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The cultural significance of the Zahir-ol-Islam House in Tehran, Iran, and its preservation

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The Cultural Significance of the Zahir-ol-Islam House and Its Preservation

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The Cultural Significance of the Zahir-ol-Islam House and Its Preservation

Abstract

Purpose

Heritage buildings are living witnesses of past traditions, carrying cultural and historical values into the present. International charters have been developed to codify principles and processes aimed at preserving these values. However, the localization and practical application of these charters in diverse contexts remain a subject of debate. This study examines the monumental preservation process of the Zahir-ol-Islam Mansion, a national heritage site that required extensive conservation efforts.

Design/Methodology/Approach

The research employs a qualitative, descriptive, and analytical methodology, using the mansion as a case study to localize international conservation principles. The study uses multiple data sources, including archival records, documents, direct observations, and physical artefacts. The conservation and restoration process were structured according to the Burra Charter framework, each step critically assessed against international standards by a restoration specialist to ensure the protection of the site's heritage values.

Findings

In this article, we have studied to understand the cultural significance of the building, according to the Burra charter process, and discovered different phases of the building process despite the limited available information. This case study demonstrates the limitations of universal conservation models and highlights the need for more flexible, context-sensitive approaches.

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Originality

This study is innovative in the application of Eurocentric conservation charters within the Iranian context, highlighting both their strengths and limitations. It also identifies gaps in international guidelines when faced with real-world challenges, advocating for a context-sensitive planned approach.

Keywords: Restoration, Conservation, Heritage value, International Charters, Adaptive reuse, Monumental restoration.

Paper type: Case Report

Introduction

The diversity of cultures and heritage across our world serves as an invaluable source of spiritual and intellectual wealth for all of humanity (ICOMOS, 1994). A significant rationale for conservation is the preservation of the cultural identity inextricably linked to particular locations (Jokilehto, 2008). The destruction of heritage buildings leads to a decline in social cohesion (Lehne, et al., 2008).

The level of deterioration in a building is influenced by its structure, materials, and maintenance practices, leading to variations in repair techniques across different building cultures and technologies. Nevertheless, the primary objective of conserving heritage buildings is to safeguard the work of the original builders for the benefit of both current and future generations. Over time, various theories regarding the conservation and restoration of heritage buildings have been developed (Yazdani Mehr, 2019).

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Critical theories are primarily categorized into three groups: stylistic restoration, conservation (anti-restoration), and the restoration-conservation movements (Yazdani Mehr, 2019). Proponents of stylistic restoration (Riegle 1996; Viollet-le-Duc 1854) argue that heritage buildings should be restored to their original state at the time of construction, with all evidence of deterioration eliminated. Conversely, some theorists oppose this approach (Boito & Birignani, 2009) (Ruskin, 1849), advocating for the preservation of decay as a means to reflect the true age of a heritage building and to acknowledge its historical value. The significant unique features of a heritage building should be preserved rather than removed or restored, even if the building's function has changed (Yount, 2005).

According to the diverse approaches that can be adopted in conservation and preservation, there was a need to define charters as guidelines to preserve heritage values. So the international charters have introduced principles to serve as guidelines.

Athens Charter for the Restoration of Historic Monuments (1931) as an early framework, laid the groundwork for international discourse on heritage conservation. The Athens charter was used as a base, and the Venice charter elaborated the solutions. This charter is a cornerstone in heritage conservation theory, formalizing principles.

These early charters reflect a chronological development in conservation shifting from a focus on physical fabric to a broader understanding of social, cultural, and intangible values. In addressing the complex challenges facing cultural heritage, from rapid urban development to climate-induced disasters, contemporary international frameworks have been presented which are beyond the scope of this article.

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Focusing on the topic, the general purpose of this paper is to implement international preservation charters to preserve the Zahir-ol-Islam. This case study provides empirical evidence or the failure of general conservation models and necessitates a more flexible and content-aware approach. This study adopts a qualitative-analytical case study methodology to explore the research problem in depth and within its real-life context. The International charters, which offer principles regarding the preservation and restoration, were used as a guideline. The conservation and restoration process is designed according to the Burra Charter process. The building was studied and analyzed carefully, then the policy was made, and the plan was implemented and managed according to the Conservation and Restoration process defined in the charters. Every step is critically evaluated based on the presented principles in international charters.

This research has been published in a series, and this is the first one. In this article, the significance of the mansion has been thoroughly examined.

This paper is structured as follows: section 2 reviews the literature related to Conservation and Restoration, then highlights the research gap. Section 3 gives details regarding the methodology adopted. Section 4: the procedure is implemented on the Zahir-ol-Islam building.

Literature review

Conservation and Restoration

There have been various perspectives on restoration throughout history. Eugene Emmanuel Viollet Le Duc (1814-1879) proposed extensive interventions and sometimes inserted new physical elements into the building (Vaccaro, 1996).

John Ruskin (1819-1900) criticized Viollet Le Duc`s theory on restoration (Wong, 2016) (Niglio, 2013). He believed restoration falsifies history and advocated regular maintenance (Burman,

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2008). Heavily influenced by Ruskin, William Morris (1834-1896) became a key figure in the conservation of British heritage buildings during the late 19th century (Niglio, 2013), advocating for the repair and maintenance of heritage structures rather than restoration (Burman, 2008). Camillo Boito (1836-1914) argued that even the best restoration revealed its inherent artificiality, and that Ruskin`s call for non-intervention was unrealistic, leading only to the building`s ruin (Jokilehto, 2007).

Boito preferred to restore only certain sections of a heritage building rather than subjecting the entire structure to unnecessary restoration (Cecchini & Suardo, 2014)

As different approaches was presented to preserve and restore heritage buildings there was a need for a universal charter to use as a guideline and Boito theory on the conservation of heritage buildings significantly influenced the creation of the Athens Charter, which was the first international document to promote modern conservation policy (Yazdani Mehr, 2019).

International Charters

The foundation of global heritage conservation begins with the 1931 Athens Charter, which emphasized the formation of international restoration bodies and the scrutiny of proposed projects to prevent errors. It promoted modern techniques and strict site protection, advocating for the safeguarding of areas around heritage zones (International Congress of Architects and Technicians of Historic Monuments, 1931). UNESCO echoed this by encouraging technical training in collaboration with academic institutions (UNESCO, 1957).

The Venice Charter (1964), adopted by ICOMOS in 1965, highlights the significance of heritage buildings as living witnesses of past traditions. It supports the adaptive reuse of monuments for socially useful purposes, provided that such use does not alter their layout or decoration (Article5).

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Restoration is defined as a specialized process aimed at preserving and revealing the monument's aesthetic and historic value (Article9). Modern techniques may be applied when traditional methods are insufficient (Article10), and all historical layers must be respected (Article11) (Venice Charter, 1964).

The UNESCO World Heritage Convention (1972) unifies the conservation of cultural and natural heritage within a single framework, emphasizing the intrinsic link between human society and the natural environment. It acknowledges the increasing threats to heritage sites due to both traditional decay and evolving social and economic pressures. It defines cultural heritage to include groups of buildings of outstanding universal value for their architecture, historical significance, or scientific importance (Article1). Article 5 calls on State Parties to adopt policies that integrate heritage protection into broader planning efforts, ensuring its active role in community life (UNESCO, 1972).

The Burra Charter (Australia, 1979), developed by Australia ICOMOS, provides a comprehensive framework for the conservation of places of cultural significance. Central to the Charter is the principle that conservation should involve changing as much as necessary but as little as possible (Article3). Traditional materials and techniques are favored, although modern alternatives may be used (Article4). Understanding a place's cultural significance through detailed investigation must precede any intervention, forming the basis for policy development and ongoing management (Article6). Uses that contribute to a place's significance should be adapted with minimal impact (Articles7, 21). Conservation practices may include maintenance, restoration, reconstruction, or adaptation, provided they respect the site's cultural value and, when possible, are reversible (Articles14–15). Restoration and reconstruction are permissible only when supported by substantial evidence and should be distinguishable (Article20). New additions must respect and

not obscure or distort the original significance (Article22). All interventions should be preceded by thorough studies and detailed documentation before and after changes (Articles26–27) (ICOMOS Australia, 1979).

The Washington Charter (1987) emphasizes that the conservation of historic towns and urban areas should be integrated into comprehensive economic, social, and spatial planning policies to ensure their effectiveness and sustainability within broader urban and regional development frameworks (Objective 1) (ICOMOS, 1987).

The Nara Document on Authenticity (1994), developed in the spirit of the Venice Charter (1964), expands the concept of cultural heritage to reflect the growing diversity of global cultural expressions. It emphasizes that the richness of cultural diversity is an irreplaceable resource for all humanity, essential to spiritual and intellectual development (Articles 3 and 5). The document advocates for the active protection and enhancement of this diversity and highlights that authenticity is a multifaceted concept shaped by a wide range of cultural and contextual factors (Article 13) (ICOMOS, 1994).

The Faro Convention (2005) redefines cultural heritage through a people-centered and cross-disciplinary lens, emphasizing its role in human development and quality of life. The Convention underscores the right of every individual and community to access and contribute to heritage (Article 4), promotes social cohesion through shared responsibility for local environments (Article 8), and advocates democratic participation in all heritage processes (Article12) (Council of Europe, 2005).

Conservation and Restoration in Iran

The maintenance and preservation of buildings in Iran has a long-standing history. The most important determining factor in building conservation and restoration has always been responding to social ideals and human needs (Abolghasemi, 1995). The traditional architect played a powerful role as the custodian of buildings. For instance, the restorations of the Isfahan Mosque complex were carried out by traditional architects of the time (Abbasi Harateh, 2015).

From 1786 to 1932 (the Qajar period), with the beginning of Western influence on architecture, conservation practices also began to be influenced (Haghir & Salavati, 2020). During the restoration of historic buildings, Western symbols began to appear in the architecture (Bani Masoud, 2015). Moreover, government officials signed contracts for archaeological excavations, and conservation measures around Naqsh-e Jahan Square in Isfahan were undertaken with the assistance of André Godard (Peyrovi, et al., 2022).

Between 1922 and the early 1960s, that is, during the reign of Reza Shah (Pahlavi I) and the first half of Mohammad Reza Shah's rule (Pahlavi II), the Society for National Heritage was established. However, practical attention to architectural conservation was still lacking, and restorations continued to be carried out by traditional architects (Jokilehto, 2007). From the early 1960s to the late 1980s, in the later Pahlavi II period and the early years of the Islamic Republic, reforms in the educational system introduced courses in architectural conservation. In 1966, the National Organization for the Protection of Antiquities was founded (Jokilehto, 2007). Most of the conservation measures during this period consisted largely of imitations and repetitions of methods employed by foreign experts. From the early 1990s onward, adaptive reuse and revitalization of historic buildings began to emerge, with architects playing a more prominent role (Peyrovi, et al., 2022).

