

Retracing the Colonial Roots of Bungalow Architecture in Bangalore

Prerana Manjunath¹, Sahithi C², Tejas Gowda³, Nazish Abid⁴

^{1,2,3} Student, 6th Sem, B.Arch., School of Architecture, Reva University, Bengaluru

⁴ Assistant Professor, School of Architecture, Reva University, Bengaluru

ABSTRACT

The study conducted to understand the colonial architectural influence in the Bangalore layout and to learn the history of how the bungalows have evolved through secondary case study through books and articles available. The study based on understanding the stepping-stones for Bangalore's urbanization to explain the evolution of the city from a military base to serve the British until it raised to the IT capital in the country. The chosen study area is Richards's town, Cox town and Frazer town, since they all connected for its historical influence. Conducting the listing and documentation of the existing colonial bungalows in the primary case study in the study area and learning the importance of the Bangalore's colonial architectural style. Based on the map available after the listing, evaluating the reasons for the decline of the bungalows and explain the historical importance of the Bangalore's colonial architectural style.

Keywords: *Colonization, Architectural vocabulary, Bungalows of Bangalore, Architectural catalog*

Date of Submission: 07-06-2020

Date of Acceptance: 23-06-2020

I. INTRODUCTION

The roots of the bungalow in India lie in the early attempts of the British military in the 18th century to design a standardized and permanent dwelling based on the indigenous domestic structures, that consisted of low, one-story, having asymmetrical layout with a veranda, situated in a large compound. In 21st century, the colonial bungalow has become a significant symbol representing a socio-culture. Its desperate Settlement pattern was considered healthier and was socially preferred. Set in a large compound it was also climatically suitable. The bungalow thus reflected a very different way of life, gender roles, and the hierarchy of family members, and servants. This type of bungalow is found all over India. The colonial bungalows found in Bangalore are all British influenced and are reducing in number day-by-day.

How do we define a bungalow?

The Anglo- Indian bungalow is as different from an English house in its external entrance and internal arrangement as is a temple from a church. It is always a detached building standing in ground of its own, which is called the "compound," single-storied, rambling, and flat roofed. Every room has direct access to a verandah, and all enter one into another, for there are no passages. Each bedroom has its own bath and retiring room, there being no drains in

India. A room with a single door in it is unknown; all have two, and many three, four, and even six, and those leading into the verandahs are generally glazed, which saves windows. Very few bungalows have halls, the verandah in the front of the house doing duty for such. Cellarage does not exist, and naturally there are no fireplaces, save in those districts in the north of India where the nights are chilly in the " cold weather," which is the Indian name for winter.

Herbert Compton defined Indian bungalows as " the fundamental building type of Bengal was the pavilion. Its singular persistence as the idea of dwelling (vastu) further clarifies the culture of Bengal delta. It is a freestanding single room, single-storey structure and consists of a bent roof, a canopy or chad."

Aim

To document, understand and analyze the existing colonial bungalow typology of Bangalore.

Objectives

1. To trace the history of bungalow typology of Bangalore.
2. To list out the existing colonial bungalows in the study area.
3. To document architectural catalog of the listed bungalow.
4. To identify reasons for the decline of bungalows in the study area.

