

Early Chinese Settlements Adaptive Reuse as History and Activity Node at Lasem Living Museum

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ABSTRACT

The concept of living museum depicts Lasem – a multi-ethnic city known for its harmonious community – as a small city with diverse heritage nodes spreading across its plateau. However, the first settlements that became the prologue of Lasem's history and development, are not being appreciated enough as it is now being used as swallow's nest production. Therefore, it is necessary to do a thoughtful conservation effort for the early settlements area, as one of important nodes in Lasem. Through the reuse of heritage buildings and reactivation of the area into a place of activity that can support economic activities, social needs, and cultural sustainability for the people, it will create a more sustainable tourism for Lasem as integrated living museum. Batik Tiga Negeri is Lasem's distinctive fabric product and intangible heritage with international reputation. The handmade creation involves endangered heritage: the elderly artists and the traditional Chinese architecture influenced building which is used as the production house. By merging batik value into the adaptive reuse of early settlement buildings – which is also derived from traditional Chinese housing, it will strengthen the most historical node while conserving important heritage elements, adding stronger bonds throughout Lasem as both living museum and tourism destination.

Keyword : Lasem, living museum, conservation, adaptive reuse, batik

INTRODUCTION

Background: The Lasem Heritage Chains

According to Pratiwo (2010), Lasem is a small town located in Central Java, also known as Petit Chinois because of its atmosphere resembling traditional Chinese villages. It isn't just the distinctive walled-houses, but also the historical background which indicates that Lasem used to be a prosperous city where the Chinese sailors first settled and created a community in 14th century. These dwellings first oriented to Lasem Babagan River in the west, but after the Netherlander initiated road building project, the famous Anyer-Panarukan Road crossing this area from west to east, the urban sprawls start to change orientation and the buildings are built along the road. There also exists the oldest Kong Hu Cu temple in Indonesia dating back to the 14th century, the Cu An Kiong temple at the south side, and near it is the unowned Lawang Ombo, a house where the largest opium trading and smuggling hole exists.

Lasem is like a heritage acupuncture, where the heritage values are scattered all around the 60-hectare area. One of distinctive feature that makes Lasem known as Petit Chinois is the traditional Chinese alike housing. Three villages in Lasem, Soditan, Karangturi, and Babagan, are rich with this unique house types. A more interesting point is that a lot of these houses are actually small home industries which produce local heritage products. Starting from the renowned handmade batik fabrics, culinary products, beverages, yopia (type of sweet snack), handmade home seasonings, furniture, coffin, etc. Other than home industries, some of these

houses and other similar Chinese architecture features are being transformed into public amenities, such as lodgings, museum, or community gathering. The heritage chain of each type of heritage can be seen on Figure 1 (left). These proved that the house buildings in Lasem played a huge role in creating Lasem overall features, both tangible and intangible heritage. Other than the architecture chain which connects until the northern part of Lasem, other features haven't reached this segment which is proposed to be a mixed-use area and central economic activities. Therefore, it is preferable to complete the chains by adding the unconnected feature to the northern part. The red mark on Figure 1 (left) annotates the existing early Chinese settlements area on the northern part of Lasem.

The first settlement area which was built in 14th century, was built according to the Chinese cosmology beliefs, which considers the four direction. This site with its four existing buildings (Figure 1, right) have undergone changes but still imprinted with the original house, now are being abandoned and used as swallow's nest production. This endangers the historical buildings, and therefore needs further maintenance to accommodate the area not just for the sake of the building itself, but to enhance Lasem as an integrated system of a living museum.



Figure 1. Lasem heritage chains (left), Early Chinese settlements in Lasem (right)

One of Lasem's most valuable heritage product is Batik Tiga Negeri, a type of batik that used to be created in three different cities to finish it – Lasem for the red colour, Pekalongan for the blue, and Solo for the yellow or brown. Crossing hundreds of kilometres for three different colours, this masterpiece is now a scarce product only produced in Lasem. Other pattern of batik which also contain deep meaning of Lasem history also exists, such as *sekar jagad*, *watu pecah*, *gunung ringgit*, *beras utah*, *latohan*, *aseman*, etc.

The traditional Chinese house site is being accommodated efficiently by utilizing the open space and side houses as working space by the batik artists and workers, thus also allowed visitors to experience real-time making of the batik. The patterning is done by mostly elderly women artists (Figure 2, left) outside of the side houses, and the colouring and drying are done in the backyard space (Figure 2, right). Batik is a very unique type of fabric, and it has high potential to be known world-wide. It also has the finest quality as a heritage product, with its whole process engraved to the lives of the locals. This makes batik has a very large significance to Lasem. From this knowledge, batik is then chosen to be the main theme of the early settlements' preservation attempt.



