

Conservation Strategies for Srirangapatna Town: Evaluation of Heritage Buildings

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ABSTRACT

There is large number of heritage sites in India and Srirangapatna is one of the prominent heritage sites. It is an island town, situated on Bangalore-Mysore highway, encircled by the river Cauvery. There are many significant heritage areas/precincts and monuments located within the fort, which is one of the principal, elements that add up to the character of Srirangapatna. Over the years, the ever increasing developmental pressures and neglect of monuments/heritage areas and their environs resulted in decay factors, which call for evolving harmonious strategies and conservation measures. The conservation measures, if taken in time, it will save Srirangapatna from gradual but imminent destruction for sustainable development. The paper presents the historical background of heritage areas and monuments of Srirangapatana and their significance. Significance Assessment is carried-out using mapping procedure for delineating the heritage areas. It suggests the conservation measures by reinvigorating the heritage areas within the fort.

Key Words: Significance Assessment, Fort, Heritage Areas, Mapping and Monuments

I. INTRODUCTION

The historic past is visibly being eroded by human and natural forces. There is a vital need of appreciation of rich heritage; for identifying the avenues for preservation, conservation, adaptive reuse and restoration; for the sake of cultural continuity and document them for posterity. Many of India's architectural and cultural heritage sites, which were recognized so far, they constitute a unique civilization legacy, as valuable as the monuments that are legally protected by Archaeological Survey of India (ASI) and State Achieves Department. The Archaeological Survey of India protects monuments that are more than 100 years old and are of national importance. The monuments of state importance are protected by the State Archaeological Department. Hardly, 5000 monuments at the national level and 3500 at the state level are being conserved by national and State governments respectively. But, considering India's vast cultural heritage, these numbers are not significant and their focus is monument-centric. Nowhere else in India, one can find such a profusion of monuments as in Karnataka. No wonder then, that Karnataka has been called the "Cradle of Stone Architecture in India". The magnificent World Heritage Sites at Hampi and

Pattadakal, the exquisite temples at Belur, Halebid and Somnathpur, the cave temples of Badami, Aihole, and the

stately forts and domes of Srirangapatna and Bijapur resurrect Karnataka's historical and cultural affluence.

Forts have always been a prime necessity of all ages. The possessive instinct of mankind has played a vital role in acquiring territories and mustering the riches and this has made the fort an essential requisite for a king to protect and preserve the wealth accumulated. In India the existence of Forts dates back to B.C. 300 and Srirangapatna is renowned for its seemingly impregnable fort, associated with the great ruler Tippu Sultan. Srirangapatna has undergone major changes over the centuries. Being a place of pilgrimage it has seen countless battles, some of which have shaken the foundation of its massive fort wall, that still stand as a testament to the greatness of Srirangapatna's glorious past. Distinguished ruling dynasties like The Gangas, Hoysalas, Vijayanagar Kings, The Wodeyars of Mysore and Hyder Ali & Tippu have left their indelible impression on the cultural legacy of this town. Innumerable monuments are a living testimony of this heritage and they are of national, state and local importance. As a mark of recognition, the state government notified Srirangapatna and other towns viz. Mysore, Bijapur, Bidar, Gulbarga and Kittur as Heritage towns in 2005. Srirangapatna aspires to be an international destination for its cultural, spiritual, natural, historical, architectural, and religious and tourism dynamism. But, it is losing its charm as the places near the fort, monuments, temples, mosques, fort gates etc., have been encroached by commercial establishments, illegal constructions, and not much concern from government agencies/authorities including people at large. The paper presents the significance assessment of heritage areas using mapping procedure and suggests conservation measures and strategies for sustenance of the historical Sirangapatna town.

