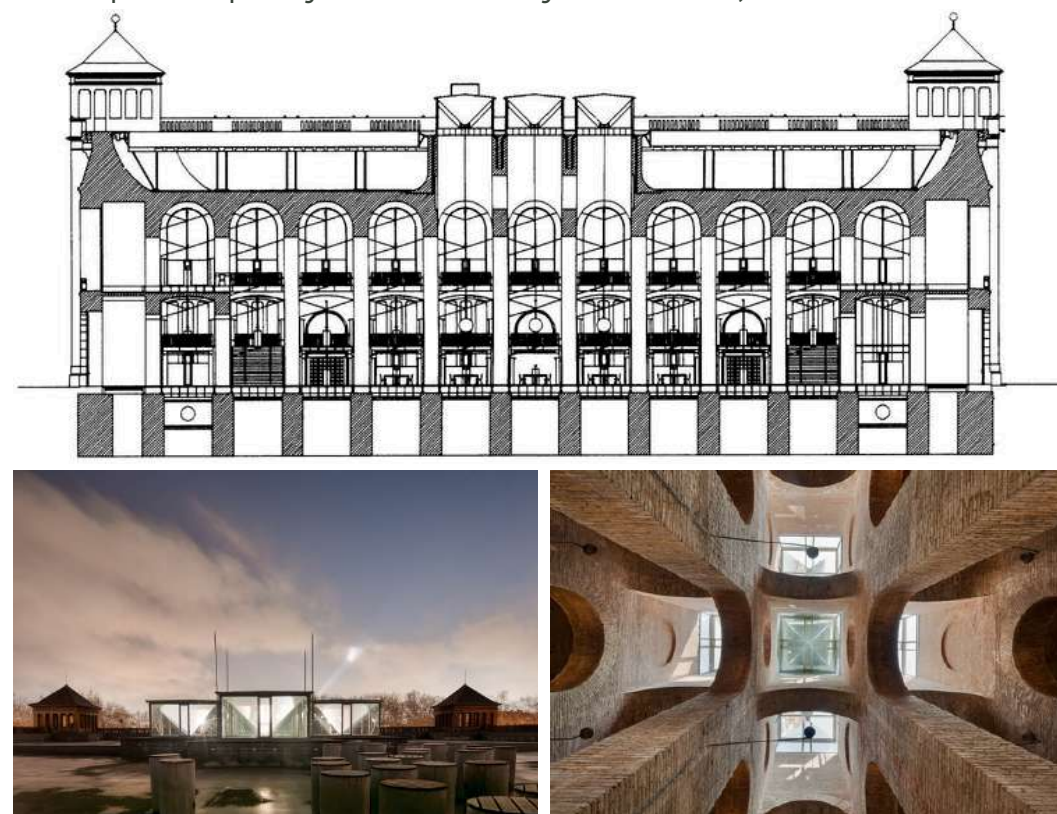


Figure 81- Section, roof and Upward view of the brick vaults and central roof skylights inside the Dipòsit de les Aigües Library, Barcelona. Source: Metalocus (2021).

The Dipòsit de les Aigües demonstrates how adaptive reuse can preserve the monumental character of a historic structure while introducing contemporary functions and environmental experiences. Its roof intervention transforms the memory of the former reservoir into a shallow reflective water surface connected visually to the interior through skylights. This relationship between water, daylight, and historic structure offers a direct design reference for the Haji Bathhouse, particularly for developing a roof that transfers moving water reflections into the interior.

