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ADDIS ABABA UNIVERSITY
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A Conservation Study of the Italian Consulate Building in Adwa and an Adaptive reuse proposal for its up keep

This thesis is submitted to the Department of Architecture (DARCH), School of Built Environment, College of Technology and Built Environment (CTBE), Addis Ababa University for partial fulfillment of all requirements of Master of Science Degree in Conservation of Urban and Architecture Heritage.

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Addis Ababa, Ethiopia
Jan, 2026

Thesis Approval Certificate

This thesis is submitted to the Department of Architecture, School of Built Environment (SBU), College of Technology and Built Environment (CTBE), Addis Ababa University for partial fulfillment of all requirements of Master of Science Degree in Conservation of Urban and Architecture Heritage.

Title of Thesis: **A Conservation Study of the Italian Consulate Building in Adwa and an Adaptive reuse proposal for its up keep**

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Approved by the Examining Board:

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Advisor		
External Adjudication		
Internal Adjudication		
Chair Person		

Declaration Form

I declare that, this thesis prepared for the partial fulfillment of the requirements for the degree of Masters of Science in Conservation of Urban and Architectural Heritage entitled; A **Conservation Study of the Italian Consulate Building in Adwa and an Adaptive reuse proposal for its upkeep** is my original research work prepared independently by my own effort with close advice and guidance of my advisor. I also declare that this thesis has not been presented in any university and all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Beza Alemu Asgedom
Signature: _____ Date: _____

Confirmation

Here with, I state that Beza Alemu Asgedom has carried out this research work on the topic; **A Conservation Study of the Italian Consulate Building in Adwa and an Adaptive reuse proposal for its upkeep** under my supervisions and it is sufficient for the partial fulfillment for award master ‘s degree of in Conservation of Urban and Architectural Heritage.

Name of Advisor: Signature: Date:
Associate Prof. Fasil Giorghis

Acknowledgments

I would like to express my deepest gratitude to all those who contributed to the successful completion of this research. First and foremost, I extend my sincere appreciation to my advisor, Associate Professor Fasil Giorghis, for his invaluable guidance, insightful feedback, and unwavering support throughout this study and his expertise in architectural conservation greatly enriched this work.

I am also grateful to the Addis Ababa University School of Built Environment, Adwa culture and Tourism office and the Tigray Culture and Tourism office for granting me access to the Italian Consulate Building and providing essential support during the fieldwork. Special thanks to the local community. I also acknowledge the contributions of my peers and colleagues for their constructive discussions and encouragement.

Lastly, I owe immense gratitude to my family and friends for their patience, motivation, and belief in my work. Their encouragement and unraveled support was a constant source of strength during this journey. This research stands as a testament to collaborative effort, and I am thankful to have been supported by such remarkable individuals and institutions.

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Abstract

This thesis addresses the critical need for the conservation of the Italian Consulate Building in Adwa, a significant structure embodying the historical and architectural heritage of the region. The primary objective of this research is to comprehensively document the building's existing condition and cultural value, and subsequently, to develop a systematic and sustainable conservation-based intervention strategy. The methodology employed qualitative approaches, including in-depth historical research and archival review and a case study combined with a meticulous physical condition assessment to document the building's current conditions, damages,material failures, and structural vulnerabilities. Findings confirmed the structure's high architectural and historical value, while simultaneously documenting extensive deterioration driven by environmental exposure and long-term neglect. The proposed recommendations are a detailed conservation plan that specifies necessary technical interventions focusing on minimal intervention, structural stabilization, and appropriate material repair alongside a framework for adaptive reuse. The study concludes by providing a conservation model for similar heritage assets in Adwa, advocating for the urgent implementation of the recommended strategy to ensure the building’s authenticity, integrity, and long-term viability for future generations.

Chapter One: Introduction

1.1 Background

The continued existence of built heritage is foundational to collective identity and historical continuity, yet it faces pervasive pressures that lead to abandonment and neglect. This global trend of disuse is often exacerbated by economic downturns, urbanization shifts, and the simple difficulty of maintaining old structures, resulting in rapid physical deterioration and a subsequent rupture in cultural transmission (Loulanski, 2006). The international response to this challenge has coalesced into the discipline of Conservation of Urban and Architectural Heritage. Modern conservation philosophy, as articulated by thinkers like Jukka Jokilehto, moves beyond a strict focus on material preservation to embrace the **social and functional values** of a historic site. This necessitates strategies like **adaptive reuse**, which is defined as converting a structure for a new use to ensure its economic and physical survival, effectively recognizing that the most sustainable form of conservation is often putting the building back to work (Rypkema, 2008). The Ethiopian nation, with its deep civilizational roots and architectural diversity—encompassing Aksumite ruins, medieval castles, and the layering of modern urban forms—presents a unique and pressing conservation landscape. While Ethiopia is home to internationally recognized treasures, its wider architectural heritage, particularly that stemming from complex periods like the late 19th and early 20th centuries, often suffers from systemic neglect due to competing national priorities and a lack of decentralized capacity (Fekadu, 2009).

This vulnerability is especially pronounced for sites whose historical narrative involves foreign contact or conflict, as their significance is often overlooked in favor of purely endogenous historical narratives. The selection of the former **Italian Consulate Building in Adwa** as a focus for this study stems from a targeted search for post-war heritage sites within the **Tigray region**. Initial identification of the site occurred during a review of a document listing war-affected heritage assets, a compilation produced by the Ethiopian Ministry of Culture and Tourism in collaboration with the Tigray Culture and Tourism office. A photograph of the consulate immediately captured interest due to its striking **Italian colonial design**, characterized by symmetrical arches, weathered stone masonry, and an imposing, albeit neglected, façade. This visual juxtaposition of historical grandeur and decay highlighted an urgent need for preservation.

The building possesses a multi-layered significance that justifies its selection for in-depth research. Firstly, the structure represents a **historical rarity** in Adwa, standing as one of the few tangible examples of Italian colonial architecture and serving as an architectural testament to **Italo-Ethiopian diplomatic history** following the 1896 Battle of Adwa. Despite its evident historical value, the consulate has been largely absent from academic literature and regional conservation discourse, indicating a gap in documented knowledge and underscoring the potential for original scholarly contribution (Mulugeta, 2020).

Secondly, the consulate maintains significant **urban relevance**. Strategically situated approximately 2kms from Adwa's bustling transportation hub through the main city road, the structure commands a strong physical presence (Mulugeta, 2020). This location, near key landmarks such as Mt. Soloda and the Adwa Battlefield memorial, positions it as an ideal candidate

for adaptive reuse, bridging heritage conservation with potential community and economic revitalization. Its proximity to the Adwa bus station and surrounding natural landscapes, including a nearby river and views of the majestic **Mt. Soloda enhances** its practical advantages for future tourism and serves as a vital anchor connecting local identity to the city's past (Mulugeta, 2020).

Adwa's roots stretch back to the 18th century when it became the Tigray province's governor's residence. The city's market significance led to the appointment of a Nagadras, with Janni of Adwa, a Greek immigrant, being the earliest known holder of this position. Gondor's establishment as a permanent capital further boosted Adwa's importance. Adwa's historical significance peaked with the 1896 Battle of Adwa, where Ethiopian forces defeated Italian colonialists. This victory solidified Ethiopia's independence and became a symbol of African resistance against colonialism (Zewde, 2001).

Today, Adwa remains a significant historical and cultural center in Ethiopia. It's a popular tourist destination, attracting visitors interested in its rich history and the Battle of Adwa memorial site. The city continues to play a vital role in the region's economy and serves as a hub for trade and commerce. Unfortunately, there is limited information available on the specific architectural and urban planning features of Adwa. However, it is likely that the city's architecture reflects a blend of traditional Ethiopian and European influences, given its historical context and location (Zewde, 2001).

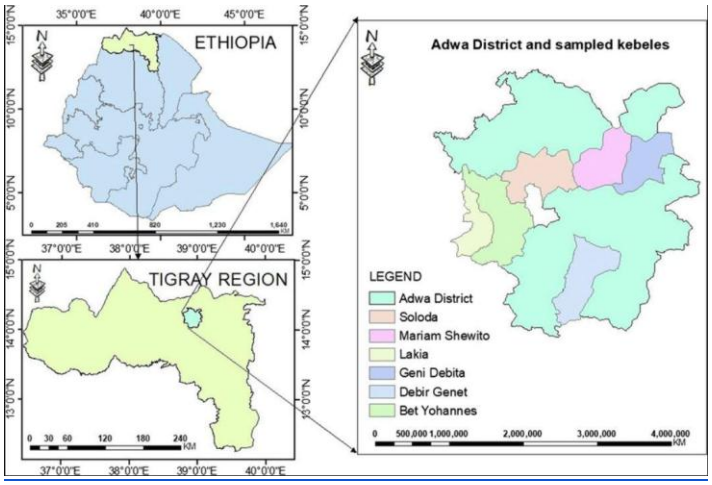

Figure 1. Map-of-Adwa-District-and-sampled-kebeles (source: https://www.researchgate.net/publication/_Ethnobotanical_study_of_medicinal_plants_in_Adwa_District_Central_Zone_of_Tigray_Regional_State_Northern_Ethiopia)

Adwa is situated in a mountainous region with rugged terrain, which has significantly influenced its urban development. The city is located in a valley, surrounded by hills and mountains. As a result, its urban layout is compact, with narrow, winding streets that follow the natural contours of the land. In central areas, paved roads are more common, but many of the peripheral sections of the city still rely on unpaved, dirt roads, contributing to a sense of a developing urban center. This topographical challenge has affected both the density and organization of Adwa's streets (Zewde, 2001).

Figure 2. Adwa, Capital of Tigré. Abyssinia 1885 old antique vintage print picture (Source: https://www.antiquemapsandprints.com)

Figure 3. The City of Adwa (Source: https://en.wikipedia.org/wiki/Adwa)

Finally, the building's evident **conservation imperative** makes it a critical subject. The visible state of deterioration, including decay and neglect, signals a pressing need for immediate intervention. This physical condition presents an opportunity: a well-planned adaptive reuse strategy, combined with proper conservation, could rescue and preserve the structure for future generations, transforming a neglected heritage asset into a sustainable development (Ethiopian Ministry of Culture and Tourism & Tigray Culture and Tourism office, n.d.). Thus, the project aims to address a dual purpose: to rescue the structure through comprehensive documentation and to demonstrate the transformative potential of **adaptive reuse** in fostering sustainable development.

Figure 4. Italian consulate building (source: Adwa culture and tourism bureau)

1.2 Statement of the problem

The Italian Consulate building in Adwa stands as a significant historical monument. However, the structure currently faces critical conservation challenges due to inadequate management leading to its deterioration over time.

The absence of historical documentation for the Italian Consulate building in Adwa poses a significant challenge. Insufficient records hinder the understanding of its architectural significance, cultural heritage, and the events associated with its construction. This gap in information impedes effective preservation efforts and limits the potential for educational and cultural appreciation.

A lack of routine maintenance, preservation initiatives, and protective measures has allowed the building for further neglect. Without a well-defined conservation and management plan, the building's physical condition continues to decline, putting its values at risk. Other human factors like the recent war have also impacted the building indirectly which should be taken into consideration.

1.3 Research objectives

1.3.1 General objective

The general objective of the study is to document, analyze, conserve the significance of the Italian Consulate Building in Adwa, mainly focusing on its architectural, cultural, and political importance within both the local and regional international context and to propose an appropriate adaptive reuse design specific to it.

1.3.22 Specific objectives

The specific objective of the study:

1. To Carry out a detailed architectural documentation of the Italian consulate building,
2. To Evaluate the condition of the building and assess its suitability for adaptive reuse,
3. To give recommendations for restoration and adaptive reuse of the building.

1.4 Research questions/Hypothesis

The research questions are:

1. What are the historical, cultural, political, economic significance of the Italian Consulate building in Adwa, including its architectural style and contributions to Italy-Ethiopia relations?

2. What is the current condition of the Italian Consulate building and what threats does it face?

3. How can the study address the conservation need?

1.5 Significance of the study

The significance of studying the conservation of an Italian consulate building in Adwa likely holds historical significance. Documenting and preserving such structures help maintain a tangible link to the past, allowing future generations to understand the historical context of Adwa.

The building may be a reflection of Italian architectural influence in the region. Studying and preserving it contributes to the broader cultural heritage of Adwa and Italy, showcasing the interplay of different architectural styles and cultural influences. The building may possess unique architectural features and craftsmanship. Documenting these aspects can be valuable for architectural historians, researchers, and students studying the evolution of architectural styles in the region.

1.6 Scope of the study

The scope of this study is comprehensive, defined by its theoretical, geographical, temporal, and methodological dimensions. Theoretically, the research is grounded in the field of Conservation of Urban and Architectural Heritage, focusing specifically on the critical concepts of minimal intervention and adaptive reuse. Its primary aim is to document the building's historical and architectural integrity and to propose a functional revitalization strategy that balances preservation with contemporary needs. Geographically, the study is focused on the Italian Consulate Building in Adwa, located in the Tigray region of Ethiopia, while drawing comparative lessons from Atse Yohanes Palace as a case study. Temporarily, the study spans from the building's upbringing to its current deteriorated state, with a forward-looking objective of proposing a viable conservation plan. Methodologically, the research employs a predominantly qualitative approach, encompassing a four-phase strategy: archival/historical research, a thorough architectural and technical survey, stakeholder engagement (interviews for oral histories), and the synthesis of the adaptive reuse proposal. The technical work involved metric surveying using a laser distance meter and

photogrammetry to create detailed as-built drawings and perform damage analysis, compensating for the lack of prior detailed documentation.

1.7 Limitations of the study

This research encountered several constraints that may have influenced the depth and accuracy of its findings. A primary limitation was lack of concrete data; written documentations related to the Italian Consulate Building. This inadequacy of information affected the comprehension of its historical overview. Furthermore, relying heavily on oral histories to reconstruct the building's historical context presented challenges due to the significant variability among the informants. The on-site investigation was also limited by physical access restrictions since certain rooms were cluttered with objects making them less accessible for taking thorough measurements compared to the other vacant rooms. These limitations must be considered when interpreting the study's results and conclusions.

1.8 organization of the paper

The study is organized into five chapters, beginning with an introduction that provides the background, problem statement, research questions, objectives, and limitations of the study. The Second Chapter, a literature review, explores architectural influences and urban development in Adwa, Ethiopia, including traditional Ethiopian and Italian colonial styles. This chapter also features a case study: Atse Yohannes IV Palace, which informs the adaptive reuse strategies.

The Third Chapter details the methodologies used, including qualitative research methods such as field-based primary data collection and interviews to gather oral histories. It also outlines a four-phase approach: archival and historical research, architectural and technical surveys, stakeholder engagement, and a synthesis of a proposal for adaptive reuse. The Fourth Chapter, "Results," presents the study's findings, including a historical and technical survey and damage analysis of the building. Finally, the Fifth Chapter provides a conclusion and recommendations specific to its needs.

Chapter Two: Literature review

2.1 A Short History of Adwa

The city of Adwa, located in the Tigray region of northern Ethiopia, holds a uniquely prominent position in both Ethiopian and global history, primarily due to its role as the site of a pivotal battle. While its early history is intertwined with the broader narrative of the Aksumite Empire, Adwa's enduring legacy was cemented in the late 19th century. The city's strategic location along key trade routes and its proximity to the Eritrean border made it a significant administrative and commercial center (Bahru Zewde, 2001; Marcus, 1994).

In this decisive conflict, the forces of Emperor Menelik II successfully repelled the invading Italian army, a victory that resonated far beyond the borders of Ethiopia. This triumph was not merely a military success; it was a profound socio-political event. The victory at Adwa established Ethiopia as the only African nation to successfully resist a European colonial power, serving as a powerful symbol of independence and a source of inspiration for anti-colonial movements across the African continent and the global diaspora (Marcus, 1994). The battle's outcome forced European powers to reconsider their assumptions about African military capabilities and led to international recognition of Ethiopia's sovereignty.

Following the battle, Adwa continued to be a city of importance, although its prominence waxed and waned with the shifting political landscape of the 20th century. During the second Italo-Ethiopian War and subsequent Italian occupation (1936–1941), Adwa once again found itself a focal point of conflict and a site of significant Italian colonial presence (Pankhurst, 1968). The construction of buildings like the Italian Consulate, for example, represents the physical legacy of this brief but impactful period. In the post-war era, the city has faced numerous challenges, including civil war and regional conflicts, but its historical significance remains undiminished. Today, Adwa is a vibrant city that continues to negotiate its identity, balancing its rich, storied past with the realities of modern life in Ethiopia (Bahru Zewde, 2001).

2.2 Architectural Influences and Urban Development in Adwa, Ethiopia

The diverse architectural landscape of Adwa, Ethiopia, highlighting the interplay of traditional Ethiopian design, limited colonial influences, religious heritage, modern developments, climatic adaptations, and historical significance. Understanding these elements provides a crucial context for analyzing the urban fabric and built environment of Adwa within the broader narrative of Ethiopian architectural history and development. The foundational architectural style in the Ethiopian highlands, including the rural and suburban areas surrounding Adwa, is characterized by indigenous materials and local craftsmanship (Tadesse, 2007). The tukul, a round dwelling with a conical thatched roof constructed from mud, stone, and thatch, stands as a prominent example of this tradition. Tadesse (2007) emphasizes the functional design of these homes, which are adapted to regulate interior temperatures, crucial in the highland climate with its diurnal temperature variations. Furthermore, the abundance of volcanic rock has led to the widespread use of stone in

both residential and public buildings, providing insulation, durability, and resilience against seismic activity prevalent in the region.