2.0 BACKGROUND OF SRIRANGAPATNA

Srirangapatna is a Town Municipal Council, having a population of 23,729 as per 2001 census. It is a taluk headquarters in the Mandya District of Karnataka State. The population growth rate of Srirangapatana during the decade 1991-2001 was 8.32 per cent, which is lower than the state's growth rate of 17.5 per cent. But the growth rates during the decades 1971-81, 1981-91 was 28.64 % and 20.77 %. It is an island town built in 894 AD on Bangalore-Mysore highway encircled by the river Cauvery. The name Srirangapatna has been derived from a 1000 year old temple dedicated to Lord Sriranganatha. The town is located at 12.41° N 76.7° E and has an average elevation of 679 metres (2227 feet), on the Deccan Plateau with an area of 8.6sq.kms. The climate is

warm and the temperature ranges between 14°C and 34.5°C. The average annual rainfall is 810 mm maximum and 217mm minimum. The religion has played a major role in the history of Srirangapatna. Both Hindu and Muslim rulers have made major contributions to the town in the form of temples, mosques, tombs, gardens etc. These buildings were not only functioned as religious places but also acted as cultural centres and at sometime supported the economy of the town. The town constituted Hindu religion (74%), followed by Muslims(24%) and the rest are Christians and Sikhs. The town is steeped in history not only with its rich historical, cultural, religious, architectural heritage but also in scientific and technological innovations.

III. SHRIRANGAPATNA FORT

The Fort is one of the principal elements to the character of Srirangapatna. The island of Srirangapatna is surrounded by a great stone fort wall that rises up sharply from the banks of the river Cauvery. The Srirangapatna Fort was constructed on the western end of the island in 1454 AD and is one of the most formidable forts in India. The fort was so formidable that a great military authority who visited it in 1880 A.D., pronounced it as the second strongest in India. The Fort, constructed on the western end of the island, is an irregular pentagon with a perimeter of about 4 k.m. The aerial view of Srirangapatna is as follows.



Fig.1: Aerial View of Srirangapatana Fort Area

Source: Google Earth, 2008

It contains 240 acres of land and in 1897 had about 1500 houses with about 5400 inhabitants. It was originally built by Thimmanna Hebbbar, Chieftain of Nagamangala who got permission from the Vijayanagara emperor Devaraya II to build a mud fort here in 1454 A. D. Later Kanteerava Narasaraja Wodeyar and the succeeding rulers strengthened the fort. To the two walls of fortification, Tippu sultan added a third inner line of fortification. The principal entrance to the fort is the Elephant gate on the south side. This gateway bears an inscription in Persian which mentioned the year of foundation of the fort in 1219 of Tipu Sultan's Mauludi era. The other important gates are Water gate near the Gangadhareswara temple, Jibi or Krishna gate near the Krishna temple and the Bangalore gate in the eastern wall. It is one of the most formidable forts in India.

IV. MONUMENTS

Srirangapatna has innumerable monuments that are of national, state and local importance. The list of the

monuments recognized by Archaeological Survey of India and State Archaeology Department, which are located in the Local Planning Area (LPA) of Srirangapatna is given in the table 1.

Table 1 : List of ASI and State Monuments within LPA

ASI Monuments	State Monuments
Ancient Palace Site and Remains	Krishnamurthy's Bungalow
Colony Baileys Dungeon	Mummadi Krishnaraja Wodeyar Birth place
Daria Daulat Bagh	Srirangapatna Fort
Gumbaz containing tomb of Tipu Sultan	Bateri 2 No
Jumma Masjid	Gun powder stores 8 no
Obelisk Monuments & Fort walls	Hanging Bridge
Spot where Tipu's body was found	Moat around Fort
Sri Kanteerava Statue in Narasimha Temple	Rangamba 2No
Sri Ranganathaswamy Temple	Ruined palace of Mirsadik
Thomas Inman's Dungeon	Tuppada kola

Source: State Archaeological Department, Karnataka

V. SIGNIFICANCE ASSESSMENT OF HERITAGE MONUMENTS

Mapping procedure is a powerful tool to assess the significance of the heritage monuments and its areas. It helps to delineate a "heritage area"/zones, precincts and monuments of importance for prioritizing the action plan. The monuments are to be classified as built or natural or cultural types. Then, the monuments are categorised as historical or architectural or aesthetic or cultural or combination of the four. The monuments are to be graded depending on their significance, type and category. The evaluation criteria are given in the table 2.

