

# VALUE ASSESSMENT OF HISTORIC FORT PRECINCTS OF MUMBAI

*A user-centric approach to analyzing significance of forts*

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**Abstract:** The significance of a site is determined by multiple values.<sup>1</sup> These values are a combination of the '*tangible*' ones held by experts- the art historians, archaeologists, architects, and other professionals-as well as '*intangible*' values brought forth by '*new*' stakeholders over the years – the citizens and local communities. These citizens have their own set of socio-cultural values which often '*differ*' from those of heritage specialists or experts. (*Torre 3*). Since the '*right to decide*' the fate of heritage sites through planning conservation strategies lies in the hands of experts who are expected to work within a fixed framework of rules and regulations laid down by the government, end up '*prioritizing historic or archaeological significance*' of the site. In this context, the historical or archaeological significance which is more relevant to the '*past*' ends up being '*emphasized*' whereas the '*present*' socio-cultural significance shaped by the citizens and the '*future potential*' of these sites is pushed to the '*periphery*'.

There are two prime reasons determining such an approach :

Firstly, the methods of measuring these '*intangible*' values which are relevant to all stakeholders, experts and citizens in a diverse country like India is difficult.

Secondly, understanding the '*influence of underlying parameters*' such as rules and regulations, potential and flexibility of the built form, infrastructure development and neighborhood characteristics of the precincts on the existing significance and future potential of these sites is a complex phenomenon.

The paper thus intends to discuss the identification of ways in these '*intangible*' values could be measured through the lenses of '*citizens as primary stakeholders*' and then viewing it in context with the underlying parameters mentioned above to obtain a more holistic vision regarding conservation of historic sites.

The case of historic fort precincts in a metro city like Mumbai is used as a model to explain these '*ways of seeing and measuring significance*'.

## **Keywords:**

Measuring intangible values, holistic vision, citizens as primary stakeholders.

## I. INTRODUCTION

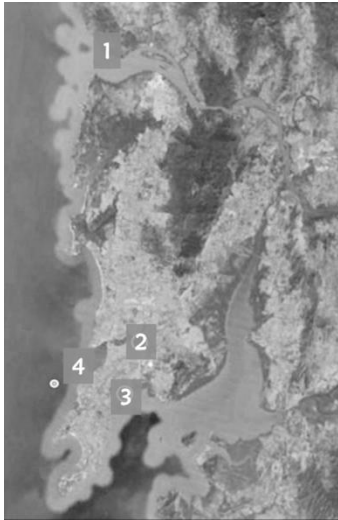
Mumbai metropolitan region with its historical variety is home to at least 25 forts. (*Study of forts within the Mumbai Metropolitan Region -Volume 1 4*) The main city of Mumbai and its extended suburbs, itself has 10 British and Portuguese colonial forts enclosing an area of more than 115 acres. Caught between a time warp of functional redundancy and contemporary urban pressures of development, several of these gradually face extinction. (*Study of forts within the Mumbai Metropolitan Region -Volume 1 4*) The laws post-independence which remained unevolved since decades restricted their role to archeological monuments that are '*forms freed of function*' with no defined purpose, apart from being viewed as museum exhibits rather than living architectural buildings. Mumbai, a city where every inch of space is a luxury, the '*buffer spaces*' around the enclosures of the forts which fall into '*prohibited*' (100 metres)<sup>2</sup> and '*regulated*' zones (200m)<sup>3</sup> as per laws, informally started serving as '*spillover*' spaces for the neighborhood especially the local communities with their activities flowing into these buffer areas and sometimes even into the enclosures of the fortifications serving either '*religious, cultural, recreational*' or '*livelihood*' purpose and thus compensating for the crunch of space in the growing city. This new land-usage gave birth to new values and significance to these precincts which now forms an integral part of the existing reality of fort precincts. This phenomenon, if viewed positively, can help us decode the future potential of these forts reincorporating them into the urban milieu as vital multifunctional spaces. To explore this new acquired significance of the forts further, the fort precincts of *Sewri, Bassein, Sion and Worli* are taken up for value assessment through lenses of citizens and local communities as

<sup>1</sup> Value can be defined simply as a set of positive characteristics or qualities perceived in cultural objects or sites by certain individuals or groups (*Torre 4*)