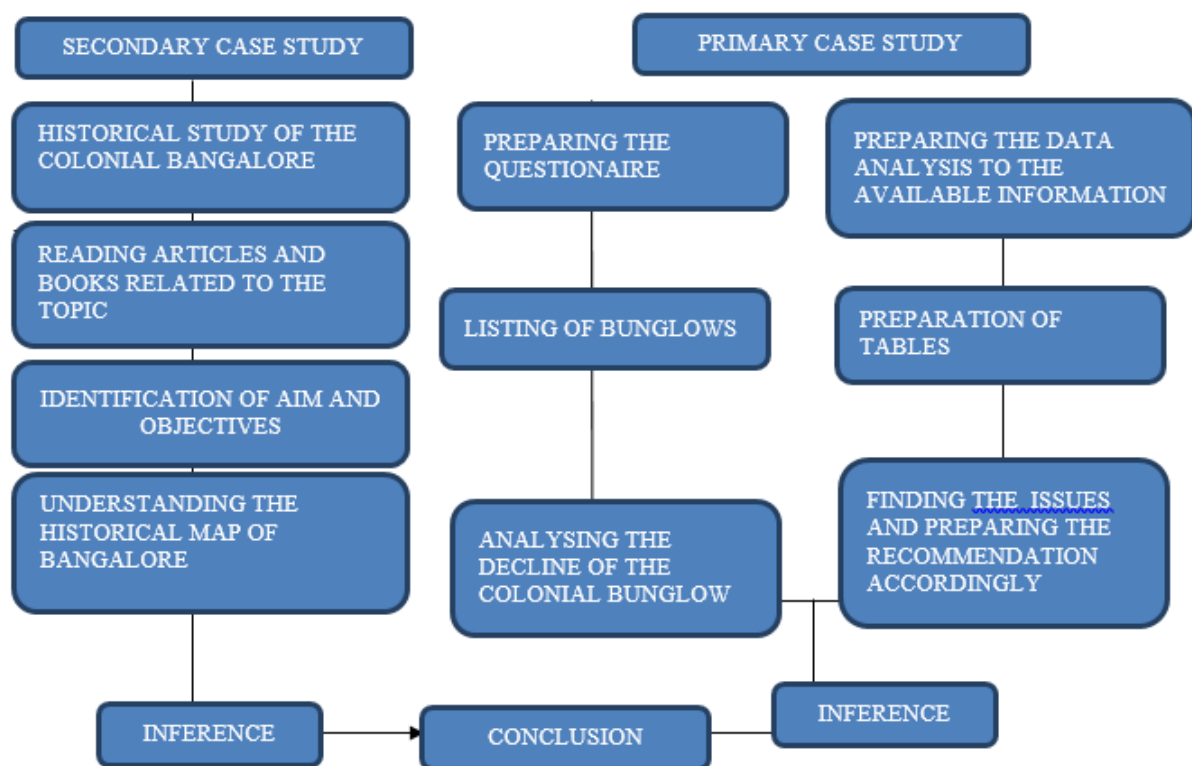
Scope

List the colonial bungalows in Richards's town, Cox town, Frazer town. Analyze the spatial characteristic of the bungalow in the primary case study identified. Compare the map from past to present, to understand the decline of the colonial bungalows in the study area.

Research Question

Interpret and evaluate the reasons for the decline of the colonial bungalows in Bangalore.

II. METHODOLOGY



Process based on the data analysis conducted for the research.

Stage 1: Preparation of tabular format based on the data collected from the prepared questionnaire.

Stage 2: Preparing graphs based on the data with respect to status of preservation, status of protection, age of the bungalows, property type and significance of the property.

Stage 3: Analyzing the data and preparing the report significantly.

Stage 4: Doing a background study on the materials, structure from the book written by Janet Pott, and note the inference.

Stage 5: Studying the plans of bungalows from the book written by Janet Pott and understanding

bungalow planning, how social significance played an important role in planning of the bungalows in Bangalore.

Stage 6: Detailed study on the architectural catalog identified in the bungalows visited.

Stage 7: Analyzing the data based on their origin, style, structural importance, and material used in it.

Stage 8: Based on all the data available from the books and primary case study identifying the reasons behind the decline of the bungalows and provide alternate measures to protect them.

LITERATURE CASE STUDY (SECONDARY CASE STUDY)

Secondary study 1: Old bungalows in Bangalore –Janet Pott, 1927

Bangalore being a low epidemic place and a lot of land for development in the beginning of 19th century, the British settled with their military base here, mainly through Sree ranga patana after defeating Tipu sultan in the battle. Both the name and the form of the bungalows originated in Bengal. 'Bangla' or 'bangala' referred to the indigenous Bengali huts of the 17th century. The Bengali peasants had evolved rectangular plans with curvilinear roofs, built on a raised plinth, with thatched roof on bent wooden ribs forming crescent shape curves at the eaves and a couple of feet below the eaves of a second pitched roof ran all around the building, giving shade to the lower walls and forming a sort of verandah. The Europeans adapted this design to their needs by enclosing the corners, and side sections, of these verandahs to use it as bedrooms and bathrooms, while the main central rooms would be lit and ventilated from the front and back verandahs. The plans of these bungalows are symmetrical. The classical 19th century bungalows are single story although their height gave the impression at first sight of having an upper floor. The bungalows have varied characteristics from climatic influence till architectural features, where there are many styles culminated into a colonial bungalow.

Inference

Detailed explanation about the transformation of bungalow typology from traditional to Colonial style. The British entry to the city influenced the lifestyle of the common people. Architectural elements newly introduced into the bungalows. The symmetrical planning played an important role. Climate of Bangalore influenced the planning of the bungalow. More spaces provided for recreation like parks etc.

