

Analysis of Contemporary Trends in Housing Design and Construction in the Historical Districts of Samarkand: Architectural Styles and Approaches (the combination of contemporary and historical elements)

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Abstract

This study explores contemporary trends in housing design and construction within the historic core of Samarkand, Uzbekistan, with comparative insights from Turkey and Europe. The introduction highlights the tension between urban modernization and heritage preservation in rapidly transforming historic cities. While Samarkand faces increasing pressure from tourism-driven development, its architectural identity rooted in traditional mahalla structures is at risk. The research identifies a critical knowledge gap in how modern housing projects in Central Asian historic cities integrate—or fail to integrate—traditional architectural and cultural values. Methodologically, the study employs qualitative analysis of urban policy documents, architectural case studies (e.g., Kosh-Khauz project), and comparative literature on heritage conservation practices. Findings reveal divergent approaches: Samarkand exhibits both sensitive adaptive reuse and disruptive redevelopment, with limited community engagement and inconsistent enforcement of heritage protection laws. In contrast, Turkey demonstrates stronger adaptive reuse models, though not without failures, while European cities apply strict zoning and incentivize preservation. The results suggest that urban heritage management in Samarkand lacks coherent integration between policy, community, and design practice. The study implies that adopting more participatory and legally grounded conservation frameworks—similar to those in Europe—could help balance modernization with the safeguarding of local identity. These findings contribute to the global discourse on sustainable heritage-led urban development.

Keywords: *Samarkand, historic housing, urban heritage, adaptive reuse, architectural conservation, traditional architecture, urban planning, cultural identity, restoration methods, comparative analysis.*

Introduction

The architectural appearance of historical Samarkand today is shaped by a complex dialogue between tradition and modernity. On the one hand, traditional neighborhoods (*mahallas*) preserve the features of vernacular architecture—narrow streets lined with blank walls, inward-oriented courtyard houses (*havli*), and dwellings decorated with carved *ganch* and wood[1]. Such houses are typically one- or two-storey, grouped around a shaded inner courtyard, and built from local

materials—sun-dried or fired brick, wood, and *ganch* mortar[1]. On the other hand, new buildings that have appeared in the historical center (especially hotels and commercial facilities designed for tourists) often introduce contemporary architectural solutions. Unfortunately, this frequently results in the disruption of stylistic cohesion: modern materials (concrete, plastic, metal) are used, façades adopt extroverted layouts with large windows and European-style bay windows instead of the traditional projecting balconies (*bolokhona*)[2]. Such new constructions within the historical environment may conflict with the existing context in terms of scale, color, and texture, thereby undermining the overall integrity of the quarters[2].

Nevertheless, there are also examples of a more sensitive approach, in which contemporary architecture seeks to speak the “language of regional architecture”[2]. A recent project—the “Kosh-Khauz” tourist complex—has demonstrated that a new building can emphasize continuity with the historical fabric of the neighborhood[2]. The authors of this project, based in Bukhara, managed to integrate a contemporary volume into the *mahalla* context in such a way that it became a noticeable accent yet not an alien element within the environment[2]. Such examples show the potential for a harmonious combination of contemporary and historical elements: the use of traditional motifs in modern design (arcades, *ayvans*, national ornamentation), adherence to customary building heights and proportions, and the application of local finishing materials. Thus, a clear trend has emerged in Samarkand’s architectural approaches: either uncritical stylization toward Western standards, which undermines authenticity, or deliberate design carried out with respect for historical heritage. The latter approach is increasingly promoted by experts and architects who recognize the value of Samarkand’s distinct cultural identity.

Urban Planning Policy and Heritage Protection

Urban planning policy in the historical districts of Samarkand is undergoing a contradictory phase. On the one hand, the preservation of the city’s unique heritage is officially declared a priority: the city is listed as a UNESCO World Heritage Site, its 3000-year history is emphasized, and programs for the rehabilitation of the old city are being developed[3][2]. As early as the 1990s, principles of conservation for the city center were formulated jointly with the Aga Khan Trust for Culture: establishing a clear boundary between the old and new city, protecting the historical residential fabric surrounding monuments, integrating monuments into the living urban environment, supporting the social mechanisms of the *mahalla*, and attracting investment for restoration[2][2]. These principles imply that new construction and infrastructure should develop with regard to the historical context, and any changes must be coordinated with heritage protection authorities.

