



## Guidelines for Conservative Architectural Development Restoration for Sustainable Tourism A Case Study of the Tobacco Leaf Incubator in Chaisathan Subdistrict, Nan Province

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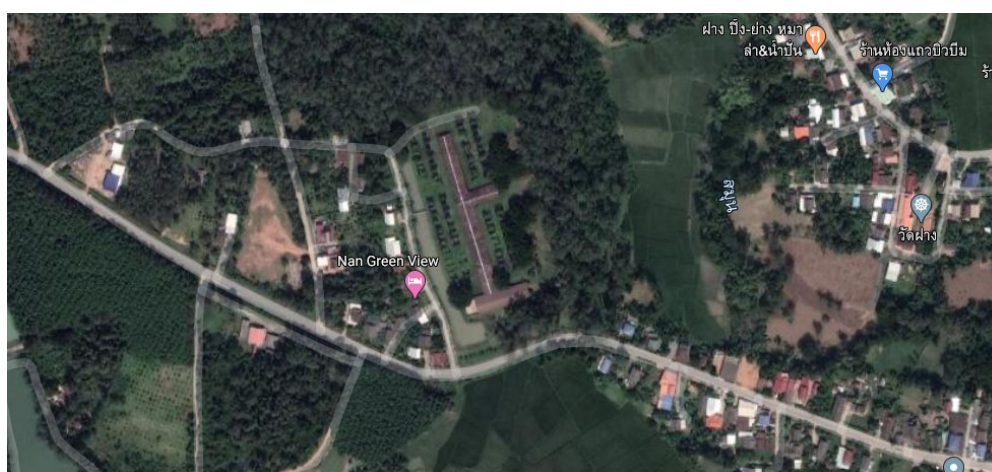
### Abstract

The objective of this study is to study physical characteristics and suggest guidelines for the development of conservation, restoration of architecture for sustainable tourism of tobacco curing plants in Chaisathan Sub-district, Mueang District, Nan Province. Which leads to the planning and design of architecture and conservation. To promote a sustainable eco-tourism area. Which the original 44 tobacco building. Although not in use for a long time, it is still in repairable condition though some parts have deteriorated and cannot be used. Guidelines for preserving and restoring architecture must take the number of possible tourists visiting into the account, focus on restoring the culture and ways of community that fade back. At the same time, maintain the architectural style of the tobacco curing plant. The method of this research is to integrate social conditions with physical characteristics by collecting primary data from surveys at the actual area to record physical data of the general environment within the tobacco curing area, such as taking images of buildings, surrounding environment of the area and discussions with owners of tobacco curing businesses including the study of Nan's development plan and community to be analyzed by using design theory and planning as the guidelines for conservation development applied to the layout design of this project area. The result of the research suggests that the basic community design divides into three parts. The first part is a commercial area and a community market. The second part is a learning area for cultural education, for instance, the way of the tobacco curing plant, and the last part is a resort-type accommodation for tourists by renovating the old building to create a new usable area. Besides, a new traffic route was designed to create activities for tourists and people in the community. Through designing spaces and landscape architecture conservation and repair the buildings, this project will promote tourism in the area, revitalize lifestyles, and strengthen the local and provincial economy, which is a prototype for community development for sustainable ecotourism.

**Keywords:** *architectural conservation, ecotourism, community development for sustainable, preserving and restoring architecture*

### 1. Introduction

Tobacco curing plant located at Moo 5, Chai Sathan Sub-district, Mueang Nan District, Nan Province, as shown in Figure 1. In the past, this tobacco curing plant was a lucrative business Nan province economy. Considered as an area that creates career income for the people in the Chaiya place. The tobacco curing plant in Chai Chai District is 8 kilometers from the city, travel time about 20 minutes. Covering an area of 19 rai, there are 42 barns and 1 tobacco building. Currently, all these buildings have been left unused and deserted. Physical characteristics are plains along the hill. There are communities spread nearby, surrounded by eucalyptus forests.



