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LOCALIZATION OF NEW DESIGN PRINCIPLES IN HISTORIC ENVIRONMENTS FOR SUSTAINABLE CONSERVATION TO CURB FORGERY DESIGN EXPRESSIONS

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Abstract. This paper investigated how localizing new design principles can lead to curbing forgery design patterns in historic environments with a heterogeneous character. Over time, interventions like preservation, restoration, and adaptive reuse have been implemented but cannot yet resolve issues related to design repetitions, static development, and obsolescence in historic cities. This is primarily because such actions adhere to a predetermined structure that can limit innovation and creativity and further impact the discerning of historical imprints as time passes. This paper adopted an evidence-based strategy gathered through a thorough literature review and situation observation in the context of North Nicosia's Walled City as a case example with diverse material cultures and mixed design composition. The results of this study identified five causalities linked to the roles played by three groups: regulatory bodies, designers, and locals. Such as approaches to reinterpreting past styles, the use of selective conservation principles, the lack of a conservation framework, circumscribing only contextual approaches, and celebrating partial perceptions for only nostalgia value. This research recommended the incorporation of SEBAS (Specimen, Engaging, Balancing, Adoption, and Selecting) as a supplemental set of conceptual tools for regulators, designers, and other stakeholders who are instrumental in the preservation of historical environments.

Keywords: *Cultural heritage, forgery design, historic environment, intervention, new design principles, sustainable conservation.*

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1. Introduction

The concept of adding new architectural objects to historical environments remains a challenging sustainable conservation intervention subject. Some authors have tried to point to the content of the international and national legislation agencies as lacking ingredients that support the values of contemporary lifestyle. Highlighting such lapses is uncommon in most architectural design-related platforms where sufficient emphasis completely rests on context and less attention goes to content. The said concerns are here opening this discourse with three exploratory prepositions derived from the existing international and national conservation principles on introducing new designs in the historical environments: Use of relativity terminologies; fine architecture, recognizable,

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distinguishable, contemporary stamp, harmony, etc when bonding two ways of existence in the historic context generates contemplation in a practice connected to novelty creation. When in this instance, the situation presents intangibles as significant drivers; the fusion of historic environment types by cultural heritage management agents and the design process development stiffening of historic tissues' continuity; and preconceiving new designs as a threat to historic places raises ideological and perceptual sensibilities.

Yet, to gain a better understanding of the situation, a look at localizing new design principles remain vital to reduce the re-occurrence of forgery design patterns in historic settings. As modern architecture comes under criticism for architectural homogenization and commonality of expression. Likewise, forgery designs misapplied in historic environments have the tendency to compromise their rich variety of tissues. This practice squeezes the three pillars of sustainable development whenever designers and other agents fail to recognize the historic environmental types (heterogeneous or homogeneous). Heterogeneous historic environments are historic settings with non-uniform (varying) characters on different scales, either spatially or expressively. An example of a heterogeneous historic environment is the City of Valletta in Malta. A homogeneous historic environment, on the other hand, has a consistent character based on historical evolution evidence. Ait Ben Haddou in Morocco is an example of a homogeneous historic environment. These definitions are consistent with Yang et al. (2015)'s explanations of environment types as either a diversity environment (heterogeneity) or a uni-modal environment (homogeneity). Katayama et al. (2014) compared landscape types to biodiversity availability (heterogeneity and homogeneity landscapes), which corresponds to the concept of the city as an organism (Alexandros, 2017).

Although most debates on this subject used to arise due to the parties' biases and poor understanding of the real historical situation, the current use value of the historical context challenges our assumptions in two ways: communicating dynamism, not repetition, on the one hand, and illogical imitation of an old style on the other. Because of its rare value and mixed architectural identity from history, North Nicosia's historic city is the focal point of this mainstream. From the post-partition era to the present, such material cultural evidence has been declining. Excluding new designs as a possibility in practice from existing contexts can lead to negative perceptions (Bolkaner et al., 2020), watered-down quality of new works, and a break in the continuity of the historic setting.

This paper’s objectives are to 1) develop a content-based framework that can lessen the appearance of repetitive designs and the fading of cyclical historic traces; 2) think about the results of adopting a non-heuristic approach to designing in historic places; and 3) consider the outcomes of following a non-heuristic approach to designing in historic places. This article makes the following contributions: Adding to the existing literature on sustainable conservation and the concept of “discrete layers,” which connects with recent city paradigms like inclusive cities and resilient cities, in the quest to build better, it will provide a flesh way of thinking about interventions within the historic context in-terms of designing in historical contexts, and as a part of preservation and conservation discourses, the methodology and the relational evaluation tools devised will be transferable for future researchers to engage with, and policymakers and regulators can use these content-rich tools to enhance the built heritage planning and management issues of their historic cities.

1.1. New Design Principles in Historic Environments

All forms of alteration in an urban setting have varying degrees of impact on dynamic layers. Alterations may be physical, social, or economic. Managing them within and around the historic place to preserve local identity falls in line with heritage conservation (Tiesdell *et al.,* 1996). Conservation principles for new designs in the historic environment carry peculiarities linked to the time of their publication and the cultural background of the writers (Meurs, 2007). The transfer of such principles to local authorities is crucial to the discussion of new designs in a historical setting. Throughout history, each era presents both opportunities and challenges to society when it comes to managing cultural landscapes. By learning from past experiences and applying those lessons to the present and future. Improving resource management provides a good reference guide for future generations. The consequences of World War II had a severe impact on several historical European towns, including their architectural legacy. The restoration process created a schism between those who preferred modern architectural language and those who preferred traditional styles. Despite the divide, a group of professionals with similar ideologies collaborated to propose innovative solutions for preserving the remaining monuments. They also recognized the dangers posed by Europe's radical urban development of the 1960s and 1970s and sought to preserve urban continuity without jeopardizing the significance of monuments surrounding historic centers.

For more than a century, attempts to regulate interventions and architectural methods for conserving cultural heritage to convey dynamism rather than repetition have grown (Toprak & Sahil, 2019). Unfortunately, between the 1900s and today, this concept has become debatable. Several players have been hesitant to recognize its inclusion in international and national charters. They continue to demonstrate that their preferences are based on one-sided historical evidence. One common factor that has aided regulation and principle formation is urban development that exceeds its historic boundaries—the dynamics that define its meaning, significance, and values (Jokilehto, 2007:33; Ukabi, 2016). In theory, that link was critical to preserving the authentic layers of a historic setting. Especially with the reconstruction schemes of the 1970s, which usher in a new urban identity that conservationists like Victor Hugo (1802-1885) and John Ruskin (1819-1901) criticized as alien. Still, the illogical imitation of an old style contributed to the difficulty. As well as the stark contrast between historic and industrial cities. As part of neoliberal trends, this has resulted in demolition, gentrification, and the universality of building designs in some extreme cases.

