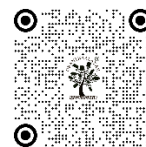


Original Article

STUCCO WORK IN ARCHITECTURE WITH SPECIAL REFERENCE TO LUCKNOW

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ABSTRACT

This paper examines the tradition of stucco work and architectural mouldings in Lucknow, tracing its evolution from the early precedents through the Nawabi era to its present conservation challenges. Lucknow's architectural identity stands out due to its lime stucco tradition. This craft was born out of geographical necessity due to the absence of building stone in the Ganga Doab area. Drawing on primary site documentation, scholarly literature, and conservation reports, this study analyses the material composition, stylistic range, and cultural significance of stucco work across key monuments like the Bada Imambara, Sibtainabad Imambara, Rumi Darwaza, Constantia (La Martiniere College) and some other monuments of Lucknow. The paper further examines the cross cultural dimensions of Lucknow's stucco traditions, arguing that the incorporation of European neoclassical mouldings within local craft frameworks most visibly at Constantia represents a significant instance of decorative syncretism in colonial era India. The paper concludes with a critical assessment of conservation challenges and policy recommendations for the protection of this endangered craft heritage.

Keywords: Stucco, Heritage, Monument, Conservation, Plaster

INTRODUCTION

Architecture is a valuable art of expression of human mind through the ages.¹ It is also an inseparable part of the history of any civilization. The New Encyclopaedia Britannica defines 'Architecture' as the art and technique of building employed to fulfil the practical and expressive requirements of civilized people.² Architectural ornamentation has always been central to the style of architecture adopted across cultures and civilisations. Surface decoration of architectural edifices through carving, painting, inlay, and plasterwork has served not merely as embellishment but as a primary medium through which patrons, builders, and communities articulated identity, faith, power, and aspiration. Among the many decorative traditions that define South Asian buildings of heritage value, stucco work and plaster mouldings occupy a position of exceptional significance, combining material economy with artistic ambition to produce effects that rival and frequently surpass the grandeur of carved stone.

This tradition of surface decoration has been vividly exemplified in Lucknow, the capital of the former princely state of Avadh. Under the Nawabs of Avadh, Lucknow emerged as one of the greatest cultural capitals of the subcontinent, rivalling Delhi, Agra, and even Istanbul in the richness and ambition of its architectural achievements. The monuments of Nawabi Lucknow, its grand Imambaras, imposing gateways, palace complexes, and residential kothis stand as an enduring testimony to the ingenuity of local craftsmen who created monuments of excellence, working without the stone resources that had underpinned Mughal architecture,

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Received: 10 March 2026; Accepted: 19 April 2026; Published 30 May 2026

DOI: [10.29121/ShodhShreejan.v3.i1.2026.68](https://doi.org/10.29121/ShodhShreejan.v3.i1.2026.68)

Page Number: 79-84

Journal Title: ShodhShreejan: Journal of Creative Research Insights

Journal Abbreviation: ShodhShreejan J. Creat. Res. Insights

Online ISSN: 3049-074X, Print ISSN: 3108-3072

Publisher: Granthaalayah Publications and Printers, India

Conflict of Interests: The authors declare that they have no competing interests.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Authors' Contributions: Each author made an equal contribution to the conception and design of the study. All authors have reviewed and approved the final version of the manuscript for publication.

Transparency: The authors affirm that this manuscript presents an honest, accurate, and transparent account of the study. All essential aspects have been included, and any deviations from the original study plan have been clearly explained. The writing process strictly adhered to established ethical standards.

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transforming lime plaster into a medium of extraordinary decorative possibility. 'Not Rome, not Athens, nor Constantinople, not any city I have ever seen appears so striking and so beautiful as this.' (William Howard Russell's Diary)

This paper aims to provide a systematic scholarly examination of stucco work and architectural mouldings in Lucknow, with particular attention to the material compositions, key monuments, and conservation challenges that define this tradition. It further explores its relationship to earlier precedents, its engagement with European neoclassical decorative language in buildings such as Constantia, and its significance as a form of intangible cultural heritage which is currently under severe threat of decay and destruction.