Following the introduction of European concepts of architectural conservation, Mohammad Mansour Falamaki, in his book Revitalization of Historic Buildings and Cities, consistently expressed concern about Iran's reliance on European scientific conservation models without sufficient consideration of local, traditional, and historical principles. He also sought to develop a localized conservation charter (Falamaki, 2011).

Iranian charter

In the literature of restoration in Iran, a significant effort was made to draft national charters, the most notable of which is the book "Architectural Restoration Charter – Iran 93" authored by Mohammad Mansour Falamaki and a group of researchers. This work is the result of research that began from the initial idea of drafting a charter by Dr. Baqer Ayatollahzadeh Shirazi (the father of modern restoration in Iran), in collaboration with the National Committee of ICOMOS Iran and the Cultural Heritage Organization. However, it was not officially approved and instead continued in the form of academic research, ultimately being published in 2017 (Falamaki, et al., 2017).

In this book, Falamaki, taking into account the unique cultural, climatic, and historical conditions of Iran, analyzes a restoration framework specific to the country and seeks to align the most important principles of international charters, such as the Venice Charter, with the context and local values.

In addition to Iran, studies at the Middle Eastern level have examined indigenous restoration frameworks. For example, analyses of the evolving attitudes toward the Venice Charter in Iran have paid particular attention to the challenges of preserving cultural landscapes, especially historic gardens. Mahdizadeh examines the paradigm shift in Iran from building symbolism to

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cultural landscape from the perspective of international charters and suggests that greater attention should be paid to intangible values (cultural and social) (Mahdizadeh, 2018).

Some studies also propose frameworks such as the dynamic conservation approach for heritage resources in Iran, which, drawing on global experience, offer adaptive models—for example, in the case of historic routes (Haji Nili, et al., 2023).

All chosen principal theories for implementation, whether directly or indirectly, focused on adaptive reuse as a method for protecting heritage buildings. "The most effective way to preserve a building is to identify a purpose for it and to meet its needs so thoroughly that no alterations are necessary." (Viollet-le-Duc, 1875).

Adaptive reuse

Heritage building preservation aimed either to extend the building`s lifespan or to adapt it for modern use. Buildings are subject to ongoing deterioration from age, weathering, and use (Jokilehto, 2007). Adaptive reuse repurposes a building or structure for a new function, giving it renewed life (Othman & Elsaay, 2018).

Adaptive reuse is not a recent phenomenon; historically, it is often the most practical option, as repurposing an existing structure requires less time, energy, and money than demolition and new construction (Velthuis & Spennemann, 2007). Discussion of adaptive reuse in architectural circles gained momentum in the 1960s and 1970s, driven by increasing environmental concerns (Cantell, 2005). Repurposing heritage buildings offers environmental and social benefits to communities while preserving our national heritage (Shen & Langston, 2010). Successfully adapted historical buildings foster a connection between people and their cultural heritage, enriching their lives with a shared identity and remembrance of the past (Butina-Watson & Bentley, 2007).

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The international charters have presented principles governing adaptive reuse. The Venice charter in Article 5 states that the conservation of monuments is best supported through their adaptation to socially beneficial uses. However, such use must not alter the building's original layout or decorative elements.

The Burra Charter in Article 21, Focus on Adaptation, states that adaptation is permissible only when it results in minimal impact on the cultural significance of the place.

Moreover, in Article 23 About Retaining or Reintroducing Use states: Retaining, modifying, or reintroducing a significant use can be appropriate and may represent a preferred approach to conservation.

The Washington charter in Article 8 States that new functions and activities should be fully compatible with the character and significance of the historic town or urban area.

In The Faro Article 10 emphasizes Cultural Heritage and Economic Activity and states to fully harness the potential of cultural heritage as a driver of sustainable economic development.

Numerous eucentric international charters have been published, offering principles aimed at guiding interventions and preserving heritage values. However, the practical application and localization of these charters within specific cultural and contextual settings remain contentious and insufficiently addressed. This gap highlights the need for further research into how these global frameworks can be effectively adapted and implemented in diverse local contexts and whether there is any insufficiency in the presented principles.

Methodology

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The research is confirmatory. It challenges the application of the International Heritage Conservation Charters. Confirmatory research is a systematic approach aimed at validating specific hypotheses or theories through empirical evidence (Fakher, 2015). The research was conducted employing a qualitative, descriptive-analytical approach. Qualitative description is particularly useful when conducting mixed-methods research or requiring a direct, firsthand description of a phenomenon, and it provides a detailed account of the data, with minimal interpretation beyond the observed words and events (Sandelowski, 2000).

The qualitative data analysis was conducted through a thematic approach. First, the textual sources, including archival documents and field notes, were systematically coded to identify recurring concepts and preservation-related practices. Second, the codes were grouped into broader themes that reflected key issues in the restoration of the Zahir-ol-Islam Mansion. Finally, these emergent themes were systematically compared with the principles articulated in international charters on heritage preservation, particularly the Burra Charter, on a clause-by-clause basis. This multi-step process ensured both methodological transparency and alignment between the case study findings and established international standards.

Sitting and context

Qualitative descriptive studies often employ purposive sampling techniques, such as maximum variation (Sandelowski, 2000), homogeneous, stratified, or multiple case sampling (Hunter, et al., 2019). The research chose Zahir-ol-Islam mansion in Tehran as a homogenous case study.

This study adopts a qualitative case study methodology to explore the research problem in depth and within its real-life context. Qualitative research emphasizes gaining a deep understanding of the nature and context of the research problem, focusing on the meaning, experience, and

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perspectives of participants rather than the frequency or extent of observed traits (Strauss & Corbin, 1994). However, it limits the generalizability of the findings to other projects.

Participants

The participants in this study were professionals directly involved in the restoration of the heritage building, including architects, project managers, and restoration specialists. Their active engagement in the project allowed them to offer firsthand insights into the restoration process. However, their stance may inadvertently affect the interpretation of the results. The owner of the heritage building also participated in the project, playing an active role in decision-making. The hierarchy of power sometimes hinders optimal decision-making. To preserve confidentiality, participants are referenced anonymously, and identifying details have been omitted or generalized where necessary.

Ethical Considerations

This study was conducted in accordance with ethical standards for qualitative research involving human participants. All participants involved in the restoration project were informed of the purpose and scope of the research and provided informed consent prior to participation. As the participants were actively engaged in the restoration process, their insights and experiences were treated with respect and confidentiality.

The study was carried out in consultation with the Research Institute of Culture and Art, and ethical guidelines recommended by the Institute's research ethics committee were followed throughout. The voluntary nature of participation was emphasized, and participants retained the right to withdraw from the study at any stage without any consequences. The research was

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designed to ensure that the data collection process would not interfere with the participants' professional responsibilities.

Research Team

The researchers were actively engaged in the setting under study. In cases where researchers actively engaged in the setting under study, participant observation methods were employed (Editorial of The International Journal of Logistics Managemen, 2017). The research team consisted of three members, all of whom are architectural professionals. Among them, one member specializes in qualitative research methodologies, another has a strong background in construction project management, and one possesses over ten years of practical experience in the field of heritage conservation, who interprets the guiding charters principles. This multidisciplinary composition ensured a comprehensive and informed approach to data collection, interpretation, and analysis. Participants contributed to the research through their involvement in informal, yet purposeful, conversations and by offering expert feedback on various aspects of the work. These interactions provided nuanced perspectives, contextual knowledge, and professional insights that enriched the analytical process and shaped the interpretation of the findings. Their contributions not only clarified specific details but also helped to validate and refine the conclusions drawn from the study.

Data collection

Data collection in this study draws upon a variety of sources, including documents, archival records, direct observation, and physical artefacts (Yin, 2013). Data collection in this study was carried out using multiple sources, including documents, archival records, direct observation, and physical artefacts. Archival materials comprised historical photographs and aerial images that

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provided visual insights into the evolution of the building and its surroundings. Additionally, relevant documents on architectural styles from the period under investigation were reviewed to contextualize the heritage values of the case study.

Participant observation played a central role in the data collection process, as the researchers were actively engaged in the field setting. This method allowed for an in-depth and first-hand understanding of the physical characteristics, spatial qualities, and ongoing interactions with the heritage building. The use of multiple data sources enabled a comprehensive and nuanced understanding of the subject matter. However, participants' perspectives may inadvertently affect the data collection process.

Guiding Charters

Numerous charters have been defined as a guideline for the preservation and restoration process. These charters reflect the evolution of heritage preservation from an emphasis on tangible, physical structures to an increasingly holistic view that encompasses intangible values, community engagement, and sustainability. However, for the purposes of this study, which focuses on the architectural preservation and restoration of a single monument, priority is given to charters that emphasize physical integrity and monumental significance; then, the restoration specialists explicate the principles.

Among the foundational texts in this domain are the Athens Charter for the Restoration of Historic Monuments (1931) and the New Delhi Recommendations (1956). These early frameworks laid the groundwork for international discourse on heritage preservation by emphasizing structural stability and aesthetic integrity (International Congress of Architects and Technicians of Historic Monuments, 1931). The Athens Charter served as a basis for subsequent development, including

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the Venice Charter (1964), which formalized many of the core principles of modern conservation theory (Venice Charter, 1964).

The UNESCO World Heritage Convention (1972) expanded the scope of conservation by encouraging heritage protection within a global context. This convention reinforces the importance of protecting monuments not just for national or local identity but as part of the shared heritage of humanity (UNESCO, 1972).

Subsequent charters further refine the understanding of heritage. The Burra Charter emphasizes cultural significance and the role of community values, making it particularly relevant for localized approaches to conservation (ICOMOS Australia, 1979). The Washington Charter (1987) addresses the challenges of preserving historic urban areas and introduces the notion of integrating conservation with sustainable urban development (ICOMOS, 1987). The Nara Document on Authenticity (1994) contributes by recognizing the cultural relativity of authenticity and the importance of respecting diverse expressions of heritage (ICOMOS, 1994). The Faro Convention (2005) shifts focus toward the social dimensions of heritage, advocating for democratic participation, human rights, and social cohesion (Council of Europe, 2005). The principles provide guidance to ensure that no decision on intervention puts at risk the integrity or cultural heritage value of the property.