During the 1960s, the National Association for the Preservation of Urban Centers (L'associazione Nazionale Centri Storico-Artistici, ANCSA) laid the groundwork for the "new approach." They hoped to establish a symbiotic relationship between preserving historical values as one indicator and attracting public-private involvement and research into other variables by using historic resources. The new approach produced positive results in two urban master plan projects in Assisi and Bologna (Jokilehto, 2007). Assisi City's visual integrity benefited from its preservation without being homogenized. The principles of integrated conservation were manifested in Bologna, which included the physical (typological and morphological) aspects of the economic, social, and urban systems. In each of the examples, the historic grain was preserved while new materials and cultural narratives were added to it.

From a logical standpoint, there are principles for introducing new designs in historic environments that communicate uncertain content. Such premises can lead to

application difficulties, as other scholars have observed. Depending on the type, scope, scale, proportion, and quality of the site or urban form on the one hand and the type of content on the other, different interpretations of the site or urban form may be misleading. It can also encourage forgery designs that reduce historical hierarchies. This aligns with the sustainability slogan "Think global, act local." This paper backs up a point made by town planner Patrick Geddes regarding strategies for increasing local content. As cities evolve, the importance of a city's environmental character must be reconsidered. Under such delicate conditions, to guide the planning and design processes. The goal here is not to promote brand projects, but rather to promote a liberating and distinct personality. A sustainable method of adapting to contemporary needs without depleting or losing the essence of historical tissues.

As a result, there are some uncertainties in the existing principles of new designs in historic environments. Significant existing charters demonstrate a swing movement on the subject of incorporating new architecture into existing historic places. Their situation is similar to "a parent who wants to control the child's sugar consumption but leaves the Sugar Chest unlocked." Their claim was contemplative and constrained in terms of intervention actions such as reconstruction and redevelopment. Trying to avoid the phenomenon of a "appropriate place" refers to a historical situation or scenario that appears in unison, though not all contexts are the same. These principles become concrete when regulatory bodies distinguish between historic environmental types. It will lay the groundwork for future interventions while resolving conflicting character definitions. When actors explored the historic settings' resources according to their preferences, the possibility of urban chaos would emerge.

1.2. Forgery Design Expressions

Because it consists of units of design methods that exhibit similar behavior, forgery design is a compound concept. The concern for the sustainable conservation of cultural heritage is based on the nuances that design brings to every environment that bears its imprint. According to the book excerpts edited by Schultz (2022), "fake design" refers to a semblance of a copy of the original build design. The opposite scenario occurs when a proposed design intended for a specific site is built in a new location. In the existing literature, forgery design approaches are also known as pseudo-historical design approaches, pastiche design approaches, or style homogenization (Jokilehto, 2007). They also represent conditions such as: the reconstruction of a cultural heritage building or site that has become extinct due to the course of a given place's history evokes nostalgia value in the present age; the selection of architectural objects that mimic native materials; architecture that pretends to be historic through unoriginal material forms (expression, sustainability, high-tech provisions, traditional crudeness, and so on).

Several scholars have discussed forgery design approaches applied by designers in different historical contexts using their synonyms. Thus, Parody imitates the features of past styles (Sachner, 1987). Contextual uniformity: Copying that follows the existing building's visual appearance (Rogers, 1988). Pastiche: New mimics old (Linda, 2006). Literal replication: Replicating historic context images (Semes, 2007). Imitation: copying past characteristics of an old building or place (Birlik, 2013). Referential: Build from references to old context. Simulation: Rebuilding from the Old (Gambassi, 2016).

The history, experiences, and perceptions of the locals enable them to distinguish between architectural expression and culture (Schultz, 2022). Despite the fact that the two concepts are nearly inseparable in reality, the claims made in this paper are consistent

with a recent virtual webinar hosted by the UofG-University of Glasgow Social and Political Sciences (2021). They sought to provide an answer to the question, "Why do historic places matter?" Chris Miele argued that the amount of effort expended by planners, regulators, and designers to protect monuments is disproportionate to the amount of effort expended by the same people to create new designs in the same environment. This is why the pastiche design approach continues to supplant uniqueness in historical places. Pastiche design approaches may not be a problem in other design disciplines with soft contexts from a trans-disciplinary standpoint. However, in architecture that deals with concrete contexts, this indicator still constitutes a major issue. As part of the long-running philosophical debate over what architecture is? According to Sadri (2017), the uniformity of public space transformations into historic squares causes disagreements among individuals and groups. The solution to this ownership dispute was to create numerous spaces for various public interactions.

Nonetheless, the public's reflection on how pastiche strategies once aided politicians in controlling their spatial identities continues to elicit contempt. They imposed social class ideology on society's living spaces in order to instill common memories of accepting ideas, which caused social symptoms that scare users away from new designs. This perception of power and control does not convey the full character of modern and contemporary architecture. As Azizi (2017) demonstrated in the Bauhaus principles in Cyprus housing, the two schools of design thought are not based on a singularity of ideas and styles. Its broader application stemmed from the style's adaptability implications, which at the time shifted from extended family circles to nuclear family types. This evidence elucidates how users' perceptions of architectural objects change over time, and one researcher described it as a "shell of memory" in war-torn cities (Bakshi, 2012). A broader spectrum connects Vitruvius' foundations to the three elements that make a building great. Firmness, function, and aesthetics are examples of such requirements. Understanding is crucial in this union of new and old.

Again, Amen (2018) projected that the dialogue between new designs and historic ones plays an existential role when an understanding of the urban binary equation between space and architecture gets formalized. Formalization in its pure state takes different forms, and this article focuses on one aspect of it known as localization. In a time when continuity struggles with people's aspirations. A reflection on the direct or indirect effects of forgery design approaches on users and the built environment in which the historic area sits is crucial. These impacts connect to the agents of change in historic environments from past times as “material structures and social life requirements” (Dijokiene, 2012). The reality is that people will keep upgrading. So a mosaic of their endeavors serves as a visual reminder even when they exceed the physical limits of the historic environment (Ukabi, 2016).