Stucco is a versatile, cement based exterior finish applied to homes and buildings. It consists of a mixture of cement, sand, lime and water, which is layered onto walls to create a durable, textured surface. Modern stucco often includes additives like acrylic or fiberglass for enhanced flexibility and weather resistance. Unlike parging (which focuses on foundations), stucco is a full wall exterior treatment used for aesthetics, insulation, and protection.³ In ancient Greece and Rome builders used stucco to simulate the appearance of marble on surfaces of lesser material, creating friezes, cornices, pilasters, and ceiling decorations of remarkable refinement. Roman domestic architecture, particularly in Pompeii and Herculaneum, preserves some of the finest surviving examples of ancient stucco reliefs, demonstrating the medium's versatility in rendering figural, floral, and geometric programmes.⁴ The Casa del Cripto portico in Pompeii, built around 40-30 B.C., showcases the growing use of stucco in coffered ceilings in ancient Rome.

The Islamic architectural tradition inherited and furthered this practice, deploying stucco for calligraphic friezes, muqarnas, geometric arabesques, and vegetal scrollwork across the mosques, madrasas, and palaces of Persia and Central Asia. Ilkhanid architecture occupies a distinctive position in the history of Islamic art through the development of highly elaborate stucco decoration.⁵ The stucco decorations of the Alhambra in Granada (fourteenth century), the Friday mosques of Isfahan (eleventh to seventeenth centuries), and the Timurid monuments of Samarkand represent the apogee of this tradition, demonstrating the extraordinary capacity of lime plaster to sustain complex three dimensional surface work over large architectural areas. Comparative analysis of Seljuq and Ilkhanid stucco mehrabs reveals a progression from simpler, repetitive geometric motifs to more complex forms integrated with vegetal patterns, reflecting the innovation of Ilkhanid artists while continuing prior traditions.⁶ In Ilkhanid architecture, stucco decorations were common and they were even added to some parts of preexisting buildings in this period. This helped to restore some stucco detailing related to earlier periods, showing the prevalence and importance of this decorative art at that time.

Stucco typically consisted of crushed or burned lime or gypsum mixed with sand and water, and was easily moulded or modelled into relief decoration for walls, ceilings, and floors in both interior and exterior spaces.⁷ In Rome stuccowork grew out of Hellenistic traditions which was a combination of Greek and Egyptian practices. The ancient Greeks used lime plaster in relief on walls while Egyptians used gypsum stucco for figural reliefs, freestanding sculpture, and other types of objects. Adopting Greek techniques, Roman artisans used versatile, lightweight white lime plaster for both elaborate stuccowork and fresco painting. Detailed accounts have been provided by authors like Vitruvius and Pliny, about this material which was expertly applied in layers to create durable wall decorations.

Figure 1



Figure 1 Ilkhanid Stucco work

Figure 2**Figure 2 Roman stucco**

The stucco tradition was brought to India by the Mughals, where it was adapted to local materials and aesthetic sensibilities. The most celebrated Mughal monuments like the Taj Mahal, the Red Fort and the Agra Fort used marble and red sandstone as their primary decorative surfaces. Stucco was used for interior decoration, secondary structures, and in regions where stone was less readily available. It was in this tradition that the architects of Avadh developed a distinctive style for the Nawabi structures. The architectural genius of the architects and builders of Lucknow was also born out of geographical necessity. Unlike Delhi or Agra, the Gangetic plains surrounding Lucknow offered no accessible building stone. The builders of Nawabi Avadh used a specialised type of thin burnt clay brick known as the lakhauri brick. These flat, rectangular bricks, measuring approximately 100mm x 150mm x 20mm, were produced in enormous quantities their name itself derives from the fact that they were manufactured in lakhs in open kilns called pajawa.⁸ The use of stacked layers of lakhauri bricks, rather than single large blocks, also provided structural resilience against the seismic activity characteristic of the Gangetic plain, which is evident in the present times with the long term survival of Lucknow's monuments.

Figure 3**Figure 3 The Stucco work on some buildings of Lucknow**

The second essential component of the Lucknow building tradition was a finely prepared lime plaster, applied as both a structural mortar and a decorative finish. This stucco was composed of lime derived from crushed shells or locally quarried limestone, mixed with a range of binding and strengthening agents. This stucco was made from lime (derived from shells or limestone) mixed with various binding agents. It is reported by various sources that there were between eighteen and twenty five ingredients in the mixture for Lucknow's lime plaster, varying from artisan to artisan and place to place, a diversity that reflects the empirical, craft based nature of the knowledge involved.⁹ The most commonly used mixture included lime, sand, crushed brick aggregate (surkhi), pulses, jaggery, and various organic binders, producing a plaster of extraordinary plasticity and durability. The exterior finish or chikna plaster was applied in successive layers, each burned to a high sheen that closely resembled polished marble. This substitute for stone was, in the buildings of Nawabi Lucknow, not merely a compromise but an art form in its own right.¹⁰ In a

