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**FRAMEWORK FOR THE QUANTITATIVE
ASSESSMENT OF AUTHENTICITY: A CASE STUDY
OF HERITAGE BUILDINGS IN KARACHI**

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Registration No.- 218025G

Doctor of Philosophy

Department of Architecture

Faculty of Architecture

University of Moratuwa

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Thesis/Dissertation submitted in partial fulfillment of the requirements for the degree
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DECLARATION

I declare that this is my own work and this thesis/dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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Date: 16-07-2025

The above candidate has carried out research for the PhD thesis under our supervision. We confirm that the declaration made above by the student is true and correct.

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DEDICATION

I dedicate this work to my loving husband, Rashid, whose everlasting support, encouragement, and dedication were the driving forces behind my strength and motivation throughout my PhD journey

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ABSTRACT

This research develops a comprehensive framework for assessing authenticity in heritage conservation by addressing the methodological gap between material-based evaluations and experiential, socio-cultural dimensions. Conventional conservation practices have predominantly emphasized the physical preservation of heritage structures, often overlooking the dynamic, perceptual, and community-embedded aspects of authenticity. As a result, assessments tend to remain incomplete, lacking sensitivity to local cultural narratives, spatial experiences, and evolving urban contexts. Building upon a critique of traditional qualitative approaches, this study conceptualizes authenticity as a multi-dimensional and co-constructed phenomenon, shaped by memory, perception, cultural practice, and spatial engagement. In response, the research proposes a new Framework for the Assessment of Authenticity (FAA), developed through case studies of adaptively reused heritage buildings in Karachi, Pakistan. The FAA comprises three interconnected methodological tools: the Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM), and the Quantitative Authenticity Assessment Matrix (QAAM). Together, these instruments enable the collection of visual, technical, and experiential data, which are synthesized into a structured, quantifiable authenticity grading system. The study employs a mixed-methods design, integrating site surveys, memory recall tasks, card-sorting exercises, and semi-structured interviews to capture both qualitative and quantitative insights. The QAAM, as the culminating tool, translates complex authenticity indicators into measurable outputs, allowing for comparative evaluation across diverse heritage contexts. The framework was tested and validated on twelve heritage buildings in Karachi, with further feedback obtained from international conservation experts in Portugal, India, Bahrain, and Thailand. Findings confirm that the proposed framework provides a replicable, contextually sensitive, and comprehensive tool for assessing authenticity in heritage buildings. It contributes both theoretically by bridging authenticity theory and empirical evaluation and practically by offering heritage professionals, planners, and

policymakers a robust model for conservation assessment.

The research thus enhances existing discourse on authenticity and proposes a meaningful contribution to heritage management practices globally.

Keywords: Authenticity, Heritage Conservation, Assessment Framework, Quantitative and Qualitative Dimensions, Urban Contexts

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LIST OF ABBREVIATIONS

Abbreviation	Description
AKTC	The Aga Khan Trust for Culture
AMC	Ahmedabad Municipal Corporation
AUA	Ahmedabad Urban Agglomeration
CAE	Consensual Authenticity Evaluation
FAA	Framework for Assessing Authenticity
GT	Grounded Theory
HBIF	Heritage Building Inventory Form
HIA	Heritage Impact Assessments
HUL	Historic Urban Landscape
KHBRP	Karachi Heritage Building Resurvey Project
MRT	Memory Recalling Tasks
MST	Multiple Sorting Tasks
NDT	Non-destructive testing
PAM	Place Authenticity Matrix
QAAM	Quantitative Architecture Authenticity Matrix
RLICC	Raymond Lemaire International Centre for Conservation
SPAB	Society for the Protection of Ancient Buildings
SSI	Semi-Structured Interviews
UDRC	Urban Development and Revitalization Company
UNDP	United Nations Development Programme
VBHM	Values-Based Heritage Management
VR	Virtual Reality

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CHAPTER 1

1.1. Introduction and background

In contemporary urban developments, cultural heritage acts as an unavoidable force affecting the evolving urban landscapes. Heritage is therefore engaged in many ways to infuse meanings and values to urban settings particularly to produce historical connections and rootedness. In engaging heritage such purposes however, heritage structures have often been evaluated, predominantly, through their material forms, focusing largely on preservation and restoration of iconic buildings (Lowenthal, 1998). Undeniably, this object-oriented approach overlooks the deeper, non-physical dimensions of heritage, particularly the nuances of meanings of places themselves.

Although used in everyday language with a predominant meaning to refer to a location, Fredholm (2017) points out that the idea of ‘place’ encompasses not just the physical location of heritage but the totality of social, spatial, and historical realities that surround it. Given the fact that the interactions with and integration of historic sites is increasingly inevitable and critical in urban developments, the need to understand these complexities of ‘place’ and engage them more meaningfully cannot be underestimated.

Indeed, heritage precincts embody the symbolic dimensions of history and their unique spatial connections with places. Therefore, without them, people’s cultural histories and roots may be lost. Thus, as Shamai (1991) shows, sustaining and managing authentic heritage with its holistic relationships with place alongside rapid urban developments is essential for maintaining connections between people and their environments. It is argued that ‘authenticity’ is crucial here. In this context, there exists a compelling need for an assessment of authenticity of heritage, emphasizing the integration of both tangible and intangible dimensions as central to understanding and preserving cultural heritage (Jokilehto, 2006; Graham et al., 2009; Graham & Howard, 2008).

Nevertheless, authenticity has not been sufficiently articulated, particularly in terms of its assessments. Towards this end, the dimension of relative perspective and experience provides a broader lens for understanding authenticity in heritage

conservation. This approach, derived from the constructivist theories challenges static, material-centric definitions of authenticity by recognizing it as an evolving construct shaped by perceptions, memories, and engagements. The experiential framework situates authenticity within lived experiences, highlighting how people collectively and individually construct meanings of heritage sites over time. According to Norberg-Schulz (1980) and Tuan (1977), authenticity in this sense is neither inherent nor fixed but emerges through a dynamic interplay between historical context, spatial configuration, cultural practices and evolving societal needs.

In fact, the concept of ‘sense of place’ offers a comprehensive understanding of the essence of the relevance of heritage in urban developments. According to Alexander (1977), sense of place refers to the unique and intangible qualities that arise from the relationship between people and their environments. He argues that it emphasizes creating environments that reflect human-friendly principles and foster interactions and social cohesion, aligning with the preservation of historic environments (Alexander (1977)).

Gehl (2010) adds to this when he says that urban spaces that facilitate social interactions, livability and walkability are essential qualities inherent in historic districts fostering a strong sense of place. In fact, concept of Genius loci advocated by Schulz (1980) describes this as ‘existential space’, where individuals form deep connections with their surroundings through natural elements and human interventions.

Quite naturally, historic places possess such sense of place giving rise to existential spaces. Both tangible and intangible aspects of heritage present in historic places, endow heritage settings with sense of place: both a social construction from the perspective of meaning formation and a physical and social reality. Inevitably, their cultural and political links to other elements contributes to these aspects too. In fact, in historic environments, sense of place becomes particularly significant as it encapsulates cultural and emotional attachments developed over time. However, maintaining these symbolic facets of heritage depends not only on conservation processes but also on their integration with new urban developments, which therefore requires a systematic evaluation of authenticity (UNESCO, 2013; Tiller, 2020; Meskell, 2018).

Shamai (1991) explores this link through concepts such as place distinctiveness, continuity, and dependency, highlighting the importance of preserving both physical attributes and the intangible aspects that give meaning to heritage. Tuan (1974) notes that sense of place fosters an "intimate relationship with place," intertwining cultural and emotional connections with the environment (Jiang et al., 2022; Graham et al., 2009; Jokilehto, 2006). The relationship between heritage conservation and urban development requires balancing cultural preservation and modern growth.

Unfortunately, rapid urban developments, particularly in historic areas, threaten the unique identities and authenticity essential for cultural continuity (Jiang et al., 2022). According to Dovey (1999), the commodification of heritage poses significant risks, reducing cultural identities to tools for branding and commercialization. Rossi (1966) emphasizes that urban places contain collective memories, and heritage buildings play a critical role in preserving these memories, sustaining the essence of places.

It is undeniable then that a more integrated approach to urban development could respect historical authenticity while addressing the contemporary needs. Rather than treating heritage as static, it could be seen as dynamic, allowing historic sites to adapt and evolve with modern life. Conscious planning and informed conservation practices can preserve the layered history of urban spaces while integrating heritage with new developments (Tostões, 2018; Hammer et al., 2014).

It is thus argued that there is a need to view heritage as dynamic, highlighting the importance of balancing its adaptive evolution with the preservation of its authentic characteristics, as evidenced by evolving urban heritage spaces and places (Harrison, 2013; Graham et al., 2009; Jokilehto, 2006). As Dovey (1999) advocates, such an approach avoids commodification by ensuring that urban growth enhances rather than undermines cultural fabric, creating meaningful, vibrant, and historically grounded places. The evolving understanding of place integrates heritage as an interaction between the past and the present, fostering a profound sense of continuity and belonging (Tuan, 1974). Graham, Mason, and Newman (2009) emphasise evaluating heritage as a dynamic context where people reinterpret the past within urban life.

It is thus clear that authenticity, a critical concern in heritage conservation, extends beyond physical structures to intangible qualities of identity and belonging (Jokilehto,

2006). UNESCO emphasizes managing changes in historic places to enhance authenticity and sustain cultural significance. Therefore, as Battaglini (2020) argues, urban developments must integrate heritage buildings and places with their authenticity intact, preserving both historical identity and contemporary functionality. In response to these concerns, this study broadly intends to address the critical gap in heritage conservation practices by developing a comprehensive framework for the assessment of authenticity that integrates both tangible and intangible dimensions. Grounded in constructivist theory and contextual objectivity, the research seeks to contribute to a more nuanced understanding of authenticity as a multi-dimensional, lived, and culturally situated phenomenon. Through empirical inquiry and methodological synthesis, the study aims to provide heritage professionals and policymakers with a structured tool for evaluating authenticity in ways that are contextually adaptable and theoretically grounded, thus informing more inclusive and sustainable conservation practices.

1.2 Research Problem

Authenticity is widely recognized as a fundamental yet complex concept in heritage conservation, shaping the perception, management, and evolution of historic places (Labadi, 2010; Larsen, 2013). While international charters and scholarly discourse underscore its significance, its practical assessment remains inadequately articulated. When applied, existing assessments tend to adopt ad hoc methods and emphasize physical attributes such as materiality, craftsmanship, and architectural form (UNESCO, 1977; Jokilehto, 2006; ICOMOS, 1994). This approach, however, overlooks the experiential, cultural, and social dimensions that contribute to a site's historical sense of place and identity (Tuan, 1977; Urry, 1995; Smith, 2006).

In many cases, conservation efforts prioritize the tangible aspects of heritage while neglecting the evolving relationships between people, place, and time (Clark, 2003; Waterton & Watson, 2013). Such methods often fail to recognize how historical narratives, spatial dynamics, and cultural practices sustain the authenticity and relevance of heritage buildings in contemporary contexts (Relph, 1976; Lowenthal,

1985). Consequently, heritage sites may be materially preserved but culturally diminished when interventions do not align with broader contextual realities (Labadi, 2010; Pendlebury, 2009).

Moreover, conservation policies frequently lack structured mechanisms to evaluate whether adaptive reuse or restoration efforts preserve experiential and cultural authenticity (Rodwell, 2007; Ashworth, 2011). Without an integrative approach, interventions may unintentionally disrupt continuity or erase community narratives (Taylor & Lennon, 2011; DeSilvey, 2017). Addressing this gap, this research aims to develop a framework that reflects the co-constructed and dynamic nature of authenticity, drawing on empirical insights into how historic buildings are perceived, remembered, and engaged with in everyday life (Tuan, 1977; Norberg-Schulz, 1980). Through this, the study contributes toward equipping conservation practice with tools and strategies to support historically grounded yet adaptable interventions.

1.3 Significance of Study

This research contributes to the growing need for a holistic understanding of authenticity in heritage conservation—one that encompasses both material conditions and intangible, lived dimensions. While conservation theory increasingly acknowledges the importance of experiential values, current methodologies remain dominated by visual and physical criteria (Jokilehto, 2006; Labadi, 2010). As a result, interventions may fall short of preserving the relational and perceptual elements that define the meaning of place (Tuan, 1977; Apaydin, 2020).

By developing a multi-dimensional assessment framework, this study seeks to enable practitioners to evaluate authenticity in ways that align with contemporary conservation charters such as the Nara Document on Authenticity (ICOMOS, 1994) and the Venice Charter (ICOMOS, 1964). The integration of qualitative and quantitative tools into the framework ensures that decisions around conservation and adaptive reuse are both culturally sensitive and analytically robust (Taylor, 2016; Larsen, 2013).

As urban pressures increase, historic buildings are often altered or abandoned in ways that threaten their cultural integrity (Pendlebury, 2009; Rodwell, 2007). This study provides a timely critique of current practices and proposes an approach that reconciles

cultural significance with contemporary functions. In doing so, it offers a model for sustainable and inclusive heritage management, relevant not only to Karachi but also to broader global urban contexts (Plevoets & van Cleempoel, 2019; Waterton & Watson, 2013).

1.4 Research Questions

Given the challenges in preserving authenticity amid urban development, this research investigates how authenticity can be systematically identified and evaluated in heritage buildings. The inquiry is premised on the recognition that authenticity is not solely a material condition but a complex experience shaped by people's interactions with place. Understanding this requires a framework that accounts for both tangible and intangible indicators. The research is guided by the following questions:

RQ-01 (Research Question 01)

What are the general and scholarly understandings and perceptions of authenticity in the context of management of urban heritage?

RQ-02

What are the appropriate frameworks, methods, strategies and tools that are currently engaged in assessing authenticity of heritage buildings?

RQ-03

How can a framework and a mechanism to assess authenticity be developed so that it can be introduced into the practice of heritage building conservation.

RQ-04

What are the essential components and validation criteria of an authenticity assessment framework?

1.5 Research Aim and Objectives

Building on the problem and gaps outlined earlier, this study aims to examine how the presence or absence of authenticity can be determined in heritage buildings through the development of a comprehensive and context-sensitive assessment framework.

This aim is achieved through the following three objectives:

1. To identify how the material and non-material aspects of heritage buildings contribute to the manifestation of a historical sense of place rooted in authenticity.
2. To evaluate the implementation of conservation principles in practice and determine the extent to which they support or undermine the retention of authenticity.
3. To develop a framework, including strategies and tools, that can be employed by heritage professionals to assess authenticity in a structured, replicable, and culturally responsive manner.
4. To validate the framework through expert feedback and application to some case studies

1.6 Overview of Research Methodology and Key Outcomes

This research adopted a qualitative methodological framework grounded in constructivist and interpretivist paradigms, aiming to understand and assess the multi-dimensional nature of authenticity in heritage buildings. The study was conducted in two phases:

Phase 1: Development of the Framework involved gathering empirical insights into perceptions and meanings of authenticity through multiple methods:

- A card-sorting exercise with 15 users (residents, visitors, students, and neighbors of heritage precincts) to understand perceived attributes of authenticity.
- A memory recall test with 12 participants from different heritage stakeholder groups, aimed at capturing how authenticity is experienced and remembered in historic areas.
- Semi-structured interviews with 12 professionals—including conservation architects, non-specialist designers, and developers—to investigate practical challenges in retaining authenticity.

Phase 2: Validation and Application focused on the development and field testing of two original tools:

- The Place Authenticity Matrix (PAM)—a qualitative grid to map tangible and intangible aspects of authenticity.
- The Quantitative Architectural Authenticity Matrix (QAAM)—a numerical grading system developed to measure the authenticity of built heritage. It was tested on 12 heritage buildings in Karachi’s historic Market Quarter.

Key data sources included archival analysis, site observations, stakeholder interviews, and documentation from student-led surveys (NED University). The use of triangulated methods ensured that both subjective perceptions and objective architectural transformations were considered.

Key outcomes of the research include:

- A new, adaptable authenticity assessment framework combining qualitative and quantitative dimensions.
- The validation of the QAAM tool across multiple international sites (Pakistan, Bahrain, Portugal, India, Thailand), demonstrating its potential for broader applicability.
- Practical insights for heritage practitioners and policymakers on how to evaluate and retain authenticity in the face of rapid urban development.

This methodological journey enabled the development of a holistic, context-sensitive approach to authenticity assessment—one that integrates lived experience, architectural character, and historical continuity

1.7 Assumptions and Limitations

1.7.1 Assumptions

The research refers to several key assumptions, throughout the development of this research, regarding the balance between heritage conservation and urban development, particularly in developing countries. They are as follows.

Cultural Heritage as an Integral Urban Element: It is assumed that cultural heritage, both tangible and intangible, holds significant value in shaping the identity of a city and should be an integral part of contemporary urban developments (Labadi, 2010). The research presumes that heritage sites can assimilate with modern urban infrastructure if apt conservation strategies are implemented.

Contextual Limitations and Applicability of Conservation Principles: The research assumes that international conservation principles, such as those outlined in the Venice Charter and Nara Document (UNESCO, 1994), are adaptable to most local contexts and regions, though limitation of applicability has also been observed, due to the differences of cultural sensitivities present some regions. Challenges may arise in implementation.

Stakeholder Collaboration: It is assumed that successful heritage conservation requires collaboration between local governments, developers, conservationists, and local communities. The research presupposes that this collaboration is achievable and will lead to mutually beneficial outcomes.

1.7.2 Limitations

Despite the comprehensive nature of this study, several limitations must be acknowledged:

Scope and Generalizability of Findings: While the framework was tested on multiple heritage sites in Karachi and validated internationally, the primary empirical data is grounded in the socio-cultural and institutional context of Pakistan. The study offers insights relevant to similar post-colonial, rapidly urbanizing cities, but the findings may not be fully generalizable to all global heritage contexts. Nonetheless, the Quantitative Authenticity Assessment Matrix (QAAM) has been explicitly designed for contextual adaptability. Its modular structure allows for recalibration to suit varying heritage typologies, user perceptions, and legislative environments, supporting broader applicability with localized adjustments.

Data Accessibility and Completeness: Access to conservation-related data, particularly original architectural drawings, historical records, and official intervention documentation was limited. In many cases, these records were either unavailable, incomplete, or inaccessible due to institutional fragmentation, bureaucratic constraints, or lack of archiving protocols. For the 12 heritage buildings studied in detail, the architectural documentation was sourced primarily from student-led field surveys and academic records archived in the Department of Architecture and Planning at NED University of Engineering and Technology. While these sources offered valuable insights and formed a useful reference for spatial and visual analysis, they remain secondary-level resources. The absence of original architectural drawings and official conservation plans posed a constraint in fully verifying the buildings' original conditions, subsequent alterations, and formal intervention history.

To address these limitations, the research relied heavily on site observations, visual documentation, and stakeholder interviews. These methods were essential for identifying material transformations, adaptive reuse practices, and experiential qualities related to authenticity. While these qualitative approaches added contextual richness and triangulated the data, the absence of authenticated official documentation remains a limitation in terms of historical verification and technical accuracy.

Stakeholder Sample Size: The study engaged 12 participants for semi-structured interviews and 15 participants for the sorting card activity, strategically selected from users, architects, contractors, and heritage professionals. Although this offered a multi-perspective understanding of authenticity, the sample size remains limited given the scale and diversity of Karachi's heritage sector. The intention was not to generalize statistically, but to extract thematically rich and nuanced insights. Nonetheless, broader sampling in future studies could strengthen the external validity of some conclusions.

Temporal and Urban Dynamics: Heritage conservation in Karachi is situated within a highly dynamic urban landscape where political, regulatory, and economic pressures continuously shift. Therefore, some conservation practices or policy references discussed may evolve over time. This temporal limitation may affect the long-term relevance of certain site-specific findings. However, the proposed framework, particularly QAAM, is constructed with such dynamism in mind. Its layered structure allows for continuous refinement and local adaptation, maintaining its relevance amidst changing heritage and urban development scenarios.

1.8 Study Scale and Case Selection Rationale

To ensure a focused and methodologically feasible analysis, this research evolved from an initially broader urban heritage perspective to a more targeted building-level investigation. In its early stages, the study was conceptually aligned with wider urban heritage concerns. An initial working title "Authenticity and Urban Heritage Management: An Investigation of the Paradigms and Paradoxes" reflected this broader scope, which aimed to explore tensions between authenticity and urban transformation at a precinct scale.

However, as the research progressed, the need for a focused and measurable assessment strategy became apparent. In order to develop and validate a structured framework such as the Quantitative Authenticity Assessment Matrix (QAAM), a building-level focus was necessary to ensure clarity in evaluation, consistency in application, and comparability across adaptive reuse cases. The decision to narrow the scope from the entire urban core to the Market Quarter and subsequently to 12

representative heritage buildings was thus a methodological one, grounded in the need for analytical depth, precision, and feasibility.

While the study does not extend the assessment across the entire precinct or urban area, the selected buildings span a variety of typologies, conservation conditions, and functional transformations. This selection offers valuable insight into the broader urban dynamics of authenticity. Moreover, the developed framework holds potential for future application at the neighborhood or precinct scale, where place-based and socio-cultural patterns unfold across urban space.

1.9 Definitions

To ensure clarity throughout the thesis, following key terms are defined based on literature:

Authenticity of Heritage: Authenticity is the presence of intrinsic qualities and characteristics that confer a sense of originality and value upon an object or place, defining its identity as an entity of social and cultural significance to individuals or communities.

Value in Authenticity of Heritage: This research understands value in authenticity of heritage as the inherent traits, historical context, cultural values, and larger societal appreciation, of the heritage asset, emphasizing its importance in maintaining and conveying our common history to future generations.

Intrinsic Value: Inherent traits and features, such as craftsmanship, historical context, and cultural relevance.

Extrinsic Value: Broader social, historical, and artistic value that a community places on a heritage object because of its authenticity and connection to the past.

Sense of Place: The emotional and cultural connection people have with a particular location, shaped by the physical, social, and historical characteristics of a site (Tuan, 1977). In heritage conservation, sense of place relates to how communities perceive the historical and cultural value of their surroundings.

Emotional Resonance: Emotional Resonance pertains to the deep emotional connections that individuals and communities have with a heritage site. These are characterized by feelings of nostalgia, personal narratives, and shared resonance, which collectively cultivate a ‘sense of place’. This notion highlights the significance of personal and community narratives, emotional and cultural values, and the shared importance that is inherent in the heritage site. (Term coined by Author through multiple literary underpinnings)

Urban Development: The process of expanding and modernizing cities through the construction of new infrastructure, housing, and commercial developments. Within heritage conservation, urban development also refers to the pressures and challenges these changes impose on heritage sites, particularly when balancing modernization with the preservation of historical authenticity.

Heritage Management: The research understands that this process involves managing cultural properties through identification of heritage, interpretation, maintenance and conservation of physical sites as well as managing of intangible aspects of cultural heritage (Ababneh, 2016) in order to retain authenticity and the values that have invested them with the heritage connotations.

Adaptive Reuse: A heritage conservation strategy where historical buildings or sites are repurposed for contemporary uses, allowing them to remain functional and relevant in a modern context. This approach ensures the preservation of historical values while adapting a site to meet the current urban and community needs (Douglas, 2006).

CHAPTER 2

THEORETICAL FRAMEWORK

Chapter Overview

According to Jokilehto (2006) and Labadi (2010), heritage and authenticity are interwoven in complex ways and are inseparable. Indeed, they argue that the role of authenticity in heritage conservation has evolved beyond its traditional focus on material preservation, expanding to include the social, cultural, and spatial dimensions that shape historical identity. Moreover, observations reveal that there is no proper framework or method for evaluating authenticity in relation to heritage. This research intends to produce a framework for a quantitative assessment of authenticity, derived from a real-world situation and validated by testing it in the same setting.

In this context, this chapter examines how authenticity has been understood across different conservation philosophies, tracing its conceptual and methodological developments. The focus of this chapter is the relationship between authenticity and heritage. Its intentions is to produce a theoretical framework by discussing the conceptual interpretations articulated by outstanding theoreticians who have discussed the nuances of the theoretical ideas underlying this investigation. The chapter begins by examining the significance of authenticity within the heritage discourse, situating it within the broader debates on sense of place and placemaking expounded by the theoreticians such as Norberg-Schulz (1980), Relph (1976) and others.

In these debates, Lowenthal (1985) and Smith (2006) take a centre-stage. They argue that heritage conservation is no longer simply about preserving physical structures but also about maintaining the relationships between people and places, the continuity of traditions, and the evolving narratives that define cultural significance. Rodwell (2007) and Taylor (2016) add that authenticity plays a central role in heritage, serving as both a guiding principle and a contested concept in conservation practice. However, as Ruskin (1849) and Viollet-le-Duc (1854) demonstrate, early conservation efforts have unfortunately, emphasized material authenticity as the defining feature of historical integrity.

Interestingly, contemporary discussions challenge this static view, advocating for a more holistic approach that integrates both tangible and intangible heritage values as

seen in the articulations of Jokilehto (2006), Smith (2006) and Larsen (2013). In fact, philosophical perspectives on authenticity, from the writings of Ruskin and Viollet-le-Duc to contemporary interpretations provide significant insights into how authenticity has been conceptualized over time.

As said, authenticity has long been associated with material integrity (ICOMOS, 1964). However, as heritage sites continue to evolve, scholars as well as practitioners have recognized the importance of context, community involvement, and historical continuity in defining authenticity (Labadi, 2010; Taylor & Lennon, 2011). It is now argued that intrinsic and extrinsic values contribute to heritage authenticity, involving aspects such as material aesthetics, historical associations, and spiritual significance (Smith, 2006; Plevoets & van Cleempoel, 2019). Moreover, Rodwell (2007) and Larsen (2013) argue that the concept of authenticity also relates to integrity, emphasizing how the wholeness and coherence of a heritage site affect its cultural meaning.

These arguments demonstrate that a good understanding of authenticity as manifested in heritage is needed before conservation of heritage is conceptualized. In fact, it is equally or more so necessary that ways of assessing authenticity are also formulated. Undoubtedly, this requires an analysis of how the conservation methodologies have expanded to incorporate both qualitative and quantitative approaches (DeSilvey, 2017; Plevoets & van Cleempoel, 2019).

Notably, according to Jokilehto (2006), early assessment models have relied heavily on expert judgments and material analysis. However, the growing emphasis on community participation, phenomenological perspectives, and empirical evaluations have led to the development of new tools and indicators (Waterton & Watson, 2013). For example, structured frameworks such as the Nara Grid (Van Balen, 2008), the survey-based scoring (SBS) (Fadaei Nezhad & Eshrati, 2015), and computational methodologies (Mitchell et al., 2009) have attempted to standardize the task of assessing of authenticity, yet their effectiveness remains contested (Gregory, 2008; Rodwell, 2007).

This chapter dwells upon the meanings of authenticity as well as the arguments and practices related to authenticity in heritage conservation in depth. It particularly examines research that have explored the challenges of balancing the inherently fluid nature of heritage authenticity with empirical rigor required in an assessment, while

emphasizing the need for integrated methodologies that bridge subjective and objective evaluations (Pendlebury, 2009; Throsby & Deodhar, 2010). While significant progress has been made in developing frameworks that account for both material and contextual authenticity (Van Balen, 2008; Apaydin, 2020), unfortunately, many existing models still struggle to incorporate dynamic, participatory, and computational approaches (Plevoets & van Cleempoel, 2019; DeSilvey, 2017).

2.1 Heritage Conservation, Sense of Place and Placemaking

To date, evaluations of heritage settings have focused predominantly on material objects, especially iconic buildings, as markers of significance (Lowenthal, 1998). However, this material emphasis has often overlooked the non-physical dimensions of heritage: the place itself, including its social and spatial realities. Marsden (1992) contrasts history, which interprets the past, with heritage, which preserves what endures from it. He stresses that heritage consists of both tangible objects and intangible aspects and practices, both of which contribute to the ambiance of a place. This broader perspective suggests that focusing solely on preserving structures neglects the holistic, social, cultural and historical significance embedded in the identity of a place.

Indeed, Tuan (1974) had already emphasized about the emotional and psychological bonds people form with their surroundings. As he shows, attachment to a specific place is central to understanding the deeper meaning of heritage. Shao and Liu (2018) elaborate that this connection makes sense of place a crucial factor in urban development, that help maintain the emotional and cultural fabric of communities. Dameria et al. (2020, 2022) add that this attachment fosters sustainable heritage conservation, as individual emotions and local identities contribute to how heritage is preserved and experienced.

It appears that assessment of authenticity in heritage have not benefitted much from these developments. Typical assessments continue to employ single-dimensional approaches. As a result, the role of heritage in urban regeneration are often limited by, isolating social, cultural and economic impacts. Fouseki and Nicolau (2018) critique this narrow focus, advocating for an integrated approach that captures the interconnected social, cultural, and economic benefits of heritage in urban development. However, arising from these arguments, the dynamic context of cultural

heritage is increasingly recognized as a significant force in shaping the 21st-century developments, particularly within historic settings. Indeed, evidence suggests that even modest investments in cultural heritage can lead to substantial benefits, enhancing sustainable environments and fostering social cohesion.

In this connection, Dameria et al. (2020 & 2022) have explored the connection between people and places, emphasizing the importance of human attachments to spatial settings in sustainable heritage conservation. Shao & Liu (2018) also points out that these attachments, tied to individual emotions and local identity, highlight the profound relationships between people and their environments.

Recent discussions expand this idea further. Fredholm (2017) highlights the role of place branding, proposing that managing the image of a place opens new dimensions in heritage conservation. He argues that by shifting the focus from preserving the buildings to maintaining the spirit and atmosphere of a place. He proposes that conservation of heritage should become more about preserving the collective associations people have with their environments and their histories., Shamai (1991) elaborates on this by discussing place distinctiveness, continuity, and dependency, terms that capture the 'spirit of space' and its role in preserving authentic layers of history adding to this argument.

2.1.1 Sense of Place

The concept of 'sense of place' has deep historical roots, traditionally associated with *genius loci* (Schulz, 1980), a term that referred to the intangible spirit that arises from the interactions between people and their environments through the geographical characteristics of a location. Initially applied to garden landscapes, *genius loci* has since been extended to include urban spaces. Schulz (1980) describes sense of place as arising from "existential space," emphasizing the bonds between individuals and their surroundings. He points out that this relationship is shaped by both natural conditions and human interventions, reflecting how people continuously interact with their environments. This is because, heritage is multivalent, encompassing both the tangible structures and intangible practices that define historical and cultural significance of a place.

It is notable that building on this foundation, urban transformations today frequently incorporate heritage conservation as a crucial strategy in fostering socially sustainable

placemaking. Here, heritage-led regeneration becomes instrumental in promoting comprehensive revitalizations across social, cultural and economic domains. This form of regenerations employ unique local heritage as the defining characteristic, stimulating community identity in otherwise declining urban areas. By embedding historical elements within urban growth, heritage-led projects strengthen local culture and stimulate economic development, effectively balancing the past with the demands of contemporary urban life (Fouseki and Nicolau, 2018; Fouseki et al., 2020).

As seen, urbanization and developments challenge the management of historic environments. It is therefore crucial to balance material preservation with the protection of the intangible spirit of a place. This is because, as Fredholm (2017) shows, poor planning and commodification of heritage can erode local identity of a place. Undeniably, heritage buildings are closely associated with the places and practices of history, contributing to the sense of place that emerges from the interactions of physical objects and their surroundings. Graham, Mason, and Newman (2009) point out that this is defined by place distinctiveness, continuity, and dependency, which capture uniqueness, historical connection, and reliance of a location for producing cultural and social identity.

However, they note that subjectivity is often overlooked in many theoretical studies. Drawing on phenomenology, they emphasize that sense of place must be experienced to be fully understood, a point also supported by Gehl (2010), who advocates the design of urban spaces that prioritize human experiences and social interactions.

Place is not static; it evolves over time, representing different layers of history. Although understood by ordinary people almost effortlessly, in academic studies of heritage and development, this has neither been acknowledged nor employed to guide heritage conservation and developments. However, Alexander (1977) employs this idea in designing environments that reflect natural, human-friendly principles, where the dynamic interactions between built forms and the people who inhabit them are promoted.

In the context of heritage conservation, this approach emphasizes the importance of preserving not just physical structures but also the intangible qualities that make places meaningful. Here, human interventions play a critical role in shaping historical settings. However, as said, current heritage practices often focus too narrowly on the material aspects of heritage. This object-oriented approach reproduces historical

artifacts without fully addressing the broader cultural and social contexts in which they exist. As both Dovey (1999) and Alexander (1977) argue, a more integrated perspective is needed; one that recognizes the evolving nature of heritage as part of a living, dynamic environment. It is therefore envisaged that by focusing on both tangible objects and the emotional and cultural bonds people form with their surroundings, heritage conservation can be founded on a sound theoretical framework.

Undeniably, this broader perspective is crucial for effective heritage management, which involves not only the identification, maintenance, and conservation of physical sites but also the management of intangible aspects, such as cultural identity and sense of place. Underlying these, exists authenticity as a core element, as it ensures the credibility and truthfulness of the cultural values embedded in a site (Jokilehto, 2006). Indeed, as Cohen and Cohen (2012) argue, authenticity extends beyond the physical structure to include the intangible qualities of place, identity and belonging.

Furthermore, Rossi (1966) articulates how urban spaces are constantly changing, with new elements emerging alongside the old, contributing to the soul of the city, which is preserved only by the authenticity of the structures and places it nurtures. This metaphor highlights the importance of maintaining a balance between preserving the past and allowing for new developments. Dovey (1999) also echoes this, suggesting that urban developments should engage in dialogue with historical structures, ensuring that new elements do not erase memories but allow them to continue. This, invariably relates to authenticity.

Notably, these conceptual interpretations of authenticity align with the ideas of Alexander (1977) and Gehl (2010) who advocate for urban environments that prioritize human experiences, thus preserving the historical continuity and cultural integrity of places. This thesis takes the view that managing heritage requires a deeper understanding of these evolving interpretations and understandings as well tools for the evaluation of their presence or the absence in the settings subject to heritage conservation.

2.1.2 Cultural Heritage, Places and Significance of Authenticity

As pointed out, conservation of cultural heritage has been concerned mainly with the conservation or restoration of monuments, without considering the cultural heritage that occurs within urban developments. This has been an object-oriented approach, preoccupied with physical properties of heritage, such as materials, facades, structures and ornamentations etc. (Veldpaus et al., 2013). Authenticity is a cornerstone of heritage preservation, reinforced by the integrity and value of cultural heritage sites and practices.

According to Mason et al. (2008), the concept of authenticity encompasses various dimensions, including historical accuracy, cultural significance, and community involvement in the preservation process. It is a cornerstone of heritage preservation, as it defines the integrity and value of cultural heritage sites and practices. Indeed, the concept encompasses various other dimensions too, such as historical accuracy, cultural significance, and community involvement in the process of production of the heritage object or the place (Mason et al., 2008).

Notably, the conventional ideas of authenticity employed in heritage preservation has come under serious scrutiny and has in fact been challenged. These challenges have arisen from the pressures of urbanization and globalization, which have led to the homogenization of cultural heritage (Ali, 2021; Pezzarosa, 2021). As cities strive to attract tourism and economic investments, the temptation to modify or commercialize heritage sites often undermine their authenticity, resulting in a loss of cultural significance and connection to the community (Gera, 2018; Wood, 2020). Given the necessity for diverse management practices tailored to the unique social, political, and economic contexts of each heritage site, understanding of authenticity has thus become increasingly extended (Veldpaus et al., 2013) leading to multifaceted interpretations. There is thus a shift from rigid, material-centric definitions to more inclusive interpretations that recognize the significance of social values in heritage conservation. This evolution invites a deeper exploration of the very concept of authenticity itself. To comprehend its implications in heritage management however, it is essential to examine its meaning and etymology, which could illuminate how perceptions of authenticity have evolved over time and across cultures.

2.1.3 Defining Authenticity and its Etymology

Authenticity is defined as “the quality of being genuine or true” (CUP, 2023; OUP, 2023), as related to art, literature, and beyond everything, including self (Sartre, 1946). The term originates from the term “Authentic” which was “autentik”, in the middle of the 14th Century, meaning "authoritative, duly authorized" (a sense now obsolete), which has been derived from an old French word “authentique”, essentially meaning "authentic; canonical" (a development of the 13th Century, modern French term “authentique”), from Medieval Latin “authenticus”. This etymology roots itself in the two Greek expressions “authentikos”, meaning "original, genuine, principal" and “authentēs”, denoting "one acting on one's own authority". This authority of self in the term comes from the compound Greek word, “autos”, meaning "self" with the second term being “hentes” meaning "doer, being" (from PIE root *sene- 3 "to accomplish, achieve") (Harper, 2023).

2.1.4 Authenticity in Literary Context

As to be expected, this term has been the subject of lengthy and complex literary arguments over the years and across a number of academic fields, such as philosophy, sociology, and literary theory. Though the concept is as old as time, the comprehension of it has initially been summed up by Descartes (1644) in his famous Cogito Ergo Sum or “I think, therefore I am”, as an affirmation of one’s authentic self. He argues for a further acceptance of one’s whole self in *La Recherche de la Vérité* par *La Lumière Naturelle* (Descartes, 1647), embracing even the doubts, *Dubito, Ergo Sum*, or “I doubt, therefore I am” where not only he embraces the flawed self and flawed judgment but also uses the previous self-deception uncertainties as tools to lead to the truth (Froegel, 2016). The most well-known definition of "authenticity" however, comes from Heidegger (1927) who wrote ‘Being and Time’. The word that has been translated as "authenticity" today indeed has been actually coined by Heidegger from the phrase *Eigentlichkeit*, which has originated from an everyday term, ‘Eigentlich’, which means "really" or "truly," but is based on the stem *Eigen*, which means "own" or "property”.

In the literary world, the term authentic guarantees the originality of writing. In this connection, Trilling (1972) has discussed the concept of authenticity at length with the concept of sincerity. He quibbles with ideas similar to ideas of the “best self” (Schiller, 1759-1805). In fact, Schiller is a proponent of ‘aesthetics’ and his philosophy and literary works represent this very idea. Trilling (1972-1974) in his lectures on the ideas of ‘best self’, questions whether, this inclination for aesthetics may lead to a

deviation from the true notion of authenticity. He favours literature which revolves around the concept of 'not being untrue' with the help of writing structures used by different poets, authors, and playwrights. He argues that authenticity can be found in their writings when concepts, which may have similar settings, but are expressed in completely different ways, give the same idea, and hence a completely authentic flavour.

This can be seen in 'Prometheus Unbound' written by Shelley (1820), which uses elements of Nature in an intense imagery to express love, while Wordsworth's (1807) intense imagery of Nature expresses loneliness and spiritual purification (Liu, 2018). The warmth of love in the epical Ulysses (Tennyson, 1833) of years of wait, compared to the love of Paris by burning the Troy in Odyssey by Illiad (8th C.; 1598), juxtapose the two distinctly authentic ideas in similar settings but with distinctly different flavours.

Similarly, the Danish philosopher Søren Kierkegaard makes the case that authenticity is an essential component of human existence, in his ground-breaking book "The Authenticity of the Present Age" (1846). According to Kierkegaard, people should make an effort to live truly by embracing their unique identities rather than meeting conventional standards. In his lecture "Existentialism and Humanism" (1946), French philosopher Jean-Paul Sartre questions the idea of an inherent, predetermined authenticity. According to Sartre, the concept of authenticity is a personal one that is constantly formed by a person's decisions and deeds. According to his theory, each person must establish his or her own true existence and develop his or her own set of values.

However, the idea of authenticity faces a strong opposition when Nietzsche (1883-1888) notes in his manuscript "Will to Power", that every idea and every notion of what is true must be untrue, based on the belief that there is no such thing as a true universe. For him, nihilism necessitates a profound denial of all given meanings and values: Nihilism is more than just the conviction that everything deserves to perish; it also involves. Nietzsche posits that people can define their own values and reinforce the significance of life by leading honest lives, taking ownership of their decisions, and working towards personal growth (Nietzsche, 1883-1888).

Moreover, the idea of authenticity itself is questioned by postmodern philosopher Jean Baudrillard (1983), who contends that it is an illusion in a world characterised by

hyper-reality. In fact, the very concept of authenticity loses its significance when Baudrillard, in his *Simulacra and Simulation* (1983) disenchant about the contemporary society overrun by and is absorbed by the excesses of consumer culture. Ligotti (2010) on the contrary, reconstrues the nihilist perspective as an affirmation of the concept of authenticity. According to Ligotti (2010), recognising the intrinsic meaninglessness of life and letting go of conventional belief systems can help one come to a better awareness of their true selves.

Notably however, Jean-Paul Sartre (1946) had dismissed nihilism completely by blaming it as a reason of erosion of authenticity, as it disavows the possibility of meaning and purpose in life. In contrast to Nietzsche's (1883-1888) disdain for responsibility or choices, Sartre contends that authenticity demands people face the underlying absurdity of existence, take ownership of their decisions and face the authentic impulse of self (Sartre, 1946). These arguments and counter arguments demonstrate clearly that authenticity as an idea prevails central across all facets of human existence and endeavours an undeniability in relation to both heritage management and urban development.

2.1.5 Development of Philosophies on Authenticity

As highlighted above, authenticity is a tool utilized heavily in the evolving concept of heritage. It's utilization in such a context can be dated back to 1903 in 'Seven Lamps of Architecture' by John Ruskin. A principle leader of the anti-restoration movement in the 19th century, he directed criticisms towards restored buildings that paid the price in time and memory erased from the said buildings in the process. In fact, John Ruskin has led this movement and has firmly rejected any kind of restorative measures as being untruthful to the passage of time (Mehr, 2019). It is posited that this anti-restoration movement has come into being as a result of the restoration works carried out in London after the Great Fire. Ruskin's distaste has undermined how Viollet-le-Duc carried out major restorations after the French Revolution with the intent to imitate the original to the best of capabilities (Mehr, 2019).

Indeed, it has been due to Ruskin's efforts, that the term 'restoration' has acquired negative connotations in the world of heritage management. Art and architecture being inimitable, Ruskin believed that age transcended the trivial matters of heritage and highlighted that artisans and architects of great talent and skill put their heart and soul in their perception of Nature. He argued that since the wounds and marks of age are

timeless and only unfold as time goes by, they should be the pillars of consideration when dealing with heritage.

As he says,

“Neither by the public, nor by those who have the care of public monuments, is the true meaning of the word restoration understood. It means the most total destruction which a building can suffer: a destruction out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed. Do not let us deceive ourselves in this important matter; it is impossible, as impossible as to raise the dead, to restore anything that has ever been great or beautiful in architecture”

John Ruskin, 1903; Page Number 242

Ruskin clearly defines restorations as a destructive process with false and deceptive overtones. It is obvious that any building or an object can never be replicated with the same historical context. Hence, it should stand to reason that restoration to the original is an inauthentic approach to heritage, further going to deem it untruthful. Interestingly, Ruskin et al. (1845) have argued that any attempt at a replica is simply an imitation and goes strictly against the main principles of authenticity.

Based on these arguments, Ruskin has strongly discouraged any kind of rebuilding and mimicker in heritage conservation. According to Ruskin (1903), memory should be allowed to contain our past notions as well as remind us of our mortal fragility. Thus, the impact of time are critical witnesses of aging of architecture. This implies that Ruskin has considered these ruins to be the truthful, noble and physical evidence of the passing of time. Thus, in his writings, Ruskin has intensely stressed on the evidence of aging as a crucial element of the authenticity of objects.

In fact, he has even used the word “wounds” to describe this evidence in architectural ruins. Moreover, he has imagined the ruins as reminders of death; eyewitnesses of the past and the markers of continuity of life. According to Ruskin, restoration processes that have occurred only in writing and illustrations were acceptable to the notions of authenticity (Munoz-vera, 2012). It is noteworthy, that this aspect of his theory indicates that restorative practices which imitate original forms effectively removed any authentic traces of the past. Thus, Ruskin has firmly stressed that meaningful architecture is that which has strong roots in the past. He has considered any sort of

restorative work on damaged or wounded buildings could be inauthentic and could cause loss of heritage credibility.

It should however be noted that Ruskin's ideals and philosophy did not exist in isolation. Indeed, among the many, a proponent of his philosophy was William Morris. Being a part of the Anti-restoration movement, he specifically discouraged the practice of restoring buildings to a specific period in time. This included later additions to the architecture, which then reduced critical evidence of time and aging. (Rouhi, 2016).

This indicates that William Morris has viewed authenticity in heritage inclusive of elements added in the later developments of these buildings too. Moreover, Morris has protested restoration as the destruction of heritage. Interestingly, William Morris has been also responsible for the establishment of the Society for the Protection of Ancient Buildings (SPAB) which has fought to preserve heritage buildings as unique pieces of art built in a specific era. Nevertheless, Morris (1877) has stressed that in order to preserve authenticity, these unique defining characteristics of time and aging shouldn't be altered or removed, even when the function of the building changed. Moreover, Morris has proposed the maintenance and repair of them without alterations as a method of conservation without losing authenticity. He has described restoration as inauthentic with strong arguments. He has also stressed that the future generations would never be able to study a restored piece of art or architecture as heritage, because the process of restoration would effectively erase a crucial piece of history from the work, unless its authenticity has been also restored.

Indeed, this implies that restoration is not effective in maintaining authenticity in heritage management. According to Morris and Ruskin, Authenticity is present when any piece of work is allowed to age with tangible evidence of time while maintaining heritage without alterations. Unsurprisingly, this concept has led to the development of preservation methods in heritage (Mehr, 2019) to greater heights.

It is noteworthy that, William Morris has led the anti-restorative movement in the face of Gothic Revival. This is because his principles have been strongly against the revivalist measures. Morris has indicated that restorations and alterations contributed to defacing authenticity of heritage. Thus, the SPAB has worked to discourage these processes of restorations and educate people on preservation instead (Yount, 2005). With the efforts of these key personalities, the concept of authenticity in heritage has started to be acknowledged in international documents.

Mehr (2019) argues that it is fair to say that Ruskin and Morris, both laid the foundation for modern heritage preservation, influencing international discourse on authenticity. While these foundational views have emphasized the importance of material authenticity, contemporary scholars of conservation advocate for a more holistic, context-sensitive approach.

In this connection, Riegl's theory (1928) has introduced the idea of "historical value," wherein authenticity of a site is maintained by respecting the natural processes of decay and transformation, thus preserving not just the physical form but the historical narratives embedded within a structure. These theories, on the other hand, have added depth to the discourse on historical value, wherein authenticity of a site is maintained by respecting the natural processes of decay and transformation, introducing distinctions between commemorative values, relating to the historical significance of a monument, and present-day values, which pertain to contemporary appreciation and utility (Riegl, 1903). His theories have also presented the age value of monuments, signifying the values from the passage of time, as a key aspect of authenticity.

Riegl's argument has marked a significant departure from the earlier conservation efforts that have focused on restoring buildings to a perceived original state, and has also helped in laying the groundwork for more inclusive approaches to authenticity. As he shows, unlike the mere historical values, age values honour the transformations a monument undergoes, thus broadening its narrative beyond its initial purpose and encouraging the conservation practices that respect historical changes within a structure (Riegl, 1903). It is noteworthy that this approach represents a substantial departure from the earlier conservation efforts that had focused on restoring buildings to an original state. Needless to say that this lays the groundwork for more inclusive perspectives on authenticity.

Riegl's insights underscore that artifacts are irrecoverable in their original states, emphasizing a focus on their current state and the significance they embody in the present. His view thus challenges traditional restoration practices, urging conservationists to balance practical needs with cultural heritage values (Riegl, 1903). Interestingly, in his framework, present-day values are divided into utilitarian or use values—acknowledging functional purposes, and art values, which he further divides into newness-values (appreciation for coherence of form) and relative art-values (aligning with changing societal aesthetics). There is no doubt that this structure offers

the conservationists a 'cognitive framework' to approach the ongoing relevance of monuments.

In comparison, Lowenthal (1985) has proposed a similar concept, where he has emphasised that heritage is not defined solely by its physical form but by the cultural meanings and memories it embodies. He warns that focusing exclusively on material aspects risks overlooking the deeper cultural dimensions, such as collective memory and the significance communities attributed to heritage sites. Yi-Fu Tuan extends this argument by emphasizing "sense of place", asserting that a true assessment of authenticity must account for the emotional and cultural connections people form with heritage (Tuan, 1977). In fact, Lynch (1960) expands this dialogue by connecting authenticity with the concept of "urban memory". He emphasizes how a built environment is understood and remembered by its inhabitants, hence shaping the sense of place. According to Lynch, authenticity of an urban environment is not tied solely to its physical buildings but also to the spatial relationships and landmarks that contribute to a collective memory (Lynch, 1960).

Indeed, this view broadens the scope of conservation beyond individual monuments to consider the broader urban context, suggesting that authenticity is also about preserving the experiential and emotional connections that people have with a place. Notably, Jackson (1994) also agrees with this notion, that authenticity is not just about preserving static monuments but about recognizing the evolving relationships between people and their environments. Without doubt, his views encourage a shift towards understanding heritage sites as living entities, where ongoing use and adaptation are part of what makes a place authentic.

It is also noteworthy, that Riegl's theories have profoundly influenced the development of the Venice Charter (1964). His analysis of age and commemorative values have informed the principles on preservation articulated in the Charter, which emphasize the current state and significance of the monuments over any attempts to restore them to an imagined past (Venice Charter, 1964). Today, this perspective encourages the conservationists to balance the historical values with contemporary needs, reflecting Riegl's ideas about the functional and symbolic roles of heritage in society. His theories on authenticity and their complexities, in fact, underscore the acknowledgment of the challenges of preserving authenticity outlined in the Venice Charter amidst evolving values and expectations (Venice Charter, 1964).

2.1.6 Authenticity in International Heritage Documents

As shown, authenticity as related to building heritage is a concept that has engrossed the worldwide community more consciously since the late twentieth century. To begin with, Athens charters marked a milestone in preservation and restoration of historic monuments. It was in 1931, that the Athens Charter began the worldwide movement to prepare documents that would be recognized internationally (Ehteshami et al., 2020; Gold, 2019). It was first introduced in the First International Congress of architects and Technicians of Historic Monuments in 1931, held in Athens. In this charter, seven resolutions have been presented to provide a foundation for the protection of historic and cultural heritage worldwide.

The charter stresses that heritage must be preserved in the face of impending developments. According to it, when new developments are being made, the construction of buildings must be harmonious with the existing character of the cities. This is important especially in the case of areas that are home to ancient monuments. Moreover, according to the charter, if it becomes imperative to make alterations because of decay, restorations must not be done to reduce or eliminate traces of aging or a specific time period.

Indeed, the Athens Charter was presented to eliminate the restoration techniques influenced by Viollet-le-Duc. It argues that each building could be viewed as a historic document inscribed with history in its aging. Thus, any restoration that attempts to discard an era of aging is effectively falsifying history. The Athens charter stressed the importance of historic monuments as pieces of common world heritage. It further provided a basis for restoration based on the context and physical attributes of these monuments (ICOMOS, 1931). Appropriately, Riegl's theories on historical and age values laid a foundational perspective, emphasizing respect for the accumulated layers of history of a monument. Moreover, his focus on age value and the necessity of recognizing evolving values has been foundational for conservation ethics, influencing later documents like the Venice Charter (1964), which has emphasized maintaining material authenticity while safeguarding the integrity of a monument.

Although mentioned only briefly in its preamble, the concept of authenticity in the field of heritage has been first discussed meaningfully in the Venice Charter (1964). According to it, authenticity is historicity and therefore, it spells out how to slow down its disappearance in heritage properties with more lasting and robust materials,

arresting the process of erosion, corrosion and wearing down. It is argued that this is all the more important because often, these buildings are made of stone and brick.

The Venice Charter also set the basis to uphold nations to the common responsibility of safeguarding cultural heritage for the future generations. It stresses that it falls upon each nation to apply a preservation plan with respect to its own culture and traditions. In fact, the charter emphasizes the importance of preserving authenticity of the monuments. Undeniably, it proved to be influential in cultural heritage conservation worldwide and has reached a vast population across almost all the countries around the world. In fact, it has provided frameworks with respect to changes in periods of war and after wars too.

It is fair to claim that the Venice Charter was the first to define the concept of Authenticity decisively. In it, it is defined as ‘restoration that respects the originality of material and traces of age in a monument, whilst safeguarding it in its full essence’ (ICOMOS, 1964). The cultural significance framework helps justify the preservation decisions, acknowledging both the tangible and intangible dimensions of heritage as being culturally-specific yet universally valuable (Avrami et al., 2000).

In comparison, the Washington Charter of 1987 has responded to the challenges posed by rapid urbanization post-World War II, which had threatened many historic neighbourhoods. This document addresses authenticity on an urban scale, signalling a shift from focusing on individual monuments to protecting entire historic urban areas, thus integrating cultural context into heritage management practices (ICOMOS, 1987). Venice charter has further sought to integrate the physical contexts of monuments as part of the authentic values of monuments. It is significant that in the Venice Charter, the term authenticity is used to define a heritage monument as an entity with profound indicators of culture.

It is noteworthy that at this point, the concept of authenticity revolved around only tangible aspects of heritage. One factor which can be considered to have prompted the inclusion of intangible urban characteristics of heritage has been the rapid urbanization happening after the World War II. This threat was considered by the ICOMOS and the Washington Charter was presented in 1987. The Washington Charter defined a framework for the preservation of historic neighbourhoods facing urbanization (ICOMOS, 1987). However, while the Venice Charter had focused only on authenticity in terms of singular monuments, the Washington charter finally indicates

the inclusion of urban context in the heritage management practices. At the same time, the mainstream concept of authenticity was challenged also in venues like Nara and Burra. The outcome was that as the conservation theories evolved, scholars and practitioners recognized the need for broader, culturally inclusive frameworks. This shift has paved the way for subsequent charters, such as the Washington Charter and the Nara documents, which have expanded the meanings of authenticity to include intangible and contextual aspects, acknowledging that heritage values are both culturally specific and dynamic.

The Nara Charter of 1994 introduced the concept of cultural diversity in heritage conservation. The Nara Document on Authenticity, a revision of the Venice Charter proposed that a globally fixed criteria for authenticity should not exist; instead, individual cultural contexts should be considered (ICOMOS, 1994). It did this by placing a profound emphasis on cultural diversity. The Nara document also introduced the concept of authenticity to the community of architects and shed light on authenticity as a new concept in the preservation and restoration objectives and methods. The Nara Document urges stakeholders in various unique cultural backgrounds to come to their own understandings on authenticity according to their distinct political, economic, and cultural conditions.

Indeed, the Nara Document was a critical step in defining authenticity in conservation. It is often argued that until now, the conservation documents produced by the World Heritage Convention focused on Western heritage monuments, mostly those built with stones. However, these practices have been challenged in the last two decades leading to the presentation of Nara Document. The Nara Document in particular shed light on the indigenous and diverse approaches to heritage instead of focusing on the western approaches. The document explores historic and cultural eventualities relating to authenticity and provide a diverse range of approaches to conservation of authenticity.

It is noteworthy that it includes various approaches such as the Japanese practice of complete dismantling and renovation of wood in Buddhist monuments. In this practice, all previous material are replaced, challenging the western concepts of authenticity. This has led to the introduction of a new concept of authenticity in the Nara Document, which implies that the approaches to authenticity and conservation may differ from culture to culture, or typology and context. It says that, therefore, authenticity of heritage cannot be judged on a singular scale for all.

However, the document did emphasize the importance of universal value reliant on the completeness, realness and the truthfulness of sites. For example, vernacular settings were brought into the discussion through “The Charter on the Built Vernacular Heritage”. It states that changes seen over a period of time are to be respected and valued as integral facets of vernacular architecture (Chapagain, 2017). In other words, emphasis is now being placed on the importance of authenticity in the process of management and preservation of cultural heritage.

Yet another development is that in 1996, the Declaration of San Antonio was presented at the ‘Inter-American symposium on Authenticity’. Notably, the statement of St. Antonio became the first to acknowledge authenticity as an identifying characteristic of heritage (ICOMOS, 1996). This declaration defined indicators for evaluating authenticity, in terms of true value, integrity, identity, use, function and context.

Similarly, the 1999 Burra Charter finally conceptualized “cultural significance” of heritage, defined by the location, fabric, context, physical and non-physical boundaries and linked objects of the monuments in order to conserve the natural and cultural significance of places (ICOMOS, 2013). However, one major shortcoming of the Burra Charter was that it was specific to the Australian context, and defined heritage management practices only for the Australian heritage. Nevertheless, the Nara Document on Authenticity marks a notable milestone in the inclusion of universally varying forms of authenticity definitions in heritage management practices. This document indicates the importance of authenticity in heritage, which will continue to ignite discussions on heritage management practices regarding conservation and restoration world-wide. Indeed, the Nara Document did mark a critical and final step in defining conservation in universal values in varying contexts. It says,

“All judgments about values attributed to cultural properties as well as the credibility of related information sources may differ from culture to culture, and even within the same culture. It is thus not possible to base judgements of values and authenticity within fixed criteria. On the contrary, the respect due to all cultures requires that heritage properties must be considered and judged within the cultural contexts to which they belong”

Nara document, 1995: xxiii.

This emphasis on authenticity relating to form, design, use, material, technique etc. has also been emphasized in the current UNESCO (2008) World Heritage Operational Guidelines along with the inclusion of intangible heritage. The international document presented by UNESCO on Authenticity and Integrity is a testament to the importance of preceding documents. This document acknowledges Authenticity and Integrity as qualifying criteria for listing as World Heritage Sites (Denyer, 2011). Thus, the basis for defining authentic heritage management practices was established in these documents. Varied forms of management practices are needed for different heritage sites, ones that rise from the diverse values systems of the country's social, political, and economic background. This is because each country not only has its own identity, culture, and traditions, but also possess local materials and building techniques.

This implies that when what is considered authentic varies from one geographic location to another, heritage management processes should also be authentic to that particular setting. In this connection, the Nara Document on Authenticity has been proved vital in marking a change of focus from the westernized concepts of authenticity to focus on non-western and indigenous groups with less rigid concepts. The concept of authenticity thus has grown to include 'social values' in heritage management.

However, heritage management enforces dual ideas of authenticity. On one hand, the conservation management practices attempt to preserve the past, while on the other hand, this preservation causes the commodification of the past. This naturally leads us to a deeper examination of the Nara Grid, a pivotal tool introduced to address these challenges by providing a structured approach for assessing authenticity in diverse cultural contexts. The Nara Grid aims to bridge the gap between theoretical principles and practical applications, ensuring that conservation practices are both culturally sensitive and adaptable to the unique needs of each heritage site. Through this lens, we can better understand the nuances of authenticity and develop more effective conservation strategies that align with the evolving demands of urban development.

2.2 Understanding Authenticity of Heritage and Value

Definition of Authenticity of Heritage remains varied, with many perspectives and stands provided by International Documents and conservation experts. For the purpose of this research and to gain a clear vantage point for the development of a theoretical stance, a holistic definition of Authenticity of Heritage, needs to be established. In this regard, it is fruitful to return to the science of the beginnings, as expounded by Heidegger (1927).

Heidegger (1927) has argued that, Authenticity in Heritage refers to exposing the fundamental truth or essence of a thing or a location and letting it reveal its own historical and cultural significance. According to him, by recognising the distinctive characteristics and values that set a historical object apart from mere reproductions or imitations, it emphasises a strong sense of connections to the past. Indeed, this can be also be seen manifesting in the international documents For example, English Heritage (2008) defines Authenticity in heritage as being the idea of ‘significance,’ which refers to the cultural, historical, and social worth associated with a heritage item. With the philosophical and literal underpinnings in place and multiple definitions from Heritage experts and documents, Authenticity could be defined as follows.

It is the faithful portrayal, conservation, and narration of the original form, historical context, and intrinsic value, of an item of heritage guaranteeing that future generations can connect with and appreciate the rich cultural heritage of the past. Authenticity entails maintaining and showcasing the material and intangible components, such as architectural details, craftsmanship, original materials, historical context, and related tales or traditions, that contribute to the overall significance of the object of heritage

Though much has been discussed earlier as to what Authenticity means, refers to or implies in literary context, philosophical debates or simply for self, Heritage relies on Value for its relevance and to affirm its Authenticity. Indeed, Authenticity of an element lies in diverse layers of values of a heritage place. So, then what is Value? Immanuel Kant (1790) gives two aspects of Value; Intrinsic value and Extrinsic value. Intrinsic value, sometimes known as "intrinsic worth," is the meaning and worth that anything has in and of itself, independent of any external causes. It is related with an object's or experience's inherent attributes and characteristics. Extrinsic value, sometimes known as "extrinsic worth," is assigned to something based on its

instrumental or relational meaning or value in relation to other objects or external variables. According to the definition supplied by ICOMOS (1994; 1999), value in the Authenticity of heritage includes the concept of relevance and significance. The cultural, historical, and social significance or meaning connected with a heritage asset contributes to its overall value. This includes recognising the value of the heritage asset to communal memory, identity, educational potential, tourism, and community engagement.

Hence, this research understands *Value in Authenticity of heritage as a Heritage asset's inherent traits, historical context, cultural value, and larger societal appreciation, emphasising its importance in maintaining and conveying our common history to future generations. The intrinsic value of a heritage item refers to its inherent traits and features, such as craftsmanship, historical context, and cultural relevance. Extrinsic value, on the other hand, refers to the broader social, historical, and artistic value that society places on a heritage object because of its authenticity and connection to the past.*

To preserve the authenticity of an element, it is crucial to capitalize on the values of these different layers. As a key figure in the anti-restoration movement in the nineteenth century, John Ruskin directed criticism towards the restoration of buildings, which resulted in the erasure of time and memory of the buildings in the process, and thus rejected any kind of restorative measures as being untrue to the passage of time (Mehr, 2019).

UNESCO defines 'authenticity' typically referring to the truthfulness and credibility of the cultural values embedded within a structure's form and design, materials and substance, and location and setting (Denyer, 2011; Jokilehto, 2006). Authenticity is not only a physical characteristic, but it is a complex social construction shaped by integrating objective and subjective extents of reality (González Martínez, 2017; Su et al., 2020). Authenticity helps in recognizing the concepts of identity and belonging to a place. For a society that is trying to build its present from the future, accepting the building material as authentic is extremely vital, because it is with that material, identity has been created (Cohen & Cohen, 2012). In this sense, Authenticity is the degree to which a heritage property's values can be understood truthfully, genuinely, and credibly through the tangible and intangible attributes (Khalaf, 2020).

While integrity and authenticity have been discussed as adjoined concepts by several theoreticians, the two concepts are widely different as defined by the 2005 Operational Guidelines by the World Heritage Convention. According to the guidelines, the concept of integrity can be applied to both natural and cultural properties. However, authenticity can only be discussed in terms of cultural properties (Denyer, 2011; Jokilehto, 2006; Stovel, 2007). Indeed, this can be attributed to the fact that natural heritage undergoes constant changes and evolution untouched by Man, which means that it remains authentic to time. On the other hand, it can be argued that cultural heritage undergoes evolution and change due to interaction with man, thus it is crucial to maintain its authenticity to both the present and the past.

According to the value-based model, historical sites have intrinsic worth that should be safeguarded and maintained. The concept is predicated on the notion that historical sites are significant and valuable in ways that go beyond their monetary worth (Avrami et al., 2019). The value-based strategy places a high priority on the authenticity and integrity of heritage sites and works to maintain them as closely as is humanly attainable to their original state (McClelland et al., 2019). On the other hand, one of the major drawback of this approach is its propensity to place conservation of the physical structure above the needs and ambitions of the local people that surround heritage monuments. Conflicts between the preservation of historic sites and the local communities' need for growth may result from this (Avrami et al., 2019). A heritage site's preservation, for instance, can prohibit the development of new structures that might help the neighbourhood economically (McClelland et al., 2019).

2.2.1 Authenticity and Integrity

Since the 1970s, emphasis has been placed on the right pre-requisites and the evaluation criteria for heritage protection, but little momentum has been gained to adhere to a strict regime of evaluation criteria. Naturally, this introduces several schools of thoughts which define “Authenticity” and “integrity” as is most applicable within that frame of reference (Denyer, 2011; Jokilehto, 2006; Stovel, 2007). While operational guideline for World Heritage sites do indicate authenticity and integrity as qualifying characteristics, there are some debates on the practical application of these characteristics in heritage.

Pertinent to this, several theorists and scholars have discussed the idea of authenticity while considering examples from Eastern and Western forms of heritage values, as

well as discussing the idea of integrity. However, it is important to note that the concepts of authenticity and integrity vary from culture to culture. As mentioned earlier, Authenticity has been defined as the “measure of the degree to which the values of a heritage property may be understood to be truthfully, genuinely and credibly, expressed by the attributes carrying the value” (Stovel, 2007). However, it can be argued that this definition is derivative of the American definition employed in 1953. Nevertheless, this definition is also in accordance with the Operational Guidelines which highlight the relation between a property, its OUV, and the several attributes it possesses.

On the other hand, “Integrity” is a relatively new qualifying concept with a certain level of uncertainty on what encompasses this factor. The concept is considered ambiguous in its application, conforming to the notion that integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. In this working definition, the term ‘wholeness’ and ‘intactness’ require more thought. Wholeness is considered to be comprised of elements necessary to paint a clearer picture of the cultural content of the site (Denyer, 2011; Stovel, 2007). This definition indicates that in order to be whole, a site must contain all the features and means to convey significance. On a similar scale, Intactness leads towards an assessment of the conditions of the property in relation to the threats to its existence, and any risks in the environment surrounding the property (Denyer, 2011; Stovel, 2007).

The main difference that can be inferred from these definitions of authenticity and integrity is that Authenticity has attributes that direct towards form and design, use/function, intangible heritage, traditions/techniques/management systems, and the materials and substance. On the contrary, Integrity is more interwoven with the elements which are important to showcase its Outstanding Universal Value. On Integrity, Jokilehto highlights how integrity is related to the qualities that are valued in a particular property (Jokilehto, 2006). These don’t necessarily need to be tangible and are considered keeping a broader perspective in mind. On providing a more formal definition, Jokilehto refers to Integrity with the standard definition presented by the Operational Guidelines of 2005, which states that:

“Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore requires assessing the extent to which the property: a) includes all elements necessary to

express its outstanding universal value; b) is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; c) suffers from adverse effects of development and/or neglect.”

Operational Guidelines of 2005: Page No 22

When considered as a whole, Jokilehto's Authenticity and Integrity have similarities and can easily be confused for one another. However, it's important to discern between the two and establish a boundary which can better help us analyze raw data. For Authenticity, Jokilehto draws inspiration from the relation between Authenticity and OUV (Jokilehto, 2006). For the case of integrity, a sense of urgency is implied that a particular site must adhere to the three criteria mentioned above. Furthermore, it is also dependent on the size, noting that it should be adequate to completely represent the significance of the property.

On the matter of Integrity, Jokilehto cites the example of Bam in Iran. When hit with a devastating earthquake in 2003, the main priority was the Ancient Citadel. However, in itself, the Citadel was a singular monument in isolation that would not adhere to the definition of Integrity. There were further elements to the Citadel, tangible and non-tangible, that would better encapsulate the spirit of the past. Hence, the nominated area went as far as possible to include the underground qanats and the ancient irrigation system. It's also important to mention that the modern urban area of Bam was not included in the nominated area, a decision that stems from the implication of the Integrity principle. Indeed, this highlights Jokilehto's point about sufficiency. It also allows us to understand his perspective better.

Working within this framework, Authenticity and Integrity can be used together to address several key issues in World Heritage. It then suggests solutions that might make qualitative analysis a little simpler. However, it has to address the major hurdles and challenges. First and foremost, it's important to acknowledge the extent to which Authenticity and integrity analysis are applicable to a particular setting. Is it practical, and what influence does it have on the suitability of nomination? Secondly, it's important to acknowledge the fact that the nomenclature isn't well defined. As time progresses, it's more than likely that more definitions and interpretations will be presented. These need to be addressed as time goes by. Lastly, to convey concisely that the current iteration of the understanding of Authenticity and Integrity can help bring practical improvements to the quality of analysis.

A great deal of understanding has been thus generated on Authenticity and Integrity, and theories about that explain how the two concepts are interpreted. While the Stovel literature dives into the shortcomings of contemporary perspective, Jokilehto is geared more towards drawing inspiration to solidify the current understanding of Authenticity and Integrity. Jokilehto adheres to the original doctrine, whereas Stovel proposes to revolutionize the think tank. Undeniably, these move the World Heritage movement forward (Jokilehto, 2006; Stovel, 2007).

2.3 Assessment of Authenticity in Heritage Conservation

The discourse surrounding authenticity in heritage conservation has been marked by a tension between materialist and contextual approaches, reflecting the evolving conservation philosophies and methodologies. Early conservation theories, rooted in 19th-century restoration principles, have emphasized material authenticity, advocating for the preservation of original fabric as the primary marker of historical integrity (Ruskin, 1849; Viollet-le-Duc, 1854). As conservation expanded beyond its Eurocentric and monument-focused origins, however, alternative perspectives have emerged, suggesting that authenticity cannot be confined to materiality alone, but must also encompass historical narratives, social engagement, and intangible cultural dimensions (Jokilehto, 2006; Smith, 2006). Indeed, as Plevoets & van Cleempoel (2019) have pointed out, this shift has necessitated the development of multi-dimensional assessment frameworks, integrating both qualitative and quantitative methodologies to evaluate authenticity more comprehensively.

2.3.1 From Material Integrity to Contextual Authenticity; Theoretical and Charter-Based Foundations

Throughout history, conservation theory has been, predominantly, focused on the dichotomy between preservation and restoration, as exemplified in the contrasting views of John Ruskin and Eugène Viollet-le-Duc (Jokilehto, 2006). As already mentioned, Ruskin (1849) has emphasised for the preservation of historic fabric in its untouched state, believing that any intervention would distort historical truth. In opposition, Viollet-le-Duc (1854) has argued that restoration should aim to reconstruct a monument's idealized past, even if this meant replacing the original materials with newer ones to maintain a structure's visual and functional coherence. Notably, these competing philosophies have influenced the early heritage charters, particularly the Venice Charter (1964), which has codified the principle that authenticity resides in the

physical material of a historic site (ICOMOS, 1964). Since then, the materialist perspective of the Venice Charter has become a cornerstone of international conservation policies, shaping authenticity assessment in ways that focus largely on the western notions of permanence and stability over cultural diversity (Van Balen, 2008). This narrow focus on material authenticity has later been challenged by scholars and practitioners who have emphasized the social and cultural dimensions of heritage (Smith, 2006).

Among them, the Nara Document on Authenticity (1994) has marked a significant departure from the materialist framework of the Venice Charter, asserting that authenticity must be understood within the specific cultural, social, and historical contexts of a site (UNESCO, 1994). While this document has introduced a more inclusive and context-sensitive approach, critics argue that it lacks a structured methodology for evaluating authenticity beyond descriptive assessments (Apaydin, 2020). In response, the Nara Grid has been developed as a matrix-based tool to systematically categorize authenticity across forms, materials, functions, traditions, and settings, allowing for comparative assessments across diverse cultural contexts (Van Balen, 2008; Eshrati et al., 2017). However, Rodwell (2007) argues that despite its expanded criteria, the Nara Grid still relies on subjective expert judgment, raising concerns about its replicability and empirical validity in conservation practice.

2.3.2 Expanding the Boundaries of Authenticity

Interestingly, as authenticity assessments moved beyond materialist perspectives, scholars have increasingly recognized the importance of phenomenology and social memory in heritage conservation (Relph, 1976; Norberg-Schulz, 1980). Many phenomenological studies reveal that authenticity is not embedded solely in the physical form of a structure, but exist in the lived experiences, emotional connections, and cultural practices associated with a place (Urry, 1995). Unsurprisingly, these arguments have led to the adoption of historical narrative analysis and ethnographic methodologies as integral components of authenticity assessment (Waterton & Watson, 2013). However, despite their qualitative depth, phenomenological approaches are also often criticized for lacking empirical rigor and comparability, making them difficult to integrate into standardized conservation policies (Taylor, 2016).

As a result of this, expert judgment remains the dominant mode of evaluation of authenticity, particularly in conservation charters such as the Burra Charter, which continues to prioritize professional assessments over community perspectives (Taylor & Lennon, 2011). While expert evaluations provide structured and historically informed assessments, they have been criticized for marginalizing local narratives and alternative cultural interpretations of authenticity (Smith & Waterton, 2009). In this context, some scholars argue that public participation should be central to authenticity assessment, as communities often possess intangible knowledge and oral histories that shape the meaning of heritage sites (Shackel & Chambers, 2004). However, participatory approaches are also often constrained by institutional resistance and the logistical challenges of integrating diverse stakeholder inputs into formal conservation frameworks (Rodwell, 2007).

An important contribution to this expanding discourse is Kapila D. Silva's (2017) articulation of symbolic authenticity, a concept that refines and deepens the understanding of intangible values in heritage conservation. Symbolic authenticity refers to the degree to which communities retain and recognize the original meanings, associations, and cultural narratives attached to a heritage place. Unlike general notions of perception or spiritual resonance, symbolic authenticity is anchored in historically grounded knowledge and its continuity across generations. It addresses a critical gap in current assessment models by accounting for the transformative yet enduring cultural meanings that make heritage relevant to its communities. In doing so, it challenges both materialist and purely phenomenological approaches by emphasizing symbolic continuity and cultural memory as central to authenticity. As such, symbolic authenticity sets the conceptual groundwork for more inclusive and temporally grounded frameworks.

2.3.3 Developing Tools and Indicators for Authenticity Assessment

Today, this increasing need for structured and replicable assessments of authenticity has led to the development of quantitative methodologies. They include survey-based scoring, matrix evaluations, and computational authenticity analysis (Rodwell, 2007; DeSilvey, 2017). It is noteworthy that one of the most widely adopted frameworks, the Nara Grid, has provided a way to assign weighted scores to authenticity attributes, facilitating comparative assessments across different heritage sites (Van Balen, 2008). However, some critics argue that the Nara Grid's reliance on expert judgment makes

it prone to subjectivity, limiting its effectiveness as a reliable quantitative tool (Gregory, 2008). To address this limitation, survey-based methods have been introduced, allowing both experts and the public to evaluate authenticity through assessments such as the Likert-scale (Fadaei Nezhad & Eshrati, 2015).

While these surveys offer valuable empirical data, their effectiveness is dependent on the design of authenticity indicators, which vary significantly across cultural contexts (Plevoets & van Cleempoel, 2019). Moreover, computational tools such as GIS mapping, 3D modelling, and AI-based authenticity analysis have further refined authenticity assessments by enabling dynamic monitoring of heritage transformations (Mitchell et al., 2009; Jokilehto, 2006). It has been noted that these technologies provide greater precision replicability and reliability. However, they have been criticized for focusing too heavily on material authenticity at the expense of social and experiential dimensions (DeSilvey, 2017).

2.3.4 Integrating Qualitative and Quantitative Approaches

Recognizing these limitations of singular methodological approaches, scholars have increasingly advocated for hybrid authenticity assessment models that integrate qualitative and quantitative dimensions (Rodwell, 2007; Bullen & Love, 2011). Arising from this, decision-making matrices, which combine expert evaluations, historical analysis, and public perception studies have emerged as a preferred tool for systematic and multidimensional authenticity evaluation (Pendlebury, 2009; Ashworth, 2011). However, these matrices remain challenging to standardize across different heritage contexts, as weighting authenticity dimensions involves inherent subjectivity (Taylor, 2016). Participatory authenticity assessments, which incorporate community-driven mapping, oral history documentation, and stakeholder workshops, have sought to bridge this gap by aligning conservation policies with local values (Smith & Waterton, 2009).

While these approaches enhance cultural sustainability, their implementation is often hindered by institutionalized conservation hierarchies that privilege expert-led decision-making (Shackel & Chambers, 2004). The historical progression of authenticity assessment illustrates a continuous negotiation between material, social, and contextual perspectives (Harrison, 2013). While empirical rigor remains essential, future frameworks must also recognize that authenticity is inherently dynamic and culturally situated (DeSilvey, 2017). The challenge, therefore, lies in developing

assessment models that remain flexible yet systematic, ensuring that conservation efforts maintain historical integrity while adapting to contemporary heritage realities (Plevoets & van Cleempoel, 2019).

2.3.5 Existing Methods of Authenticity Assessment

Assessing authenticity in heritage conservation is an evolving discourse, shaped by the complexities of urban environments (Rodwell, 2007; Jokilehto, 2006). Just as cities are continuously influenced by governance policies, socio-economic dynamics, and demographic shifts, authenticity assessment methodologies, have also emerged from varied philosophical, technological, and cultural contexts (Plevoets & van Cleempoel, 2019). These methodologies extend beyond the tangible heritage to encompass intangible dimensions, offering critical insights while exposing persisting gaps in conservation discourse (DeSilvey, 2017; Smith & Waterton, 2009).

Direct evaluation methods utilize systematic frameworks such as the Nara Grid, a matrix-based tool categorizing authenticity across attributes like material, form, and tradition (Van Balen, 2008; Eshrati et al., 2017). While useful for comparative assessments, its dependence on expert judgments introduce subjectivity, hence limiting consistency (Gregory, 2008). Material analysis techniques, including radiocarbon dating and petrographic studies, provide precise data on the age, and composition of heritage elements (Plevoets & van Cleempoel, 2019).

However, these methods often prioritise physical attributes at the expense of experiential and cultural dimensions (DeSilvey, 2017). Advances in non-destructive testing (NDT), such as ultrasonic scanning and 3D modeling, further enhance structural assessments while preserving material integrity (Mitchell et al., 2009). Despite their technical advantages, these methods remain resource-intensive and largely inaccessible for underfunded conservation projects (Rodwell, 2007). S

imilarly, the Burra Charter-inspired Process Flowchart translates the charter's principles into actionable frameworks, emphasizing cultural significance alongside authenticity (Taylor & Lennon, 2011). However, this approach has been critiqued for privileging expert-led narratives over community interpretations, often overlooking diverse cultural perspectives (Smith & Waterton, 2009).

Other evaluation methods indirectly incorporate authenticity within broader assessments of the significance of heritage. Visual and structural analysis, including

photogrammetry and architectural surveys, remains a fundamental approach for documenting design coherence, and material integrity (Pendlebury, 2009). Yet, the qualitative nature of these assessments and the absence of standardised grading mechanisms hinder their applicability across varied contexts (Ashworth, 2011).

Archival documentation, drawing from historical maps, texts, and photographs, aids in verifying material authenticity (Jokilehto, 2006). However, incomplete records and restricted access to archival sources often limit its effectiveness, particularly for marginalized or undocumented heritage (Lowenthal, 1985).

Participatory approaches, such as stakeholder engagement have gained traction for integrating intangible and lived dimensions of authenticity, employing methods like oral history documentation and community mapping (Shackel & Chambers, 2004). While intended to be inclusive, these approaches frequently face logistical constraints and institutional resistance, reducing their transformative potential (Smith & Waterton, 2009). Broader frameworks such as Heritage Impact Assessments (HIA) position authenticity within the larger measures of integrity and cultural significance, yet due to its focus on emphasising structural and historical factors, the extent of evaluation of authenticity is somewhat understated (Taylor, 2016).

Despite the advancements in assessment methodologies, significant gaps remain in fully capturing the multidimensional nature of authenticity through them. Tools such as the Nara Grid and the material analysis techniques, prioritise the tangible aspects, often neglecting the social, experiential, and dynamic cultural values (DeSilvey, 2017; Van Balen, 2008).

Similarly, participatory approaches struggle against institutional hierarchies and limited community representation, restricting their inclusivity (Rodwell, 2007). The reliance on expert-led methodologies and the inaccessibility of resource-intensive technologies like NDT further constrain the broader applicability of these frameworks (Mitchell et al., 2009).

Understandably, addressing these limitations calls for integrative frameworks that balance material preservation with cultural and experiential dimensions. The development of adaptable, inclusive, and context-sensitive tools will be essential for advancing authenticity assessment in heritage conservation, ensuring that both physical integrity and cultural resonance are preserved within the increasingly

complex fabric of contemporary urban environments (Plevoets & van Cleempoel, 2019).

2.4 Precedent Studies: Evaluating Practical Adaptations

Williams (1976) emphasizes that the performative aspects of culture and society provide a more nuanced understanding of social dynamics than their representational counterparts. This becomes especially relevant in the context of urban heritage, where the relationship between people and their environments is shaped by cultural consciousness. AlSayyad and Nam (2014), building on Harvey's (1992) discourse, point to the importance of the visual and spatial dimensions of the built environment, which must be understood through a culturally aware perspective. Authenticity in heritage, as Adorno (1973) notes, transcends mere physical conservation, extending to the ideological essence of historical spaces. Therefore, an ethnographic and consensus-based approach to heritage management is needed, accounting for the diverse societal values inherent in different geopolitical settings (Avrami et al., 2019). This promotes the use of varied strategies tailored to the specific needs of each cultural context.

As previously discussed, with the focus of heritage conservation on material authenticity and conservation (Mehr, 2019), social, spatial, and historical authenticities that reinforce a sense of place, are considered auxiliary concerns. As cities evolve, balancing the preservation of historical authenticity with the demands of modernization becomes a critical challenge. The integration of new developments with the cultural fabric of urban heritage often risks diluting the authenticity of historic sites through commercialisation and rapid urbanization (Dovey, 1999).

The case studies, Galle Fort, Ahmedabad, Old Cairo, and Shiraz illustrate the complexities of heritage conservation in rapidly urbanizing environments. Galle Fort struggles with divided administration and a narrow focus on material conservation, highlighting the need for sustainable methods and stronger community engagement to ensure long-term preservation. Ahmedabad faces rapid urbanization, technological shifts, and changing economic patterns. Despite these challenges, the city has benefited from active community involvement and efforts by the Municipal Corporation, leading to positive conservation outcomes. In Old Cairo, historical significance, economic pressures, and insufficient community participation create barriers to heritage preservation, necessitating a collaborative approach between government and local

stakeholders to safeguard the cultural identity of the city. The expansion of industrialization and imposition of orthogonal street grids have significantly altered the historic centre of Shiraz. Top-down urban regeneration projects initially sidelined the community's role, further eroding the cultural character of the city, but the reforms in Shiraz have aimed to create a more balanced approach, integrating heritage conservation with development objectives. In all cases, large-scale urban interventions complemented by community-driven initiatives that emphasize collaboration and public participation, can allow for a more inclusive conservation process that strengthens cultural identity.

Across these cases, common themes like, policy changes, developmental pressures, and conflicts among stakeholders consistently challenge heritage conservation efforts. A holistic approach, integrating both physical and intangible elements, is crucial for effective heritage management. As seen in these examples, urban development and heritage conservation are not mutually exclusive but must work in tandem to preserve the unique sense of place and cultural continuity that give historic environments their authenticity. This understanding of heritage aligns with the views of Williams, AlSayyad, Nam, and Avrami, who argue that the preservation of authenticity encompasses not only material aspects but also the deeper social and ideological dimensions that define the significance of these spaces. To clarify how these ideas manifest in the practices of heritage conservation, following case studies are offered.

2.4.1 Precedent Study- Galle Fort, Sri Lanka

The Galle Fort in Sri Lanka, a UNESCO World Heritage Site, is a vital cultural landmark representing the colonial past of the region, blending European and Asian architectural influences. Constructed initially by the Portuguese in 1588 and modified later by the Dutch, the Fort includes structures like bastions, temples, courts, and mosques, spanning 52 hectares and reflecting the rich multicultural history of Sri Lanka (Kuruppu and Wijesuriya, 1992; Bandaranayake, 1992). Beyond its physical structures, the Fort serves as a living heritage site, housing diverse communities such as Buddhists, Christians, and Muslims, and encompassing a blend of ethnic groups, which adds to its complex, intangible cultural heritage (MCA-Sri Lanka, 2015).

A notable shortcoming in the conservation of the Galle Fort lies in the lack of contextually relevant methodology to effectively capture the unique characteristics of the site. Existing conservation methodologies, often centered on standardized metrics

for assessing architectural and structural integrity, fall short in fully addressing the intangible cultural heritage of the Fort and its ecological interdependence (Avrami et al., 2019). The absence of tools that can evaluate both tangible and intangible values has led to a disjointed focus on physical preservation while underrepresenting the daily cultural practices and traditional livelihoods integral to the identity of the site.

A critical point is that the conservation strategies would have been even more effective if it incorporated accurately reflecting the importance of traditional fishing practices and the role of coastal resources, which shape the cultural identity of the community. The traditional fishing practices of Galle Fort are not merely economic activities; they are deeply intertwined with the local culture and social fabric, contributing to a sense of identity and continuity. Without recognizing these practices, conservation efforts risk erasing vital aspects of the heritage of the community.

In this regard, Kuruppu and Wijesuriya (1992) emphasize that conservation should not only focus on the physical structure but also the living traditions and practices that define the community. The ecological integration of the site including the surrounding coral reefs and Rumassala Hill, demonstrates the environmental importance of the Fort. These features, vital in protecting against coastal erosion, lack comprehensive evaluation in current assessment tools, which typically prioritize architectural attributes. The surrounding coral reefs act as natural barriers, reducing the impact of waves and preventing erosion (Jayatissa, 2009).

Rumassala Hill is not only a natural habitat but also holds cultural significance for local communities, believed to be part of the legendary Sanjeevani hill from the Ramayana epic (Ravi Prakash, 1998). Dahdouh-Guebas et al. (2005) highlights the crucial role mangroves have played during the tsunami, demonstrating the interconnectedness of ecological and cultural heritage. The absence of a framework that values the protective and cultural role of the natural landscape has contributed to oversight in maintaining these critical elements, especially considering their impact on resilience against events like the 2004 Indian Ocean Tsunami.

While broad-based conservation metrics are necessary for global comparability, they cannot always account for every local nuance. Standardized tools enable UNESCO and related agencies to maintain certain uniform criteria across World Heritage Sites, ensuring consistent evaluation across vastly different locations (Jokilehto, 2006). Yet, this approach often sacrifices depth, as it imposes a one-size-fits-all standard that does

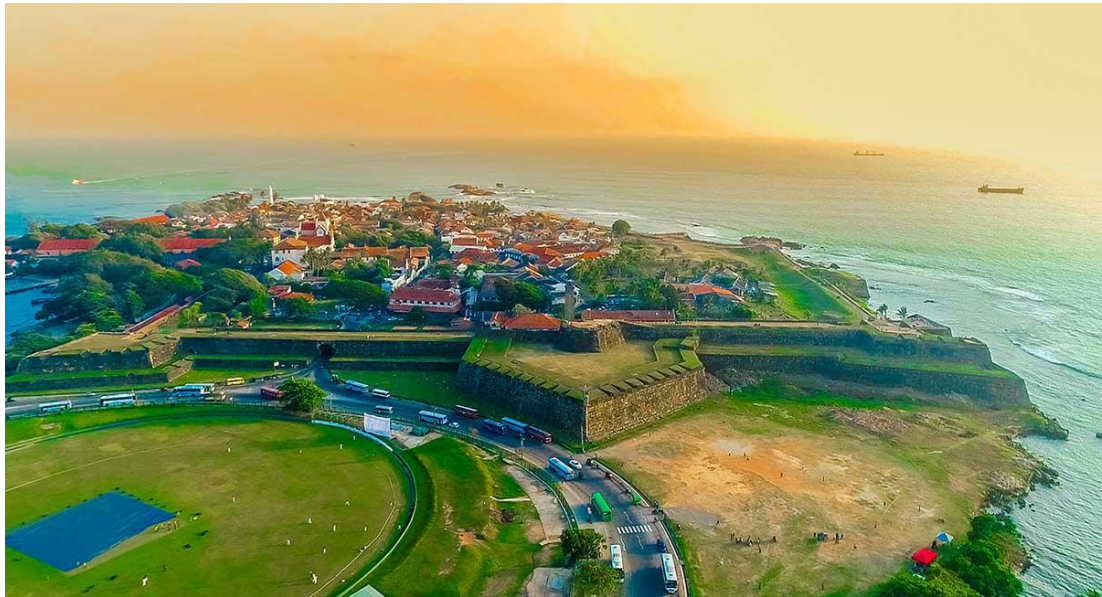
not fully adapt to unique regional challenges like those at Galle Fort, where the combined influences of colonial architecture and vibrant local practices create a distinctive heritage narrative (Udejaja et al., 2020). The challenge is to strike a balance between maintaining global standards and adapting to local contexts to ensure that conservation efforts are both effective and culturally sensitive.