**Figure 1** Google Map (Online) showing the location of tobacco curing plant, Village No. 5, Chaisathan Subdistrict, Mueang Nan District, Nan Province

Therefore, this area is suitable for the education and development of ecotourism, which is in line with the government policy objectives of tourism development in Nan Province. It was aimed to transform the unused wasteland from the area that used to be the main income-generating community in the past in Nan Province to a tourist and leisure area by conserving Culture and Architecture Natural resource management (Integrated Provincial Executive Committee, Provincial Administration Organization, online). From learning management, such teaching is the source of the Tobacco curing's building improvement project. Besides, it aimed to promote ecotourism and rehabilitation in the Chaisathan Sub-district, Mueang Nan District, Nan Province, which is the project of Sirin Thiratsuta, the owner of this tobacco curing plant is one of the real projects that the project owner wants to improve. Also, The SIA Studio teachers and students could have the opportunity to learn together under the project 4+1 Architectural Design Project.

In this regard, the project owners who want to improve and restore the building to be usable employing changing the living space to meet local activities and new forms of tourism and to maintain their local lifestyles, local knowledge, and the original architecture as well as to create careers and income for people in the area

According to the study of the principles of architecture and environment development for conservation and architectural revival, found that in any changes (Office of Natural Resources and Environmental Policy and Planning Ministry of Natural Resources and Environment, online) should consider

- a) Value preservation, we have to respect and refer to the cultural values of both physical and non-physical components
- b) Quality integrity, the goal is to improve the quality of life of local people and as well as the environment.
- c) Quantitative change control. Any changes that affect the existence of the quantity and quality of important cultural elements should be avoided unless those changes will improve the restoration and preserve the quality and cultural values
- d) Connection Context, the context should be considered holistically and relatable to economic and social conditions. Road structure, society, and cultural diversity should be respectfully taken into account.
- e) Finding the Balance, by conserve and restore. Which must cover physical, environmental, social, cultural, and economic harmony. Well executed plans are needed to allow local people to participate in welcoming visitors to encourage joint development without any conflict.
- f) Conditions of time. Controlling change is an important condition for maintaining the overall value of the communities in this area to keep up with the times of change.



As for the treatment guidelines, the important components are the structure of the project plan. Which is determined by the road route, the group of buildings, vacant land. While improving the area, we need to maintain an adequate proportion between the buildings, the green and open space. The shape and physical characteristics both inside and outside of the building which is determined by building structure, volume, form, proportion, material, color, and decoration Including maintaining relationships between project areas with the context of the natural, human-made environment, preserving the useful elements, maintain the original culture at the same time embrace new activities in order to keep up with inevitable changes of time. It is important to continue the inheritance of culture, tradition, wisdom, places, which will lead to maintaining the identity and uniqueness of the place, the social structure/network, including cultural diversity in the community (Creative District Thailand, online).

Therefore, the guidelines for the renovation of the living space for tobacco curing buildings are to be able to support sustainable tourism activities. It is essential to implement the technical factors that will affect the building's stability and comply with laws and regulations because the buildings have been abandoned for a long time. As the buildings have been abundant for a long time, materials have had deteriorated. The careful calculation must be enforced, especially in the building structure, the weight support of the building that should be modified for interior space purposes, modern technology, and the mix of traditional and new materials that would be used together. Besides, the area of the building is also a factor to be considered in determining the utility space in various forms; however, it must be suitable for use in the size of  $6.55 \times 6.35$  meters.

However, those improvements should preserve the original style as much as possible to keep the originality of the building that affects the identity of the area context. Besides, there is a need to analyze tourism factors in order to be aware of the goals of adjustment, which these factors must include other relevant contexts to be analyzed together, such as tourism and service activities Tourism and marketing information communication as well as legal requirements, economic factors, society and culture, environment, public facilities, and the physical context of tourist attractions. However, as mentioned above, When the research team acknowledged the needs of the project owner, along with the analysis of building condition data, make them aware of the framework of the architectural design process (Architectural Design Process). Moreover, the results of the analysis will be used as a guideline to design and improve the layout for suitable buildings.

## 2. Objectives

1. To study the context of communities, limitations, and potential of tobacco curing plants and information for planning layout design and building improvements.
2. To study the form, uniqueness, and identity of architecture in Nan Province and various contextual factors that affect the inheritance of identity, way of life, culture, and local wisdom in the community.
3. To suggest design, architectural revival, and conservative project planning that corresponds to the context and follows the policy plan for sustainable tourism development of Nan province
4. To study the context of communities, limitations and potential of tobacco curing plants and information for planning layout design and building improvements.
5. To study the form, uniqueness, and identity of architecture in Nan Province and various context factors that affects the inheritance of identity, way of life, culture and local wisdom in the community.
6. To suggest design, architectural revival, and conservative project planning that corresponds to the context and follows the policy plan for sustainable tourism development of Nan province

