



Master Plan of Architectural Conservation for Ecotourism A Case Study of Sobkorn Tobacco Incubation Plant of Chiang Klang District, Nan Province

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Abstract

Sobkorn Tobacco Incubation Plant in Nan Province, Northern Thailand has an important history reflecting the local's way of live, which blends their culture and architectural forms with individuality. These heritages are still passed on, by the older generations and small amount of young people. Nowadays, the economic condition of this community is stagnant and the plant is changing from a large source of curing tobacco for domestic sales to a deteriorated place. However, the characteristics of the architecture are still beautiful, even after many years have passed. It is still the representative telling of the story in the past, including the culture of the place. This study of architectural conservation and development methods for ecotourism is the integration of community, and the surrounding area, which mean the social conditions, way of life, and the cultural and natural environment. They are all concerned in the physical design that lead the project, to the area-based learning for architectural curriculum. The primary data collection method is collected by surveying in the actual area, and recording physical data of the general environment, within the tobacco storing area, such as taking pictures of buildings and the surrounding of the area, and also making the discussions with the owners of tobacco storing businesses. For the secondary data is the researching on social, economy and the environmental conditions for the analysis and the design guidelines. The analytical method for the formulation of guidelines consists of:

- a) Heritage value, we have to value the significance of tangible and intangible heritage for the best solution of the development project.
- b) Quality integrity, the goal is to improve the quality of life of the local people, as well as the environment.
- c) Quantitative change control and any changes that affect the existence of the quantity and quality of cultural important elements should be avoided, unless those changes will improve the restoration and preserve the quality and cultural values
- d) Connection context which is the context that should be considered holistically, and is related to economic and social conditions. The road structure, society and cultural diversity should be respectfully taken into account.
- e) Finding the balance between conservation and development, that must cover physical, environmental, social, cultural, and economic harmony. Well-executed plans are needed to allow local people to participate in welcoming of visitors, and to encourage joint development without any conflict.

The guidelines invented for the development of ecotourism are presented, in the form of master plan. They promote sustainable tourism, in participation of stakeholders, the generating of income for the people in the community and the conservation of the natural environment, with the historical stories, at the same time.

Keywords: *Ecotourism, architectural conservation and development, tobacco incubation plant*

1. Introduction

Sobkorn Tobacco Incubation Plant located in Pue Sub-district, Chiang Klang District, Nan Province (Figure 1) belongs to Khun Sakaorat Lohachote, the president of the Tobacco Growers Association of Nan Province. In the past, tobacco was the key economic crop of the province. Therefore, this tobacco storing place was the important site, that created career and income for the people in Chiang Klang community, for income from the cultivation of tobacco leaves, and income from trading in the market, at the incubator area. This incubator site has an area of 44 Rai or 104,172 square meters, adjacent to the agricultural community which does not have many interesting tourist attractions nearby the area. The guidelines for area development will be invented in order to revitalize this place, that used to create careers, and income for the communities



in the past. The Project development for ecotourism, therefore, uses the concept of cultural and natural conservation to preserve cultural significance of the place, and natural environment, by developing it to support local tourism. The development has to be taken into consideration of the original condition of the buildings and the creative utility space, that can support suitable activities for the project. In particular, it is important for people in the community, to get involved and earn income from this project, consequently, the ecotourism is introduced to the project concept. Like sustainable tourism, ecotourism is often referred to as “green”, “conservation”, and “sustainable” (Honey, 1999). Ecotourism is being defined by Ziffer (1989) as nature-oriented travel that promotes and finances conservation and resource protection, and also adds to the local economy. Boo (1991) also defined the definition of ecotourism as “Nature tourism that contributes to conservation, through generating funds for protected areas, creating employment opportunities for local communities, and offering environmental education”.

From the travel market perspective, Colvin (1991) described the characteristics of ecotourist as the followings:

- Wanting an in-depth, “authentic” experience.
- Considering the experience worthwhile, personally and socially.
- Abhorring large tour groups on strict itinerary.
- Seeking physical and mental challenge.
- Wishing interaction with locals, cultural learning.
- Being adaptable, often prefers rustic accommodations.
- Being tolerate the discomforts.
- Seeking involvement, not passive behavior.
- Preferring to pay for experience rather than for comfort.