<sup>2</sup> Prohibition within the monument: Consumption or cooking of food, hawking, selling, begging, vehicular movement, official meetings, parties, conference or entertainment apart from the purpose of religious usage or customs except under and in accordance with a permission in writing granted by central government. (*AMASR Act-1958*)

<sup>3</sup> Regulated zone is the 200 m radius from the boundary of the prohibited zone (*AMASR rules, 1959-rule 32*)

primary stakeholders. Sewri fort precinct is chosen for its ecological significance and sudden rise in pace of development caused due to Mumbai Trans-harbour Link ;Bassein fort precinct for its scale and size (110 acres) and enormous future potential; Sion fort precinct for it being the only landlocked hill fort in the city; and Worli fort for its emerging socio-cultural importance in the *koliwada* surrounding it. Currently, Sion and Bassein fort are centrally protected monuments under the Archaeological Survey of India (ASI) whereas Sewri and Worli forts are state-protected monuments.



**Figure 1 : Map of Mumbai showing Bassein fort (1), Sion fort(2), Sewri fort (3) and Worli fort (4)**

**Source: Google earth**

## II. EXISTING METHODOLOGIES

Since Riegl's (1902) distinction between memorial(past) and present-day values, several typologies of values have followed (*Labadi, 2007*), including in national and international heritage conservation guidelines. (*Candiracci 29*) . If one were to map these value schemata, there would be a great deal of overlap even between such different frameworks as Frey's (from economics) and Riegl's (from art history). The typology suggested in English Heritage's paper on sustainability is perhaps the most comprehensive and balanced (*English Heritage 1997*) This breakdown is well oriented to conservation practice because the value categories focus on how heritage is used and valued (contingently, and by people other than elites and experts), whereas many other typologies resonate more with connoisseurship and professional values and are strongly influenced by the notion of heritage's intrinsic value. (*Torre 10*)

For the value assessment of fort precincts, the English heritage value typologies are taken as reference with a few modifications to accommodate with the site context of Mumbai fort precincts. The value typologies of English heritage (cultural, educational

<b>RIEGL(1902)</b>	<b>UNESCO, World Heritage Convention (1972)</b>	<b>LIPE(1984)</b>	<b><u>BURRA CHARTER (1998)</u></b>	<b><u>FREY (1997)</u></b>	<b><u>ENGLISH HERITAGE (1997)</u></b>
<ul style="list-style-type: none"> <li>▪ Age</li> <li>▪ Use</li> <li>▪ Commemorative</li> <li>▪ Historical</li> </ul>	<p>Value for monuments (historical, artistic, scientific)</p> <p>Values for groups of buildings (historical, artistic, scientific)</p> <p>Values for sites (historical, aesthetic, ethnological, anthropological)</p>	<ul style="list-style-type: none"> <li>▪ Aesthetic</li> <li>▪ Informational</li> <li>▪ Associative-symbolic</li> <li>▪ Economic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aesthetic</li> <li>▪ Historic</li> <li>▪ Scientific</li> <li>▪ Social (spiritual political national and cultural)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monetary</li> <li>▪ Option</li> <li>▪ Existence</li> <li>▪ Bequest</li> <li>▪ Prestige</li> <li>▪ Educational</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cultural</li> <li>▪ Educational and academic</li> <li>▪ Economic</li> <li>▪ Resource</li> <li>▪ Recreational</li> <li>▪ Aesthetic</li> </ul>

**Table 1: Summary of heritage value typologies devised by various scholars and organizations (Reigl 1902; Lipe 1984; for the Burra Charter, UNESCO, World Heritage Convention (1972) Australia ICOMOS 1999; Frey 1997; English Heritage 1997 (Torre 9) (Candiracci 29)**

economic, resource, recreational and aesthetic) are revised as *socio-cultural*, *educational monetary*, *recreational* and *aesthetic* values (economic and resource value are clubbed together as monetary value).

### III. VALUE ASSESSMENT OF FORT PRECINCTS

#### a) METHODOLOGY

An on-field survey Questionnaire with a total of 23 statements was used for evaluating the significance of each precinct from the citizens perspective. The citizens on the site were expected to give their opinion on how strongly do they agree/disagree with these 23 statements on a rating scale of 0 to 3. All 23 statements were broadly classified into 4 categories with each one belonging to one of the categories<sup>4</sup>-Educational(6 statements), Socio-cultural (5 statements), recreational (8 statements)or Aesthetic (4 statements).