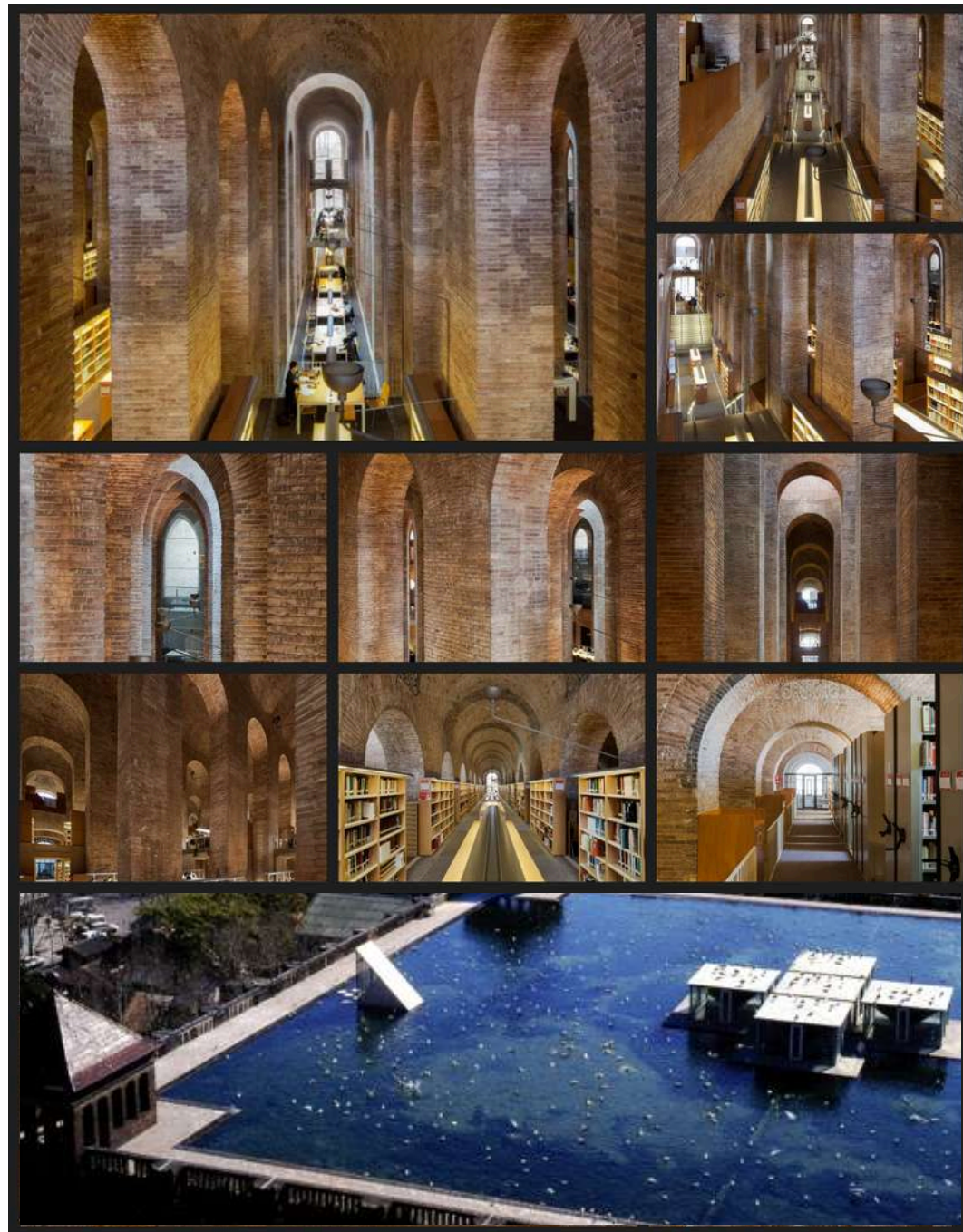


Figure 82- Interior and exterior view of the building, Source: Metalocus (2021).

05

Design Approach: Adaptive Reuse & Spatial Interpretation

Rationale of Adaptive Reuse and Design Approach
Architectural Drawings
Conclusion



VEIL
OF
STEAM

REIMAGINING HAMMAM
AS A CONTEMPORARY SPA

Rationale of Adaptive Reuse and Design Approach

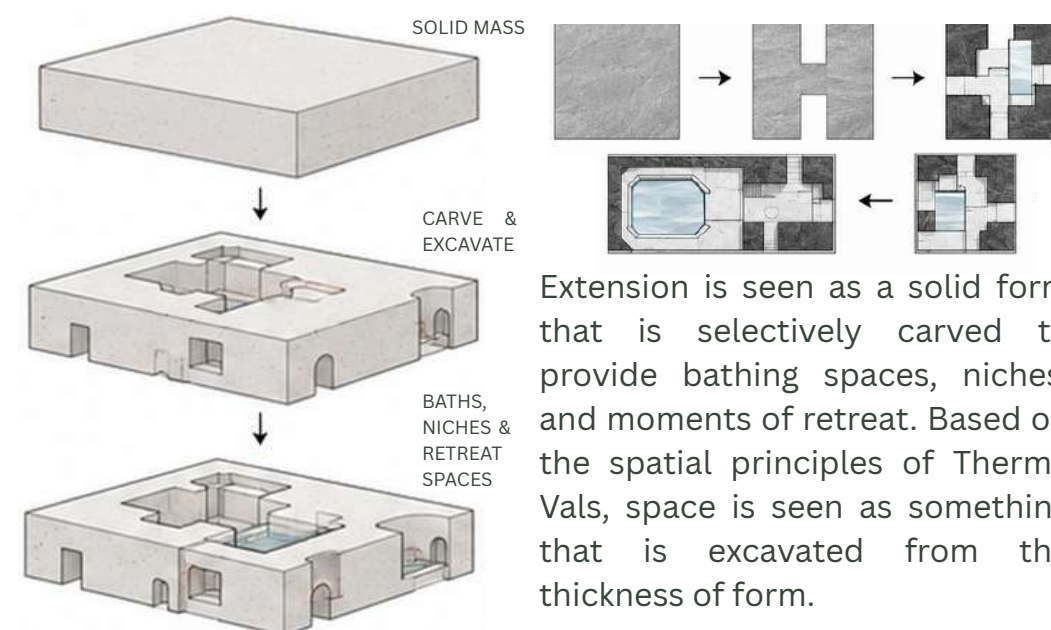
It is well known that bathhouses have traditionally been one of the important buildings in terms of importance in society, holding an important role in the lives of people of former times. However, the development of new infrastructures such as piping for water and bathrooms in houses have led to the decline of importance of traditional bathhouses. The places where important rituals were once held and where people used to meet have become deserted and have fallen into neglect (Sarmiento & Kazemi, 2012; Plevoets & Van Cleempoel, 2011).

Historical monuments reflect the culture and memory of the society and thus their conservation becomes crucial. Historic baths represent an excellent example of a unique blend of space hierarchy, environmental regulation, and sensory experience through water and the human body (Kiani, 2009; Soltanzadeh, 2011). Given this reason that instead of allowing them to go out of use, a process of adaptive reuse is a good approach by which they can be preserved effectively (Plevoets & Van Cleempoel, 2011).

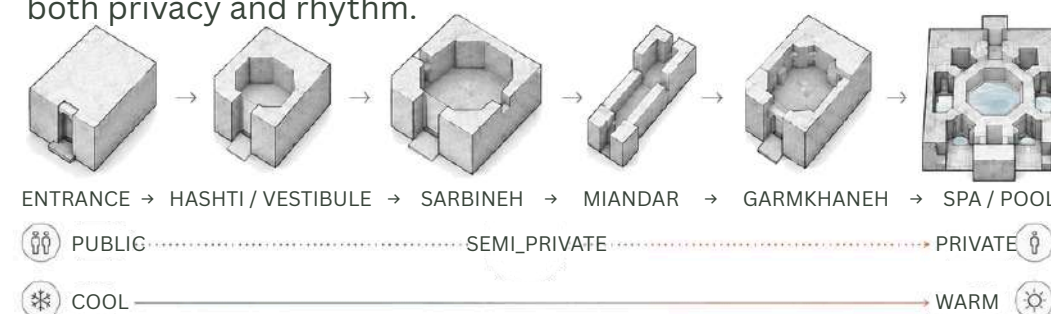
In this context, the restoration of the Haji Bathhouse proposes a museographic approach, in which heritage is not presented through static display but is instead embedded within spatial experience. Museography, in this sense, operates through architectural elements, materiality, and environmental qualities—such as light, humidity, and movement—to narrate cultural memory and engage users in an embodied experience of the past (Fadli & Sibley, 2008).