departure from Mughal architecture, which typically reserved lime plaster for interiors and used stone for exterior work, the Nawabs of Lucknow flipped this approach, using lime plaster extensively on exterior surfaces as their primary means of architectural expression. The decorative range of Lucknow's stucco mouldings is remarkable in its breadth and sophistication. Craftsmen produced deep relief floral motifs, false arches and false domes, running borders, fish emblems (emblematic of the coat of arms of Avadh), geometric arabesques, calligraphic panels, and various hybrid forms that blended Indo Islamic, Persian, Ottoman, and European influences.¹¹ From the reign of Nawab Asaf-ud-Daula (1774–1798) to that of Wajid Ali Shah (1847–1856) a vast variety of stucco ornamentation was produced and the monuments of this era therefore represent the fullest expression of the Lucknow's architectural tradition.

Figure 4



Figure 4 Lakhauri bricks

The Bada Imambara, commissioned by Nawab Asaf-ud-Daula in 1784 and designed by the architect Kifayatullah, is counted as one of the signature buildings of Lucknow and represents the inaugural monument of the mature Nawabi stucco tradition. Its central congregational hall, believed to be the largest arched hall in Asia at approximately fifty metres in length, was constructed without central supporting pillars, relying entirely on the structural integrity of thick lakhauri brick walls and lime surkhi mortar to distribute loads across a system of arched vaults.¹² The Rumi Darwaza showcases stucco mouldings on a grand scale, featuring intricate designs and Ottoman inspired silhouettes reinterpreted through Avadhi aesthetics. The Chhota Imambara (1838), commissioned by King Muhammad Ali Shah, showcases Lucknow's coloured stucco traditions, featuring intricate geometric and floral designs and gilded mouldings in Avadhi style. This use of coloured stucco, with pigments mixed into or applied onto the plaster, is a distinct aspect of Lucknow's stucco heritage. The gate of this Imambara has been subject immense neglect and apathy leading to its damage and destruction.

Figure 5



Figure 5 The damaged stucco on Chhota Imambara Gate

The Sibtainabad Imambara, constructed by King Amjad Ali Shah and completed by his son King Wajid Ali Shah located in the heart of the market Hazratganj, presents a particularly significant case for the study of stucco mouldings in Lucknow. The imambara

built of lakhauri bricks in lime mortar, lime plastered, and decorated with fine plaster mouldings, has its walls and ceiling decorated with intricate floral and geometrical designs rendered in (vegetable) coloured stucco. Despite its architectural significance, the Sibtainabad Imambarah remains underrepresented in mainstream conservation literature, though the structure today exists as a live monument having been rescued after a long struggle for protection and conservation. Perhaps the most intellectually stimulating case study for the analysis of stucco mouldings in Lucknow is the Constantia or La Martiniere College for boys which was constructed by the French army officer (East India Company), Major General Claude Martin. Constantia deploys European neoclassical mouldings, cornices, pediments, Greco-Roman figurative panels, bas-reliefs, arabesques, and pilasters executed by Avadhi craftsmen trained in the local lime stucco tradition. Constantia is not merely a curiosity of colonial era architecture but a laboratory of decorative syncretism, in which local craft knowledge and imported iconographic programmes were brought into productive dialogue.¹³ The chapel of Constantia is a beautiful example of cross cultural decorative richness, with its ceiling embossed with stucco art inspired by the Renaissance style, and its stained glass windows from the European neoclassical period all set within a structure built by Avadhi masons using local materials and techniques. The exquisite ceiling inside the chapel, however, was lavishly decorated with bas relief images designed by artists working for Josiah Wedgwood the famous English potter who is credited with the industrialisation of the manufacture of pottery. Wedgwood's most famous contribution is Jasperware, used for different objects in pottery.¹⁴ The set of Nine Muses and Apollo are the most popular image designed by John Flaxman. The Muses' Bower is decorated with profusion of bas reliefs, created in plaster of Paris. The Chapel is a magnificent representation of the outstanding and exclusive achievement of craftsmen and designers besides the ingenuity of Claude Martin. Similarly there are many other monuments in Lucknow which have stucco embellishments some defaced and some totally erased. Stucco is the first layer to suffer the effects of natural weathering, wild growth, inappropriate repair, and deliberate vandalism, compromising the integrity of stucco surfaces almost across all of Lucknow's major monuments.