Each Statement in every category/value was framed with a purpose of measuring a specific important attribute of that particular value .( refer table 2 for list of attributes under each category of value).

For example, for measuring the *Recreational* value, a few statements were :

- This place is safe for me to spend time alone (*measuring safety/security*)
- I find it very easy to move around here without using google maps or asking other people about directions. (*measuring Legibility*)
- I find this place very comfortable to visit even in hot afternoon sun.(*measuring Physical Comfort*)

Similarly, for measuring educational value, a few statements were:

- This place offers knowledge that is not available through any other resources like internet,books,etc (*measuring rare source of knowledge*)
- This place offers something to learn for everyone irrespective of age, sex and occupation.( *Measuring relevance of knowledge to all age groups, gender and occupation*)

The survey was carried out multiple times with stratified random sampling for reliable results.

#### b) FINDINGS

Based on the scores obtained, a percentage value assessment was obtained for each fort ( refer Figure 2,3,4 and 5). A detailed value assessment with attributes is given in Figure 6 based on citizens opinions.

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<sup>4</sup> Monetary value of land is assessed through interaction with experts. Since this paper deals with value assessment from citizen's perspective, results of monetary value are not a part of this paper.

Educational/ Academic value	Socio-cultural Value	Recreational Value	Aesthetic Value	Monetary Value
<ul style="list-style-type: none"> <li>▪ Relevance of knowledge to all age groups, gender and occupation</li> <li>▪ Authenticity</li> <li>▪ Rare source of knowledge</li> <li>▪ Knowledge from fort (built heritage)</li> <li>▪ Knowledge from precinct and natural heritage</li> <li>▪ Learning Environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Social Integration</li> <li>▪ Sense of pride/belongingness</li> <li>▪ Symbolic value/landmark</li> <li>▪ Opportunities for sociability</li> <li>▪ Religious and cultural events</li> </ul>	<ul style="list-style-type: none"> <li>▪ Safety/Security</li> <li>▪ Legibility</li> <li>▪ Physical Comfort</li> <li>▪ Accessibility to all</li> <li>▪ Variety in Recreation Activities</li> <li>▪ Proximity</li> <li>▪ Basic Facilities (drinking water, toilets,etc)</li> <li>▪ Cleanliness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ambience</li> <li>▪ Visual beauty-built heritage</li> <li>▪ Visual beauty-unbuilt &amp; natural heritage</li> <li>▪ Vantage point for scenic views</li> </ul>	<ul style="list-style-type: none"> <li>▪ Land cost</li> <li>▪ Monetary value of built heritage materials</li> <li>▪ Resource value</li> </ul>

Table 2 :List of attributes to be measured under each value for assessment purpose through questionnaire. Source : Author