Therefore, ecotourism is the travel to natural resources and cultural resources with responsibility, without causing interference or damage, to natural resources and the environment. The objective of this travel is to study, learn and get new experiences from the flora and wildlife as well as the cultural characteristics that appear in those natural sources. Ecotourism creates economic opportunities for the communities in that area. It also promotes the conservation of natural resources, and the environment which is beneficial to the local area. For tourism activities that natural and cultural resources are going to be developed to the tourism attractions, the project development must be considered for significant value of the place, to be presented to the visitors, and the activities must be mapping to the purpose of visiting, such as: recreation, learning, working or exploring on a new experience.

In order to find the guidelines for creating improvement around the tobacco plant area, the usability of the existing physical environment must be considered. To support ecotourism activities and allow them to be a center for learning about history, they need to focus on exploring existing things, both architecture and landscape architecture, including the strength of the building structure, to well keep houses and other buildings in the area (Figure 2). They also need the assessment of the building condition, that requires experts to advise and give recommendations about how to keep the building safe for visitors and the project as well. Examining the physical conditions can determine the work area, that is suitable for various activities that would tell the historical story, respectively, in the form of a living museum or open-air museum, which emphasizes on the presentation of culture, nature and history, on the purpose of knowledge information and promotion of community activities.

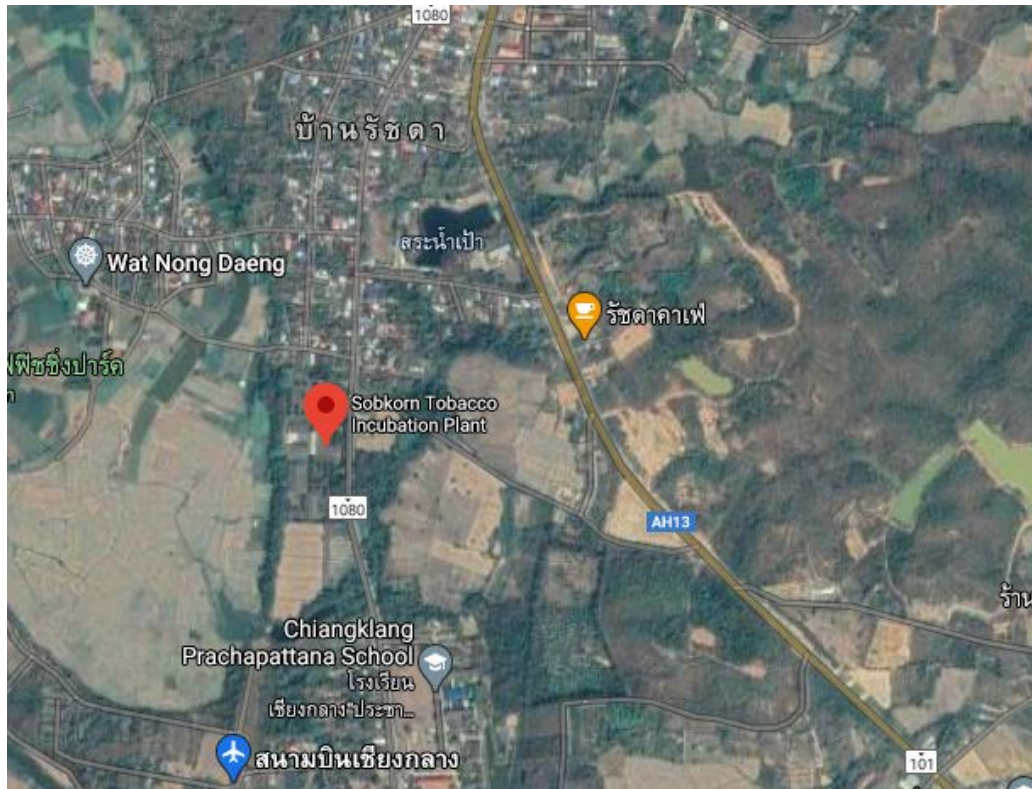


Figure 1 Google Map (2020) Location of Sobkorn Tobacco Incubation Plant of Chiang Klang District, Nan Province



Figure 2 The existing of Sobkorn Tobacco Incubation Plant



2. Objectives

- 1) To study basic information, surrounding context, and potential of Sobkorn Tobacco Incubator
- 2) To study the context of way of life, culture and local wisdom in the community
- 3) To suggest the design guidelines of conservation and development of place, as a sustainable ecotourism attraction of the community

3. Methodology and scope of study

This research gathers basic community information from government publications and the preparation of data for the location of Sobkorn Tobacco Incubation Plant Project. The researchers are divided into groups to survey the plant site and surrounding context. Each group is equipped with surveying tools, pencils, pens, tape meters, cameras for recording image data, and interviewing project owners, including the supervisor of the tobacco plant storing, in order to understand the history of the project, and bring in the analysis to find various factors, that affect the development of this project. The procedures in operation are as follows:



Figure 3 The Research methodology framework

3.1 Design the research methods as an educational framework (Figure 3).

3.2 Data collection from the interview with project owner about the history of tobacco industry and site surveying of tobacco curing buildings, with context of the area that has been included for primary data. The secondary data composes of Nan's provincial development plan policies and development strategies, general data of Nan Province, the social & economic dimensions, and tourism situation in Nan.