## 3. Materials and Methods

This research collects community data by surveying, which are primary data, surveying equipment such as cameras, notebooks for recording physical data of tobacco curing buildings to study the uniqueness, identity, and structure of architectural styles in both internal and external projects. General environment and record inquiries from project owners and tobacco curing caretakers. To connect the data in the social and economic dimensions and social activities for secondary data research data from relevant agencies on Nan's provincial development plan policies and development strategies. Such as the issue of sustainable tourism



development to be used as data in analyzing various factors that affect the context of this project Which has the procedure in operation as follows

- 3.1 Design the research methods as an educational framework (Figure 2)
- 3.2 Collect data from surveys, interviewing in the study area, and research information disseminated from government agencies and reliable sources
- 3.3 Analyze physical data, space requirements, legal restrictions, techniques, methods, and possibilities of construction and improvement in order to set the framework for the building improvement suitable for the project.
- 3.4 Synthesize the concepts and create architectural styles that are in line with the needs and objectives of the project owner
- 3.5 Evaluate the operation by the faculty and the project owners to conclude and apply suggestions to further improve the project



**Figure 2** The research methodology framework

#### 4. Results and Discussion

The implementation of the research methodology following the above process resulted in the analysis results as follows:

4.1 From the survey of the project area and interview with the project owner, we, therefore, have set a target and scope of operation building condition and context survey results. In the surrounding area, it was found that the same building was used for curing tobacco in the past. Building materials are Mon bricks (Figure 3). The view of the tobacco curing building and the surveying of the project area, together with faculty and project owners shown inside the building is a high-rise building with two chimneys attached to the outside of the building. The building has a width and length of  $6.55 \times 6.35$  meters and a height of 7.4 meters with a height of 1.7 meters. There are 44 factories. There is one tobacco leaf trading plant, which is an open space. There are no walls. The central area is 12 meters wide and 5.50 meters high, and there is a building in front of the entrance, it was the staff of the tobacco curing house. The other building has a width of 14 meters (Figure 4).





Later, when there were new laws, regulations, and restrictions, of growing tobacco leaves causing the people in the area to grow fewer tobacco leaves, resulting in the tobacco curing business shut down. The building was, therefore, abandoned. However, it is currently in a state of disrepair due to lack of space in the building. Also, the building survey found that the building was renovated. Some building structures can be seen disposed of. The pumping incubator has been disintegrated and collapsed; therefore, the roof structure could not be seen. Whereas we could determine the pillars are reinforced concrete columns, the roof is of wooden structure and galvanized (Room Baanlaesuan, online).

Therefore, from the above information, when considering the demand for usable areas together with the components of the tourism system, which helps to know how to improve the building to promote sustainable tourism activities, conserving and restoring, by using the building design approach that combines traditional atmosphere within the framework of the building under the current conditions. However, the choice of external materials must be taken into account in order to comply with the law, local ordinances, and the surrounding context of the project location. So that the project can be carried out to suit the surrounding context.