Secondary study 2: The bungalow in twentieth-century India, 2015

During the twentieth century reaction to the British and, later, international ideas about the nature of houses, particularly, those of the modern movement in architecture that had its seeds in continental Europe, resulted in a self-conscious examination of indigenous house types. Nationalism and nationalist ideas came to the fore. The most notable of reaction in the early part of the century were the ideas promulgated by Rabindranath Tagore at Shantiniketan. After independence, ideas about houses from were affected by the ideologies



Figure 1: The old bungalow in Bangalore
Source: Janet Pott, 1977

- It has many architectural features like:
 - Monkey tops
 - Balustrades
 - Pediments
 - Doric, Ionic, Tuscan columns
 - Cast iron railings
 - Stone walls
 - Trellis
 - Cast iron brackets
 - Madras roof
 - Fan light
 - Sky light

of the Europe modernist, such as Walter Gropius and le Corbusier, and by the garden city movement. Although much housing development, particularly in rural areas was untouched by the colonial experience, throughout the twentieth century. While architects designed only a miniscule part of the total housing production of India. With the dramatic rise in land values in the city, it became economically attractive to redevelop the individual bungalows, often built into apartment's blocks, etc.

Inference

This book gives us the background of how bungalow came into existence during the British period and the evolution in planning. The British style having a great influence on Indian architecture, explained clearly. The rapid change from colonial to post-colonial period influenced the bungalow, detailed in this book. As a conclusion, the author has given us the detailed picture of why there is a decline in the bungalows.



Figure 2: Book cover of “The bungalow in twentieth-century India”, Source: Madahvi Desai, Miki Desai & John Lang

Secondary study 3: Krumbiegel hall, Lalbagh botanical garden, Bangalore

The Krumbiegel Hall inside the Lalbagh Botanical Garden collapsed recently but its older relative on the premises — the 150-year-old Horticulture Director’s Bungalow — is faring slightly better. Part of the 10,000-sqft British-era building. Built in 1865 as a small cottage, the brick and mortar structure were later extended to include a kitchen annex, a front porch and horse stables. Botanical curators William New and AA Black occupied the home. “The house had beautiful wooden trellises, a formal European garden, a bird bath and jardinières,” said Harish J Padmanabhan. “Back in the day, a tennis court was part of the home. MH Mari Gowda, who succeeded Javaraya, was the home’s last occupant. It is a mess now and even the restoration lacks aesthetics,” Padmanabha pointed out. The bungalow, with its wooden floor, was first restored in 1908 and again in 1988. Lack of maintenance warranted another renovation in 2014.

Primary case study: Richards’s town, Frazer town and Cox town.

After reading all the available articles and books based on bungalows of Bangalore and understanding the architectural hierarchy of the bungalows pattern of Bangalore. Therefore, for the stipulated time we have chosen Richards town, Frazer town and Cox town as the study area. Since these locations given interconnected to each other, the place is highly popular for its land value and the present place where all the wealthy families are settling. The study area being close to Halsuru which was military base for the British were most of the army official families had settled. This was also the place where in 19th century the government had created plots and sold it to developers to rent the

Even though the Pompeian red façade and the high Mangalorean tile roof remain, the rooms show a stark contrast. They are painted in shades of blue and purple, and done up in contemporary style. The bungalow is not accessible to the public.

The section of the bungalow that houses the horticulture library - that once housed 7,000 books - now lies desolate. The building with discolored walls, shattered glass, peeling paint and dust is a sorry sight. “The restoration should be completed by the yearend,” said a horticulture department official.



Figure 3: Krumbiegel Hall, Lalbagh botanical garden, Bangalore. Source: Author

Inference

This article implies on the reason for the decline of the bungalow. Low government support leading to the decline of bungalow. Residence lack of interest and cost factor in protecting the structure.

bungalows to the officials and created point of interest.

Process of primary case study held:

Splitting the project among the 3 in the team

1. Locating the bungalows
2. Photography
3. Interviewing the residence or owners

After the listing of bungalows conducted in the selected study area, 15 bungalows are identified. Depending on the questionnaire prepared by the team, the survey conducted from 02/02/2020 until

March 10/03/2020. Based on the data available, data analysis was done.