Design repetition is “a fast architecture,” which kills critical reflection and choice making in the design process (Kostourou, 2014):

- It reduces architectural design and urban design quality (likening it to porosity).
- This design method is a plus for real estate and political agendas but neglects local conditions for architectural universality.
- Economists refer to it as a homogeneous product. A form of constraining people into a single prototyping spatial condition that rips them off their diversity. There is also another problem with 'way finding' in these urban quarters.
- It reduces the quantitative expression of the historic urban fabric (Navickiene, 2012), which makes it difficult to read the historic layering over time. In the

long run, this will result in the loss of the rare value of cultural heritage ensembles.

Tümer (2012) proposed the pseudo-vernacular design approach as a middle-ground method for designing in historic environments. However, according to this researcher, planning policies that attempt to create a desired image history can result in the creation of pastiches that are not representative of the original image. Under the guise of intervention and politics, the latter still occurs in the United Kingdom for reasons such as site development for cultural tourism, urban regeneration, and reconstruction (Orbasli, 2000:79). Safranbolu and Odunpazari in Eskisehir, Turkey, are examples of such pastiche (Toprak & Sahil, 2019; Alpan & Unver, 2020).

The gaps resurface in different contexts because agents of historic environments ignore the dual application of environmental perception. Local contexts use this principle to test the relationship of the new with the old. Why? Environmental perception is a multifaceted concept that includes three facts about people's interactions with the environment (Ittelson, 1973). The facts incorporated in it include, first and foremost, those that are not directly controlled by the stimulus. Second, it has implications for other aspects of psychological functioning. Third, "it is relevant and appropriate to the specific environmental contexts" (Marques *et al*., 2020).

The third fact relates to the goals of this paper. This premise in the previous webinar was simplified when another keynote speaker debunked the one-sided focus on human perception in a historical context. Rebecca Madgin argued that people's perceptions of historic places reflect not only nostalgia but also a sense of "wow." Perceiving wow is a composite emotional response associated with aesthetic appreciation, admiration, and adoration for the location. Heterogeneous environments represent a synthesis of intangible and tangible aspects of heritage. Both types of environmental perception can bring people of different ages together while keeping the visual layers intact.

2. Material and Methods

2.1. Methodology

This qualitative research adopted an evidence-based approach from the content analysis of documents and other pilot research carried out by the authors, participation in two semesters of design studio in the study context, and frequent observation over a specific time in the study surroundings and mapping. Evidence-based research (EBR) is a methodical and transparent approach to using prior research to inform a new study in order to answer important questions in a valid, efficient, and effective manner (Lund *et al.*, 2021).The data collection methods used included reading of texts from documents, online media blogs and design platforms, study context visits with a Sketchbook, taking photographs, and informal conversations with staff of the Department of Antiquities and Museums Lefkoşa. Data analysis techniques included visualization, inductive reasoning via correlating the results, and research participants' concept mapping of the evolving trends as a form of round-table evaluation. Studies where Evidence-based research (EBR) was used include: Wells *et al*. (2018) who engaged EBR strategy to discuss how a human-centered conservation approach can and should change practice in built environment heritage preservation; it was also used to explores the conservation of biological resources in an agricultural heritage system in the example of the Shuangjiang Mengku Ancient Tea and Culture System (Ma *et al*., 2020).

This research's process systematically follows four phases. In this regard, North Nicosia Walled City was considered the study area and an example of such a city with a heterogeneous nature. In the first phase, two steps were followed. The first step explored 25 international and national conservation regulatory agencies that dealt with the relationship between contemporary designs and existing buildings in historical environments to determine the preferential attitudes of the agencies. The next step embraced the logical exploration of 100 articles on this subject to identified the ones that concentrated on designing in all forms of historical places. And part of this dataset was deposited at Figshare during the pilot literature survey stage of this research. 43 design types were identified in that document analysis. This phase conceptualized a six-part ranking of the guideline criteria, and six design approaches taxonomy for new designs in historical settings. A synthesis of these two conceptualizations and some factors from the literature reviews brought about five-point indicators that were used to analyze the case studies selected from the study area as a Relational Evaluation Tool (RET). Thus, design approaches, principles, historic environment character, visual appreciation, and relationship with context which the authors had test-run from their recent studies (Ukabi & Akçay, 2023).

The second phase engaged situation observation through periodic individual and group tours, of the case study area–The Walled City of Nicosia on the northern side. Particularly, taking part in two design studio ARC302-Interventions within Historical Context in the Fall 2022-2023 and Spring 2022-2023 semesters at one of the island's university. The level of participation was at the Studio coordinator. The site inventory and SWOT Analysis provided a clear insight into the situation and involved the taking of photographs, making sketches, and taking notes. The selection and analysis of case studies was the third phase which was discussed under the study area in the section below as part of the materials for this research.

The fourth phase focused on the comparative analysis of the three phases to identify and form extrinsic tools simplified into a single pack-SEBAS (Specimen, Engaging, Balancing, Adoption, Selecting). Specimen was taken from the evidence possessed by historic environments, irrespective of location, having either a heterogeneous or a homogeneous character, as introduced in the literature. Engaging was derived from the fact that environmental perception is diverse. Allowing users to perceive this diversity contributes to both the tangible and intangible benefits of architectural ensembles. Especially now that designing in historical surroundings has become a public domain, it will be unfair for designers to create designs that fail to meet both individual and community satisfaction. Balancing advocates for designing from different perspectives because design contains many things. That means from both the general phenomena of inside-outside and outside-inside. Adoption, every historic situation requires different solutions. The evidence should direct the type of intervention, which in some cases may mean doing nothing at all. A too sick historic environment will require more urgent and sophisticated actions, maybe regeneration, than a moderately sick one, which consolidation can adequately solve. Selecting focuses on authorities concerns with control issues to provide a comprehensive regulation framework rich in content, open to quality visual outcomes, and not rigid for constructive reviews and upgrades. This study was limited to a heterogeneous historic environment; it implies that the envisaged outcomes can be applicable in other types of historic places with a similar character, but homogeneous historic contexts might require different parameters of evaluation. This is the distinction we think future research should be able to explore to minimize the

challenges posed by treating the two environmental types as the same. The research design diagram was simplified for transfer-ability by other related studies, Figure 1.