In response to emerging global challenges such as climate change, urbanization, and disaster risk, more recent frameworks have expanded the conservation discourse. Despite their relevance, these more recent frameworks are not the primary focus of this article. The current study addresses the conservation and restoration of building monuments.

Application of the Burra Charter Process

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The Burra charter has presented a conservation process to set a standard for conservation and restoration planning (article6). This framework provides a standardized foundation for adopting a holistic approach to restoration.

6.1 The cultural significance of a place and other factors influencing its future are best understood through a structured process of information gathering and analysis prior to decision-making. This process involves first understanding cultural significance, then formulating appropriate policies, and finally managing the place in accordance with those policies. Documents, archival records, direct observation, and physical artefacts provided insights into the evolution of the building and its surroundings; then, they helped us to make a decision.

6.2 The development of policy for managing a place must be grounded in a comprehensive understanding of its cultural significance. This article emphasizes the assessment of the place`s significance as a foundation for making an appropriate conservation policy.

6.3 Policy formulation should also take into account a range of other factors that may influence the future of the place. Both the owner`s objectives and the aim of cultural heritage preservation were considered in parallel during the policy-making.

6.4 In the course of policy development, it may be necessary to explore various strategies that both conserve cultural significance and respond to practical considerations. The policy is developed to accommodate the owner`s intended future use of the mansion while ensuring the conservation of its heritage value.

6.5 The Burra Charter Process is iterative: changes in circumstances, or the emergence of new information or perspectives, may necessitate a re-examination or repetition of the process.

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Data Analysis

According to the approach outlined in the Burra Charter, which was explicated by the restoration specialist, the first step in conservation and restoration is to understand the cultural significance of a site. Cultural significance, along with other factors that may influence a site's future, is best determined through a systematic process of information gathering and analysis prior to making decisions.

The Zahir-ol-Islam Mansion, located within a garden complex, presents a multifaceted architectural case, as shown in image 1. The building's layout comprises two square units integrated at a 45-degree angle relative to each other, as shown in image 2 —a feature also observed in a nearby structure tentatively identified as the Tehran Glass and Mirror Union Building, as shown in image 3. This angular configuration appears on both the ground floor and the basement, and the mansion contains numerous rooms.

Image 1: Aerial photo from 1968 of the Zahir ol Islam House in a complex garden.

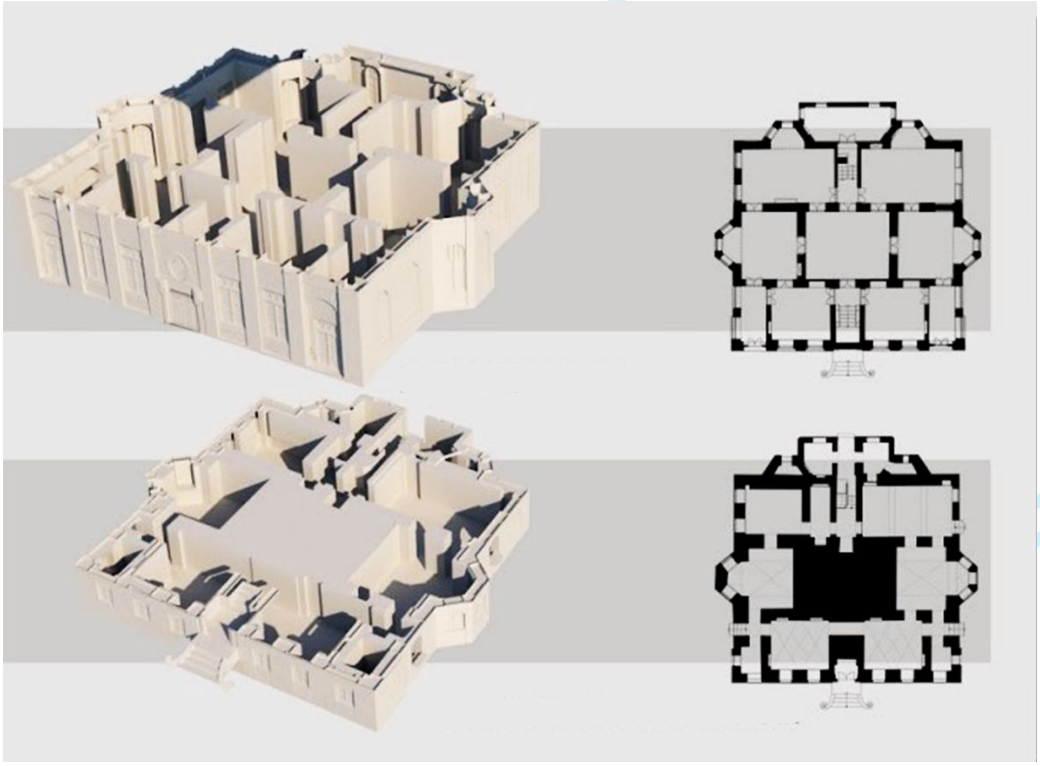

Image 2: Isometric view of the Zahir-ol-Islam, top the ground floor and down the basement

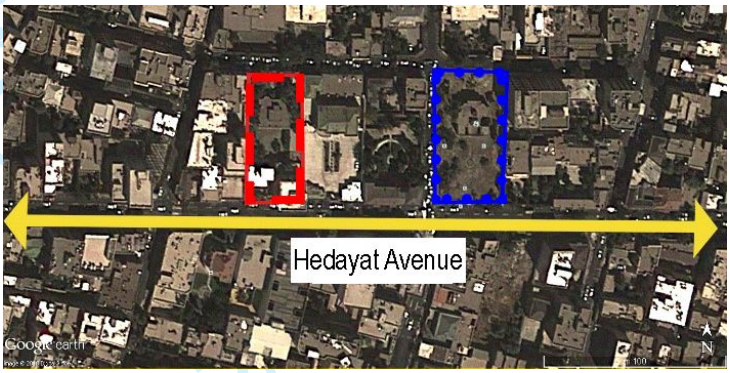

Image 3: An aerial photograph from 1954 shows the Zahir-ol-Islam House on the right, the Tehran Glass and Mirror Union on the left.

The main entrance, situated on the south façade, opens into a central foyer, from which multiple doorways lead to individual rooms, each with distinctive stylistic elements. A secondary entrance on the north façade provides access to the ground floor and roof, while additional entrances on the east and west façades connect to the basement via staircases. Although the central space displays a degree of symmetry, especially in the basement where rooms are relatively uniform in size, inconsistencies in room dimensions and layout throughout the building suggest substantial alterations over time. Image 4 shows the Zahir-ol-Islam ground floor on the right and the Glass and Mirror Union ground floor on the left. Image 5 shows The Zahir-ol-Islam basement on the right and the Glass and Mirror Union basement on the left.

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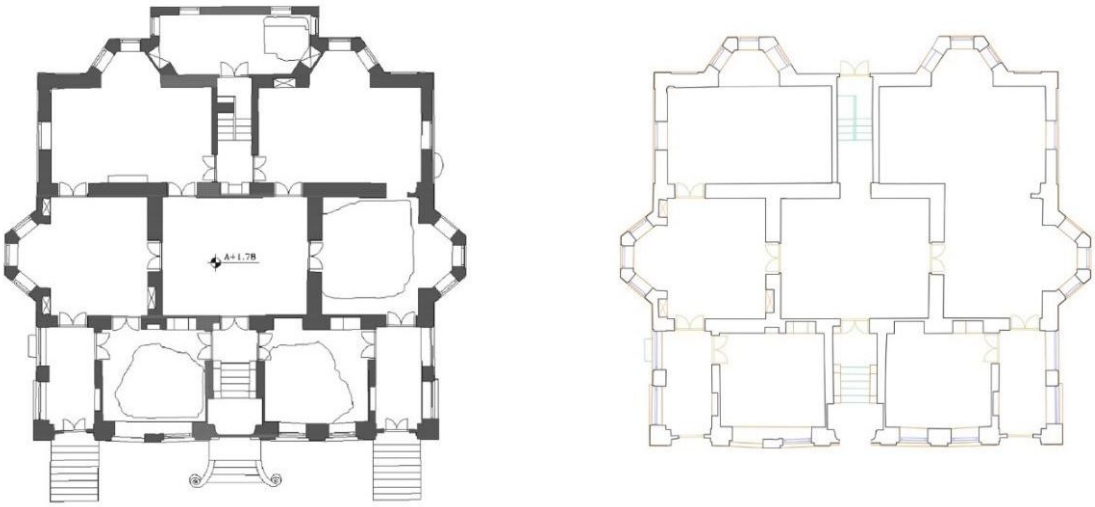

Image 4: The similarity between The Zahir-ol-Islam and the Glass and Mirror Union ground floor

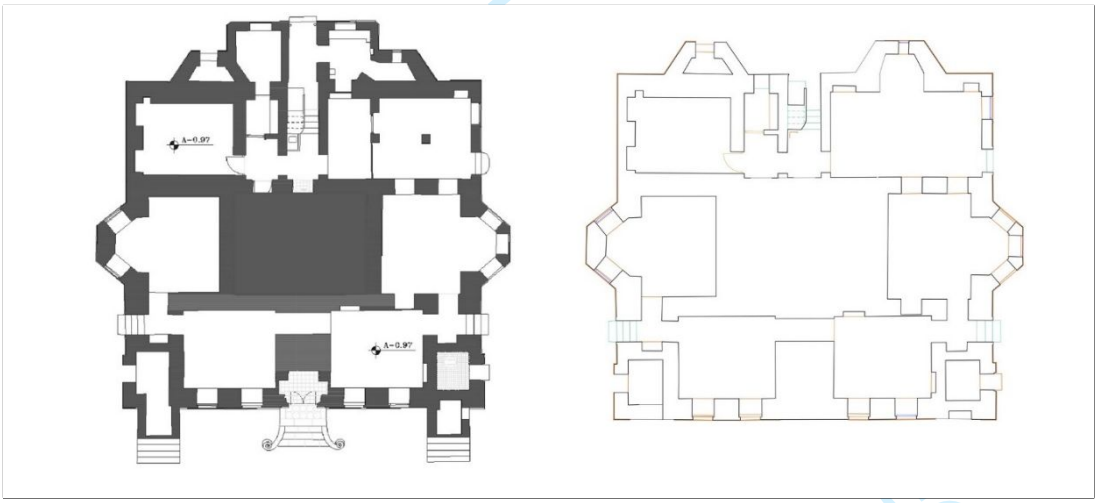

Image 5: The similarity between The Zahir-ol-Islam and the Glass and Mirror Union basement

This hypothesis is further supported by a comparative analysis of the Zahir-ol-Islam Mansion and the Glass Union Building. Both structures exhibit notable similarities in their planimetry and general form, as the north façade of the glass and mirror union mansion is shown in image 6 and the north façade of The Zahir-ol-Islam mansion is shown in image 7, implying a shared historical context and possibly similar construction techniques. Stylistically, both buildings reflect a hybrid

aesthetic that blends Iranian and Western architectural elements typical of the transitional period between the late Qajar and early Pahlavi eras (Bani-Masoud, 2012). This aligns with the presumed construction date of the Zahir-ol-Islam Mansion. The Glass Union Building features a prominent clerestory, which not only enhances visual appeal but also channels natural light into the central foyer. Additionally, the building showcases cornice ornamentation and other decorative features emblematic of its era (Bani-Masoud, 2012). Although much of its interior ornamentation was lost during the replacement of its original timber roof with a steel structure, its north façade—including cornices and basement brickwork—retains greater authenticity than that of the Zahir-ol-Islam Mansion. Table 1 summarizes the main characteristics of the two buildings.