Table 2: Evaluation Criteria for Heritage Monuments

	Main Criterion	Sub-criterion	Rank
Built Heritage	Historical	Very Significant	5
		Moderately Significant	3
		Not so Significant	1
	Architectural	Outstanding	5
		Average	3
		Poor	1
	Aesthetic	Significant	5
		Modest	3
		Poor	1
	Cultural	High	5
Medium		3	
Low		1	
Natural Heritage	Historical Value	Very Significant	5
		Moderately Significant	3
		Not so Significant	1
	Landscape	Significant	5
		Modest	3
		Not so Significant	1
Cultural Heritage	Historical	Very Significant	5
		Moderately Significant	3
		Not so Significant	1
	Uniqueness	Outstanding	5
		Average	3
		Poor	1

A. Step by Step Procedure for Mapping

The Primary objective is to identify an area that is of special value and is in need of special planning strategies that take care of potential and prospects of the area in the context of resources compatibility. Each of the resource is characterized by a set of criteria. Each criterion is given rank on a 3-point scale. Each rank is given a binary scoring, that is 1, if present else 0. The summation of ranks gives the value of each resource.

Step 1: To assess the architectural quality of built heritage, the criteria can be –outstanding, moderately significant and poor. If an artifact ‘A’ is assessed as of ‘significant’ value, the rank will be 5, whereas for Historical importance, the same artifact may be described as ‘not so significant’. Hence it will get a minimum value of 1.

Step 2: Each rank is given a binary scoring, that is 1, if present else 0.

The Artifact criteria assessment rank score

	Rank	Score
A Architectural - Very Significant	5	1
- Not so Significant	1	1
Alternatively, if it is historically insignificant Historical- insignificant	0	0

Step 3: The summation of (rank x score) gives the value of each resource.

$$V_k = \sum_{n=1}^j R \times S$$

Where,

- V- total value in each category
- k- resource category
- S Score for each criteria
- R- Rank for each criterion
- n- criteria
- j- total number of criteria in each category

Thus, in the above example value becomes

$$V=(5 \times 1) + 1 \times 1 = 6$$

Step 4: The geographical area is subdivided in to smaller chunks like plots. For simplicity purpose, a network of grids has been adopted. The grid spacing has been taken as 110 meters. The cumulative values are assigned to grids containing the resources.

Step 5: The different potential area maps for built, natural and cultural heritage are prepared.

Step 6: These maps are superimposed to get the final value of the grids. The total value of each grid, V, is then represented by the generalized formulae as follows:

$$V = \sum_{k=1}^p V_k$$

Where,

- k-category of resources
- p-number of categories

Step 7: The values are divided into 3 ranges to get areas of high, moderate and low potential. This helps to identify the core and buffer areas. The high potential areas give the possible location of the core area, the medium and the low potential areas imply the buffer area. The graphical representation thus obtained will guide in delineating the

Heritage site. Physical, natural and administrative boundaries are considered to get the final boundaries of various areas. The methodology has been followed to delineate the core and buffer area. Schematic Diagram showing Mapping of Heritage Resources and its Significance.

V2	V3	V3	V1	V2
V3	V2	V2	V2	V3
V3	V2	V1	V1	V2
V3	V2	V1	V1	V3
V2	V2	V3	V3	V3

V1 : 1 to 3 Low potential

V2 : 4 to 6 Medium potential

V3 : 7 to 9 High potential

B. Heritage Monuments and their Significance

The significance of the Heritage monuments of the Fort area has been evaluated based on the ranking of monuments. Table 3 shows the ranking of heritage monuments. Based on the ranking of monuments, the mapping has been carried out and is shown in Fig. 2

Table 3: Heritage Monuments and the Total Ranking

Sl. No.	Places of interest	Historical	Architecture / Landscape	Aesthetic/ Uniqueness	Cultural	Ranking
1	Ancient Palace Site	5	-	3	-	8
2	Colony Baileys Dungeon	5	5	3	-	13
5	Jumma Masjid	1	5	3	5	14
6	Obelisk & Fort walls	3	3	1	-	7
7	Tipu's body was found	3	-	-	-	3
9	Ranganathaswamy Temple	5	5	5	5	20
10	T. Inman's Dungeon	3	3	3	-	9
11	Krishnamurthy's Bungalow	3	3	3	-	9
12	Mummadi Krishnaraja Wodeyar's Birth place	3	1	1	-	5
13	Srirangapatna Fort	5	5	5	-	15
14	Bateri 2 No	5	3	3	-	11
15	Gun powder stores 8 no	5	3	1	-	9
16	Hanging Bridge	3	1	-	-	4
17	Moat around Fort	5	5	5	-	15
18	Ranagamba 2No	3	3	1	-	7
20	Tuppadakola	3	3	3	-	9