The most harmful practice which has caused irreparable damage to these buildings is the modern cement plasters and lime whitewash over original stucco surfaces, a form of insensitive repair that destroys original decorative elements, introduces incompatible materials prone to cracking and accelerates the decay of the underlying historic fabric. Consequently, the restoration work undertaken on Lucknow's monuments frequently lacks the specific knowledge and skill required for authentic lime stucco repair, resulting in interventions and repairs that are technically inadequate and aesthetically destructive as was the case with the Chhota Imambarah repairs. Globally also the erosion of traditional lime craftsmanship has been identified as a critical challenge for heritage conservation, with UNESCO's 2003 Convention for the Safeguarding of Intangible Cultural Heritage recognising traditional craftsmanship as among the most threatened forms of intangible heritage.¹⁵

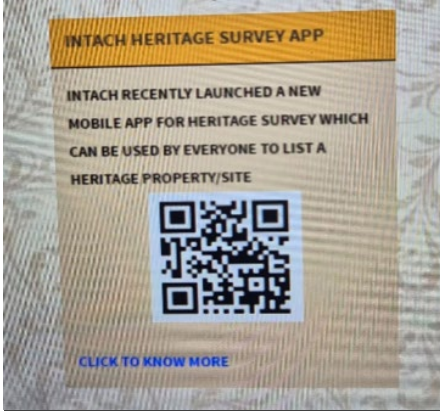
However, for a silver lining it is important here to note that several institutions and heritage enthusiasts have made meaningful contributions towards the protection of Lucknow's endangered lime stucco heritage. The INTACH Conservation Institute, established in Lucknow in 1985, aims to restore and conserve the vast repository of art objects, wall paintings, and ancient monuments, operating a dedicated Lime Research Testing Unit and conducting monument preservation, wall painting conservation, and capacity-building workshops. INTACH has directly undertaken conservation work at the Hussainabad Gates complex and has conserved significant collections at the Hussainabad Picture Gallery, Raj Bhavan, and Shahi Masjid in Lucknow.

The Archaeological Survey of India has undertaken conservation efforts at the Rumi Darwaza, though the identifying and marking of cracks took months, followed by research to find authentic material for repairs. This has been a complex task requiring multiple layers of plaster applied meticulously to each crack. At the majestic Sikandar Bagh, ASI commissioned refurbishment in early 2022 that restored sections of the walls and ramparts using traditional lakhauri bricks all this in the face of encroachments and concrete repairs that had compromised the site's originality and distinction.

However, a PIL filed before the Allahabad High Court in the year 2013 by Advocate S.M. Haider Rizvi for the proper conservation of centrally protected monuments of Lucknow, paved the way for the emancipation of Imamabada Sibtainabad, which was on the verge of collapse and extinction. Years of struggle and perseverance finally led to the repair and renovation of this edifice which stands tall amidst all challenges to its existence. It being the first monument of Lucknow to get its heritage by laws. This PIL has highlighted a massive gap in conservation across the state of Uttar Pradesh, demanding the adequate protection and conservation of heritage monuments.

The responsibility therefore rests on us all for the protection of our heritage. It is imperative that the historians and scholars of history work towards producing systematic material documentation of stucco surfaces and advocate the cause of Lucknow's lime stucco tradition as Intangible Cultural Heritage under UNESCO's 2003 Convention. The concerned authorities must prohibit cement-based repair on all lime stucco monuments and mandate authentic lime mortar in all conservation contracts and activities. Establish a formal artisan training programme to revive and transmit the craft knowledge of stucco artists. Also promote the creation of a dedicated heritage conservation fund for Lucknow's unprotected monuments, modelled on the LDA's PPP initiative at Butler Palace. The Lucknowites must be made aware of the fundamental duty under Article 51A(f) 'to value and preserve the rich heritage of our composite culture' by reporting encroachments, participating in heritage walks, and by not indulging in vandalism or scribbling on walls of monuments and heritage structures.

In this regard INTACH has gone a way ahead and recently launched a mobile app for heritage surveys that allows any citizen to list a heritage property or site encouraging community participation in conservation.

Figure 6**Figure 6 INTACH APP**

It would not be wrong to conclude therefore that the stucco art of Lucknow is the fingerprint of a civilisation. It is a part of the rich cultural heritage of Lucknow exposed to the threat of decay and destruction in need of protection and care lest it disappears in to the pages of history. The monuments of Lucknow do not merely deserve restoration. They demand it.

'I never saw a more beautiful panorama—the whole of Lucknow spread out before us, with its innumerable fine buildings, gardens, gilded domes, and tall minarets—it was an enchanting sight, and the air so fresh and lovely.'- Mrs G. Harris, (A Lady's Diary of the Siege of Lucknow)

ACKNOWLEDGMENTS

None.

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