Image 6: The north façade of The Glass and Mirror Union Mansion

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Image 7: The north façade of The Zahir-ol-Islam mansion bears resemblance to The Glass and Mirror Union Mansion

Table 1 comparision between Zahir-ol-islam and Glass and mirror union mansion

	Zahir-ol-Islam mansion	The glass and mirror union mansion
The building's layout: two square units integrated at a 45° angle	√	√
The plan design: the mansion contains numerous rooms	√	√
The main entrance: situated on the south façade, opens into a central foyer	√	√
secondary entrance, on the north façade: provides access to the ground floor and roof	Presence of an annex in the north facade	√
entrances on the east and west façades: connect to the basement	√	√
building aesthetic: the late Qajar and early Pahlavi eras	√	√

Analysis of the North facade

Multiple phases of construction and modification are evident in the Zahir ol-Islam Mansion. Analysis of the north façade reveals an addition lacking the characteristic "toothing" technique used in the original construction. Blocked window openings and sondages exposing original

brickwork beneath newer masonry confirm that this section was a later addition, as shown in image 8:.

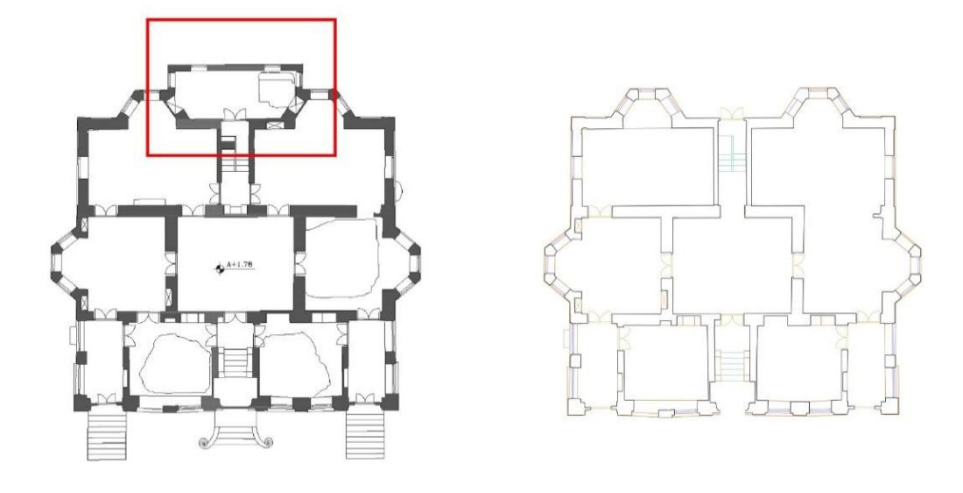

Image 8: later additions that refer to principle of all historical layers must be respected.

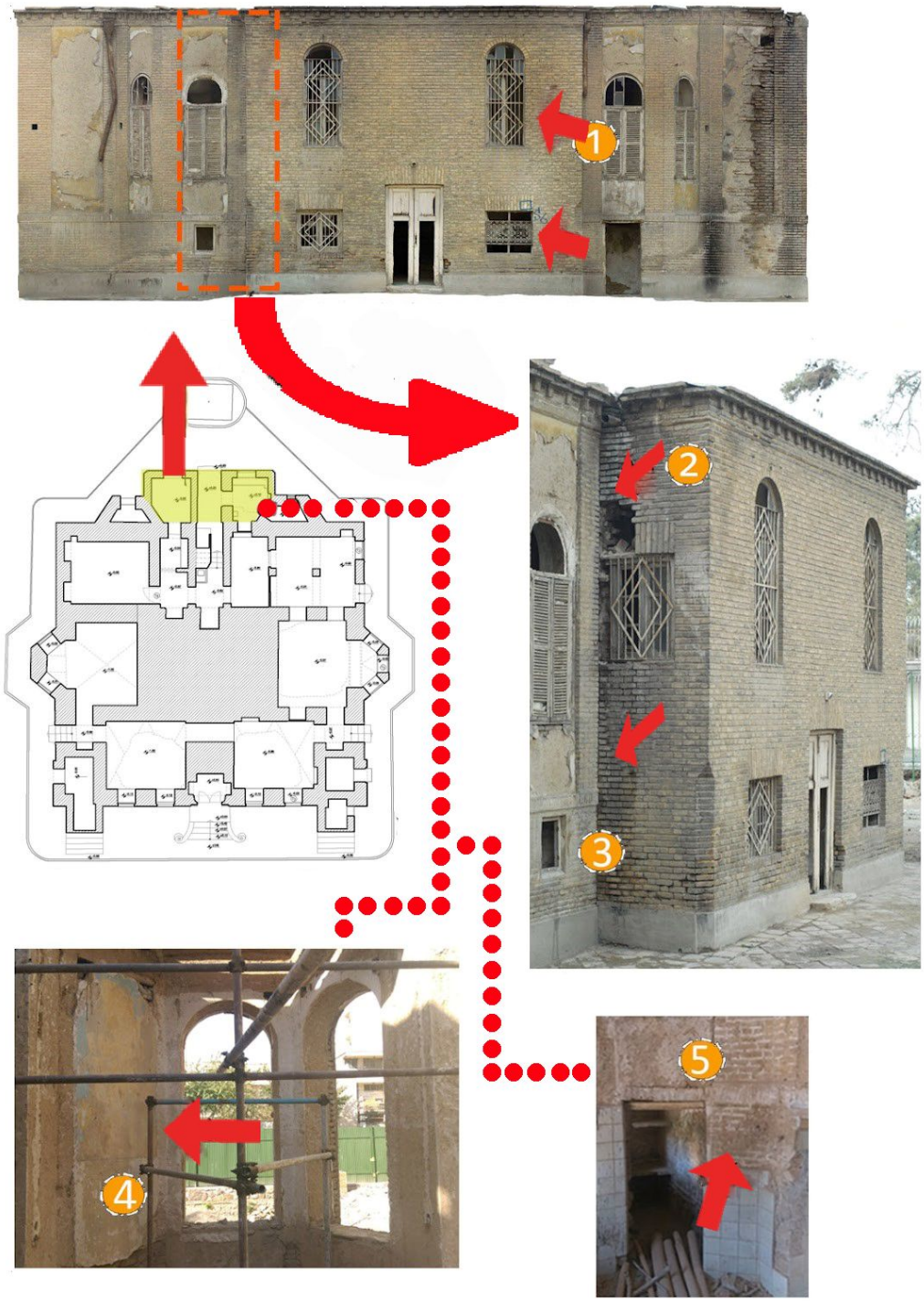

Image 9: Evidences that the north façade is an annex

As shown in image 9, the evidences that prove the north façade section was added later is:

-the style of the windows in the added box structure contrasts with that of the original building,

- the added structure lacks alignment and integration with the original facade,

- a noticeable difference exists in the type of brick used in the added section compared to the original structure-the existing ground-floor has been sealed

- the original rear façade, now concealed by the added structure, remains visible from the interior basement space

Analysis of the South facade

Additional alterations are apparent on the south façade of the ground level. As shown in image 10, two large mosaic staircases, leading to secondary rooms that open onto the garden, were constructed using methods common during the early second Pahlavi era (Bani-Masoud, 2012)—several decades after the mansion's original construction.

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Image 10: The south façade has sufficient evidence of an earlier state of the fabric that refers to the principle of restoration policy.

As well as the method of connecting the brick cladding of the staircase to the southern wall surface, which has been executed without proper bonding or interlocking, is noteworthy, as Image 11 focuses on it.

Image 1: The use of single-piece terrazzo as the final stair finish during the early second Pahlavi era.

Analysis of the east-south area

Sondages conducted following the removal of these staircases revealed original openings leading to basement windows. The brickwork surrounding these openings matched the original façade, while the differing window styles and presence of steel ceiling structures, distinct from the wooden ceilings in the original construction, further indicate a later addition. The discovery of chalk-based groin vaults, chalk-covered walls, and a one-meter-high base wall beneath these layers provides additional confirmation of subsequent modifications.