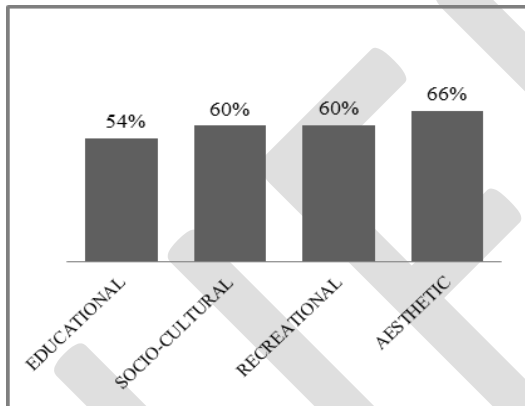


Figure 2 : Value Assessment results : Sion fort

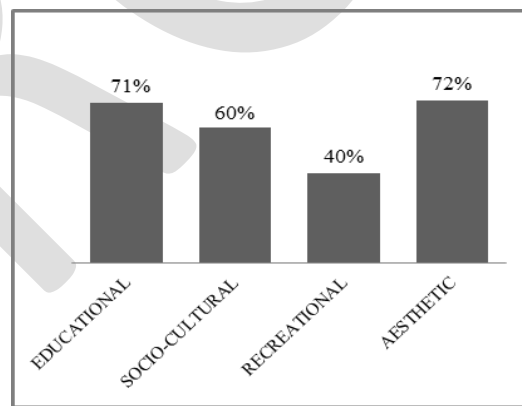


Figure 4: Value Assessment results :Vasai fort

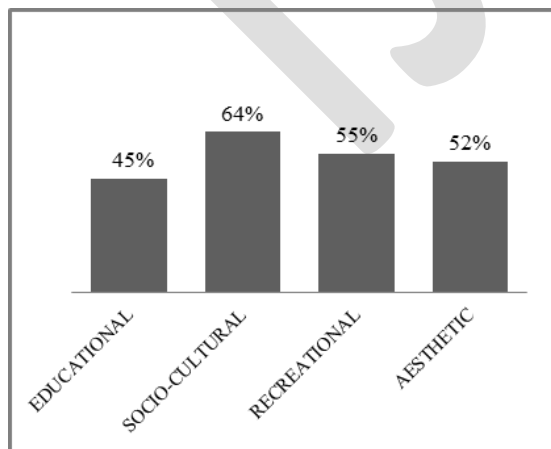


Figure3 : Value Assessment results :Worli fort

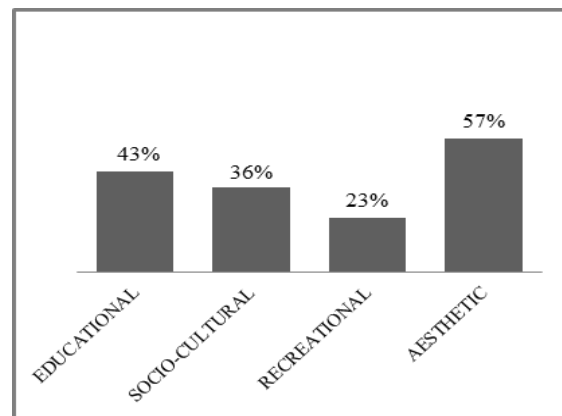
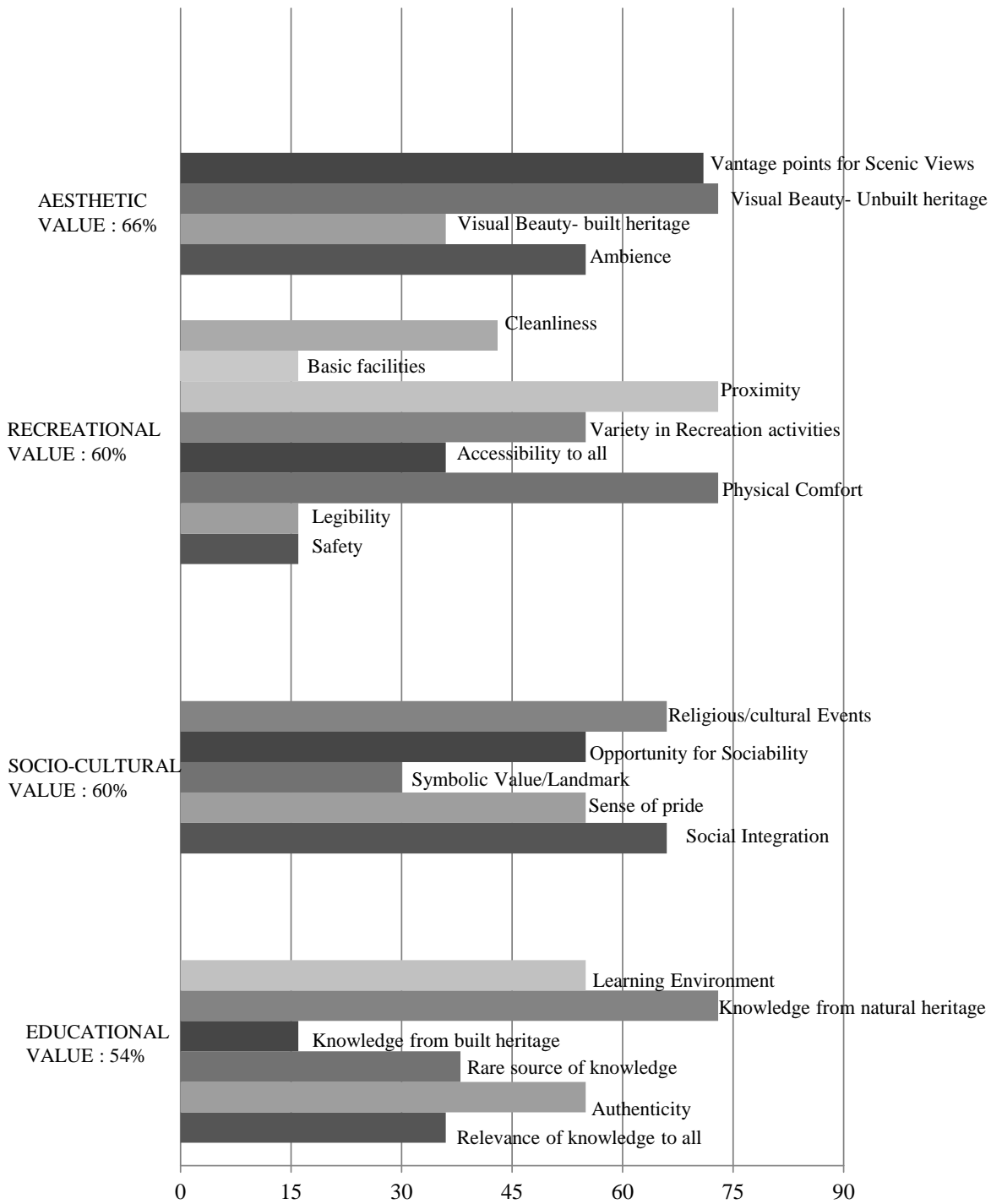


