

ADAPTIVE REUSE IN HISTORIC URBAN CONTEXTS: CONTEXTUAL AND VISUAL ASSESSMENT OF A BUILDING IN AL-HUSSEIN AREA

إعادة الاستخدام التكيفي في السياقات الحضرية التاريخية: تقييم سياقي ومرئي لمبنى في
منطقة الحسين

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ABSTRACT

This paper examines the adaptive reuse potential of an abandoned building facing Al-Hussein Mosque in Cairo's Al-Gamaleya district, a site of high cultural and urban value. Through field observation, photographic documentation, and spatial analysis, the study assesses the building's condition, contextual role, and viability for reuse. Emphasis is placed on accessible, site-based evaluation methods to guide reuse decisions in heritage-sensitive urban settings. The analysis of this paper explores how the building's visual presence, commercial integration, and proximity to key heritage landmarks influence its adaptive reuse potential. Findings suggest that revitalizing such underutilized structures can enhance cultural continuity, support community-oriented functions, and contribute to sustainable urban regeneration. The proposed reuse—creative workspaces and educational hubs demonstrates how adaptive strategies can serve both the historic character of the site and the evolving needs of the city. This research contributes to broader frameworks for assessing reuse potential in historic districts without compromising heritage integrity.

KEYWORD

Adaptive Reuse; Historic Urban Contexts; Al-Gamaleya

الملخص

تتناول هذه الدراسة إمكانات إعادة الاستخدام التكيفي لأحد المباني المواجهة لمسجد الحسين في حي الجمالية بالقاهرة، وهي منطقة ذات قيمة ثقافية وحضرية عالية. ومن خلال الملاحظة الميدانية، والتوثيق الفوتوغرافي، والتحليل الفراغي، تقييم الدراسة حالة المبنى، ودوره السياقي، وإمكانية إعادة تفعيله. وتركز المنهجية على أساليب تقييم ميدانية بسيطة ومباشرة لتوجيه قرارات إعادة الاستخدام في البيئات الحضرية الحساسة تراثياً. يستعرض التحليل في هذه الدراسة كيف تؤثر السمات البصرية للمبنى، واندماجه التجاري، وقربه من معالم تراثية رئيسية في إمكانات إعادة استخدامه. وتشير النتائج إلى أن إعادة تفعيل مثل هذه المباني غير المستغلة يمكن أن تعزز استمرارية الهوية الثقافية، وتدعم الوظائف المجتمعية، وتساهم في تجديد حضري مستدام. وتقدم الدراسة تحويل المبنى إلى مساحات عمل إبداعية ومحاوّر تعليمية، باعتبارها استراتيجية تكيفية تحقق توازناً بين الطابع التاريخي للموقع التراثي واحتياجات المدينة المعاصرة. وتسهم هذه النتائج طبقاً للدراسة في وضع أطار أوسع لتقييم إمكانات إعادة الاستخدام في المناطق التاريخية دون المساس بقيمتها التراثية والاضافة المفيدة.

الكلمات المفتاحية

إعادة الاستخدام التكيفي؛ السياقات الحضرية التاريخية؛ حي الجمالي

1. INTRODUCTION

Historic urban districts, like the Al-Gamaleya district in Cairo, are vibrant city spaces that embody the confluence of architectural form, collective memory, and social identity. They are of immeasurable cultural and historical significance, frequently having several, stratified stories told through the built environment. They are, nonetheless, also susceptible to deterioration, with numerous structures falling underutilized or vacant over time. Many such structures, having been vacated, stand at strategic locations next to major heritage monuments. The degradation of these structures, aside from being detrimental to the vibrancy of the surrounding urban landscape, is a menace to the preservation of the cultural heritage that they represent.

With this in mind, adaptive re-use of vacant buildings offers a tremendous opportunity for the renewal of these districts in a way that enables the preservation of historic authenticity alongside addressing the changing requirements of contemporary urban habitation. Successful adaptive re-use necessitates a clear understanding of the physical condition, spatial character, and its contextual relationship to adjacent heritage places—factors that are often uncertain because of a lack of documentation and the general state of dereliction of the building.

This paper investigates the potential of adaptive reuse in historic urban settings through a case study of an abandoned building situated directly in front of Al-Hussein Mosque in Cairo. By conducting a contextual and visual analysis, the study evaluates the building's spatial role, physical condition, and relationship to the surrounding heritage fabric. The aim is to identify viable reuse strategies that both preserve cultural value and serve contemporary urban functions. Accordingly, this research addresses the following question:

How can the contextual, spatial, and physical assessment of non-listed buildings within heritage zones inform their adaptive reuse potential?

