

An Outlook on the Future of Chettinad Architecture and the Impediments in its Conservation

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Abstract: The grand mansions of Chettinad built from an eclectic blend of different architectural styles are heirlooms that are unique to Tamilnadu, specifically the Chettinad region. They represent a rich history and utilize unique construction techniques and natural materials which deserve to be preserved for the future. With the disintegration of joint-family culture and increasing expenses involved in conservation, these homes face a risk of being abandoned or demolished to pave the way for newer and more context-averse architecture. This paper aims to study the factors involved in this decline and the current situation in the Chettinad area, specifically in Karaikudi. The general planning and layout of Chettinad homes are explored, focusing on the material usage, and cultural and social contexts based on the occupants' day-to-day life. The inferences from the above analyses are presented in the form of suggestions which include a special focus on heritage tourism and adaptive reuse.

Keywords: Chettinad Residential Architecture, Abandonment, Context-Averse Architecture, Conservation, Heritage Tourism, Adaptive Reuse

1. INTRODUCTION

Karaikudi, situated in the Sivaganga district in Tamil Nadu, India; is a municipality encompassed within the region commonly known as "Chettinad." Notably, this locale has received official recognition as a heritage town from the Tamil Nadu Government. The mansions of Chettinad are truly exceptional, showcasing an eclectic and unique architectural blend (Figure 1,2). The exteriors of these homes contain elements which seem to be inspired by Southeast Asian, Art Deco and Art Nouveau styles. The interior spaces juxtapose this using traditional designs and characteristics. This fusion creates a distinct charm and



allure that sets Chettinad's mansions apart.

But most of Chettinad has lost its former opulence and glory and stands in a precarious position with the



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need for conservation. The main threats to these homes are legal conflicts and economic insufficiency regards to conservation (Patwardhan, 2018). In 2014, it was estimated that Chettinad has lost 19 % of its houses so far and the number has only increased since then (UNESCO, 2014).

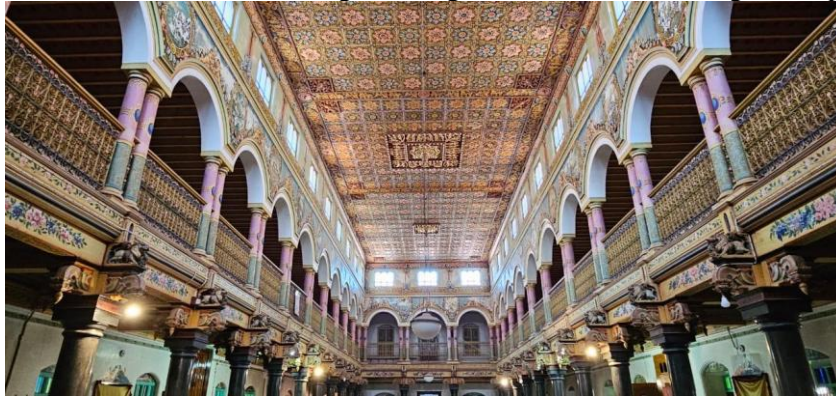
In this paper, an exploration is undertaken to delve into the architectural elements and distinctive features that constitute the essence of a Chettinad home. By considering the social and cultural context, the aim is to gain a deeper understanding of the historical significance and rich heritage associated with these homes. It aims to study the current threats to the community, the supports and roadblocks towards conservation and the opportunities available going forward, to ensure a sustainable future.

2. LITERATURE REVIEW

2.1 EVOLUTION

By the nineteenth and early twentieth centuries, the Nattukottai Chettiar community established extensive business networks with Southeast Asian countries like Malaysia and Singapore through trade. During their travels, these affluent merchants acquired exquisite and costly materials, which later became integral elements of the distinct architectural style seen in Chettinad's mansions (Rudner, 1994). Between 1850 and 1950, the houses in the area went through a notable transformation from modest homes to extravagant individualistic mansions. Initially, the houses followed strict bilateral symmetry, but later deviations occurred with the addition of spaces along the longitudinal side (Figure 3,4).

Initially, the houses were single storied with pitched roofs and clay tiles. With time, the Thinnai (veranda) evolved into a two-story structure with intricate balustrades and raised parapets embellished with polychrome niches depicting deities and occasionally British soldiers. The architectural facades of the houses incorporated elements from Art Deco, Art Nouveau, and Neoclassical styles, evident in the treatment of arches, grills, gates, and stained-glass panelling (Patwardhan, 2018).



