

Serial Cultural Heritage Concept, Values Identification, and Management : Case Study
Angkor - Phimai Cultural Route



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มรดกวัฒนธรรมเกี่ยวเนื่อง แนวคิด การกำหนดคุณค่า และการบริหารจัดการ กรณีศึกษา เส้นทาง
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มรดกวัฒนธรรมเกี่ยวเนื่อง หมายถึงกลุ่มของแหล่งมรดกวัฒนธรรมที่มีความเกี่ยวเนื่องกันอยู่ด้วยความเชื่อมโยงทาง
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Serial cultural heritage refers to groups of cultural heritage sites which are formed as series by significant cultural linkage. It is a category of cultural heritage which has played important roles in World Heritage context, however, it has not been given appropriate attention in general context although it prevails in all cultures. This thesis, therefore, investigated into serial cultural heritage and has clarified its identification, concept, applications, categorization, values identification, and management, both in World Heritage and general contexts, which can be used as initiative frameworks for future works and studies in the issue of serial cultural heritage. To summarize, serial cultural heritage can be categorized into 4 types: Symbolic serial cultural heritage, Pilgrimage routes, Cultural routes of communication, and Cultural theme series; values identification depends on type of serial cultural heritage; and serial cultural heritage concept can be applied both symbolically and functionally, for instance, World Heritage nominations and cultural tourism.

For in-depth research, Angkor - Phimai cultural route was selected as case study, focusing on part of the route in Thailand, which comprises 35 components, including Phimai, the termination of the route, remains of physical road, dharmasalas, aroyasalas, temples, barays, Dvaravati site, ancient towns, and ancient industrial sites, which are testimonies of the existence and significance of the route based on the information from Preah Khan Inscription, archaeological, and historical evidences. Field survey, interviews, and questionnaires were conducted to obtain information on the case study and the perception of people on Angkor - Phimai cultural route in serial cultural heritage perspective. The case study was analysed in the aspects of values, interpretation, management and tourism, which clarified the high historical value that is contrasting with the low tangible and interpretational values of the route due to lack of evidence of the physical road, which requires specific studies in the future. Consequently, the results of case study analysis have provided information on future requirements of the case in respective issues, as well as identified points of consideration which can be applied to cultural routes and serial cultural heritage in other categories. In conclusion, the most challenging issue concerning serial cultural heritage is the establishment of perception on 'serial' characteristics of the cultural heritage series, which will lead to appropriate means for conservation and management, and most importantly, the core value of serial cultural heritage lies in its meaning, which should be conserved and conveyed as a living part of the heritage rather than a rigid set of information so that the values of serial cultural heritage can be expressed and sustained in their full potential.

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Chapter 1 Introduction

Heritage, objects or features that people have created, which have values that are worth keeping and passing on to future generations, is an issue which has become one of the most concerned public interests especially in today's world when advancements in technology and communications have instigated rapid change that affects most, if not all, aspects of human's life. Although the term 'heritage' covers both tangible objects and intangible features, natural and man-made creations, it is undeniable that the built heritage has been highly prevalent. This group of heritage comprises architecture, vernacular architecture, landscapes, monuments, etc., which may be inclusively called "places" as referred to in the Burra Charter (Australia ICOMOS, 2013) and in several literatures of the present time.

Since heritage places are valued by people, it is necessary that their values are conserved and passed forward into the future, thus, in all cultures, conservation concept and practices have existed in various forms, depending on the backgrounds of each locality, beliefs, traditions, etc., wherein the heritage places belong. However, from circa 19th century onwards, conservation concepts from the Western cultures have influenced the world, and Thailand is a country that has adopted and adapted the concepts and practices to the nation's cultural heritage conservation and management since that time.

Originally, conservation was aimed for individual cultural heritage sites, which were formerly called "monuments". The scope of interest has later expanded to cover sites, settings, cultural landscapes, vernacular built heritage, cultural routes, indigenous communities, until eventually, the intangible cultural heritage has also been recognized as a category of cultural heritage. These conservation concepts and scope of considerations have been continually developed, with UNESCO acting as leading organization in the process. One of the most important turning points was the ratification of the Convention Concerning the Protection of World Cultural and Natural Heritage (World Heritage Convention) in 1972. Since then, the trends of nominations and inscriptions of heritage sites to the World Heritage List have led to expansion of scope

and roles of cultural heritage conservation in several aspects e.g. social, economics, as well as politics and international relations.

Resulting from the World Heritage Convention is the development of the Operational Guidelines for the Implementation of the World Heritage Convention, and the coining of the terms 'serial cultural properties', referring to serial heritage sites (both cultural and natural), which are not situated in the same location but are related by significant linkage, having shared group, or serial, values. This concept has opened more opportunities for State Parties to nominate cultural or natural sites, including transboundary or transnational sites under the category of serial properties, as well as supporting the statement "World Heritage, heritage of mankind", in the World Heritage Convention.

Apart from the World Heritage context, serial cultural heritage has existed in all cultures since ancient times although they are not called "serial cultural properties" or "serial cultural heritage". We know the Seven Wonders of the World, Four Buddhist Pilgrimage sites, Silk Road, or the 12 Stupas of the Zodiac Signs in Thai culture, which are undoubtedly serial cultural heritage by meaning. Therefore, it is interesting to investigate into the issue of serial cultural heritage for better understanding on the concept, characteristics, and values that should lead to appropriate means for conservation and management to conserve its meaning, relationship, and holistic values of this type of cultural heritage, especially since there have not been previous studies specifically conducted on the issue of serial cultural heritage in general context.

The aforementioned issues have led the author to conduct a research on serial cultural heritage based on the objectives as follows:

1. To clarify the concept of serial cultural heritage and its relating issues e.g. categorization, values identification and application, both in World Heritage and general contexts.
2. To conduct an in-depth study on a selected serial cultural heritage site, for this thesis, Angkor – Phimai cultural route was selected as case study, in order to

gain insights into issues concerning existing serial cultural heritage site, which could be applicable to other sites of the same category and adaptable to sites in other categories.

3. To study the management of serial cultural heritage sites, which will be useful for practical purposes, especially in conservation and tourism.
4. To conclude this research as an initiative framework for future studies and works on serial cultural heritage.

It should be noted that, regarding terminology, the author chose the term 'serial cultural heritage', not 'serial cultural property' as seen in World Heritage documents. The reason is that the term 'heritage' covers a wider scope of meaning and implies both tangible and intangible aspects of the subject (in this case, the heritage place), whereas the term 'property' inclines on the physical or tangible aspect of the place, which does not fulfil the requirements and purpose of this study.

This thesis is divided in to 7 chapters, followed by list of references and appendices. Summary of contents of each chapters and methodology used are listed as follows:

Chapter 1: Introduction

This chapter provides an overview on the rationale of the thesis and the author's aim and objectives of study.

Chapter 2: Literature Review: An Overview on Serial Cultural Heritage: from Concept to Management

This chapter reviews existing literatures which are relevant to the serial cultural heritage in 4 aspects: definitions, concept, applications, and management. It should be noted that, since the issue of serial cultural heritage has not been widely addressed outside the World Heritage context, academic papers regarding the issue are relatively few. Other sources of information and previous studies that the author used in literature review are, therefore, legal documents e.g. conventions, charters, and Operational Guidelines for the Implementation of the World Heritage Convention.

The literature review provides overall ideas on perception and situations of serial cultural heritage at the time this thesis was written and conclusion on the serial cultural heritage concept. Furthermore, it reveals the gap that the author had to investigate and fulfil, which are presented in the following chapters.

Chapter 3: Serial Cultural Heritage Categorization and Values Identification

This chapter discusses the categorization and values identification of serial cultural heritage, from the formation of cultural heritage series, categorization of serial cultural heritage, and serial cultural heritage values identification based on the concept concluded in the previous chapter. Information was obtained from documents and literature, as well as from the author's observation.

The issues for categorization and values identification presented in this chapter form a foundation for understanding of the overall characteristics of serial cultural heritage before proceeding to the case study, which is an in-depth study of a representative case of 1 category of serial cultural heritage, the cultural routes of communication, to be presented in the following chapter.

Chapter 4: Case Study: Angkor – Phimai Cultural Route

This chapter is an in-depth study into a category of serial cultural heritage, the cultural routes of communication, with Angkor – Phimai cultural route as a case study. The author chose to specifically study cultural routes of communication due to their being a category of serial cultural heritage with intrinsic values. Angkor – Phimai route was chosen as case study because there are supporting legal document, the ICOMOS Charter on Cultural Routes, 2008; and previous studies on the physical and archaeological aspects of the route by foreign scholars and Thai scholars, the most recent and detailed of which is the “Living Angkor Road” Project led by Asst. Prof. Dr. Panjai Thanthassanawong, et. Al. Furthermore, the Angkor – Phimai route is a transnational cultural heritage, comprising components of diverse characteristics and levels of protection and management, therefore, it is a series with various interesting aspects to be investigated into.

Apart from existing documents, the author had conducted a field survey to the Angkor-Phimai route in Thai territory. The field survey provided in situ information on the physical characteristics of the route and associated evidences, as well as existing management systems, which was obtained by interviewing the people involved in the maintenance and management of the route and related sites.

Furthermore, a questionnaire survey, Angkor – Phimai Cultural Route, was conducted to obtain information on recognition and perception of people to the route and its components. As for specific questions on management and opinions on future development of the series and components, information was obtained by interviewing responsible persons in various issues.

It should be noted that, although the entire route of Angkor – Phimai was chosen as a case study, the part of the route that the author conducted field survey and questionnaire was the part in Thai territory only due to political situation and inconveniences in several aspects. Information on the part of the route in Cambodia was studied from existing documents and the Royal Angkor Road Project report.

This case study provides information on geographical locations, physical characteristics, and serial formation, as well as the existing state of conservation and management of components, which will be analyzed in the following chapter.

Chapter 5: Case Study Analysis

This chapter is the analysis of information presented in Chapter 4. Results of questionnaires, interviews, literature and observation were used to reach a conclusion on the following topics:

- Values
- Interpretation
- Management
- Tourism

This chapter concludes with the topic: Reconstruction of Angkor – Phimai Cultural Route Based on Results of Analysis, which provides a hypothesized image of the route and its functions in the past as an interpretation of analyzed information.

Chapter 6: Future Requirements for Angkor – Phimai Cultural Routes and Lessons Learned from Serial Cultural Heritage Study

Analyzed information presented in Chapter 6 were used to propose a recommendation on future requirements for Angkor – Phimai cultural route in the aspects of values, interpretation, management, and tourism.

Apart from the issues which concerns the Angkor – Phimai cultural route, there are other interesting issues which are relevant to serial cultural heritage in general. These issues are presented and discussed in the topic: Lessons Learned from Serial Cultural Heritage Study, which covers the following issues:

- Application of serial cultural heritage concept.
- Identification of serial cultural heritage.
- Recommendations on interpretation.
- Management issues concerning serial cultural heritage.
- The transnational issue of serial cultural heritage.
- Tourism and serial cultural heritage.

Interviews and observation made by the author, as well as cases of serial cultural heritage in Thailand and foreign countries, especially World Heritage Sites, are the main sources of information used in this chapter.

Epilogue : Philosophy of Serial Cultural Heritage

The conclusion of this thesis is on the philosophical aspect of serial cultural heritage as observed by the author. The remarks are reflections crystalized from the study, which may lead to future exploration into serial cultural heritage and its various related issues.

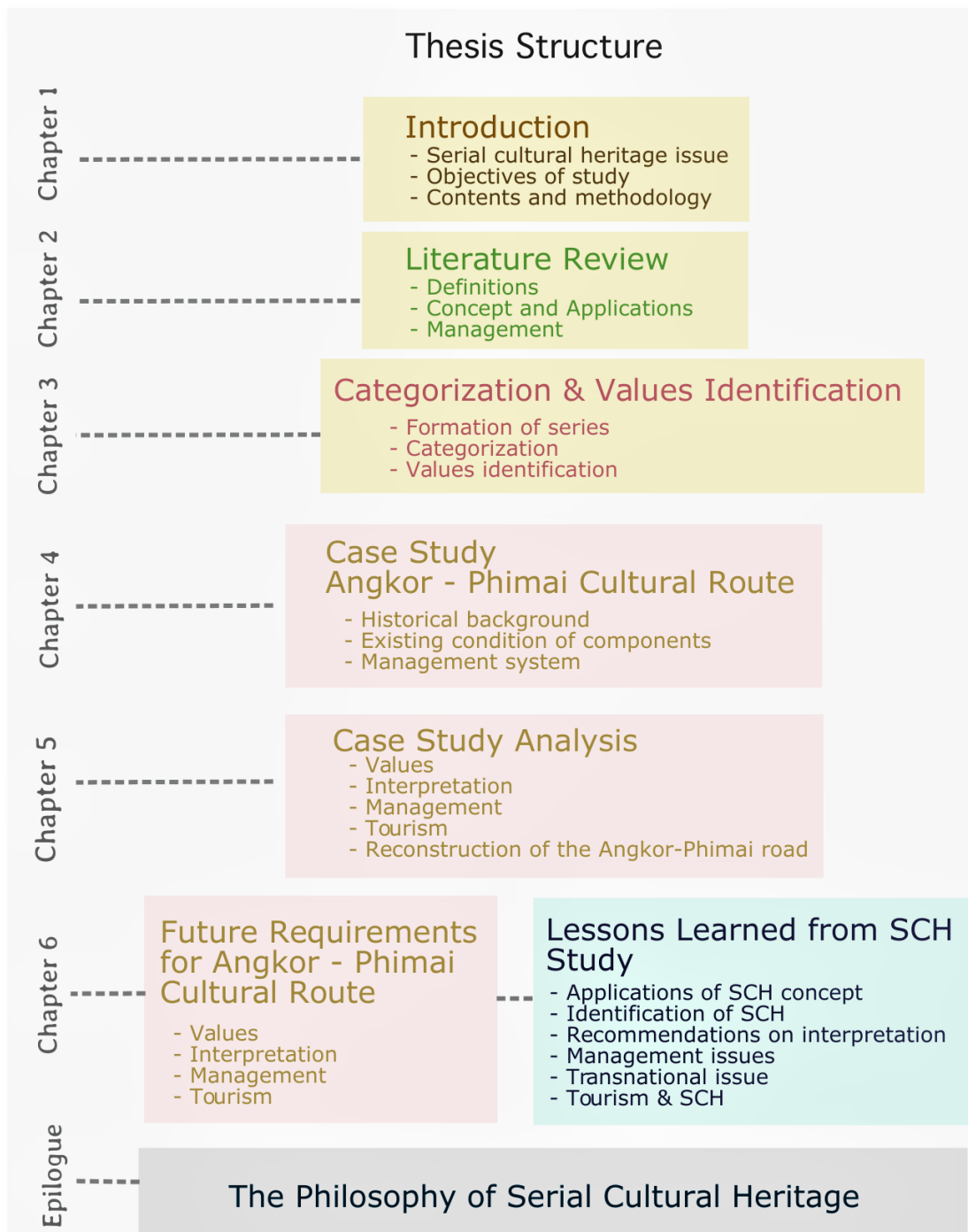


Figure 1: Thesis structure

Chapter 2 Literature Review:

An Overview on Serial Cultural Heritage: from Concept to Management

2.1 Introduction

Cultural heritage, in the context of international conservation, is the term which refers to immovable cultural properties and their settings, or monuments and sites, including its intangible values which are regarded as 'intangible cultural heritage'.

Categorization of cultural heritage has been developed since the international conservation movements in early 20th century initiated by the Athens Charter (ICOMOS, 1931), followed by subsequent charters concerning protection and conservation of monuments and sites. The most influential milestone of the conservation movements is the adoption of the Convention Concerning the Protection of the World Cultural and Natural Heritage, commonly called 'World Heritage Convention', in 1972. Since then, the World Heritage issues have become a global issue that has influenced the world in various circles, for instance, tourism, economics, politics, international relations, etc. New categories of heritage have been developed to be more specific and to comprehensively cover all types of heritage sites.

'Serial cultural heritage' or 'serial cultural property' is one of the new categories which appeared for the first time in the Operational Guidelines for the Implementation of the World Heritage Convention to identify cultural, natural, or mixed heritage properties, which are located in more than one locations but have significant linkage or relationship in natural or cultural aspects, depending on the type of each nominated property. The recognition of serial properties in World Heritage context has opened opportunities for nomination of smaller heritage sites as series with shared values, thus it is regarded by State Parties as means for successful nomination.

This literature review aims to provide an overview on serial cultural heritage, focusing on the concept, development, applications, and management that have been addressed in documents and academic papers prior to the composition of this thesis, in

order to provide a background for further investigation into the issue of serial cultural heritage. The topics to be discussed are:

- Definitions
- Serial cultural heritage concept
- Applications of serial cultural heritage concept
- Management of serial cultural heritage

Conclusion from this chapter is the basis for further investigation into serial cultural heritage issue presented in the following chapters of this thesis.

2.2 Definitions

In order to specify the scope of this research, it is necessary to clarify the following terms which are the keys to further investigation into the issue of serial cultural heritage. It should be noted that there are 2 core terms which have been used interchangeably in several documents, namely, 'cultural property' and 'cultural heritage'. Definitions of these terms, therefore, are essential for further discussions.

The first term to be clarified is 'cultural property', which has been defined and explained in several documents. There are 2 documents which may be considered most important in this respect, firstly, the 1954 Hague Convention and the 1970 UNESCO Convention, in which the definition of 'cultural property' appears in Article I of both conventions, quoted as follows :

2.2.1 Cultural Property

The term 'cultural property' was initially defined in Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954 (UNESCO, 1954) as:

"Article I – The term 'cultural property' shall cover, irrespective of origin or ownership:

- (a) movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites; groups of buildings which, as a whole,*

are of historical or artistic interest; works of art; manuscripts, books and other objects of artistic, historical or archaeological interest; as well as scientific collections and important collections of books or archives or of reproductions of the property defined above;

(b) buildings whose main and effective purpose is to preserve or exhibit the movable cultural property defined in sub-paragraph (a) such as museums, large libraries and depositories of archives, and refuges intended to shelter, in the event of armed conflict, the movable cultural property defined in sub-paragraph (a);

(c) (c) centers containing a large amount of cultural property as defined in subparagraphs (a) and (b), to be known as 'centres containing monuments'."

Later, another definition was made in the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property 1970 (UNESCO, 1970) as:

"Article I - Cultural property means property which, on religious or secular grounds, is specifically designated by each State as being of importance for archaeology, prehistory, history, literature, art or science and which belongs to the following categories:

- a. Rare collections and specimens of fauna, flora, minerals and anatomy, and objects of paleontological interest;*
- b. property relating to history, including the history of science and technology and military and social history, to the life of national leaders, thinkers, scientists and artists and to events of national importance;*
- c. products of archaeological excavations (including regular and clandestine) or of archaeological discoveries;*
- d. elements of artistic or historical monuments or archaeological sites that have been dismembered;*

e. antiquities more than one hundred years old, such as inscriptions, coins and engraved seals;

f. objects of ethnological interest;

g. property of artistic interest, such as:

(i) pictures, paintings and drawings produced entirely by hand on any support and in any material (excluding industrial designs and manufactured articles decorated by hand);

(ii) original works of statuary art and sculpture in any material;

(iii) original engravings, prints and lithographs;

(iv) original artistic assemblages and montages in any material; rare manuscripts and incunabula, old books, documents and publications of special interest (historical, artistic, scientific, literary, etc.) singly or in collections; postage, revenue and similar stamps, singly or in collections; archives, including sound, photographic and cinematographic archives; articles of furniture more than one hundred years old and old musical instruments.”

The key features of cultural property, deduced from these quoted definitions, is that cultural property are tangible objects, both *movable and immovable*, which are culturally important, both religious and secular. Cultural properties range from small objects to large objects that cover vast area, for instance, buildings, historical or archaeological sites.

2.2.2 Cultural Heritage

From the mentioned pioneer legal documents, the scope of cultural property was narrowed down in the 1972 World Heritage Convention, which concerns the protection of the world cultural and natural heritage. In the World Heritage Convention ‘cultural heritage’ is the term used to identify objects to be protected, as follows :

From Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO, 1972):

“1. Definition of the Cultural and Natural Heritage

Article 1

For the purpose of this Convention, the following shall be considered as “cultural heritage”:

monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.”

In this convention, the term ‘cultural heritage’ covers monuments, group of buildings and sites, which are all *immovable objects*. The term ‘cultural property’ does not appear anywhere in the convention, however, the term ‘cultural property’ appears in the “Operational Guidelines for the Implementation of the World Heritage Convention” from the first version in 1978 (UNESCO, 1978), which functions as a complementary document to the World Heritage Convention.

The recent reference on definition of cultural heritage is found in the Council of Europe Framework Convention on the Value of Cultural Heritage for Society, or Faro Convention, which was opened in 2005 and entry into force on 1st June, 2011. The definitions are stated in Article 2 as follows (Council of Europe, 2005) :

“Article 2 – Definitions

For the purposes of this Convention,

- a. *cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time;*
- b. *a heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.”*

These definitions are remarkable that they do not specify the physical characteristics of ‘cultural heritage’ but focuses on its intangible qualities, using the term ‘group of resources’ to represent the heritage based on identification made by *people*. Furthermore, a definition of ‘heritage community’ was included, which has never been found in earlier documents. This may be seen as an indication of trends on present and future conservation movements that considerably involve, or even depend upon, public or group participations.

2.2.3 ‘Cultural Heritage’ and ‘Cultural Property’ in the UNESCO’s World Heritage Related Documents

The adoption of the 1972 World Heritage Convention led to a development of tools for the justification of the Outstanding Universal Value and guidelines for the protection of World Heritage sites and other relevant issues stated in the Convention, thus the “Operational Guidelines for the Implementation of the World Heritage Convention” (to be referred to as “Operational Guidelines” henceforth) was created. The first issue of this document was adopted in 1978 and has since been continually revised by the World Heritage Committee to reflect new concepts, knowledge or experiences. The 1978 Operational Guidelines contained 30 paragraphs, and the latest issue of the document (2017) contains 290 paragraphs. Such remarkable difference in the contents indicates substantial changes concerning the issue of World Heritage in the 4 decades time frame.

It should be noted that, although the World Heritage Convention uses the term 'cultural heritage', the Operational Guidelines uses the term 'cultural property' or 'cultural properties' instead. The document did not give definition for the term 'cultural property' but concentrated on the 'outstanding universal value' (aka OUV) and provided criteria for determination of outstanding universal values for the cultural property and natural property.

Clarification of terms was made by the composition of a document, namely, the Information Document Glossary of World Heritage Terms (UNESCO, 1996), in which all World Heritage related terms were defined in alphabetical order. The term 'cultural heritage' was defined as in Article I of the World Heritage Convention. As for the term 'cultural property', definition is quoted as follows :

"Cultural property

Properties inscribed in the World Heritage List after having met at least one of the cultural heritage criteria and the test of authenticity are referred to as cultural properties."

It should be noted that, in the above quotation, the term 'cultural property' was used based on the World Heritage inscription, therefore, this definition is very limited and remarkably different from definitions provided in previous other legal documents, however, it has been adopted in the Operational Guidelines and has become an accepted term, especially in the contexts of World Heritage nomination and inscription.

2.2.4 Intangible Cultural Heritage

From the above revision of definitions, the application of terms 'cultural heritage' and 'cultural property' is rather inconclusive up to the present. It is, therefore, necessary to investigate into another category of cultural heritage which has been given more attention and consideration in recent years, that is, the 'intangible cultural heritage'.

Intangible cultural heritage plays important roles in the 'living' or 'spiritual' aspects of culture. In October, 2003, the UNESCO has adopted the Convention for the

Safeguarding of the Intangible Cultural Heritage, in which definitions are clearly stated for the term 'intangible cultural heritage' as follows (UNESCO, 2003) :

"Text of the Convention for the Safeguarding of the Intangible Cultural Heritage,

Article 2 – Definitions

For the purposes of this Convention,

1. The "intangible cultural heritage" means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. For the purposes of this Convention, consideration will be given solely to such intangible cultural heritage as is compatible with existing international human rights instruments, as well as with the requirements of mutual respect among communities, groups and individuals, and of sustainable development.

2. The "intangible cultural heritage", as defined in paragraph 1 above, is manifested inter alia in the following domains:

(a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;

(b) performing arts;

(c) social practices, rituals and festive events;

(d) knowledge and practices concerning nature and the universe;

(e) traditional craftsmanship."

The above quoted information indicates the recognition of intangible cultural heritage in world context by UNESCO, which contributes greatly to the overall concept of cultural heritage. By integration of the intangible cultural heritage, the scope of

cultural heritage concept is more comprehensive, which should lead to more profound and meaningful development in cultural heritage values identification, conservation, protection and management.

2.3 Serial Cultural Heritage Concept

Serial cultural heritage is perceived based on the 'concept' of series, in other words, the perception of cultural heritage sites which are 'linked' by certain linkage. Initiation of the concept and its development are presented in the following topics:

2.3.1 Initiation of serial cultural heritage concept

From the above reviews on definition of terms, it should be noted that the characteristics of cultural heritage or cultural property as being 'series' has not been mentioned in any documents. The first appearance of the term 'serial cultural properties' was found in the 1980 Operational Guidelines, therefore, it may be said that the initiation of serial heritage, both natural and cultural, had resulted from the adoption of the World Heritage Convention and the composition of its complementary documents, the Operational Guidelines.

The concept of serial cultural heritage, or serial cultural properties, as applied in the Operational Guidelines, was initially formed as part of the categorization for nomination of cultural and natural heritage to be inscribed in the World Heritage List. The issue of serial cultural heritage, therefore, should begin by reviewing the serial cultural heritage in World Heritage context before proceeding to other relevant studies and documents.

The concept and characteristics of serial World Heritage properties first appeared in the first revised version of the Operational Guidelines, October 1980. Stated in paragraphs 11, 14 and 15 as follows (UNESCO, 1980):

"11. In cases where a cultural and/or natural property which fulfils the criteria adopted by the Committee extends beyond national borders the States Parties concerned are encouraged to submit a joint nomination."

“14. States Parties may propose in a single nomination a series of cultural properties in different geographical locations, provided that they are related because they belong to :

- (i) the same historico-cultural group or*
- (ii) the same type of property which is characteristic of the geographical zone*

and provide that it is the series as such, and not its components taken individually, which is of outstanding universal value.

15. When a series of cultural properties, as defined in paragraph 14 above, consists of properties situated in the territory of more than one State Party to the Convention, the States Parties concerned may in agreement, jointly submit a single nomination.”

The concept of serial cultural heritage in the World Heritage context may be summarized from the above statements that it must :

1. Consist of more than one cultural heritage sites.
2. Be related by socio-cultural aspects or by typological characteristics of the geographical zone.
3. Have outstanding universal value that derives from the series of cultural heritage sites as a whole, not from individual components.

2.3.2 Development of Serial Cultural Heritage Concept

The 1980 Operational Guidelines, as mentioned, was the first document that explicitly applied the phrase ‘*series of cultural properties*’, which was the origin of the term ‘serial cultural property’ or ‘serial cultural heritage’, however, the concept of serial cultural heritage has developed long before that time. In general context, cultural heritage sites do not have to possess Outstanding Universal Value, however, groups of sites which have significant cultural linkage do exist, therefore, the idea, or concept, of serial cultural heritage in general context may be summarized as :

“A set of cultural heritage sites, situated in different geographical locations, that are related in significant aspects, which derives its values from such relationship.”

The protection and conservation of places and properties has existed well before the 18th and 19th centuries around the world. Nevertheless, the recognition of ‘heritage’ in different cultures focused on the values of individual places, groups of buildings, beautiful landscapes, etc. (Jokilehto, 2008, pp. 5-10), each of which has its own values that were appreciated and protected. In some cultures, however, some cultural heritage sites were recognized together as having special values and characteristics, for instance the Five Principal Sacred Mountains of China (Jokilehto, 2008, p. 5), comprising the mountains Taishan, Hua Shan, Heng Shan (Hunan), Heng Shan (Shanxi) and Song Shan (Wikipedia, 2016c). Apart from the five sacred mountains as mentioned, there are groups of Four Sacred Mountains of Buddhism and Four Sacred Mountains of Taoism in China, Buddhist Pilgrimage Sites in India and Nepal, Muslim Pilgrimage to Mecca and Holy Places, etc. In these cases, each place has its own values and distinguished features, but these values become even greater in the perception of people when they are grouped together. This could be considered the ‘serial’ concept for the recognition of cultural heritage that concerns the thematic values of the places or heritage sites regardless of geographical location. The most important series originated in Western culture and has become accepted world-wide is the Seven Wonders of the World.