On the other hand, in practice, serious development conflicts are observed. Construction control is often chaotic, leading to the appearance of illegal or inappropriate structures. A textbook example is the 12-storey building that was illegally erected within the UNESCO buffer zone and disfigured the landscape for a decade before the authorities decided to demolish it[3]. An even larger scandal is associated with the plan to construct a major pilgrimage center in the very heart of the historical city: for this project, the government authorized the demolition of 217–220 residential houses within the protected zone[3]. This initiative, advanced through a closed governmental decree, sparked protests from lawyers and human rights advocates who argued it violated the Constitution and Uzbekistan’s international obligations[3]. Such cases show that the rights of residents of historical neighborhoods and the requirements of heritage preservation retreat in the face of investment-oriented development plans.

As a result, the traditional urban environment suffers: the residential function of old *mahallas* is lost, the unique appearance is replaced by standard development, and the historical scale is disrupted. Experts note that the construction of new wide roads and squares in the old city

blurs the boundary between the historical and contemporary parts, destroying the potential for the historical environment's own development[2]. The isolation of monuments within a setting of new construction impoverishes their perception and “empties” the spirit of the place[2].

In response to these challenges, there has emerged an urgent need to improve policies for managing the historical center. It is necessary to strengthen urban planning regulations: clearly define and enforce the boundaries of protected zones, introduce special regulations on building height and style for new developments, and prevent arbitrary demolition of historical buildings[1]. The Law “On the Protection and Use of Cultural Heritage Sites” (2019) declares these principles, but their practical implementation is crucial. Programs to support local residents are also required in order to preserve the socio-cultural environment of the *mahallas*, for without a living community architecture loses its context. Community engagement and transparent discussion of projects in the historical part of the city could help prevent conflicts and find a balance between development and preservation. Thus, in Samarkand's urban planning policy, a struggle is currently underway between ambitious modernization projects and the need to preserve the historical appearance of the city.

Construction Technologies and Building Materials

Historically, construction technologies in Samarkand harmonized with the climate and cultural traditions of the region. Traditional residential houses were built from locally available materials: sun-dried and fired brick, clay (*ganch* plaster), and wood[1]. The structural system of many houses was based on a frame-and-mudbrick technique; for example, in certain areas a construction method similar to the Tashkent *sufa* was used—a wooden frame filled with sun-dried brick, ensuring seismic stability and natural thermal regulation[1]. Thick mudbrick walls and *ayvans* created cool interiors during the heat, courtyard pools (*hauz*) humidified the air, and inward-oriented layouts ensured privacy and security. Thus, traditional construction technologies were bioclimatic, sustainable, and tested over centuries.

In the contemporary period, however, new buildings in the historical part often incorporate modern materials and technologies that are uncharacteristic of the region. Reinforced concrete frames, cement blocks, plastic windows, and other features typical of mass construction are introduced even into *mahallas*. This simplifies and reduces the cost of construction but can negatively affect the appearance and durability of buildings within the historical environment[2]. Moreover, when new materials are integrated unskillfully, authenticity is lost: experts note cases where so-called “restoration” is in fact new construction—an old building is demolished and rebuilt using modern materials to imitate antiquity[1]. Such practices are criticized because they result in the loss of the building's original structure and historical value, even when the external appearance is partially preserved.

Progressive methodologies, by contrast, recommend using materials similar to the original ones during the repair and reconstruction of historical housing. For example, the restoration of houses in the *Kosh-Khauz mahalla* demonstrated the effectiveness of a scientifically grounded approach: the use of traditional materials (*ganch*, fired brick) and technologies made it possible to preserve 85–90% of the authentic structures while adapting the buildings to modern needs[1]. This approach—conservation with minimal intervention—allows historical houses to continue their “life” without losing their identity. Each stage of work was meticulously documented to record the methods and materials used for future generations of restorers[1]. Modern safety and comfort requirements were also taken into account: for instance, concealed structural reinforcement for seismic stability and the installation of utilities, all carried out in a manner that did not harm the historical fabric of the building[1].