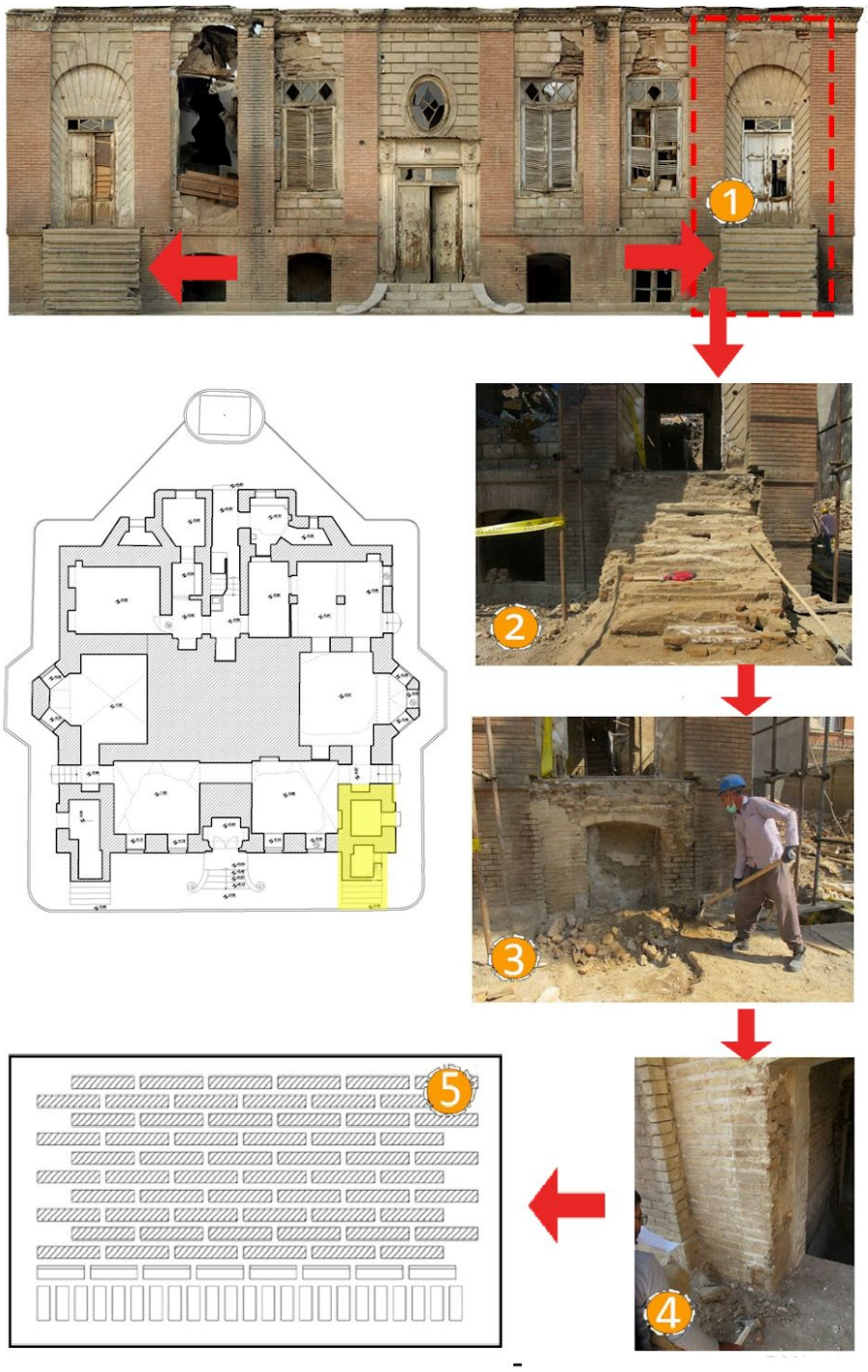

Image 2: Analysis of the east-south area of the mansion

As shown in image 12, there are some evidences that prove the east-south section of the building as an additional part:

-The staircase is composed entirely of single-piece terrazzo, a material characteristic of architectural practices from the late Pahlavi II period onward,

- the brick structure supporting the terrazzo tile surface

- the original southern façade of the building, located behind the staircase - the original southern façade, located behind the staircase, was constructed using yellow bricks,

- the construction details of the original façade features a protruding brick, known as a `harrah`, at the base, topped by a fillet brick, referred to as a `fitileh`.

As emphasized by UNESCO guidelines, such conservation work should involve collaboration with research institutions and universities to ensure technical training and scientific rigor (UNESCO, 1972). In this case, all restoration and investigation activities were conducted by expert contractors under the supervision of the Research Institute of Culture and Art, with the Cultural Heritage Organization serving as a consultant. Article 30 of the Burra Charter also stresses the importance of competent direction, supervision, and implementation by individuals with appropriate expertise, standards that were adhered to throughout this process.

Analysis of the southwestern area

Further discrepancies between the original construction and newer additions, particularly in the southwestern section, where window and lintel details differ, provide additional evidence of multiple construction phases. To evaluate the full extent of these modifications, additional sondages were carried out. An initial sondage along the eastern exterior wall revealed a base wall

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that suggests the original building may not have included a basement. Subsequent sondages within the interior, aligned with the same wall, confirmed the absence of a proper foundation beneath the interior brickwork. These consistent findings strongly support the conclusion that the basement was not part of the original structure but was introduced during a later phase of development.

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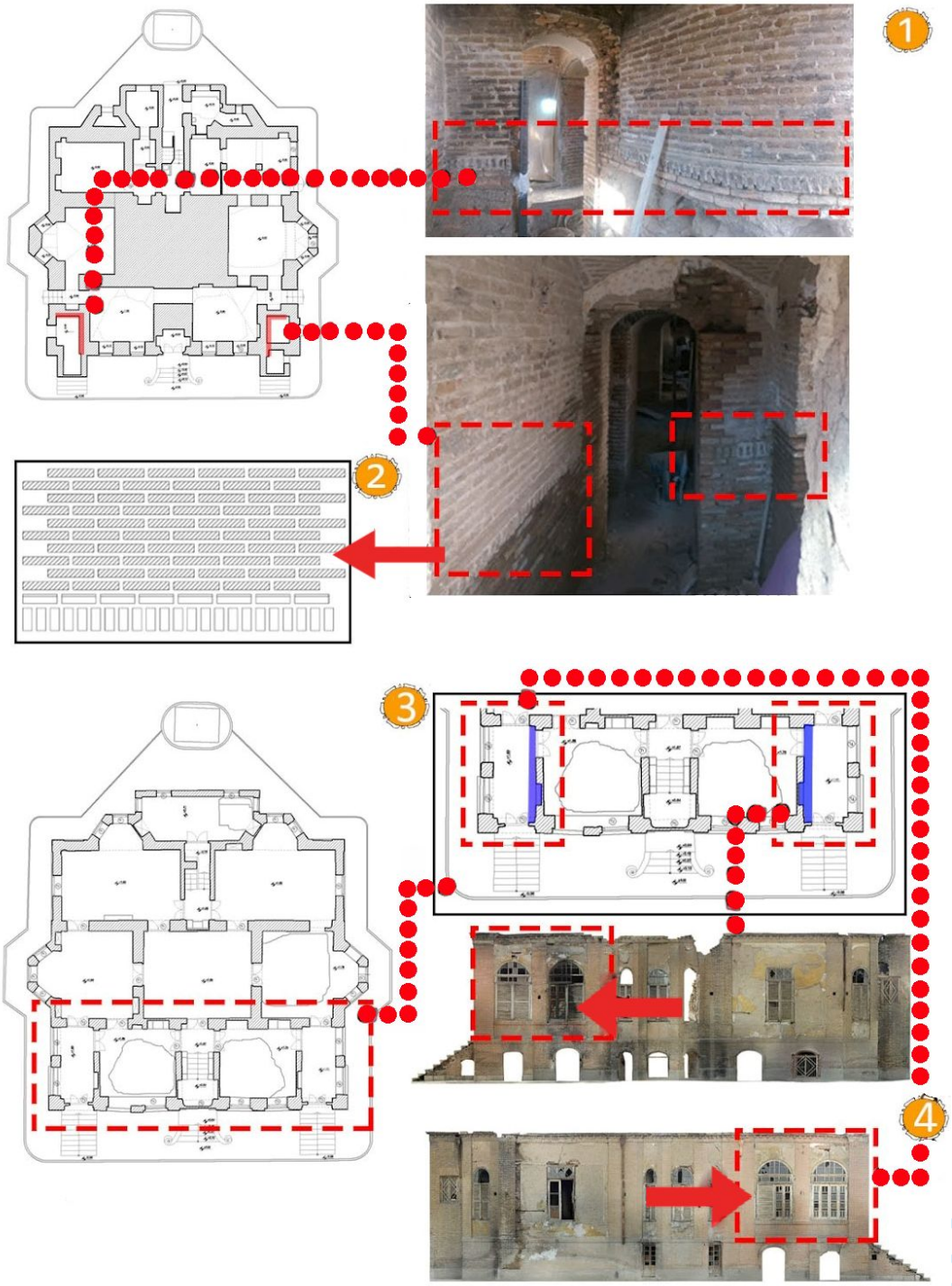

Image 3: the west-south is an annex

As shown in the image 4, there is evidence that proves the west-south as an addition:

- the original façade of the building, which has bricks like the design that used to be behind the staircase on both sides, was revealed in the basement areas on each side of the southern face of the building

- the original façade details uncovered in the basement closely resemble those of the original southern façade, and other facades of the building share these same features.

- the ground floor wall is 35 cm thick. After some exploring, the basement façade wall was found to continue below, making the total thickness of the main wall about 65 cm

- the ground floor windows on either side of the southern façade are identical in size and shape, in contrast to the windows on the other facades of the house, which vary in both form and dimensions.

Results

The comprehensive study of the Zahir ol-Islam Mansion—supported by comparative analysis with the Glass Union Building and detailed architectural sondages—reveals a complex construction history that challenges initial assumptions about the building's original form and function. The findings demand a nuanced understanding of the mansion's evolving form and its shifting cultural, functional, and social priorities across time. The evidence suggests a four-stage construction history for the Zahir ol-Islam Mansion:

1. Initial Construction: The original structure consisted solely of the ground level, constructed without a basement, suggesting a general function
2. Basement Addition: A basement level was added in a subsequent phase, demonstrating a shift in special needs, possibly tied to new service functions or storage requirements.

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3. Further Basement Expansion: Additional sections were appended to the original basement space. It represents a deepening adaptation, reinforcing the idea that the mansion was continually adjusted to accommodate evolving use.
4. North and South Extensions: Additions were made to the north façade, and twin staircases, along with an outer shell, were introduced on the south façade. They illustrate a significant architectural reconfiguration, shifting both circulation patterns and the symbolic presence of the building.

This multi-phase development aligns with Article 11 of the Venice Charter. By acknowledging these sequential modifications, the conservation process recognizes the mansion as a palimpsest of cultural values.

The Burra Charter reinforces these principles to respect contributions of all historical periods. (Article 13). Furthermore, Article 15.1 states that any necessary changes must not diminish cultural significance. The decision to remove the twin monolithic staircases to preserve the south façade and expose previously blocked basement windows illustrates this careful balance of values. The act of removal thus demonstrates a targeted and evidence-based application of conservation principles, rather than a blanket prioritization of an earlier phase.

The question of the building's contemporary use also emerged as a critical issue. The owner's decision to repurpose the mansion as an office aligns with Article 23 of the Burra Charter, as a preferred form of conservation. Nevertheless, this choice presents challenges when viewed through the lens of Article 12 of the Faro Convention. This article emphasizes the importance of improving public access, especially for youth and marginalized groups, to foster awareness of heritage value and promote its preservation. While new functions ensure ongoing maintenance and financial

sustainability, they restrict wider community interaction, especially for younger groups who may benefit the most from direct heritage experiences. This tension highlights the unresolved challenge of balancing private stewardship with public cultural rights.