Figure 5: Value Assessment results : Sewri fort

**Figure 6 : Value assessment with attributes : Sion fort , source : Author**



#### IV. THE HOLISTIC APPROACH:

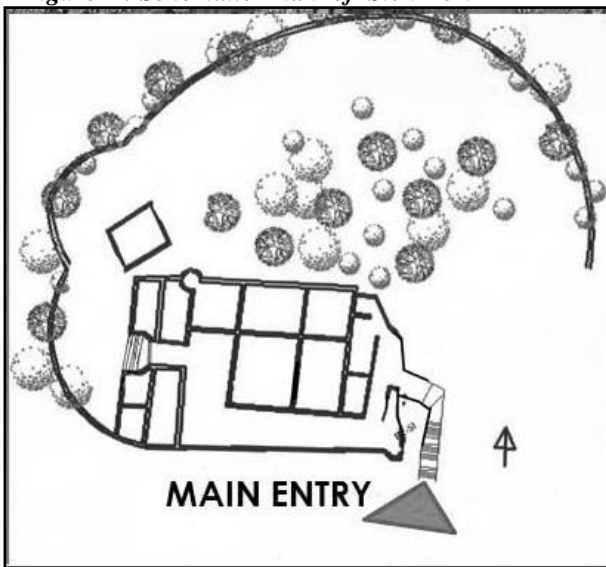
After the value assessment, the following questions were explored in order to understand the cause and the effect to these existing values.

- 1) What caused/allowed the emergence of these values?
- 2) Why do these values continue to thrive?
- 3) Are these values co-existent at a particular point in time?
- 4) Will they continue to thrive in future?

The 'parameters' identified in a process to understand answers to questions were then studied in detail. The parameters identified were follows:

##### A. SPATIAL CONFIGURATION/BUILT FORM:

Figure 7 : Schematic Plan of Sion Fort



mostly belong to the same neighborhood. The enclosures majorly act as a spillover space for students and neighborhood whose houses are too small to certain group activities. The fort being surrounded by udyan forms a buffer space of around 100 meters in all the boundary of the fort walls thus enhancing the potential open-air study.

The role of built form and spatial configurations in usage and future potential is also evident in case of the Vasai.



Figure 10 : Sion fort chambers. Source : trekshitiz.com

Spanning around 110 acres of land, it contains ruins of a number of churches and the citadel connected through internal pathways. Many of the walls of this fort are more than 10 meters which gives a sense of very strong enclosure creating visual disconnect between different built structures(churches, citadel, etc) within the fort boundaries. This visual disconnect in a way allows the development of each enclosure independently with different usage co-existing within the same precinct. Thus, in some spaces, one can see fishermen drying



Source :

Abandoned Treasures-Forts of Mumbai (book)

The built form along with the shape of its enclosures determines the kind of function it can allow. For instance, In case of Sion hill fort, the built form comprises of a number of chambers-each chamber of the size and volume of a habitable room. The fort has more than 12 such chambers. The volume thus has a good potential for activities involving social interaction at a more personal level. Currently, the precinct being a home to many schools, the chambers are used for group study by students . the fort is also popular amongst youngsters as they hold dance and music rehearsals in small groups.