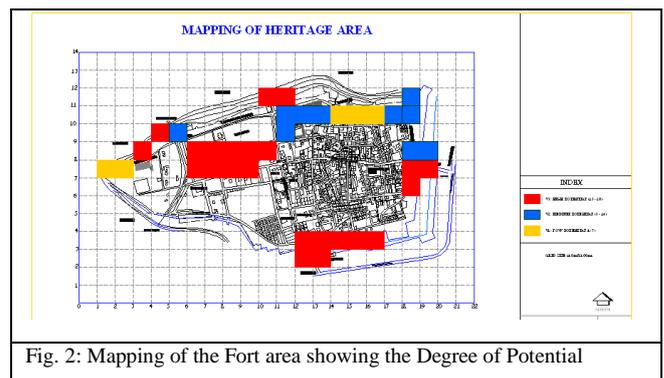


Fig. 2: Mapping of the Fort area showing the Degree of Potential

In the Fig. 2, high potential area (red colour area) requires first phase of conservation and will receive the highest level of conservation and management efforts. Limited development should be encouraged and be in conformity with the area. Medium (Blue colour) and low (yellow) potential areas will be taken up for the conservation in successive phases.

VI. DELINEATION OF HERITAGE AREAS

The Fort Area where the monuments of historic, religious and cultural importance are located is to be declared as “Heritage Area” which needs to be delineated on the following grounds for heritage conservation. Most of the heritage buildings are scattered along the Cauvery River, which shows that water was a major element for development and also forms a natural barrier. The monuments are located towards the Northern part of the Fort. The tourists visit only Sri Ranganathaswamy Temple due to its Historic, Cultural and Religious significance; other monuments are being neglected either by the authorities, tourists or residents. The prominence of other monuments could be recognized by interconnecting them in a Heritage Trail. i.e., “Heritage area” and is marked where all the important monuments are connected. The “Heritage Area”, which was delineated from the mapping procedure, is to be developed and conserved in a holistic approach. The delineated heritage area is shown in Fig. 3.

The area delineated as “Heritage Area” has following shortfalls and are: negligence of monuments by the authorities as well as the residents; temporary commercial establishments near the monuments; absence of organized parking; encroachment of the fort area and the places near the monuments; inaccessibility to the monuments; lack of awareness and knowledge about the importance of the monuments by the authorities as well as the residents; absence of vision to envisage Heritage management as a tool to develop tourism economy and diversified image of the facades around the area.

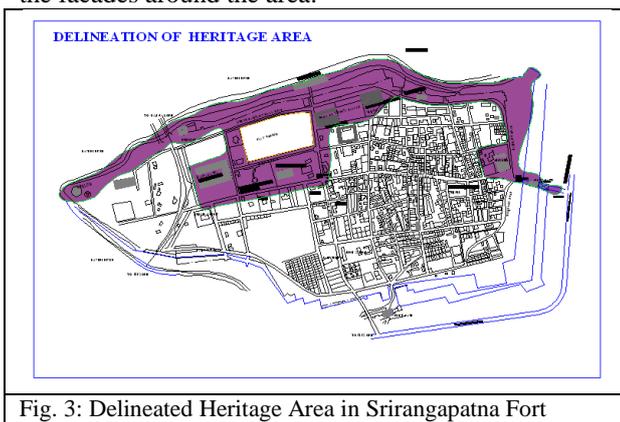


Fig. 3: Delineated Heritage Area in Srirangapatna Fort

VII. CONSERVATION STRATEGIES

The following strategies are suggested for planning and conservation of heritage areas, buildings and precincts in the Town of Srirangapatna:

- i) The monuments and buildings of historical, architectural, archaeological and cultural significance need to be identified and published in the gazetteer.
- ii) The listing of buildings shall be based on the age of the building, its special value of architecture or

cultural reasons or historical periods, its relevance to history, its association with well known character or event, its value as a part a part of group of buildings and the uniqueness of the building or any object or structures fixed to the building or forming part of land and comprised within the cartilage of the building not only within the Fort Area but also within the Local Planning Area.