On international level, the recognition of serial cultural heritage has been developed, although implicitly, along with the international conservation movements. The initiation of international measures for conservation was marked, after the First World War, by the adoption of the UNESCO Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention 1954 (Hague Convention), the first international convention for the protection of cultural properties (Jokilehto, 2008, p. 10). Since that time, several measures for conservation and protection of valuable cultural objects, recognized as ‘cultural heritage’, have been made, and the scope of cultural heritage has continually expanded from movable and

immovable objects including monuments (cultural properties as defined in 1954 Hague Convention) to sites (1956 UNESCO Recommendation of International Principles Applicable to Archaeological Excavations), group of buildings (1972 UNESCO Recommendation Concerning the Protection, at National Level, of the Cultural and Natural Heritage; 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage), historic areas (1976 UNESCO Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas), places (Burra Charter 1979), historic centres, historic gardens (1982 Florence Charter on Historic Gardens), historic towns (1987 ICOMOS Charter for the Conservation of Historic Towns and Urban Areas), cultural landscapes (1992 World Heritage Committee recognition of cultural landscapes as a type of cultural heritage) vernacular heritage (1999 ICOMOS Charter on the Built Vernacular Heritage), historic urban landscape (2005 Vienna Memorandum). On the other hand, the intangible aspects of cultural heritage has also been taken into consideration and concern, as seen in the adoption of 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (Jokilehto, 2008, pp. 10-21).

The mentioned documents indicate the 'idea' on cultural heritage that has expanded from single objects to group of objects and toward much wider scope such as towns and landscapes, which are the recent recognition of cultural heritage. The inclusion of intangible heritage in the international conservation context has completed the idea, or concept, of cultural heritage that it must comprise both tangible and intangible values.

Nevertheless, the term 'serial cultural property' appeared rather early as mentioned that it was included in the 1980 Operational Guidelines for the Implementation of the World Heritage Convention. The specification of 'serial property' in the document was intended for the purpose of nomination, however, during that time, the ideas on 'sites', 'historic areas' and 'places' have already been known and accepted. These terms recognized cultural heritage in wider scope and may be said that they implied 'open ended' idea on cultural heritage, and all of which were based on

intangible values of each site, area or place, that extended beyond the 'object'. It can be said that, when conservation concept was developed to cover a wider scope, such concept naturally inclined toward or involved the concept of serial cultural heritage, for instance, cultural landscape and historic urban landscape generally involve more than one representative heritage sites, thus they are 'series' by nature.

2.4 Applications of Serial Cultural Heritage Concept

The serial cultural heritage concept has been applied since ancient times as seen in China and other cultures when referring to certain groups of cultural heritage. At present, however, the concept has mostly been recognized and applied in the nomination and inscription of cultural World Heritage Sites. Therefore, this topic is divided into 2 parts, firstly, the application of serial cultural heritage in World Heritage context and the application of serial cultural heritage in general context.

2.4.1 Applications of Serial Cultural Heritage in World Heritage Context

As mentioned earlier that the purpose of specification and categorization of serial cultural properties in the Operational Guidelines was for the purpose of nomination and inscription of World Heritage Sites, therefore, the Operational Guidelines and related documents on World Heritage nominations are the most important sources to be reviewed. Since the 1980 Operational Guidelines, which was the first revised version of the original documents issued in 1978, there have been as many as 26 revisions of the document to the present 2017 version, which is the longest and most detailed version. The most up-to-date definition of serial world heritage property is stated in the Operational Guidelines, 2017, (UNESCO, 2017, pp. 37-38) as follows :

“III.C Requirements for the nomination of different types of properties

Transboundary properties

134. A nominated property may occur:

a) on the territory of a single State Party, or

b) on the territory of all concerned States Parties having adjacent borders (transboundary property).

135. Wherever possible, transboundary nominations should be prepared and submitted by States Parties jointly in conformity with Article 11.3 of the Convention. It is highly recommended that the States Parties concerned establish a joint management committee or similar body to oversee the management of the whole of a transboundary property.

136. Extensions to an existing World Heritage property located in one State Party may be proposed to become transboundary properties.

Serial properties

137. Serial properties will include two or more component parts related by clearly defined links:

- a) Component parts should reflect cultural, social or functional links over time that provide, where relevant, landscape, ecological, evolutionary or habitat connectivity.
 - b) Each component part should contribute to the Outstanding Universal Value of the property as a whole in a substantial, scientific, readily defined and discernible way, and may include, inter alia, intangible attributes. The resulting Outstanding Universal Value should be easily understood and communicated.
 - c) Consistently, and in order to avoid an excessive fragmentation of component parts, the process of nomination of the property, including the selection of the component parts, should take fully into account the overall manageability and coherence of the property (see paragraph 114).
- and provided it is the series as a whole – and not necessarily the individual parts of it – which are of Outstanding Universal Value.

138. A serial nominated property may occur :

- a) on the territory of a single State Party (serial national property); or
- b) within the territory of different States Parties, which need not be contiguous and is nominated with the consent of all States Parties concerned (serial transnational property)

139. Serial nominations, whether from one State Party or multiple States, may be submitted for evaluation over several nomination cycles, provided that the first property nominated is of Outstanding Universal Value in its own right. States Parties planning serial nominations phased over several nomination cycles are encouraged to inform the Committee of their intention in order to ensure better planning.”

The latest version of the Operational Guidelines (2017) as quoted above clearly defined the characteristics of transboundary properties and serial properties, which are separate categories under the title “different types of properties”. It can be concluded that :

1. There are 2 categories which possess special characteristics, namely, transboundary properties and serial properties.
2. A transboundary property must occur on the territory of all concerned States Parties having adjacent borders.
3. A serial property must possess the following characteristics :
 - Comprise two or more component parts related by clearly defined links.
 - Component parts should reflect cultural, social or functional links over time that provide, where relevant, landscape, ecological, evolutionary or habitat connectivity.
 - Each component part should contribute to the Outstanding Universal Value of the property as a whole.
 - The process of nomination of the property should take fully into account the overall manageability and coherence of the property.

- The series as a whole, not necessarily the individual parts of it, are of Outstanding Universal Value.

The above summary points to one aspect of consideration, that is, the manageability and coherence of the serial property, which have become critical to the nomination apart from the attributes of the property itself.

It should be noted that the most important characteristic of a serial property is that it is “a linked series of components”. It may be said that, in the “serial” perspective, each area of the property is a “component” or part of the entire property, although in reality each component may have its own completeness as a property, with its own cultural or natural values, or some may have already been listed as a World Heritage Site.

Furthermore, not only the linkage of the component, but the results of such linkage should be presented to form the values of the serial property as specified in the 2015 Operational Guidelines.

In *Preparing World Heritage Nominations* (UNESCO, 2011, p. 50), the categorization of properties was clearly illustrated, which is worth studying although some details differed from those of the 2017 Operational Guidelines. The serial properties were categorized into 2 types, with the same basic feature that a serial property must consist of properties situated in more than one area. Such properties were then categorized as follows :

1. Serial national property : serial properties which consists of a linked series of components situated in more than one area within one country.
2. Serial transnational property : serial properties which consists of properties situated in more than one area, some of which are shared between more than one country. Properties in this category can be categorized into 3 types :
Type 1 : A linked series of components, each of which is situated in different country with shared border.

Type 2 : A linked series of components, some of which are shared between more than one country.

Type 3 : A linked series of components, some of which are situated in countries that do not have a shared border.

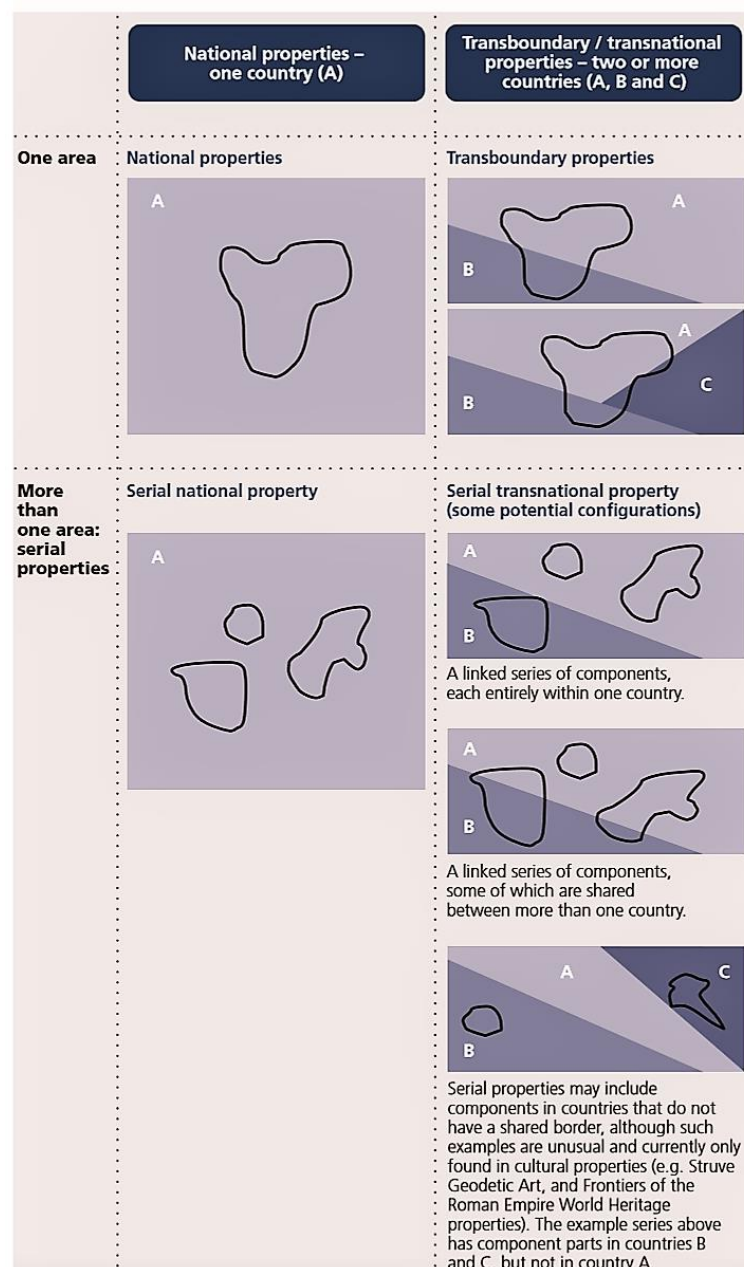


Figure 2: Types of World Heritage serial properties. Credit: UNESCO, Preparing World Heritage Nominations. 2011.

Type 3 of the serial transnational property is the most interesting type since it covers the areas, not only across the border, but overpassing the countries with shared border into the territory of another country without shared border. Examples of this type are the Struve Geodetic Arc (Belarus, Estonia, Finland, Latvia, Lithuania, Norway, Republic of Moldova, Russian Federation, Sweden and Ukraine, inscribed in 2005) and Frontiers of the Roman Empire (Germany and United Kingdom, inscribed in 1987).

Concerning World Heritage serial nominations, some literature provides an overall viewpoint to the issue that, although the serial and transcontinental nomination have become a trend and positive approach in international cooperation, interdisciplinary dissemination and sustainable preservation of cultural heritage, problems have arisen from lack of qualified professionals and technicians, as well as lack of development of relevant policies, strategies, and conservation and management plans (Stokin, 2015). The problems as mentioned occur not only in the nomination preparation stage but have become principal problems to a large number of World Heritage sites. Stokin raised several cases in Slovenia, for instance, the mercury mining sites of Almaden and Idrija, the Dinaric Karst, and the Silk Roads, a transnational World Heritage site, to exemplify the issues of problems and prospects of serial World Heritage nominations. It should be noted that, although concerns about the active nomination of cultural heritage sites to the World Heritage List, which has become critically overloaded with newly added properties, have been recognized, attempts have been continuously and earnestly made to ensure successful inscription of nominated sites, for which serial nominations have been used as a strategy for the purpose (Stokin, 2015).

The Silk Roads serial transnational World Heritage Site appears to be one of the most widely discussed cases due to its long distance and involvement with several State Parties. In such cases, Information Management Systems (IMS) should be applied to assist State Parties, site managers and other stakeholders in conservation, management, and monitoring of the cultural heritage. The Silk Roads

case, a representative of serial cultural World Heritage properties, was raised to point out the requirements of good coordination among State Parties, appropriate tools and methodology to properly document the sites, therefore, a specific system called CHRIS (Silk Roads Cultural Heritage Resource Information Systems) was developed for the preparation of Silk Roads nomination dossier and serves as first baseline information for future monitoring and reporting after the inscription of the Silk Roads Site on World Heritage List. The CHRIS system is an application of Geospatial Content Management Systems (GeoCMS) that is very useful in data and information collection, analysis and interpretation, and monitoring (Vileikis, 2012). Although the article is highly technical, it provides useful information concerning serial cultural heritage, especially, the serial cultural heritage sites which comprise large number of components. Nevertheless, such systems may not be necessary for smaller series, or series which are situated in one country of which the components are not located too far apart.

Previous works on cultural routes which were conducted in Thailand are mostly related to World Heritage context, the most important of which was the submission of Phimai cultural route to the World Heritage Tentative List, resulting in the inclusion of the series to the list under the name “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” (UNESCO World Heritage Centre, 2004b). The proposed series comprises 3 temples namely, Prasat Phimai, Prasat Phanomroong (Phnom Rung) and Prasat Muangtam, and associated rest houses and hospitals along the route. This series is related to the case study of this thesis, which will be discussed and analyzed in later chapters.

Consequent to the inclusion of Phimai cultural route to the World Heritage Tentative list is a research on Angkor – Phimai cultural route, called “Living Angkor Road” in a research led by Asst. Prof. Dr. Panjai Thanthassanawong (ปานใจ ธารทัศน์วงศ์ และคณะ, 2550 (2007)) in 2007. The research was a multi-disciplinary research project that utilized the knowledge and technologies from archaeology, anthropology, remote sensing, GIS, geo-physics, and information technology to

study the ancient road from Angkor to Phimai. The research, however, attempted to gain physical information of cultural heritage sites along the route, both in Thailand and Cambodia, rather than viewing the route in serial cultural heritage perspective. Nevertheless, the research is, at present, the most detailed source of information on the physical characteristics of the cultural heritage sites as mentioned, and provides valuable information on sites in Cambodia, which are difficult to conduct field survey at present due to political reasons.

Another interesting work conducted jointly between Thailand's Fine Arts Department and a group of Malaysian scholars is the drafting of the Tentative Bibliography for The Cultural Route of Chaiya, Thailand to Kedah , Malaysia for Tentative List of the World Heritage (Fine Arts Department), supported by and academic paper on Archaeology of Bujang Valley and Patani Area and Possible Trade Connection via Trans-peninsular Route (2nd – 13th CAD) by Dr. Nik Hassan Shuhaimi Nik Abdul Rahman (Nik Hassan Shuhaimi Nik Abd. Rahman), which are parts of the preliminary preparation for submitting the Chaiya – Kedah cultural route in southern Thailand to the World Heritage Tentative List. The paper provides information on cultural linkage between Malaysia's Bujang Valley and Thailand based on archaeological evidence which strongly indicates the existence of an ancient trade route. These mentioned works on Phimai and Chaiya cultural routes, indicate Thailand's interest in cultural routes' potential for nomination to the World Heritage List.

2.4.2 Applications of Serial Cultural Heritage in General Context

Applications of serial cultural heritage concept in general context are recognized when the concept is applied to cultural heritage for certain purposes, both functional and symbolical. The symbolical application is the categorization of cultural heritage sites for passive purposes such as didactic or symbolic purposes, for instance, as previously mentioned, the Chinese often categorized their heritage, either tangible or intangible, into groups or sets, for instance, the Five Principal Sacred Mountains (Wikipedia, 2016c), or, as for the intangible cultural heritage, the Liao-Fan's Four Lessons (Wikipedia, 2016a),

etc. 7 Wonders of the World (Wikipedia, 2016d) is also included in this symbolical application category.

On the other hand, the functional application of serial cultural heritage concept that has been widely and continually used can be seen in tourism. The planning of tourism routes, themes and programmes applies serial cultural heritage concept for the objectives of interpretation, and tourism experience that eventually lead to economic benefits.

Tourism is a dynamic industry that requires continual development and expansion to attract diverse markets. New segments such as cultural tourism, heritage tourism, wine tourism, etc. have been developed to serve different groups of tourists. In cultural tourism segment, the 'cultural routes' or 'theme routes' which involve visits to tourist attractions in different locations based on various themes e.g. whisky trails, wine routes, or the Silk Roads (Puczkó, 2011, pp. 131-132), can be considered one of the direct applications of serial cultural heritage concept.

It is interesting to observe, from tourism point of view, that cultural routes are 'created' for the purpose of tourism success but, at the same time, has to take into account the cultural identity of the community. The theme should be easy to identify, relatively widely recognized and self-evident, but it should not narrow down too much the scope of attractions that may be incorporated in the route, because that may also limit its appeal (Puczkó, 2011, p. 139).

The themes of cultural routes are proposed in Trailing Goethe, Humbert, and Ulysses : Cultural Routes in Tourism (Puczkó, 2011, pp. 139-140) as follows :

"The themes of cultural routes may vary widely, but the themes are most frequently related to one of the cultural areas listed here :

1. *A time period (e.g., Northern Bronze Age Route)*
2. *A Historic event (e.g., UNESCO's aforementioned Slave Route)*
3. *Religious heritage (e.g., the Route of the Jewish Community in Europe, 2004)*

4. *Industrial heritage (e.g., German Route of Industrial Heritage, 2004)*
5. *Social heritage/value (e.g., Freedom Trail, Boston, 2004)*
6. *Cultural heritage/value (e.g., the Council of Europe Routes of Humanism)*
7. *A school of art and/or a style of architecture (e.g., the Council of Europe Baroque Route, 2004)*
8. *Common geographic property/location/identity (e.g., German Alps Route)*
9. *Local traditions (e.g., the Route of Rural Habitat by the Council of Europe)*
10. *A product/manufacturing (e.g., Cheese Route Bregenzerwald)*
11. *A well-known historic personality or artist (e.g., Goethe Route)"*

Here we notice the 'ideas' on creating cultural routes that may be identified with the 'socio-cultural' or 'typological' relationship between components of a series as specified in the previously quoted Operational Guidelines. However, the creation of cultural routes does not depend on the 'outstanding universal value' but on thematic relationship that could serve the purpose of tourism that aims for satisfactory experiences of visitors, therefore, several factors have to be considered including transportation, restaurants, accommodation, etc. apart from the values of cultural heritage sites.

2.5 Management of Serial Cultural Heritage

Cultural heritage management is a science which comprises conservation of architecture and communities, art and culture studies, and management (ปิ่นรัชฎ์ กาญจนะจิติ, 2552 (2009), p. 34). It is an essential part of conservation that it provides means for making conservation useful and beneficial in several aspects, for instance, cultural, political, economic, etc.

Since recognition and perception on cultural heritage has substantially expanded from individual monuments and sites to encompass much wider scale and scope e.g. cultural landscapes, indigenous communities, intangible cultural heritage, and serial cultural heritage, therefore, it is necessary to review the issue of management,

especially the management of serial cultural heritage, which is the topic of this thesis, to find out its special characteristics, problems, and means for problem-solving or improvements.

2.5.1 Cultural Heritage Management Concept

Cultural heritage has been increasingly important to all societies, and the range of what is regarded as heritage has broaden significantly over the last half-century to include, apart from individual monuments and buildings, urban centres, archaeological sites, industrial heritage, cultural landscapes, and heritage routes. Furthermore, it has been recognized that heritage places are not isolated but they are places where social and cultural factors have been and continued to be important in shaping them. Management, therefore, has to involve private and public stakeholders and authorities rather than being managed solely by a public organization as in former times (UNESCO, 2013).

Although the scope, or range of cultural heritage has broadened, the main objective of cultural heritage management is, more or less, unchanged, that is, cultural heritage management focuses on the conservation of cultural heritage values and the use of such values to serve intended purposes. Cultural heritage can be used in various aspects (เป็นวัชฎ์ กาญจนนัฐิ, 2552 (2009)), mainly:

- Culture: The intrinsic values of cultural heritage makes the heritage itself important as part of culture of nations or communities.
- Politics and administration: Cultural heritage places act as symbol of nations or cultures.
- Economics: Cultural heritage helps generate economical values, as seen most frequently in cultural tourism.

2.5.2 Values-based Approach to Cultural Heritage Management

Value-based, or values-based management approach has been developed around late 19th century in business circle, however, it has become widely accepted and

practiced in the beginning of 21st century, especially when conventional management approaches failed to cope with corporate expansion and increasing complexity of the present age of globalization and technological advancement. In heritage conservation, values-based management has been applied as means towards sustainability in conservation, especially since the scope of heritage has considerably expanded from individual heritage place to large-scale landscape, districts, historic towns, and serial cultural properties.

2.5.2.1 What is value-based management

Value-based management, in its original form, is the management approach that ensures corporations are run consistently on value. This management approach comprises 3 principal elements:

1. Creating value (ways to actually increase or generate maximum future value).
2. Managing for value (governance, change management, organizational culture, communication, leadership).
3. Measuring value (values identification).

Value-based management aims to provide consistency of:

- the corporate mission (business philosophy),
- the corporate strategy (courses of action to achieve corporate mission and purpose),
- corporate governance (who determines the corporate mission and regulates the activities of the corporation),
- the corporate culture,
- corporate communication,
- organization of the corporation,

- decision processes and systems,
- performance management processes and systems, and
- reward processes and systems,

with the corporate purpose and values a corporation wants to achieve (normally: maximizing shareholders value), ("Value Based Management ", 2017).



Figure 3: Value Based Management model. Credit: www.valuebasedmanagement.net

The aforementioned principles of value-based management show that value-based management depends on *corporate purpose and corporate values*, however, values in business are usually economic oriented (shareholder value), whereas other values, for instance, social values and public benefits (stakeholder value), are regarded in lower priorities.

2.5.2.2 Values-based management in cultural heritage conservation

It is interesting to note that, in conservation, the word 'values' in values-based management is usually spelled in plural form, whereas in business term 'value' is spelled in singular form. This spelling difference suggests the perception on values in cultural heritage conservation that there are several categories and aspects of value which must be considered, and which are equally important, unlike its business counterpart that

holds shareholder value as the most important. The author, therefore, decides to use the term values-based management in this thesis henceforth.

In values-based management approach, the heritage values are key importance, and the conservation of those values is the goal, or shared mission. Regarding values of heritage, it can be said that all subjects that can be attributed to a heritage building (or, a cultural heritage place – author) can be called values ("Values-based Management ", 2017). The *values-based management process uses heritage value to guide decision making* about historic places. The Guidelines for Implementing Context Studies and Values-Based Management of Historic Places (Heritage Branch, 2017), interestingly points out, "*When beginning a values-based management system, it is best to have an understanding of the heritage values of the community as a whole before trying to understand the significance of individual places.*" This is remarkably contrasting with conventional conservation concept that was top-down (conservation policy, plans, and decisions generally come from the government or local authority), and site-centric, (an individual heritage place plays the principal role and its environment, setting, or immediate community (aka. core community), play supportive roles), (see Figure 4).

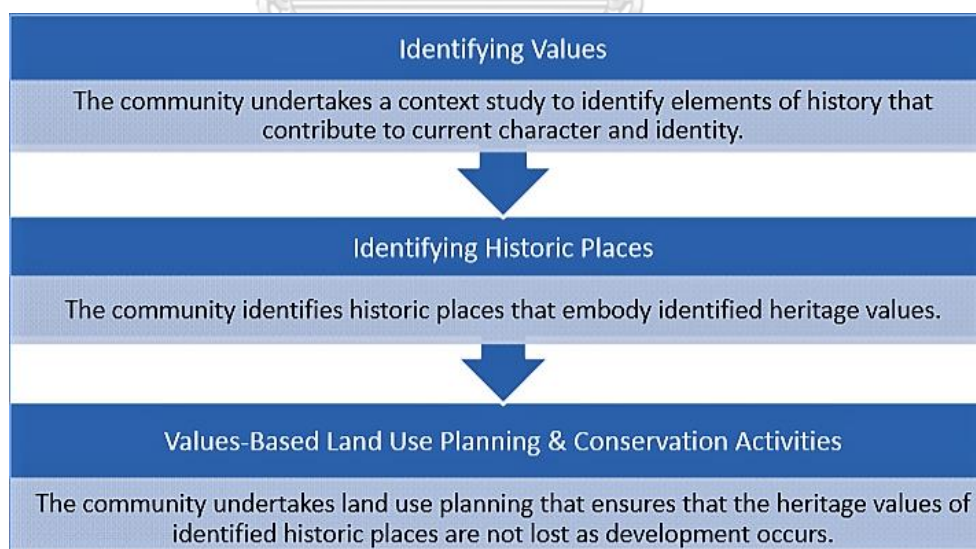


Figure 4: Values-based management process for historic places. Credit: Guidelines for Implementing Context Studies and Values-Based Management of Historic Places: <https://www.for.gov.bc.ca>, 2017).

Characteristics of values-based conservation are summarized by Dr. Yongthanit Pimonsathean, as in the following table (Pimonsathean, 2017):

Table 1: Comparison between Traditional Top-down Conservation and Values-based Conservation Approaches

Traditional Top-down	Values-based
Centralized	Decentralized
Bureaucratic procedure	Performance-based
Antiquities Law	National Heritage Law
Executive judgement	Nomination process
Government property	Private property
Managed by government	Various management forms

It can be seen from the table that traditional conservation and management approach relies heavily on the government, or the state, from policy setting to management of the heritage, whereas values-based conservation and management approach distributes responsibilities to the people who are involved with the heritage, or stakeholders. It can be said the values-based approach is a bottom-up, community-driven approach rather than an expert-led one (Clark, 2014). It can be said, therefore, that the main advantage of values-based management is that this approach allows the community to involve with conservation process from the beginning, leading to better understanding and appreciation of the cultural heritage values, which should ensure sustainability in conservation and protection of cultural heritage. Ideally, this approach takes all values and stakeholders into account, aiming to create an environment of mutual collaborations in heritage conservation which is integrated into the community's development and evolution over time.

The aforementioned concept and implementation process, which have become the most preferred approach to heritage management, is argued by Ioannis Poullos (Poullos, 2010) that it is not suitable for all types of heritage. Poullos pointed out that the values-based approach works well for heritage sites of which functions have

discontinued, but is not applicable to living heritage sites that still maintain their original function as continually reflected in the process of its spatial definition and arrangement. The values-based approach, although attempting to place people at the core of conservation and consider both tangible and intangible values of the heritage site, generally ended up with one leading managing authority, or conservation professionals, who influenced the entire planning and implementation process, and place the priority of physical attributes of the sites over intangible values. He proposed a suitable approach for living heritage sites called “living heritage approach”, and compared the difference between values-based approach to living heritage approach as quoted:

“A values-based approach mostly sees heritage as a product, and sees any change in the fabric of this product as something to be avoided, whilst a living heritage approach treats heritage as a process, considering change of the fabric as an inseparable part of this process.” (Poulios, 2010, p. 181)

It should be noted that the ‘living heritage approach’ that Poulios proposed sympathizes with *traditional* maintenance practices that allow change and replacement of materials, which may be the same material as the original or different ones, or even total physical renewal, which he quoted the case of renewal of Shinto shrine buildings in Japan. He concluded that the values-based approach and living heritage approach are different ways of looking at ‘authenticity’, and that conservation should move towards a completely different context of understanding and safeguarding heritage, shifting the focus from protection towards creation (Poulios, 2010, p. 182). However, it should be considered whether the values-based approach and the ineffectiveness of living heritage management are relevant, in other word, is it logical to conclude that values-based approach is not applicable to living heritage sites since there are several other factors to be considered for success or failure of conservation, likewise, the proposed living heritage approach appears to focus on change of materials and physical features, which leads to other points of concern? This issue will be investigated further in this thesis.

2.5.3 Management of Serial Cultural Heritage

Serial cultural heritage is a set of cultural heritage sites which are located in different locations, therefore, management of serial cultural heritage is a challenging issue that have to be specifically considered.

An interesting overview of serial properties management is seen in the Proceedings of 2009 IUCN Workshop under the topic 'Serial Natural World Heritage Properties – Challenges for Nomination and Management (Engels, 2009, p. 8), which, although intended for serial natural World Heritage properties, is also applicable to serial cultural heritage in both World Heritage and general contexts. It is pointed out in the literature that the crucial aspect of management of serial properties is that it must be “functioning management” which include the management at the component part level and the coordination between the component parts. It is recommended that *“To achieve joint management, the OUV (or values – author) has to be translated into a shared set of overall goals and subsequently into tangible and measurable objectives for the component parts. A joint approach to define the objectives is advisable, but not all objectives need to be similar for all component parts that make up the serial site. Based on the objectives, a set of indicators can be defined that can be used to measure the management performance and determine whether or not the objectives are being met.”*

It can be concluded from this recommendation that management of serial heritage, be it natural or cultural, should comprise:

1. A successful joint management approach that include both component part level and coordination between component parts, or integrative level.
2. A shared set of overall goals, based on the values of the heritage.
3. Subsequent objectives for the component parts, which need not be similar but depend on the characteristics and requirements of each individual component.
4. A set of indicators for measuring the management performance.