With reference to this, Bandaranayake (1992) argues that a one-size-fits-all approach might overlook the specific historical and cultural contexts that make sites like Galle Fort unique. Simultaneously, Silva (1992) suggests that the preservation efforts in recent years have sometimes emphasized the physical aspects of the Fort, often at the expense of its living heritage. The Ministry of Culture and Arts Government of the Socialist Republic of Sri Lanka (2015) points out the importance of an integrated management approach that includes the ecological, cultural, and historical values of the heritage sites and this applies to the Galle Fort as well. Therefore, the future advancement and safeguarding the Galle Fort necessitates an all-encompassing approach that integrates the protection of cultural heritage, environmentally-friendly methods, and active involvement of the community. The primary objective is to conserve the natural elements in the vicinity of the fort, including coastal features like mangroves, sand dunes, and coral reefs. These components play a vital role in bolstering resilience and guaranteeing the enduring viability of the coastal heritage (Dahdouh-Guebas et al., 2005).

The significance of these natural barriers in offering protection was underscored by the 2004 Tsunami (Jayatissa, 2009). Today, the designs place a high priority on minimizing any disruption to the coastal environment surrounding the fort in order to maintain its protective role. It is crucial to safeguard the intangible cultural assets and traditional livelihoods within the fort. Conserving portable cultural artifacts, such as Ola Leaf Manuscripts, is an essential element of this undertaking (Kuruppu & Wijesuriya, 1992). UNESCO has enforced an integrated management plan to address institutional divisions and build cohesive rules for the overall administration of forts (Ministry of Culture and Arts Government of Socialist Republic of Sri Lanka, 2015). The tactics seek to attract guests and preserve the authenticity of the fort by applying conscientious tourism techniques. Needless to say that the involvement of local people and the transmission of traditional knowledge are essential for the preservation of the fort (Bandaranayake, 1992).

Figure 2.1

The Galle Fort, Sri Lanka



Note. The Ariel view of Galle Fort, Sri Lanka showing its context (Dilshan, 2020)

This approach places a high importance on ensuring the long-term viability of the environment, the protection of cultural heritage, the establishment of appropriate legislative structures, active participation from the local community, and the promotion of sustainable tourism. The objective is to ensure the enduring conservation of Galle Fort for subsequent generations. The challenges faced in preserving Galle Fort involve fragmented institutional governance, absence of coherent strategies, and a concentration on tangible heritage rather than intangible aspects (Silva, 1992). In order to adequately prepare for the future, it is crucial to prioritize sustainable practices, active involvement with the community, and the conservation of both architectural and environmental characteristics. This includes the alteration of the regulatory frameworks, the integration of cultural preservation into sustainable tourism, and the proactive involvement of local communities (Kuruppu & Wijesuriya, 1992).

2.4.2 Precedent Study- Ahmedabad, India

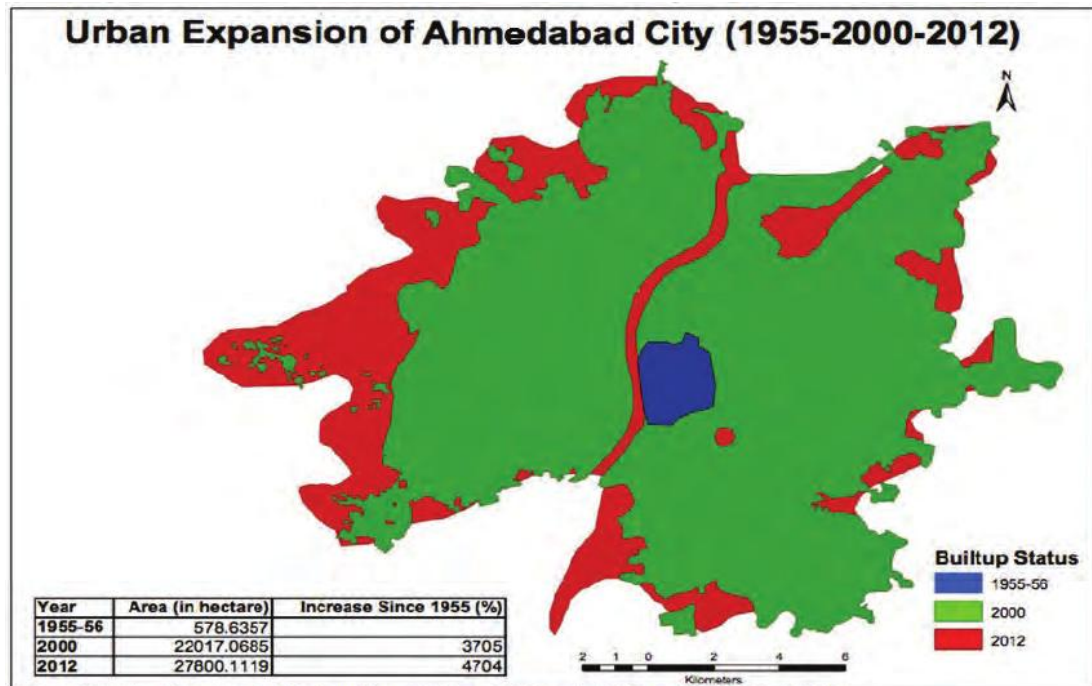
Ahmedabad, founded in 1411 AD by Ahmed Shah, is one of India's historically rich cities, originally surrounded by a fortified wall spanning 10 kilometers and equipped with 6,000 battlements, 12 gates, 139 towers, and 9 corners (INTACH, 2015). Its history reflects the rule of the Gujarat Sultanate, the Mughals, the Marathas, and later the British Empire, making it a site of architectural and cultural convergence. Situated within a major cotton-producing region, Ahmedabad emerged as a key textile

production hub, establishing a legacy as a commercial and industrial center (INTACH, 2015). However, this rich historical trajectory, reflected in both tangible and intangible heritage elements, faces critical challenges as urbanization and economic shifts have gradually altered the city's cultural landscape. The walled city of Ahmedabad, forming part of the Greater Ahmedabad Urban Agglomeration (AUA) controlled by the Ahmedabad Municipal Corporation (AMC), reflects the complexities of urban expansion and its impact on heritage preservation. As industrial growth accelerated in the 1970s, population density in the walled city decreased substantially, and its demographic prominence within the AUA dropped from 44% in 1951 to 12% by 1991 (INTACH, 2015). Urban sprawl directed population growth outward, and with it, the communal and architectural cohesiveness of the walled city diminished, challenging the preservation of the city's distinct social structure and heritage. Particularly unique are the "Pol" neighborhoods, traditional housing clusters populated by families of specific caste or religious affiliations, numbering approximately 600, which showcase a high level of craftsmanship and cultural expression adapted to the local climate (Kishnadwala, 2015). The Pol homes are embedded with a high social value, reinforcing social cohesion and a strong sense of place for their residents while serving as a living representation of Ahmedabad's cultural history (Mistry, 2018).

However, the rapid economic and technological transformations that reshaped Ahmedabad's urban landscape also introduced challenges to the preservation of its built heritage. Demolition of portions of the old city fortification, increasing modernization, and shifting property usage to accommodate commercial needs have contributed to a disintegration of Ahmedabad's historic urban fabric (Kishnadwala, 2015). Economic changes have led to the relocation of residents to newer areas, where modern infrastructure and amenities were more accessible, leaving traditional spaces, including the Pol homes and the Bhadra Fort, increasingly vulnerable to deterioration.

Figure 2.4.2

Map of Ahmedabad City



This shift has impacted the preservation of cultural heritage, as gentrification has altered neighborhood compositions and has depleted the cultural wealth embedded in these historic structures (Kishnadwala, 2015). The Ahmedabad Municipal Corporation has initiated focused efforts in the 1980s to address the city's declining heritage resources. In collaboration with the Ford Foundation, the AMC has established the Heritage Cell in the 1990s, which aimed to document Ahmedabad's built heritage and introduce regulatory frameworks for conservation (INTACH, 2015). Over time, partnerships with international organizations, including the French government and the Spanish city of Valladolid, led to restoration projects within the walled city and promoted community-led heritage preservation efforts. This multi-stakeholder involvement paved the way for Ahmedabad's nomination as India's first UNESCO World Heritage City in 2017 (Routh et al., 2022).

While these initiatives represent progressive steps toward conservation, the conservation strategies reflect a critical need for more flexible and well-rounded approaches that evaluate and adapt to Ahmedabad's unique historical and cultural context. Conservation efforts often fail to account for the nuanced socio-economic and cultural dimensions that characterize cities like Ahmedabad. Standardized criteria for

evaluating heritage authenticity may overlook essential aspects, such as the social cohesion fostered by Pol neighborhoods, which contribute to the preservation of place identity and cultural continuity (Mistry, 2018). The Historic Urban Landscape (HUL) model, implemented in Ahmedabad, emphasizes the importance of community engagement in conserving heritage. However, the challenge remains to create a dynamic authenticity assessment that aligns with the lived experiences of residents and the multifaceted values embedded in heritage structures (Oers & Pereira, 2012). In particular, the focus on historical form, material, and architectural integrity often marginalizes the fluid social values and community connections that give these spaces meaning and sustenance. In Ahmedabad, economic pressures drive both real estate development and the adaptive reuse of heritage structures, primarily for commercial tourism, as is evident in the conversion of historic residential spaces into hospitality venues (Kishnadwala, 2015). While such initiatives generate revenue, they risk compromising the social and cultural fabric of these heritage properties. Ahmedabad's Heritage Cell has made substantial progress in urban conservation through community engagement, programs such as heritage walks, and cultural events that reinforce local attachment to place. Despite these achievements, the continuity of traditional practices, social structures, and sense of place remains precarious in the face of urban pressures and shifting demographics (INTACH, 2015). Without a flexible and context-sensitive model of authenticity assessment, the risk of eroding the very attributes that make Ahmedabad's heritage unique is magnified. Further, the HUL model's emphasis on local stakeholder involvement could be deepened to address specific heritage attributes such as the integration of traditional crafts in restoration, promoting not only aesthetic authenticity but also sustaining cultural practices that add intrinsic value to the heritage fabric (Hampton, 2005). Ahmedabad's conservation efforts illuminate the limitations of conservation efforts focusing on authenticity, frequently lacking the contextual adaptability necessary to encompass the full scope of heritage value in rapidly urbanizing cities.

2.4.3 Precedent Study- Cairo, Egypt

One of the world's most significant heritage sites, Historic Cairo, houses the majority of the world's Islamic monuments and preserves evidence of one of the oldest civilizations. Declared a World Heritage Site in 1979, historic Cairo's heritage extends far beyond its physical monuments, embedding a legacy that reflects centuries of

socio-cultural evolution, dynastic rule, and urban transformations (Sedky, 2009). However, with modernization and rapidly changing urban and cultural habits, Cairo's historic core faces significant pressures from neglect and degradation (Rashed, 2013). Despite numerous federal, national, and international efforts to rehabilitate and restore historic Cairo, challenges remain in achieving sustainable urban growth. The majority of these efforts lack a critical element essential to many successful urban preservation projects: active community engagement in the planning process (Rashed, 2013). Conservation strategies for Cairo emphasize presenting an "authentic" version of the city to meet both domestic and international tourist expectations, yet this approach often prioritizes specific architectural or historical periods that align with consumer preferences, overlooking the full depth and diversity of Cairo's heritage (Paymanafar, 2021). This selective conservation creates a "manufactured" heritage that emphasizes external aesthetics while sidelining the lived realities of the communities who inhabit and shape these spaces daily (AlSayyad & Nam, 2014).

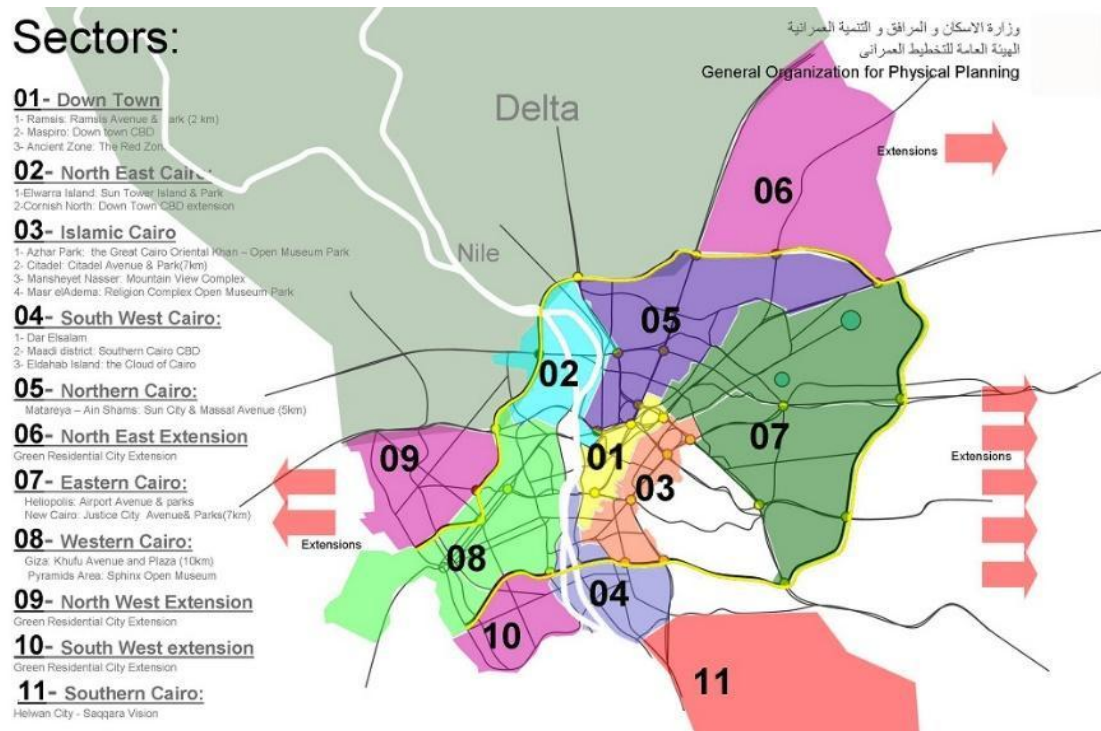
Nasser (2003) describes the symbiotic relationship between heritage and tourism, where the revenue generated through tourism can be reinvested in preserving heritage values. However, in Cairo, this profit-driven approach often skews preservation efforts towards elements that "generate revenue" and meet certain criteria, rather than those that encapsulate the authentic, lived experience of the city's residents (Paymanafar, 2021). As a result, Cairo's heritage is increasingly commodified, directed by the tastes of foreign stakeholders rather than the city's historical and cultural continuity (Newby, 1994).

The earthquake of 1992 in Cairo served as a pivotal moment, revealing both the vulnerability of its heritage structures and the inadequacies of existing preservation approaches. Following the earthquake, the United Nations Development Programme (UNDP) launched conservation initiatives, but these struggled to balance tourism development with genuine heritage preservation (Sutton & Fahim, 2002). The response demonstrated a reliance on gentrification strategies, prioritizing economic revitalization over the preservation of Cairo's complex urban and social fabric. The Aga Khan Trust for Culture (AKTC), however, initiated a contrasting approach, focusing on projects that resonated more with community aspirations for socio-economic development (Rashed, 2012). However, despite AKTC's approach, which was though progressive, emphasized economic enhancement over cultural

authenticity, engaging the community in development initiatives rather than involving them directly in identifying and preserving the intrinsic values of the heritage itself (Rashed, 2013).

Figure 2.3

Map of Cairo City



Note. Development Plan showing 11 sectors of Cairo City (Urban Development Consortium, 2015)

Similar to the other cases, in most applications, authenticity frameworks tend to prioritize physical conservation and retention over the social and cultural dynamics that imbue heritage sites with meaning (AlSayyad & Nam, 2014). Paymanafar (2021) discusses the recommendation on Historic Urban Landscape (HUL) by UNESCO, which sought to bridge the gap between Authenticity of Heritage, Public involvement and Sustainable development, while also identifying Tourists as stakeholders. The Historic Urban Landscape Recommendation, or HUL (2011), aims for three things: 1. the actual sense of authenticity of the heritage; 2. Avoiding duplication, addition, and alterations; and 3. Emphasizing community life and its social, cultural, and economic activities (Paymanfar, 2021). This study offers “government supervision” and “community participation”, as Paymanafar identifies to resolve the very first point of contention, where the Government rely on local knowledge as resources for real sense of authenticity. However, implementing the HUL principles in Cairo remains

challenging, as there are unresolved tensions between commercial interests and the authentic cultural landscape.

The drive to cater to tourist expectations has altered Cairo's medieval urban system into a commodified landscape that aligns more with external consumption patterns than the city's organic development over centuries (SCA, 2002). Consequently, local customs and practices, which have evolved alongside Cairo's urban morphology, are compromised. Sedky (2009) highlights how successive dynasties imprinted their architectural styles on Cairo, creating a uniquely diverse urban fabric that spans various historical epochs. These intricate layers of influence, each a reflection of distinct periods, are vulnerable to homogenization when preservation strategies prioritize certain aesthetics over the inclusive representation of Cairo's historical complexity. The selective preservation of architectural forms and emphasis on restoring monumental structures to their "original" states may enhance tourism appeal, but it limits a holistic understanding of the city's historical and cultural evolution, often disconnecting its current inhabitants from their heritage.

The HUL model's emphasis on "carrying capacity", the notion that heritage sites should be developed and preserved within the limits of what they can sustain without degradation, is particularly relevant in Cairo, where tourism-driven policies risk overwhelming the city's capacity for authentic heritage preservation. Carrying capacity policies, coupled with small-scale, community-led interventions, offer a balanced approach, allowing communities to directly participate in the preservation process while ensuring that the urban environment is not irreversibly altered by external influences (Paymanafar, 2021). The heritage journey of Cairo exposes the complex issues associated with conserving its rich and diversified history (Abada, 2008; Antoniou, 2000). The city's historical fabric, a fusion of varied architectural forms, dynamic communal life, and changing social practices, embodies a continuous history that challenges conservation methods centred solely on aesthetics (Bacharach, 1995; Sedky, 2009). The past of Cairo is not only represented by its monuments but is also vibrant in neighbourhoods such as Al-Darb al-Ahmar, where traditional crafts and cultural activities thrive, reflecting a distinct local identity (AKTC, 2007; CDC, 2008). This neighbourhood, emblematic of Cairo's living heritage, illustrates how historic neighbourhoods function not merely as tourist attractions but as sites of ongoing cultural importance. However, conservation techniques that emphasise visual

restoration may oversimplify these areas, overlooking the intangible aspects that uphold their historical and social significance (SCA, 2002; Sutton & Fahim, 2002).

Adopting such measures in Cairo can cause the loss of cultural heritage, so severing its connection to the dynamic culture it embodies. These techniques, by concentrating exclusively on constructed edifices, may fail to encompass the dynamic interactions among inhabitants, their customs, and the physical surroundings (AlSayyad & Nam, 2020). Integrating local perspectives and acknowledging Cairo's ecological features, including the Nile's historical influence on the city, can enhance preservation initiatives that respect the cultural and natural complexities of the area (Bandarin & Van Oers, 2012; Paymanafar, 2021). Unlike solely physical restoration, methods that involve people in conservation decisions recognise the richness of Cairo's living heritage and promote a preservation framework that is flexible and resilient. This viewpoint corresponds with the Historic Urban Landscape concept, which promotes an inclusive approach that encompasses social and environmental aspects in addition to architectural considerations (UNESCO, 2012; Avrami & Mason, 2019). In Cairo, evolving conservation methods must reconcile the preservation of tangible property with the promotion of the intangible traditions that characterise its populations. As urban centres contend with the demands of tourism and development, Cairo's situation highlights the necessity of a contextually aware strategy that honours local heritage in its entirety, encompassing the preservation of monuments as well as the support of communities and cultural practices that animate these historic areas.

2.4.4 Precedent Study- Shiraz, Iran

The evolution of Shiraz from a settlement overshadowed by Estakhr to a prominent city under Zand rule reveals the complex layering of architectural and cultural heritage that defines its urban identity. During its brief status as a capital in the 18th century, Shiraz flourished with grand constructions like the Vakil Mosque and Bazaar, showcasing an ambitious architectural vision that reflected local pride and rivalled the iconic urban landscape of Isfahan (Scarce, 1991). This phase of urban development, marked by opulent gardens and public spaces, embodied the cultural and political vitality of the Zand dynasty (Clarke, 1963). The sweeping urban reforms under the Pahlavi dynasty in the 20th century, however, disrupted this historic fabric. The Road Widening Act of 1933 which was part of a broader modernization agenda, initiated a shift that prioritized industrial expansion, employment, and infrastructure, also led to

the gradual erosion of the historic center's social and cultural significance (Kermani, 2020). These reforms introduced new urban symbols like boulevards and public offices, though often at the expense of existing architectural patterns, reflecting the growing emphasis on national identity and industrial progress (Manoukian, 2012). This transformation signified a departure from heritage-focused urbanism, as development began to encroach on historically and culturally significant areas without sufficient regard for their contextual integrity (Izadi, 2008).

Figure 2.4.

Map of Shiraz City



Note. Shiraz Urban Structure (Soltani & Sharifi, 2012)

In the following decades, the trend of imposing large-scale development on the historic districts persisted, exemplified by Shiraz's first Master Plan by the University of Tehran. The plan accelerated eastward and westward expansions, increasing Shiraz's land area and solidifying a preference for linear urban growth over the organic preservation of the old city center (University of Tehran, 1972). The Islamic Revolution of 1979 introduced another dimension of modernization, where extensive state-led projects replaced smaller, community-driven initiatives (Kermani, 2020). Despite the intention to advance societal reforms, the top-down nature of these projects further alienated local residents and disregarded the unique socio-cultural fabric of the area, accelerating the historic city's physical and social decline. The 1997 electoral

success of reformist leaders sparked a wave of policy changes, giving rise to more integrative approaches like the Urban Development and Revitalization Company (UDRC), which aimed to balance socio-political progress with heritage conservation (Izadi, 2008). This reformist drive encouraged collaborative planning and community engagement, a departure from earlier interventions that had overlooked local input (Kermani, 2016). The shift enabled initiatives that respected the cultural landscape, reintroducing elements of traditional architecture and rehabilitating decaying structures, which simultaneously enhanced the historic charm and economic viability of Shiraz. This approach saw the revival of artisanal crafts and the creation of employment opportunities for local craftsmen, enriching the cultural and economic tapestry of Shiraz's old districts (Leslie, 2001). The recent focus on a strategic, adaptable framework has contributed to a more dynamic conservation model, as projects now aim to sustain the local way of life while rejuvenating the historic core. This approach, grounded in heritage values and responsive to local advocacy, has allowed Shiraz to reassert its unique identity within Iran's urban narrative. Growing public opposition to destructive redevelopment signals a heightened awareness of heritage values among locals, who increasingly champion the authenticity of Shiraz's historical identity on social and cultural platforms. This societal shift highlights a new collective commitment to preserving Shiraz's legacy while fostering a heritage-sensitive urban future that reflects the shared cultural memory and socio-spatial integrity unique to Shiraz (Kermani, 2020).

Table 2.5*Comparative Analysis of Precedent Studies*

Feature	Galle Fort, Sri Lanka	Ahmedabad, India	Cairo, Egypt	Shiraz, Iran
Historical Context	Portuguese and Dutch colonial influences; rich multicultural past; integration of European and Asian architecture (Kuruppu & Wijesuriya, 1992).	Founded in 1411; fortified city with diverse rulers, including Gujarat Sultanate, Mughals, and British; Pol neighborhoods reflect social cohesion (INTACH, 2015).	Islamic monuments and neighborhoods reflecting centuries of dynastic rule; UNESCO World Heritage Site (Sedky, 2009).	Zand dynasty's capital in the 18th century with grand architecture; disrupted by 20th-century Pahlavi modernization reforms (Scarce, 1991).
Challenges in Conservation	Disjointed focus on physical preservation; undervaluation of intangible heritage such as fishing practices and ecological assets (Jayatissa, 2009).	Urban sprawl diminishing historic identity; economic pressures leading to gentrification and cultural displacement (Kishnadwala, 2015).	Commodification of heritage driven by tourism; lack of community engagement; selective preservation (Paymanafar, 2021).	Rapid urban expansion and modernization eroding historical fabric; top-down projects disconnected from local context (Kermani, 2020).
Key Conservation Strategies	Integrated management plans addressing ecological, cultural, and historical values (MCA-Sri Lanka, 2015).	HUL model emphasizing community engagement and traditional practices; initiatives like heritage walks (INTACH, 2015).	Aga Khan Trust projects promoting socio-economic development but limited in cultural authenticity; UNESCO HUL principles (Rashed, 2013).	Reformist urban planning (UDRC) with community collaboration and craft revival to restore socio-cultural vibrancy (Izadi, 2008; Leslie, 2001).

Intangible Heritage	Overlooked in standardized tools; traditional fishing and coastal ecology essential to local identity (Kuruppu & Wijesuriya, 1992).	Social cohesion in Pol neighborhoods; traditional crafts and practices marginally integrated (Mistry, 2018).	Cultural practices overshadowed by aesthetic restoration; organic urban evolution disrupted (AlSayyad & Nam, 2014).	Growing societal advocacy for preserving shared cultural memory and socio-spatial integrity (Kermani, 2020).
Use of Standardized Tools	Inadequate in addressing site-specific needs; ecological aspects undervalued (Avrami et al., 2019).	Standardized tools fail to capture nuanced socio-economic and cultural dynamics of the Pols (Hampton, 2005).	HUL principles challenge implementation due to tensions between tourism and authentic representation (Paymanafar, 2021).	Standardized frameworks insufficient for capturing Shiraz's dynamic urban identity; need for adaptable strategies (Kermani, 2020).
Lessons for Authenticity	Conservation must include ecological and intangible cultural aspects to reflect holistic authenticity.	Emphasis on community involvement in conservation strategies enhances socio-cultural authenticity.	Addressing commodification and selective preservation can safeguard cultural integrity and authenticity.	Socio-political reforms and participatory planning enrich heritage conservation, fostering authenticity through shared memory (Izadi, 2008).

Note. Comparative Summary Table of Precedent Studies

The comparative analysis of Galle Fort, Ahmedabad, Cairo, and Shiraz highlight critical challenges and opportunities in the discourse on heritage authenticity. These case studies reveal the limitations of standardized conservation tools, such as the Venice Charter (ICOMOS, 1964) and the Nara Document (ICOMOS, 1994), in addressing the nuanced interplay between tangible and intangible heritage elements. The emphasis on material preservation within these frameworks often overlooks socio-cultural and ecological dimensions, as seen in Galle Fort's neglected traditional fishing practices and ecological interdependence (Kuruppu & Wijesuriya, 1992; Jayatissa,

2009). Similarly, Cairo's commodified heritage landscape, shaped by tourism-driven consumption patterns, demonstrates how selective conservation can erode cultural integrity (Paymanafar, 2021).

These findings echo Labadi's (2010) critique of conservation practices that prioritize aesthetics over community engagement and social narratives. The integration of socio-cultural dimensions in Ahmedabad and Shiraz illustrates the importance of community-driven approaches in fostering authenticity. The Pol neighborhoods in Ahmedabad exemplify the role of social cohesion and shared traditions in preserving a sense of place (Mistry, 2018). Likewise, Shiraz's participatory planning initiatives, including craft revival and local advocacy, demonstrate the potential for socio-political reforms to enhance heritage authenticity (Kermani, 2020). These examples align with Smith's (2006) constructivist perspective, framing authenticity as a co-created and evolving construct shaped by collective narratives.

Contextual adaptability, in this comparison, emerges as a pivotal criterion for authenticity. While Galle Fort and Cairo expose the inadequacies of rigid frameworks, the integrative strategies in Ahmedabad and Shiraz highlight the value of tailored methodologies. Ahmedabad's heritage walks and Shiraz's initiatives under the Urban Development and Revitalization Company (UDRC) illustrate how adaptable conservation strategies can balance historical continuity with modern development (Izadi, 2008; INTACH, 2015). This aligns with Lowenthal's (1985) emphasis on the relational and dynamic nature of heritage, suggesting that adaptability is essential for maintaining authenticity in diverse cultural contexts. The findings emphasize the inseparability of tangible and intangible heritage elements. Galle Fort's traditional fishing practices and Cairo's cultural activities in neighborhoods like Al-Darb al-Ahmar exemplify how intangible heritage complements physical structures, creating a holistic sense of authenticity (AKTC, 2007; Dahdouh-Guebas et al., 2005). Theoretical frameworks such as Norberg-Schulz's (1980) concept of *genius loci* further highlight the need to preserve both spatial and symbolic dimensions, reinforcing the importance of integrated conservation methodologies.

2.4.5 Insights from Practical Adaptations; Identifying Gaps in Authenticity Assessment

The conservation of heritage in urban environments requires a nuanced, adaptable approach that respects both tangible and intangible values. As illustrated by the case

studies of Galle Fort (Sri Lanka), Ahmedabad (India), Cairo (Egypt), and Shiraz (Iran), balancing historical preservation with contemporary demands is a complex task (Avrami et al., 2019; Denyer, 2011). The analysis implies a need for standardized yet adaptable methodologies that ensure heritage conservation, honours cultural significance, while supporting sustainable urban development. Traditional methods of evaluating authenticity are deeply rooted in objective standards that primarily focus on the tangible aspects of heritage, such as physical structures and materials. This approach, while valuable, does not fully capture the intricate and multifaceted nature of authenticity, particularly in its intangible forms, such as cultural practices and community values (González Martínez, 2017; Su et al., 2020).

The lack of adaptability in authenticity tools also impacts the sustainability of heritage initiatives (Fredheim & Khalaf, 2016). One significant limitation of these tools is their reliance on a one-size-fits-all methodology that fails to account for the cultural diversity and unique historical contexts of different regions. The Nara Document on Authenticity, introduced by UNESCO, attempted to address this by broadening the concept of authenticity to include a more global perspective. While the Nara Grid offers a flexible structure for integrating material preservation with intangible cultural values, it often falls short in several key areas crucial for managing the complexities of diverse urban environments (Avrami & Mason, 2019; Bandarin & Van Oers, 2012).

In Galle Fort, fragmented governance emphasizes material conservation at the expense of intangible cultural practices and environmental factors essential to the site's significance (Avrami et al., 2019). This scenario underscores the need for an integrated, holistic model. This model incorporates local traditions, ecological resilience, and community involvement. Standardized methodologies like the Nara Grid can support such an approach by valuing both the physical and experiential facets of heritage, aligning with Williams' (1976) emphasis on performative culture and with McClelland et al. (2019), who emphasise on conservation practices that embrace performative and lived cultural elements. Addressing both tangible and intangible values enables heritage sites like Galle Fort to transcend mere architectural preservation and become living heritage spaces that engage and serve local communities meaningfully (Cohen & Cohen, 2012). Ahmedabad, in contrast, exemplifies a model of heritage conservation that successfully integrates community participation in conservation efforts, driven by the Municipal Corporation's

engagement with local stakeholders (Kermani, 2020). This approach aligns with AlSaiyad and Nam's (2014) advocacy for inclusivity in heritage management and with Williams' (1976) concept of performative culture, which stresses that heritage spaces gain authenticity through their connection to people and place.

In prioritizing adaptive reuse and community involvement, Ahmedabad effectively balances modern demands with historical preservation, maintaining its *genius loci*, or "spirit of place," as Schulz (1980) describes. This balance reinforces the cultural fabric of the city and is a model for other cities to emulate (Rashed, 2013). In Cairo, however, the commodification of heritage has led to a preservation approach that often prioritizes tourism over authenticity, threatening the ideological essence of its historic spaces (Adorno, 1973). Economic pressures and insufficient local engagement have diluted the deeper cultural significance of Cairo's Old City, calling for an ethnographic, consensus-based approach to heritage management that respects experiential and community-driven elements (Avrami et al., 2019). Here, the flexible application of the Nara Grid can provide a more culturally sensitive framework for conservation, acknowledging intangible practices that current assessment tools often overlook (Denyer, 2011). Such an approach aligns with Jokilehto's (2006) and Secchi's (1984) call for culturally grounded, adaptable methodologies that honour both tangible and intangible heritage values.

In contrast, Shiraz exemplifies the dangers of top-down urban regeneration projects that initially disregarded cultural dimensions, disrupting the city's traditional fabric (Harvey, 1992). The imposition of modern architectural elements and orthogonal street grids, echoing Harvey's (1989) critique of commodified space, illustrates the need for context-sensitive conservation strategies that value cultural and social dimensions alongside material preservation. Recent reforms in Shiraz, which now integrate community participation into the conservation process, reflect a shift toward more inclusive, bottom-up strategies that foster deeper connections between residents and their heritage (Kermani, 2020). This shift resonates with Dovey's (1999) principles of spatial and social authenticity, helping to restore a sense of place that aligns with the lived experiences and cultural memory of the local community (Rashed, 2013).

The experiences from case studies such as Galle Fort, Ahmedabad, Cairo, and Shiraz highlight the need for an understanding of authenticity that integrates both tangible and intangible values, particularly through community engagement. These cities

illustrate that preserving a unique sense of place involves weaving together historical significance with contemporary demands (McClelland et al., 2019; AlSayyad & Nam, 2020). However, the Nara Grid's general guidelines may not sufficiently address the unique historical, social, and cultural specifics of each urban area. Urban environments are rich tapestries of diverse cultural practices, histories, and identities, and the Nara Grid's broad framework lacks the depth needed to fully capture these nuances.

This often leads to conservation practices that may overlook the distinctive characteristics of different urban communities, as demonstrated in Galle Fort, where local traditions were marginalized in favor of more easily quantifiable architectural elements (Labadi, 2010; Kuruppu & Wijesuriya, 1992). Although the Nara Grid is designed to be adaptable, its application in rapidly changing urban settings reveals its limitations. Urban environments are constantly evolving, with dynamic socio-economic and cultural shifts. The Nara Grid does not always provide the detailed methodologies needed to adapt to these rapid changes effectively. This rigidity can result in conservation strategies that are not responsive enough to the immediate needs and evolving realities of urban communities, potentially stifling the organic growth and transformation that characterize vibrant urban centers, as seen in the case of Cairo's urban regeneration efforts (Asdar Ali & Martina, 2010; SCA, 2002).

The Nara Grid, in this regard, promotes the integration of both tangible and intangible heritage elements, which is essential for holistic conservation (UNESCO, 1994). It may, though, fall short in providing a systematic approach for evaluating and balancing these elements. In diverse urban settings, the intangible aspects of heritage, such as community practices, oral traditions, and social behaviors, are just as vital as the physical structures. The Nara Grid's lack of detailed methodologies for assessing these intangible elements means that they often receive less attention, resulting in conservation efforts that prioritize the physical at the expense of the cultural and social (Avrami & Mason, 2019; Harrison, 2009). While community involvement is acknowledged as important in the Nara Grid, it does not provide comprehensive guidelines or mechanisms to ensure active participation from all relevant stakeholders. Effective heritage conservation in urban environments requires the active involvement of local communities, government bodies, heritage professionals, and other stakeholders. The Grid's lack of specific strategies for engaging these groups can lead to top-down approaches that do not fully reflect the needs and values of the

community, potentially leading to resistance or lack of support for conservation initiatives, as evidenced by the experiences in Ahmedabad (Kuruppu & Wijesuriya, 1992; Mistry, 2018).

While the Nara Grid supports sustainable heritage management, it does not explicitly address the balance between heritage preservation and modern urban needs. Urban environments face significant pressures from development, population growth, and environmental challenges. Sustainable conservation practices must navigate these pressures, promoting heritage preservation that is compatible with contemporary urban development, tourism, and economic needs (Hampton, 2005; Hutter, 2019). The Nara Grid's general guidelines do not provide the specificity needed to develop sustainable strategies that align heritage conservation with urban development goals, such as infrastructure expansion and environmental protection. It encourages alignment with international conservation principles but lacks detailed guidance on navigating the complex regulatory landscapes of local, national, and international levels.

Urban heritage sites often fall under multiple jurisdictions and regulatory frameworks. Effective conservation strategies require tools that help navigate these complexities, ensuring that heritage policies are consistent with broader urban planning and development regulations. The Grid's general approach may not provide the clarity needed for managing these multifaceted legal and administrative requirements effectively. Though the Nara Grid provides a valuable foundation for heritage authenticity assessment, its broad and flexible nature means it lacks the specificity required to address the diverse and complex realities of urban environments fully. To bridge these gaps, additional tools and methodologies that offer more detailed, context-sensitive guidelines are necessary. By incorporating these missing factors, including the critical lessons learned from the experiences of Galle Fort, Ahmedabad, Cairo, and Shiraz, heritage conservation efforts can become more inclusive, sustainable, and effective, ensuring the preservation of both tangible and intangible values in the vibrant and dynamic contexts of urban areas.

2.5 Preliminary Discussion

The discourse on authenticity in heritage conservation, continues to grapple with the complexities of urban transformation, resonating with long-standing debates surrounding the Venice Charter and the Nara Document. As cities expand and

modernize, the delicate balance between heritage preservation and urban development becomes increasingly difficult to maintain. Nowhere is this challenge more evident than in rapidly urbanizing regions, where the push for infrastructure and economic growth often comes at the cost of cultural heritage. The erosion of both tangible and intangible heritage in these settings underscores the pressing need for conservation strategies that safeguard authenticity while accommodating the evolving urban fabric.

Conventional methodologies for assessing authenticity tend to emphasize material preservation, often at the expense of the lived experiences and evolving cultural practices that define heritage sites. This approach risks marginalizing local communities whose traditions, knowledge systems, and social structures are intrinsic to a site's historical continuity (Camagni et al., 2020). The Venice Charter laid the groundwork for conservation principles, emphasizing the architectural and material integrity of heritage sites (ICOMOS, 1964). Yet, its rigid framework does not fully account for the socio-cultural dimensions that shape the authenticity of urban heritage. The Nara Grid attempts to bridge this gap by incorporating community perspectives, yet its broad framework lacks the adaptability required for the diverse and dynamic realities of contemporary urban environments.

The limitations of these existing methodologies become especially pronounced in historic urban centers such as Ahmedabad, Cairo, and Shiraz, where heritage conservation must contend with rapid urbanization, economic shifts, and social transformation. Standardized tools like the Nara Grid provide a structured means of assessing authenticity but often fail to capture the complex interweaving of social, economic, and cultural factors that define historic neighborhoods (Kermani, 2020; Rashed, 2013). Hence, without a more nuanced approach, conservation efforts risk prioritizing physical structures while overlooking the intangible cultural elements that give these spaces their unique identity.

The growing urgency for adaptable conservation methodologies is evident in the shifting dynamics of urban governance, where top-down policies frequently marginalize local voices and diminish the cultural resonance of heritage sites. Adaptive reuse has emerged as a critical strategy in response, advocating for flexible, community-driven conservation models that sustain both tangible and intangible heritage (Secchi, 1984; Harvey, 1989). While material authenticity remains central to conservation discourse, its dominance, though often leads to an incomplete

representation of heritage, neglecting the significance of oral histories, rituals, and everyday interactions that shape the character of historic spaces (Denyer, 2011; Jokilehto, 2006). Moving towards a more integrative approach demands the development of conservation tools that are both systematic and adaptable. The experiences of Galle Fort, Ahmedabad, and other historic cities illustrate the limitations of existing authenticity assessments, which frequently overlook the need for direct community engagement and contextual sensitivity. While the Nara Grid advocates for a balance between tangible and intangible heritage, its lack of detailed methodologies often results in conservation efforts that default to physical preservation, sidelining broader cultural dimensions (Cohen & Cohen, 2012). Its reliance, on expert-driven assessments, further raises concerns about inclusivity, as community voices often remain secondary to institutionalized narratives (Kuruppu & Wijesuriya, 1992; Mistry, 2018).

The challenge extends beyond heritage authenticity to the intersection of conservation and urban planning. Cities are under pressure, to accommodate population growth, infrastructure demands, and environmental sustainability, all of which directly impact heritage sites. The Nara Grid, while providing a flexible foundation, does not explicitly address how heritage conservation can align with contemporary urban needs, leaving a critical gap in its applicability (Jayatissa, 2009; Hampton, 2005). A more comprehensive and inclusive framework would integrate heritage preservation within broader urban strategies, ensuring that conservation efforts contribute to the resilience and sustainability of cities rather than operating in isolation. Addressing these gaps, requires a recalibration of conservation methodologies, one that moves beyond rigid frameworks to embrace fluid, context-sensitive approaches. Heritage conservation must evolve in tandem with the urban landscape, ensuring that authenticity is not merely preserved in static forms but remains a dynamic, living aspect of the city's identity. By incorporating more inclusive, adaptable, and interdisciplinary strategies, conservation efforts can sustain both the material and experiential essence of heritage, reinforcing its relevance in the ever-changing fabric of urban life.

CHAPTER 3

REVIEW OF LITERATURE

Chapter Overview

In the previous chapter, a theoretical framework for the investigation of the relationship between authenticity and heritage conservation was constructed by delving deeper into the evolution of their theoretical notions as well as those associated with them. It was discovered that the conceptualization which had begun with the focus on material structure has now been extended to accommodate the social, cultural, economic, emotional and perceptual dimensions of place as well as the manifestations of experiences of place such as sense of place and spirit of place. Indeed, Jokilehto (2006) and Labadi (2010) have established without doubt that the role of authenticity in heritage conservation has evolved from an emphasis on material preservation to a broader, multidimensional approach that integrates social, spatial, and experiential dimensions. Accordingly, today, both tangible materialistic objects as well as the intangible values, practices and perceptions have come to occupy the centre stage. Assessments of authenticity thus require both qualitative and quantitative evaluations for which multi-faceted and nuanced frameworks that employ all facets of techniques and tools are needed.

It is well known that, numerous international heritage frameworks exist, such as the Venice Charter (ICOMOS, 1964) and the Nara Document on Authenticity (ICOMOS, 1994). It is undeniable that they have played a critical role in shaping the conservation practices around the world. However, as Van Balen (2008) and many others have shown, their applications in everyday practices have attracted much debates and discussions. Apaydin (2020) in particular points out that, these frameworks have evolved in response to the increasing recognition of cultural diversity and the need for adaptable conservation strategies.

In this context, it is now necessary to figure out where the new directions may be conceptualised in constructing a framework for the assessment of authenticity in heritage conservation, which this thesis aims to accomplish. This chapter therefore explores previous research in order to establish the status of current knowledge and

identify where the gaps in that knowledge exist particularly related to methods of assessment of authenticity.

It intends to illuminate the body of knowledge while recognizing the inadequacies and dark spots, while emphasizing how a clear, reliable methods for the assessment of authenticity could be constructed. The intention is to help infuse both the theoretical corpus as well as the practical frameworks with the ability to balance heritage conservation with contemporary urban challenges, in order to ensure that cultural identity and historical continuity buttressed by authenticity becomes central to all the efforts in the conservation of buildings and settings (Pendlebury, 2009; Kermani, 2020).

Building on the key theoretical constructs discussed in the previous chapter, this chapter begins with an introduction to the different types of authenticity, considering how they intersect with material integrity, place identity, and lived cultural expressions (Smith, 2006; Larsen, 2013). The experiential framework of authenticity is examined as a necessary evolution in conservation thinking, recognizing authenticity as, not a static attribute but a dynamic construct shaped by human interactions, perceptions, and memories (Norberg-Schulz, 1980; Relph, 1976). This shift aligns with the growing advocacy for community-driven heritage management approaches, where local engagement plays a vital role in sustaining authenticity beyond the formal efforts of preservation (Waterton & Watson, 2013).

It then analyses and critiques the limitations of current assessment tools and conservation charters, such as the Nara Grid, Venice Charter (ICOMOS, 1964) and the Nara Document on Authenticity (ICOMOS, 1994). It is known that while the Nara Grid provides a flexible structure for integrating materialistic and cultural heritage values, its application often falls short in addressing the complexities of urban heritage conservation, particularly in rapidly transforming environments like Cairo and Ahmedabad (Avrami & Mason, 2019; Bandarin & Van Oers, 2012).

As also articulated by Van Balen (2008) and Apaydin (2020), it therefore argues for the need to develop adaptable assessment methodologies that account for diverse cultural contexts and evolving social practices. The discussion revisits the arguments of Fadaei Nezhad & Eshrati (2015) and Gregory (2008) who have assessed the strengths and limitations of existing tools such as the Nara Grid and survey-based authenticity scoring models. In other words, the chapter analyses the limitations of

conventional techniques of assessments of authenticity, highlighting how emerging interdisciplinary approaches, such as computational modeling, participatory mapping, and ethnographic research, offer a more complete understanding of authenticity (Mitchell et al., 2009; McClelland et al., 2019).

This study aims to address these gaps by developing a structured, adaptable, and multi-layered framework for evaluating authenticity, ensuring that conservation efforts remain culturally sensitive, historically relevant, and socially inclusive.

This chapter thus bridges theoretical insights with the research questions guiding this study. By tethering these questions to the theoretical framework, it establishes the foundation for developing an integrated, context-sensitive model for assessment of authenticity. It is buttressed on the premise articulated by DeSilvey (2017) and Pendlebury (2009) that conservation must move beyond material evaluation, advocating for adaptable, empirical, and community-centered methodologies that align with the evolving realities of urban heritage. Undeniably, its foundation is a method of assessment of authenticity as being either present or absent in the heritage situation subject to conservation. This chapter indeed argues for the establishment of a more comprehensive mechanism for evaluating authenticity in heritage conservation which is holistic, reliable and flexible.

3.1 Learning from the Theoretical Framework

Martínez (2017) points out that authenticity assessment tools thus far have either focused on objective, material attributes such as architectural integrity, restoration techniques, and historical documentation. This is in complete contrast to a more quantified or objective approach. However, this material-centric approach fails to adequately address intangible heritage, including lived traditions, community narratives, and evolving social practices (Labadi, 2010; McClelland et al., 2019). In this context, the Nara Document (1994) has attempted to redefine authenticity by incorporating cultural diversity and local traditions. However, Avrami & Mason (2019) and Bandarin & Van Oers (2012) show that its practical application remains constrained by its broad and non-prescriptive guidelines.

Indeed, the comparative analysis of precedent studies, presented in this thesis: the Galle Fort (Sri Lanka), Ahmedabad (India), Cairo (Egypt), and Shiraz (Iran), eloquently demonstrates the complexities of balancing historical preservation with

contemporary urban pressures (Avrami et al., 2019; Denyer, 2011). These case studies reveal significant gaps in existing methodologies of assessing authenticity, highlighting the inadequacy of standardized frameworks like the Nara Grid in capturing the diverse socio-cultural and environmental dimensions of heritage conservation (Fredheim & Khalaf, 2016; Su et al., 2020). Undeniably, these case studies reinforce the limitations of these standardized tools.

For example, in Galle Fort, conservation policies prioritize physical preservation over the cultural practices and ecological factors that define the historical identity of the site (Kuruppu & Wijesuriya, 1992; Jayatissa, 2009), highlighting the need for an integrated model that values both tangible and experiential dimensions. In contrast, Ahmedabad exemplifies successful community participation in conservation, demonstrating that heritage authenticity is best sustained through collaborative, adaptive reuse strategies (Mistry, 2018; INTACH, 2015). The model applied there is more in alignment with the concept of *genius loci* (Norberg-Schulz, 1980), illustrating that authenticity stems from the active engagement of local communities in heritage preservation (Schulz, 1980; Rashed, 2013). Indeed, it has now been well established that conservation of heritage requires a nuanced and adaptable approach that respects both the tangible and intangible values.

Cairo reflects the dangers of commodification, where heritage sites are transformed into commercial assets catering to tourism rather than cultural continuity (Paymanafar, 2021; Adorno, 1973). This reinforces the need for conservation strategies that move beyond aesthetic restoration, instead incorporating ethnographic and participatory approaches that prioritize local voices and cultural relevance (Avrami et al., 2019). Similarly, Shiraz demonstrates how top-down urban planning and modernization can erode authenticity by disregarding socio-spatial histories (Kermani, 2020). The gradual shift toward more inclusive conservation strategies in Shiraz suggests that authenticity is best preserved when planning decisions integrate local narratives and participatory governance (Dovey, 1999; Rashed, 2013).

What is noteworthy is that these insights collectively challenge the effectiveness of existing assessment methodologies in capturing the fluid and evolving nature of authenticity. While the Nara Grid provides a foundation for incorporating both material and intangible elements, its approach lacks the specificity required to address local heritage dynamics, or ground it contextually (Labadi, 2010; Kuruppu &

Wijesuriya, 1992). This further reinforces that urban environments are dynamic spaces, constantly shaped by the socio-economic, cultural, and environmental transformations.

Indeed, current authenticity frameworks do not offer detailed methodologies for adapting to these rapid changes, resulting in conservation practices that risk becoming obsolete (Asdar Ali & Martina, 2010; SCA, 2002). The broader implication is the need for contextually adaptable authenticity assessment models that integrate both the qualitative and quantitative methodologies (Avrami & Mason, 2019). This includes expanding evaluation criteria to account for social participation, economic sustainability, and cultural resilience (Harrison, 2009). As Cohen & Cohen (2012) point out, effective conservation should not merely protect historic buildings but also sustain the living traditions, narratives, and socio-spatial relationships that define heritage identity. In response to these findings, this research advocates for a more recalibrated approach to assessment of authenticity, which synthesizes material evaluation with community-driven methodologies, digital heritage tools, and participatory conservation practices (McClelland et al., 2019; DeSilvey, 2017).

3.2 Extending the Theoretical Framework

It has been already mentioned that authenticity in heritage conservation is a dynamic and evolving concept, shaped by shifting cultural, philosophical, and methodological perspectives. Contemporary discourse, challenges static views towards authenticity, advocating for a broader, more inclusive understanding that incorporates social, experiential, and contextual dimensions (Smith, 2006; Larsen, 2013). This shift reflects in international heritage charters, such as the Nara Document on Authenticity (ICOMOS, 1994), which expanded the definition of authenticity to encompass cultural traditions, community values, and evolving historical narratives (Van Balen, 2008). It was argued that as urban environments continue to evolve, the need for adaptable authenticity assessment methods becomes increasingly critical, in the face of rapid urbanisation. Inflexible, one-size-fits-all frameworks often fail to capture the complexities of heritage sites, particularly in contexts where intangible cultural heritage and community participation play a central role in shaping authenticity (Waterton & Watson, 2013; González Martínez, 2017).

The challenge, is therefore, in developing approaches that balance empirical assessment with the lived experiences and cultural identities embedded within the historic places. This requires a reconceptualization of authenticity not as a fixed attribute but as a process, something that is negotiated over time through interactions between heritage sites, local communities, and conservation practices (McClelland et al., 2019; DeSilvey, 2017).

Silva (2017) expands on this dynamic conceptualization by introducing the idea of Symbolic authenticity, which goes beyond material facets and encompasses spiritual authenticity. The continuity of the meanings and values that were initially connected to a heritage site, as well as the degree to which these meanings are still understood, practiced, and deemed significant by the communities that are associated with the location, are referred to as symbolic authenticity. Symbolic authenticity assesses the extent of knowledge, ritual practice, memory, and cultural continuity that maintains the significance of heritage over time, as opposed to merely looking at physical integrity or modern perceptions. This idea challenges conservation theory to consider whether people still comprehend and identify with a place's original symbolic meanings, even as interpretations change, rather than just whether they acknowledge it as “authentic”.

By exploring the evolving nature of authenticity, this section critically examines the theoretical underpinnings that inform heritage conservation today.

3.2.1 Intrinsic and Extrinsic Values of Authenticity

As the discussion on authenticity in heritage conservation deepens, and we touch upon the intrinsic worth of built structures, it becomes crucial to distinguish between the various dimensions that contribute to the multifaceted nature of authenticity. The interplay between intrinsic and extrinsic values, as well as the dynamic relationship between materials, aesthetics, and spiritual significance, highlights the complexity of conservation practices (González Martínez, 2017; Su et al., 2020). This complexity requires a nuanced understanding of how these elements interact, particularly in relation to the conservation of heritage sites. This will also give a critical insight into the conflict regarding preference for certain values of authenticity over others. It becomes apparent that heritage conservation must integrate both the inherent and attributed values of cultural assets to justify their protection and perpetuate their relevance (Avrami et al., 2000). Such significance transcends the materiality of

heritage sites, encapsulating intangible dimensions such as memory, identity, and collective relationships (Australia ICOMOS, 1999).

This broader view acknowledges that the values tied to heritage are often extrinsic, shaped by a variety of social groups whose perspectives may evolve with changing contexts, though core cultural values remain relatively stable (Roders & Hudson, 2011). Drawing from Riegl's (1903) differentiation between memorial and contemporary values, modern frameworks have expanded to incorporate multiple perspectives on heritage values, integrating typologies that reflect the dynamic roles heritage plays within communities (Mason, 2002; Riganti & Nijkamp, 2005). These guidelines, including those from UNESCO and the Council of Europe, seek to codify cultural values within a framework that balances traditional values with the demands of sustainable development (English Heritage, 2008; EC, 2005 in Battaini-Dragnoni, 2005).

By employing these typologies, Roders (2007) further refines this framework by categorizing cultural values into social, economic, political, historical, artistic, scientific, temporal, and ecological. This approach addresses limitations within the initial framework of the UNESCO World Heritage Convention, aligning heritage conservation with sustainable development goals across ecological, social, and economic dimensions (Riganti, 2005). Through this lens, heritage assets are appreciated not only for their historical and aesthetic significance but also for their relevance in fostering social cohesion, economic viability, and environmental resilience.

Social values, particularly, underscore the "spirit of place" or *genius loci*, which fosters a deep emotional bond and sense of belonging among communities, reinforcing heritage assets as critical to identity and continuity (Mason, 2002). In contrast, economic values prioritize the functional and monetary contributions of heritage sites, underscoring their role in economic development, albeit with caution against potential commodification that may threaten authenticity (Mason, 2002). Political values, integral to heritage designation and protection highlight the ideological and cultural significance attached to heritage, reflecting collective pride, identity, and cultural symbolism (Mason, 2002).

Historical values anchor heritage within a temporal framework, linking generations through shared narratives, while aesthetic values capture the sensory and intellectual

responses that heritage evokes, celebrating sites as milestones of artistic and architectural achievement (Rodgers, 2007). Scientific value extends this appreciation to encompass informational and technological aspects, positioning heritage as a repository of human innovation and knowledge (Burra Charter, 1999).

Temporal values emphasize resilience and continuity across generations, while ecological values, increasingly central to conservation discourse, promote a balanced relationship between heritage and its natural surroundings, advocating sustainability as a core conservation goal (Rodgers, 2007). Collectively, these values create a holistic framework for assessing cultural significance, which, as Mason (2002) suggests, enables a more inclusive, multi-dimensional approach to heritage conservation.

Indeed, this expanded typology is crucial for balancing traditional cultural values with broader considerations of social, ecological and economic sustainability, ensuring that the cultural, historical, and communal significance of heritage assets endures for future generations. An analysis of over 40 international guidelines underscores that these expanded values facilitate a balanced and inclusive approach to heritage conservation, one that respects the diverse layers of significance ascribed to heritage sites across many contexts.

A thorough analysis of distinct values such as Materials and Aesthetics Authenticity, Place-Based and Historical Authenticity, and Spiritual Authenticity enhances our comprehension of the cultural relevance and illustrates the complexity and variety of heritage conservation approaches and practices. Each of these values represents a distinct yet interconnected dimension that contributes to the holistic conservation of heritage sites.

Materials and Aesthetics Authenticity delves into the tangible attributes that define the physical integrity of heritage structures, while Place-Based and Historical Authenticity encompasses the temporal and locational contexts that ground heritage assets within specific cultural narratives. Spiritual Authenticity, meanwhile, highlights the intangible connections that bind communities to heritage, emphasizing the role of memory, identity, and cultural resonance.

These values are further explored in detail, to formulate a deeper perspective on how they shape conservation practices and influence the ways communities and stakeholders interact with and perceive heritage assets. The main focus remains in

understanding, how approaches to authenticity differ across cultural contexts, reflecting both materialistic and spiritual interpretations that shape our understanding of heritage conservation practices (Khalaf, 2020).

3.2.1.1 Authenticity of Materials and Aesthetics

When a heritage site is demarcated to undergo conservation, multiple factors of authenticity may be present. At the same time, conservation to be based on authenticity may still have different approaches when factoring in materials and aesthetics of a heritage site. Given the fact that examining authenticity in heritage started with the emphasis on the static physical elements of a heritage site and was strongly linked to tangible values (Su, 2018), they could be evaluated first. They could in fact use strict, objective standards (Maccannell, 1973).

It should be reiterated that the initial argument saw differing discourses about how to authentically conserve, where Ruskin (1845) leaned towards a complete dismissal of any restoration, while Morris showed tolerance of repair and preservation, without any alteration (Rouhi, 2016; Mehr, 2019). This view reflects an alignment of a more Western or Eurocentric approach to authenticity, and generally materialists dictate the authenticity of a conservation proposal, as deliberated by Winter (2014). In contrast, Eastern inclination of authenticity is rooted more towards a non-materialistic and spiritual character of a heritage site, as has been discussed by Winter (2014), noting a difference of discourse. This difference in the interpretation of authenticity according to the specific cultural context, though, was fully acknowledged in the Nara Document (ICOMOS, 1994), drafted in the wake of World Heritage Convention, at Nara, Japan.

The Eastern approach, however, goes even further when in Qufu Declaration (2005), a complete replacement of old timber members was proposed as it advocated for a healthy state rather than one in ruins or disrepair, retaining the techniques and originally intended material, to maintain the spiritual and intangible character of the heritage site. This allowed for a more dynamic conservation technique, with emphasis on contemporary use and accessibility, while not withstanding any disrespect towards the proposed repairs as “fake antiques”, rather a return to “the original state”, as derived from the China Principles (1997-2015). Similarly, more subtle guidelines have been proposed on the Western hemisphere by Sanpaolesi, in a UNESCO (1972) document, outlining “Preserving and Restoring Monuments And Historic Buildings”,

where the need to restore with cement replicas was quoted from the restoration of Parthenon's external Colonnade.

At the same time, Sanpaolesi (UNESCO, 1972) also discouraged mindless replacement of materials, removal of other alterations or superimpositions that have happened over time. According to this argument, the decision to retain or remove may be taken only after the deliberation of the character, uniqueness and aesthetics, regardless of temporal value, where some elements, which may have come at a later date than the original, may be retained owing to the uniqueness, aesthetic value and character of that element. An example discussed was of a Baroque Church from the 17th Century, Sant'Urbano Alla Caffarella, built over a Roman tomb, on the Via Appia outside Rome. The Church under discussion was decidedly retained, keeping in mind the uniqueness and purpose of the building, while also preserving and displaying the underlaying elements of the original Roman tomb. This approach as suggested by Sanpaolesi in his General Principles for Conservation, touch upon aesthetic and place-based authenticity, retaining and preserving elements and sites, based purely on their unique aesthetic values and the purpose and sense of place, attached by the community.

From the above discussion on authenticity and its relevance in aesthetics, everyday life as well as heritage conservation, it is clear that there is a need to formulate a vantage point to develop a rubric and an evaluation system to ascertain authenticity. Indeed, this requires an understanding of material authenticity as related to the preservation of the physical values of heritage resources, which may include the building materials, methods of buildings as well as aesthetic authenticity. The approach to material authenticity is defined by the desire to preserve the physical attributes of heritage in their original conditions. Material authenticity is closely intertwined with aesthetic authenticity, often affecting the values of each other.

However, as noted in the Oufu Declaration (2005), where preserving the original materials take a backseat when it comes to preserving the aesthetic values of a heritage site, separating the two, or interchanging, may be difficult. Aesthetic authenticity of heritage resources is defined by the aesthetic and design values and characteristics of the resources, which involve their physical features, workmanship as well as other artistic aspects. The approach to preserving aesthetic authenticity involves managing and conserving elements which maximize the aesthetic values, involving sensory qualities lying in visual and experiential aspects. Hence, there is a need for a case-

based approach, while having a flexible and encompassing tool set to generally evaluate aesthetics

3.2.1.2 Place-Based and Historical Authenticity

Place based and historical authenticity encompass a broader understanding of heritage beyond mere materiality, integrating spatial, cultural and experiential dimensions. While early conservation discourses emphasized tangible authenticity, focusing on the material fabric of heritage buildings, contemporary perspectives argue for a more holistic approach, one that considers the dynamic relationship between place and historical continuity (Jokilehto, 2006; Labadi, 2010). This shift reflects an evolving discourse in heritage conservation where authenticity is increasingly understood as an interplay between historical evidence, cultural narratives and the lived experiences of communities (Graham, Mason & Newman, 2009). Tensions persist, however, between these perspectives, since let's face it, the materialist view still dominates conservation policies, often sidelining the social and contextual meanings embedded within heritage sites (Smith, 2006; Fredheim & Khalaf, 2016).

The historical trajectory of conservation approaches illustrates how different cultural contexts shape the interpretation of authenticity. In Western conservation theory, early advocates such as Ruskin (1845) and Morris (1877) strongly opposed restoration, emphasizing the preservation of historical fabric in its untouched form (Rouhi, 2016; Mehr, 2019). This philosophy underpinned international charters such as the Venice Charter ICOMOS, 1964, which enshrined material authenticity as the fundamental principle of heritage conservation. However, as Winter 2014 notes, this perspective is largely rooted in Eurocentric conservation ideologies, which prioritize physical integrity over the evolving social functions of heritage. In contrast, Eastern approaches to conservation have long emphasized the intangible and spiritual dimensions of heritage, valuing continuity of practice over material preservation Byrne, 1991. The Qufu Declaration 2005 exemplifies this contrast, as it advocates for the complete replacement of deteriorated timber members in historic Chinese structures, arguing that authenticity resides in craftsmanship, material techniques and spiritual continuity rather than in the original physical elements themselves (Zhang, 2013). This divergence underscores the need to contextualize authenticity within different cultural traditions, challenging the universal application of material-based conservation principles (Su, 2018).

The Nara Document on Authenticity (ICOMOS 1994) sought to address these divergences by acknowledging the relativity of authenticity and the necessity of considering cultural specificity in conservation practices (Larsen 1995, Stovel 2007). While this document broadened the scope of authenticity to include non-material dimensions, its implementation remains inconsistent because in practice, conservation assessments often revert to materialist interpretations (Labadi 2010). Cases such as Luang Prabang in Laos highlight this tension, where despite the adoption of the Nara framework, conservation efforts continue to prioritize the physical restoration of colonial-era structures, while neglecting local cultural practices and social transformations (Askew 2010). This raises critical concerns, concerns about whether heritage policies, despite their theoretical inclusivity, genuinely accommodate the evolving place-based meanings attributed to historic sites by communities (Pendlebury 2013).

The integration of place-based authenticity into heritage conservation also intersects with urban development and adaptive reuse practices. As historic environments undergo transformation, the question arises, whether authenticity is retained through physical conservation alone or if it must also account for evolving urban functions and community engagement (Rodwell, 2007). The Historic Urban Landscape (HUL) approach (UNESCO, 2011) attempts to reconcile conservation with urban growth by emphasizing the cultural and socio-economic dimensions of heritage. However, its application has revealed challenges, as seen in cases such as Edinburgh, where urban policies have struggled to incorporate participatory heritage management, resulting in a continued emphasis on façade conservation rather than meaningful community engagement (Veldpaus, Pereira Roders & Colenbrander, 2013). This demonstrates that while frameworks such as HUL propose holistic conservation strategies, their effectiveness often depends on the governance structures and policy mechanisms in place.

Another critical debate surrounding authenticity lies in the distinction between material and aesthetic authenticity. While material authenticity is concerned with the retention of original physical elements, aesthetic authenticity prioritizes visual and experiential qualities, sometimes necessitating selective restoration or reconstruction (Marschall 2010). This is evident in restoration debates, such as the reconstruction of the Parthenon's colonnade using cement replicas, as proposed by Sanpaolesi in a

UNESCO document (Sanpaolesi 1972). The rationale behind such interventions is that authenticity can be retained not only through original materials, but also through the preservation of a site's aesthetic integrity and spatial character (Sanpaolesi 1972). However, this approach is often contested, particularly in contexts where reconstruction risks altering the historical narrative of a place (Lowenthal 1998). The case of Warsaw's post war reconstruction, which meticulously replicated the city's historic center based on pre-war paintings and photographs, exemplifies this paradox. It raises the question of whether authenticity is defined by historical accuracy or by the continued presence of a cultural landmark (Stubbs 2009).

The notion of place-based authenticity further intersects with community engagement, as heritage sites are often deeply embedded within local identity and collective memory. Values-Based Heritage Management (VBHM) emphasizes the importance of integrating community perspectives into conservation decisions, ensuring that authenticity is not dictated solely by expert evaluations, but is also shaped by the lived experiences of those who interact with heritage daily (Mason 2002; Avrami et al. 2000). This approach has been instrumental in cases such as George Town, Malaysia, where local narratives played a central role in defining what aspects of heritage were most meaningful for conservation (Tan & Rahman 2017). However, as seen in the case of Lijiang, China, such approaches can also be co-opted by commercial interests, where heritage is commodified for tourism rather than preserved for cultural continuity, leading to the displacement of local communities and an erosion of authenticity (Su & Teo 2008). This illustrates that while participatory conservation models offer valuable insights, they must be carefully managed to prevent the exploitation of heritage for economic gains at the expense of social sustainability.

Despite the theoretical advancements in authenticity discourse, the practical application of place-based authenticity remains a challenge. Many existing conservation methodologies continue to operate within rigid assessment frameworks, often reducing authenticity to checklists of material conditions rather than engaging with the evolving and contested meanings of heritage (Fredheim & Khalaf 2016). The complexity of authenticity lies in its dual nature, both as an objective historical reality and as a subjective cultural construct shaped by interpretation and context (Smith 2006). A more effective approach to heritage conservation, therefore, necessitates moving beyond static preservation models towards adaptive frameworks, ones that

acknowledge authenticity as a dynamic and multi-dimensional concept. This involves integrating qualitative and quantitative methodologies that capture both tangible and intangible heritage values, ensuring that authenticity assessments remain flexible, yet structured, empirical, yet contextually nuanced (González Martínez 2017).

The future of heritage conservation must address the limitations of current authenticity paradigms by embracing methodological pluralism. Rather than privileging material or aesthetic authenticity in isolation, conservation strategies must balance historical integrity with the evolving needs of contemporary urban landscapes and communities (Avrami & Mason 2019). By recognizing heritage as an ever-evolving construct rather than a fixed relic of the past, future conservation practices can ensure that authenticity remains a meaningful and sustainable guiding principle in the management of historic sites worldwide.

3.2.1.3 Spiritual Authenticity

Spiritual authenticity is an important aspect that is taken into account in the theoretical frameworks for heritage management of value-based conservation. Jokilehto (2006) asserts that preservation efforts must respect the spiritual and religious significance of heritage sites and highlights the relevance of authenticity in heritage conservation. He says that in order to maintain the spiritual authenticity of a site, historical conservation efforts should focus on preserving the layout of the original elements, and the context of the location.

In this regard, the need for safeguarding the spiritual and religious values of heritage sites is emphasised in the Operational Guidelines for the Implementation of the World Heritage Convention. They insist that value-based conservation ought to involve local communities in the conservation process and should take into account social, cultural, and spiritual aspects (UNESCO, 2019) of a site. Indeed, understanding the cultural and spiritual aspects connected to heritage sites is crucial, according to Lowenthal (1998). As he says, value-based conservation should include the various meanings and values that people associate with heritage assets, including their spiritual significance. Some of the factors that affect spiritual authenticity in value-based conservation have been articulated below, based on Smith's (2016) observations of Spiritual "*wholeness*" of a heritage site.

Sacredness: Many heritage sites have spiritual or religious values because certain people see them as sacred. The sacredness of a site is recognised and valued in value-based conservation, and efforts are made to protect it from damage or desecration.

Ritual and Tradition: Spiritual or religious practises related to a heritage site are frequently firmly embedded in local communities and cultural traditions. The relevance of these rituals and traditions is recognised by value-based conservation, which attempts to conserve them as part of the spiritual validity of the site.

Significance to Belief Systems: Heritage sites may be significant to various belief systems, including indigenous, traditional, or mainstream religious groups. Value-based conservation considers the significance of these convictions and attempts to guarantee that the site's conservation respects and supports these ideals.

Authentic Experience: Efforts are undertaken in value-based conservation to ensure that visitors to a heritage site enjoy an authentic spiritual experience. This includes preserving the physical and intangible aspects of the site, such as its architecture, artefacts, and rituals, so that visitors can experience the site as it was intended.

Community Engagement: A critical component of the theoretical framework of value-based conservation is community engagement. Community participation is essential in the case of spiritual authenticity in order to understand the spiritual value of a heritage property and to involve local communities in the conservation process. This guarantees that conservation initiatives respect and reflect the community's beliefs and practises.

Spiritual Authenticity: Spiritual Authenticity of heritage resources lies in their religious or spiritual significance, defined by untouchable elements like customs, traditions and ritual practices etc. This form of authenticity also involves the engagement of concerning religious or spiritual groups and communities in the conservation process.

3.2.1.4 Symbolic Authenticity

Symbolic authenticity becomes a crucial but frequently disregarded aspect when the conceptual framework for heritage authenticity is expanded. According to Silva (2017), Symbolic authenticity is the degree to which a heritage site's original meanings, stories, and ritual associations are passed down through the generations,

creating a cultural continuity that supports the significance of place. Symbolic authenticity encompasses both spiritual and historical meanings, in contrast to spiritual authenticity, which is focused on religious value or sacred experience. It focusses on the extent of collective understanding regarding a location's initial cultural and symbolic roles and how they are preserved, reinterpreted, or lost over time. Silva (2017) uses the example of Kandy, Sri Lanka, to demonstrate the city's persistent status as a holy and

The city's lasting identity as a sacred and symbolic landscape is not only linked to its material ensemble, as Silva (2017) demonstrates with the example of Kandy, Sri Lanka, but also to the customs, festivals, myths, and place-based knowledge that are still ingrained in the collective consciousness, even if they are fragmentary or modified for contemporary living.

Value-based conservation is significantly impacted by this recognition:

- Intangible continuity, or the persistence of narrative, ritual, and mnemonic associations even when material forms are changed or recreated, is the first aspect of symbolic authenticity.
- Second, it emphasises how important community knowledge and belief systems are to maintaining heritage: conservation runs the risk of becoming disconnected from the site's lived significance if local populations fail to identify or pass on the site's original symbolic meanings.
- Third, even when heritage institutions shape official narratives and physical interventions, public support for conservation may still be strong in places like Kandy. This is explained by symbolic authenticity. In these situations, even in situations where material heritage has been altered, local conceptions of heroism and sacredness that are based on lived and inherited memory preserve symbolic value.

As a result, adding symbolic authenticity to conservation frameworks necessitates:

- Methods of participation that extract meanings from the community.
- Regular evaluations of the ways in which the original symbolic associations are being passed down, contested, or modified.
- A change in authenticity metrics from purely physical or expert-driven assessments to ones based on cultural resonance.

To put it briefly, symbolic authenticity ensures that conservation efforts foster the cultural vitality that survives rather than merely preserving form by serving as a link between historical meanings and contemporary relevance.

Table 3.1*Intrinsic and Extrinsic Values of Authenticity*

Type Of Authenticity	Applications In Heritage Management (HM)	Applications In Urban Heritage Management	Remarks
Materials and Aesthetics Authenticity	The management and conservation of factors that may have visual and/or sensory impact	High	One or the other may come forward as the dominant Value, based on case and context.
Place-Based and Historical Authenticity	Place entangled with social/spatial/historical context	Very High	Links To Intrinsic and Extrinsic Values
Spiritual Authenticity	Determinant of religious or spiritual importance, defined by intangible components such as conventions, traditions, and ritual practices	Contextually Dependent	Engages Local Communities as the most important stakeholders May be intertwined with Place-based and Historical Authenticity May impact Material Authenticity Links To Intrinsic Values but may require a context of Extrinsic Values
Symbolic Authenticity	Continuity and recognition of original cultural meanings, narratives, and value systems by the associated community over time	High	Emphasizes cultural memory and interpretive continuity

3.2.2 The Need for a Mechanism for Evaluating Authenticity

According to Bandarin and Van Oers (2012), rising urbanisation, environmental concerns, and socio-economic upheavals present a growing number of issues in contemporary urban landscapes. These elements jeopardize the cultural relevance of heritage sites and their physical integrity, frequently weakening sense of place (Tuan, 1974; Schultz, 1980). Tuan, 1974; Schultz, 1980). This is an issue that any mechanism for evaluating authenticity must deal with.

Evaluation of authenticity in heritage conservation has traditionally been dominated by qualitative methodologies, as seen in the frameworks established by the Venice Charter (ICOMOS, 1964) and the Nara Document on Authenticity (ICOMOS, 1994). These frameworks emphasize material integrity and cultural relativism, offering critical guidance on heritage conservation but lacking structured mechanisms to systematically assess the socio-cultural dimensions of authenticity (Jokilehto, 2006; Labadi, 2010). The reliance on descriptive methodologies, while being valuable in capturing the historical and symbolic significance of heritage sites, often introduces subjective biases that limit their application across diverse cultural landscapes (Smith, 2006; Avrami & Mason, 2019). The inherent flexibility of these qualitative tools allows for broad interpretations, but this same flexibility can result in inconsistencies in how authenticity is understood and measured across different regions and heritage contexts (González Martínez, 2017).

To address these limitations, there is a pressing need for a structured, adaptable, and context-sensitive mechanism for evaluating authenticity, which integrates quantitative metrics alongside qualitative insights. Quantitative methodologies introduce measurable criteria, offering a standardized yet flexible means to assess architectural integrity, historical narratives, cultural practices, and community perceptions (Avrami et al., 2019; McClelland et al., 2019). By incorporating statistical models, scoring mechanisms, and computational analysis, quantitative approaches can provide replicable, data-driven insights into the evolving nature of authenticity, ensuring that assessments are both empirical and inclusive (Schulz, 1980; Jokilehto, 2006). This integration does not seek to replace qualitative perspectives but rather complement them, allowing for a balanced framework that accounts for both universal conservation principles and regional cultural specificities (Labadi, 2010; Avrami & Mason, 2019).

3.2.3 Experiential Framework of Authenticity

Building on the limitations of existing frameworks, to bridge the critical gap between fixed methodologies and the lived, dynamic realities of urban heritage, the development of an approach to assessment or evaluation of authenticity in heritage conservation, which may be contextually adaptable, is critical. While traditional models seem to have an affinity to one value over the other, where one may fail to account for the experiential, cognitive, and participatory dimensions of authenticity, the other may cater to all but may fall short in the face of a critical factors of urban socio-economic developments that are central to the evolving identity of urban spaces.

As highlighted previously, the rapid urbanization of cities like Ahmedabad, Cairo, and Shiraz exposes the inadequacies of top-down conservation practices that overlook the intangible heritage and social practices vital to the local communities. In comparison, a philosophy, grounded in the iterative processes of observation, perception, cognition, memory, and engagement, offers a more adaptive and inclusive framework. By dissecting the values of these processes within this research, it seeks to not only capture the interconnected social, cultural, and economic dimensions of authenticity but also to ensure that heritage preservation aligns with broader urban development goals. This paradigm shift moves beyond rigid authenticity metrics, emphasizing co-created, community-centered practices that honor both tangible and intangible heritage, fostering resilient urban environments where historical continuity and contemporary relevance coexist harmoniously.

The philosophical foundation of this research converges on the core dimensions of observation, perception, cognition, memory, and engagement. These dimensions, deeply rooted in phenomenological and constructivist thought, serve as critical pillars for understanding the subjective and interactive nature of heritage interpretation and authenticity. Together, they illustrate how heritage conservation transcends mere preservation to become a dynamic interplay of tangible and intangible elements, shaped by cultural, historical, and emotional dimensions. Observations form the initial bridge between the individual and their environment, moving beyond passive sensory reception to become an active, culturally informed process.

In fact, this aligns with Merleau-Ponty's (1962) focus on embodied perception and Gehl's (2011) insights into human-environment interaction. In the heritage realm, observation involves more than visual engagement; it reflects an observer's cultural

positioning, historical context, and personal experience. Site managers or interpreters set expectations for visitor behavior and understanding, embedding observations within a broader interpretive framework (Poria et al., 2003). This interplay situates observations within a larger matrix of cognition and memory, as visitors discern not only what they see but also what they are expected to see.

Observations as the initial step in sensory engagement is emphasized also by Norberg-Schulz (1980), who highlights the role of perception in interpreting spatial and symbolic meanings within heritage contexts. Perception, as an extension of observation, incorporates sensory inputs into cognitive and emotional responses, constructing meanings actively rather than passively. Indeed, this resonates with constructivist theory, which emphasizes the subjective nature of reality shaped by personal and cultural frameworks (Piaget, 1970). In the heritage contexts, perception transforms tangible elements, like architectural designs, into symbolic narratives, creating resonance with both individual and collective memories (Halbwachs, 1925; Confino, 1997). This process also involves fulfilling orientation expectations set by the interpreters, who guide the visitors to deeper engagements through curated experiences (Rusch, 1992). Schmidt (1994) adds to this understanding by distinguishing between comprehension, cognitive recognition, and understanding as an interactive mechanism merging emotional and cognitive dimensions.

Cognition deepens the interpretative process, linking observation and perception with broader epistemological and cultural frameworks. The interplay between perception and cognition aligns with Piaget's (1970) cognitive development theory, which explains how sensory information is transformed into structured knowledge frameworks. Understanding, as a cognitive construct, reflects the complexity of this process, characterized by multifaceted interactions between knowledge, context, and emotional engagement. Struber's (1985) delineation of understanding as interpretation, relational analysis, and self-awareness offers valuable insights, particularly in heritage conservation, where comprehension extends beyond factual accuracy to encompass deeper connections with cultural narratives.

Interestingly, Reusser and Reusser-Weyeneth's (1997) attributes of understanding further emphasize its iterative and dynamic nature, suggesting that cognition is not a static achievement but an ongoing negotiation of meaning (Shalaginova, 2012). This aligns with Piaget's (1970) notion of assimilation and accommodation, wherein

individuals integrate new experiences into their cognitive schemas or adapt their schemas to accommodate novel information. Memory weaves a temporal dimension into this framework, connecting past experiences with present perceptions and future expectations. Similarly, Bloch's (1925) reconstructive view of memory highlights its role in dynamically reinterpreting the past to align with the present-day values. In Tulving's (1985) article, 'Memory and Consciousness,' his study of an amnesiac patient, and his discussion of episodic and semantic memory systems, it is discussed how episodic memory and semantic memory operate as distinct yet interconnected systems within cognition. The autonoetic consciousness illustrates how organized cognitive processes, such as attention, perception, and categorization, shape the encoding, storage, and retrieval of memories.

Undeniably, these processes influence how individuals engage with and recall meaningful contexts, such as those encountered in heritage settings. These ideas address the distinction between episodic and semantic memory and the role of autonoetic consciousness, which is tied to the subjective sense of re-experiencing the past events (Tulving, 1985). This relational aspect of memory underpins heritage conservation, where collective memory sustains intangible heritage through rituals, stories, and shared histories (Halbwachs, 1925). Emotional connections to heritage sites, such as nostalgia at a cultural site or reverence at a war memorial, further illustrate how memory and emotion interact to fulfil orientation expectations (Uzzel & Ballantyne, 1998). In fact, this dynamic is central to the discourse on authenticity, where subjective and objective understandings balance tangible conservation efforts with intangible engagement.

Thus, 'engagement' emerges as the culmination of these interconnected processes, where visitors interact dynamically with the heritage sites. In this regard, Rusch (1992) provides a framework for shaping these interactions, emphasizing that engagement is more than knowledge transfer; it is a transformative experience encompassing cognitive, emotional, and behavioral dimensions. Schmidt (1994) reinforces this perspective, suggesting that observable responses, such as donations or volunteerism, signify alignment with intended interpretive messages. Emotional engagement, as Uzzel and Ballantyne (1998) argue, bridges tangible and intangible heritage, fostering a sense of place that is central to authentic experience

3.2.4 Tethering the Research Questions

The evaluation and management of authenticity in heritage conservation necessitate a structured foundation that bridges scholarly discourse with practical application. This study is guided by three key research questions, each addressing a critical dimension of authenticity in conservation.

The first question examines how authenticity has evolved conceptually in both academic and professional heritage discourse, tracing its transformation from a material-focused principle to a context-dependent and socially constructed framework (Smith, 2006; Jokilehto, 2006). This shift challenges static conservation models, positioning authenticity as an experiential and interpretive phenomenon shaped by lived cultural narratives (ICOMOS, 1994; Avrami & Mason, 2019).

Building on this conceptual evolution, the second question investigates existing methodologies for evaluating authenticity, assessing the strengths and limitations of qualitative, quantitative, and hybrid approaches (McClelland et al., 2019; DeSilvey, 2017). While tools such as the Nara Grid offer comparative structures, they often struggle to capture the complexities of intangible cultural heritage and rapidly transforming urban environments (Van Balen, 2008). The study thus addresses this gap by proposing an adaptive model that integrates empirical assessment with socio-cultural narratives, offering a more holistic and context-sensitive evaluation framework (Cohen & Cohen, 2012).

The third research question extends this inquiry into practical application, considering how authenticity can be embedded into decision-making processes that navigate historical integrity, community engagement, and urban development pressures (Rashed, 2013; Kermani, 2020). This perspective advocates for an approach to conservation that recognizes heritage as a dynamic, living entity rather than a static artifact, ensuring that assessments of authenticity inform sustainable, inclusive heritage management strategies.

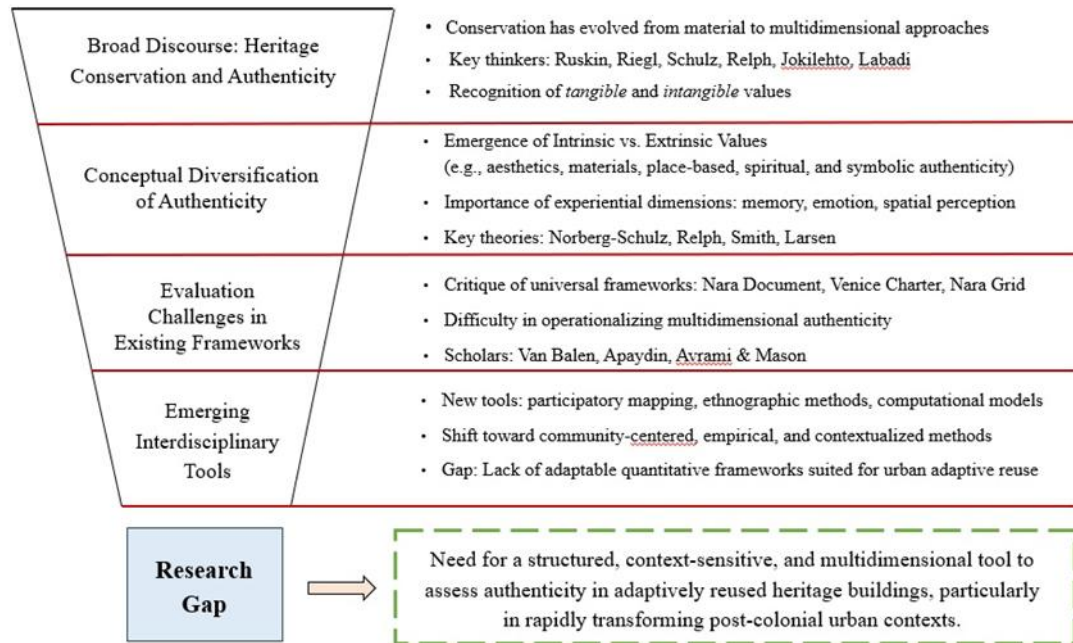
Together, these research questions frame the foundation of this study, supporting the development of a methodology that moves beyond theoretical constructs to practical conservation applications. These enquiries emphasise the necessity of a contextualized and adaptive authenticity evaluation framework that reconciles empirical rigor with cultural specificity.

3.3 Synthesis of Literature and Research Gap

The reviewed literature demonstrates a significant evolution in the discourse of authenticity, moving from material-centric conservation approaches to multidimensional and socially grounded frameworks. However, the literature also reveals gaps in the operationalization of authenticity—especially in the context of adaptive reuse in post-colonial urban settings. The following funnel diagram synthesizes this trajectory, illustrating the broad discourse, emerging complexities, evaluation challenges, and the research gap that this study addresses.

Figure 3.1

Graphical Synthesis of Literature on Heritage Authenticity and Identification of the Research Gap



3.4 Preliminary Discussion

The assessment of authenticity in heritage conservation has long grappled with the tension between material integrity and cultural relativity, often resulting in methodological inconsistencies and gaps in conservation practice (Jokilehto, 2006; Labadi, 2010). While qualitative methodologies remain valuable in capturing historical significance and community narratives, their subjectivity and variability limit their applicability across diverse cultural landscapes (Smith, 2006; Avrami &

Mason, 2019). Conversely, quantitative tools introduce measurable indicators, offering comparability and replicability, but they frequently fail to account for the lived experiences and evolving cultural narratives that shape authenticity perceptions (González Martínez, 2017). This methodological divide underscores the need for a multi-dimensional authenticity assessment model that integrates quantitative scoring mechanisms with qualitative, community-driven evaluations, ensuring a balanced and adaptable conservation approach (McClelland et al., 2019; Cohen & Cohen, 2012).

Existing frameworks such as the Nara Grid attempted to provide a more holistic approach to authenticity by incorporating both material and cultural considerations. Its practical implementation, though, has remained inconsistent, particularly in dynamic urban contexts where historic environments continue to evolve under socio-economic pressures (Avrami & Mason, 2019; Bandarin & Van Oers, 2012). While the Historic Urban Landscape (HUL) approach promotes integrated heritage management, it similarly lacks a concrete assessment mechanism, relying instead on broad policy recommendations that often fall short in addressing site-specific authenticity concerns (Bandarin & Van Oers, 2012). Case studies from Shiraz, Cairo, and Ahmedabad highlight these shortcomings, where rapid urbanization has often clashed with conservation efforts, demonstrating that existing models are insufficient in capturing the complexity of heritage authenticity (Apaydin, 2020).

This research proposes a hybrid framework that integrates quantitative authenticity metrics with qualitative cultural narratives, ensuring methodological rigor while maintaining flexibility to adapt to diverse cultural contexts (McClelland et al., 2019; Cohen & Cohen, 2012). The concept of contextual objectivity serves as a foundation for this approach, ensuring adaptability to cultural diversity rather than imposing rigid, Universalist criteria (Kermani, 2020). Regional variations in aesthetic traditions, religious practices, and spatial configurations, such as bold color palettes in South Asia versus muted tones in Western Europe or vernacular spatial arrangements in Islamic cities compared to orthogonal grids in colonial urban planning, highlight the need for evaluation frameworks that respect cultural and contextual specificity (Cohen & Cohen, 2012). By embedding localized preferences into measurable criteria, heritage assessments can balance standardization with cultural relevance, mitigating the one-size-fits-all limitations of existing methodologies (Avrami & Mason, 2019; Bandarin & Van Oers, 2012).

The lack of a structured, adaptable, and multi-layered mechanism for authenticity evaluation continues to be a major gap in heritage conservation. While China's heritage policies, particularly the China Principles (ICOMOS China, 2015), have shown success in integrating cultural heritage values into assessment frameworks, they remain regionally specific and difficult to generalize for global application (Su, 2018). The success of these principles, in accommodating adaptive reuse and maintaining historical integrity suggests that authenticity evaluation must inherently be flexible and context-driven. Most conservation models, however, have struggled with balancing conservation with urban transformation, often leading to facadism, displacement, or gentrification in historic districts (Winter, 2014).

The research aims to bridge these very gaps by developing a standardized yet flexible matrix that evaluates both tangible and intangible heritage dimensions, hence, ensuring practical applicability across varied heritage environments (Schulz, 1980; DeSilvey, 2017). By embedding participatory engagement, cultural adaptability, and empirical evaluation, the proposed framework aligns, with contemporary conservation discourses advocating for dynamic and community-driven methodologies (Labadi, 2010; McClelland et al., 2019). This approach marks a paradigm shift, moving away from static, preservation-focused models toward context-sensitive evaluation tools that capture the complex, evolving nature of authenticity in urban heritage (Jokilehto, 2006; Smith, 2006).