2.2 CONSERVATION

Heritage conservation encompasses the vital processes of identification, documentation, analysis, and safeguarding of cultural and heritage resources. The preservation of heritage buildings serves as a significant instrument in urban development, exemplified by several cities worldwide. It not only defines notable landmarks within heritage areas but also contributes to economic benefits and fosters the growth of the tourism industry.

In 2007; UNESCO formulated a preliminary strategy to engage international multidisciplinary teams consisting of jurists, architects, and other experts. The objective was to explore strategies for conserving and enhancing the Chettinad heritage buildings (Mayamurugan, 2018). This was followed by the release of the "Indian Heritage Passport Programme on the Chettinad trail in Tamil Nadu", a concept paper by UNESCO New Delhi in 2010. In April 2014, the Permanent Delegation of India to UNESCO nominated the Chettinad Region as a UNESCO World Heritage Site. Today it is present among the



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tentative heritage centre list maintained by UNESCO.

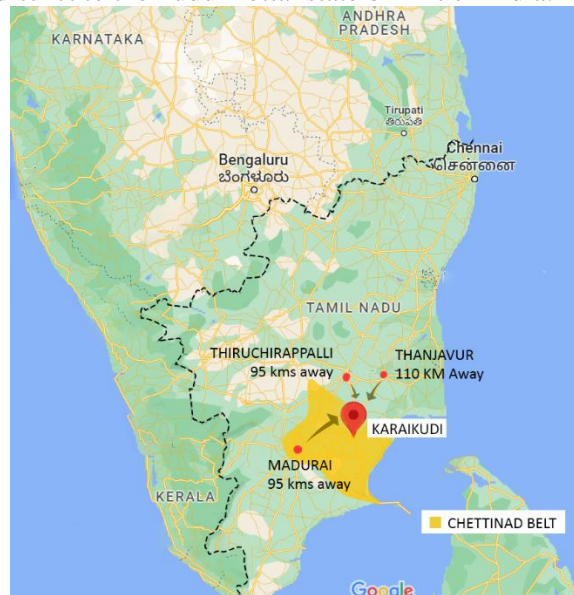
3. METHODOLOGY

Chettinad Residential Architecture was chosen as the topic of study due to its rich heritage and cultural significance in Tamilnadu. A structured study of the architectural features, layout, and planning of Chettinad homes followed. The analysis focused on the planning of spaces in relation to the occupants' everyday use and needs. The next step involved an in-depth analysis of current conservation trends in the area, and the factors affecting the same. Inferences from the literature study and analyses were used to suggest multiple areas of interest to preserve the existing heritage including a renewed focus on heritage tourism, increasing awareness among the community, and proposing ideas for Chettinad-Inspired modern adaptations.

4. ANALYSIS AND DISCUSSIONS

4.1 SITE AND CONTEXT

Karaikudi, a part of the Sivaganga district is the largest town in the Chettinad region, present in Tamil Nadu, India (Figure 5). It belongs to the collection of 80 towns and villages in the Chettinad belt that stretches from the Ramnad district to the Pudukkottai state of British India.



The town's terrain is chiefly flat in most areas, with hard red lateritic soil. There are expanses of rocky areas in the surrounding region. Karaikudi experiences a hot and semi-arid climate with an average annual temperature of 30°C and 58.1mm of precipitation.



4.2 ARCHITECTURAL FEATURES

The Chettinad dwellings were planned with Vaastu shastra in mind and were constructed depending on the occupation of the residents as well as cultural and climatic influences.

Since the Chettiars were traders, they regularly received visitors from abroad, therefore the design of the home was catered to host multiple guests as well.

Because males were usually away on business, the design placed an emphasis on security and encouraged women's independence. The orientation itself provides air, shade, light, and comfort with a central east-west courtyard (Noguchi, 2023).