The simultaneous adaptation of the bathhouse into a spa facility is an important and pertinent move in terms of architectural intervention. translates the old role of the bathhouse as a place of cleansing, relaxation, and taking care of one's body in the light of today's needs to promote well-being and sensory experience. This approach will guarantee that there is continuity between the past and present context and that the building can be used without losing its spatial value and cultural meaning.

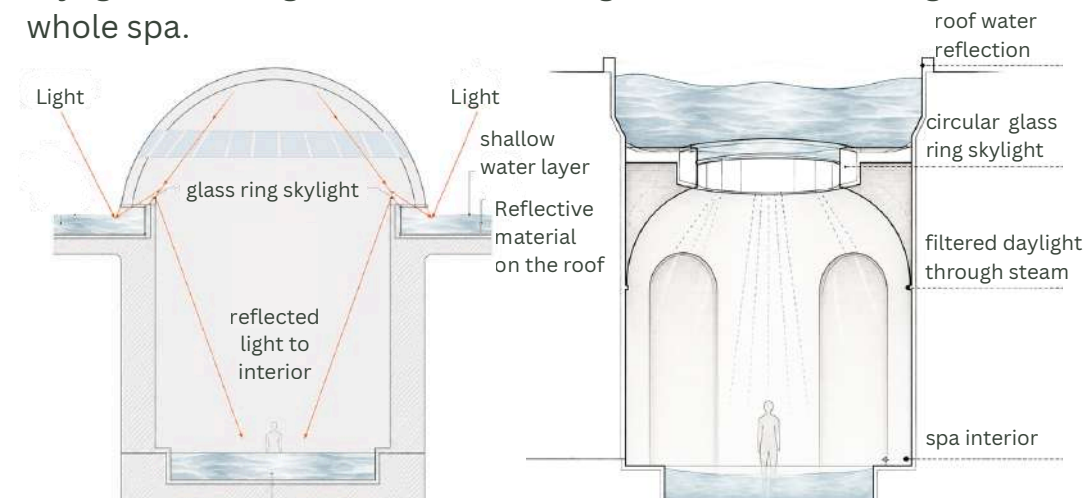
In addition, the fact that the Haji Bathhouse is situated in one of the oldest districts of Rasht, namely, the historically significant Saghari-Sazan area, creates a great potential for urban regeneration.



Conceptualization of the movement through the Iranian bathhouse is that of gradual transformation of space and sensations. Movement through the entrance into the vestibule and subsequently into the sarbineh and the warm rooms provides for both privacy and rhythm.



Based on the example of Dipòsit de les Aigües in Barcelona, a shallow layer of water is placed over the roof, right above the skylights. The natural light enters the space and combines with the water surface as well as reflective roof and interior part of the skylights creating soft and vibrant light reflections throughout the whole spa.



Spatial Analysis of the Urban Context

Scale: 1:1500

From the spatial analysis of Haji Bathhouse, it can be seen that the location of this site lies in a busy and compact urban context, in which the mix of residential, commercial, and certain amount of cultural attractions have been made possible through close integration. The presence of main road and some secondary roads provides favorable access, while 50-meter radius around it and the one of 150-meters show that there is capability of serving not only the vicinity but people coming from further areas as well. In this way, the spatial analysis contributed to the process of design by establishing a balanced relation between historical building, spa extension, and the current network of streets. As a result, entrances, movements and public spaces were created in connection with major traffic axes, and careful consideration was made on the dimensions and positioning of new intervention, so that it would not disrupt the nature of surrounding area.

LAND USE & URBAN STRUCTURE
Funtions & built fabric



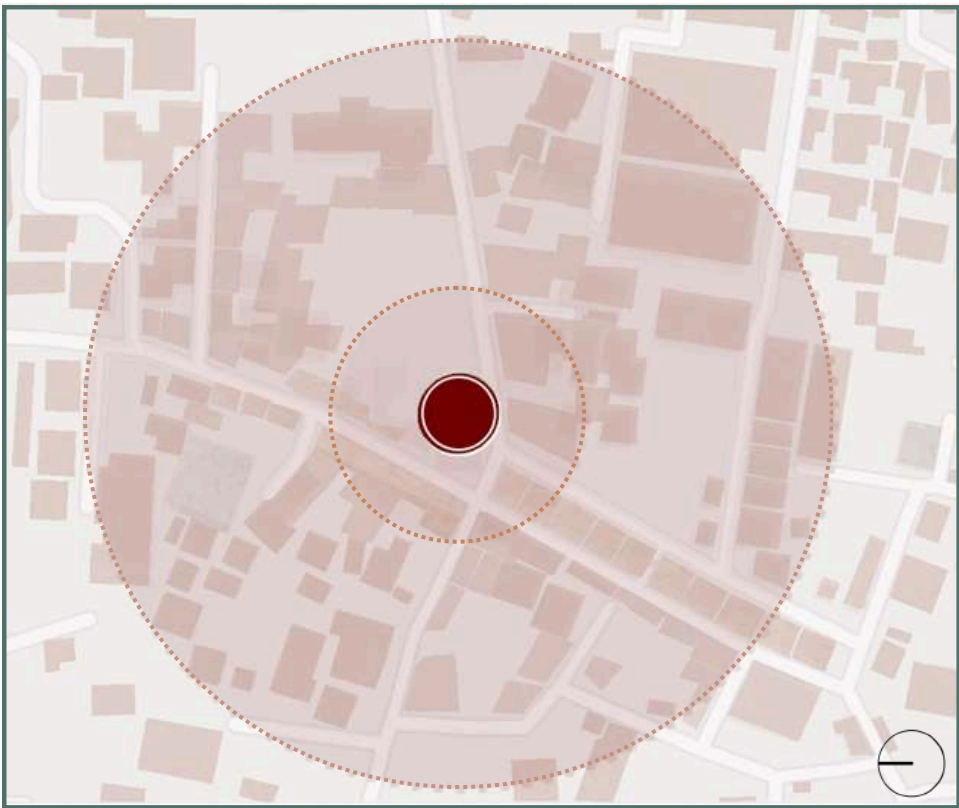
- Cultural Buildings
- Commercial Buildings
- Residential Buildings