2. LITERATURE REVIEW

2.1 Definition and Scope

Adaptive re-use is the reuse of existing structures for alternative purposes without completely erasing their historic and architectural significance. The method is crucial for sustainable urbanization, specifically in heritage contexts where demolition is not possible or acceptable (Douglas, 2006). Adaptive re-use is the process of converting an existing building or structure to a use other than that for which it was originally designed, while still maintaining its historic and architectural integrity. Not only does this approach assist in the preservation of cultural heritage, but it also provides a sustainable alternative to new construction, thus reducing the environmental impact of urban development (Bullen & Love, 2011).

2.2 Principles

The fundamental principles of adaptive re-use are minimum intervention, reversibility, and respect for historic value (Plevoets & Van Cleempoel, 2011). These principles direct the decision-making to achieve new uses that harmonize with the prevailing architecture and cultural context.

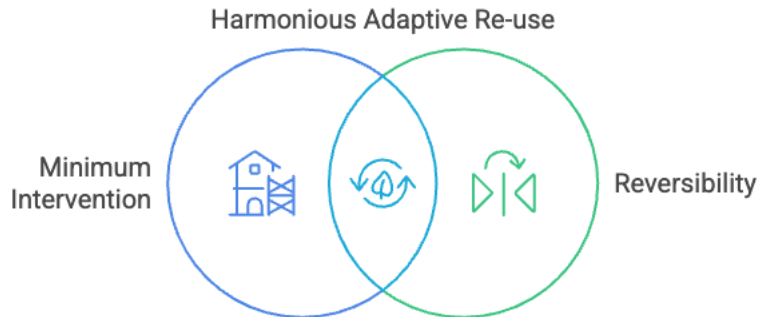


Figure (1) diagram explains the harmonious adaptive re-use.

2.3 Characteristics

Adaptive re-use proposals are typically characterized by functional flexibility, integration with contemporary needs, and retention of existing fabric. In the case of historic districts, reuse is also designed to cater to vernacular architecture, urban morphology, and social dynamics (Bullen & Love, 2011).

2.4 Key Studies

There is abundant research work pointing to the potential of digital technologies in bringing about adaptive reuse.

- Fai and Filippi (2017) examine the potential of Building Information Modeling (BIM) in the documentation of intricate heritage buildings.
- Dore and Murphy (2012) propose the utilization of 3D Geographic Information Systems (GIS) and photogrammetry in obtaining precise spatial data.
- Abdelmonem (2015) demonstrates, however, that there is a general absence of implementing such technologies in Cairo's historic districts owing to institutional and financial limitations.

3. METHODOLOGY

This research involves a study of a neglected building adjacent to Al-Hussein Mosque in Historic Cairo. Because of the location's vulnerable heritage setting and the relatively limited availability of sophisticated digital technologies, the study is based on firsthand observation supported by photographic documentation taken by the researcher. The necessary visual documentation is employed as the foundation for recognizing patterns of deterioration, structural vulnerability, and inherent potential for adaptive reuse. The methodological structure adheres to two fundamental phases:

1- Site Visit and Visual Documentation

Extensive field observations were conducted to evaluate the physical state, spatial layout, and urban setting of the abandoned building. Photographic documentation from various viewpoints was secured to offer a comprehensive visual record of the external elevations, interior conditions, circulation paths, and materials of the building. Architectural and Contextual Analysis

Architectural and Contextual Analysis

The images were scrutinized to ascertain the building's structural stability, adaptability, and cultural pertinence in terms of how close it was to Al-Hussein Mosque. The results were put into

perspective with the overall city morphology of Al-Gamaleya, specifically how it responded to the streets, pedestrian traffic, and local aesthetic values.

The method of analysis borrows from adaptive reuse and urban morphology paradigms, specifically those developed in Douglas (2006), Plevoets & Van Cleempoel (2011), and Abdelmonem (2015). It also adheres to the guidelines established by ICOMOS (2011) for heritage buffer zones by incorporating urban visibility and contextual sensitivity dimensions into the evaluation process. The chosen criteria are divided into two groups:

A. Urban Contextual Role

- **Location and Connectivity**
Examines how the building is integrated into the urban tissue, for instance, proximity to active streets, pedestrian routes, and patterns of access (Gehl, 2011; Dovey, 2010).
- **Visibility and Urban Presence**
Assesses the building's contribution to the surrounding spatial and visual character—especially if located in proximity to major landmarks or public spaces (Abdelmonem, 2015).
- **Relationship to Heritage Sites**
Respects adjacency and spatial conversation with heritage buildings that are protected, adhering to the ICOMOS (2011) guidelines for the management of historic places' settings.
- **Potential for Public Activation**
Refers to potential re-use situations that facilitate social or cultural activities, hence fostering urban vibrancy and community engagement (Plevoets & Van Cleempoel, 2011; Douglas, 2006).