2.3 Italian and Colonial Architecture:

While Adwa itself notably resisted Italian colonization following the decisive victory at the Battle of Adwa in 1896, the broader historical context of Italian colonial endeavors in the Horn of Africa left an indirect mark on some Ethiopian urban centers (Pankhurst, 2001). Cities like Addis Ababa and Asmara exhibit a blend of classical European architectural designs integrated with local Ethiopian motifs. Pankhurst (2001) suggests that the aftermath of the war in Adwa led to the construction of war memorials and public monuments, some of which may subtly reflect European-inspired commemorative architecture. The public buildings erected in Adwa after the battle demonstrate a mixture of modern and traditional styles, although these European influences remain less pronounced compared to cities that experienced direct Italian colonial rule.

2.4 Climate and Architectural Adaptations:

Adwa's highland climate, characterized by cool temperatures and a distinct wet season, has significantly influenced its building design. Traditional structures, particularly the tukul, utilize thick walls of stone or mud for thermal regulation. Steep roofs, often made of thatch or corrugated metal, are a common feature to facilitate water runoff during the rainy season (Tadesse, 2007). In more recent constructions in central Adwa, Tadesse (2007) observes the introduction of energy-efficient technologies such as solar panels and water collection systems, reflecting a growing emphasis on sustainability.

2.5 Cultural and Historical Landmarks:

Adwa's architectural identity is deeply intertwined with its historical and cultural significance, most notably the 1896 victory against Italy. The Adwa Victory Monument stands as a powerful symbol of Ethiopian independence and a focal point for national pride (Pankhurst, 2001). Beyond this central monument, other statues and memorials commemorating Ethiopian leaders and soldiers further contribute to Adwa's unique urban character, blending architectural forms with the city's legacy of resistance (Pankhurst, 2001).

2.7 Theoretical Debates on Adaptive Reuse:

Adaptive reuse has emerged as a critical and highly-debated strategy in the field of heritage conservation, offering a vital balance between the preservation of historical structures and the fulfillment of contemporary functional needs. At its core, this practice involves strategically repurposing an old building for a new use while meticulously retaining its cultural and architectural significance. The growing embrace of adaptive reuse can be attributed to its multifaceted benefits, including its inherent sustainability, economic viability, and powerful role in revitalizing urban areas (Bullen & Love, 2011; Yung & Chan, 2012). However, this practice is not without its complexities. It has spurred ongoing academic and professional debates concerning the appropriate

extent of intervention, the nuanced concept of authenticity, and the socio-cultural implications of transforming historical spaces.

The theoretical foundations of adaptive reuse are rooted in a series of key charters and evolving critical perspectives. A foundational document is The Venice Charter (1964), which set forth an internationally recognized standard for heritage preservation. The Charter's primary emphasis is on minimal intervention and a deep respect for a building's original materials and fabric, advocating for a "conservation-first" approach (ICOMOS, 1964). This perspective prioritizes the physical integrity of the monument as a historical document. However, critics argue that a strict and unyielding adherence to the principles of authenticity can often be a restrictive force, limiting the functional adaptability required for a building to remain economically viable, particularly in rapidly urbanizing contexts (Pendlebury, 2013).

In response to these limitations, The Burra Charter (1979) introduced a more flexible and holistic framework. This charter broadened the scope of conservation by introducing the crucial concept of cultural significance, which encompasses a building's historical, social, and aesthetic values (Australia ICOMOS, 2013). This perspective posits that interventions, including adaptive reuse, can be justified and even encouraged if they are deemed necessary to enhance the building's long-term relevance and its continued connection to the community it serves (Kerr, 2013).

Beyond these charters, Critical Conservation Theory has offered a more dynamic and philosophical lens through which to view heritage. Scholars like Françoise Choay have challenged the notion of heritage as a static, frozen relic of the past (Choay, 2001). Instead, this perspective frames heritage as a living, dynamic, and evolving entity. This theoretical stance provides intellectual support for creative adaptations that seek to reinterpret historical spaces for modern needs, allowing for a more symbiotic relationship between a building's history and its contemporary use (Foster, 2020).

These divergent theoretical perspectives underpin the central debate in adaptive reuse: the delicate balance between preservation and transformation. Traditionalists, such as Jokilehto (1999), often voice concerns that excessive modifications or aggressive interventions can compromise a building's historical integrity and its ability to truthfully communicate its past. Conversely, pragmatists, including Brand (1994), assert that functional updates are not only acceptable but essential. They argue that for a building to survive and avoid dereliction, it must be economically viable and responsive to modern demands, even if this means making thoughtful, well-considered

alterations to its original form. This ongoing dialogue between these two viewpoints continues to shape the practice of adaptive reuse globally.

The architectural landscape of Adwa is a testament to the resilience of traditional Ethiopian design and the city's unique historical trajectory. While largely uninfluenced by direct Italian colonial rule, Adwa exhibits a rich tapestry of indigenous building practices, religious architectural traditions, and a gradual incorporation of modern urban features. The presence of the Italian Consulate Building serves as a reminder of the complex historical interactions in the region. In contrast, the extensive Italian colonial architecture of Asmara highlights the significant impact of prolonged colonial rule on urban development and architectural identity. Examining these diverse influences in Adwa provides valuable insights into the evolution of Ethiopian architecture and the enduring impact of historical and cultural forces on the built environment.

2.8 Contextual review

2.8.1 Historical and Geo-Political Context

The significance of the Italian Consulate Building in Adwa is inextricably linked to the **historical and geo-political context** of the city, which differs critically from areas subjected to long-term colonial rule. Adwa is globally recognized as the site of the pivotal **Battle of Adwa in 1896**, an event that ensured Ethiopia's sovereignty and established the city as an unparalleled symbol of African anti-colonial resistance. The Consulate, consequently, is not a typical colonial building; its establishment was a direct result of the post-battle **Treaty of Addis Ababa**, serving as an architectural artifact of the subsequent diplomatic relationship (Pankhurst, 1990). This historical grounding defines the building's **intangible heritage value**, marking it as a physical record of negotiation and recognized independence. Architecturally, it represents one of the few examples of Italian-influenced construction in Adwa, standing apart from the predominant indigenous stone and earth building traditions. The conservation challenge, therefore, lies in preserving an isolated foreign style structure whose importance is rooted in its unique political function and scarcity within the local urban fabric.

2.2.2 The Treaty of Addis Ababa (1896) and its Historical Connection to Adwa

It is important to clarify a common historical misconception: the Treaty of Addis Ababa was not signed in 1936 but rather in **1896**. The year 1936 marks a separate and more tragic event, the beginning of the Italian military occupation of Addis Ababa during the Second Italo-Ethiopian War. The 1896 treaty, however, is directly and profoundly connected to the city of Adwa and the very existence of buildings like the Italian Consulate, as it was the diplomatic outcome of a war-defining battle. The treaty was signed in the wake of the decisive **Battle of Adwa** on March 1, 1896, where Ethiopian forces under Emperor Menelik II delivered a crushing defeat to the invading Italian army. The battle itself was a monumental event that secured Ethiopia's independence and established its reputation as the only African nation to successfully repel a European colonial power (Marcus, 1994). The subsequent Treaty of Addis Ababa formally ended the First Italo-Ethiopian

War and, most crucially, nullified the controversial Treaty of Wuchale. The Treaty of Wuchale had been a source of conflict due to a translation discrepancy, with the Italian version suggesting a protectorate over Ethiopia, while the Amharic version did not. The 1896 treaty officially recognized Ethiopia as a sovereign nation, forcing Italy to acknowledge its independence and re-establish diplomatic relations on new, more equal terms (Bahru Zewde, 2001).

The establishment of the Italian Consulate building in Adwa must be understood within this post-1896 context. It is a physical manifestation of the diplomatic relations that were initiated after Italy's military defeat and its formal recognition of Ethiopian sovereignty. Unlike the buildings constructed during the occupation of the 1930s, which were symbols of colonial power and urban segregation, the consulate in Adwa from the late 19th or early 20th century represents a period of diplomatic engagement, albeit one fraught with underlying tensions. It is an artifact of a time when Ethiopia's victory at Adwa secured its place on the world stage, compelling a European power to establish a formal diplomatic presence within its borders (Pankhurst, 1968).

Therefore, the Italian Consulate building in Adwa is not connected to the events of 1936 but rather stands as a tangible link to the aftermath of the 1896 Battle of Adwa. The building's architecture and historical purpose serve as a direct result of the diplomatic relationship forged in the Treaty of Addis Ababa. This relationship, however, would ultimately break down in the 1930s with Italy's renewed imperial ambitions, culminating in the Second Italo-Ethiopian War and the occupation of the capital. In this way, the building's history provides a physical narrative that bridges two distinct chapters of Italo-Ethiopian history, one marked by hard-won sovereignty and the other by renewed conflict.

2.2.3 Theoretical Framework: Conservation and Adaptive Reuse

The methodology for intervention is guided by established international charters and contemporary conservation theory, ensuring that all actions are ethically sound and academically defensible. The foundational principles are drawn from **The Venice Charter (1964)**, which governs minimal intervention and respect for the authenticity of the historical fabric, and **The Burra Charter (1979)**, which introduces the concept of **cultural significance** to justify necessary interventions and manage change (ICOMOS). The central guiding philosophy for the building's future is **Adaptive Reuse (AR)**, a critical approach defined by Latham (2000) as the process of assigning a historic structure a viable new function to ensure its continued economic and social relevance. This strategy is essential for the Adwa Consulate, as its current dereliction makes pure preservation unsustainable. AR necessitates a careful balance between retaining the structure’s defining **historical integrity, its** walls, construction techniques, and form and implementing the functional updates required by the proposed new use, thereby securing the building’s long-term survival and avoiding obsolescence.

2.2.4 Practical Context: Case Studies and Lessons Learned

To bridge the gap between conservation theory and practical application, the review incorporates two distinct case studies, chosen specifically for their relevance to the Consulate’s unique context and condition.

2.8.1 Case Study: Atse Yohannes IV Palace

The Atse Yohannes IV Palace in Mekelle, Ethiopia, serves as a compelling case study of architectural synthesis, representing a deliberate fusion of indigenous building traditions with introduced European techniques. Built in the 1880s, the palace's design, supervised by the Italian craftsman Giacomo Naretti, navigated the complex requirements of imperial representation while retaining elements vital to local identity (Shimizu & Asfha, 2021). Its masonry construction utilized locally developed Tigrayan methods, derived fundamentally from the region's long-standing church architecture. However, the influence of Naretti is evident in more refined elements such as the use of elaborate decorative wooden works, stone arches, and plasterwork, which contribute to the palace's distinctive symmetrical appearance (Shimizu & Asfha, 2021). This blend results in a structure that, while employing techniques from abroad, ultimately remains deeply rooted in the local building knowledge and materials of Tigray (Shimizu, 2019). The palace, therefore, is not merely a foreign imposition but a dynamic adaptation reflecting both Emperor Yohannes IV's political aspirations and the deep reservoir of regional craftsmanship.

The functional adaptation of the palace from an imperial residence to a public museum, officially registered as a national heritage site, introduced inherent challenges, particularly concerning the installation of modern utility services. As a structure built primarily using traditional *Hidmo* construction, characterized by stone masonry walls and ceilings made of wood and gravel, the palace's fabric was not designed to accommodate contemporary electrical wiring, plumbing, or climate control systems (Shimizu, 2019). Integrating electricity, an essential requirement for modern museum operations—including lighting for exhibits, security systems, and basic visitor services—demanded careful consideration to prevent damage to the historic stone walls and decorative wooden ceilings. Non-invasive installation techniques, such as surface-mounted conduits or strategically routed systems within existing structural voids, would have been necessary to preserve the historical integrity of the building's interior finishes and structure.

Furthermore, the conversion required significant internal planning and modification to serve museological functions. The symmetrical layout and pre-existing use of each room, documented through historical analysis, had to be carefully re-evaluated for display purposes, visitor flow, and security (Shimizu & Asfha, 2021). The collection, which includes royal regalia and religious paraphernalia, necessitates specific environmental conditions to ensure conservation, a requirement difficult to meet in a historic stone structure without modern climate controls. While the palace compound was restored, refurbished, and opened to the public, the inherent limitations of integrating sophisticated museum infrastructure into a 19th-century masonry building highlight the ongoing tension between heritage preservation and functional modernization. Recent reports regarding the subsequent use of the palace as a military camp underscore the fragility of heritage preservation in conflict zones, often leading to the defacement of historically decorated walls and the destruction of original wooden materials, compounding the maintenance issues of the already sensitive structure (Alula, 2021).

2.8.2 Observations

2.8.2.1 Exterior and interior Functional description

The exterior view is characterized by **thick masonry walls** finished with a pale, earth-toned plaster. Architecturally, the composition is marked by a deep archway leading to an external space, crowned by simple, fortress-like parapets that suggest the imperial and defensive purpose of the original structure.

Figure 5. Exterior image of Atse Yohannes IV Palace

The interior spaces of the palace, particularly the primary halls, are defined by a robust, high-contrast material palette that emphasizes the structure's imperial heritage and subsequent adaptation. The dominant architectural features include massive, square masonry columns finished in white plaster, which support an exposed, dark timber ceiling system, characterized by heavy beams and rafters . The flooring throughout the main circulation areas is composed of deeply rich, varnished wood planks, providing a warm textural contrast to the cool white walls. These primary halls exhibit significant vertical volume, with the columns establishing a powerful rhythm and spatial grid, essential for defining the circulation path and the placement of exhibition components. In the former ceremonial spaces, the original function is highlighted by monumental wooden installations, such as the Emperor's intricately carved throne raised on a stepped dais and flanked by balustrades , which acts as a permanent, central exhibit. Secondary features include ornate carved wooden doors and multi-paned louvered windows that control natural light penetration, ensuring the ambient conditions are appropriate for the preservation of textile and artifact displays. The overall effect is one of solemn grandeur, achieved through the enduring quality of the timber and stone construction.

Figure 6. Images showing Atse Yohannes IV Palace interior

A notable feature representing the private, domestic side of the imperial residence is the historic sanitary installation, housed within a small, dedicated alcove or closet space . This chamber features a built-in wooden structure that serves as the toilet, distinguished by decorative paneled casework and a circular aperture at the seat level. The dark, heavily finished wood of this utilitarian fixture contrasts sharply with the plain plastered walls. Its enclosed, minimalist design reflects the early forms of sanitary engineering available in the 19th century, predating modern plumbing standards and offering a tangible insight into the daily life and infrastructure of the palace's original occupants.A notable feature representing the private, domestic side of the imperial residence is the historic sanitary installation, housed within a small, dedicated alcove or closet space . This chamber features a built-in wooden structure that serves as the toilet, distinguished by decorative paneled casework and a circular aperture at the seat level. The dark, heavily finished wood of this utilitarian fixture contrasts sharply with the plain plastered walls. Its enclosed, minimalist design reflects the early forms of sanitary engineering available in the 19th century, predating modern plumbing standards and offering a tangible insight into the daily life and infrastructure of the palace's original occupants.This is still open as part of the exhibition for visitors to get a better understanding of sanitary system of the time.

Figure 7. Images showing Atse Yohannes IV Palace original toilet

The adaptive reuse strategy of the Atse Yohannes IV Palace interior involved a functional re-zoning to transition from a private imperial residence to a public museum. Key primary spaces, notably the former reception halls, have been formally designated as **Exhibition Galleries**. These areas leverage the existing structural grid of monumental interior columns and high ceilings to define expansive verticality, allowing for the display of large-scale artifacts, such as the ceremonial elephant tusks , without compromising sightlines or circulation volume. The design employs a sequential, linear flow, using the original architectural features the deeply coffered timber ceiling and the substantial column shafts as inherent elements of the museological narrative. Exhibition components consist primarily of freestanding, perimeter, and central vitrines, which maintain a deliberate separation from the historic plaster walls, thereby adhering to crucial **non-invasive conservation principles** during display configuration. Lighting control is managed through exposed surface-mounted track systems, providing adjustable task illumination for artifacts while supplementing the limited natural light entering through the deeply recessed historical fenestration, effectively balancing preservation requirements with required visibility and user experience.

Figure 8. Images showing Atse Yohannes IV Palace various artifacts displayed in the adaptively reused museum

2.8.2.2 Electric installations

The interior space, likely under a staircase, presents the most direct evidence of **utility retrofitting challenges**. The historic interior features dark, varnished wood flooring and substantial timber ceiling beams, contrasting with the stark, light-colored plastered walls. In a deliberate, **non-invasive conservation strategy**, the entire modern electrical infrastructure including conduits, junction boxes, and distribution panels—has been **surface-mounted**. This aesthetically disruptive choice avoids the destructive process of concealing wiring within the palace's thick, load-bearing

stone and mortar walls, though the exposed gray PVC conduit runs follow complex paths, highlighting the difficulty of routing modern systems in this archaic structure

. 

Figure 9. Images showing Atse Yohannes IV Palace electrical installations in the adaptive reused museum

2.8.2.3 Ground Lighting and Pathway Intervention

Observations of the pathways and exterior lighting within the palace compound reveal necessary compromises for security and visitor accessibility. The pathways feature large, irregularly shaped flagstones typical of **traditional masonry paving**, but the rough, uneven surface and intrusive vegetation suggest deferred maintenance. To facilitate evening circulation, a modern, **low-voltage recessed light fixture** is installed, but it is embedded into a new, geometrically cut concrete square that is clearly inserted into the rough, historic flagstone matrix; this **invasive intervention** prioritizes functional ground illumination over the consistency of the historical texture. Furthermore, exterior fixtures, such as a large floodlight mounted near a stone step, show less aesthetic consideration for the required utility runs, with exposed cabling indicating a less refined approach to installation than seen indoors, and a missing lens element on the fixture suggests current **maintenance deficits** impacting the planned illumination scheme.

Figure 10. Images showing Atse Yohannes IV Palace pavement and walkway light fixtures installations

2.8.2.4 Material Revelation Windows

The interior utilizes a focused **material revelation window** as a key didactic display element. This common heritage interpretation technique involves cutting a clean, square aperture into the finished plastered wall and framing it with dark, stained wood trim. The primary purpose is to expose the **underlying structural components** typically the original plaster finish with the added mesh for the new plaster to bind providing visitors with direct, tangible insight into the palace's earliest finishing, By transforming a section of the building wall itself into an **educational artifact**, this feature effectively bridges the gap between the finished architectural appearance and its hidden plastering without requiring the wholesale removal of historic finishes.