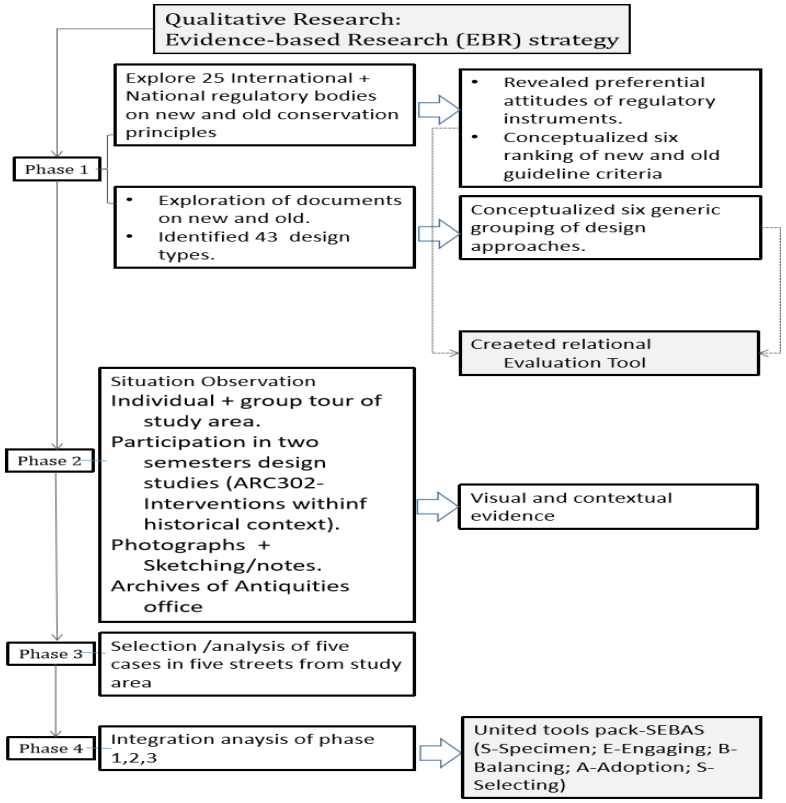

Figure 1. Research framework for localizing new and old conservation principles (developed by authors)

2.2. Study Area-North Nicosia Walled City

Although Nicosia has been divided, it plays a significant administrative role on both sides, North and South Cyprus. Enclosed by fortifications and home to a variety of architectural styles from different cultural eras. Its geographical positioning near Africa, Asia, and Europe has greatly influenced its economic, religious, and historical significance. However, the city's severe division in 1974 by a Green Line and a Buffer Zone (Perbellini, 1994:3) brought difficult cultural, economic, and social-spatial changes that posed a threat to the historical Walled City of Nicosia and the whole of Cyprus as well. The Walled City is home to both Turkish Cypriot communities in the North and Greek Cypriot communities in the South. This research focused mainly on the northern section of the city. An historical reflection on the city's cultural material from the Lusignan to the TRNC periods was explored to appreciate its tendencies, which was vital to understanding the core drivers. The existing architectural marks of the city showcase a coexistence of the "new and the old." The Ottoman era introduced new additions to the city, and even though their efforts did not fully yield the desired results, they did serve to preserve the existing artifacts. The TRNC Period to now is the study bounds for the selection of cases. Its analysis highlights an essential period in the social, cultural, and

spatial structuring of North Nicosia's Walled City, using four variables: Styles, design approaches, implications and building photos, Table 1.

Table 1. Material cultural tendencies of North Nicosia Walled City (developed by authors)

Variables	**Lusignan Era (1192-1489)**	**Venetian Era (1489-1571)**	**Ottoman Era (1571-1878)**	**British Era (1878-1960)**	**Republic of Cyprus (1960-1963)**	**Partition Era (1963-1974)**	**TFSC Era (1974-1983)**	**TRNC Era (1983-now)**
Styles	Gothic	Renaissance	Oriental	Eclectic	Corporate Modernism	Mediterranean modernist	Uncertainty	Random
Design approaches	Indicative	Reflective	Reflective, Selective-reflective, Resiliency	Progressive	Progressive	Progressive	Barriers	Reflective, Selective-reflective
Implications	City foundations were laid	Built urban elements that militarized the city	Intrinsic family living influenced buildings layout	Secularization brought new ideas and new materials	Post-Colonization influences	Started to build boundaries within micro and macro scales	Non-Directional with sociocultural and spatial restrictions	Imagine a Turk image
Building photos								

TFSC-Turkish Federated State of Cyprus; TRNC-Turkish Republic of Northern Cyprus

As shown in (Table 1), four variables were used to showcase the material cultural ideologies of the Walled City of North Nicosia through the various cultural civilizations: Style, design types, implications, and buildings photographs. The city's fabric during the imperial eras shows a consecutive distinctive evolution to the formative periods of modernization. On the contrarily, the nationalistic periods could not maintained that tempo for different ideological reasons among the different stakeholders. The implications in the period investigated brought uncontrollable contemporary design repetitions.

2.2.1. Case Studies

The provisions for a green line and buffer zone are now encouraging urban decay. This implication is consistent with the findings of other researchers who surveyed other Walled City neighborhoods (Eyyamoğlu & Akçay, 2022). This research selected five cases from four streets and two neighborhoods in the walled city of North Nicosia. Cases 1 and 2 are in the Selimiye neighborhood, while Cases 3–5 are in the Arabahmet neighborhood. The selected cases include: 1. Sabor Restaurant next to Yunus Emre Enstitüsü on Semiliye Square by Müftü HİlmiStreet.; 2. İstimdami Koruma on Eski Saray Street; 3. Law firms (AV. Özkul Özdevim and AV. Cemi, and Asvaroğlu Hukuk Bürosu by Müftü ZİyaİEffendi Street; 4. Djumba Guest House by Müftü ZİyaİEffendi Street; 5. Residential House (SHT. SalahİşevletStreet).

The criteria for selecting case studies follows: The new buildings added in each context during the Turkish Republic of Northern Cyprus (TRNC) period as defined (1983-now); the visual character of added new buildings showing resembling expression of past cultural images; actively used for different purposes; the new building stands in proximity with adjoining buildings in a street, Figure 2.

Figure 2. Visuals of case studies (developed by authors)

From Figure 2 above, the following inferences are made. Case 1 is a restaurant that serves both local and continental dishes, catering to both the local populace and visiting tourists within Selimiye Square. Its location is strategic within the city's historic core. The design mirrors the neighboring traditional historic buildings, although there's a noticeable difference in the construction materials and color. The main facade elements and visual composition show features of Ottoman architecture in the study areas. This visual expression is synonymous with design typologies such as contextual uniformity, referential, simulation, and so on.