3.3 Study of physical data including the study of the architectural model of the tobacco keeping plant, assessing the value and condition of the original building, studying the utility of each building, and the possibility of building improvements.



3.4 Analysis for creating architectural design programs, conceptual design, project design, target group, activities, project elements, and area requirements. The analysis of the heritage value of tobacco storing buildings is included to find out the appropriate method for conservation and development.

3.5 Synthesis of concepts and creating architectural styles, that are in line with the needs and objective of the project owner.

3.6 Evaluation of the operation by the faculty, and the project owner to draw conclusions. To apply suggestions to improve the project further.

4. Research results and Discussion

The results from the implementation of the above methodology are as follows:

4.1 Project selection, reasons for choosing this project, and the results of all context studies are according to the objectives and the content of the 4th and 1st year architectural design courses. Once the project owner is informed, the teaching and learning plan is organized, with the faculty and the project owner for setting goals and scope of operations. From building condition and context survey within the study area, it was found that this place was used for storing tobacco in the past, being surrounded by communities, agricultural field, and woodland (Figure 4). Inside the study area, there are 42 buildings of tobacco incubation plant. Each building size is 7x 7 meters and 12 meters in height with 2 chimneys. Building materials are Mon bricks and some are bamboo (Figure 5). Moreover, there are a market place, which is open space with no walls, comprising of an office, an owner house, worker's house, 2 restrooms, dried fruit warehouses, and 2 new buildings (creating for no interference to this part). (The regulation and the limitation of the tobacco leaves cultivation, caused the reduction of the farmer number in the area, which resulting in the tobacco storing business to be shut down. The old tobacco incubation plants were abandoned, not being used anymore. Some buildings are currently in a state of disrepair. From the survey of buildings, it found that some buildings have been renovated and some structures of the building are collapsed according to deterioration from the abandoned period (Figure 6).

Criteria for registering historic sites by the Fine Arts Department is used, as the criteria for the cultural and natural significant assessment on this site. The criteria designates that archaeological sites must have historical, artistic and archaeological values (Fine Arts Department, 2021). From the data collections, they show that this site is an important place in historical events, and it has buildings with unique architectural features, also.