Figure 11. Images showing Atse Yohannes IV Palace material revelation window as part of the museum display

2.8.3 Contextual review Conclusion

The cumulative evidence from the contextual review affirms the building's unique historical importance and justifies the need for an Adaptive Reuse strategy guided by established conservation principles. The synthesis of historical context, theoretical framework, and practical case studies reveals a clear **research gap**: despite its unique cultural and architectural status, the Italian Consulate Building in Adwa currently suffers from a lack of comprehensive **architectural documentation, detailed condition assessment, and a formal literature about the building**. Therefore, this thesis is essential to fill this gap by providing the necessary technical data and a viable Adaptive Reuse proposal, thereby offering the practical foundation needed to safeguard the structure's physical form and ensure its enduring significance.

Chapter Three: Methodologies

3.1 Introduction

In conducting the research, a qualitative research method was employed focused on field-based primary data collection. This included conducting interviews with six individuals to gather oral histories and contextual information regarding the building's past. Despite these efforts, secondary sources providing detailed historical background, architectural dimensions, or spatial classifications, such as floor plans or elevations, were not found by the researcher. However, two old photographs of the building, which provided valuable visual context and supported the understanding of its historical features and were very helpful to recognize the original structure.

To address the lack of detailed documentation, the research undertook the task of measuring the existing structure and creating detailed architectural drawings. This process involved metric surveying work, where it carefully selected appropriate methods and tools to capture accurate data. The tools utilized included a measuring tape, a laser distance meter, a folding meter, and a sketchbook for on-site notes and damage documentation. Additionally, The study employed metric camera photography to enhance the precision of the survey and document the building's current condition comprehensively. This combination of field measurements, photographic documentation, and the analysis of the old photograph allowed for a thorough understanding of the structure's layout and existing damage, forming a crucial component of my research methodology.

3.2 Detailed methods

This study employs a qualitative research approach with the going through literature, field-based surveys, and stakeholder interviews to investigate the Italian Consulate Building's historical significance, current condition, and adaptive reuse feasibility. The methodology is structured in four phases, each designed to address specific research questions while compensating for gaps in existing documentation.

Phase 1: Archival and Historical Research

The objective of this phase is to study the building's historical background, architectural analysis, ownership history, and socio-political role. The investigation began with an in-depth examination of primary sources as much as possible. Here, the study sought to uncover colonial-era blueprints, consular correspondence, and any municipal records that might shed light on the building's construction and early history, which is estimated to be between the 1890s and 1940s. A crucial part of this phase involved a comparative photographic analysis. During the study an old photograph of the consulate from the 1930s was found, which helped to meticulously compare it with contemporary images to identify any changes, structural modifications, or signs of degradation over time. The study also goes through a range of secondary sources, cross-referencing colonial histories, such as those by Pankhurst (2001), with regional architectural studies to contextualize the building's design within the broader framework of Italian colonial practices. To address the inevitable gaps in written records, the study planned to collect oral histories from Adwa's elderly residents, particularly those with familial ties to pre-1960s municipal workers, to add a human element and a more understandable narrative to the building's past.

Phase 2: Field survey and Observation

Recognizing that it is not possible to rely solely on historical records, the second phase was a hands-on, technical survey of the building itself. The objective was to create a detailed assessment of its physical condition and to identify any constraints that might impact its adaptive reuse. To do this, a metric survey was conducted using a variety of tools, including a laser distance meter, a measuring tape, a folding meter, and a professional camera for photogrammetry. The use of these tools was critical for capturing accurate data on the building's structural integrity, documenting elements for the damage analysis. On-site, a sketch book was also used to meticulously record my observations, noting original versus modified elements and any signs of damage and measurements for the as-built drawing. The data collected in the field was then used to create precise architectural outputs, including scaled floor plans, elevations, and 3D models, using software like AutoCAD, Revit, and Lumion. This phase also included a thorough material analysis through on-site inspection, where it identified the composition of the stone and brickwork, the type of binding used, and the underlying causes of its degradation, such as water infiltration or vegetative growth.

A Visual Technical Investigation is a systematic approach focused on the visual examination of a building's structure and components. The primary goal is to accurately assess the overall condition and pinpoint any existing damage or defects. Following the established methodology, this investigation is generally divided into three sections

Figure 12. On-site Technical Investigation

The Visual Technical Investigation process, as the name suggests, is a methodical approach to visually examining a building's structure and components to assess its condition and identify any damages or defects. As mentioned before, this process typically consists of three sections

1. **Building Description and Typology**: This section involves gathering information about the building's construction, age, design, and layout. This information helps investigators understand the building's characteristics and any potential issues that may be associated with its design or materials.

2. **Damages Analysis**: This section is typically broken down into two components: structural and non-structural. The structural component involves evaluating the building's load-bearing components, such as walls, floors, and columns, to identify any damage or defects that may be affecting their structural integrity. The non-structural component involves evaluating non-load-

bearing components, such as windows, doors, and finishes, to identify any damage or defects that may be affecting their functionality or safety.

3. **Foundation**: This section involves evaluating the building's foundation and surrounding soil conditions to identify any issues that may be affecting the building's stability. This may involve examining the type of foundation, such as a slab or a pier and beam, as well as the soil composition and any evidence of settling or movement.

Phase 3: Stakeholder Engagement

To ensure the research was not purely academic, the third phase involved engaging with key stakeholders to understand their perspectives and priorities. The research conducted a series of semi-structured interviews with participants who had a direct connection to the building or its community. This included local historians from the Adwa Tourism Bureau and administrators from the Queen of Sheba High School, which currently occupies the premises. These interviews were invaluable for gathering qualitative data on their perceptions of the building's heritage value, their preferred reuse options, and any concerns or setbacks they foresaw in a potential conservation project. This human-centered approach provided crucial insights that complemented the technical and historical data gathered.

Phase 4: Synthesis and Adaptive Reuse Proposal

The final phase was dedicated to synthesizing all the information gathered from the previous three phases into a comprehensive and actionable adaptive reuse plan. This involved integrating the historical context with the technical survey findings and community insights. This research took lessons from a relevant case study of the adaptive reuse of **Atse Yohannes IV Palace** , to inform the practical aspects of the intervention. The goal was to create a functional program that carefully balanced the imperatives of heritage preservation with the need for commercial viability and community benefit. The proposal focused on material interventions that would match restoration techniques to historical authenticity, ensuring that any future use of the building would honor its past while securing its place in the community's future. This holistic approach was the cornerstone of my methodology, designed to ensure my findings were not only thorough but also reproducible for future studies on under-documented colonial-era buildings in Ethiopia.

Chapter Four: Results

4.1 Conservation and Restoration Design process

The Conservation and Restoration Design Process (Fig.13) emphasizes the essential collaboration between architects and structural engineers throughout its stages. This process is divided into three sequential and interrelated components. The first component, the Historical and Technical Survey conducted by the architect, aims to gather comprehensive historical and technical data that will inform both architects and engineers in developing the Restoration and Conservation Design for historical structures. The second component involves a Diagnostic and Structural Survey performed by the structural engineer, which assesses the various phases of the existing building, evaluates the quality and durability of the materials, and identifies the types of degradation affecting the structure. Finally, the Conservation and Restoration Design is a collaborative effort between architects and engineers, wherein they jointly determine the most suitable conservation methods and restoration strategies.theories/techniques to be adopted for resolving the damages. But in this study all the surveys and conservation and restoration proposals have been done by the author.

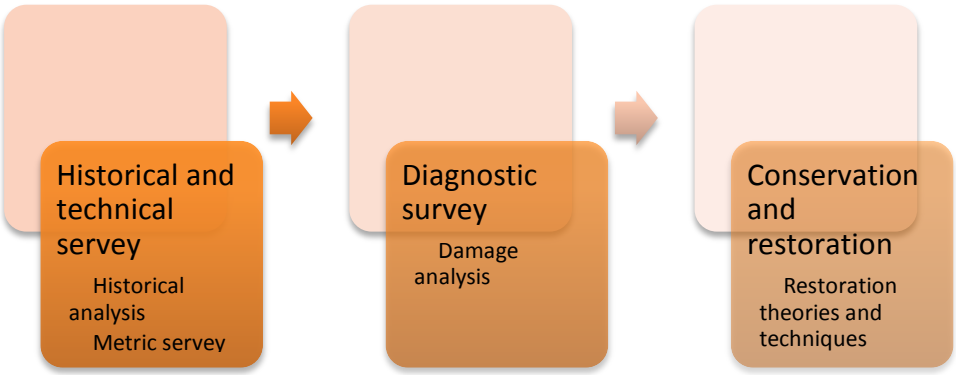

Figure 13. Restoration & Conservation Design process for the historical buildings

4.2 Historical and Technical Survey:

4.2.1 Historical/ Critical Analysis

Intricate relationships between the building, the site, and the people give rise to the idea of identity; these relationships only become apparent when the building, site, and people are so intertwined that they become inseparable (fig.14). A building cannot exist without its location, and if it is not used by people, its value is reduced. Therefore, in order to preserve, conserve, and restore the uniqueness of historical structures through careful design, a comprehensive historical and critical analysis of the site, the building, and the community is necessary.

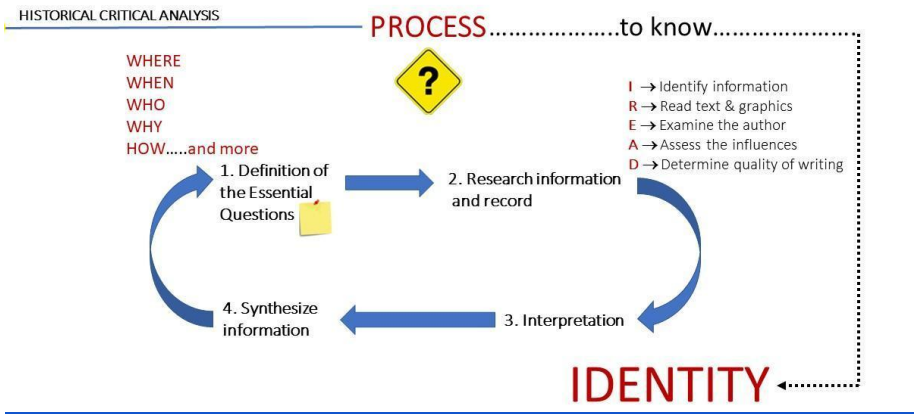

Figure 14. Process cycle of Historical and critical Analysis (by: Phd. Vassalo.C.M)

4.2.2 Site - Urban Context

4.2.2.1 Location

Starting from the location, the grounds of the Italian consulate building are home to the Queen of Sheba High School, an educational institution that serves the local community. The image below displays a short route in Adwa City, Ethiopia to arrive at the Italian consulate building site, starting from Adwa Bus Station. The route primarily follows the main road and leads to our destination which is located inside Queen Sheba no 2 high school compound.. The location is highly accessible from the city's main transport hub, with the journey estimated at a 7-minute drive (2 km) or a 27-minute walk (1.7 km). A key landmark visible along the path is the Pan Africa Hotel, indicating the route progresses through a central, built-up part of Adwa.

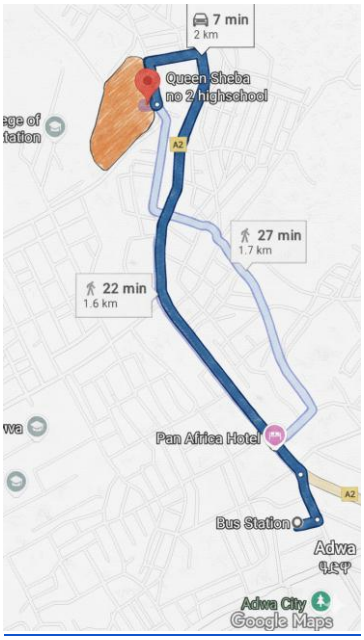

Figure 15. Location route from the Adwa bus station (source: google map)

The layout of the compound shown in the map fig 15 presents a spatial organization characterized by distinct functional zones. The compound is defined by a perimeter line that encloses multiple structures and access points, suggesting a coherent design aimed at functionality and accessibility. This compound layout illustrates a blend of administrative, educational, and support functionalities, prioritizing accessibility, efficiency, and security. The layout of the compound exhibits a cohesive arrangement of functional areas, primarily centered around the Italian Consulate Building, which serves as the administrative focal point marked in red. Adjacent to it are the historical Old Building (orange) and the Queen of Sheba High School, delineated in blue for classrooms and light blue for additional expansion, illustrating a thoughtful integration of educational facilities. The securely positioned Closed Storage Building (pink) and Security Guards Unit (green) enhance safety measures, while the clearly identified entrances—Main Entrance (yellow arrow) and Second Entrance (informal, orange triangle) facilitate efficient access. This strategic layout not only promotes operational efficiency but also fosters an environment conducive to both learning and administrative functions, ensuring a harmonious flow of movement throughout the compound.

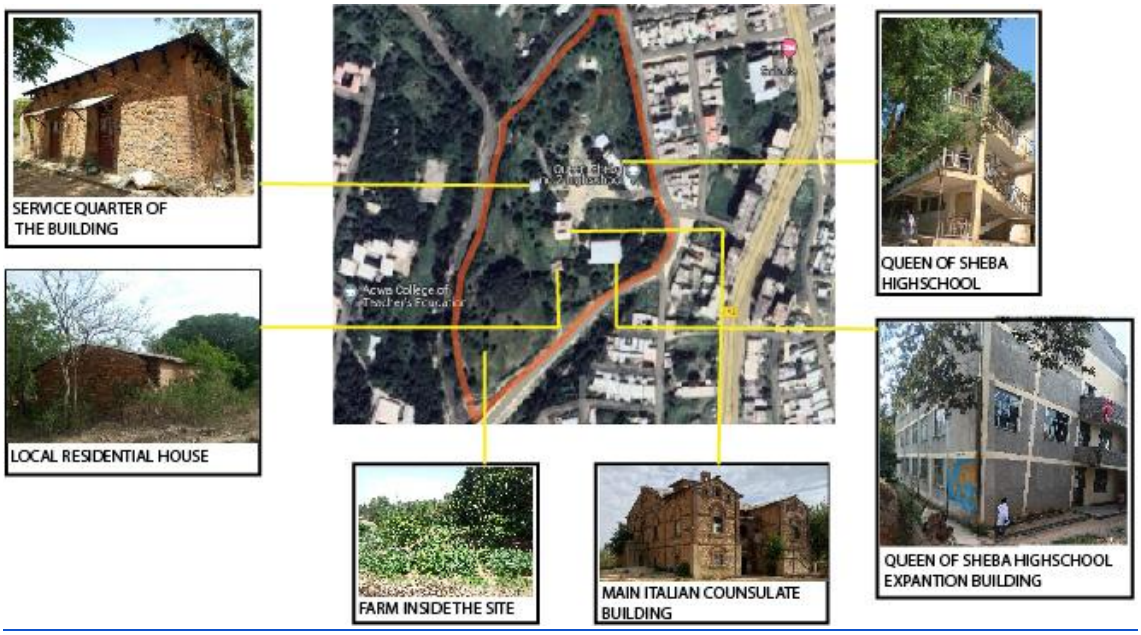

Figure 16. existing site setting in the compound

This picturesque setting not only highlights the beauty of the region but also reflects the historical importance of the consulate as a place of diplomacy and cultural exchange.In addition to its scenic surroundings, there are ongoing developments that will further improve access to the consulate. A new road is currently under construction at the rear of the building, which will connect directly to the main road. This infrastructure project aims to provide an additional access point to the site, enhancing connectivity and facilitating easier movement for those visiting the consulate.

Figure 17. Image showing the new road under construction

4.2.3 The Building

The Italian Consulate Building in Adwa was constructed as part of Italy's broader diplomatic infrastructure in Ethiopia. While the exact architectural style of the consulate building in Adwa is not widely documented, it is likely that the building exhibited typical colonial Italian architectural features, such as the use of masonry and neoclassical elements. These buildings were designed to project Italian authority and were typically characterized by symmetrical facades, columns, and large windows, often integrating elements of European design with local building techniques Pankhurst (2001).

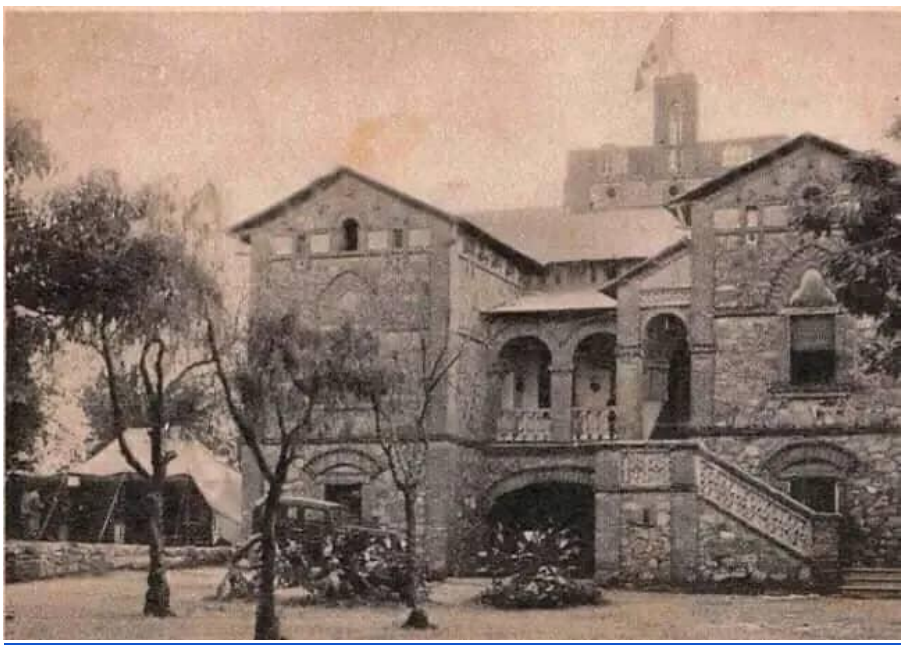

Figure 18. Italian consulate building old photograph (Source: Adwa culture and tourism office)

4.2.4 Historical Context and Functional Evolution

According to my interview with Ato Tsige of the Adwa culture and Tourism Office, the Italian Consulate Building has undergone a significant and multifaceted functional evolution since its construction. The findings reveal a rich history spanning over a century, marked by a series of transformations reflecting the changing political and social landscape of the region.