Case 2, located in proximity to one of the city's monuments, the Selimiye Mosque, functions as an office for Employment Protection (now use for EU Incubator Hive from April 23, 2023). This case distinctly contrasts with the surrounding context in terms of color, the flat roof, and the semi-open balcony design, but it mirrors the British colonial architecture. This architectural approach tried to hybridize with street ambiance, but rather, the visual energy displayed harken to design types such as contextual contrast, abstract symbolism, harmonic contrast, and integration.

Case 3 is a building that is home to several law firms and is close to the Arabamet Mosque, one of the significant heritage structures in the study area. The facade copied the character of Ottoman and British neoclassical architecture. This case aligned with design types like facadism, re-founding, parody, contextual uniformity, pastiche, literal replication, imitation, referential, and simulation.

Case 4, located opposite the Arabahmet Mosque, depicts a clear design with the client's inclinations to bring back how their parents configured the structure, which now serves the public as a hotel and cafe. The design type articulated agrees with that of Case 3.

Case 5 still showcases the common elements already mentioned in Case 3. They resemble the prevalent traditional domestic houses referred to as "sachnisi" (Thravalou & Philokyprou, 2021). They are reproduced with a touch of modern materials, but the design type falls into contextual uniformity, referential simulation, and version. The analysis of the case studies using one of the developed tool (RET), Table 2.

Table 2. Analysis of case studies (developed by authors)

Indicators	Case 1	Case 2	Case 3	Case 4	Case 5	Frequency
Design approaches						
Indicative						0
Reflective	✓			✓		2
Selective-reflective		✓	✓		✓	3
Resiliency						0
Progressive						0
Fashionista						0
Principles ranking						
1st	✓	✓	✓	✓	✓	5
2nd	✓	✓	✓	✓	✓	5
3rd	✓	✓	✓	✓	✓	5
4th						0
5th						0
6th						0
Historic environment character						
Heterogeneous	✓	✓	✓	✓	✓	5
Homogeneous						0
Visual appreciation						
Nostalgia	✓		✓	✓	✓	4
Freshness		✓				1
Wow						0
Relationship with context						
Uniformity	✓		✓	✓	✓	4
Harmony with contrast		✓				1
Contrast						0
Too contrast						0

From Table 2 above, assuming 50% cases' frequency represent bench mark, then the variables that will define the study area investigated will include Selective-reflective design approaches, 1st-3rd ranks principles, heterogeneous historic character, nostalgia visual perception, uniformity relationship with context. Other results of the case studies are visualized in the results section.

3. Results

The results of the five case studies are presented using composite bars in the Chart below. Providing a simplified relationship between indicators on the vertical axis and the cases placed on the horizontal axis, Figure 3.

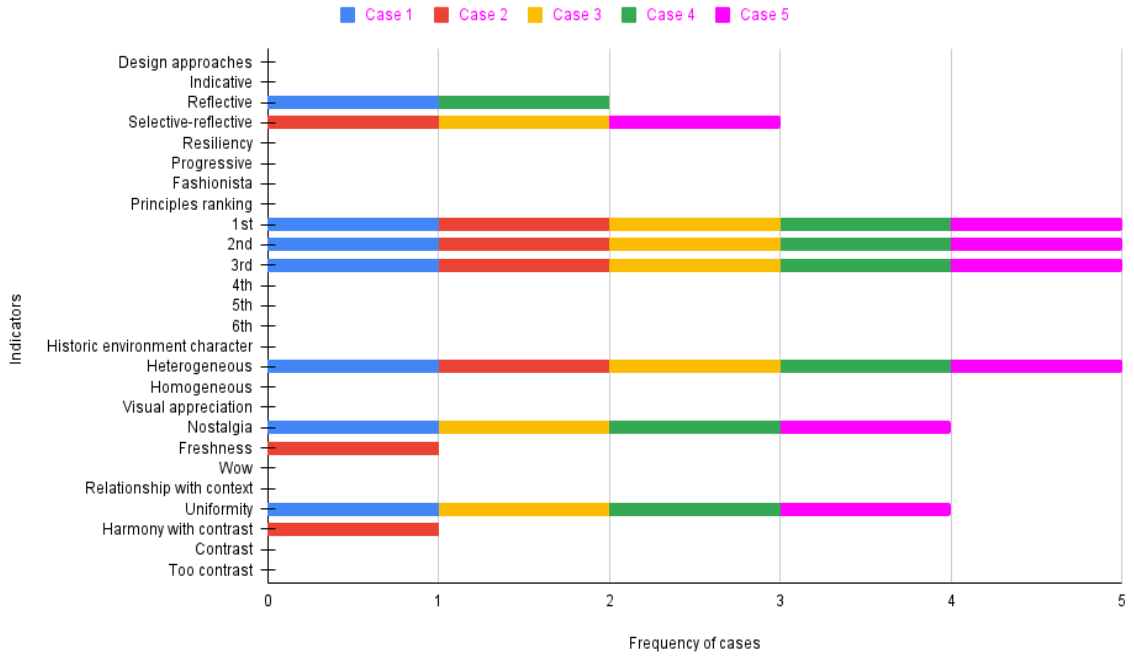

Figure 3. Results of case studies (developed by authors)

From Figure 3, the results at each indicator for the cases show that in Nicosia Walled City, the design approaches significantly used by designers to add contemporary architecture to the existing ones were Selective-reflective (Cases 2,3,5) and Reflective (Cases 1,4) design approaches. Under principles ranking, only rank 1st-3rd ranks were engaged to execute all the interventions of the five cases. From the analysis, all the cases are located in a historic environment character that is heterogeneous. Four cases depicted nostalgia visual perception (Case 1, 3,4,5) while one case displayed a feel of freshness (Case 2). In the relationship with the context, four of the cases related uniformly with the existing context (Case 1,3,4,5) while the remaining one case related at the level harmony with contrast (Case 2).

The three problems identified in the exploration of existing conservation principles and literature about new and old: The use of relativity terminologies, the fusion of historic environment types, and preconceiving new designs as threats to historic places. These indicators came from the theoretical section of this paper as a lacuna with content descriptions are shown in Table 3 with the use of four protocols: Content scrutinized, logical thoughts, regulatory agencies, and critique from other scholars from the formative periods to the 21st century ones.