In World Heritage Context, management system for serial cultural World Heritage Sites is set out in UNESCO's Managing Cultural World Heritage (UNESCO, 2013), that, *"there should be a management system at the level of the whole property that should ensure communication and coordination between all component parts, in particular in relation to:*

- *The harmonization of management of all the component parts to meet a set of shared objectives of conserving potential Outstanding Universal Value;*
- *The Identification of and response to threats to the property; and*
- *The coordination of monitoring and reporting, in particular in relation to the requirements of the World Heritage Convention."*

It should be noted that, for serial cultural heritage in general context, the last set of requirements, monitoring and reporting, does not have to follow the regulations or standards of World Heritage but could be based on national or local requirements. However, the monitoring and reporting, or recording, must always be included as part of the management system.

Apart from these overviews of serial heritage management, there are recommendations on serial cultural heritage management, which specifically concerns the Silk Road World Heritage Site, one of the most widely discussed serial heritage due to its long distance and involvement with several State Parties, written for the purpose of tourism. The Recommendations for Effective Heritage Management on the Silk Road (World Tourism Organization (UNWTO), 2013) are:

- Provide quality visitor experiences that do not degrade or damage the property's natural or cultural values.
- Deliver holistic planning, with well integrated stakeholder participation for long-term sustainability.
- Identify nodes (large cities) along the Silk Road, the segments of routes connecting them and the corridors.

- Collaborate on trans-national approaches to strengthen Silk Road tourism heritage brand and offer.
- Share skills, expertise and knowledge to avoid duplication, build on strengths and implement coordinated management frameworks regarding sustainable tourism, conservation, education, research, development and interpretation.
- Develop appropriate standards and protocols e.g. boundaries, buffer zones, site selection, etc.
- Implement monitoring systems at local, national and transnational levels.
- Provide high quality, consistent and informative heritage communication.
- Invest in Intangible Cultural Heritage e.g. traditional handicraft, gastronomy, rituals, music, etc, to enhance visitor experience and contribute to intercultural understanding and exchange.
- Embrace technology and innovation in order to provide publicly accessible archive that people from around the world can visit and learn.

On technological aspect, an academic paper proposed that Information Management Systems (IMS) should be applied to assist State Parties, site managers and other stakeholders in conservation, management, and monitoring of the cultural heritage. The Silk Roads case, a representative of serial cultural World Heritage properties, was raised to point out the requirements of good coordination among State Parties, appropriate tools and methodology to properly document the sites, therefore, a specific system called CHRIS (Silk Roads Cultural Heritage Resource Information Systems) was developed for the preparation of Silk Roads nomination dossier and serves as first baseline information for future monitoring and reporting after the inscription of the Silk Roads Site on World Heritage List. The CHRIS system is an application of Geospatial Content Management Systems (GeoCMS) that is very useful in data and information collection, analysis and interpretation, and monitoring

(Vileikis, 2012). Although the article is highly technical, it provides useful information concerning serial cultural heritage, especially, the serial cultural heritage sites which comprise large number of components. Nevertheless, such systems may not be necessary for smaller series, or series which are situated in one country of which the components are not located too far apart.

2.5.4 Problems in Serial Cultural Heritage Management

It is necessary to focus on the management of serial cultural heritage to find out whether there are specific problems, however, the management problems on components level are not different from those that individual heritage sites are facing, but on serial or integrative level, the emphasis on the 'management system', is very strong. It is necessary for serial heritage sites to have appropriate management system that involves the commitment of qualified professionals and technicians, as well as development of relevant policies, strategies, and conservation and management plans (Stokin, 2015, p. 28) Lack of the system is the major problem for serial heritage sites, including those already on World Heritage List.

2.6 Conclusion

From the reviewed literature and documents, the author has decided that it would be more appropriate to refer to the subject of this study as 'serial cultural heritage' based on the definition in the 1972 World Heritage Convention and the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage. Considering the nature of serial heritage, which greatly and inseparably involves the interpretation and intangible values of each heritage site, the term 'serial cultural property' as applied in the Operational Guidelines is rather limited and insufficient, especially since it has been limited to the World Heritage inscription, which is not the main purpose of this research. The cases to be studied and discussed, therefore, will be referred to as 'serial cultural heritage sites' henceforth.

The serial cultural heritage concept has developed along with the concepts on protection and conservation of cultural heritage, which have become more and more

inclusive over time. The integration of intangible cultural heritage into the international conservation context is the recent benchmark, which is greatly supportive to serial cultural heritage concept that is basically the combination of 'story' and 'place'. It can be said, therefore, that the conservation movements have reached a stage of completion with the recognition of intangible cultural heritage and the adoption of the Convention for the Safeguarding of the Intangible Cultural Heritage.

The application of serial cultural heritage concept in the World Heritage context has been widely accepted and has played an important role in nomination and inscription of cultural heritage sites to the World Heritage List. The categorization of serial cultural properties has been laid out clearly in the Operational Guidelines, which have developed over time to become more detailed and specific. The number of inscribed serial World Heritage Sites indicates popularity and usefulness of serial nominations that has opened more possibilities for successful inscription.

In general context, the serial cultural heritage concept has been known since ancient times as seen in the recognition and grouping of cultural heritage sites in various cultures. This can be viewed as the symbolical application of the concept by categorizing cultural heritage sites for passive purposes such as academic and symbolic purposes.

On the other hand, functional application of serial cultural heritage concept is most frequently seen in tourism. The creation of tourist cultural routes that combines 'story' and 'place' for the good impressions and pleasant experiences of tourists has been developed successfully and continually. The growing and dynamic cultural tourism segment, however, requires factors of consideration that differ from the consideration on "outstanding universal value" in World Heritage context. Distance, services and facilities, accommodations, costs, etc. must be considered for the planning of the routes, therefore, tourist cultural routes are generally based on 'theme' rather than following the actual cultural routes that cover long distance or extending across the borders between countries.

On management aspect, the reviewed documents and literature provide overall ideas for cultural heritage and serial cultural heritage management. Nevertheless, there are still gaps and arguments, especially on the issue of values-based management approach which require further investigation. Furthermore, it should be noted that the reviewed literatures are mostly based on Western and foreign cultures, therefore, study of the cultural heritage management in Thai context must be carried out in order to gain wider perspectives on the issue.

As mentioned in previous literature, it has been realized that management of serial cultural heritage is more challenging than management of individual cultural heritage sites, requiring more work and involving a larger number of stakeholders. Information technology, therefore, must be applied to enable publicly accessible information that would enhance understanding and appreciation of serial cultural heritage.

The application of values-based management approach should be useful for conservation and management of individual components of the series, however, on integrative level, the applicability and suitability of this approach require further study. Although it is ideal to give concern for all values of the heritage site in all levels, there are still questions about practicality and possibility of this approach.

In conclusion, serial cultural heritage is the issue which has rather been disregarded outside the World Heritage context despite its prevailing existence and roles. This issue has not received much interest thus there is not much relevant literature apart from that which is related to World Heritage. Nevertheless, by reviewing existing literature and documents, the author has obtained valuable and inspiring information that are useful for further investigation into the serial cultural heritage issue, which will be clarified and elaborated in this thesis.

Chapter 3 Serial Cultural Heritage Categorization and Values Identification

3.1 Introduction

From the concept and other general aspects of serial cultural heritage covered in the previous chapter, Literature Review, this chapter proceeds to investigate into more specific issues, thus the topics to be addressed are the categorization and values identification of serial cultural heritage.

For any subject of study, categorization is a system that facilitates further investigation and consideration on treatments, however, since there have not been previous studies and literature on this matter, the author had to set up a system of categorization based on existing documents concerning serial cultural heritage, among which the World Heritage List is the most relevant and provides pertinent information. Other relevant sources of information are, for instance, tourist programmes, which provide ideas on the recognition and applications of serial cultural heritage in tourism aspect; and other sources e.g. religious and historical documents. These sources were studied and summarized into a categorization system for serial cultural heritage.

Values identification of serial cultural heritage is the issue discussed in this chapter following the categorization, since appropriate categorization of serial cultural heritage sites consequently leads to reliable values identification, which is the first and most important stage in cultural heritage conservation and management.

Topics covered in this chapter are:

- The formation of cultural heritage series
- Categorization of serial cultural heritage
- Serial cultural heritage values identification

Details of each topics are presented as follows:

3.2 The Formation of Cultural Heritage Series

Basically, a serial cultural heritage site must comprise 2 or more components which are related by significant cultural linkage, as has been mentioned and concluded in the previous chapter (see 2.3 Serial Cultural Heritage Concept). This can be said that a serial cultural heritage site is 'formed' by 2 or more cultural heritage sites, in other words, 2 or more cultural heritage sites are 'grouped' under certain condition, that is, the cultural linkage.

Grouping is a psychological characteristic of human mind, which has an innate disposition to perceive patterns based on certain rules. The principles of grouping, in Gestalt laws of grouping, are organized into 6 categories: Proximity, Similarity, Good Form, Closure, Common Fate, and Continuation, (Sincero, 2017).¹

The mentioned principles are clues to the idea behind the formation of cultural heritage series, that is, cultural heritage sites which resemble each other in certain aspects tend to be perceived as a group, or series. Such resemblance or similarity, consequently, is the significant cultural linkage, thus it can be said that cultural heritage series are formed of several individual cultural heritage sites by their resemblance in

¹Categorization of Grouping

1. Proximity: objects or shapes that are close to one another appear to form groups (spatial relationship).
2. Similarity: objects or shapes that physically resemble each other are perceived as group (physical resemblance relationship).
3. Good form: the mind tends to group together forms of similar shape, pattern, colour, etc., even in cases where two or more forms clearly overlap, when these elements form a pattern that is regular, simple, and orderly (mental preference of regularity that leads to creation of meaning).
4. Closure: the mind tends to see complete figures or forms even if a picture is incomplete, partially hidden, or if part of the information needed to make a complete picture in our mind is missing (natural recognition of familiar patterns).
5. Common fate: when visual elements are seen moving in the same direction, the mind perceives them as belonging to the same group even if the shapes and forms of each element are not clearly recognized (directional relationship).
6. Continuation: when there is an intersection between two or more objects, the mind tends to perceive each object as a single uninterrupted object (visual familiarity recognition).

cultural values. This values-based resemblance amongst elements, or components, in the same series, results in a common meaning of the series that people can perceive, learn, and remember.

Consequently, it is natural that serial cultural heritage exists in all cultures of the world due to the tendency of human minds to group things together as mentioned. The Seven Wonders of the World, for instance, is one of the most famous and universally recognized series, their resemblance is the manifestation of human creative ability and great aspiration, the representation of human feats of art and architectural creation.

3.3 Categorization of Serial Cultural Heritage

The issue on categorization of serial cultural heritage addresses serial cultural heritage in 2 contexts, firstly, World Heritage context and, secondly, general context. The reason that World Heritage context comes first because the concept of 'serial' properties was first conceived in the World Heritage circle. Serial cultural heritage in these 2 contexts are discussed and categorization systems are analyzed and proposed separately before arriving to a comprehensive categorization system for serial cultural heritage that covers both contexts at the end of this part.

3.3.1 Serial Cultural Heritage in World Heritage Context

The World Heritage List (UNESCO, 2019) is one of the most important documents to be studied, since the term "serial cultural property" was initiated in the context of World Heritage nominations. The author, therefore, tried to summarize the types of serial cultural properties which have been inscribed on World Heritage List to find out clues for serial cultural heritage categorization.

Serial cultural World Heritage sites (properties) listed by year of inscription, as of August 2019, numbered 331 sites² in total including Mixed World Heritage sites and sites which are in In Danger List. A cultural/mixed World Heritage property is considered as series when it comprises components situated in multiple locations (2 or more) as

² See Appendix I: World Heritage Serial Cultural Properties.

seen in the enclosed Map in the UNESCO World Heritage website. Some properties, which are marked n/a in the Table, do not have information on location of components on the map, or number of components in the description, however, they are searchable by the keyword “serial” in the website.

Number of Inscribed Serial Cultural and Mixed Properties by Type

Types are categorized by the author based on main function/feature of each property.

Number of sites in each type, from 1978 - 2019 are:

A - Architecture	=	15	sites
AL - Agricultural landscape	=	10	sites
C - Representation of culture, kingdom, administrative system	=	24	sites
CL - Cultural landscape	=	35	sites
CR - Cultural route	=	6	sites
De - Defence, military architecture and site	=	12	sites
I - Industrial, manufacturing site	=	4	sites
M - Mining site	=	12	sites
Mo - Monuments	=	10	sites
O - Others ³	=	8	sites
Pi - Pilgrimage site	=	5	sites
Pr - Prehistoric site	=	9	sites
R - Religious places e.g. churches, temples, shrines	=	35	sites
RA - Rock art site	=	14	sites
S - Settlement, village, district	=	22	sites
T - Town, city, capital	=	88	sites
TC - Tombs, cemeteries	=	8	sites
VIP - Association with important person(s)	=	3	sites

³ Serial cultural properties specified as type “Others” comprise: 1 Nazi concentration camp, 1 group of belfries, 1 geodetic survey points site, 1 convict site, 1 commercial centre site, 1 group of places associated with Fuji San, 1 university site, and 1 seires of academies, total 8 serial sites. “Site” here refers to a group of sites which are components of each serial property.

W - Works of architect, engineer	=	6	sites
WM - Water management site	=	5	sites
Total	=	<u>331</u>	<u>sites</u>

World Heritage serial cultural properties as listed above are tangible heritage with Outstanding Universal Values as mentioned previously. The above summary shows a remarkably high number of serial cultural heritage sites which represent towns and settlements in comparison to other groups of function/features.

These groups of serial cultural heritage sites can be categorized into groups based on their main characteristics, which are:

1. Cultural theme series

This group comprises sites which represent larger ideas (e.g. cultures, themes), or tangible objects (e.g. places or people). Each series comprise sites, or components, which have different functions, features, that are complementary to the meaning of the series as a whole. Types of World Heritage series which fall into this group are:

- Agricultural landscape
- Commercial centre site
- Convict site
- Cultural landscapes
- Geodetic survey stations site
- Industrial sites
- Mining sites
- Nazi concentration camp site
- Places associated with Fuji San
- Prehistoric sites
- Settlements, villages, districts
- Sites associated with important person(s)
- Sites which are representations of culture, kingdom, administrative system
- Towns, cities, capitals

- University site
- Works of architect, engineer
- Water management sites

2. Typological series

This group comprises sites of the same or similar type, function, or feature, which convey or represent a set of significant characteristics e.g. style, period, construction techniques, etc. World Heritage Sites in this group are:

- Architecture
- Belfries
- Defence, military architecture and sites
- Monuments
- Religious places e.g. churches, temples, shrines
- Rock art sites
- Tombs, cemeteries

3. Routes of communication

This group comprises cultural route of communication, of which the main function is means of communication and transportation.

4. Pilgrimage routes

This group comprises cultural route of which the main function is means for spiritual attainment. Although physical features of cultural heritage sites in this group are similar to routes of communication, but their meaning and purpose of use are clearly different, thus the author assigns this group as a distinguished category.

These 4 categories of World Heritage serial cultural properties can be filtered into more comprehensible groups. By investigating further, this groups can be categorized by their physical characteristics as:

1. Non-linear serial cultural heritage sites: comprising sites which belong to group 1 and 2 of the above mentioned categories. The components of these sites are usually not located linearly.
2. Linear serial cultural heritage sites: comprising sites in group 3 and 4 of which the components are located linearly, that is, the routes of communication and pilgrimage routes.

Finally, these distinctive features lead to a comprehensive conclusion on the types of World Heritage serial sites, which are:

1. Thematic serial cultural heritage: comprises the non-linear serial cultural heritage sites which do not have physical linkage between components but are linked by cultural theme. Components of series in this type can be divided into 2 subgroups: a) Changeable components, depending on consideration of the specifiers of the series who select components as means for representation and interpretation of the theme that each series belong to, for instance, historic towns, works of famous architects; and, b) Fixed components, which are based on factual evidence, therefore, such components are generally unchanged unless new evidences are found, for instance, Struve Geodetic Arc, Frontiers of the Roman Empire.
2. Functional serial cultural heritage: comprises the linear serial cultural heritage sites which have physical linkage between components, as seen in cultural and pilgrimage routes. The evolution or development of these series are based on the physical routes of communication or pilgrimage, which, in most cases, have been consolidated by uses and time, and most of the components of the routes are specified literally or historically.

3.3.2 Serial Cultural Heritage in General Context

Apart from World Heritage, serial cultural heritage has existed in all cultures as mentioned previously, although the serial characteristics of these heritage series are

often overlooked. Serial cultural heritage in general context can be categorized by their dominant characteristics as follows:

1. Symbolic serial sites

Symbolic serial sites were created based on human inclination to glorify some important places, or to identify himself/herself with certain places that serve his/her values in certain aspects, for instance, spiritual values, egotistical values, etc. These serial cultural heritage sites are, generally, well-established or well-known in certain culture, or in the world, the most outstanding of which is the Seven Wonders of the World that most people know and accepted as part of their learning about the world from childhood. Interestingly, there are not only one set or series of Seven Wonders but people have designated new Seven Wonder series over time until now there are Seven Wonders of the Ancient World, Seven Wonders of the Modern World, etc. (Wikipedia, 2016d).



Figure 5: Map: Locations of the 7 Wonders of the Ancient World.

These ‘Wonders’ represent human achievements in creation of outstanding architectural masterpieces, until the present time, one of the latest ‘Wonders’ of

the World is the Internet (Wikipedia, 2016d), which is an extraordinary item that it is a non-physical object, it is not visible but manifests itself in various forms, it is intangible yet powerful in its impacts that can be felt around the world and are still growing and expanding.

In Chinese culture, there are several serial cultural heritage places which are similar to the Seven Wonders of the World, for instance, the 5 Sacred Mountains of China (Wikipedia, 2018b), the 4 Ancient Capitals of China (Wikipedia, 2018a), etc.

Examples of important symbolic cultural heritage types based on symbolic meanings are:

1. Symbols of human achievements e.g.
 - Seven Wonders of the World
2. Symbols of spiritual concepts e.g.
 - Stupas of the 12 Zodiac signs (งานทำนุบำรุงศิลปวัฒนธรรม สถาบันภาษาศาสตร์และวัฒนธรรมศึกษาราชนครินทร์ & (Rajanagarindra Institute of Language and Culture, 2016)⁴
 - 5 Great Mountains of China⁵

⁴ According to the Thai Lanna (Northern Thai) local beliefs, there are 12 stupas assigned to the zodiac signs of the 12-year cycle: Year of the Rat – Phra That Si Chom Thong, Chiang Mai; Year of the Ox – Phra That Lampang Luang, Lampang; Year of the Tiger – Phra That Cho Hae, Phrae; Year of the Rabbit – Phra That Chae Haeng, Nan; Year of the Naga – Phra Phuttha Sihing, Wat Phra Sing, Chiang Mai; Year of the Snake – Bodh Gaya stupa, India or Bodhi tree and stupa, Wat Photharam Mahawihan, Chiang Mai; Year of the Horse – Phra That Yangon or Shwedagon stupa, Myanmar, or Wat Phra Borommathat, Tak; Year of the Goat – Phra That Doi Suthep, Chiang Mai; Year of the Monkey – Phra That Phanom, Nakhon Phanom; Year of the Rooster – Phra That Hariphunchai, Lamphun; Year of the Dog – Phra That Chulamani, Tavatimsa Heaven or Wat Ketkaram stupa, Chiang Mai; Year of the Pig – Phra That Doi Tung, Chiang Rai.

It is believed that a person should make worship at the stupa of his/her zodiac sign at New Year time to receive blessings and mark an auspicious beginning of the coming year. (Rajanagarindra Institute of Language and Culture: 2016)

⁵ Five Great Mountains, arranged by the five cardinal directions of Chinese geomancy are: East Great Mountain – Taichan; West Great Mountain – Hua Shan; South Great Mountain – Heng Shan (Hunan); North Great Mountain – Heng Shan (Shanxi); Centre Great Mountain – Song Shan. (Wikipedia: 2018)

3. Symbols of power e.g.
 - 4 Great Ancient Capitals of China⁶

It can be observed that the designation of these places is a means of commendation, that is, regardless of physical existence, as seen until today that the Seven Wonders are still remembered and learned about, the 5 Sacred Mountains are permanently fixed in the history and culture of China. These places have become symbols, unaffected, or very minimally affected, by time and circumstances.

It should be noted that this category of serial cultural heritage is not found in World Heritage context.



Figure 6: Map: Sacred Mountains of China.

Credit:https://en.wiki/Sacred_Mountains_of_China.

2. Pilgrimage sites

⁶Beijing, Nanjing, Luoyang, and Xi'an (Chang'an). (Wikipedia: 2018)

Pilgrimage sites evolved from spiritual beliefs, which can be either religion-based or non-religion-based. Components of each pilgrimage series are related to certain story which inspires the pilgrims to reminisce and gain spiritual reflection, uplifting, salvation, or enlightenment. Therefore, pilgrimage series are distinguishable from other categories of serial cultural heritage that all components of the series must have spiritual values perceivable by the pilgrims, whose visit to the sites is for spiritual purpose. Furthermore, there are always spiritual activities associated with the visit, for instance, praying, meditation, flowers offering, etc., or intended hardship in accessing the places, especially in ancient times. Pilgrimage sites can be categorized into 2 types namely, religious pilgrimage sites and secular pilgrimage sites (Yahoo Answers, 2016).

2.1 Religious pilgrimage sites:

This category or type of serial cultural heritage comprises sites are the religious or spiritual places, which can be called pilgrimage places, pilgrimage routes, or pilgrimage sites. An outstanding example is the Buddhist Memorial Places which are associated with the life of the Buddha, namely, Lumbini, the Buddha's Birthplace; Bodh Gaya, the Place of Enlightenment; Sarnath, Place of the First Sermon; and Kusinara, the Place of Passing into Nirvana. These places were designated by the Buddha himself, according to the Tipitaka, the Buddha said to his disciple that whoever wanted to remember him should visit these places⁷ (Vajira; Story, 1998) thus

⁷ "Four Places of Pilgrimage

16. There are four places, Ananda, that a pious person should visit and look upon with feelings of reverence.[42] What are the four?

17. Here the Tathagata was born![43] This, Ananda, is a place that a pious person should visit and look upon with feelings of reverence.

18. Here the Tathagata became fully enlightened in unsurpassed, supreme Enlightenment![44] This, Ananda, is a place that a pious person should visit and look upon with feelings of reverence.

19. Here the Tathagata set rolling the unexcelled Wheel of the Dhamma![45] This, Ananda, is a place that a pious person should visit and look upon with feelings of reverence.20. "Here the Tathagata passed away into the state

they have become Buddhist pilgrimage sites since the time of the Buddha until today.

In other religions, there are the Mecca, Muslim pilgrimage; Jerusalem, Christian pilgrimage; the Four Sacred Cities of Hinduism, etc. These pilgrimage places have common characteristics that the visitors, or pilgrims, must intend to visit these places with spiritual purposes, furthermore, during the journey or upon arrival of each place in the series, the pilgrim must perform certain ritual, e.g. praying, meditation, etc. in order to complete the pilgrimage. Other people can also visit these places for other purposes, for instance, tourism, but they are not called pilgrims. Thus the pilgrimage places are distinguished by the purpose of visit and the associated rituals, which make these series different from other groups of serial cultural heritage.

2.2 Secular pilgrimage sites

Apart from religious-based pilgrimage sites, there are non-religious-based pilgrimage sites or secular pilgrimage, which are places associated with important events or persons that people identify with and visit these places for remembrance, spiritual reflections and paying homage.

Examples of famous secular pilgrimage sites are, for instance, the Normandy Beaches or Normandy landings, France⁸ (Glock, 2016; Wikipedia, 2016b); Vietnam Veterans Memorial, Vietnam; the Thai-Burma Railway and Hellfire

of Nibbana in which no element of clinging remains!' This, Ananda, is a place that a pious person should visit and look upon with feelings of reverence."

[<https://www.accesstosight.org/tipitaka/dn/dn.16.1-6.vaji.html>]

⁸ Utah beach, Omaha beach, Gold beach, Juno beach and Swoed beach, important sites where the D-Day operation occurred on June 6th, 1944, to liberate the occupied northwestern Europe from Nazi control. The event was the largest seaborne invasion in history, involving more than 150,000 troops. Visit to the beaches and associated places are pilgrimage to people who are associated with the events (Wikipedia: 2018).

Pass⁹ (Australian Government, 2016), Thailand; Graceland, the Home of Elvis Presley, Tennessee, USA, etc.

It should be noted that secular pilgrimage sites are subjected to decline in spiritual values through time, since they are associated with people who have personal associations with the place(s) or events, therefore, the death of these people, for instance, is one of the main causes of such decline.

When these sites are not regarded as spiritual places or visited for pilgrimage purposes, they are categorized as theme series.

3. Routes of Communication

Routes of communication are series which evolved by functions as means for travelling and communication of people since ancient times.

The routes of communication are serial cultural heritage by nature because the route acts as linkage between several sites, which are considered components of the route. This group of cultural heritage has been officially recognized by the UNESCO, along with the issue and ratification of the ICOMOS Charter on Cultural Routes 2008 (ICOMOS, 2008b). It should be noted that the pilgrimage routes and cultural routes of communication are not differentiated by physical characteristics but by meaning and purpose of use.

4. Tourism Routes

Tourism routes are created based on tourism purpose, which is most dynamic and covers widest range of possibility in its design and creation.

This category or type of serial cultural heritage comprises sites which are designated for tourism purpose. These series are, for example, Wine routes in France, King Rama V's rural visit trail, Thailand. The creation or design of these

⁹ Sites related to the building of 415 kilometres Thai-Burma Railway to supply the Japanese forces during 1942-1945, involving some 200,000 Asian labourers and 60,000 Allied prisoners of war. Visit to the railway and related places are made by people from various countries to pay homage to the deceased and for remembrance and spiritual reflections. At present, this serial site is in the process of nomination to the World Heritage List (Australian Government: 2016).

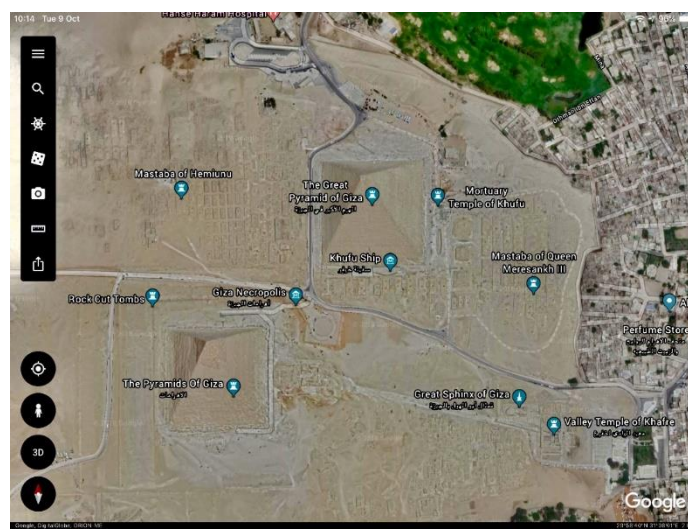
routes may be based on history, literature, etc., however, its main purpose is to serve tourists in experiencing certain aspects of culture. It can be considered a means for interpretation of culture, which has become very popular nowadays. Tourism routes can be designed for most any topic or theme, and are highly dynamic, depending mostly on market trends, economic factor, as well as affordability, appropriate length of travel, and other tourism factors.

3.3.3 Conclusive Categorization of Serial Cultural Heritage

From the aforementioned groups of serial cultural heritage, both in World Heritage and in general contexts, the author has concluded on a categorization system by which serial cultural heritage is categorized into 4 meaning-based types, namely, symbolic serial cultural heritage, pilgrimage routes, cultural routes of communication, and cultural theme series. It should be noted that shared characteristics can be found between these categories, thus designation of a series to any one category should be considered based on its dominant characteristics, or the characteristics which are most relevant to the objectives of designation.

1. Symbolic serial cultural heritage

Symbolic serial cultural heritage is distinguishable by its special attributes which are symbols of certain aspects of culture, for instance, Seven Wonders of the World, the Four Ancient Capitals of China, the Five Sacred Mountains of China, the Four Sacred Mountains of Japan, etc. Designation of such special attributes was often made by scholars in the past, and the information was recognized and has been handed down through generations until it has become well-known in today's cultures. The purpose



of designation is mainly for commendation, not for practical purposes.

Figure 7: Great Pyramid of Giza, the only remaining member of the 7 Wonders of the Ancient World.