The building was constructed in 1889 E.C. by local Ethiopian builders, following a design provided by Italian architects. This collaborative origin highlights the cross-cultural exchange that defined the site's early years. Upon its completion, the building served as a functioning Italian Consulate from approximately 1890 E.C. to 1935 E.C. This period, lasting for forty-five years, established its primary identity as a diplomatic hub.

Following the end of the Italian colonial occupation, the building's function shifted dramatically. It served as a residential space and a military camp for the Italians. After that came the reign of Emperor Haile Selassie and continued through the Derg regime to be a military base. This long period of military occupation, ending in the late 1980s, introduced a new chapter in the building's history, likely leading to functional modifications.

After that came the EPRDF period, a school was constructed inside the compound, and the consulate building was repurposed to serve as the school's store. According to this analysis, the building's abandonment appears to have begun approximately a decade ago. The ownership of the compound was transferred to the Adwa Culture and Tourism Bureau after the school's establishment, placing it under the direct purview of a public heritage authority.

In summary, the building's history is characterized by its transition from a diplomatic consulate to a military base, a school store, and finally, a decade of abandonment. This chronological progression underscores its adaptability and resilience, while also highlighting the urgent need for its preservation and restoration.

Figure 19. Italian consulate building old photograph (source: https://web.facebook.com/ሃዘካችን - Horn of Africa)

The consulate building in Adwa, although not as prominent as similar structures in cities like Asmara or Addis Ababa, reflects the duality of Ethiopia's interaction with colonial powers. In the years leading up to and following the Italian occupation of Ethiopia in the 1930s, the Italian presence in Adwa was a reminder of the complex political dynamics between Ethiopia and Italy, especially considering the diplomatic relations between the two nations after the Battle of Adwa (Pankhurst, 2001).

Figure 20. picture showing Italian consulate building (2024)

4.3Technical Assessment

4.3.1 Preliminary Inspection

In May 2024, I communicated with the Tigray tourism bureau and requested to work on the data collection and technical investigation with the help of the Adwa tourism bureau. In the first visit, a preliminary inspection of the building to evaluate the general condition was made in order to achieve an accurate visual technical investigation. The historical building exhibits signs of significant weathering and neglect, yet it retains an undeniable architectural charm. The stone façade, characterized by intricate stone, brickwork and decorative elements, highlights its cultural heritage despite the visible deterioration of its structural integrity. Overgrown vegetation around the building suggests a prolonged absence of maintenance, with plants encroaching upon the walls and windows. Several openings appear boarded or partially collapsed, reflecting potential safety hazards. However, the enduring craftsmanship suggests that, with appropriate restoration efforts, this structure could be revitalized, preserving its historical significance while enhancing its resilience against further environmental damage. Overall, the building stands as a testament to its rich history, inviting future appreciation and careful stewardship.

4.4 Metric Survey and As-built Drawings:

4.4.1 Metric Survey

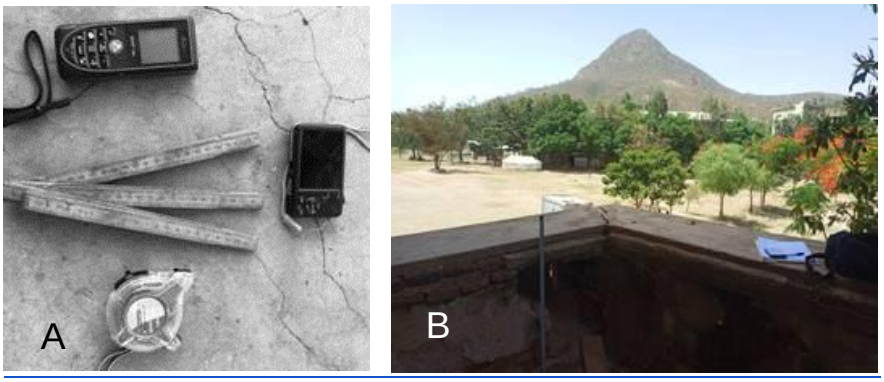

Figure 21. Image A instruments used for documentation, image B instruments being used

4.4.2 Measurements for as built drawings

Measurements taken were in May 27-29/2024 backed by sketches, for the development of the As-built drawing which helped to understand the building's internal spatial distribution and the external part as it is a base for next step which was the damage analysis and condition assessment.

4.5 Building description and typology

According to my observation the Italian Consulate in Adwa serves as a significant case study in architectural fusion, illustrating the material manifestation of colonial power mediated by regional necessity. Its design rigidly adheres to European formal conventions, most evident in the pronounced **symmetrical facade** and the **symmetrical arrangement** of its fenestration, a deliberate strategy in colonial architecture to project order and centralized authority, often referencing simplified classical or Renaissance aesthetics. This imposition of foreign form is further emphasized by the extensive use of **arched openings** and **arched windows** across both levels of architectural devices common in early Italian colonial structures alongside the robust reliance on **stone masonry** to convey permanence and distinction from local building stock. Conversely, the structure demonstrates a crucial adaptation to the local environment and supply constraints, fundamentally defined by the presence of a **thatched roof**, which is characteristic of traditional Ethiopian construction. This pragmatic compromise is complemented by the apparent construction using **local materials**, such as rough-cut stone and potentially mud brick infill, and the requisite engagement of **local craftsmanship**, underscoring a localized expression of imperial architecture that subordinates stylistic purity to regional material availability and enduring Ethiopian building traditions.

Conversely, the structure demonstrates a crucial adaptation driven by local material availability and indigenous expertise, fundamentally defined by the presence of a **thatched roof**, a characteristic feature of traditional Ethiopian construction. This pragmatic compromise is complemented by the apparent use of readily available **local materials**, such as rough-cut stone and potentially mud brick infill, which necessitated the extensive engagement of **local craftsmanship** for construction and

finishing. This reliance on endemic resources and indigenous labor, despite the foreign design brief, underscores a localized expression of imperial architecture that subordinates stylistic purity to the enduring practicalities of regional construction methodology and climate.

Overall, the building seems to be a hybrid of Italian colonial and a bit of local architectural styles. This is not uncommon in colonial architecture, as colonial powers often adapted their architectural styles to suit local conditions and materials.

Constructed primarily from indigenous stone, the façade of the building is not only sturdy but also aesthetically pleasing, enhanced by a striking assortment of red brick embellishments. These brick accents add depth and texture to the surface, creating a dynamic interplay of materials that draws the eye and invites closer inspection. The careful craftsmanship involved in the integration of these materials speaks to the skill and artistry of the builders, who sought to create a lasting monument.

Figure 22. Italian consulate building

The symmetrical layout of the building is a classical design, providing a sense of balance and harmony. This is further emphasized by the numerous arched windows that punctuate the façade, each one serving as a frame for the light that filters into the interior. These windows are not merely functional; they are also ornamental, featuring intricate designs that enhance the overall aesthetic appeal of the structure. Above the entrances, elaborately carved details add a touch of elegance, showcasing the meticulous attention to detail that characterizes the building's design.

Figure 23. Image A showing the overall facade features of one side of the building, Image B showing a closeup details of one of the arched windows

At the heart of the structure lies a balcony, which serves as a focal point and is supported by sturdy columns. This feature not only underscores the vertical emphasis of the building but also invites visitors to appreciate the view from above, creating a sense of connection between the interior and the surrounding landscape. The balcony, with its graceful lines and proportions, exemplifies the architectural sophistication of the era.

Figure 24. image showing arches in the balcony

The roof of the building is another element, characterized by multiple gables and a tiled covering that adds to its visual complexity. A unique feature of the roof is a small tower or chimney, which rises above the rest of the structure, contributing to its distinctive silhouette. This element not only enhances the building's character but also serves a practical purpose, allowing for ventilation and adding to the overall functionality of the design.

A staircase leads visitors to the first-floor entrance, flanked by sturdy stone walls that amplify the building's grandeur. This approach creates a sense of anticipation and reverence, inviting guests to

ascend and experience the beauty within. The staircase, with steps and supportive walls, serves as a transition from the outside world to the historical significance of the interior.

Figure 25. image showing details of the front stair

Surrounding a landscape that further enhances its values. Lush grass and scattered trees, this historical building reflects a rich architectural heritage, combining strength with intricate craftsmanship, embodying a narrative of its time and purpose.

4.6 As-Built Floorplans /Elevations

The provided architectural drawings of the Italian Consulate Heritage Building, illustrates its current state through ground, first, and second floor plans, a roof plan, and front, rear, right, and left elevations. The floor plans reveal a multi-story structure with rooms and corridors defined by stone and brick masonry walls and primarily finished with cement tiles, with some areas noted as "NOT ACCESSIBLE. “The roof plan shows a corrugated iron sheet roof with a central section and possibly lower extensions. The elevations depict a building constructed with stone and brick, featuring arched windows and doorways, balconies, and a corrugated iron roof with chimneys. The design appears somewhat symmetrical, utilizing local materials. Vegetation is visible in some of the elevation views. Each drawing includes a small inset site plan for overall context.