Figure 4 Percentage of building integrity



Figure 5 Architectural form

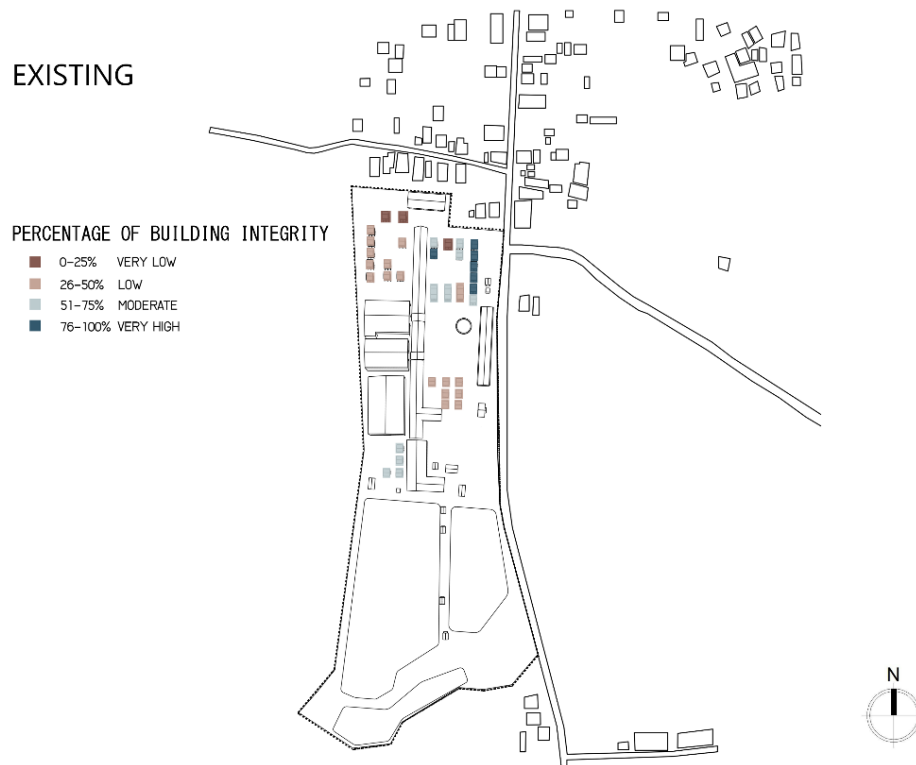


Figure 6 Percentage of building integrity

4.2 Design concepts and works are created from the analysis of building condition and context survey, including a discussion of the teachers and students, with the project owner, who all give the direction to the developments in the project. The design concept of project that purposes to be a new tourist attraction of Nan destination, offering various activities, which use the unique architecture to communicate and connect with local culture for sustainable tourism. Building condition and context survey results including discussions of the research team and project owners, give the framework guidelines for designing, building improvements. The project owner wants to keep it existing as much as possible, including the existing activities of tobacco incubation plant, and to develop the surrounding area, as tourist accommodations. This new tourist attraction provides various activities, which uses the unique architecture to communicate and connect with local culture, their way of life, and their wisdom to continue the stories of their community. The tourist activities compose of art & craft workshop, souvenir shop, local market, cycling route, open-air museum and gallery. Therefore, the concept of building design has been proposed to conserve the architecture for sustainable tourism, and the design guidelines of the tobacco incubation buildings, to be renovated or preserved that is shown in Figure 7.

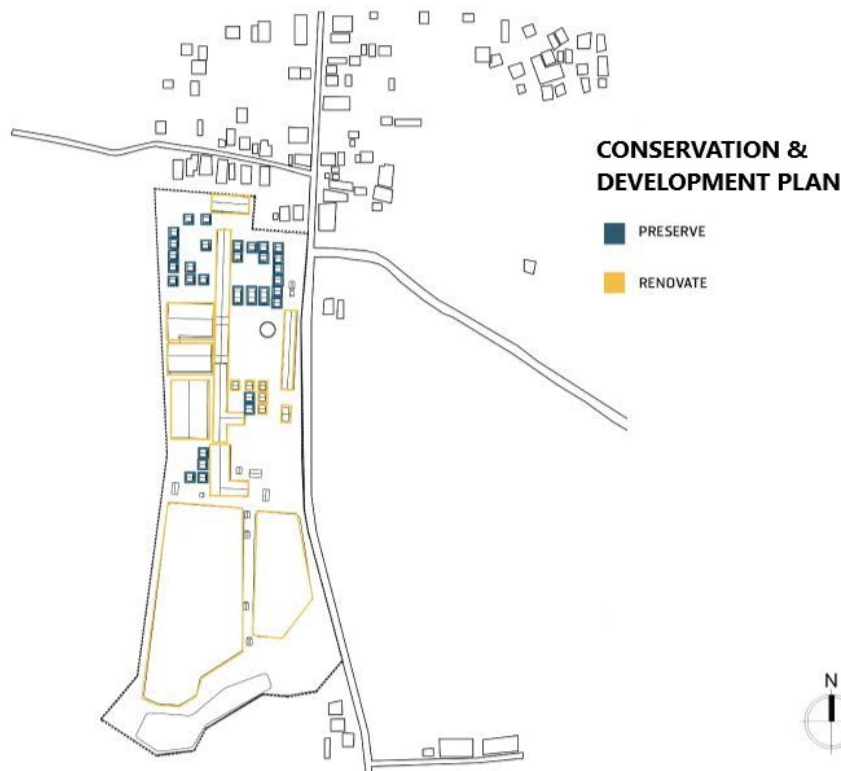


Figure 7 Design guidelines for development

The design concept of this project is combined to a set of “eco-design ethics” by the Western Australian Tourism Commission (1989). The following is a set of some important eco-design fundamentals concerned with the project values.

- Resort design shall be in scale with the setting, and does not dominate the natural resources.
- The location of tourist facilities shall be separated from major cultural and natural resources.
- Cultural attraction development shall be planned ethically, so that visitors are given a rich experience without eroding cultural values.
- Major resort and tourist projects should not be developed in remote areas, where the infrastructure (water supply, waste disposal, police and fire protection, and road access) are unavailable.
- The immediate area within and surrounding important cultural or natural resource attractions must not be developed with incompatible uses, that diminish the quality of visitors’ experiences.
- Major land use projects, such as golf courses, shall not be developed in pristine natural areas but rather at locations, where minimum stress upon the environment will be made.
- In the siting of buildings as much of the natural topography, trees, and other plant materials shall be retained as much as possible, in order to provide maximum visitor enjoyment, and also protect the resources.