B. Physical Condition and Reuse Potential

- **Facade and Architectural Features**
Documents remaining architectural elements and surface features (e.g., windows, arches, ornamentation) in order to determine reuse sensitivity and retention of character (Feilden, 2003; Bullen & Love, 2011).
- **General Exterior Condition**
Reports show evidence of decay, weathering, or unauthorized extensions—analyzing the degree of material deterioration and maintenance (Yung & Chan, 2012).
- **Internal Condition**
Based on interior photos and firsthand observation, this criterion captures general spatial usability and maintenance, such as wall finishes, room configuration, lighting, or extensive deterioration—without committing detailed structural examination (Douglas, 2006; Feilden, 2003).
- **Signs of Use or Abandonment**
Recognizes indicators like closed doors, tagging, or unofficial reuse, in order to measure urgency and possibility of reintegration within the urban fabric (Bullen & Love, 2011; Yung & Chan, 2012).

4. STUDY AREA AND CASE DESCRIPTION

Cairo, commonly known for its extensive architectural legacy, was listed as a UNESCO World Heritage Site in 1979 as "Historic Cairo." The historic city was founded in 969 AD and encompasses well-known Islamic monuments such as Al-Azhar Mosque (972 AD), Al-Hussein Mosque (1154), and Khan Al-Khalili Bazaar (1882) (Hassan et al., 2016; O'Kane, 2016). Notably, the Al-Hussein Mosque, which was reconstructed into its current form in 1873, is both a religious and cultural icon (O'Kane, 2016).

Al-Gamaleya district, in the center of Historic Cairo, contains a tight concentration of narrow passageways and aged buildings. It is defined by Bab El Fotouh and Bab El Nasr to the north, Bab Zuwaila to the south, El Darrassa to the east, and El Geish Street to the west, with portions of the original Fatimid urban design. Despite its historical importance, the district has also suffered from acute socio-economic and physical problems. Its population declined by 41%—from 310,427 to 184,424—between 1986 and 2006 because of its poor living conditions and high population density (CAPMAS, 2006).

Al-Gamaleya is characterized by a concentration of small-scale industries and workshops, primarily jewelry, clothing, shoemaking, and metalwork. It is also home to a high concentration of food establishments, including spice and dried fruit shops. While the area has 45 schools and 70 health centers, educational dropout is a problem since children tend to leave school early to work and earn money for their families. The area also has five youth centers, four police stations, and two fire stations (CAPMAS, 2006).



Figure (2) photo of Al-Hussein Mosque in Gamaleya, Cairo. Source: google images



Figure (3) photos of streets of al-Gamaleya. source: by researcher

Within this context, the case study building lies adjacent to Al-Hussein Mosque. Although currently abandoned, the structure occupies a strategic location along a highly trafficked pedestrian route, presenting both challenges and opportunities for adaptive reuse.