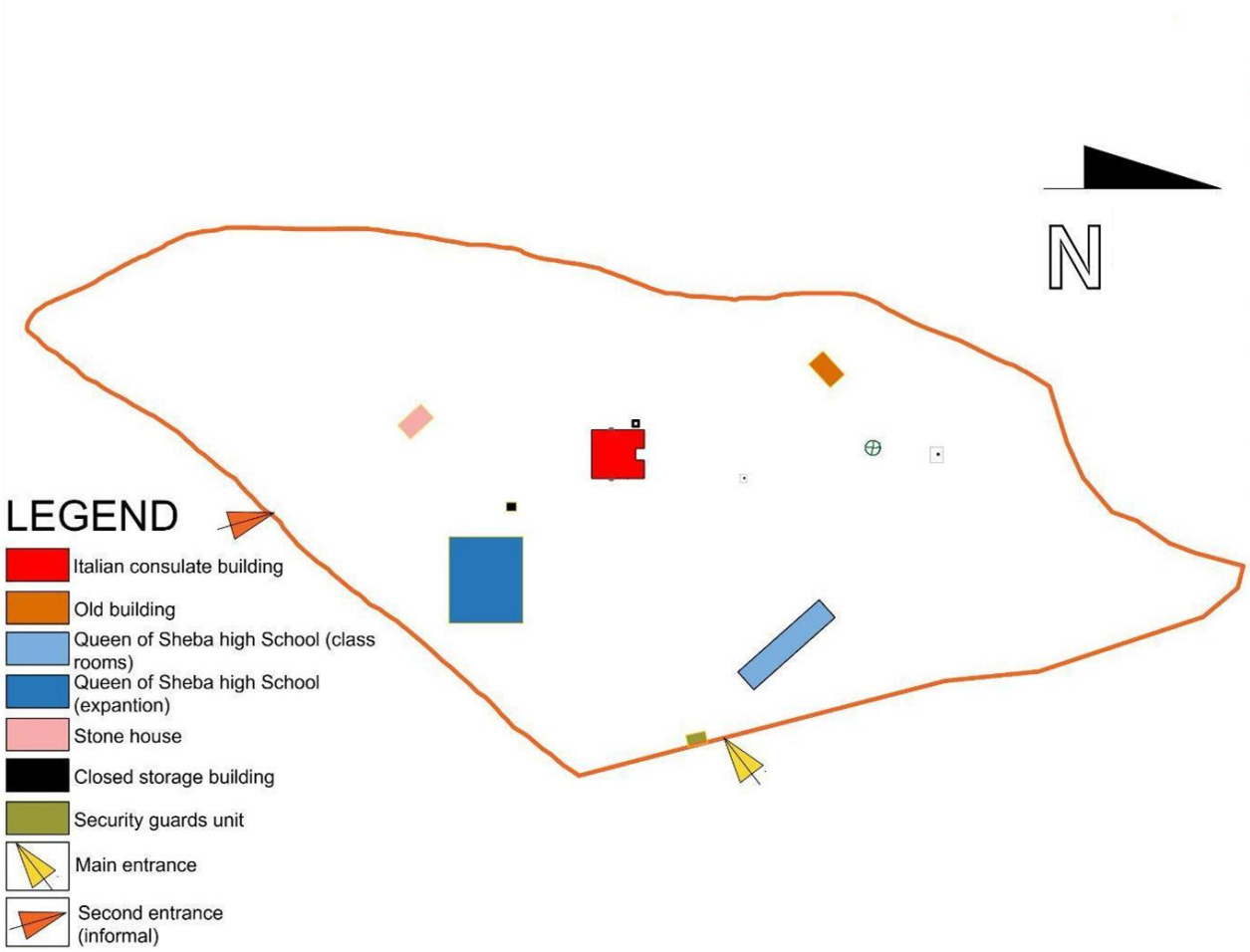

Figure 26. image showing a site plan drawing

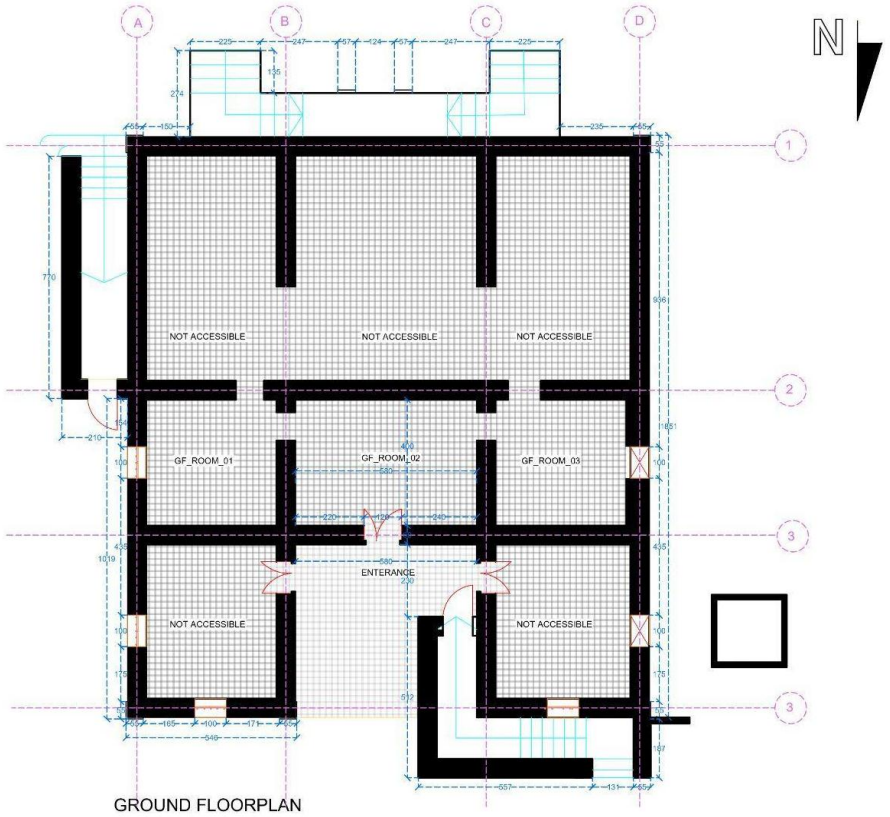

Figure 27. image showing ground floor plan drawing with dimension

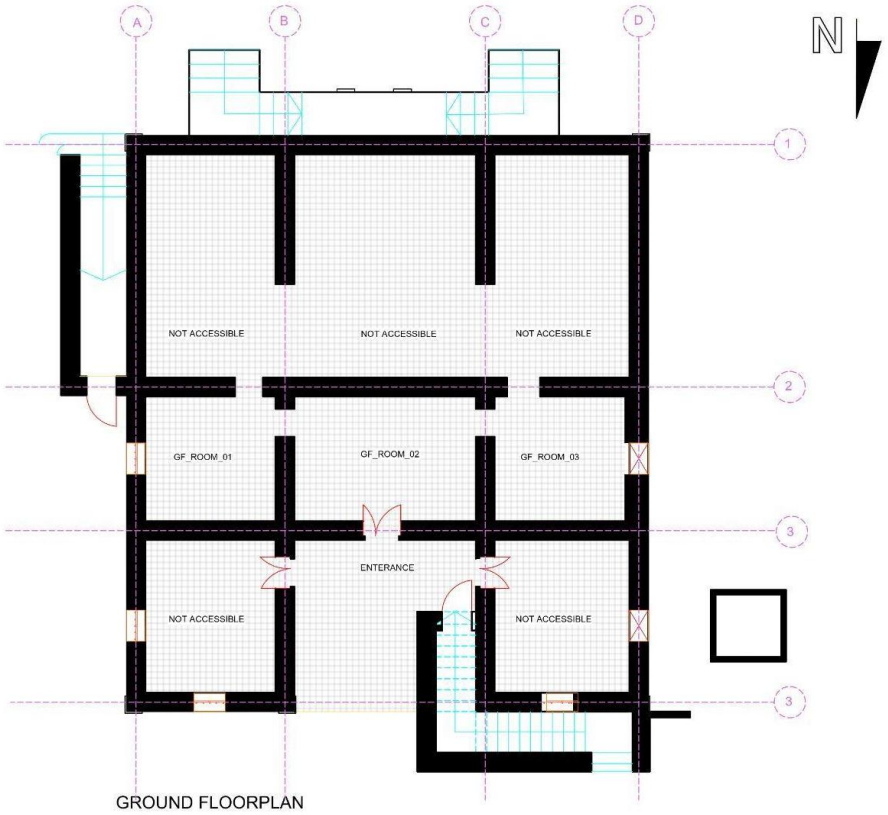

Figure 28. image showing ground floor plan drawing without dimensions

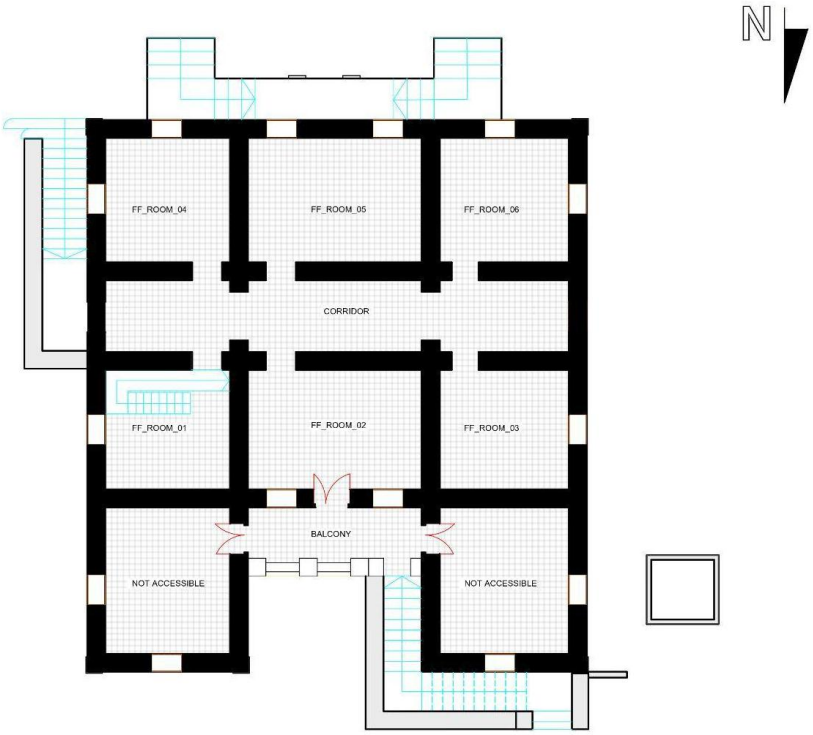

Figure 29. image showing first floor plan drawing

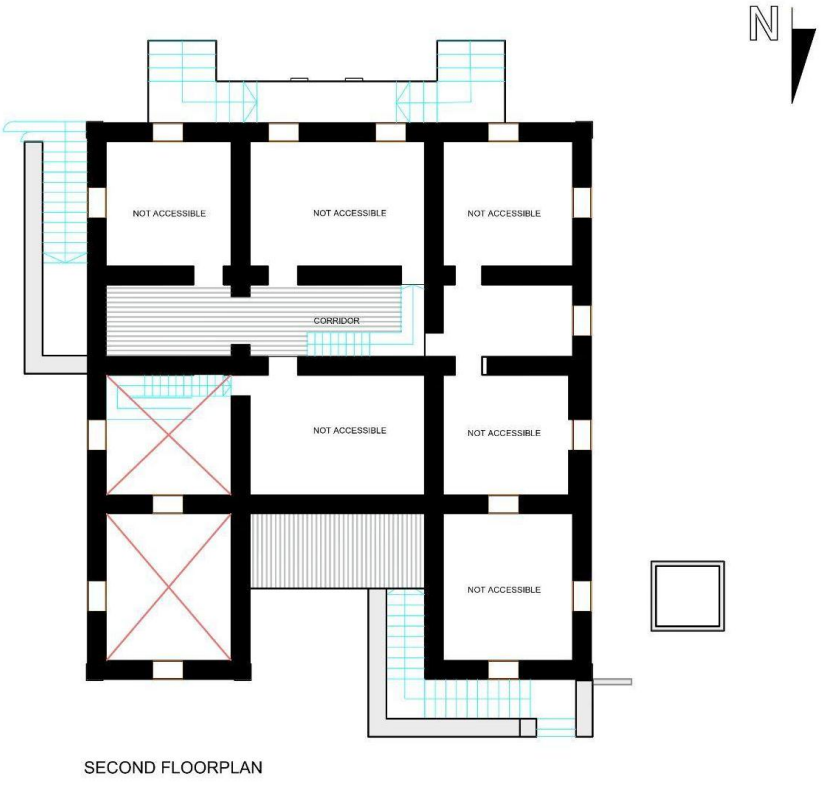

Figure 30. : image showing second floor plan drawing

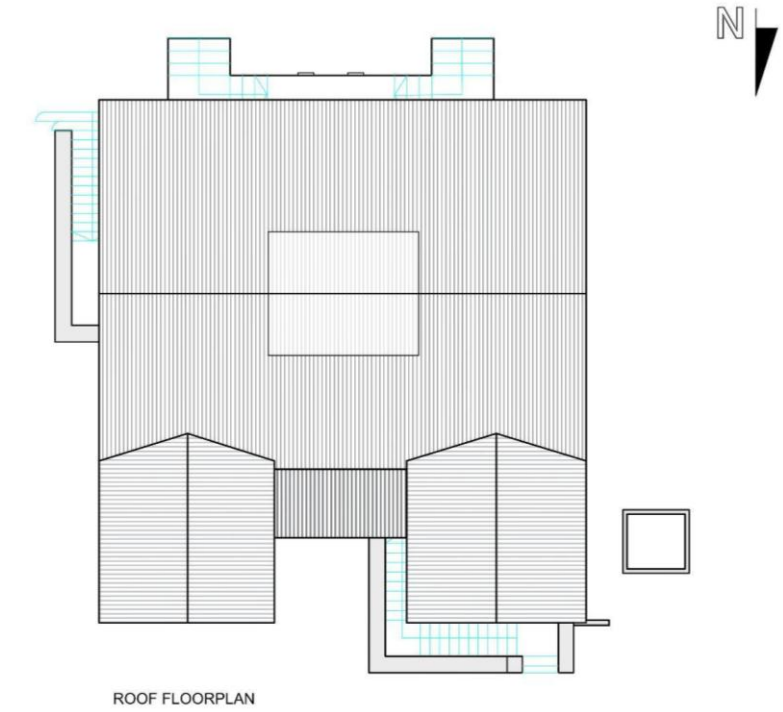

Figure 31. image showing roof plan drawing

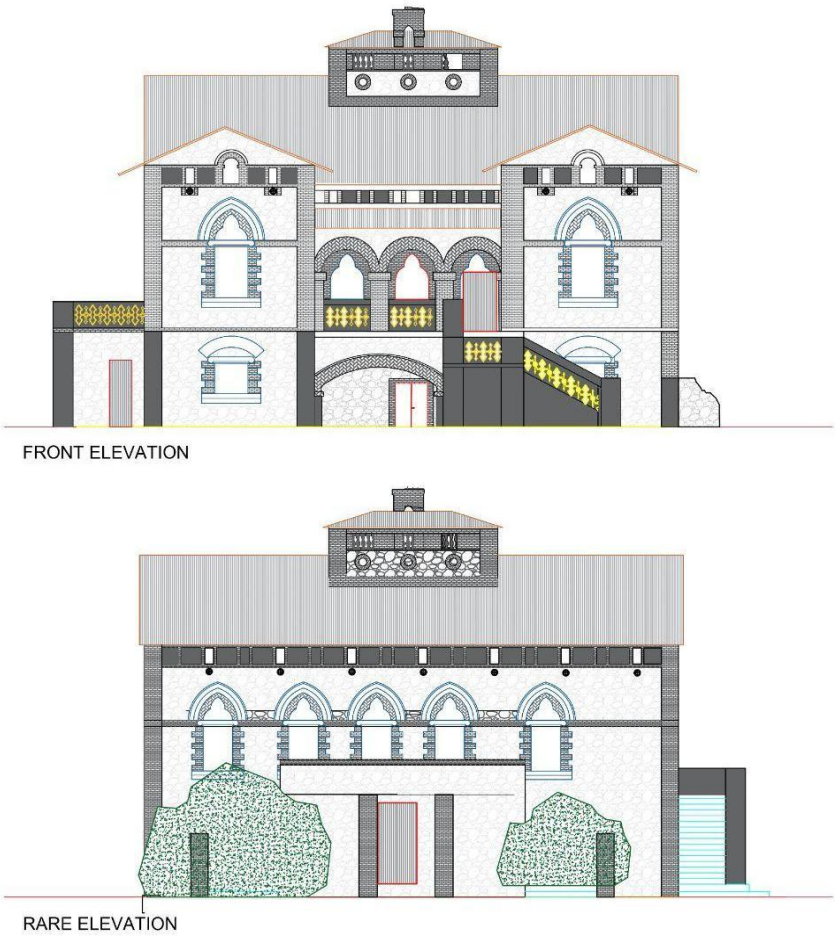

Figure 32. image showing Elevations(east/west)

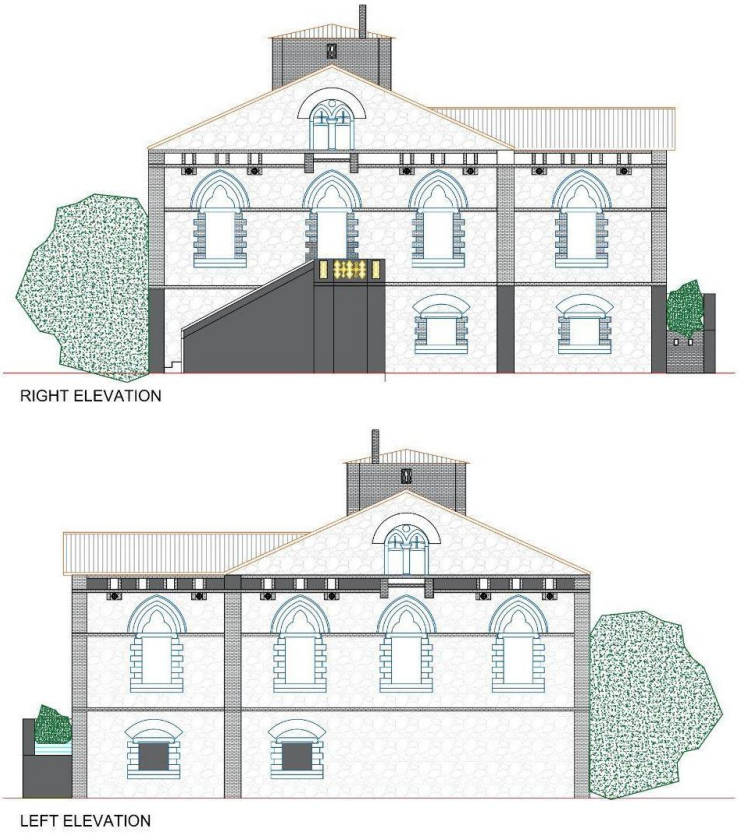

Figure 33. image showing elevation drawings (north/south)

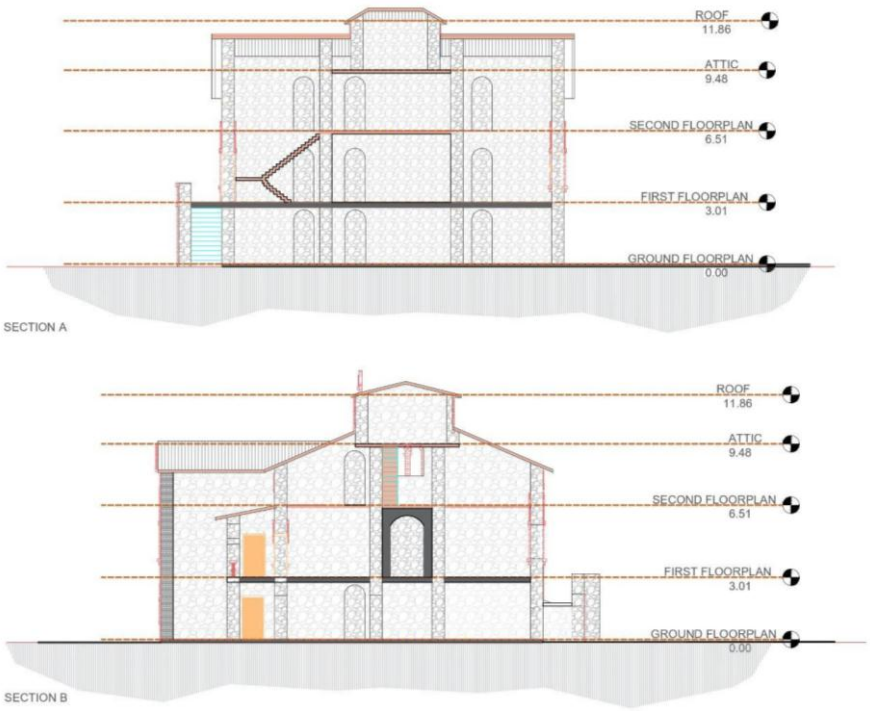

Figure 34. image showing sections

4.7 Metric Photo survey (Photogrammetric documentation)

This sequence of operations constitutes the standardized procedure for conducting a phased metric survey for architectural pathology documentation. The process commences with the **establishment of a fixed reference scale**, typically a 1-meter datum affixed directly to the wall surface, which compensates for material and equipment limitations in direct on-site mapping and enables subsequent drawing rectification. Data acquisition then requires the capture of **orthophotography (rectified imagery)** to minimize perspective distortion and facilitate accurate planar analysis of the elevation. This imagery is subsequently imported into a CAD environment, where it is digitally scaled using the established on-site reference. The survey concludes with the meticulous **mapping and tracing of visible physical deterioration**, concentrating specifically on crack patterns, which is followed by a systematic **damage assessment** and classification to define the overall level of pathology of the documented architectural element.

The current conditions at the site, including the presence of birds occupying certain rooms, inaccessible due to excessive clutter, and areas of complete darkness, made the photometric survey method impractical for mapping the cracked areas and assessing the internal damages within the building. However, the research study attempted to conduct a photogrammetric documentation of the building's external elevations, and the results are presented in the images below.

Figure 35. photogrammetric result three elevation (prepared by: Natneal Firew)

4.8 Damage analysis

The damages in the building are classified into two distinct categories: structural and non-structural damages. The study of the damage analysis had focused most of the efforts on the Structural components, utilizing the as-built drawings as a base.

In this stage of the visual technical investigation, proceeded by taking sketches, photographs, and measurements for the damaged parts of the building, including flooring, walls, false ceilings, doors and windows, water and electrical systems, and roofs. The study has also identified the affected areas and have made the necessary assessments to determine the extent of the damages. The research also identified the causes of the damages and have made the necessary recommendations for repairs. Safety of the building was also taken into account. The study has also documented the findings of the damage analysis and have provided a detailed report of the findings. This report will serve as a reference for the building owners and stakeholders to better understand the damages and to make informed decisions on the necessary repairs and maintenance

4.8.1 Wall Damage Analysis.

The Italian Consulate Building in Adwa is constructed as a **load-bearing masonry structure**, meaning the walls themselves form the primary structural system, carrying all gravity loads (such as the building's weight, floors, roof, and occupants) down to the foundation. This architecture **does not rely on a separate internal framework of columns and beams** (a characteristic of modern reinforced concrete or steel frame construction). The structural integrity is achieved through the substantial mass and compressive strength of the walls, which exhibit significant thicknesses, ranging from **0.57 meters (57 cm) to 0.60 meters (60 cm)** in certain areas, providing the necessary stability, stiffness, and load-transfer capacity for the entire building.

The plan below maps the damage to the **masonry walls** on the first floor. It highlights significant damage, including areas of **D5 (High level wall collapsed)** near the balcony and in an inaccessible room, and **D4 (Serious level plaster collapsed)** in the corridor and one of the rooms. Most walls exhibit **D2 (Light level Plaster crack)**, with some spots of **D3 (Medium level Plaster removed)**. Photographic evidence confirms the high-level damage, such as a collapsed wall and ceiling plaster.