CHAPTER 4

RESEARCH METHODOLOGY

Chapter Overview

This research involves two tasks: first, it produces a framework for the assessment of authenticity in heritage buildings; second, it tests and validates the framework so produced to prove that the framework is reliable, practical and implementable. This chapter presents the structured methodological approach adopted in this research in doing so. Thus, it comprises two parts: gathering data for the production of the framework and gathering data for testing the framework produced after the analysis of the data from the first part.

In other words, this chapter outlines the dual-part investigation comprised of both the development of a framework for the assessment of authenticity of heritage buildings and its validation through empirical testing. This two-part methodology ensures a comprehensive and iterative process, allowing for both the formulation and the evaluation of an adaptable heritage assessment model.

The first part focuses on the development of the framework, drawing from theoretical discourse, literature insights, and experiential methodologies to explore how authenticity is perceived, constructed, and maintained. The second part involves the validation of the framework, applying it across selected heritage sites to test its effectiveness and adaptability across varying conservation contexts.

The first section details the methodologies used in developing the framework, building on the theoretical underpinnings and empirical research. A mixed-method approach is employed, utilizing case studies as a method within which the following techniques are employed to gather data.

- Multiple sorting tasks,
- Memory Recalling Tasks, and
- Semi-structured interviews

These research techniques investigate authenticity as a construct shaped by perception, memory, and engagement. They facilitate an in-depth exploration of how authenticity is experienced within the historic urban environments, ensuring that the framework is grounded in both structured conservation principles and community-driven narratives.

The rationale behind the case study selection is outlined, with specific criteria for building and precinct selection, ensuring that representative cases are examined to reflect diverse authenticity determinants. A discussion on the development of findings follows, illustrating how patterns and relationships between material and non-material authenticity indicators emerged through iterative analysis. The research employs qualitative coding and quantitative clustering techniques to derive dominant authenticity indicators, forming the basis of a structured evaluation approach. The findings from this part inform the core evaluation criteria, ensuring that the developed framework is contextually adaptable and methodologically robust.

The second section focuses on the validation of the developed framework, outlining the methodology employed to assess its effectiveness. The validation process involves an independent selection of heritage buildings and participants, ensuring that the cases used for the development phase are distinct from those selected for testing and evaluation. The methodology is systematically structured to cover case selection, data collection, and data analysis, illustrating how the framework is tested against real-world conservation challenges. The validation process ensures that the framework effectively captures both the material and non-material dimensions of authenticity, assessing its ability to function across varied heritage conditions.

By structuring the research into two distinct yet interrelated parts, this methodology ensures that authenticity assessment moves beyond theoretical constructs into a practical and applicable heritage evaluation model. The dual-part structure guarantees that the framework is both rooted in a solid theoretical foundation and tested for empirical applicability. By positioning authenticity as an evolving and multi-dimensional construct, this chapter contributes to produce an evaluation method that bridges the theoretical discourse with heritage conservation practices, ensuring the continued relevance of historic environments within contemporary urban developments.

4.1 Methodological Foundations Derived from the Theoretical Framework

This research builds upon the theoretical discourse established in the earlier chapters, integrating constructivist principles, contextual objectivity, and multi-dimensional authenticity assessment into its methodological approach, as suggested by Smith (2006). The need for a structured yet adaptable authenticity evaluation model stems from the limitations of existing tools, which either rely heavily on qualitative, subjective interpretations or emphasize quantifiable, material-focused assessments that fail to capture intangible socio-cultural dimensions (Labadi, 2010; Avrami & Mason, 2019). By combining qualitative and quantitative methodologies, this study ensures a holistic evaluation of heritage authenticity, grounded in historical, cultural, and perceptual dimensions (McClelland et al., 2019).

To operationalize these theoretical commitments, the study adopts a dual-phased research design aimed at both the development and validation of a framework for assessing authenticity in heritage buildings. This hybrid design bridges the gap between theoretical aspirations and practical conservation needs by incorporating both qualitative and quantitative methods (González Martínez, 2017). It allows for empirical rigor while remaining contextually adaptable, ensuring that authenticity assessments are replicable yet sensitive to regional and cultural particularities (Kermani, 2020). Central to this methodological framework is the concept of contextual objectivity, which views heritage authenticity as a co-constructed and fluid phenomenon rather than a static, universally measurable entity (Labadi, 2010).

In line with this approach, the study is grounded in Karachi as its research context—a city with a layered urban heritage, socio-cultural diversity, and dynamic conservation landscape. Karachi's complex built environment, which spans colonial, vernacular, and modern architectural forms, serves as a microcosm for examining global conservation challenges in a local context. The city's ethnic and linguistic diversity, rapid urban transformation, and heritage typological variety provide fertile ground to explore authenticity as both a material and experiential construct (Ashworth, 2011; Jokilehto, 2006). Constructivist interpretations of authenticity argue that value is not inherent in heritage objects, but negotiated through cultural memory, social practice, and emotional attachment to place (Tuan, 1977; Lowenthal, 1985). Karachi's

heterogeneous population and shifting urban landscape offer a unique opportunity to analyze how diverse communities engage with and interpret heritage, thereby aligning with this broader theoretical position.

Further reinforcing the relevance of Karachi as a testbed, the study leverages the city's evolving urban conditions to explore how socio-economic, political, and environmental forces shape heritage values. Frameworks like the Historic Urban Landscape (HUL) approach and heritage urbanism emphasize the need to assess heritage within the dynamics of lived urban experiences (UNESCO, 2011; Rodwell, 2007). This research benefits from being applied in such a context, where the relationship between communities and historic sites is continually renegotiated.

Methodologically, heritage conservation has traditionally relied on qualitative techniques rooted in visual, historical, and experiential interpretations (ICOMOS, 1964; Jokilehto, 2006). While effective in capturing the cultural and historical significance of heritage sites, these approaches often lack standardization and replicability, limiting their comparative utility (Fredheim & Khalaf, 2016). To address these gaps, this study integrates structured quantitative metrics with qualitative tools such as memory recall tasks, card sorting exercises, and semi-structured interviews. This combination introduces a more rigorous and systematic framework that can measure both tangible and intangible heritage attributes across diverse settings (Smith, 2006).

The integration of these methods reflects the principle of contextual objectivity by balancing empirical measurement with cultural nuance. Quantitative indicators lend transparency and consistency to the evaluation process, while qualitative methods enable deeper engagement with local meanings, heritage narratives, and user experiences. This comprehensive approach helps ensure that heritage authenticity is assessed holistically—preserving historical integrity while accommodating contemporary socio-cultural realities and urban transformations.

4.1.1 Research Design

This research follows a dual-phased methodological approach designed to both develop and validate a framework for assessing authenticity in heritage buildings. By integrating qualitative and quantitative methodologies, the study ensures a

comprehensive and adaptable evaluation model that addresses both theoretical discourse and practical conservation challenges.

4.1.2 Positioning Karachi as the Research Context

The selection of Karachi as the research context is grounded in its multi-layered urban heritage, socio-cultural diversity, and dynamic conservation landscape, making it an effective setting for studying perceptions of authenticity within evolving historic environments. Urban heritage studies emphasize the importance of examining heritage authenticity within living urban contexts to capture the interplay between historical continuity, adaptive reuse, and social engagement (Ashworth, 2011; Labadi, 2010). The diversity of Karachi's built heritage, spanning colonial, vernacular, and modern architectural forms, offers a microcosm of larger global conservation challenges, aligning with approaches that stress context-sensitive and participatory evaluations of heritage sites (Jokilehto, 2006; Avrami et al., 2000).

Given that authenticity is increasingly understood as a relational and co-constructed concept, shaped by both material attributes and experiential dimensions (Smith, 2006; Cohen & Cohen, 2012), Karachi's demographic and cultural diversity provides a broad spectrum of stakeholder perspectives on heritage. The city's linguistic and ethnic heterogeneity, combined with its rapid urban transformation, makes it a rich site for exploring how diverse communities engage with, interpret, and assign value to historic spaces. This aligns with constructivist approaches to heritage conservation, which argue that authenticity is not an inherent property of objects but is negotiated through cultural memory, social practice, and place attachment (Tuan, 1977; Lowenthal, 1985).

The experiential framework, also, applied in this research benefits from being tested in a setting where heritage is not static but constantly shaped by socio-economic, political, and environmental forces. Studies on heritage urbanism and the Historic Urban Landscape (HUL) approach emphasize the need for heritage assessments to consider evolving urban realities and the lived experiences of communities interacting with historic sites (UNESCO, 2011; Rodwell, 2007). Karachi's urban dynamics provide an opportunity to examine authenticity as an adaptive and fluid phenomenon, contributing to the growing discourse on contextually adaptable heritage assessment methodologies.

By grounding this study within Karachi's multi-layered historic environment, the research ensures that the determinant factors derived for authenticity assessment are not confined to a singular heritage typology or geographic context, but rather contribute to a broader theoretical and methodological discourse on evaluating authenticity in diverse urban settings.

4.1.3 Qualitative and Quantitative Methods

Heritage conservation has traditionally relied on qualitative methodologies, focusing on material authenticity and subjective interpretations rooted in visual, historical, and experiential analyses (ICOMOS, 1964; Jokilehto, 2006). These approaches have been instrumental in capturing the cultural significance and historical continuity of heritage sites. However, their lack of replicability and standardization presents challenges when applied across diverse contexts, making it difficult to establish comparative authenticity assessments (Fredheim & Khalaf, 2016). Since qualitative analyses are often influenced by regional traditions, conservation philosophies, and expert biases, they may not always ensure universal applicability.

To address these limitations, this study integrates quantitative metrics alongside qualitative methods such as memory recall tasks, card sorting exercises, and semi-structured interviews. This mixed-methods approach introduces structured, replicable methodologies, enhancing the objectivity and comparative rigor of authenticity evaluations (Smith, 2006). By incorporating measurable indicators, quantitative methods facilitate the systematic assessment of both tangible and intangible heritage values, ensuring consistency across diverse cultural and geographic settings. This approach aligns with the principles of contextual objectivity, balancing empirical analysis with socio-cultural specificity and mitigating the risks of applying one-size-fits-all conservation frameworks (Camagni et al., 2020).

By combining qualitative and quantitative approaches, this study ensures a comprehensive authenticity assessment framework. While qualitative methods allow for in-depth interpretations of heritage narratives, experiential significance, and local engagement, quantitative methodologies introduce structured evaluation tools that enhance transparency, replicability, and comparative analysis. This integrated approach ensures that heritage authenticity is assessed holistically, preserving

historical integrity while accommodating contemporary cultural and urban transformations.

4.1.4 Methodological Framework

The research is structured into two interdependent parts:

Part 1: Development of the Authenticity Assessment Framework

This phase focuses on identifying determinant factors that shape authenticity in heritage conservation. To achieve this, three empirical methods are employed:

- **Multiple Sorting Tasks (MST)** – to analyze cognitive associations and perception patterns related to authenticity.
- **Memory Recalling Tasks (MRT)** – to capture narratives, emotional connections, and collective memory linked to heritage sites.
- **Semi-Structured Interviews (SSI)** – to gather expert insights, policy critiques, and stakeholder perspectives on conservation practices.

The findings from these methods inform the core evaluation criteria for assessing authenticity, ensuring that the framework is both methodologically rigorous and adaptable across different heritage contexts.

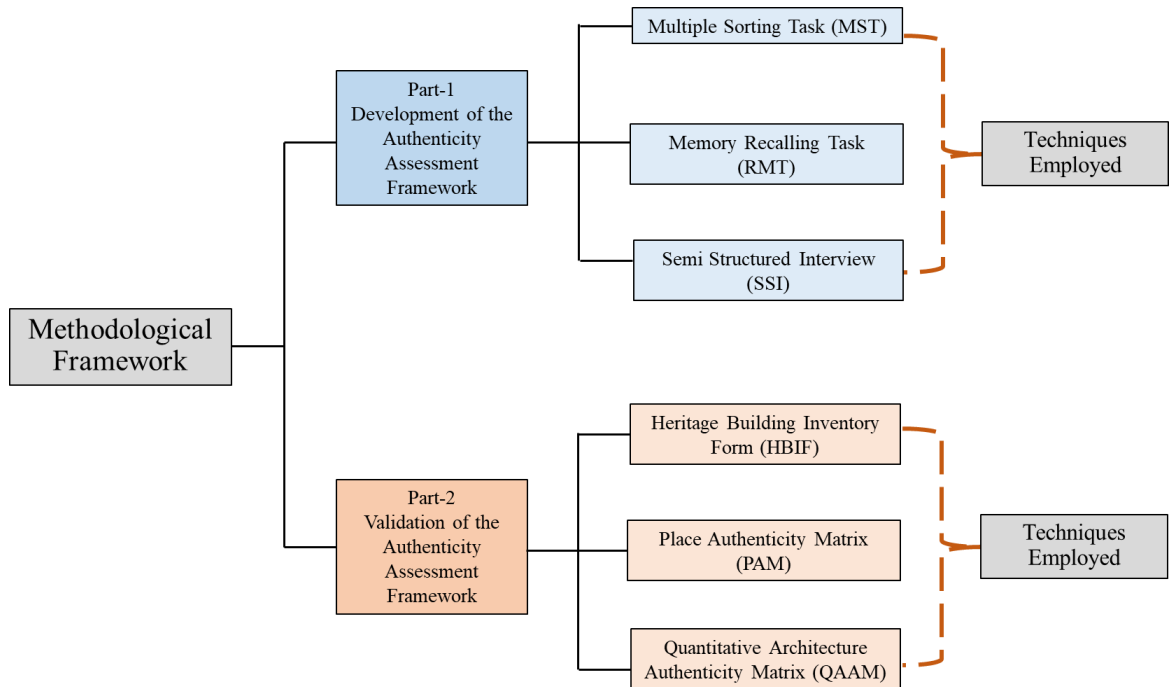
Part 2: Validation of the Authenticity Assessment Framework

The second phase involves testing and validating the framework developed in Part 1 by applying it to a separate set of heritage buildings and participants. This ensures that the framework is empirically robust and practically applicable across diverse conservation settings. The validation process includes:

- **Heritage Building Inventory Form (HBIF)** – to systematically document physical attributes and alterations in historic buildings.
 - **Place Authenticity Matrix (PAM)** – to evaluate authenticity across emotional, cultural, and spatial dimensions.
 - **Quantitative Architecture Authenticity Matrix (QAAM)** – to provide a structured, data-driven assessment of architectural authenticity.
- The validation phase ensures that the developed framework can be effectively applied in real-world conservation contexts, allowing for iterative refinement based on empirical testing.

Figure 4.1

Methodological Framework



Note. Figure showing structure of two independent parts of methodological framework and techniques employed for collect data

By structuring the research into these two distinct phases, this study moves beyond theoretical discussions to establish a practical, adaptable authenticity assessment model. The methodological rigor of both phases allows for a holistic evaluation of authenticity, ensuring that historic environments are preserved in ways that are both culturally meaningful and conservation-driven.

4.2 Developing Authenticity Assessment

The development of an authenticity assessment framework necessitates a multi-method approach, integrating quantitative and qualitative tools to evaluate both the material and non-material dimensions of heritage. This phase of the research focuses on identifying determinant factors that shape perceptions of authenticity through structured empirical investigations

4.2.1 Research Methods for Developing Authenticity Assessment

To systematically explore how authenticity is perceived, constructed, and contested, the study employs three distinct research methods:

- **Multiple Sorting Tasks (MST)** – analyzing cognitive associations and perception patterns related to authenticity.
- **Memory Recalling Tasks (MRT)** – documenting narratives, emotional connections, and collective memory associated with heritage sites.
- **Semi-Structured Interviews (SSI)** – capturing expert insights, policy critiques, and stakeholder perspectives on conservation practices.

Each method serves a distinct role in identifying determinant factors influencing authenticity perception. MST reveals patterns of association and divergence, highlighting how built form, spatial configuration, and functional use influence authenticity. MRT captures the experiential and phenomenological dimensions, uncovering how memory, cultural continuity, and symbolism shape authenticity narratives. SSI contextualizes these insights within the practical challenges of conservation, identifying governance issues, stakeholder misalignment, and socio-economic pressures as critical factors affecting authenticity retention.

4.2.2 Analytical Framework

A structured analytical approach was adopted to ensure the rigorous interpretation of findings. Each method was analyzed using specific techniques to extract meaningful insights:

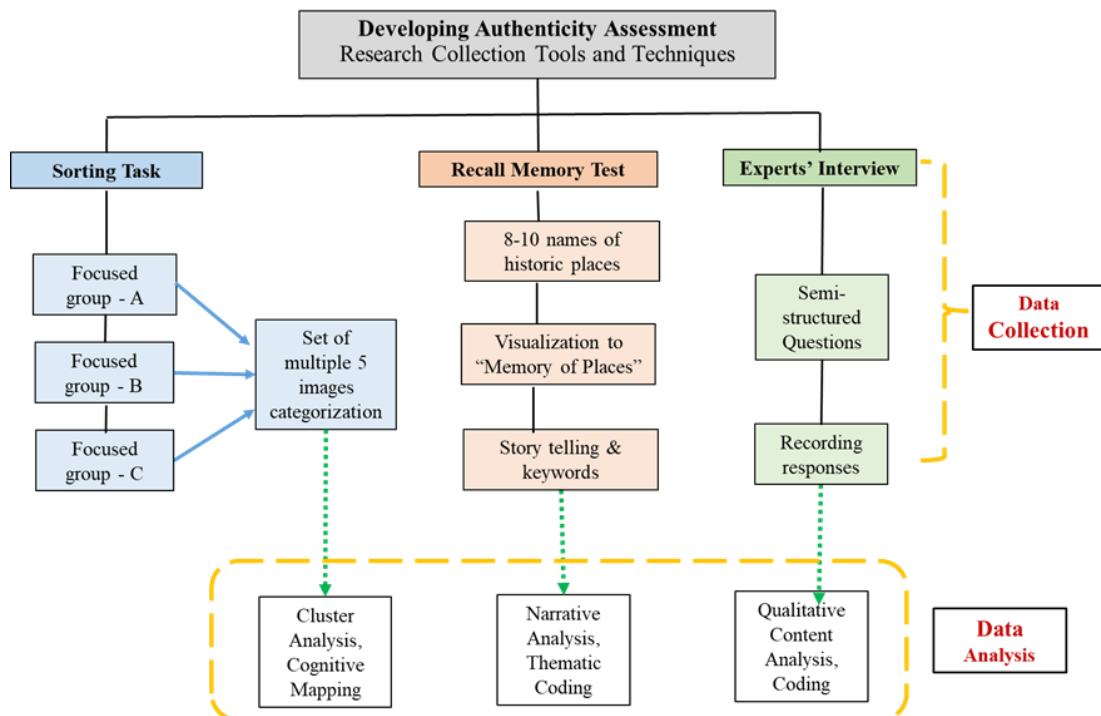
Table 4.2

Analytical Framework of Methodology

Research Method	Analytical Technique	Expected Outcome
Multiple Sorting Tasks (MST)	Cluster Analysis, Cognitive Mapping	Identification of authenticity perception patterns
Memory Recalling Tasks (MRT)	Narrative Analysis, Thematic Coding	Understanding emotional and collective memory associations with heritage sites
Semi-Structured Interviews (SSI)	Qualitative Content Analysis, Coding	Identification of policy gaps and stakeholder concerns in conservation

Figure 4.3

Development process for Authenticity Assessment



Note. Figure describing Data Collection and Data Analysis for the Authenticity Assessment process

The research integrates these analytical techniques to derive key determinant factors, ensuring that the framework is both theoretically grounded and methodologically adaptable.

The findings from this phase inform the core evaluation criteria, ensuring that the developed framework is empirically validated and adaptable across diverse heritage contexts. By systematically examining patterns of authenticity perception, this methodological framework provides a structured foundation for the assessment model. This section lays the groundwork for the subsequent validation phase, where the framework is tested against real-world conservation challenges to assess its applicability and reliability.

4.2.2.1 Multiple Sorting Task

The Multiple Sorting Task (MST), first introduced by David Canter (1977), is a well-established cognitive method designed to unravel individuals' conceptualizations of their environments, categorizing objects, events, and settings based on perceptions and mental constructs. Originally developed in environmental psychology, MST has been widely used to explore subjective meanings, enabling researchers to decode how people interpret their surroundings. The sorting task method is a cognitive process, which is based on the premise that people naturally use categorization of different objects, settings, and situations all the time (Canter, 1977). It is a simple procedure for unravelling people's conceptualizations of events, objects, settings, and situations, allowing the identification of underlying cognitive structures (Rugg & McGeorge, 2005). It enables the gathering of data that demonstrates a person's utilizations of concepts, ideas, and interests based on their perceptions and mental representations (Kaplan & Kaplan, 1989). In other words, it unravels people's "mental constructs" of the world surrounding them, providing insight into how people categorize and prioritize information (Canter et al., 1985).

This process requires the provision of a brief introduction and clear objectives of the research to the participants, enabling them to become aware of their own mental constructs as related to the ideas pursued in the research (Gifford, 2014). In this case, the constructs revolve around "authenticity" and "sense of place", concepts that shape the experiential and cognitive dimensions of heritage perception (Tuan, 1977; Norberg-Schulz, 1980). While it is accepted that "authenticity" is not an everyday construct for ordinary people, the sorting task method helps to unearth the "categories" and "constructs" in people's perceptions of authenticity, encompassing both physical and non-physical aspects of heritage buildings/sites (McClelland et al., 2019). This

method allowed participants to categorize elements based on their subjective understandings of the key concepts like “authenticity” and “age value”, offering a structured yet flexible framework for capturing nuanced interpretations of heritage attributes (Kaplan & Kaplan, 1989). As recommended by Gifford (2014), MST is effective in revealing underlying cognitive frameworks by allowing participants to group items based on their internal value systems and priorities, providing insight into how communities conceptualize heritage. By focusing on these perceptual constructs, MST enables the study to assess the alignment or divergence between the local interpretations of authenticity and scholarly definitions established in the conservation practices (Tuan, 1977).

MST’s relevance to heritage conservation and authenticity assessment lies in its ability to reveal participants' perceptions of the tangible and intangible aspects of heritage sites. By sorting visual representations or descriptive attributes of buildings and spaces, participants express how they categorize and relate to elements of authenticity, such as architectural integrity, historical continuity, and sense of place (Uzzell, 2009). In this study, MST serves a dual purpose: first, to extract subjective meanings from focused group discussions, and second, to analyze the data quantitatively by identifying patterns and relationships within the participants' categorizations. The card-sorting process will involve individual participants, allowing for unbiased reflections of their mental constructs related to authenticity and sense of place.

The participants will include a diverse cross-section of stakeholders, such as older residents, younger users, and frequent visitors of Karachi’s historic precincts, ensuring a comprehensive representation of community perceptions.

To attain quantifiable analysis from this qualitative method, advanced analytical tools like dendrograms, similarity matrices, and other clustering techniques are employed (Everitt et al., 2011). These tools help visualize the relationships between categorized elements, providing structured and replicable outputs that balance subjective insights with empirical rigor. By using hierarchical clustering methods, the study identifies patterns of similarities and differences in the participants' perceptions, enabling the construction of robust, data-driven models for evaluating authenticity across multiple heritage sites (McClelland et al., 2019).

Through this mixed-method approach, MST will contextualize participants' experiences, highlighting both physical and non-physical attributes that contribute to

authenticity of place. The gathered data will offer valuable insights into how different demographic groups perceive heritage sites, providing a structured framework for evaluating community-driven authenticity in urban conservation practices. This integration of qualitative and quantitative insights ensures that the subjective richness of local perceptions is systematically captured and analyzed, contributing to the ongoing discourse on authenticity assessment in heritage conservation.

4.2.2.1-Detail 1: Criteria for Card Selection

The cards are selected in three groups: Sorting Task Set A, Set B, and Set C. Each set consists of five different images showing heritage and historic contexts of the old Karachi. Set A and Set B focus on the buildings, including their functional and abandoned status, whereas Set C represents the street views of the historic areas surrounded by the heritage buildings. The pictures for each card sort have been carefully selected to show varying levels of alterations and interventions in the heritage buildings and precincts.

The purpose of selecting these images was to demonstrate the impact of unplanned urban developments and significant interventions on the heritage buildings of the Market Quarter. These images illustrate both minor and major alterations, leading to unharmonized architecture and urban development (Smith, 2006). The selected pictures highlight how such interventions significantly compromise the authenticity and integrity of heritage buildings, emphasizing the need for an informed conservation approach in the precinct (Uzzell & Ballantyne, 1998). Additionally, the pictures were taken from various parts of the Market Quarter and its surrounding areas to draw attention to the common features of heritage interventions.

The intention behind selecting these images for data collection through the sorting task was to answer Research Question 1, which addresses the general perception of authenticity in the management of heritage conservation. This selection also supports the Objective 1, which explores how different aspects of heritage buildings, including both material and non-material elements, contribute to the manifestation of a "sense of place" that arises from the authenticity of heritage (Tuan, 1977; Gifford, 2014).

Following tables present the images from each card sorting session (Card Sort A, B, and C), along with the descriptions explaining how the buildings depicted are losing

their authenticity, thereby impacting the heritage buildings and the precincts (Norberg-Schulz, 1980).

Table 4.4

Card Selection Criteria

<u>Sorting Task (ST) Set-A</u>	Buildings showing status of major and minor alteration		
		<u>ST Card-A1</u>	<u>ST Card-A2</u>
	Justification for card selection for Sorting Task Activity	Encroachment on the land adjacent to the heritage building plot	Alterations projecting mass in the front elevation have defaced the original facade.
			
	<u>ST Card-A3</u>	<u>ST Card-A4</u>	<u>ST Card-A5</u>
	The original façade of the building has been covered with plaster, concealing the original stone material. Significant alterations have resulted in the loss of the façade's original character	Unsympathetic urban development, lacking consideration for scale and architectural style, has resulted in the loss of the site's historic context.	Overpowering shopfront alterations on the ground floor have disrupted the street montage and overall appearance. The use of mismatched paint colors on

			balconies further undermines the architectural integrity of the area
<u>Sorting Task Set-B</u>	Buildings showing status of major and minor alteration		
		<u>ST Card-B1</u>	<u>ST Card-B2</u>
	Justification for card selection for Sorting Task Activity	Major alteration by adding two floors on the roof	Building with significant architectural details, retaining only the façade structure, while being completely demolished internally
			
	<u>ST Card-B3</u>	<u>ST Card-B4</u>	<u>ST Card-B5</u>
	Good condition building, abandoned on the first and second floors, with only the ground floor in use.	A landmark building showing sign of neglect and partial demolition	A major alteration showing the addition of a second floor and a projected extension on the first-floor façade, concealing the

			original architectural style
<u>Sorting Task Set-C</u>	Precincts showing status of major and minor alteration in historic areas		
		<u>ST Card-C1</u>	<u>ST Card-C2</u>
	Justification for card selection for Sorting Task Activity	Precinct showing a shift in activity, from vehicular access to pedestrian use, with the inclusion of outdoor activities	A major historic road covering the entire façade of the buildings, resulting in a change to the historic sense of place
			
	<u>ST Card-C3</u>	<u>ST Card-C4</u>	<u>ST Card-C5</u>
	Redevelopment of the historic area adjacent to the landmark buildings	A major historic road covering the entire façade of the buildings, resulting in a change to the historic sense of place	A street showing significant demolition of a landmark building, with only the façade structure remaining

4.2.2.1-Detail 2: Criteria For Participant Selection

For the sorting card activity, a total of 15 participants were selected and divided into three groups, representing a cross-section of stakeholders familiar with the heritage precinct. These included residents, students, neighbors, and visitors of the area. The participants were purposely chosen based on their direct interaction with and experience of the selected historic environment, as such users could offer first-hand insights into the character, meaning, and spatial familiarity of the place (Tuan, 1977). The aim was to gather diverse perspectives on people's understanding of heritage buildings and their associated sense of place, in line with the phenomenological perspectives on place attachment (Relph, 1976).

4.2.2.1-Detail 3: Data Collection Procedure

Participants were given a collection of pictures/cards and were instructed to categorize them based on their own understanding. Participants categorized the cards according to the similarities, relationships, or any other criteria they considered important (Canter, 1977). Additionally, participants assigned labels to the categories to highlight the underlying reasoning behind their groupings. The sorting task was conducted with a diverse group of stakeholders, including elderly individuals, residents of historic areas in Karachi, younger people, and some visitors to the area. Data was collected using a standard analytical procedure, guided by the following principles (Uzzell & Ballantyne, 1998):

- Each focused group was provided with 5 cards showing pictures from the historic area of Karachi. The pictures were carefully selected.
- The focused group was asked to sort the images in order to see how authenticity is maintained in the historic places from higher to lower level.
- Based on their understanding, a few respondents were selected as a Specialist Group to further explore the research.
- The Specialist Group was asked to categorize the same images again to reassure how these images contributed to create authenticity and a sense of place.
- In order to provide same samples with their codes and identical sequence, the analytical structure was set by fixed variable.

The specific direction for the sorting task was centered on the manifestation of "Sense of Place" within the subject area. If the public, who have interacted with the conserved spaces in the context of urban development, and experience these areas as emanating with authenticity that is claimed to have been retained, then the "sense of place" they experience confirms that the conservation methods used have been effective in preserving authenticity (Norberg-Schulz, 1980). This sorting task method was valuable in exploring how people understand the concepts of sense of place as well as authenticity, and in evaluating the values of the heritage building (Tuan, 1977; Relph, 1976).

4.2.2.2 Memory Recalling Task

The Memory Recalling Task (MRT) draws from the principles of Grounded Theory (GT), a qualitative research methodology that systematically develops theory from data through inductive analysis (Glaser & Strauss, 1967). Originally, it was conceived to address the gap between large-scale data collection and the absence of robust analytical frameworks, GT has evolved into a widely used approach in social sciences, valued for its capacity to derive conceptually rich and empirically grounded theories (Charmaz, 2015). In the context of heritage conservation, MRT adopts the constructivist interpretation of GT, which emphasizes the co-construction of meaning through the interplay of memory, perception, and environment (Hussein, Stephens, & Tiwari, 2020). It serves as a tool to capture the historical and emotional layers of a identity of a place by engaging the participants in memory recall exercises that elicit their memories of authenticity and sense of place as experienced before. This method aligns with Charmaz's (2006) constructivist GT approach, which prioritizes participants' lived experiences and subjective interpretations, enabling the researchers to understand how collective and individual memories shape cultural heritage values. By asking the participants to recall visual, sensory, and narrative aspects, that are often associated with historic buildings and urban spaces, the MRT captures both tangible attributes, such as architectural features, and intangible elements, like cultural practices and emotional connections (Tuan, 1977; Norberg-Schulz, 1980).

The integration of MRT with GT's iterative and comparative techniques ensures that emerging themes remain closely tied to the data, avoiding assumptions that are preconceived, and instead allowing the theory to develop organically (Strauss & Corbin, 1998). This approach is particularly effective in heritage studies, where

understanding authenticity requires balancing material conservation with the evolving cultural and social meanings attached to historic environments (Smith, 2006; Labadi, 2010). The emphasis of MRT on memory recall offers a nuanced perspective on this balance, providing insights into how historic sense of place is retained, transformed, or eroded through urban development and conservation practices (Lowenthal, 1985; Avrami et al., 2019).

The application of MRT in Karachi's historic urban areas enables an in-depth exploration of community narratives and their alignment with the physical heritage attributes. By correlating participants' recalled memories with visual and structural assessments of conserved buildings, the study identifies "historical clues" of architectural and spatial elements that reinforce the authenticity of place (Schulz, 1980; Hussein et al., 2020). This cross-referencing method ensures a comprehensive evaluation of heritage authenticity, capturing the dynamic interplay between memory, identity, and the built environment (Kaplan & Kaplan, 1989; Gifford, 2014).

Indeed, this aligns the MRT with GT's notion of context-specific theory development, hence offering a framework that reflects the unique socio-cultural and historical context of Karachi's urban heritage (Bandarin & Van Oers, 2012). By employing methods like thematic coding, the study systematically organizes the participants' responses into categories that reveal the patterns of perceptions and associations (Strauss & Corbin, 1998). This accuracy of analysis, in turn enhances the reliability of the findings, enabling the development of a conceptual model that balances empirical data with interpretive depth (Charmaz, 2015). In practice, MRT has been effectively utilized in studies examining the psycho-social impacts of historic urban landscapes, highlighting its capacity to capture the emotional and symbolic dimensions of place attachment (Hussein et al., 2020). By emphasizing memory as a lens for understanding authenticity, the method highlights the importance of integrating community voices into conservation efforts, ensuring that heritage management practices remain sensitive to local identities and evolving cultural narratives (Cohen & Cohen, 2012; McClelland et al., 2019). The grounding of MRT in the constructivist GT, demonstrates a powerful approach for exploring the relational and experiential aspects of heritage authenticity. Through systematic memory recall and comparative analysis, the method reveals how historic environments foster a sense of place, enriching the conservation practices with the depth of community memory and cultural continuity

(Relph, 1976; Smith, 2006). This well-rounded perspective reinforces the need for an adaptive, community-centered framework that honors both the tangible and intangible heritage dimensions in urban development (Labadi, 2010; Avrami & Mason, 2019). This approach could also help in formulating the answer to the Research Question-3, which addresses how the conservation strategies affect the authentic heritage place experiences and identity of heritage sites.

4.2.2.2-Detail 1: Criteria for Focus Group Selection

The Memory Recalling Task was conducted with older generations who helped recollect the historic sense of place of the research area. The process took place over two consecutive days, with two separate groups.

Participant Selection: The focus group participants were selected based primarily on two criteria. First, elderly individuals were chosen to contribute to the Memory Recalling Task (MRT), a phenomenologically grounded method that explores the lived experiences and memories of individuals connected to heritage places (Heidegger, 1927; Merleau-Ponty, 1962). These participants shared their experiences of living in older areas, offering comparisons between new and old developments. Phenomenological approaches are particularly effective in revealing how people remember and make sense of their past encounters with heritage sites (Relph, 1976). Second, participants were selected based on their deep-rooted connection to historic Karachi, as well as their involvement or engagement with the city's heritage, whether through day-to-day interactions or professional contact with heritage precincts (Smith, 2006).

Participants were also chosen for their geographical proximity, as they either lived or worked in the same area. This ensured that their experiences and insights were deeply rooted in the specific heritage context of Karachi. This approach reflects the sense of place theory, which emphasizes the importance of both physical and emotional connections to specific locations (Tuan, 1977; Lowenthal, 1985). To achieve this, the researcher invited individuals from well-known Facebook groups such as the Old Karachi Group and Karachi Uroosul Ibad Group. These groups, which include people from diverse backgrounds such as writers, poets, businesspeople, engineers, doctors, lawyers, and other professionals were chosen for their reflection of the city's social and cultural diversity, as well as the significance of its heritage across various sectors (Uzzell & Ballantyne, 1998).

Most participants discussed well-known locations and buildings from their memories, particularly from the Saddar Bazar quarter, which is considered the heart of historic Karachi. Many conversations revolved around recalling important events and places within Saddar Bazar. One example is the Saddar Cooperative Market, still regarded as an attractive shopping destination. Other key locations mentioned included Mereweather Tower, Soldier Bazar, Light House, Urdu Bazar, and various commercial spaces in the Ram Bagh quarter. While these locations were commonly discussed, there are many other historically significant sites in the city. However, since the participants had personal connections to these areas, they primarily highlighted memories tied to them.

The focus group comprised twelve participants, ensuring a diverse yet manageable group size for rich qualitative data collection. The discussion was held in the heritage building of NED University City Campus, a space that embodies the authenticity and historical significance of Karachi's architecture (Norberg-Schulz, 1980). The conversation took place under a low-profile Neem tree, known as a "bethak," a traditional social gathering space. This setting was chosen to enhance participants' engagement with the space and provide a culturally resonant environment for the discussion (Gifford, 2014).

4.2.2.2-Detail 2: Data Collection Procedure

Preparation for Memory Recall Discussion: For interview preparation, a series of open-ended questions were created, with a specific emphasis on personal memories, experiences at historical locations, and views about urban growth. These questions are aligned with phenomenological methodologies that prioritize lived experiences and perceptions of places of the respondents (Heidegger, 1927; Merleau-Ponty, 1962). Moreover, a set of four questions, divided into two categories were designed to explore two main themes: age value, focusing on the distinctions between "oldness" and "originality" in the historic areas of Karachi, and perceptions of oldness, specifically examining the relevance of traditional functions and activities in relation to the physical form and materials of historic buildings. The concept of age value, as outlined by Riegl (1903) explores how the value of an object or place increases with age, particularly in the context of cultural heritage, where historical significance and aesthetic appeal are intertwined with the passage of time. This concept helps in

understanding how heritage buildings are valued differently as they age and how that impacts the perception of authenticity.

The data from the Memory Recalling Task (MRT), which engages the participants in recollecting memories of heritage places, contributed to answering the Research Question 1 (RQ1). This question is aligned with all the three objectives of the research, helping to establish whether the historical character of a place is more deeply rooted in its physical structures or in the continuity of cultural practices (Tuan, 1977; Lowenthal, 1985). The MRT also provided insights into how authenticity is tied not only to the physical elements but also to the ongoing cultural practices that are intertwined with those places (Uzzell & Ballantyne, 1998).

The discussions began by naming a few historic landmark places and buildings to prompt the associations and memories of the participants with those locations. These initial prompts are grounded in heuristic techniques for stimulating the memories and reflections of the participants on the significance of the places (Relph, 1976). The discussion was aimed specifically at eliciting their recollections and narratives related to the urban past of Karachi, fostering a dialogue between their personal memories and the broader cultural narratives of the heritage of the city. By engaging the participants in this way, the study explored how sense of place is shaped through memory and experience, as well as how the authenticity of a place is perceived by the different stakeholders (Gifford, 2014).

- 8-10 well-known names of old city areas were selected for use in the MRT process.
- Participants were asked four fixed questions as mentioned above, to understand their perceptions of old areas and the values of age.
- Participants were asked to perform the MRT using those names that would help visualize the “memories of places”.
- Participants were encouraged to re-imagine the attributes that are missing in order to retain authenticity or sense of place in the present time.
- Relevant stories and key terms were noted during the MRT process.

Documentation: The interviews were recorded using the audio recorder function of a mobile phone, and detailed notes were taken throughout the sessions.

Transcriptions: The interviews were transcribed verbatim to ensure that all the nuances and details were accurately recorded for analysis.

Interview Location: The memory recall interview was conducted at the old campus of the NED University, located in the heart of the historic city. The interview was held informally, in a setting called *bethak* (a casual gathering with people). The campus holds significance as a listed building, and the participants expressed admiration for the location, as it evokes a strong sense of place through its historic built environment.

The MRT task was accomplished by mentioning significant names of historic areas of Karachi. Memories of places were incited by references to the places themselves. These references cited recollections of history, suggesting that some elements that once existed may have been lost over time. In this way, the process of recall brought to the surface, the aspects that have been lost and those that should have been preserved.

4.2.2.3 Semi-Structured Interviews with the Experts

Semi-structured interviews are a well-established qualitative data collection method, designed to balance a structure of guided questioning with the flexibility of open-ended exploration (Flick, 2018). In the context of this research, semi-structured interviews were conducted with key professionals in the field of heritage conservation, including conservation experts, heritage practitioners, and urban planners who have been actively engaged with the colonial heritage of Karachi. This method was chosen to capture the depth and diversity of professional opinions on authenticity, while offering insights into practical challenges and theoretical interpretations shaping conservation efforts in the rapidly urbanizing historic environments (Creswell, 2013).

The origin of the semi-structured interview method, lies in the broader tradition of qualitative inquiry, particularly within the frameworks of phenomenology and grounded theory. Phenomenology, as articulated by Heidegger (1927) and Merleau-Ponty (1962) emphasizes the importance of capturing the lived experiences and subjective understandings of the participants. This makes the semi-structured interview particularly well-suited for heritage research, where concepts like authenticity and sense of place are more than often, deeply intertwined with personal and professional experiences. Grounded theory, developed by Glaser and Strauss (1967) further supports this approach by advocating for an iterative data collection and

analysis, allowing the emerging themes to shape the subsequent inquiry and deepen the theoretical insights (Charmaz, 2015).

In practice, the semi-structured interview offers a middle ground between the rigidly-structured surveys and entirely open-ended conversations. Pre-determined questions provide a consistent framework for discussion, ensuring alignments with the research objectives while allowing the participants to expand on topics they consider most relevant (Bryman, 2016). This format is particularly effective for exploring complex and context-dependent issues like authenticity in heritage conservation, where interpretations of professionals often reflect a combination of theoretical knowledge, practical experience, and institutional constraints (Smith, 2006). For this study, the interview questions were designed to investigate how authenticity is perceived and operationalized in the historic urban areas of Karachi. Topics included the balance between material and intangible heritage, the impact of urban development on historical integrity, and the role of community engagement in conservation practices. By encouraging the participants to reflect on their professional experiences and the evolving demands of heritage management, the interviews provided nuanced insights into the intersections of conservation theory and practice (Riegl, 1903; Lowenthal, 1985).

One of the key strengths of the semi-structured interview method lies in its adaptability. As new themes and perspectives emerged during the interviews, the flexible format allowed the researcher to pursue these lines of inquiry in greater depth, enriching the data set with context-specific observations and expert analyses (Guba & Lincoln, 1994). This approach aligns with constructivist epistemology, which emphasizes the co-construction of knowledge through dialogue and interaction, recognizing that participants' interpretations of authenticity are shaped by their professional contexts and personal experiences (Charmaz, 2006). The interviews were instrumental in bridging the gap between the theoretical debates on authenticity and the practical realities of heritage conservation in Karachi. The participants' reflections on contemporary urban development highlighted the tensions between preserving historical integrity and accommodating the modern infrastructure needs. Their insights underscored the importance of developing adaptable conservation strategies that respect both the physical and socio-cultural dimensions of heritage, supporting the

broader aim of this research to propose a holistic framework for the assessment of authenticity (Avrami et al., 2019; Bandarin & Van Oers, 2012).

To ensure methodological rigor, the interview process followed the established best practices for qualitative research. Participants were selected based on their expertise and experience in heritage conservation, and efforts were made to include a diverse range of perspectives. Interviews were recorded and transcribed with the consent of the participants, and a thematic analysis was employed to identify the recurring patterns and divergent viewpoints within the data (Schreier, 2012). This systematic approach facilitated the development of a comprehensive understanding of authenticity as perceived by the heritage professionals in Karachi, laying the groundwork for the subsequent integration of qualitative and quantitative findings in the analytical framework of the study (Krippendorff, 2004).

The interviews provided invaluable insights into the evolving discourse on authenticity in urban heritage conservation. By capturing the voices of those directly engaged in preserving the colonial architecture and cultural identity of Karachi, this method enriched the exploration of authenticity as a multi-dimensional concept, shaped by historical narratives, professional practices, and community values (Labadi, 2010; McClelland et al., 2019). These expert perspectives serve as a critical foundation for the efforts to develop an authenticity assessment model which is both contextually sensitive and methodologically robust.

4.2.2.3-Detail 1: Criteria For the Selection of the Participants

To address the Research Question 3, participants were selected from both the public and private sectors based on their active involvement in the field of architectural conservation. The selection process was designed to ensure that the participants possessed the theoretical and practical knowledge necessary to understand the current practices promoting urban development in historic areas (Heidegger, 1927). All the participants had direct involvement in the ongoing conservation projects in Pakistan, contributing to an informed perspective on the challenges and opportunities within the conservation and development intersections (Smith, 2006).

To develop a comprehensive understanding of the conservation practices and urban development in the historic areas, experts with diverse specializations were chosen. They included professionals from legal protection, structural intervention,

conservation design proposals, and heritage site management (Creswell, 2013). Moreover, some experts were selected for their roles in community engagement or their work in advancing materials and technologies related to the restoration projects (Lowenthal, 1985). The goal was to ensure a holistic view of conservation that considered not only the physical structures but also the social, cultural, and technological aspects of heritage management (Riegl, 1903).

The current practices of heritage conservation can be categorized into three distinct types, based on insights gathered from site visits to historic areas of Karachi, analysis of conservation projects within the study area, focus group discussions, and critiques of conservation approaches. These practices reflect varying levels of intervention and different ways in which authenticity and integrity are either preserved or compromised in response to urbanization (Cohen, 2012). Moreover, they highlight not only the material preservation of heritage but also the experiential dimensions of heritage perception, aligning with the ideas of Uzzell and Ballantyne (1998).

These three categories are:

- Heritage conservation conducted by qualified conservation architects
- Heritage conservation undertaken by unqualified practitioners or general architects
- Heritage redevelopment projects led by contractors and/or stakeholders

To capture the perspectives within each of these categories, twelve semi-structured interviews were conducted comprising 3 to 4 participants from each group. This purposive sampling ensured a diverse representation of professional roles and enabled a comparative analysis of how authenticity is understood, implemented, or overlooked in heritage interventions across different actor groups.

4.2.2.3-Detail 2: Criteria For Interview Questions

A set of questions was designed in alignment with the research questions. However, not all questions were posed to every participant. Questions were tailored depending on their expertise and professional involvement in public and private sector roles related to historic area preservation, building conservation projects, or structural restoration (Creswell, 2013). This approach ensured that the interviews were relevant to the specific roles and experiences of each participant, in line with the best practices in qualitative research (Denzin & Lincoln, 2011).

The interview questions were designed with a multidimensional approach to heritage conservation practices in the context of Pakistan. As Mason (2008) describes, opinions of the experts can help explore the various multifaceted challenges of integrating cultural values into the conservation process. Furthermore, Ashworth et al. (2007) point out the necessity of an appropriate framework for interview questions that distinguish between tangible and intangible aspects, in order to address the diverse perspectives of the stakeholders involved in the conservation projects. Some of the questions were context-specific (Kvale & Brinkmann, 2009) referring to the main research theme, 'authenticity,' to determine whether the architects working on the conservation projects understand its meanings and values in relation to their conservation or restoration proposals. The questions were designed to facilitate both direct and indirect conversations, exploring the actionable aspects of the core research area and emphasizing reflection on the long-term effects of the current approach to maintaining the authenticity of historic areas. The questions aimed to explore how the practitioners assess the value of authenticity and how they enhance it while managing the heritage sites for adaptive reuse and urban development (Uzzell & Ballantyne, 1998). This inquiry is particularly pertinent in the light of the tensions between preserving historical authenticity and adapting heritage sites for the modern urban needs (Cohen, 2012).

4.2.2.3-Detail 3: Data Collection Procedure

Data was collected from all three categories, with three participants in each category. Some interviews were conducted in person, while others were held online, depending on the availability of the participants. The expert responses were recorded using a mobile phone recorder, and additional notes were taken to highlight the key points. The recordings were later transcribed and saved as raw data. Relevant information pertaining to the research questions was then summarized for analysis.

4.2.3 Methodological Response to the Research Questions and the Framework

4.2.3.1 Research Question-Framework-Multiple Sorting Task

The urban environment is a dynamic and evolving entity, shaped by layers of governance, socio-economic shifts, cultural practices, and spatial configurations. Understanding authenticity within such a context requires methods that capture both tangible and intangible dimensions of heritage. Multiple Sorting Task was employed

as a structured yet adaptable approach to explore these dimensions within the historic sites of Karachi. This method enabled the participants to categorize the elements based on their subjective understandings of authenticity and age value, uncovering the complex interplay between physical attributes and cultural significance (Kaplan & Kaplan, 1989). Drawing on cognitive mapping techniques, this approach provided valuable insights into how the participants prioritize and associate various heritage characteristics (Gifford, 2014).

4.2.3.1-Detail 1: Linking to Research Questions and Objectives

In addressing the Research Question 1, “What are the general and scholarly understandings and perceptions of authenticity in the context of management of urban heritage?”, and the Objective 1, “To identify how the different aspects of heritage buildings contribute to the manifestation of a historical sense of place arising from the authenticity of heritage”, the Multiple Sorting Task was instrumental. By engaging the participants with both the material aspects (e.g., architectural form, construction materials) and the non-material aspects (e.g., cultural practices, emotional connections), the method facilitated the identification of dominant themes and diverse perspectives. Participants' sorting patterns revealed not only personal interpretations of authenticity but also culturally shared understandings. This approach enabled a deeper investigation into how historic identity is experienced and perceived, providing a holistic assessment of heritage authenticity.

4.2.3.2 Research Question-Framework-Memory Recalling Task

The ever-changing nature of urban environments often reshapes people’s sensory and emotional connections to heritage spaces. The Memory Recalling Task (MRT) was employed to capture these intangible aspects, drawing on the participants’ recollections to understand how the memories influence their perceptions of authenticity and sense of place. Rooted in phenomenological approaches, this immersive method aligns with Lowenthal’s (1985) assertion that memory and experience are crucial in shaping historical identity and authenticity.

4.2.3.2-Detail 1: Linking to Research Questions and Objectives

The MRT directly supports the Research Question 2, “What are the appropriate frameworks, methods, strategies, and tools to assess the authenticity of heritage buildings?”, and Objective 2, “To analyze the implementation of conservation principles in practice and ascertain how they have contributed to retaining authenticity

in heritage conservation”. Through memory evocation, participants recalled interactions with Karachi’s heritage sites, revealing layers of emotional resonance, sensory detail, and historical continuity. This method illuminated the ways conservation practices shape collective memory and reinforce authenticity, emphasizing the importance of preserving both physical structures and the cultural narratives they embody.

4.2.3.3 Research Question-Framework-Semi-Structured Interview

Urban heritage conservation operates within a complex framework of policy, planning, and community engagement. Semi-structured interviews were conducted to delve into these complexities, gathering in-depth insights from the heritage professionals, conservation architects, and community stakeholders. Adaptability of this method allowed for the exploration of diverse experiences while maintaining a focused dialogue on key themes of authenticity, conservation, and urban development.

4.2.3.3-Detail 1: Linking to Research Questions and the Objectives

Addressing the Research Question 3, “How can strategies to assess authenticity be incorporated into the practice of heritage building conservation?”, and Objective 3, “To develop a framework, strategies, and tools that can be employed by heritage practitioners to assess the presence or absence of authenticity in heritage buildings”, the semi-structured interviews offered a platform for practical discourse. By facilitating an exchange of professional knowledge and community perspectives, the interviews captured the challenges and opportunities inherent in heritage management. Discussions encompassed strategies for balancing development pressures with conservation goals, the role of policy in sustaining authenticity, and innovative approaches for integrating traditional practices into contemporary urban planning.

4.2.4 Case Study Selection Criteria

The selected study area is located in the historic core of Karachi, a cosmopolitan city and the largest metropolis in Pakistan, situated in the southern part of the country (Moore, 2018). According to the record of The World According to GaWC 2008, Karachi is ranked as a Beta-global city. Over time, boundaries of Karachi have expanded significantly due to population growth from both within Pakistan and abroad. According to the 2017 census, population of Karachi constitutes 12% of the country’s total population (Khan et al. 2020). The historic core of Karachi is in the

western part of the city. During the British colonial rule, this area has been divided into various quarters, featuring mixed-use developments that included residential, commercial, educational and recreational facilities. The term “quarter” was introduced by the British to define specific land parcels within the old Karachi.

The first administrative division of the city was established by Mr. Belasis in 1858, dividing it into 14 quarters. (Lari, 1996, Naeem 2011) These quarters showcase the British colonial architectural styles and includes several prominent landmarks. Later, the boundaries of the British town have been expanded by the municipal engineer, Alexander Bailie. This expansion has divided the extended city into 12 new quarters, resulting in a total of 24 quarters (Bailie 1890, Lari 1996)

This research examines the preservation of authenticity in selected sites within the British-era historic quarters of Karachi. Regarding the selection of Karachi, the author chose it as a primary reason as a convenience sample due to accessibility to the site (Ashworth & Tunbridge, 2000), as well as the subject knowledge the researcher had about the colonial buildings of Karachi gained through extensive work experience with the Karachi Heritage Building Resurvey Project.

Talking about available heritage sites, Poria et al. discuss the feasibility of convenience samples due to easy access to the sites (Poria, et.al., 2011, Cohen, E.,1988). As a citizen of Pakistan, the author has unrestricted access to the Karachi and Pakistan during all the academic breaks from the university where the researcher worked. Furthermore, logistical feasibility made it more convenient to visit the selected sites, as Karachi is the home city of the researcher (Cohen, 1988)

The secondary reason for selecting Karachi was its convenient location, as well as time and financial constraints. Since this research is self-funded, it was more practical to work in the hometown of the researcher. Familiarity with the site and community also made the process easier, as the participants who spoke the vernacular language were readily available and were cooperative during the site visits.

The historic urban areas of Karachi were selected as the research site due to their rich colonial heritage and the ongoing conservation efforts aimed at preserving the historic buildings and the streetscapes. These areas are suitable particularly for investigating the intersection of authenticity and conservation practices, as they feature a blend of tangible heritage (such as colonial-era buildings and infrastructure) and intangible

heritage (such as local community practices, rituals, and memories). This setting offers a unique opportunity to explore how authenticity is perceived not only in terms of physical structures but also in terms of the cultural practices that continue to shape the identity of the community. The rapidly changing urban landscape of Karachi also presents challenges to the preservation of both material and non-material elements of heritage, making it an ideal case study for exploring these tensions.

The research methods employed in this study are designed to address the research questions and objectives, which aim to understand the relationship between heritage conservation practices, preservation of authenticity and how to assess authenticity. These methods include semi-structured interviews, focus group discussions, and community participatory mapping. The mapping of research questions and objectives ensure that each method is aligned with the overall aims of the study. The semi-structured interviews are designed to assess how experts in heritage conservation perceive and apply the concept of authenticity in their work. These interviews also seek to explore the challenges practitioners face in maintaining both the physical and non-physical aspects of authenticity in the face of urban development pressures. Focus group discussions, conducted with various stakeholders, help to gather insights into the lived experiences and collective memories that contribute to sense of place within the historic areas. The community participatory mapping method, which includes activities like memory recall tasks, is used to understand how different individuals and groups relate to the heritage sites, helping to assess whether their experiences align with the physical preservation efforts made by the conservationists. Through these methods, the study seeks to provide a comprehensive understanding of how authenticity is experienced by different actors and how these experiences influence the conservation practices.

4.2.5 Process of Data Analysis

4.2.5.1 Data Analysis Technique for the Sorting Task

As previously elaborated, the research employed multiple sorting task as a technique, to gather data on authenticity and sense of place, associated with the distinct heritage buildings in the old urban areas of Karachi as experienced by diverse stakeholders. They were engaged in sorting images according to perceived similarities and linkages.

The card sorting method is used as a primary way to understand the level of authenticity retained in the heritage buildings and precincts in Karachi. This method allows the organization and categorization of the key ideas that efficiently revealed the perception of authenticity among the respondents.

4.2.5.1 Multiple Card Sorting Software for Data Collection and Analysis

This research employed two card sorting softwares: namely OptimalWorkshop™ and ProvenbyUsers™, to facilitate qualitative data analysis and maintain academic rigor, in a quantitative manner, enabling a comprehensive understanding of the perceptions of the participants regarding heritage and authenticity. The card sorting method allowed for the analysis of key themes, patterns, and insights in relation to the urban heritage environment of Karachi.

The analysis was carried out using the following techniques:

4.2.5.1-Detail 1: Group To Card Ratio

The Group-to-Card Ratio analysis provided valuable insights into perceptions of heritage and authenticity among the participants in the context of the built environment of Karachi. This approach enabled the visualization of how different groups of cards were categorized by the participants. The results were presented in a clear visual format, using bar graphs to represent the frequency of categories across the three different groups. This technique helped identify dominant themes related to heritage and authenticity, simplifying the comparison of the views of the participants across various categories

4.2.5.1-Detail 2: Similarity Matrix

In addition to the Group-to-Card Ratio, a similarity matrix was used to quantitatively compare the pairwise similarities between the five images used in the card sorting task. The values within the matrix reflected the degree of similarity based on the specific criteria such as historical context, facade characteristics, usage, alterations, and craftsmanship. The percentage-based similarities provided insights into how the participants perceived the features of the heritage buildings in relation to one another, revealing the patterns of the shared features and the distinguishing characteristics

4.2.5.1-Detail 3: Dendrogram

The dendrogram complemented the similarity matrix by visually representing the hierarchical clustering of images based on their similarity scores. The clustering analysis revealed how the different images were grouped, providing a clear indication of which images the participants considered more similar to each other. This tool was particularly useful for identifying the dominant groupings, as well as the close-knit clusters of the buildings that shared the similar attributes related to authenticity.

4.2.5.1-Detail 4: Data Visualization and Interpretation

The card sorting software also facilitated the extraction of key themes and patterns by analysing how the participants categorized the cards. The software allowed for the inclusion of thematic elements identified by multiple participants, ensuring a broad representation of views. Clear data visualizations such as bar charts, similarity matrices, and dendrograms, helped to extract the diverse opinions regarding the perceived level of authenticity in the heritage buildings. This allowed for a more streamlined comparison of different perspectives, contributing to a deeper understanding of how authenticity is perceived in the historic areas of Karachi

4.2.5.2 Data Analysis Technique for Memory Recalling Task (MRT) Method

As elaborated in the updated research, the study employed the Memory Recalling Task (MRT) as a qualitative method to gather data on authenticity and sense of place in the historic urban areas of Karachi. The MRT method focused on understanding the perceptions of the participants related to heritage and age values through a set of fixed questions. This approach enabled the participants to express their views on the tangible and intangible aspects of heritage, such as the role of physical structures and the traditional activities in preserving historical authenticity.

4.2.5.2-Detail 1: Qualitative Data Collection and Analysis

The MRT method provided a structured framework for gathering the perspectives of the participants on heritage conservation and the manifestation of authenticity. By using fixed questions, the research captured insights into historical continuity, material preservation, and cultural practices. The analysis process involved organizing the collected qualitative data systematically and identifying the recurring themes through

cross-comparison tables. This method allowed the study to categorize the responses of the participants based on their perceptions of heritage and authenticity, offering a clear and organized presentation of key ideas. The cross-comparison tables facilitated the recognition of patterns and differences in the viewpoints of the participants, making it possible to construct a coherent understanding of the interplay between the tangible and intangible heritage elements.

The data was analysed without pre-empting the findings, focusing solely on establishing an effective methodology for interpreting the perspectives of the participants. The thematic categories emerging from the MRT responses were refined through iterative analysis, ensuring a comprehensive and nuanced approach to understanding authenticity and sense of place as related to heritage.

4.2.5.3 Qualitative Content Analysis for Semi-Structured Interviews

According to Schreier (2012) and Mayring (2015), qualitative content data analysis is a systematic approach used to interpret textual data by identifying meaningful patterns. This method employs a deductive process to analyse complex qualitative data, highlighting the relationships between research goals and iterative results from raw data. It integrates both predetermined objectives (deductive) and findings that emerge through multiple interpretations and understandings of the data (inductive).

Content analysis offers a quantitative measure for identifying patterns to simplify qualitative data. Formulating well-structured research questions aligned with clear objectives is essential for achieving better results in network pattern development. This alignment helps filter relevant information and identify clear themes and relationships during the analysis process (Krippendorff, 2004; Schreier, 2012; Mayring, 2015).

The development of themes from raw data is a critical step in this method. These themes are then organized into a framework or model that captures the key processes and outcomes deemed sustainable by the research. In fact, this approach ensures that the analysis remains methodologically grounded in the data while staying aligned with the primary objectives of the research.

Incorporating deductive reasoning, the study aims to understand the perceptions of individuals. For this purpose, the research employs thematic analysis, using relevant coding from the dataset aligned with the research questions. The flexibility of thematic analysis facilitates the identification of relationships among themes and codes,

enabling a deeper understanding of the phenomenon. To enhance the analysis, the research utilized Atlas.ti software, which provided visual representations of theoretical data and aided in analysing information across three distinct categories of expert opinions.

4.2.5.3-Detail 1: Process of Qualitative Content Analysis for Semi-Structured Interviews

The data analysis was conducted using a methodical coding process and the development of themes with the assistance of the Atlas.ti tool. To streamline the process, the recorded interviews were transcribed and thoroughly reviewed to develop themes and understand the relationships among them. As required by the software, the transcriptions were uploaded into Atlas.ti and categorized into three distinct groups:

- Heritage conservation practices by architects
- Heritage conservation practices by conservation architects
- Heritage redevelopment practices by contractors

Using a deductive approach, the analysis involved organizing raw data into meaningful codes that facilitated the development of a comprehensive model or framework. Each code was assigned a brief label summarizing its key knowledge, followed by a detailed explanation within the specific context. Relevant excerpts from the data were linked to each code to exemplify their meanings and perspectives. Networks among the codes were established to visualize the relationships between them. These networks presented complex theoretical information in clear and accessible graphic formats.

These networks were associated with predefined labels in the software, which described the relationships among the codes using multiple links, such as associations, contradictions, causes, hierarchical structures, or interdependencies. These relationships highlighted influences within the classified structures and fundamental connections in networked models.

The finalized framework effectively summarized the analysis using graphical representations, such as two-dimensional layouts of networking among the codes with their relationship, code frequency matrices in the form of bar diagrams, and code co-occurrence analyses. These visualizations efficiently extracted the raw data into key themes and methods.

4.2.6 Development of the Framework

The aim of the first part of the methodology is to examine scholarly interpretations of authenticity in urban heritage management, critically evaluate current heritage conservation practices, and identify the key determinant factors that influence the integration of authentic heritage values within urban development. To achieve this, the study employs a mixed-method approach, combining qualitative and quantitative methodologies to capture both structured assessments and experiential perceptions of authenticity. A range of data collection methods, including multiple sorting tasks, Memory Recalling Tasks, and semi-structured interviews are utilized to explore how authenticity is perceived, categorized, and contextualized. These methods facilitate an in-depth analysis of cognitive associations, memory-based recognition, and expert evaluations, ensuring that the framework captures both the tangible and intangible dimensions of authenticity.

The sorting tasks uncover the patterns in how the participants group and differentiate the heritage elements, while Memory Recalling Tasks provide insights into the emotional and historical connections individuals form with the heritage spaces. Moreover, semi-structured interviews with heritage practitioners and community stakeholders reveal the practical concerns, policy gaps, and conservation challenges, offering a nuanced understanding of how authenticity is negotiated in the real-world urban contexts.

By integrating these methodologies, this part ensures that the assessment of authenticity is both methodologically rigorous and sensitive to cultural and experiential dimensions, establishing a foundation for the development of a comprehensive evaluation framework that aligns with the contemporary urban needs of heritage conservation.

4.2.6.1 Findings Leading to the Development of the Framework for Assessment

A significant outcome of this research is the development of a specialized evaluation framework for assessing authenticity of heritage within urban contexts. This framework was formulated through an iterative process of data collection and analysis, identifying the key determinants of authenticity that shape both the scholarly discourse and conservation practices. It responds to the limitations of existing assessment models by integrating both the tangible and intangible dimensions, ensuring a contextually adaptable and comprehensive approach to evaluation of heritage. The development of

the framework was informed by empirical research conducted through perception-based methodologies, designed to uncover how authenticity is experienced, categorized, and valued. These methods facilitated an exploration of contextual, architectural, structural, and functional authenticity, ensuring that the framework encapsulates both material integrity and cultural continuity in conservation decision-making. The framework incorporates qualitative and quantitative criteria, drawing from three key data collection techniques:

- a. **Multiple Sorting Tasks:** These tasks examine how people group and categorize heritage buildings, revealing patterns in perception, cognitive associations, and authenticity indicators. The results highlight the role of visual coherence, spatial integrity, and historical narratives in shaping authenticity assessments.
- b. **Memory Recalling Tasks:** These tasks capture individual and collective memory-based narratives, offering insights into emotional resonance, place attachment, and historical continuity. This method reinforces the importance of lived experiences in defining authenticity, particularly in relation to adaptive reuse and evolving urban landscapes.
- c. **Semi-Structured Interviews:** Interviews with heritage practitioners, policymakers, and community stakeholders provide practical perspectives on the challenges to conservation, identifying the gaps in legislature, inconsistencies in policies, and pressures of urban developments that impact the retention of authenticity.

Findings from the first part of the methodology identified the key factors necessary to construct a multi-dimensional, structured, and layered understanding of authenticity. These insights emphasize the critical values required for evaluating authenticity across diverse urban settings, offering heritage practitioners a systematic framework that balances historic conservation with contemporary urban development demands. The Evaluation Framework thus serves as an essential resource for guiding holistic, adaptive, and community-centred conservation strategies, ensuring that authenticity assessments remain rigorous yet flexible in addressing evolving heritage challenges.

4.3 Validation of Evaluation Framework

The second part of the methodology focuses on the validation of the developed framework, ensuring its applicability and effectiveness in assessing architectural authenticity within diverse heritage contexts. The validation process is designed to test the capacity of the framework to integrate both the tangible and intangible dimensions of authenticity, reinforcing its adaptability to evolving urban landscapes and conservation challenges. The Framework for Assessing Authenticity (FAA) is subjected to empirical testing through its application across selected heritage buildings, allowing for a structured and comprehensive evaluation of authenticity indicators. This part ensures that the framework is not only theoretically sound but also practically viable, addressing both material conservation and experiential dimensions of heritage.

A key component of this validation process is the engagement of local practitioners, whose expertise and familiarity with conservation challenges play a critical role in refining the contextual sensitivity and methodological rigor of the framework. Their application of the FAA provides insights into real-world conservation dynamics, ensuring that the framework reflects local knowledge, cultural values, and practical considerations. By incorporating stakeholder-driven assessments, the validation phase strengthens the reliability of the framework as a tool for heritage management, bridging the gap between academic discourse and practical conservation strategies.

4.3.1 Validation Process

To ensure structured and empirical validation, the FAA is tested through three distinct evaluation tools, each designed to assess authenticity from different but complementary perspectives. These tools provide a comprehensive and data-driven approach, balancing quantitative and qualitative assessments.

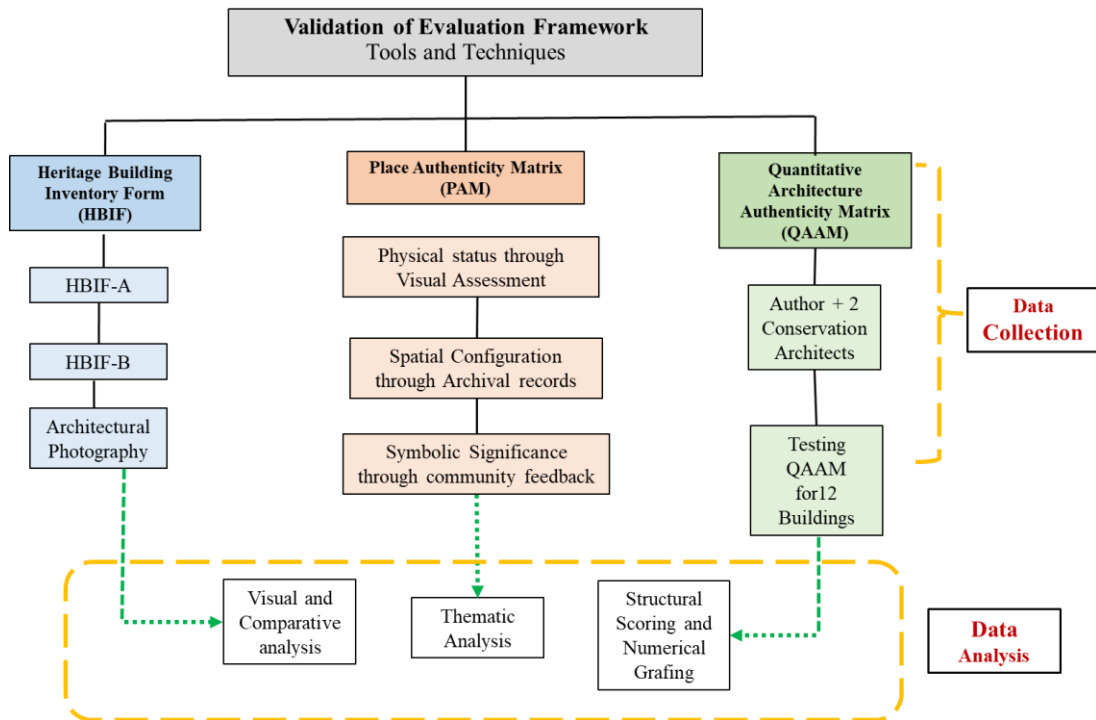
Table 4.5

Evaluation Tools for Validation and Testing

Validation Tool	Analytical Technique	Expected Outcome
Heritage Building Inventory Form (HBIF)	Comparative analysis of documented alterations	Systematic documentation of physical attributes and changes in historic buildings
Place Authenticity Matrix (PAM)	Thematic evaluation of emotional, cultural, and spatial authenticity	Assessment of experiential and cultural dimensions influencing authenticity
Quantitative Architecture Authenticity Matrix (QAAM)	Structured scoring system and numerical grading	Data-driven evaluation of architectural integrity and reversibility of changes

Figure 4.6

Tools and Techniques of Evaluation Framework



4.3.2 Application of the Framework by Local Practitioners

The research tests the proposed framework by offering it for application by selected local practitioners, assessing their responses regarding interpretations, methodologies, and challenges encountered in the evaluation process. By examining the practical application of this framework, the research aims to identify strengths and limitations in authenticity evaluations conducted at the local level. Through this analysis, the study underscores the importance of aligning global conservation standards with local perspectives, fostering a more inclusive and nuanced approach to heritage preservation.

The application of the FAA by local practitioners also provides valuable insights into the adaptability of the framework across diverse architectural contexts. It reveals how local expertise and on-the-ground experience shape the assessment outcomes, offering a more holistic understanding of authenticity in heritage conservation. This investigation ultimately contributes to refining authenticity assessment methods, enhancing their relevance and effectiveness in safeguarding cultural heritage in dynamic urban environments.

4.3.2.1 Precinct and Building Selection Criteria

The study of authenticity is context-based and requires the researcher's familiarity with the context being investigated. This necessitates in-depth observations of heritage alterations in historic buildings within the area. As mentioned earlier in the chapter-4, the reason of selecting Karachi, and Market quarter is due to author convenience, familiarity and accessibility. To assess the levels and types of authenticity, as outlined in the theoretical framework, it is essential to understand the interventions made in heritage buildings and the conservation approaches applied. Another reason for the site selection was the specific archive of the Heritage Cell at NED University, which contained readily available and well-documented architectural drawings through a conservation course in their architecture program.

To understand the challenges faced by urban developments in various contexts – in the case of this particular testing: historic areas of Karachi – this research developed a selection criterion to identify an appropriate precinct for the study and to address the research questions effectively.

Table 4.7*Criteria of the Precinct Selection*

Precinct Selection Criteria		
	Aspects	Description
1	Location and setting	Surrounded by historic areas on a larger scale
2	Variety of context	Including heritage buildings and urban development
3	Historic & architecture Value	Area with architectural integrity and historical significance
4	Socio-Cultural value	Supports social and communal interactions
5	Economic Climate	Potential for investment and economic growth
6	Function/ Usage	Mixed-use area with diverse functions
7	Historic Sense of Place	Reflects the character of the local neighborhood
8	Conservation Status	Involvement in multi-level conservation projects

The broader criterion for precinct selection helped identify a potential area that possesses cultural and historical architectural character, ensuring historical cohesiveness within the modern context. It also facilitated the development of a more focused selection criterion for individual buildings, validating the application of the quantitative proposal to assess authenticity. The precinct selection criteria for this study are carefully aligned with the research objectives, research questions, and the theoretical discourse established throughout the investigation. By selecting precincts that possess both tangible and intangible elements of heritage, the study ensures a comprehensive evaluation of authenticity rooted in cultural, historical, and architectural significance. These criteria enable the assessment of how the colonial heritage areas in Karachi retain their historical character while adapting to the contemporary urban needs. The Table 4.7 illustrates the basic rubric for selecting the potential buildings for the study.

The selection of these criteria, also allows for testing the assessment tools to their full capacity, examining the sensitivity of the tools under varying conditions and contexts. By applying the Heritage Building Inventory Form (HBIF), Place Authenticity Matrix (PAM), and Quantitative Architecture Authenticity Matrix (QAAM), the study ensures

that both material and non-material aspects of heritage are evaluated with depth and rigor.

- a. The first criterion, Location and Setting, ensures that the selected precinct is surrounded by other historic areas, fostering historical cohesiveness and contextual integrity. This approach aligns with the emphasis of the study on the spatial configuration of heritage sites, which Tuan (1977) and Relph (1976) highlight as essential for establishing a strong sense of place. By situating the precinct within a broader historic environment, the study captures the collective memory and shared cultural identity of the area (Lowenthal, 1985). The 'Variety of the Context' addresses the interplay between the heritage buildings and the modern urban developments, reinforcing the research question on how designing and planning approaches can balance authenticity with contemporary urban pressures. This ensures that the evaluation framework is tested on a precinct which presents a multitude of scenarios, ensuring a diversity of context.
- b. Socio-Cultural Value captures the intangible dimensions of heritage by prioritizing areas that support social and communal interactions. This aligns with the PAM, which integrates emotional resonance and community engagement as essential components of authenticity assessment. The inclusion of communal practices and cultural traditions within the precinct strengthens the cultural identity of the site, as advocated by Smith (2006) and Mason (2022). This helps test the flexibility of PAM, by allowing to analyse varying levels of community engagement and association with each context.
- c. Economic Climate ensures that the precinct offers potential for investment and economic growth, highlighting the practical considerations of heritage conservation within urban developments. This criterion responds to the research question on the socio-economic implications of conservation efforts and aligns with the findings of the study on balancing the development pressures with heritage preservation. Testing a context where there is a diversity of economic conditions, the tested buildings can hence provide a glimpse of how the evaluation framework will respond to different economic climates.

- d. Function and Usage emphasize the importance of mixed-use areas, reflecting the adaptive reuse and evolving functions of heritage buildings. This supports the exploration of how the changes in building use impact authenticity, as observed in the analysis of conservation practices and the challenges posed by the redevelopment projects.
- e. Historic Sense of Place evaluates the ability of the precinct to reflect the character of the local neighbourhood, preserving its cultural and historical identity. This criterion aligns with the theoretical discourse on sense of place, with scholars like Norberg-Schulz (1980) and Relph (1976) emphasizing the importance of maintaining the experiential and symbolic significance of the heritage sites. This also tests the response of the assessment framework to historicity and age value.
- f. Conservation Status considers the involvement of the precinct in multi-level conservation projects, ensuring that the area benefits from structured preservation efforts. This criterion supports the research objective of identifying effective conservation practices and aligns with the critique of existing legislative frameworks, such as the Karachi Building and Town Planning Regulations 2002 and the Sindh Cultural Heritage (Preservation) Act, 1994. An important factor identified during the design of the framework through methodology analysis, this helps test the Assessment framework in terms of responsiveness of the tools to each other. Where HBIF will record the exact conservation status, identifying the relevant legislature applicable to the building, the tangible factors and current socio-economic climate recorded in PAM can help define how the legislature may affect the building. It may also help identify the gaps in the legislature or any factors which may be counteractive to the conservation activities.

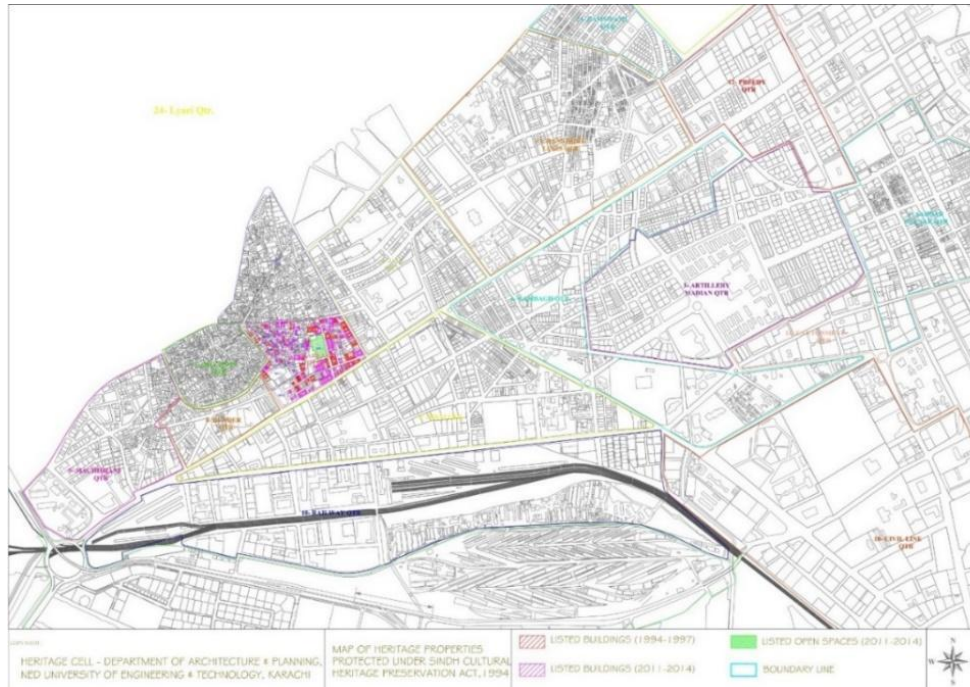
Together, these precinct selection criteria provide a foundation for evaluating authenticity by integrating spatial, cultural, economic, and conservation related factors. By testing the sensitivity of the assessment tools across diverse conditions and settings, this approach not only supports the methodological framework of the study but also addresses the research questions on balancing heritage preservation with urban development.

4.3.2.2 Precinct Selection

According to the design criteria, multiple quarters were visited to assess the level of interventions. The criteria were applicable in most cases; however, the final selection was based on the availability of historical documents and architectural records. The Market Quarter was chosen due to its strategic location within the dense historic core of Karachi. This convenience sample of the Market Quarter may not represent the entire historical context, potentially leading to bias or specific conclusions based on the limited scope of the study.

Figure 4.8

Location of Market Quarter in the historic core of Karachi



Note. Map showing demarcation of historic quarters of Karachi, highlighting location of Market Quarter (Source: HC-DAPNED)

Table 4.9*Justification of the selected Criteria for Market Quarter*

Precinct Selection Criteria		Selected Area
	Aspects	Market Quarter
1	Location and setting	Situated in the heart of old Karachi, surrounded by historic areas
2	Variety of context	A mix of heritage buildings and new urban development in the area
3	Historic & architecture Value	A group of historic buildings, with significant architecture styles
4	Socio-Cultural value	Active spaces day and night, fostering community interaction
5	Economic Climate	A potential zone for investment, serving as a commercial hub
6	Function/ Usage	A mix of residential, commercial, and religious functions
7	Historic Sense of Place	Predominantly inhabited by long-time residents, contributing to local identity
8	Conservation Status	Ongoing conservation and redevelopment projects focused on heritage buildings

4.3.2.3 Buildings Selection Criterion

Within the scope of this study, the relationship between the precinct and the building is integral to establishing a broader context for the study area. For this reason, preservation of the collective harmony between the two is fundamental to ensure that the conservation efforts respect the authentic connection between individual buildings and their surroundings. The unique interplay between the historic urban context and the particular building styles forms the basis for a holistic approach to evaluate authenticity. To investigate the conservation challenges in the precinct, particularly in the selected buildings, the research aligns both criteria to assess the authenticity status of the buildings within the context of old Karachi.

The building selection criteria are designed to test the sensitivity and adaptability of the assessment tools, named as Heritage Building Inventory Form (HBIF), Place Authenticity Matrix (PAM), and Quantitative Architecture Authenticity Matrix (QAAM). They ensure that both tangible and intangible aspects of authenticity are evaluated rigorously. Indeed, the study captures the nuanced interplay between historical character, contemporary pressures and conservation practices by applying these tools across the buildings with varying conditions and histories.

The selected buildings are situated within the historic neighbourhoods, reinforcing the collective group value and contextual integrity emphasized by Tuan (1977) and Relph (1976). Their locations strengthen the assessment of spatial configuration and historical cohesiveness through the HBIF and PAM. Buildings constructed during the colonial era or pre-independence period are prioritized to reflect the architectural and historical narrative central to the research. This focus enables the evaluation of historical authenticity, drawing from the exploration of historical continuity of the study and its role in shaping sense of place (Lowenthal, 1985). The selection of buildings utilizing colonial-era materials like wood, stone, and brick further enhances the assessment of material authenticity, testing the capacity of QAAM to evaluate the integrity of the original construction fabric.

Structural stability is a key criterion, ensuring that the buildings represent good physical condition essential for measuring architectural authenticity. This allows the QAAM to effectively gauge reversibility and adaptability in conservation efforts while preserving structural integrity. Moreover, buildings exhibiting authentic colonial features, such as the decorative facades, wooden balconies, and intricate stonework, provide a tangible link to the architectural styles of the colonial period. These features support the evaluation of both the material authenticity and symbolic significance, captured through the PAM.

The presence of the conservation interventions, including visible alterations like mass additions, material changes, or colour modifications, is crucial for analysing the impact of the contemporary practices on historical authenticity. This criterion allows the assessment tools to measure the balance between preservation and adaptive reuse, aligning with the discourse on conservation ethics articulated by Smith (2006). Moreover, buildings with colonial plan typologies, such as symmetrical floor plans, ventilated room arrangements, and courtyard designs, offer insights into the cultural and functional aspects of colonial architecture, enabling the PAM to assess spatial configuration and the QAAM to evaluate layout integrity.

Finally, the availability of complete architectural records was an important criterion, owing to the limitation of time and resources for primary data collection like detailed building surveys. Availability of comprehensive building documentation provides a solid foundation for the role of the HBIF in recording material and structural details, ensuring accurate comparative analysis, reinforcing the methodological rigor of the

study. This criteria, therefore provides a framework for testing the assessment tools across diverse building conditions, enabling a comprehensive understanding of authenticity assessment. By evaluating how these buildings retain their historical character amidst urban pressures, the study addresses the research questions and objectives, ensuring methodological rigor and theoretical alignment.

Table 4.10

Criteria of the Buildings Selection

Building selection Criteria		
	Aspects	Description
1	Context and setting	Historic neighborhood and group value.
2	Period of construction	During colonial time / Pre-independence.
3	Building material	Reflects the use of colonial era material such as wood, stone, brick, etc.
4	Structural Layout	Shows stability in structure to represent good physical status.
5	Authentic Colonial Features	Represents common features of particular architecture style.
6	Conservation Interventions	Shows some level of alterations either as mass added, subtracted, change of material or color etc.
7	Spatial Layout	Shows colonial plan typology such as symmetrical floor plans, room arrangements for ventilation, courtyards.
8	Architecture drawings	Ascertains the availability of complete architecture records.

As per the building selection criterion, fifteen buildings were selected to assess their compatibility with the designed rubrics. Almost all the buildings met the requirements, except for three, due to either the unavailability of a complete set of architectural drawings or significant changes in the neighborhood that affected the historical setting. Twelve buildings that met the criteria were selected for the final pilot testing of the proposal for quantitative evaluation.

Table 4.11*Criteria of the Buildings Selection*

Heritage buildings selection based on the designed criterion									
	Building Names	Context and setting	Period of construction	Building material	Structural Layout	Authentic Colonial Feature	Conservation Interventions	Spatial Layout	Complete set of Architectural Drawings
1	Allah Wala Building	✓	✓	✓	✓	✓	✓	✓	✓
2	Alvi Chambers	✓	✓	✓	✓	✓	✓	✓	✓
3	Azeem ud din Mansion	✓	✓	✓	✓	✓	✓	✓	✓
4	Shahla Mansion	✓	✓	✓	□	✓	✓	✓	□
5	Badri Masjid	✓	✓	✓	✓	✓	✓	✓	✓
6	Dada Chambers	✓	✓	✓	✓	✓	✓	✓	✓
7	Al Ghousia Building	□	✓	✓	✓	✓	✓	✓	□
8	Fakhri Building	✓	✓	✓	✓	✓	✓	✓	✓
9	Fazal Chambers	✓	✓	✓	✓	✓	✓	✓	✓
10	Feeroz Chambers	✓	✓	✓	✓	✓	✓	✓	✓
11	Khadija Bai Building	✓	✓	✓	✓	✓	✓	✓	✓
12	Pakistan Chemicals and Dy	✓	✓	✓	✓	✓	✓	✓	✓
13	Yousuf Market	✓	✓	□	✓	✓	✓	✓	□
14	Quetta Wala Building	✓	✓	✓	✓	✓	✓	✓	✓
15	Shams Building	✓	✓	✓	✓	✓	✓	✓	✓

These buildings were selected based on the established criteria, with the availability of architectural drawings from NED University playing a major role in the process. The final twelve buildings are distributed across four parcels of the Market Quarter: MR1, MR2, MR3, and MR7. There is no other reason for not selecting buildings from MR4, MR5, and MR6 rather than the unavailability of architectural records. Following buildings fulfilled the requirements of the criterion.

4.3.3 Introduction to the Market Quarter, Karachi (12 Building)

4.3.3.1 Market Quarter

As a pilot study, the research focused on the Market Quarter to evaluate the level of authenticity retained in the historic buildings of Karachi. An authenticity matrix was applied to the twelve buildings within this district. The Market Quarter, one of the oldest commercial centres in the old city of Karachi, is situated along the main M.A. Jinnah Road (formerly Bunder Road) and is bordered by the Jail Quarter to the East and the Old Town Quarter to the North. According to the initial records under the Sindh Cultural Heritage (Preservation) Act of 1994, 48 buildings in the Market Quarter were designated as Listed Buildings. A subsequent survey conducted by the Karachi Heritage Building Resurvey Project (KHBRP), led by NED University of Engineering

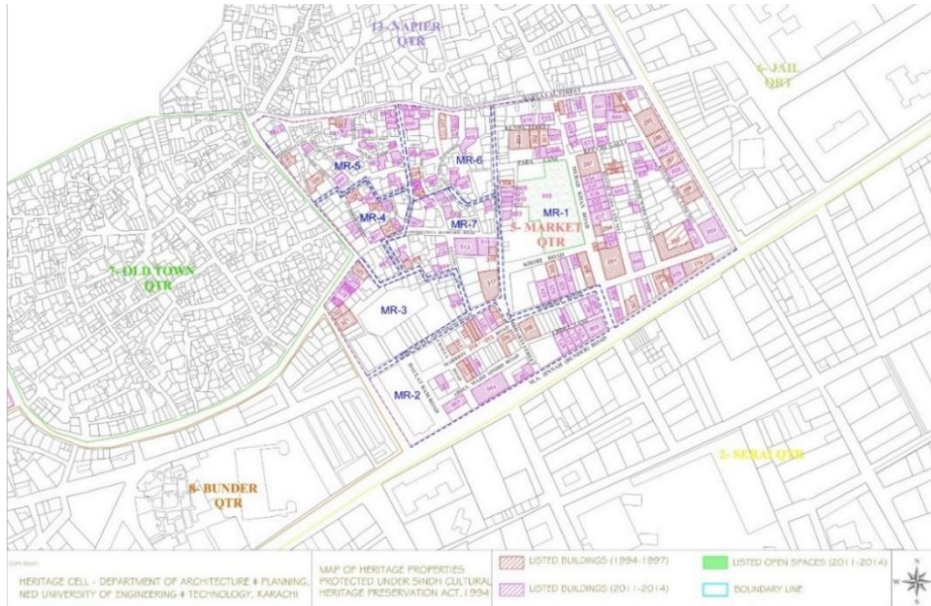
and Technology in collaboration with the Government of Sindh, and identified an additional 113 buildings for listing. The KHBRP research project, carried out between 2006 and 2011, was sponsored by the Department of Culture, Government of Sindh (NED Ref. MAR QTR report). This research aims to explore how authenticity can be maintained and re-engaged within its historic context.