Figure 2. Batik patterning (left) and Batik coloring (right)

Basic Theory, Methodology, and Research Purpose

In this research, the main concepts as the base as design guide is the adaptation and contextual harmony theory from Burra Charter (2013) and Tiesdell (1996). By doing adaptive reuse and new addition using contextual harmony approach, the design purpose is to achieve the living museum (Pan, 2012) and living heritage (Poulios, 2014), which mostly highlights the involvement of locals. The base theory diagrams and its main points can be seen on Picture 3. Living museum and living heritage are terms used to describe Lasem and as main consideration in site design, adaptive reuse is for the site treatment, and contextual harmony is the design approach. Each and every classification and description in the diagrams are put into consideration in every design decision implicitly.

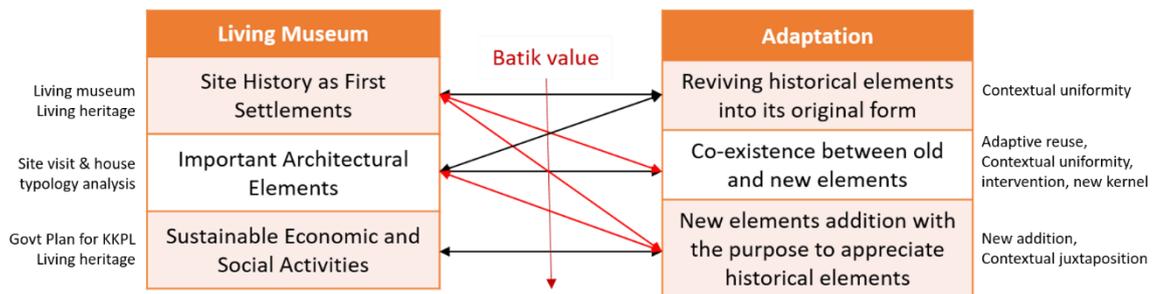


Figure 3. Base theory as design guide

Aiming for the living museum’s authenticity of spatial element, it is then needed to revive the previous spatial quality of the original housing. Therefore, it is necessary to do a research on transformation of the housing and settlements in Lasem, from the origins – the traditional Chinese house, the first settlements, and finally the last transformation in the heritage villages which still hold strong to the values. The method used in this research is primary and secondary data extraction, including interview, observation, measurement, and literature review. After learning the history and data, it is analysed which parts are essential for the revival of the site and what potentials that can further enhance its surrounding areas.

As the purpose of this research, is to enhance Lasem living museum by enabling one of the most important historical sites. How to revive an abandoned historical site by using adaptive reuse while injecting batik value for future considerations? This paper will discuss important things for the purpose of the design intended to reach full potential of Lasem living museum, starting from Lasem heritage significance which already presented beforehand, followed by the base theory and how this research is conducted and the purpose of it, to the important elements in house typology transformation. The main discussion will be about the case study and what design is implemented for the best fit, and finalized with the conclusion.

THE HOUSE TYPOLOGY TRANSFORMATION

These first settlements derived from the traditional Chinese house Siheyuan, with changes to fit the local requirements, where the large inner court in the middle is transformed into a single main building, thus separating the open space into public and private area. These significant changes are seen in both the first settlements and the further-transformed houses around the newer area of the village along the road. The differences of the space quality can be seen in Picture 4. Thus, from these comparisons, it is determined which elements are to be kept as a preservation in order to reminisce these qualities, which is then implemented in how to treat the remaining ruins and which to be revitalized in the design proposed.