Table 3. Top-down concern about conservation principles for coexisting new and old (developed by authors)

Content scrutinized	Logical thoughts	Regulatory agencies	Critique from other scholars
Fine architecture.	Leaves creative designers to ponder whether this is referring to Vitruvius creed or a fashionable design value.	Athens Charter 1933	Supported isolation as a negation to the concept of heritage (Iamandi, 1997).
Use of pastiche bears a singular signification without considering the other side.	A negative or positive outcome is possible, depending on the contextual significance of the historic site.		
Style homogenization	Leads to architectural universality, a design approach which resides with pastiche.	Venice Charter 1964	The use of the terms recognizable, distinguishable, and contemporary stamp is uncertain from the review conducted by Khalaf (2016:326) for pragmatic designers whose design value is to create novelty.
Limited reconstruction to a mere theoretical assumption.	Undermining the threats caused by war and disasters.		
Valorization of cultural heritage assets.	When the intrinsic values are glaring, friction can surface between the locals and the government because the scale of valorizing the heritage assets is undefined.	Norms of Quito 1967	
Incongruous new construction versus architectural heritage is not only buildings of exceptional quality.	The issue about high quality of new insertions (like the beauty of a piece of architecture) raises the question of what level and aspects?	Amsterdam Charter, 1975	
Scared of new works in rural settlements.	Considered unsuitable in local settlements with homogeneous tissues.This limit is unrealistic because there are design approaches that can fit in such environmental sensitivity.	Tlaxcala declaration 1982	
The dual role of new additions to satisfy both comtemporary language and traditional too.	Consideration of additions as complementary tools fuel repetitive approaches and water-down quality of new designs.	Appleton Charter 1983	
The Concept of urban conservation in the face of harmony and compatibility.	To keep to all the spatial and urban pattern outlined would be problematic in intervention schemes like adaptation, renovation, etc.	Washington Charter 1987	
Literal isolation of homogenization or pastiche.	Inside of this homogenization is pseudo-historical design approaches which are forgery by misapplication.	Mexico Charter 1999	
Maintain the spirit of the heritage site and new constructions.	New constructions are treated lightly because the heritage site is seal as an eutopia and a downplay on continuity.	China ICOMOS 2000	
The reality of time specificity and continuity.	Asserting contemporary works as complementary activity becomes obsolete in the present age for lack of the new generations' aspirations.	Vienna memorandum 2005	
The scale of new development.	The parameters for control are not elaborated for urban manipulators. The pairing of new architecture to traditional expression while maintaining the architectural trends of its time and place is a complex assertion.	Valletta ICOMOS 2011	
Place significance as two modes of existence (old and new).	Their interaction for change is handled subtly and the dimensions of impacts, relationships, and respect for cultural significance are not explicit for designers and regulators.	Burra Charter 2013	A positive shift from classical tendencies of conservation to the status of managing change and integrating other notions of practical typologies critically require clarity (Taylor, 2014).

From Table 3, the results examined the use of universal terms, which fit into the reading of the historic setting as a literal construct. Opened to interlinks of text, ambiguity, exclusion, or inclusion to forge an idea. The evaluation of the 25 regulatory agencies to find out their preferences on 21 guideline criteria relating to contemporary architecture in historical environments are visualized in Figure 4.

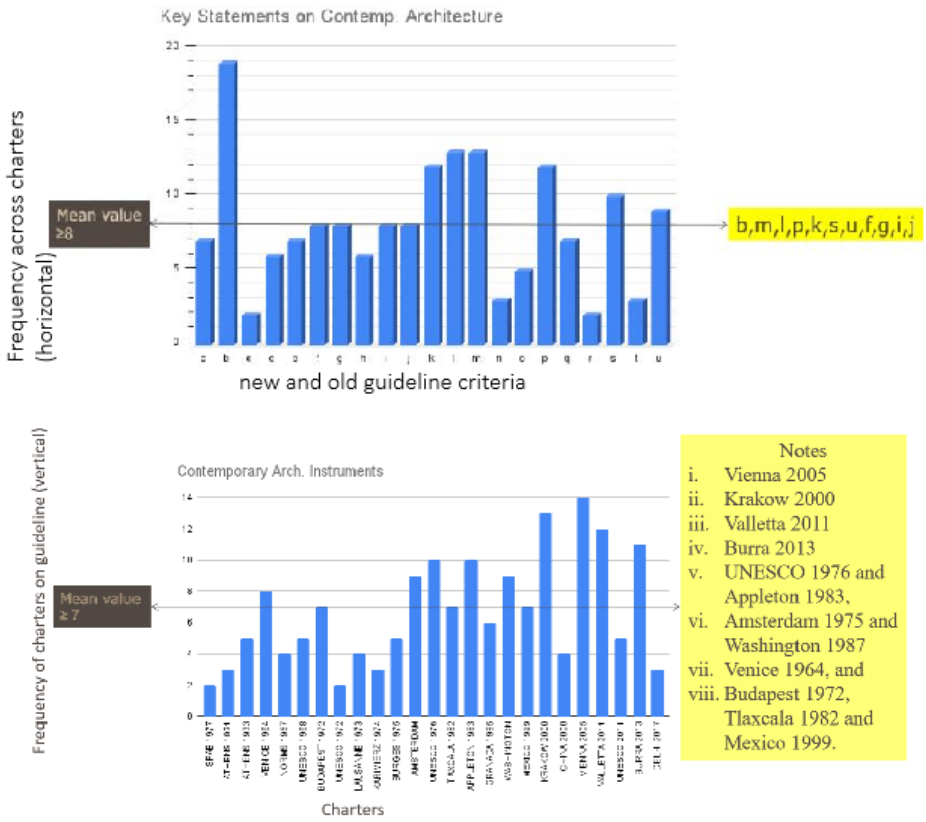

Figure 4. Preferences of conservation agencies for principles (developed by authors)

In (Figure 4), a two-way preferences analysis showed two results that relate but express different intentions. On the vertical preference, a single regulatory body interacts with the 21 guideline criteria chosen after reviewing the conservation legal framework documents that deliberated on the subject. The horizontal column preference is the opposite of the vertical. Meaning, a single principle was plotted against the 25 regulatory bodies. Their frequencies came from a physical data count of text found in their documents. Again, mean values as a limit to determine the most preferred guideline by them eased the selection process, the mean value for the vertical equals to 7 and for the horizontal approximately 8 as highlighted on black. For instance, SPAB 1977 mentions only 2 out of the 21 guidelines selected, and (code a-"New should avoid forgery approaches") appears in 7 regulatory bodies.