2. Pilgrimage routes

A pilgrimage route is a route that people travel for spiritual purposes, which generally comprises physical components, namely, the main destination, minor destinations and the route itself, as well as spiritual activities related to the pilgrimage, for instance, praying, ablution, rituals, as well as the difficulty and hardship in traveling, which is believed to be part of the pilgrimage and serves in spiritual purification. Pilgrimage routes and sites exist in all religions and cultures, and the action of pilgrimage is still practiced today although traveling on pilgrimage routes is not as difficult or dangerous as it was in the past. Examples of famous pilgrimage are routes to Santiago de Compostela; the Four Buddhist Pilgrimage; Mecca; and Hindu Sacred Sites of Banares.

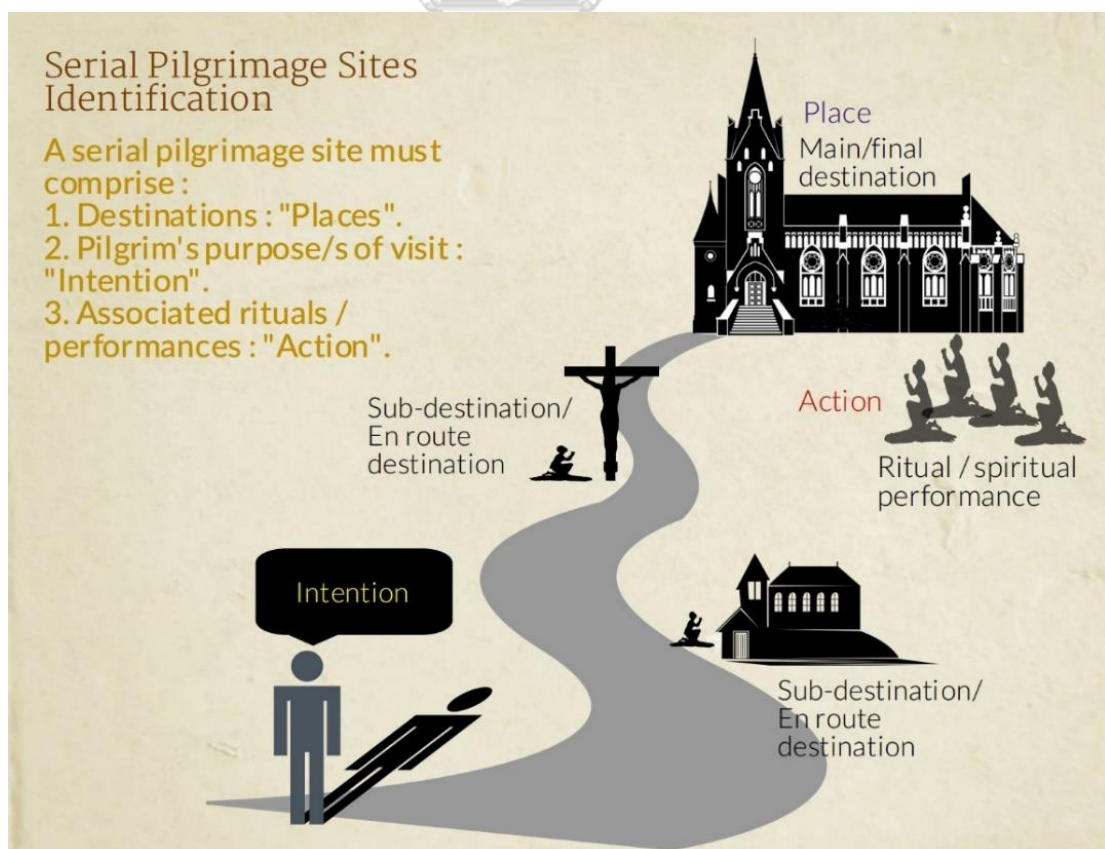


Figure 8: Pilgrimage routes identification.

3. Cultural routes of communication

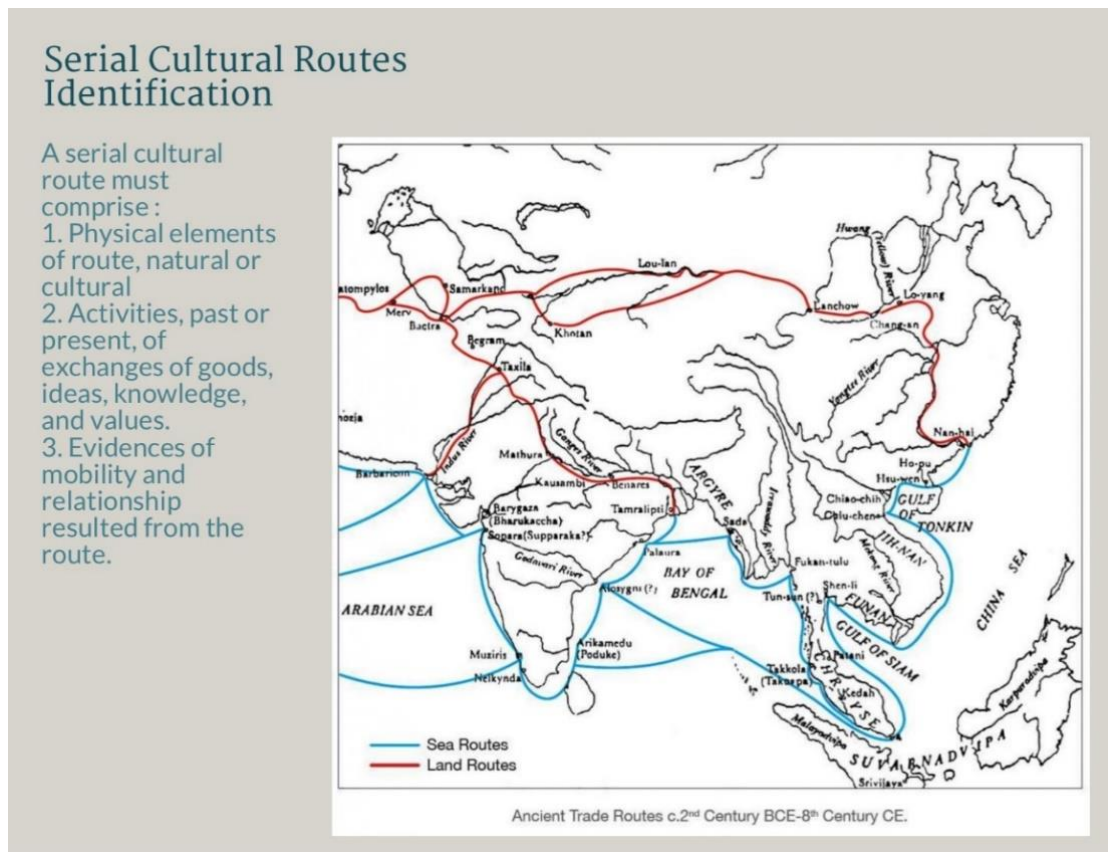


Figure 9: Cultural routes identification

A route of communication is serial by nature because it must comprise places and the physical route that links those places together. The most famous cultural routes of communication are the Silk Roads, or Silk Routes, which comprise both land routes and maritime routes. Among several numbers of the Silk Routes, the Routes Network of Chang'an-Tianshan Corridor has been inscribed as World Heritage Site.

4. Cultural theme series

Cultural theme series can be categorized into 3 types, as follows:

- a. Theme routes: are series which are not evolved or designated in the past but are designed or created in the present time to serve certain purposes, especially tourism. Creation of theme routes is based on cultural or historical information, by which places are linked to form a route that serves to interpret the 'story'. Examples of cultural theme routes are : Goethe route, Wine route, route of King Rama V's rural visit, etc.



Figure 10: Stellenbosch Wine Routes, tourist map.

- b. Evidence-based series: the second type of cultural theme series are groups of places which are linked by cultural theme or historical information, for instance, Struve Geodetic Arc (UNESCO World Heritage Centre, 2019c), and Frontiers of the Roman Empire (UNESCO World Heritage Centre, 2019b), both of which are World Heritage Sites. The most distinguished characteristic of this type is that the series are formed of components which are related based on historical records (Struve Geodetic Arc), archaeological evidence (Frontiers of the Roman Empire), or other verifiable evidences. Components of this type of series, therefore, are not subjected to change unless new evidences are discovered.



Map B. Part 1 (2).
Map of the Struve Geodetic Arc with the sites selected to the Nomination. Scale about 1:6 million.

Figure 11: Map of Struve Geodetic Arc World Heritage. Credit: UNESCO.

c. Interpretation-based series: the third type of cultural theme series are those created as means for interpretation. This type is generally found in World Heritage context, for instance, series of places that represent towns or settlements, civilizations, cultures, works of famous architects, etc. Components of a certain series in this type are selected as representatives of the 'theme', for instance, Angkor World Heritage is represented by 3 areas, namely, Angkor, Banteay Srei, and Roluos. These 3 areas are separated, each area is a component of the Angkor series which convey the most important characteristics and meaning of Angkor.

The most distinguished characteristic of series in this type is that components are 'selected' based on 'theme' of the series. Components selection is interpretation-based, considering the characteristics of each component that best convey or impart the meaning of the series. The main reason for this is that it is not possible or not practical for the series in this type to include all cultural elements within the area, for instance, the Angkor World Heritage Site. Apart from this, it is the requirement of World Heritage nomination that all components in a series must be verifiable by the same criteria, therefore, Angkor, for instance, is represented by only 3 components, nominated under the same criteria for World Heritage inscription. Components in this type of serial cultural heritage, therefore, are changeable according to requirements, circumstances or objectives of series formation.

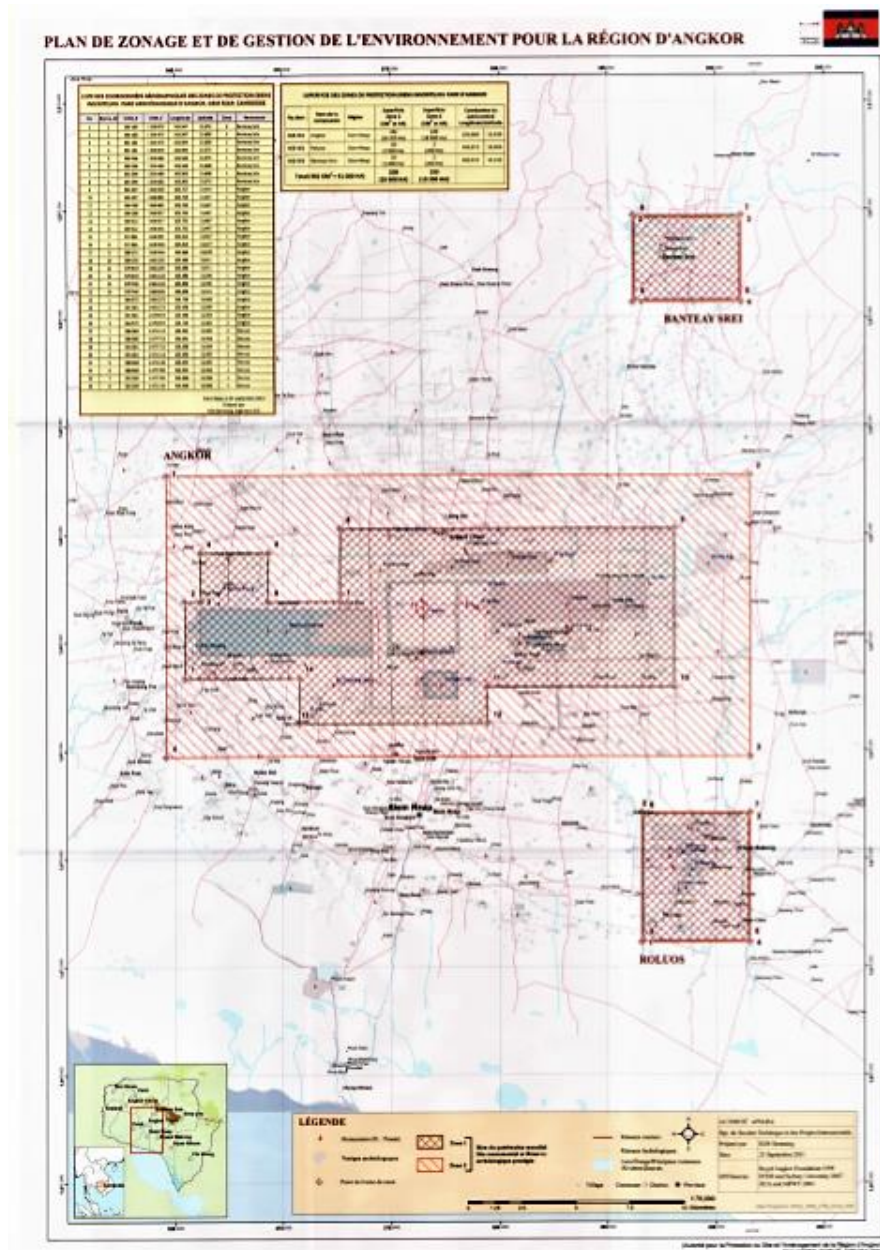


Figure 12: Map of Angkor World Heritage. Credit: UNESCO.

It should be noted that these 4 groups of serial cultural heritage have certain overlapping characteristics and functions, for instance, a pilgrimage route can be perceived as cultural theme route by those who do not belong to the belief that the route represents, a route of communication can also be a pilgrimage route, such as Silk Road, the route that the monk Xuan Zang travelled to India for studying and bringing back the Buddhist Canon.

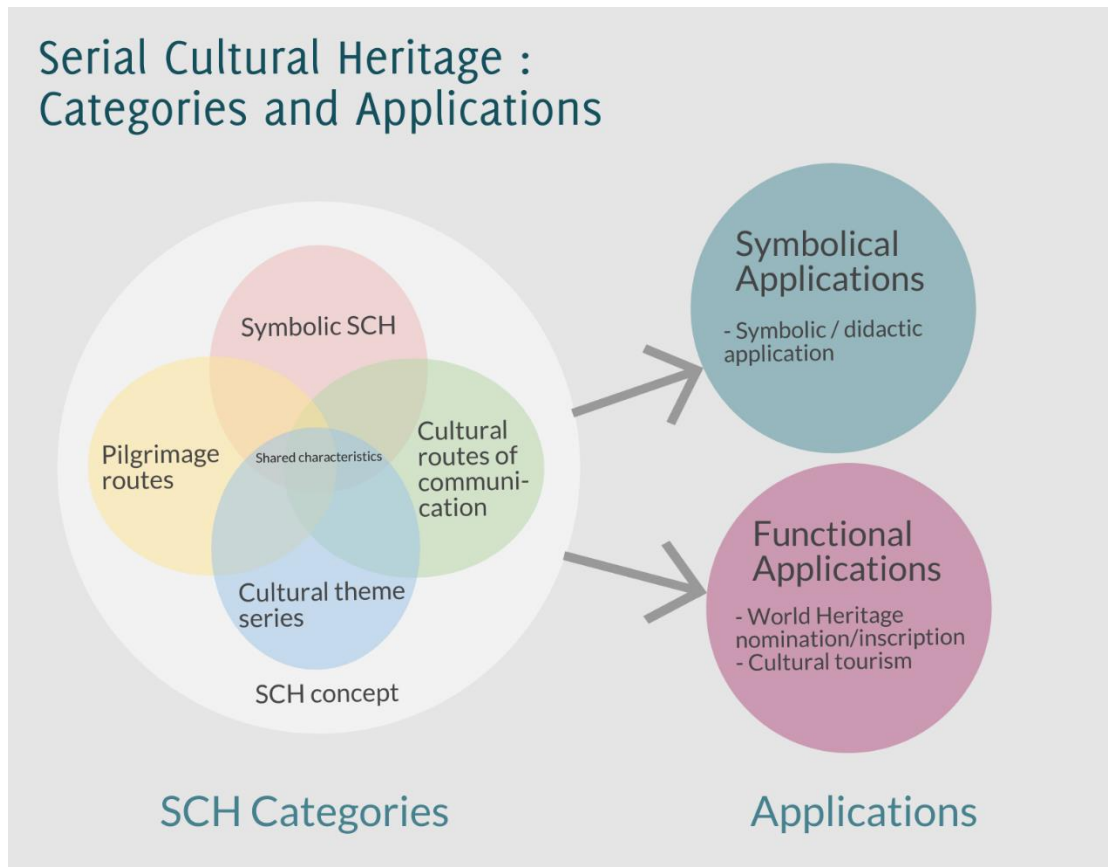


Figure 13: Serial cultural heritage categories and applications.

The illustration shows the categories of serial cultural heritage, within the framework of serial cultural heritage concept, and their applications, which can be divided into 2 main aspects, as follows:

1. Symbolical applications

Serial cultural heritage concept can be applied for passive purposes in cases that the series are formed, accepted and learned as parts of certain culture until they have become cultural symbols, for instance, 7 Wonders of the World. As mentioned, series in the Symbolic cultural heritage group are basically applied symbolically, however, they can also be functionally applied, especially in tourism. The symbolic values of a series can enhance the value of individual sites, or components of the series that they can become important tourist attractions, provided that they possess other tourism values, for instance, physical existence, accessibility, sufficient remaining physical features, etc.

2. Functional applications

Functional applications of serial cultural heritage are most frequently seen in World Heritage nominations and inscriptions, as well as in tourism. It should be noted that the applications or uses of a certain cultural series do not have to include all components of the series, but can be applied to some parts which serve the purpose of each practical project. For instance, a tourist programme of Silk Road does not have to include all components, but only important sites as time and convenience require, aiming for the best experience of tourists rather than for obtaining all information about the route by actual visit.

3.4 Serial Cultural Heritage Values Identification

Values identification of serial cultural heritage is the issue to be discussed after the categorization system is set. In this topic, the World Heritage context is to be addressed followed by general context as in the topic on categorization, however, there is not a single conclusive system for values identification of all types of SCH because values identification of serial cultural heritage in each context, and for each type has its specific aspects of consideration, most of which are not shared by other types thus an all-encompassing values identification system is irrelevant.

Values identification is the most essential part of heritage treatment procedure, that is, the value of heritage to be conserved must be recognized and clarified before the means for any kind of treatments to a certain cultural heritage site is considered and decided.

It is necessary that, before proceeding to values identification process, the purpose of values identification must be clearly understood and laid out as basis for values identification.

3.4.1 Purpose of values identification

Purpose of values identification is the most important factor in determining appropriate values identification system for a certain serial cultural heritage site. Although values identification can be based on various purposes, the most important or

principal purpose should be the one which is focused upon so that values identification can proceed in a clear and strong direction. In case that there are several purposes of values identification, these purposes should be categorized into different priorities, for instance, there should be 1 main purpose, with complementary purposes which are prioritized based on degree of importance, urgency, or other factors.

Example purposes of values identification are:

1. World Heritage nominations:

In case that a certain serial cultural heritage site is considered appropriate for nomination to the World Heritage List, it is necessary for the State Party(ies) to study in depth the values of the site. Values identification must be based on the requirements set up by of the World Heritage Centre at the time when the application of the site to the Tentative List, or the Nomination Dossier is to be submitted.

2. Commendations:

Values identification of a certain serial cultural heritage site for commendation purpose, for instance, to award the site on certain aspect, depends on the principle set up by the awarding committee. Examples of this type of values identification purpose are e.g. Architectural Conservation Award by the Association of Siamese Architects under Royal Patronage, Thailand; UNESCO Asia Pacific Heritage Awards, etc.

3. Conservation:

Values identification for conservation of a certain serial cultural heritage site should aim to investigate and articulate the values of the site in various aspects in order to be able to determine the most appropriate conservation concept for the site, which leads to the most appropriate conservation design, implementation, and all works involved in the conservation process.

4. Tourism:

Tourism is another issue which entails values identification of a certain serial cultural heritage site which is planned for tourism, especially cultural routes

which can easily be applied as tourist attractions. Values identification of tourism cultural heritage sites, apart from the cultural values of the sites e.g. history, art, architecture, etc., the suitability of the sites for tourism purpose such as duration of travel, appropriate accommodations, facilities e.g. restaurants, shopping areas, toilets, are necessary aspects to be considered and added up as values of the sites.

There may be purposes of values identification other than these 4 mentioned sets of purpose which are most frequently encountered in cultural heritage issue.

When the purpose is clear, the following step is to find means for values identification which is suitable for the purpose. This issue is addressed in World Heritage and general contexts as follows:

3.4.2 Values identification of World Heritage serial cultural properties

Although World Heritage is the framework that initiated and literally recognized the concept of “Serial Properties” (natural and cultural), it does not have specific means of values identification, or values identification, of serial cultural properties.

It should be noted that, to be inscribed on World Heritage List, the cultural or natural heritage site must possess a special set of values called “Outstanding Universal Value (OUV)”. The State Party(ies) which submit a certain site to the World Heritage Committee must provide a document called “Nomination Dossier” in which the OUV of the site is proposed for consideration of the Committee based on the Criteria laid out in the Operational Guidelines for the Implementation of the World Heritage Convention. There are 10 criteria for justification of OUV, the first 6 criteria are applicable to cultural properties and the next 4 criteria are applicable to natural properties (UNESCO World Heritage Centre, 2004a). for the purpose of is study, only the first 6 criteria are quoted as follows:

“The Criteria for Selection

To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria.

Selection criteria

- (i)
to represent a masterpiece of human creative genius;
- (ii)
to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- (iii)
to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- (iv)
to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- (v)
to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- (vi)
To be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);”¹⁰

Apart from OUV, it is specified in the most recent (2017) Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO, 2017, p. 26) that “*To be deemed of Outstanding Universal Value, a property must also meet the conditions of integrity and/or authenticity and must have an adequate protection and*

¹⁰ UNESCO World Heritage Centre, The Criteria for Selection. <https://whc.unesco.org/en/criteria/>

management system to ensure its safeguarding.”, therefore, it can be said that integrity¹¹, authenticity¹², and management are essential aspects for values identification of the cultural heritage site, be it individual or serial site, which must be respected in case that the purpose of values identification is for World Heritage nomination.

Another interesting issue concerning the values identification of serial cultural heritage site for World Heritage nominations is that, the criteria for selection must be applicable to both the series (being collective OUV of the series) and all components of the series (being OUV of individual component), for example, if a series comprising 10 components is proposed with criteria (i), this means that all 10 components must meet the requirements set out in criteria (i), that is, all 10 components must represent a masterpiece of human creative genius. In this respect, the author sees as a setback for the case of serial cultural heritage sites, many of which comprise components of different characteristics and levels of significance. However, the reason behind this means of consideration may be for strengthening the values of World Heritage Sites, which should meet high standard, as well as for the convenience of values identification by the Committee.

3.4.3 Values identification of general serial cultural heritage

Values identification of serial cultural heritage in general context follows the categorization system laid out in previous topics, thus aspects for consideration on the values depend on the type or category of the heritage site as follows:

¹¹ Measure of intactness which can be assessed by 3 aspects, whether the property: a) includes all elements necessary to express its OUV; b) is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance; c) suffers from adverse effects of development and/or neglect. (UNESCO, 2017: 27-28)

¹² Authenticity should be expressed by: form and design; materials and substance; use and function; traditions, techniques and management systems; location and setting; language, and other forms of intangible heritage; spirit and feeling; and other internal and external factors. (UNESCO, 2017: 27).

1. Symbolic serial cultural heritage

Symbolic series are usually well-established and are widely accepted in one or several cultures. Values identification of this type of serial cultural heritage is generally irrelevant, especially for the series which are historically recognized such as the Seven Wonders of the Ancient World, the 5 Sacred Mountains of China and other similar cases. Nevertheless, the more recent symbolic series may be subjected to debate, for instance, the 7 Wonders of Modern World proposed by USA Today that included the Internet as one of the Seven Wonders. In such case, values identification depends largely on credibility of the person or party who proposed or designated the series.

It should be noted, however, that for a certain series to be recognized as symbolic, such series must withstand the test of time. Values identification, therefore, is not intentionally conducted but recognition, acceptance, and appreciation of these sites develop naturally with the reaction of people towards them, which are reflected through cultural works such as literature, paintings, historical documents, proverbs, quotations, etc. Therefore, it can be said that values identification of symbolic serial cultural heritage depends on its impact on the society in several aspects such as:

In conclusion, values identification of symbolic series should consider these following aspects:

- a) Credibility of series designation.
- b) Duration in time.
- c) Impacts on society, which are reflected in:
 - Culture
 - History
 - Art, architecture and literature
 - Politics
 - Etc.

2. Pilgrimage routes

Values identification of pilgrimage routes highly depends on intangible aspects of the routes. It should be noted that pilgrimage routes have intrinsic symbolic values, for instance, most of the pilgrimage routes have specified places of worship or visit, which are fixed based on religious documents or history; and these routes and places of worship are well-recognized and accepted within one or several cultures; and most of them have long duration in time. Values identification of this type of serial cultural heritage, therefore, should consider these following aspects:

- a) Impacts of the route, which can be seen in:
 - Number of pilgrims who visit the route and conduct ritualistic activities at the specified pilgrimage sites (the route's components).
 - Art, architecture, and literature, which are relevant to the route and components.
 - Duration in time.
- b) Existing evidences of the route, for examples:
 - Physical elements of the route.
 - Related elements e.g. towns, ports, bridges, etc.
 - Intangible evidences e.g. rituals, traditions, etc.

3. Cultural routes of communication

Values identification of cultural routes of communication can be based on the Charter on Cultural Routes 2008, which can be summarized into 3 main aspects for values identification as follows:

- a) Distance, which reflects the values of the route in:
 - Intention in creating the route.
 - Duration in time, in which the route has/had developed.
 - Power and influence of people involved with the route.
 - Potential of the route in creating impacts.

- Involvement with number of people / goods / events, etc.

b) Impacts of the route on the following aspects:

- Culture
- History
- Art, architecture, and literature
- Economy
- Etc.

c) Existing evidences of the route, for examples:

- Physical elements of the route.
- Related elements e.g. towns, ports, bridges, etc.
- Intangible evidences e.g. languages, beliefs, traditions, etc.

4. Cultural theme series

Values identification of cultural theme series, or cultural theme routes is based on the main purpose of their creation, that is, interpretation. A cultural theme series or theme route, whether created for tourism or other purposes, always aim to convey a theme or story interpreted through the components of the series or route. Therefore, aspects for values identification should comprise the following sets of value:

a) Interpretational values, which should be considered by:

- Appropriate selection of representatives/components.
- Understandable and verifiable representatives and their relevant evidences.
- Efficiency of the series in conveying theme/story with its meaning, messages and knowledge.

b) Impacts of the series on the following aspects:

- Culture
- History
- Art

- Economy
- Etc.

c) Selected components/ existing evidences of the series, depending on the type of series in this category.

3.5 Conclusion

Categorization and values identification of serial cultural heritage discussed in these chapter are essential issues which form a foundation for further stages of work in conservation and management. They are required whenever treatments to certain serial cultural heritage site are in prospect. It should be noted that a cultural heritage site, either individual or serial site, does not have to be categorized or evaluated if there are not purposes for any kind of treatment, for instance, conservation, commendation, tourism, etc.

Categorization lays foundation for values identification, therefore, it is most important to categorize a serial cultural heritage site appropriately. By studying World Heritage series and serial cultural heritage in general context, serial cultural heritage can be categorized into 4 types: 1. Symbolic serial cultural heritage, 2. Pilgrimage routes, 3. Cultural routes of communication, and 4. Cultural theme seires. These 4 types are distinguishable by their specific characteristics yet some shared characteristics are presented, however, decision on categorization can be made by considering the dominant characteristics that are most relevant to the situation. Examples are the overlapping physical features between pilgrimage routes and cultural routes of communication, which are distinguishable by considering the purpose of use, that a route can be perceived as pilgrimage route by pilgrims or believers, but for general visitors or travellers, the route is seen as cultural route of communication. It is also possible that a pilgrimage route can also be categorized as theme route for tourism purpose, depending on the objective of categorization and prospected users whether they are pilgrims or tourists.

The same principle applies to values identification, which requires a clear purpose of values identification first and foremost. There are 2 main purposes of values identification, that is, values identification for nomination of a certain series to the World Heritage List, and values identification for other purposes. Aspects for consideration on the values of serial cultural heritage sites vary according to values identification purpose(s) as mentioned, and to the type of series within each set of purpose. Nevertheless, it cannot be said that the values identification aspects listed in this study are definite, on the contrary, they should be seen as guidelines for values identification, which must be adapted to suit each individual case in practical work.



Chapter 4 Case Study: Angkor – Phimai Cultural Route

4.1 Introduction

As detailed in Chapter 3, it has been concluded that serial cultural heritage can be categorized into 4 groups: symbolic serial cultural heritage, pilgrimage routes, cultural routes of communication, and cultural theme series. From these groups, the author selected the cultural routes of communication to be focused and studied based on the following reasons:

1. Cultural routes of communication are represented by various types of components, which are linked by the routes that cover a certain distance, therefore, this group of serial cultural heritage provides challenges in terms of values, interpretation, and management, which should be beneficial for further study on serial cultural heritage and for application to the study on other types of SCH.
2. The ICOMOS Charter on Cultural Route, 2008 is a ratified legal reference that provides criteria for specification, values identification, and management guidance for cultural routes, which are helpful for the study.
3. There are sufficient examples of cultural routes, including those which have been inscribed on the World Heritage List, the sites in Tentative Lists, and the non-inscribed sites, which can be compared to the case study as well as providing information that can be adapted the case study.
4. Although there have been studies on cultural heritage sites along the Angkor – Phimai cultural route, and the route has been recognized by scholars since early 20th century, there have not been specific studies on Angkor – Phimai cultural route in serial cultural heritage perspective, which will be useful for future works on conservation and management of the case study itself as well as for cultural routes in general, and may be applicable to other types of serial cultural heritage in various aspects.