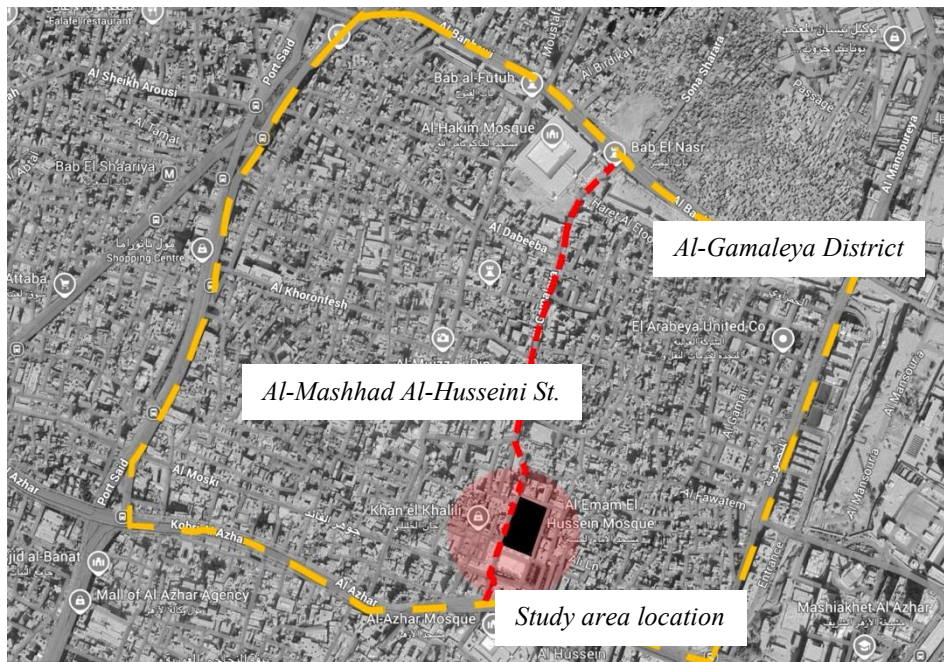


Figure (4) photo of case study area around Al-Hussein Mosque in Gamaleya, red highlights Al-Mashhad al Hussein St. Source: google earth, analysis by researcher

The chosen case study is a medium-scale abandoned building directly facing the western facade of Al-Hussein Mosque in Al-Gamaleya district of Historic Cairo. The building is divided from the mosque by a small road named Mashhad Al-Husseiny, which is used as a dynamic pedestrian path with buildings catering to tourists and street markets. This boulevard is a lively commercial avenue connecting several of the nearby historic sites, and it contributes to the dynamic metropolitan character of the neighborhood.

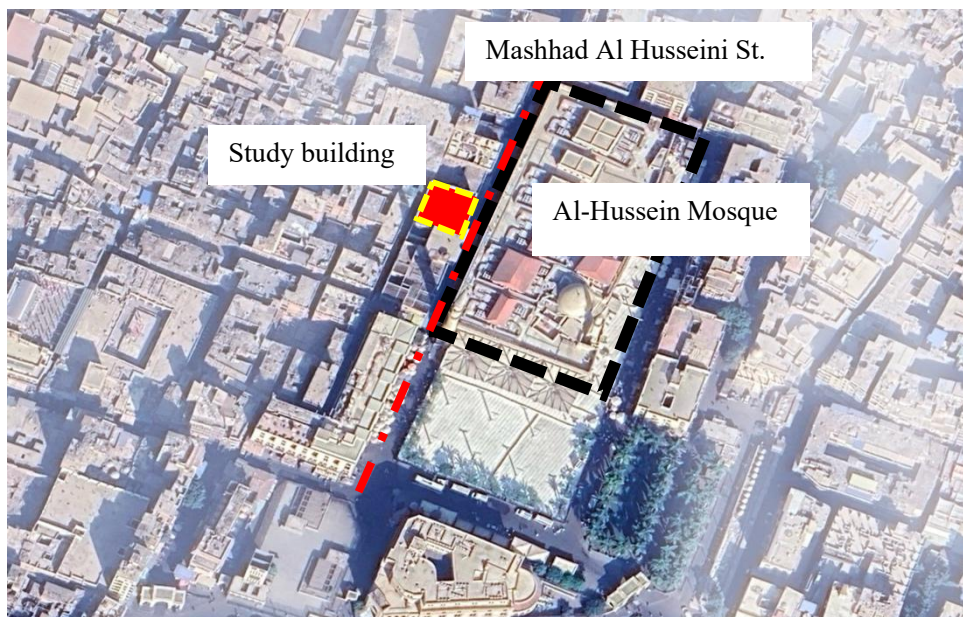


Figure (5) map shows case study location highlighted in ochre the abandoned building, highlighted in black is the Al-Hussein Mosque, Mosque in Gamaleya, Cairo. Source: map satellite google earth, analysis by researcher.

Historically, the structure was used as a local hostel (lokanda al-Haram al-Husseini) for pilgrims and visitors, thereby embodying the traditional culture of hospitality in the region. Today, however, it stands in a state of total neglect, devoid of any usable function or maintenance. Although the building is in a state of disrepair, it continues to be spatially and visually integrated into the surrounding urban fabric and has great potential for adaptive reuse given its prime location and proximity to major heritage attractions.

The exterior appearance and architectural design of the building still bear vestiges of its original purpose, but the circumstance that it stands close to one of Cairo's most revered and frequented religious landmarks highlights its significance in the larger context of urban regeneration and heritage-conscious redeveloping.



Figure (6) photos of the abandoned building – formally a hostel (lokanda el Haram el Hussein) in Gamaleya, Cairo. Source: photographs site visit by researcher.

5. ANALYSIS

The following is the significant finding from site visits and photograph documentation of the abandoned structure adjacent to the west façade of Al-Hussein Mosque. The findings are guided by spatial and visual observation related to adaptive reuse, namely the building's integration into the urban fabric, its current condition, and prospect for reuse. The indicators are drawn from adaptive reuse literature including Douglas (2006), Bullen and Love (2011), Plevoets and Van Cleempoel (2011), and Yung and Chan (2012).