Thus, two opposite vectors have emerged in the construction practices of historical

Samarkand. The first consists of rapid reconstructions using modern technologies, often at the expense of authenticity. The second comprises careful restoration and adaptive reuse based on traditional materials, which allow old houses to be preserved for longer. It is evident that the latter path—combining restoration science with contemporary standards of comfort—is preferable for sustainable heritage conservation.

Examples of Projects in the Historical Center of Samarkand

The historical part of Samarkand serves as a testing ground for various projects—from exemplary to controversial. Several notable examples include:

- **The *Kosh-Khauz* Mahalla Center.** This neighborhood near Registan Square has recently been revitalized. It once included a historic ensemble with a mosque, a minaret, and an octagonal *hauz* (pool); unfortunately, the wealthy merchant Usmanbay's house that completed the ensemble had been demolished earlier during the construction of the "Asia" hotel[2]. After a long pause, in 2023 a new tourist complex, "Kosh-Khauz," was opened—its construction lasted four years[2]. Architect Zoirsho Klichev's project seamlessly integrated the new building into its surroundings: the ensemble preserved its historical spirit while the contemporary infrastructure (hotel rooms, services) was concealed behind a traditional façade. This complex became a successful example of blending new and old—it highlights the character of the *mahalla* without blindly copying ancient forms, instead reinterpreting them[2]. At the same time, several traditional houses within the *mahalla* were restored, with their authentic wooden structures and carved decorations preserved and adapted for use as guesthouses[1][1]. *Kosh-Khauz* now attracts tourists and demonstrates how adaptive restoration can ensure both heritage preservation and economic benefit.

- **Redevelopment of the Area Near the Mausoleum of Amir Temur (Gur-Emir).** In the 1990s a project to rehabilitate the area was proposed: the plan included restoring *mahalla* centers, introducing small hotels, and improving streets while maintaining the residential function of the neighborhood[2][2]. However, contradictory decisions were later implemented. A new road was cut leading to the mausoleum, for which a number of houses were demolished and a modern square with fountains was constructed[2]. This damaged the fabric of the old city: the boundary between the historical neighborhood and the new roads was blurred, and the monument was extracted from its traditional setting. Moreover, numerous private mini-hotels appeared around Gur-Emir, and their inappropriate architectural style further deepened the rupture with the medieval ensemble[2]. Instead of inward-facing courtyards, open façades with large windows appeared; instead of national balconies, regionally alien bay windows were installed[2]. This example serves as a warning: ill-considered modernization of historical neighborhoods can lead to the loss of their atmosphere and reduce their attractiveness for tourists and residents.

- **Demolition of *Mahallas* for Tourist Projects.** A similar situation is unfolding around another significant monument—the mausoleum of al-Maturidi. In 2025 a large-scale project for a pilgrimage center is under discussion, for which more than two hundred historical residential houses are planned for demolition[3]. The project faces public resistance but remains on the agenda as an example of potentially destructive redevelopment that ignores the principles of environmental preservation. If implemented, Samarkand risks losing yet another fragment of its living heritage—residential *mahallas* transformed into a pseudo-historic "decorative" quarter for tourists.

- **Official Restoration Initiatives.** The Cultural Heritage Protection Agency plays a positive role. In 2024, under its supervision, repair and restoration work was carried out on 20 sites in the Samarkand region, five of which were completed and opened to visitors[4]. One example is the "Dari-Zanjir" complex, located in the old part of the city near Registan. This historical complex

(its name translates as “The Door on a Chain”) is associated with the Timurid era and was placed under state protection in 2019[4][4]. By 2025, its roof and façades were restored, and interior conservation work continues[4]. It is expected that the renewed “Dari-Zanjir” will become a new point of attraction for tourists and an example of careful treatment of residential architectural monuments. Although such projects concern individual sites, they demonstrate the growing attention of the state to preserving the historical appearance of Samarkand.

• **Previously Rehabilitated Mahallas.** Specialists also note successful cases from past years, when traditional residential neighborhoods were revitalized without losing their identity. For example, the *mahalla* centers “Khon Said Imam” and “Sufi Rozik” were comprehensively restored at the time[2]. Public spaces were rehabilitated, houses were repaired with the addition of modern amenities, yet the planning structure and decorative elements were preserved. These sites serve as practical examples of the methodology for regenerating historical *mahallas*: combining restoration with infrastructure development, respecting the scale of the built environment, and supporting the local community. This experience proves that traditional neighborhoods can be renewed without losing their soul—in fact, restoring their former attractiveness.