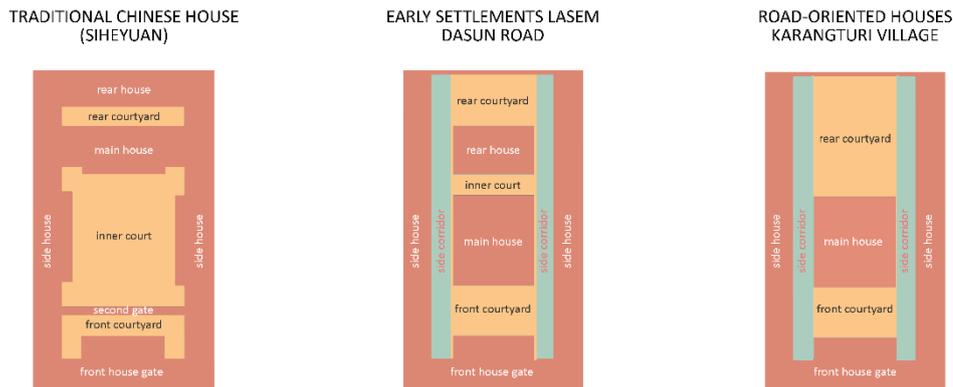


Figure 4. House typology transformation in Lasem

THE DESIGN CASE-STUDY: PRESERVING ABANDONED HERITAGE VALUES THROUGH DESIGN

These two specific sites are chosen as the pilot project, as the gate to welcome visitors to Lasem, after they've gone through the ritual path proposed by the government, as this is the first site with significant history passed through from the station after walking down the river to the north. (Picture 5).



Figure 5. Chosen pilot project for Lasem living museum enhancement

There are several potentials of the site, namely the site history as the first Chinese settlements, the location on the early part of the ritual path, the important architectural elements remained, and the government plan to make this area as a central economic activity. Physically, it has large area to fit in as a mixed-used facility and thus preserving to be a welcoming site to the visitors.

However, there are some problems coming along with those potentials, such as the abandoned value of the site, the surrounding area is not attractive enough for people to come in, most architectural elements nearly died and some are not accessible, and the area has no significant activity to engage.

Additionally, the batik value can become a very unique theme to be brought up, since it has deep meaning and value to Lasem, which in turn can help Lasem to promote and sustain batik legacy engraved into this site. This can be achieved by looking to the intangible value of batik, which includes the ingredients, process, artists, etc. but also by looking at current problems and how to tackle it for the future. A concerning problem about the batik is the waste produced, which includes the solid waste – the wax sediment, and liquid waste – the colorants dissolved in water. Therefore, it is necessary to provide research as to how these can be handled in a traditional batik production house.

From the four main theories and analysis of each existing potentials and problems, it is summarized that there are 3 things to be noticed as the main agents of change to revitalize this site, namely through site history as the first Chinese settlements, architectural elements, and precinct role as central economic activity. Figure 6 explains the design thinking frame following these 3 issues.

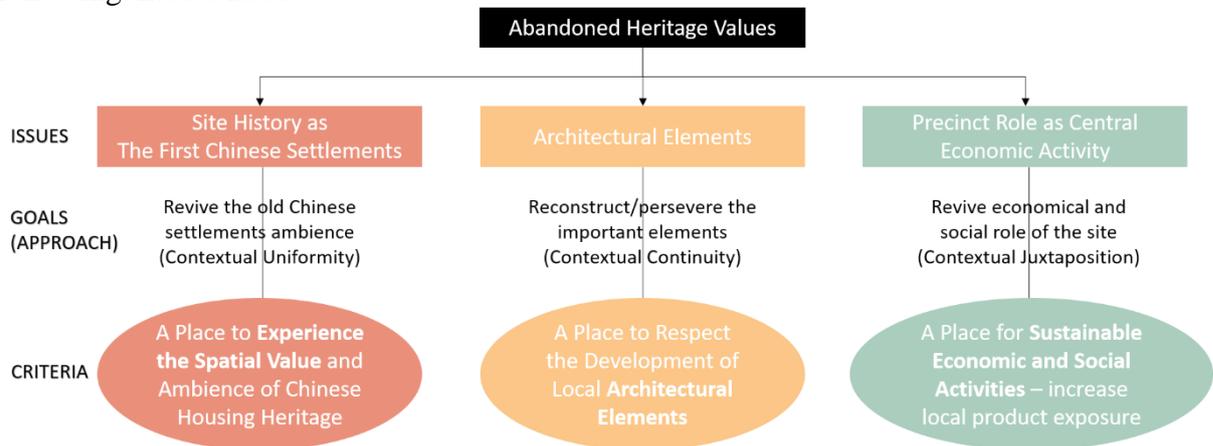


Figure 6. Design thinking frame

The revitalization covers reviving historical elements into its original form, co-existence between old and new elements, and finally new elements addition with the purpose to appreciate historical elements. These three methods will be applied in each design focus: landscape, architecture, and activity design.