**Figure 3** The survey of buildings together with students and project owners

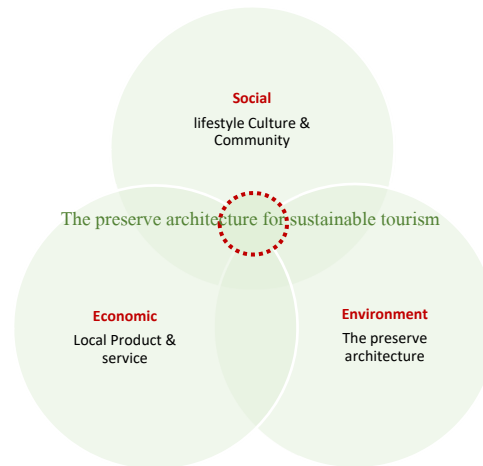


**Figure 4** The view of tobacco curing building

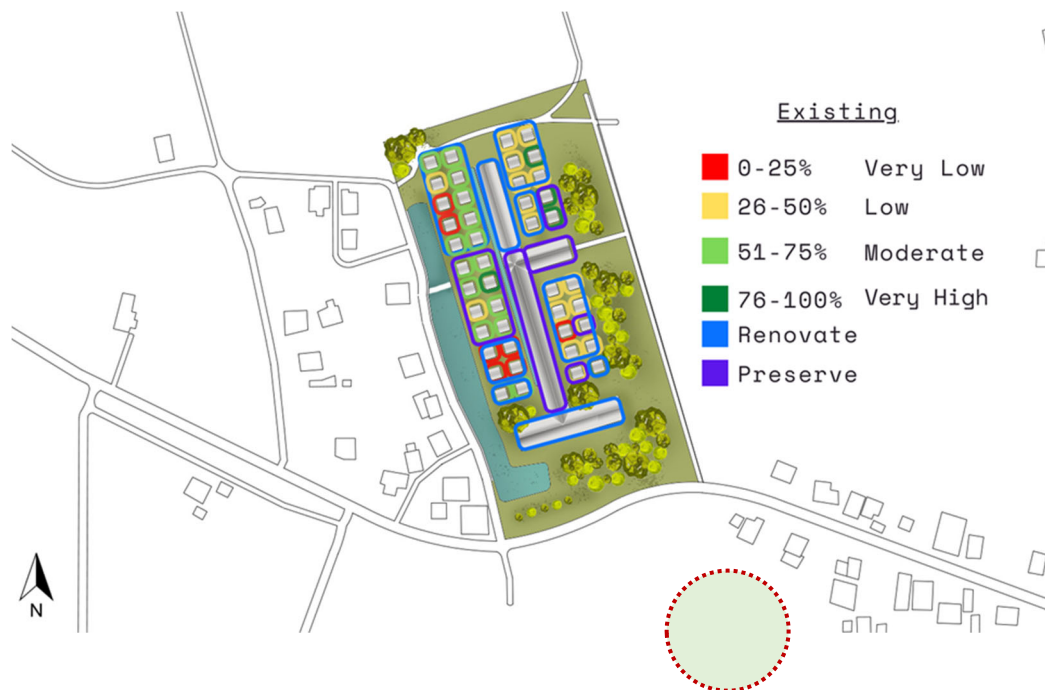
4.2 The diagram in Figure 5 is the design concept of the project that purpose of being a new tourist destination and offering various activities that use the unique architecture to communicate and connect with local culture is the preserved architecture for sustainable tourism. Building condition and context survey results, including discussions of the research team and project owners, giving the framework guidelines for designing, building improvements. The project owner wants to develop this area as a resort-style cultural attraction that provides various activities using the unique architecture to communicate and connect with local culture, their way of life, and their wisdom to resurrect the past and tell the age-old stories of their community (Bangkok Post, online). Therefore, the concept of building design has been proposed to preserve the



architecture of sustainable tourism. According to the design guidelines, the buildings were renovated or preserved, as shown in Figure 6.



**Figure 5** The design concept purpose to be a new tourist destination offering various activities which use the unique architecture to communicate and connect with local culture is the preserved architecture for sustainable tourism



**Figure 6** The existing of Tobacco Buildings to be renovated or preserved

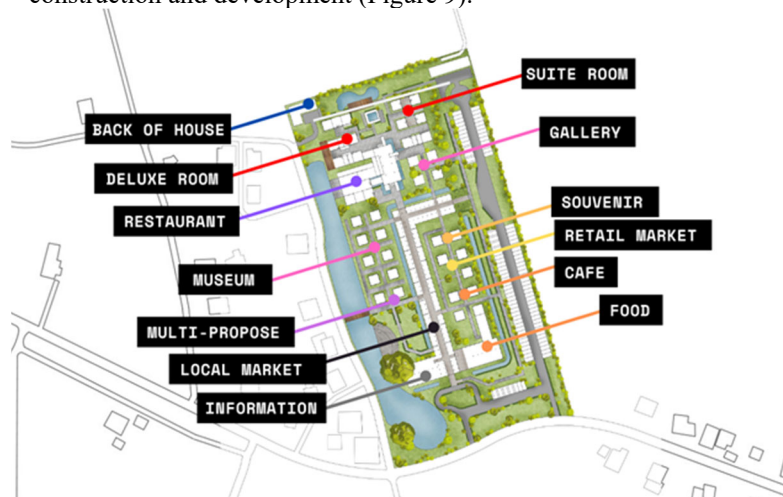
4.3 The results of the evaluation of the design from the research team together with the experts and the project owners found that the guidelines are feasible and sufficient substance can meet the needs of the project goals. There are sufficient living space, and the design of the building is to restore a dilapidated building in order to be able to use it again. The external appearance emphasizes the atmosphere of a