For the aforementioned reasons, the author decided to use the Angkor – Phimai Cultural Route as case study. The route is a transnational cultural heritage that connects Angkor in Cambodia to Phimai in Northeast Thailand, 253.9 kilometres in distance¹³. Along the route, there are several cultural heritage sites which are associated to the route, for instance, Khmer temples, ancient settlements, hospitals from King Jayavarman VII's period, ancient industrial sites, and most importantly, the dharmasalas or travelers' rest houses, which are mentioned in ancient inscriptions, and serve as landmarks which indicate the delineation of the physical route, or road, in ancient times. Historical significance of the route verified by its existing tangible and intangible components has led the Fine Arts Department to plan for nomination of Angkor – Phimai Cultural Route (in Thailand) to the World Heritage List and the name and brief description of the site have been sent to UNESCO, therefore, this cultural heritage site was included in the World Heritage Tentative List since 01/04/2004 under the name "Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam". The Fine Arts Department had begun working on the preparation of nomination dossier for this serial site, however, certain problems had been encountered during the working process, therefore, in April 2019, Thailand's National Committee on World Heritage Convention decided to have it removed from the World Heritage List and proposed "Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries" instead. This is also a serial cultural heritage site which are components of the Angkor – Phimai cultural route, however, they belong to the category of interpretation-based theme series. This issue will be presented later in this chapter and will be discussed in the following chapter on case study analysis.

This chapter describes and discusses details of the Angkor – Phimai cultural route, based mainly on field survey conducted in August 2017. However, due to political situation and certain inconveniences, the field survey was conducted for the part of the route in Thailand only. Consequently, this study focuses on the part of the Angkor – Phimai Route in Thailand. Nevertheless, necessary information on the route and sites in

¹³ The part of the road in Thailand, from Phimai to Prasat Ta Muean, the last dharmasala nearest to the Thai-Cambodian border is 128.9 kilometres.

Cambodia is included based on documents and existing survey and literature, especially, the Living Angkor Road Project (LARP) conducted by Asst. Prof. Dr. Panjai Thanthassanawong, Col. Asst. Prof. Dr. Surat Lertlam, Mr. Pongdhan Sampaongern, and Mr. IM Sokrity.

This chapter specifically presents the characteristics of Angkor – Phimai cultural route, focusing on the part of the route in Thailand, in the following topics:

- Historical background
- Existing condition of the Angkor – Phimai cultural route
- Management system
- History of Recognition of Angkor – Phimai Cultural Route

The topic on existing condition of the Angkor – Phimai cultural route is the largest part of this chapter. It provides information on each component of the route, including geographical coordinates, maps and photographs, protection status, existing condition and state of conservation.

It should be noted that this study focuses on the series and its components in the contexts of conservation and cultural heritage management. Social study of people and communities related to the components are not covered in this study, therefore, the case study does not present the aspect of community unless it is an immediate environment, or has direct impact on the components.

4.2 Historical Background

Khmer was one of the most important and influential civilizations of Southeast Asia that had developed since circa 9th century CE until reaching its prime during 12th – 13th centuries CE (Cœdes, 1968). Its legacy can be seen in forms of art, architecture, archaeological remains, as well as written evidence i.e. stone inscriptions, which exist in large number in several countries apart from Cambodia, namely, Vietnam, Lao PDR, and Thailand (นิคม มุสิกะคามะ, 2536 (1993)). During the late period of Khmer dominance, King Jayavarman VII (1181 – 1218?) was the most distinguished and successful leader. He adopted Mahayana Buddhism and became a devout Buddhist King who diligently

made merit by creating public service projects e.g. infrastructure, hospitals, travelers' rest-houses; as well as building religious places, Buddha images and other images of worship e.g. Bodhisattva, which were located and placed throughout his Kingdom. These projects are verified by inscriptions, which, in most cases, were made as part of the projects, intended for commendation of the King's personal virtues, and his merit in the initiation of the projects. These inscriptions have become valuable ancient records and sources of information that help clarify history of the Khmer Kingdom, as well as ancient traditions and various aspects of people's way of life. Amongst these inscriptions, the Prah Khan Inscription, or Preah Khan Inscription, mentions the order of King Jayavarman VII to build travelers' rest-houses along the routes (roads) from Angkor to 5 towns including Phimai in present day Thailand (สุภัทรวดีศ ดิศกุล, 2509 (1966)).

From the inscription, there have been studies conducted on the mentioned routes, which presented concrete evidences of the existence of the routes and their related places and elements. The author, therefore, is inspired to study one of these routes, the Angkor - Phimai route, in the perspectives of cultural route and serial cultural heritage, which the author believes could lead to an insight into the function and characteristics of this important cultural heritage, as well as being a means to find out effective conservation approach for the heritage sites which are components of the Angkor – Phimai cultural route in the framework and perception of serial cultural heritage.

The recognition of Angkor – Phimai cultural route has been based directly on an ancient document made during the reign of King Jayavarman VII (1181 – 1218?) of Angkor. The inscription was discovered by M. M. Glaize at Preah Khan sanctuary in Angkor, Cambodia on 13th November, 1939. The inscription is a squarish block of stone, measured 58 x 58 centimetres at base, 1.85 centimetres in height. The base is decorated with moldings and the top part has rough carvings of lotus designs. The inscription comprises 72 lines, 179 verses, written in Sanskrit language with Khmer scripts of Jayavarman VII period. The contents of the inscription mention the virtues of King Jayavarman VII, the temple founder, the temple of Preah Khan, and related information about the temples and merit making projects and activities that the King had

ordered or initiated. It is clearly stated in verses 122 -126 (Coedès, 1941; Maxwell, 2007, pp. 84-85) that:

“122.

On the roads from Yasodharapura (Angkor) to the [capital] city of Campa (Vietnam), there are fifty-seven buildings that are staging posts with fire.

123.

[On the road] from the city (Angkor) to Vimayapura (Phimai, in north-east Thailand), there are seventeen houses of fire.

[On the road] from the city (Angkor) to Jayavati, and from thence to Jayasimhavati,

124.

thence to Jayaviravati, thence to Jayarajagiri, and from Jayarajagiri to holy Suvirapuri,

125.

and thence up to Yasodharapura (Angkor), there are forty-four fire-houses, and there is one on holy Suryaparvata,

126.

One at holy Vijayadityapura, and one at Kalyanasiddhika.

Altogether, there are one hundred and twenty-one.”¹⁴

The content of these mentioned verses clearly states the existence of roads that connected the capital, Yasodharapura or Angkor as it is called today, to 5 important

¹⁴ Translated from Sanskrit original as transliterated in: Georges Coedès, La Stèle du Pràh Khan d'Angkor. (Coedès, 1941, pp. 279-280).

CXXI.	(1)	● jayavuddhamahānātham ṣṛimantam so vanīpatih yaçodharatatākasya	tīre yāgāh punar daça
CXXII.	(2)	● yaçodharapurād yāvac upakāryāhutabhujas	campānagaram adhvasu saptapañcāçaḍ ālayāh
CXXIII.	(3)	● purād vimāypuram yāvad purāj jayavatī [m] (1) tasyāh	vahnes saptadaçālayāh jayasimhavatī [m] tatah
CXXIV.	(4)	● jayavīravatī [m] tasyā jayarājagirer yāvac	jayarājagiri[m] punah chrīsvīrapurī [m] tathā
CXXV.	(5)	● tasyā yaçodharapuram catvārimcac ca catvāri	yāvad vahnigrhāni ca caikam ṣrisuryaparvate
CXXVI.	(6)	● ekam ṣṛīvijayāditya- ekañ ca pinditāny eka-	pure kalyānasiddhike vimçaty uttarakam çatam

towns. The Royal Angkor Road network, according to the inscription, comprises the following 5 routes:

1. Angkor – Phimai (in present day Thailand) route (253.9 km)
2. Angkor – Wat Phou (in Champasak, Lao PDR) route (171 km)
3. Angkor – Sawai Chik route (90 km)
4. Angkor – Preah Khan temple (in Kampong Sawai) route (95 km)
5. Angkor – Sombor and Kampong Thom route (120 km)

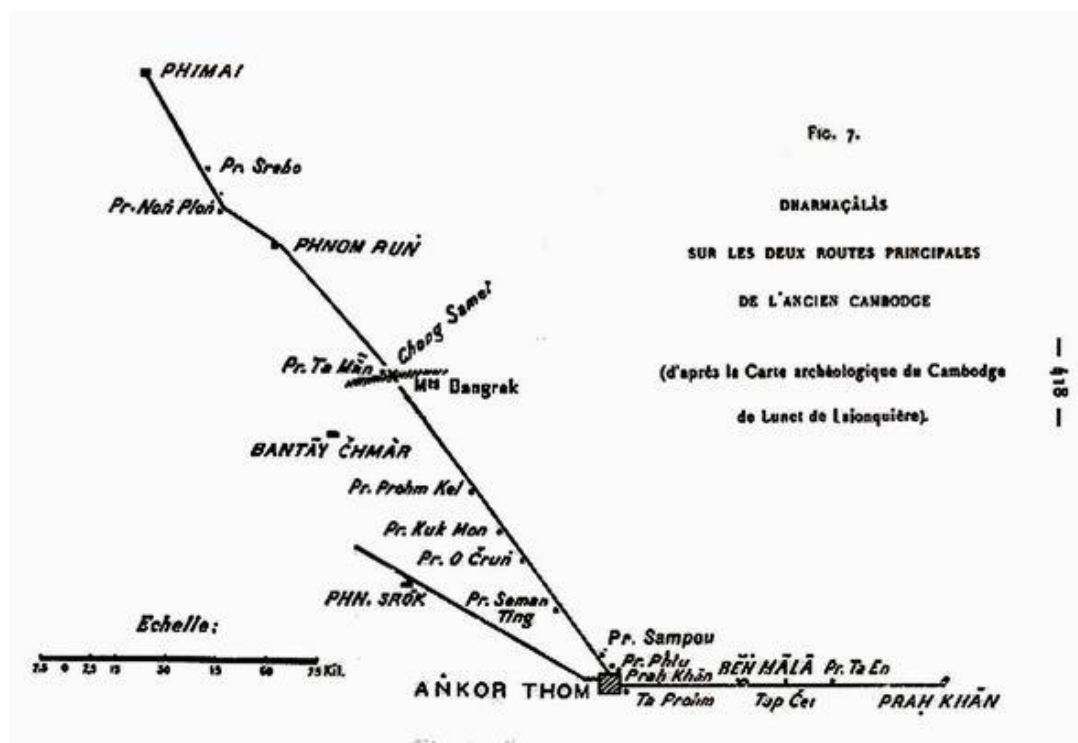


Figure 14: Map of Angkor Routes: Étienne Lunet de Lajonquière, 1910 (Lunet de Lajonquière, 1910).

On these routes, the King had staging posts with fire, or houses of fire ‘vahnigrhani’, as mentioned in the inscription, built. These ‘houses of fire’ have been agreed by archaeologists and historians as buildings built to serve as travelers’ rest-houses, which have been discovered throughout the area under the influence of Khmer culture of the 12th – 13th centuries. At present, they are commonly called “dharmasalas”, featuring buildings with common architectural design characterized with simple rectangular plan, facing east, gabled roof that connects to the conical-tiered (prang-

shaped) tower covering the innermost part where image of worship is installed, the walls on northern and southern sides are different, that is, the northern side wall is solid whereas the southern side wall is fitted with openings. These are typical characteristics of a dharmasala (Boisselier, 1966).

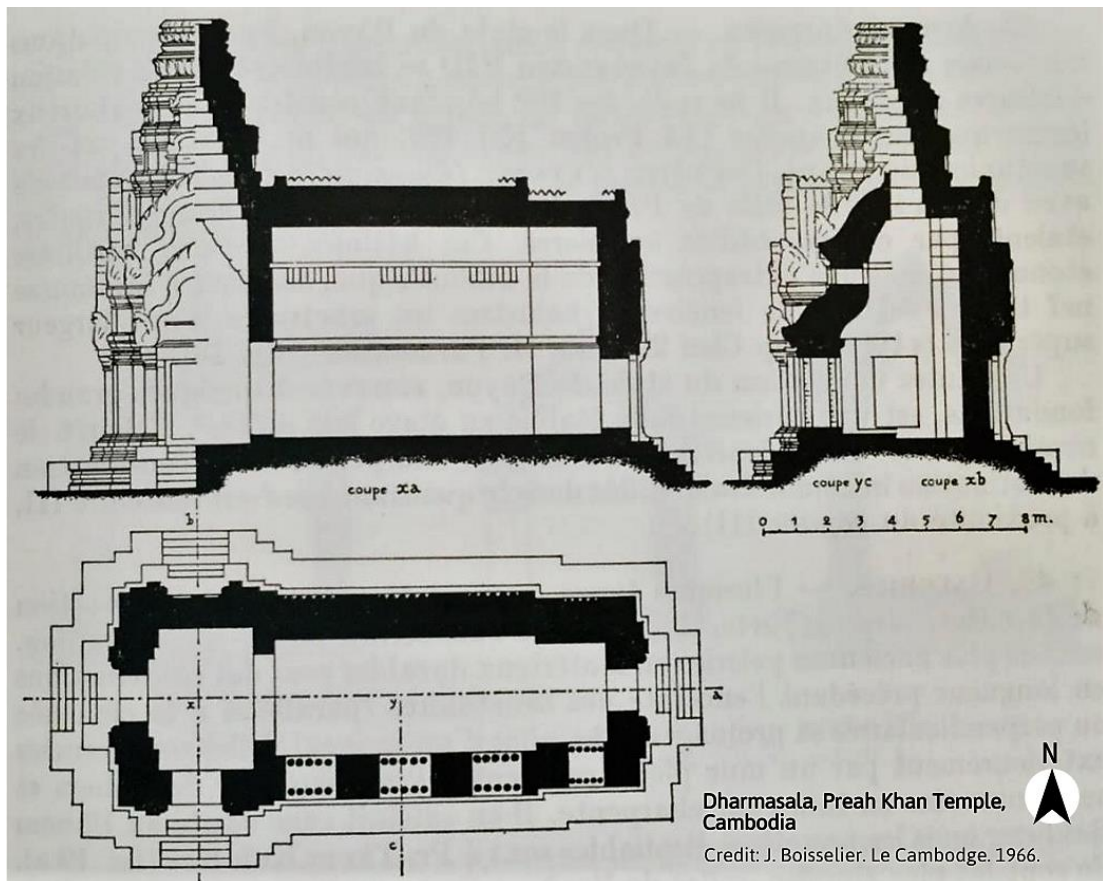


Figure 15: A typical dharmasala, reconstructed drawings of dharmasala at Preah Khan Temple, Cambodia. Credit: J. Boisselier. *Le Cambodge*. 1966.

The building of dharmasalas as public facilities was a means for merit-making of the King since he adopted Buddhism. Kindness and benevolence are essential for a king to rule and be revered as “Dharmaraja” (the king who rules by Dharma) according to Buddhist beliefs.

Surveys for verification of the information given in the inscription have been carried out, especially for the Angkor – Phimai route (ปานใจ ธารทัศน์วงศ์ และคณะ, 2550 (2007)). The result has verified the accuracy of the inscription with the findings of 17 dharmasalas from Angkor to Phimai, with an addition of 1 dharmasala called ‘Prasat Jan’,

which could have been built in later period?¹⁵ Locations of these dharmasalas indicate the delineation of the road, although most of the physical remains of the road have been lost. Further studies are still required in order to find out more evidences of the physical road, however, it is clearly perceivable from the existence of dharmasalas that Angkor – Phimai road once existed and must have been one of the most important and active routes of communications in the time of King Jayavarman VII.

Apart from mentioning the roads and houses of fire, interesting information relevant to these roads are found in verses 158 – 160 (Maxwell, 2007, pp. 95-96) that says:

“158.

Every year in the month of Phalguna, these gods [from other temples] will be accessible here [in Preah Khan]: Munindra (King of Sages, the Buddha) of the East; the Goddess Jayarajacudamani;

159.

the Jayabuddhamahanathas of twenty-five provinces; the holy Buddha Virasakti; and the Buddha of Vimaya;

160.

Bhadresvara;

Campesvara;

Prthusilesvara, and the rest –

all these, with their attendant deities, amounting to one hundred and twenty-two.”¹⁶

¹⁵ Recently, it is observed that the architectural features of Prasat Jan in Cambodia indicate that it is not a dharmasala as previously believed. Therefore, the number of dharmasalas should be 17, exactly as mentioned in the Inscription. This will be discussed later in the following chapter on case study analysis.

¹⁶ Translated from Sanskrit original as transliterated in: Georges Coëdes, *La Stèle du Pràh Khan d'Angkor*. (Coëdes, 1941, pp. 281-282).

CLVIII.	(38)	● atrādhyesyā ime devāh	phālgune prativatsaram
		prācyo munīndraç	çrījaya- rājacūdamanis tathā
CLIX.	(39)	● jayavuddhamahānāthāh	pañcavimçatideçakāh
		çrīvīraçaktisugato	vimāyasugato pi ca

These verses mention the festival or ceremony that was held annually in the month of Phalguna (February – March, Maxwell, 2007: 95), when Buddha images and sculptures of deities from several provinces were brought and gathered at the Preah Khan temple to be worshipped. The “Buddha of Vimaya” is clearly mentioned in verse 159. Therefore, the Angkor – Phimai road must have been the most convenient route of transportation for this religious event, and the building of travelers’ rest-houses is believable to accommodate participants of this activity which must have been a large number of people who joined in the procession of transporting the Buddha of Vimaya to Preah Khan temple and back again.

The information obtained from the Preah Khan Inscription verifies the existence of the Angkor – Phimai road, as well as its significance as means of transportation in the annual religious ceremony.

Apart from dharmasalas, there are other historical and archaeological evidences which indicate that the Angkor – Phimai road had existed and served local people since the periods prior to the Khmer domination. This will be presented and discussed in the following topics.

4.3 Existing Condition of the Angkor - Phimai Cultural Route

From field survey and existing documents, it is verified that the royal Angkor roads network of King Jayavarman VII did exist. Lunet de Lajonquière made the earliest map of these roads, showing a network of satellite road system that extended from Angkor to the 5 important towns and places mentioned earlier. Among these roads, the Angkor – Phimai is the longest, distance 253.9 kilometres. All roads are straight, taking the shortest routes to the destinations.

At present, surveys have been conducted using GPS and advanced technology to determine the physical remains of the roads and related elements. In this paper, we

CLX. (40) ● bhadrecvaracāmpēcvara prthuṣaileṣvarādayah
 ṣatadvāvimṣaṭiṣ caite pinditāh parivārakaih

shall concentrate our study on the Angkor – Phimai route, especially the part of route in Thai territory as stated in the introduction.

4.3.1 Angkor – Phimai route and components¹⁷

The Angkor – Phimai route can be perceived based on the map of Lajonquière as shown previously, verification of the delineation of the route is based on the location of the existing dharmasalas, significant complementary elements of the road mentioned in the Preah Khan Inscription.

It should be noted that the author adopts the term ‘components’ from the Operational Guidelines for the Implementation of the World Heritage Convention, which the author sees as suitable term for specifying cultural heritage sites which are complementary elements of the series. In this study, the series is the Angkor – Phimai cultural route, and selected elements are its components.

4.3.2 Selection of components

It is necessary to specify means for selection of components for serial cultural heritage, in this case, the Angkor – Phimai cultural route. The author used the Preah Khan Inscription as base information due to its being the clearest and most pertinent written document on the matter. The information deduced from the inscription can be summarized as follows:

1. The Angkor – Phimai road existed before the time of King Jayavarman VII.

¹⁷ Consideration on the relationship between these components to the Angkor – Phimai cultural route is based on the dates prior and up to the period of King Jayavarman VII. Dharmasalas are considered important landmarks which are most relevant to the Preah Khan Inscription, the important historical document for this study. Furthermore, it should be noted that after the reign of King Jayavarman VII, the Khmer civilization gradually declined. Sukhothai and Ayutthaya Kingdoms successively rose into dominating powers in the region. There were no more important constructions in Cambodia after the 13th century. Later, in 14th century, Cambodia was partly defeated by Ayutthaya and became its vassal state. The significance and use of the Angkor – Phimai route, consequently, was lost due to these political reasons until most of the physical parts of the road, as well as many of the related components, deteriorated. Nevertheless, ancient settlements along the route have always been inhabited and developed until today, and the features of these ancient settlements still exist and perceivable in satisfactory condition.

2. King Jayavarman VII had 17 houses with fire (vahnigrhani) built along the existing road.

This learned information has led to further investigation into the route, or road, from Angkor to Phimai, when the houses of fire (travelers' rest houses, dharmasalas) were plotted onto the map. It is clearly seen that the delineation of the dharmasalas forms a straight line from Angkor to Phimai, which indicate a very probable delineation of the physical road, of which there is not much physical evidence at present¹⁸. It should be noted, however, that the exact delineation of the road may differ from the delineation made by connecting the locations of dharmasalas, which is the hypothesized route, therefore, further studies are required for verification of the route in this aspect.

The following map shows locations of all dharmasalas from Angkor to Phimai, including Prasat Jan, which may be a later addition to the 17 original dharmasalas built in King Jayavarman VII's period, this issue will be discussed in the following chapter on case study analysis.

Number of dharmasalas is 18, however, in case Prasat Jan is not included as mentioned, the number will be 17, exactly as specified in the Preah Khan Inscription.


 จุฬาลงกรณ์มหาวิทยาลัย
 CHULALONGKORN UNIVERSITY

¹⁸ This is due to lack of studies on the physical road, however, it is believable that if studies are carried out, evidence of the road will be considerably revealed. At present, there has been recent discovery of some parts of the road, as will be presented in this chapter.

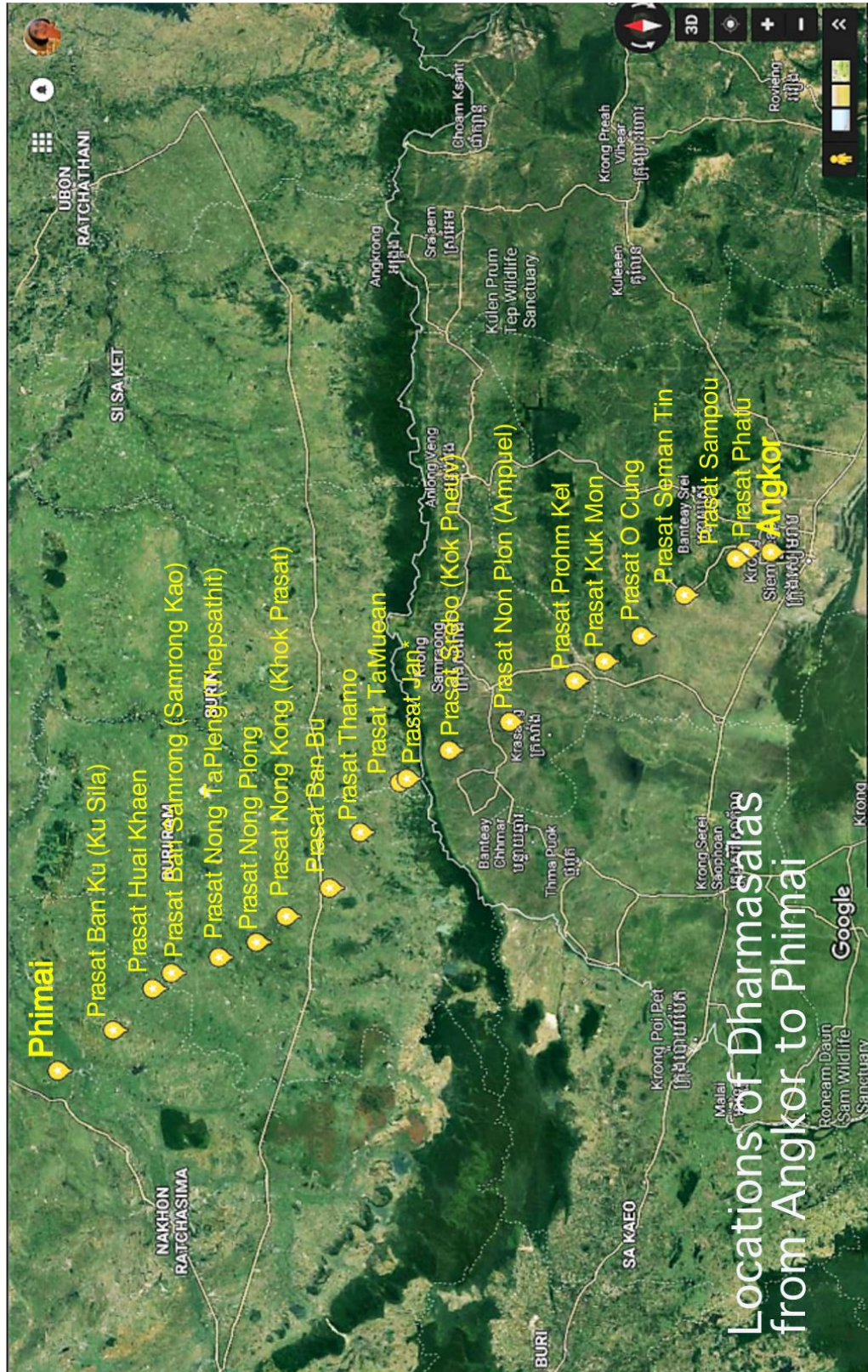


Figure 16: Map: Locations of Dharmasalas from Angkor to Phimai.

As seen from the map, the hypothesized road (based on locations of the dharmasalas) runs pass several cultural heritage sites, e.g. ancient towns, important Khmer temples, hospitals (arogayasalas, also built by order of King Jayavarman VII), and ancient industrial sites. These sites are situated in commutable distance (within 2 kilometres radius from the hypothesized route that links dharmasalas together) to the route thus they could have used the road as means of communication and transportation, therefore, they are justifiable as components of the route.

The components of the Angkor – Phimai, therefore, are summarized into 2 groups as follows:

Group I: Components of the route based on the Preah Khan Inscription.

Components of the route in this group are those which are clearly mentioned in the Preah Khan Inscription, which comprise:

1. Main destinations, which are the beginning and termination of the route, namely, the towns of Angkor and Phimai.
2. Physical remains of the Angkor – Phimai route (road)
3. Travelers' rest houses (dharmasalas)

Group II: Components of the route based on archaeological and other evidences.

Components in this group comprise archaeological sites and other evidences which are relevant to the route. Archaeological excavations have revealed as many as 184 archaeological sites and cultural heritage sites which are located within 15 kilometres along the hypothesized route which connects the dharmasalas, hypothesized as delineation of the Angkor – Phimai road in the past (Sampaongern, 2007). The following table lists the types and number of archaeological sites, including the dharmasalas, as surveyed by Mr. Pongdhan Sampaongern during 2007-2009 (พงศัณวีย์ สำเภาเงิน, 2557 (2014)).

Table 2: Type and Number of Archaeological Sites Along the Angkor – Phimai Route in Thailand

Type of Archaeological Sites	Number
Religious places	18
Arogayasalas	4
Dharmasalas	9
Pottery kiln sites	40
Iron smelting sites	67
Ancient communities (prehistoric)	9
Stone marking posts	10
Ponds	22
Town gates	3
Pier	1
Wooden bridge	1
Total	184

Although these archaeological sites are valid testimonies of the significance of the Angkor – Phimai cultural route, it is not necessary that all sites must be selected as components of the cultural route because, in the aspect of serial cultural heritage, selection of components should be based on representativeness of each site to the characteristics and values of the series as a whole. Therefore, the author has surveyed and selected some of these sites which best represent the Angkor – Phimai cultural route, situated within 2 kilometres radius from the hypothesized route. Selected components are categorized into 6 groups as follows:

1. Arogayasalas (hospitals)
2. Khmer temples e.g. Phnom Rung, Mueang Tam

3. Baray (water reservoirs)
4. Dvaravati site
5. Ancient towns/settlements
6. Ancient industrial sites

Components which are addressed in detail in this study are those which are situated in Thailand. Components in Cambodia are mentioned as necessary based on existing documents.