The results on the yellow highlights in (Figure 3) show that 8 regulatory bodies are the ones that provided average and above guideline criteria for adding contemporary architecture in historic environments. They are Vienna 2005 showing the most significant with 14 points. Next to it, was Krakow 2000 with 13 points before Valletta 2011 with 12 points. After Burra 2013 with 11 points, and Venice 1964 on the singular representation came out with 8 points. We observed the following regulatory agencies occurred in

clusters: UNESCO 1976 and Appleton 1983 appeared with 10 points; Amsterdam 1975 and Washington 1987 followed the trend with 9 points; and Tlaxcala 1982 and Mexico 1999 shown a preference of 7 points. The preferred conservation principles are 11 out of the 21 identified for this analysis and their ranking was developed from these logical outcomes into 1st to 6th ranks, Table 4. These are results taken to create the conceptualized ranking from the horizontal preferences that correspond to the mean value and above and a check to ascertained the outcome of the vertical preferences.

Table 4. Guideline criteria ranking (developed by authors)

Code	Principles	Rank
b	Protection of monuments' character/surroundings, historic values and not demolish.	1st
l	Contemporary architecture as part of town-planning scheme for future development demands administrative resources.	2nd
m	Avoid new uses that rip residents' liveliness and historic condition.	
k	New role/adaption of the 'historic groups' and authenticity/integrity should be regarded.	3rd
p	New should be harmonious/contextualize with its surroundings/whole town.	
s	Safeguarding the natural or man-made environment as umbrella concept for heritage care (activities and interventions).	4th
u	Duplicate Venice Charter principles.	5th
f	Rigorous scrutiny of contemporary proposals/new materials by specialists.	6th
g	Permit change of function/modifications as urban evolution/continuity.	
i	New must be distinct and bear contemporary stamp (mark of our age).	
j	Valorization of cultural heritage as tools for progress.	

The results in Table 4 show an ascending order from a lighter mode to a denser principle (1st-6th ranks). This order was earlier described as small (1st-3rd ranks), moderate (4th-5th ranks), and extensive (6th rank). It is ranked sixth; contemporary designs have achieved expressive status. Having realized the ranking of regulatory guidelines, we correlated these results with the TRNC conservation regulation for contemporary designs in the historic setting, which was carried out to provide more clarity and enhance the argument raised. Antiquities Law of North Cyprus states that the approved project should be compatible with the character of the environment and/or sites, properties, heights, architectural construction materials, the buildings and the environment and the perception of the environmental issues should be taken into consideration. Other rehabilitation projects implemented under a bi-communal agreement were important because most of the cases selected fell within that period. Based on the (AKDN-The Aga Khan Development Network, 2007) documents adopted six design guidelines. They provided clues to the local content deficiencies in new additions which this paper seeks to address in order to curb forgery designs expression:

- Developed a legal framework that will sustain the protection process and ownership rights.
- Adopted international restoration guidelines on safeguarding the authenticity of the structure and reversibility.

- Building height limits was set at two story.
- Maintaining streets network and introducing pedestrianization.
- Reorganization of vernacular traffic network and provision of parking spaces.
- Emphasis was on the use of traditional materials and techniques.

The taxonomy of design approaches was first sorted using five protocols: Design approach description, sub-units of design types, codes, numerical value, proposed new design approach, Table 5.

Table 5. Sorting design types (developed by authors)

Design approach description	Sub-units of Design types	Codes	Numerical values	Proposed new design grouping
Design types that serve as a sign and bring about the attributes of new and old similarities	Philosophical, Genius Loci, Prescriptive.	A, E, Q	3	Indicative design approaches
Designs that are modeled after the traits and trends of the past	Facadism, Re-founding, Morphological, Parody, Impressionistic, Contextual uniformity, Pastiche, Literal replication, Imitation, Referential, Simulation.	C, G, H, I, J, K, (RZ^{13}), S, W, Z^{1}, Z^{7}	11	Reflective design approaches
This category of designs show preference for old elements, the new pick out specific elements or parts of the existing artifacts	Collage city, Contextual continuity, Abstract symbolism, Stylistic, Intention within a style, Abstract reference, Version, Harmonic contrast, Differential, Integration, Partitioning, Traditional.	D, M, O, P, T, U, X, Z, Z^{2}, Z^{8}, Z^{11}, Z^{14}	12	Selective-reflective design approaches
Design types that are neither biased by the past nor motivated by the new, are neutral.	Intellectual, Strategic, Neutral, Participatory, Subtle, Humanistic.	F, N, Z^{4}, Z^{6}, Z^{15}, Z^{19}	6	Resiliency design approaches
These are new works that grow in creative phases with age, without homogenization	Spatialism, Contextual juxtaposition, Opposite, Analogy, Contrast, Spectrum interpretation, Modern, Picturesque.	B, L, Y, Z^{9}, ($Z^{3}Z^{10}$), Z^{12}, Z^{16}, Z^{18}	8	Progressive design approaches
Design types that express surprise	Intentional opposition, Contrasting, Freestyle, Arrogant	V, Z^{5}, Z^{17}	3	Fashionista design approaches

The data in Table 5 above was carefully sorted and enabled a logical technique of using the codes (A to Z^{19}) but during the process an hybrid code was developed for pastiche (RZ^{13}), and contrast ($Z^{3}Z^{10}$) because they were repeated in the data collation to spot clusters or patterns with design types that portray similar interlink of content meaning. A further simplification was done on them using a Funnel Chart to visualized the results into six new generic grouping, which are made up of sub-units of design types, prepared using Wondershare EdrawMax, Figure 5.