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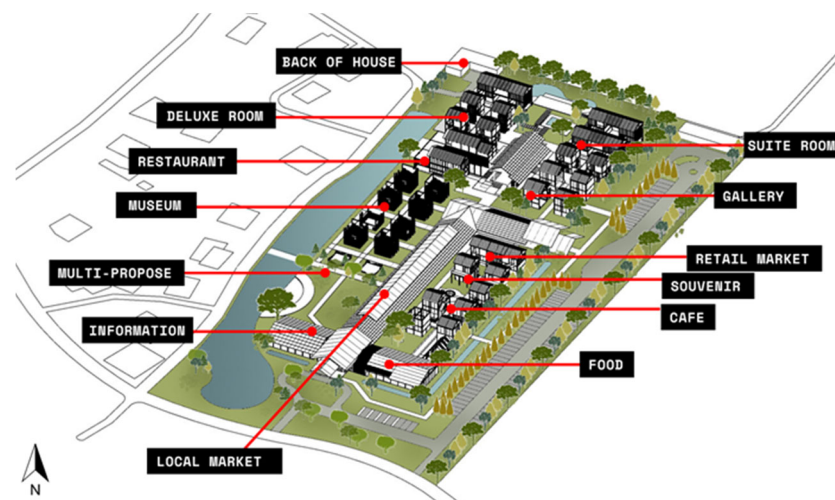


contemporary building that showcase the interesting original building style. The airy, open, spacious interior atmosphere incorporates with modern decoration details will be carefully design so it will nicely blend in with the local community context. (Winnie Dsignsomething, Bopiliao Historical Block, online) Together with the Lanna style decoration Localities of Nan Province, It can create a selling point for attracting the attention of tourists, including local people who use public spaces located around the project. It will also create opportunities to connect activities between inside and outside of the project through creative design, planning, and building improvements, which can be considered as follows

- The master plan of design suggestion shows a group of function zone of each building that renovated for tourism (Figure 7).
- The master plan of design suggestion shows the accessibility, usage, and height of each building after the renovation that describes the circulation of the user to each function and activity (Figure 8).
- The design suggests how to phasing for investment purpose in the form of zoning in construction and development (Figure 9).



**Figure 7** The design suggestion is shown in the master plan, showing the usage zones of each building.



**Figure 8** The design suggestion shows the accessibility, usage, and height of each building after the renovation.

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**Figure 9** The design suggestion shows in the form of zoning in construction and improvement for investment purposes.

This research is, therefore, beneficial to the development of architecture education. This work presented an interesting overall picture, which allows a good possibility for further development to continue and to achieve the objectives of the project's owner. The proposed guidelines for building improvements, by which the zone structure consists of (1) the residential area in resort-style, (2) the market area for people in the local community to trade in the project, (3) tourist support areas such as restaurants, cafes, and souvenir shops, (4) workshop for creating local products, (5) learning area, for example, stories about tobacco curing in the past, and (6) multi-purpose activity area. However, each zone needs some improvements or additional areas, such as parking spaces for tourists, conservative tourism communities, and architectural revival by improving the existing buildings. It is essential to study the identity and uniqueness of the vernacular architectural style to maintain the identity of the local treasure.

## 5. Conclusion

The project of guidelines for the development of conservation, restoration of architecture for sustainable tourism: a case study of the tobacco incubator in Chaisathan Sub-district, Muang District, Nan Province, can be summarized as follows;

5.1 Integration of the Tobacco Incubation Project in Chai Sathan Sub-district, Muang District, Nan Province requires further study details of architectural design, architecture construction techniques, and engineering systems. Also, project feasibility is needed to be studied in both construction and investment.

5.2 The main outstanding feature of this project is the creativity in the design of petty and revival of interesting architecture. However, the observation of the development of this project is to prepare a suitable construction and investment plan, and the community participation in the area to eventually achieve sustainability.

5.3 Suggestions from the owners of this project show that this research by the SIA Studio Group, Space tactics students, has clear guidelines for the architectural practice. The project helps to create experiences outside of the classroom from real hand-on experience and learning and allow the researchers to learn how to work professionally both in design and investment to achieve the goals and objectives of the project.





## 6. Acknowledgments

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