Figure 8 : Dance rehearsals at Sion fort. Source :gettyimages.in

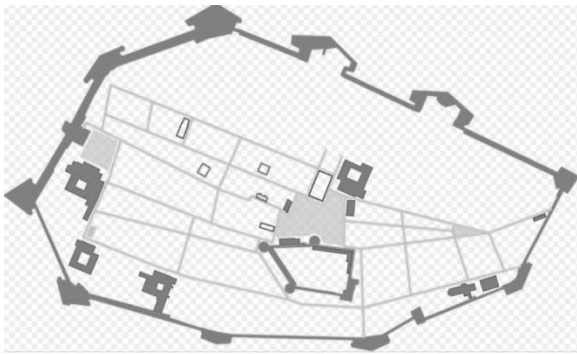
Figure 9 : Dance rehearsals at Sion fort. Source : tinydrops.org



these people of Sion fort youngsters of the accommodate Jawaharlal Nehru directions from of the site for

defining existing coastal fort of

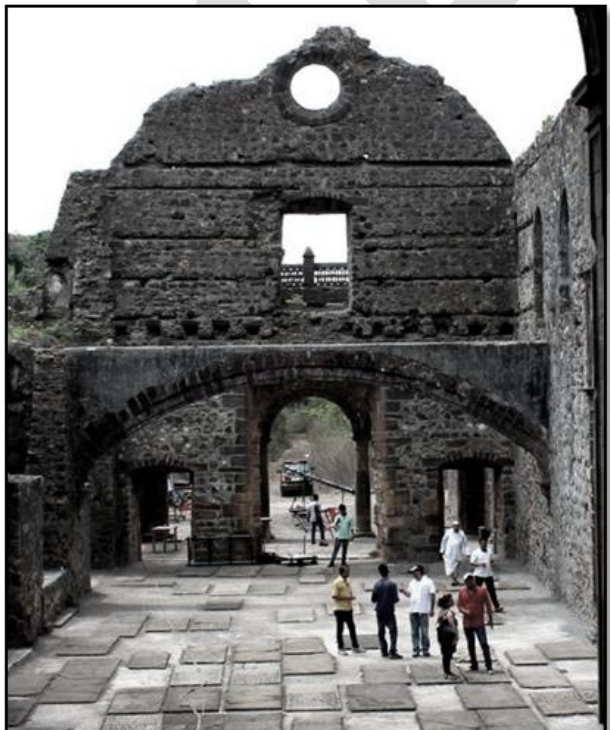
their nets within the shade of high walls whereas at the same point in time, artists painting canvas in other spaces and a few meters away church prayers taking place in one of the ruined churches. Although the built structure of the fort isn't intact, the high walls itself create strong acoustical properties essential for religious prayers.



**Figure 11 : Vasai fort map with built structures. Source : Heritage of Portuguese influence**



**Figure 12 : Vasai fort fishermen drying nets  
Source : Author**



**Figure 13 : Vasai fort church remains**

**Source : Author**

## B. TYPE OF NEIGHBORHOOD

Type of Neighborhood defines type, degree and pace of encroachment .In case of industrial neighborhood, the pace and degree of encroachment is very slow whereas in predominantly residential neighbourhood especially belonging to the low- income housing settlements, the pace and degree of encroachment is more. The dense residential neighbourhood of Worli fort consists of koliwada - the settlements of which extend till the fort boundaries thus leaving no buffer space around the fort. As a result of this, the historical context of the site is completely lost. In order to prevent this, the state government had proposed a buffer space extending 100 m on all sides of the fort. But since the people of the koliwada were using these areas(the only open space within these settlements) for drying of fishing nets as well as for leisure activities, the government had to drop the plan.



**Figure 14 : Worli fort encroachment**

**Source : google earth**

One peculiar characteristic observed in encroaching forts is through *religious markers* such as temples, dargahs or gates or in some cases, territorializing the precinct through *religion-specific identity markers* such as gates (refer figures 15,16 and 17) . In a country like India, controversial religious markers become a tool for permanent encroachments. In some cases, the communities justify these construction of temples within the forts as a way of protecting the fort from anti-social activities. In case of Worli fort, the justification is found to be true.