MOVEMENT & ACCESSIBILITY
Connectivity & urban flow



- Main Road
- SEcondary Road
- Movement Network

SPATIAL INFLUENCE ZONES
Understanding reach & context



- 50 m _ Immediate Zone
- 150 m _ Walkable Zone

Master Plan Design

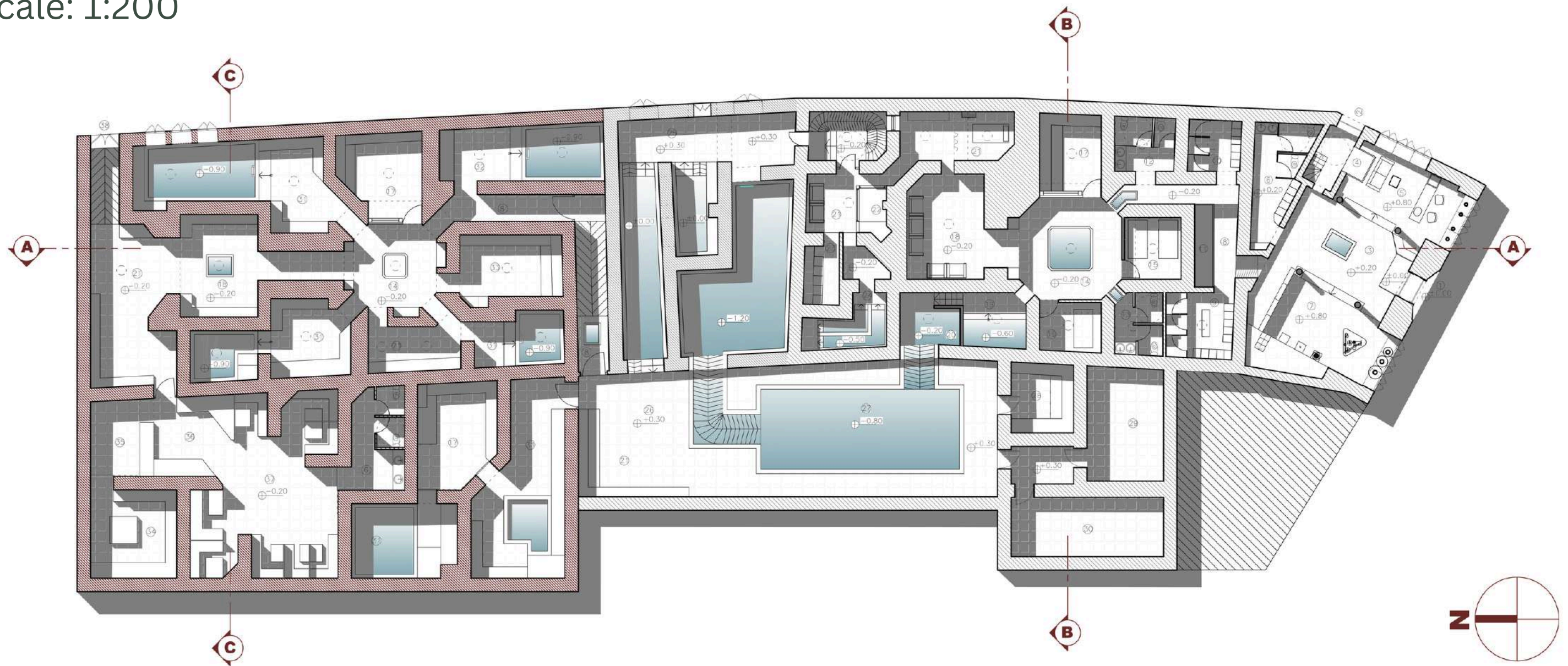
Scale: 1:500

In contrast to viewing the Haji Bathhouse as an independent addition, the master plan design concept presents the Haji Bathhouse as an integrated series of historic and contemporary components. The historic part of the bathhouse is kept within the current context, whereas the new spa facilities are developed along the western boundary defined by the curvilinear street. The latter arrangement allows for the project to serve two important streets without destroying the density of the neighborhood. Water becomes the main unifying element that connects all the elements of the scheme – roof pools, dome pavilions and the courtyard with open water allow for a smooth transition from the historic bathhouse to the contemporary one.