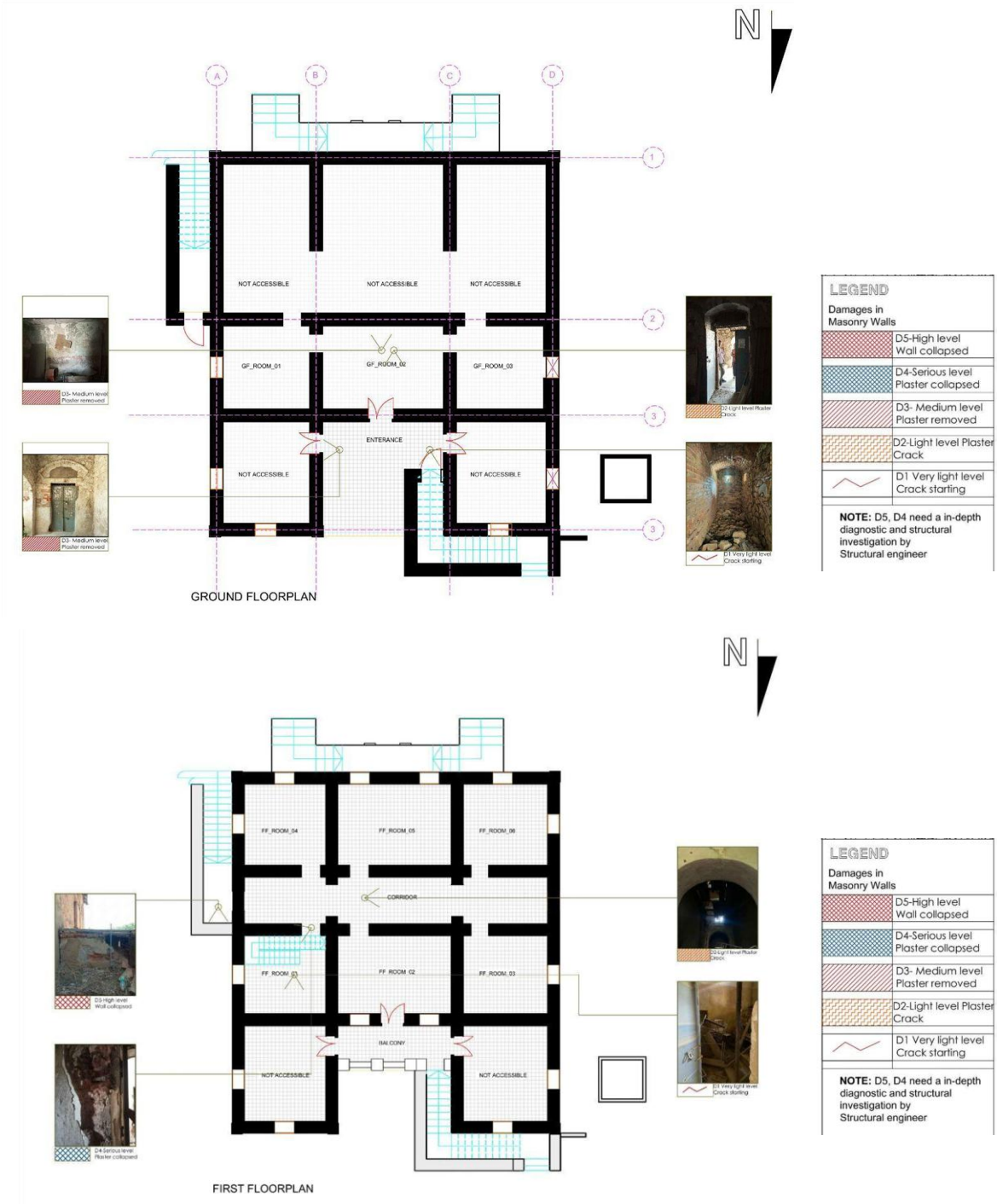

Figure 36. Interior walls damage analysis

This drawing below analyzes the damage on the Front and Rare Elevations. The Front Elevation shows prominent damage, including a large section marked D4 (Serious level crack) near the entrance steps, and areas of D3 (Medium level damage) on the walls and steps. The Rare Elevation also indicates scattered D3 damage and D2 (Light level missing threads/risers) on the steps and railings, along with small areas of D1 (Very light level crack starting). This plan maps the damage to the **masonry walls** on the first floor. It highlights significant damage, including areas of **D5**

(High level wall collapsed) near the balcony and in an inaccessible room, and **D4 (Serious level plaster collapsed)** in the corridor and one of the rooms. Most walls exhibit **D2 (Light level Plaster crack)**, with some spots of **D3 (Medium level Plaster removed)**. Photographic evidence confirms the high-level damage, such as a collapsed wall and ceiling plaster.

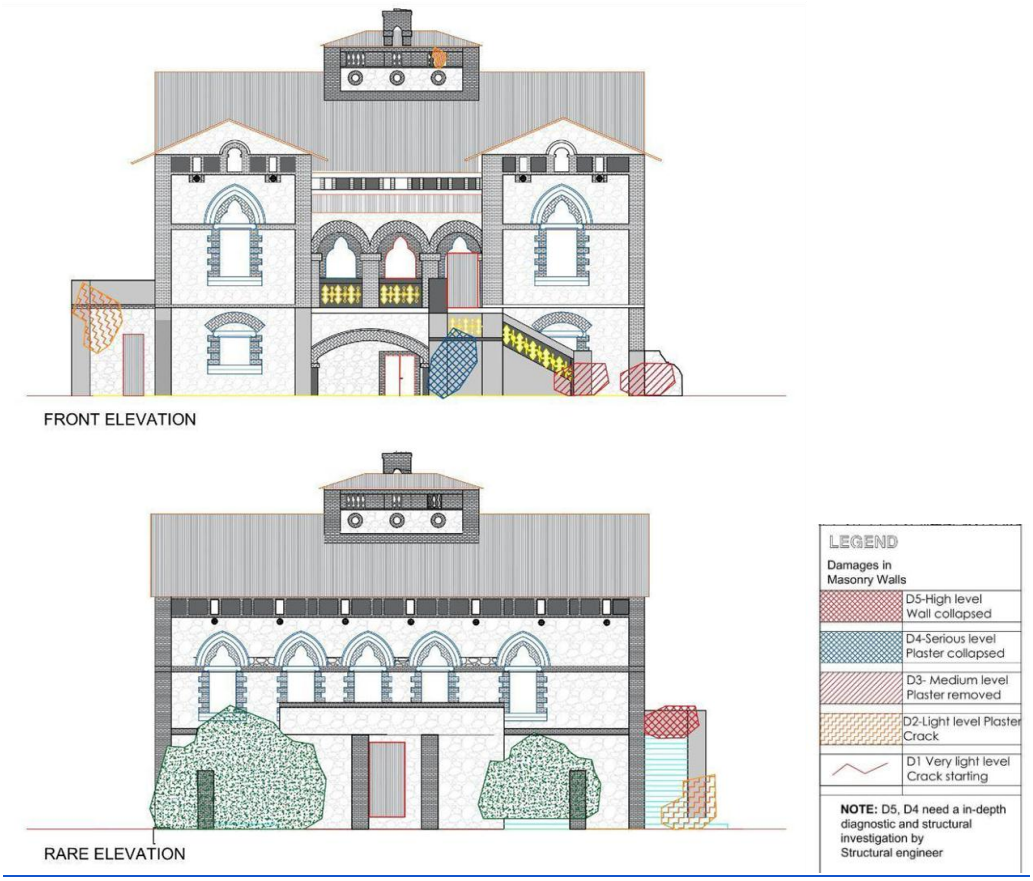

Figure 37. Elevation wall damage analysis 1

This plan below maps the damage to the **masonry walls** on the first floor. It highlights significant damage, including areas of **D5 (High level wall collapsed)** near the balcony and in an inaccessible room, and **D4 (Serious level plaster collapsed)** in the corridor and one of the rooms. Most walls exhibit **D2 (Light level Plaster crack)**, with some spots of **D3 (Medium level Plaster removed)**. Photographic evidence confirms the high-level damage, such as a collapsed wall and ceiling plaster.

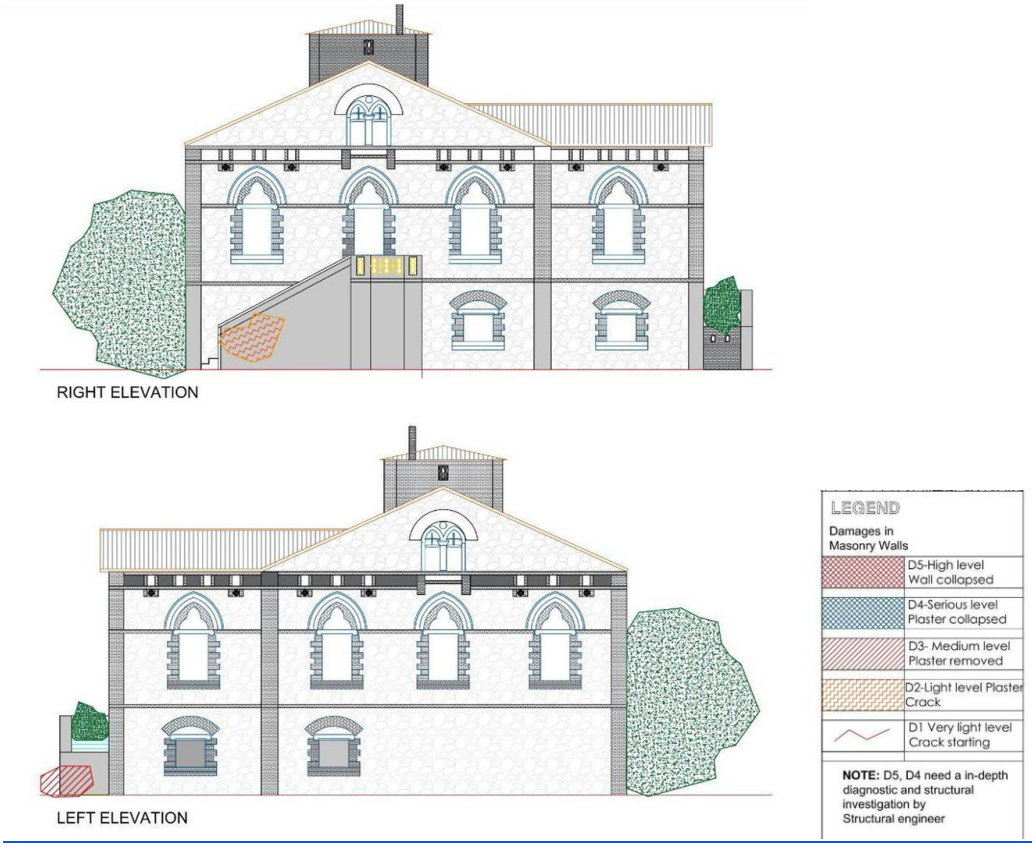

Figure 38. Elevation damage analysis 2

4.8.2 Flooring Damage

The flooring depicted in the image is evidently in a deteriorated condition, necessitating immediate attention. A notable concern is the absence of several tiles, which results in gaps and uneven surfaces that pose a tripping hazard. Additionally, numerous remaining tiles exhibit cracks, further undermining the integrity of the flooring. The presence of dirt, leaves, and other debris contributes to the overall appearance of neglect and unsanitariness. The combination of missing and cracked tiles leads to an uneven walking surface, which can be uncomfortable and hazardous. The flooring is in a state of disrepair and requires substantial repairs to restore its safety and functionality.

Figure 39. Images showing the floor damages

The drawing below illustrates the damage to the concrete tiled floors on the ground floor. The entrance area and a portion of the adjacent room show D4 (Serious level floor finish damage) and some areas are marked as D3 (Medium level missing tiles). Specific rooms also have spots of D2 (Light level floor crack starting) and D1 (Very light scratches and dirt). The plan also includes photographic evidence of missing tiles and light floor cracks.

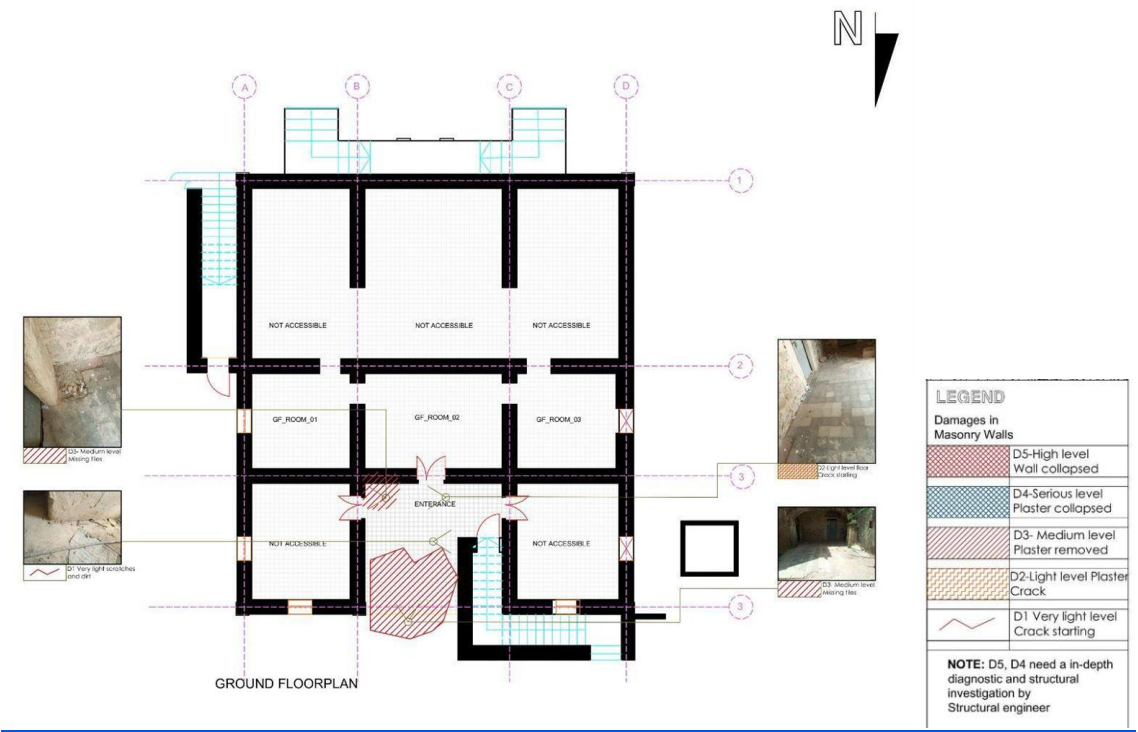

Figure 40. Floor damage analysis

4.8.3 Staircase Damage Analysis

The external staircases, which provide access to the first floor and balcony, exhibit **severe deterioration** that compromises both their structural integrity and user safety. As indicated in the accompanying drawing, damage is localized primarily in the exterior stone stair flights. Key issues include **high-level wall collapse** (D5) in the supporting masonry of the upper flight (as seen in the top-left photo insert) and **missing treads or risers** (D2) on the main flight leading up to the balcony (bottom-left photo insert). Furthermore, the structural area near the balcony shows signs of **serious cracking** (D4) and a **medium level of general damage** (D3), suggesting significant instability at the intersection of the stair structure and the main building facade. The advanced state of decay and physical loss of material renders these primary access points **unserviceable and hazardous**, requiring complete reconstruction of affected sections before the first floor can be safely accessed or reused.

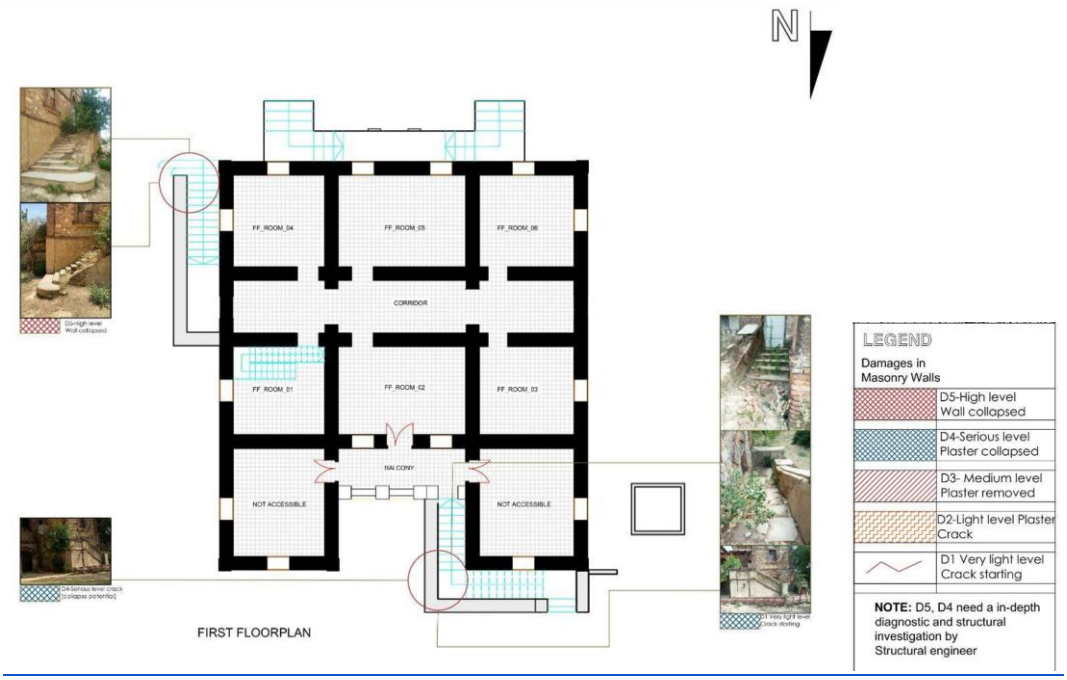

Figure 41. stair damage analysis

4.8.4 Roof Damage

A direct, comprehensive inspection of the roof structure was not possible due to the absence of specialized access equipment, such as scaffolding or drones, and a lack of safe access to the attic space. Consequently, this assessment relies heavily on **visual inspection from the ground level** and the observation of **internal indicators of water infiltration**.

The roof is inferred to be in a state of **advanced degradation**, consistent with a history of prolonged, systemic neglect exceeding a decade. The visible external sides of the roof show **significant deterioration**, with the corrugated iron covering suggesting **extensive corrosion and material fatigue**. While the exterior condition is not yet indicative of catastrophic structural failure, the interior does not reveal a critical situation of severe **water damage and moisture**

ingress across the interior . This is the **primary immediate threat** to the building's long-term integrity, actively accelerating the deterioration of internal finishes and potentially compromising load-bearing masonry walls through constant moisture exposure. Immediate and complete intervention is required to reconstruct the roof envelope and halt the current rate of decay.

4.8.5 Foundation Condition Analysis

A deep, intrusive investigation (e.g., test pits or core sampling) of the foundation structure was constrained by the lack of appropriate instrumentation and professionals. The assessment relies on observing the performance of the superstructure (walls) as an indirect indicator of foundation stability.

According to the technical survey and observation, the majority of the primary structural walls exhibit no evidence of major or significant vertical cracking, differential settlement, or noticeable tilting. This indirect evidence strongly suggests that the main foundational structure beneath the core of the building remains largely stable and has settled without major failure over its lifespan. Minor hairline cracks, typical of aging masonry buildings, are present but do not indicate a systemic foundation issue. A severe and localized threat to the foundation exists on the western/left side of the building (referencing the main facade view). A very large, proximate tree with an extensive root system is growing extremely close to the building's perimeter.

The large, expansive roots of the tree pose a significant future risk to the structure through two primary mechanisms. Firstly, direct mechanical pressure from ongoing root growth can exert immense force against the foundation and retaining walls, potentially causing cracking, displacement, and localized structural failure. Secondly, the tree contributes to soil desiccation by absorbing significant amounts of moisture from the surrounding earth; this cyclical moisture extraction can cause the underlying clay subsoil (if present) to shrink and swell, which often leads to a critical loss of bearing capacity and eventual differential settlement beneath that section of the building.