The Karachi Metropolitan Corporation (1947) and the Sindh Building Control Authority (1974) records show the demarcation of the Market (MR) Quarter into seven further land parcels. These seven divisions reveal a minimum of 60 plots in MR-4 and a maximum of 210 plots in MR-1. However, there is no available justification in the records to explain the criteria for these divisions, which exhibit varying plot sizes in the Market Quarter map. The Market Quarter meets the selection criteria and provides a suitable location, surrounded by other historic quarters and easily accessible, and was therefore selected for the precinct study in this research (Ashworth & Tunbridge, 2000, Cohen, 1988). However, it faces significant urban development pressures, including various approaches to conservation design and heritage building redevelopment projects. Karachi is a commercial hub in Pakistan, and the Market Quarter is an active commercial zone within the historic part of Karachi. It also faces a considerable pressure from urban developments, and the quarter has a great potential to attract investments from various stakeholders.

Indeed, it represents significant developments and continuous constructions due to its status as a highly active business hub. As the most active commercial centre, the area has attracted increasing interest, evidenced by the opening of numerous bank branches. However, many development activities have led to a significant loss of some heritage structures and the erosion of authenticity in the others. Despite this, the precinct has drawn considerable attention from the architects and various stakeholders, who are employing various strategies to conserve the heritage of the area.

Figure 4.12

Demarcation of 7 parcels in the map of Market Quarter.



Note. Map of Market Quarter showing Listed Buildings record (1994-1997) and (2011-2014)

Source: HC-NED

4.3.3.2 Selected Buildings for testing and validation

The twelve buildings listed in the table below have been selected in the Market Quarter, representing all of the selection requirements in terms of colonial-style architectural characteristics, building materials, structural stability, authentic architectural features, spatial layout, and alterations due to unplanned conservation interventions. The images below show the location plan of each building, along with several images to confirm the selection based on the given criterion.

Table 4.13

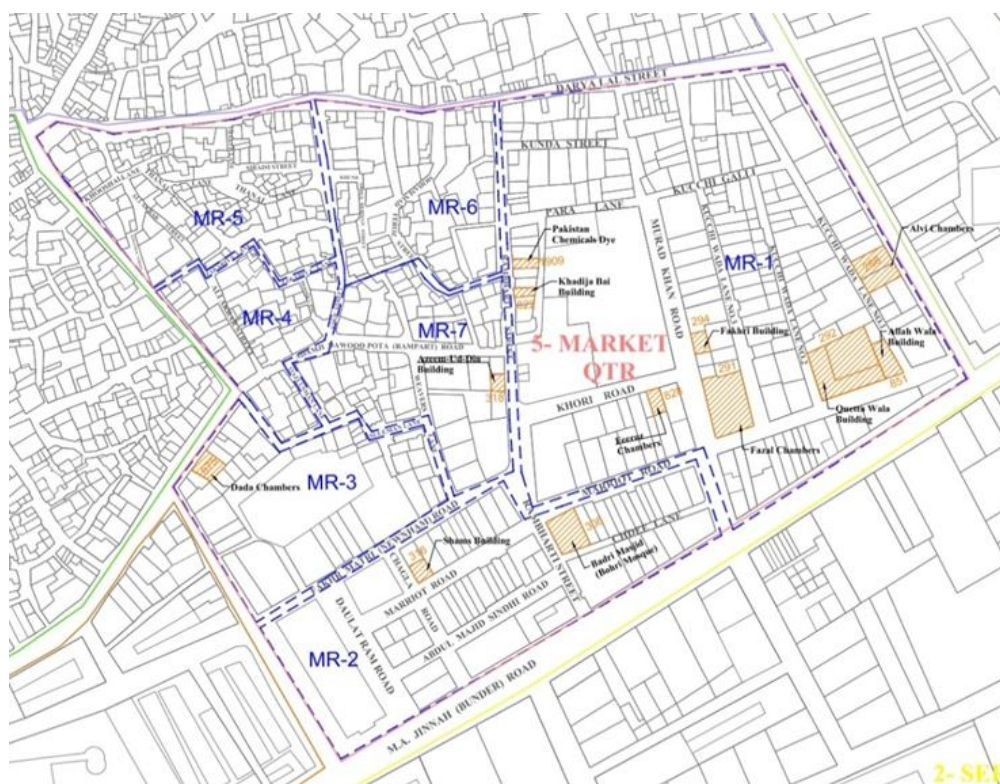
List of Selected Buildings

List of 12 Buildings in Market Quarter	
	Building Names
1	Allah Wala Building
2	Alvi Chambers
3	Azeem ud din Mansion

4	Badri Masjid
5	Dada Chambers
6	Fakhri Building
7	Fazal Chambers
8	Feeroz Chambers
9	Khadija Bai Building
10	Pakistan Chemicals and Dye
11	Quetta Wala Building
12	Shams Building

Figure 4.14

Location of 12 Buildings in the map of Market Quarter



Note. Source: HC-NED

Figure 4.15

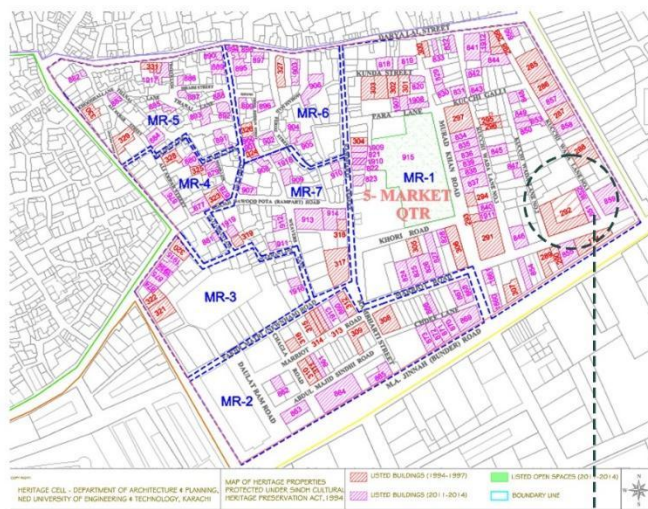
Illustrations and location Map of Allah Wala Building



1. STREET VIEW OF ALLAH WALA BUILDING



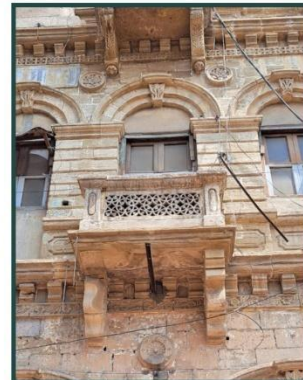
2. MOULDINGS, CORNICE, PILASTER, KEYSTONE AND ROUNDELS



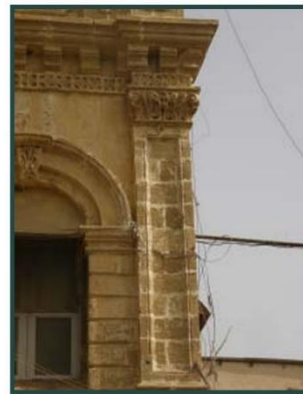
**ILLUSTRATION
SHOWING LOCATION
MAP AND PICTURES OF
ALLAH WALA
BUILDING**



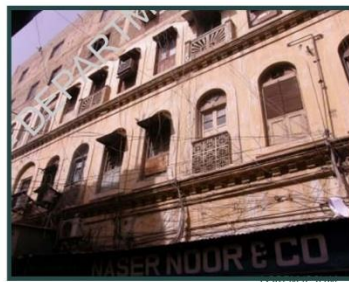
Location Map



3. BALCONY, DECORATED RAILING, ROUNDELS, MOULDINGS, PILASTERS, ARCHES, KEYSTONE



4. DECORATED PILASTER AND MOULDINGS



5. SIDE VIEW OF ALLAH WALA BUILDING
SOURCE(4-7): NED UNIVERSITY HERITAGE



6. BALCONY, DECORATED RAILING, ROUNDELS, MOULDINGS, PILASTERS, ARCHES, KEYSTONE



7. BALCONY

Figure 4.16

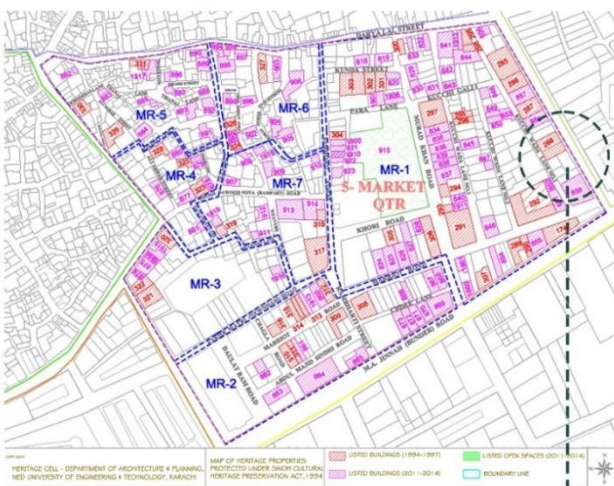
Illustrations and location Map of Alvi Chambers



1. STREET VIEW OF ALVI CHAMBER



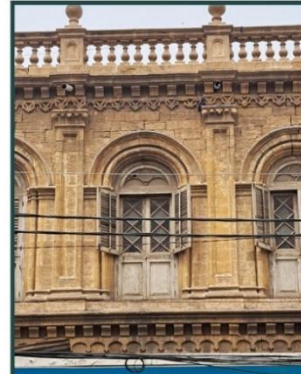
2. FRONT ELEVATION OF ALVI CHAMBER



**ILLUSTRATION
SHOWING
LOCATION MAP
AND PICTURES OF
ALVI CHAMBER**



Location Map



3. ROUNDED ARCH, MOULDINGS, PILASTERS
AND BALUSTRADE



4. ROUNDED ARCH



6. SIDE VIEW OF ALVI CHAMBER SOURCE: NED
UNIVERSITY HERITAGE DEPARTMENT



5. CONTEXTUAL VIEW OF ALVI CHAMBER

Figure 4.17

Illustrations and location Map of Azeem-uddin Building



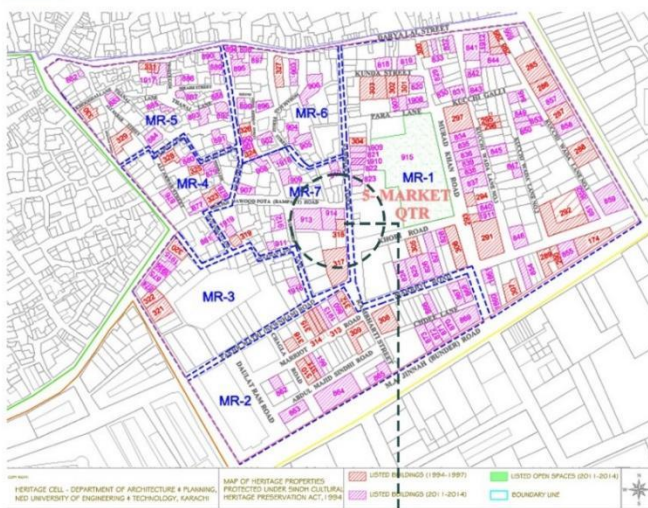
1. CORNICE, MOULDINGS, DECORATIVE PARAPET



2. FRONT ELEVATION WITH CONTEXT



3. BALCONY WITH DECORATIVE RAILING



**ILLUSTRATION
SHOWING LOCATION
MAP AND PICTURES
OF AZEEM-UDDIN
BUILDING**



Location Map



4. FRONT VIEW OF AZEEM-UDDIN BUILDING



5. FESTOONS



8. KEYSTONE, MOULDINGS SOURCE(5-8): NED UNIVERSITY HERITAGE



7. BALCONY WITH DECORATIVE RAILING



6. CORNICE, PILASTER

Figure 4.18

Illustrations and location Map of Badri Masjid

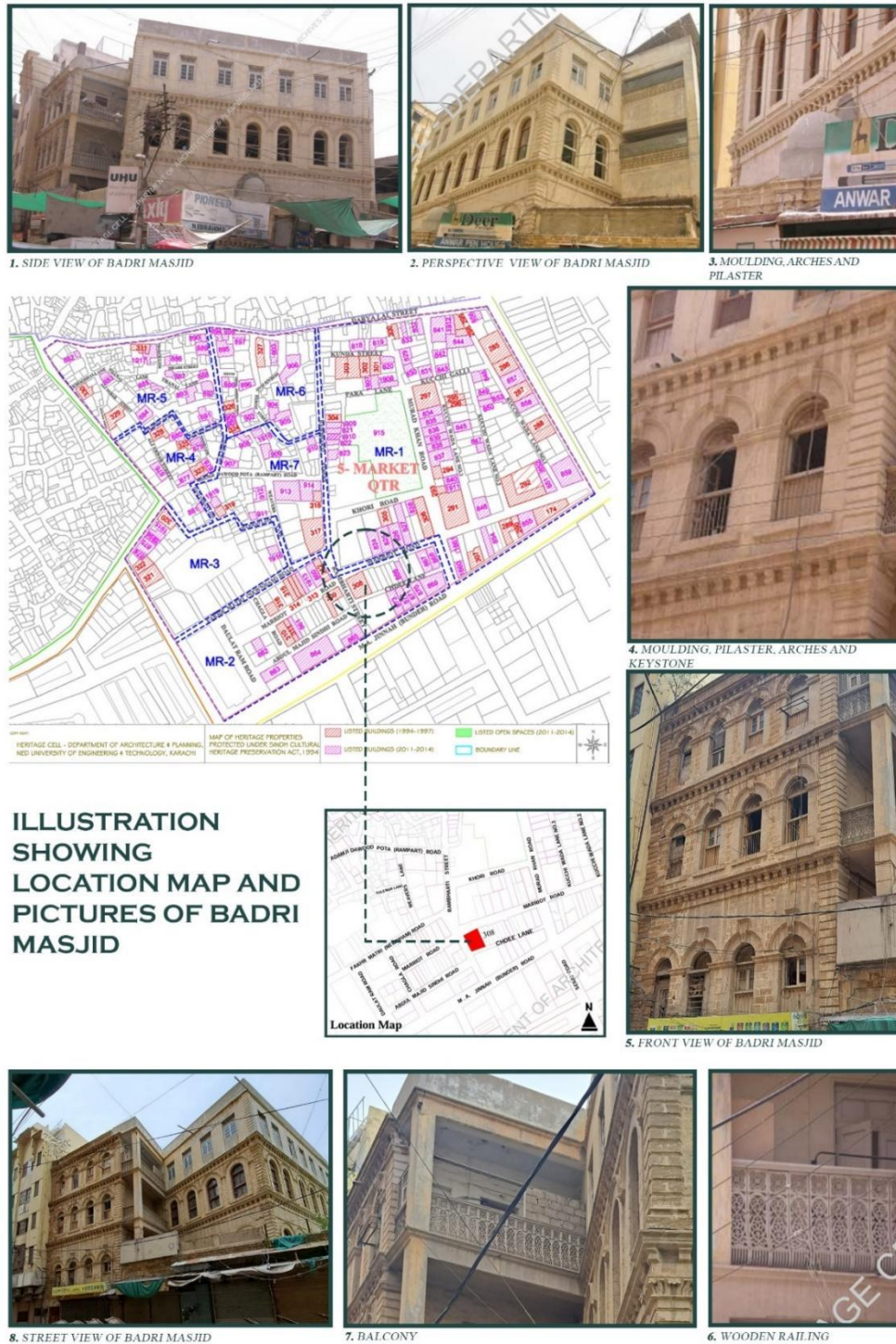


Figure 4.19

Illustrations and location Map of Dada Chambers



Figure 4.20

Illustrations and location Map of Fakhri Manzil



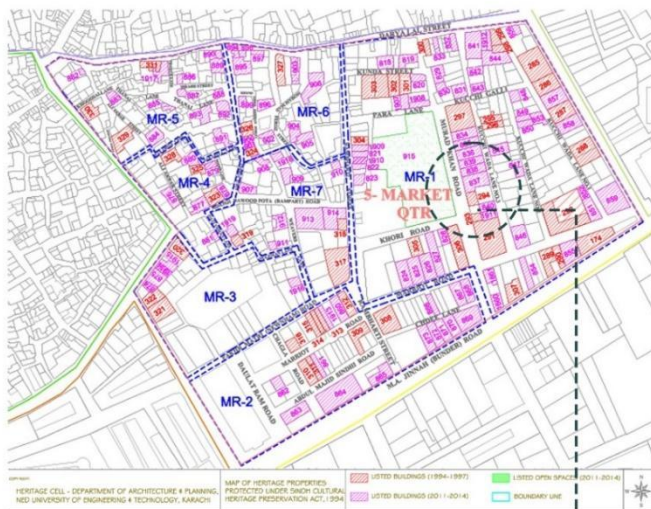
1. FRONTVIEW OF FAKHRI MANZIL



2. SIDE VIEW OF FAKHRI MANZIL



3. PARAPET WALL, MOULDINGS, COLOUMN, AND PEDIMENT DETAILS



**ILLUSTRATION
SHOWING
LOCATION MAP AND
PICTURES OF
FAKHRI MANZIL**



Location Map



4. MOULDINGS, COLOUMN, AND PEDIMENT DETAILS



5. MOULDINGS, COLOUMN, ROUND ARCHES, KEYSTONE AND BALUSTRADE DETAILS



8. FRONTVIEW OF FAKHRI MANZIL, SOURCE(3-8): NED UNIVERSITY HERITAGE



7. STREET VIEW OF FAKHRI MANZIL



6. MOULDINGS, COLOUMN, AND KEYSTONE DETAILS

Figure 4.21

Illustrations and location Map of Feroz Chambers



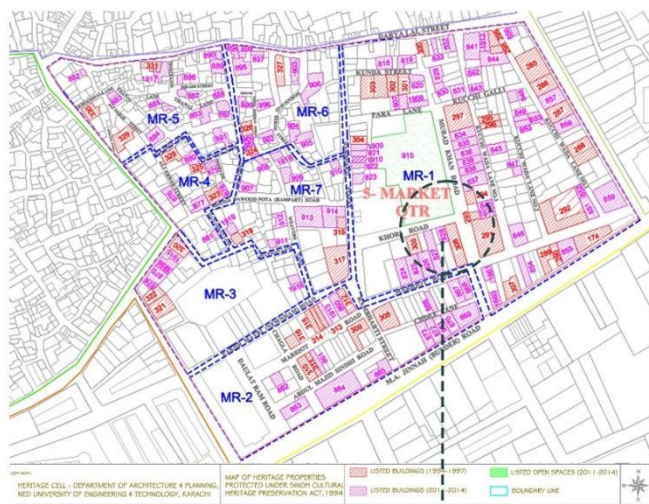
1. FRONT VIEW OF FEROS CHAMBER



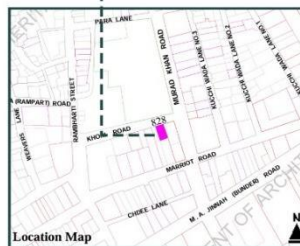
2. ARCHES, BALCONY, RAILING, GRILL WORK



3. FRONT VIEW OF FEROS CHAMBER WITH CONTEXT



**ILLUSTRATION
SHOWING LOCATION
MAP AND PICTURES
OF FEROS
CHAMBER**



Location Map



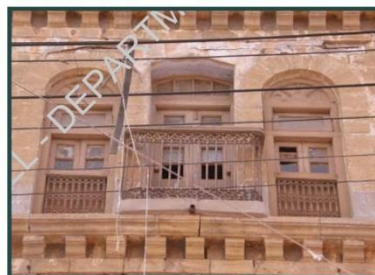
4. FRONT VIEW OF FEROS CHAMBER WITH CONTEXT



5. ARCHES, MOULDINGS



8. BALCONY, ARCHES SOURCE(5-8): NED UNIVERSITY HERITAGE



7. BALCONY, ARCHES, AND MOULDINGS



6. ARCHES, MOULDINGS, BALCONY

Figure 4.22

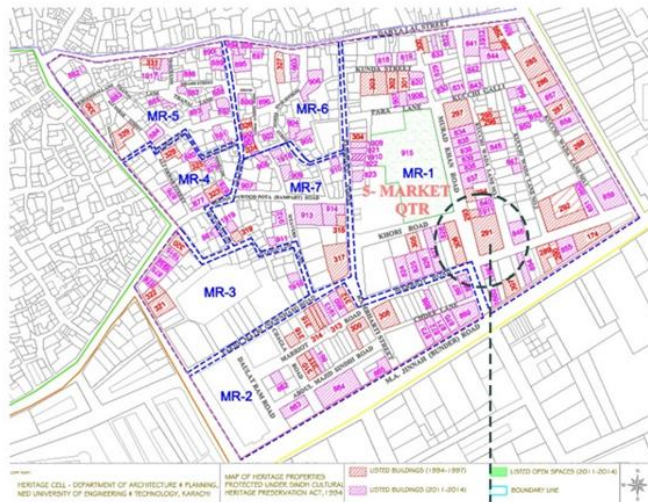
Illustrations and location Map of Fazal Chambers



1. FRONT VIEW OF FAZAL CHAMBER



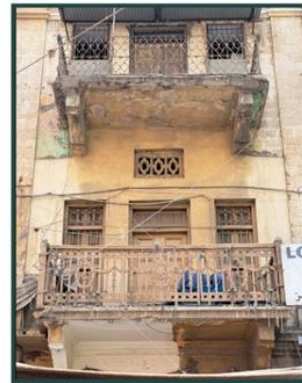
2. BALCONY, PARAPET WALL AND PILASTERS



**ILLUSTRATION
SHOWING
LOCATION MAP AND
PICTURES OF FAZAL
CHAMBER**



Location Map



3. BALCONY



4. ARCH, PILASTER AND BALUSTRADE



**7. STREET VIEW OF FAZAL CHAMBER . SOURCE(4-7):
NED UNIVERSITY HERITAGE**



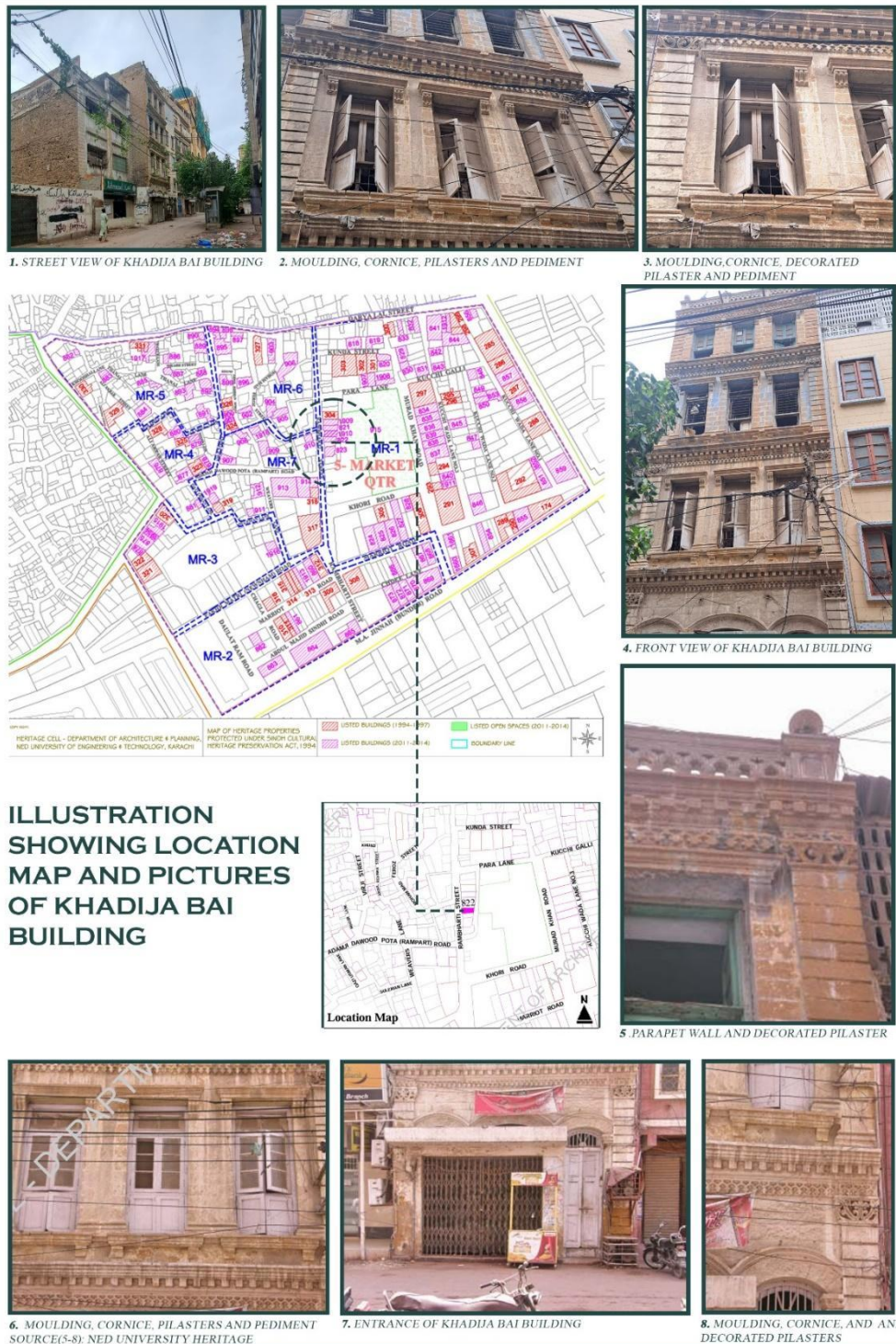
6. BALCONY, ARCHES, PILASTERS, AND BALUSTRADE



5. WOODEN RAILING

Figure 4.23

Illustrations and location Map of Khadija Bai Building



Illustrations and location Map of Pakistan Chemical And Dye House



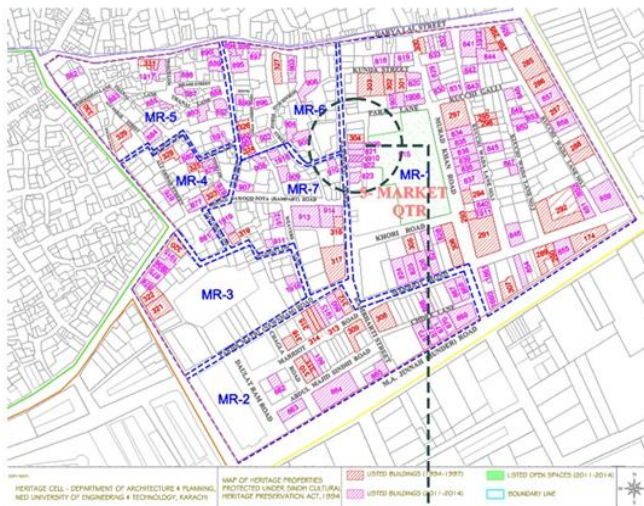
1. STREET VIEW OF PAKISTAN CHEMICAL AND DYE HOUSE



2. BALCONIES AND IONIC COLUMN



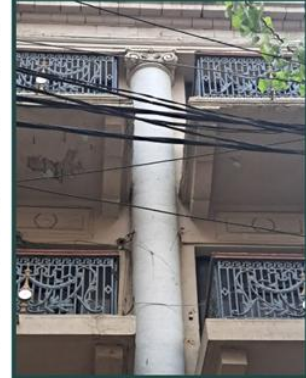
3. ENTRANCE OF PAKISTAN CHEMICAL AND DYE HOUSE



**ILLUSTRATION
SHOWING LOCATION
MAP AND PICTURES
OF PAKISTAN
CHEMICAL AND DYE
HOUSE**



Location Map



4. IONIC COLUMN



5. FRONT VIEW OF PAKISTAN CHEMICAL AND DYE HOUSE



6. DECORATED RAILING
SOURCE(6-8): NED UNIVERSITY HERITAGE



7. FESTOON



8. DECORATED RAILING

Figure 4.25

Illustrations and location Map of Quetta Wala Building

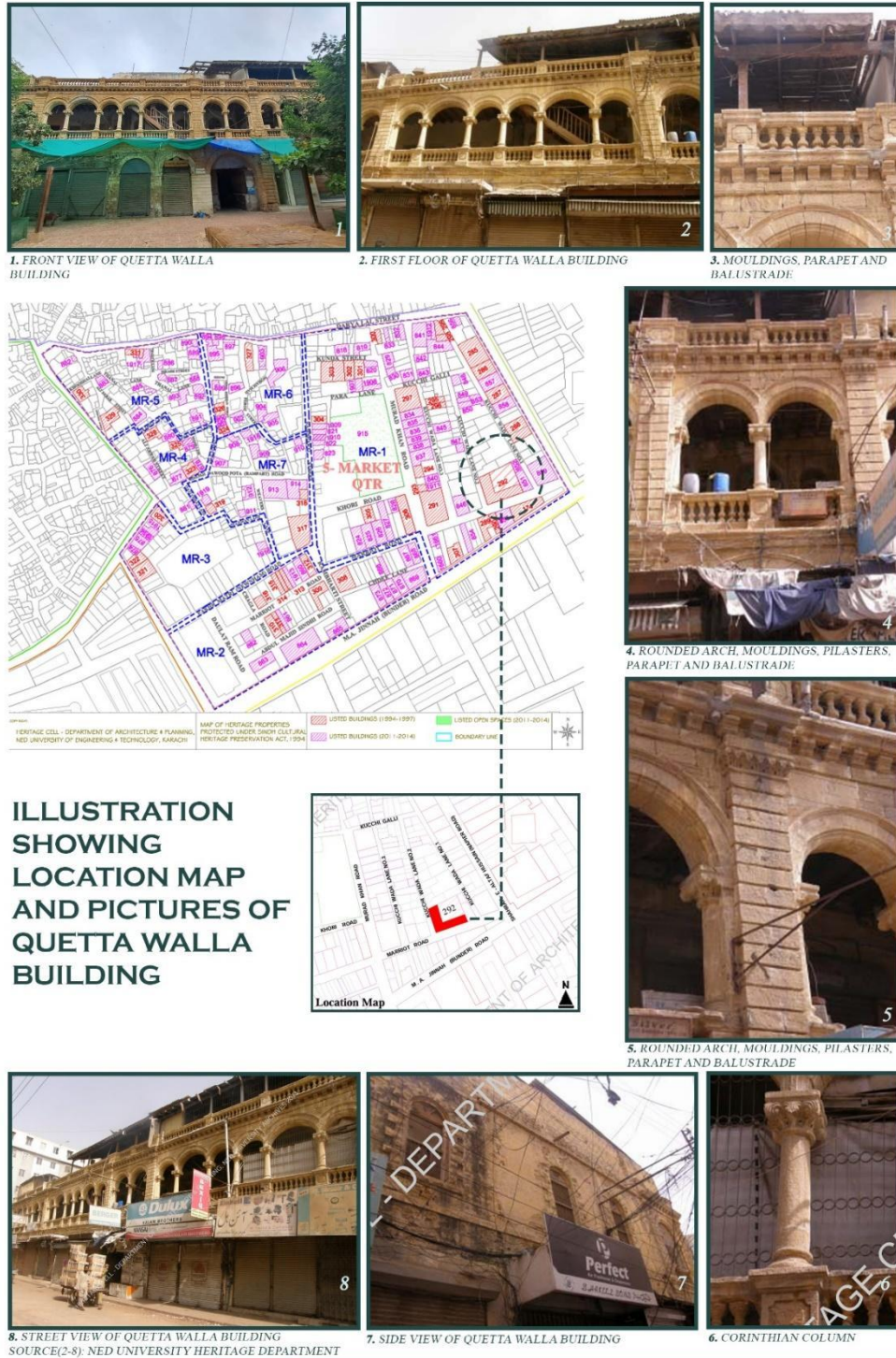


Figure 4.26

Illustrations and location Map of Shams Building



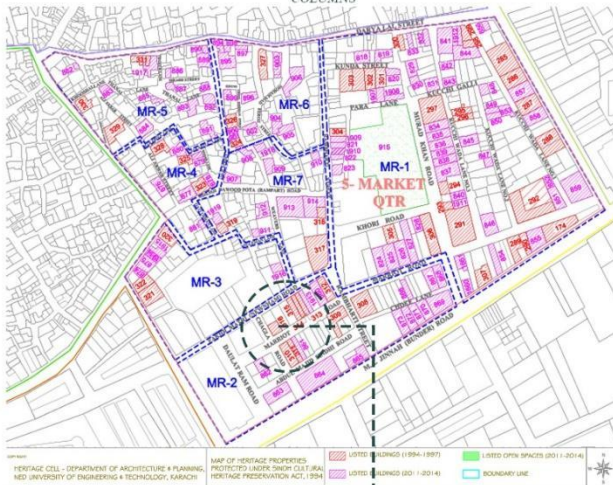
1. SIDE VIEW OF SHAMS BUILDING



2. BALCONY, MOULDINGS, CORNICE, AND IONIC COLUMNS



3. ARCHES, MOULDING, AND IONIC COLUMNS



**ILLUSTRATION
SHOWING
LOCATION MAP
AND PICTURES OF
SHAMS BUILDING**



Location Map



4. IONIC COLUMN AND MOULDING



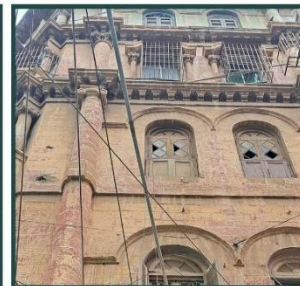
5. ARCHED AND WOODEN RAILING



6. PERSPECTIVE VIEW OF SHAMS BUILDING
SOURCE (4-5): NED UNIVERSITY HERITAGE DEPARTMENT



7. SIDE VIEW OF SHAMS BUILDING



8. ARCHES, IONIC COLUMNS, MOULDING, AND CORNICE

4.3.4 Testing and Validation of the Framework by Applying it to Each Building

As a pilot study, the research tested the authenticity matrix on the twelve buildings within the Market Quarter. During the site visits, major and minor alterations to the historic buildings were recorded and compared with the drawings documented by the KHBRP between 2002 and 2008, as well as with the current on-site situation. The HBIF was used for the 12 buildings and assessed by the researcher and two conservation architects with extensive experience working with heritage buildings. The selection of buildings for authenticity assessment was based primarily on site observations and secondarily on the availability of original drawings. The researcher collected the records of the levels of alterations that have been carried out in the KHBRP and in the current time from the available public and private archives and documents. The observations were recorded and documented through HBIF A and B. The assessment of authenticity was evaluated using the Place Authenticity Matrix and the Quantitative Architecture Authenticity Matrix. As mentioned in the previous chapter, site observations, photographic records, and the available architectural drawings helped to understand the spatial layout, adaptability, and reversibility of the building.

4.3.4.1 Data Collection Procedure

Site surveys were conducted with the team of two architects who have experienced working with heritage buildings and could understand multiple layers of changes in the status of the building. During the site surveys, personal observations of buildings and precincts are checked and noted. In order to maintain the consistency in recording the architecture data, the survey teams used both forms. The Quantitative Architectural Authenticity Matrix form is specifically designed to check the physical changes and manifestation of sense of place arising from the authenticity of heritage.

4.3.4.2 Data Analysis and Evaluation

The data collected through the testing and validation of the framework underwent a structured analysis to ensure a rigorous and comprehensive evaluation of authenticity within Market Quarter of Karachi. The multi-layered approach combined quantitative scoring mechanisms and qualitative interpretations, allowing for a balanced and nuanced assessment of authenticity of heritage. The analysis was conducted using three primary tools; HBIF, PAM, and QAAM, each designed to capture different facets

of authenticity, ensuring that both tangible and intangible heritage elements were systematically recorded and evaluated.

4.3.4.2-Detail 1: Evaluation Process for HBIF

HBIF-A: This form is used to document the current condition of the building along with its key details. It includes a visual evaluation of both the major and minor alterations made to the historic buildings, whether due to urban developments or contemporary demands from the users or the owners. The Heritage Building Inventory Form is a structured document used to assess, record, and preserve important information about the heritage buildings.

HBIF-B: This form is designed to record architectural details through visual documentation. It also provides a comprehensive vocabulary of colonial architectural features found in the historic buildings of Karachi. Moreover, the form includes space to display photographs of architectural details, enabling a clearer visualization of their types and styles.

4.3.4.2-Detail 2: Evaluation Process for PAM

The evaluation process for PAM involves an assignment of authenticity rating (low, medium, high) for each combination of dimension and element. These ratings are essentially derived from a triangulated approach that incorporates visual assessment, extensive archival research, and community feedback. Visual assessments ensure immediate, site-specific understanding of the physical conditions and the spatial characteristics, while archival research provides historical depth and context by analysing documentation, records and prior studies, previously recorded in HBIF. Accompanying these ratings, a detailed qualitative commentary contextualizes the scores, offering nuanced insights into the social, cultural, and historical significance of the sites. Further to this, community feedback, which may be added based on its significance, captures the intangible, lived experiences and perceptions that shape the cultural identity and emotional resonance of the sites. This multi-layered methodology reinforces the holistic evaluation framework of the Place Authenticity Matrix (PAM), ensuring that both the tangible and intangible aspects are evaluated in the assessment of authenticity.

4.3.4.2-Detail 3: Evaluation Process for QAAM

The QAAM is designed as a systematic approach to evaluate the quantitative value of a subjective matter of heritage authenticity in buildings and in precincts. Due to the complex nature of Authenticity evaluation (Stovel, 2007), it is important for the evaluation framework to address the qualitative and relative nuances of a context. The outcome helps to understand the level of authenticity retained/left in the historic buildings resulting from the urban developments or contemporary demands from the users. The QAAM is divided into the following classification:

- Contextual Authenticity
- Architectural and Structural Authenticity
- Functional/ Activity Authenticity
- General perception on Authenticity

Contextual Authenticity

Description: This element evaluates the physical environment of the building, encompassing its geographical position, spatial expansion, spatial alteration and structural examination. The assessment takes into account the degree of intervention, including integration, insertion, addition, and the overall structural soundness of the building. The objective is to assess the effects of these modifications on the initial setting of the structure.

Analysis: It is crucial to guarantee minimal interference while still maintaining the balance within the specific situation. The fundamental framework and essence of the building should be preserved, and any modifications should uphold the authenticity of the surrounding environment. This technique aids in the conservation of the historical and cultural importance of the buildings, guaranteeing that alterations do not disturb their integrity and compatibility with the environment.

Architectural/Structural Authenticity

Description: The element pertains to the preservation of the original design, materials, finishes, and the architectural elements of a building to ensure its complete and unaltered state. This encompasses an assessment of the external elements such as the exterior appearance and the spatial arrangement, including the interior areas. The potential reversibility evaluates the likelihood of being able to undo modifications made to the structure, both on its outside and the interior. It assesses which

modifications can be undone to return the building to its initial condition.

Analysis: It is crucial to retain the architectural integrity of a structure in order to safeguard its historical significance and the aesthetic values. This entails preserving the original materials and craftsmanship while ensuring that any restoration or conservation endeavours are in line with the historical setting of the building. It is therefore important to comprehend the possibility of being able to reverse the changes in order to preserve the long-term historical significance of a building. The process involves determining which components of the structure can be restored to their initial condition and which alterations are irreversible. This knowledge aids in directing future conservation endeavours and guarantees that any modifications made are mindful of the historical authenticity of the buildings.

The objective is to preserve the architectural integrity of the buildings, emphasizing their distinctive attributes and initial conceptions.

Functional/Activity Authenticity

Description: This aspect takes into account both the initial purpose of the building and its subsequent purpose after being repurposed. It guarantees that the architectural style remains true to historical accuracy after being reused, and that any modifications are easily identifiable for the future generations.

Interpretation: It is essential to preserve the historical authenticity of heritage while either maintaining its original function or appropriately adapting it for a new purpose. Preserving the historical narrative of the building is crucial, and any changes made should be easily recognizable as part of its gradual development.

General perception on Authenticity (Symbolic Value)

Description: This factor is evaluated based on the symbolic importance and acknowledgment of the current presence of the building, as well as the assessment of its outstanding qualities, whether they are tangible or intangible cultural assets. This element assesses the recognition of a building as a prominent feature and its importance to the local community.

Interpretation: This aspect assesses the extent to which a building is remembered or recognized as a prominent feature and its perceived importance to the community and cultural heritage. The symbolic significance and the recognition of the building are

crucial in determining its importance as heritage, since they represent its cultural and historical influence on the community.

Each classification is further subdivided into specific subcategories assessed through a Likert Rating Scale. This scale offers five divisions (0, 1–5, 6–10, 11–15, and 16–20), providing the respondents with the flexibility in expressing their degree of agreement.

4.3.4.2-Detail 4: Scoring Criteria for Degree of Assessment

The total score of the assessment is 280 points

Degree A: 210 or more points significant at a high level.

Degree B: 140-210 points is considered significant heritage property

Degree C: 70 to 140 points corresponds to a heritage importance

Degree D: 0-70 points reflects no value

Table 4.27

Scoring Criteria for Degree of Assessment

Group	Authenticity Value	Score Limit
A	Highly significant Value	280-210=70
B	Significant Value	210-140=70
C	Modest Value	140-70=70
D	Low value	70-0=70

To ensure consistency across the evaluations, clearly defined assessment rubrics and descriptions are provided within the QAAM. The process measures the reversibility, compatibility, and incompatibility of changes made to the selected historic buildings, analysing the alterations against the original structural drawings. The evaluation is conducted by three assessors including experienced conservation architects. Any differences in the assessment are resolved through consensus, forming what is termed as the Consensual Authenticity Evaluation (CAE), which mitigates any potential bias by incorporating multiple expert perspectives. Using the QAAM, the team systematically assesses and records the compatibility of architectural changes and both minor and major alterations. Observations are discussed on-site among the three members, with each independently documenting the status of the building based on their understanding. This evaluation process considers both the material aspects of

authenticity, such as physical alterations, and non-material aspects, including building usage, historic layouts, and the visual character of urban spaces like streets, squares, and the open areas.

A deeper discussion of the conceptual strengths and distinguishing features of the QAAM framework including its adaptability, inclusivity, and contextual grounding is presented in Chapter 5.

4.3.5 Development of Findings

The final stage of the validation process focuses on synthesizing the collected data to ensure a comprehensive assessment of authenticity across multiple dimensions. By employing a structured combination of quantitative assessments and qualitative narrative analyses, this methodology establishes a holistic framework for evaluating authenticity within the urban heritage contexts. The comparative analysis between archival records, documented alterations, and contemporary site conditions serves as a crucial mechanism to identify conservation challenges and assess the effectiveness of the preservation strategies.

The validation process integrates the expert assessments and community perspectives, ensuring that the evaluation process remains both methodologically rigorous and contextually adaptable. Through this approach, the assessment framework is tested against real-world conservation scenarios, refining its capacity to accommodate historical continuity, material integrity, functional adaptability, and socio-cultural relevance. The findings derived from this validation reinforce the applicability of authenticity assessment frameworks, offering structured yet flexible evaluation tools that respond to the complexities of heritage conservation. This iterative process of testing and refinement ensures that the evaluation methodology remains robust, replicable, and adaptable across diverse heritage settings, contributing to an improved and systematic approach to assessing authenticity in urban environments.

4.3.6 Synthesis of Methodological Approach

The validation process was carefully structured to ensure methodological independence between the two parts of research. The buildings and participants selected for data collection in the first part, aimed at developing the framework, were distinct from those chosen for the second part, which focused on validation. This

separation was essential to maintain objectivity in testing and to prevent bias from influencing the evaluation process. In the first part, the research explored how authenticity is perceived, constructed, and interpreted, using sorting tasks, Memory Recalling Tasks, and semi-structured interviews to identify determinant factors shaping authenticity in heritage conservation. This part established the conceptual foundation for the evaluation framework, drawing insights from a broad spectrum of perspectives to formulate an adaptable and comprehensive methodology.

The second part, however, tested and validated the framework by applying it to a separate set of buildings and engaging a different group of assessors and practitioners. This ensured that the assessment tools were evaluated independently of the contexts in which they were developed. The heritage buildings used in validation were selected based on their architectural significance, documented alterations, and availability of archival records, allowing for an objective comparison between historical authenticity and contemporary conservation efforts. By maintaining this methodological separation, the study ensured that the framework was not shaped by the same set of variables used to test its effectiveness. This distinction enhances the reliability and applicability of the evaluation model, demonstrating that its principles and assessment mechanisms are transferable across different heritage contexts without being constrained by the conditions of its development.

4.3.7 Ethical Considerations

Ethical considerations are essential in research involving human participants, ensuring their rights, well-being, and dignity are safeguarded throughout the length of the study (Miles and Huberman, 1994; Silverman, 2011). In heritage conservation research, where participants share personal memories and cultural perspectives, ethical integrity becomes even more critical (Bryman, 2012). This study adhered to all the established ethical protocols, including the informed consent, privacy, and protection (Creswell, 2007; Yin, 2009). Participants comprising of heritage professionals, conservation experts, and community members were fully briefed on the objectives and their role in the study, with written consent obtained prior to their involvement. They were assured of their right to withdraw at any stage without consequence (Wiles et al., 2008).

Confidentiality was maintained by anonymizing participant data, using codes in place of real names and excluding identifiable information from the published findings (Kaiser, 2009). Given the sensitive nature of the discussions on urban development

and conservation practices, protecting participants from potential social or professional repercussions was a priority (Saunders et al., 2015).

To minimize potential harm, the study fostered a respectful environment, particularly during memory recall tasks and focus group discussions, where strong emotional responses were anticipated (Flick, 2018). Participants were allowed to skip any question or activity they found uncomfortable, ensuring their emotional well-being remained protected (Beskow et al., 2001).

Ethical oversight followed international standards, including the Belmont Report and the Declaration of Helsinki. By prioritizing cultural sensitivity and inclusivity, the study ensured equitable representation of local community voices alongside professional experts, strengthening the authenticity and integrity of its findings (Israel and Hay, 2006).

CHAPTER 5

DATA ANALYSIS AND FINDINGS AND DEVELOPMENT OF FRAMEWORK FOR ASSESSING AUTHENTICITY

Chapter Overview

The chapter through this in-depth exploration of the study's objectives and methodologies, constructs a methodical approach to evaluating heritage authenticity, integrating both empirical findings and conceptual reflections.

The chapter first provides an analytical interpretation of the research outcomes, offering nuanced insights into the cognitive, emotional, and practical dimensions of authenticity within heritage conservation. These findings emerge from the deployment of three primary research methods, each contributing distinct perspectives on the subject. The Multiple Sorting Task (MST) facilitates the organization and prioritization of authenticity elements, revealing cognitive associations and patterns in heritage perception. The analysis of MST involves examining group card ratios and clustering relationships to identify commonalities in how participants categorize authenticity factors. The Memory Recalling Task (RMT) investigates the role of individual and collective memory in shaping an authentic sense of place, emphasizing the significance of narrative and emotional connections in maintaining heritage identity. The analysis of RMT includes memory pattern recognition and the correlation of recalled elements with spatial and historical significance. Complementing these, the Semi-Structured Interviews (SSI) yield rich qualitative data, capturing stakeholder perspectives and addressing practical concerns such as economic pressures, policy gaps, and the feasibility of conservation efforts. The analysis of SSI focuses on thematic coding and cross-referencing expert concerns with documented conservation challenges. This has been summarised in Table 5.1 for clarity

Table 5.1*Data Gathering Techniques and Methods of Analysis*

Action/Method	Purpose	Remarks
Multiple Sorting Task (MST)	To identify cognitive associations and categorization of heritage authenticity by participants.	Helps establish patterns in perception, revealing how different authenticity elements are grouped and prioritized.
Data Analysis for MST – Sort A	Examines shared visual, functional, and symbolic associations among buildings.	Identifies themes of perceived authenticity based on architectural coherence, spatial continuity, and historical relevance.
Data Analysis for MST – Sort B	Analyzes relationships based on structural and locational attributes.	Highlights spatial integration, physical alterations, and the role of adaptive reuse in authenticity perception.
Data Analysis for MST – Sort C	Investigates accessibility, landmark recognition, and street activity in authenticity evaluations.	Assesses how urban interactions and physical presence contribute to sense of place and heritage recognition.
Memory Recalling Task (RMT)	Captures personal and collective memory associations with heritage sites.	Provides insights into emotional resonance, cultural memory, and historical identity.
Data Analysis for RMT	Identifies memory retention patterns and correlation with architectural/spatial authenticity.	Establishes links between recalled heritage attributes and perceived historical continuity.

Semi-Structured Interviews (SSI)	Gathers expert and practitioner perspectives on conservation challenges and authenticity indicators.	Identifies determinant factors influenced by legislative gaps, economic pressures, and community involvement.
Data Analysis for SSI	Thematic coding of responses to align professional conservation concerns with empirical findings.	Validates determinant factors from MST and RMT, ensuring practical applicability.
Synthesis of Findings	Combines insights from all methods to formulate determinant authenticity factors.	Integrates cognitive, emotional, and policy-based perspectives to develop an authenticity evaluation framework.

Building upon these findings, the second section introduces an evaluation framework designed to assess heritage authenticity through a blend of qualitative and quantitative criteria. This framework encapsulates the multifaceted nature of authenticity by synthesizing tangible and intangible elements identified during data analysis. The development process involves integrating collective perceptions, emotional affiliations, and pragmatic conservation concerns, creating a robust foundation for assessment.

Within this framework, determinant factors are also identified, establishing essential values for a multi-layered understanding of authenticity. These factors form the basis of a balanced and comprehensive evaluative approach, which is then translated into an evaluation framework. The framework is operationalized through three complementary tools: the Heritage Building Inventory Form (HBIF), which distills key authenticity determinants from the data; the Place Authenticity Matrix (PAM), evaluating authenticity across emotional, cultural, and physical dimensions; and the Quantitative Architecture Authenticity Matrix (QAAM), which applies systematic, data-driven measures to architectural authenticity. By integrating these diverse analytical methods, the chapter ensures a rigorous and multidimensional approach to understanding and assessing authenticity within heritage conservation.

5.1 Data and Analysis

The first part of the chapter presents a comprehensive qualitative analysis of the perceptions of heritage authenticity and urban conservation strategies in the context of Karachi's historic urban areas. Utilizing a structured approach, the study draws on data gathered through multiple methods, including card sorting tasks, Memory Recalling Tasks, alongside focused group discussions, community interviews, and semi-structured interviews with experts, through similarity matrices, dendrogram analyses, and comparison tables. The part systematically explores the material and non-material dimensions of heritage conservation, emphasizing themes such as historical continuity, façade dynamics, functional transformations, and community engagement.

The first part begins by the subsequent analysis of card sorts uncovers clusters of similarities and distinctions among heritage sites, using tools like similarity matrices and dendrograms to visualize the relationships between elements. Key findings emphasize the interplay between material attributes, such as craftsmanship, façade coherence, and architectural integrity, and intangible elements, including community narratives, cultural practices, and emotional connections. It illustrates how perceptions of authenticity are influenced by factors like adaptive reuse, alterations, and urban growth. These findings are contextualized through participant perspectives, offering qualitative insights into the challenges and opportunities of heritage conservation in dynamic urban environments.

The first part concludes by synthesizing the findings into actionable insights for conservation strategies. It highlights the need for tailored interventions that balance the preservation of historical narratives with contemporary urban demands. By integrating material and cultural dimensions, the study provides a framework for sustainable and inclusive approaches to heritage management, contributing to the broader discourse on urban conservation practices.

5.1.1 Data and Analysis of Method 1- Sorting Task (Quantitative Method)

Card-Sorting Tasks: Elemental Hierarchy of Authenticity to Understand Cognitive Associations.

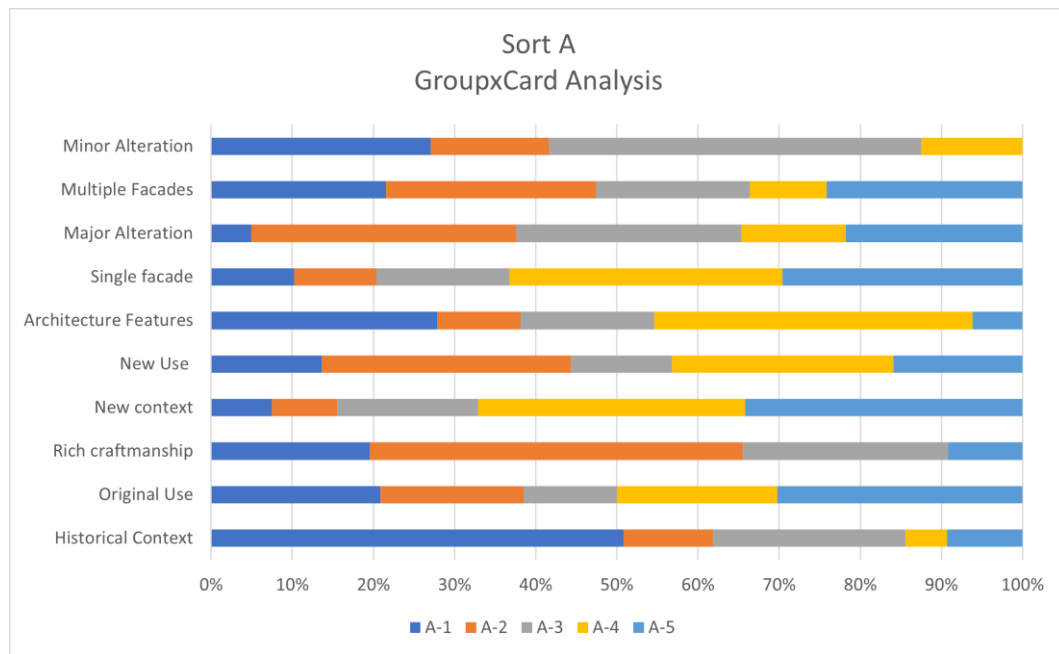
As previously elaborated, the research employed multiple sorting task, to gather data on authenticity and sense of place in old urban areas of Karachi, with distinct heritage buildings with diverse stakeholders, sorting images according to perceived similarities

and linkages. The data was analyzed to discern patterns, themes, and correlations. The results illustrate the comprehension of authenticity and sense of place, amongst various other factors, as perceived by various demographics and their inherent significance in perception of authenticity in heritage buildings and precincts.

5.1.1.1 Data Analysis for Sort A

Figure 5.2

Data Analysis for Sort-A (CST)



Note. Group to Card Ratio for Sort-A

The Group to Card Ratio analysis reveals participants' perceptions of the heritage and authenticity of buildings A1 through A5, offering distinct insights into the urban environment of Karachi. The analysis reflects the interplay between historical and modern contexts, functional and abandoned statuses, alterations, facade characteristics, and material craftsmanship. By interpreting participant ratings, key conclusions emerge regarding the dynamics of authenticity in the Market Quarter's built environment. Participants' evaluations of historical and new contexts illustrate how they perceive the balance between original heritage characteristics and contemporary changes. In A1, equal ratings for historical context and new context suggest a perceived equilibrium between the building's original character and modern urban interventions. This aligns with constructivist theories of authenticity, emphasizing its context-dependent nature shaped by evolving interactions between the

old and the new. Conversely, A2's higher rating for historical context compared to new context underscores concerns about the erosion of authenticity due to urban development, reflecting apprehensions commonly associated with the integrity of historic environments. These findings elucidate how historic and modern elements coexist or conflict within the urban fabric.

The sorting task also explored participants' perceptions of the functional and abandoned statuses of buildings, highlighting the connection between original use and authenticity. For instance, A2 received a high score for original use and none for new use, indicating a strong association between authenticity and maintaining the building's traditional function. This reflects the experiential framework of authenticity, wherein preserving original uses reinforces a sense of place. In contrast, A5's lower scores for original use but higher ratings for minor alterations and rich craftsmanship suggest that architectural detail preservation can sustain authenticity even when functional changes occur. This divergence illustrates how perceptions of authenticity are shaped by the balance between functional continuity and material preservation.

Perceptions of alterations further reveal nuanced views on how interventions affect authenticity. In A1, participants noted moderate levels of major and minor alterations, indicating a partial compromise to authenticity. A3's balanced ratings for major alterations and new use suggest that significant structural and functional changes simultaneously impact perceptions of authenticity. Meanwhile, A5's high ratings for minor alterations highlight a preference for subtle, craftsmanship-preserving changes, reinforcing the value of minimal interventions in heritage conservation. These patterns illustrate the effects of unplanned urban development and substantial modifications on the authenticity of historic buildings.

Participants' assessments of facade characteristics and architectural integrity underscore the importance of cohesive design in maintaining authenticity. A4's high ratings for multiple facades reflect a recognition of the disruptive impact of inconsistent interventions across facades, echoing concerns about design fragmentation. Conversely, A3's higher ratings for single facade and architectural features emphasize the value participants place on preserving coherent facade details despite other alterations. This analysis reveals the intricate relationship between architectural integrity and perceptions of authenticity in heritage structures.

Finally, ratings for craftsmanship and material elements highlight the role of sensory and material details in shaping authenticity. A5's highest rating for rich craftsmanship demonstrates that intricate architectural details are central to maintaining authenticity. Similarly, A2's high rating for craftsmanship despite other significant alterations indicates that material preservation can mitigate the perceived loss of authenticity. These findings emphasize the phenomenological importance of sensory engagement with material heritage and its contribution to a sense of place.

These insights provide a comprehensive understanding of how participants perceive and evaluate the authenticity of heritage buildings in Karachi's Market Quarter. By examining the interplay of historical and modern contexts, functional changes, architectural alterations, and material elements, the analysis sheds light on the complex dimensions of authenticity in urban heritage conservation.

5.1.1.1-Detail 1: Similarity Matrix Interpretation

Figure 5.3

Similarity Matrix (Pairwise similarities between the five images in the Card Sort A)

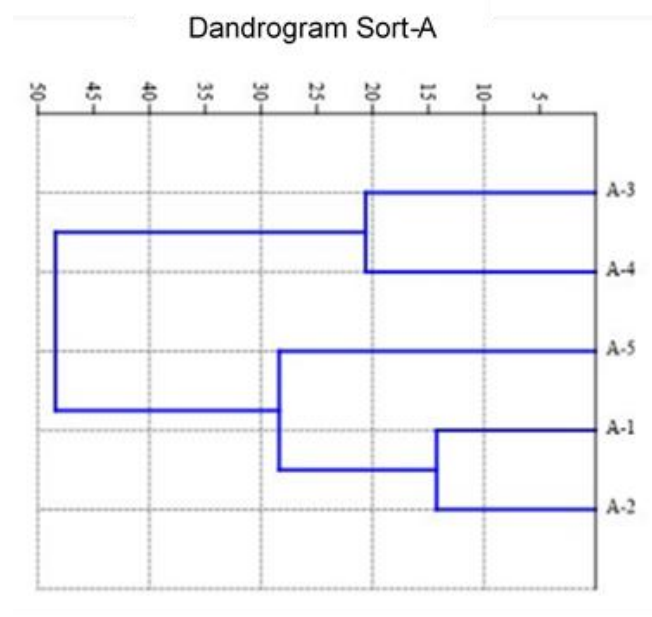
A-1				
10	A-2			
45	20	A-3		
30	20	20	A-4	
20	30	10	30	A-5

The similarity matrix provides a quantitative comparison of the pairwise similarities between the five images in Card Sort A (A-1, A-2, A-3, A-4, A-5). The values within the matrix reflect the degree of similarity based on criteria such as historical context, facade characteristics, usage, alterations, and craftsmanship. The interpretation of these percentages reveals patterns of shared features and distinctions between the images. The highest degree of similarity is observed between A-1 and A-3, with a similarity score of 45%. This suggests significant commonalities, potentially in their historical context, facade complexity, or levels of alteration. A moderate similarity score of 30% is noted between A-2 and A-5, indicating shared features such as minor

alterations or facade characteristics. In contrast, pairs such as A-1 and A-2 and A-3 and A-5 show the lowest similarity scores of 10%, highlighting marked differences in elements like facade complexity, historical use, or the extent of structural alterations. Pairs with moderate overlap, such as A-1 and A-5, A-2 and A-3, and A-3 and A-4, suggest partial commonalities, with divergence likely in aspects such as usage or craftsmanship.

Figure 5.4

Dendrogram representing the hierarchical clustering of Sort-A images based on their similarity scores



5.1.1.1-Detail 2: Dendrogram Interpretation

The dendrogram complements the similarity matrix by visually representing the hierarchical clustering of these images based on their similarity scores. The clustering analysis reveals two dominant groupings: A-1 and A-2 form one cluster, while A-3 and A-4 comprise the second. The close grouping of A-1 and A-2, despite their low similarity score, suggests shared characteristics related to facade type or usage that distinguish them from other images. The pairing of A-3 and A-4 reflects a higher degree of similarity, likely due to shared attributes in structural interventions, facade features, or alterations.

The position of A-5 is particularly noteworthy as it initially clusters with A-1 and A-2 but also demonstrates moderate similarity with A-3 and A-4. This intermediate placement suggests that A-5 exhibits a combination of features from both clusters,

such as moderate facade alterations or a hybridization of original and new uses. This blend positions A-5 as a bridge between the two primary groupings, reflecting its multifaceted heritage characteristics.

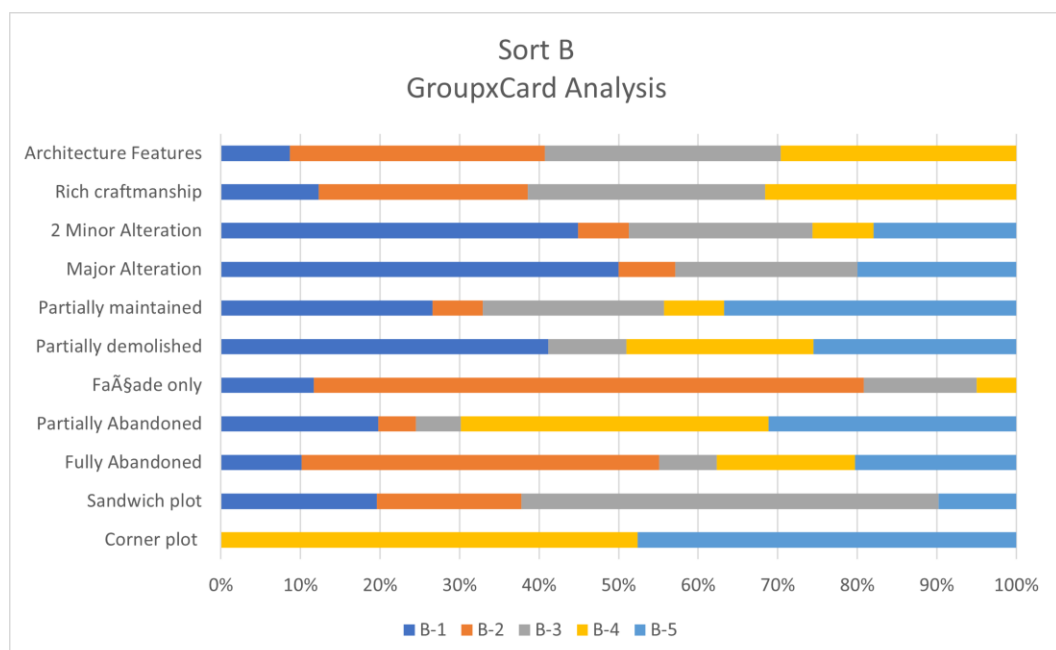
The clustering patterns reveal significant insights into the diversity of heritage interventions and the complexity of maintaining authenticity within historic precincts. The primary clusters highlight distinct approaches to facade alterations and usage, while A-5's intermediate position underscores the nuanced interplay of preservation and adaptation. These observations align with constructivist and experiential paradigms, emphasizing how subjective perceptions of facade, usage, and alterations shape interpretations of authenticity. The constructivist approach underscores the context-dependent nature of heritage assessments, while the experiential framework emphasizes the role of lived experiences and sensory engagement in influencing perceptions of similarity.

This analysis underscores the importance of adopting tailored conservation strategies that account for varying levels of intervention and the subjective dimensions of authenticity. By recognizing the diverse interpretations of historical and contemporary elements, conservation efforts can better navigate the complexities of preserving and adapting heritage sites within dynamic urban environments.

5.1.1.2 Data Analysis for Sort B

Figure 5.5

Data Analysis for Sort-B (CST)



Note. Group to Card Ratio for Sort-B

The Group to Card Ratio Analysis examines the participants' perception of the worth, condition, and historical relevance of buildings B1-B5 in Karachi. The analysis is classified according to the value of the building's location, the status of abandonment, the physical condition, any alterations made to the building, and the presence of ornamentation. Every category provides detailed insights into the overall comprehension of the heritage and authenticity of these buildings.

The analysis reveals several key findings and insights into the characteristics and preservation needs of the selected buildings. B-4 and B-5 exhibit a strong association with corner plot dominance, reflected in their scores of 38% and 34.5%, respectively. These buildings occupy prominent urban positions, suggesting they have experienced fewer functional changes over time. However, their significance in the urban fabric necessitates context-sensitive interventions to preserve their visibility and prominence amidst ongoing development.

B-3 is highly associated with the sandwich plot typology, scoring 37.5%. This typology indicates buildings constrained by neighboring structures, creating unique preservation challenges. Strategies for these buildings should prioritize facade retention and emphasize creative adaptive reuse to address spatial limitations while preserving their historical essence.

B-2 demonstrates a strong correlation (41.5%) with facade-only preservation. This finding highlights the importance of interventions that focus on maintaining external authenticity while accommodating internal modifications. Policies aimed at facade retention could serve as an effective approach for balancing preservation and modernization in such cases.

The analysis also sheds light on abandonment levels. B-2 shows the highest association with full abandonment at 15.5%, indicating significant neglect. In contrast, B-4 and B-5 exhibit moderate levels of partial abandonment at 20.5% and 16.5%, respectively. Conservation strategies for these buildings should prioritize stabilization and adaptive reuse, aiming to arrest decay and restore their functional and historical value to the community.

B-1 stands out for its notable associations with both major and minor alterations, each scoring 17.5%. This duality suggests a mix of intervention types, underscoring the

need for balanced strategies that combine restoration of historical features with adaptable modern updates. These approaches should aim to minimize disruption while maintaining the authenticity of the structure.

B-3 and B-4 display moderate associations with rich craftsmanship and architectural features, scoring 8.5% and 9% for craftsmanship and 12% each for architectural features. These findings indicate the importance of conservation efforts that focus on artisanal details and distinctive architectural elements, ensuring the preservation of these defining characteristics. Buildings in this category would benefit from craftsmanship-centered approaches that highlight their unique historical and aesthetic value. These insights emphasize the need for tailored conservation strategies that respect the unique typological, functional, and architectural attributes of the buildings. By addressing their specific preservation needs, these efforts can ensure a balanced integration of historical authenticity and contemporary utility within the urban environment.

5.1.1.2-Detail 1: Similarity Matrix Interpretation

Figure 5.6

Similarity Matrix (Pairwise similarities between the five images in the Card Sort B)

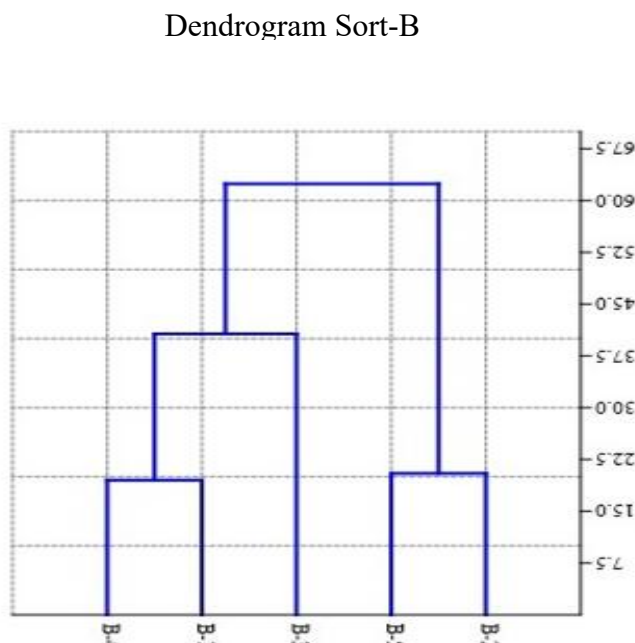
B-1				
35	B-2			
30	51.5	B-3		
6.5	30	30	B-4	
12.5	0	5	34	B-5

The similarity matrix illustrates the pairwise similarity percentages among five images in Card Sort B (B-1, B-2, B-3, B-4, and B-5), providing insights into their shared attributes based on plot typology, intervention levels, abandonment status, and structural features. The numerical values within the matrix offer a quantitative basis for understanding these relationships. B-2 and B-3, with a similarity score of 51.5%, display the highest degree of overlap, likely reflecting commonalities in plot type or shared intervention strategies. Similarly, B-4 and B-5, scoring 34%, suggest a

moderate-to-high similarity, possibly linked to comparable levels of abandonment or plot typology. Moderate similarities are evident between B-1 and B-2 (35%), as well as B-3 with both B-1 and B-4 (each 30%), indicating shared characteristics that may pertain to structural or contextual elements. In contrast, B-2 and B-5 exhibit no similarity (0%), reflecting significant divergence, possibly in intervention types or abandonment patterns. Minimal similarity is also observed between B-4 and B-3 (5%), underscoring distinct differences in plot or intervention typology.

Figure 5.7

Dendrogram representing the hierarchical clustering of Sort-B images based on their similarity scores



5.1.1.2-Detail 2: Dendrogram Interpretation

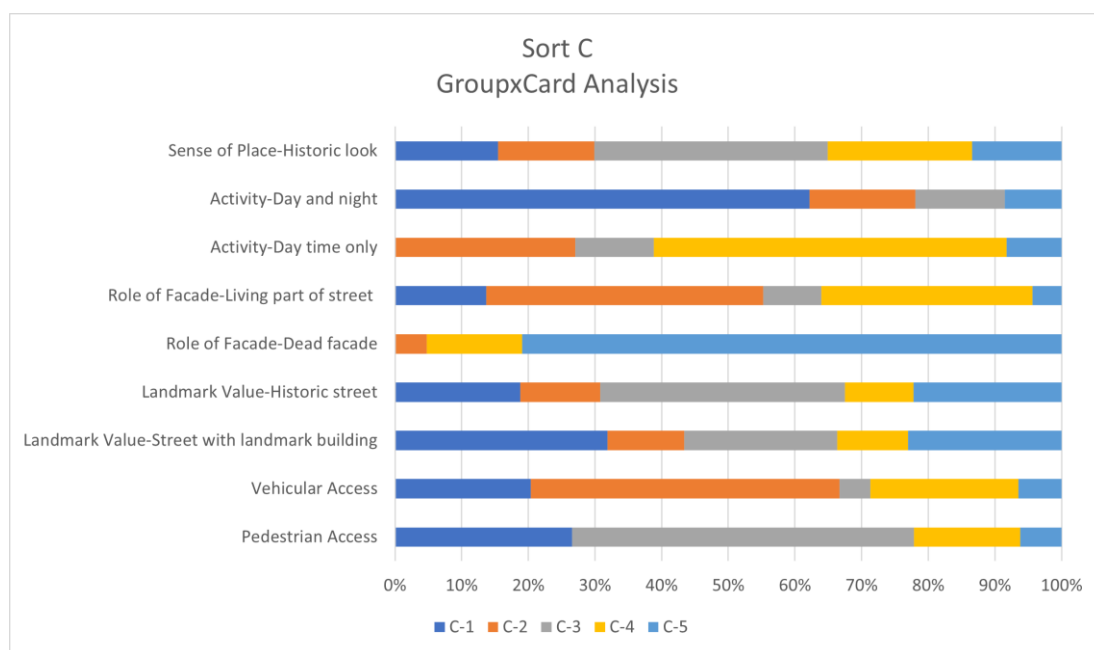
The dendrogram provides a hierarchical visual representation of these relationships, elucidating how the images cluster based on their similarity scores. One notable cluster comprises B-2 and B-5, which, despite their 0% similarity score, are grouped together at a higher level, suggesting broader contextual commonalities. Another cluster includes B-1 and B-4, which, although scoring just 6.5%, are linked by shared attributes in plot type or structural intervention. B-3 eventually joins the grouping of B-1 and B-4, reflecting moderate overlap in intervention strategies or typologies. At the highest level, the clusters of (B-2/B-5) and (B-1/B-3/B-4) merge, suggesting two overarching categories based on intervention and abandonment characteristics. These

findings highlight dominant groupings within the data: (B-2/B-5) and (B-1/B-3/B-4), representing different approaches to plot typology, intervention levels, and abandonment strategies. B-3's intermediate position within its cluster suggests it incorporates features from both structural interventions and broader contextual attributes. This nuanced analysis underscores the importance of context-specific conservation strategies. Recognizing the distinct differences in intervention and authenticity levels is vital for aligning preservation practices with adaptive reuse objectives, ensuring both the historical integrity and functional viability of these sites are maintained.

5.1.1.3 Data Analysis for Sort C

Figure 5.8

Data Analysis for Sort-C (CST)



Note. Group to Card Ratio for Sort-C

The analysis of Card Sort C highlights key patterns in heritage street characteristics, emphasizing the interplay of access, façade activity, landmark value, and sense of place in shaping the urban experience of historic precincts. Among the findings, pedestrian access emerges as a defining feature, with C-3 (29%) showing the strongest association. This underscores a preference for pedestrian-friendly environments, suggesting the need for walkability-focused conservation efforts that enhance accessibility while preserving historical integrity.

Conversely, vehicular access remains significant, with C-2 (25%) reflecting its importance in street planning. This calls for a balanced approach to traffic management, ensuring that vehicular movement integrates harmoniously with heritage preservation and pedestrian safety. Similarly, streets characterized by landmark value, such as C-1 (18%) and C-3 (21.5%), highlight the prominence of iconic buildings or historic contexts. For these streets, interventions should prioritize the conservation of facades and visual integrity to reinforce their status as cultural landmarks. Facades play a critical role in defining the vitality of heritage streetscapes. Dead facades, strongly associated with C-5 (51%), signal inactivity or neglect, pointing to the urgent need for adaptive reuse strategies that reinvigorate these spaces through functional and visual reanimation. In contrast, living facades, exemplified by C-2 (33.5%) and C-4 (25.5%), actively contribute to street life, highlighting the importance of preserving and enhancing these dynamic frontages to sustain vibrant street-level activities. Activity patterns also influence the conservation priorities for heritage streets. C-1 (25.5%) demonstrates a strong association with both day and night activity, reflecting a need for strategies that enhance safety, lighting, and mixed-use designs to maintain round-the-clock functionality. Lastly, the sense of place, particularly evident in C-3 (17%), underscores the importance of preserving original architectural elements and historical narratives. Such efforts are essential for sustaining the unique identity and cultural memory embedded within these streetscapes. These findings underscore the importance of integrating access, façade activity, landmark prominence, and sense of place into conservation strategies. Revitalizing dead facades, prioritizing pedestrian access, and preserving active streetscapes are crucial for maintaining authenticity while addressing the challenges posed by contemporary urban development. These efforts ensure that heritage precincts remain vibrant, functional, and true to their historical and cultural roots.

5.1.1.3-Detail 1: Similarity Matrix Interpretation

Figure 5.9

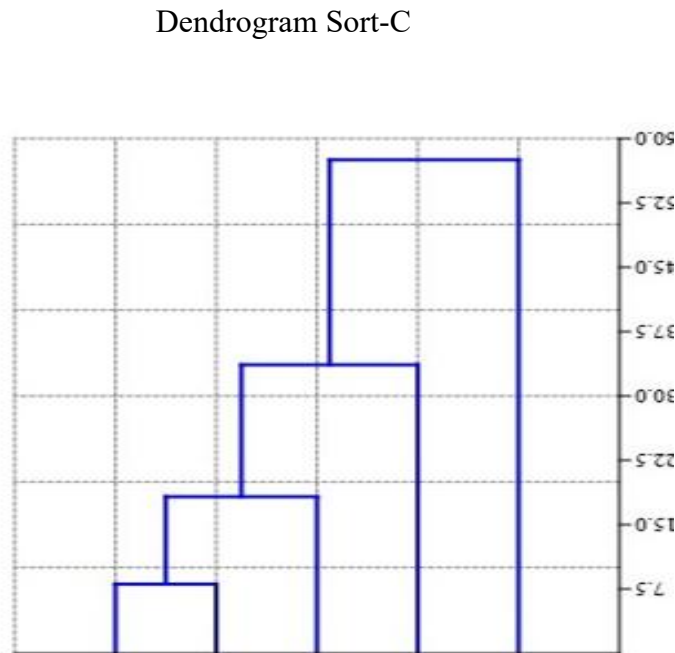
Similarity Matrix (Pairwise similarities between the five images in the Card Sort C)

C-1				
10	C-2			
57.5	10	C-3		
10	44	15	C-4	
10	20	10	10	C-5

The similarity matrix analysis for Card Sort C offers insights into the relationships between categories (C-1, C-2, C-3, C-4, C-5) based on their shared characteristics, such as pedestrian and vehicular access, landmark value, facade roles, activity patterns, and sense of place. High similarity scores, such as the 57.5% similarity between C-2 and C-1, indicate significant overlap in features like access types and landmark prominence, suggesting that these streets may benefit from shared conservation or revitalization strategies. Similarly, the moderate-to-high similarity score of 44% between C-4 and C-3 implies these categories share pedestrian-centric dynamics, active facades, or a strong sense of place, reinforcing the need for interventions that prioritize street vitality and walkability. Moderate similarity scores highlight nuanced relationships between categories. For instance, the 15% similarity between C-4 and C-2 suggests overlapping characteristics, potentially in facade roles or mixed access types, while the 20% similarity between C-5 and C-2 points to shared elements, such as vehicular access patterns or facade activity. In contrast, low similarity scores, such as the 10% similarity between C-3 and C-2, reveal significant differences, particularly in access types and activity patterns, emphasizing the distinct conservation priorities for pedestrian-centric streets versus vehicular-focused contexts. Similarly, the minimal overlap between C-5 and other categories, including C-1, C-4, and C-3, underscores the unique challenges posed by inactive facades and diminished activity, necessitating interventions tailored to revitalize these spaces.

Figure 5.10

Dendrogram representing the hierarchical clustering of Sort-C images based on their similarity scores



5.1.1.3-Detail 2: Dendrogram Interpretation

The dendrogram further contextualizes these relationships by clustering the categories hierarchically. C-1 and C-5 form the first cluster despite their low similarity score, suggesting broader contextual or facade-related overlaps. This initial grouping is joined by C-2, reflecting moderate shared traits such as vehicular access and facade activity. A distinct cluster emerges with C-3 and C-4, which share significant features related to pedestrian dynamics, active facades, and a strong sense of place. The final merging of these clusters into broader groupings highlights two dominant categories: one comprising C-3 and C-4, emphasizing pedestrian-friendly streets with active streetscapes, and another including C-1, C-2, and C-5, reflecting streets characterized by vehicular access, inactive facades, or diminished activity.

These findings underscore the need for differentiated conservation strategies. Streets within the pedestrian-focused cluster, represented by C-3 and C-4, require interventions that enhance walkability, public space vitality, and placemaking, while those in the vehicular and inactive facade cluster, comprising C-1, C-2, and C-5, demand approaches that balance traffic management with facade activation and

context-sensitive revitalization. C-2, as a transitional category, illustrates hybrid characteristics, bridging vehicular access with opportunities for enhancing facade activity. By addressing these dynamics, conservation efforts can more effectively balance contemporary urban needs with the preservation of heritage streetscapes.

Table 5.11

Overall Summary of Findings Across Sorts A, B and C

Cross-Comparison and Summary Table for Findings Across All Sorts (A, B, and C)

Category	Sort A (A1–A5)	Sort B (B1–B5)	Sort C (C1–C5)	Overall Implications
Historical vs. New Contexts	A-1: Historical context (30) valued over new (6). A-4: New context (26.5) dominates historical (3).	Not directly addressed.	C-3 (21.5%): Historic streets reflect stronger ties to heritage. C-5 (6.5%): Weak sense of historic identity.	Preservation efforts must balance historical narratives with contemporary updates to maintain authenticity and a sense of place.
Access Patterns	Not addressed directly.	B-4 (38%) & B-5 (34.5%): Corner plots signify prominent locations. B-3 (37.5%): Sandwich plot constraints.	C-3 (29%): Pedestrian access dominates. C-2 (25%): Vehicular access remains significant.	Corner plots require prominence preservation, sandwich plots need creative reuse, and pedestrian access fosters greater engagement.
Facade Characteristics	A-4: Multiple facades (19) disrupt harmony. A-3: Single coherent facades (8) preferred.	B-2 (41.5%): Strong facade-only preservation. B-5 (14.5%): Partial maintenance valued.	C-5 (51%): Dead facades dominate. C-2 (33.5%) & C-4 (25.5%): Living facades foster activity.	Revitalizing dead facades while preserving consistent designs and active facades is critical for urban vibrancy and architectural integrity.

Functionality and Abandonment	A-2 (14.5): Preference for original use over new (7). A-5 (27.5): Strong modern context influence.	B-2 (15.5%): Fully abandoned. B-4 (20.5%) & B-5 (16.5%): Partially abandoned.	C-5 (51%): Dead facades reflect inactivity. C-1 (25.5%): Day-and-night activity supports vibrancy.	Adaptive reuse strategies are essential to restore abandoned or inactive spaces while retaining cultural narratives and traditional functions.
Craftsmanship and Features	A-5 (4): Craftsmanship undervalued. A-2 (20): Craftsmanship valued despite moderate historical context.	B-3 (8.5) & B-4 (9): Moderate association with craftsmanship and features.	Not directly addressed, but active facades (C-2, C-4) indirectly preserve material integrity.	Prioritize preserving intricate craftsmanship and architectural details to sustain authenticity and sensory engagement.
Landmark Value and Sense of Place	A-3 (14): Balanced intervention maintains historic character. A-4 (26.5): Modern influence dominates.	B-1 & B-4: Corner plots reflect strong visual prominence. B-3 (37.5%): Sandwich plot typology limits landmark status.	C-1 (18%) & C-3 (21.5%): Streets with landmarks reflect stronger historic ties. C-5 (6.5%): Weakest sense of historic place.	Enhance landmark visibility and sense of place by balancing preservation and modern interventions.
Impact of Alterations	A-3: Balanced major (14) and minor alterations (11). A-4: Minor alterations (3.5) preferred.	B-1: Balanced major (17.5%) and minor alterations (17.5%). B-3: Moderate alteration tolerance.	C-4 (22.5%): Day-only activity reflects unbalanced interventions. C-1 (25.5%): Balanced design supports round-the-clock use.	Subtle and context-sensitive alterations are preferred to preserve authenticity while accommodating modern use and design.

As discussed and summarised in Table 5.11 which shows the cross comparison across Sorts A, B and C, following are the key takeaways:

1. Preservation of Historical Narratives:

Across all sorts, maintaining historical narratives and sense of place emerges as a key priority. While Sort A emphasizes the balance of historical and new contexts, Sort C highlights pedestrian-friendly spaces and active facades as contributors to a stronger historical connection.

2. Access and Usage:

Sort B focuses on the significance of spatial typology (corner vs. sandwich plots), while Sort C underlines the importance of pedestrian and vehicular access patterns. Together, they emphasize the need to adaptively reuse abandoned spaces and ensure accessibility that supports both historical authenticity and urban vitality.

3. Craftsmanship and Architectural Features:

All sorts stress the value of craftsmanship and material details in perceptions of authenticity. High ratings for rich craftsmanship in Sort A and moderate associations in Sort B suggest that preserving intricate details is critical for sensory and cultural engagement.

4. Facade and Activity Dynamics:

The analysis consistently points to the role of facades in maintaining urban vibrancy and authenticity. Sort C stresses the need to revitalize dead facades and promote living, active streetscapes, while Sort A and Sort B address the coherence of facade design and external preservation.

5. Intervention Levels:

Minor alterations are preferred across all sorts, with participants viewing significant interventions or inconsistent designs as detrimental to authenticity. Conservation strategies should focus on subtle, context-sensitive updates that respect historical features.

6. Strategic Conservation Approaches:

Findings suggest a tailored approach to conservation, balancing preservation with adaptation. For pedestrian-focused heritage areas (Sort C), active facades and walkability should be prioritized. For abandoned or heavily

altered buildings (Sort A and B), adaptive reuse and facade-focused interventions are necessary.

This cross-comparison highlights the shared themes of access, facade dynamics, craftsmanship, and interventions while emphasizing the need for context-sensitive conservation strategies that integrate historical and contemporary elements.

5.1.1.4 Discussion on Card Sorting Task

The cross-comparison of the card-to-group ratios and the analysis of similarity matrix and dendrogram for Card Sorts A, B, and C provides significant insights into the dynamics of heritage conservation. Viewed through the lens of the experiential framework of authenticity and the constructivist research paradigm, these findings highlight the complexities of reconciling historical continuity with evolving urban needs, forming the foundation for an evaluation system. By examining criteria such as historical narrative, spatial configuration, symbolic significance, and evolution/adaptation, the discussion addresses the research question, “How can designing and planning approaches be adapted in existing heritage buildings to balance authenticity with contemporary urban development?” and the research objective, “Explore how different aspects of heritage buildings, including both material and non-material elements, contribute to the manifestation of a ‘sense of place’ that arises from the authenticity of heritage”.

In Card Sort A, the grouping of buildings revealed divergence in historical narratives and facade alterations, with transitional elements, such as A-5, bridging historical and modern interventions. These groupings reflect how aspects like spatial configuration (facade coherence in A-3) and evolution/adaptation (structural changes in A-4) shape perceptions of authenticity. Similarly, in Card Sort B, groupings emphasize plot typology, abandonment status, and intervention levels. The transitional role of B-3 highlights a hybridization of attributes, such as structural interventions and contextual traits, underscoring the nuanced interplay between heritage preservation and urban development. Card Sort C focuses on symbolic significance, access patterns, and facade roles. Streets like C-3 and C-4 represent pedestrian-friendly clusters with active facades, reinforcing a strong sense of place through engagement and activity.

Conversely, streets such as C-5, with inactive facades, demonstrate the challenges of revitalizing symbolic spaces where diminished activity disrupts continuity. These

findings align with Merleau-Ponty's (1962) insights into perception as an embodied, interactive process and Gehl's (2010) emphasis on walkability and active urban environments as critical to fostering meaningful engagement. The similarity matrix and dendrogram analyses further refine these observations by identifying relationships between elements and providing quantitative and hierarchical representations. High-similarity clusters, such as A-1/A-3, B-2/B-3, and C-2/C-1, highlight shared attributes like spatial harmony, structural integrity, or functional adaptability. These groupings reveal opportunities for shared conservation strategies that enhance continuity across elements. In contrast, low-similarity pairs, such as A-1/A-2, B-2/B-5, and C-5 with others, underscore distinct challenges. These minimal overlaps emphasize the importance of tailored interventions, particularly in addressing symbolic gaps or inactive spaces. For example, the transitional roles of elements like A-5, B-3, and C-2 demonstrate how hybrid approaches can integrate physical manifestations with evolving cultural identities, blending preservation with modernization. These findings resonate with Smith's (2006) assertion that authenticity is not an inherent property but a construct negotiated through social and cultural practices. The identified clusters in each card sort also respond directly to the research question by suggesting how designing and planning approaches can be adapted. For instance, high-similarity clusters (e.g., C-3/C-4) highlight the importance of prioritizing pedestrian-oriented designs and active facades, whereas low-similarity pairs (e.g., C-5 with others) reveal the need for interventions that reactivate inactive spaces. Transitional elements, such as B-3 and C-2, suggest hybrid strategies that balance contemporary urban demands with the retention of heritage values. The findings further address the research objective by illustrating how the interplay of historical narratives, spatial configurations, and symbolic significance creates a sense of place rooted in authenticity. Streets like C-3 and C-4 embody this interplay, fostering active engagement and cultural continuity through symbolic and physical elements. However, challenges in areas like C-5 reveal disruptions to this balance, emphasizing the need for interventions that restore cultural identity and emotional association.