Site History and Landscaping

In landscaping design, three purposes remain: reviving historical spatial value of early Chinese settlements, coexistence by interpreting Chinese cosmology towards the site and creating new spatial quality between old and new buildings, and adding new elements such as vegetation which contains batik value in it.

1. Spatial value

From the short description in section 2, there are open spaces on each segment divided from front to back: the front verandah as public space, middle court as open space for house occupants, and hind verandah as open space and hind courtyard, the most private part of the house. There are also side corridors which function as connectors of front and back, but it is actually a unique experience because it doesn't exist in the original traditional Chinese house, and thus become typical characteristics of Lasem housing that has undergone transformation. All spatial qualities are reborn with the addition of perimeter massing, be it buildings or plantations, can be seen on Figure

7. The mass can be building as the origin, and can be vegetation with clear boundary to create side corridors.

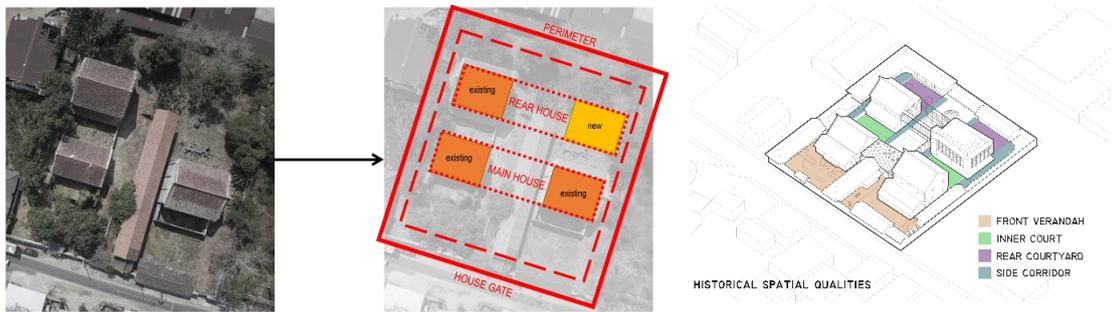


Figure 7. Reviving spatial qualities of Lasem early Chinese settlements

2. Cosmology and connectivity space

In coexistence concept, cosmological application (Figure 8, left) is by adding water elements in west and north to represent river and sea, while on the east side there exists stairs that leads to ‘nirvana’ as a blue dragon suggests in a batik pattern. Emphasize on the red house gate in front of the site, the south side, represents red phoenix as a guardian, as well as an escort towards Lasem living museum. The creation of new spatial qualities is based on old and new buildings. The new building is built to complete the formation of four buildings, representing the back house together with the back house on the other site. To connect the two buildings in front and two buildings at the back, two closures are placed, and the inner court that connect each site’s buildings are left open as it completes the united inner court in the middle. This main plaza is the center of the site, thus becoming the main performance stage for the cultural entertainments. At the back, united hind courtyard also exists to accommodate larger view range across the site. Thus, these new spaces become a new spatial experience adopted from historical spatial quality. (Figure 8, right).



Figure 8. Cosmological cognition on site (left) and new spatial qualities (right)

3. Vegetation identification

Plantation variations are selected as added values to the site according to Lasem living museum most valuable products – batik, thus the site becomes a silent story-teller of its uniqueness. Sea grape (*latoh*) and *aseman* plants are the inspiration source of batik patterns *latohan* and *aseman*. Other unique vegetation are the ones used to be natural dyes for Batik Tiga Negeri: noni (*mengkudu*) as red, soja as yellow/brown, and indigofera as blue. This five vegetation represents the role of nature in Lasem batik history, it became an unmovable attraction for the tourist who are eager to learn. Through these heritage plantation gardens; visitors can observe the real plants firsthand.

There is also teakwood which represents the main materials of handcrafted furniture and coffin produced in one of the traditional houses. Other than significant vegetation, some vegetation is also picked from existing plants and easily-found local plants in Lasem such as bananas, wild cherry, and mangos. These plants function as both decoration and natural shading for the area. Complete vegetation concept can be seen on Picture 9.