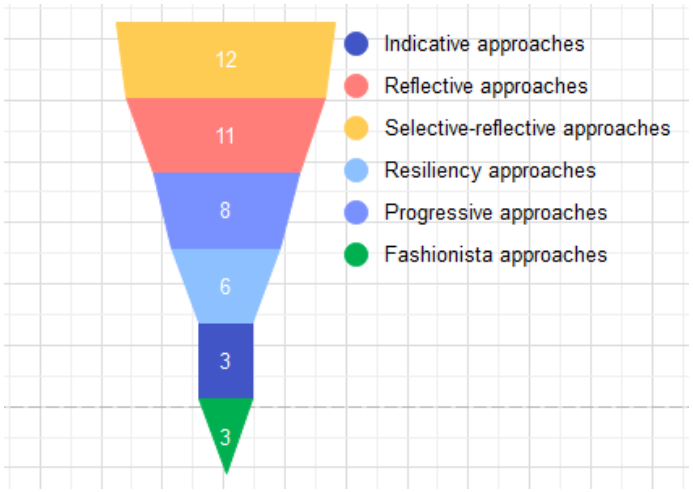

Figure 5. Six new design approaches strata (developed by authors)

From (Figure 5), the new six design grouping show that the most used approaches by designers to add to existing layers are the Selective-reflective with 12 points (approx. 28%) and situated at the apex of the Funnel, and Reflective design approaches with 11 points (approx, 27%) followed. The next design approach on this stratification showed Progressive approaches with 8 points (equivalent to 18.6%). Resiliency carried 8 points (approx. 14%) and Indicative and Fashionista approaches each featured 3 points (7.0% for each).

4. Discussion

The current state of built heritage conservation agencies gives more attention to one-way existence in the historic environment, which overemphasized the monument's values to the detriment of fashioning contemporary architecture in that version (see Table 3). A notion already carried by some urban researchers in the 21st century on the application of style to contemporary design tends to mallet them toward uniformity (Wang, 2012). This study remains paralleled on this premise and juxtaposes it with the universal design principles of "variety." Such inputs brighten the historic place's tangible ensembles of heritage on the one hand, but on the other hand, they can obscure them. This type of preference negates sustainable conservation goals for heritage inclusion and the capacity of the current architectural object to transmit quality traces to the future, as enshrined in the Amsterdam Declaration (1975). Yet, the type of historic environment challenges design practices when too much attention goes to these two groups shown, which are selective-reflective and reflective approaches (see Figure 5). These claims are not isolated from the conservation principles ranking because the descriptions given by the first to third ranks align with the features of the design approaches and their content meanings (see Tables 4-5 and Figure 5).

Based on the evidence captured, the existing literature has shown that different historic cities that strictly regulated the design and construction process of interventions that involved adding contemporary designs failed to produce constructive outcomes. Furthermore, they ended with forgery design expressions. This homogenization challenges the design of the historical place and also affects the entire urban environment at large.

Although the cases analyzed belong to a heterogeneous historic environment (see Table 1), ironically, they significantly showed the features of a homogeneous historic type (see Table 2). Cases 1,3,4,5 (see Figure 3), which aligned with the relationship existing between conservation principles and design approaches. Although Case 2's expression showed contrast from the other four cases, its overall expression looks like a reconstruction action that engaged new materials. While the simplified characteristic of it tells about forgery design approaches. The evidence from the findings shows that more design types that reflect past features were used to make the new additions (see Table 5). Approximately 10% of the conservation principles were localized for the contemporary designs in the Northern Nicosia Walled City in accordance with international and national principles based on the content used by TRNC conservation regulations and the ones adopted by AKDN (2007), which are similar in content. That aligns with only the first to second ranks (see Table 4) and negates the re-interpretation of contextual values suggested by Dıncyurek & Turker (2007).

The practical application of these principles shows that the lacuna earlier remarked on the international and national regulatory documents still surfaces here. Leading to the freezing of new environmental perceptions because they are one-sided towards the nostalgic value of the previous traces. Such restrictions imposed by a lack of a holistic conservation framework (Doratlı et al., 2004), led to unsustainable results in the local context of the North Nicosia Walled City. The findings show that most of the less used conservation principles are the ones that can give contemporary architecture its real image. This agrees with present use value and topological value as a continuing mosaic of the place. Based on these outcomes, most of the cases analyzed show a shift toward newness, but this paper interprets this phenomenon as superficial expressions in the basket of forgery designs.

The imitations that resurfaced as a type of forgery design in the study context studied was as a result of:

- designers adopting design approaches that emphasis only a reflection of the past in the new;
- adherence to contextual strategies as a form of adaptation;
- complete following of preferred conservation principles;
- a lack of a clear conservation framework;
- cultural affinity and ideologies of locals with the past and other cultural civilizations.

5. Conclusion

This study looked into how localizing modern design principles can prevent forgery of design expressions in historically heterogeneous environments. When incorporating new designs into any historical environmental type, this study did not identify any issues with design approaches. The regulating bodies', designers', and locals' roles were discovered to be the root causes of the symptoms. This was further summarized into five causal factors: the way designers apply design approaches to the given situation (and erroneous application can be problematic), the conservation guidelines that designers are required to follow from control authorities, the partial perceptions of the locals and policy-makers for a nostalgic feel (which is an incomplete environmental perception), unclear conservation policy at the local level, and the designers' attitude to switch only to contextually based design approaches. These variables are responsible for the visual

energies manifested in the North Nicosia Walled City, which this study called forgery design expressions. They align with the historic cities exemplified in the evidence sourced from the available literature, where pastiches were inevitable because of control lapses.

Regarding new and old conservation guideline criteria, especially for existing historically heterogeneous environments with rare values like the North Nicosia Walled City, which presently follows a piecemeal set of international and national principles while attempting to localize its impact on the city's fabric. Again, this paper spotted this lack together with the other four reasons mentioned as contributors to forgery design approaches from a sustainable conservation perspective on the drivers of inclusivity and typological value. Based on the evidence identified, the introduction of contemporary designs within existing historic settings should not be limited to just enforcing the preservation of the artifact's value and branding attributes but also to its visual quality, which represents various aspirations (tangibles and intangibles) of the place and people. Although these facts are enshrined in most of the heritage conservation documents, a preference for the former tends to dictate most local policies and implementation.

Most importantly, to localize conservation principles in North Nicosia Walled City, it will require these five-letter recommendations that stand for SEBAS as an integrated additional conceptual-based framework for building multiple local visual and content quality, and for creating a multifaceted experience:

- Specimen-Acknowledging historic environment types;
- Engaging-Involving environmental perceptions;
- Balancing-Design approach adopted by designers should embrace the two major paradigms of design: Inside-outside (problem solving-topic, concept, context), and Outside-inside (action-reflective practice);
- Adoption-Applying design approaches that suit the environmental situation;
- Selecting-Regulating authorities should include in the local legislation the 4th-6th principles ranking of international and national regulation.

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