**Figure 15 : Hanuman Temple in Premises of Worli fort . Source : Author**





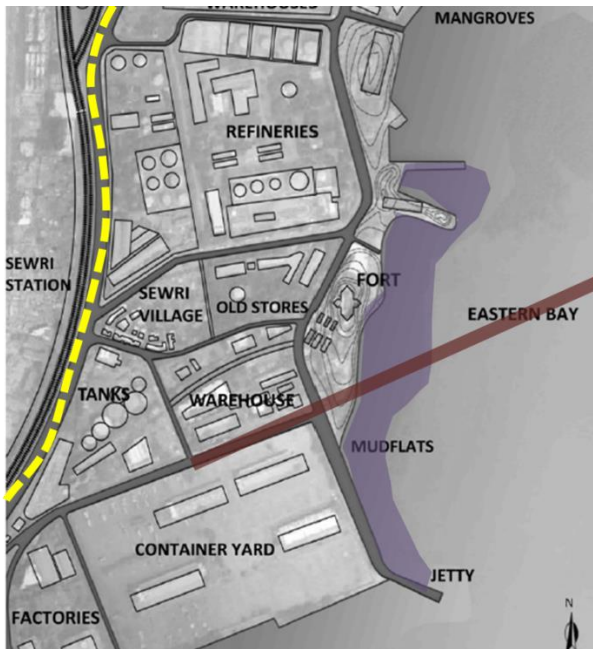
**Figure 16 : Dargah touching the sewri fort wall . Source : Google earth**



**Figure 17 : Entry to Mahim fort (now completely encroached by slums) marked by gate of religious symbolism . Source : Google earth, Author**

### C. INFRASTRUCTURE DEVELOPMENT/FUTURE PROJECTS :

Study of infrastructure development and future projects determine the changing urban fabric of the precinct over the years. One way of studying this is through study development plans of the region. Any kind of infrastructure development has the power to dramatically change the pace of development in any precinct. Sometimes, the connectivity through infrastructure (railways, sealink, etc) brings in more people to the sites making them less derelict whereas in some cases, it makes the sites more vulnerable and is a threat to their existence. In case of Sewri fort precinct, the construction of Mumbai Trans-harbor link (refer figure 18,) may destroy the ecological importance of the site by intervening the natural habitat of mudflats for flamingos. In addition to this, it may also dramatically increase the pace of development in the zone. The fort precinct of Sewri thus calls for design interventions to save the context of the heritage on a priority basis.



**Figure 18 : Proposed Mumbai Trans-harbour Link (red) connecting Eastern coast to Nhava Sena port passing through Sewri Mudflats (Rane 2)**

#### D. OWNERSHIP AND THEIR APPROACH

Ownership determines the approach and the budget under which development takes place within the forts. Centrally protected monuments have strict rules of prohibiting and development within 100 m radius of the fort boundaries. As a result of which, site context is preserved. Whereas in case of state protected monuments such as Dharavi, Mahim and Worli forts, there are no such rules implemented. This leniency makes the sites vulnerable to encroachments.

#### E. SITE TOPOGRAPHY

Topography defines the microclimate as well as the accessibility factor. For instance, the hill fort of Sion is less accessible to senior Citizens. Thus, the usage of the fort structure is restricted to youngsters and children for whom it is easier to climb and access the hill fort.

#### V. CONCLUSION

The fort studies need a comprehensive study of ground realities, future infrastructure projects and most importantly the cultural significance of the site understand the current and future potential of forts in addition to the historical study. In the process, a wide range of heritage values need to be identified and characterized in a way that is relevant to all stakeholders involved. It is self-evident that no society makes an effort to conserve what it does not value. Until all the stakeholders don't value a place, all efforts to in will be futile (Torre 3)

To ensure public participation and economic sustenance of the sites, there is an urgent need for innovative strategies that *monetize* these precincts without disturbing the historical significance of the site. Adaptive reuse, strategically planned access roads and navigation patterns within the precinct, defining buffer spaces around forts with strong physical boundaries such as trees instead of mental boundaries of 100 m prohibited zones may be some of the strategies that can work for these forts.

The value assessment methodology mentioned in the paper have resulted from site context of selected sites. The methodology needs to be verified further for their pertinent applicability to other similar sites. This methodology showed difficulties in being implemented at a derelict site of restricted access like Sewri fort and its sparsely populated precinct.

## VI. ACKNOWLEDGEMENT

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