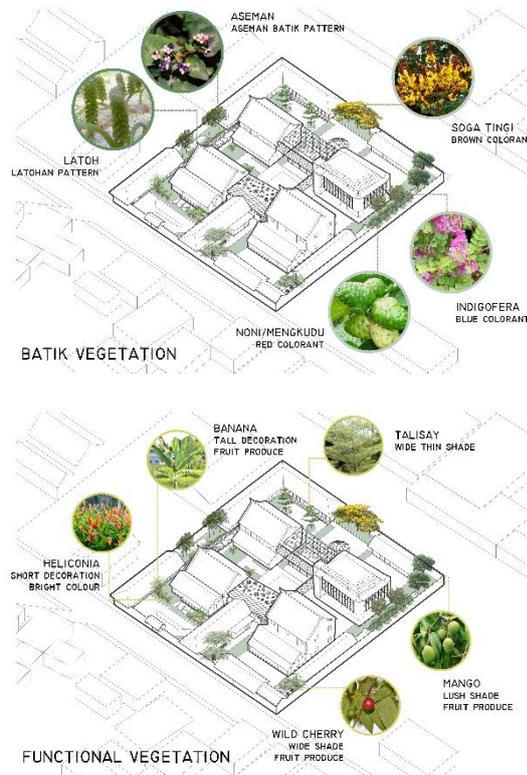


Figure 9. Vegetation identification

Architectural Elements

Architectural elements are specifically about the detailed hybrid elements, but also includes walls and balconies. The main concept for this is to embed acculturation and assimilation through the design. There are 3 main things: reviving the historical detailed hybrid elements that can be cleaned and repaired with little damage, coexistence with reviving the shape of old look by using new materials, and finally adding new element such as balcony to reach previously unreachable elements and appreciation space towards the outdoor spatial qualities.

1. Detailed architectural elements recovery

The hybrid architectural elements that is essential in the site are as follow: the house gate, *ngang-shan* roof truss, talisman, *dou-gong* column braces, double-door, windows, roof (wallet tail and cat crawling). Other than these, are the remained materials such as the brick load-bearing wall, terracotta floor tiles, and clay roof tiles. These detailed elements (photos of existing can be seen on Figure 10) are to be reserved and revived for a long-term knowledge.



Figure 10. Preserved architectural elements and the table guide

2. Front verandah highlights as arrival and departure

Reviving the front verandah spatial quality as the open-air reception to the northern part of the site (Figure 11, left). The existing ruin buildings in this site has already been thickened and added new front walls which closed the original verandah spatial quality. In order to achieve the spatial quality of a front verandah, the front additional wall is demolished, leaving only side load-bearing walls. Although the roof for the verandah is gone, it is necessary to build up a sheltered verandah, thus the newly added asbestos roof using steel roof truss structure with opened gable for air circulation. The front verandah on the southern part of the site acts as departure hall to Lasem living museum (Figure 11, right). There are also bridges to connect old building to the new, giving experience from old to new and vice versa to those crossed the 20-metres-long bridges.



Figure 11. Front verandah as open-air reception (left) and departure hall (right)

3. Appreciating recovered elements through new spaces

Some of the elements are not reachable to be viewed, such as the talisman on top of the second floor of the southern front building. By adding extra structure such as a balcony, this crafted talisman would be available as a viewable display as it depicts the building museum. Another appreciation space is added on the arrival area, where the new mass is added to revive the front verandah with side houses on each side.