From the vantage point of the experiential framework, these findings highlight the role of observation, perception, cognition, memory, and engagement in shaping heritage authenticity. Observation and perception reveal how shared spatial features and symbolic narratives foster clusters, while cognition and memory link these attributes

to broader cultural frameworks. For instance, the memory of historical uses in buildings like A-3 and the cultural significance of pedestrian streets like C-3 contribute to their perceived authenticity. Engagement emerges as the culmination of these processes, evident in the vibrancy of active facades (C-3/C-4) and the potential for adaptive reuse in transitional elements like A-5 and C-2. This dynamic aligns with Halbwachs' (1925) concept of collective memory, emphasizing the relational and iterative processes through which authenticity is co-constructed. These insights also highlight the limitations of traditional conservation approaches, which often prioritize material over intangible heritage. The low-similarity scores and outliers in all card sorts challenge static frameworks that fail to accommodate dynamic, participatory processes. The findings align with the Nara Document on Authenticity (ICOMOS, 1994), which advocates for context-sensitive and community-driven practices. By integrating both tangible (e.g., structural integrity and spatial configuration) and intangible (e.g., symbolic significance and community engagement) elements, conservation strategies can better navigate the complexities of preserving heritage in urban environments. The discussion forms the foundation for an evaluation system that addresses the research objective by recognizing how different aspects of heritage contribute to a sense of place and authenticity. It also responds to the research question by emphasizing the need for designing and planning approaches that integrate historical continuity, contemporary relevance, and socio-economic development goals. Such a system must balance the unique needs of high-similarity clusters with tailored strategies for outliers, ensuring adaptability across diverse urban contexts. By embedding dimensions like observation, perception, cognition, memory, and engagement into its framework, the system can harmonize tangible and intangible heritage elements. This approach not only aligns with constructivist principles but also fosters sustainable and inclusive practices, enabling heritage conservation to evolve alongside urban development.

5.1.2 Data and Analysis of Method 2- Recall Memory Test; (Quantitative Method)

The recall memory test serves as an important qualitative method mainly aimed at understanding how individuals perceive and retain information about heritage buildings and spaces. By examining the participant' recollections of architectural and cultural features, and narratives, this method provides important insights into how memory shapes perception of authenticity and historical significance. Through an

analysis of narrative responses and subjective impressions, the recall memory test captures the emotional and cognitive dimensions of heritage appreciation.

5.1.2.1 Method 2a- Recall Memory Test; Thematic Analysis of Perceptions on Authenticity and Age Value

The fixed-question recall memory test was designed to probe the participants' perceptions of historic authenticity and "sense of oldness" in heritage areas of Karachi. Rather than viewing each response in isolation, the findings are here synthesized around three major themes that emerged: Material Anchors of Authenticity, Experiential and Social Dimensions, and The Tension Between Physical Preservation and Functional Change.

(a) Material Anchors of Authenticity

Across the responses, a strong majority emphasized that their sense of historic authenticity is tied to the physical presence of historic structures. Participants consistently referenced architectural form, aged facades, and traditional materials as the most immediate indicators of "oldness" or historical continuity. This aligns with traditional conservation approaches which foreground material authenticity as the core of heritage value (Jokilehto, 2006; ICOMOS, 1964). For instance, even when asked whether modern uses in old buildings would erode the sense of authenticity, several participants argued that as long as the visual and structural character remained intact, the site retained its authenticity.

This dominant material bias underscores the continued influence of object-oriented paradigms in public perception, reinforcing the view that built form serves as a primary repository of collective memory (Lowenthal, 1985; Kuruppu & Wijesuriya, 1992).

(b) Experiential and Social Dimensions

However, a significant minority drew attention to intangible aspects, such as traditional practices, events, and community interactions, as contributors to historical atmosphere. Some respondents noted that changes in activities — even in preserved buildings — disrupted the sense of historical continuity. These reflections resonate with constructivist and experiential theories of authenticity (Tuan, 1977; Smith, 2006),

which argue that heritage is co-produced through lived experience and collective engagement, not simply physical remnants.

The tension between building form and activity was especially apparent when participants discussed hypothetical scenarios (e.g., retaining façades with modern uses), revealing ambivalence over what truly sustains authenticity: appearance or use.

(c) Authenticity as a Balancing Act

When explicitly asked to choose between preserving structures or traditional activities, most respondents leaned toward material conservation. This finding reinforces the dominance of Western-influenced conservation values in local discourse (Labadi, 2010), yet it also raises concerns about the possible erasure of social memory in conservation strategies focused solely on physical fabric.

Interestingly, even among those who favored material preservation, there was an underlying recognition that a building's meaning is incomplete without cultural context. This validates the need for a dual-layered framework—such as the one developed in this study—that balances tangible and intangible indicators in assessing authenticity.

These findings suggest that public perceptions of authenticity in Karachi are shaped by both visual continuity and cultural engagement, though the former still dominates. The thematic analysis reinforces the necessity of a multi-dimensional assessment framework like QAAM, which captures the richness of both material and experiential values. It also confirms the importance of evaluating how people construct, perceive, and respond to authenticity, particularly in contexts undergoing rapid urban change.

5.1.2.2 Discussion on Fixed Questions

The responses to the fixed questions on heritage perception and age value in Karachi's historic areas illuminate critical themes in the discourse on authenticity and conservation. Participants largely associated a sense of "oldness" and historic authenticity with the physical presence of heritage structures, underscoring the prevailing emphasis on tangible heritage as a primary marker of historical continuity. This aligns with established conservation practices that prioritize material integrity as

foundational to authenticity, as reflected in frameworks like the Venice Charter (ICOMOS, 1964). However, the dissenting views of participants who highlighted urban neglect and modern encroachments as eroding this sense of authenticity reveal a significant tension between preservation and urban development, echoing challenges observed in other urbanized heritage contexts such as Galle Fort (Kuruppu & Wijesuriya, 1992). The interplay between physical structures and cultural practices emerged as a critical axis in understanding heritage perception. While most respondents prioritized the architectural form and materiality of buildings, a notable minority emphasized the role of traditional activities in fostering a connection to the past. This duality resonates with global conservation debates, where material conservation is often viewed as insufficient without the parallel preservation of intangible cultural heritage. The perspectives align with studies on Shiraz, where traditional community practices are integral to maintaining authenticity (Kermani, 2020). This interplay points to the inadequacy of frameworks that narrowly focus on structural integrity without addressing the dynamic relationship between built environments and social practices. The mixed responses to whether retaining historic facades alongside modern activities would sustain a sense of oldness highlight the complexity of authenticity as a concept. While material conservation remains a dominant lens, the view that modern activities could undermine historical character underscores the need for integrative approaches that consider both tangible and intangible heritage. This reflects broader critiques, such as those by Lowenthal (1985) and Jokilehto (1999), of conservation models that fail to accommodate the evolving nature of cultural practices. The predominance of material-focused perspectives in maintaining historical authenticity, as expressed by the majority of participants, reflects traditional Western conservation ideologies. However, the minority view advocating for the preservation of traditional activities reveals an emerging recognition of the layered dimensions of authenticity. The findings align with international discussions advocating for holistic approaches, where cultural narratives and community practices are considered essential alongside physical preservation (Avrami et al., 2000). This highlights a pressing need to develop adaptive frameworks that integrate tangible and intangible dimensions of heritage, fostering a more inclusive and context-sensitive conservation ethos.

These responses reveal a critical gap in existing conservation practices, where the material focus often overshadows the nuanced interdependencies of cultural practices and community engagement. Bridging this gap requires recalibrating conservation strategies to embrace both structural and experiential dimensions of heritage, ensuring a comprehensive and sustainable approach to preserving historical authenticity.

5.1.2.3 Method 2b- Recall Memory Test (Quantitative Method)

This section, the second component of the recall memory test focuses on the participants' spontaneous and open-ended recollections, offering a qualitative exploration of memory's role in shaping perceptions of authenticity. This method allows for the participants to recall specific details related to architectural design, materiality, historical context, and cultural significance without the constraints of pre-structured questions. This particular approach captures the diversity and subjectivity of perception and memory, providing a deeper understanding of how heritage elements are emotionally and symbolically valued. The analysis of these narrative responses reveals individual and collective memory patterns, shedding light on the ways in which heritage authenticity is internalized and expressed.

5.1.2.4 Location: Saddar Bazar Quarter – Saddar Cooperative Market Community Participant- Cooperative Market 1: (CP-CM-1)

5.1.2.4-Detail 1: Authenticity Perception

CP-CM-1's narrative reveals a deep-rooted connection to the historical significance of the Saddar Bazar Quarter. His artistic background and continuous presence in the area since 1987 emphasize a lived, phenomenological understanding of authenticity. For CP-CM-1, authenticity is intricately tied to cultural relevance and personal memory, which evokes a sense of grief as he witnesses these heritage sites being ignored and forgotten. His reflections underscore the intrinsic worth of preserving heritage by maintaining its links to preceding events and cultural narratives.

This qualitative insight highlights the importance of recalling memory to re-imagine the attributes that have been lost and should be restored to maintain authenticity (Norberg-Schulz, 1980; Relph, 1976).

5.1.2.4-Detail 2: Management Practices and Conservation of Authenticity

CP-CM-1's critique of current management practices underscores a systematic failure to preserve heritage authenticity. He points to the conscientious preservation efforts of past administrations and contrasts them with the indifference of current authorities, attributing this decline to political neglect, lack of strategic vision, and a disproportionate focus on economic development over cultural preservation. He also notes the ineffective utilization of foreign funding intended for maintenance. These observations raise the question of whether current management practices help retain authenticity and how it manifests in spatial experience. His critique reveals that inadequate management methods erode not only the physical character but also the lived experience of heritage sites, aligning with Objective 2, which seeks to analyze how conservation principles are implemented in practice and their impact on authenticity and sense of place (Uzzell & Ballantyne, 1998).

5.1.2.4-Detail 3: Spatial Experience and Authenticity

CP-CM-1's memories of Cooperative Street's lively atmosphere offer critical insights into the spatial experience shaped by urban history. He notes that the shift from vibrant pedestrian spaces to shopping malls has diluted the cultural ambiance of historic districts. The lack of sidewalks and pedestrian infrastructure further diminishes the authenticity of spatial encounters. This decline in spatial experience reflects how poor urban management disrupts the connection between place and its historical identity.

By engaging in the Memory Recalling Task and Focused Group Discussions, CP-CM-1's reflections help identify missing spatial attributes that need restoration to preserve authenticity. His insights emphasize the need for urban planning strategies that incorporate experiential quality and support pedestrian activity to sustain a sense of place (Tuan, 1977; Lowenthal, 1985).

5.1.2.4-Detail 4: Design and Planning Approaches

Although CP-CM-1 does not directly discuss specific design methodologies, his call for integrating heritage structures into modern urban development implies a preference for adaptive reuse and context-sensitive design. He advocates for infrastructure improvements, such as transportation, sewage, and water systems, that support urban growth while maintaining the cultural essence of historic areas. His perspective suggests that successful design and planning should balance contemporary development with the conservation of historical authenticity. This aligns with Objective 2, which emphasizes the implementation of conservation principles that contribute to a meaningful sense of place (Smith, 2006). Through the Focused Group Discussions, participants can re-imagine missing attributes and propose design solutions that reflect both historical integrity and modern needs.

5.1.2.4-Detail 5: Community Perspectives and Heritage Conservation

CP-CM-1's viewpoint highlights the diminishing interest among the community in heritage preservation, largely due to economic constraints and the high costs of maintenance. He observes that the preference for modern constructions leads to the neglect of historical buildings. Despite these challenges, his emotional attachment to these structures underscores the importance of community engagement in heritage conservation. By incorporating the community's lived experiences and perspectives through Focused Group Discussions and the Memory Recalling Task, heritage management can better address the community's needs and values. CP-CM-1's narrative reinforces the idea that sustainable conservation requires shared responsibility and community-driven efforts to maintain authenticity (Relph, 1976; Uzzell & Ballantyne, 1998).

5.1.2.4-Detail 6: Sense of Place and Emotional Resonance

CP-CM-1's interview reveals a profound emotional connection to the Saddar Bazar Quarter. His detailed recollections of the area's cultural vibrancy and the impact of

urban decline reflect a deep sense of loss. The deterioration of heritage sites disrupts his emotional bond, underscoring the need to integrate sentimental and cultural values into urban development. The Memory Recalling Task helps capture these emotional and sensory experiences, providing insights into how authenticity can be preserved through community memory and cultural narratives (Norberg-Schulz, 1980; Tuan, 1977). CP-CM-1's desire to see heritage buildings incorporated into modern development highlights the importance of maintaining emotional resonance to foster a dynamic and enduring sense of place.

5.1.2.4-Detail 7: Analysis with Research Questions

CP-CM-1's perspectives offer unique insights into the complexities of urban heritage management in Karachi. His reflections emphasize the interplay between personal memory, community engagement, and the challenges of balancing cultural preservation with contemporary urban development. These insights address the study's research questions by illustrating the need for effective management practices that preserve authenticity, spatial planning that reflects historical identity, and active community participation. His narrative aligns with Objective 2 by showing how the implementation of conservation principles—or lack thereof—affects authenticity and sense of place. The qualitative data captured through Memory Recalling Tasks and Focused Group Discussions reinforce the importance of integrating emotional and cultural relevance into urban design to ensure the long-term viability of heritage sites (Lowenthal, 1985; Smith, 2006). This holistic approach bridges the gap between heritage conservation ideals and the dynamic realities of urban contexts.

5.1.2.5 Community Participant- Soldier Bazar 2: (CP-CM-2)

5.1.2.5-Detail 1: Authenticity Perception:

CP-CM-2's account reflects a profound understanding of the historical significance of Saddar's structures, underscoring their origins and transformations since Partition. His lifelong connection to the area, having lived there since his birth in 1952, strengthens his sense of authenticity. He highlights the craftsmanship and aesthetic appeal of these heritage buildings, lamenting the decline in skilled artisans and the fading commitment to artistic excellence over the decades. His reflections provide a qualitative basis for re-imagining missing attributes of authenticity, which can be further explored through Focused Group Discussions. Recalling specific names of historic areas can invoke memories and perceptions that capture the intangible aspects of authenticity.

5.1.2.5-Detail 2: Management Practices and Conservation of Authenticity:

CP-CM-2 offers a critical evaluation of current management practices, condemning the lack of government intervention in heritage conservation. He highlights how inadequate infrastructure management—evident in open manholes and poor sewerage systems—undermines the spatial experience and contributes to the loss of authenticity. However, he acknowledges the market union's efforts, though limited, to safeguard the buildings. His observations raise the question of whether these management practices help retain authenticity and whether this manifests in the spatial experience. The Memory Recalling Task could provide qualitative insights into how these practices impact residents' perceptions of authenticity and sense of place.

5.1.2.5-Detail 3: Spatial Experience and Authenticity:

CP-CM-2's observations on the deteriorating mixed-use buildings offer key insights into how poor infrastructure and neglect impact the spatial experience. Issues like exposed manholes and unresolved sewerage problems detract from the area's authenticity and habitability. His critique suggests that current management practices fall short of preserving spatial authenticity. Focused Group Discussions could encourage community members to re-imagine the missing elements that once contributed to a cohesive spatial experience. Using historic area names can invoke shared memories, reinforcing the link between effective management and the preservation of spatial authenticity.

5.1.2.5-Detail 4: Design and Planning Approaches:

Although CP-CM-2 does not explicitly address specific design and planning methods, his support for community-driven maintenance strategies indirectly promotes the conservation of architectural authenticity. His proposal for business owners to contribute to building upkeep highlights a potential pathway for integrating community engagement into management processes. This approach can be evaluated for its effectiveness in retaining authenticity through Focused Group Discussions that explore how such contributions might manifest in the spatial experience. This aligns with Objective 2, which seeks to analyze the implementation of conservation principles in practice.

5.1.2.5-Detail 5: Community Perspectives and Heritage Conservation:

CP-CM-2 emphasizes the importance of the community, specifically the market union and local entrepreneurs, in conserving heritage structures. His call for mutual support and honesty reflects a community-oriented approach to heritage management. By participating in Focused Group Discussions, community members can articulate stories and elements of authenticity that need preservation. This participatory approach helps re-imagine missing attributes and reinforces the connection between management processes and spatial authenticity.

5.1.2.5-Detail 6: Sense of Place and Emotional Resonance:

CP-CM-2's emotional connection to Saddar is evident in his memories of the area's historical development and the current challenges it faces. His recollections of skilled craftsmanship and deteriorating conditions highlight the erosion of sense of place. The Memory Recalling Task can capture these lived experiences, providing qualitative data on how current management practices affect the community's sense of authenticity. His desire for improved conservation measures underscores the need for management practices that prioritize both tangible and intangible heritage attributes.

5.1.2.5-Detail 7: Analysis with Research Questions:

CP-CM-2's insights offer a nuanced understanding of the relationship between management practices, authenticity, and spatial experience. His observations underscore the need to assess whether existing management efforts retain urban heritage authenticity and how this manifests spatially. His critiques align with Objective 2, focusing on the implementation of conservation principles and their impact on authenticity and sense of place. Focused Group Discussions and the Memory Recalling Task provide valuable methods to capture community perceptions and re-imagine missing attributes of authenticity. His narrative emphasizes the importance of integrating effective management, community participation, and historical context to develop holistic strategies for urban heritage conservation.

5.1.2.6 Community Participant- Soldier Bazar 3: (CP-CM-3)

5.1.2.6-Detail 1: Authenticity Perception

CP-CM-3's narrative reflects a profound comprehension of the historical and architectural significance of Saddar's stone heritage buildings, particularly those that predate Partition. His reflections emphasize the aesthetic splendor and robust

architecture that once attracted both tourists and locals, highlighting the cultural and historical value embedded in these structures. This perspective is deeply rooted in his lived experiences, underscoring the need for authenticity that resonates with the community's collective memory (Relph, 1976; Norberg-Schulz, 1980). His sense of regret over the neglect of these buildings illustrates a critical gap in current conservation efforts, where economic priorities overshadow cultural preservation. This qualitative insight, gathered through the Memory Recalling Task and Focused Group Discussions, underscores the importance of re-imagining missing attributes to restore authenticity and maintain a sense of place (Tuan, 1977; Lowenthal, 1985).

5.1.2.6-Detail 2: Management Practices and Conservation of Authenticity

CP-CM-3 strongly criticizes the government's neglect of heritage buildings, attributing their decay to a lack of ownership and financial support. He highlights systemic corruption, where officials demand bribes for refurbishment permits, thereby hindering conservation efforts. This mismanagement erodes both the structural integrity and the intangible authenticity of these sites. His observations align with Objective 2, which seeks to evaluate the implementation of conservation principles and their impact on authenticity (Uzzell & Ballantyne, 1998). The Memory Recalling Task captures these perceptions of corruption and neglect, providing qualitative data on how ineffective management practices undermine the community's efforts to sustain heritage authenticity.

5.1.2.6-Detail 3: Spatial Experience and Authenticity

CP-CM-3's recollections of a time when tourists and locals flocked to Saddam to admire its architectural beauty and engage in commercial activities offer rich insights into the spatial experience shaped by heritage. He notes that the decay of these structures and the shift towards modern shopping centers have significantly altered the spatial dynamic, diminishing the area's cultural vibrancy and economic vitality. This decline in pedestrian activity and the loss of a lively ambiance underscore the impact of poor urban management on spatial authenticity. By invoking memories of the area's former liveliness through the Memory Recalling Task, CP-CM-3's narrative helps identify missing spatial elements that should be restored to enhance the sense of place (Norberg-Schulz, 1980; Gifford, 2014).

5.1.2.6-Detail 4: Design and Planning Approaches

While CP-CM-3 does not explicitly discuss specific design methodologies, his critique of the pagree system, which limits economic returns for property owners, points to significant regulatory and economic obstacles to conservation. His insights suggest that successful design and planning approaches must address these constraints by promoting policies that facilitate investment in heritage restoration. This aligns with Objective 2, which emphasizes the need for conservation principles that balance economic viability with cultural preservation (Smith, 2006). The Focused Group Discussions provide a platform to explore community-driven solutions and adaptive reuse strategies that integrate historical conservation with urban growth.

5.1.2.6-Detail 5: Community Perspectives and Heritage Conservation

CP-CM-3 emphasizes the community's desire to preserve and renovate historical structures, while acknowledging challenges posed by governmental corruption and a lack of awareness about regulatory processes. His observations highlight the frequent unauthorized modifications made by store owners, which further deteriorate these buildings. This reflects a pressing need for supportive policies and regulations that empower community-led conservation efforts. Through Focused Group Discussions, community members can articulate their challenges and propose collaborative solutions that align with Objective 2, fostering a shared responsibility for heritage preservation (Uzzell & Ballantyne, 1998).

CP-CM-3's narrative underscores that sustainable conservation must be community-centric, addressing both tangible and intangible heritage values.

5.1.2.6-Detail 6: Sense of Place and Emotional Resonance

CP-CM-3's interview reveals a deep emotional connection to Saddar's heritage buildings, shaped by memories of their former splendor and cultural vibrancy. His reflections on the decline in visitor attraction and the negative impact on local businesses convey a sense of loss and frustration. This emotional resonance highlights the importance of maintaining a sense of place through effective conservation practices that preserve both the physical and experiential aspects of heritage (Relph, 1976; Tuan, 1977). The Memory Recalling Task captures these emotional connections, providing valuable insights into how authenticity is experienced and how it can be restored to foster a dynamic cultural identity.

5.1.2.6-Detail 7: Analysis with Research Questions

CP-CM-3's insights offer critical reflections on the challenges of urban heritage management in Karachi. His narrative highlights the detrimental effects of governmental neglect, corruption, and economic constraints on maintaining the authenticity of heritage structures. These perspectives address the study's research questions by emphasizing the need for:

1. **Effective Management Practices** – To combat corruption and ensure financial support for conservation efforts.
2. **Supportive Policies** – To resolve economic and regulatory challenges hindering conservation.
3. **Community Engagement** – To empower local stakeholders in heritage preservation and adaptive reuse.

CP-CM-3's emotional connection and sense of place further illustrate the importance of integrating personal memories and community narratives into conservation strategies. The qualitative data from the Memory Recalling Task and Focused Group Discussions underscore the necessity of holistic approaches that bridge the gap between urban development and heritage preservation, ensuring that authenticity and cultural identity are sustained in the dynamic context of Karachi's urban heritage (Lowenthal, 1985; Smith, 2006).

5.1.2.7 Location: Ram Bagh District – Urdu Bazaar Community Participant-Ram Bagh 1: (CP-RB-1)

5.1.2.7-Detail 1: Authenticity Perception

CP-RB-1's discourse reflects a deep appreciation for the historical and cultural significance of the heritage structures in Urdu Bazaar. His lifelong connection to the area, stemming from his birth and continuous residence, grounds his perception of authenticity in lived experience and cultural memory. He emphasizes the skillful workmanship, detailed woodwork, resilient wiring, and overall robust construction of buildings erected before Partition. These reflections highlight the Hindu architectural influences and intricate craftsmanship that characterize the cultural identity of the area (Norberg-Schulz, 1980; Relph, 1976). Through the Memory Recalling Task, CP-RB-1's memories provide qualitative insights into the authentic elements that need

preservation and underscore the importance of cultural narratives in maintaining authenticity (Lowenthal, 1985; Tuan, 1977).

5.1.2.7-Detail 2: Management Practices and Conservation of Authenticity

CP-RB-1 is critical of the inadequate management practices that fail to preserve the heritage structures of Urdu Bazaar. He identifies the pagree system as a major hindrance, limiting economic benefits for property owners and disincentivizing investment in conservation. He also highlights conflicts between property owners and heritage departments, leading to neglect and legal disputes. This reflects a systemic failure in heritage management that compromises both the structural integrity and the authenticity of these buildings (Smith, 2006). CP-RB-1's perspective aligns with Objective 2, which seeks to analyze how conservation principles are implemented and their impact on authenticity. The Memory Recalling Task and Focused Group Discussions can capture these issues, revealing the gaps in current management practices and the need for strategies that address economic and legal challenges (Uzzell & Ballantyne, 1998).

5.1.2.7-Detail 3: Spatial Experience and Authenticity

CP-RB-1 describes the transformation of Urdu Bazaar from a primarily residential area to a commercially dominated space, highlighting the effects of business encroachment on spatial authenticity. Increased traffic and the pressure to convert heritage buildings into commercial ventures have altered the spatial dynamics, reducing the integrity and authenticity of the area. The lack of maintenance and the demand for commercial exploitation disrupt the historic character of the space, negatively affecting the sense of place (Relph, 1976; Gifford, 2014). CP-RB-1's narrative, captured through the Memory Recalling Task, emphasizes the need to re-imagine missing spatial attributes that once contributed to a cohesive and culturally rich environment. His insights support the idea that effective urban planning must balance commercial growth with heritage preservation to maintain authenticity (Tuan, 1977).

5.1.2.7-Detail 4: Design and Planning Approaches

Although CP-RB-1 does not explicitly address specific design methodologies, his support for integrating heritage structures into modern urban development suggests an inclination toward adaptive reuse and context-sensitive design. He advocates for strategies that preserve the historical and cultural significance of these buildings while

accommodating contemporary needs. This reflects the constructivist principle of balancing preservation with modern functionality, ensuring that heritage structures remain relevant within the evolving urban landscape (Smith, 2006). CP-RB-1's account aligns with Objective 2, which emphasizes implementing conservation principles to sustain authenticity. The Focused Group Discussions can further explore design approaches that achieve a harmonious equilibrium between heritage preservation and urban development (Lowenthal, 1985).

5.1.2.7-Detail 5: Community Perspectives and Heritage Conservation

CP-RB-1's perspective underscores a strong communal desire to preserve the heritage buildings of Urdu Bazaar, despite facing financial and legal challenges. He highlights the community's recognition of the cultural and historical significance of these structures and advocates for their integration into new developments. His narrative points to the importance of community engagement and supportive policies in fostering sustainable conservation practices (Uzzell & Ballantyne, 1998). Through the Memory Recalling Task and Focused Group Discussions, these communal aspirations can be articulated, revealing the need for participatory approaches that empower local stakeholders in heritage management (Relph, 1976; Gifford, 2014).

5.1.2.7-Detail 6: Sense of Place and Emotional Resonance

CP-RB-1's interview reveals a profound emotional connection to Urdu Bazaar, rooted in his memories of the area's architectural beauty and cultural vibrancy. His detailed descriptions of craftsmanship and historical significance reflect a deep sense of place and a desire to see these structures preserved. The decline of these buildings and the fear of their potential destruction evoke a sense of loss and urgency for better conservation efforts. The Memory Recalling Task captures these emotional bonds, providing qualitative data on how authenticity and sense of place are intertwined (Norberg-Schulz, 1980; Tuan, 1977). CP-RB-1's reflections emphasize the importance of integrating emotional and cultural relevance into conservation strategies to maintain the community's connection to their heritage.

5.1.2.7-Detail 7: Analysis with Research Questions

CP-RB-1's insights offer valuable perspectives on the complexities of urban heritage management in Urdu Bazaar. His narrative highlights the challenges posed by inadequate management practices, economic constraints, and legal conflicts in

maintaining authenticity. These reflections address the research questions by emphasizing the need for:

1. **Effective Management Practices** – To address systemic failures and ensure proactive conservation efforts.
2. **Supportive Policies and Community Engagement** – To empower local stakeholders and resolve economic and legal challenges.
3. **Balanced Design and Planning Approaches** – To integrate heritage preservation with modern urban development.

Through the Memory Recalling Task and Focused Group Discussions, CP-RB-1's perspectives provide qualitative data that underscore the importance of maintaining a sense of place and emotional resonance. His reflections highlight the need for holistic and participatory strategies that bridge the gap between heritage conservation and urban growth, ensuring that authenticity and cultural identity are preserved amidst contemporary development pressures (Lowenthal, 1985; Smith, 2006).

5.1.2.8 Community Participant- Ram Bagh 2: (CP-RB-2)

5.1.2.8-Detail 1: Authenticity Perception

CP-RB-2's account reflects a deep understanding and respect for the cultural and historical significance of the old buildings in Saddar. His reflections emphasize the role of these structures in connecting individuals to previous generations, serving as living artifacts that embody the cultural heritage of the region. He highlights the exceptional durability and craftsmanship of these buildings, which he compares favorably to modern constructions. This perspective is rooted in his lived experiences and aligns with the phenomenological emphasis on authentic perceptions shaped by memory and place (Heidegger, 1927; Merleau-Ponty, 1962). Through the Memory Recalling Task (RMT), CP-RB-2's observations capture the material authenticity of these buildings and underscore their role in preserving the cultural identity of the neighborhood (Tuan, 1977; Lowenthal, 1985).

5.1.2.8-Detail 2: Management Practices and Conservation of Authenticity

CP-RB-2 strongly criticizes the inefficiency of current management practices in conserving historical structures. He identifies the intrusion of commercial activities, inadequate parking, and a lack of recreational amenities as key factors driving people away from these buildings. This exodus undermines collective efforts to maintain these

properties, creating a cycle of neglect and disrepair. He notes that disputes over renovation responsibilities and the shared financial burden further hinder conservation efforts. Additionally, the risk of structural collapse, exacerbated by negligence and environmental factors, complicates the task of preservation (Smith, 2006; Uzzell & Ballantyne, 1998). These insights address Objective 2, which focuses on analyzing the effectiveness of conservation principles in maintaining authenticity and sense of place. CP-RB-2's critique highlights the urgent need for supportive policies and collaborative management practices to address these challenges (Norberg-Schulz, 1980).

5.1.2.8-Detail 3: Spatial Experience and Authenticity

CP-RB-2's reflections emphasize how economic pressures and urban growth have altered the spatial experience of Saddar's heritage buildings. The lack of adequate parking and spatial amenities has pushed residents to relocate to modern buildings offering more space and comfort. This shift from residential to commercial use disrupts the spatial dynamics of the neighborhood, eroding the authenticity and historical function of these buildings (Relph, 1976; Gifford, 2014). His narrative, captured through the RMT and Focused Group Discussions, illustrates how these spatial transformations diminish the sense of place, affecting both the physical and experiential dimensions of authenticity. This aligns with the need for urban planning strategies that balance spatial functionality with heritage preservation (Tuan, 1977).

5.1.2.8-Detail 4: Design and Planning Approaches

CP-RB-2 advocates for integrating historic buildings into contemporary urban development, recognizing the challenges posed by the compact dimensions of older structures. Despite these limitations, he underscores their cultural and historical importance, suggesting that design and planning strategies should aim to reconcile heritage conservation with modern urban needs. His perspective aligns with constructivist principles, which emphasize the co-creation of knowledge and adaptive approaches to urban development (Guba & Lincoln, 1994; Smith, 2006). CP-RB-2's views support Objective 2, highlighting the importance of incorporating sustainable design and adaptive reuse practices to ensure the continued relevance of heritage buildings (Lowenthal, 1985).

5.1.2.8-Detail 5: Community Perspectives and Heritage Conservation

CP-RB-2's narrative underscores the community's diminishing enthusiasm for preserving heritage structures due to financial constraints and logistical challenges. He points to the rising land values and economic incentives that encourage residents to sell their properties to developers. This practice often results in the demolition of historic buildings and their replacement with modern structures, gradually eroding the area's cultural and historical fabric (Uzzell & Ballantyne, 1998). His insights emphasize the need for community engagement and supportive legislation to empower residents in heritage conservation efforts. The Focused Group Discussions provide a platform for exploring these challenges and developing community-driven solutions (Relph, 1976; Gifford, 2014).

5.1.2.8-Detail 6: Sense of Place and Emotional Resonance

CP-RB-2's reflections reveal a deep emotional connection to the heritage structures of Saddar. His memories of the area's cultural richness and historical significance highlight a profound sense of place. However, his concerns about safety hazards, neglect, and financial obstacles convey a sense of frustration and loss. This emotional resonance underscores the importance of preserving both the physical integrity and the experiential value of these buildings (Norberg-Schulz, 1980; Tuan, 1977).

The RMT captures these emotional connections, offering qualitative insights into how authenticity and sense of place can be sustained through effective conservation strategies (Lowenthal, 1985).

5.1.2.8-Detail 7: Analysis with Research Questions

CP-RB-2's perspectives provide critical insights into the complexities of urban heritage management in Saddar. His narrative addresses the research questions by highlighting the challenges posed by commercial pressures, safety concerns, and communal disputes. These insights emphasize the need for:

1. **Effective Management Practices** – To address economic constraints, shared responsibilities, and structural risks.
2. **Supportive Policies** – To promote community engagement and provide financial incentives for conservation.
3. **Balanced Design and Planning Approaches** – To integrate heritage buildings into modern urban development while preserving their cultural significance.

CP-RB-2's reflections, gathered through the Memory Recalling Task and Focused Group Discussions, illustrate how a sense of place and emotional resonance are integral to heritage conservation. His support for incorporating old structures into new development highlights the potential for adaptive reuse strategies that harmonize historical identity with contemporary needs. These findings align with the constructivist and phenomenological frameworks, emphasizing the dynamic interplay between community experiences, urban development, and heritage preservation (Smith, 2006; Guba & Lincoln, 1994).

5.1.2.9 Community Participant- Ram Bagh 3: (CP-RB-3)

5.1.2.9-Detail 1: Authenticity Perception

CP-RB-3's narrative conveys a strong conviction regarding the potential and historical value of heritage structures, contrasting them with newly constructed buildings. He emphasizes the substantial cultural and architectural worth of these heritage buildings, which, according to him, is often overshadowed by the rapid push for modern development. CP-RB-3 laments that heritage buildings are more often acknowledged for their deteriorated condition rather than their intrinsic historical and aesthetic significance. This perception reflects a disconnect between the true value of these buildings and how they are viewed by the public. CP-RB-3's account highlights a gap in the recognition of these structures, where their authenticity is compromised not only physically but also in terms of their cultural importance, echoing the need for a broader understanding of authenticity that encompasses both material and non-material aspects (Smith, 2006; Uzzell & Ballantyne, 1998).

5.1.2.9-Detail 2: Management Practices and Conservation of Authenticity

CP-RB-3 critiques the government's prioritization of new development projects, which undermines efforts to preserve heritage structures. He points to the role of influential developers or "mafias" who exploit regulatory loopholes to demolish heritage buildings, replacing them with modern constructions. This practice leads to community disruption and exacerbates infrastructure challenges. CP-RB-3's narrative underscores the absence of effective management and regulatory policies to protect these heritage sites, leading to their gradual decay and replacement. His conclusions suggest the need for improved conservation measures and regulatory oversight to ensure that heritage buildings are protected amidst urban growth (ICOMOS, 1994;

Gifford, 2014). This connects to Objective 2, which focuses on analyzing how conservation practices can foster authenticity and a sense of place.

5.1.2.9-Detail 3: Spatial Experience and Authenticity

CP-RB-3's observations of the transformation in the area highlight the impact of contemporary developments on the spatial experience. The substitution of historical buildings with modern constructions has introduced problems like inadequate water supply, sewage issues, and a lack of parking spaces, disrupting the daily lives of residents. These infrastructural changes, coupled with the juxtaposition of old and new buildings, have altered the spatial dynamics and ambiance of the neighborhood, leading to a diminished sense of place and authenticity (Tuan, 1977). CP-RB-3's insights point to the impact of urban growth on the spatial encounter, emphasizing how physical transformations erode the historical and cultural significance of the area, thereby affecting experiential authenticity (Relph, 1976; Lowenthal, 1985).

5.1.2.9-Detail 4: Design and Planning Approaches

CP-RB-3 advocates for the integration of heritage buildings into modern urban development plans, suggesting that design strategies should not prioritize demolition for new structures. He calls for urban planning strategies that balance heritage conservation with urban growth, acknowledging the need to preserve historical buildings while accommodating contemporary development demands. His viewpoint aligns with constructivist principles, emphasizing that heritage conservation should not be a static process but rather one that adapts to modern needs while respecting the historical context (Smith, 2006; Guba & Lincoln, 1994). CP-RB-3's perspective also underscores the importance of adaptive reuse, which is critical for sustaining the authenticity of historical sites within an evolving urban landscape (Vygotsky, 1978).

5.1.2.9-Detail 5: Community Perspectives and Heritage Conservation

CP-RB-3 highlights the community's declining interest in preserving historical structures, largely due to economic constraints and logistical challenges. He notes that many residents have sold their properties to developers due to rising land prices and the financial incentives provided by developers. This shift is leading to the gradual loss of historical heritage in the area.

CP-RB-3 emphasizes the need for collaborative efforts among residents, government bodies, and community organizations to combat this trend and to advocate for cultural

heritage preservation (Uzzell & Ballantyne, 1998). His observations align with Objective 3, which focuses on how community engagement and collaborative practices are essential for the long-term conservation of heritage sites.

5.1.2.9-Detail 6: Sense of Place and Emotional Resonance

CP-RB-3's emotional connection to the heritage structures in Saddar is palpable. His deep attachment to these buildings, combined with his memories of the aesthetic beauty and cultural importance they once held, underscores the emotional resonance of the sense of place. He expresses regret about the transformation of the area, particularly the loss of authenticity as modern buildings replace the historic structures. CP-RB-3's feelings of sorrow and disappointment reflect the personal and collective attachment that communities have to their built heritage, reinforcing the need for strategies that recognize the emotional and cultural significance of heritage places (Smith, 2006; Tuan, 1977). His narrative contributes to Objective 1, which explores how material and non-material elements of heritage contribute to the authenticity and sense of place of a community (Relph, 1976).

5.1.2.9-Detail 7: Analysis with Research Questions

CP-RB-3's perspective offers critical insights into the challenges of managing urban heritage in Saddar. His narrative effectively addresses the research questions by highlighting the disconnect between modern development and heritage preservation, stressing the need for more supportive policies and community involvement. CP-RB-3's desire to integrate heritage buildings into new development underscores a potential approach to balance contemporary needs with the conservation of historical and cultural heritage. His reflections on spatial experience and sense of place reinforce the necessity of recognizing emotional resonance and community connections in the design and planning of urban heritage sites. These insights align with the updated research philosophy, which emphasizes context-sensitive, community-driven conservation practices that balance historical authenticity with modern urban development needs (Guba & Lincoln, 1994; Uzzell & Ballantyne, 1998).

5.1.2.10 Community Participant- Light House 1: (CP-LH-1)

5.1.2.10-Detail 1: Authenticity Perception

CP-LH-1's perspective demonstrates a deep reverence for the cultural and historical significance of the heritage buildings in the Lighthouse area. He strongly believes these structures hold the potential to showcase the area's history and attract visitors, provided they are properly preserved. His frustration with the government's focus on new projects like "PEOPLE'S SQUARE," instead of allocating resources to the conservation of cultural assets, reflects his firm belief in the authenticity of these heritage buildings.

He argues that conserving and highlighting the architectural and cultural value of the heritage buildings would offer a more authentic representation of Karachi's rich history. This aligns with the research philosophy that emphasizes the importance of recognizing both material and non-material heritage in the conservation process (Smith, 2006; Lowenthal, 1985).

5.1.2.10-Detail 2: Management Practices and Conservation of Authenticity

CP-LH-1 critiques the current management practices, noting the insufficient allocation of resources to the conservation of historical buildings. He points out the significant financial investments directed toward new initiatives, contrasting them with the neglect of established cultural landmarks. His views call for a more equitable approach to urban development, one that balances preservation with modern growth. He criticizes existing management policies, particularly those that prioritize the construction of new buildings and impose financial burdens, like fees on sellers in areas such as "PEOPLE'S SQUARE," which he perceives as detrimental to the conservation of historical structures. This observation highlights the importance of policy interventions that incorporate community values and historical significance into planning practices, aligning with Objective 2 that addresses the implementation of conservation principles (ICOMOS, 1994).

5.1.2.10-Detail 3: Spatial Experience and Authenticity

CP-LH-1 reflects on how the evolution of street culture and the relocation of merchants to modern plazas and malls have altered the spatial perception of historic areas like Burns Road and the Lighthouse. The substitution of traditional urban street culture

with modern developments has impacted the essence and authenticity of these spaces. His belief that preserving and promoting heritage buildings could enrich the cultural and spatial experience for both residents and visitors suggests that these recent changes have diminished the historical ambiance and geographical significance of the area. This sentiment underscores the need to incorporate historic values into urban development, as outlined by Tuan's concept of sense of place, which emphasizes the emotional and spatial connections people have with their surroundings (Tuan, 1977).

5.1.2.10-Detail 4: Design and Planning Approaches

CP-LH-1 advocates for a dual approach in urban development that combines both modern construction and the conservation of heritage structures. He suggests that design and planning strategies should not only address contemporary needs but also integrate historical conservation. He criticizes the government's preference for new projects at the expense of preserving historical buildings, calling for more balanced approaches that respect historical context while meeting current urban demands. His proposal to use heritage buildings to promote art and craft emphasizes the importance of incorporating community-driven solutions in conservation efforts. These approaches align with the constructivist philosophy, which stresses the importance of community participation and adaptive reuse in the preservation of heritage (Smith, 2006; Vygotsky, 1978).

5.1.2.10-Detail 5: Community Perspectives and Heritage Conservation

CP-LH-1's perspective mirrors the concerns of the broader community, who feel the neglect of historical structures and the consequences of recent developments. He highlights the role of the community, particularly the market merchants, in safeguarding cultural heritage, emphasizing the challenges posed by economic pressures and the lack of government support. He believes that while community members recognize the cultural value of heritage buildings, their efforts to preserve them are hindered by legal, economic, and infrastructural obstacles. His call for collaborative efforts underscores the need for inclusive management practices that involve both the community and governmental agencies in heritage conservation. This reflects the importance of community engagement in heritage management, which is key to the sustainability of conservation efforts (Uzzell & Ballantyne, 1998).

5.1.2.10-Detail 6 Sense of Place and Emotional Resonance

CP-LH-1's interview reveals a deep emotional connection to the heritage buildings in the Lighthouse area. He shares fond memories of the architectural splendor and cultural significance of these structures, which resonate deeply with his sense of place. His deep emotional attachment to the area and concern over the erosion of cultural authenticity due to modern developments illustrate the profound impact of these spaces on personal identity and community bonds. CP-RB-3's desire to see these buildings preserved as part of urban development highlights his commitment to protecting the historical identity of the area while accommodating modern needs. This reflects the phenomenological emphasis on lived experiences and emotional engagement with heritage, where authenticity is linked not only to materiality but also to personal and communal experiences (Heidegger, 1927; Relph, 1976).

5.1.2.10-Detail 7: Analysis with Research Questions

CP-LH-1's perspectives provide key insights into the complexities of urban heritage conservation in Karachi. His narrative directly responds to the research questions by advocating for equitable management practices and inclusive planning strategies that prioritize the preservation of cultural heritage. He underscores the importance of community involvement and highlights the emotional and cultural connections people have to heritage sites. His critique of the current management practices aligns with the study's focus on the need for adaptive reuse and policy reforms that integrate historical conservation with contemporary urban development. The significance of his sense of place and emotional resonance reinforces the need for authenticity to be assessed not only in terms of physical integrity but also through experiential and communal lenses. His insights align with the updated research philosophy, emphasizing the role of community-driven conservation, adaptive reuse, and emotional engagement in the sustainable preservation of urban heritage (Smith, 2006; Tuan, 1977)

5.1.2.11 Community Participant- Light House 2: (CP-LH-2)

5.1.2.11-Detail 1: Authenticity Perception

CP-LH-2's narrative emphasizes a deep appreciation for the historical and architectural integrity of the heritage building he resides in. He contrasts the robustness and excellence of the old architecture with the relatively fragile and less durable modern buildings, underscoring his admiration for the traditional artistry and materials used in

the construction of these historic edifices. His belief in the enduring strength of the building, despite its age, reflects its ongoing authenticity and cultural value. CP-LH-2's perspective emphasizes that the building's longevity and resilience affirm its intrinsic authenticity, aligning with the notion that authenticity is sustained not only through physical preservation but also through continual functional use and cultural relevance (Smith, 2006; ICOMOS, 1994).

5.1.2.11-Detail 2: Effective Management Practices and Conservation of Authenticity

CP-LH-2's account highlights a gap between the building's actual condition and the management practices in place. While the building itself remains structurally sound, poor maintenance due to the residents' reluctance to fund upkeep and the lack of formal management structures is a significant issue. This highlights the deficiencies in effective administrative practices, which negatively affect the building's preservation despite its intrinsic architectural and historical merit. His observations underscore the necessity of better management systems and strategic planning for effective heritage conservation, emphasizing the importance of formalized efforts in maintaining the authenticity of urban heritage (Lowenthal, 1985).

5.1.2.11-Detail 3: Spatial Experience and Authenticity

CP-LH-2's description of the spatial experience in the heritage building reveals a balance of historical charm and functional utility. The building's spaciousness and unique Dewari-style design contribute to its authentic character. However, the impact of modern urbanization, with the rise of contemporary buildings that obstruct its historical splendor—diminishes its overall spatial authenticity. CP-LH-2's narrative illustrates the tension between the authentic spatial experience of the heritage building and the encroaching modernity that affects its visibility and cultural prominence. This aligns with phenomenological insights into place-making, where the sensory and emotional perception of space can be disrupted by external urban changes (Tuan, 1977; Relph, 1976).

5.1.2.11-Detail 4: Design and Planning Approaches

CP-LH-2 advocates for the renovation of the building to restore it to its former grandeur, suggesting that with the right attention and conservation, the building could meet contemporary aesthetic and functional standards. This perspective highlights the

need for design and planning strategies that integrate historical preservation with modern urban development. His proposal calls for a careful balance between heritage conservation and urban growth, stressing the importance of incorporating historical structures into urban planning as cultural landmarks that continue to serve contemporary needs. This supports the research strategy of aligning adaptive reuse with heritage preservation to enhance both material authenticity and functional adaptability (Smith, 2006; Ashworth, 2011).

5.1.2.11-Detail 5: Community Perspectives and Heritage Conservation

CP-LH-2's viewpoint reflects the strong communal bond and sense of shared responsibility among the residents. Despite the challenges posed by financial constraints and the lack of official governance, the community's collective emotional investment in the heritage building is evident. Their connection to the building emphasizes the significance of local engagement in heritage conservation. CP-LH-2's perspective highlights that the community's involvement, through informal social cohesion and mutual support, is essential for the preservation of cultural heritage. His view suggests that community-driven conservation efforts can play a pivotal role in sustaining the authenticity of urban heritage (Uzzell & Ballantyne, 1998).

5.1.2.11-Detail 6: Sense of Place and Emotional Resonance

CP-LH-2's narrative expresses a profound emotional attachment to the heritage building, demonstrating a deep sense of place tied to its historical significance and architectural splendor. He reflects on the nostalgia evoked by the building, which he associates with the pre-Independence era, and expresses sorrow at its diminishing prominence amid modern developments. The tension between the building's hidden magnificence and the modern structures around it intensifies his emotional resonance with the place. This emotional connection underscores the role of heritage conservation in maintaining historical identity and cultural continuity, supporting the idea that authenticity is not solely based on physical characteristics but also on the emotional and cultural connections people form with places (Heidegger, 1927; Tuan, 1977).

5.1.2.11-Detail 7: Analysis with Research Questions

CP-LH-2's insights offer valuable perspectives on the challenges of urban heritage management in Karachi. His account underscores the difficulties in maintaining and

preserving the authenticity of heritage structures, highlighting the need for improved management practices and inclusive conservation strategies. The stakeholder's critique of current urban development practices and his emphasis on community involvement in preservation underscore the importance of integrating historical structures into modern planning. CP-LH-2's emphasis on community engagement and the emotional impact of authenticity strengthens the argument for developing adaptive reuse strategies that balance historical preservation with contemporary urban needs. His perspective aligns with the updated research philosophy of viewing authenticity as a dynamic, context-dependent construct, informed by both material and non-material elements (Smith, 2006; Jokilehto, 2006).

Table 5.12

Summary of the Findings Across Saddar Bazar, Ram Bagh & Lighthouse

Cross-Comparison of the Findings of the Recall Memory Test

Aspect	Saddar Bazar (CP-CM-1, CP-CM-2, CP-CM-3)	Ram Bagh (CP-RB-1, CP-RB-2, CP-RB-3)	Lighthouse (CP-LH-1, CP-LH-2)	Implications
Perception of Authenticity	Deep connection to heritage, rooted in personal and cultural memory. CP-CM-1 emphasizes cultural relevance; CP-CM-2 highlights craftsmanship and artistic value. CP-CM-3 contrasts modern development with heritage, lamenting a lack of public recognition.	High regard for cultural and architectural significance. CP-RB-1 emphasizes craftsmanship; CP-RB-2 highlights resilience; CP-RB-3 laments undervaluation of heritage structures.	Recognition of historical and cultural importance. CP-LH-1 critiques focus on new developments; CP-LH-2 admires architectural resilience and craftsmanship.	Authenticity is perceived as a multi-dimensional concept, encompassing both material and non-material aspects, which requires a more holistic, flexible approach to heritage management. Theories by Norberg-Schulz (1980) and Relph (1976) emphasize the role of personal memory and cultural context in defining authenticity, suggesting that management strategies must respect local narratives and traditions.
Management Practices	Critique of government neglect and inadequate policies. CP-CM-1 and CP-CM-2 note poor allocation of resources. CP-CM-3 emphasizes corruption and developer influence as major obstacles to preservation.	Critique of systemic failures in maintenance. CP-RB-1 notes economic and legal issues; CP-RB-2 points to infrastructural neglect; CP-RB-3 highlights misuse by developers.	Critique of misallocated resources. CP-LH-1 highlights neglect of cultural landmarks; CP-LH-2 notes lack of formal management despite structural integrity.	Effective management requires a shift toward community engagement and decentralized decision-making. Theories like Guba & Lincoln (1994) on constructivism and Uzzell & Ballantyne (1998) on participatory management suggest that heritage conservation must be a collaborative, adaptive process, integrating both

				local knowledge and governmental support.
Spatial Experience	Loss of vibrant street life due to urban sprawl. CP-CM-1 and CP-CM-2 highlight pedestrian infrastructure decline; CP-CM-3 notes disruption in spatial harmony and connectivity.	Shift from residential to commercial use disrupts spatial dynamics. CP-RB-1 highlights encroachment; CP-RB-2 notes reduced habitability; CP-RB-3 emphasizes loss of historical ambiance.	Modern developments disrupt historical ambiance. CP-LH-1 notes decline in street culture; CP-LH-2 emphasizes reduced visibility of heritage due to encroaching modernity.	Urban heritage management must balance spatial functionality with authenticity. Tuan (1977) and Relph (1976) underscore the importance of experiential authenticity, where the preservation of both the physical and sensory aspects of space is critical to maintaining a sense of place.
Design and Planning Approaches	Preference for integrating heritage structures into urban planning. CP-CM-3 stresses adaptive reuse, while CP-CM-1 implies balance between modern infrastructure and cultural conservation.	Support for adaptive reuse and modern integration. CP-RB-1 and CP-RB-3 advocate for conservation in urban planning. CP-RB-2 highlights compact designs for contemporary use.	Call for balanced strategies. CP-LH-1 advocates for dual approaches integrating modern needs and heritage conservation. CP-LH-2 supports adaptive reuse for aesthetic and functional restoration.	Successful design and planning approaches must balance modern needs with heritage conservation. The constructivist theory by Guba & Lincoln (1994) and Vygotsky (1978) supports adaptive reuse as a method for maintaining authenticity while addressing modern urban growth.
Community Perspectives	Declining community interest due to economic constraints and regulatory challenges. CP-CM-2 and CP-CM-3 emphasize collective responsibility but note systemic barriers.	Economic pressures challenge communal efforts. CP-RB-1 and CP-RB-2 stress collaborative strategies; CP-RB-3 notes limited awareness among residents.	Community involvement hindered by economic pressures. CP-LH-1 highlights local merchant efforts; CP-LH-2 emphasizes social cohesion as key to sustaining heritage.	Community-driven approaches are vital to sustainable heritage conservation. Uzzell & Ballantyne (1998) emphasize that local involvement ensures the longevity and relevance of preservation efforts, while Smith (2006) highlights the importance of shared responsibility and participatory management in conservation strategies.
Sense of Place and Emotional Resonance	Strong emotional connection to heritage. CP-CM-1 recalls cultural vibrancy; CP-CM-2 highlights craftsmanship; CP-CM-3 reflects on aesthetic and historical loss.	Deep emotional connection to heritage sites. CP-RB-1 reflects on cultural narratives; CP-RB-2 emphasizes historical continuity; CP-RB-3 laments loss of identity.	Emotional attachment to historic buildings. CP-LH-1 reflects on cultural vibrancy; CP-LH-2 emphasizes nostalgia and identity tied to pre-Independence architecture.	Emotional resonance and sense of place are central to heritage conservation. Norberg-Schulz (1980) and Relph (1976) argue that the emotional and social connections to a place are integral to its authenticity, which necessitates a preservation framework that recognizes and nurtures these personal and communal connections.

5.1.2.12 Discussion on Recall Memory Test

The findings from the recall memory test conducted across various heritage sites in Karachi offer a profound insight into how communities perceive and experience authenticity within their built environment. The analysis in Table 5.12 reveals the deep connection individuals have with their surroundings, highlighting how authenticity is not merely a static characteristic of heritage but a dynamic, lived experience shaped by both material and non-material factors. This aligns with the phenomenological and constructivist theories of place-making, as discussed by Norberg-Schulz (1980), Relph (1976), and Smith (2006), which emphasize that authenticity is a multifaceted construct shaped by individual and collective memory, as well as the spatial and emotional connections people form with their environment.

Participants from Saddar Bazar, Ram Bagh, and Lighthouse area each demonstrated a strong attachment to their heritage, showing how these locations serve as crucial repositories of cultural and personal history. The narratives from Saddar Bazar (CP-CM-1, CP-CM-2, CP-CM-3) revealed a consistent theme of loss and frustration over the degradation of historic buildings. Their recollections emphasized not only the physical aspects of these spaces but also the emotional resonance they carried—vibrant street life, intricate craftsmanship, and the collective memories that connected the community to past generations. This aligns with Lowenthal's (1985) assertion that authenticity is deeply intertwined with both the tangible and intangible aspects of heritage, where the latter plays a critical role in shaping the community's sense of place.

In contrast, the narratives from Ram Bagh (CP-RB-1, CP-RB-2, CP-RB-3) further emphasized the importance of craftsmanship and material authenticity, particularly in the pre-Partition buildings. Their recollections revealed that many of these spaces, while still structurally sound, were at risk of losing their significance due to modern developments encroaching upon them. CP-RB-1, for instance, critiqued the shift from residential to commercial use, highlighting how the influx of economic pressures has altered the spatial dynamics of the neighborhood. This shift has disrupted not just the physical space but also the cultural continuity that these buildings represent. Their experiences reflect the tension between the authenticity of physical structures and the modern urban demands, a central issue in heritage conservation today. These insights resonate with Relph's (1976) argument that a place's authenticity is derived from its

continuity with the past, its ability to maintain cultural relevance, and its connection to people's memories.

In the Lighthouse area, both CP-LH-1 and CP-LH-2 demonstrated a deep emotional connection to the area's heritage, stressing the potential of these spaces to reflect Karachi's historical and cultural identity. Their reflections on the rapid urbanization and the shift in street culture underscored the diminishing role of heritage sites as vibrant, functional spaces in daily life. Both participants lamented the lack of investment in the conservation of these sites, which have been overshadowed by the rapid construction of new commercial developments. CP-LH-1's critique of government policies and his call for a balanced approach to urban development highlight the need for an urban conservation model that incorporates heritage preservation alongside modern growth. This perspective supports Smith's (2006) call for a conservation approach that integrates community-driven solutions and adaptive reuse to balance the demands of contemporary urbanization with the preservation of historical authenticity.

A key theme emerging from all three locations is the challenge of balancing economic pressures with the need for cultural preservation. Participants consistently critiqued current management practices, emphasizing the lack of resources, effective policy frameworks, and the challenges posed by gentrification. The narratives from Saddar Bazar and Ram Bagh, in particular, highlighted how financial and legal constraints have hindered effective conservation efforts. CP-CM-3 and CP-RB-2 pointed out how economic incentives often lead to the demolition or neglect of heritage structures, further eroding the authenticity of these spaces. Similarly, CP-LH-1 critiqued the prioritization of new developments over heritage preservation, emphasizing the need for a more equitable allocation of resources. These concerns are aligned with ICOMOS's (1994) recommendations on balancing economic growth with the conservation of heritage, which underscores the importance of supportive policies and community engagement in the preservation process. Furthermore, the emotional connection that participants associated with their heritage sites is crucial in understanding the broader implications of these findings. CP-CM-1, CP-RB-1, and CP-LH-2 all expressed profound personal and emotional attachments to the places they inhabited, linking their sense of identity to the authenticity of the built environment. This aligns with Tuan's (1977) concept of "sense of place," which argues that places

become authentic when they resonate emotionally with individuals and communities, shaping their personal and collective memories. These emotional connections not only deepen the sense of place but also reinforce the need for conservation strategies that address both the tangible and intangible aspects of heritage.

Findings from the recall memory test emphasize the need for a more nuanced and comprehensive approach to heritage conservation. The narratives from the participants highlight the importance of integrating both material and non-material aspects of authenticity, recognizing that conservation is not merely about preserving physical structures but also about maintaining the cultural narratives, memories, and emotional connections that these places hold. To ensure the sustainability of urban heritage, it is critical to develop management practices that are inclusive, community-driven, and context-sensitive, as suggested by theories of participatory conservation (Uzzell & Ballantyne, 1998) and the concept of “adaptive reuse” (Smith, 2006). The preservation of authenticity in urban heritage sites requires a balance between preserving historical integrity and adapting to the needs of contemporary urban environments.

5.1.3 Data and Analysis of Method 3- Semi Structured Interview

The semi-structured interviews with experts provide a crucial qualitative method for understanding the practical and professional dimensions of heritage conservation. By engaging conservation architects, heritage practitioners, and contractors, this method captures diverse perspectives on how authenticity is interpreted, preserved, and adapted within contemporary urban development. The flexible format of semi-structured interviews allows for in-depth discussions, enabling participants to reflect on their experiences and articulate both theoretical and practical concerns. The analysis of these interviews reveals the challenges and opportunities within heritage conservation,

5.1.3.1 Method 3a- Semi Structured Interview- Conservation Architects

The first section is aimed at capturing the perspectives and invaluable insights into the practical challenges and strategic decisions involved in maintaining authenticity amid evolving urban pressures and development demands, provided by Conservation Architects. Through semi-structured interviews, this study captures a reflection on architectural interventions, restoration techniques, and policy frameworks, shedding light on the delicate balance between preserving material integrity and accommodating

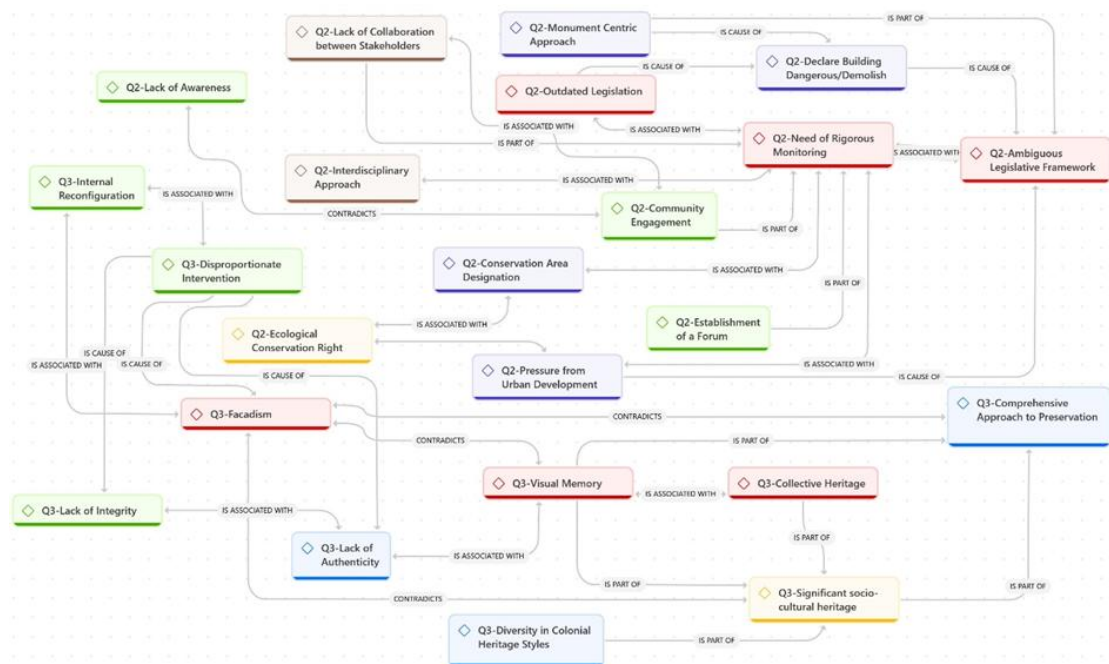
contemporary functionality. By exploring the intersection of methodological practices and ethical considerations, the section reveals the systemic issues and collaborative efforts required to foster sustainable and context-sensitive heritage conservation.

5.1.3.2 Heritage Conservation Practices by Conservation Architects

5.1.3.2-Detail 1: Networking & Relationship Among Codes

Figure 5.13

Interviews with Conservation Architects: Networking & Relationship Among Codes



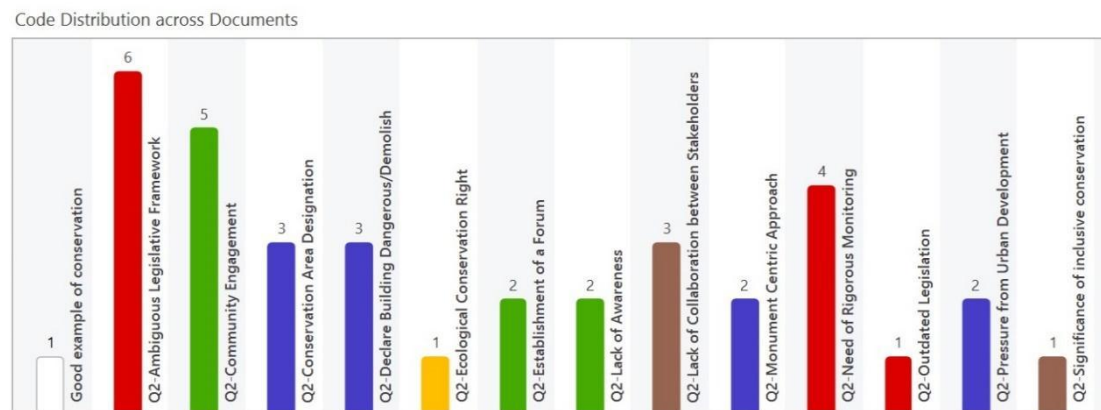
The visualization outlines the interconnection of systemic difficulties (Q2) and their particular indicators (Q3) among the architectural conservation. Essential themes like redundant legislatures, and ambiguous models aligns with Smith (2006) addressing heritage management challenges like facadism, disproportionate interference, and burden from the urban growth. Causal relations like destruction practices as a result of redundant legislatures highlight the systemic nature of these challenges which reflects themes from Ashworths (2011) study on policy-driven preservation issues. Relationships between complete conservation and engagement of community align with Mason's (2022) importance of the part of cooperation of authorities in the success of preservation. Conflicts like the strain among interdisciplinary and monument-centric methods resonate with Jokilehto's (1999) thoughts on the conflict between current and outdated ideas of preservation. Generally, the link discloses the necessity

for interconnected models and alignment of authorities to discourse these multifaceted issues efficiently.

5.1.3.2-Detail 2: Frequency & Distribution Among Documents

Figure 5.14

Interviews with Conservation Architects: Code Distribution across data



The frequency and distribution of codes across the documents shows main understandings into the challenges of architectural preservation, positioning with themes outlined in the literature of preservation. The most quoted codes like “Ambiguous Legislative Framework” with 6 incidences and “Community Engagement” with 5 incidences highlight systemic challenges and the significance of cooperative practices, as noted by Ashworth (2011) in the discussion of the part of authorities in the management of heritage. In contrast, less recurring codes such as “Good Example of Conservation” outlines a restricted emphasis on positive researches, echoing Pendlebury et al. (2009), who stress the underrepresentation of success stories in preservation discourse. The distribution across the interviews displays fluctuations with some codes such as “Client-centered Conservation Approach” being prominent in numerous interviews with a total of 6 occurrences, though others such as “Inappropriate Material Selection” and “Inadequate Façade Restoration” are less highlighted with 3 occurrences each representing diverse respondents. This aligns with Avrami et al. (2000) emphasizing the particular and context-dependent nature of preservation importance.

5.1.3.1.1-Detail 3 Code Co-Occurrence Analysis

Figure 5.15

Interviews with Conservation Architects: Codes Co-Occurrence Analysis

D 2: Interview_Contractor-2

D 3: Interview_Contractor-3

Code-Document Analysis

D 1: Interview_Contractor-1

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Table

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		D 1: Interview_Contractor-1 11	D 2: Interview_Contractor-2 6	D 3: Interview_Contractor-3 7	Totals
No code	Q2/Q3-Absence of Value Recognition 3	1	2		3
	Q2/Q3-Lack of Architectural Documentation 2	1	1		2
	Q2/Q3-Lack of Conservation Guidelines 4	1	3		4
	Q2/Q3-Rebuilding instead of Conservation 3	1	2		3
	Q3-Client-centered Conservation Approach 6	1	3	2	6
No document	Q3-Contractor-led Conservation Approach 4	2	1	1	4
	Q3-Engineering Inspection for Conservation 2	2			2
	Q3-Inadequate Façade Restoration 3	1	1	1	3
	Q3-Inappropriate Material Selection 3	2	1		3
	Q3-Site base Survey Drawings 3	2		1	3
	Totals	14	14	5	33

The analysis of code cooccurrence reveals significant issues within architectural conservation, with “Absence of Value Recognition” emerging as a dominant theme, indicating systemic undervaluation of heritage, which aligns with Smith’s (2006) critique of facadism and urban development pressures overshadowing conservation efforts. “Lack of Architectural Documentation” is another recurring theme, reflecting the insufficient recording of architectural heritage, as highlighted in Jokilehto’s (1999) discussions on the importance of documentation in conservation practices. The theme "Rebuilding Instead of Conservation" underscores a prevalent issue in practice, where rebuilding takes precedence over conservation, echoing Ashworth's (2011) concerns about policy-driven preservation challenges that favor new development over maintaining historical integrity. Additionally, “Ambiguous Legislative Framework” highlights systemic legislative issues, consistent with Pendlebury et al. (2009)’s observation on the complexity and inadequacy of existing preservation laws that hinder effective conservation efforts. Themes like “Community Engagement” and “Client-Centered Conservation Approach” emphasize the critical need for collaborative and inclusive conservation methods, resonating with Mason’s (2022) emphasis on the role of community involvement in successful preservation strategies. These findings collectively emphasise the necessity for coherent policy frameworks,

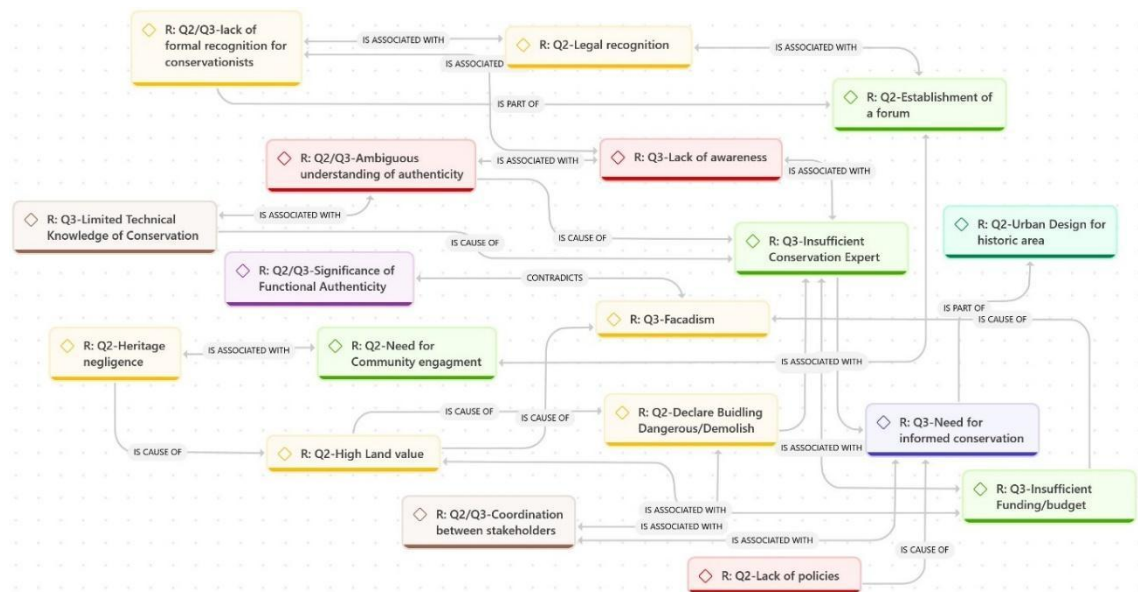
comprehensive documentation practices, and stakeholder collaboration to address the multifaceted challenges in architectural conservation effectively.

5.1.3.3 Heritage Conservation Practices By Architects

5.1.3.3-Detail 1: Networking & Relationship Among Codes

Figure 5.16

Interviews with Architects: Networking & Relationship Among Codes



Note. The visualization outlines the interconnection of various codes- Atlas.ti

The above illustration discloses the complexity in the relationship of themes and challenges in heritage preservation. A main difficulty is the lack of formal recognition and legal frameworks for conservationists which delays collaboration for preservation practices. This difficulty is constant with the worldwide results, where scholars such as Jokilehto (1999) outlines that preservation policies usually lack consistency, leaving experts without clear support or guidance. Additionally, the 2005 model of United Nations Educational, Scientific and Cultural Organization (UNESCO) for Historic Urban Landscape (HUL) highlights the need of mixing heritage into urban development, aligning with the necessity for legal models acknowledged in the illustration. The themes of uncertainties in understanding authenticity and negligence of heritage reflect universal debates and urbanization difficulties. As Lowenthal (1985) notes, authenticity in preservation is personal and influenced by the values of a society, which further complicates the decisions between adaptive reuse and restoration. Initiatives like Freemasons Building in Karachi align with best practices

internationally, whereas others, like house of Nadir Ali Dinshaw outlines the risks associated with narratives of a culture. Correspondingly, the critiques of Ashworth (1997) on the urban development usually neglecting the conservation of culture but rather prioritizing the growth of an economy, as witnessed in the heritage districts of Karachi where the value of land is very high and facadism mirror worldwide pressures such as in Venice. To address these challenges, emphasis by Avrami et al. (2000) on the need of inclusivity and cooperation between stakeholders. Nevertheless, the absence of forums and personalized policies in Karachi challenges like engagement, underlining the necessity for projects similar to Old Wall City Authority in Lahore.

5.1.3.3-Detail 2: Frequency & Distribution Among Documents

Figure 5.17

Interviews with Architects: Code Distribution across data



Note. Sample of Code Distribution with reference to answer Research Question 2 and 3- Atlas.ti

The illustration on distribution of code among the documents outlines the occurrence and emphasis of different difficulties connected to the heritage preservation in Karachi. The most prominent theme ‘‘Lack of Policies’’ with 7 occurrences underlines the systemic lack of structured models essential to guide efforts of preservation. This result aligns with Jokilehto’s (1999) declaration that efficient preservation heavily depends on cohesive policies and legal models. Subsequently, ‘‘Heritage Negligence’’ with 5 occurrences discloses the persistent challenge of disregard for heritage structures, which is consistent with critique of Ashworth (1997) that the growth of an economy dominates conservation of culture in urban planning. Moreover, the equivalent

frequency of themes like “Urban Design for Historic Areas” and “Need for Community Engagement” with 4 occurrences each shows the universal importance on inclusive strategies regarding preservation, as supported by Avrami et al. (2000) who stress the emphasis of value-based and cooperative methods. These designs outline the interconnection of challenges and the critical necessity for well personalized policies, coordination of stakeholders, and high participation of the community in addressing the heritage preservation challenges in Karachi.

5.1.3.3-Detail 3: Code Co-Occurrence Analysis

Figure 5.18

Interviews with Conservation Architects: Codes Co-Occurrence Analysis

		1: Interview 1 8	2: Interview 2 20	3: Interview 3 6	Totals
◆ R	34	8	20	6	34
◆ R: Need for informed conservation	3	1	1	1	3
◆ R: Q2-Declare Building Dangerous/Demolish	2	1		1	2
◆ R: Q2-Heritage negligence	5		3	2	5
◆ R: Q2-Heritage significance	1		1		1
◆ R: Q2-Lack of policies	6		5	1	6
◆ R: Q2-Need for Community engagment	3		2	1	3
◆ R: Q2/Q3-Lack of awareness	1			1	1
◆ R: Q2/Q3-Lack of Collaboration between Stakeholders	4	1	3		4
◆ R: Q3-Establishment of a forum	3	1	2		3
◆ R: Q3-Facadism	2		2		2
◆ R: Q3-High Land value	1	1			1
◆ R: Q3-Lack of Skilled Labor	3	2	1		3
◆ R: Q3-Poor conservation example	1	1			1

Note. Sample of Code Codes Co-Occurrence Analysis - Atlas.ti

The analysis of code cooccurrence outlines the frequent issues in heritage preservation across interviews, with “Need for Informed Conservation” with 34 occurrences developing as the most crucial theme, underlining the emphasis of models based on knowledge as mentioned by Avrami et al. (2000). “Lack of Policies” with 6 occurrences further mirrors systemic gaps, as per Jokilehto’s (1999) declaration that strong policies are important for guiding the efforts of preservation. Moreover, themes like “Need for Community Engagement” with 3 occurrences and “Lack of Collaboration Between Stakeholders” emphasize the necessity for inclusivity,

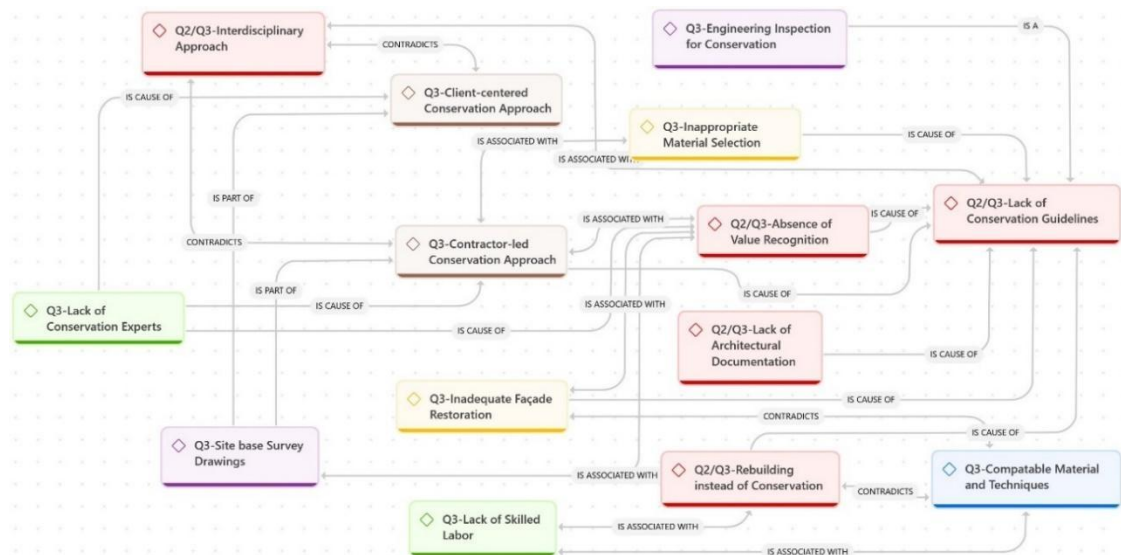
consistent with Chitty's (2017) debate for participating methods. Practical difficulties like "Lack of Skilled Labor" with 3 occurrences and "Heritage Negligence" with 5 occurrences disclose the operative barriers that align with Ashworth's (1997) analysis of economic pressures outshining heritage conservation. These results cooperatively outline the urgent necessity for informed, policy driven preservation strategies, and cooperation to address the heritage conservation issues in Karachi effectively.

5.1.3.4 Heritage Redevelopment Practices by Contractors

5.1.3.4-Detail 1: Network & Relationships Among Codes

Figure 5.19

Interviews with Contractors: Codes Co-Occurrence Analysis



Note. The visualization outlines the interconnection of various codes- Atlas.ti

The above illustration outlines the interrelated and systemic difficulties which are being faced by contractors in the projects of preservation of heritage. The Client-Centered Conservation Approach appears as a vital theme, which reflects the domination of customer priorities, which usually compromise practices of authentic preservation. This practice is interlinked with challenges like Absence of Value Recognition and Inappropriate Material Selection, highlighting the pressure between conservation ethics and profit-driven motivations. Additionally, the Lack of Conservation Guidelines helps as a root cause for various issues, which includes, Lack of Architectural Documentation and Rebuilding Instead of Conservation, underlining the crucial necessity for structured models, as endorsed by Jokilehto (1999).

Further important gaps including the Lack of Conservation Experts and Skilled Labor intensifies the functional challenges like Ineffective Site-Based Survey Drawings and Inadequate Façade Restoration. These gaps outline the emphasis of developing technical capacity to support efforts of preservation. Moreover, conflicts between the Client-Centered Conservation Approach and Interdisciplinary Approach, disclose the necessity for aligning cooperative plans with moral preservation methods. In general, the networked relations highlight the need for strong strategies, interdisciplinary efforts, and practical skills to address the systemic issues in the preservation of heritage. Overall, the networked relationships emphasize the necessity for robust guidelines, technical expertise, and interdisciplinary efforts to address systemic challenges in heritage conservation.

5.1.3.4-Detail 2: Frequency & Distribution Among Documents

Figure 5.20

Interviews with Contractors: Code Distribution across data



Note. Sample of Code Distribution with reference to answer Research Question 2 and 3- Atlas.ti

The illustration outlines the main themes in the issues of preservation acknowledged by contractors with Client Centered Conservation Approach with 6 occurrences developing as the most frequent, showing customer's prioritization which usually outshine the long-term goals of conservation of heritage. This aligns with Avrami et al. (2000), who highlights the risk of profit driver methods compromising the integrity of preservation. Lack of Conservation Guidelines with 4 occurrences additionally underlines the systemic gaps in regulatory models, as noted by Jokilehto (1999), while frequent challenges like Inappropriate Material Selection and Contractor Led Conservation disclose operative misalignments. Moreover, themes like Engineering

Inspection for Conservation and Lack of Skilled Labor outline crucial practical limitation, highlighting the necessity for moral approaches, strong training, and policy restructure to align aim of sustainable preservation with efforts of contractor.

5.1.3.4-Detail 4: Code Co-Occurrence Analysis

Figure 5.21

Interviews with Contractors: Codes Co-Occurrence Analysis

		1: Interview_... 11	2: Interview_... 6	3: Interview_... 7	Totals
Q2/Q3-Absence of Value Recognition	3	1	2		3
Q2/Q3-Interdisciplinary Approach	1			1	1
Q2/Q3-Lack of Architectural Documentation	2	1	1		2
Q2/Q3-Lack of Conservation Guidelines	4	1	3		4
Q2/Q3-Rebuilding instead of Conservation	3	1	2		3
Q3-Client-centered Conservation Approach	6	1	3	2	6
Q3-Compatible Material and Techniques	1			1	1
Q3-Contractor-led Conservation Approach	4	2	1	1	4
Q3-Engineering Inspection for Conservation	2	2			2
Q3-Inadequate Façade Restoration	3	1	1	1	3
Q3-Inappropriate Material Selection	3	2	1		3
Q3-Lack of Conservation Experts	2			2	2
Q3-Lack of Skilled Labor	1			1	1
Q3-Site base Survey Drawings	3	2		1	3

Note. Sample of Code Codes Co-Occurrence Analysis - Atlas.ti

The analysis of code co-occurrence outlines the frequent and interrelated issues in preservation, with Client Centered Conservation Approaches with 6 occurrences developing as a main theme. This shows how client-driven priorities usually overshadows moral methods of preservation, as noted by Avrami et al. (2000), who highlighted the risks of profit-oriented methods compromising integrity of heritage. The intersection with Contractor Led Conservation Approach and Lack of Conservation Guidelines both with 4 occurrences each underlines systemic gaps, as noted by Jokilehto (1999) who promotes strong policies to guide efforts of preservation. Operative issues like Rebuilding Instead of Conservation and Inappropriate Material Selection disclose how inappropriate model and insufficient skillset affect results of a project. These results resonate with Ashworth's (1997) critique of urban pressure compromising preservation over redevelopment. In general,

the co-occurrence outlines the importance of urgent necessity for expert workforce, consistent policies, and interdisciplinary methods to align contractor approaches with objectives of sustainable preservation.

Table 5.22

Comparative Analysis of Semi Structures Interview

Themes	Conservation Architects	Architects	Contractors	Implications
Ambiguous Legislative Framework	Interviewees pointed out that unclear policies often create delays in starting conservation projects. Some felt that regulations are too vague to guide efforts effectively.	Interviewees expressed frustration over the lack of clear legal frameworks, which they felt hindered the progress of restoration projects.	Contractors highlighted that inconsistent regulations often caused confusion during the restoration process, delaying projects.	The unclear and ambiguous nature of legislative frameworks leads to inefficiency and delays in conservation projects. Strong, consistent policies are necessary to streamline processes (Jokilehto, 1999).
Community Engagement	Many conservation architects emphasized the importance of community involvement, noting that local engagement is crucial for the success of conservation efforts.	Architects mentioned that community input is often undervalued in the design process, although they acknowledged its importance in fostering emotional connections to heritage sites.	Contractors expressed that while community engagement is important, there is often resistance from property owners due to financial concerns.	Community engagement helps ensure that heritage conservation is sustainable and meaningful. Collaborative efforts between authorities and communities are essential for preserving cultural identity (Uzzell & Ballantyne, 1998).

Facadism and Urban Growth Pressure	The impact of urban growth was discussed extensively, with conservation architects criticizing facadism as a method that compromises authenticity.	Architects discussed how urban growth pressures often lead to facadism, undermining the integrity of the buildings.	Contractors noted that facadism was often a compromise to meet economic and aesthetic demands, leading to diluted authenticity.	Facadism and the pressure of urban growth often compromise the authenticity of heritage sites. A more balanced approach is needed to integrate urban development with cultural preservation (Ashworth, 1997).
Redundant Legislatures	Conservation architects mentioned that overlapping regulations hindered effective conservation planning, and they struggled with bureaucracy.	Architects identified the lack of cohesive legislative action as a challenge, pointing out that differing regulations across sectors led to inefficiencies.	Contractors noted that redundant legislations often resulted in confusion, leading to project delays and conflicts.	Redundant legislatures cause inefficiencies and delays in the restoration process. Streamlining policies and clarifying roles can facilitate smoother execution of preservation projects (Jokilehto, 1999).
Inadequate Façade Restoration	Conservation architects felt that façade restoration is often prioritized over the overall integrity of the building, leading to an incomplete understanding of heritage.	Architects agreed, emphasizing that facadism often leads to an incomplete restoration of historical buildings.	Contractors mentioned that façade restoration was often done to meet aesthetic standards, neglecting structural integrity and cultural value.	Inadequate façade restoration often leads to incomplete preservation, where only the external elements are addressed, compromising the authenticity of the building. Comprehensive

				ve restoration that includes both tangible and intangible aspects is crucial (Avrami et al., 2000).
Lack of Coordination Between Authorities	Architects highlighted that lack of coordination among various authorities caused delays and inefficiencies in conservation projects.	Architects expressed concern over the lack of clear communication between different stakeholders, which led to misaligned efforts.	Contractors noted that the absence of coordination between municipal authorities and other stakeholders created bottlenecks in the approval and execution of conservation projects.	Poor coordination between authorities can cause significant delays and inefficiencies in conservation efforts. Coordinated planning and management across all stakeholders is essential for successful preservation projects (Jokilehto, 1999).
Client-Centered Conservation Approach	Conservation architects stressed that when clients prioritize modern needs over historical accuracy, the authenticity of the building is compromised.	Architects acknowledged the increasing trend of client-driven projects but emphasized the importance of balancing these interests with heritage values.	Contractors mentioned that client preferences often led to compromises in the authenticity of heritage buildings, as economic considerations take precedence.	A client-centered approach can often undermine the authenticity of preservation efforts. It is essential to balance client priorities with the need to maintain cultural and historical integrity (Avrami et al., 2000).
Lack of Skilled Labor	Conservation architects noted the lack of skilled tradesmen, such	Architects highlighted the shortage of skilled laborers as	Contractors agreed that the lack of skilled labor led to poor	The shortage of skilled labor hampers the ability to

	as stonemasons and woodworkers, as a significant barrier to successful heritage conservation.	a challenge, particularly in niche restoration techniques.	quality restoration work, often compromising the authenticity of heritage buildings.	carry out high-quality restoration work. Training and capacity-building programs are necessary to address this gap (Jokilehto, 1999).
Lack of Conservation Guidelines	Conservation architects discussed how the absence of clear conservation guidelines often led to inconsistent restoration practices.	Architects emphasized the need for clear guidelines to ensure consistency in conservation efforts and quality control.	Contractors noted that the lack of detailed guidelines resulted in varied practices and often led to disputes over the correct approach.	The absence of conservation guidelines leads to inconsistent restoration practices, highlighting the need for comprehensive, context-specific standards to guide preservation efforts (Jokilehto, 1999).
Rebuilding Instead of Conservation	Conservation architects criticized the practice of rebuilding structures instead of conserving them, arguing that it erases valuable cultural heritage.	Architects expressed frustration over the trend of rebuilding, which compromises the authenticity of the heritage structure.	Contractors noted that rebuilding is often seen as a more cost-effective solution, though it sacrifices the historical value of the site.	Rebuilding instead of conserving heritage buildings compromises authenticity and erases cultural history. Adaptive reuse should be prioritized over demolition to maintain the integrity of heritage sites (Ashworth, 1997).

Lack of Architectural Documentation	Conservation architects highlighted that insufficient architectural documentation often leads to inaccuracies in the restoration process.	Architects pointed out that poor documentation results in inconsistent restoration and difficulty in understanding the original design intent.	Contractors noted that a lack of detailed architectural documentation makes it challenging to restore buildings to their original state.	Comprehensive architectural documentation is essential for accurate restoration and preserving the integrity of heritage buildings (Jokilehto, 1999).
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The findings above, in Table 5.22 from the semi-structured interviews with conservation architects, architects, and contractors reveal critical insights into the systemic and operational challenges in heritage conservation practices, emphasizing the interplay of legislative, ethical, and practical dimensions.

The networking and relationships among codes highlight the interconnected nature of these challenges. For conservation architects, the lack of formal recognition and ambiguous legislative frameworks, were very prominent themes. These systemic difficulties also very much align with Smith's (2006) identification of policy-driven constraints, such as facadism and disproportionate interference, which often compromises the conservation efforts. In a similar manner, Ashworth (2011) critiques these policy limitations as factors that prioritize urban growth over heritage conservation.

These challenges are further exacerbated by legislative gaps present in Karachi's regulatory environment. The Karachi Building and Town Planning Regulations 2002, for instance, allow the sale of unutilized floor area of heritage buildings (15-3.2). Although this measure may have been originally intended to provide a sustainable financial solution for the upkeep and maintenance of heritage buildings, it actually may often lead to the exploitation of heritage spaces for commercial gain rather than their conservation. This very lack of detailed provisions within this rule to restrict or regulate development in a manner that conserves historical character results in the potential loss of authenticity and sense of place. This concern aligns with Relph's (1976) theory on placelessness, where unchecked development disrupts the historical and cultural identity of places. This provision, creates an economic incentive for heritage property owners to prioritise development rights over conservation, thereby

diluting the historical character of protected sites. This serves as a major gap, frequently taken advantage of, exacerbating the challenges faced in heritage conservation.

Moreover, the Sindh Cultural Heritage (Preservation) Act, 1994, while proposing agreements for preservation between the government and heritage owners (Section 8), fails to establish enforceable preservation mandates, which leaves room for non-compliance and inadequate protection measures. This very lack of binding requirements often results in the neglect of heritage and inconsistent maintenance, aligning with interviewee observations on the systemic undervaluation of heritage properties. Similarly, the Antiquities Act of 1975 (amended 1992) prohibits alterations to protected structures (Section 20), yet provisions for minor adjustments with permission lack the oversight necessary to prevent unauthorized and inappropriate interventions, weakening the law's efficacy. The analysis also reveals the need for community engagement and collaboration between authorities and stakeholders, reinforcing Mason's (2022) perspective that participatory approaches are vital for successful conservation. This point is particularly critical in urban contexts like Karachi, where the absence of unified frameworks fosters conflicts between monument-centric approaches and interdisciplinary preservation strategies, as noted by Jokilehto (1999).