A. Urban Contextual Role

1. Location and Connectivity

The building is located in the complex pedestrian network of Historic Cairo, right across from one of the most visited places in the city. It is set on a major pedestrian route that connects various historic and commercial destinations, thus enhancing its accessibility and potential for inclusion in larger reuse initiatives (Gehl, 2011; Dovey, 2010).

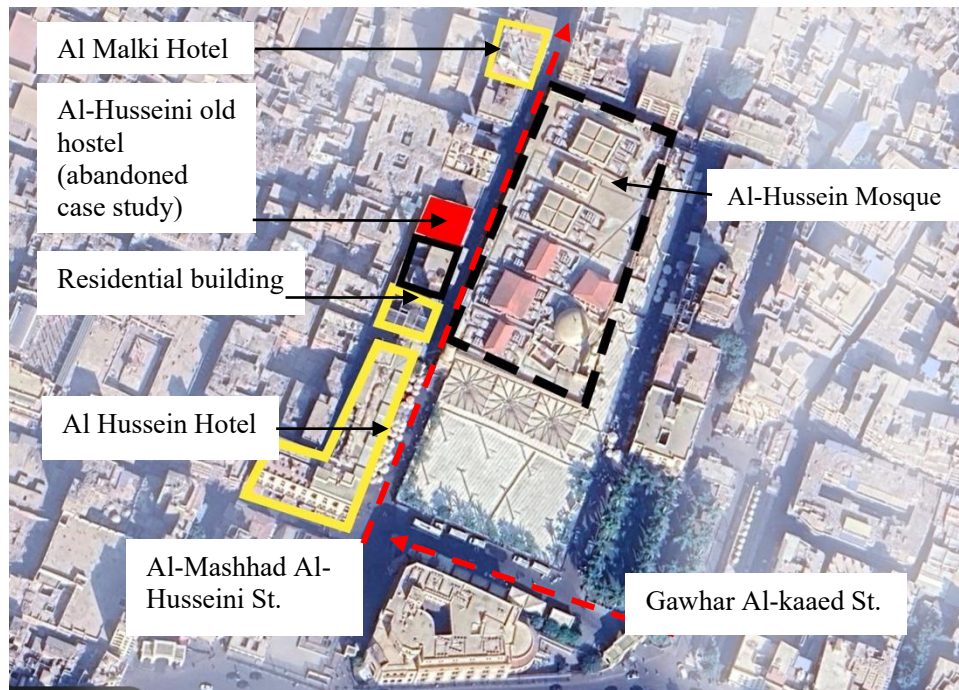


Figure (7) map analysis for location of case study building in al Hussein area, al Gamaleya, Cairo.

2. Visibility and Urban Presence

High Visibility Zone: The facility lies along a prominent pedestrian walkway that takes people to Al-Hussein Mosque, thereby making it very visible to residents and tourists who stroll through the historic bazaar.

- **Street-Level Integration:**
Situating in the middle of a commercial thoroughfare, the ground floor of the building is actively engaged with lively street life by having shops, establishing a permanent interface with the public.
- **Cultural Vibrancy:** The face that there is surrounding tourist traffic, active shopfront business, and public usage gives the building a life beyond its architecture infusing it with the daily rhythm of Old Cairo.



Figure (8) analysis of the case study building highlighted in yellow and its surroundings. source: photo and analysis by researcher

3. Relationship to Heritage Sites

- The structure is situated directly adjacent to Al-Hussein Mosque, positioning it within a heritage area that is culturally sensitive and rendering its presence pivotal in defining the visual and spatial dynamics of the locale.
- Historic Traces: Although not a heritage-listed building, its old materials, vintage hostel signage, and layered façade reflect a sense of historical continuity and local identity.



Figure (9) analysis of the case study building relationship to heritage site. source: photo and analysis by researcher

- The building's simple form and weathered exterior are contrasted with the mosque yet are sympathetic to the context by scale and texture, contributing to the layered character of the district.