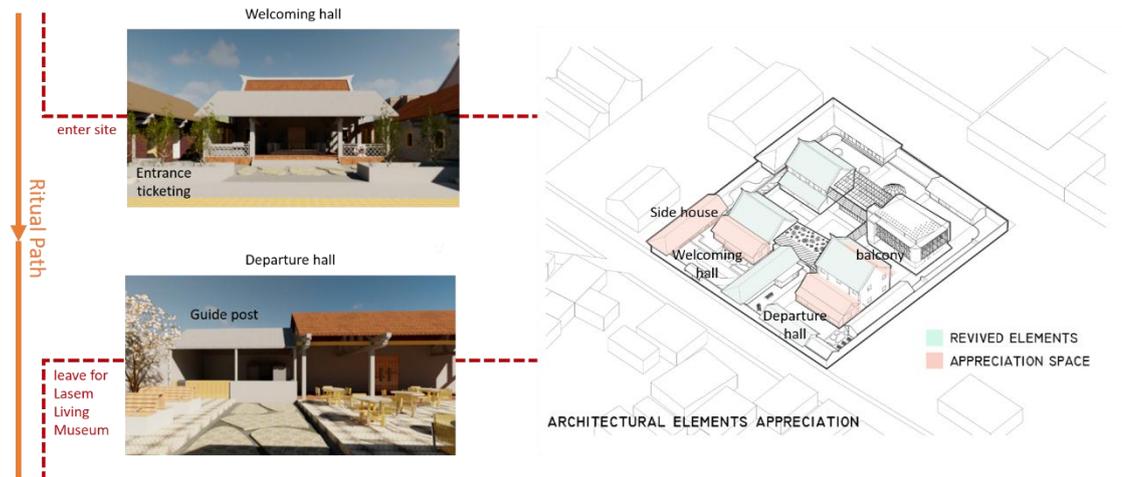


Figure 12. Appreciation space on site

Activity for a Sustainable Mixed-use Facility

As discerning matters by the government written in the local regulation about Lasem living museum (see Rembang, 2019), there are three main aspects to be concerned about the activity: cultural, social, and economic. These main activities are spread through the whole site as can be seen on Figure 13.

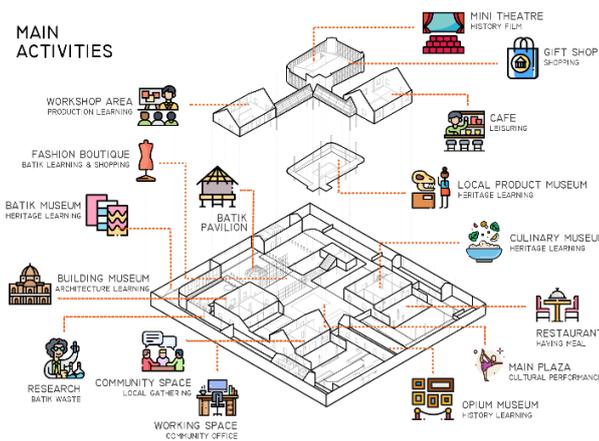


Figure 13. Main activities in site

1. Cultural enhancement: The Story-telling Exploration

The first and fundamental aspect is cultural, which is the main thing to be overlooked to achieve integrated living museum. Two main functions are museums and galleries. Since the site has separated buildings, it is necessary to create compact story-telling about Lasem history right from the start of the site. Thus, there are three steps to experience Lasem history in this site: the entrance, the main exploration, the new, and side quest.

It starts with opium museum, where it tells Lasem history with opium smuggling. The dark alleys in the old side building represents the smuggling hole, giving real experience as if the visitors are the opium being smuggled. Later on, visitors emerge to the southern site, to the open area of two-stores revitalized old building. Here, the main exploration begins, since the visitors are allowed to wander across the site as they like, though there is recommended route. The first floor of this building is the culinary

museum, showcasing the local culinaries, including the ingredients where some are from local natural resources.

Next on the back side of northern site is the building museum, where space arrangement is preserved, showing how old houses have the main altar in the middle, bedrooms on side, and compact living room on the back. In the rear house, exists batik museum. This positioning represents of how a common batik house is, since the production always done in the rear house area. Connected to it on the side, is a roofed open space for the batik waste research. The building is set as similar to the batik houses, with slightly elevated floor and drainage on the outside. These allow the researchers to practice how to process the waste within or surrounding the drainage to be less toxic to the environment. Hopefully, the settings can help the image of how batik artists can easily manage the waste.

Finally, to the new building, is the local product museum. A little bit different than culinary, here is where the local products other than batik is showcased, such as yopia, lemonade, and other small-sized products. At the top floor is the mini theater as supporting facility for the necessary story to be told, and closed with small heritage gift shop. The new building applies lantern concept for the whole building, which also is engraved with knowledge of how Batik Tiga Negeri is produced. There are 10 steps of this process, which is aligned along the ramp of the building perimeter. This ‘lantern’ building carries the site philosophy, that is to be a tribute, guide, and hope for Lasem.

Last but not least, is the side quest which visitors can explore while doing main exploration throughout the site, that is the landscape exploration, where they can examine significant plants as mentioned before.

Thus, this site is a memory labyrinth of Lasem history, in the shape of open-air Lasem living museum. (can be seen on Figure 14).