- iii) The areas under conservation shall be suitably treated for landscape and as far as possible shall be utilised for social and cultural activities
- iv) The Planning Authority has to develop guidelines for development, re-development, additions, alterations, repairs, renovation and reuse of heritage building within the LPA.
- v) Citizens need to be involved and awareness programmes need to be undertaken for effective implementation of heritage plans and programmes.
- vi) Management Action Plan for Heritage Areas including precincts to be worked out in consultation with various stakeholders namely Town Municipal Council of Srirangapatana, ASI, Archaeological and Heritage Commissioners Officers, Town Planning and other agencies including NGOs.
- vii) The Area delineated as Heritage Area (depicted in the map) need to develop special plans for conservation and improvement of controlled areas and alteration or demolition of any building is prohibited in the controlled conservation areas without the consent of the Planning Authority and Municipality as well. The Fort Area should be considered as *Special Area* and needs special treatment to conserve the heritage value for retaining the character. In order to preserve aesthetic environs around these monuments, it is necessary to declare areas surrounding these monuments as *zones of special control* and impose the following regulations around these monuments:
 - Buildings upto a height of 3.5 mts from the ground level is permissible within the distance of 100-300 meters from the premises of the monuments.
 - Building up to inclusive of first floor or upto a height of 7 mts from ground level whichever is less only is permissible in the area beyond 300 mts from the premises of the monuments within the fort area.

viii) Following conservation measures and strategies are required to arrest the damage and decay in the fort heritage area:

- a. The Fort has a perimeter of 3.7 km. and the conservation of the entire fort requires huge amount and time. Hence conservation of the fort can be carried out in phased manner. The fort along the river, towards the Northern side has not been damaged much due to the inaccessibility and the presence of huge trees. As this part of the fort has rampart, first phase of conservation is to be taken up here.
- b. The North Rampart Road is lined with monuments and it provides a beautiful view to the fort, if

- conserved. As the monuments are located on the edge of the town and are not intervened with the developments, the conservations measures can be effectively carried out.
- c. The movement of local traffic is very less on North Rampart Road and this is an added advantage for the tourist movement and there is an ample space is available for parking.
 - d. The fort has two gates namely Southern Gate or Mysore gate and Eastern Gate or Bangalore Gate, which is known only by researchers, academicians, Archaeologists etc.,. These Gates are to be conserved to depict the Historicity.
 - e. The encroachments near the Bangalore Gate are to be cleared and proper alternative arrangements are to be provided.

II. CONCLUSIONS

The history of the town is written in its old buildings and streets. Though a town should have new structures, it is not wise to lose the old buildings, as every building has some history related to it. The conservation cannot be the sole concern of government departments, but it has to be a coordinated effort of local authorities, architects, related professionals, private organizations and millions of individuals. The conservation strategies presented here leads to enhance the historical, architectural, cultural and aesthetic aspects of the town by giving a rebirth to the dyeing monuments. The conservation measures, if taken in time will save Srirangapatna from gradual but imminent destruction.

REFERENCES

- [1]. Ashtosh Joshi. (2007), "Regeneration of Indian Historic Cities", The Journal of The Indian Institute of Architects, Volume 72, Issue 12, pp. 20-22.
- [2]. Deborah Thiagarajan and Pierre Pichard. (1989), "The Listing of Heritage – Pondicherry", Architecture + Design, A Journal for the Indian Architects, Vol. VI, No. 1, pp. 52-54.

- [3]. Dipaneeta Das and Sanghamitra (2007), " Mapping of Heritage Resources and Planning for Sustainable tourism in Temple town of Vishnupur", W.B., ITPI Journal, Institute of Town Planners, India, Vol. 4, No. 3. pp. 16-26.
- [4]. Issar, T. P. (1991), "The Royal City", Mytec Process Pvt. Ltd., Bangalore.
- [5]. Krishna Menon, A. G. (1989), Conservation in India, Architecture + Design, A Journal for the Indian Architects, Vol. VI, No. 1, pp. 22-27.
- [6]. Kulbhushan and Minakshi Jain. (1989), "The Listing of Heritage – Jaiselmer", Architecture + Design, A Journal for the Indian Architects, Vol. VI, No. 1, pp. 49-51.
- [7]. Mysore State Gazetteer (1967), Mandya District, Gazetteer of India.
- [8]. Neetu Kapoor. (2007), " Redevelopment of Heritage Zone", The Journal of The Indian Institute of Architects, Volume 75, Issue 10, pp. 9-10.

BIOGRAPHIES



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