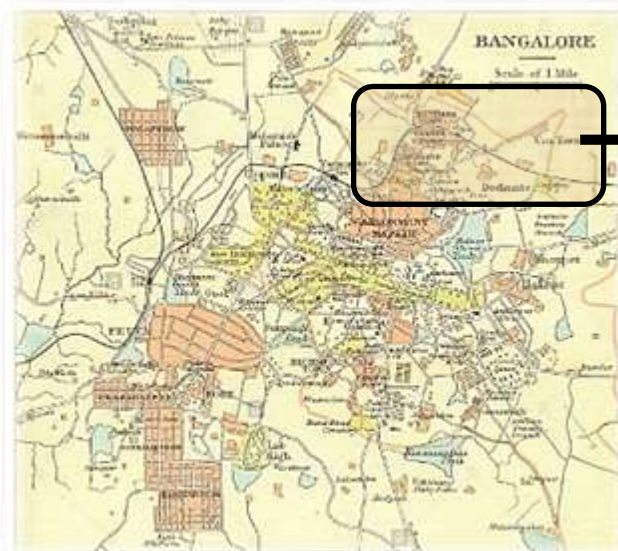
The data is categorized into:

- Status of protection
- Property type
- Material used
- Significance of the bungalow
- Architectural features

<u>Name(s) of Property:</u>		<u>Geographical Co-ordinates:</u>		<u>Status of Preservation</u>			
		Latitude		POOR	AVG	GOOD	EXCELENT
		Longitude Context		<u>Date of Construction:</u>			
<u>Setting:</u>		<u>Architectural Style:</u>		Use:			
<u>Architectural Description:</u>				Original			
				Current			
				<u>Status of Protection:</u>			
				PRESERVATION			
ORNAMENTATION		PARAPET		REHABILITATION			
ROOF		COLUMNS		RESTORATION			
WINDOW		MONKEY TOP		RECONSTRUCTION			
PEDIMENTS		COMPOUNDS		<u>Ownership:</u>			
DOOR		FLOORS		<u>Property type:</u>			
BUILT UP TO SITE RATIO		BALUSTRADES		RESIDENTIAL			
PLANNNING		FAN LIGHT		NON-RESIDENTIAL			
SITE AREA		SKY LIGHT		EDUCATIONAL			
PORCH		TRELLIS		MEDICAL			
VERANDAH		CRENELATION		OFFICE			
<u>Historical Background of the bungalow:</u>				<u>Material of Construction:</u>			
				ROOF			
				WALL			
				WINDOW-DOOR			
				TILES			
<u>Sketches:</u>				PLINTH			
				COLUMN			
				<u>Significance:</u>			
				ARCHAEOLOGICAL			
				HISTORICAL			
				ARCHITECTURAL			
				RELIGIOUS			
SOCIAL							
CLIMATIC							

Table 1 : Listing Format, Source: Author

MAPPING



Map 1 : Old demarcated map of Bangalore with colonial bungalows mapped. Source: Mythic Society

RT-RICHARDS TOWN



RT001, Fernandes Villa



RT002, Bungalow 7



RT003, Bungalow 6



RT004, Louis Villa



RT005, Thomas Villa



RT006, Bungalow 2



MAP OF THE SELECTED AREA

FT-FRAZER TOWN



FT001, Wesley Church



FT002, Borajanna Mane



FT003, Bungalow 30



FT004, Sree Nilaya

CT- COX TOWN



CT001, Abandoned



CT002, Laksmi Krupa



CT003, W.Nazereth



CT003, W.Nazereth

Map 2: Map of the selected area, Photographs of bungalow listed. Source: Author

III. DATA ANALYSIS OF ARCHITECTURAL CATALOG

The bungalows were to show the social significance of the families, the bungalows also show the varied architectural features were found *flat roofs* and

pitched roof, were found maximum the addition of parapet wall with balustrades are a major feature in colonial architecture, the addition of sky lights and monkey tops is a major feature in the bungalows. As said in the books all, the plans were symmetrical with verandah and porch in the entrance.

Listing No	Name of the Bungalow	Monkey tops	Balustrades	Pediments	Columns	Cast iron railings	Stone walls	Trellis	Cast iron brackets	Madras roof	Sky light	Verandah	Porch
RT001	FERNANDES HOUSE	NO	YES	NO	YES	NO	NO	YES	NO	YES	YES	YES	YES
RT002	BUNGALOW 7	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	NO
RT003	BUNGALOW 6	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	NO
RT004	LOUIS VILLA	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	NO
RT005	THOMAS VILLA	YES	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	NO
RT006	BUNGALOW 22	YES	YES	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES
FT001	WESLEY CHURCH	NO	YES	NO	YES	YES	NO	NO	YES	YES	YES	YES	YES
FT002	BORJANNA MANE	NO	YES	NO	YES	NO	NO	YES	NO	YES	NO	YES	YES
FT003	BUNGALOW 50	NO	YES	YES	YES	NO	NO	YES	NO	YES	YES	YES	NO
FT004	SREE NILAYA	NO	YES	NO	YES	YES	NO	NO	NO	NO	NO	YES	YES
FT005	ABANDONED	NO	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES
CT001	ABANDONED	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	NO
CT002	LAKSHMI KRUPA	NO	YES	YES	YES	NO	NO	NO	NO	YES	YES	YES	YES
CT003	WINAZERETH	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO
CT004	CHARLES LAMBED	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	YES	NO