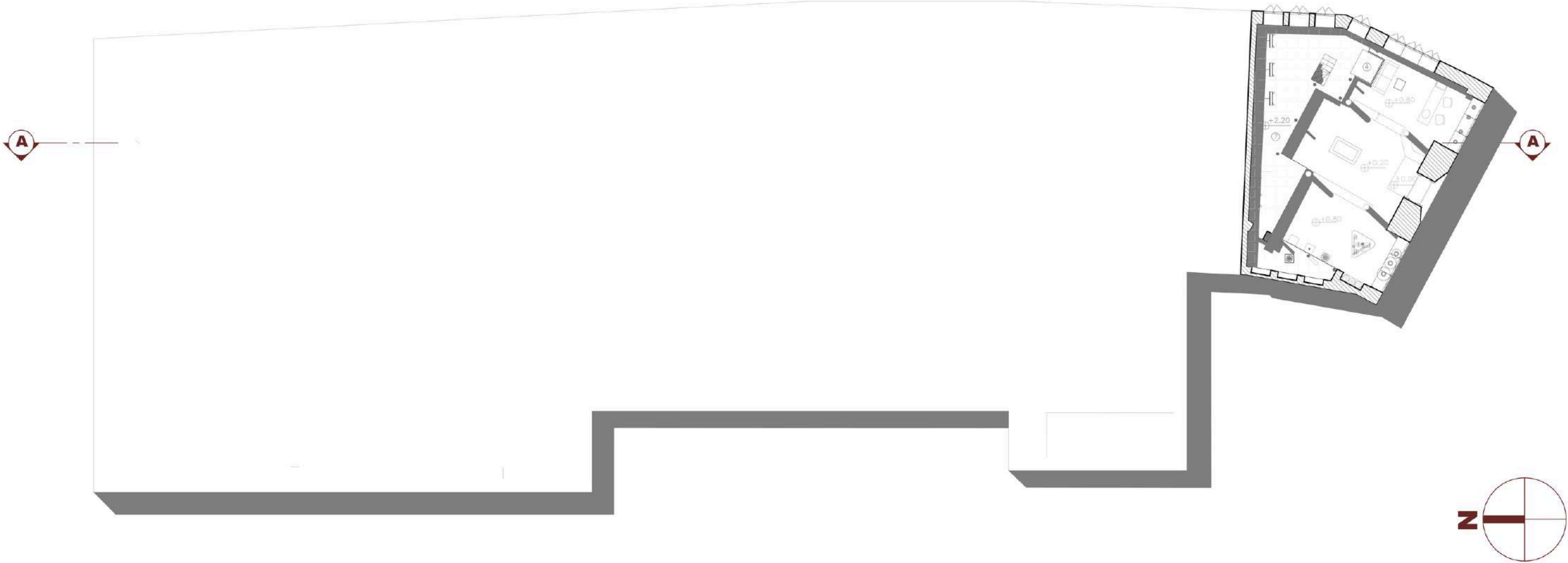
Plan Design

Scale: 1:200



Legend

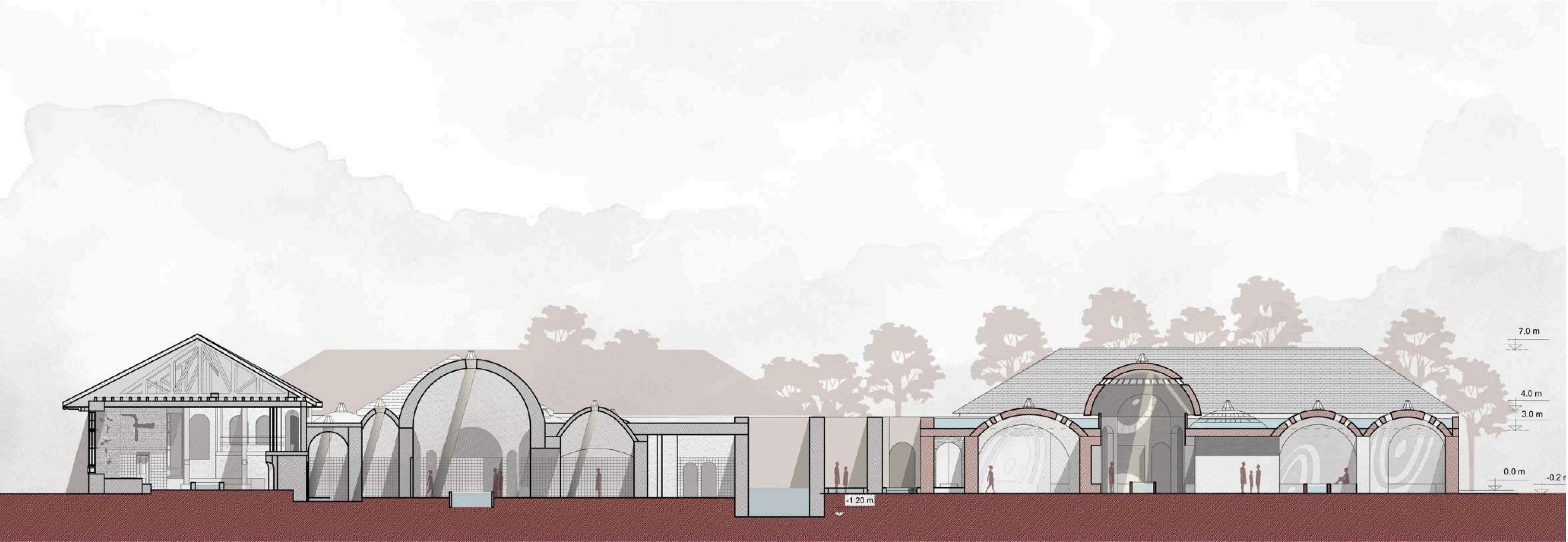
- | | | | |
|------------------------------------|-------------------------------|------------------------------|--------------------|
| ① Main Entrance | ⑪ Towel-hanging area | ⑳ Relax Room | ㉑ Thermal Pool |
| ② Entrance of Disabled people | ⑫ Men's Bathroom | ㉒ Salt Room | ㉒ Cold Plunge Pool |
| ③ Lobby | ⑬ Women's Bathroom | ㉓ Foot pool | ㉓ Face Massage |
| ④ Lift | ⑭ Divided Area / Hashti | ㉔ Foot Massage | ㉔ Kitchen |
| ⑤ Reception | ⑮ Men's Traditional massage | ㉕ Different Temperature Pool | ㉕ Reception |
| ⑥ Bathroom | ⑯ Women's Traditional massage | ㉖ Courtyard | ㉖ Self-Service |
| ⑦ Gallery | ⑰ Steam Sauna | ㉗ Pool | ㉗ Cafe |
| ⑧ Corridor | ⑱ Tea Room | ㉘ Dry Sauna | ㉘ Emergency Exit |
| ⑨ Women's Changing Room and Shower | ㉙ Waterfall | ㉙ Mechanical Room | |
| ⑩ Men's Changing Room And Shower | ㉚ Khazineh | ㉚ Laundry | |