Responsibility for these decisions rested with the building's owner and the consulting experts, in accordance with Article 29 of the Burra Charter, which calls for transparency and accountability in heritage management. The final decisions were made by the owner in consultation with the Cultural Heritage Organization and academic institutions. The collaborative process illustrates not only the technical but also the ethical dimensions of conservation practice.

Modifications to the service zone on the north side were implemented to support the building's new function. This approach is consistent with Article 5 of the Venice Charter to reuse heritage buildings for socially useful purposes to support their conservation, provided such adaptations do not alter the building's original layout or decoration. In the Zahir-ol-Islam project, reconciled modern functional requirements with historical integrity.

In terms of conservation methodology, in this project, a combination of processes such as maintenance, preservation, restoration, reconstruction, adaptation, and interpretation was applied. The decision to proceed with restoration was guided by Article 18 of the Burra Charter, which states that restoration should reveal culturally significant aspects of the site, and by Article 19, which asserts that restoration is appropriate only when there is sufficient evidence of an earlier state of the fabric. The condition assessments confirmed the urgency of restoring the building and provided a reliable basis for the restoration process.

Taken together, the results of this study highlight not only the layered construction history of the Zahir-ol-Islam Mansion but also the complex ethical negotiations required in its conservation. The

project embodies the fundamental conservation challenge articulated across charters: to preserve material authenticity while accommodating evolving functions and cultural values, all within a transparent and accountable decision-making framework. Table 2 demonstrates the alignment between data, themes, and Charter principles. The qualitative data were analyzed using a thematic coding approach aligned with the principles of the International Charters. The analysis followed three stages:

1. Initial Coding

   All collected data (documents, observations, reports) were read carefully and broken down into meaningful units.

   Codes were assigned to data segments related to conservation practices (e.g., "use of original materials," "reversibility," "documentation," "adaptive reuse").

2. Thematic Categorization

   Codes were grouped into broader themes that reflect core conservation concerns (e.g., material authenticity, structural integrity, functional adaptation).

3. Systematic Comparison with Charter Principles

   Each theme was compared clause-by-clause with the relevant Venice Charter principles.

Table 2The alignment between data, themes, and Charter principles

	Data segment(Zahir-ol – Islam case study)	Theme	Principle	Aalytical conclusion

Venice Charter(1964)	Mansion reused as Private office without changing its structure.	Appropriate use	Art. 6: Socially useful function acceptable if it doesn't alter layout	Compatible reuse respected historic fabric.
	Adaptive reuse involved minimal change and maximum retention of fabric	Restoration limits	Art. 11: Valid contributions of all periods respected; stylistic restoration avoided	Multi-period heritage safeguarded.
Burra charter (Australia, 1979)	The conservation process start with significance study; then, making policy.	Conservation Process	Art. 6.Process framework, Three-step workflow (significance → policy → management)	Conservation structured by Charter.
	Multiple phases of construction have been recognized	Multiple phases	Art. 13. Co-existence of cultural values should be respected.	Multiple phases acknowledged.

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	the south façade has been preserved and previously blocked basement windows have been exposed	Changes	Art. 15. Managing change Interventions assessed for impact before execution.	Significance protected against loss.
	A combination of process such as maintenance, preservation, restoration, reconstruction, adaptation, and interpretation was applied	reveal cultural significance	Art. 18. Restoration. restoration and reconstruction reveal cultural significance	Design consistent with evidence.
	The building has enough evidence of the original state.	Sufficient Evidences	Art. 19.Restoration, acceptable there is sufficient evidence	The final policy has been made to restore the building.
	The building is will be used as a private office.	New use	Art. 23.reintroduce a Use is a form of conservation	Continuity of functions ensured.

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	The final decisions were made by the owner in consultation with the Cultural Heritage Organization and academic institutions	Responsibilities	Art. 29.Responsibility or management and decision	Every responsibility has been assigned.
	all restoration and investigation activities were conducted by expert contractors under the supervision of the Research Institute of Culture and Art, with the Cultural Heritage Organization serving as a consultant	Direction, Supervision, and implementation	Art. 30. Direction, supervision, and implementation by appropriate people	Services were offered compatible with responsibilities.

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Faro Convention (2005)	Reuse as a private office.	Public Access	Art. 12. Access to cultural heritage and democratic participation	Incompatible with the charter because of owner`s decision

Discussion

The conservation process presented in the Burra Charter offers a structured framework initiating conservation and restoration. In this study, the first task—assessing the cultural significance of the mansion—was driven by the principles in the international charters.

However, the practical implementation of these principles was not without challenges. One of the most critical issues we faced was stakeholder power dynamics. This might lead to an imbalanced decision-making process that prioritizes certain interests over heritage values. To address this, a structured stakeholder decision-making process should be provided to help manage competing interests, reduce conflicts, and support both the conservation goals and the rights of the property owner.

The study also faced the limitation of relying on traditional excavation methods. While manual techniques are valuable for maintaining contextual integrity, they are time-consuming and labor-intensive in this case. Integrating modern technologies into the process enhances both precision and productivity.

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Moreover, as a single case study, the findings may not be generalizable to all heritage restoration projects. Additionally, the subjective interpretation and application of conservation charters may influence the analysis and results. Despite these limitations, the study identified the significance of the building and defined different construction phases. It also highlights areas where future research and development are needed in practical applications.

In the case of the Zahir-ol-Islam Mansion, the issues initially perceived as limitations, such as the lack of comprehensive historical documentation, proved to be central findings of the research. These conditions show the underlying challenges that define the reality of heritage management in practice. Moreover, Stakeholder disagreements demonstrate how competing cultural, economic, and institutional priorities shape decision-making in adaptive reuse.

This study provides empirical evidence of the application and limitations of Eurocentric conservation charters within the Iranian context, thereby reinforcing the ongoing discourse on their localization to align with diverse cultural and socio-historical conditions. It reinforces the need to critically assess the universality of international conservation frameworks and to develop localized models that reflect non-Western realities. The study provides valuable insights to practitioners by applying international conservation theories to the real-world restoration of a monumental heritage site highlighting both their practical applicability and the challenges encountered in context-specific implementation. It highlights practical challenges such as limited historical documentation, unforeseen site conditions, and complex stakeholder dynamics. There is a need for a comprehensive approach that accommodates uncertainty, remains sensitive to contextual factors, and incorporates a flexible approach The study underscores the influence of stakeholder power dynamics, revealing a need for policy measures that promote balanced, transparent decision-making. These findings can inform the development of more equitable guidelines for cultural

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heritage organizations, professionals, and property owners. The research supports the safeguarding of national heritage that reinforces cultural identity, sustains collective memory, and encourages continued public engagement with historical assets.

Conclusion

Preservation of heritage buildings is a collective responsibility, as they represent tangible links to past traditions. The restoration of Zahir-ol-Islam was challenging due to its status as a national cultural heritage site. International charters provided general principles for intervention and the preservation of cultural values; however, the localization of Eurocentric charters within the Iranian context posed challenges.

According to the conservation and restoration process outlined in the Burra Charter, the first and most essential step in any conservation and restoration effort is understanding the cultural significance of the site. The Zahir-ol-Islam Mansion, situated within a garden, displays evidence of multiple construction phases, each reflecting distinct historical and functional layers.

Architectural analysis of the north façade revealed the absence of the toothing method characteristic of the original construction. Moreover, the presence of a blocked window opening served as additional evidence of a later addition on the north side.

On the other hand, two monolithic staircases on the south façade were constructed using early Second Pahlavi-era techniques, dating several decades after the mansion's initial phase. There were windows located behind the staircases. Investigations behind these windows revealed brickwork identical to the original façade, alongside modern elements such as a steel ceiling

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structure. These contrast with the original wooden construction and strongly suggest a later addition.

Exploratory sondages were carried out around the building. All excavation tasks were conducted by experienced contractors under the supervision of the Research Institute of Culture and Art at and the Cultural Heritage Organization. Initial sondages on the eastern exterior wall revealed a base wall without any foundation. Interior walls were also found to lack support beneath them, indicating that the original structure was built without a basement. Further sondages produced consistent findings, supporting the hypothesis that the basement was added during later construction phases.

This interpretation, together with the analysis of the additions described above, suggests a four-stage construction history for the Zahir-ol-Islam Mansion.

The different building phases, which should be recognized, respected, and encouraged. Policy development was based on cultural significance, while also considering the owner's intentions, the site's physical condition, and external constraints. The owner decided to repurpose the mansion as a private office.

While international charters provide valuable guiding principles, the analysis shows that unforeseen site conditions and insufficient historical documentation are barriers to direct application. These issues reveal a gap between universal guidelines and the practical realities of contexts characterized by limited documentation and dynamic site conditions.

The study faced several limitations. One major issue was the absence of reliable historical documentation and evidence regarding the original state and transformation phases of the Zahir-

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ol-Islam Mansion. The lack of archival and material records created considerable uncertainty and complicated the interpretation of architectural elements. Numerous unforeseen findings and conditions also emerged during the site exploration. These discoveries disrupted the planned workflow, causing delays and unanticipated increases in both time and financial expenditure. These challenges highlight a critical gap in current conservation frameworks: rigid approaches that rely heavily on complete documentation or ideal conditions often fail when confronted with complex local realities. This case demonstrates the necessity of a more flexible, context-aware model of heritage preservation. It should embrace uncertainty, adapt to evolving conditions, and integrate local knowledge and practical constraints into the decision-making process.

Further research is necessary. Several walls were found to be built directly on soil without any foundation. A comprehensive geotechnical investigation is required to evaluate the long-term structural stability of the mansion and the effectiveness of future conservation measures. Detailed soil testing should be prioritized to inform any necessary reinforcement strategies and prevent potential settlement or structural failure.

A comprehensive decision-making framework should be designed to effectively manage power dynamics among stakeholders involved in the project. Such a framework should aim to balance the interests of the property owner with the imperative to preserve the site's cultural, historical, and environmental significance. This would help prevent conflicts of interest and ensure mutually beneficial outcomes for all involved parties.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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Image 1: Aerial photo from 1968 of the Zahir ol Islam House in a complex garden.