Table 2: Tabular based format to identify the difference in Architectural glossary of the colonial bungalows. Source: Author.

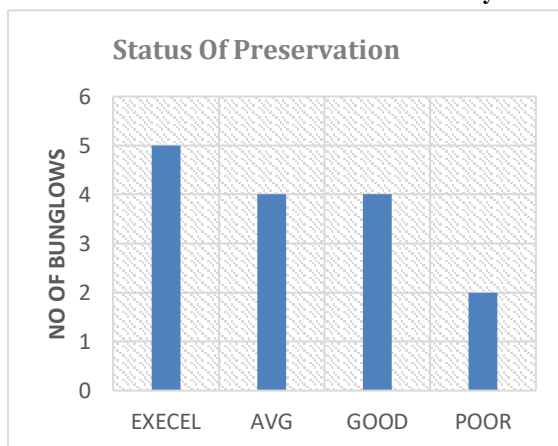


Table 3: Status of Preservation, Source: Author

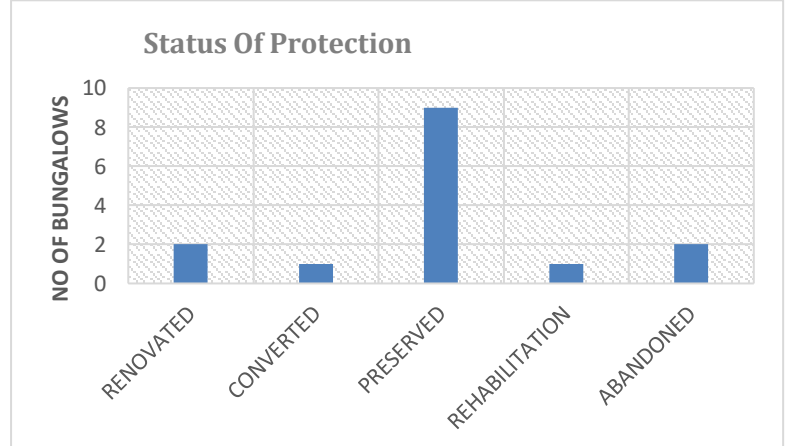


Table 4: Status of protection, Source: Author

The bungalows identified were most often found in an average status of preservation. In the data collected after the primary case study 2 bungalows were left abandoned and soon about to be demolished. The reason for the bungalows to decline then identified is even if the owners were shifted to abroad or could not afford the maintenance the bungalow needed.

Few owners showed interest in preserving the bungalows, few thought maintenances are too high and the remaining have abandoned the bungalows.

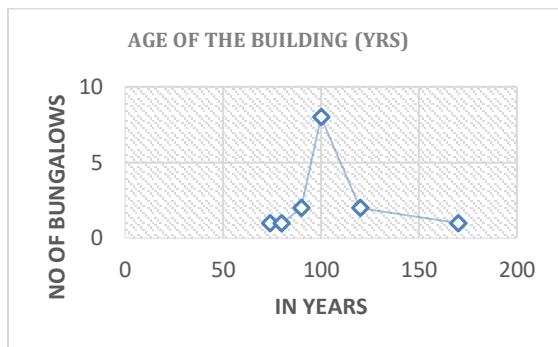


Table 5: Age of the Building, Source: Author

Depending upon the given data analysis 11 bungalows is over a hundred years old, few bungalows were found to be constructed after independence of India.

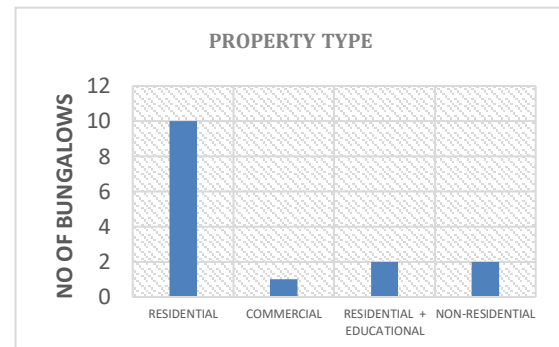


Table 6: Age of the Building, Source: Author

Based on the data analysis available maximum no of bungalows found were residential, a very few commercial and mixed typology.