Serial structure of Angkor – Phimai cultural route is illustrated in the diagram below:

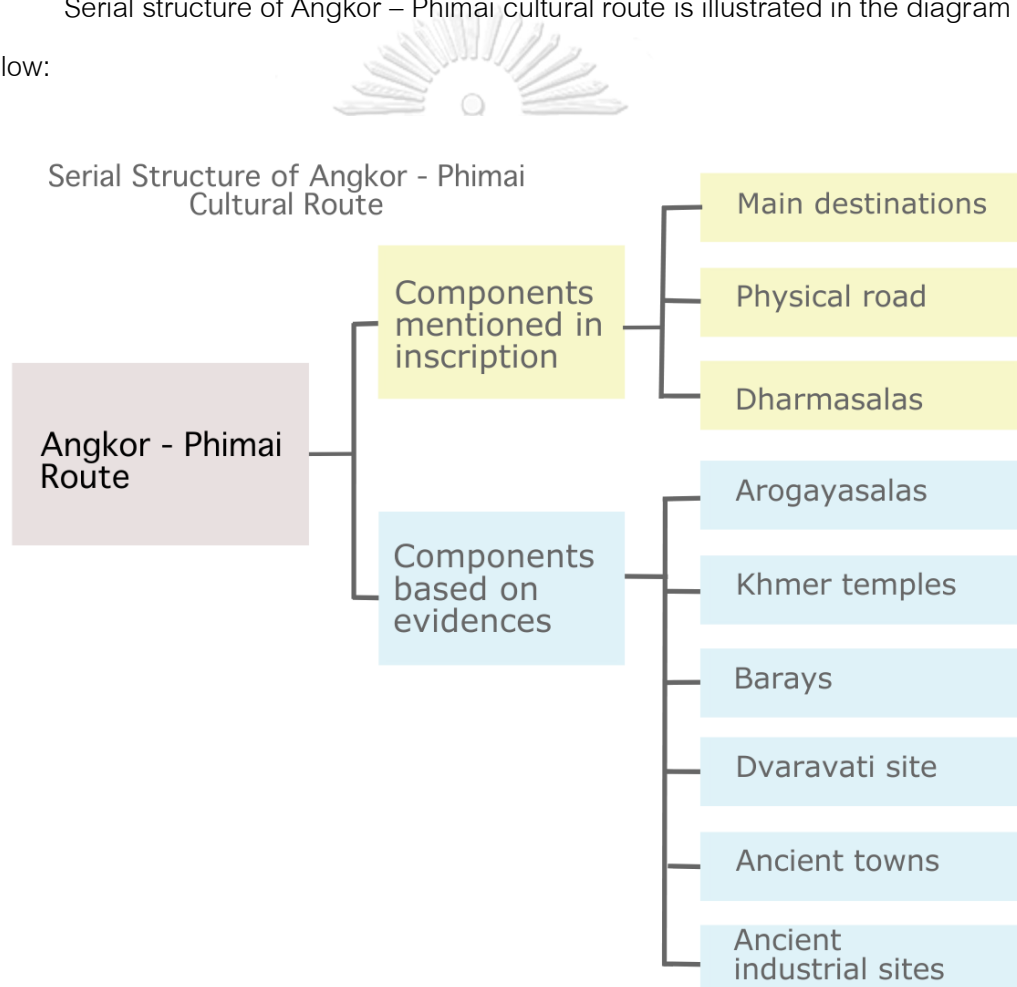


Figure 17: Diagram: Serial Structure of Angkor – Phimai Cultural Route.

Locations of components are shown in the following map, in which the delineation of the route can be clearly perceived, as well as the noticeable clustering of industrial sites, important temples, reservoirs and ancient towns.

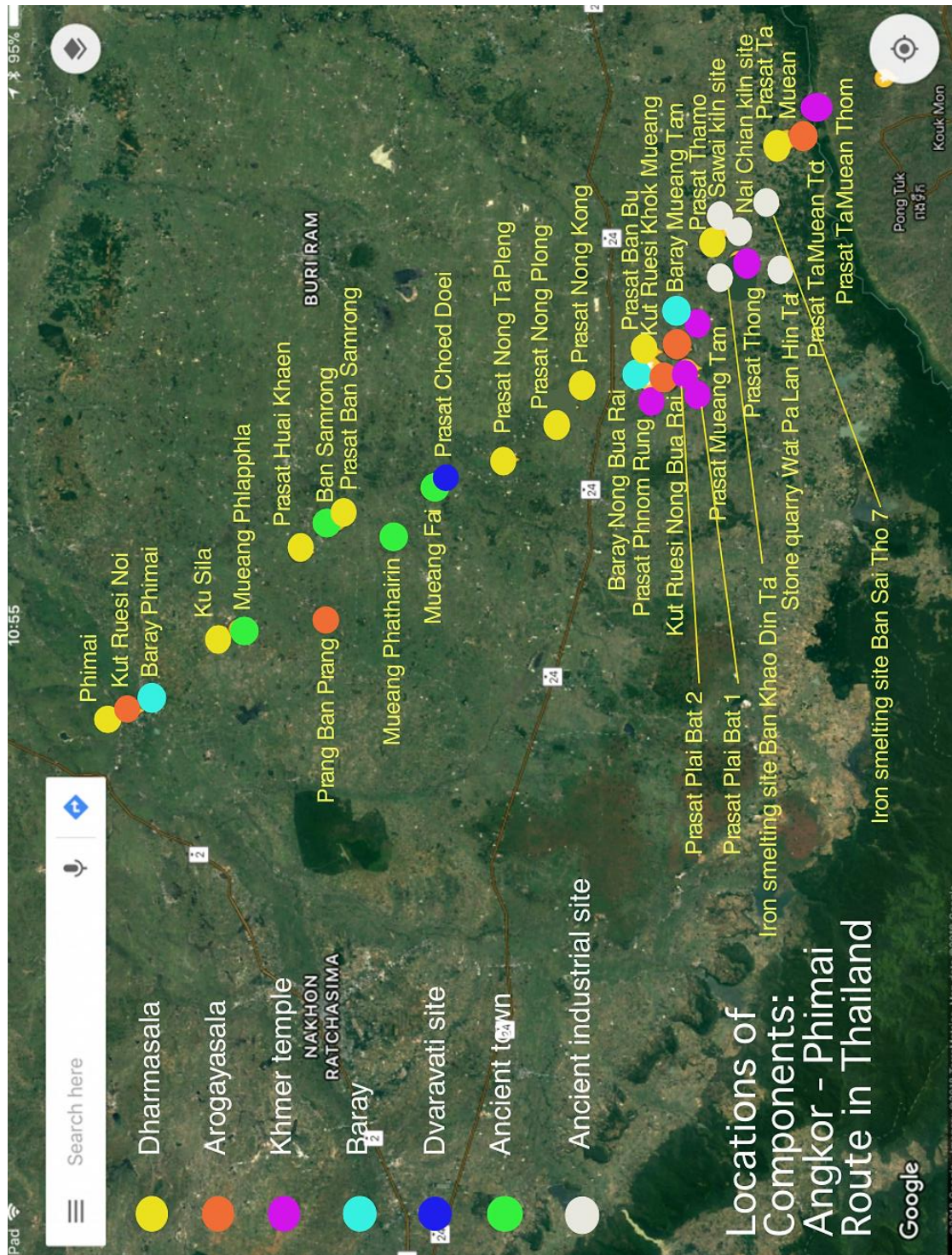


Figure 18: Map: Locations of Components, Angkor – Phimai Cultural Route in Thailand.

4.3.3 Descriptions of components

Components of the Angkor – Phimai cultural route in Thailand are described by group, with map and photograph for each component, as follows:

4.3.3.1 Group I: Components of the cultural route as mentioned in the Inscription

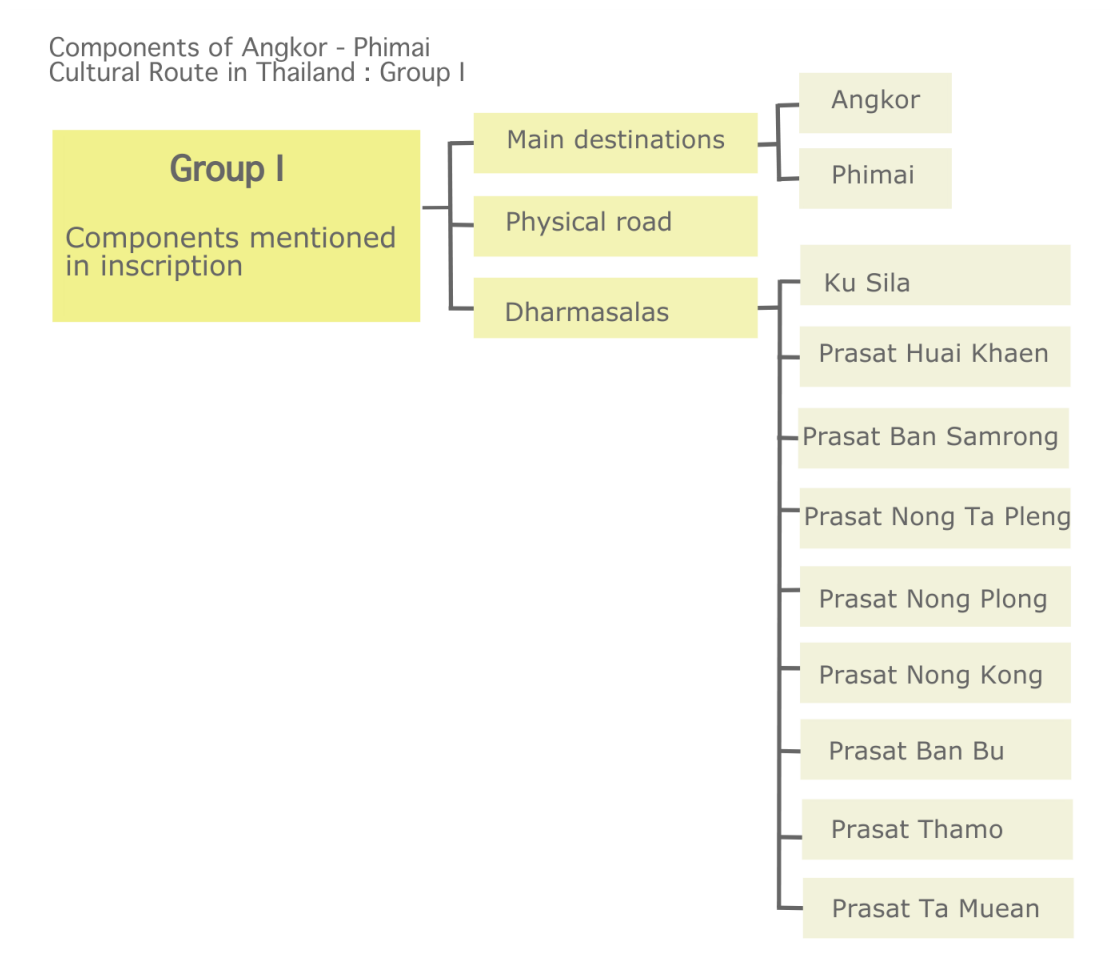


Figure 19: Diagram: Components of Angkor – Phimai Route in Thailand, Group I.

Cultural heritage sites in Group I are the most important components of the Angkor – Phimai cultural route based on the Preah Khan Inscription. There are 3 categories of components which form a serial cultural heritage of the cultural route. Each category and its cultural heritage sites are described as follows:

1. Main destinations, which are the beginning and termination of the route, namely, the towns of Angkor and Phimai

Angkor (เมืองพระนคร)

Location: Siem Reap, Cambodia

Geographical coordinates: 13.412469, 103.866989

13° 24' 44.8884" N 103° 52' 1.1604" E

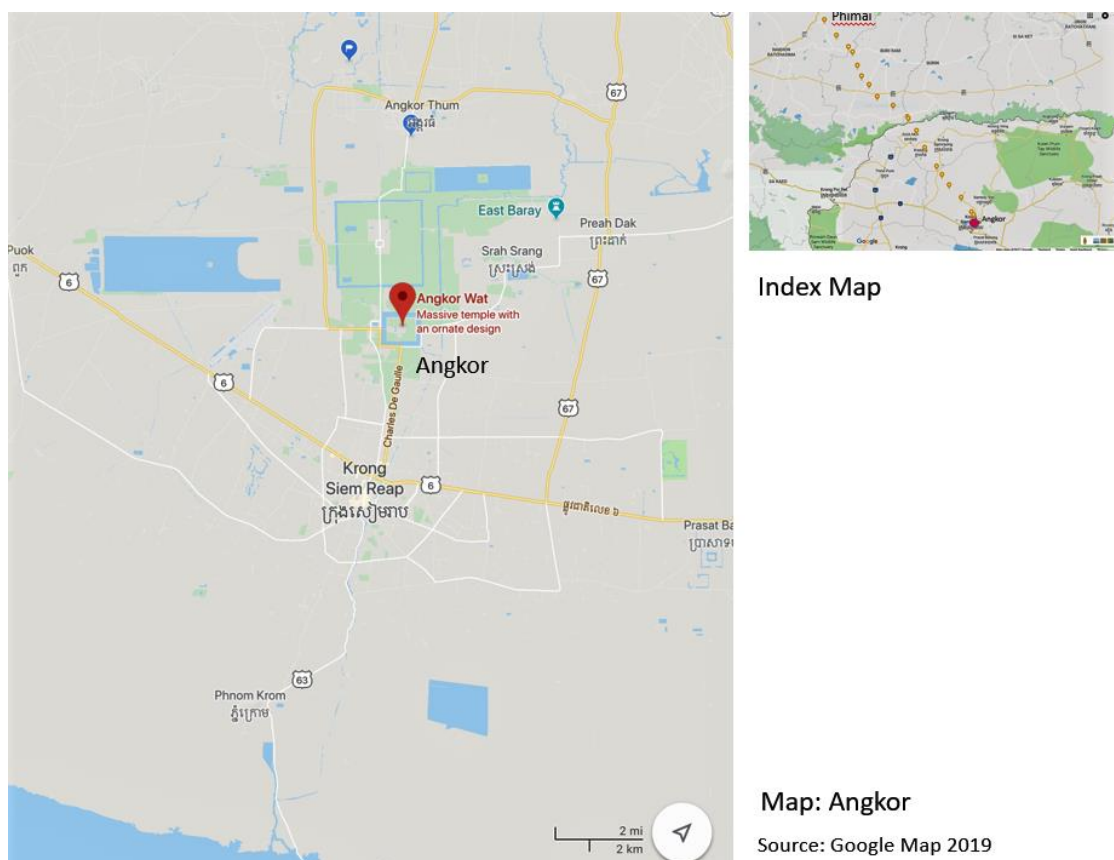


Figure 20: Map: Angkor

Angkor was the most important capital of the Khmer Kingdom that lasted from circa 9th – 14th centuries, before it was rediscovered during the 20th century, from which it has become famous as one of the most important historic cities and cultural heritage sites of the world.

Information about the city of Angkor has been obtained via numerous cultural heritage places, archaeological evidences, and most importantly, the inscriptions, which

have given reliable information about the names of kings, important events, place names, etc. Foreign documents, especially the most widely referred “Journal of Zhou Da Kuan”, a Chinese traveler in 13th century, is another source of information on the life and events in Angkor at that time (เฉลิม ยงบุญเกิด, 2543 (2000)).



Figure 21: Causeway, the main access to Angkor Wat.

- The founding of Angkor

Angkor, originally named Yasodharapura, was founded by King Yasovarman, who ascended the throne in 888 CE. At that time, the capital was at Hariharalaya. A few years afterward, King Yasovarman decided to build a new capital at the place approximately 20 kilometres from Hariharalaya, which was a flat and fertile plain nourished by the river Stung Siem Reap. On the plain stood the Phnom Bakheng, a low hill that represents Mount Meru, an auspicious geographical feature in Hindu beliefs. The King, therefore, had his new capital, Yasodharapura, commonly known as “Angkor” (the capital), built with Phnom Bakheng at its centre, based on the belief in Hindu cosmology that the city represented the world of Gods, with Mount Meru at centre. The King had a Shiva lingam built on Phnom Bakheng, as well as having numerous small Shiva lingam carved onto the stone bed of the river that flowed from Phnom Kulen to the city, thus the

city was perpetually blessed with sacred water, being the place where the King established his power and ruled the Kingdom.

Apart from the creation of the city, the King had an important irrigation project carried out by building a large water reservoir originally named “Yasodharatataka”, which is now called the “East Baray”. The size of the reservoir is 1,800 x 7,000 metres, made by building levees that retain water that was directed from Siem Riep river (Jacques & Lafond, 2004; ปราบนี้ วงษ์เทศ, 2543).

- The West Baray

After the reign of King Yasovarman, later kings had several religious places built in and around Yasodharapura. As for irrigation project, the most remarkable of which is the West Baray built in the reign of King Udayadityavarman II (1050 – 1080 CE). The Baray was built by building levees surrounding the area of 2.2 x 8 kilometres, situated to the west of the city. The West Baray is most relevant to the Angkor – Phimai route because the beginning of the route (road) was part of the levee of the Baray.

- The building of Angkor Wat

The most important cultural heritage place of Yasodharapura, the Angkor Wat, was built in the reign of King Suryavarman II. The temple was built near the southeastern corner of Yasodharapura, covering the area of approximately 200 hectares, surrounded by a ring of moat. This temple is considered the most beautiful and magnificent of Khmer architecture, where the Hindu cosmology concept is perfectly manifested in the architecture and planning, and the mural carvings are the most elaborate and extensive, covering more than 800 metres of interior walls of the galleries. The temple was dedicated to Vishnu, who is depicted all over the place in various forms. At present, Angkor Wat is inscribed on World Heritage List as part of the Angkor property. It is also recognized as one of the 7 Wonders of the World of Modern Time.

- The reign of King Jayavarman VII and the founding of Angkor Thom

King Jayavarman VII (1181 – 1218? CE) ascended the throne after he had victory over the Cham, that defeated Angkor in 1177 and ruled for approximately 4 years. After King Jayavarman VII expelled the Cham, he had to revive Angkor from the war damages, which might have inspired him to build another capital, resulting in the founding of Angkor Thom in 1181? (นิคม มุสิกะคามะ, 2536 (1993), p. 150). Angkor Thom is a massive city, square-planned, the length of wall on each side is approximately 12 kilometres, surrounded by a moat, accessible through 5 gateways. The centre of the city is Prasat Bayon with the giant “face towers”, one of the iconic temples of Khmer culture (Cunin, 2007). In the area of Angkor Thom, there are several important temples built by order of the King, e.g. Prasat Banteay Kdei, Ta Prom, Preah Khan, Neak Pean, Ta Som, Krol Ko, Ta Nei. Other important temples outside the capital are, for instance, Banteay Chmar to the northwest, Wat Angkor in Kampong Cham, Prasat Ta Prom in Bati region.

- Public facilities projects in King Jayavarman VII period

King Jayavarman VII was a devout Buddhist who wanted to make merit and establish himself as a “Dharmaraja”, the King who rules by Dharma, therefore, he had numerous public facilities built, which amount to 121 dharmasalas (travelers’ rest houses) and 102 arogyasalas (hospitals), and roads (which may have already existed but were repaired or rebuilt in this period) which led to important towns around the capital in all directions.

- Angkor World Heritage

Angkor has been inscribed on World Heritage List since 1992, under criteria (i)(ii)(iii) and (iv). Property area is 40,100 hectares, being a serial cultural property comprising 3 Zones: Angkor, Roluos, and Banteay Srei. It is managed by the APSARA National Authority (Authority for the protection of the site and the management of the Angkor Region), which was specifically established in 1995 for the purpose of protection and management of Angkor. Another important body which plays important roles in the protection and conservation of Angkor is the ICC-Angkor (International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor) created

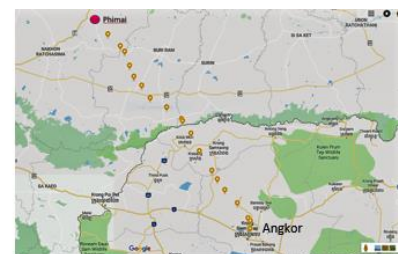
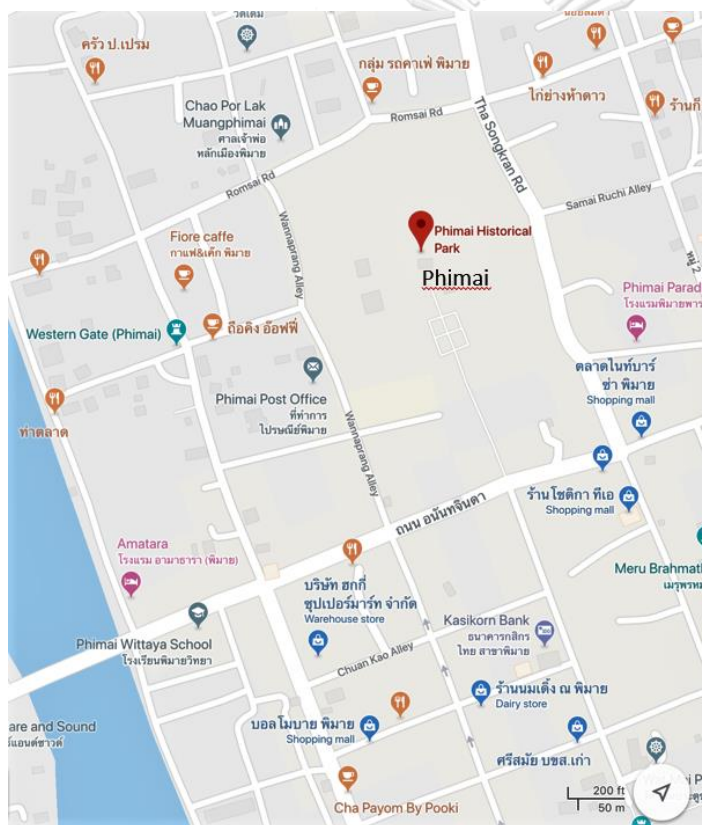
on 13th October, 1993, to ensure the coordination of the successive scientific restoration and conservation related projects, executed by the Royal Cambodian Government and its international partners, as well as consideration on the overall management of the property (UNESCO, 2018a).

Phimai (พิมาย)

Location: Nakhon Ratchasima, Thailand

Geographical coordinates: 15.221077, 102.493770

15° 13' 15.9" N 102° 29' 37.6" E



Index Map

Map: Phimai

Source: Google Map 2019

Figure 22: Map: Phimai town centre and Phimai Historical Park.

Phimai is an Amphoe (district) in Nakhon Ratchasima province, Northeast Thailand. The area of Phimai has been inhabited since prehistoric period, circa 3,000 years BP, verified by archaeological evidences from late prehistoric period to Funan, Dvaravati, and Chenla which later developed into the Khmer civilization.



Figure 23: Prasat Phimai, centre of Phimai town and view of the present Phimai town.

The ancient town of Phimai lies at 260 kilometres northwest of Angkor. Relationship between the town of Phimai and Khmer Kingdom is recorded in several Khmer inscriptions, wherein the town name 'Vimayapura' (original name of Phimai) was mentioned. The town plan clearly articulates Khmer influence, being a rectangular walled town, 565 x 1,030 metres, surrounded by a ring of moat. Town walls were built of packed earth, the southern part of which still remains. There were 4 gateways built of red sandstone and laterite, only 3 of them still remain in perceptible condition, namely, the south gateway called "Pratu Chai" (Victory Gate), the west gateway, "Pratu Hin" (Stone Gate), and the north gateway "Pratu Phi" (Ghost Gate), the east gateway remains only the base. The town moat comprises the moat on eastern side, which is still perceptible; the northwestern and northern sides are part of the Chakarat stream which flows into the Mun river at Tha Songkran; the Mun river acts as town moat on eastern and western sides; and the moat on southern side is the Khem stream, a branch of

Chakarat stream, that flows toward the Mun river at Tambon Prasak, Amphoe Chum Phuang, Nakhon Ratchasima. The location of Phimai, surrounded by waterways, is highly appropriate for settlement as well as being auspicious according to religious beliefs.

Irrigation system of Vimayapura was well-planned, with several reservoirs called “Baray” built within the town namely, Sa Kaeo, Sa Phrung, Sa Si, and Sa Khwan. Outside the town walls there are 2 large barays, Sa Phleng to the east and Sa Chong Maeo to the south (กรมศิลปากร, 2532 (1989); จรรยา มาณะวิฑิต และ รวีวรรณ แสงวัณณ์, 2546 (2003)).

Significant of Phimai in the aspect of natural resources is that the town, as well as the entire area of the present Amphoe Phimai, is situated on bedrocks which comprise strata of rock salt, therefore, it has been an important source of salt since ancient times, which might be one of the reasons that the town was considered amongst the most important towns in Khmer Kingdom. The Angkor – Phimai road, therefore, is believable to be the main route of transportation that transported salt from Phimai to the capital of ancient Cambodia. Furthermore, Dr. Thada Sutthitham, a scholar who studied the Angkor – Phimai cultural route in this aspect hypothesized that the reason for Khmer territorial kingdom’s expansion to northeast Thailand might have been for salt, thus she named the road as “salt road” (Sutthitham, 2005). At present, salt mining is still active in Phimai, with a large factory, Kluea Phimai Co.,Ltd., located at approximately 8 kilometres to the northwest of Prasat Phimai. Salt mining process, which is conducted by boring holes into the rock salt bed and pumping the brine up, had caused sinkholes in some area near the rock salt wells, therefore, in 2002, the Department of Mineral Resources had conducted a geological survey at Prasat Phimai in order to evaluate the risks which might affect the monument and related cultural heritage sites. Fortunately, survey results were concluded that there were no risks of sinkholes at Prasat Phimai area, however, further survey and study would be made at the area between Prasat Phimai and the rock salt mine (สืบศักดิ์ ศิลโกสุม กำปนาท แผลมพุลทรัพย์ และขวัญใจ กัฬหะสุต, 2545 (2002)).

As for intangible aspect, Phimai town is one of the places which are mentioned in the “Pachit – Oraphim”, one of the most well-known of Thai local legends. Phimai was

the town of the villain “King Phrommathat” who kidnapped “Nang Oraphim”, the heroine, then the hero “Thao Pachit”, a prince from Angkor Thom, came to rescue her (Kullapat, 2016). The legend has inspired people to connect the places in Phimai and locations in Nakhon Ratchasima with the story, which has resulted in place names “Prang Phrommathat” (Phrommathat Tower), “Tha Nang Sa Phom” (Lady Washing Hair Pier), and “Noen Oraphim” (Oraphim Mound).

At present, Phimai town is a Registered National Monument (registered by name). Survey and demarcation of registration area have been carried out and completed since 2014 (สำนักศิลปากรที่ 10 นครราชสีมา, 2014), however, due to the condition of the site as a living town, public hearings and negotiations with people who are stakeholders of the site must be made, and there are still disputes over some areas, which must be cleared before the registration can be officially announced in the Government Gazette.

It should be noted that, although the registration of Phimai town is not completed, most of the important monuments and cultural heritage sites in the town are registered National Monuments, complete with boundary demarcation and announced in the Government Gazette (จรรยา มาถนะวิท และ รวีวรรณ แสงวันฉน์, 2546 (2003)).

Important cultural heritage sites in Phimai are:

- Prasat Phimai จุฬาลงกรณ์มหาวิทยาลัย

At the centre of Phimai stands a large Khmer temple made of sandstone, the Prasat Phimai. The name of the temple was mentioned in inscriptions as “Kamartengchakatavimaya”. The temple dates from 11th – 12th centuries, with some additional parts built circa 13th century. This temple architecture is based on Mahayana Buddhist concept, with Khmer style planning that represents Buddhist cosmology, however, it is noticeable that, instead of lying on east – west axis, Prasat Phimai is laid on north – south axis, with the main entrance to the south. This is believed to be related to the direction of Angkor, the capital, which is located to the southwest of Phimai. The main gateway of the town “Pratu Chai”, is also situated to the south where the town was

accessible from the Royal Road, or the Angkor – Phimai route mentioned in the Preah Khan Inscription (Freeman, 1996; Smitthi & Moore, 1992).

Prasat Phimai comprises outer walls with 4 gateways or Gopuras, the causeway, inner galleries with 4 inner Gopuras, 2 libraries, and the main sanctuary. The most important structure, the main sanctuary, is built of white sandstone, facing south. The tower is 28 metres high, square-based, 22 x 22 metres, with 3 porches and an 8 x 15 metres antechamber to the south. The structure is elaborately decorated with carvings, depicting Bodhisattva of Mahayana Buddhist beliefs, and the story of Ramayana.

Prasat Phimai is a National Monument, registered in the Government Gazette vol. 53, part 34, on 27th September, 1936. It has been restored by Anastylis method by collaboration between Thai and French scholars and conservation experts. It is managed as a historical park, under the name “Phimai Historical Park” which was officially opened on 12th April, 1989, presided over by HRH Princess Mahachakri Sirindhorn. The area of Phimai Historical Park covers Prasat Phimai and other related monuments in Phimai town area (จรรยา มาณะะวิท และ รวิวรรณ แสงวัฒน, 2546 (2003)).



Figure 24: Main tower, Prasat Phimai.