Frequency and distribution analyses underscore the recurring emphasis on systemic issues, such as the "Ambiguous Legislative Framework" and "Community Engagement", which were noted as the most cited themes. The imbalance between highlighting challenges and recognizing success stories, as reflected in the underrepresentation of positive case studies like adaptive reuse practices, echoes Pendlebury et al. (2009), who argue for more visibility of effective conservation models. This gap reflects a broader tendency to overlook the potential benefits of successful projects, which could serve as benchmarks for addressing the challenges of sustainability in heritage conservation. In the code co-occurrence analysis, overlapping themes like the "Need for Informed Conservation" and "Lack of Policies" emphasize the critical necessity of cohesive frameworks. Avrami et al. (2000) stress that informed approaches must combine technical expertise with community involvement, a finding supported by the identified gaps in collaboration and policy. Challenges such as "Heritage Negligence" and "Lack of Skilled Labor" also emerge prominently,

demonstrating the operational barriers that undermine preservation goals. These challenges reflect Ashworth's (1997) critique of how economic pressures and developmental priorities often sideline heritage conservation. By addressing these legislative inadequacies, as seen in the Karachi Building and Town Planning Regulations 2002 and Sindh Cultural Heritage (Preservation) Act, 1994, there is an opportunity to develop more effective policies that safeguard heritage integrity while supporting urban development.

Contractor practices reveal additional layers of complexity. The client-centered conservation approach emerges as a dominant theme, where customer priorities frequently overshadow ethical preservation practices. This aligns with Avrami et al. (2000), who warn against profit-driven motivations compromising the integrity of heritage. Practical issues such as the lack of skilled labor, inadequate architectural documentation, and the use of inappropriate materials further highlight operational shortcomings. Jokilehto (1999) advocates for robust guidelines to address these systemic gaps, emphasizing the importance of expertise and informed methodologies in aligning contractor practices with the principles of sustainable preservation.

The results highlight the urgent need for a multidisciplinary approach to heritage conservation. Policy-driven models must integrate community engagement and technical expertise, fostering collaboration across stakeholders to balance urban growth with heritage preservation. The findings also stress the importance of adaptive reuse and knowledge-based strategies to address operational barriers, ultimately aligning conservation efforts with global best practices. By addressing systemic issues, enhancing legislative clarity, and fostering inclusive participation, these insights can guide the development of a more resilient and context-sensitive heritage conservation framework.

5.1.3.5 Findings and Discussion- Analysis

The integration of findings from card sorting tasks, fixed question, recall memory tests, and semi-structured interviews reveals a comprehensive narrative of heritage authenticity, shaped by physical, cultural, and emotional dimensions. The overlapping yet distinct insights from these methods highlight the complexities of heritage conservation in Karachi, aligning with global discourses on authenticity, participatory conservation, and urban development.

Card sorting tasks elucidated the relationship between historical narratives, spatial configurations, symbolic significance, and adaptive reuse. The grouping of buildings in these exercises reflected patterns of similarity and divergence based on material integrity, facade coherence, and accessibility. For instance, high-similarity clusters emphasized the centrality of shared spatial and structural attributes in shaping perceptions of authenticity, while low-similarity clusters and transitional elements underscored the dynamic nature of urban heritage. These findings align with Smith's (2006) assertion that authenticity is a socially constructed and contextually negotiated concept, further emphasizing the Nara Document's (ICOMOS, 1994) advocacy for context-sensitive approaches to heritage conservation. The recall memory test added a deeper phenomenological perspective, highlighting individual and collective memories tied to heritage spaces. Participants consistently associated heritage authenticity with both the materiality of structures and the intangible cultural practices that animate them. For instance, recollections from the Saddar Bazar area revealed a profound sense of loss over the decline of vibrant street life and craftsmanship, aligning with Tuan's (1977) concept of "sense of place," which posits that emotional and sensory engagements anchor the authenticity of spaces. Similarly, narratives from Ram Bagh and Lighthouse areas reflected the tension between historical preservation and modern urban pressures, underscoring Lowenthal's (1985) argument that heritage is a dynamic interplay of continuity and change.

Semi-structured interviews provided a broader systemic critique, emphasizing governance, community engagement, and policy challenges. Conservation architects highlighted the disconnect between legislative frameworks and on-ground realities, pointing to issues like redundant policies, inadequate stakeholder coordination, and the prevalence of facadism. Contractors and other stakeholders reiterated these concerns, identifying practical barriers such as insufficient technical expertise and client-driven priorities that often compromise long-term preservation goals. These findings resonate with Ashworth's (1997) critique of urban development prioritizing economic growth over cultural sustainability and Avrami et al.'s (2000) call for inclusive, value-based conservation models.

The interplay between these findings reveals critical insights into the research questions and objectives. For instance, the emphasis on material conservation in card sorting tasks and interviews aligns with the predominant focus on structural integrity

in traditional conservation practices. However, the recall memory test highlights the limitations of this approach, revealing that emotional and cultural dimensions are equally vital in preserving a sense of place. This juxtaposition underscores the importance of integrating tangible and intangible heritage elements, as suggested by participatory conservation theories (Uzzell & Ballantyne, 1998) and adaptive reuse frameworks (Smith, 2006).

Key takeaways include the need for policy reform to address systemic challenges such as inadequate legal frameworks and stakeholder misalignment. Equally important is fostering community engagement to bridge the gap between top-down conservation efforts and grassroots participation. The emotional resonance and cultural narratives captured in recall memory tests emphasize the importance of designing conservation strategies that are not only context-sensitive but also rooted in local histories and practices. This perspective aligns with the Historic Urban Landscape (HUL) model (UNESCO, 2011), which advocates for an integrated approach to urban heritage conservation that balances historical authenticity with contemporary urban dynamics. The inferences from the analysis highlight the multidimensionality of authenticity, which encompasses material, cultural, and experiential facets.

Addressing the systemic, cultural, and emotional complexities of heritage conservation requires a nuanced and adaptive framework that harmonizes preservation with urban growth. Such an approach must prioritize both physical restoration and the safeguarding of intangible cultural heritage, ensuring that conservation efforts sustain the sense of place and historical identity essential to Karachi's urban heritage.

5.2 Findings Leading to Development of an Evaluation Framework

The findings from the methodology identified key factors necessary for developing a multi-faceted, structured, and multi-layered understanding of heritage authenticity. These findings emphasize the critical values required to evaluate various aspects of authenticity and offer an assessment framework for heritage practitioners. Furthermore, they helped uncover a research gap, which was validated through ongoing debates in the field.

One notable example is the Theophilos Conference, held in Greece in November 2024, which centered on exploring solutions for assessing authenticity. In this context, the inferred Evaluation Framework from this research was pilot tested, validated and

finally presented at the conference. The Authenticity Evaluation Framework with Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM) and the Quantitative Architecture Authenticity Matrix (QAAM), provided structured and adaptable tools for evaluating authenticity across both tangible and intangible heritage dimensions. The framework was in direct response to the ongoing need for systematic, replicable methodologies that respect cultural specificity while ensuring analytical rigor. The tools, each a derivative of findings from the Methodological Framework, builds on factors that shape the commonalities of contextually and culturally influenced experiential perception.

The reception of these tools marked the criticality of moving beyond philosophical discussions, and toward actionable strategies. Feedback from the conference highlighted the importance of integrating socio-economic implications and community perspectives into authenticity assessments, an aspect now refined through the combined qualitative and quantitative approach adopted in this study.

5.2.1 Development of Evaluation Framework

The development of an evaluation framework for heritage authenticity emerges from the comprehensive analysis of data gathered through multiple methodologies, including the Multiple Sorting Task (MST), Memory Recalling Task (RMT), and Semi-Structured Interviews (SSI). These methodologies provided distinct yet interconnected insights into how authenticity is perceived and experienced, aligning with the constructivist and experiential theoretical foundations established in earlier chapters. By integrating both material and non-material aspects, the evaluation framework seeks to create a multi-faceted, structured, and layered understanding of heritage authenticity.

The Framework incorporates qualitative and quantitative criteria to evaluate heritage authenticity, addressing both tangible and intangible elements. It draws from data analysis of the following:

- a. **Multiple Card-Sorting Tasks (MST)** actively helped explore collective perceptions of authenticity, including culturally determinant authenticity factors. Findings from the MST highlighted the importance of spatial configuration, historical narrative, symbolic significance, and evolution/adaptation in shaping perceptions of authenticity. The clustering of

buildings in high-similarity groups underscored the significance of facade coherence, adaptive reuse, and functional transformations in maintaining a sense of place (Gehl, 2010). Low-similarity clusters, on the other hand, revealed challenges in preserving symbolic spaces and the need for tailored conservation interventions.

- b. **Memory Recalling Tasks** were critical in shaping the aspects influencing narratives and emotional associations, significant in recording authenticity related narratives. The RMT provided a deeper exploration of community-driven perspectives on authenticity. Participants' recollections of historical spaces in Karachi's heritage sites demonstrated how emotional resonance and collective memory contribute to the authenticity of urban environments (Tuan, 1977; Lowenthal, 1985). The narratives underscored the importance of maintaining cultural continuity and addressing the socio-economic pressures threatening heritage conservation.
- c. **Semi-Structured Interviews** helped analyse conservation practices and their impact on authenticity including determinant factors affecting conservation practice. Semi-structured interviews with conservation architects, planners, and contractors revealed systemic challenges and operational gaps in heritage management. The interviews emphasized the need for cohesive policy frameworks, informed conservation practices, and greater community engagement (Avrami et al., 2000). These expert insights highlighted the balance required between historical preservation and contemporary urban development.

The culturally determinant authenticity factors and related narratives helped define the significance of both material and non-material authenticity issues. Additionally, the inappropriate conservation practices highlighted the need for informed approaches to maintaining and retaining authenticity in historic areas. The findings demonstrate that different aspects of authenticity require a balanced conservation approach. Before developing strategies for good conservation practices, it is crucial to establish a system to assess the level of retained authenticity in heritage buildings. The synthesis of the heritage status will further help define the approach towards conservation.

5.2.2 Framework for Assessing Authenticity (FAA)-The three main tools

The research methodology proposed strategies and techniques that facilitated the step-by-step development of the research framework, from data collection to analysis and interpretation. The study examined an extensive range of published material, including scholarly articles, national and international guidelines, and charters. This literature review, along with the legislative framework, provided a foundation for understanding the guiding principles of conservation, the value of authenticity, and the role of integrated planning in addressing the challenges of urban development and heritage management practices.

The framework for authenticity assessment requires a systematic procedure that considers multiple aspects of both tangible and intangible heritage. This research proposes three main tools to evaluate authenticity, addressing different layers of understanding regarding the heritage property. The application of these tools is supported by personal observations, site surveys, analysis of architectural records and building plans, and critical discussions among conservation experts to reach a consensus. The findings highlight key determinants that affect the level of authenticity retained in the heritage property, as well as the conservation practices applied to historic structures

5.2.2.1 Heritage Building Inventory Form

5.2.2.1-Detail 1: Determinants from Data Analysis

The Heritage Building Inventory Form (HBIF) provides a detailed template for documenting material age, structural integrity, and the spatial arrangement of heritage buildings the form included the information of historic buildings, characteristics of possible architectural alteration and visual images. It considered both, the material and non-material aspects of the site/building through various addition or subtraction, usage of buildings, historic layout and location. It serves as foundational data for assessing the authentic tangible values of these structures. Additionally, the heritage building government notification number as a Listed Building was considered for inclusion to support future research opportunities.

The data analysis process identified various determinants that influence authenticity assessment. General architectural characteristics, including ornamental features and

building elements, play a significant role in maintaining the integrity and authenticity of a structure. To visually represent these architectural characteristics, the inclusion of pictures in the form was carefully considered. Another important factor is the building's usage, specifically whether it remains under its original use or has undergone a change in function. The compatibility and reversibility of its new use will be further analysed in the QAAM form.

Determining whether a building has undergone conservation interventions, assessing its structural stability, and defining the extent of alterations posed challenges. During expert meetings, a proposal was discussed to assign a lump sum percentage to represent the alterations in heritage buildings. This evaluation was based solely on personal observations during site visits and the analysis of architectural plans.

Furthermore, the form includes a dedicated section for the statement of significance, serving two key purposes: first, to justify the building's value, and second, to guide assessors who may not be familiar with its historical and cultural importance. By incorporating these determinants and fostering critical discussions during site visits and the evaluation process, the HBIF offers a comprehensive approach to documenting heritage buildings.

5.2.2.1-Detail 2: Design of Heritage Building Inventory Form A & B (HBIF)

To establish the existing condition of heritage buildings before assessing their authenticity values, the first research tool comprises two complementary forms: Heritage Building Inventory Form (HBIF) A & B.

- **Heritage status:** Classification of Heritage Significance
- **Location and Context:** Geographic details
- **Functional attributes:** Current and Primary Use
- **Vulnerability Assessment:** Evaluation of Structural Integrity
- **Interventions in building:** Documentation of alteration
- **Visual Documentation**

Figure 5.23

Heritage Building Inventory Form- A

Data Collection and Analysis				Building No. xx	
Heritage Building Inventory Form- A					
Name of the Building		Functional Use	Original Use	Residential	Institutional
				Commercial	Recreational
				Mixed Use	Other
			Current Use	Original	In case of change
			Change		
Listed Building Ref. No.		Structural System	Load Bearing	Timber Frame	
Precinct Name			RCC	Other	
Local Neighborhood Name		Material	Stone	Wood	
			Block	Other	
Complete Address		Level of Alteration	Minor %		
			Major %		
Date of Construction		Setting	Individual	Group Value	
Number of Floors		Current Physical Status	Maintained		
Overall Building Picture			Location Map		

Statement of Significance (Not more than 100 words)

The Heritage Building Inventory Form B, systemically documents architectural and historical aspects

- **Architecture Features:** Overview of Architectural Style and design
- **Architecture Elements:** Detailed documentation of design elements.
- **Building Material:** Documentation of Materials

Figure 5.24

Heritage Building Inventory Form- B

Heritage Building Inventory Form- B General Architecture Characteristics of Heritage Building		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals	☐ Arch	☐ Yellow lime stone
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill	☐ Dome	☐ Wood
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings	☐ Chimney	☐ Brick
☐ Cornice	☐ Staircase	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint
☐ Ornamented parapet	☐ Terrace	☐ Grill work in the building
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		

Architectural Features and Elements Photos	

5.2.2.2 Place Authenticity Matrix

5.2.2.2- Detail 1: Determinants from Data Analysis

The development of the Place Authenticity Matrix (PAM) follows the Nara Grid concept developed by the Raymond Lemaire International Centre for Conservation (RLICC). The Nara Grid highlighted the need for exchanging diverse insights to enhance the understanding of the authenticity of both tangible and intangible aspects (Jaenen, 2008).

The PAM serves as a comprehensive framework to assess authenticity by integrating emotional, cultural, physical, and community dimensions. The PAM defines several

columns and rows to represent an axis of the multilayered concept of authenticity, connecting each in different contexts. The columns represent dimensions such as emotional resonance, cultural identity, physical manifestation, and community engagement, while the intersections of these dimensions align with aspects of historic narrative, spatial configuration, symbolic significance, and evolution and adaptation.

During the application of the PAM, some key determinants were combined with reference to the research context. For example, "Form and Design" and "Use and Function" in the Nara Grid are replaced by "Spatial Configuration" in the PAM to streamline and simplify the content. A significant change can be observed in the dimensions of the Nara Grid. Instead of considering general categories like artistic, historical, social, and scientific, the PAM focuses on specific elements related to emotional, cultural, physical, and communal dimensions. A crucial development in the PAM is the addition of "emotional resonance," which enhances the intangible aspect of place. Emotional resonance is a unique addition for use in heritage assessment, as it complements the personal connection people have with heritage sites, influenced by lived experiences, historical associations, and cultural symbolism. The inclusion of community engagement further emphasizes local traditions within contemporary society.

The PAM offers a holistic perspective by incorporating the tangible aspects covered in the HBIF form and aligning with the Quantitative Architecture Authenticity Matrix, reinforcing both tangible and intangible assessments of heritage authenticity.

5.2.2.2- Detail 2: Design of Place Authenticity Matrix (PAM)

In addition to the Nara Grid, the PAM is designed for the qualitative assessment of heritage buildings. It informs cultural connections, religious diversity, emotional resonance, and social structures. The purpose of the PAM is to guide heritage assessment by combining both tangible and intangible elements for a holistic approach to authenticity.

Table 5.25*Place Authenticity Matrix*

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Manifestation	Community Engagement
Aspects	Historical Narrative				
	Spatial Configuration				
	Symbolic Significance				
	Evolution and Adaptation				

A. Dimensions**a. Emotional Resonance:**

- i. *Objective:* Investigate the affective bonds individuals establish with the location. These factors encompass nostalgia, individual affiliations, and communal recollections, all of which enhance the collective feeling of belonging.
- ii. *Characteristics:* Individual accounts, accounts from the community, strong emotional connection, sentimentality, collective importance.

b. Cultural Identity:

- i. *Objective:* Examine how the site mirrors and enhances the distinctiveness of a specific community or cultural group. Emphasize the rituals, traditions, and symbols that are ingrained in the site.
- ii. *Characteristics:* Cultural icons, ceremonial practices, customary beliefs, emblems of individuality, depiction of cultural variety.

c. Physical Manifestation:

- i. *Objective:* Analyze physical attributes that elicit a feeling of location, such as structural components, natural surroundings, or distinctive characteristics that possess historical or cultural importance.
- ii. *Characteristics:* Architectural designs, famous landmarks, natural characteristics, historical buildings, physical components.

d. Community Engagement:

- i. *Objective:* Evaluate the extent to which the local community is actively participating and contributing to the preservation and development of the site's distinctive qualities. Take into account their proactive involvement in decision-making and upkeep.
- ii. *Characteristics:* Engagement with the community, inclusion of participatory methods, promotion of local projects, responsible management, and collective accountability.

B. Elements

a. Historical Narrative:

- i. *Objective:* Examine the historical backdrop and anecdotes linked to the location, encompassing noteworthy occurrences, individuals, and transformations throughout its existence that contribute to its overall story.
- ii. *Characteristics:* Historical events, significant achievements, biographical accounts, evolutionary transformations, and layers of time.

b. Spatial Configuration:

- i. *Objective:* Examine the spatial organization and positioning of elements inside the site that contribute to its distinct character and feeling of individuality.
- ii. *Characteristics:* Arrangement of space, city structure, consistency of design, spatial connections.

c. Symbolic Importance:

- i. *Objective:* Analyze and recognize symbolic traits or characteristics that possess cultural or historical importance for the community linked to the location.
- ii. *Characteristics:* Symbolic depictions, metaphoric expressions, cultural significance, allegorical allusions.

d. Evolution and adaptation

- i. *Objective:* Reflect on the site's gradual development and adjustment while preserving its genuineness and consistently connecting with the community.
- ii. *Characteristics:* Utilization of existing structures for new purposes, changes, consistency, genuine development.

5.2.2.3 Quantitative Architecture Authenticity Matrix (QAAM)

Building on the evaluation process described in Chapter 4 (Section 4.3.4.2), this section highlights the conceptual and functional strengths of the Quantitative Authenticity Assessment Matrix (QAAM). While the previous chapter detailed the classification and scoring method, the following discussion identifies the defining characteristics that make QAAM a context-sensitive, scalable, and inclusive framework. These attributes were developed through a careful synthesis of theoretical principles and empirical validation and are instrumental in addressing the shortcomings of existing authenticity assessment tools.

Contextual Objectivity: QAAM embeds cultural and regional nuances directly into its scoring criteria. It respects local materials, architectural expressions, and historical narratives, avoiding standardized approaches that ignore contextual differences (Cohen & Cohen, 2012).

Hybrid Model: QAAM merges qualitative insights (through tools like the Heritage Building Inventory Form and the Place Authenticity Matrix) with structured quantitative scoring. This hybrid approach captures both tangible attributes and intangible dimensions such as meaning, memory, and emotional resonance (McClelland et al., 2019).

Scalability and Adaptability: The framework is adaptable to a wide range of heritage contexts — geographically, typologically, and temporally. While maintaining a consistent core logic, QAAM allows for weighting adjustments to suit specific local values and conservation priorities (Labadi, 2010).

Collaborative and Inclusive Evaluation: QAAM is designed to be applied through consensus scoring by multidisciplinary teams, including heritage professionals and local stakeholders. This participatory mechanism ensures inclusivity, reduces bias, and reflects both expert judgment and lived experience (Schulz, 1980).

Together, these characteristics position QAAM as a flexible, culturally sensitive, and empirically grounded tool. It responds to the limitations of existing authenticity evaluation models by offering a more nuanced and locally resonant approach to heritage conservation assessment.

5.2.2.3- Detail 1: Determinants from Data Analysis

The QAAM provides a scientific tool to evaluate authenticity by assigning measurable variables to key determinants. As discussed in the first two tools, authenticity is a layered concept influenced by various aspects. To make the systematic approach more objective, the QAAM refines the criteria by separating all aspects into their subdivisions. These aspects of authenticity include Contextual, Architectural/Structural, Functional/Activity, and General Perception. This approach guarantees the conservation of a structure's authentic values, while still allowing for essential alterations to fulfill modern needs. The form enables stakeholders to effectively manage the delicate equilibrium between cultural preservation and the promotion of sustainable urban growth.

The development of QAAM began with the division of multiple crucial evaluation components, each accompanied by its own distinct set of standards and scoring system. Initial focus was given to factors encompassing contextual integrity, architectural integrity, general perception, building function, and sustainable adaptation. Later, the term "integrity" was replaced with "authenticity" to better align with the subject area. Additionally, sustainability, profitability, and energy efficiency were removed during the evaluation process, as they were not directly relevant to assessing authenticity. The potential for reversibility and adaptability were added and considered important factors for maintaining and re-engaging authenticity in historic structures. Each component is thoroughly assessed to gain a comprehensive understanding of the building's significance and the consequences of any suggested alterations. The QAAM form is a crucial instrument for assessing and safeguarding the architectural and historical authenticity of structures. This form offers a methodical and organized technique to evaluate many variables that contribute to the genuineness and importance of a building. The QAAM form provides a thorough assessment of architectural integrity, contextual harmony, symbolic significance, and sustainability. This complete evaluation aids in making well-informed decisions for conservation and adaptive reuse initiatives. The QAAM form is significant because it has the capability to impartially assess the quality and authenticity of a building's architectural heritage. This form facilitates the preservation of the authentic features and historical importance of buildings, while also accommodating essential modifications to meet contemporary requirements. It is particularly useful for conservationists, architects,

and heritage experts. By utilizing this method, stakeholders may guarantee that any interventions or modifications made to a building adhere to its historical context and enhance its long-term sustainability.

The section below, offers comprehensive definitions, instructions and analyses of each assessment factor. These provides users with step-by-step guidance on how to complete the form, ensuring that the building is carefully analyzed and appropriately evaluate each criterion. By following these principles, users can attain an informed assessment that preserves the architectural and historical significance of the building in question.

5.2.2.3- Detail 2: Design of Quantitative Architecture Authenticity Matrix (QAAM)

The QAAM form evaluates heritage authenticity by considering both tangible and intangible aspects, focusing on emotional resonance. It adapts to regional values, empowering local committees to uphold culturally sensitive preservation practices by giving equal weightage to both tangible and intangible factors. This ensures the evaluation responds to value preference of a particular culture and region. The flexibility of this tool enables local committees to preserve their distinct identities and sensitivities, rendering it a versatile instrument.

Figure 5.26*Quantitative Architecture Authenticity Matrix*

Quantitative Architecture Authenticity Matrix									
	Significance	Degree of Authenticity					Assessment Points		
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.	Min
Contextual Authenticity	Setting/ Location						60	15	
	Harmony and Visual compatibility with surroundings								
	Emotional Resonance								
Architectural / Structural Authenticity	Architectural Style/ Character						120	30	
	Structural integrity								
	External details/ façade features								
	Spatial Layout/ Internal Spaces								
	Retention of Facade								
	Potential of Reversibility								
Functional / Activity Authenticity	Compatibility						60	15	
	Adaptability								
	Retention of Primary Use								
General Perception on	Symbolic Value						40	15	
	Existing Value/ Exceptional Value								
Total points scored								280	75

Overall, the integration of findings from card sorting tasks, recall memory tests, and semi-structured interviews provides a comprehensive and multi-dimensional perspective on heritage authenticity, revealing the interplay between material, cultural, and experiential dimensions. The alignment of structured quantitative assessments with qualitative narrative analyses ensures that authenticity is understood not only as a tangible quality but also as a construct shaped by perception, memory, and socio-cultural influences. The validation process further reinforces the necessity of an adaptive, context-sensitive approach, highlighting key determinants that influence conservation practices and authenticity assessments.

Table 5.27*QAAM Grading System*

Group	Authenticity Value	Score Limit
A	Highly significant Value	280-211=70
B	Significant Value	210-141=70
C	Modest Value	140-71=70
D	Low value	70-0=70

These insights, help the development of an evaluation framework, which emerges as a critical response to the challenges identified in heritage conservation. The framework bridges empirical findings with conservation strategies, addressing both structural and symbolic aspects of authenticity. By synthesizing material conditions, historical narratives, and community-driven perspectives, the study provides a structured, replicable methodology that integrates both local and global discourses on authenticity. This methodological advancement emphasises on the need for interdisciplinary approaches in conservation, ensuring that historic environments remain both physically preserved and culturally relevant.

CHAPTER 6

TESTING AND VALIDATION OF THE FRAMEWORK FOR ASSESSING AUTHENTICITY

Chapter Overview

This chapter presents the validation of the Framework for Assessing Authenticity (FAA) proposed in the previous chapter through its application in twelve selected heritage buildings in the Market Quarter of Karachi. It begins by outlining the precinct and building selection criteria, emphasizing the diversity in architectural styles, historical significance, and varying states of preservation to ensure a comprehensive evaluation of the appropriateness and validity of the framework to assess the authenticity of heritage. The introduction to the Market Quarter provides contextual background, highlighting the cultural and architectural importance of the area.

The testing and validation process involves applying the FAA to each building, engaging local practitioners whose expertise and familiarity with the heritage of Karachi adding depth and cultural sensitivity to the assessment. The chapter presents the analysis of the twelve buildings in detail; the analysing tools and the sensitivity responses by the experts for each building. The results of the authenticity assessment, validated through peer review, demonstrate the ability of the framework to distinguish varying levels of authenticity based on architectural integrity, historical continuity, and functional adaptability. An analysis of architectural features explores the extent of alterations in each building, offering insights into the patterns of conservation and transformation. Finally, it critically evaluates the effectiveness of FAA as a mixed-method approach, demonstrating its strengths in capturing both tangible and intangible heritage dimensions while considering potential limitations and areas for refinement. Through this case study, the chapter affirms the reliability of the FAA and its applicability in heritage conservation practices.

6.1 Testing and Validation of the Framework by Applying it to Each Building)

To evaluate the level of authenticity retained in the historic buildings of Karachi, this research focused on the Market Quarter: one of the city's historic quarters. As a pilot study, an authenticity matrix was applied to twelve buildings within this area. Site visits were conducted to document both the major and minor alterations to the selected buildings, which were then compared with the architectural drawings documented by the Karachi Heritage Building Rescuing Project (KHBRP) between 2002 and 2008, as well as with the current conditions observed at site. The Heritage Building Inventory Form (HBIF) was utilized to record various aspects of the twelve buildings, with assessments conducted by the author in collaboration with two conservation architects who possess extensive expertise in heritage conservation.

The selection of buildings for the authenticity assessment was based primarily on-site observations. They were supplemented by the availability of original architectural drawings. The research sought to gather records from public or private archives to ascertain the extent of alterations made during the KHBRP and subsequent modifications evident in the present day. These observations were systematically recorded and documented using the HBIF forms A and B. The evaluation of authenticity relied on the Place Authenticity Matrix and the Quantitative Architecture Authenticity Matrix, as detailed in the preceding chapter. Site observations, photographic documentation, and available architectural drawings were integral in analysing the spatial layout, adaptability, and the reversibility of the characteristics of the buildings.

This chapter presents the outcomes of the application of the proposed criteria to the twelve buildings, with the resulting data set providing a contextual understanding of the pilot testing process. The findings for all the twelve buildings are summarized and discussed collectively, offering a comprehensive analysis of the outcomes of the study. Following are the data sets for the twelve selected buildings. They include the following for each building.

- An introduction to each building,
- The Heritage Building Inventory Form - A and B,
- The Place Authenticity Matrix (PAM),

- The Quantitative Architecture Authenticity Matrix (assessed by the author and two practitioners), and
- The concluding discussion.

6.1.1 Building No.1- Allah Wala Building

Figure 6.1

Heritage Building Inventory Form-A

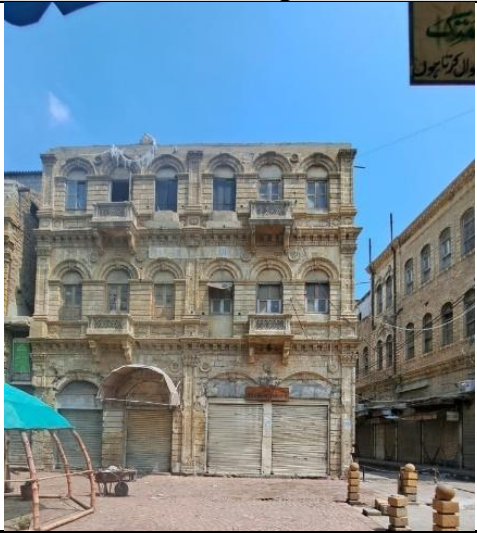
Data Collection and Analysis				Building No.01			
Heritage Building Inventory Form- A							
Name of the Building	Allah Wala Building	Functional Use	Original Use	Residential		Institutional	
				Commercial	✓	Recreational	
				Mixed Use		Other	
			Current Use	Original	✓	In case of change	
				Change			
Listed Building Ref. No.	MAR-851	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Murad Khan Road		RCC		Pitched Roof		
Local Neighborhood Name	Kohri Garden		Other				
Complete Address	MR-1/130, Marriot Road, Wada Lane-No-1	Material	Stone	✓	Wood		
			Block		Other		
Date of Construction	1945	Level of Alteration (As per visual analysis)	Minor (0-20%)		10%		
			Major (20 or above)		90%		
Number of Floors	G+2	Setting	Individual		Group Value	✓	
		Current Physical Status (As per visual analysis)	Maintained		80%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Allah Wala building is situated at Murad Khan Road, Kohri Garden and stands out as a beautiful heritage building of British Colonial style amongst other heritage buildings in its vicinity. It is used as a warehouse and retains its original function. The façade is also retained and maintained. The internal structure is also intact and overall, the building is in a good shape. The beautiful architectural features include arches, moldings and cornice, decorated capitals, balconies and roundels.							

Figure 6.2

Heritage Building Inventory Form-B

Heritage Building Inventory Form – B (Allah Wala Building)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch ✓	☐ Yellow lime stone ✓
☐ Roundels ✓	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster ✓
☐ Windowsill ✓	☐ Dome	☐ Wood
☐ Key Stone ✓	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase ✓	☐ RCC
☐ Carving	☐ Courtyard ✓	☐ Paint
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments –The building was a part of Rahguzar project (2021). Additional information section added.		
Architectural Features and Elements Photos		
   		

Figure 6.3

Additional Information- Rahguzar Project

Building No 1- Allahwala Building
Additional Information- Rahguzar Project

Rahguzar Project, launched in 2021, is a **Urban Revitalization Initiative** aimed to enhance Karachi's historic districts by restoring key heritage structures, improving streetscapes, and promoting pedestrian-friendly environments.

- **Removal of Unauthorized Additions:**
As part of the Rahguzar Project, the Allah Wala Building underwent restoration, which included the removal of two additional floors constructed beyond the original G+2 structure, reinstating its historic architectural integrity.
- **Façade and Structural Conservation:**
The project focused on preserving the building's colonial-era features, such as arches, pilasters, roundels, and decorative moldings, ensuring that its historical character remained intact despite prior modifications.
- **Integration into the Heritage Streetscape**
The restoration aligned the Allah Wala Building with the broader conservation efforts in the Kohri Garden precinct, enhancing its contribution to the collective architectural identity of the area while maintaining its functional role as a commercial space.



Allahwala Building, Pre 2021 Rahguzar Project
Source: HC-DAPNED 2008



Allahwala Building, Post 2021 Rahguzar Project
Source: HC-DAPNED 2008



Pre 2021 Rahguzar Project
Source: Heritage Foundation



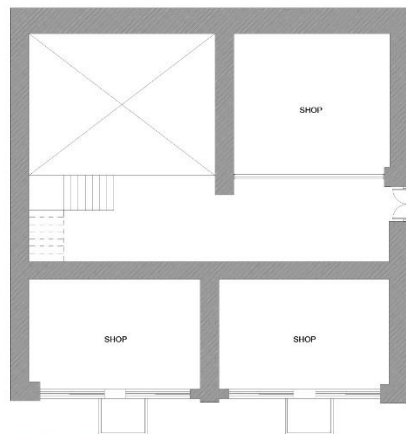
Post 2021 Rahguzar Project
Source: Heritage Foundation

Figure 6.4

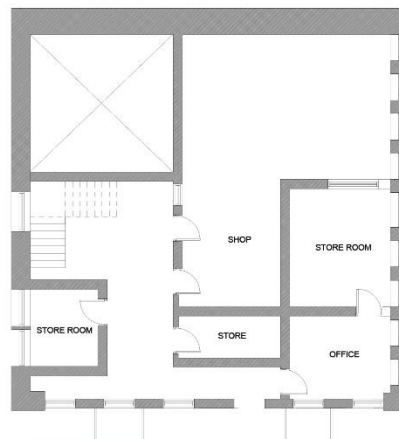
Drawings of Allah wala Buildings

DRAWINGS OF ALLAH WALA BUILDING

PLANS



GROUND FLOOR PLAN

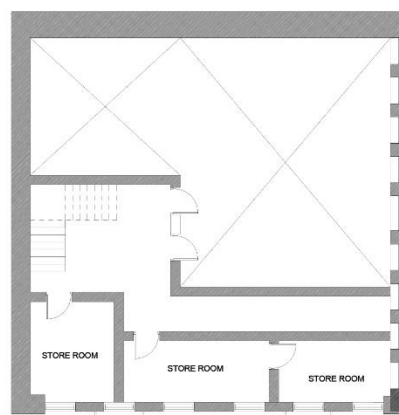


FIRST FLOOR PLAN

ELEVATION

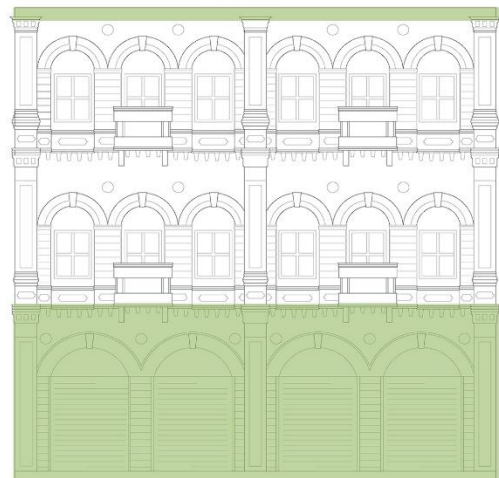


FRONT ELEVATION



SECOND FLOOR PLAN

ALTERATION MAPPING



ALLAH WALA BUILDING

LEGEND	
	MAJOR ALTERATION
	MINOR ALTERATION

The Allah Wala Building is a distinguished example of Karachi's British colonial architectural heritage, situated on Murad Khan Road in the historic Kohri Garden neighborhood. Constructed in 1945, this load-bearing stone structure features a characteristic colonial-era material palette, with yellow limestone and lime plaster as primary building materials. Listed under the Sindh Cultural Heritage Preservation Act, 1994 (SCHP 1994-CL) as MAR-851, the building holds protected status, underscoring its historical significance. Despite urban development pressures, it remains a well-preserved symbol of colonial architectural grandeur.

Functionally, the building has retained its original commercial use and currently operates as a warehouse. This continuity enhances its authenticity, demonstrating adaptability while preserving its historical role in the urban fabric. Its location within a cluster of heritage structures further strengthens its group value, reinforcing the collective architectural identity and sense of place in Kohri Garden. Over time, the building underwent significant alterations.

Before 2021, two additional floors were constructed above the original G+2 structure, altering its spatial and structural composition. However, as part of the Rahguzar Project, these floors were removed during restoration, reinstating the building's original scale. This intervention played a key role in its authenticity assessment, restoring its volumetric proportions and enhancing its visual coherence within the historic streetscape. Currently spanning three floors (G+2), the structure exhibits characteristic colonial decorative elements, including arches, pilasters, roundels, and balustrades. Additional embellishments such as decorated capitals, intricate moldings, and a well-maintained cornice highlight its aesthetic value and the craftsmanship typical of colonial-era architecture in Karachi.

Despite overall preservation, the building has undergone notable modifications, with approximately 90% of its structure showing interventions beyond its original design. These range from minor to major alterations, impacting material finishes and spatial configurations. However, the façade remains largely intact, maintaining its historical character and architectural integrity. Visual analysis indicates that around 80% of the building's physical condition is stable, ensuring its continued reflection of historical and cultural identity.

6.1.1.1 Place Authenticity Matrix- Allah Wala Building

Figure 6.5

Place Authenticity Matrix – Allah Wala Building

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	***	**	***	**
	Spatial Configuration	**	**	***	**
	Symbolic Significance	**	**	**	**
	Evolution and Adaptation	**	***	***	*

* Low Authenticity ** Medium Authenticity *** High Authenticity

In terms of Historic Narrative, the Allah Wala Building maintains a strong colonial-era identity and continues to be a significant part of Karachi's historical urban development. Its largely retained original use as a warehouse and its well-preserved architectural features, such as arches, mouldings, cornices, decorated capitals, and roundels, contribute to its high ratings for Emotional Resonance and Physical Maintenance. However, while the building's historical character remains intact, Cultural Identity is rated at a medium level, reflecting the broader context of heritage appreciation rather than direct community-driven identity reinforcement. Community Engagement also remains at a medium level, as local participation in its conservation has been limited. The Spatial Configuration of the building presents a nuanced assessment. Prior to 2021, two additional floors had been constructed beyond the original G+2 design, altering the structure's proportions and affecting its authenticity. However, as part of the Rahguzar Project, these floors were removed, restoring the original scale and improving its coherence within the historic setting. This restoration enhanced Physical Maintenance, which remains high, while Historic Narrative and Cultural Identity retain medium authenticity ratings, acknowledging the impact of prior alterations. Community Engagement remains at a medium level, as public awareness and involvement in the building's transformation have been limited.

Symbolic Significance scores consistently at a medium level across all dimensions. While the building is recognized for its architectural elegance and historical value, it

is not a widely celebrated landmark. Its Cultural Identity and Emotional Resonance remain moderate, reflecting its contribution to Karachi's colonial-era heritage but not its elevation to an iconic status within the community. In terms of Evolution and Adaptation, the Allah Wala Building demonstrates a high rating for Physical Maintenance and Cultural Identity, as it has successfully adapted to urban pressures while preserving its original function. However, Community Engagement is rated low, indicating that conservation efforts have not been significantly participatory. The Rahguzar Project played a crucial role in reinstating its authenticity, but further engagement strategies are needed to enhance its role within the community.

6.1.1.2 Quantitative Architecture Authenticity Matrix- Allah Wala Building

The Quantitative Architecture Authenticity Matrix (QAAM) assessments for Allah Wala Building provide a structured evaluation of its authenticity, incorporating both individual and collective perspectives on its cultural and architectural significance. The analysis captures contextual, architectural, structural, functional, and symbolic aspects, aligning with HBIF and PAM for a comprehensive authenticity assessment.

The QAAM evaluation by the author initially assigned a total score of 238 points, placing the building in the "Highly Significant" heritage category. The pre-2021 assessment, based on images before the removal of additional floors, raised concerns about structural interventions and reversibility. However, the post-2021 reassessment, following the removal of extra floors under the Rahguzar Project, reflects an improvement in architectural coherence and conservation potential. Contextually, the building retains strong authenticity, scoring 51 out of 60, with its location on Murad Khan Road within the Kohri Garden precinct enhancing its group value among colonial-era structures. Its visual harmony, emotional resonance, and adherence to the original urban fabric further reinforce its significance. The removal of additional floors has positively impacted its architectural and structural integrity, improving façade retention, spatial layout, and reversibility potential. This restoration enhances its long-term heritage value, reaffirming its Highly Significant status.

The architectural and structural authenticity assessment of Allah Wala Building reflects its material integrity and historical coherence, with scores ranging from 92 to 104 points across different evaluations. The author's assessment (103 points) and second assessor's (104 points) indicate strong architectural coherence, particularly in façade retention, spatial configuration, and material authenticity, while the first

assessor's lower score (92 points) reflects concerns about past modifications. Pre-2021 assessments, based on images showing additional floors, led to differing views on reversibility potential, with the first assessor assigning only 12 points, compared to the author's 19 points and second assessor's 16 points. The post-2021 removal of unauthorized floors under the Rahguzar Project has since improved spatial harmony and restoration potential, reinforcing the building's structural integrity.

The functional and activity authenticity of Allah Wala Building remains highly rated, scoring between 51 and 53 points across assessments. Its continued commercial use as a warehouse required minimal structural modifications, allowing it to retain its original function. The adaptive reuse potential is particularly notable, with primary function retention scores ranging from 18 to 20 points, emphasizing its continued role in the urban economy without compromising architectural coherence. Since pre-2021 commercial activities remained consistent, functional authenticity scores show little variation, as structural changes did not significantly impact its use.

The contextual authenticity evaluation highlights the building's strong alignment with its historic environment, with scores ranging between 50 and 54 points. The building's location within Kohri Garden's colonial-era urban fabric, along with its visual compatibility and emotional resonance, enhances its heritage value. Notably, Assessor-1 rated the setting and location at 20 points, surpassing the author's and Assessor-2's scores of 18 points, indicating a stronger emphasis on urban contextual integrity. The 2021 restoration efforts, particularly the removal of additional floors, likely contributed to higher ratings in this category by reinstating spatial harmony with the historic streetscape.

The general perception of authenticity is consistently high, with scores of 30 to 31 points. The symbolic value and cultural significance of the building remain strong, though slight variations in scores reflect subjective interpretations of its heritage perception.

A cross-analysis brings forward, how pre-2021 assessments as opposed to post-2021 restorations influenced authenticity evaluations. Initially, spatial harmony, reversibility, and structural integrity scores were lower due to unauthorized extensions. Since the Rahguzar Project's removal of additional floors, restored the building to its original G+2 structure, authenticity perceptions have improved, particularly in architectural coherence and urban integration. However, some assessors' lower

reversibility scores suggest lingering concerns over whether all structural modifications were fully reversible.

Despite minor variations in scoring methodologies, all three assessments place Allah Wala Building in the “Highly Significant” category, affirming its architectural, functional, and contextual authenticity. The Rahguzar Project’s interventions have enhanced authenticity perceptions, particularly in structural coherence and spatial reintegration within Kohri Garden’s urban landscape.

Figure 6.6

Quantitative Architecture Authenticity Matrix – Author

Building No. 1- Allah Wala Building Quantitative Architecture Authenticity Matrix – Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					51	60
	Harmony and Visual compatibility with surroundings	17						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character		15				103	120
	Structural integrity	17						
	External details/ façade features	17						
	Spatial Layout/ Internal Spaces	17						
	Retention of façade	18						
	Potential of Reversibility	19						
Functional / Activity Authenticity	Compatibility	18					53	60
	Adaptability		15					
	Retention of primary Use	20						
General Perception on Authenticity	Symbolic Value	16					31	40
	Existing Value/ Exceptional Value		15					
Total points scored							238	280

Group	Authenticity Value	Score Limit
A	Highly significant	280-211=70
B	Significant	210-141=70
C	Part of Heritage Importance	140-71=70
D	Modest value/ group value	70-0=70



Score achieved- **238 points**
The building fall in the category of
Highly Significant Value

Figure 6.7

Quantitative Architecture Authenticity Matrix – Assessor-1

Building No. 1- Allah Wala Building Quantitative Architecture Authenticity Matrix – Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	20					54	60
	Harmony and Visual compatibility with surroundings	18						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	16					92	120
	Structural integrity	16						
	External details/ façade features	16						
	Spatial Layout/ Internal Spaces	16						
	Retention of façade	18						
	Potential of Reversibility		12					
Functional / Activity Authenticity	Compatibility	16					52	60
	Adaptability	18						
	Retention of primary Use	18						
General Perception on Authenticity	Symbolic Value	16					30	40
	Existing Value/ Exceptional Value		14					
Total points scored							238	280

Group	Authenticity Value	Score Limit
A	Highly significant	280-211=70
B	Significant	210-141=70
C	Part of Heritage Importance	140-71=70
D	Modest value/ group value	70-0=70

262

Score achieved- 238 points

The building fall in the
category of

Highly Significant Value

Figure 6.8

Quantitative Architecture Authenticity Matrix – Assessor-2

Building No. 1- Allah Wala Building Quantitative Architecture Authenticity Matrix – Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					50	60
	Harmony and Visual compatibility with surroundings	16						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	18					104	120
	Structural integrity	18						
	External details/ façade features	18						
	Spatial Layout/ Internal Spaces	16						
	Retention of façade	18						
	Potential of Reversibility	16						
Functional / Activity Authenticity	Compatibility		15				51	60
	Adaptability	16						
	Retention of primary Use	20						
General Perception on Authenticity	Symbolic Value	16					31	40
	Existing Value/ Exceptional Value		15					
Total points scored							236	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **236 points**
The building fall in the
category of
Highly Significant Value

6.1.2 Building No.2- Alvi Chambers

Figure 6.9

Heritage Building Inventory Form-A

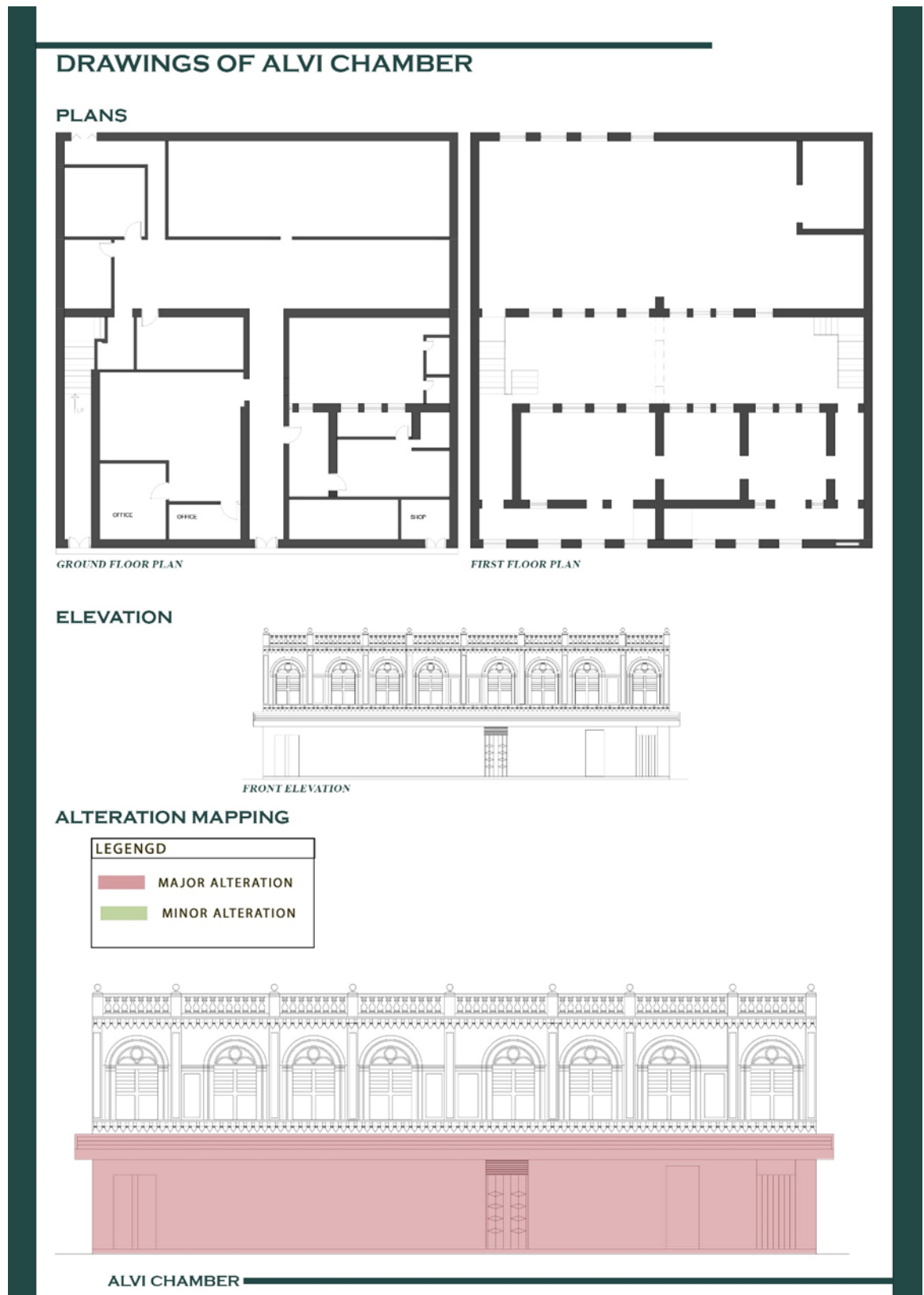
Data Collection and Analysis				Building No.02			
Heritage Building Inventory Form- A							
Name of the Building	Alvi Chambers	Functional Use	Original Use	Residential		Institutional	
				Commercial	✓	Recreational	
				Mixed Use		Other	
			Current Use	Original	✓	In case of change	
Change							
Listed Building Ref. No.	MAR-1848	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name			RCC		Pitched Roof		
Local Neighborhood Name	Napier Road		Other				
Complete Address	MR-1/162,163, Shahra-e-Altaf Hussain, Napier Road	Material	Stone	✓	Wood		
			Block		Other		
Date of Construction		Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above)		45%		
Setting		Individual		Group Value	✓		
Number of Floors	G+1	Current Physical Status (As per visual analysis)	Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Alvi Chambers is situated at Napier Road. Its currently used as a bank and originally it was also used as a commercial building. The façade remains intact with prominent architecture features such as arches, moldings, cornice and parapet. Overall, the building is firm and the structure is also stable.							

Figure 6.10*Heritage Building Inventory Form-B*

Heritage Building Inventory Form – B (Alvi Chambers)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch ✓	☐ Yellow lime stone ✓
☐ Roundels ✓	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster ✓
☐ Windowsill	☐ Dome	☐ Wood
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimney	☐ Brick
☐ Cornice ✓	☐ Staircase ✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint ✓
☐ Ornamented parapet	☐ Terrace	☐ Grill work in the building
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
		

Figure 6.11

Drawings of Alvi Chambers



Alvi Chambers is a distinguished example of Karachi's colonial-era architectural heritage, located on Napier Road within the city's historic urban fabric. This load-bearing stone structure, constructed during the colonial period, stands as a testament to the architectural style and construction techniques characteristic of that era. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-1848, the building holds both historical and architectural significance. Its original and current use as a commercial property underscores its continued functional relevance within the precinct. Unlike many heritage structures that undergo functional transformation, Alvi Chambers has retained its commercial identity, which has likely contributed to its well-maintained state.

The structure's group value within the broader historic context of Napier Road strengthens its role in preserving the collective architectural character of the area. This group value is crucial in maintaining the visual and historical cohesiveness of the precinct, aligning with broader conservation objectives. Material authenticity is a defining feature of Alvi Chambers, with its prominent use of yellow limestone and lime plaster, materials widely employed in colonial-era construction across Karachi. The building's architectural integrity is further highlighted by key structural and decorative elements, including arches, staircases, and symmetrical spatial layouts. Ornamental features such as decorated capitals, pilasters, moldings, and cornices enhance the building's aesthetic appeal, reflecting the design sophistication typical of colonial architecture.

Though the building remains largely intact, it has undergone approximately 45% alteration, reflecting a balance between preservation and adaptation. These modifications, while evident, have not significantly compromised the building's architectural character or material authenticity. Visual analysis indicates that 90% of the building's physical structure remains well-maintained, preserving its historic appearance and structural stability.

1.1.2.1 Place Authenticity Matrix – Alvi Chambers

Figure 6.12

Place Authenticity Matrix – Alvi Chambers

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	***	**	**	**
	Spatial Configuration	**	**	**	**
	Symbolic Significance	**	**	**	**
	Evolution and Adaptation	*	*	***	***

* Low Authenticity ** Medium Authenticity *** High Authenticity

Alvi Chambers demonstrates high authenticity in its historic narrative, reflecting its colonial-era origins and enduring presence on Napier Road. This historical continuity is reinforced by the building's original commercial function, which remains intact. The consistency of its usage enhances its authenticity by preserving the building's original purpose and its role in the urban fabric of Karachi's historic precincts. The architectural features, including arches, decorative cornices, and pilasters, further emphasize the building's historical significance, contributing to its strong narrative presence. In terms of cultural identity, the building maintains a medium level of authenticity. While its colonial architectural style and material choices, such as stone and lime plaster, reflect the cultural and historical context of the colonial period, the evolving urban environment and partial alterations have somewhat diminished this authenticity. The adaptations made to meet contemporary commercial demands have introduced new elements that, while necessary for functional sustainability, dilute the building's cultural coherence. Nevertheless, the building continues to represent a significant chapter of Karachi's colonial heritage, maintaining a degree of cultural relevance. Physical maintenance is another area where Alvi Chambers exhibits medium authenticity. Despite visible alterations, including changes to material finishes and structural updates, the building remains in a relatively well-preserved state. Approximately 90% of its physical form is intact, and key architectural elements, such as the façade's decorative features and structural layout, have been retained. This

balance between preservation and modification reflects the building's ability to adapt while maintaining its architectural identity. Community engagement, while demonstrating medium authenticity in some aspects, shows high authenticity in its adaptability and continued relevance. The building's ongoing commercial use ensures its active engagement with the local population, maintaining its role within the economic and social life of the neighbourhood. Evolution and adaptation present a dual perspective on authenticity. While the building's structural and functional modifications show a high degree of adaptability, the extent of these changes raises questions about the balance between preservation and modernization. The building's ability to maintain its historical identity while accommodating contemporary uses underscores its resilience, yet the substantial alterations reflect a shift that challenges traditional conservation principles.

6.1.2.2 Quantitative Authenticity Assessment Matrix; Analysis

The Quantitative Architecture Authenticity Matrix (QAAM) for Alvi Chambers provides a systematic and numeric assessment of the building's authenticity through key determinants distributed across contextual, architectural/structural, functional/activity, and general perception categories. This quantitative approach ensures objectivity in evaluating the building's physical integrity, historical coherence, and adaptability to contemporary needs.

The QAAM assessment conducted by the author assigns Alvi Chambers a total score of 185 out of 280 points, positioning it within the "Significant" authenticity category. The building scores notably high in contextual authenticity, with a combined 46 points across setting, visual harmony, and emotional resonance. This reflects Alvi Chambers' well-preserved location within the historic Napier Road precinct and its compatibility with the surrounding colonial-era urban fabric. However, the architectural/structural authenticity category reveals a more moderate evaluation, scoring 69 points out of 120. Elements such as architectural style, spatial layout, and façade retention show signs of modification, contributing to the lower rating. Notably, the building's reversibility potential, its ability to restore altered elements to their original state, scores relatively well, indicating possibilities for future conservation.

Functional/activity authenticity stands at 41 points out of 60, with high marks for adaptability and retention of primary use. As a commercial building currently housing

a bank, Alvi Chambers retains its original function with minor adaptive reuse. The general perception on authenticity, with 29 out of 40 points, underscores the building's symbolic value and its continued recognition within the community.

The QAAM assessments by the two additional evaluators, Assessor-1 and Assessor-2, provide varying perspectives, with total scores of 215 and 228 points, respectively, both falling within the "Highly Significant" category. These higher evaluations emphasize Alvi Chambers' strong architectural character and excellent structural stability. Assessor-2 particularly awards the building near-perfect scores in architectural style, retention of façade, and reversibility, highlighting its potential for comprehensive restoration. The functional adaptability and retention of primary use also receive high ratings, indicating successful adaptive reuse without compromising historical authenticity. The evaluation, averaging the assessments from all three evaluators consolidating it within the "Significant" category. This result reflects the natural variation in expert evaluations, balancing individual perspectives with a collective judgment. The alignment of high contextual and functional scores with more moderate architectural assessments underscores the building's importance within Karachi's colonial heritage, while also highlighting areas requiring focused conservation efforts.

The architectural and structural authenticity assessment of Alvi Chambers reflects its material integrity, historical coherence, and potential for restoration, with scores ranging from 69 to 99 points across different evaluations. The author's assessment (69 points) indicates moderate architectural authenticity due to modifications in spatial layout and façade features, while Assessor-1 (93 points) and Assessor-2 (99 points) provide higher ratings, emphasizing the building's retained character and strong reversibility potential. The variation in scores highlights differing interpretations of architectural alterations, with higher assessments recognizing the building's ability to restore altered elements to their original state.

The functional and activity authenticity of Alvi Chambers remains consistently high, scoring between 41 and 52 points. The building's continued commercial function, currently housing a bank, aligns with its historical use, requiring only minor adaptive reuse. The adaptability score is particularly notable, ranging from 16 to 18 points, emphasizing its ability to accommodate evolving urban needs without compromising authenticity. The retention of the primary function, scoring between 11 and 18 points,

further reinforces its historical continuity. The contextual authenticity evaluation highlights the building's strong alignment with its historic setting within the Napier Road precinct, with scores ranging from 42 to 47 points. The well-preserved location and visual harmony with the colonial-era streetscape contribute to its heritage value. The emotional resonance of the building remains significant, scoring between 13 and 16 points, underscoring its continued relevance to the urban identity.

The general perception of authenticity remains strong, with scores between 29 and 31 points. The building's symbolic and cultural significance is widely recognized, though slight variations in ratings reflect subjective interpretations of its perceived value.

A cross-analysis of all three assessments reveals that while individual evaluations vary, the overall placement of Alvi Chambers remains within the "Significant" category. The author's assessment places it in the upper range of this category, while the two additional evaluations elevate it to "Highly Significant." This variation underscores the importance of balancing historical continuity with architectural adaptation. The strong ratings in contextual and functional authenticity, combined with its recognized reversibility potential, suggest that targeted conservation efforts could further enhance the building's authenticity and reinforce its role within Karachi's colonial heritage.

Figure 6.13

Quantitative Architecture Authenticity Matrix – Author

Building No. 1- Alvi Chambers Quantitative Architecture Authenticity Matrix – Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					46	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance		15					
Architectural / Structural Authenticity	Architectural Style/ Character			10			69	120
	Structural integrity		14					
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces		11					
	Retention of façade		11					
	Potential of Reversibility		13					
Functional / Activity Authenticity	Compatibility		12				41	60
	Adaptability	18						
	Retention of primary Use		11					
General Perception on Authenticity	Symbolic Value		14				29	40
	Existing Value/ Exceptional Value		15					
Total points scored							185	280

Group	Authenticity Value	Score Limit
A	Highly significant	280-211=70
B	Significant	210-141=70
C	Part of Heritage Importance	140-71=70
D	Modest value/ group value	70-0=70



Score achieved- **185 points**
The building fall in the category of
Significant Value

Figure 6.14

Quantitative Architecture Authenticity Matrix – Assessor-1

Building No. 2- Alvi Chambers								
Quantitative Architecture Authenticity Matrix - Assessor -1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				42	60
	Harmony and Visual compatibility with surroundings		14					
	Emotional Resonance		13					
Architectural / Structural Authenticity	Architectural Style/ Character	16					93	120
	Structural integrity	16						
	External details/ façade features		14					
	Spatial Layout/ Internal Spaces		15					
	Retention of façade	16						
	Potential of Reversibility	16						
Functional / Activity Authenticity	Compatibility		15				49	60
	Adaptability	16						
	Retention of primary Use	18						
General Perception on	Symbolic Value	16					31	40
	Existing Value/ Exceptional Value		15					
Total points scored							215	280

Group	Authenticity Value	Score Limit
A	Highly significant	280-211=70
B	Significant	210-141=70
C	Part of Heritage Importance	140-71=70
D	Modest value/ group value	70-0=70



Score achieved- **215 points**

The building fall in the
category of

Highly Significant Value

Figure 6.15

Quantitative Architecture Authenticity Matrix – Assessor-2

Building No. 2- Alvi Chambers								
Quantitative Architecture Authenticity Matrix - Assessor -2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					47	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	16					99	120
	Structural integrity	16						
	External details/ façade features	16						
	Spatial Layout/ Internal Spaces		15					
	Retention of façade	18						
	Potential of Reversibility	18						
Functional / Activity Authenticity	Compatibility	16					52	60
	Adaptability	18						
	Retention of primary Use	18						
General Perception on Value	Symbolic Value		14				30	40
	Existing Value/ Exceptional Value	16						
Total points scored							228	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 228 points

The building fall in the category of

Highly Significant Value

6.1.3 Building No.3 Azeem uddin Building

Figure 6.16

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.03				
Heritage Building Inventory Form- A								
Name of the Building	Azeem Uddin Building	Functional Use	Original Use	Residential	✓	Institutional		
				Commercial		Recreational		
				Mixed Use		Other		
			Current Use	Original		In case of change		
				Change	✓	Warehouse		
Listed Building Ref. No.	Mar- 318	Structural System	Load Bearing	✓	Timber Frame			
			RCC		Pitched Roof			
Precinct Name	Khori Garden		Other					
Local Neighbourhood Name	Rambharti Street	Material	Stone	✓	Wood	✓		
			Block	✓	Other			
Complete Address	MR-7/63 Ram Bharti Street, Adamjee Dawod Pota (Rampart) Road	Level of Alteration (As per visual analysis)	Minor (0-20%)					
			Major (20 or above %)		50%			
Date of Construction	-	Setting	Individual		Group Value	✓		
Number of Floors	4 (Ground +3)	Current Physical Status (As per visual analysis)	Maintained		65 %			
Overall Building Picture			Location Map					
Statement of Significance (Not more than 100 words)								
This building is situated on the bustling Rambharti Street, surrounded by a toy market. Currently, it serves as a warehouse for toys. The structure remains in good condition and has not caused harm to anyone so far. Overall, the building represents beautiful architecture elements which also remained intact over the years.								

Figure 6.17

Heritage Building Inventory Form-B

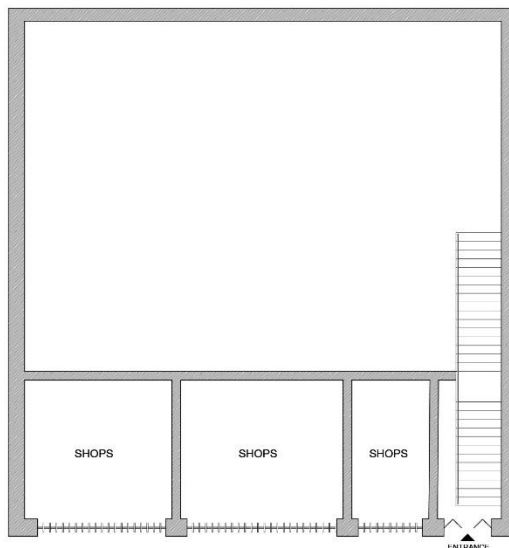
Heritage Building Inventory Form- B (Azeem Uddin Building)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch	☐ Yellow lime stone✓
☐ Roundels✓	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill ✓	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint
☐ Ornamented parapet✓	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements Garlands,	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
		

Figure 6.18

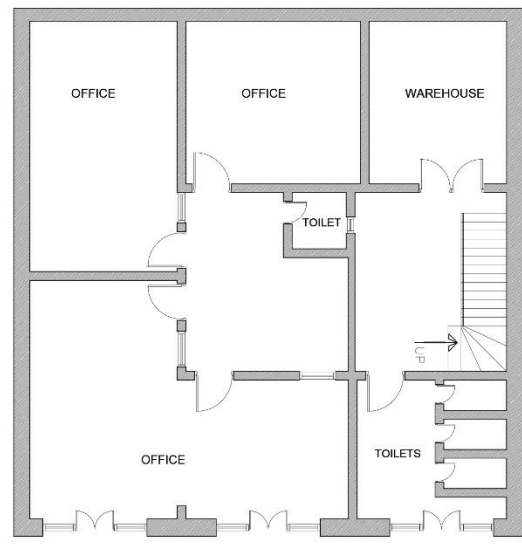
Drawings of Azeem uddin Building

DRAWINGS OF AZEEM-UDDIN BUILDING

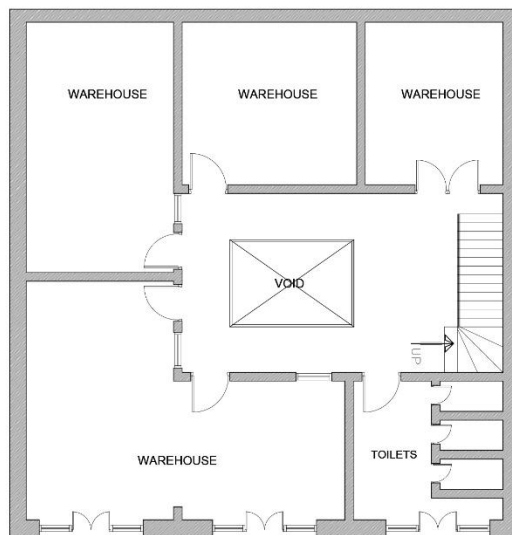
PLANS



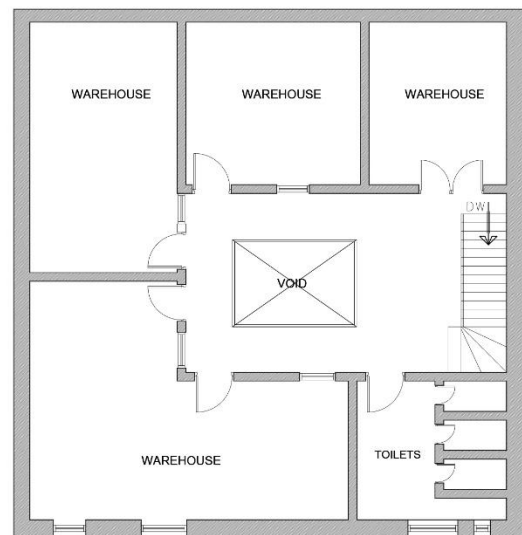
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

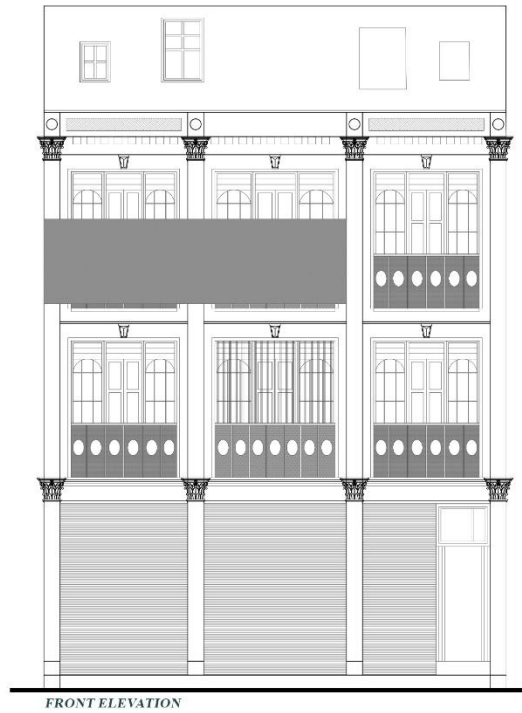


THIRDFLOOR PLAN

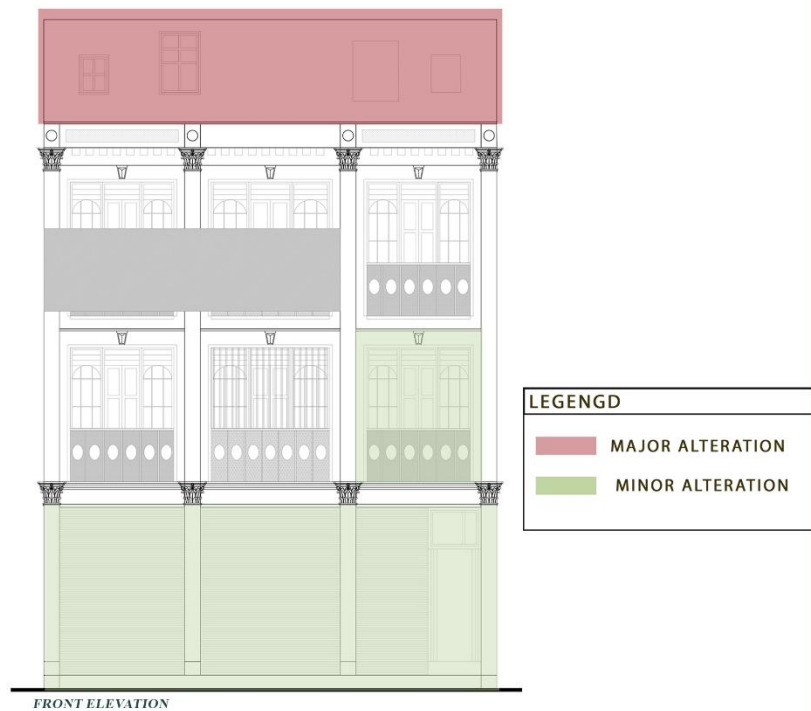
AZEEM UDDIN BUILDING

DRAWINGS OF AZEEM-UDDIN BUILDING

ELEVATION



ALTERATION MAPPING



AZEEM UDDIN BUILDING

Azeem Uddin Building, a colonial-era structure located on Rambharti Street within the Khori Garden precinct, remains an important part of Karachi's architectural heritage. Listed under the Sindh Cultural Heritage Preservation Act, with reference number MAR-318, the building was originally constructed as a residential property. Over time, its function has evolved, and it now serves as a toy warehouse, reflecting the broader trend of commercial adaptation in Karachi's historic districts. Despite this shift, the building continues to contribute to the precinct's historic streetscape.

Architecturally, Azeem Uddin Building exemplifies colonial-era construction techniques, featuring a load-bearing stone structure reinforced with wooden and block elements. Its four-story composition (G+3) reflects the vertical expansion characteristic of the period. The building's group value within the Khori Garden precinct strengthens its role in preserving the area's architectural character, contributing to the continuity of historic urban fabric. While it has undergone approximately 50% alteration, a visual assessment indicates that 65% of the structure remains well-maintained, ensuring that key architectural elements are still intact.

The building's façade retains several defining features of colonial architecture. Decorated capitals, roundels, pilasters, moldings, and cornices contribute to its stylistic richness, while grillwork, a terrace, and an ornamented parapet further enhance its period character. Despite some modifications, these elements ensure that the building's visual and historical identity remains recognizable within its evolving urban context. While Azeem Uddin Building has been repurposed for commercial use, its continued occupation ensures its active engagement with the surrounding neighborhood. However, the extent of physical alterations highlights the challenges of balancing preservation with contemporary functional demands. The shift from a residential to a warehouse function underscores the economic and spatial pressures that influence the evolution of heritage buildings in Karachi.

As an example of colonial-era residential architecture that has transitioned into commercial use, Azeem Uddin Building demonstrates the adaptability of Karachi's heritage structures. Despite modifications, its presence within the historic district remains significant. Moving forward, conservation efforts that integrate material preservation with sustainable adaptive reuse will be essential in maintaining the building's architectural and historical integrity.

6.1.3.1 Place Authenticity Matrix – Azeem Uddin Building

Figure 6.19

Place Authenticity Matrix – Azeem Uddin Building

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	**	*
	Spatial Configuration	*	**	**	*
	Symbolic Significance	**	**	**	**
	Evolution and Adaptation	**	**	*	*

* Low Authenticity ** Medium Authenticity *** High Authenticity

Azeem Uddin Building demonstrates medium authenticity in its historic narrative, reflecting its colonial-era origins and transformation within the Khori Garden precinct. Originally constructed as a residential property, its adaptation into a toy warehouse highlights the broader trend of commercial repurposing in Karachi’s historic districts. While the shift in function has altered its original use, the architectural integrity of the structure remains partially intact, preserving its connection to the past. The presence of key architectural elements, such as pilasters, moldings, and decorated capitals, reinforces its historical significance, though modifications have altered nearly 50% of the building, reducing its ability to fully convey its original narrative.

In terms of cultural identity, the building retains a medium level of authenticity. The colonial-era construction techniques, featuring a load-bearing stone structure reinforced with wooden and block elements, establish its architectural character within the broader historical fabric of Khori Garden. The presence of decorative features, such as roundels, cornices, and grillwork, further strengthens its stylistic continuity. However, the adaptations necessary for its warehouse function have introduced structural and visual changes that, while ensuring continued use, dilute its cultural coherence. The evolving urban landscape has contributed to this transformation, affecting the way the building’s identity is perceived in the contemporary setting.

Physical maintenance exhibits medium authenticity, with approximately 65% of the original structure still intact. The façade retains key colonial features, including ornamented parapets and a rooftop terrace, preserving its period character. Despite this, the substantial level of alteration (50%), including internal modifications and material changes, indicates that while the building remains structurally stable, conservation efforts have been inconsistent. These changes, driven by functional necessity, impact the building's architectural integrity and raise concerns about the long-term sustainability of its heritage fabric.

Community engagement demonstrates low authenticity, as the building's function as a warehouse minimizes public interaction. Unlike heritage structures that maintain active residential or commercial engagement, Azeem Uddin Building primarily serves as storage space, limiting its role in the social and cultural life of the precinct. While its continued occupation prevents deterioration, the lack of accessibility reduces its visibility as an actively engaged historic structure, affecting its broader significance within the community.

Evolution and adaptation present medium authenticity, balancing the preservation of architectural features with functional changes driven by economic necessity. The shift from residential to commercial use reflects urban pressures, and while the building retains many of its period characteristics, the extent of modifications impacts its authenticity. The structural adjustments and alterations ensure its continued use, but further interventions may risk diminishing its historical and architectural integrity. Moving forward, sustainable conservation approaches that integrate adaptive reuse with material preservation will be essential in maintaining the authenticity of the building within its evolving urban context.

6.1.3.1 Quantitative Authenticity Assessment Matrix; Analysis

The Quantitative Architecture Authenticity Matrix (QAAM) for Azeem Uddin Building provides a structured evaluation of the building's authenticity based on contextual, architectural/structural, functional/activity, and general perception criteria. This systematic approach ensures an objective assessment of the building's physical integrity, historical coherence, and adaptability within its evolving urban setting.

The QAAM assessment by the author assigns Azeem Uddin Building a total score of 132 out of 280 points, placing it within the "Significant" authenticity category. The

building scores moderately high in contextual authenticity, with 33 points across setting, visual harmony, and emotional resonance, highlighting its retained presence within the historic Khorī Garden precinct despite changes in function.

The architectural/structural authenticity category receives 64 points out of 120, reflecting partial retention of colonial-era features, such as pilasters, moldings, and decorated capitals. However, modifications affecting nearly 50% of the building reduce its architectural coherence. The retention of façade (11 points) and reversibility potential (10 points) indicate some scope for restoration, though internal changes impact historical integrity. The functional/activity authenticity assessment records 25 points out of 60, emphasizing adaptability (11 points) and the shift from residential to warehouse use. While the building's original function has changed, its structural framework remains intact, ensuring continued occupation. The general perception of authenticity scores 10 out of 40, underscoring the building's symbolic value but reflecting reduced community engagement due to its warehouse function.

Assessments by Assessor-1 and Assessor-2 provide differing perspectives, assigning 145 points and 128 points, respectively. Assessor-1 rates the building higher, emphasizing its strong structural integrity (18 points), reversibility potential (16 points), and well-preserved spatial layout (20 points). This evaluation acknowledges the building's adaptability while maintaining significant original elements. In contrast, Assessor-2's evaluation is slightly lower, scoring the building at 128 points, with moderate ratings in architectural style (14 points), spatial layout (15 points), and reversibility (18 points). The lower contextual authenticity score (16 points) suggests a perception of reduced harmony within the changing urban landscape.

Averaging the three assessments consolidates Azeem Uddin Building within the "Significant" authenticity category. The building's moderate architectural retention and structural stability, combined with low community engagement and functional transformation, suggest that targeted conservation efforts should prioritize façade preservation, material integrity, and adaptive reuse strategies. While functional shifts have altered its historical use, its colonial-era architectural elements and structural robustness provide a foundation for sustainable conservation. Future restoration approaches should aim to balance economic adaptability with material preservation, ensuring the building maintains its heritage value within Karachi's evolving urban context.

Figure 6.20

Quantitative Architecture Authenticity Matrix- Author

Building No. 3- Azeem Uddin Building								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				33	60
	Harmony and Visual compatibility with surroundings		12					
	Emotional Resonance			6				
Architectural / Structural Authenticity	Architectural Style/ Character			10			64	120
	Structural integrity		12					
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces		11					
	Retention of façade		11					
	Potential of Reversibility			10				
Functional / Activity	Compatibility			9			25	60
	Adaptability		11					
	Retention of primary Use				5			
General Perception on	Symbolic Value			6			10	40
	Existing Value/ Exceptional Value				4			
Total points scored							132	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **132 points**

The building fall in the
category of

Modest Value

Figure 6.21

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No. 3- Azeem Uddin Building								
Quantitative Architecture Authenticity Matrix – Assessor -1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location			10			28	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance				3			
Architectural / Structural Authenticity	Architectural Style/ Character	16					92	120
	Structural integrity	18						
	External details/ façade features	16						
	Spatial Layout/ Internal Spaces	20						
	Retention of façade			6				
	Potential of Reversibility	16						
Functional / Activity	Compatibility					0	20	60
	Adaptability		15					
	Retention of primary Use				5			
General Perception on	Symbolic Value				5		5	40
	Existing Value/ Exceptional Value					0		
Total points scored							145	280
Group	Authenticity Value	Score Limit	Score achieved- 145 points The building fall in the category of Significant Value					
A	Highly significant value	280-211=70						
B	Significant value	210-141=70						
C	Modest Value	140-71=70						
D	No value	70-0=70						

Figure 6.22

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No. 3- Azeem Uddin Building								
Quantitative Architecture Authenticity Matrix – Assessor -2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location			7			16	60
	Harmony and Visual compatibility with surroundings			8				
	Emotional Resonance				1			
Architectural / Structural Authenticity	Architectural Style/ Character		14				87	120
	Structural integrity	16						
	External details/ façade features	16						
	Spatial Layout/ Internal Spaces		15					
	Retention of façade			8				
	Potential of Reversibility	18						
Functional / Activity	Compatibility					0	22	60
	Adaptability		12					
	Retention of primary Use			10				
General Perception on	Symbolic Value				3		3	40
	Existing Value/ Exceptional Value					0		
Total points scored							128	280
Group	Authenticity Value	Score Limit		Score achieved- 128 points The building fall in the category of Modest Value				
A	Highly significant value	280-211=70						
B	Significant value	210-141=70						
C	Modest Value	140-71=70						
D	No value	70-0=70						

6.1.4 Building No.4 Badri Masjid

Figure 6.23

Heritage Building Inventory Form-A

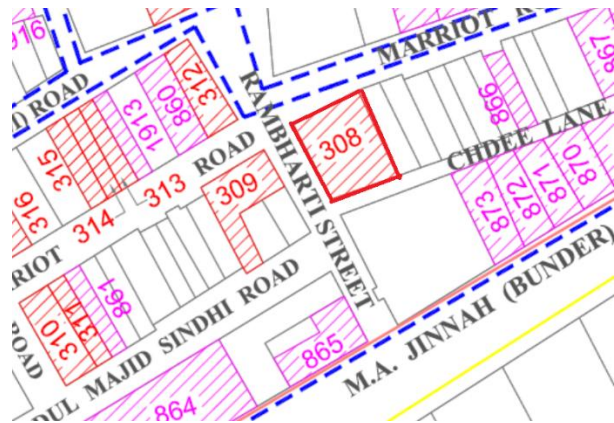
Data Collection and Analysis				Building No.04			
Heritage Building Inventory Form- A							
Name of the Building	Badri Mosque	Functional Use	Original Use	Residential		Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original	✓	In case of change	
				Change			
Listed Building Ref. No.	MAR-025	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name			RCC	✓	Pitched Roof		
			Other				
Local Neighborhood Name	Marriot Road	Material	Stone	✓	Wood	✓	
			Block	✓	Other		
Complete Address	MR-2/36, Ram Bharti Street , Marriot Road	Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above %)		35%		
Date of Construction		Setting	Individual		Group Value	✓	
Number of Floors	G+3	Current Physical Status (As per visual analysis)	Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Badri Masjid/Mosque is situated on Marriot Road which serves as a functional mosque for Bohri Community of Karachi. The structure is well maintained, stable and perfectly complements its context. The building is a corner plot rotated at a certain angle, having architectural features like arches with keystones, cornice, moldings and pilasters giving it a symmetrical look. It also has an added floor which respects the overall look and design language of the building.							

Figure 6.24

Heritage Building Inventory Form-B

Heritage Building Inventory Form- B (Badri Mosque)

General Architecture Characteristics of Colonial Buildings Karachi

Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill ✓	☐ Dome	☐ Wood ✓
☐ Key Stone ✓	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC✓
☐ Carving	☐ Courtyard	☐ Paint✓
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material

☐ Any comments

Architectural Features and Elements Photos

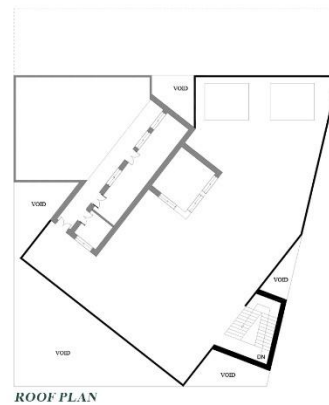
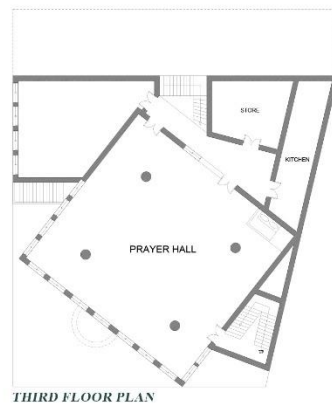
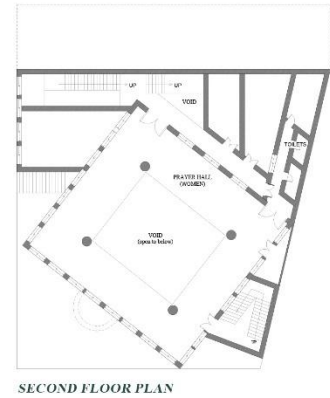
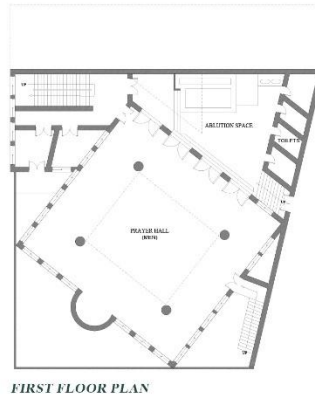
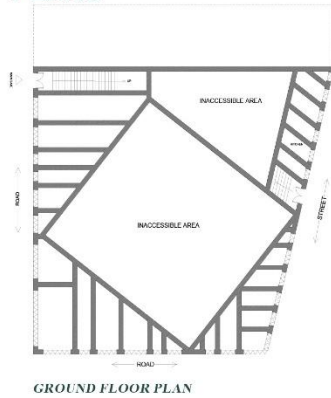


Figure 6.25

Drawings of Badri Masjid

DRAWINGS OF BADRI MOSQUE

PLANS



ALTERATION MAPPING

LEGEND	
	MAJOR ALTERATION
	MINOR ALTERATION



ELEVATION



BADRI MOSQUE

Badri Mosque is a significant religious landmark situated on Marriot Road, serving as a place of worship for Karachi's Bohra community. Listed under the Sindh Cultural Heritage Preservation Act with reference number MAR-025, the mosque exemplifies a blend of colonial and Islamic architectural influences. Constructed as a load-bearing stone structure, it incorporates traditional materials such as wood and RCC, ensuring both durability and structural integrity. Unlike many heritage buildings that undergo complete functional transformations, Badri Mosque has retained its original religious function, which has contributed to its well-maintained state.

The group value of Badri Mosque enhances its architectural and historical significance within the larger precinct of Marriot Road. Its corner plot orientation, positioned at a rotated angle, provides a distinctive presence in the streetscape. The building's symmetrical façade is accentuated by key architectural features such as arched entrances with keystones, pilasters, cornices, and moldings, all of which reflect the refined design aesthetics of the colonial period while reinforcing its religious character.

Material authenticity remains a defining characteristic of Badri Mosque. The finely cut stone masonry, bonded with lime mortar, forms the primary structural framework, while wooden elements are integrated into decorative and functional components. RCC reinforcements have been introduced to support structural modifications, ensuring the building's long-term stability. Additionally, grill work, staircases, and terraces contribute to both functionality and aesthetic coherence.

Despite its largely intact form, the building has undergone approximately 35% alteration, primarily due to the addition of an upper floor to accommodate expanded religious and educational activities. These modifications, however, have been executed with sensitivity to the original design language, ensuring that the visual and structural integrity of the mosque remains uncompromised. The current physical status, as assessed through visual analysis, indicates that 90% of the building is well-maintained, preserving both its historic and religious significance.

Badri Mosque's continued active use as a religious and cultural center reinforces its role within Karachi's historic urban fabric. The building's ornamental features, including Islamic calligraphic inscriptions, geometric patterns, and decorative stone elements, further enhance its aesthetic and cultural value. Its preservation ensures that

it remains a vital part of the city’s architectural and communal heritage, maintaining historical continuity while serving the needs of the Bohra community.

6.1.4.1 Place Authenticity Matrix – Badri Mosque

Figure 6.26

Place Authenticity Matrix – Badri Masjid

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	***	***	***	***
	Spatial Configuration	***	***	***	***
	Symbolic Significance	***	**	**	***
	Evolution and Adaptation	**	**	***	***

* Low Authenticity
 ** Medium Authenticity
 *** High Authenticity

Badri Mosque demonstrates high authenticity in its historic narrative, reflecting its enduring role as a religious and cultural landmark for Karachi’s Bohra community. Unlike many heritage buildings that undergo significant functional transformations, the mosque has retained its original purpose as a place of worship, ensuring the preservation of its historical and spiritual significance. Its colonial and Islamic architectural influences, evident in elements such as arched entrances, pilasters, and decorative stonework, reinforce its historical continuity. The minimal alterations (35%) have been executed with sensitivity to the original design, allowing the building to maintain a strong connection to its past while accommodating evolving needs. In terms of cultural identity, Badri Mosque exhibits high authenticity, as its architectural design, material choices, and religious function remain intact. The use of finely cut stone masonry with lime mortar, along with wooden and RCC reinforcements, reflects both traditional and modern construction techniques that ensure structural stability while respecting historical craftsmanship. The ornamental features, including Islamic calligraphic inscriptions and geometric patterns, further reinforce its cultural and religious significance. While the addition of an upper floor represents a functional

adaptation, the modifications have been carried out in alignment with the building's original aesthetic, preserving its cultural coherence within Karachi's historic urban landscape.

Physical maintenance demonstrates high authenticity, with 90% of the building remaining in excellent condition. The structural integrity of the mosque has been well-preserved, with grillwork, staircases, terraces, and other functional elements remaining intact. The sensitive incorporation of RCC reinforcements ensures long-term stability without compromising visual authenticity. This level of maintenance is largely due to the mosque's continued active use, which has provided the resources and community commitment necessary for its upkeep. Compared to many heritage buildings that suffer neglect due to changing functions, Badri Mosque's ongoing religious role has facilitated its conservation and careful restoration efforts. Community engagement exhibits high authenticity, as the mosque remains a vibrant religious and cultural center for the Bohra community. The community's active involvement in the mosque's upkeep, religious practices, and preservation efforts ensures its continued relevance within the urban fabric. The Bohra community's dedication to conservation and adaptive restoration has played a critical role in maintaining the mosque's architectural and social integrity. Its strategic location on a corner plot, coupled with its distinctive orientation, enhances its visibility within the Marriot Road precinct, reinforcing its symbolic and social role in the area.