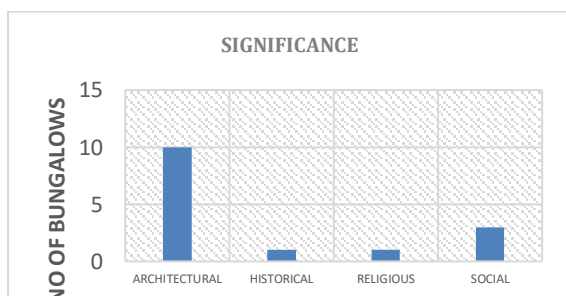


Table 7: Significance, Source: Author

The bungalows identified had more architectural significance, one bungalow in Frazer town was in adjacent with the church, which showed historical, and religious significance of Christianity and three bungalows were of same family with similar architectural feature showed the social significance.

Inference on structure and material from the book “Old bungalows in Bangalore” by Janet pott.

It is possible to study the structure and material of the old bungalows because many of them are unfortunately, in the process of demolition.

In this book, the author has given detailed information on the materials used in the construction and the technics used in the construction. The materials they used were, to fill the foundation they used local granite chips and crushed bricks. Then stones about 8x9x14 in. laid in mortar were used to build the foundation walls, and finally a 5 in. deep course of granite block 8 to 10 ft. long by 18 in. wide was laid, on this brick wall was built. Between the foundation walls the space was filled with crushed brick and rubble, levelled off with granite chips and mortar to receive the flooring tiles, they even used oiled teak boards as the suspended floor above ground level.

The walls were 18 to 21 in. thick of fired or pukka brick externally, and often of sundried or cutcha bricks internally. They even use Gare as mortar before cement was introduced in about 1930. For large building construction, mortar-grinding facilities were set up on the spot. The walls were colour washed with red oxide, but the almost universal colour wash colour scheme was a deep cream colour wash, locally called Gopi. On the external walls which set off the shining white columns, balustrades, moulding, and rustications.

Columns were about 18 in. dimeter usually of Doric types, though occasionally ionic, spaced rather more widely than in the traditional European classical porticoes which allowed for better airflow. They were either built up of courses of 4 to 5 wedge-shaped flat brick or else they consisted of a sing rough stone pier about 1 ft. * 8 in. in section encased in brick rubble to form a cylinder, and surfaced with chunam. In most of Bangalore bungalows, huge take beams carried

roofs and veranda roofs, about 14 in. wide by 16 in. deep, spanning 20 ft. or more.

Inference on PLANNING from the book “Old bungalows in Bangalore” by Janet Pott

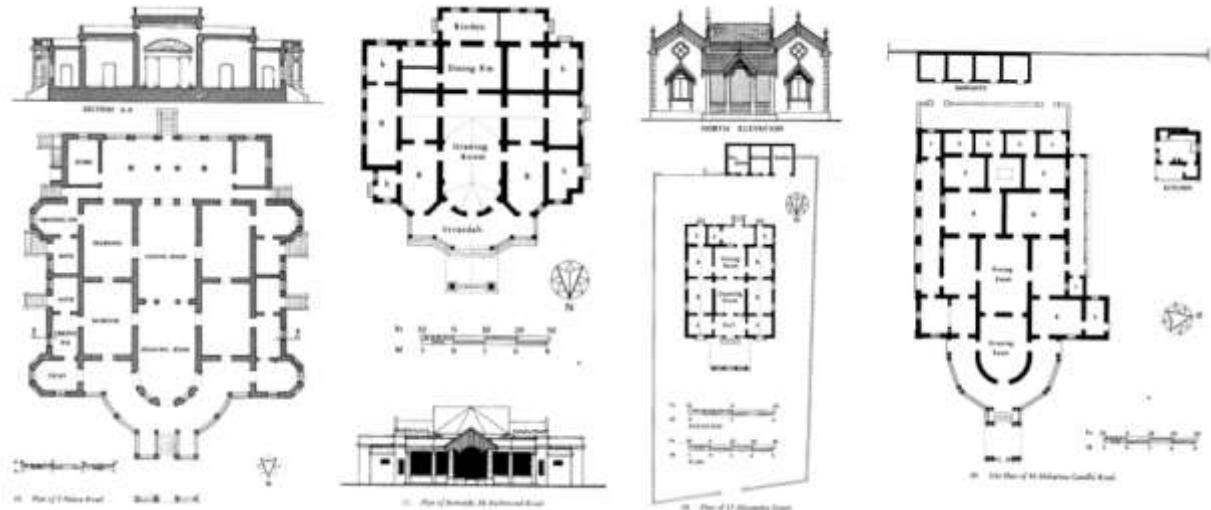


Figure 4 : Plans of the Bungalows, source “Old bungalows in Bangalore” by Janet Pott