4.8.6 Ceiling Damage

A breakdown of the condition:

1. Missing Plaster: Large sections of the plaster have fallen off, exposing the underlying material, which appears to be concrete blocks. This exposes the building to further damage from moisture and pests.
2. Cracks: There are visible cracks in the remaining plaster

Overall, the ceiling is in a condition that requires immediate attention to prevent further deterioration and potential structural collapse.

Figure 42. images showing ceiling damages

4.8.7 Doors and Windows

4.8.7.1 Doors

All 8 doorways lack their original doors, exposing the interior spaces to the elements. This absence not only compromises the building's security but also allows for moisture infiltration, which can accelerate the deterioration of the structural elements inside. The door frames, still intact, display detailed craftsmanship indicative of the era, with ornate arches and sturdy construction that highlight the building's former grandeur. The absence of doors suggests a long period without maintenance, allowing nature to reclaim parts of the structure, with vines and other vegetation creeping into the openings.

Figure 43. images showing replaced doors

4.8.7.2 Windows

Similar to the doors, all 18 of the windows have wholly missing panes, further exposing the building to weather conditions. The remaining window frames, often showing signs of rot and wear, still reveal elegant designs that reflect the architectural style of the building's time. The absence of glass not only detracts from aesthetic appeal but also leaves the interior vulnerable to elements such as wind, rain, and pests, contributing to further decay and making restoration efforts more complex. And some windows are completely covered shut using concrete.

Figure 44. image showing missing windows

Figure 45. image showing missing windows of the west(left) side of the building

In summary, the missing doors and windows serve as poignant reminders of the building's historical significance while illustrating the impact of neglect over time. They highlight both the architectural beauty that once was and the urgent need for preservation or restoration to prevent further deterioration.

4.8.8 Electrical System

The building currently lacks a functioning electric line installation; this absence highlights the evolution of the building's infrastructure over time. However, upon closer inspection, remnants of electric cable holders and transmitters can still be observed affixed to various sections of the walls. These remnants serve as tangible evidence of the building's past, indicating that electric lines were once an integral part of its design and functionality during that period. The presence of these artifacts suggests that the building was once equipped with an electrical system, which has since been removed or fallen into disrepair. The current state of the building with its historical context provides insight into the technological advancements that occurred in the past.

4.8.9 Water/ Plumbing system

Thorough examination of the building revealed a significant absence of visible plumbing or sanitary lines in both the accessible interior and exterior areas. This lack of conventional plumbing infrastructure raises questions about the sanitation and water management practices employed within the structure.

Despite this absence, the inspection did uncover a stone water reservoir, which stands out as a critical feature of the building's water supply system. This reservoir appears to serve as the sole water source for the occupants, indicating that the residents rely entirely on this single source for their water needs. The reservoir is strategically located approximately two meters to the left side of the structure, suggesting that it may have been intentionally positioned for easy access by the inhabitants.

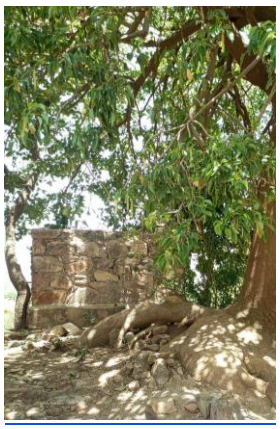

Figure 46. Image showing an old water reservoir

The presence of the stone water reservoir highlights the building's reliance on traditional methods of water collection and storage, which may reflect the historical context or the specific needs of the occupants. It also raises considerations regarding the quality and sustainability of the water supply, as well as the potential challenges faced by the residents in terms of water accessibility and sanitation. Overall, the findings suggest a unique approach to water management within the

building, warranting further investigation into the implications for the health and well-being of its occupants.

4.9 Special features in the compound

The Italian Consulate Building in Adwa is distinguished not only by its main architectural structure but also by a variety of unique features that populate its grounds. These elements serve to highlight the building's historical importance, intended function, and aesthetic appeal.

4.9.1 Second Heritage Building

In addition to the main consular building, the compound features a secondary structure that played a crucial role in the daily operations and domestic life of the consulate. This building, identified as the service quarters, provides valuable insight into the functional layout and social hierarchy of the compound in its former life.

Figure 47. Image showing the other historic part of building in the compound

The image shows a smaller, more utilitarian building compared to the main structure. It is a single-story edifice with a distinct architectural style that, while related to the main building, is less ornate. The building features a series of arches that form an open-air corridor or loggia along its facade. This design is both functional, providing shade and shelter, and aesthetically pleasing, creating a sense of continuity with the arched details found elsewhere in the compound. The arches are well-proportioned and appear to be constructed from the same masonry or rendered material as the other structures, reinforcing a cohesive architectural language.

A particularly interesting feature is the presence of an external staircase leading to a rooftop area. This suggests a multi-functional use for the building, possibly including a rooftop terrace for chores, storage, or even a small residential space. The staircase itself is simple and unadorned, emphasizing its practical purpose. The open nature of the corridor and the accessible roof space point to a building designed for work and domestic activities, rather than formal diplomatic functions.

The building's location within the compound, set apart from the main consular building, reinforces its status as a service quarter. This physical separation is a common architectural strategy in such compounds, creating a distinction between public/official spaces and private/service areas. It would have housed kitchens, laundries, and possibly living quarters for domestic staff.

In its current state, the building, like others in the compound, shows signs of age and distress. However, its form and layout are still clearly legible. It stands as a testament to the full operational capacity of the consulate, highlighting that the compound was a complete and self-contained entity. This service quarter is not just a secondary building; it is a vital piece of the puzzle, revealing the full scope of life and work that once took place within the walls of the Italian Consulate in Adwa.

4.9.2 The flagpole

Among the various architectural and landscape features of the Italian Consulate compound, the flagpole stands out as a powerful and singular symbol of its original purpose and authority. Positioned prominently within the grounds, this flagpole is not merely a utilitarian object but a key element that conveys the site's diplomatic identity and its historical presence in Adwa.

The image captures the flagpole's imposing height, which suggests its intended purpose was to be visible from a distance, making a clear statement about the consulate's status. Its extreme length, dwarfing the surrounding buildings and trees, is a deliberate design choice that speaks to the pride and authority of the nation it represents. The pole itself appears to be made of a sturdy material, possibly metal, and is anchored firmly to the ground with a robust base, ensuring its stability and permanence.

Figure 48. Images showing the flag pole

The placement of the flagpole is particularly noteworthy. It is situated in a central, open area of the compound, away from the main building but still a focal point. This careful placement ensures that the flag, when raised, would have been the most prominent feature of the entire site. The flagpole's prominence is a physical manifestation of the concept of sovereignty; it is a sentinel, a silent guardian that declared the presence of the Italian state in Adwa.

In the context of the consulate's history, the flagpole would have been a daily reminder of diplomatic relations and international presence. The raising and lowering of the flag would have been a ceremonial act, imbued with political and symbolic meaning. Even in its current state, devoid of a flag and showing signs of age, the pole retains its symbolic weight. It stands as a testament to the past, a relic of a time when the compound was an active center of political and social life. Its impressive scale continues to tell a story of an institution that once held considerable influence.

In conclusion, the flagpole is a critical feature of the Italian Consulate compound. Its exceptional height, strategic placement, and sturdy construction all contribute to its symbolic role. It is a powerful architectural element that transcends its simple function, acting as a historical marker and a poignant reminder of the compound's former life as a hub of international diplomacy.

4.9.3 Circular sitting space with a Tree

Within the Italian Consulate compound, there is a distinctly designed outdoor sitting area that serves as a central social and aesthetic feature. This space, as depicted in the images, is a thoughtful combination of natural elements and built environment, creating a comfortable and functional gathering point.

Figure 49. Image of the building in relation to the sitting space

At the heart of this space is a large, mature tree, which provides a natural canopy of shade. This tree is not merely a decorative element; it is the focal point around which the entire area is organized. Its substantial size and wide-spreading branches offer a welcome respite from the sun, making the area usable throughout the day. This strategic use of a natural feature for climate control demonstrates an understanding of passive design principles, crucial for a building in a warm climate like Adwa's.

Figure 50. Sitting space

The seating area itself is defined by a circular arrangement of masonry benches. These benches are constructed from the same type of stone or rendered material found in the compound's other structures, ensuring architectural continuity. The circular layout encourages conversation and social interaction, creating an intimate and communal atmosphere. The simple, robust construction of the benches is both practical and durable, designed for long-term use.

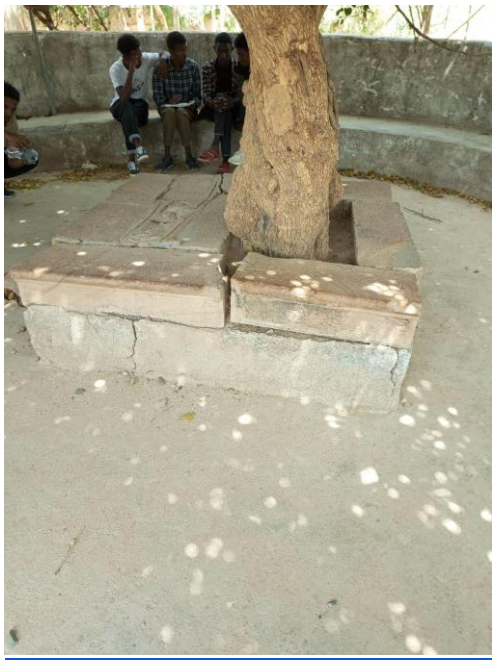

Figure 51. Image showing the sitting space being used

The images also show a rectangular raised planter bed or a decorative fountain basin at the very center, encircling the tree's base. This detail further accentuates the tree's importance and frames it as a central monument. While the planter or basin appears to be in disrepair, its original design suggests a past commitment to creating a beautiful and serene environment.

Figure 52. Image showing the rectangular planter at the center

Surrounding this central sitting area is a paved walkway, also in a circular pattern, which connects it to other parts of the compound. The use of paving stones adds a formal touch and clearly delineates the space. The entire setup from the shaded tree to the communal benches and the circular walkway creates a well-integrated and harmonious space that likely served as a primary spot for informal meetings, relaxation, and social gatherings for the consulate's residents and visitors.

In conclusion, this tree-shaded courtyard is a special feature that speaks to the social and aesthetic considerations of the compound's design. It represents a deliberate effort to create a comfortable, inviting, and functional outdoor space. Its presence underscores the idea that the Italian Consulate was more than just an official building; it was a living community, and this courtyard was its heart.

4.9.4 Soloda Mountain View

The Italian Consulate compound in Adwa is remarkable not only for its internal architecture and landscaping but also for its deliberate and striking relationship with the surrounding natural environment. A particularly special feature is the commanding view of Soloda Mountain, which serves as a powerful natural backdrop to the entire site.

Figure 53. Images showing mt. Soloda view

As shown in the images, the compound is positioned to offer an unobstructed view of the majestic mountain. The architectural design seems to be oriented to capitalize on this vista. The main building, as well as the terraces and open spaces, appear to have been strategically placed to provide residents and visitors with a constant visual connection to the mountain. This suggests a conscious design choice to integrate the man-made structure with the awe-inspiring natural landscape, elevating the site beyond a simple building to a place of aesthetic contemplation and environmental harmony.

The mountain itself is a dominant presence, with its rugged, rocky terrain and distinctive profile. Its sheer scale and natural beauty provide a sense of place and context that would be impossible to replicate. The changing light and atmospheric conditions would have constantly altered the mountain's appearance, making it a dynamic and living part of the compound's aesthetic. The view of Soloda Mountain would have offered a sense of tranquility and permanence, contrasting with the often-transient nature of diplomatic life.

Figure 54. Image showing mt. Soloda view in relation to the building

The strategic placement of openings, such as windows, doors, and open terraces, is likely a key aspect of this design. These elements would have framed the view, turning the mountain into a natural work of art visible from key vantage points within the compound. The images show a broad, open space, possibly a terrace or a high-ground area, that is perfectly positioned for

observing the mountain. This suggests it was a designated space for reflection, relaxation, or formal gatherings.

In conclusion, the view of Soloda Mountain is not a coincidental detail but a special, integral feature of the Italian Consulate compound. It speaks to a design philosophy that valued the integration of architecture with its natural surroundings. The mountain serves as both a physical landmark and a powerful symbolic presence, enriching the historical and aesthetic narrative of the site and solidifying its unique identity.

4.9.5 Agricultural Features: The Farm within the Italian Consulate Compound

The Italian Consulate compound in Adwa also contains a small farm area since it is in close distance with a river passing by, emphasizing potential self-sufficiency and resourcefulness. The image shows a structured agricultural plot, with a series of organized rows of plants. The rows are separated by raised earth, which likely serves as a form of furrow irrigation, a common and efficient method in arid and semi-arid regions. This demonstrates a thoughtful and practical approach to cultivation, designed to conserve water and maximize crop yield.

The plants themselves appear to be in a relatively early stage of growth, with some already bearing small fruit. The presence of what look like gourd-type vegetables, possibly zucchini or pumpkins, suggests that the farm was used to grow a variety of produce for consumption by the residents. This small-scale farming operation would have provided a fresh and reliable food source, a significant benefit given the remote location of the consulate.

Figure 55. Image showing the small-scale farm inside the site

4.10 Specific Interventions and restoration measures

The Italian Consulate Building in Adwa, with its unique architectural features and rich historical context, stands as a critical piece of cultural heritage. While its current state of disrepair is a testament to the passage of time, it also highlights an urgent need for targeted intervention and restoration. The goal of any such endeavor is not merely to repair physical damage but to preserve the integrity of the site's historical narrative and architectural significance. Therefore, a comprehensive strategy for intervention must be grounded in a philosophy of minimal intervention, where the focus is on preserving existing fabric, stabilizing deteriorating elements, and carefully restoring lost or damaged components based on historical evidence.

This section outlines specific measures and interventions designed to address the unique challenges of the compound. These measures are categorized to reflect a systematic approach, beginning with structural stabilization and progressing to the conservation of specific architectural details, landscape features, and functional elements. By prioritizing a holistic and historically sensitive approach, the proposed interventions aim to halt further decay, enhance the site's resilience, and ensure its continued existence as a valuable historical landmark for future generations. Each measure is proposed with the objective of maintaining the authenticity of the building while making it safe and accessible, thus securing its legacy as a significant monument to Adwa's shared history.

These specific interventions are vital for the conservation and revitalization of the Italian Consulate Building, ensuring the preservation of its historical significance and architectural charm.

1. **Stone and Brickwork:** The building is constructed with stone and brick masonry walls, which reflect a rich architectural heritage. Interventions would involve addressing any visible deterioration of the stone façade, intricate stonework, and brickwork to preserve their cultural heritage significance and structural integrity. This would likely include cleaning, repointing mortar joints, repairing or replacing damaged stones/bricks with matching materials, and consolidating fragile areas.
2. **Floors:** The floor plans indicate that the rooms and corridors are primarily finished with cement tiles. Interventions for floors would include: **Cleaning and Repair:** Thorough cleaning of existing cement tiles and repairing or replacing any cracked, broken, or missing tiles with matching materials to restore functionality and aesthetic appeal.
3. **Roofing:** The roof plan indicates a corrugated iron sheet roof with a central section and possibly lower extensions. The elevations also depict a corrugated iron roof with chimneys. Interventions should focus on: **Maintenance or Replacement:** Repairing or replacing corroded or damaged corrugated iron sheets to ensure weather tightness. **Chimney Conditions:** Addressing any deterioration of the chimneys, including structural repairs, repointing, or capping as needed. **Drainage:** Ensuring proper water runoff to prevent water accumulation and potential damage to the roof structure and walls.
4. **Openings (Doors and Windows):** The building currently has missing doors and windows, indicating neglect and an urgent need for preservation or restoration. Interventions would involve: **Replacement:** Restoring existing historical doors and windows where it is impossible in this case because almost all are missing. Replacing missing ones with historically accurate reproductions to prevent further deterioration and enhance the building's integrity and its adaptive reuse plan. This includes ensuring proper weatherproofing and security.
5. **Structural Repairs:** According to the technical survey the building shows signs of significant weathering and neglect, and the on-site surveys are intended to identify

structural challenges and deterioration factors which showed the structure is in good condition. but it needs further structural survey in order to find and address any unidentified structural issues, such as foundation condition, instability, or areas of collapse, which must be identified and addressed through appropriate engineering solutions to ensure the long-term stability and safety of the building.

6. **Vegetation Management:** Overgrown vegetation encroaching upon the walls and windows is visible and needs to be removed. This intervention is crucial to prevent further structural damage from roots and moisture retention.

4.11 Adaptive reuse

Adaptive reuse represents a strategic and sustainable approach to heritage conservation, offering a compelling alternative to demolition or simple restoration. By re-purposing a historic building for a new function, adaptive reuse ensures its continued relevance and vitality within the community. This method not only preserves the architectural and historical integrity of a structure but also breathes new life into it, allowing it to evolve with contemporary needs while honoring its past. For a building like the Italian Consulate, with its unique historical significance and current state of disrepair, adaptive reuse is a particularly fitting strategy. It allows us to protect its tangible heritage—the physical form and materials—while creating new economic and social value. The following interventions are proposed with the core principle of adaptive reuse in mind: to transform the building into a functional, economically viable, and culturally resonant space that will serve the for generations to come.

The Italian Consulate Building in Adwa, despite its current state, holds significant potential for adaptive reuse, contributing to the city's socio-economic revitalization while preserving its cultural heritage. This study recommends the transformation of the building into a guest inn and restaurant, a concept that aligns with the growing tourism sector in Adwa and addresses the need for improved hospitality services.

Adaptive Reuse Plan:

1. Restaurant: The ground floor, with its accessibility and potential for spaciousness, is ideal for a restaurant. This space can showcase Ethiopian cuisine while also offering international dishes to cater to a diverse clientele. The restaurant can also serve as a dining area for guests of the inn.