4. Potential for Public Activation

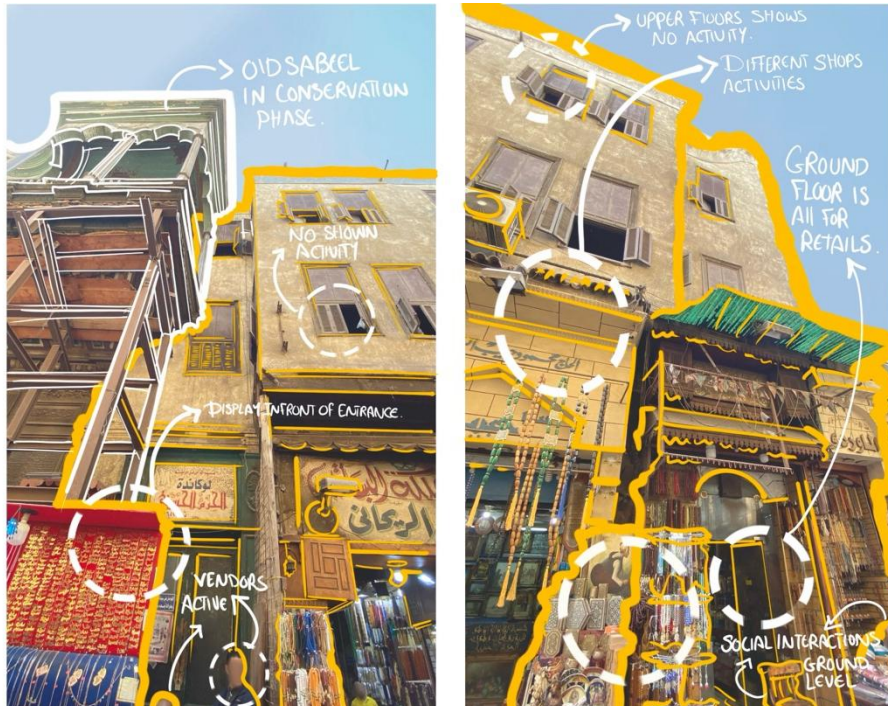


Figure (10) analysis of the case study building public activation. source: photo and analysis by researcher

- The building is located within a dense pedestrian zone, surrounded by continuous commercial and tourist activated, especially along the main street adjacent to Al-Hussein Mosque.
- The ground floor is incorporated within an active retail strip, with several existing store fronts that provide a robust public engagement at grade.
- The upper stories seem detached from street level activity, with no signage or points of access that would indicate active public use.

B. Physical Condition and Reuse Potential

1. Facade and Architectural Features
2. The longitudinal rectangular windows set evenly across the higher levels have
3. wooden shutters, following a simple and modest vocabulary.
4. The repetition window pattern conforms to the initial purpose of the building as a hostel, providing repetition and symmetry appropriate for various similar rooms.
5. The ground floor is completely commercialized, and it has shops and bazaars whose displays spill over the building line, encroaching into the pedestrian space.
 - a. Every store has a unique sign design non-original additions by local users frequently trying to emulate Islamic motifs, albeit with diverse degrees of authenticity.

- b. Informal interventions can be observed, for example, a visible AC unit on the first floor and exposed cable trays that run across the facade.

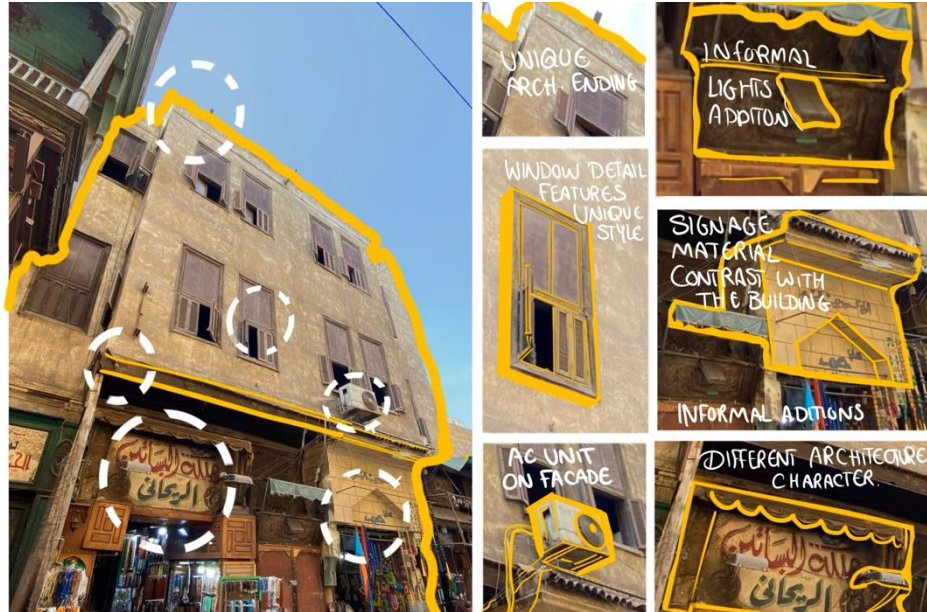


Figure (11) analysis of the case study building façade, architectural features, exterior condition. source: photo and analysis by researcher

1. General Exterior Condition

- The building's façade shows visible signs of surface decay, including blackened plaster, weathering, and material erosion.
- Lower portions of the outside are visually dominated by commercial aspects shop signs, metal shutters, and display structures.
- Informal changes disrupt the original architectural rhythm, e.g., projecting signage and inserted service elements.
- No evidence of recent repairs or maintenance is observed on the exterior of the building.
- Overall appearance expresses long exposure to environmental conditions and lack of regulatory oversight of facade interventions.