- Tha Nang Sa Phom (Nang Sa Phom Pier)

The Angkor – Phimai road ends at the bank of Khem stream where a pier stands. The pier, called “Tha Nang Sa Phom” now remains as a laterite base of a building which is believed to have been built of wood. The site has been restored, perceivable as a cross-shaped structure with stairs on 3 sides, one leading toward the stream and 2 on the sides. The side without the stairs is connected to the road, which could have been finished to the same level. Archaeological excavation revealed column holes on all sides of the laterite base, as well as a large number of terracotta tiles, indicating the original building to be a 4-porched pavilion made of wood, with terracotta tiled roof, dated circa 13th century (จรรยา มาณะวิท และ จิวรรณ แสงวัณณ์, 2546 (2003)).



Figure 25: Tha Nang Sa Phom

- Pratu Chai (Victory Gate)

Pratu Chai, meaning Victory Gate, is the southern gateway, the main access to Phimai town. It is the most important gateway to the town built on the same axis as Prasat Phimai, therefore, the main prang (tower) of the temple is clearly visible at centre of the gateway when approaching from outside the town.



Figure 26: Pratu Chai (Victory Gate). Main tower of Prasat Phimai can be seen at centre of the gateway.

The outermost chamber is elevated approximately 1 metre from ground level, paved with red sandstone, with no doorway; the middle chamber and innermost chamber have doorways sized 0.80 x 1.75 metres. Extended from the end of the innermost chamber is a laterite wall of 3 metres in height and 20 metres in length. This laterite wall is connected to earthen wall that form the main part of the town walls of Phimai (จรรยา มาณะวิท และ รวิวรรณ แสงวัฒน์, 2546 (2003)).

The gateway is rectangular-planned with chambers on both sides. Each side has 3 chambers, archaeological excavation in 1987 resulted in discovery of several important artefacts e.g. the head of Avalokitesvara found in the eastern chamber, the body of Prajnaparmita found in the western chamber, terracotta mold of Buddha image in Samadhi (meditation) posture, similar to the style of Buddha image found in Angkor, dated circa 13th century. Apart from the style of images, the construction techniques of the gateway indicate that the structure was built in 13th century, the period of King Jayavarman VII.



Figure 27: Evidence of ancient road discovered by excavation in 2017 at Pratu Chai (Victory Gate).

The excavation in 2017, which was initially conducted for burying electric cables, unexpectedly revealed the surface of ancient road. From this discovery, the Fine Arts Department did further excavation and found that the road is an entrance road that runs through the Pratu Chai. The road structure is packed earth and stone blocks, finished with lime plaster, 5 – 6 metres in width. This is an important evidence of the physical

features of the road from Angkor to Phimai, which could lead to further study on the physical remains of the cultural route in Thailand.

2. Physical remains of the Angkor – Phimai route (road)

The Angkor – Phimai route, which is approximately 253.9 kilometres in distance, was the longest road among those which were mentioned in the Preah Khan Inscription, and the part of the route in Thailand, from Phimai to Prasat Ta Muean, the last dharmasala nearest to the Thai-Cambodian border, is 128.9 kilometres. With such long distance, however, evidence of physical remains of the road exists in very small number, especially in Thailand, which is believable to have resulted from lack of studies. It should be noted that the physical remains of the road are group of the most important components of cultural route, however, there have not been many specific studies on the subject until recently, archaeological excavations at levees, which are believed to be the remains of the Angkor – Phimai road were conducted in 2006 by Mr. Pongdhan Sampaongern at 2 sites (พงศ์ธัญว์ สำเภากเงิน, 2557 (2014), pp. 28-39):

- Ban Khok Yang, Amphoe Ban Kruat, Buriram
- Ban Ta Pang, Tambon Chan Thop Pet, Amphoe Ban Kruat, Buriram

From both sites, excavation results are concluded that:

1. The top part of the levee (hypothesized as part of the Angkor – Phimai road) is leveled soil, laid on top of a layer of fine sand which is laid over natural clay bed.
2. Locations of both sites are relatable to 2 dharmasalas, namely, Prasat Thamo and Prasat Ta Muean.

Further information is obtained in the most recent study in 2017 by Mr. Wasan Thepsuriyanont, Head of Phnom Rung Historical Park, present in his report “เทคโนโลยี LIDAR กับงานโบราณคดีเขพนมรุ้งและปลายบัด (LiDAR Technology and Archaeological Works at Phnom Rung and Plai Bat Mountains) (วสันต์ เทพสุริยานนท์, 2016). This report is highly valuable to the study of Angkor – Phimai cultural route in Thailand because the LiDAR survey reveals trace of ancient road, shown in the following map and photographs:

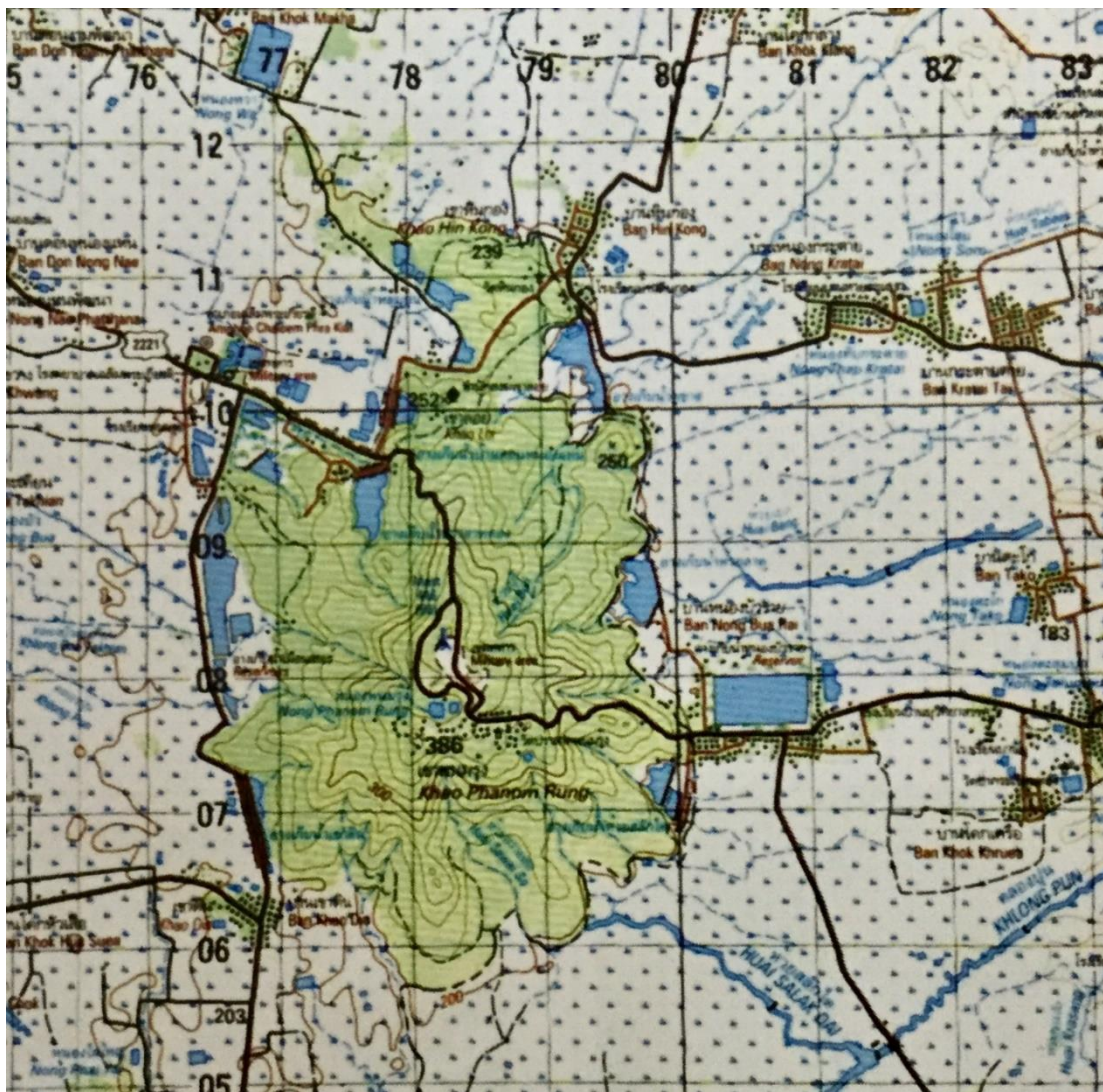


Figure 28: Map 1:50,000, Amphoe Nang Rong, Buriram, showing area of Phnom Rung mountain, area for LiDAR survey. Credit: Wasan Thepsuriyanont, LiDAR Technology and Archaeological Works at Phnom Rung and Plai Bat Mountains. 2016.

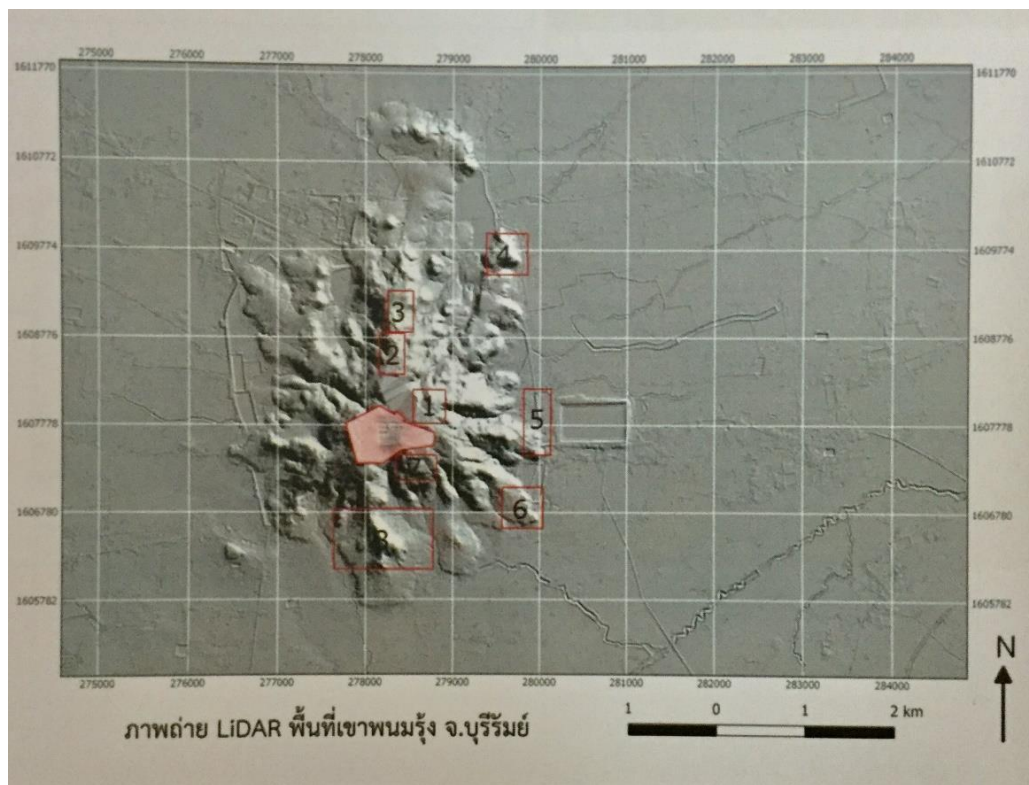


Figure 29: LiDAR aerial photograph of Phnom Rung mountain, the road is seen in area 5. Credit: Wasan Thepsuriyanont, LiDAR Technology and Archaeological Works at Phnom Rung and Plai Bat Mountains. 2016.



Figure 30: Area 5, zoomed in, showing the trace of road passing between the base of Phnom Rung mountain and Baray Nong Bua Rai, the nearest reservoir, compare with photograph take from field survey that the road is seen as a levee. Credit: Wasan Thepsuriyanont, LiDAR Technology and Archaeological Works at Phnom Rung and Plai Bat Mountains. 2016.

Condition of the road is described in the report that Area 5 is to the east of Phnom Rung mountain, on the left side of the present road when coming down from the mountain, before reaching Baray Nong Bua Rai, approximately 1.5 kilometres from Prasat Phnom Rung. Important evidence is a levee, 300 metres long, 20 metres wide, believed to be part of the Royal Road, which connected Angkor in Cambodia to Phimai in Thailand, passing Phnom Rung on its way (วสันต์ เทพสุริยานนท์, 2016, p. 5).

This information is one of the most concrete evidence of the Angkor – Phimai cultural route in Thailand that sheds light on the delineation of the road and verifies the connection between the road and important elements, the Phnom Rung group of cultural heritage sites, which are components of the route. It is considered a pioneer report on the subject, which should lead to further survey of the Angkor – Phimai route or the Royal Road in the future.

Information about the physical road in Cambodia is obtained from the Living Angkor Road Project (LARP), which conducted surveys in Cambodia where physical remains of the roads including important elements such as bridges built of laterite have been discovered. Such bridges are not found on part of the route in Thailand.

Information on physical features of the ancient road is summarized as follows (ปานใจ ชารัทศนวงศ์ และคณะ, 2550 (2007); อุทยานประวัติศาสตร์พิมาย, 2015 (2558)):

1. Ancient road in Cambodia can be found in the areas of Siam Reap and Oddar Meanchey provinces. The roads are laid in straight line, but some are curved as seen in the place when the road approaches Preah Khan Temple, it deviates approximately 20 degrees to the east, passing the Kol and Khok Spean. This indicates that that road must have been constructed after the building of temple and settlements. At Khok Spean village, the road is part of the levee that surrounds the village, with evidence of the use of road since circa 11th century CE.
2. The road is generally elevated in the parts that pass lowlands and lowered when entering highlands. The features of the road comprise roadway built of packed

earth mixed with coarse sand, silt, and a layer of packed fine sand, approximately 14.40 metres in width, elevated approximately 1 metre above ground level; on both sides of the road are ditches, approximately 6 metres in width, 1 metre in depth, located about 1.4 metres from the base of the slope of the road shoulder. Overall, the road, its shoulders and ditches measure approximately 30 metres wide.

3. In Cambodia, there are 32 ancient bridges which are parts of the Angkor – Phimai road, found in Siam Reap and Oddar Meanchey provinces. The first bridge, which is nearest to Angkor is called Sampou Bridge, measuring 9 x 27 metres. The last bridge before the road crosses Phnom Dangrek is called Kmeng Bridge, measuring 6 x 12 metres. The longest bridge is Top Bridge, in Songkal district, Oddar Meanchey, measuring 14.5 x 150 metres. The smallest bridge is Hal Bridge in Kol village, measuring 6.1 x 7.5 metres. Load bearing capacity of bridge, as studied by the Chulachomklao Royal Military Academy, is approximately 42 tons per square metre.

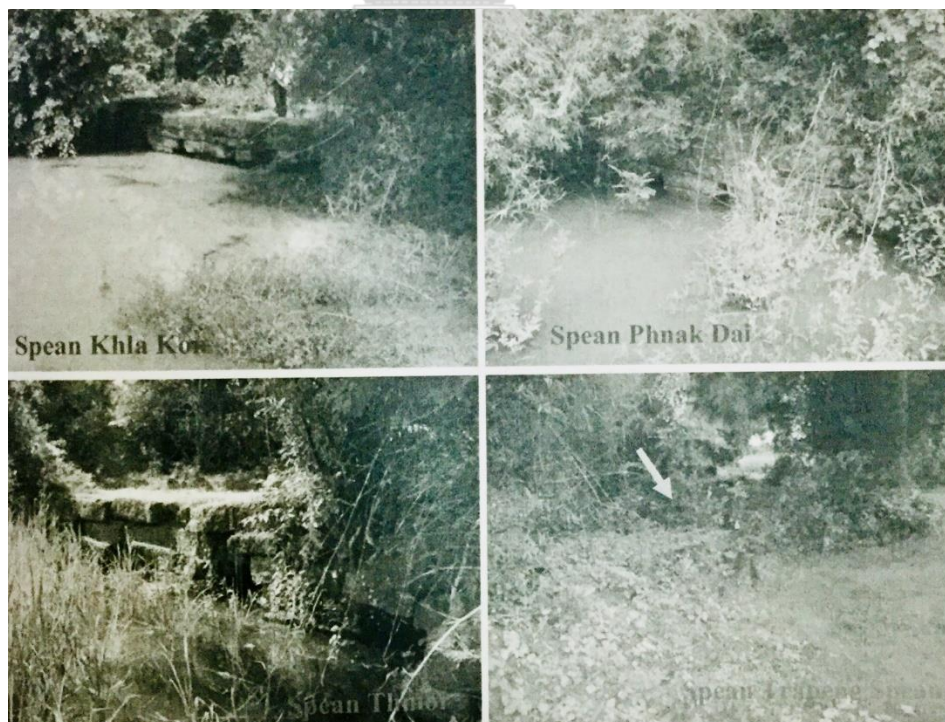


Figure 31: Laterite bridges on Angkor – Phimai route in Cambodia. Credit: Asst. Prof. Dr. Panjai Thanthassanawong et. al. Living Angkor Road. 2007.

4. Local people in Cambodia call the ancient road “vrah ganlon” as it is mentioned in the K. 175 inscription dates 10th century CE, and most of the people know that it is the ancient road that runs towards Siam (Thailand). Only some people know that the road reaches Nokor Reach (Korat – Nakhon Ratchasima, the name of the province where Phimai is located), because the name “Phimai” is not known to local people. However, the local people in Phnom Dangrek area generally know about the beginning and termination of the ancient road.
5. There are 2 ancient roads that run parallel in the Phnom Dangrek pass, one road is called “Thanon Pla Hok” (Phlov Prahok – Fermented Fish road) used for carts, elephants or general communications; the other is called “Phlov Romkel Sap” (Royal Corpse road – road for transporting corpses of royal family members), featuring elevated roadway, with laterite stairs, used for pedestrians and royal parades with palanquins.

The ancient Angkor – Phimai road runs northwest from Angkor, passing Phnom Dangrek, entering Thailand where the road passes important temples e.g. Phnom Rung and Mueang Tam, ancient villages, ancient industrial sites e.g. iron smelting sites, pottery kiln sites. The road terminates at Phimai, where it meets with the levee of the Baray that leads to Tha Nang Sa Phom pier, before proceeding toward the town of Phimai through the Pratu Chai, Victory Gate.

Report for the Registration of Mueang Phimai has included parts of ancient road as important elements of the town, however, there is no information about the original features of the road. Locations of the roads on registration map of Phimai are shown below.

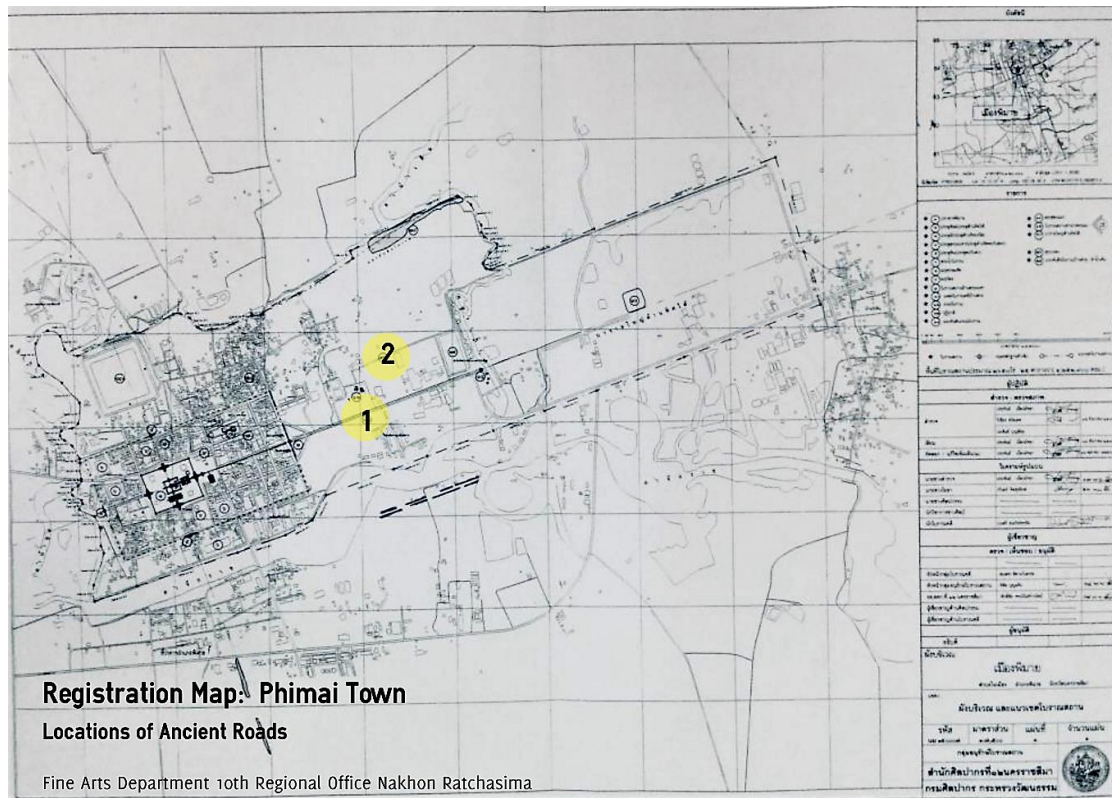


Figure 32: Map of Phimai Town, with Locations of Ancient Roads.

“Ancient road” no. 1 on the map is mentioned “starting from Pratu Chai and ending at the Tha Nang Sa Phom pier, is overlaid with a new road”.

No. 2 is specified as “levee/ancient road” described as, “runs from the southern levee of the baray, passing Sa Chong Maeo pond to the area near Kut Ruesi (arogayasala). The road is approximately 10 metres wide, approximately 1 metre elevated from surrounding area”, with no further details (สำนักศิลปากรที่ 10 นครราชสีมา, 2014).

Apart from the mentioned evidences, archaeological studies on the physical features of the Angkor – Phimai road should be continually conducted to obtain more information which will be essential in verification and validation of the values of this cultural route. LiDAR technology is one of the effective means of survey as seen in the results of the report on the Phnom Rung area.

3. Travelers' rest houses (dharmasalas)

Travelers' rest houses, which are called "dharmasalas" in present documents, are mentioned in the Preah Khan Inscription as "vahnigrhani" (vahni = fire; grhani = house) (Tingsanchali, 2018). The term "dharmasala" has been used following Louis Finot, a French scholar, who applied this Indian architectural term meaning "travelers' rest house", to this type of architecture which serve similar function (Pakdekham, 2018). Hence the term dharmasala has become popular in the field of Khmer architecture and culture studies until today although it is not used in the period of Jayavarman VII when these buildings were built.

The architecture of a dharmasala typically comprises a rectangular plan building, generally built of laterite, laid on east – west axis lengthwise, with entrance to the east. The west of the building is a tower, under which is an interior space for enshrining image of worship, most probably a Buddha image or Bodhisattva image based on Mahayana Buddhist beliefs that was prevalent in the period of King Jayavarman VII. The southern side wall of the building is installed with openings, whereas the northern side wall is solid. Another distinguished feature of dharmasala is the presence of clerestory, which is believed to have been created following the architectural style of the library (Boisselier, 1966, p. 82).

Dharmasalas are mentioned in the Sdok Kok Thom II inscription (dated Baphoun period, prior to Bayon of King Jayavarman VII), however, the dharmasalas, or travelers' rest houses in Baphoun period were built of light materials. It was King Jayavarman VII's innovation to have dharmasalas built of durable materials, laterite or sandstone (Boisselier, 1966, p. 82). However, it is still uncertain whether travelers actually stayed inside the building or the building only served as a place of worship for travelers, who stayed outside in shelters made of wood or other perishable materials, since no evidences of those shelters remain. Another idea on the use of dharmasalas was asserted by Claude Jacques and Philippe Lafond, that the dharmasala, "house of fire", was in fact the place where Sacred Fire was housed, referable to the bas reliefs at Angkor Wat and Bayon that show the Sacred Fire being carried in the middle of the

army line (Jacques & Lafond, 2004, p. 263). However, the author does not agree on this idea, because, considering the intention of King Jayavarman VII who wanted to establish himself as a Dharmaraja based on Buddhist concept of merit making, the building of public facilities such as travelers' rest houses are more reasonable than the building of house of Sacred Fire. Besides, the beliefs in Sacred Fire have not been credited in Buddhism, and there is not sufficient information on the practice and use of Sacred Fire in relevant to the period of King Jayavarman VII.

Due to the distinguished features of dharmasalas and the durability of materials, most of these buildings still survive and are recognizable although some of which are in much deteriorated state. With reference to the Preah Khan Inscription, a team of scholars, Asst. Prof. Dr. Panjai Thanthassanawong, Col. Asst. Prof. Dr. Surat Lertlam, Mr. Pongdhan Sampaongern, and Mr. IM Sokrity, conducted the Living Angkor Road Project (LARP) during 2007 - 2009, which aimed to survey and study the Angkor – Phimai cultural route using advanced technologies to collect and analyze archaeological and cultural information of the route and related archaeological sites.

Focusing on the dharmasalas, the Preah Khan Inscription mentions that the King had 17 vahnigrhanis built on the road from Angkor to Phimai. However, the survey by Living Angkor Road Project found 18 travelers' rest houses, which is 1 site more than the 17 rest houses specified in the Preah Khan inscription. Presumably, the 1 extra rest-house might have been built in later period or built in the same period but after the making of the inscription. However, there is a contradiction to this information after the architectural features of Prasat Jan was studied, that the site may not be a dharmasala . This will be discussed later in the following chapter on case study analysis.

The author conducted a survey of dharmasalas in Thailand in August, 2017 and has summarized a table of names and locations of these dharmasalas, with additional information from the Living Angkor Road Project for the names, locations, and other information of dharmasalas in Cambodia, as shown in the following table:

Table 3: Locations of Dharmasalas on Angkor – Phimai Route

Country	Name	Material	Distance between Sites (km)	Geographical Coordinates
Cambodia	Angkor		0	13.412469, 103.866989
Cambodia	Phatu	Laterite	1.6	13.475595, 103.869941
Cambodia	Sampou	Laterite	3.70	13.500812, 103.848573
Cambodia	Seman Tin	Laterite	17.84	13.632177, 103.753523
Cambodia	O Cung	Laterite	17.20	13.743872, 103.64394
Cambodia	Kuk Mon	Laterite	12.60	13.836603, 103.576796
Cambodia	Prohm Kel	Laterite	10.00	13.91138, 103.526581
Cambodia	Non Plon (Ampuel)	Laterite	22.90	14.078847, 103.416073
Cambodia	Srebo (Kok Pneuv)	Laterite	18.60	14.229637, 103.342193
Cambodia	Jan ¹⁹	Sandstone	14.50	14.338872, 103.267547
Thailand	Ta Muean	Laterite	2.30	14.355896, 103.258596
Thailand	Thamo	Laterite	17.70	14.454468, 103.126872
Thailand	Ban Bu	Laterite	18.40	14.533794, 102.979345
Thailand	Khok Prasat (Nong Kong)	Laterite	14.20	14.642338, 102.905606
Thailand	Nong Plong	Laterite	11.50	14.718251, 102.836189

¹⁹ Prasat Jan, according to its architectural features, appears that it is not a Dharmasala, in this case, the number of Dharmasala is precisely 17, which correctly conforms to the Preah Khan Inscription.

Thailand	Thep Sathit (Nong Ta Pleng)	Laterite	11.10	14.812680, 102.797120
Thailand	Samrong Kao (Ban Samrong)	Laterite	14.30	14.932999, 102.753869
Thailand	Huai Khaen	Laterite	6.70	14.980144, 102.713256
Thailand	Ban Ku (Ku Sila)	Sandstone (red)	16.00	15.079991, 102.602980
Thailand	Phimai		19.50	15.221077, 102.493770

Information from this table is referred to in the following map:



Figure 33: Map: Angkor – Phimai Cultural Route, Locations of Dharmasalas (Travelers' Rest Houses).

It is noticeable that locations of these rest-houses form an almost straight line, indicating the delineation of the road. Direction of the route is in accordance with the 1910 map of Lunet de Lajonquiere, verifying the accuracy of the survey by French scholars of the early 20th century.

Descriptions of dharmasalas in Thailand

Following are descriptions of dharmasalas in Thailand, from Phimai to the Thai – Cambodian border. It should be noted that most dharmasalas are titled “Prasat” (building with tower) by local people.

1. Ku Sila (Prasat Ban Ku) (กุศลลา (ปราสาทบ้านกุ))

Location: Mu 4, Ban Ku Silakhan, Tambon Lung Pradu, Amphoe Huai Thalaeng, Nakhon Ratchasima

Geographical coordinates: 15.07999104, 102.602480

15° 04' 47.9678 N 102° 36' 10.7282" E

Protection status: Registered National Monument. Government Gazette vol. 53, part 34, 27th September, 2479 B.E. (1936).