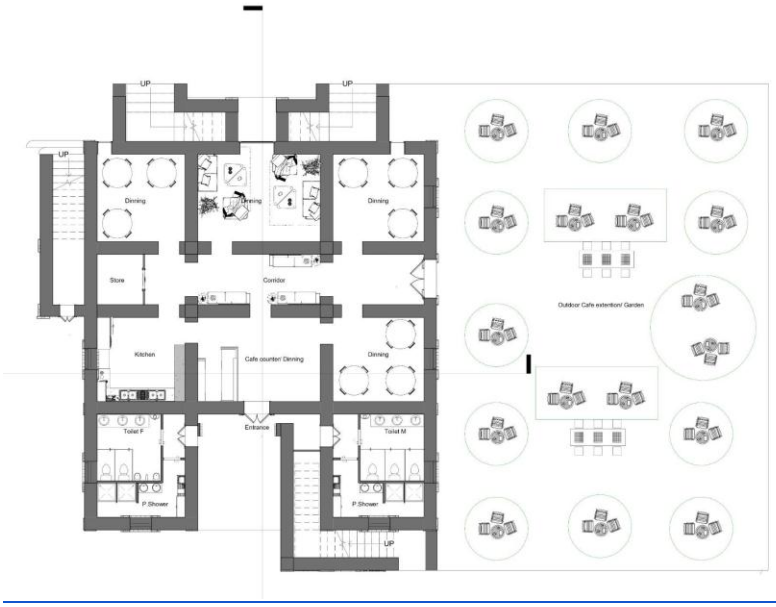

Figure 56. Image showing the proposed ground floor plan

2. Guest Inn: The existing rooms on the first and second floors can be restored and converted into comfortable guest rooms, maintaining the building's original spatial configuration where feasible. The incorporation of modern amenities, such as en-suite bathrooms and Wi-Fi, is crucial to meet the expectations of contemporary travelers.

Figure 57. Images showing the proposed first and second floor plan

3. Outdoor Space: The building's surrounding compound offers opportunities for creating an attractive courtyard or outdoor dining/lounging area. Landscaping and the integration of local flora will enhance the ambiance and create a welcoming environment. Presenting a wider, comprehensive view of the entire site, image 62 site plan for the compound. The design introduces new amenities that complement the historical structure without

overshadowing it. A dedicated camping area, featuring a series of stylish and comfortable tents, is proposed to attract tourists and provide a unique accommodation experience. A central fire pit acts as a focal point for gatherings and evening relaxation and entertainment. The intentional variety of seating arrangements from informal benches to elegant patio transforms the once-vacant grounds into a versatile and dynamic leisure and event space. The design also strategically incorporates the existing farm, which can be revitalized for educational or agricultural purposes, creating a self-sustaining element within the compound. Additionally, a designated parking space and a new entrance has been thoughtfully included to ensure better access for all visitors.

Figure 58. Image showing the proposed site floor plan

4. Preservation of Historical Features: The adaptive reuse plan prioritizes the preservation of the building's historical and architectural integrity. Key features, such as the stone and brick masonry, arched windows, and the balcony, should be carefully restored and integrated into the new design. As shown in the elevation’s drawings below.

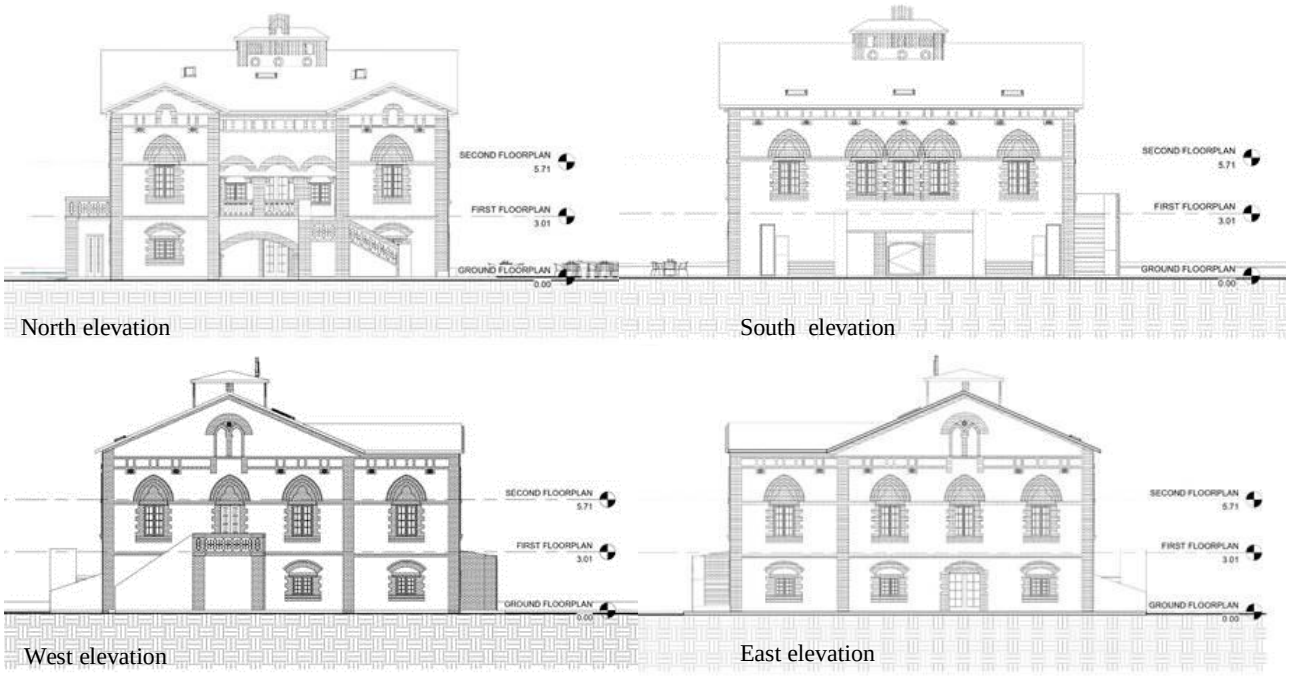

Figure 59. Images showing the proposed (NORTH, SOUTH, WEST, EAST) elevation plans

SECTIONS

Figure 60. Image showing the proposed Section

4.11.l Proposed design 3d

The following 3D renderings illustrate the proposed adaptive reuse of the Italian Consulate Building and its surrounding grounds. These designs aim to transform the site into a vibrant and functional space, connecting the building's historical integrity with contemporary needs. The proposals focus on creating multi-use functions, complete with a restored main building and a thoughtfully designed outdoor leisure area.

Figure 61. Image showing the proposal in 3D

Restored Main Facade This rendering showcases the restored main facade of the Italian Consulate building. The design emphasizes the preservation of the original stone and brickwork, highlighting the unique arched windows and symmetrical architecture. The proposed landscaping and paved courtyard create a welcoming entrance, setting the stage for the building's new life as a public space.

Figure 62. Image showing the proposal in 3D rare elevation

This closer look at the smaller similar building reveals a similar restoration philosophy to the main consulate. The design maintains its historical stone construction and distinct architectural character.

The surrounding landscaping, which includes prominent, strategically placed stone-paved paths, thoughtfully connects this secondary structure to the rest of the site. This building is envisioned for a variety of potential uses, such as an administrative office for the entire complex, ensuring that every part of the site is utilized and brought back to life.

Figure 63. Image showing the proposal in 3D in relation to the other historic buildings

Site Overview with Proposed Amenities This wider view of the site shows the main building and its surrounding landscape. The design introduces new amenities, including a dedicated camping or glamping area with stylish tents, a fire pit for community gatherings, and a variety of seating arrangements. This transforms the grounds into a versatile leisure and event space, inviting both locals and tourists to engage with the site.

Figure 64. Image showing the proposal in 3D wider view

Cafe and Terrace with Mountain View Here, we see the proposed outdoor cafe and terrace, situated adjacent to the main building. This space features modern, comfortable seating and large umbrellas, providing a pleasant setting for dining and socializing. The view is framed by the distinctive mountain in the background, a reminder of the site's unique context within the Adwa landscape.

Figure 65. Image showing the proposal in 3D outdoor space with the view

Outdoor Gathering Space This rendering captures a view of the proposed fire pit area, nestled among trees. The design prioritizes creating comfortable, informal gathering spaces that encourage interaction and relaxation. This element adds a modern, functional layer to the historical site, making it a destination for social and cultural activities.

Figure 66. Image showing the proposal in 3D Areal view

The proposed interior design for the **Adwa Guest Inn** blends a **rustic, natural aesthetic** with modern comfort, creating a cozy and unique theme. This is achieved primarily through the extensive use of **natural wood finishes**, seen in the dark-stained plank flooring and the exposed beam or slatted ceiling, which provides a warm, cabin-like feel. This warmth contrasts with the **rough, textured, light-colored walls** that appear to mimic ancient mud or carved stone, suggesting a connection to local or historical architectural elements. The furniture is contemporary—featuring plush gray sofas and simple, dark wooden pieces—while indoor greenery and unique artwork add splashes of color and life, resulting in a theme that is both **earthy and invitingly modern**.

Figure 67. Images Showing the theme of the interior spaces

Chapter five: Conclusion and Recommendation

Conclusion

This research has undertaken a comprehensive study of the Italian Consulate Building in Adwa, Ethiopia, focusing on its historical significance, current condition, and potential for adaptive reuse. The investigation revealed the building's importance as a historical and cultural artifact, reflecting the complex interplay of Ethiopian and Italian history. Despite its current state of deterioration, primarily due to inadequate management and the passage of time, the building retains its architectural charm and structural integrity, offering a valuable opportunity for conservation. One of the core research objectives which is to develop a sustainable strategy for the building's upkeep—has been validated by the proposed adaptive reuse. The conservation philosophy embraced here is one of minimal intervention and maximum preservation of **authenticity and integrity**, focusing on stabilizing the original fabric while preparing it for a dynamic new role within the community. The findings demonstrate that passive neglect is the single greatest threat to heritage assets in this context; thus, the adaptive reuse concept shifts the building from a static historical monument to a **self-sustaining cultural and economic generator**. This strategy not only justifies the necessary conservation investment but transforms it into a long-term asset for the community and regional identity.

The methodologies employed in this study, including literature reviews, on-site surveys, and architectural documentation, provided a thorough understanding of the building's historical context and physical condition. The lack of readily available historical documentation presented a challenge, highlighting the importance of this research in creating a record of the building for future generations. The architectural analysis revealed a blend of Italian colonial and local Ethiopian influences, contributing to the building's unique character and reflecting the broader architectural context of Adwa.

The proposed adaptive reuse of the Italian Consulate Building as a guest inn and restaurant offers a sustainable solution for its conservation and revitalization. This approach aligns with the growing tourism potential of Adwa and addresses the need for improved hospitality services in the area. However, the successful implementation of this adaptive reuse project necessitates a comprehensive conservation plan, a robust management strategy, and the securing of adequate financial resources.

This research underscores the significance of the Italian Consulate Building as a valuable cultural heritage asset in Adwa. The findings advocate for its conservation and adaptive reuse to ensure its preservation for future generations while contributing to the city's sustainable development. It is recommended that collaborative efforts involving local authorities, conservation experts, and the community be prioritized to realize this vision and safeguard Adwa's rich architectural and historical legacy.

Recommendation

The successful execution of this conservation study, which diagnosed the critical condition of the Italian Consulate Building and proposed a viable strategy for its future, culminates in a series of integrated recommendations essential for securing the structure's longevity. The first and most critical action directly addresses the thesis objective of assessing deterioration and proposing a technical conservation strategy. Based on the forensic evidence presented, which identified severe moisture ingress and consequential structural instability as the principal threats, immediate interventions must focus on emergency stabilization. This program must prioritize the complete rectification of the roofing system and external drainage infrastructure to permanently eliminate the source of hydrological decay. All technical work must strictly adhere to the principle of minimal intervention, ensuring reversibility and the preservation of authentic historic fabric. Specifically, the use of locally sourced materials, such as specific lime mixes for repointing and rendering, and the engagement of local master craftspeople are non-negotiable requirements. This approach not only ensures material compatibility but also serves the broader aim of capacity building and the revitalization of indigenous conservation skills within the community.

The second tier of recommendations transitions from immediate repair to functional viability, directly engaging with the objective of developing a sustainable adaptive reuse proposal. The building's proposed function offers the critical opportunity to shift its status from a costly, vulnerable relic to a dynamic, self-sustaining civic asset. To manage this monumental transition, it is recommended that a dedicated, multi-disciplinary Heritage Stewardship Committee be established. This body must be empowered with both technical oversight and legal mandate to supervise the phased implementation of the adapted design. The successful operation of the guest inn and restaurant, which will rely on robust Management and Fundraising Strategies, requires securing professional management expertise to oversee staff training, marketing, and rigorous quality control. This operational effort must be deeply integrated with the local context through community involvement and a firm commitment to sustainability, encompassing the use of renewable energy sources and effective waste management. Furthermore, initial capital generation must be achieved through a diversified approach, including exploring private partnerships, diligently seeking grants and donations from international and cultural heritage foundations, and engaging the public through targeted crowdfunding campaigns. Ultimately, the project's long-term financial sustainability will rely on the consistent generation of revenue from the guest inn and restaurant, supported by effective marketing and promotion that highlights the building's unique historical significance.

Addressing the ultimate objective of long-term upkeep and perpetual preservation, systemic policy and governance changes are required to institutionalize the building's protection. It is critically recommended that the regional governmental body formally grants the Italian Consulate Building statutory protection, officially designating it as a legally protected cultural heritage site. This formalization is vital for shielding the building from inappropriate future development or political volatility. This legal safeguard must be paired with the immediate and mandatory establishment of a conservation management plan that is officially budgeted for and strictly enforced. Shifting maintenance from reactive, expensive crisis management to proactive, preventative care, including

annual inspections, is the single most decisive factor in guaranteeing the building's survival beyond the current restoration cycle, ensuring the community retains access to this important cultural resource for generations.

Finally, the study's successful methodology should be leveraged to create a broader regional and over all country's conservation legacy. It is recommended that the diagnostic and proposal framework developed herein be adopted as a pilot model for assessing and revitalizing the numerous other threatened colonial-era and historic buildings across Adwa and the wider Tigray region and more. By implementing these rigorous technical, operational, and management plan recommendations, this thesis will transform from an academic document into the foundational blueprint for a renewed commitment to integrated heritage conservation, setting a precedent for safeguarding Ethiopia's layered architectural history.

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Annex I: Publishable Manuscript

Annex II : Consensual letters

EiABC
Ethiopian Institute of Architecture, Building Construction and City Development
Addis Ababa University
Building Ethiopia Since 1954

To: Tigray culture and tourism bureau

Subject :
Requesting Co-operation

Addis Ababa, May. 16 /2024
Ref No: EiABC/GPD/2085/2024

Beza Alemu ID.No - GSR/2618/15 - is a M.Sc. student in the field of Conservation of Urban and Architectural Heritage, at Ethiopian Institute of Architecture, Building Construction and City Development AAU. Currently, he/she is conducting research for his/her seminar/project.

Conservation of Italian courdate building in Adwa.

This letter is, to kindly request your cooperation and support in providing him/her with necessary data and information in the research area and also allow taking pictures, videotape and site visit.

Ethiopian Institute of Architecture,
Building Construction and City Development
P.O.Box 518
Addis Ababa, Ethiopia
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Dagnachew Adugna(PhD)
Graduate Program Director EiABC

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Regards.

Dagnachew Adugna (PhD)
(Director for Graduate Programs)

EiABC
Ethiopian Institute of Architecture, Building Construction and City Development
Addis Ababa University
Graduate Program Director

Figure 68. letter written to Tigray tourism bureau

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Tigrai: Cradle of Civilization

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ቢሮ ባህልን ቱሪዝምን
Tigrai Interim Administration
Bureau of Culture and Tourism

ቁፅሪ/ Ref.No 375/55 ዕለት/ Date 21/09/2016

ንዝምልከቶ ኹሉ

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ምስ ሰላምታ፡

የማነ ገድሉ ገዛኸኝ
Yemane Gedlu Gezahegn
ዳይሬክተር ብቕዓት ምርግጋፅን ሬጉላቶሪነ
Accreditation & Regulatory Director

ኣድራሻ፡ መቐለ ትግራይ፣ ኢትዮጵያ
Address: Mekelle, Tigrai, Ethiopia
ስልኪ: ፋክስ
Tel: 0344409360 Fax: 0344401032
0344402028
0344401031
E-mail: visittigrai1@gmail.com

Figure 69. Cooperation letter to Adwa tourism bureau

ቁጥር 2027/ገ/ቱ/10
ዕለት 23/08/2016

ንዝምልከቶ ኩሉ

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[illegible] field of conservation Urban and architectural heritage [illegible]

[illegible]

Figure 70. Cooperation letter written by Adwa tourism bureau to whom it may concern

Annex III: Interview Questionnaire

Thesis Focus: Conservation of Italian Consulate Building in Adwa

Goal: To gather essential insights on the building's history, current state, and future use.

1. Building History:

- What is the earliest known history of the Consulate Building (date, original function, key people involved)?
- What specific architectural or construction features are unique to this building?

2. Cultural Value:

- What is the most significant social or historical memory connected to the building in Adwa?
- What does the building represent to the local community today?

3. Condition Assessment:

- What are the most urgent signs of damage or decay in the building (e.g., roof, walls, foundations)?
- Has the building been affected by any recent conflicts, disasters, or severe neglect?

4. Maintenance and Challenges:

- Who is currently responsible for the building, and what is the current state of maintenance (active or passive)?
- What are the biggest challenges preventing its effective conservation today (e.g., money, expertise, security)?

5. Future Vision:

- Do you believe the building should be actively used (adaptive reuse) or kept only as a historical monument? Why?
- What specific new function would you recommend for the building (e.g., cultural center, museum, public office)?

6. Implementation:

- Which parts of the building must be kept exactly as they are when adapting it for a new use?
- Do you know of any community members or groups who should be consulted about its future?

Thank you.

Annex IV: Drawings (A3)