В целом перечисленные примеры отражают спектр тенденций: от варварского сноса до научной реставрации. Лучшие проекты подтверждают, что грамотно реконструированные исторические дома и кварталы становятся украшением города и ресурсом для его развития. Худшие же предупреждают о необратимых потерях при пренебрежении принципами сохранения наследия.

Comparison with the Experience of Turkey and Europe in Preserving Historical Districts

The experience of other countries, particularly Turkey and various European states, offers useful benchmarks for Samarkand in preserving historical residential environments. Despite differing contexts, many challenges and solutions are shared.

Turkey. In Turkey, as in Uzbekistan, ancient cities with dense historical fabric face a dilemma: develop infrastructure or preserve authenticity. In recent years, several major restoration projects have been implemented in Turkey’s historical districts. A vivid example is the revitalization of the Fener and Balat neighborhoods in Istanbul. These are historic urban quarters with Ottoman houses that had fallen into decline by the 2000s. With the support of the European Union and the municipality, a restoration project was carried out: more than 80 houses and dozens of shops were restored to their original appearance (façades, wooden balconies, tiled roofs), while utilities were modernized to meet contemporary needs[5]. These districts now attract tourists with their bright historic houses and cozy streets, and local residents have gained improved living conditions without losing the neighborhood’s character. Another example is the historic center of Antalya (*Kaleiçi*), where the comprehensive restoration of old Ottoman mansions allowed them to be transformed into hotels, restaurants, and museums. The municipal authorities of Antalya completed the renewal program of *Kaleiçi*, and the district has become a jewel for tourists: narrow streets with restored mansions that retain authentic details but are adapted for modern services. This adaptive reuse of historical houses (boutique hotels, museums, cultural centers) is widely practiced in Turkey: for example, in Cappadocia cave dwellings are converted into hotels, and in the city of Safranbolu nearly every historic mansion functions as a guesthouse or museum under UNESCO protection.

However, the Turkish experience is not unequivocal. In some cases, reconstruction results in new structures made to look old rather than authentic restoration. For instance, following armed conflict in the historic quarter of Sur in the city of Diyarbakir, a large part of the old buildings was destroyed, and the government rebuilt the area within a few years with new standardized houses

that only vaguely resemble traditional Kurdish-Ottoman architecture[6]. Essentially, the ancient quarter was sterilized and rebuilt from scratch, causing it to lose a significant portion of its cultural authenticity. This prompted criticism from international organizations because the UNESCO site lost its genuine historical fabric. This case serves as a warning: full-scale reconstruction of historical areas without attempts to preserve original houses can result in the loss of the site’s intrinsic value. At the same time, the positive Turkish examples (Istanbul, Antalya, Mardin) show that with political will and funding, even partially ruined districts can be revived with attention to both architecture and the social dimension. For example, in 2024 a state project began in Mardin province to restore the old Assyrian quarter of Dereici—churches and residential houses are being restored, lighting is being improved, and cafés and hotels are planned in order to reinvigorate this multiethnic area[7][7]. Such an approach—combining restoration and tourism development—is similar in spirit to what has been proposed for Samarkand’s *mahallas* (introducing new functions while preserving old buildings).

Europe. In European countries, historical urban centers are generally protected very strictly. National laws and international charters (such as the Venice Charter on Restoration)[1] establish principles: preservation of authentic materials, the minimum necessary intervention, reversibility of new additions, and the distinguishability of new from old. Unlike some post-Soviet cities, where new construction may intrude into historical environments, Europe often limits the height and volume of new buildings in historical zones. For example, high-rise buildings are prohibited in the centers of Rome and Paris—modern architecture there is either situated outside the historic core or introduced selectively while respecting the scale of the surroundings. When it becomes necessary to integrate contemporary architecture, a stylistic contrast is often used: a new building is constructed in a modern design but in such a way that it does not dominate the surroundings or disrupt the silhouette. In other cases, practices such as “Disneyfication” (as a negative scenario) or facadism are applied, in which only the historical façade is preserved while a new building is constructed behind it. However, this method is criticized, as the value of a monument is not limited to its façade.