Spiritual authenticity is high, as the mosque continues to function as a sacred space, maintaining its religious identity and spiritual significance. Unlike many heritage structures that undergo repurposing, Badri Mosque's unaltered function ensures a strong spiritual connection between the site, its users, and the broader Bohra community. The presence of Islamic calligraphy, geometric ornamentation, and religious symbols further enhances its authenticity as a place of worship. The mosque remains a center of communal gatherings, religious education, and spiritual practice, reinforcing its role as a living heritage site. Evolution and adaptation present medium to high authenticity, as the structural modifications have been carried out in a way that respects the original architectural intent. While the addition of an upper floor represents a modern adaptation, it has been executed with architectural sensitivity, ensuring visual and functional coherence with the historic structure. These changes reflect the balance between conservation and the evolving needs of the community,

allowing the mosque to maintain its historical presence while adapting to contemporary requirements. Moving forward, continued stewardship and context-sensitive conservation practices will be essential in ensuring that Badri Mosque remains an integral part of Karachi's architectural, religious, and communal heritage.

6.1.4.2 Quantitative Authenticity Assessment Matrix; Analysis

Badri Mosque stands as a significant architectural and cultural landmark within Karachi's historic urban fabric, reflecting high authenticity across multiple dimensions. Serving as a religious and cultural center for the Bohra community, the mosque has retained its original function as a place of worship, ensuring the preservation of its historical, spiritual, and communal significance. Unlike many heritage buildings that undergo substantial repurposing, Badri Mosque has remained largely unchanged in its purpose, reinforcing its role as a living heritage site within the Marriot Road precinct.

The QAAM assessment by three evaluators positioned Badri Mosque within the 'Highly Significant Value' category, with scores ranging between 226 and 228 out of 280. The evaluation highlights a high degree of authenticity, particularly in contextual, architectural, and functional dimensions. Contextual authenticity scored 48 out of 60 across all assessments, indicating the mosque's strong spatial and visual coherence within its urban setting. Its strategic corner plot location enhances its prominence, while its orientation and visibility contribute to its continued significance in Karachi's historic religious landscape. The mosque's emotional resonance also remains high, reflecting its deep-rooted connection with the Bohra community.

Architectural and structural authenticity received scores between 88 and 89 out of 120, demonstrating a well-preserved material and spatial integrity. The mosque retains its original architectural character, blending colonial and Islamic influences through arched entrances, pilasters, finely cut stone masonry, and decorative elements such as Islamic calligraphy and geometric ornamentation. Approximately 90% of the structure remains in excellent condition, with minimal alterations (35%) executed in a manner that respects the historical craftsmanship. The incorporation of RCC reinforcements ensures long-term stability while maintaining visual and structural coherence with the original design. The retention of façade elements, staircases, and terrace spaces further reinforces its architectural authenticity.

Functional authenticity scored 56 out of 60, underscoring the mosque's sustained religious function. The preservation of its primary use, coupled with its adaptability to contemporary needs, ensures its ongoing relevance within the community. Unlike many heritage buildings that undergo functional transformation, Badri Mosque remains an active place of worship, fostering a continuous link between its past and present. This enduring function has facilitated consistent conservation efforts, preventing the neglect and degradation often seen in repurposed historic structures.

Symbolic authenticity, assessed between 33 and 36 out of 40, reflects the mosque's enduring cultural and spiritual significance. As a center for religious gatherings, community events, and spiritual education, it maintains its role as a vibrant social and religious institution. The presence of religious iconography, calligraphic inscriptions, and geometric designs further strengthens its symbolic authenticity, reinforcing its identity as a sacred space within Karachi's historic core.

The evaluation of Badri Mosque highlights its exceptional authenticity and conservation status. Its continued religious function, coupled with sensitive restoration efforts, has ensured the preservation of its architectural, cultural, and spiritual integrity. While modifications such as the addition of an upper floor represent an adaptation to evolving needs, these changes have been implemented with careful consideration for the mosque's historical aesthetic. Moving forward, sustained conservation efforts and context-sensitive adaptive reuse strategies will be crucial in maintaining its authenticity. Ensuring active community participation in preservation initiatives will further solidify its standing as a key architectural and cultural asset within Karachi's urban heritage.

Figure 6.27

Quantitative Architecture Authenticity Matrix- Author

Building No. 4- Badri Mosque								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				48	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	18						
Architectural / Structural Authenticity	Architectural Style/ Character		12				89	120
	Structural integrity	16						
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces	18						
	Retention of façade		14					
	Potential of Reversibility	16						
Functional / Activity	Compatibility	18					56	60
	Adaptability	18						
	Retention of primary Use	20						
General Perception on	Symbolic Value	18					33	40
	Existing Value/ Exceptional Value	18						
Total points scored							226	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **226 points**
The building fall in the
category of
Highly Significant Value

Figure 6.28

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No. 4- Badri Mosque Quantitative Architecture Authenticity Matrix – Assessor -1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				48	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	18						
Architectural / Structural Authenticity	Architectural Style/ Character		12				88	120
	Structural integrity	16						
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces	18						
	Retention of façade		13					
	Potential of Reversibility	16						
Functional / Activity	Compatibility	18					56	60
	Adaptability	18						
	Retention of primary Use	20						
General Perception on	Symbolic Value	18					36	40
	Existing Value/ Exceptional Value	18						
Total points scored							228	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **228 points**
The building fall in the category of
Highly Significant Value

Figure 6.29

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No. 4- Badri Mosque								
Quantitative Architecture Authenticity Matrix Assessor -2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				48	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	18						
Architectural / Structural Authenticity	Architectural Style/ Character		12				89	120
	Structural integrity	16						
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces	18						
	Retention of façade		14					
	Potential of Reversibility	16						
Functional / Activity	Compatibility	18					56	60
	Adaptability	18						
	Retention of primary Use	20						
General Perception on	Symbolic Value	18					33	40
	Existing Value/ Exceptional Value	18						
Total points scored							226	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **226 points**
The building fall in the category of
Highly Significant Value

6.1.5 Building No.5 Dada Chambers

Figure 6.30

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.05			
Heritage Building Inventory Form- A							
Name of the Building	Dada Chamber	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change Shops on ground floor, rest is abandoned	
	Change	✓					
Listed Building Ref. No.	MAR-033	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Adamjee Dawood Road		RCC		Pitched Roof		
			Other				
Local Neighborhood Name	Rampart road	Material	Stone	✓	Wood	✓	
			Block	✓	Other		
Complete Address	MR-3/4, Adamjee Dawod Pota (Rampart) Road	Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above)		25%		
Date of Construction		Setting	Individual		Group Value	✓	
Number of Floors	G+3	Current Physical Status (As per visual analysis)	Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
The Dada Chamber, a colonial-era structure situated on Adamjee Dawood Road, now stands mostly abandoned, with only the ground floor occupied by shops. Its notable architectural features, including arches, pilasters, roundels, and balustrades. Despite its current state, the building's intricate design elements continue to reflect its historical and architectural significance.							

Figure 6.31

Heritage Building Inventory Form-B

Heritage Building Inventory Form- B (Dada Chambers)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels✓	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill ✓	☐ Dome	☐ Wood ✓
☐ Key Stone ✓	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint✓
☐ Ornamented parapet✓	☐ Terrace	☐ Grill work in the building ✓
☐ Other ornamental Features Balustrade, Keystone	☐ Other Building Elements	☐ Other Building Material

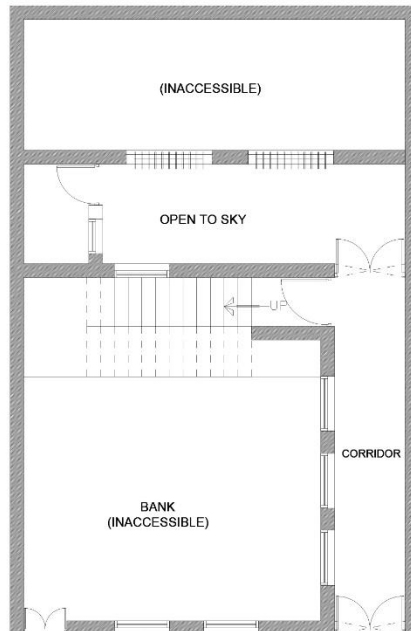
Architectural Features and Elements Photos


Figure 6.32

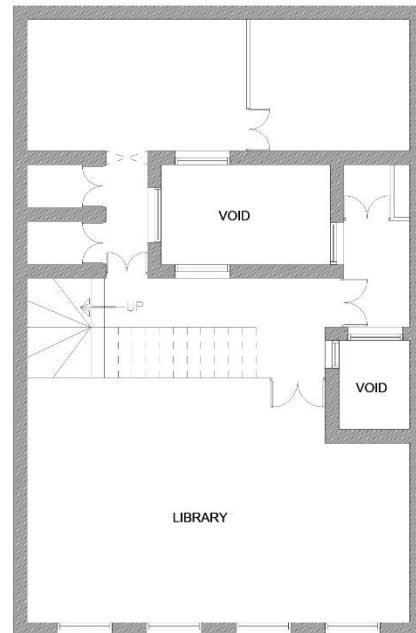
Drawings of Dada Chambers

DRAWINGS OF DADA CHAMBER

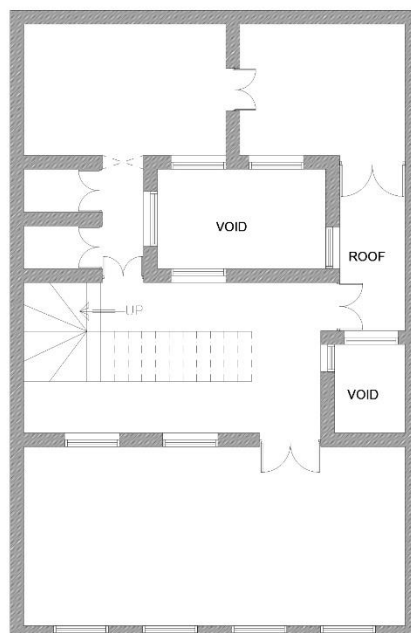
PLANS



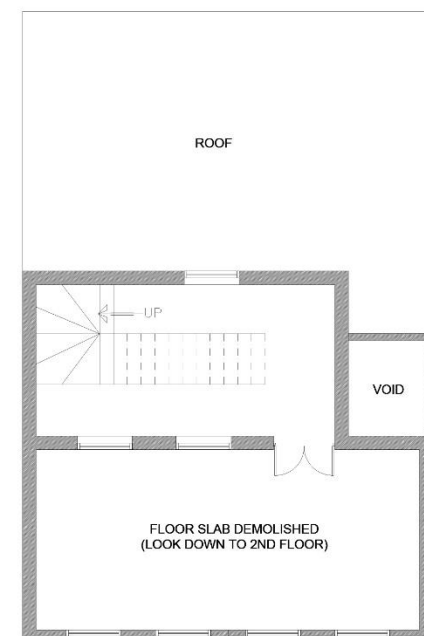
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

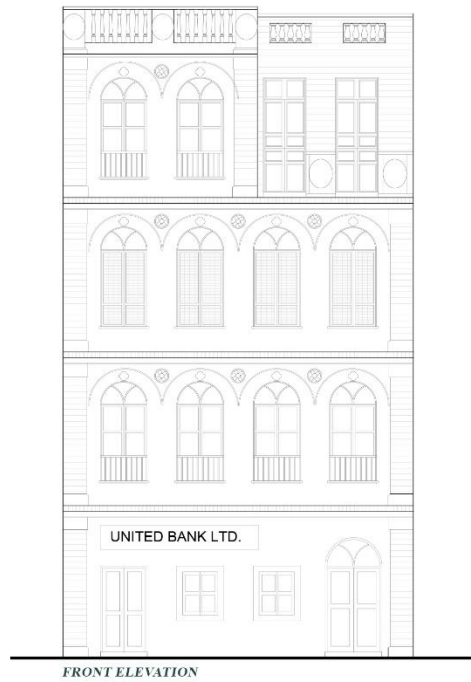


THIRD FLOOR PLAN

DADA CHAMBER

DRAWINGS OF DADA CHAMBER

ELEVATION



ALTERATION MAPPING



LEGENGD	
	MAJOR ALTERATION
	MINOR ALTERATION

DADA CHAMBER

The Dada Chamber stands as a prominent example of Karachi's colonial-era architectural heritage, located on Adamjee Dawood Road in the historic Rampart neighborhood. Constructed during the colonial period, this load-bearing stone structure features a blend of stone, wood, and block materials, which are characteristic of the architectural style prevalent in that era. With a listed building reference number MAR-033 and governed under the Sindh Cultural Heritage Preservation Act, 1994, the building enjoys protected status, though its current physical condition reflects both its historical grandeur and the impacts of modern urban pressures. The building's original use was residential, yet it has since undergone a significant transformation in function. Today, only the ground floor remains active, repurposed for commercial use as shops, while the upper floors stand abandoned. This shift from residential to mixed-use highlights the evolving urban dynamics and economic pressures in the area. Despite this change in function, the Dada Chamber retains an impressive group value within the broader historic context of Adamjee Dawood Road, contributing to the collective architectural identity of the precinct. The building's prominent use of yellow limestone and wood highlights the material authenticity of colonial construction practices in Karachi. Distinctive architectural elements such as arches, staircases, and balustrades define the structural form, while intricate ornamental features like roundels, pilasters, keystones, and decorative cornices enhance its aesthetic appeal. These design characteristics align closely with the stylistic conventions of colonial architecture, emphasizing both structural functionality and decorative sophistication. However, the Dada Chamber has experienced considerable alteration over time, with approximately 75% of its structure showing modifications beyond its original design. These changes include both minor and major interventions, evident in the building's altered material finishes and the addition of modern elements that contrast with its historic fabric. Despite this level of intervention, the building remains in a relatively maintained state, with an estimated 90% of its physical form still intact. The building's architectural and cultural significance is further reinforced by its strategic location and historical context. As part of a larger cluster of colonial-era buildings on Adamjee Dawood Road, the Dada Chamber's presence contributes to the street's collective sense of place and urban memory. Through the documentation provided by the Heritage Building Inventory Form (HBIF) A and B, the building's material integrity, architectural features, and evolving functionality are systematically recorded, offering a comprehensive assessment of its authenticity and conservation needs. This detailed

evaluation serves as a crucial step toward informed heritage management, ensuring that the Dada Chamber’s historical and architectural legacy is preserved for future generations.

6.1.5.1 Place Authenticity Matrix – Dada Chambers

Figure 6.33

Place Authenticity Matrix – Dada Chambers

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	**	**
	Spatial Configuration	**	**	***	**
	Symbolic Significance	**	**	**	*
	Evolution and Adaptation	*	*	***	***

* Low Authenticity

** Medium Authenticity

*** High Authenticity

The Place Authenticity Matrix (PAM) for Dada Chambers provides a multidimensional assessment of the building’s authenticity by evaluating emotional resonance, cultural identity, physical maintenance, and community engagement. In terms of emotional resonance, Dada Chambers registers predominantly low to medium authenticity. The building’s historic narrative and symbolic significance are marked by a sense of disconnection, due to its current state of abandonment above the ground floor and the adaptive reuse of its lower levels for commercial purposes. This partial occupation has led to a diminished sense of historical continuity. The building’s spatial configuration, rated moderately higher, retains a semblance of its original colonial-era design, including architectural elements like arches, pilasters, and balustrades, which continue to evoke its historic identity. Cultural identity within Dada Chambers also reflects medium authenticity. While the structure’s colonial architectural features contribute to its historical identity, the lack of active cultural functions or traditional practices associated with the space weakens its role as a cultural landmark. This aligns with Smith’s (2006) constructivist approach to heritage, where cultural significance is shaped by contemporary engagement and social practices. The building’s symbolic significance remains underrepresented, given the limited communal interaction and

recognition it currently receives, reinforcing Relph's (1976) concept of placelessness when historic environments lose their cultural context.

Physical maintenance stands out as a relatively strong dimension in the PAM, with several elements reflecting high authenticity. The structural integrity and preserved architectural features, including the use of colonial-era materials like stone, wood, and decorative elements, affirm the building's material authenticity. Despite the high degree of physical alterations (75%) noted in the Heritage Building Inventory Form (HBIF), the building retains much of its visual and structural coherence. Community engagement, however, registers the greatest disparity, with mostly low to medium ratings. The limited active use of the building and lack of community-driven conservation initiatives suggest weak local involvement in the preservation process. Dada Chambers' current state reflects a gap in collective community ownership and public interaction. The building's adaptation for commercial use on the ground floor offers some degree of engagement, but this functional shift risks undermining its broader cultural and communal role.

The PAM analysis of Dada Chambers emphasizes on the importance of balancing material preservation with active cultural and community involvement. While the building's physical maintenance and spatial configuration demonstrate significant authenticity, the lack of emotional resonance, cultural identity, and community engagement highlights the challenges of sustaining heritage value amid urban development pressures.

6.1.5.2 Quantitative Authenticity Assessment Matrix; Analysis

The Quantitative Architecture Authenticity Matrix (QAAM) assessments for Dada Chambers provide a structured evaluation of the building's authenticity, offering both individual and consensual perspectives on its cultural and architectural significance. The analysis through QAAM captures the building's tangible attributes, contextual, architectural, and structural, as well as functional and symbolic aspects, building on and responding to HBIF and PAM, ensuring a comprehensive approach to authenticity assessment.

The QAAM evaluation conducted by the author assigns a total score of 138 points, placing Dada Chambers within the "Significant" category of heritage authenticity. The assessment reflects high ratings in architectural/structural authenticity, particularly for

the building's architectural style, character, and structural integrity, with notable scores for external details, façade retention, and spatial layout. Contextual authenticity also scored well, indicating the building's visual compatibility and alignment with the surrounding historic environment. However, the lower score for functional authenticity, specifically due to the loss of primary use and limited adaptability, highlights challenges in preserving the building's original function amidst evolving urban demands.

The first external assessor's evaluation yielded a slightly lower total of 132 points, yet still within the "Significant" category. This assessment closely mirrors the author's findings, with minor variations in scoring architectural elements and spatial configuration. The nuanced differences underscore the subjective interpretation inherent in authenticity evaluations while reaffirming the building's consistent architectural value and contextual relevance.

The second external assessor's score of 138 points aligns closely with the author's assessment, reflecting strong agreement on the building's architectural integrity and contextual harmony. This evaluation emphasized the building's symbolic value and emotional resonance, acknowledging its cultural significance and potential for community engagement.

The final averaged score of 136 points reinforces Dada Chambers' classification as a site of "Significant" heritage value. The consensus highlights the building's strengths in preserving colonial architectural features and maintaining structural integrity, while also identifying challenges in functional adaptability and retention of primary use. Despite the building being well-maintained and showing minimal alterations, its abandonment and lack of use contribute to a lower functional authenticity score.

By integrating diverse expert perspectives, the assessment mitigates individual biases and enhances the robustness of the authenticity assessment. The findings support the importance of adaptive reuse strategies and context-sensitive interventions to ensure the continued relevance and sustainability of Dada Chambers as a heritage asset in the evolving urban landscape.

Figure 6.34

Quantitative Architecture Authenticity Matrix- Author

Building No. 5- Dada Chambers								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		12				30	60
	Harmony and Visual compatibility with surroundings		12					
	Emotional Resonance			6				
Architectural / Structural Authenticity	Architectural Style/ Character	16					77	120
	Structural integrity		14					
	External details/ façade features		12					
	Spatial Layout/ Internal Spaces		13					
	Retention of façade		12					
	Potential of Reversibility			10				
Functional / Activity	Compatibility			10			15	60
	Adaptability				5			
	Retention of primary Use					0		
General Perception on	Symbolic Value			8			16	40
	Existing Value/ Exceptional Value			8				
Total points scored							138	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **138 points**

The building fall in the category of

Modest Value

Figure 6.35

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No. 5- Dada Chambers								
Quantitative Architecture Authenticity Matrix – Assessor -1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		12				28	60
	Harmony and Visual compatibility with surroundings			10				
	Emotional Resonance			6				
Architectural / Structural Authenticity	Architectural Style/ Character	16					73	120
	Structural integrity		12					
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces			10				
	Retention of façade		12					
	Potential of Reversibility			10				
Functional / Activity	Compatibility			10			15	60
	Adaptability				5			
	Retention of primary Use					0		
General Perception on	Symbolic Value			8			16	40
	Existing Value/ Exceptional Value			8				
Total points scored							132	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 132 points

The building fall in the
category of

Modest Value

Figure 6.36

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No. 5- Dada Chambers								
Quantitative Architecture Authenticity Matrix - Assessor -2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		12				30	60
	Harmony and Visual compatibility with surroundings			10				
	Emotional Resonance			8				
Architectural / Structural Authenticity	Architectural Style/ Character	16					74	120
	Structural integrity		14					
	External details/ façade features		14					
	Spatial Layout/ Internal Spaces			10				
	Retention of façade		12					
	Potential of Reversibility			8				
Functional / Activity	Compatibility			10			16	60
	Adaptability			6				
	Retention of primary Use					0		
General Perception on	Symbolic Value			10			18	40
	Existing Value/ Exceptional Value			8				
Total points scored							138	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 138 points

The building fall in the
category of

Modest Value

6.1.6 Building No.6 Fakhri Manzil

Figure 6.37

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.06			
Heritage Building Inventory Form- A							
Name of the Building	Fakhri Manzil	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change Partial change-Bank Branch	
Change	✓						
Listed Building Ref. No.	MAR-1911	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Murad Khan Road		RCC		Pitched Roof		
Local Neighborhood Name	Khori Garden		Other				
Complete Address	MR-1/67,68 Murad Khan Road, Karachi 74000	Level of Alteration (As per visual analysis)	Minor (0-20%)	15%			
			Major (20 or above %)				
Date of Construction	1918	Setting	Individual		Group Value	✓	
Number of Floors	G+3	Current Physical Status (As per visual analysis)	Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Fakhri Manzil, situated on the lively Murad Khan Road, now serves as a bank. This British colonial building boasts an array of rich architectural features, including elegant pediments, intricately decorated capitals, a distinguished balustrade, and exquisite moldings. Amidst the bustling street, Fakhri Manzil stands out as a well-preserved and meticulously maintained structure, evidence to the architectural grandeur of its era.							

Figure 6.38

Heritage Building Inventory Form-B

Heritage Building Inventory Form- B (Fakhri Manzil)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels✓	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments✓	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill	☐ Dome	☐ Wood ✓
☐ Key Stone ✓	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint
☐ Ornamented parapet✓	☐ Terrace	☐ Grill work in the building
☐ Other ornamental Features Balustrade, Keystone	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		

Architectural Features and Elements Photos

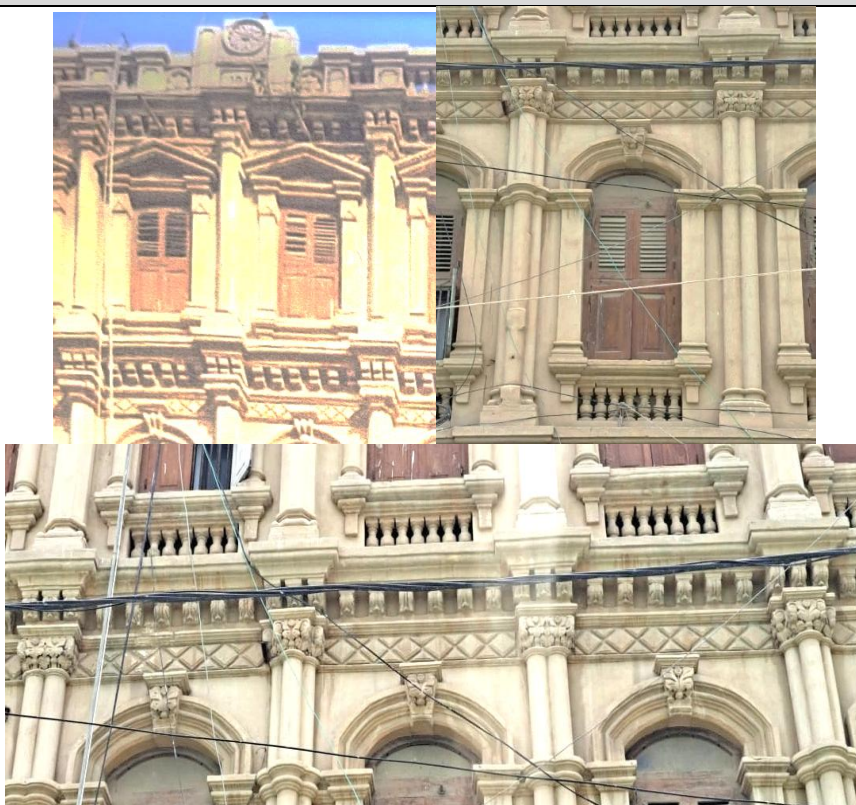
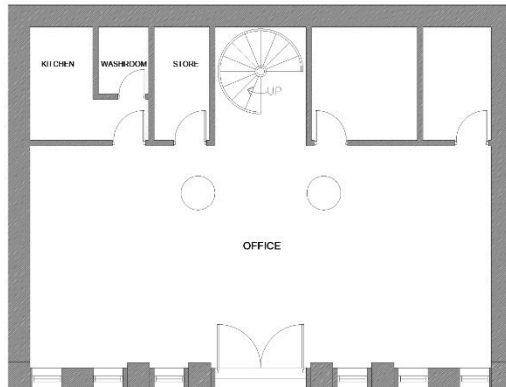


Figure 6.39

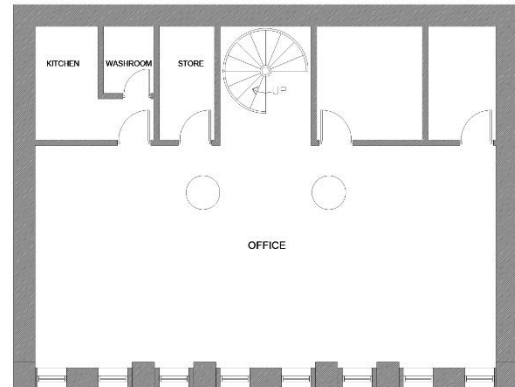
Drawings of Fakhri Manzil

DRAWINGS OF FAKHRI MANZIL

PLANS

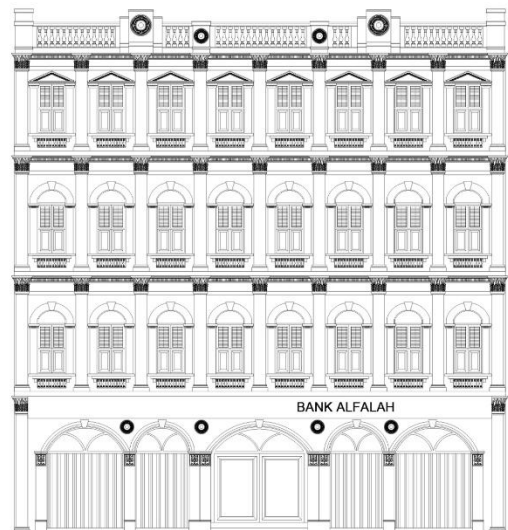


GROUND FLOOR PLAN



FIRST, SECOND & THIRD FLOOR PLAN

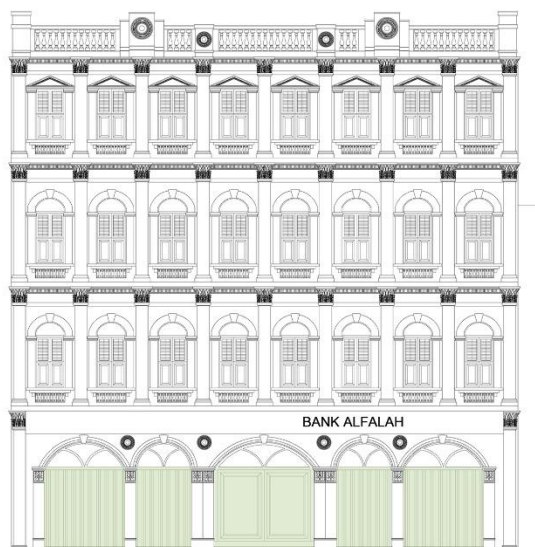
ELEVATION



FRONT ELEVATION

ALTERATION MAPPING

LEGEND	
	MAJOR ALTERATION
	MINOR ALTERATION



FAKHRI MANZIL

Fakhri Manzil, a British colonial-era building located on Murad Khan Road within the Khori Garden neighborhood, is an architecturally distinguished structure that continues to play an active role in the urban landscape. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-1911, this load-bearing stone structure was originally designed as a residential building and has since undergone partial functional transformation, now housing a bank branch on its premises.

Fakhri Manzil possesses group value, contributing to the historic character of the Murad Khan Road precinct. The structure is well-maintained and integrates seamlessly with its surroundings, reflecting early 20th-century colonial architecture. The building's historical significance is further amplified by its construction date of 1918, placing it within a pivotal period of Karachi's architectural evolution. The material authenticity of Fakhri Manzil is evident in its yellow limestone masonry, wooden elements, and lime plaster finish, materials that characterize many colonial-era structures in Karachi. Architecturally, the building features symmetrical proportions and ornate detailing, with decorated capitals, pediments, pilasters, moldings, and balustrades adorning its façade. Keystones and roundels further enhance its decorative richness, contributing to its classical aesthetic and structural harmony.

Despite its partial adaptation for commercial use, the building has undergone only 15% alteration, ensuring the preservation of its original character and material integrity. The changes primarily accommodate the bank's operational needs, yet the overall architectural elements remain intact, maintaining the building's historic visual appeal.

Visual analysis confirms that 90% of the building's physical structure is well-preserved, signifying a high degree of maintenance. This continued upkeep ensures that Fakhri Manzil remains a prominent landmark within its precinct, balancing historic preservation with contemporary functionality.

As a notable example of Karachi's colonial architectural heritage, Fakhri Manzil stands as a testament to the city's layered urban history. Its graceful adaptation to modern use, coupled with its well-maintained condition, underscores the importance of conservation efforts in safeguarding Karachi's historic urban fabric while allowing for sustainable development.

6.1.6.1 Place Authenticity Matrix – Fakhri Manzil

Figure 6.40

Place Authenticity Matrix – Fakhari Manzil

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	***	**	***	***
	Spatial Configuration	**	**	**	**
	Symbolic Significance	***	**	***	**
	Evolution and Adaptation	**	**	***	***

* Low Authenticity
 ** Medium Authenticity
 *** High Authenticity

Fakhri Manzil demonstrates high authenticity in its historic narrative, reflecting its British colonial-era origins and its continued relevance within Karachi’s evolving urban fabric. Constructed in 1918, the building retains its architectural integrity and historical significance, representing a pivotal period in Karachi’s colonial architectural development. While originally designed as a residential structure, it has undergone partial functional transformation, now housing a bank branch on the ground floor. This adaptation has been carried out with minimal alterations (15%), ensuring the preservation of its material authenticity while accommodating contemporary needs. The integration of restored façade elements using Color Crete on the stone further reinforces the building’s commitment to conservation, preserving both its aesthetic character and structural integrity. In terms of cultural identity, Fakhri Manzil exhibits medium authenticity, as its architectural details and material composition reflect its colonial heritage. The yellow limestone masonry, wooden elements, and lime plaster finish align with Karachi’s historic building traditions, while ornate features such as capitals, pediments, pilasters, moldings, and balustrades reinforce its classical aesthetic. The decorative richness of keystones and roundels enhances its architectural grandeur, maintaining a strong connection to early 20th-century design principles. While the lower portion of the building has been adapted for commercial use, these modifications have been executed sensitively, ensuring the continuity of its cultural essence within the Murad Khan Road precinct.

Physical maintenance demonstrates high authenticity, with 90% of the building remaining in excellent condition. The façade restoration using Color Crete on stone is a rare and commendable conservation effort, ensuring that original materials and textures are preserved rather than replaced. Despite the partial conversion of the ground floor for commercial use, the building's original structure, proportions, and decorative elements remain intact. The limited alterations primarily address operational needs without compromising the architectural integrity of the structure, making it a well-preserved example of colonial-era residential architecture.

Community engagement exhibits high authenticity, as Fakhri Manzil remains a prominent landmark within its neighborhood, contributing to the historic character of Murad Khan Road. Its group value within the surrounding precinct enhances its collective identity, fostering a sense of continuity in the urban fabric. The building's current function as a partially adapted commercial space ensures its active use, sustaining its relevance within the economic and social life of the area. While the residential function has been altered at the ground-floor level, the upper floors remain architecturally and visually consistent with their original use, allowing for sustained community interaction and urban engagement.

Evolution and adaptation present medium to high authenticity, as the ground-floor conversion to a bank branch has been executed with minimal impact on the building's overall structure and visual coherence. The façade restoration using Color Crete rather than invasive alterations underscores a conservation-first approach, allowing the building to evolve functionally while preserving its historic fabric. This balance between preservation and adaptation highlights Fakhri Manzil's resilience, demonstrating how heritage structures can accommodate contemporary uses without sacrificing their architectural and historical identity.

6.1.6.2 Quantitative Authenticity Assessment Matrix; Analysis

The Quantitative Architecture Authenticity Matrix (QAAM) for Fakhri Manzil provides a structured evaluation of the building's authenticity based on contextual, architectural/structural, functional/activity, and general perception criteria. This systematic approach ensures an objective assessment of the building's physical integrity, historical coherence, and adaptability within its evolving urban setting. The

QAAM assessment by the author assigns Fakhri Manzil a total score of 228 out of 280 points, placing it within the “Highly Significant” authenticity category.

The building scores high in contextual authenticity, with 49 points across setting, visual harmony, and emotional resonance. Fakhri Manzil retains its historical presence within the Murad Khan Road precinct, with strong visual and spatial continuity despite functional adaptations. The building's setting (18 points), harmony with surroundings (16 points), and emotional resonance (15 points) reinforce its significance within the historic fabric of Karachi.

The architectural/structural authenticity category receives 101 points out of 120, reflecting strong retention of colonial-era features, including limestone masonry, pilasters, moldings, capitals, and balustrades. The architectural style and character (18 points), structural integrity (18 points), and external details (18 points) emphasize the building's well-preserved classical elements. The retention of the façade (17 points) and reversibility potential (16 points) indicate a strong capacity for conservation efforts.

The functional/activity authenticity assessment records 36 points out of 60, emphasizing adaptability (15 points) and the shift from residential use to partial commercial use with minimal alterations (15% modification). While the building's original function has changed, its structural framework remains intact, ensuring continued occupation and relevance. However, the retention of primary use scores lower (5 points), reflecting the transformation of the ground floor into a bank branch.

The general perception of authenticity scores 31 out of 40, highlighting the building's symbolic value (15 points) and exceptional architectural and cultural value (16 points). This high score indicates strong community recognition and historical significance despite adaptive modifications.

Assessments by Assessor-1 and Assessor-2 provide slightly varying perspectives, assigning 226 points and 227 points, respectively. Assessor-1 rates the building highly in structural integrity (16 points), reversibility potential (16 points), and symbolic value (15 points), acknowledging its resilience and adaptability while maintaining significant original elements. Assessor-2 assigns the highest contextual authenticity score (53 points), emphasizing the building's harmony with its historic surroundings and setting (19 points). Both assessors align in their evaluation of the architectural and

structural integrity, assigning identical scores for architectural style (20 points), façade retention (16 points), and reversibility (16 points).

Averaging the three assessments consolidates Fakhri Manzil within the “Highly Significant” authenticity category. The building’s strong architectural retention, structural stability, and material authenticity reinforce its heritage value. While functional adaptations have altered its historical use, the careful restoration of the façade using Color Crete and the preservation of original materials underscore a commitment to conservation. Future restoration approaches should prioritize maintaining material integrity, enhancing community engagement, and developing adaptive reuse strategies that balance economic viability with historical preservation, ensuring that Fakhri Manzil remains an integral part of Karachi’s urban heritage.

Figure 6.41

Quantitative Architecture Authenticity Matrix- Author

Building No. 6- Fakhri Manzil								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					49	60
	Harmony and Visual compatibility with surroundings	16						
	Emotional Resonance		15					
Architectural / Structural Authenticity	Architectural Style/ Character	18					101	120
	Structural integrity	18						
	External details/ façade features	18						
	Spatial Layout/ Internal Spaces		14					
	Retention of façade	17						
	Potential of Reversibility	16						
Functional / Activity	Compatibility	16					36	60
	Adaptability		15					
	Retention of primary Use				5			
General Perception on	Symbolic Value		15				31	40
	Existing Value/ Exceptional Value	16						
Total points scored							228	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **228 points**
The building fall in the
category of
Highly Significant Value

Figure 6.42

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No. 6- Fakhri Manzil Quantitative Architecture Authenticity Matrix Assessor -1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					53	60
	Harmony and Visual compatibility with surroundings	16						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	20					103	120
	Structural integrity	16						
	External details/ façade features	18						
	Spatial Layout/ Internal Spaces		12					
	Retention of façade	16						
	Potential of Reversibility	16						
Functional / Activity	Compatibility		15				37	60
	Adaptability	18						
	Retention of primary Use				3			
General Perception on	Symbolic Value		15				33	40
	Existing Value/ Exceptional Value	16						
Total points scored							226	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **226 points**
The building fall in the category of
Highly Significant Value

Figure 6.43

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No. 6- Fakhri Manzil								
Quantitative Architecture Authenticity Matrix – Assessor -2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	19					53	60
	Harmony and Visual compatibility with surroundings	18						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	20					103	120
	Structural integrity	18						
	External details/ façade features	18						
	Spatial Layout/ Internal Spaces		15					
	Retention of façade	16						
	Potential of Reversibility	16						
Functional / Activity	Compatibility	16					38	60
	Adaptability	18						
	Retention of primary Use				4			
General Perception on	Symbolic Value	16					33	40
	Existing Value/ Exceptional Value	17						
Total points scored							227	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 227 points
The building fall in the
category of
Highly Significant Value

6.1.7 Building No.7 Fazal Chambers

Figure 6.44

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.07			
Heritage Building Inventory Form- A							
Name of the Building	Fazal Chambers	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change Warehouse	
				Change	✓		
Listed Building Ref. No.	MAR-72	Structural System	Load Bearing	✓	Timber Frame		
			RCC		Pitched Roof		
Precinct Name	Murad Khan Road		Other				
Local Neighborhood Name	Kohri Garden	Material	Stone		Wood	✓	
			Block		Other		
Complete Address	MR-1/72, Marriot Road, Murad Khan Road, Kutchi Wala Lane-3	Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above %)		50%		
Date of Construction		Setting	Individual		Group Value	✓	
Number of Floors	G+3	Current Physical Status (As per visual analysis)	Maintained		65%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words) Fazal Chambers is located at Murad Ali Khan Road in Kohri Garden. The building is stable however, the façade has lost its original charm and the architectural features are not prominent as before. It is deteriorated and there is no sign of maintenance. The function of the building is also changed as per the condition of building. Originally, it was a residential building but now it is used as a warehouse.							

Figure 6.45

Heritage Building Inventory Form-B

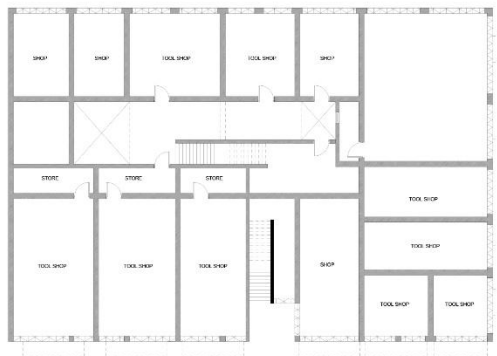
Heritage Building Inventory Form- B Fazal Chambers General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals	☐ Arch ✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint ✓
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
		

Figure 6.46

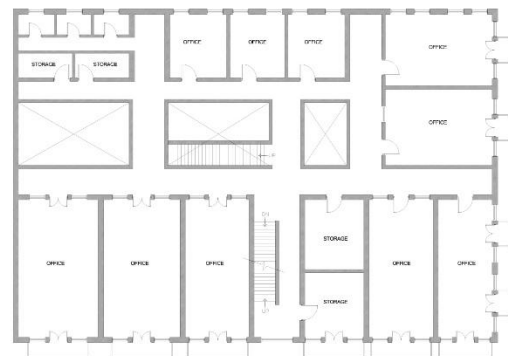
Drawings of Fazal Chambers

DRAWINGS OF FAZAL CHAMBER

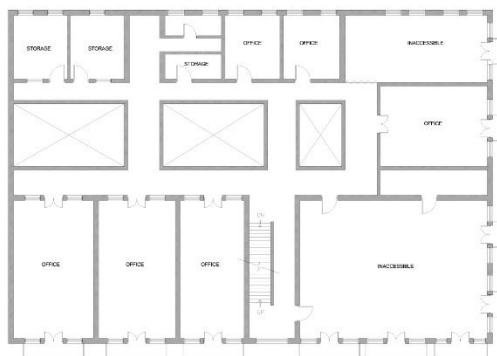
PLANS



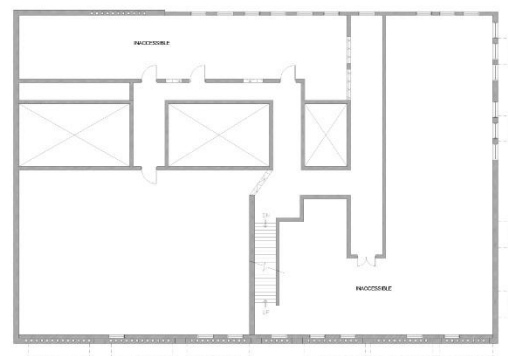
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ROOF PLAN

ELEVATION



ELEVATION 2

FAZAL CHAMBER

DRAWINGS OF FAZAL CHAMBER

ELEVATION



ELEVATION 2

ALTERATION MAPPING

LEGEND	
	MAJOR ALTERATION
	PARTIALLY MINOR ALTERATION
	MINOR ALTERATION



ELEVATION 1



ELEVATION 2

FAZAL CHAMBER

Fazal Chambers, located on Murad Khan Road within Kohri Garden, represents a colonial-era residential building that has undergone substantial changes over time. Originally built as a residential structure, it is now repurposed as a warehouse, marking a significant shift in its functional use.

The building is listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-72. It is a G+3 load-bearing structure, primarily constructed from yellow limestone with wooden elements, including timber-framed components. Given its group value, Fazal Chambers contributes to the historical streetscape of Kohri Garden, yet it has suffered from significant deterioration and neglect.

A visual analysis of its current state indicates that 50% of the structure has undergone major alterations, significantly impacting its architectural integrity. Key ornamental features such as pilasters, cornices, and archways remain, but many details have been eroded over time, diminishing its original colonial charm. The façade has lost much of its distinctiveness, and no visible maintenance efforts have been undertaken to preserve its decorative elements.

Despite this, the building remains structurally stable, though its physical condition has declined to 65%, indicating a moderate level of degradation. The change in function to a warehouse reflects a common trend of adaptive reuse, particularly in areas experiencing economic shifts and urban transformation. However, this change has contributed to further wear and tear, with alterations likely impacting the spatial and material authenticity of the building.

Fazal Chambers serves as a cautionary example of the consequences of neglecting heritage structures, illustrating the need for conservation measures to prevent further deterioration. Without intervention, continued neglect may lead to irreversible damage, underscoring the importance of heritage-sensitive restoration and adaptive reuse strategies.

6.1.5.1 Place Authenticity Matrix – Fazal Chambers

Figure 6.47

Place Authenticity Matrix – Fazal Chambers

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	*	**
	Spatial Configuration	*	**	*	**
	Symbolic Significance	**	**	**	*
	Evolution and Adaptation	**	*	*	*

* Low Authenticity ** Medium Authenticity *** High Authenticity

Fazal Chambers, a colonial-era residential building, has undergone substantial changes, transitioning into a warehouse, a shift that has significantly impacted its architectural integrity and authenticity. While originally constructed as a G+3 load-bearing structure using yellow limestone and wooden elements, the building now exhibits considerable deterioration, with 50% of its structure altered and many decorative elements eroded over time. Listed under the Sindh Cultural Heritage Preservation Act, 1994, Fazal Chambers retains group value within the Murad Khan Road streetscape, though its current state of neglect diminishes its historical presence. In terms of historic narrative, Fazal Chambers holds medium authenticity due to its colonial-era origins and contribution to Karachi's architectural evolution. However, the loss of key architectural details and extensive alterations have weakened its original character, reducing its ability to communicate its historical significance. The ornamental pilasters, cornices, and archways, though still present, have been severely worn down, reflecting the effects of long-term neglect.

Cultural identity also exhibits medium authenticity, as Fazal Chambers remains part of the historic Kohri Garden precinct but has lost much of its original residential essence. The conversion into a warehouse represents a significant functional shift, distancing the building from its historic residential character. Although its group value

within the streetscape remains, the eroded façade and absence of maintenance efforts have weakened its contribution to the area's architectural coherence.

Physical maintenance is rated low authenticity, as the building's condition has declined to 65%, with visible neglect and structural deterioration. The lack of conservation efforts and functional adaptation into a warehouse have further accelerated wear and tear, threatening the longevity of its architectural fabric. Without intervention, continued deterioration may lead to irreversible damage, underscoring the urgent need for restoration and material preservation.

Community engagement presents low authenticity, as the current warehouse function limits public interaction and engagement with the building's historical value. Unlike other adaptive reuse cases where mixed-use functions retain some connection to the original purpose, Fazal Chambers has entirely lost its residential role, making it less relevant to the community's lived experience. Its symbolic significance has diminished, as the building is no longer actively recognized as a key heritage landmark.

Evolution and adaptation demonstrate low authenticity, as the building's transformation into a warehouse has compromised its spatial and material integrity. While adaptive reuse is a common survival strategy for heritage structures in evolving urban economies, the lack of heritage-sensitive interventions has resulted in substantial degradation rather than thoughtful adaptation. The loss of historic elements and lack of preservation efforts further highlight the challenges of maintaining authenticity in the face of unchecked functional shifts.

Fazal Chambers stands as a cautionary example of heritage neglect, illustrating the critical need for conservation measures to prevent further deterioration. Without intervention, the building risks losing its remaining architectural and historical value, emphasizing the importance of proactive heritage preservation strategies to balance urban transformation with sustainable conservation.

6.1.5.2 Quantitative Authenticity Assessment Matrix; Analysis

The Quantitative Architecture Authenticity Matrix (QAAM) assessment of Fazal Chambers reveals significant authenticity challenges due to extensive functional and structural alterations. Originally constructed as a colonial-era residential building with a G+3 load-bearing structure using yellow limestone and wooden elements, it has

undergone a drastic transformation into a warehouse. This shift has negatively impacted its architectural integrity, with nearly 50% of the original structure altered and many decorative elements eroded over time. Although the building remains listed under the Sindh Cultural Heritage Preservation Act (1994), its neglected state has diminished its historical presence within the Murad Khan Road streetscape.

Independent assessments conducted by three evaluators placed Fazal Chambers within the 'Significant Value' category, with scores ranging between 135 and 161 out of 280. These findings highlight a decline in authenticity across multiple dimensions, particularly in functional integrity and physical maintenance. Despite this, the building retains a moderate to high degree of contextual authenticity, scoring between 43 and 46 out of 60. It maintains a presence within the Murad Khan Road streetscape, preserving its urban context and group value. While the setting and location remain intact, the ongoing neglect has diminished its contribution to the architectural coherence of the area. Even though decorative elements have eroded, the colonial-era footprint still evokes a historical narrative.

The architectural and structural integrity of the building received the lowest ratings, with scores ranging between 57 and 66 out of 120. The extensive loss of ornamental details such as pilasters, cornices, and archways has contributed to a significant reduction in its architectural authenticity. While parts of the load-bearing structure remain, the integrity of materials has been compromised due to repeated interventions and neglect. The façade, though partially preserved, exhibits considerable wear, further exacerbated by the lack of conservation efforts. The potential for restoration remains limited unless immediate conservation measures are undertaken.

The most substantial decline is observed in functional authenticity, where the building scored between 18 and 25 out of 60. The complete transformation into a warehouse has severed its connection to its original residential function, with no attempt to maintain elements of its historical use. Unlike other adaptive reuse projects that balance preservation with contemporary needs, Fazal Chambers' new function does not align with its architectural and historical significance. Furthermore, the current usage restricts public engagement, effectively erasing the building's role as a cultural landmark within the community.

Symbolic authenticity ratings varied from 10 to 24 out of 40, reflecting a moderate-to-low perception of historical significance. Although the building's colonial origins contribute to Karachi's architectural heritage, its deteriorated state and lack of community relevance have weakened its status as a recognizable landmark.

The findings from the QAAM assessment emphasize the urgent need for heritage-sensitive adaptive reuse strategies to safeguard Fazal Chambers' historical essence while reintegrating it into the urban landscape. Despite its continued presence within the historic fabric, the loss of architectural details, functional disconnection, and weakened symbolic value place it at significant risk of further deterioration. Conservation efforts should prioritize restoring the façade and reinforcing the structure to mitigate further degradation. Future adaptive reuse strategies must be designed with sensitivity to the building's original residential function while accommodating contemporary needs. Equally crucial is fostering public engagement and implementing policies that can reestablish Fazal Chambers as a historically significant landmark within the Kohri Garden precinct. Without timely intervention, continued neglect will erode its authenticity, ultimately jeopardizing its long-term viability as a heritage site.

Figure 6.48

Quantitative Architecture Authenticity Matrix- Author

Building No 7- Fazal Chambers								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					44	60
	Harmony and Visual compatibility with surroundings	16						
	Emotional Resonance		12					
Architectural / Structural Authenticity	Architectural Style/ Character			10			63	120
	Structural integrity		11					
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces		11					
	Retention of façade			10				
	Potential of Reversibility		11					
Functional / Activity	Compatibility			9			18	60
	Adaptability			8				
	Retention of primary Use				1			
General Perception on	Symbolic Value				5		10	40
	Existing Value/ Exceptional Value				5			
Total points scored							135	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **135 points**
The building fall in the
category of
Modest Value

Figure 6.49

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No 7- Fazal Chambers Quantitative Architecture Authenticity Matrix – Assessor-1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					43	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance			10				
Architectural / Structural Authenticity	Architectural Style/ Character			8			57	120
	Structural integrity			10				
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces			9				
	Retention of façade			10				
	Potential of Reversibility			10				
Functional / Activity	Compatibility			9			20	60
	Adaptability		11					
	Retention of primary Use					0		
General Perception on	Symbolic Value			9			17	40
	Existing Value/ Exceptional Value			8				
Total points scored							137	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 137 points
The building fall in the
category of
Modest Value

Figure 6.50

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No 7- Fazal Chambers Quantitative Architecture Authenticity Matrix Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					46	60
	Harmony and Visual compatibility with surroundings	18						
	Emotional Resonance			10				
Architectural / Structural Authenticity	Architectural Style/ Character		12				66	120
	Structural integrity		11					
	External details/ façade features		11					
	Spatial Layout/ Internal Spaces		11					
	Retention of façade			10				
	Potential of Reversibility		11					
Functional / Activity	Compatibility		11				25	60
	Adaptability		12					
	Retention of primary Use				2			
General Perception on	Symbolic Value		14				24	40
	Existing Value/ Exceptional Value			10				
Total points scored							161	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **161 points**
The building fall in the
category of
Significant Value

6.1.8 Building No.8 Feroz Chambers

Figure 6.51

Heritage Building Inventory Form-A

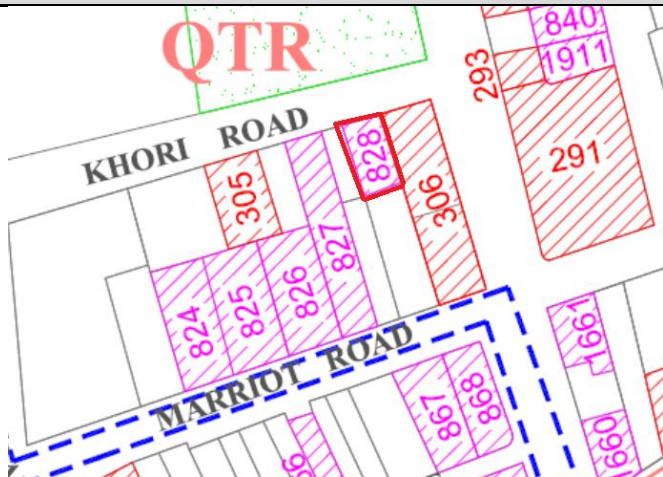
Data Collection and Analysis					Building No.08		
Heritage Building Inventory Form- A							
Name of the Building	Feroz Chambers	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change Commercial (offices & warehouse)	
				Change	✓		
Listed Building Ref. No.	MR-828	Structural System	Load Bearing	✓	Timber Frame		
			RCC		Pitched Roof		
			Other				
Precinct Name	Khori Garden						
Local Neighborhood Name	Khori Road	Material	Stone	✓	Wood		
			Block	✓	Other		
Complete Address	MR-1/ 46/ 1, Khori Road	Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above %)		35%		
Date of Construction	1912	Setting	Individual		Group Value	✓	
Number of Floors	G+3+1(Encroached Floor)	Current Physical Status (As per visual analysis)	Maintained		80%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Feroz Chamber, a British colonial building rising five stories high, was once a residential building but has now transformed into warehouses and offices for nearby shopkeepers. Nestled in a neighborhood rich with historically significant buildings, it stands right in front of Khori Garden. This architectural gem, with its rich history and adaptive reuse, remains a lively and integral part of the community's heritage.							

Figure 6.52

Heritage Building Inventory Form-B

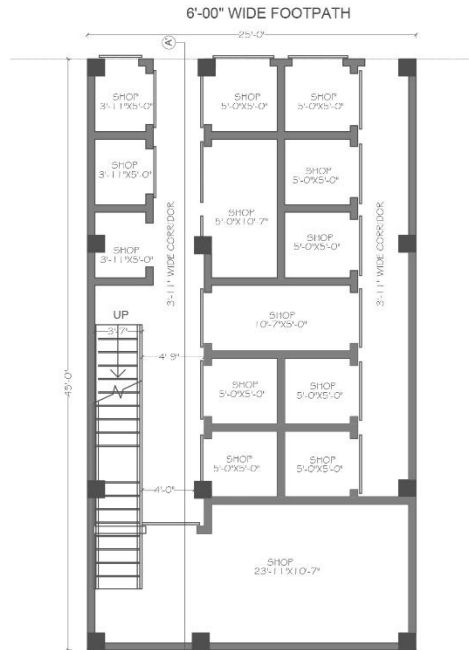
Heritage Building Inventory Form- B (Feroz Chambers)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any Comments		
Architectural Features and Elements Photos		
		

Figure 6.53

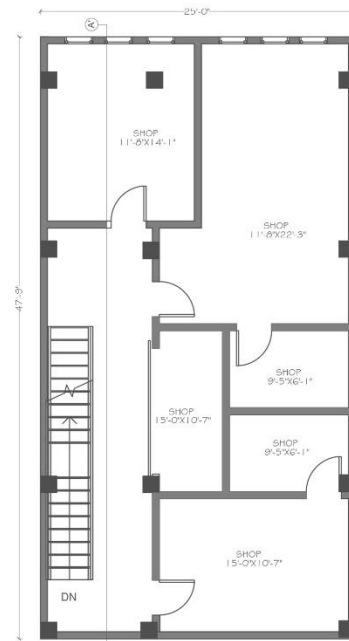
Drawings of Feroz Chambers

DRAWINGS OF FEROS CHAMBER

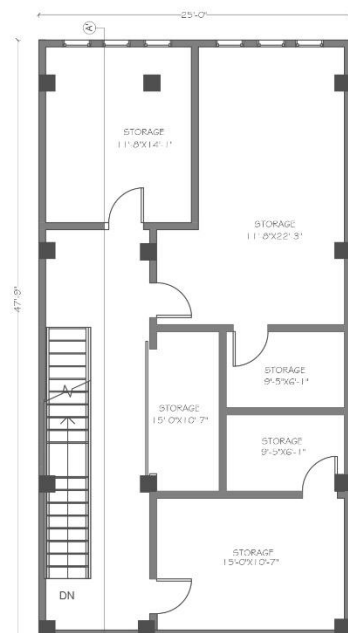
PLANS



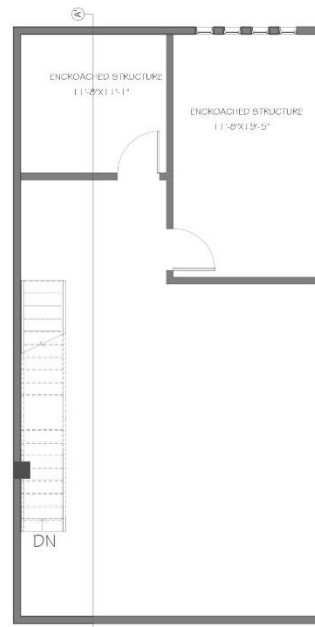
GROUND FLOOR PLAN



FIRST FLOOR PLAN



2ND & 3RD FLOOR PLAN

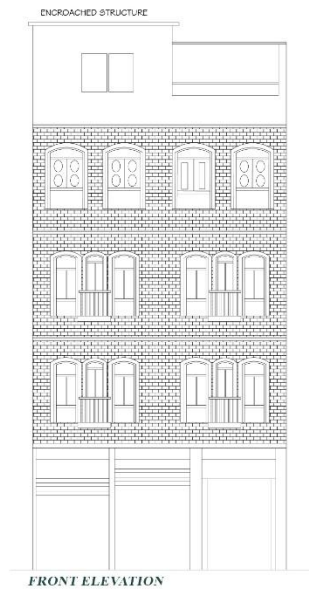


ROOF PLAN

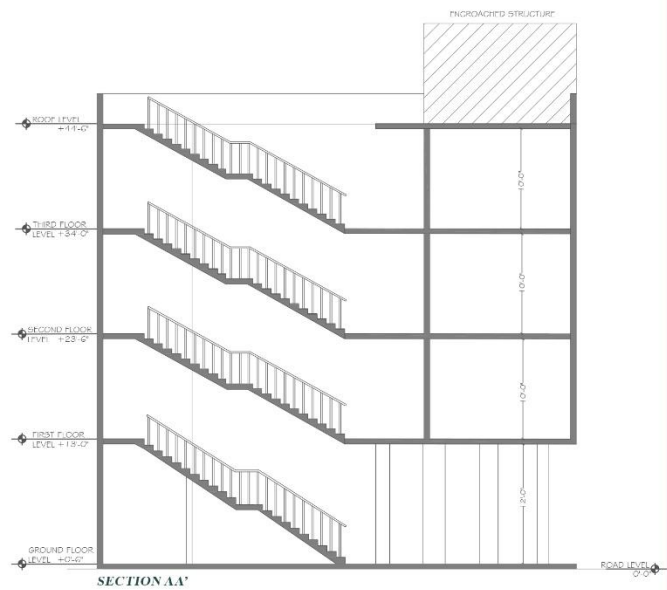
FEROS CHAMBER

DRAWINGS OF FERROZ CHAMBER

ELEVATION

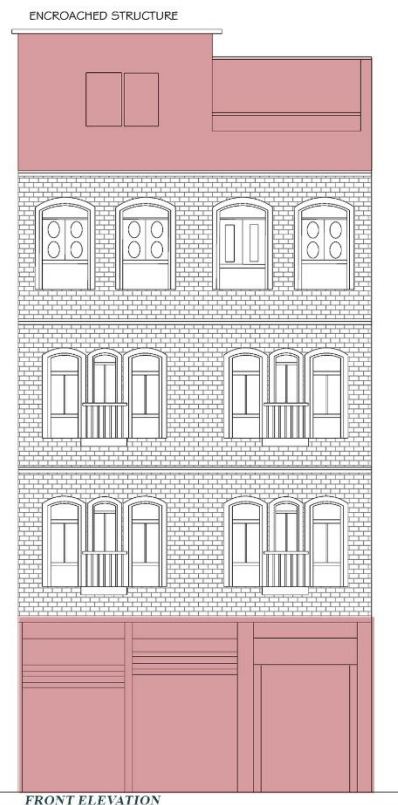


SECTION



ALTERATION MAPPING

LEGEND	
	MAJOR ALTERATION
	MINOR ALTERATION



FERROZ CHAMBER

Feroz Chambers, a British colonial-era building situated on Khori Road within the historically significant Khori Garden precinct, is a prominent architectural landmark that continues to contribute to the urban fabric. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MR-828, this load-bearing stone structure was originally designed as a residential building but has since undergone a functional transformation, now serving as commercial offices and warehouses for local businesses. Feroz Chambers holds group value, reinforcing the historic character of the Khori Garden precinct. The building remains in a relatively well-preserved condition, maintaining 80% of its original structural integrity, despite undergoing approximately 35% alteration. These changes primarily accommodate its adaptive reuse, yet the building's architectural elements continue to reflect its colonial-era identity. Constructed in 1912, it represents an important phase in Karachi's architectural development, characterized by the use of durable materials and intricate detailing.

The material authenticity of Feroz Chambers is evident in its yellow limestone masonry, wooden elements, and block construction, materials commonly associated with colonial buildings in Karachi. Architecturally, the building exhibits a range of classical design features, including arched openings, pilasters, moldings, and cornices, which enhance its façade's ornamental quality. Additionally, decorative grillwork and an ornamented parapet contribute to its historical aesthetic. However, the construction of an additional encroached floor disrupts the original proportions of the structure, raising concerns regarding unregulated modifications and their long-term impact on architectural authenticity.

Despite these alterations, Feroz Chambers remains a significant contributor to its historic setting, particularly due to its strategic location opposite Khori Garden, an area surrounded by other heritage structures. Its transformation from a residential building into a commercial hub reflects broader trends of adaptive reuse, where heritage structures continue to play an active role in Karachi's evolving urban landscape. While this ensures the building's continued relevance, it also highlights the ongoing challenge of balancing preservation with contemporary urban demands. As a notable example of Karachi's colonial architectural heritage, Feroz Chambers exemplifies the complexities of heritage conservation within a rapidly changing city. While its current maintenance level ensures its continued presence in the urban environment, further

unregulated alterations could compromise its historical authenticity. The case of Feroz Chambers underscores the need for structured conservation strategies that protect the architectural integrity of heritage buildings while accommodating their evolving functional roles.

6.1.8.1 Place Authenticity Matrix – Feroz Chambers

Figure 6.54

Place Authenticity Matrix – Feroz Chambers

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	***	**
	Spatial Configuration	*	**	**	**
	Symbolic Significance	**	**	***	**
	Evolution and Adaptation	*	***	**	*

* Low Authenticity ** Medium Authenticity *** High Authenticity

Feroz Chambers, a British colonial-era building, remains a significant architectural landmark within the historically important Khori Garden precinct. Originally constructed in 1912 as a residential structure, it has since undergone a functional transformation, now serving as commercial offices and warehouses for local businesses. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MR-828, Feroz Chambers holds group value, reinforcing the historic character of Khori Garden. Despite 35% alteration, the building retains 80% of its original structural integrity, demonstrating a relatively well-preserved condition.

In terms of historic narrative, Feroz Chambers exhibits medium to high authenticity, as it represents an important phase in Karachi's colonial architectural evolution. Constructed using durable materials such as yellow limestone masonry, wooden elements, and block construction, it retains significant material authenticity despite some modifications. The addition of an encroached floor has disrupted the original proportions, raising concerns about unregulated changes impacting its architectural

integrity. Cultural identity maintains high authenticity, as Feroz Chambers continues to define the streetscape of Khorī Garden, an area surrounded by other heritage structures. The building's classical architectural features, including arched openings, pilasters, moldings, cornices, decorative grillwork, and an ornamented parapet, reinforce its historical aesthetic. However, the functional shift from residential use to a commercial hub reflects broader trends of adaptive reuse, which, while ensuring continued relevance, also present challenges in balancing preservation with evolving urban needs.

Physical maintenance demonstrates medium to high authenticity, as the building is structurally stable, with most of its original architectural features intact. However, ongoing alterations, including the addition of an extra floor, have begun to affect its visual coherence. If unregulated modifications persist, the building's historical authenticity may be further compromised, necessitating structured conservation efforts to preserve its architectural integrity. Community engagement presents medium authenticity, as Feroz Chambers remains actively used within the commercial sector, ensuring its continued relevance within Karachi's evolving urban landscape. However, its role as a historical landmark is somewhat diminished, as commercial activities have overtaken its original residential function. The lack of formal heritage appreciation initiatives within the precinct further reduces its engagement with the broader public as a cultural asset.

Evolution and adaptation reflect medium authenticity, as the building's adaptive reuse aligns with economic and urban transformations in Karachi. While repurposing heritage structures is a pragmatic conservation strategy, unregulated interventions, such as the encroached floor, raise concerns about long-term authenticity loss. If future modifications continue without heritage-sensitive oversight, the architectural and historical significance of Feroz Chambers may become further diluted.

As a notable example of colonial-era architecture, Feroz Chambers illustrates the complexities of heritage conservation in a rapidly changing urban environment. While its current maintenance level ensures its continued presence, future unregulated changes could pose significant risks to its authenticity. The case of Feroz Chambers highlights the importance of structured conservation strategies, ensuring that heritage buildings remain architecturally intact while evolving to meet contemporary functional needs.

6.1.8.2 Quantitative Authenticity Assessment Matrix; Analysis

Feroz Chambers, a British colonial-era building constructed in 1912, remains a key architectural landmark within Karachi's historically significant Khorī Garden precinct. Originally designed as a residential structure, it has since undergone functional transformation, now serving as commercial offices and warehouses for local businesses. While this adaptation ensures its continued relevance, it also presents challenges in maintaining historical authenticity. Despite being listed under the Sindh Cultural Heritage Preservation Act (1994) with reference number MR-828, the building faces ongoing modifications, including the addition of an encroached floor, which has disrupted its original proportions.

The QAAM assessment by three evaluators placed Feroz Chambers within the 'Significant Value' category, with scores ranging from 143 to 173 out of 280. The evaluation highlights a moderate to high level of authenticity across various dimensions, particularly in contextual integrity and material authenticity. The building maintains 80% of its original structural integrity, demonstrating resilience despite alterations. It continues to define the streetscape of Khorī Garden, preserving its visual harmony within a precinct characterized by similar heritage structures. Contextual authenticity remains strong, with scores between 40 and 48 out of 60, reflecting the building's ability to retain its historical presence and group value. Its classical features, including arched openings, pilasters, moldings, cornices, decorative grillwork, and an ornamented parapet, reinforce its colonial-era aesthetic, though some elements have deteriorated due to neglect and unregulated modifications.

Architectural and structural authenticity received scores ranging from 55 to 75 out of 120, indicating a moderate level of preservation. The use of durable materials such as yellow limestone masonry and wooden elements has ensured significant material retention. However, the encroached floor and interior modifications have altered spatial configurations, affecting the building's overall coherence. While the façade retains much of its original design, continued unauthorized interventions threaten its long-term architectural integrity.

Functional authenticity presents a more complex scenario, scoring between 28 and 30 out of 60. The shift from residential to commercial use aligns with broader urban transformations but has diminished the building's historical purpose. Unlike adaptive

reuse projects that integrate heritage-sensitive strategies, the commercial conversion of Feroz Chambers lacks structured oversight, leading to unchecked modifications that risk further eroding its authenticity. The retention of primary use was rated particularly low, with one assessment assigning it just 0 to 3 points.

Symbolic authenticity, evaluated between 18 and 22 out of 40, reflects a moderate level of cultural resonance. While the building remains a recognizable feature of Khorī Garden, its role as a heritage asset has been overshadowed by its commercial function. The absence of formal heritage appreciation initiatives within the precinct has further reduced public engagement with its historical significance.

The assessment of Feroz Chambers underscores the complexities of heritage conservation within a rapidly evolving urban landscape. While the building remains structurally stable and visually significant, continued unregulated alterations, particularly the addition of extra floors, pose risks to its authenticity. Without structured conservation efforts, these modifications could progressively diminish its historical and architectural value. Implementing heritage-sensitive adaptation strategies is essential to ensure that Feroz Chambers retains its colonial-era character while accommodating contemporary functional needs. A balance between preservation and adaptive reuse must be established to safeguard the building's role within Karachi's heritage fabric. If conservation measures are not enforced, ongoing encroachments and unchecked alterations may ultimately compromise its long-term authenticity and cultural significance.

Figure 6.55

Quantitative Architecture Authenticity Matrix- Author

Building No. 8- Feroz Chambers								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	17					48	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character		13				75	120
	Structural integrity		12					
	External details/ façade features		12					
	Spatial Layout/ Internal Spaces	16						
	Retention of façade		12					
	Potential of Reversibility			10				
Functional / Activity	Compatibility		11				28	60
	Adaptability		14					
	Retention of primary Use					3		
General Perception on	Symbolic Value			10			22	40
	Existing Value/ Exceptional Value		12					
Total points scored							173	280
Group	Authenticity Value	Score Limit	 Score achieved- 173 points The building fall in the category of Significant Value					
A	Highly significant value	280-211=70						
B	Significant value	210-141=70						
C	Modest Value	140-71=70						
D	No value	70-0=70						

Figure 6.56

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No. 8- Feroz Chambers								
Quantitative Architecture Authenticity Matrix - Assessor 1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	17					48	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character		11				64	120
	Structural integrity		11					
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces		12					
	Retention of façade			10				
	Potential of Reversibility			10				
Functional / Activity	Compatibility	16					30	60
	Adaptability		14					
	Retention of primary Use					0		
General Perception on	Symbolic Value			10			22	40
	Existing Value/ Exceptional Value		12					
Total points scored							164	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70

Score achieved- **164 points**

The building fall in the category of **Significant Value**

Figure 6.57

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No. 8- Feroz Chambers								
Quantitative Architecture Authenticity Matrix - Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					40	60
	Harmony and Visual compatibility with surroundings		12					
	Emotional Resonance		12					
Architectural / Structural Authenticity	Architectural Style/ Character		11				55	120
	Structural integrity			10				
	External details/ façade features			8				
	Spatial Layout/ Internal Spaces		11					
	Retention of façade			8				
	Potential of Reversibility			7				
Functional / Activity	Compatibility	16					30	60
	Adaptability		12					
	Retention of primary Use				2			
General Perception on	Symbolic Value			8			18	40
	Existing Value/ Exceptional Value			10				
Total points scored							143	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **143 points**
The building fall in the
category of
Significant Value

6.1.9 Building No.9 Khadija Bai Building

Figure 6.58

Heritage Building Inventory Form-A

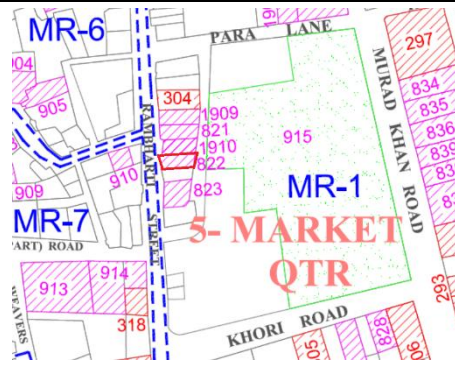
Data Collection and Analysis				Building No.09			
Heritage Building Inventory Form- A							
Name of the Building	Khadija Bai Building	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change GF- Commercial Other Floors- Abandoned	
Change	✓						
Listed Building Ref. No.	MAR-822	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Rambharti Street		RCC		Pitched Roof		
Local Neighborhood Name	Kohri Garden		Other				
Complete Address	MR-1/32, Rambharti Street	Material	Stone		Wood	✓	
			Block		Other		
Date of Construction		Level of Alteration (As per visual analysis)	Minor (0-20%)		18%		
			Major (20 or above %)				
Number of Floors	G+4	Current Physical Status (As per visual analysis)	Individual		Group Value		
			Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
Khadija bai building is located on Ram Bharti Street surrounded by few other heritage buildings as well. Unfortunately, as much as the fascinating façade catches the attention of visitors, the internal spaces are not functioning as they used to in the past. Originally, the building functioned as residential cum commercial but now, the ground floor is used for commercial use and upper floors are abandoned and currently in no use. The façade displays beautiful architectural details such as decorated parapet, moldings of two different kinds, ornamented capitals and cornice etc.							

Figure 6.59

Heritage Building Inventory Form-B

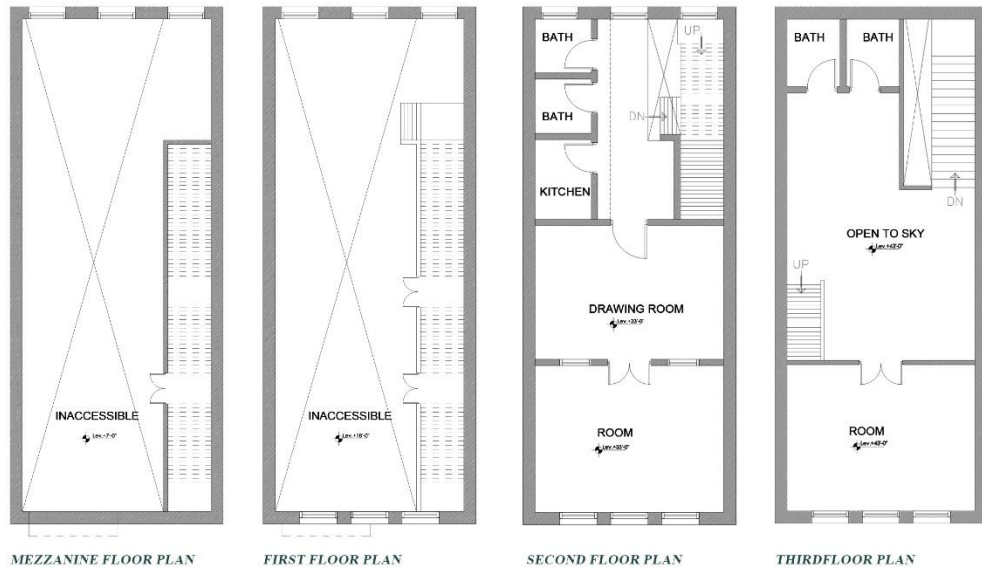
Heritage Building Inventory Form- B (Khadija Bai Building)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments ✓	☐ Pitched Roof	☐ Lime Plaster ✓
☐ Windowsill ✓	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint
☐ Ornamented parapet ✓	☐ Terrace	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
		

Figure 6.60

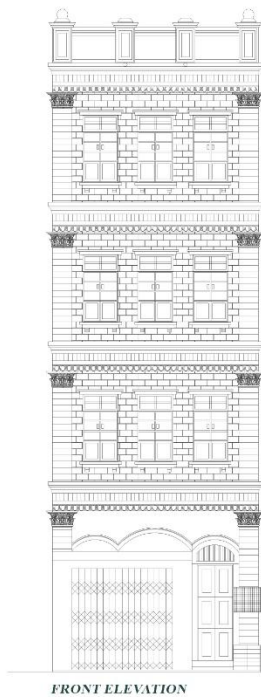
Drawings of Khadija Bai Building

DRAWINGS OF KHADIJA BAI BUILDING

PLANS

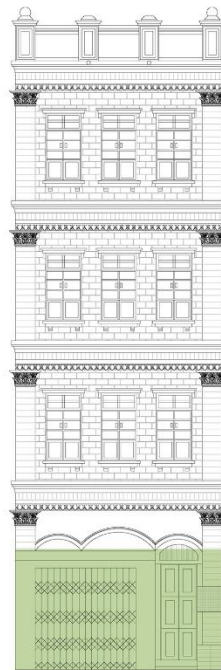


ELEVATION



FRONT ELEVATION

ALTERATION MAPPING



FRONT ELEVATION



ROOF PLAN

LEGEND

- MAJOR ALTERATION
- MINOR ALTERATION

KHADIJA BAI BUILDING

Khadija Bai Building, a colonial-era heritage structure situated on Rambharti Street within the Khori Garden neighborhood, stands as a testament to Karachi's architectural legacy. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-822, this load-bearing stone structure originally functioned as a mixed-use residential and commercial building. Over time, its use has evolved, with the ground floor currently occupied by commercial establishments, while the upper floors remain abandoned, signaling a shift in its functional relevance within the urban landscape.

Despite its altered usage, Khadija Bai Building retains a high degree of material authenticity and architectural integrity, with only 18% alteration observed. The structure remains in a well-maintained condition, with 90% of its physical fabric preserved. Though the building no longer serves its original purpose entirely, its presence continues to contribute to the historic character of Rambharti Street. The surrounding precinct features other heritage structures, reinforcing the collective value of the built environment in this part of the city. Architecturally, the building exhibits a distinctive colonial aesthetic, with yellow limestone masonry, wooden elements, and lime plaster as its primary materials. Its façade remains one of its most striking features, displaying an array of ornamental details, including decorated parapets, moldings of varying styles, pilasters, pediments, and intricately adorned capitals. The presence of these elements enhances the visual prominence of the building, ensuring its continued recognition as a significant historic landmark. Additionally, elements such as window sills, cornices, and decorative grillwork further enrich the building's architectural vocabulary.

The building's abandonment of its upper floors highlights ongoing challenges in heritage conservation, particularly concerning adaptive reuse and sustainable maintenance. While the ground floor's commercial activity sustains some level of upkeep, the disuse of the upper floors presents a risk of gradual deterioration, potentially affecting the overall structural stability in the long term. The contrast between the vibrancy of the active commercial ground floor and the silent decay of the upper levels underscores the broader issue of heritage neglect amid urban development pressures. As a vital part of Karachi's colonial architectural heritage, Khadija Bai Building reflects both the potential and the vulnerability of historic structures in the city. Its continued maintenance at the ground level suggests an opportunity for

adaptive reuse strategies that could reintegrate the upper floors into the functional urban fabric. With careful restoration and conservation efforts, the building could regain its original vitality, ensuring that its architectural and historical significance remains preserved for future generations.

6.1.9.1 Place Authenticity Matrix – Khadija Bai Building

Figure 6.61

Place Authenticity Matrix – Khadija Bai Building

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	***	**
	Spatial Configuration	**	**	***	**
	Symbolic Significance	**	***	**	**
	Evolution and Adaptation	**	**	*	**

* Low Authenticity ** Medium Authenticity *** High Authenticity

Khadija Bai Building, a colonial-era heritage structure located on Rambharti Street within the Khorī Garden neighborhood, is a testament to Karachi’s architectural legacy. This load-bearing stone structure was originally designed as a mixed-use residential and commercial building. Over time, its function has evolved, with the ground floor now occupied by commercial establishments, while the upper floors remain abandoned, highlighting a shift in its urban relevance.

Despite this partial disuse, Khadija Bai Building retains a high degree of material authenticity, with only 18% alteration observed. It remains in a well-maintained condition, with 90% of its physical fabric preserved. Its continued presence reinforces the historic character of Rambharti Street, contributing to the group value of surrounding heritage structures in Khorī Garden.

Historic narrative authenticity is medium to high, as the building’s colonial-era origins remain evident in its architectural integrity and preserved materiality. Constructed with yellow limestone masonry, wooden elements, and lime plaster, it showcases a

distinctive colonial aesthetic. The building's façade is particularly notable, featuring decorated parapets, moldings, pilasters, pediments, and intricately adorned capitals, which enhance its architectural prominence. Additional elements such as window sills, cornices, and decorative grillwork further enrich its historic visual identity. Cultural identity reflects high authenticity, as the building remains an integral part of Rambharti Street's historic urban fabric. Its architectural significance and ornamental quality contribute to the collective memory of the area, ensuring its continued recognition as a heritage landmark. However, the functional decline of its upper floors presents a challenge, as partial abandonment diminishes its role in the evolving urban landscape.

Physical maintenance is high, particularly on the commercially active ground floor, which sustains some level of upkeep. However, the abandonment of the upper floors introduces concerns about gradual deterioration, which could affect long-term structural stability. If left unaddressed, neglect at the upper levels may accelerate decay, reducing the building's overall preservation quality. Community engagement presents medium authenticity, as the commercial function on the ground floor ensures ongoing interaction with the urban environment. However, the inactive upper floors reduce the building's full engagement potential, creating a stark contrast between commercial vibrancy and neglected spaces. This reflects a broader issue in heritage conservation, where historic structures remain partially utilized but lack a comprehensive strategy for sustainable reuse.

Evolution and adaptation show medium authenticity, as the building's transition from a residential-commercial mix to primarily commercial use aligns with urban economic shifts. While this adaptive reuse sustains the ground floor, the inactivity of the upper levels poses a conservation challenge. Without intervention, the imbalance between use and neglect may lead to further deterioration, threatening the building's long-term viability.

As a vital part of Karachi's colonial architectural heritage, Khadija Bai Building embodies both the potential and vulnerabilities of historic structures in the city. While partial maintenance has preserved much of its material authenticity, the disuse of upper floors presents a risk. Its case underscores the need for adaptive reuse strategies that could reintegrate abandoned spaces, ensuring that its architectural and historical significance remains intact for future generations. A targeted conservation effort

focusing on restoring the upper floors could revitalize the building, allowing it to function as a cohesive historic asset within the evolving urban landscape.

6.1.9.2 Quantitative Authenticity Assessment Matrix; Analysis

Khadija Bai Building, a colonial-era heritage structure situated on Rambharti Street within Karachi's Khorī Garden neighborhood, stands as a significant architectural remnant of the city's historic fabric. Originally designed as a mixed-use residential and commercial building, it has undergone functional shifts over time, with the ground floor now occupied by commercial establishments while the upper floors remain abandoned. This evolving urban role highlights both the persistence of its historical presence and the challenges posed by partial disuse.

Despite this shift, the building retains a high degree of material authenticity, with only 18% alteration observed, preserving 90% of its original physical fabric. As a result, it continues to reinforce the historic streetscape of Rambharti Street, contributing to the collective identity of the Khorī Garden precinct. The architectural integrity of Khadija Bai Building remains largely intact, as evidenced by its medium to high historic narrative authenticity. Its colonial-era construction, featuring yellow limestone masonry, wooden elements, and lime plaster, showcases a distinctive aesthetic that aligns with the broader visual character of Karachi's historic districts. The façade is particularly notable, featuring ornamented parapets, pilasters, moldings, pediments, and intricate capitals, alongside decorative window sills, cornices, and grillwork, all of which enhance its architectural prominence.

The QAAM assessment, conducted by three evaluators, positioned Khadija Bai Building within the 'Significant Value' category, with scores ranging from 166 to 185 out of 280. Contextual authenticity remains a key strength, with scores between 37 and 43 out of 60, affirming the building's continued relevance within its historic setting. Its role in defining the streetscape and maintaining group value within the Khorī Garden precinct ensures strong harmony and visual compatibility with its surroundings.

Architectural and structural authenticity, assessed between 96 and 99 out of 120, highlights the building's largely intact material condition. The retention of façade elements, structural integrity, and potential for reversibility remain strong, though concerns arise regarding the abandoned upper floors, which may be at risk of gradual

deterioration. While its architectural character remains well preserved, the lack of active intervention for the upper levels introduces a vulnerability that could compromise long-term conservation. Functional authenticity presents a mixed evaluation, scoring between 10 and 28 out of 60. The shift from residential-commercial use to a predominantly commercial function aligns with broader urban economic shifts but has contributed to partial abandonment, diminishing the building's holistic utility. While the active ground floor ensures some degree of upkeep, the vacant upper floors create a stark contrast between maintained and neglected spaces. This imbalance raises concerns about potential long-term decay if conservation strategies are not implemented. Symbolic authenticity, rated between 19 and 20 out of 40, reflects the building's continued cultural significance. Khadija Bai Building remains an integral part of Rambharti Street's historic urban fabric, contributing to the collective memory and architectural identity of the area. However, the lack of structured community engagement and conservation initiatives limits its role as an actively recognized heritage asset.

The case of Khadija Bai Building underscores the dual challenge of preservation and sustainable adaptation in Karachi's rapidly evolving urban landscape. While its material integrity and architectural character remain largely intact, the disuse of the upper floors threatens its long-term stability. Without targeted adaptive reuse strategies, the building risks progressive neglect, ultimately compromising its role within the historic fabric of Khorī Garden. Conservation efforts focused on reintegrating the upper floors into active use could revitalize the building, ensuring its architectural and historical significance endures for future generations.

Figure 6.62

Quantitative Architecture Authenticity Matrix- Author

Building No 9- Khadija Bai Building Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				42	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance			12				
Architectural / Structural Authenticity	Architectural Style/ Character	16					96	120
	Structural integrity	16						
	External details/ façade features	17						
	Spatial Layout/ Internal Spaces		14					
	Retention of façade	17						
	Potential of Reversibility	16						
Functional / Activity	Compatibility			10			28	60
	Adaptability		12					
	Retention of primary Use			6				
General Perception on	Symbolic Value		11				19	40
	Existing Value/ Exceptional Value			8				
Total points scored							185	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **185 points**
The building fall in the category of
Significant Value

Figure 6.63

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No 9- Khadija Bai Building								
Quantitative Architecture Authenticity Matrix – Assessor-1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				37	60
	Harmony and Visual compatibility with surroundings		12					
	Emotional Resonance			10				
Architectural / Structural Authenticity	Architectural Style/ Character		15				96	120
	Structural integrity		15					
	External details/ façade features	17						
	Spatial Layout/ Internal Spaces		15					
	Retention of façade	16						
	Potential of Reversibility	18						
Functional / Activity	Compatibility			6			13	60
	Adaptability			6				
	Retention of primary Use				1			
General Perception on	Symbolic Value			10			20	40
	Existing Value/ Exceptional Value			10				
Total points scored							166	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **166 points**
The building fall in the
category of
Significant Value

Figure 6.64

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No 9- Khadija Bai Building								
Quantitative Architecture Authenticity Matrix - Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					43	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance			12				
Architectural / Structural Authenticity	Architectural Style/ Character	16					99	120
	Structural integrity		15					
	External details/ façade features	18						
	Spatial Layout/ Internal Spaces	16						
	Retention of façade	18						
	Potential of Reversibility	16						
Functional / Activity	Compatibility				5		10	60
	Adaptability				5			
	Retention of primary Use					0		
General Perception on	Symbolic Value		11				19	40
	Existing Value/ Exceptional Value			8				
Total points scored							171	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- 171 points

The building fall in the category of

Significant Value

6.1.10 Building No.10 Pakistan Chemical And Dye

Figure 6.65

Heritage Building Inventory Form-A

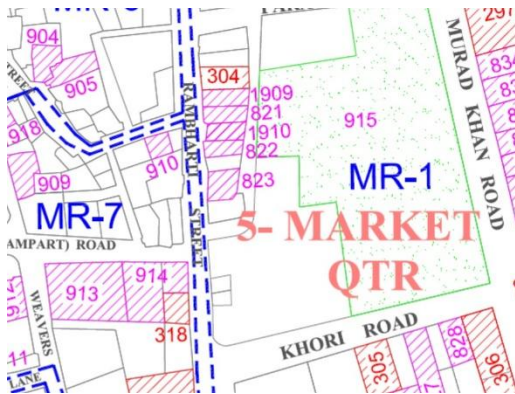
Data Collection and Analysis					Building No.10		
Heritage Building Inventory Form- A							
Name of the Building	Pakistan Chemical & Dye House	Functional Use	Original Use	Residential		Institutional	
				Commercial	✓	Recreational	
				Mixed Use		Other	
			Current Use	Original	✓	In case of change	
				Change			
Listed Building Ref. No.	MAR-1909	Structural System	Load Bearing	✓	Timber Frame		
			RCC		Pitched Roof		
Precinct Name	Rambharti Street		Other				
Local Neighborhood Name	Jodia Bazar	Material	Stone	✓	Wood		
			Block	✓	Other		
Complete Address	MR-1/29, Rambharti Street	Level of Alteration (As per visual analysis)	Minor (0-20%)		30%		
			Major (20 or above %)				
Date of Construction		Setting	Individual		Group Value	✓	
Number of Floors	G+4	Current Physical Status (As per visual analysis)	Maintained		90%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
The building, known as Pakistan Chemicals and Dyes House, is a prominent chemical and dyes houses located in Jodia Bazar. It serves primarily as an office and retail space. This colonial-era structure features subtle yet distinctive architectural elements from that period.							