Picture 14. Memory labyrinth of open-air living museum Lasem introduction

2. Social contribution : Community and Local guides

As mentioned in a living museum and living heritage concept, it is important to consider the locals’ role and participation in their own public space. Thus, the community function for the gathering and working, as the manager of the site. There also exists a main plaza for any performances of heritage dance for local community. These can build up sense of belonging to maintain this site as a valuable space for the locals. Another noticeable effort from the locals currently, is the informal teaching to locals about how to guide and tell stories of each heritage chain in Lasem. Because

Lasem is a rather small area, it is possible for one guide to go through all the essentials for a whole group of visitors. The main problem is there are no known starting point in Lasem and where to get the guide. After experiencing the introduction of Lasem in this site, at the exit or departure hall, the local guide post stands. Visitors can tag local guides waiting there to assist them to tour Lasem living museum. This contributes a lot to the locals, for the youngsters can be given jobs as legal local guides, enhancing their sense of belonging of Lasem. Social contribution activities can be seen on Figure 15

3. Economic center

As future central economic activity, the surrounding area should also be lifted by this site performance. Therefore, it is necessary for this site to sustain its economic needs, as well as increase local sellers to open their business here. For example, putting food and culinary function that allows local delights to be enjoyed by visitors can be a great income for the site management. It also acts as leisure area after the visitors wander the site, just like a small café to allows slightly different offer in beverages. Another function is the heritage gift shop, which helps local products to be known and bought by visitors as souvenirs. Economic center activities can be seen on Figure 15, left.

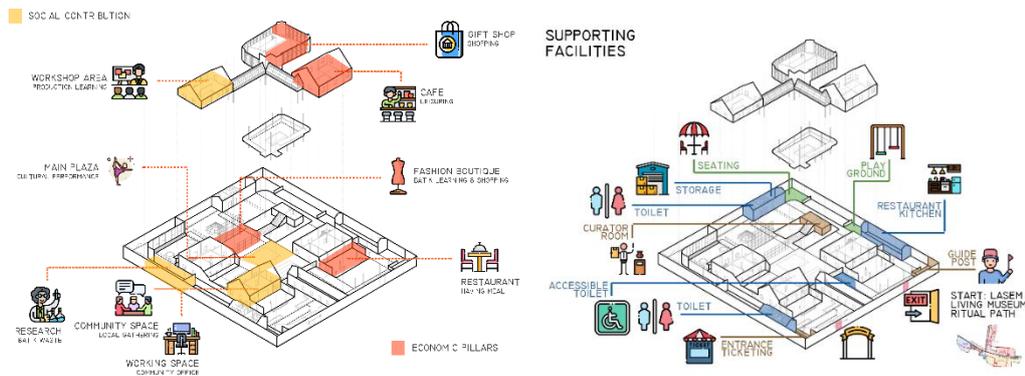


Figure 15. Social and economic facilities on site (left); Supporting facilities on site (right)

4. Supporting facilities

In the welcoming area is small ticketing locket for entrance. Each main function needs their own supporting or service facilities. Essential ones such as toilet and storage are put on the perimeter building, just like the arrangement of the traditional house. Accessible toilet is put in the front for easy access. This setting separates the main and service function clearly, and gives easier direction for visitors. For the museum, curator room is provided on the first floor. For the restaurant, there exist kitchen on the side. Some open spaces are equipped with outdoor seating and children mini playground. In front of the local guide post are queue seating. The placements of supporting facilities can be seen on Picture 15, right.

CONCLUSION AND FURTHER RESEARCH POTENTIAL

According to the case study, it is possible enhance Lasem living museum by enabling one of the most important historical sites. And to revive an abandoned historical site by using adaptive reuse while injecting batik value for future considerations, there are three classification of design to consider. The first is how to apply site history to the landscape design, by reviewing the earlier transformation of site spatial value, the cosmological responses to site, and what plants are significant to both existing and as added value. The second is to consider the heritage architectural elements, each selected carefully and chosen how to be treated. Mostly to be recovered, some with poor access is provided with better

access, and the important ones are highlighted and coexisted with new materials. All done to appreciate the elements with different treatment according to different conditions. Here, batik value can be seen on the positioning of side rear house that acknowledges the space for batik area, same as the space in real batik house. The third is to provide mixed-use activities in the site so that the site can sustain itself, not only cultural needs, but also social and economic necessities. Each activity supports one another to exist, creating a full memory labyrinth story of Lasem. By adding batik value into this activity, that is to include batik museum and waste research, it strengthens the value and contribution of the site to the whole Lasem living museum. These methods in adaptation of the site is one of the examples of how adaptive reuse can be applied with contextual harmonies, while injecting batik values in it. Thus, by respecting history, ongoing heritage, and future ambitions for a sustainable site as Lasem introduction as the first site visited on the ritual path, comes the concept of lantern as a tribute, guide, and hope for Lasem living museum. The conclusion diagrams can be seen on Figure 16.