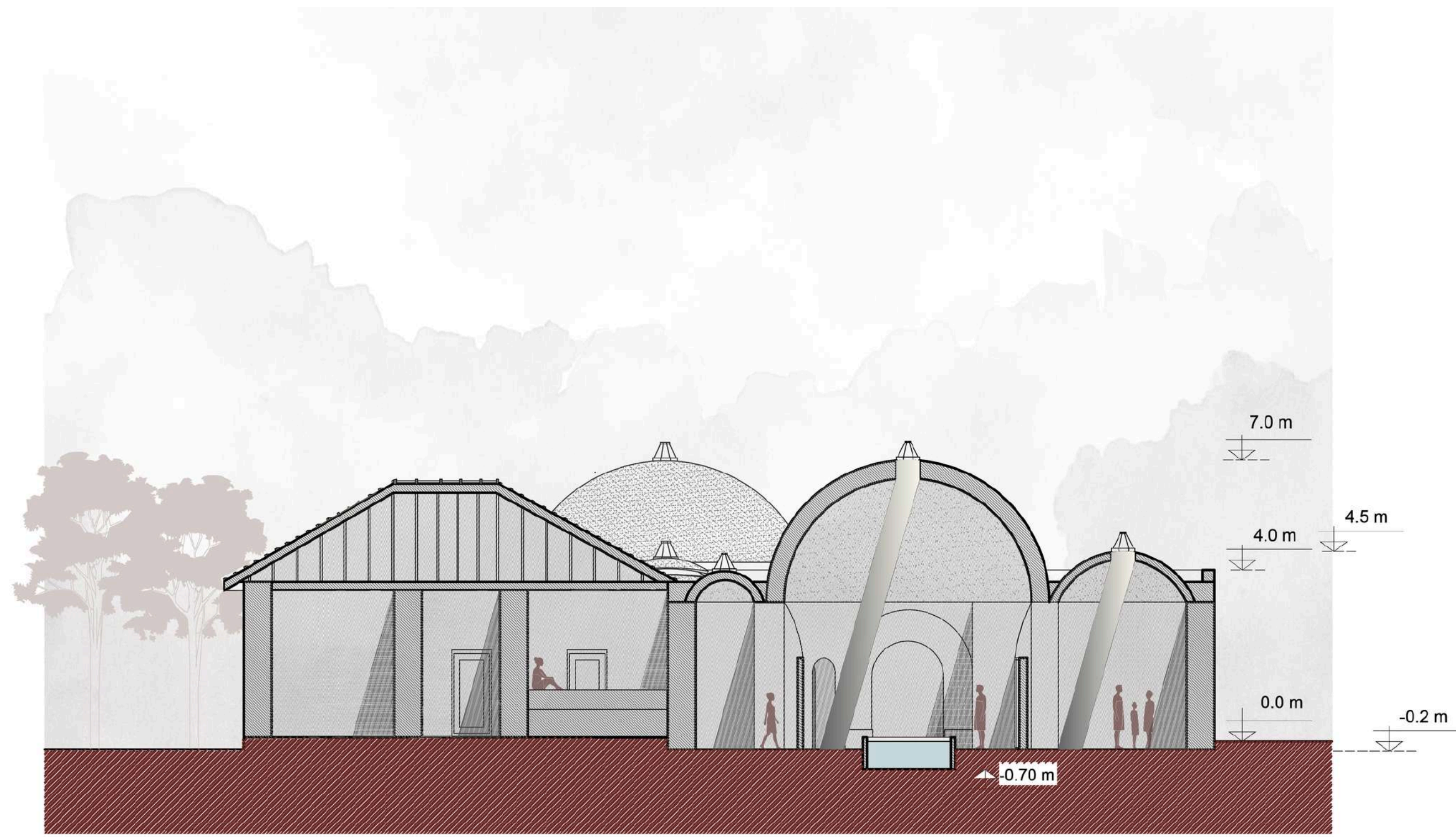
Legend

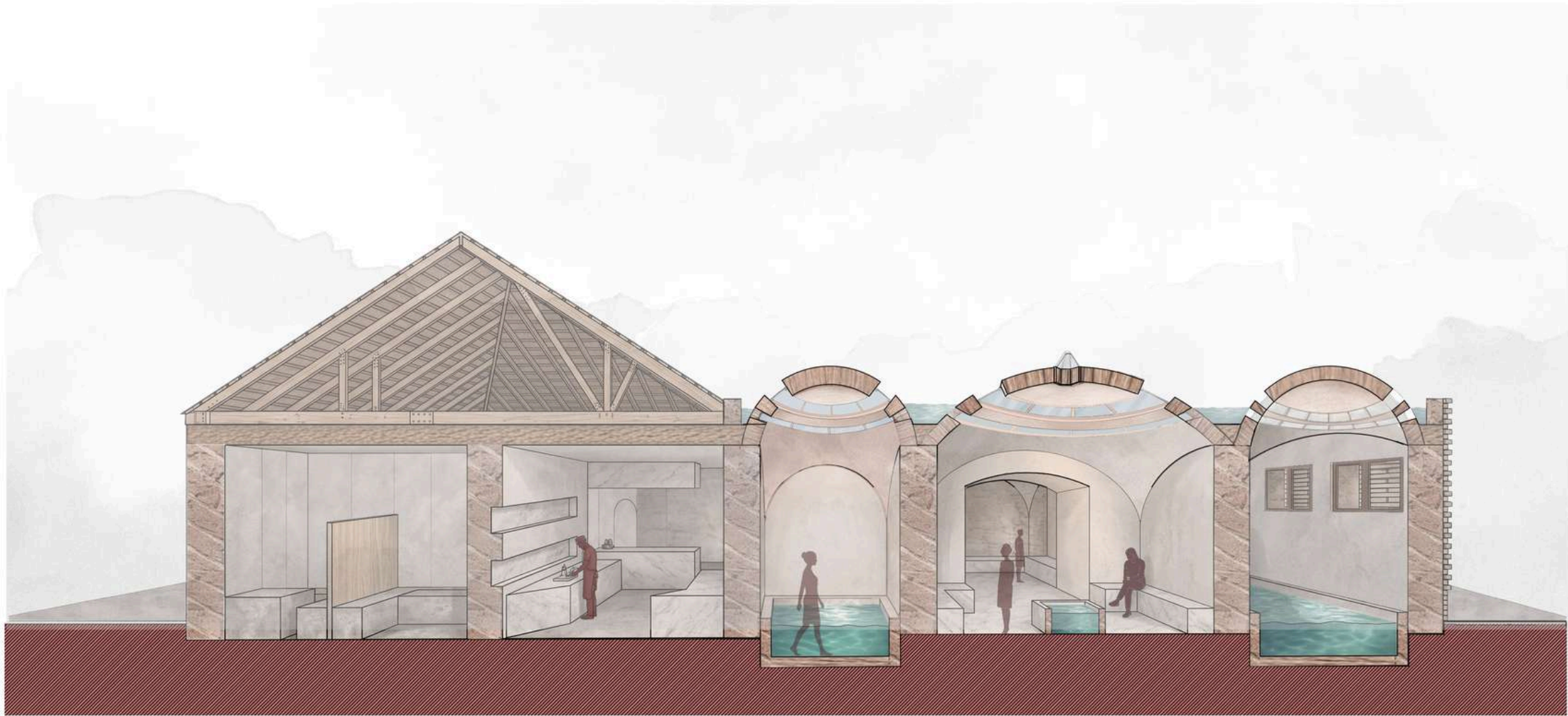
- ④ Lift
- ⑦ Gallery

Section A-A
Scale: 1:200



Section B-B
Scale: 1:100





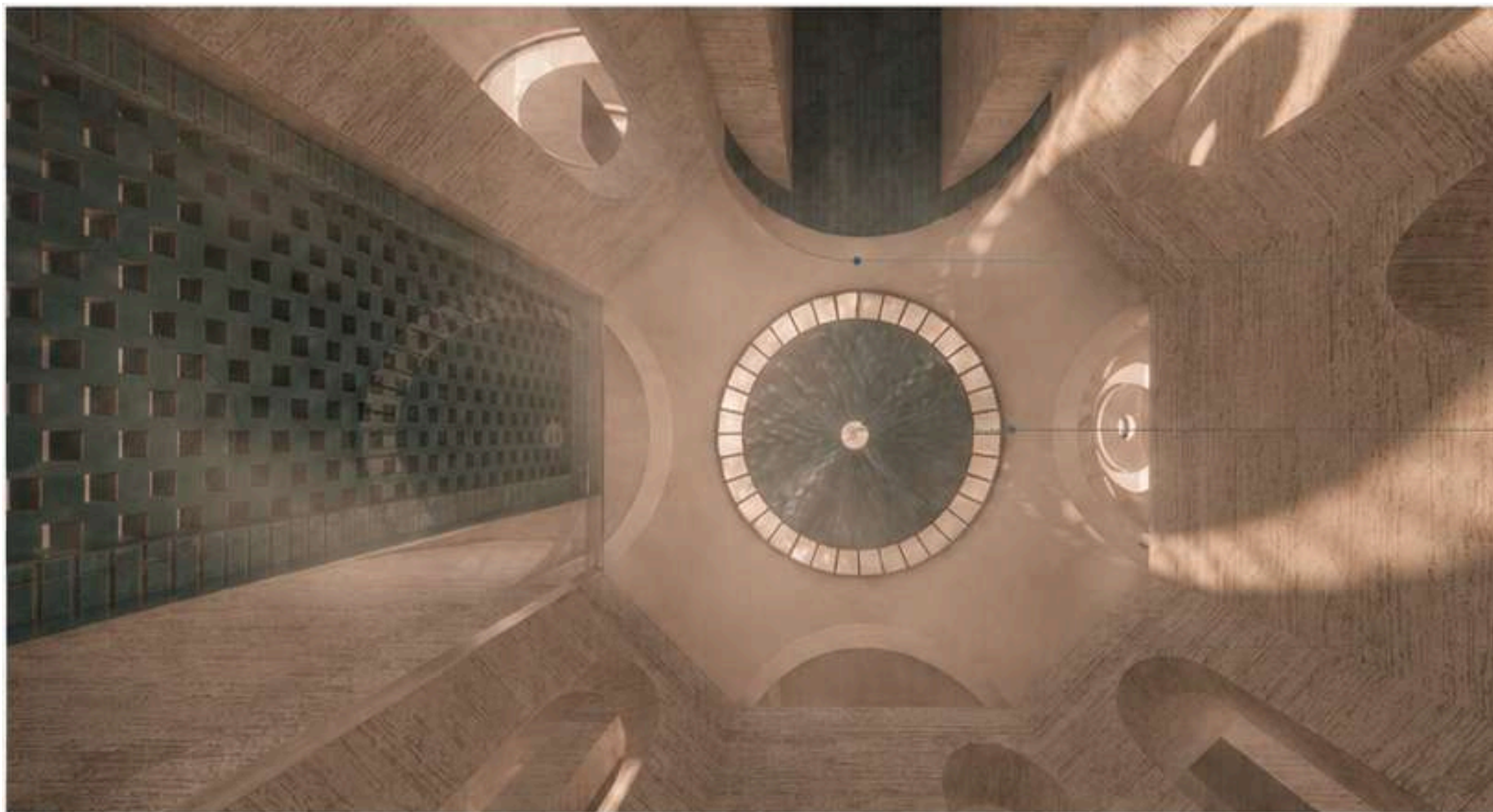
East Elevation
Scale: 1:200



South Elevation
Scale: 1:100



01 Top View to the Dome and Glass Ring

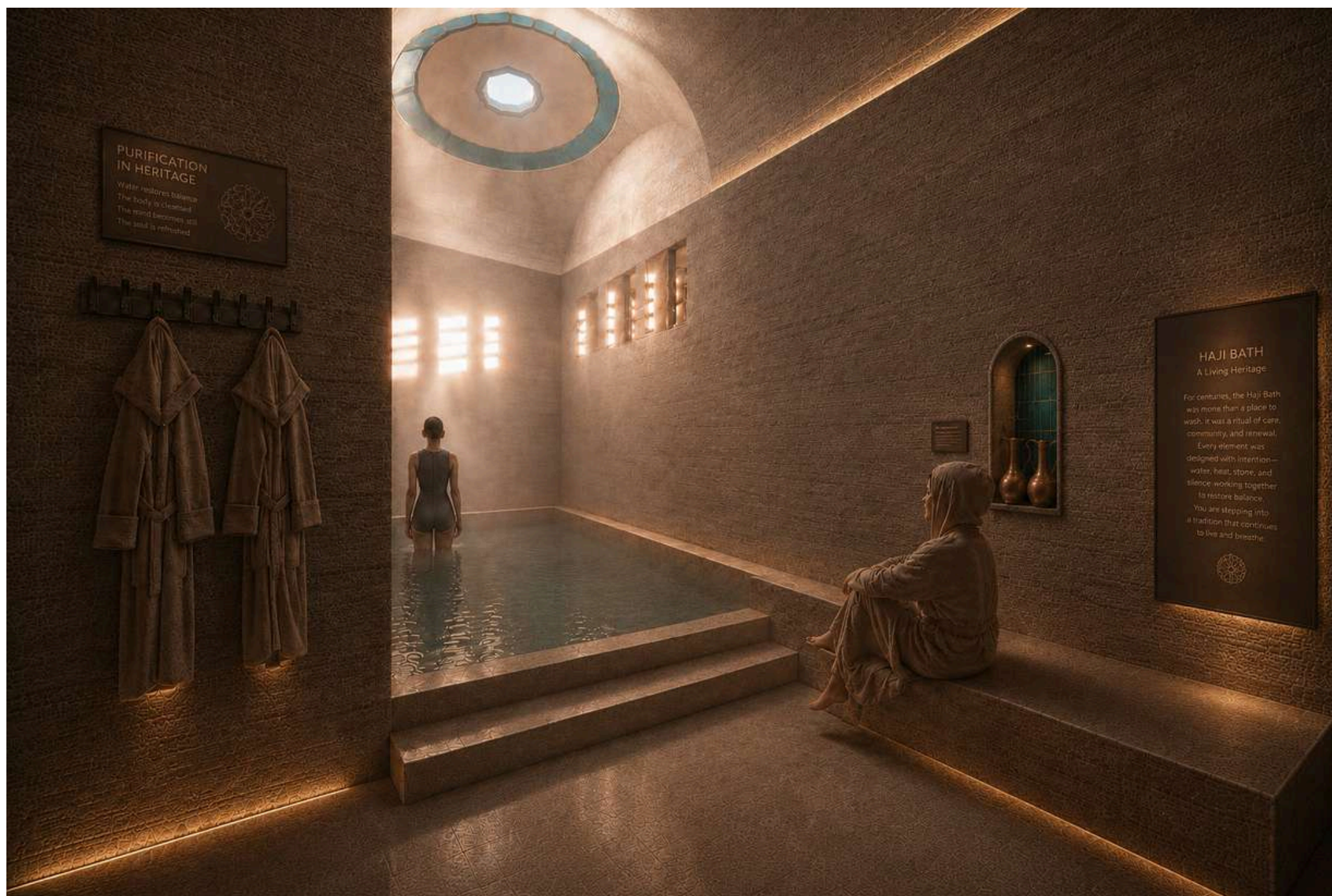


The new dome allows light to penetrate through the ring of glass around it and the roof water that is positioned on top of it. Reflection, vapor, and shadow work together to make the addition a relaxing bathing environment, thus making the connection between the new intervention and the sense memory of the ancient bath.

02 Interior View of the Extension Spa



03 Interior View of the Extension Spa



The spa is seen as museographical journey, where the act of bathing becomes linked to the memory of the Haji bath through the use of brick as the tactile envelope and water, light, and motion guiding the visitors from one moment of pause, submersion, and contemplation to another.