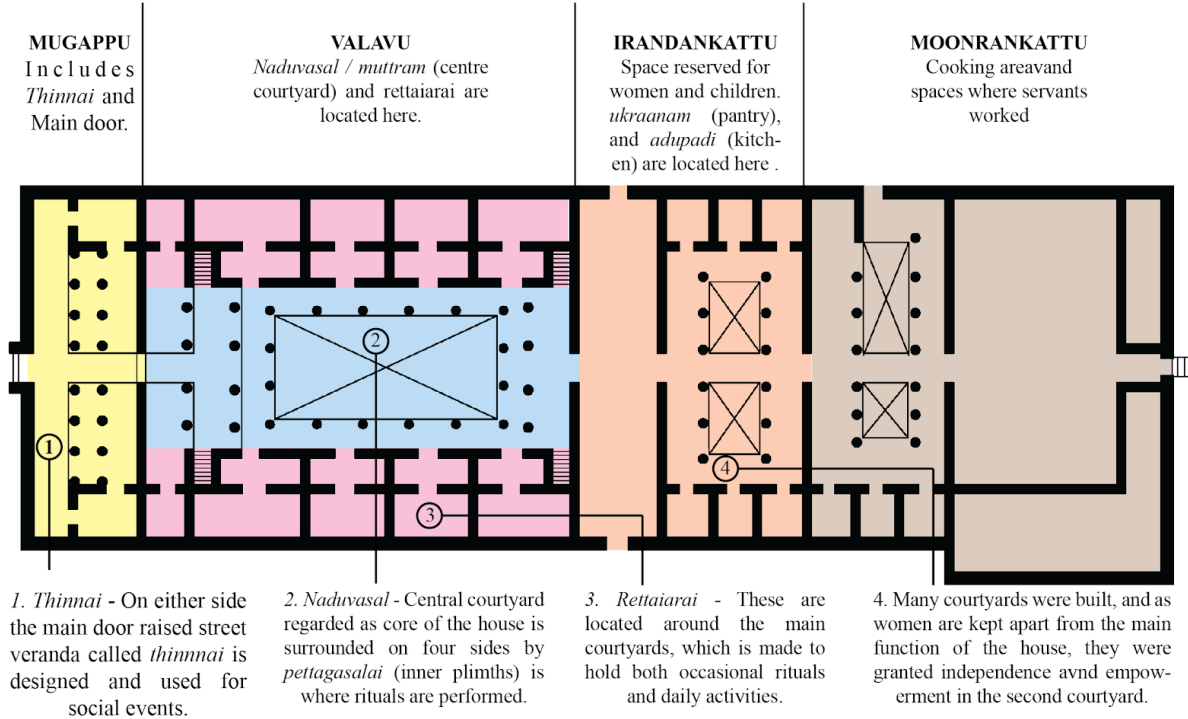


Figure 7: Plan of a Chettinad home

	MATERIAL	SOURCE CHARACTERISTICS	& USE
Plaster	Saanthu-kalavai (Chettinad plaster)	Saanthu (Limestone), Kadukkai (gallnut), Egg's white-yolk, Karuppatti (palm-jaggery), water.	Strong crack-resistant bond and smooth finish. Used as mortar. Stuccos and wall paintings are done on the plaster walls adding on aesthetics.
Walls	Baked bricks	Red soil available in the local area	Gives cool and comfortable atmosphere inside the house
Floor	Athangudi tiles, Venetian tiles, Italian marble	Hand made using sand, cement, and baby jelly	Environment friendly option with low levels of heat reflectivity, radiation and conduction.
Roof	Clay tiles, timber	Timber sloping roof with clay tiles	Roofs are an important tool for rainwater harvesting and cooling through air flow.
Columns	Wood, stone	Satin wood, highly polished Burma Teak, and polished granite	Interiors have columns made of wood while in courtyards they're made of stone.
Doors and windows	Wood, metal (Figure 6)	Burma teak, satin wood, stained glass	Main doors are highly carved (rich wood carvings) and detailed in comparison with the simpler interior doors and windows. All fixtures are of high-quality wood.



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Table 1 (Mayamurugan, 2018)

Adding to the elements mentioned in Table 1, the degree of embellishment of materials goes in descending order from the entry of the house, where the interior of the house has minimum embellishment (simple unpolished granite columns and stone implements used in cooking) (Patwardhan, 2018). Each Chettinad house has imposing richly decorated entrance porches at the level of compound wall showcasing the wealth of the Chettiars (Figure 7). Every house is embellished with concrete figures subject to particular attention (Deities, Kings, hunters, queens, British soldiers). Japanese and Venetian wall cladding tiles, Ceiling tiles, frescoes, murals, brackets, and paintings were used in the entrance (Myneni 2013).

Courtyards play a vital role in the Chettinad house. The western gardens let fresh air into the house and promote warmth, and the courtyard radiates the absorbed heat at night. The main axis of the house is oriented east/west, facilitating airflow and bringing light and shade to the central courtyard. Projections for the courtyard and windows are built to prevent the direct entry of sunlight. The slopes of the roof allow the collection of rainwater and drainage takes the water from courtyard ponds to storage tanks. Rainwater is further filtered and funnelled into large brassware, which is then stored for weeks (Dragon, 2010).

4.3 RECENT TRENDS AND CHALLENGES

In earlier days, due to the existing family structures and business traditions, the ownership and maintenance of the homes were clear. With the breaking of the joint family system, the number of stakeholders involved increased, which caused a threat to the Chettinad homes' futures due to control over operations. Combined with the high costs which are usually involved in heritage conservation, this has resulted in multiple houses being abandoned or demolished (Figure 8).