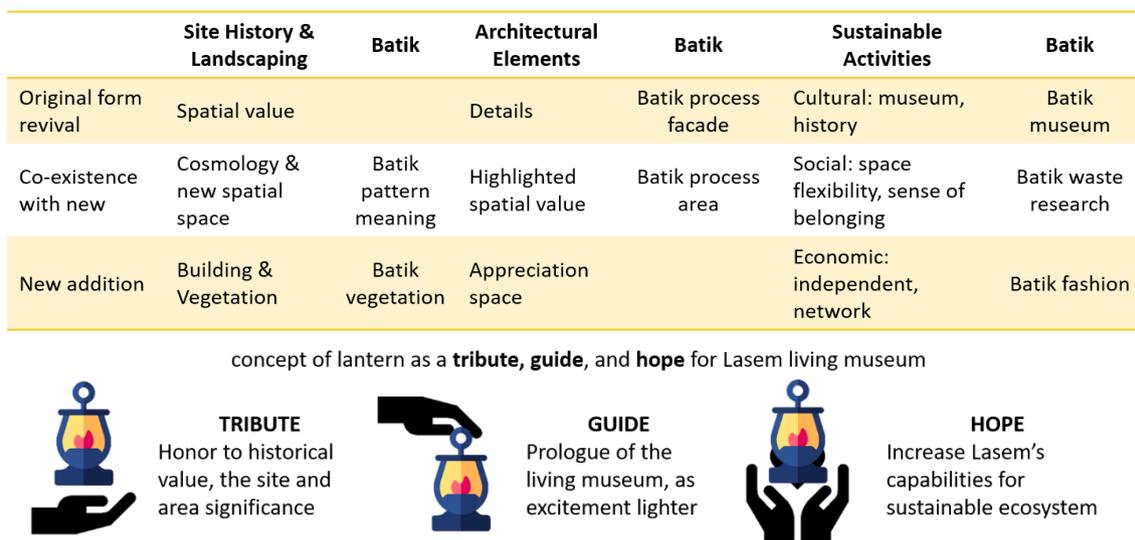


Figure 16. Conclusion

However, this method may miss some of detailed information, since the research is done quality-focused. It is necessary to do deeper research on the house typology transformation for better understanding. Measurements on the real existing housing are also important, preferably on several houses, so that the proportion rules of each architectural element can be found. Creating drawings of each houses can be a good start as record purposes and future references. This study is also restricted to only two historical sites, while the existing settlements have 4-5 site, which can have potentially larger area to be developed.

For further research purposes, it is recommended to look for various methods and approached for combining adaptive reuse and added value of the site, for example to maintain sustainable building, can use parametric analysis to improve the old building performances. Another alternative is to view the whole context of all early Chinese settlements as a complex area. Thus, more integrated mixed-use area can be designed along with more considerations through a larger area, including to the northern part of Lasem, which also contains abundance of natural heritage.

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REFERENCES

- Burra Charter. (2013). The Australia ICOMOS Charter for Places of Cultural Significance. *Australia ICOMOS*. Australia.
- Pan, Ying, et al. (2012). *Practice of Living Museum in the Traditional Architecture Culture Protection and Renewal in South Fujian*. Trans Tech Publications. Switzerland.
- Pan, Ying dkk. (2012). Practice of Living Museum in the Traditional Architecture Culture Protection and Renewal in South Fujian. *Trans Tech Publications*. Switzerland.
- Poulios, I. (2014). The Past in the Present: A Living Heritage Approach - Meteora, Greece. *Ubiquity Press*. Retrieved August 28, 2020, from <http://www.jstor.org/stable/j.ctv3s8tpq>. London.
- Pratiwo. (2010). *Arsitektur Tradisional Tionghoa dan Perkembangan Kota*. Penerbit Ombak. Yogyakarta.
- Pratiwo. (2010). *Arsitektur Tradisional Tionghoa dan Perkembangan Kota*. Penerbit Ombak. Yogyakarta.
- PerBup Rembang (2019). *Peraturan Bupati Rembang Nomor 47 Tahun 2019 tentang Rencana Tata Bangunan dan Lingkungan Kawasan Pusaka Lasem*.
- Rembang, Bupati. (2019). *Peraturan Bupati Rembang Nomor 47 Tahun 2019 tentang Rencana Tata Bangunan dan Lingkungan Kawasan Pusaka Lasem*. Rembang: Pemerintah Daerah Kabupaten Rembang.
- Tiesdell, Steven, et al. (1996). *Revitalizing Historic Urban Quarters*. Oxford University Press. London.