The planning of bungalows was generally influenced by the 19th-century vernacular style, which was later modified as time passed ahead. The British engineers mostly followed symmetrical planning. Based on the drawing available from the Janet pott book and the primary case study held we understood the bungalow lied inside a property of more than 20,000sft enclosed by compounds and a gate in the entrance, the carpet area of the bungalow was in average 13,000sft to 15,000sft.

The main entrance to bungalows was in common with a porch, continued with veranda,

entering a huge hall divided into living area and dining hall. Both the side of the halls were an entry to the bedroom, where each bedroom had an attached bathroom, the kitchen and storeroom would in average be in the rare end of the bungalow or outside the bungalow. Depicting the social discrimination for the servants who could not enter the bungalow, we can also notice the servant's quarters provided located in the rare end of the property. The entrance to the bungalows were naturally one in the front and the other in the back for the servant's entry. The study on planning alone signifies the social significance of the British.

ARCHITECTURAL CATALOG

PEDIMENT

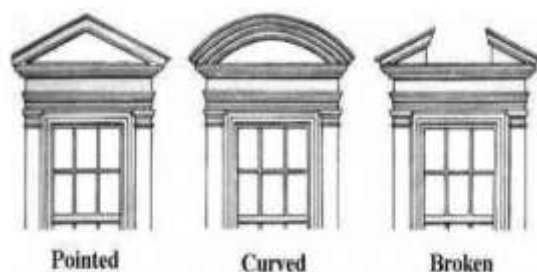


Figure 5: Types of pediments



Image 1: Pediment, Bungalow CT002

A **pediment** is an **architectural** element found particularly in Classical, Neoclassical and Baroque **architecture**, and its derivatives, consisting of a gable, usually of a triangular shape, placed above the horizontal structure of the lintel, or entablature, if supported by columns.

SKYLIGHTS

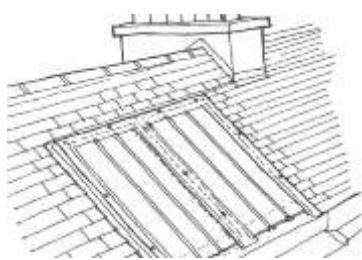


Figure 6: Sketch of the skylight



Image 2: Octagonal skylight, rectangular skylight, Bungalow RT001



Image 3: Fanlight, Bungalow FT005

Skylight, Roof opening covered with translucent or transparent glass or plastic designed to admit daylight.

COLUMNS

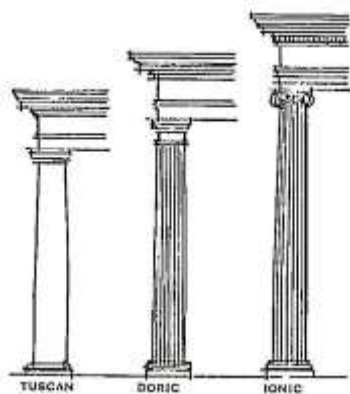


Figure 7: Types of columns



Image 5: Double Tuscan order column, Bungalow FT005

Roman columns were purely for decoration, unlike Greek columns that used to support their buildings and temples. There were four types of columns used throughout the Ancient Roman Empire. These columns were: Doric, Ionic, Corinthian and Tuscan. Doric style columns are the plainest of the four columns

COMPOUND

The low-rise wall which encloses the property with a small opening of gate, which also tells the social status of the residence



Figure 8: Compound

MADRAS ROOFING

The **Madras terrace roofing** is a traditional **roof** building technique using handmade 'achikal' brick, wood and lime plaster.

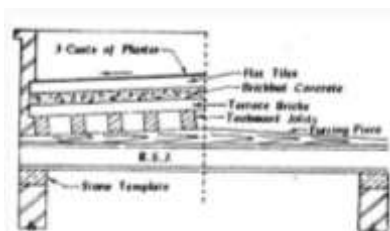


Figure 11: Section of the Madras roof



Image 8: Madras Roof, Bungalow FT003



Image 9: Pitched Roof, Bungalow FT003

PORCH



Figure 9: Sketch of the porch



Image 6: Porch, Bungalow FT005

Porch, roofed structure, usually open at the sides, projecting from the face of a building and used to protect the entrance.