119x144mm (96 x 96 DPI)

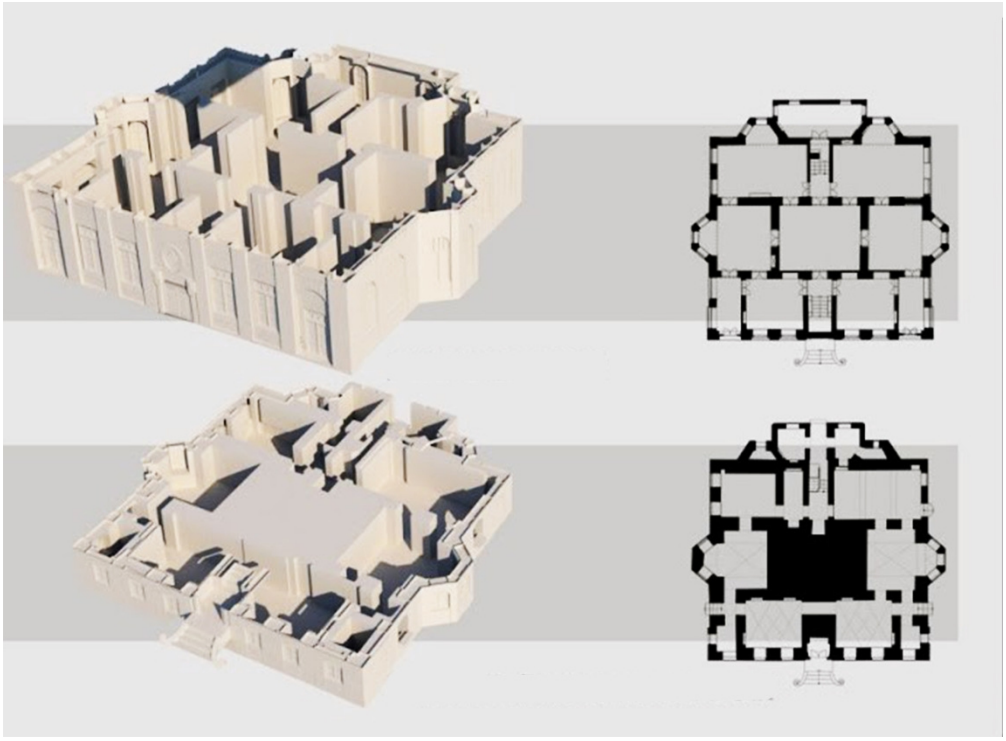

Image 2: Isometric view of the Zahir-ol-Islam, top the ground floor and down the basement

181x133mm (300 x 300 DPI)

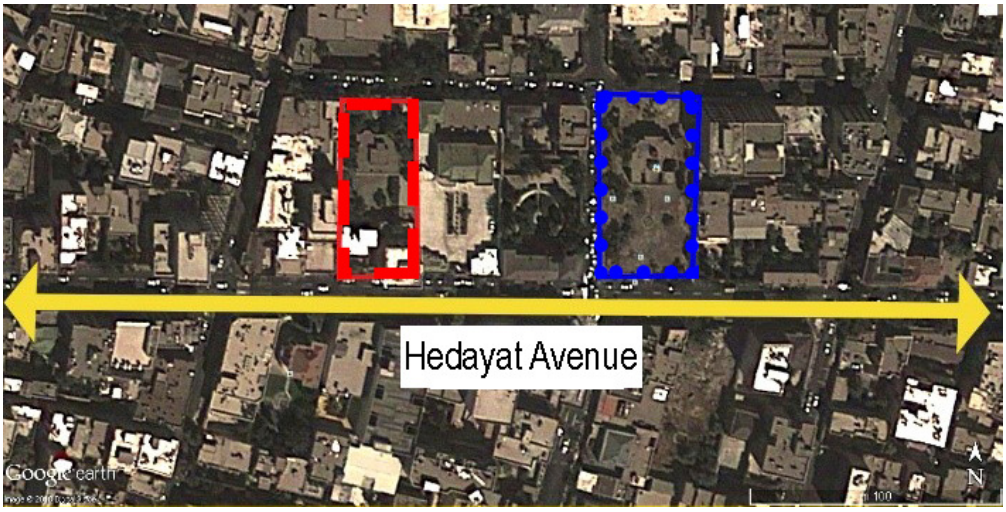

Image 3: An aerial photograph from 1954 shows the Zahir-ol-Islam House on the right, the Tehran Glass and Mirror Union on the left.

81x40mm (220 x 220 DPI)

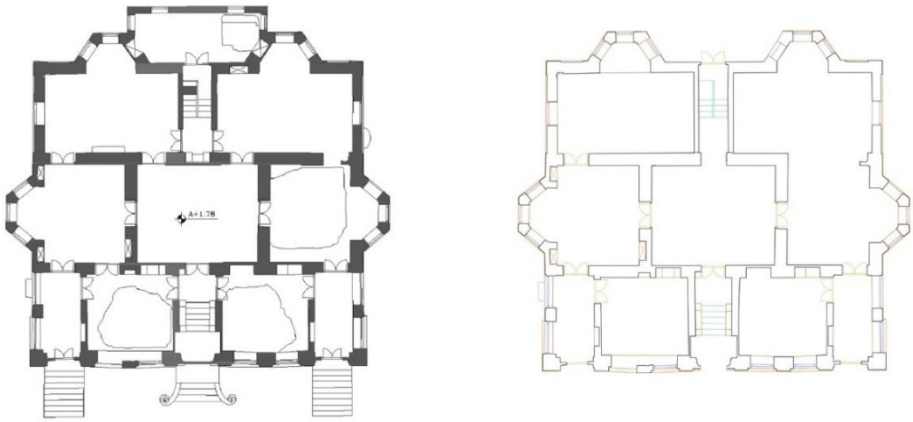

Image 4: An aerial photograph from 1954 shows the Zahir-ol-Islam House on the right, the Tehran Glass and Mirror Union on the left.

330x155mm (96 x 96 DPI)

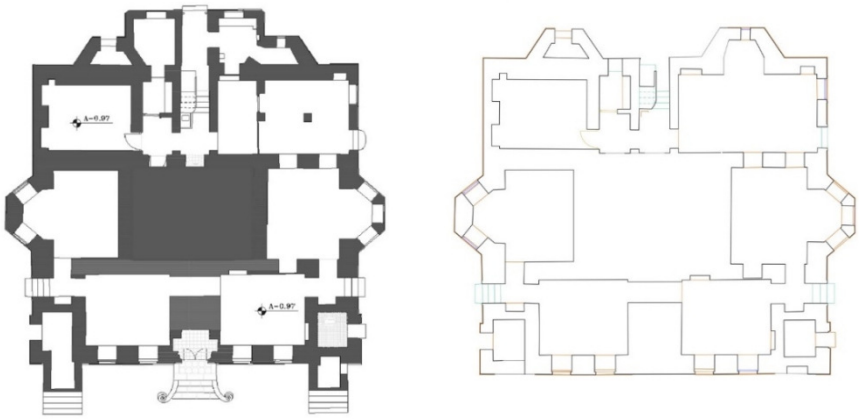

Image 5: The similarity between The Zahir-ol-Islam and the Glass and Mirror Union basement

143x64mm (220 x 220 DPI)

Image 6: The north façade of The Glass and Mirror Union Mansion

72x48mm (220 x 220 DPI)

Image 7: The north façade of The Zahir-ol-Islam mansion bears resemblance to The Glass and Mirror Union Mansion

72x48mm (220 x 220 DPI)

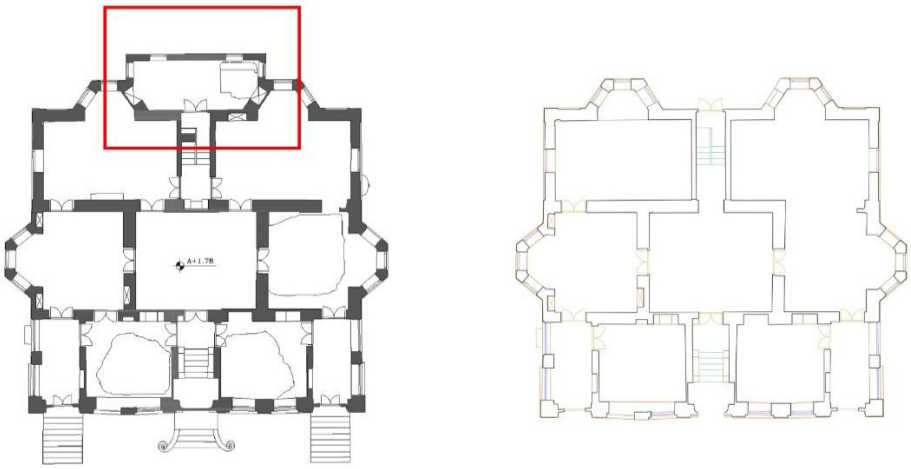

Image 8: later additions that refer to principle of all historical layers must be respected.

304x155mm (96 x 96 DPI)

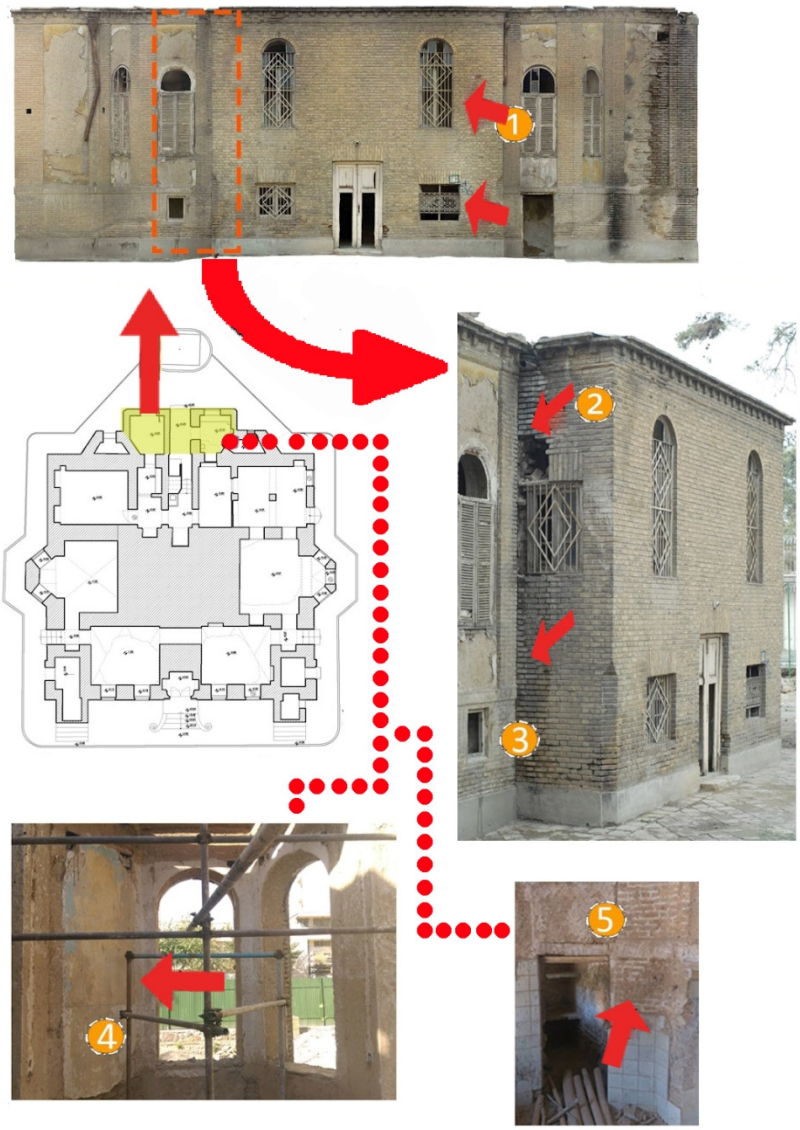

Image 9: Evidences that the north façade is an annex

306x423mm (96 x 96 DPI)

Image 10: The south façade has sufficient evidence of an earlier state of the fabric that refers to the principle of restoration policy.