04 Divided Area View in Existing Building (Former Garmkhaneh)



Keeping heritage alive
The old bath returns as a living experience

05 Different Temperature Pool



Historic brick memory
The bricks used in these pools are left from the women's section of the Haji Bathhouse

C O N C L U S I O N

This thesis maintains that the conservation of historic bathhouses should not be limited to restoration because it requires the reactivation of their spatial, environmental, and culture inherent in these structures. In the case of the Haji Bathhouse, this architectural structure provides an example of how, in history, architecture structured collective life through spaces and temperatures.

Using the museographic approach, the project shifts conservation from simply visual conservation to experience-based conservation. The transformation of the old bath to a modern-day spa allows the project to recover the initial principles via the body, where movement, humidity, light, and water allow for recreating the depth of experience of the old environment. It means that the project does not replicate the past but, instead, translates its underlying concept into the present spatial language.

Such an addition allows for this translation to occur because of the incorporation of modern-day elements that still maintain a separation from the historical building form. Continuity occurs not by duplication but through the use of similarities within space, environment, and atmosphere.

Generally, the thesis demonstrates the viability of adaptive reuse as an architectural tool that bridges heritage and modernity. By interpreting the principles of history and not replicating them, architecture remains relevant and meaningful within the context of today's world.

In this regard, the Haji Bathhouse is reinvented as a dynamic environment where memory is not only conserved but relived constantly. Through the reconfiguration of the interrelatedness between space, body, and water, the Haji Bathhouse project offers a method of working with history that is rooted in history itself and yet transformative at the same time.

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