3. Internal Condition

- interior spaces exhibit clear signs of deterioration, which include the buildup of dust, worn surfaces, and damaged wall finishes.
- Many sections of the ceiling show partial collapse or instability in structure, with temporary wooden supports installed to prevent further failure.
- The nonfunctioning or failure of light fixtures leads to dimly lit interiors, which exacerbate a feeling of neglect.
- the internal structure is still legible, with original room boundaries and corridors still present despite material destruction.

- Flooring in some areas shows traces of original tiles beneath layers of dust and debris, while others are heavily deteriorated.



Figure (11) analysis of the case study building internal condition and signs of use or abandonment. source: photo and analysis by researcher

4. Signs of Use or Abandonment

- The front entrance is accessible but does not have any consistent pedestrian traffic or activity.
- Dust accumulation and visual inactivity near access points indicate extended non-use.
- There is no evidence of recent interior use or occupancy or recent maintenance.
- Windows appear dirty or smeared, limiting visual connection between inside and outside.
- The building gives a clear impression of vacancy, despite being physically open.

6. DISCUSSION

Using the criteria established through site observation and photographic evidence, a number of key observations were noted with respect to the potential for adaptive reuse of the vacant building adjacent to the Al-Hussein Mosque:

A. Urban Contextual Role

Criterion	Findings
Location & Connectivity	The structure stands in a highly accessible area, facing Al-Hussein Mosque and in close proximity to a main pedestrian pathway, further increasing its potential for reuse.
Visibility & Urban Presence	Located prominently along a busy pedestrian artery, the building engages the street actively through retail venues; nonetheless, it does face some visual barriers.
Relationship to Heritage Sites	Located near Al-Hussein Mosque, the structure contributes to the cultural and historical significance of the place. It complements the heritage setting despite not being heritage-listed.

Criterion	Findings
Potential for Public Activation	The building's ground floor is integrated into a vibrant commercial zone, but upper floors are disconnected from the street. Its visual presence remains significant in the urban fabric.

B. Physical Condition and Reuse Potential

Criterion	Findings
Facade & Architectural Features	The facade is a simple design characterized by regular window patterns. Despite commercial features obscuring its natural character, the cornice line is still easily recognizable.
General Exterior Condition	The exterior manifests evidence of degradation, which entails weathering and erosion of material. Unauthorized changes disrupt its initial design.
Internal Condition	Interior spaces are deteriorating with damaged walls, ceilings, and flooring. Despite this, the layout remains intact.
Signs of Use or Abandonment	The building shows clear signs of abandonment, such as dust accumulation and absence of recent usage. There is no sign of recent maintenance.

Table (2) analysis findings

The findings highlight the potential for urban integration of the building, along with the challenges it faces due to its physical condition and lack of recent use. The location and visibility of the site allow for possibilities of adaptive reuse, particularly on the ground level; however, the upper floors and overall condition of the building will require significant restoration efforts.

A comparable example of adaptive reuse in Cairo is the restoration of Bayt al-Suhaymi, a 17th-century Ottoman-era residence located in the Al-Gamaleya district. Between 1996 and 2000, the house underwent extensive restoration, supported by the Arab Fund for Economic and Social Development and managed by the NADIM Foundation. It was later repurposed into a center for artistic creativity under the supervision of the Cultural Development Fund (Nadim, 1997; Ibrahim, 1998). While Bayt al-Suhaymi is a listed heritage building, the abandoned structure analyzed in this paper—though unlisted—shares a similar urban and cultural context. Both cases highlight how integrating educational and cultural functions within historic settings can revitalize underutilized spaces and strengthen community engagement. This comparison illustrates the broader potential of adaptive reuse to contribute to cultural sustainability and urban regeneration in Cairo's historic districts.

7. SUGGESTIONS FOR ADAPTIVE REUSE PROPOSAL

Based on findings derived from the site analysis conclusions that highlighted the prime location of the building within Cairo's vibrant and historically rich urban context, as well as its potential for public utilization and accessibility within the prevailing cultural environment, the adaptive reuse proposal herein presented seeks to replenish the edifice while remaining sensitive to its historical value. The study proved that the building is well-placed for community engagement and cultural preservation, with inherent qualities that enable multi-purpose applications. Based on these findings, the following adaptive reuse plan is designed

to balance contemporary functions and the building's heritage values, thus ensuring its continued relevance and dynamism in the cityscape.