423x282mm (96 x 96 DPI)

Image 11: The use of single-piece terrazzo as the final stair finish during the early second Pahlavi era.

77x58mm (220 x 220 DPI)

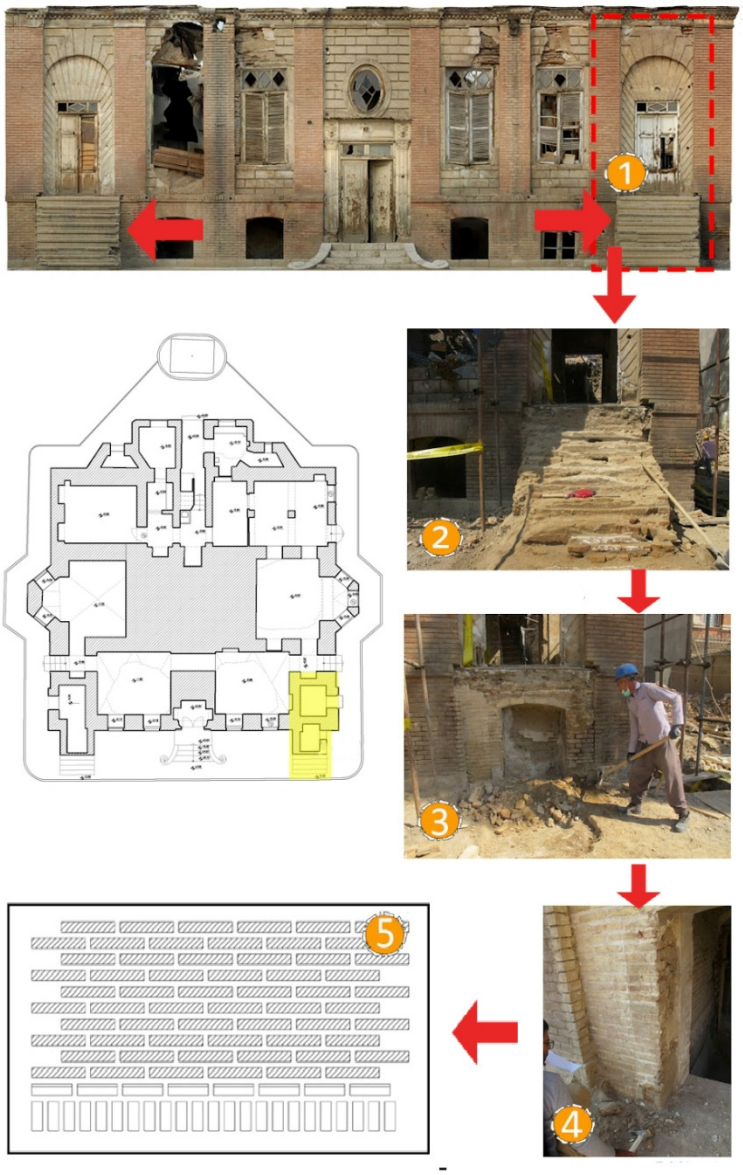

Image 12: Analysis of the east-south area of the mansion

264x396mm (96 x 96 DPI)

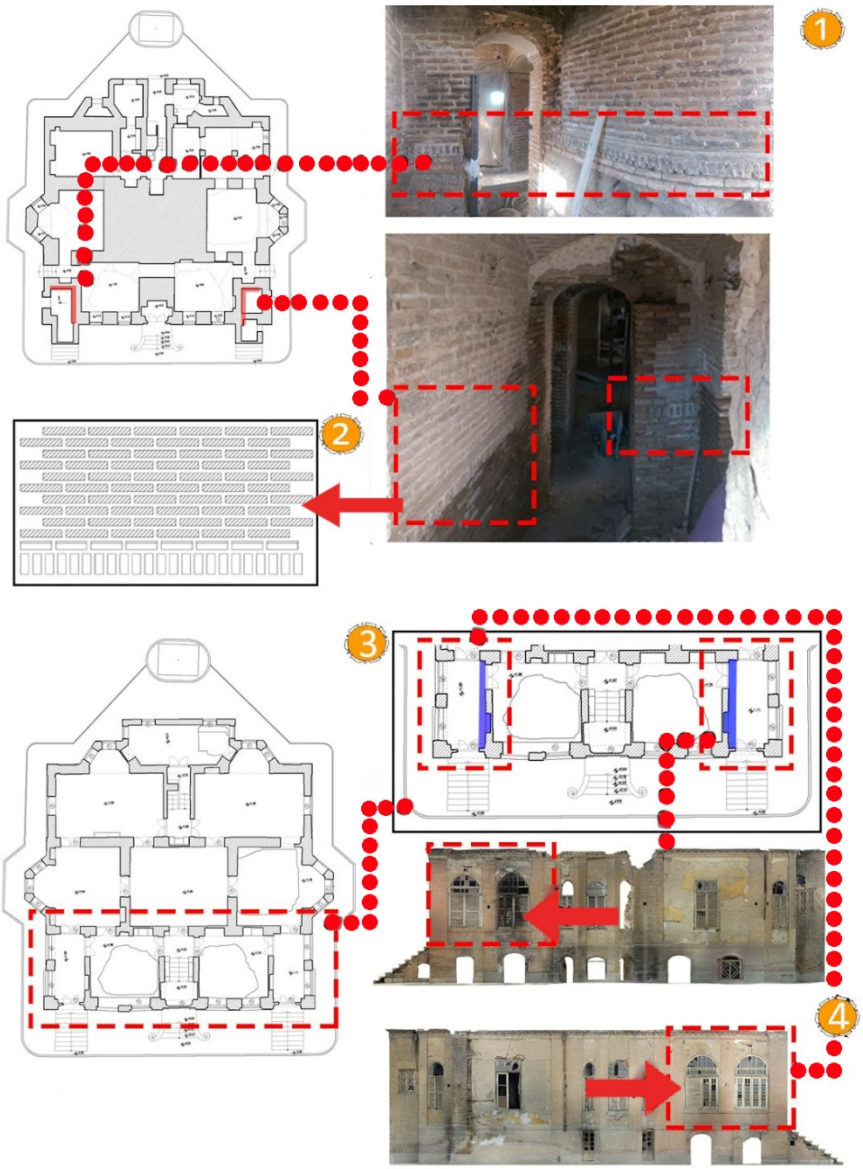

Image 13: the west-south is an annex

289x397mm (96 x 96 DPI)

Table 1 comparision between Zahir-ol-islam and Glass and mirror union mansion

	Zahir-ol-Islam mansion	The glass and mirror union mansion
The building's layout: two square units integrated at a 45° angle	√	√
The plan design: the mansion contains numerous rooms	√	√
The main entrance: situated on the south façade, opens into a central foyer	√	√
secondary entrance, on the north façade: provides access to the ground floor and roof	Presence of an annex in the north facade	√

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Table 2 The alignment between data, themes, and Charter principles

	Data segment(Zahir-ol – Islam case study)	Theme	Principle	Aalytical conclusion
Venice Charter(1964)	Mansion reused as Private office without changing its structure.	Appropriate use	Art. 6: Socially useful function acceptable if it doesn't alter layout	Compatible reuse respected historic fabric.
	Adaptive reuse involved minimal change and maximum retention of fabric	Restoration limits	Art. 11: Valid contributions of all periods respected; stylistic restoration avoided	Multi-period heritage safeguarded.
Burra charter (Australia, 1979)	The conservation process start with significance study; then, making policy.	Conservatio n Process	Art. 6.Process framework, Three-step workflow (significance → policy → management)	Conservation structured by Charter.
	Multiple phases of construction have been recognized	Multiple phases	Art. 13. Co-existence of cultural values should be respected.	Multiple phases acknowledged.

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	the south façade has been preserved and previously blocked basement windows have been exposed	Changes	Art. 15. Managing change Interventions assessed for impact before execution.	Significance protected against loss.
	A combination of process such as maintenance, preservation, restoration, reconstruction, adaptation, and interpretation was applied	reveal cultural significance	Art. 18. Restoration. restoration and reconstruction reveal cultural significance	Design consistent with evidence.
	The building has enough evidence of the original state.	Sufficient Evidences	Art. 19.Restoration, acceptable there is sufficient evidence	The final policy has been made to restore the building.
	The building is will be used as a private office.	New use	Art. 23.reintroduce a Use is a form of conservation	Continuity of functions ensured.

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	The final decisions were made by the owner in consultation with the Cultural Heritage Organization and academic institutions	Responsibilities	Art. 29.Responsibility or management and decision	Every responsibility has been assigned.
	all restoration and investigation activities were conducted by expert contractors under the supervision of the Research Institute of Culture and Art, with the Cultural Heritage Organization serving as a consultant	Direction, Supervision, and implementation	Art. 30. Direction, supervision, and implementation by appropriate people	Services were offered compatible with responsibilities.

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Faro Convention (2005)	Reuse as a private office.	Public Access	Art. 12. Access to cultural heritage and democratic participation	Incompatible with the charter because of owner`s decision

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