Figure 6.66

Heritage Building Inventory Form-B

Heritage Building Inventory Form- B (Pakistan Chemical & Dye House)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster ✓
☐ Windowsill	☐ Dome	☐ Wood
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC✓
☐ Carving	☐ Courtyard	☐ Paint✓
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features Festoon	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
  		

Figure 6.67

Drawings of Pakistan Chemical And Dye



Pakistan Chemical & Dye House, a colonial-era commercial structure located on Rambharti Street within the Jodia Bazar neighborhood, remains an active participant in Karachi's historic trading district. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-1909, the building has retained its original function as a commercial space, serving as an office and retail establishment specializing in chemicals and dyes. Its continued use within the same trade reflects its sustained economic relevance in the historic market precinct.

The building's architectural composition aligns with colonial-era commercial typologies, featuring a load-bearing stone structure with wooden and block elements. Despite undergoing approximately 30% alteration, the structure maintains a well-preserved condition, with 90% of its physical fabric intact. Its group value is reinforced by its integration within the dense commercial fabric of Jodia Bazar, where similar heritage structures contribute to the collective identity of the area.

While the architectural detailing is relatively restrained compared to more ornamented colonial-era buildings, Pakistan Chemical & Dye House exhibits select decorative features that enhance its visual identity. The façade incorporates pilasters, decorated capitals, and cornices, reflecting the stylistic preferences of its time. The presence of festoon motifs adds a distinctive ornamental touch, distinguishing the structure within its urban context. Additional elements, such as grill work and a terrace, contribute to its architectural coherence while maintaining its commercial functionality. The building's sustained commercial use has facilitated its maintenance, ensuring its structural longevity. However, the observed alterations highlight the pressures of modernization within heritage precincts. The balance between preserving historical integrity and accommodating contemporary commercial demands remains a critical consideration for long-term conservation efforts.

As an example of Karachi's understated colonial commercial architecture, Pakistan Chemical & Dye House illustrates the enduring legacy of historic market spaces within the city's evolving urban framework. Its continued operation within its original trade sector underscores the economic resilience of heritage structures, reinforcing the importance of adaptive conservation approaches that support both preservation and functional viability.

6.1.10.1 Place Authenticity Matrix – Pakistan Chemical and Dye

Figure 6.68

Place Authenticity Matrix – Pakistan Chemical and Dye

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	**	***	**
	Spatial Configuration	***	**	***	*
	Symbolic Significance	**	**	**	**
	Evolution and Adaptation	**	***	***	*

* Low Authenticity ** Medium Authenticity *** High Authenticity

Pakistan Chemical & Dye House, a colonial-era commercial structure located on Rambharti Street within the Jodia Bazar neighborhood, remains an enduring element of Karachi's historic trading district. The building has retained its original commercial function, continuing to serve as an office and retail space specializing in chemicals and dyes. Its uninterrupted use within the same trade sector highlights its economic resilience and sustained relevance within the historic market precinct. Despite minor modifications, Pakistan Chemical & Dye House has maintained a high level of material authenticity, with only 30% alteration recorded. Approximately 90% of its original physical fabric remains intact, ensuring that the building continues to contribute to the group value of Jodia Bazar, where similar heritage structures reinforce the historic character of the precinct.

The building demonstrates medium-to-high historic narrative authenticity, as its colonial-era origins remain discernible in both its architectural typology and sustained commercial use. Constructed using a load-bearing stone framework with wooden and block components, the structure adheres to the pragmatic yet enduring commercial designs of its time. While less ornamented than some contemporaneous colonial-era buildings, its façade remains visually distinguished, featuring pilasters, decorated capitals, and cornices. The presence of festoon motifs and intricate grillwork enhances

its architectural identity, reinforcing its place within Karachi's historic mercantile environment.

Cultural identity authenticity is high, as the building remains fully operational within its original trade and continues to serve as an active component of Jodia Bazar's historic urban fabric. Its architectural expression and commercial continuity ensure that it retains both its symbolic and functional significance within the area. Physical maintenance authenticity is also high, largely due to its ongoing commercial use, which has facilitated regular upkeep. The building's structural stability remains largely intact, though the observed alterations reflect pressures of modernization within heritage precincts. These changes, while necessary for functionality, must be managed carefully to prevent gradual erosion of architectural integrity.

Community engagement authenticity presents a medium rating, as the building's commercial function encourages interaction with the urban environment. However, its engagement is limited to trade and commerce, with little evidence of broader heritage-related initiatives that could enhance public awareness of its historic significance.

Evolution and adaptation authenticity is medium, as the building's ability to sustain its original commercial role reflects an adaptive resilience within Karachi's evolving urban economy. However, the introduction of modern interventions and material substitutions signifies the tension between conservation and functional demands. Future conservation strategies should aim to balance historic preservation with adaptive reuse, ensuring that any modifications respect the building's architectural and historical essence.

As an integral part of Karachi's colonial-era commercial heritage, Pakistan Chemical & Dye House serves as a case study in the longevity of historic market structures. While continued commercial use has supported its preservation, future conservation efforts must consider context-sensitive interventions to safeguard its architectural authenticity. A heritage-sensitive maintenance plan that prioritizes original material retention and sympathetic adaptations could ensure the building's sustained relevance and preservation for future generations.

Quantitative Authenticity Assessment Matrix; Analysis

Pakistan Chemical & Dye House, a British colonial-era commercial structure located on Rambharti Street within the Jodia Bazar neighborhood, remains an enduring

element of Karachi's historic trading district. Originally constructed as a commercial facility, it has retained its original function, continuing to operate as an office and retail space specializing in chemicals and dyes. This uninterrupted use within the same trade sector highlights its economic resilience and sustained relevance within the historic market precinct. Despite minor modifications, the building has preserved a high level of material authenticity, with only 30% alteration recorded. Approximately 90% of its original physical fabric remains intact, reinforcing the group value of Jodia Bazar, where similar heritage structures define the precinct's historic character.

The QAAM assessment, conducted by three evaluators, placed Pakistan Chemical & Dye House within the 'Significant Value' category, with scores ranging from 182 to 193 out of 280. The evaluation highlights a moderate to high level of authenticity across various dimensions, particularly in contextual integrity and material authenticity. The building continues to define the streetscape of Jodia Bazar, maintaining visual harmony within a precinct characterized by similar heritage structures. Contextual authenticity, scored between 40 and 41 out of 60, reflects the building's ability to retain its historical presence and group value. Its setting and location received between 15 and 16 points, affirming its enduring role in Karachi's commercial heritage, while harmony with surroundings scored between 14 and 15 points, indicating a strong visual and functional integration within the precinct.

Architectural and structural authenticity, assessed between 64 and 69 out of 120, signifies a moderate to high level of preservation. The structural integrity received scores of 15 to 16 points, confirming the stability of its original load-bearing stone framework. The façade, though modest in ornamentation compared to other colonial-era structures, retains key decorative elements, including pilasters, capitals, cornices, and festoon motifs, which reinforce its historic mercantile identity. The retention of the façade was rated at 10 points across all assessments, reflecting minimal external alterations. However, potential for reversibility, rated between 6 and 8 points, suggests that some modern interventions could be addressed through careful conservation efforts.

Functional authenticity, rated between 49 and 53 out of 60, underscores the building's strong adaptive resilience. The retention of primary use received the highest scores (18 to 20 points), indicating that its continued commercial function aligns with its original intent. However, the introduction of modern interventions and material substitutions

signals the challenges of balancing conservation with contemporary functional demands.

Symbolic authenticity, evaluated between 27 and 31 out of 40, highlights the building's cultural significance within Jodia Bazar's trading community. Its historical and commercial continuity enhances its identity, yet the absence of formal heritage recognition or conservation initiatives has limited broader public engagement with its historical value.

Figure 6.69

Quantitative Architecture Authenticity Matrix- Author

Building No 10- Pakistan Chemical & Dye House								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				40	60
	Harmony and Visual compatibility with surroundings		14					
	Emotional Resonance		11					
Architectural / Structural Authenticity	Architectural Style/ Character		12				69	120
	Structural integrity		15					
	External details/ façade features		11					
	Spatial Layout/ Internal Spaces		15					
	Retention of façade			10				
	Potential of Reversibility			6				
Functional / Activity	Compatibility		15				49	60
	Adaptability	16						
	Retention of primary Use	18						
General Perception on	Symbolic Value		11				27	40
	Existing Value/ Exceptional Value	16						
Total points scored							185	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **185 points**

The building fall in the
category of
Significant Value

Figure 6.70

Quantitative Architecture Authenticity Matrix- Assessor 1

Building No 10- Pakistan Chemical & Dye House								
Quantitative Architecture Authenticity Matrix – Assessor-1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		15				40	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance			10				
Architectural / Structural Authenticity	Architectural Style/ Character			10			64	120
	Structural integrity		15					
	External details/ façade features			8				
	Spatial Layout/ Internal Spaces		15					
	Retention of façade			10				
	Potential of Reversibility			6				
Functional / Activity	Compatibility		15				51	60
	Adaptability	16						
	Retention of primary Use	20						
General Perception on	Symbolic Value		11				27	40
	Existing Value/ Exceptional Value	16						
Total points scored							182	280
Group	Authenticity Value		Score Limit		Score achieved- 182 points The building fall in the category of Significant Value			
A	Highly significant value		280-211=70					
B	Significant value		210-141=70					
C	Modest Value		140-71=70					
D	No value		70-0=70					

Figure 6.71

Quantitative Architecture Authenticity Matrix- Assessor 2

Building No 10- Pakistan Chemical & Dye House								
Quantitative Architecture Authenticity Matrix -Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					41	60
	Harmony and Visual compatibility with surroundings		15					
	Emotional Resonance			10				
Architectural / Structural Authenticity	Architectural Style/ Character			10			68	120
	Structural integrity	16						
	External details/ façade features			6				
	Spatial Layout/ Internal Spaces	18						
	Retention of façade			10				
	Potential of Reversibility			8				
Functional / Activity	Compatibility		15				53	60
	Adaptability	18						
	Retention of primary Use	20						
General Perception on	Symbolic Value		15				31	40
	Existing Value/ Exceptional Value	16						
Total points scored							193	280
Group	Authenticity Value	Score Limit		Score achieved- 193 points The building fall in the category of Significant Value				
A	Highly significant value	280-211=70						
B	Significant value	210-141=70						
C	Modest Value	140-71=70						
D	No value	70-0=70						

6.1.11 Building No.11 Quetta Wala Building

Figure 6.72

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.11			
Heritage Building Inventory Form- A							
Name of the Building	Quetta Wala Building	Functional Use	Original Use	Residential		Institutional	
				Commercial		Recreational	
				Mixed Use	✓	Other	
		Current Use	Original		In case of change		
Change	✓						
Listed Building Ref. No.	MAR-292	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Marriot Road		RCC	✓	Pitched Roof		
			Other				
Local Neighborhood Name	Kacchi Wada Lane 2	Material	Stone	✓	Wood	✓	
			Block	✓	Other		
Complete Address	MR-1/129 Marriot Road, Kacchi Wada Lane 2 Karachi 74000	Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above %)		35%		
Date of Construction		Setting	Individual		Group Value	✓	
Number of Floors	G+1	Current Physical Status (As per visual analysis)	Maintained		65%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
The Quetta Wala Building, a colonial structure, is located on the bustling Marriot Street, also known as Rah Guzar. This building holds significant importance due to its location. Currently, it is used for warehouse and several shops. Notable architectural features include arcades, pilasters, decorated capitals, and balustrades.							

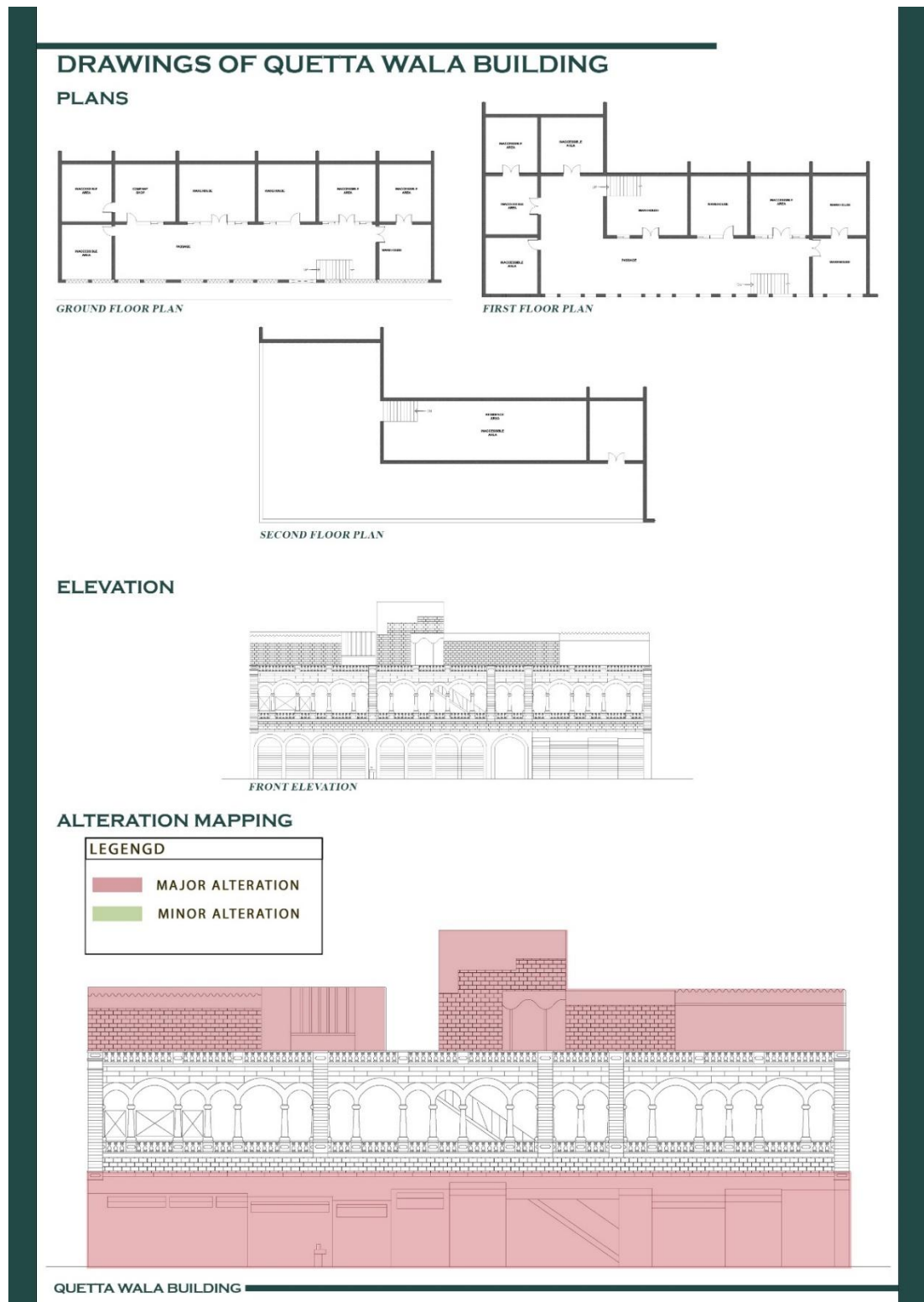
Figure 6.73

Heritage Building Inventory Form-B

Heritage Building Inventory Form- B (Quetta Wala Building)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade✓	☐ Red sand stone
☐ Pilasters ✓	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster
☐ Windowsill	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint✓
☐ Ornamented parapet✓	☐ Terrace	☐ Grill work in the building
☐ Other ornamental Features balustrade	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
  		

Figure 6.74

Drawings of Quetta Wala Building



Quetta Wala Building, a colonial-era structure situated on Marriott Road within Kacchi Wada Lane 2, remains an integral part of Karachi's historic commercial landscape. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-292, the building was originally designed for mixed-use purposes. Over time, its function has evolved, and it now accommodates a combination of warehouse storage and retail shops, reflecting the adaptive nature of heritage structures within the city's evolving commercial framework.

Architecturally, the building exemplifies the characteristics of colonial-era construction, featuring a load-bearing stone structure reinforced with wooden and block elements. It also incorporates RCC components, suggesting later modifications to accommodate structural needs. Despite undergoing approximately 35% alteration, Quetta Wala Building retains a maintained physical state, with 65% of its original fabric preserved. Its location along Marriott Road, also known as Rah Guzar, enhances its significance within the urban fabric, as it contributes to the group value of the precinct, where several heritage buildings collectively define the character of the area.

The building's façade features prominent architectural elements that reflect colonial stylistic influences. Arcades and pilasters structure its visual composition, while decorated capitals and balustrades add a layer of ornamental richness. The presence of cornices and moldings further enhances its aesthetic appeal, reinforcing its historical identity within the streetscape. Although some material changes and adaptations have occurred, key design elements remain legible, maintaining a connection to the building's original architectural intent. While the physical state of Quetta Wala Building indicates a moderate degree of maintenance, the level of alteration suggests ongoing challenges in balancing preservation with functional requirements. The adaptation of the structure for warehouse and retail use underscores the economic pressures driving modifications in historic commercial zones. Ensuring sustainable conservation efforts will be essential in safeguarding both the building's material integrity and its role within the broader historic environment.

As an example of colonial-era mixed-use architecture in Karachi, Quetta Wala Building stands as a testament to the layered history of the city's commercial districts. Its continued utilization, despite alterations, highlights the resilience of historic structures within changing urban dynamics. Conservation strategies that prioritize

material preservation while accommodating practical use will be key to maintaining the building's heritage value in the long term.

6.1.11.1 Place Authenticity Matrix – Quetta Wala Building

Figure 6.75

Place Authenticity Matrix – Quetta Wala Building

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	**	***	***	***
	Spatial Configuration	**	**	***	***
	Symbolic Significance	**	***	**	**
	Evolution and Adaptation	**	**	**	**

* Low Authenticity ** Medium Authenticity *** High Authenticity

Quetta Wala Building, a colonial-era structure situated on Marriott Road within Kacchi Wada Lane 2, remains a defining element of Karachi's historic commercial core. The building was originally designed for mixed-use purposes, reflecting the architectural and functional trends of the colonial period. Over time, its adaptive reuse as a warehouse and retail space highlights the dynamic evolution of commercial heritage buildings in Karachi's urban fabric. Despite undergoing approximately 35% alteration, Quetta Wala Building retains 65% of its original physical fabric, maintaining a moderate to high degree of material authenticity. Its strategic location along Marriott Road (Rah Guzar) enhances its group value, as it contributes to a cohesive historic streetscape alongside other heritage structures.

The building exhibits medium-to-high historic narrative authenticity, as its architectural integrity remains largely intact, despite modifications. Built with a load-bearing stone framework, reinforced with wooden and block elements, and later incorporating RCC components, it reflects colonial-era construction methods while accommodating structural updates over time. The façade composition remains a notable feature, showcasing arcades, pilasters, decorated capitals, balustrades,

moldings, and cornices. These elements reinforce its colonial stylistic influences, preserving its architectural presence within the streetscape.

Cultural identity authenticity is high, as the building continues to function within the commercial framework of Karachi's historic trading district. Its architectural expression and material composition ensure its continued recognition as a significant heritage asset within Marriott Road's evolving commercial landscape. Physical maintenance authenticity is moderate, as the building remains in functional use, ensuring a basic level of upkeep. However, material alterations and ongoing adaptations reflect the challenges of balancing preservation with commercial demands. Without sensitive conservation interventions, further modifications may gradually erode its architectural integrity.

Community engagement authenticity is medium, as the building's retail and warehouse functions encourage regular interaction with traders, shoppers, and the local workforce. However, its engagement is purely economic, lacking initiatives that promote public awareness of its heritage significance.

Evolution and adaptation authenticity is medium, as the building's transition from a mixed-use structure to a warehouse and retail hub demonstrates adaptive resilience. While this flexibility sustains its relevance, the extent of alterations and material substitutions reflects the pressures of modernization in historic commercial precincts. Conservation efforts should aim to balance adaptive reuse with architectural preservation, ensuring the building's longevity within Karachi's historic urban fabric.

As a significant example of colonial-era commercial architecture, Quetta Wala Building illustrates the challenges of heritage conservation within an evolving economic landscape. While continued commercial use has supported its preservation, future conservation strategies should emphasize heritage-sensitive interventions to safeguard its architectural integrity and historical relevance. A context-driven approach that encourages sustainable conservation alongside commercial viability could ensure the building's continued presence as a valued heritage asset.

6.1.11.2 Quantitative Authenticity Assessment Matrix; Analysis

Quetta Wala Building, a colonial-era structure situated on Marriott Road within Kacchi Wada Lane 2, remains a defining element of Karachi's historic commercial core. Originally designed for mixed-use purposes, the building reflects the architectural and

functional trends of the colonial period. Over time, its adaptation into a warehouse and retail space highlights the ongoing evolution of commercial heritage structures in Karachi's urban fabric. Despite undergoing approximately 35% alteration, Quetta Wala Building retains 65% of its original physical fabric, maintaining a moderate to high degree of material authenticity. Its strategic location along Marriott Road (Rah Guzar) enhances its group value, as it contributes to a cohesive historic streetscape alongside other heritage structures.

The QAAM assessment by three evaluators placed Quetta Wala Building within the 'Significant Value' category, with scores ranging from 213 to 231 out of 280. The evaluation highlights a moderate to high level of authenticity across various dimensions, particularly in contextual integrity and material authenticity. The building maintains strong contextual authenticity, with scores ranging from 52 to 56 out of 60, reflecting its ability to retain historical presence and visual harmony within its precinct. The setting and location of the structure were rated highly, scoring between 18 and 20 points, affirming its role as a heritage asset that continues to contribute to the commercial character of Marriott Road. Emotional resonance, reflecting the public's connection to the building, was also rated relatively high, ranging from 16 to 18 points.

Architectural and structural authenticity was assessed between 88 and 95 out of 120, signifying a moderate to high level of preservation. The structural integrity of the building, constructed with a load-bearing stone framework reinforced with wooden and block elements, scored between 15 and 16 points, confirming its stability. The façade, which features arcades, pilasters, decorated capitals, balustrades, moldings, and cornices, remains a significant visual marker of colonial-era aesthetics. Retention of the façade was scored between 14 and 15 points, indicating that while the exterior remains largely intact, some modifications have impacted the original design. The potential for reversibility, rated consistently at 16 points across all assessments, suggests that with careful conservation, recent alterations could be mitigated to restore original architectural elements.

Functional authenticity presents a balanced scenario, scoring between 43 and 49 out of 60. The building's transition from a mixed-use structure to a warehouse and retail hub demonstrates adaptability, with the adaptability component scoring between 16 and 18 points. However, while the shift aligns with broader commercial trends, the retention of primary use received lower scores, ranging between 12 and 15 points,

highlighting the shift away from its original intended function. Symbolic authenticity, evaluated between 29 and 32 out of 40, reflects a moderate to high level of cultural resonance. While the building remains a recognizable feature of Karachi's commercial heritage, its role as a heritage asset has been overshadowed by its economic function. The absence of formal heritage appreciation initiatives within the precinct has further reduced public engagement with its historical significance.

The assessment of Quetta Wala Building underscores the complexities of heritage conservation within a rapidly evolving urban landscape. While the building remains structurally stable and visually significant, continued commercial modifications present risks to its authenticity. Without structured conservation efforts, ongoing alterations, particularly material substitutions, could progressively diminish its historical and architectural value. Implementing heritage-sensitive adaptation strategies is essential to ensure that Quetta Wala Building retains its colonial-era character while accommodating contemporary functional needs. A balanced approach to preservation and adaptive reuse must be established to safeguard the building's role within Karachi's heritage fabric.

Figure 6.76

Quantitative Architecture Authenticity Matrix- Author

Building 11- Quetta Wala Building								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					54	60
	Harmony and Visual compatibility with surroundings	19						
	Emotional Resonance	17						
Architectural / Structural Authenticity	Architectural Style/ Character	16					88	120
	Structural integrity		15					
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces		13					
	Retention of façade		15					
	Potential of Reversibility	16						
Functional / Activity	Compatibility		15				43	60
	Adaptability	16						
	Retention of primary Use		12					
General Perception on	Symbolic Value		15				32	40
	Existing Value/ Exceptional Value	17						
Total points scored							217	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **217 points**
The building fall in the
category of
Highly Significant Value

Figure 6.77

Quantitative Architecture Authenticity Matrix- Assessor 1

Building 11- Quetta Wala Building								
Quantitative Architecture Authenticity Matrix Assessor-1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	18					52	60
	Harmony and Visual compatibility with surroundings	18						
	Emotional Resonance	16						
Architectural / Structural Authenticity	Architectural Style/ Character	16					89	120
	Structural integrity		15					
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces		15					
	Retention of façade		14					
	Potential of Reversibility	16						
Functional / Activity	Compatibility		15				43	60
	Adaptability	16						
	Retention of primary Use		12					
General Perception on	Symbolic Value		15				29	40
	Existing Value/ Exceptional Value		14					
Total points scored							213	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **213 points**
The building fall in the
category of
Highly Significant Value

Figure 6.78

Quantitative Architecture Authenticity Matrix- Assessor 2

Building 11- Quetta Wala Building								
Quantitative Architecture Authenticity Matrix Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	20					56	60
	Harmony and Visual compatibility with surroundings	18						
	Emotional Resonance	18						
Architectural / Structural Authenticity	Architectural Style/ Character		15				95	120
	Structural integrity	16						
	External details/ façade features		15					
	Spatial Layout/ Internal Spaces	18						
	Retention of façade		15					
	Potential of Reversibility	16						
Functional / Activity	Compatibility	16					49	60
	Adaptability	18						
	Retention of primary Use		15					
General Perception on	Symbolic Value	16					31	40
	Existing Value/ Exceptional Value		15					
Total points scored							231	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **231 points**
The building fall in the
category of
Highly Significant Value

6.1.12 Building No.12 Shams Building

Figure 6.79

Heritage Building Inventory Form-A

Data Collection and Analysis				Building No.12			
Heritage Building Inventory Form- A							
Name of the Building	Shams Building	Functional Use	Original Use	Residential	✓	Institutional	
				Commercial		Recreational	
				Mixed Use		Other	
			Current Use	Original		In case of change Warehouse and Residence	
				Change	✓		
Listed Building Ref. No.	MAR-033	Structural System	Load Bearing	✓	Timber Frame		
Precinct Name	Khori Garden		RCC		Pitched Roof		
Local Neighborhood Name	Marriot Road		Other				
Complete Address	MR-2/4, Marriot Road, Fakhar Matri (Newnham) Road	Material	Stone	✓	Wood	✓	
			Block		Other		
Date of Construction		Level of Alteration (As per visual analysis)	Minor (0-20%)				
			Major (20 or above %)		35%		
Number of Floors	G+4	Setting	Individual		Group Value		
		Current Physical Status (As per visual analysis)	Maintained		70%		
Overall Building Picture			Location Map				
							
Statement of Significance (Not more than 100 words)							
The building, located on Marriot Road, is a colonial structure originally used as a residence. Currently, only the top floor serves as a residential space, while the rest of the building functions as an undergarment warehouse. This corner plot features a curved, ornamented balcony. Although it once held significant symbolic value, it no longer carries the same importance. However, its architectural ornamentation remains well-preserved and meticulously maintained.							

Figure 6.80

Heritage Building Inventory Form-B

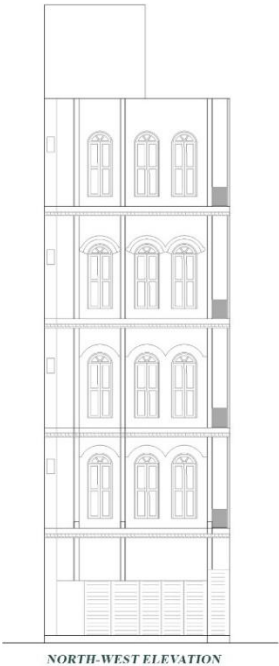
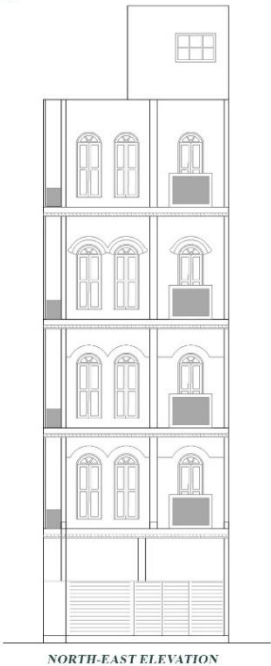
Heritage Building Inventory Form-B (Shams Building)		
General Architecture Characteristics of Colonial Buildings Karachi		
Ornamental Features	Building Elements	Building Material
☐ Decorated Capitals ✓	☐ Arch✓	☐ Yellow lime stone✓
☐ Roundels	☐ Arcade	☐ Red sand stone
☐ Pilasters	☐ Colonnade	☐ Grey limestone
☐ Pediments	☐ Pitched Roof	☐ Lime Plaster ✓
☐ Windowsill	☐ Dome	☐ Wood ✓
☐ Key Stone	☐ Tower	☐ Stain Glass✓
☐ Mouldings ✓	☐ Chimny	☐ Brick
☐ Cornice ✓	☐ Staircase✓	☐ RCC
☐ Carving	☐ Courtyard	☐ Paint✓
☐ Ornamented parapet	☐ Terrace ✓	☐ Grill work in the building ✓
☐ Other ornamental Features	☐ Other Building Elements	☐ Other Building Material
☐ Any comments		
Architectural Features and Elements Photos		
		

Figure 6.81

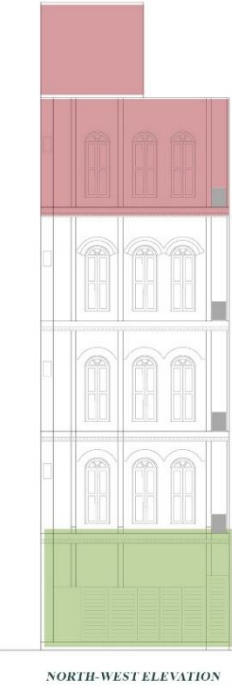
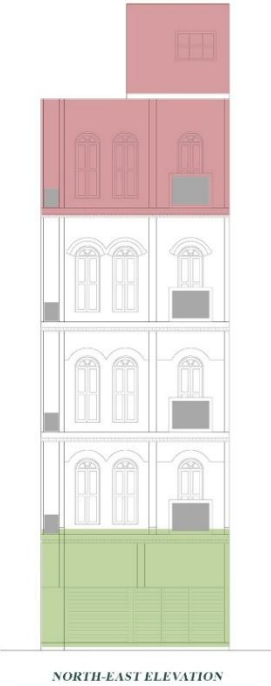
Drawings of Shams Building



DRAWINGS OF SHAMS BUILDING
ELEVATION



ALTERATION MAPPING



LEGEND	
■	MAJOR ALTERATION
■	MINOR ALTERATION

SHAMS BUILDING

Shams Building, a colonial-era structure located on Marriott Road within the Khorī Garden precinct, remains a significant part of Karachi's architectural heritage. Listed under the Sindh Cultural Heritage Preservation Act, 1994, with reference number MAR-033, the building was originally constructed as a residential property. Over time, its function has evolved, with the uppermost floor still serving as a residence while the lower floors have been repurposed into a warehouse for undergarments. This adaptive transformation reflects the broader trend of functional repurposing within Karachi's historic commercial districts.

Architecturally, the building embodies colonial-era construction techniques, featuring a load-bearing stone structure reinforced with wooden elements and finished with lime plaster. Despite undergoing approximately 35% alteration, Shams Building retains a well-maintained physical state, with 70% of its original architectural fabric intact. Its prominent location at a corner plot enhances its visual significance, contributing to the character of the precinct. While it no longer holds the same symbolic importance as in its early years, its architectural integrity remains largely preserved. The building's façade showcases several key architectural and ornamental features that highlight its colonial design influences. A distinctive curved and ornamented balcony defines its corner plot presence, while arches and decorated capitals further enhance its aesthetic appeal. The inclusion of moldings, cornices, and stained glass elements adds to its stylistic richness. The presence of intricate grillwork and a rooftop terrace further emphasizes the building's period character, despite the functional adaptations made over time.

Although the building is moderately well-maintained, the degree of alteration underscores the challenges of balancing conservation with evolving functional needs. The shift from a purely residential space to a mixed-use structure exemplifies the economic and spatial pressures driving changes in Karachi's heritage buildings. Sustainable conservation efforts will be crucial in ensuring that Shams Building retains both its material integrity and its place within the historic urban environment.

As a representative of colonial-era residential architecture that has transitioned into mixed-use functionality, Shams Building stands as a testament to the resilience of Karachi's heritage structures. Its continued use, despite modifications, reflects the dynamic nature of the city's historic urban fabric. Moving forward, conservation

strategies that integrate material preservation with adaptive reuse will be essential in maintaining the building’s architectural and historical significance.

6.1.12 Place Authenticity Matrix – Shams Building

Figure 6.82

Place Authenticity Matrix – Shams Building

Place Authenticity Matrix		Dimensions			
		Emotional Resonance	Cultural Identity	Physical Maintenance	Community Engagement
Aspects	Historic Narrative	***	**	**	***
	Spatial Configuration	**	**	**	**
	Symbolic Significance	**	**	**	***
	Evolution and Adaptation	**	**	**	**

* Low Authenticity ** Medium Authenticity *** High Authenticity

Shams Building reflects high authenticity in its historic narrative, retaining colonial-era architectural elements while adapting to evolving urban needs. Originally designed as a residential property, its current mixed-use function, with a warehouse on the lower floors and residential use on the uppermost floor, mirrors broader trends in Karachi’s historic commercial districts. Listed under the Sindh Cultural Heritage Preservation Act, 1994, the building’s placement within the Khori Garden precinct reinforces its architectural and historical significance. While approximately 35% of the structure has undergone modifications, its original load-bearing stone structure, wooden reinforcements, and lime plaster finish remain largely intact.

In terms of cultural identity, Shams Building holds medium authenticity, reflecting colonial-era design influences while adapting to contemporary functional demands. The building’s corner plot orientation enhances its visibility, contributing to the collective character of Marriott Road. Architecturally, it maintains a curved and ornamented balcony, arches, decorated capitals, moldings, and cornices, elements that align with period aesthetics. The stained glass windows, intricate grillwork, and rooftop terrace further accentuate its historical character, despite functional

adaptations over time. While its symbolic importance has diminished compared to its original residential role, the integrity of its design language and material composition continues to reflect its heritage value.

Physical maintenance presents medium authenticity, as 70% of the building remains intact, with a well-maintained façade despite functional adaptations. The warehouse conversion on the lower floors has introduced some alterations, yet the structure remains largely preserved, ensuring that the building's architectural details and materials retain their historic authenticity. The ornamental façade elements, including cornices, moldings, and balconies, remain visible, maintaining the building's contribution to the historic streetscape. However, the ongoing pressures of commercial repurposing highlight the need for strategic conservation efforts to prevent further material degradation.

Community engagement exhibits high authenticity, as the building remains actively utilized within the economic and residential fabric of Khorī Garden. The continued use of the upper floors as a residence fosters a degree of historical continuity, while the warehouse function integrates the structure into the commercial activities of the district. The corner plot enhances its urban presence, reinforcing its role in the streetscape's visual and functional cohesion. Despite its partial adaptation, Shams Building continues to serve as a reference point within its precinct, preserving a sense of place and cultural continuity.

Evolution and adaptation demonstrate medium authenticity, as the building has successfully transitioned into a mixed-use structure while maintaining much of its original architectural character. The functional shift to a warehouse on the lower floors aligns with the economic realities of Karachi's urban transformation, yet this adaptation has not entirely compromised the building's material and structural identity. While conservation strategies must balance preservation with sustainable reuse, Shams Building exemplifies resilience, serving as an enduring heritage landmark within the evolving historic landscape of Karachi.

6.1.12.2 Quantitative Authenticity Assessment Matrix; Analysis

Shams Building, a colonial-era structure, remains a notable architectural landmark within Karachi's historically significant Khorī Garden precinct. Originally designed as a residential property, the building has undergone functional transformation, now

serving as a mixed-use structure with a warehouse on the lower floors and residential units on the uppermost level. This adaptation mirrors broader urban trends in Karachi's historic commercial districts, ensuring the building's continued relevance while posing challenges to its historical authenticity. Despite these changes, Shams Building retains a substantial degree of its original material composition and architectural character. It is listed under the Sindh Cultural Heritage Preservation Act (1994), reinforcing its historical and architectural significance.

The QAAM assessment by three evaluators placed Shams Building within the 'Significant Value' category, with scores ranging from 143 to 162 out of 280. The evaluation highlights a moderate to high level of authenticity across various dimensions, particularly in contextual integrity and material authenticity. The building's placement at a corner plot enhances its visibility and urban presence, contributing to the collective character of Marriott Road. Contextual authenticity remains strong, with scores between 28 and 37 out of 60, reflecting the building's ability to retain its historical presence and group value. Its curved and ornamented balcony, arched openings, decorative capitals, moldings, cornices, stained glass windows, intricate grillwork, and rooftop terrace reinforce its colonial-era aesthetic, despite functional adaptations over time.

Architectural and structural authenticity received scores ranging from 59 to 70 out of 120, indicating a moderate level of preservation. Approximately 70% of the structure remains intact, with its original load-bearing stone structure, wooden reinforcements, and lime plaster finish largely preserved. However, around 35% of the building has undergone modifications, particularly due to the warehouse conversion on the lower floors, which has introduced alterations to spatial configurations. While the façade retains much of its original design, continued commercial repurposing presents challenges to long-term conservation.

Functional authenticity presents a complex scenario, scoring between 29 and 30 out of 60. The shift to a mixed-use structure aligns with economic transformations within Karachi's historic core, yet it has diminished the building's original residential purpose. Despite these functional changes, the residential use of the upper floors fosters a degree of historical continuity, contributing to the overall authenticity of the structure. Community engagement exhibits high authenticity, as the building remains actively integrated into the economic and residential activities of Khorī Garden. The

retention of key architectural details also ensures that it continues to serve as a reference point within its precinct, preserving a sense of place and cultural continuity.

Symbolic authenticity, evaluated between 24 and 27 out of 40, reflects a moderate level of cultural resonance. While the building remains a recognizable feature of the historic district, its role as a heritage asset has been partially overshadowed by its commercial adaptation. Despite this, its historical significance is reinforced by its material integrity and architectural coherence.

The assessment of Shams Building underscores the complexities of heritage conservation within an evolving urban landscape. While the building remains structurally stable and visually significant, continued commercial repurposing and unregulated modifications could progressively erode its authenticity. Implementing structured conservation strategies is essential to balance preservation with sustainable adaptive reuse. Without strategic conservation efforts, the building's long-term historical and architectural value may be at risk, necessitating proactive measures to safeguard its authenticity within Karachi's heritage fabric.

Figure 6.83

Quantitative Architecture Authenticity Matrix- Author

Building 12- Shams Building								
Quantitative Architecture Authenticity Matrix - Author								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location	16					37	60
	Harmony and Visual compatibility with surroundings		12					
	Emotional Resonance			9				
Architectural / Structural Authenticity	Architectural Style/ Character		12				70	120
	Structural integrity		15					
	External details/ façade features		12					
	Spatial Layout/ Internal Spaces		13					
	Retention of façade			10				
	Potential of Reversibility			8				
Functional / Activity	Compatibility				6		30	60
	Adaptability		11					
	Retention of primary Use		13					
General Perception on	Symbolic Value		13				25	40
	Existing Value/ Exceptional Value		12					
Total points scored							162	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **162 points**
The building fall in the
category of
Significant Value

Figure 6.84

Quantitative Architecture Authenticity Matrix- Assessor 1

Building 12- Shams Building								
Quantitative Architecture Authenticity Matrix – Assessor-1								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		12				28	60
	Harmony and Visual compatibility with surroundings			9				
	Emotional Resonance			7				
Architectural / Structural Authenticity	Architectural Style/ Character			10			59	120
	Structural integrity		12					
	External details/ façade features			10				
	Spatial Layout/ Internal Spaces		11					
	Retention of façade			10				
	Potential of Reversibility			6				
Functional / Activity	Compatibility			7			29	60
	Adaptability		13					
	Retention of primary Use			9				
General Perception on	Symbolic Value		15				27	40
	Existing Value/ Exceptional Value		12					
Total points scored							143	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **143 points**
The building fall in the
category of
Significant Value

Figure 6.85

Quantitative Architecture Authenticity Matrix- Assessor 2

Building 12- Shams Building								
Quantitative Architecture Authenticity Matrix – Assessor-2								
Significance		Degree of Authenticity					Assessment Points	
		Excellent 16-20 points	Very Good 11-15 points	Good 6-10 points	Poor 1-5 points	0 Points	Points Scored	Max.
Contextual Authenticity	Setting/ Location		11				29	60
	Harmony and Visual compatibility with surroundings		11					
	Emotional Resonance			9				
Architectural / Structural Authenticity	Architectural Style/ Character		12				68	120
	Structural integrity		12					
	External details/ façade features		13					
	Spatial Layout/ Internal Spaces		11					
	Retention of façade		11					
	Potential of Reversibility			9				
Functional / Activity	Compatibility			7			29	60
	Adaptability		10					
	Retention of primary Use		12					
General Perception on	Symbolic Value		12				24	40
	Existing Value/ Exceptional Value		12					
Total points scored							150	280

Group	Authenticity Value	Score Limit
A	Highly significant value	280-211=70
B	Significant value	210-141=70
C	Modest Value	140-71=70
D	No value	70-0=70



Score achieved- **150 points**
The building fall in the category of
Significant Value

6.2 Validation of the QAAM Framework

The validation of the Framework for Assessing Authenticity (FAA) is a pivotal component of this research, aimed at establishing its credibility and effectiveness in evaluating the authenticity of heritage buildings. The FAA is a cohesive and interconnected system, integrating the Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM), and the Quantitative Architecture Authenticity Matrix (QAAM). Each component builds upon the other, forming a structured and comprehensive methodology for assessing authenticity. The HBIF serves as the foundational tool, collecting detailed visual, technical, and contextual data through field notes and observations. This data provides the essential baseline for the qualitative assessments conducted through the PAM, which evaluates spatial configurations, experiential dimensions, and broader contextual significance.

The QAAM, in turn, draws from the insights and findings of both the HBIF and PAM. It integrates the qualitative considerations of the PAM and the technical specifics of the HBIF into a systematic and quantifiable framework. This interconnected approach ensures that the assessment captures a full spectrum of authenticity, addressing both tangible and intangible heritage dimensions. Using data from the pilot study conducted in the Market Quarter, the FAA was applied to twelve historic buildings, demonstrating its ability to systematically analyse and validate the authenticity of architectural heritage. By synthesizing empirical evidence, professional evaluations, and contextual analysis, this activity underscores the adaptability of the framework and its potential as a robust tool for guiding heritage conservation efforts.

The outcomes of the Assessment based on the FAA conducted by the author is as follows:

Table 6.86*Overall Findings of the Quantitative Assessment of Authenticity of 12 Buildings*

Quantitative Assessment of Authenticity Level in Heritage Buildings of Karachi							
	Building Names	Contextual Authenticity	Architectural / Structural Authenticity	Functional / Activity Authenticity	General Perception on Authenticity	Total Score	Authenticity Value
1	Allah Wala Building	50	104	51	31	236	Highly Significant
2	Alvi Chambers	46	69	41	29	185	Significant
3	Azeem ud din Mansion	31	63	25	10	129	Part of Heritage Importance
4	Badri Masjid	48	80	56	36	220	Highly Significant
5	Dada Chambers	28	78	16	14	136	Part of Heritage Importance
6	Fakhri Building	49	102	48	31	230	Highly Significant
7	Fazal Chambers	29	60	24	17	130	Part of Heritage Importance
8	Feeroz Chambers	46	76	30	22	174	Significant
9	Khadija Bai Building	41	96	28	18	183	Significant
10	Pakistan Chemicals and Dye	41	69	47	27	184	Significant
11	Quetta Wala Building	52	84	45	32	213	Highly Significant
12	Shams Building	30	69	29	27	155	Significant

6.3 Results of Assessment of Authenticity as Validated by Peers

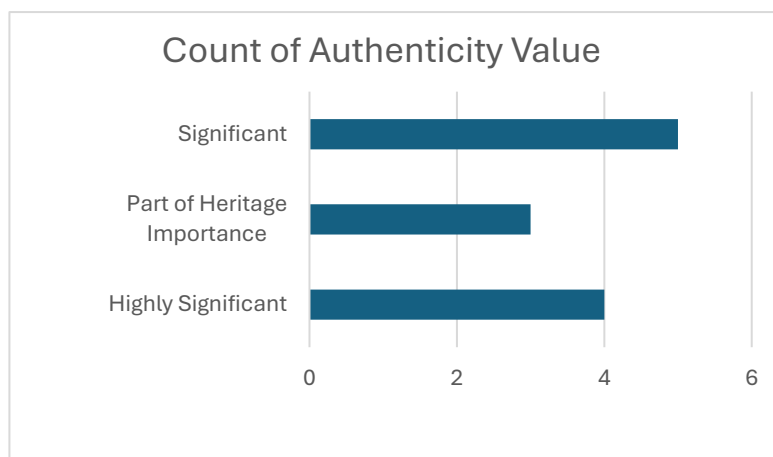
Adding to the above, the authenticity assessment, was also conducted engaging peer reviews. They yield essential information regarding the application of the Framework for Assessing Authenticity (FAA). For the Place Authenticity Matrix (PAM), buildings were assessed and graded on the basis of their levels of authenticity as Low Authenticity, Medium Authenticity, or High Authenticity, thereby yielding a qualitative determination of their spatial and experiential integrity. Furthermore, the Quantitative Architecture Authenticity Matrix (QAAM) employed a scoring system to rank the buildings into four distinct groups: Group A (Highly Significant Value, Score Range: 280–211), Group B (Significant Value, Score Range: 210–141), Group C (Modest Value, Score Range: 140–71), and Group D (No Value, Score Range: 70–0).

The analysis, as shown in the Fig XX2, revealed a diverse distribution of authenticity across the twelve buildings. The peer review assessment allocated about 30% of the buildings to Group A, which assigns a "highly significant" value of authenticity, thus emphasizing their immense architectural and cultural value. 45% of the buildings were allocated to Group B, which assigns a "significant value" of authenticity. This indicates that these buildings still display considerable heritage value despite some alterations.

On the other hand, 25% were allocated to Group C, which assigns these buildings with a "modest value". This means that, although they still display some aspects of heritage values, they have undergone significant alterations to authenticity. Interestingly, none of the buildings were allocated to Group D, which also affirms the observation that all the buildings being studied still possess at least a modest level of heritage values.

Figure 6.87

Overall value of the level of Authenticity in the 12 Buildings



Note. A comprehensive analysis showing that none of the buildings fall under 'No Value'

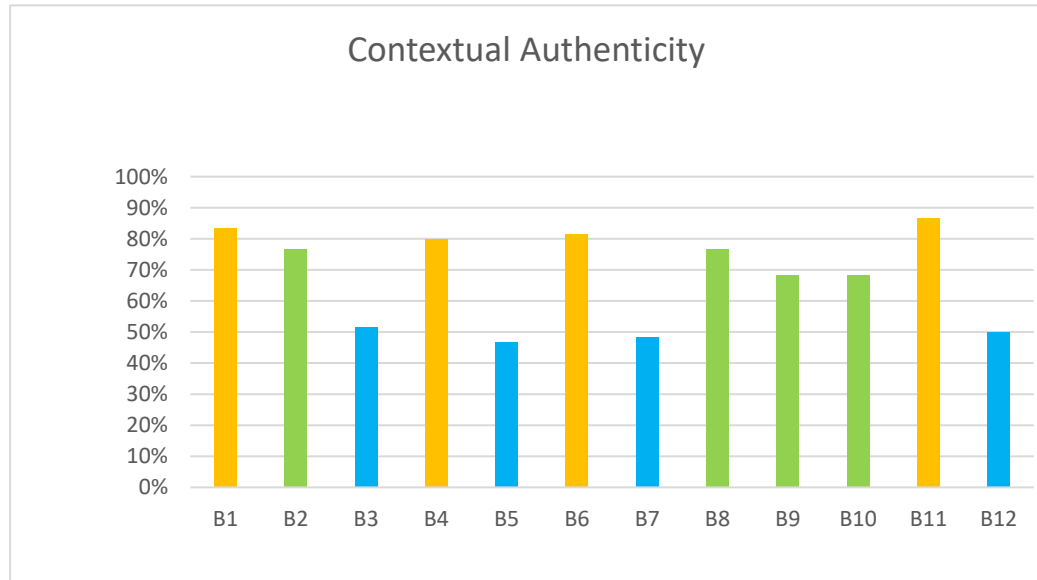
Indeed, these evaluations validate capability of the FAA to measure and place levels of authenticity, thereby providing a thorough description of the heritage value of each building. The thorough evaluation outcomes for the twelve buildings, including their corresponding PAM scores and QAAM values, are shown in the table below for easy reference.

6.3.1 Contextual Authenticity

The contextual authenticity, as shown in the Fig XX, considered the setting and the location of the building, harmony and contextualization with the surrounding, and emotional resonance with the attachment to site. All of this combines the authenticity of the sense of place retained in the context. It is interesting to see that 1/3 are achieving almost 80% sense of place, where 1/3 of the buildings are 50% lower on the scale.

Figure 6.88

Overall value of the level of 'Contextual Authenticity' in the 12 buildings

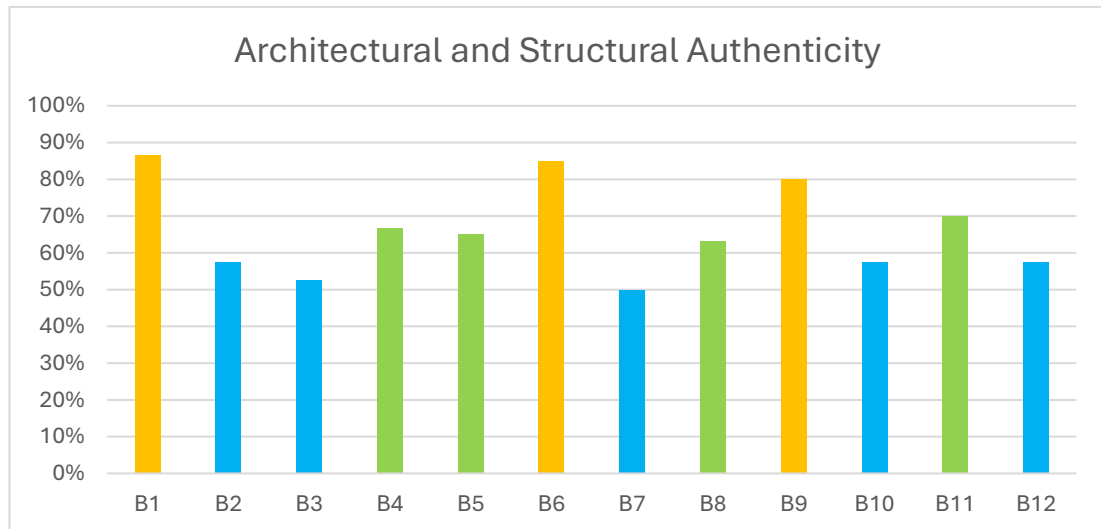


6.3.2 Architectural / Structural Authenticity

All the selected buildings in the Market quarter have ample details of architectural characteristics. The assessment considered the architecture style, structural integrity, external details, spatial layout, retention of the façades and potentials of reversibility in the design. The results, as shown in the Fig XX, reflect that the level of retained architectural and structural authenticity is between 50% to 87%. The changes due to the major and minor alterations, caused a decline in the physical authenticity in the heritage buildings. It is worth mentioning here that the ornamental features of architecture are still in very good conditions. However, the additions or the removal of the masses, as well as the doors and windows have caused a deterioration of some of the significant features of the buildings.

Figure 6.89

Overall value of the level of 'Architectural and Structural Authenticity' in the 12 buildings



6.3.3 Functional / Activity Authenticity

The functional or activity authenticity investigated the compatibility, adaptability and retention of the primary use of the buildings. The findings as shown in the Fig XX reflect that almost 50% of the buildings are being used with a new function. This is a major cause to decline their functional authenticity value. Only few buildings are still in use with their original function but have lost some points due to the incompatibility or difficulties in adaptability with the changes of use on the ground floors. In fact, some of the buildings are partially abandoned and partially used with a new function.

Figure 6.90

Overall value of the level of 'Functional / Activity Authenticity' in the 12 buildings

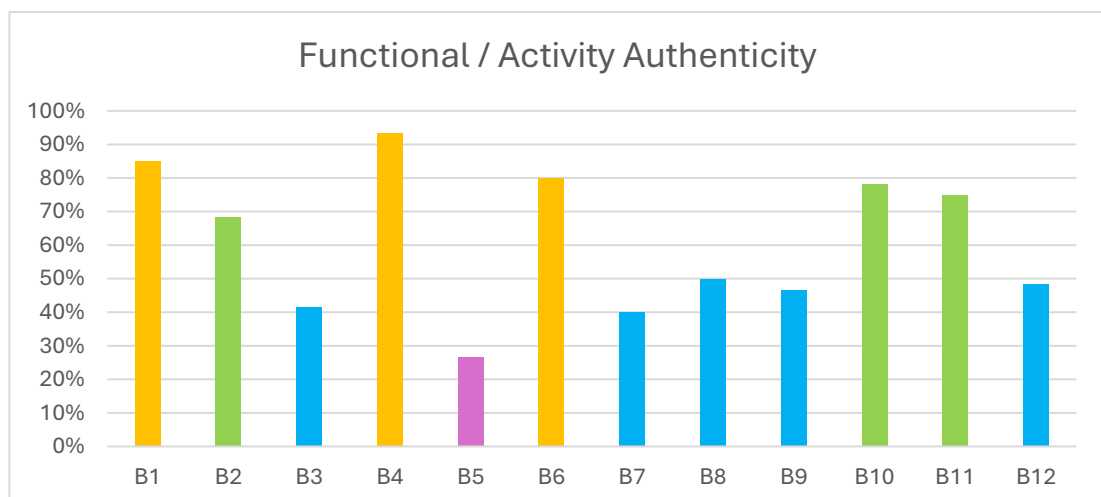
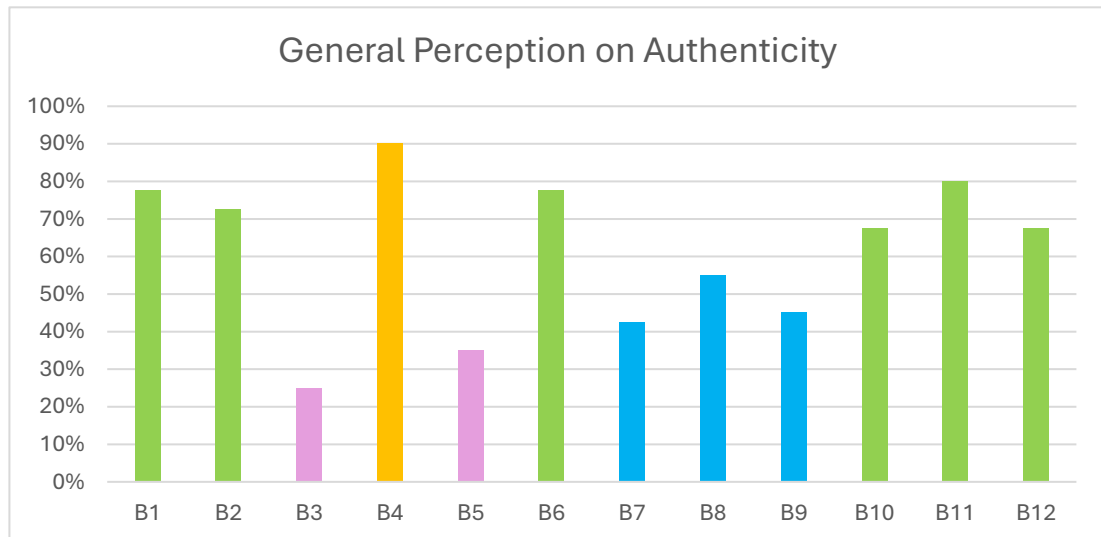


Figure 6.91

Overall value of the level of 'General Perception on Authenticity' in the 12 buildings



6.3.4 General Perception of Authenticity

The evaluation of the overall perception of authenticity assessed both the symbolic and material values of the buildings, emphasizing their connection to the historical record and identity of the neighborhoods. As shown in the Fig XX, a very high percentage of buildings, including B1, B2, B6, B10, B11, and B12, have strong perceptions of authenticity, and more than 60% of the survey respondents endorsed them. Indeed, this shows a strong identification with their architectural and historical values in the neighbourhoods.

On the other hand, buildings classified as B3 and B5 possess lower perceived authenticity levels, as seen in the evaluations below 40%. This suggests that these buildings have undergone extensive modification or possess a weaker connection with the historical character of the community. Building B4, which has the highest perception at almost 80%, is a perfect example of community attachment and historicity. Buildings B7, B8, and B9 possess moderate authenticity perceptions, which can be characteristic of conflicting views perhaps due to urban developments or partial alterations.

The results point to the appreciation and understanding of the community related to the historic urban landscape of architecture. They also point to the impact of

unchecked urban expansions on the experience of authenticity, leading to variation in the perception of these buildings in shifting contexts.

6.4 Comparative Analysis of Architecture Features

The comparative analysis of architectural features across the selected heritage buildings, as shown in the Fig XX reveals both the shared characteristics and distinct elements that define their historical and cultural significance. A strong consistency emerges in the presence of foundational architectural components, with many buildings retaining their original facades, structural integrity, and stylistic elements reflective of their historical context. These recurring features demonstrate a cohesive architectural language, underscoring the collective identity of the built heritage in this study.

Table 6.92

Comparative Analysis of Architecture Features

Analysis of Architecture Features in the selected buildings													
Buildings Numbers		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
Buildings Name		Allah Wala Building	Alvi Chambers	Azeem ud din Mansion	Badri Masjid	Dada Chambers	Fakhri Building	Fazal Chambers	Feeroz Chambers	Khadija Bai Building	Pakistan Chemicals and	Quetta Wala Building	Shams Building
Architecture Features	Decorated Capitals	x	y	x		x	x			x	x	x	x
	Roundels	y		x		x	x						
	Pilasters	x	y	y	x	x	x	x	x	x	x	x	
	Pediments						x			x			
	Terrace	x		x	x			y	y		y		y
	Mouldings	x	y	x	x	x	y	y	y	x		x	x
	Cornice	x	y	x	x	x	y	y	y	x	x	x	x
	Carving						x						
	Arch	x	y		x	x	x	x	x	x		y	x
	Key Stone	x		x	x	x	x						
	Ornamented parapet	y	x	y	y		x			x	y	x	y
	Decorative Window Sill	x					x			x			
	Door	y	y	y		y	y	y	y	y	y	y	y
	Window	y	y	y	y	y	y	y	y	y	y	y	y
	Window Sill	y	y		x	x	x			x			
	Original	x		Partially Altered			y		Fully Altered			z	

However, beyond this shared foundation, several buildings exhibit varying degrees of alteration that distinguish them from the broader group. Some buildings remain largely original, conserving their historical elements with minimal changes. Others show partial alterations, where original features are modified but still recognizable, reflecting adaptations influenced by functional needs and evolving urban dynamics. In some cases, buildings exhibit significant transformations, where original elements are almost entirely replaced by the contemporary interventions. These varying levels of alterations introduce a layer of individuality, demonstrating the balance between preservation and adaptation.

Moreover, certain buildings stand out for their rare and exceptional features, which are not commonly observed across the sample. These elements may include singular design motifs, innovative structural solutions, or symbolic representations that enhance the cultural resonance of the buildings. The presence of such unique characteristics underscores the importance of targeted conservation efforts, ensuring that these rare attributes are preserved as integral parts of the architectural heritage.

The analysis also highlights how architectural authenticity is reinforced through the balance of consistency and diversity. While the widespread preservation of key features establishes historical continuity, the nuanced variations and occasional distinctive elements enrich the collective narrative, offering insights into the evolution of architectural practices over time. This interplay between shared identity and individual expression shapes a comprehensive understanding of the heritage values embodied by these buildings.

6.4.1 Discussion

This validation of the Framework for Assessing Authenticity (FAA) in the Market Quarter of Karachi has yielded significant evidence for its practical utility and methodological robustness. Through the systematic assessment of twelve heritage buildings, the FAA has proven its ability to address both the tangible and intangible dimensions of authenticity. The research design was in line with the objectives of the study, and involved intensive case studies of buildings in which authenticity is taken for granted or contentious. This undertaking necessitated the use of a mix of qualitative, quantitative, and hybrid methods, ensuring thereby an overall evaluation. Precinct and building selections were deliberately varied, including a mix of various architectural styles, historic importance, and preservation states. This approach

enabled the testing of the FAA under variable conditions, posing it as responsive and sensitive to the nature of heritage authenticity. With the inclusion of buildings with varied degrees of modification and layering in the historical process, the study laid significant stress on the effectiveness of the framework to evaluate urban heritage in terms of transformations.

One of the greatest strengths of FAA is not only its capacity to evaluate buildings that are already conserved, but also to identify the potentials that the heritage buildings have. It highlights the significance of the social, cultural and historical context of the buildings; its presence in the urban environment; its role in the construction of community identity and the degree to which changes have detracted from or added to its authenticity.

In comparison with conventional approaches that mostly deal with preservation status, the FAA offers information on whether changes can be reversed or whether, over the years, they have added to the identity and functionality of the buildings.

Furthermore, the FAA aids in the discovery of factors that enhance structural deterioration, hence making it an effective tool for strategic conservation planning. Far from declaring the buildings being either authentic or inauthentic, the FAA offers a deeper insight into the authenticity dynamics, offering a rich appreciation essential for heritage management in the 21st century.

The application of the FAA by the local practitioners was instrumental in validating its methodological soundness, particularly through its mixed-method approach. Their expertise, rooted in familiarity with cultural and historical landscape of Karachi, introduced a level of depth and contextual sensitivity often lacking in standardized assessment models. This aligns with assertion of Lowenthal (1985) that authenticity is shaped by local perceptions and evolving cultural narratives. Importantly, variations in the individual assessments did not diminish the credibility of the framework; instead, they enriched the evaluation process by incorporating multiple professional perspectives. A case in point is the Alvi Chambers (185, 215, 228), where the author's evaluation differed notably from those of the other two assessors. Such differences in scoring are not inconsistencies but rather reflections of diverse interpretative approaches to architectural integrity and contextual integration. These variations reinforce the concerns raised by Jokilehto (2006), who advocates for a broader, more flexible interpretation of authenticity; one that extends beyond the rigid material

preservation to encompass cultural and historical significance. The FAA, by accommodating these multiple perspectives, strengthens its role as a comprehensive heritage assessment tool.

Table 6.94

Overall Assessment of Authenticity by three Assessors				
	Building Names	Evaluation Score by Author	Evaluation Score by Assessor-1	Evaluation Score by Assessor-2
1	Allah Wala Building	238	230	236
2	Alvi Chambers	185	215	228
3	Azeem ud din Mansion	132	145	128
4	Badri Masjid	226	228	226
5	Dada Chambers	138	132	138
6	Fakhri Building	228	226	227
7	Fazal Chambers	135	137	161
8	Feeroz Chambers	173	164	143
9	Khadija Bai Building	185	166	171
10	Pakistan Chemicals and Dye	185	182	193
11	Quetta Wala Building	217	213	231
12	Shams Building	162	143	150

Overall Assessment of Authenticity by Author and two Assessors

The assessments further validate the reliability of FAA in distinguishing the patterns of authenticity across different buildings. Structures such as Allah Wala Building (238, 230, 236), Badri Masjid (226, 228, 226), and Fakhri Building (228, 226, 227) consistently received high scores from all the assessors, affirming their strong architectural integrity, contextual coherence, and the reversibility of the past modifications. This consistency reinforces the ability of the framework to identify the buildings with well-preserved authenticity markers, aligning with the principles outlined in the Nara Document on Authenticity (1994). Similarly, Quetta Wala Building (217, 213, 231) demonstrated resilience in terms of contextual and architectural authenticity, though its slight variation in scoring reflects the complexities inherent in heritage assessments. These findings emphasize the capacity of FAA to identify and classify heritage buildings with strong authenticity credentials, thereby supporting its application in conservation practice.

Buildings that received moderate authenticity scores, such as Khadija Bai Building (185, 166, 171) and Pakistan Chemicals and Dye (185, 182, 193), exhibited some degree of scoring variations. This is understandable, given that their modifications, material changes, or evolving functional roles have resulted in a more ambiguous authenticity status. This aligns with the perspectives of Schulz (1980) and Tuan (1977), who argue that authenticity extends beyond physical attributes to include the cultural and social meanings embedded within a place. In cases such as Feeroz Chambers (173, 164, 143) and Shams Building (162, 143, 150), significant scoring variations were observed, likely influenced by the differing interpretations of reversibility, symbolic significance, and material authenticity. These discrepancies do not indicate flaws in the framework but rather highlight its ability to capture the complexities of heritage assessment. The lowest-scoring buildings, such as Azeem ud Din Mansion (132, 145, 128) and Dada Chambers (138, 132, 138), evidently experienced extensive modifications that have compromised their authenticity. An interesting anomaly was Fazal Chambers (135, 137, 161), where one assessor rated the building considerably higher than the others, suggesting a differing emphasis on functional or symbolic aspects. Such variations enrich rather than weaken the assessment process, ensuring a more layered and multifaceted understanding of authenticity.

The variations in scoring across assessors enhance the analytical depth of FAA, integrating multiple viewpoints to produce a more holistic assessment. In some cases,

such as Allah Wala Building, differences in evaluating the reversibility of modifications played a critical role in scoring. In others, such as Alvi Chambers and Quetta Wala Building, contextual factors and urban integration influenced the assessment outcomes. Moreover, architectural integrity, particularly in buildings such as Feeroz Chambers and Shams Building, was evaluated differently based on considerations of material retention and façade preservation. These findings resonate with the scholarship of Lowenthal (1985) and Jokilehto (2006), reinforcing the idea that authenticity is a dynamic and multifaceted concept shaped by both tangible and intangible factors. The structured approach of FAA allows these variations to serve as strengths, demonstrating its capacity to accommodate the complexities inherent in heritage evaluation.

The outcomes of the QAAM assessments point to the reasons behind the multicentric evaluations in heritage authenticity studies. "Highly Significant" buildings exhibit robust architectural, contextual, and functional authenticity, while others with lower scores illustrate the effect of alterations and slow fading of original character. Bringing more than one assessor in lends methodological transparency to the authenticity evaluation process. Rather than see variations as inconsistencies, they should be construed as necessary for richer, broader understandings of heritage significance. This, to Tuan (1977) and Schulz (1980), in view of their inclusion of memory in defining place identity and thus authenticity.

Apart from assessing the current measures of conservation, the FAA can also be an important element in setting the future direction of preservation. This also means identifying not only buildings of high significance but also those that may need some interventions like rehabilitation, adaptive reuse, or targeted restorations. It also helps assess if those changes have been reversible or if the changes made on a building have positively contributed to character-making in buildings, all of which are critical in conservation decision-making. As such, FAA is very significant not only in terms of authenticity evaluation but also as extended strategic management technique for heritage in changing urban environments.

CHAPTER 7

CONCLUSION

Chapter Overview

The chapter synthesizes the key findings of the research, bringing together the theoretical, methodological, and empirical elements that shaped the development of the Framework for Assessing Authenticity (FAA). It provides a reflective analysis of the core aims and objectives of the study, critically engaging with the theoretical discourse on authenticity and the experiential framework that underpins the design of FAA. The chapter moves beyond the contextual specificity of the heritage sites of Karachi, positioning the framework as a universally adaptable model for evaluating authenticity in diverse urban environments.

The discussion is structured to offer an integrated response to the research questions and objectives, emphasizing how the FAA addresses existing gaps in heritage conservation practices. By combining material and non-material dimensions, the framework captures the dynamic and evolving nature of authenticity, challenging traditional models focused solely on physical preservation. Through its three-tiered structure, the Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM), and the Quantitative Architecture Authenticity Matrix (QAAM), the FAA reflects a balanced approach that incorporates architectural integrity, cultural identity, and functional adaptability.

The chapter also explores the validation and testing of the evaluation toolkit, which played a crucial role in shaping the final design of the FAA. The empirical methods employed, multiple sorting tasks, recall memory tests, and semi-structured interviews, which were instrumental in identifying key authenticity determinants and demonstrating their effectiveness in real-world conservation contexts. The cross-comparison of empirical results affirmed the ability of the framework to capture the complex interplay of observation, perception, memory, and engagement, validating the inclusion of specific indicators and ensuring the methodological robustness of the framework.

The chapter positions the FAA as a critical contribution to heritage conservation discourse, advocating for a more holistic and context-sensitive approach to assessment

of authenticity. By integrating empirical rigor with cultural interpretation, the framework offers a scalable and adaptable tool that addresses the evolving challenges of heritage management, opening new pathways for inquiry and practice in the field of conservation

7.1 Discussion

The discussion section serves to synthesize the key findings of this research, presenting them through the lens of the research questions and objectives that guided the study. It aims to critically evaluate the development and application of the Framework for Assessing Authenticity (FAA), reflecting on its theoretical foundation, methodological design, and empirical validation. By engaging with the experiential framework and constructivist principles, the discussion addresses the complex interplay between material and non-material dimensions of heritage authenticity, offering insights into how perception, memory, and engagement shape our understanding of historic values. In doing so, the section not only highlights the effectiveness of the FAA but also positions it as a significant contribution to the heritage conservation discourse, advocating for more adaptive and inclusive approaches in evaluating authenticity.

7.2 Overview of Findings and Response to Research Questions & Objectives

The overview of findings provides a structured response to the research questions and objectives, framing the development and validation of the FAA as the core outcome of this study. Through a systematic exploration of theoretical debates, experiential methodologies and empirical insights, the research established a comprehensive and adaptable model for assessing authenticity. This section revisits the aims of the study, reflecting on how the framework addresses gaps in existing conservation practices by balancing material preservation with cultural and experiential dimensions.

7.3 Synthesis of Findings

This section presents a synthesized discussion of the key findings, framed through the research questions and objectives that guided this investigation. The evaluation framework for assessing authenticity (FAA) emerged as the central outcome of this research, shaped by a theoretical exploration, experiential methodologies, and an empirical validation. Through this, the study addressed the gaps in existing

conservation practices, offering a multi-dimensional model that balances tangible and intangible heritage dimensions.

7.3.1 To Identify How Different Aspects Of Heritage Buildings, Both Material and Non-Material, Contribute To The Manifestation Of A Historical Sense Of Place

The first objective aimed to explore the multi-dimensional nature of authenticity and how the diverse elements of heritage buildings collectively shape their historical and cultural identity. Existing conservation practices often prioritize physical attributes, such as architectural style, material integrity, and structural stability, while neglecting the social, cultural, and experiential dimensions that contribute to a sense of place of a building (Tuan, 1977; Norberg-Schulz, 1980). This study builds on the premise that authenticity is not solely rooted in material preservation but is equally dependent on intangible factors like community engagement, historical narrative, symbolic significance, and emotional resonance.

Through the development of the experiential framework, the study systematically analysed how observation, perception, cognition, memory, and engagement interact to shape the people's understanding of heritage authenticity. Methods like the multiple sorting task and recall memory test captured subjective associations of the participants with heritage spaces, revealing the importance of spatial configuration, cultural practices, and evolving use patterns in maintaining a historical sense of place. By integrating these insights, the research demonstrated that authentic heritage conservation requires a holistic approach that acknowledges both tangible and intangible aspects.

7.3.2 To Analyze The Implementation Of Conservation Principles In Practice And Ascertain How They Have Contributed To Retaining Authenticity In Heritage Conservation

The second objective focused on evaluating the effectiveness of existing conservation practices and their alignment with the principles of authenticity established in international charters, such as the Venice Charter (1964) and the Nara Document on Authenticity (1994). While these charters advocate for balancing material preservation with cultural relativism, their application often remains limited to physical restoration, sidelining the social and experiential dimensions of heritage.

Through semi-structured interviews with heritage professionals and local practitioners, the study identified key challenges in implementing these principles within the urban context of Karachi. These included gaps in legislative frameworks, the influence of economic pressures on conservation decisions, and the tendency toward facadism and aesthetic preservation at the expense of functional and cultural authenticity.

The study also highlighted how legislative gaps and evolving urban dynamics impact the ability of conservation efforts to maintain historical integrity. Insights from the experts emphasized the need for adaptable conservation strategies that reflect local realities while upholding international standards. By integrating these findings, the research laid the foundation for the design of the Framework for Assessing Authenticity (FAA), ensuring that it addresses the practical concerns alongside theoretical principles.

7.3.3 To Develop A Framework, Strategies, And Tools That Can Be Employed By Heritage Practitioners To Assess The Presence Or Absence Of Authenticity In Heritage Buildings.

The final and most significant objective was the development of a structured, adaptable evaluation framework capable of assessing authenticity across diverse heritage contexts. Building on constructivist principles and contextual objectivity, the FAA was designed as a multi-tiered model incorporating both qualitative and quantitative assessment tools.

The Heritage Building Inventory Form (HBIF) captures material authenticity by documenting architectural features, construction methods, and conservation status. The Place Authenticity Matrix (PAM) evaluates intangible dimensions, such as emotional resonance, cultural identity, and community engagement, providing a nuanced understanding of how heritage buildings contribute to sense of place. The Quantitative Architecture Authenticity Matrix (QAAM) offers a data-driven approach, assessing architectural integrity, functional adaptability, and potential for reversibility.

The development of FAA was informed by empirical research methods that tested the principles of perception and collective memory of the framework. By applying the framework to a diverse sample of heritage buildings, the study demonstrated its effectiveness in capturing varying levels of authenticity and addressing the conservation challenges. The collaborative validation process involving the local

practitioners further refined the framework, ensuring its methodological rigor and practical applicability.

Together, these objectives provided a comprehensive roadmap for developing an authenticity assessment model that balances theoretical insight with practical application. The ability of the FAA to integrate material and non-material dimensions, reflect the local conservation realities, and provide a scalable tool for the heritage practitioners underscores its contribution to advancing authenticity discourse and conservation practice.

7.4 Key Findings and the Insights

The most significant outcome of this research is the development of the Framework for Assessing Authenticity (FAA), a comprehensive and adaptable model designed to evaluate heritage authenticity by integrating material and non-material dimensions. This framework is rooted in a theoretical discourse that positions authenticity as a fluid, contextually adaptable concept, shaped through constructivist principles, co-creation, and contextual objectivity. By capturing the experiential and cultural dimensions of heritage, the FAA transcends static models of material conservation, offering a multi-dimensional approach to authenticity assessment.

Central to the development of this framework was the experiential methodology employed in this research. This methodology explored how perception, memory, and engagement inform the collective understanding of authenticity, moving beyond physical attributes to encompass intangible cultural practices and emotional associations. Through multiple sorting tasks, recall memory tests, and semi-structured interviews, the research identified key determinants of authenticity, ensuring that the framework reflects both empirical evaluation and cultural interpretation.

The multiple sorting tasks provided critical insights into perception and cognitive mapping, demonstrating how the participants grouped and categorized the heritage buildings based on their architectural form, historical context, and spatial configuration. This method revealed patterns of association and differentiation, highlighting the importance of visual coherence, material integrity, and functional adaptation in shaping perceptions of authenticity. The results underscored the fluidity of authenticity, showing how the buildings with similar physical characteristics could be perceived differently based on their cultural and social significance. The recall

memory tests added a phenomenological dimension to the research, capturing personal and collective memories associated with heritage spaces. This method illustrated the deep emotional resonance and historical continuity that shape perceptions of authenticity, emphasizing the importance of lived experience and cultural memory in conservation practice. The narratives of place attachment and loss provided by the participants highlighted the interplay between physical preservation and cultural identity, reinforcing the need for a holistic assessment approach.

The semi-structured interviews with heritage practitioners and experts further enriched the research by identifying the practical challenges and legislative gaps in conservation practice. These interviews revealed the determinant factors influencing conservation outcomes, including policy constraints, economic pressures, and community engagement. The insights gained from the practitioners underscored the importance of integrating the legal frameworks and stakeholder collaboration into authenticity assessments, ensuring that the FAA remains adaptable and context-sensitive.

These methodologies collectively informed the design of the FAA, providing a balanced and multi-faceted understanding of heritage authenticity. The three-tiered structure of the framework, comprising the Heritage Building Inventory Form (HBIF), the Place Authenticity Matrix (PAM), and the Quantitative Architecture Authenticity Matrix (QAAM), ensures a comprehensive evaluation that captures architectural integrity, cultural identity, and functional adaptability. By combining empirical data with cultural narratives, the FAA addresses the gaps in existing assessment models, offering a scalable and adaptable tool for heritage conservation across diverse urban contexts.

The development of the FAA stands as the core contribution of this dissertation, providing heritage practitioners with a robust evaluation model that balances material preservation with cultural continuity. By integrating qualitative and quantitative methodologies, the framework ensures that historic places retain their authenticity and significance, while adapting to contemporary needs and evolving urban environments.

The validation of the evaluation framework, furthermore, provides insights on the effectiveness of FAA in capturing authenticity across varying conditions, and provided crucial evidence supporting the inclusion of specific authenticity determinant indicators within the Framework for Assessing Authenticity (FAA). The validation and testing of the Framework for Assessing Authenticity (FAA) provided essential

insights into the effectiveness of the indicators designed to capture the multi-dimensional nature of authenticity. These indicators, rooted in the emphasis on observation, perception, cognition, memory, and engagement of the experiential framework (Norberg-Schulz, 1980; Tuan, 1977), were systematically assessed through empirical methods, revealing their capacity to reflect both material and non-material dimensions of heritage authenticity. The results of the evaluation toolkit confirmed the critical role of these determinants in shaping collective and individual perceptions of authenticity and reinforced the need for a balanced approach to heritage conservation.

The indicator of architectural integrity, for instance, gained strong validation through the consistent performance of buildings like Alvi Chambers and Allah Wala Building in the Quantitative Architecture Authenticity Matrix (QAAM). Their high scores on material authenticity were closely tied to the retention of original façade elements, external details, and structural coherence, factors that align with Jokilehto's (2006) emphasis on the significance of architectural style and physical preservation. This material consistency, however, is more than a reflection of tangible features; it represents the cognitive recognition and memory association that shape the public perceptions of historical value (Schulz, 1980). In contrast, the significant alterations observed in the Dada Chamber resulted in lower authenticity scores, illustrating how the loss of original physical features disrupts both visual coherence and the cognitive map of historic identity of the community (Lowenthal, 1985).

Functional adaptability also emerged as a crucial determinant, validated through its impact on authenticity perception across varying building use patterns. The Allah Wala Building, which retained its original commercial function, maintained a high degree of functional authenticity, aligning with Plevoets and van Cleempoel's (2019) argument that adaptive reuse, when aligned with the historical purpose, sustains cultural continuity. This consistency supports the notion of place identity, where the ongoing use of heritage spaces reinforces their experiential authenticity. In contrast, the evolving functions and partial abandonment observed in the Alvi Chambers highlighted the challenges of balancing contemporary needs with historical identity, demonstrating the sensitivity of this indicator in assessing the impact of functional changes on perceived authenticity.

The indicator of contextual harmony was affirmed through results from the Place Authenticity Matrix (PAM), where spatial configuration and symbolic significance

played a pivotal role in determining the authenticity levels. Buildings like Alvi Chambers and Allah Wala Building, which maintained strong visual and spatial alignment with their historic surroundings, scored high on contextual authenticity. This alignment fosters a coherent narrative of place, enhancing both individual and collective memory through consistent environmental cues (Tuan, 1977; Norberg-Schulz, 1980). Conversely, the disjointed visual integration of Dada Chamber within its evolving urban context illustrated how the disruptions in spatial harmony weaken emotional engagement and diminish the perceptions of authenticity (Uzzel & Ballantyne, 1998).

Finally, the importance of legislative and conservation status as an authenticity determinant was underscored through insights from the Heritage Building Inventory Form (HBIF). The varied conservation outcomes across the evaluated buildings highlighted the direct influence of policy enforcement on material preservation and adaptive reuse. The identification of legislative gaps and inconsistent policy application validated the need for integrating legal frameworks into authenticity assessments, ensuring that heritage management practices align with both conservation objectives and community expectations (Rodwell, 2007). The experiential framework further reinforces this finding, as perceptions of authenticity are shaped by the reliability and effectiveness of the conservation efforts, influencing the public trust and engagement with heritage sites (Lowenthal, 1985).

Through the cross-comparison of empirical results, the validation process affirmed the capacity of FAA to capture the complex interplay between material integrity, functional continuity, contextual alignment, and legislative support. Each indicator demonstrated its effectiveness in reflecting the multifaceted nature of authenticity, shaped by the interconnected processes of perception, cognition, memory, and engagement. By grounding the framework in these experiential dimensions, the FAA offers a comprehensive and adaptable tool for evaluating authenticity, ensuring that heritage conservation efforts maintain both physical preservation and cultural resonance.

7.5 Conclusion

This dissertation reshapes the discourse on authenticity in heritage conservation by proposing an integrated, context-sensitive framework that acknowledges both tangible and intangible values. It challenges conventional material-centric definitions and advances a constructivist and experiential understanding of authenticity rooted in the lived experiences of users.

By introducing tools such as the Place Authenticity Matrix and the Quantitative Architectural Authenticity Matrix (QAAM), this study offers a structured yet flexible methodology to evaluate authenticity in adaptively reused heritage buildings. These tools emphasize contextual authenticity where cultural, historical, and spatial specificities shape perceptions and integrate emotional resonance as a critical dimension of heritage experience. This dual emphasis helps capture the evolving meanings of heritage in rapidly transforming urban settings like Karachi.

The research demonstrates that authenticity is not a static attribute tied solely to original materials or formal aesthetics, but a dynamic construct negotiated through use, memory, identity, and place attachment. The findings validate that community perceptions, emotional connections, and sensory experiences are central to any meaningful conservation effort, especially in post-colonial, development-driven contexts.

Through a systematic methodology and multi-stakeholder analysis, the study contributes both theoretically and practically to the field of heritage conservation. It provides a replicable assessment framework that balances objectivity with subjectivity, thus offering planners, conservationists, and policymakers a more grounded basis for decision-making in adaptive reuse projects. Ultimately, this research reaffirms that sustaining authenticity in heritage demands not only preserving form but also nurturing the emotional and contextual dimensions that give places their significance.

Contribution to Knowledge and Practice

Theoretical Contribution

This research advances heritage theory by integrating constructivist, existential, and place-based perspectives into a unified framework. It challenges static, material-centric definitions of authenticity and instead positions it as a layered, evolving construct embedded in cultural memory, sensory experience, and identity. The study responds to contemporary scholarly calls for authenticity to be understood through lived experience and contextual relevance, thereby bridging abstract philosophical discourse with operational needs.

Methodological Contribution

The study introduces the Quantitative Authenticity Assessment Matrix (QAAM), a novel evaluative tool that combines qualitative insights with structured quantitative indicators across architectural, functional, spatial, and perceptual dimensions. Methodologically, the research employs a two-phase design involving card sorting, memory recall tasks, inventory forms, and stakeholder interviews. The application of QAAM across 12 adaptive reuse cases in Karachi, followed by international validation, demonstrates its robustness and adaptability, addressing a long-standing gap in empirical authenticity assessment tools.

Applied Contribution to Heritage Management

Practically, this research provides a replicable framework for heritage professionals, conservation planners, and decision-makers. QAAM enables prioritization of interventions, resource allocation, and adaptive reuse strategies that align with both local values and international heritage standards. By emphasizing user perception and emotional resonance, the framework promotes inclusive, sustainable, and culturally attuned heritage management especially in complex and rapidly transforming urban environments.

7.6 Future Directions

This research responds to the evolving demands of heritage conservation by offering a comprehensive, adaptable framework that bridges theoretical foundations with

practical application. The FAA challenges narrow preservationist approaches by integrating empirical rigor, community engagement, and contextual specificity, foregrounding the importance of contextual authenticity that is, authenticity shaped by local culture, history, spatial logic, and lived realities.

While the framework has proven effective across multiple cases, its broader implementation, particularly at urban or policy levels, warrants further exploration. Future research could apply the FAA in varied cultural, socio-economic, and political settings to test its versatility and refine its indicators of contextual authenticity. The role of governance and legislative structures in shaping conservation outcomes also emerged as a key concern; thus, policy-based applications and recommendations constitute a promising avenue for extension.

In terms of methodological innovation, the potential integration of digital tools, real-time monitoring systems, and AI-based analytics could further enhance the scalability of QAAM, particularly in large-scale conservation or planning efforts. Additionally, interdisciplinary engagement with fields such as environmental psychology, spatial cognition, or sustainability studies may enrich future iterations of the framework, particularly in assessing emotional resonance and user-place relationships. New technologies, including virtual reality and immersive documentation, offer exciting possibilities for capturing emotional and sensory interactions with heritage spaces, enabling a deeper understanding of how authenticity is experienced and embodied.

The FAA does not aim to resolve all complexities in authenticity assessment, but rather opens pathways for more inclusive, responsive, and emotionally resonant, context-aware heritage practices. By emphasizing authenticity as an evolving reflection of cultural meaning rather than a fixed historical attribute this research invites practitioners and scholars alike to reimagine heritage as a living, dynamic resource for contemporary society.

Comparative application in diverse contexts such as colonial towns in Southeast Asia, Islamic quarters in the Middle East, or post-industrial European districts could further validate and evolve the framework, testing the universality and cultural recalibration of its indicators. In doing so, the FAA may emerge not only as a locally grounded tool,

but as a globally relevant model for meaningful, multi-dimensional authenticity assessment rooted in both emotional resonance and contextual authenticity.

7.7 Executive Summary

This research develops a comprehensive, multi-dimensional framework for assessing authenticity in heritage conservation. It responds to the growing recognition that conventional conservation approaches — often focused narrowly on physical preservation — overlook the experiential, cultural, and social dimensions of authenticity, especially in rapidly urbanizing contexts. The study is situated in Karachi, Pakistan, and addresses the pressing need for a structured methodology that integrates both tangible and intangible heritage values.

Through a mixed-methods approach incorporating field surveys, memory recall exercises, sorting card activities, and semi-structured interviews, the study develops the Framework for the Assessment of Authenticity (FAA). This framework is composed of three interlinked tools:

1. Heritage Building Inventory Form (HBIF)
2. Place Authenticity Matrix (PAM)
3. Quantitative Architecture Authenticity Matrix (QAAM)

These tools work in tandem to capture both measurable data and lived experiences, offering a holistic assessment model. The framework was applied to 12 heritage buildings in Karachi to test its validity, demonstrating its ability to identify degrees of authenticity loss or preservation across different conservation typologies.

A core motivation for this framework arises from the critical gap in Pakistan's heritage legislation, where the term authenticity is entirely absent. National, provincial, and municipal-level documents — including the Antiquities Act (1975) and the Sindh Cultural Heritage Act (1994) — lack any reference to authenticity or its assessment. As argued in this research, what is not clearly defined cannot be meaningfully protected. This legal and conceptual void not only hinders consistent conservation outcomes but also places heritage decisions at the mercy of subjective interpretations or economic pressures.

The study's contributions are threefold:

- Theoretical: It deepens the conceptual understanding of authenticity by linking phenomenological ideas of place with practical assessment mechanisms.
- Methodological: It introduces and validates a replicable, context-sensitive tool (QAAM) that quantifies authenticity using both qualitative and quantitative indicators.
- Applied: It provides a policy-relevant model that can guide conservation planning, regulatory review, and heritage impact assessments.

Policy and Practice Implications

The QAAM framework offers a practical tool for heritage authorities, urban planners, and policymakers to:

- Incorporate structured authenticity assessments into conservation decisions.
- Evaluate adaptive reuse proposals in heritage sites more holistically.
- Prioritize funding and protection based on empirical scoring.
- Address legislative gaps by embedding QAAM tools in heritage policy reforms.

By combining empirical rigor with cultural sensitivity, this framework enables more equitable, inclusive, and adaptive heritage management practices. It has potential for replication beyond Pakistan in similarly complex urban heritage contexts.

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