VERNADAH



Figure 10: Plan explaining the verandah



Image 7: Verandah, Bungalow RT001

A **verandah** is an outdoor porch with a roof. Most **verandahs** extend along the sides and rear ends of a house or building.

BALUSTRADES

A railing supported by balusters, especially one forming an ornamental parapet to a balcony, bridge, or terrace

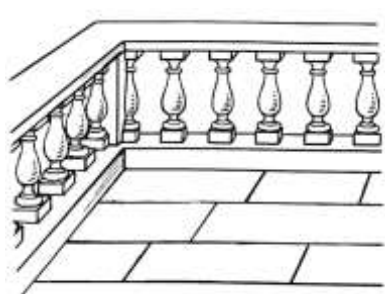


Figure 13: Sketch of Balustrade



Image 10: Balustrade, Bungalow FT001

TRELLIS

A framework of light wooden or metal bars used as a support for fruit trees or creepers, typically fastened against a wall.

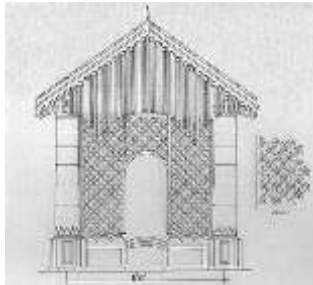


Figure 14: Sketch of Trellis



Image 11: Trellis, Bungalow RT002



Image 12: Monkey tops, Bungalow RT004



MONKEY TOPS

The 'Monkey Top' with its characteristic a shaped pointed hood and canopy of clay tiles defined the other over a window with flat slats above shuttered windows. Often, there was a complementary, harmonious color palette- white walls, terracotta colored tiles and slats that were usually painted Bottle Green.

FLOORING



Image 13: Terracotta Tiles, Bungalow RT004



Image 14: German tiles, Bungalow RT004



Image 15: Vitrified tiles, Bungalow RT001

WINDOWS AND DOORS

The windows and doors found were unique in the bungalow during the documentation. Each design of the window and door found were never same.



Image 16: Four leaf door to the hall, Bungalow RT001



Image 17: Two leaf door with ventilators, Bungalow FT003



Image 18: Three leaf window, Bungalow CT003

Issues identified for the decline of bungalow

1. Low government support
2. Yearly maintenance cost issues
3. Age of the building
4. Lack of Knowledge in the owners towards conservation.
5. The surrounding skyline in contrary to the bungalows.
6. The rapid growth in urbanization.
7. Real estate and rapid increase of the land value in these area
8. The owners shifting to abroad and abandoning the bungalow.
9. A combination of economic, social and physical factors is leading to the deterioration and abandonment of the bungalows.
10. The other important issue is repeated maintenance of the roofs and tiles for it to be viable.
11. The ratio of the site to the bungalow is always more and maintaining the garden and watering always is a trouble to the owners.
12. The modernizing surrounding asks for modern equipment to be installed in the building for ex the kitchen in few bungalows are located outside, where the system of servants is not in practice for middle class families.
13. Fixtures in the toilets and the drains are affected due to the age of the building.



Figure 15: Image of Bangalore in 1902, Source: INTACH

Recommendation to safeguard the bungalow

1. Government to take over the property.
2. Adaptive reuse, just like how the historical structure being transformed as the Samsung opera house, M.G road and Cinnamon boutique, Halasuru.
3. Marking the town as INTACH property or a heritage site.
4. Providing financial support to the bungalow owners for the maintenance of the bungalow.
5. To have workshops to literate the owners about conservation, preservation, and protection.

How is this research paper helpful for future architects?

1. This paper is source of information for the architects who can use it to refer about the old bungalows of Bangalore.
2. The architects can easily refer this paper to understand better about the architectural details about the bungalow.
3. Each typology of bungalows are different for example-Sidhpur havelis, Delhi chowk, Chennai bungalow they all have certain similarities and their special features make them differ from each other.
4. Each façade treatment is different; hence, the Bangalore bungalow has its own identity with **skylights, trellis, monkey tops, balustrades and porches standing on double Doric columns.**
5. Instead of Bangalore losing its identity, the architects following this in housing can retain its identity for its historical background.

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