Demolished houses involve multiple stakeholders who divide the plot and build according to personal preferences. New homes differ in scale, catering to smaller nuclear families for maintenance and economic reasons. There is now an established demolition industry, and several demolition contractors are available to auction off the houses and pull them down.



The usable remains from the demolished homes like the wooden columns, doors, windows, furniture, and other decorative features are sold off as separate parts to be used in construction elsewhere.

Reconstruction poses a pressing issue as it detracts from the context without adding value. This norm of demolishing and reconstructing bland houses to suit new owners' needs requires urgent intervention. Proactive conservation and restoration efforts are mainly observed in the conversion of palatial homes into hotels or homestays for the purpose of heritage tourism. Visalam, Saratha Vilas, and Chidambara Vilas are commendable examples of adaptive reuse, initiated privately (Patwardhan 2018). But these are rare examples and not the norm of the day.

5. PROPOSED OPTIMIZATION MEASURES

5.1 PROMOTING HERITAGE TOURISM

To preserve the heritage of Karaikudi, and to conserve the existing homes of Chettinad through tourism; a two-fold approach is necessary. The first step is to focus on Urban Rejuvenation and Conservation hand in hand with the preservation of individual structures. Heritage conservation safeguards non-renewable heritage from damage, while urban regeneration addresses the overall revitalization of declining urban



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areas (Ravisankar, 2012). To achieve successful urban development and preservation of heritage monuments, comprehensive policies from the government are necessary. Incentives like exemptions of property tax and transfer of floor space indexes will motivate the house-owners of privately owned projects to invest in the rehabilitation and conservation of age-old historic properties for economically viable adaptive-reuse opportunities like heritage stays, restaurants, store fronts and offices (Ravisankar, 2012).

The second step is to encourage community involvement in conservation. It plays a crucial role in attaining sustainable outcomes, complementing legal and institutional frameworks. Involving the community leads to diverse policies, transparent procedures, and a strong sense of ownership and connection to ancestral, social, cultural, and historical values.

Improving the city as a whole and encouraging adaptive reuse of private buildings will promote an increase in heritage tourism. This in turn will increase economic opportunities. This is an effective approach to garnering local community support for site conservation and development.

5.2 TEMPLATES FOR RECONSTRUCTION

A common sight among towns is newly reconstructed single-family homes which poorly try to replicate the lavish facades of traditional Chettinad homes and replace the well-thought-out interiors with basic modern-day floor plans (Patwardhan, 2018). Where the need for smaller homes and cheaper options becomes inevitable, the government can employ architects and conservationists to come up with basic templates which can assist the public in replicating the traditional styles while benefitting from economically advantageous planning.

The templates will capture the essence of the traditional Chettinad home and aid in restoring context to the urban facades of the city. The inhabitants may also benefit from climate control through orientation, thermal comfort through choice of materials and ease of use due to contextual planning which is regularly seen throughout traditional mansions. This can also be a good opportunity to reuse the warehouses of deconstructed heirlooms taken from previously demolished homes and revitalize them in a way that still holds meaning.

5.3 ADAPTING CHETTINAD VALUES IN MODERN ARCHITECTURE

Apart from conserving the traditional homes of Karaikudi and surrounding areas, the meaning and values behind Chettinad Architecture can be used as inspiration for constructing modern homes. This can help honour the heritage and history of Chettinad without necessarily building a new Chettinad residence. Some examples include:

- Usage of traditional materials like Athangudi tiles, Chettinad Lime Plaster and Clay Roofing tiles in contemporary architecture. Using these traditional materials adds to the aesthetic while also improving the thermal comfort of occupants.
- Usage of Thinnai as a transitional space to promote communal relationships and preserve a sense of belonging and inclusivity in urban cityscapes.
- Usage of central courtyards with bi-axial alignment to the direction of cross ventilation to promote thermal comfort.

CONCLUSION

The Future of Chettinad Architecture relies on multiple factors like the involvement of local communities in conservation, engagement of the local government in ensuring urban development and holistic tourism opportunities, and the increase of awareness among the public on the rich heritage and meaning behind Chettinad Architecture. By conserving the existing homes through adaptive reuse measures powered by government incentives, and by improving the overall cityscape through template-driven newer construction and rejuvenation of public areas; the tourism industry will begin to flourish and aid in the economic security of the area.

The spirit of Chettinad architecture can also be encapsulated in modern homes by implementing



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measures that are directly inspired by existing structures. With time, these measures will ensure that the legacy of Nattukottai Chettiars and their residential architecture practices will live on through generations.

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