ZONING DESIGN CONCEPT



Figure 8 Zoning shows design concept of activities

4.3 Evaluation is considered by the teachers and the project owner. In conclusion, the design process of this student group gives benefit to the development of architecture education. The history of the incubator and the overall picture of the work presented is interesting. The work has potential to be further developed, according to the objectives of the project owner. The structure of zoning (Figure 8) consists of:

1. the area of life museum
2. the market which is a market for local people in the community
3. the tourist support areas such as cafes, souvenir shops
4. the learning area about tobacco storing in the past
5. the multipurpose activity area which, in each zone, must be improved such as creating parking for tourists and new building for tourism communities, which will be passed on to the next generations to absorb and maintain the history of tobacco storing sustainability.

Design evaluation, the results of the study found that the guidelines are interesting. Every building of tobacco incubation plant is conserved and developed. The good condition buildings are adapted to use the space inside the incubator buildings to facilitate the learning center. The bad condition buildings are preserved to show the original building styles of interest, so that visitors are given a rich experience without eroding their values. The resort part is in scale with the new setting, separated at the backyard of the plant. The landscape is adjusted to serve the conservation of plant zone, and the resort with camping zone. It looks more beautiful, and is revived to be able to use again. In order to be an attraction for tourists to visit and also



a learning center for students, interested in the history of the incubator, it requires the process of the urban design which can be considered as shown in Figure 9.



Figure 9 Master plan of design guidelines

5. Conclusion

The adoption of “eco-design ethics” as the design fundamental for guidelines of architectural conservation for ecotourism, seems to be successful from the evaluation, by the teachers and the project owners. It offers an alternative concept that retains original heritage values, and allows desired development. The project resulting from the design can be summarized as follows:

5.1 The Sobkorn Tobacco Incubation Plant and its surrounding have significant value of its history and aesthetic. Therefore, this place is a valuable cultural resource, and it has potential to be developed as an attraction of Nan destination.

5.2 The suitable conservation and development, as a tourist attraction, can maintain its historic and aesthetic value. It responds to the requirements of the owner, and can make money to support the maintenance of the old building. It also promotes the career and income for the local. Along with the community participation in the area, the project can be achieved for sustainable development in the end.

5.3 The outstanding feature of this project is the creativity in the design, to achieve visitor satisfaction and for business. This project is proposed to be a tobacco incubation plant, with tourist activities, such as workshop, cycling, and camp site. The old buildings with wood wall are preserved, and the others are



renovated to accommodate the tourists, consequently, it requires further study details of architectural design, architecture construction techniques and engineering systems for conservation part, also with the project feasibility study, both in construction and investment, to fulfill the development part.

However, this project creates the valuable experiences for the researchers outside the classroom and lead researchers to learn how to work professionally, both in design and investment, to achieve the goals and objectives of the project.

6. Acknowledgements

The success of the creative work of the 4+1 Architectural Design Project working group, SIA Studio group, Space tact students, would not be possible, without the opportunity given by Khun Sakaorat Lohachote, the project owner as well as Khun Sirinthar Ramsuta, the owner of the tobacco storing plant, residing at Village No. 5, Chaisathan Sub-district, Mueang Nan District, Nan Province. We wish to thank, especially, the Faculty of Architecture, Rangsit University, which provided financial support activities, in the project category 4+1 Architectural Design Project, for the fiscal year 2019.

7. References

- Boo, E. (1991). *Ecotourism: The Potentials and Pitfalls*. Washington D.C.: World Wildlife Fund-US
- Colvin, Jean G. (1991). "The Scientist and Ecotourism: Bridging the Gap." In *Ecotourism and Resource Conservation* (pp.575-581). In Keesler, J.A. & Berne, N.Y. (Eds). Association of Wetland Managers.
- Fine Arts Department. (2021). *100 subjects: Fine Arts Department: How are the rules for registration of historic sites?* Online. Retrieved March 20, 2021, from <https://www.finearts.go.th/promotion/view/7451>
- Honey, M. (1999). *Ecotourism and Sustainable Development: Who Owns Paradise?* Washington DC: Island Press.
- Western Australian Tourism Commission (1989). *The Eco Ethics of Tourism Development*. Perth, Australia: WATC.
- Ziffer, K.A. (1989). *Ecotourism: The Uneasy Alliance*. Washington DC: Conservation Foundation.