Most European cities prefer careful restoration and revitalization. Old residential buildings are modernized internally (structural reinforcement, utility installation) while façades and layouts remain historical. As a result, entire districts preserve their authentic appearance for centuries. For instance, in Prague, Kraków, and Florence, residential districts remain active in buildings that are 200–300 years old and adapted for modern apartments, shops, and cafés. Effective legislation on tax incentives for owners who preserve historical houses and grant programs for restoration also plays a key role. Local communities are typically highly involved: societies for the protection of the old city oversee each project. As a result, historical districts in Europe rarely undergo complete reconstruction—rather, they undergo evolutionary regeneration: houses are gradually updated without destroying the urban fabric.

Table 1. Comparative Overview of Housing Design and Conservation Practices in Historic Urban Areas

| Category | Samarkand (Uzbekistan) | Turkey | Europe |
|-----------------------------|--|---|--|
| Architectural Approaches | Mix of modern and traditional; often disharmonious, but some projects blend well with historic context | Traditional styles revived; adaptive reuse of Ottoman-era houses; successful heritage integration | Strong preservation focus; modern additions designed with contrast or hidden |

| Category | Samarkand (Uzbekistan) | Turkey | Europe |
|--|--|---|---|
| | | | integration |
| Urban Heritage Policy | Heritage protection declared, but enforcement inconsistent; modern development often dominates | Legal frameworks exist; results vary by region; some areas reconstructed with new structures | Strict protection laws; adherence to international charters; clear heritage zoning |
| Building Materials & Technologies | Historically adobe, brick, wood; now often concrete and plastic; authenticity sometimes lost | Preference for traditional materials like wood, stone, tile; but also some imitation structures | Authentic materials used; internal modernization allowed; minimal external changes |
| Examples of Reconstruction | Kosh-Khauz (positive), Gūr-i-Amir (controversial), demolition for tourism projects | Fener-Balat, Kaleiçi, Mardin (positive); Sur in Diyarbakır (complete rebuild, criticized) | Gradual revitalization in cities like Prague, Krakow, Florence; historic urban fabric preserved |
| Community Involvement | Limited involvement; top-down decisions; some forced relocations | Community included in EU-funded projects; some state-led demolitions lack participation | Active civic groups; public review required; tax benefits for preservation |
| Tourism & Economic Strategy | Focus on tourism; risks of gentrification; few homeowner incentives | Tourism drives investment in historic districts; many guesthouses in heritage homes | Heritage used for cultural identity and sustainable tourism; well-integrated policies |

In comparison, such mechanisms are only beginning to take shape in Samarkand. European experience suggests that the key to success lies in the economic and social value of heritage preservation. When residents take pride in their historical *mahalla* and see tangible benefits (tourism, crafts, prestige), they themselves become guardians of the environment. The state must provide legal protection and professional support for restoration. International organizations (UNESCO, ICOMOS) likewise recommend a comprehensive approach: not isolated monuments, but holistic preservation of the historical landscape, including its residential function, traditional way of life, and building scale[1][1]. Applying these principles in Samarkand would help preserve the city's unique character and integrate its rich heritage into contemporary life.

Conclusion

Contemporary trends in the design and construction of housing in the historical districts of Samarkand reflect an intense search for balance between development and preservation. On the one hand, the pressure of urbanization leads to the emergence of new structures that do not always

take the historical context into account. On the other hand, there is a growing recognition of the value of traditional architecture and the need for its careful revitalization. Successful projects demonstrate that integrating modern comfort with historical form is both possible and desirable: adaptive reuse of old houses, the use of traditional materials and styles in new construction, and the development of tourism through authentic urban spaces. At the same time, negative episodes provide warnings against irreversible mistakes—thoughtless demolition and imitation of heritage instead of its genuine preservation.

The experience of Turkey and Europe confirms that a comprehensive approach is the key to success. This includes the combination of legal protection, scientific restoration, financial incentives, and community involvement. Under these conditions, Samarkand's historical *mahallas* can not only be preserved but can become drivers of sustainable development, attracting tourists and investors with their unique atmosphere. Thus, the future of historical Samarkand depends on how skillfully contemporary projects are integrated into the ancient city, respecting its spirit and heritage for future generations.

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