- **Creative Workspaces:**

Convert the upper floors into flexible studios for artists, designers, or co-working spaces for creative professionals, supporting local entrepreneurs and tying into the area's cultural heritage.

- **Lecture Halls & Educational Spaces:**

Transform some of the spaces into lecture halls for the purpose of cultural, heritage, or architectural study. These may accommodate workshops and seminars, establishing a direct relationship to the history of the building.

- **Event Spaces for Rent:**

Re-design open areas into multifunctional spaces for holding conferences, exhibitions, or civic gatherings, thereby facilitating cultural functions concerning Cairo's history.

- **Heritage Preservation Labs:**

Reserve a portion of the building for heritage conservation work, offering facilities for learning and working on heritage conservation projects that engage with the local heritage.

Suggested Proposal: **Creative Workspaces and Educational Hubs**



Figure (12) suggested adaptive re-use of the case study building in the main hall and creative workspace. source: photo and re-imagined by researcher

Given the location's Spatial location and its historic value, the reutilization of the higher levels as new workspaces, together with learning centers (e.g., lecture halls for cultural courses), seems to be the most suitable method of reutilization. Not only does this favor local craftsmen and professionals, but it also naturally relates the building functions to the preservation and sharing of Cairo's rich heritage.

8. CONCLUSION

This research illustrates the potential of adaptive reuse as an effective approach to preserving historical identity while addressing contemporary urban demands. The results offer the following items that encapsulate the key contributions of the suggested reuse:

- The building's location near Al-Hussein Mosque and within a dense pedestrian zone makes it highly suitable for culturally integrated reuse.
- Its spatial and architectural characteristics support the introduction of contemporary functions without compromising heritage value.
- Proposed interventions creative workspaces, educational hubs, and event areas offer sustainable, community-driven uses that align with the building's historic and urban context.
- The reuse strategy enhances urban continuity, supports local professionals, and encourages heritage-based cultural engagement.
- Overall, the proposal exemplifies a balanced model for adaptive reuse that contributes to both heritage conservation and dynamic urban regeneration in historic Cairo.

9. LIMITATIONS

This study was undertaken by using visual observations and photodocumentation with no access to structural reports, digital imaging, or archive data, which restricted the level of architectural analysis. Historical documentation being absent precluded detailed understanding of the building's development. The suggested adaptive reuse opportunities are largely hypothetical and need testing by feasibility studies and stakeholder consultation. Also beyond the purview of this study were regulatory frameworks, ownership concerns, and policy constraints. Importantly, the absence of community involvement as well as feedback from end-users is a critical deficiency, considering the public character of the reuse projects.

10. REFERENCES

- Abdelmonem, M. G. (2015). *The architecture of home in Cairo: Socio-spatial practice of the Hawari's everyday life*. Routledge.
- Brooker, G., & Stone, S. (2004). *Re-readings: Interior architecture and the design principles of remodelling existing buildings*. RIBA Enterprises.
- Bullen, P. A., & Love, P. E. D. (2011). Adaptive reuse of heritage buildings. *Structural Survey*, 29(5), 411–421. <https://doi.org/10.1108/02630801111182439>
- Douglas, J. (2006). *Building adaptation* (2nd ed.). Butterworth-Heinemann.
- Dovey, K. (2010). *Becoming places: Urbanism/architecture/identity/power*. Routledge.
- Feilden, B. M. (2003). *Conservation of historic buildings* (3rd ed.). Routledge.
- Gehl, J. (2011). *Life between buildings: Using public space*. Island Press.
- ICOMOS. (2003). *Principles for the analysis, conservation and structural restoration of architectural heritage*. International Council on Monuments and Sites.
- ICOMOS. (2011). *Guidance on heritage impact assessments for cultural World Heritage properties*. International Council on Monuments and Sites.
- Plevoets, B., & Van Cleempoel, K. (2011). Adaptive reuse as an emerging discipline: An historic survey. In *Proceedings of the International Conference on Changing Cities: Spatial, Design, Landscape & Socio-economic Dimensions*.
- Yung, E. H. K. & Chan, E. H. W. (2012). Implementation challenges to the adaptive reuse of heritage buildings: Towards the goals of sustainable, low carbon cities. *Habitat International*, 36(3), 352-361/ <https://doi.org/10.1016/j.habitatint.2011.11.001>