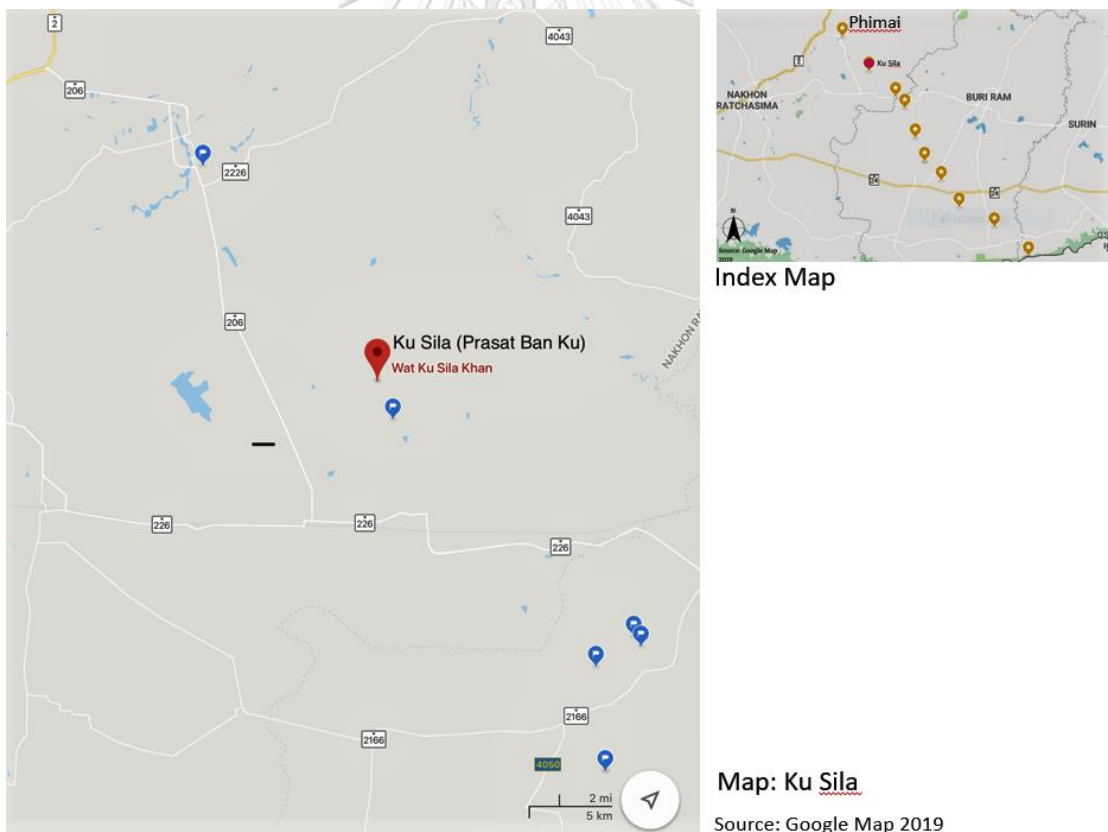


Figure 34: Map: Ku Sila



Figure 35: Ku Sila

Ku Sila, or Prasat Ban Ku is the first Dharmasala from Phimai, situated at 19.5 kilometres distance from Phimai to the southwest. The building is in much deteriorated condition due to the material, red sandstone, which is low quality type of sandstone. The remaining structure is perceptible as a dharmasala only by its size, planning, and remaining architectural elements e.g. stone blocks used as parts of window frames.

The area where this site is located is now occupied by a local temple named “Wat Ku Sila”. A shrine is built very close to the dharmasala. However, the original structure of the dharmasala mostly remains undisturbed, but the condition of the structure may not be suitable for restoration, therefore, means for conservation of this site should be carefully considered.

The site is registered as National Monument by name. Survey, demarcation, and registration documents have not been carried out.

2. Prasat Huai Khaen (ปราสาทห้วยแคน)

Location: Mu 1, Ban Huai Khaen, Tambon Huai Khaen, Amphoe Huai Thalaeng, Nakhon Ratchasima

Geographical coordinates: 14.9801440, 102.713256

14° 58' 48.5188" N 102° 42' 47.7226" E

Protection status: Non-registered monument.

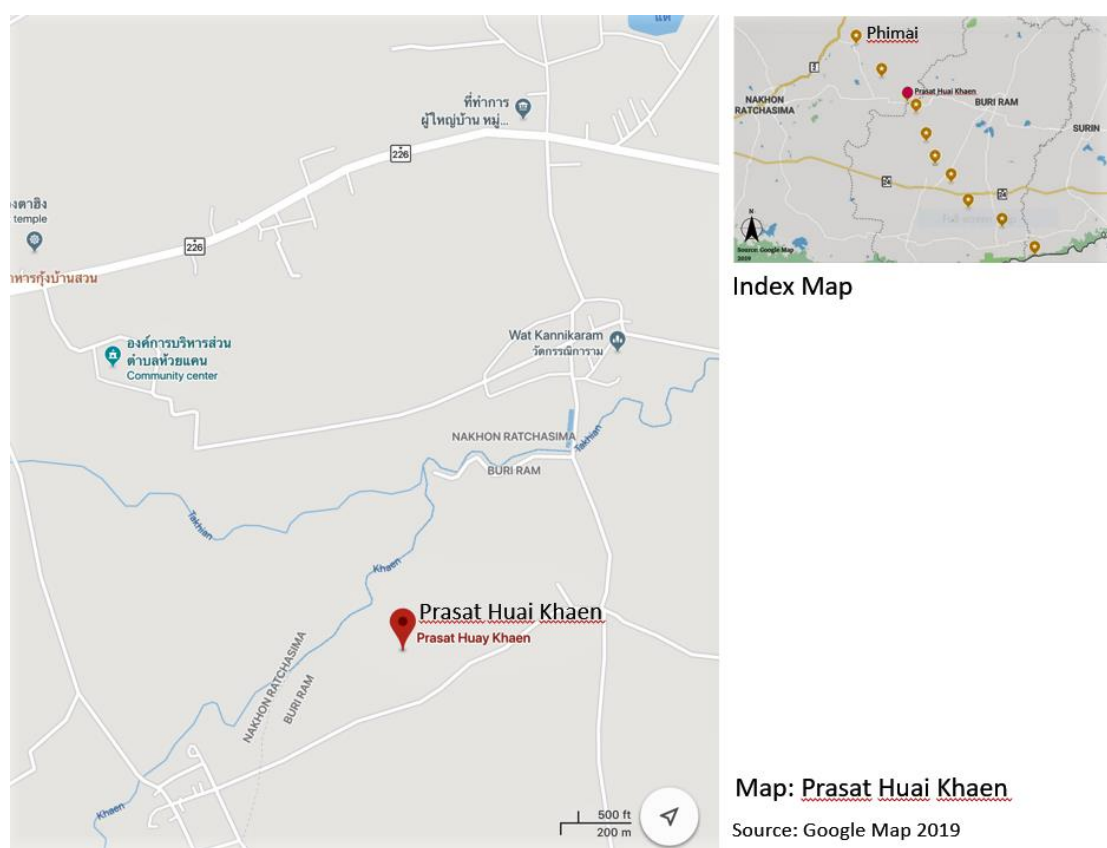


Figure 36: Map: Prasat Huai Khaen



Figure 37: Prasat Huai Khaen

Prasat Huai Khaen is built of laterite. It has been restored, with landscape development and information board. However, the restoration is not complete because there are still piles of stones which have not been restored to their original positions on the structure.

This site has undergone archaeological study in 2002, and restoration and landscape development in 2003.

3. Prasat Ban Samrong (Samrong Kao) (ปราสาทบ้านสำโรง (สำโรงเก่า))

Location: Mu 15, Ban Samrong Mai, Tambon Phathairin, Amphoe Lam Plai Mat, Buri Ram

Geographical coordinates: 14.932999, 102.753869

14° 55' 58.7999" N 102° 45' 13.9306" E

Protection status: Non-registered monument.

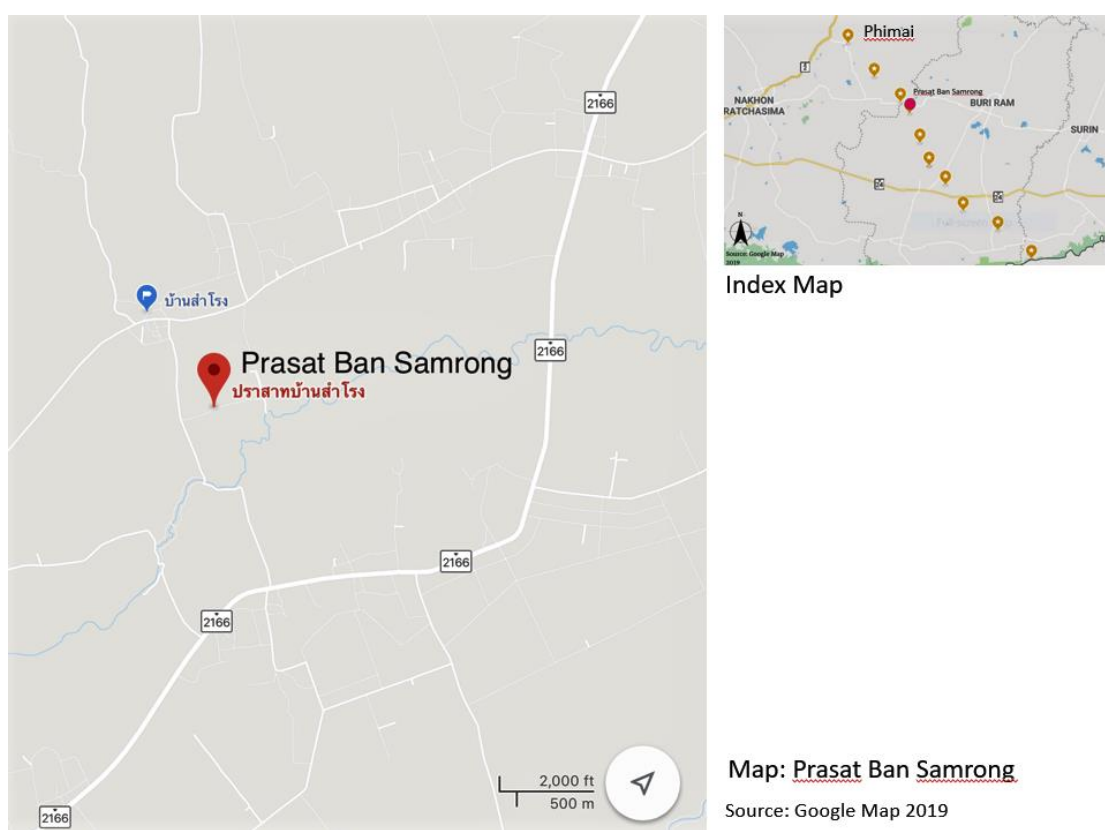


Figure 38: Map: Prasat Ban Samrong



Figure 39: Prasat Ban Samrong

Prasat Ban Samrong or Samrong Kao is in ruinous state, however, it is made of laterite which is durable material and the site is not disturbed, therefore, there is a potential for future restoration. The site has undergone initial survey.

4. Prasat Nong Ta Pleng (Thepsathit) (ปราสาทหนองตาปลั่ง (เทพสถิตย์))

Location: Mu 13, Ban Prasat Thepsathit, Tambon Chophaka, Amphoe Chamni, Buri Ram

Geographical coordinates: 14. 8126804, 102.7571201

14° 48' 45.6495" N 102° 47' 49.6327" E

Protection status: Non-registered monument.

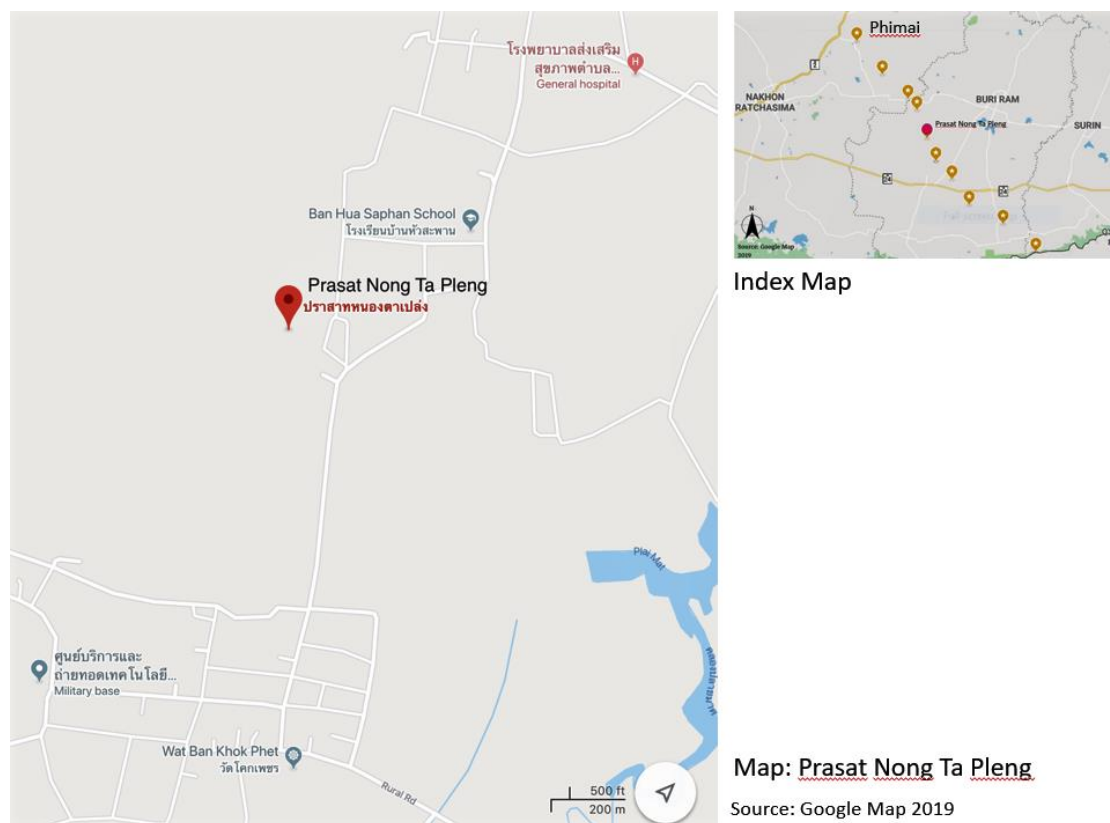


Figure 40: Map: Prasat Nong Ta Pleng



Figure 41: Prasat Nong Ta Pleng

Prasat Nong Ta Pleng or Thepsathitis a dharmasala in ruinous state. The remaining structure is approximately 50%, built of laterite. It is in the National Monument registration process.

5. Prasat Nong Plong (ปราสาทหนองปล่อง)

Location: Mu 2, Ban Nong Hua Lao, Tambon Nong Plong, Amphoe Chamni, Buri Ram

Geographical coordinates: 14.7182510, 102.8361893

14° 43' 05.7038" N 102° 50' 10.2818" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 99, part 172, 18th November, 2525 B.E. (1982).

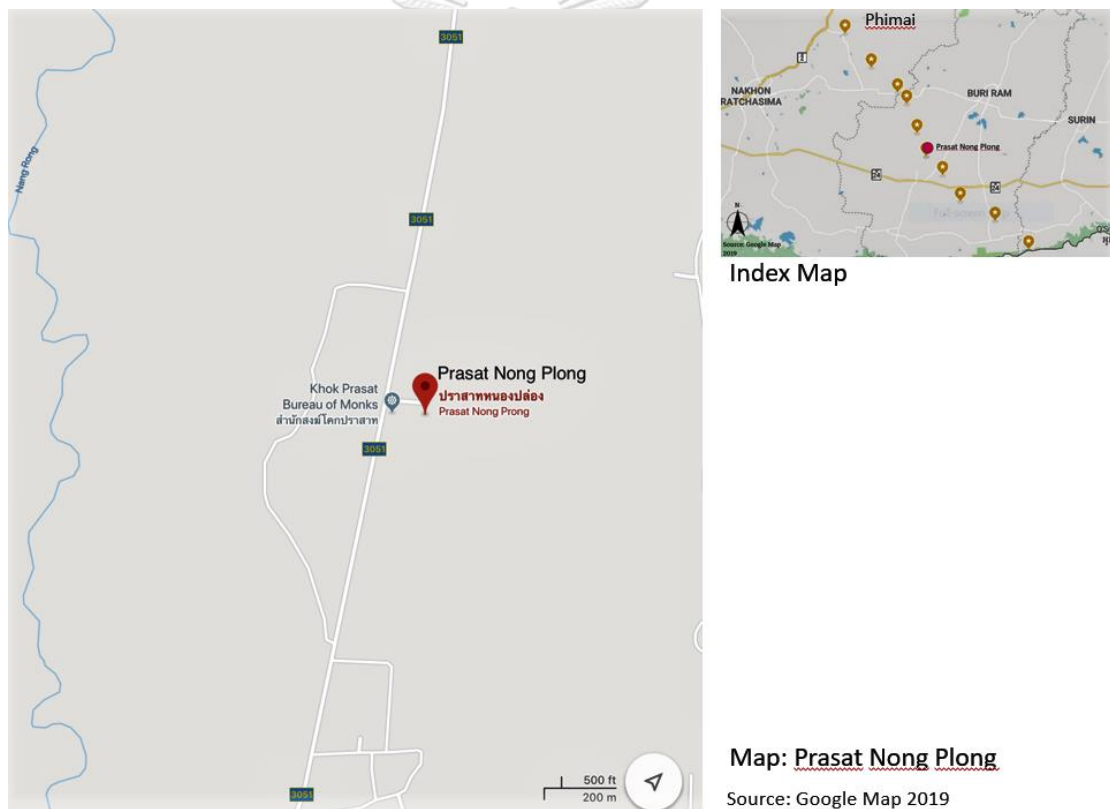


Figure 42: Map: Prasat Nong Plong

Prasat Nong Plong is a Dharmasala built of laterite, in ruinous state with approximately 60% of the structure remains. It is a registered National Monument.

Problem with this site is the surroundings, which is occupied by a local temple with several structures and buildings, built in the styles and designs that are not harmonized with, or even damaging to, the cultural heritage site.

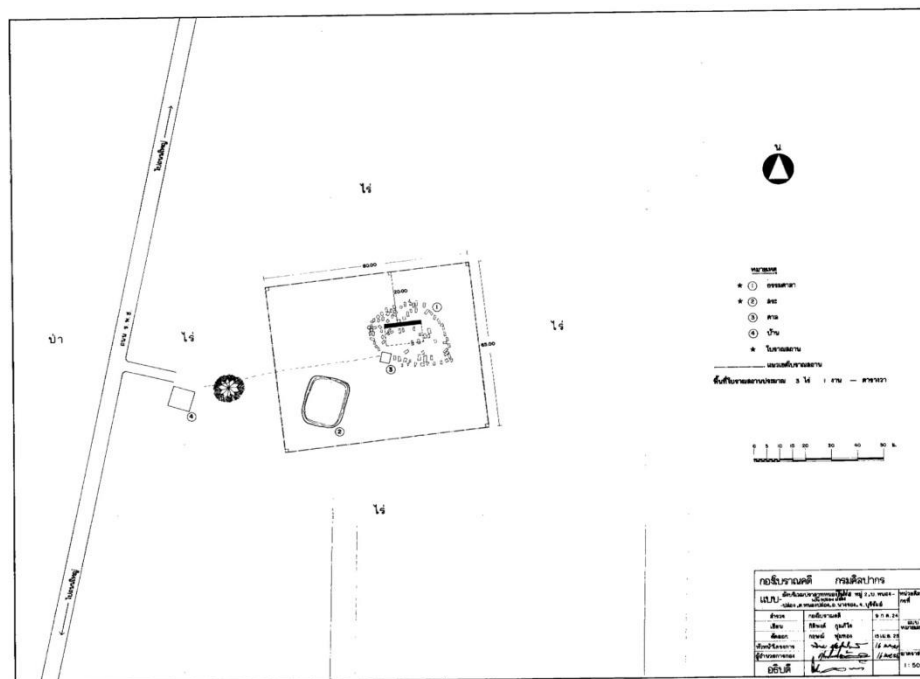


Figure 43: Prasat Nong Plong Registration Area Plan. Credit: Fine Arts Department



Figure 44: Prasat Nong Plong

6. Prasat Nong Kong (Khok Prasat) (ปราสาทหนองกง (โคกปราสาท))

Location: Mu 1, Ban Nong Kong, Tambon Nong Kong, Amphoe Nang Rong, Buri Ram

Geographical coordinates: 14.6423386, 102.9056065

14° 38' 32.4190" N 102° 54' 20.1835" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

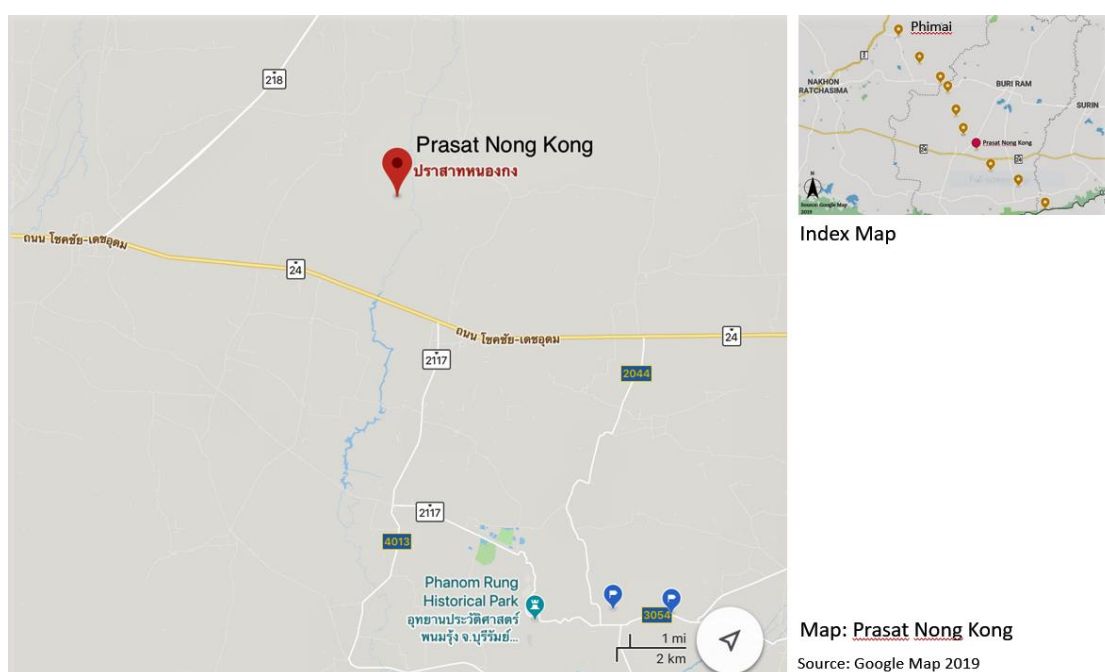


Figure 45: Map: Prasat Nong Kong



Figure 46: Prasat Nong Kong

Prasat Nong Kong is situated in agricultural area, which is rather isolated from the present road and the access is difficult, especially during rainy season. The structure is laterite, remaining approximately 50%. It has not undergone conservation process, however, the site still remains undisturbed apart from natural deterioration.

7. Prasat Ban Bu (ปราสาทบ้านบุ)

Location: Mu 5, Ban Bu, Tambon Chorakhe Mak, Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.5337946, 102.9793454

14° 32' 01.6609" N 102° 58' 45.6437" E

Protection status: Registered National Monument. Demarcation of protected area announced in Government Gazette vol. 100, part 36, 15th March, 2526 B.E. (1983).

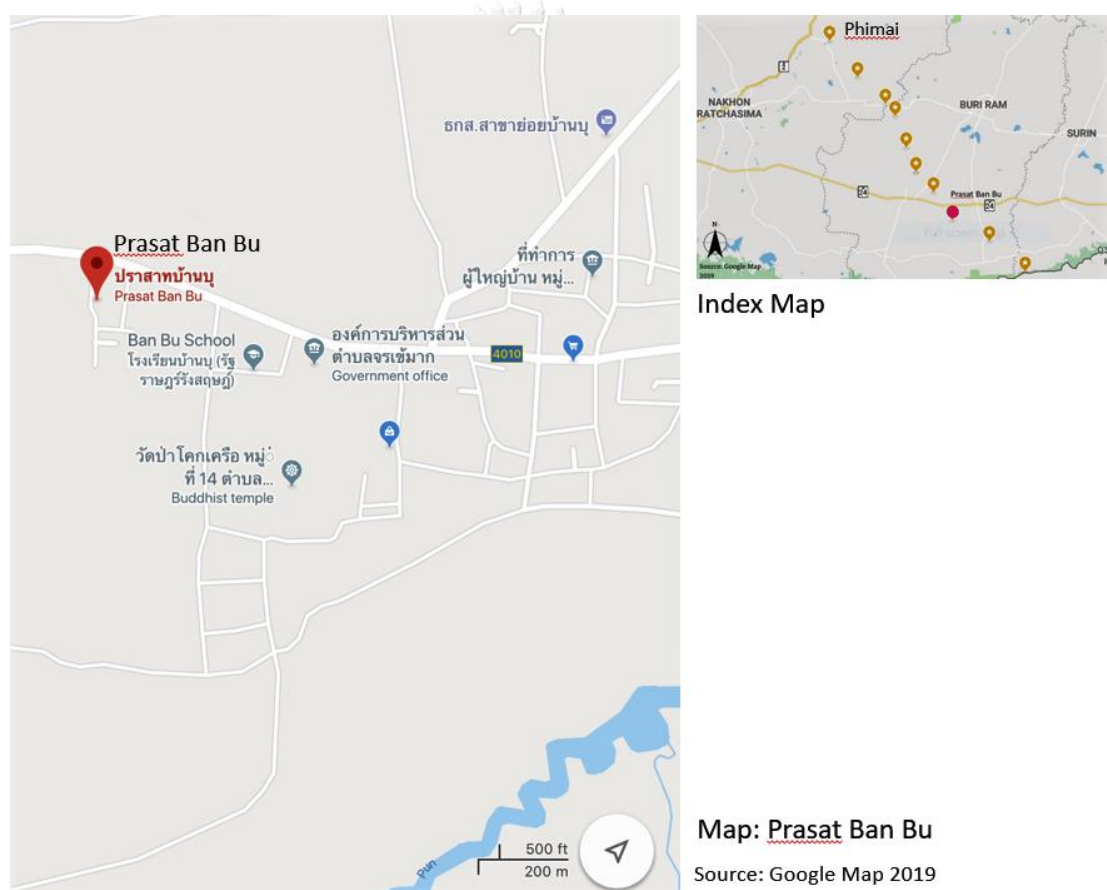


Figure 47: Map: Prasat Ban Bu

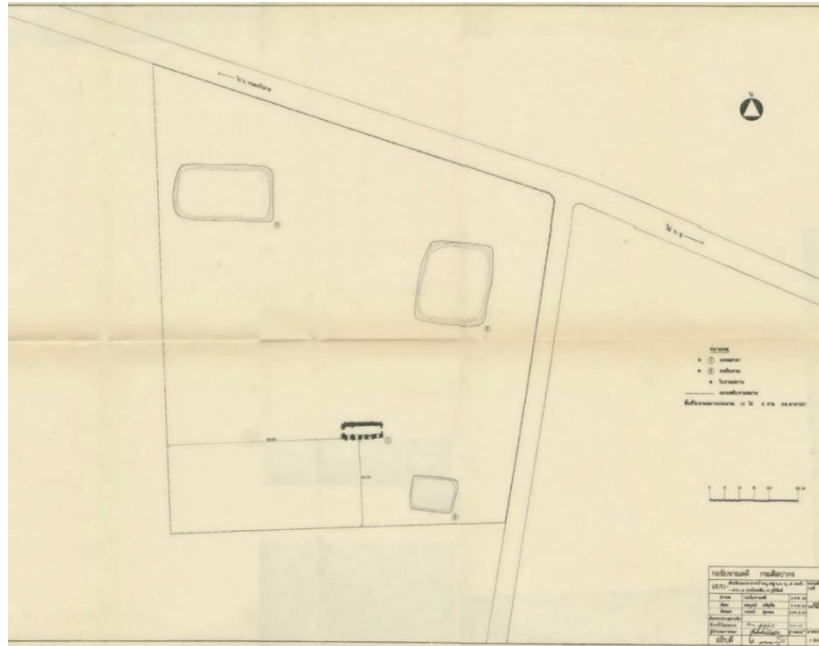


Figure 48: Prasat Ban Bu Registration Area Plan. Credit: Fine Arts Department



Figure 49: Prasat Ban Bu

Prasat Ban Bu is a dharmasala, completely restored, situated in the area of Ban Bu Witthayasan School, Amphoe Lahan Sai, Buri Ram. It is a registered National Monument, in care of Phnom Rung Historical Park.

This site underwent archaeological study in 1986, and restoration and landscape development in 2013 – 2015, and 2017.

8. Prasat Thamo (ปราสาททมอ)

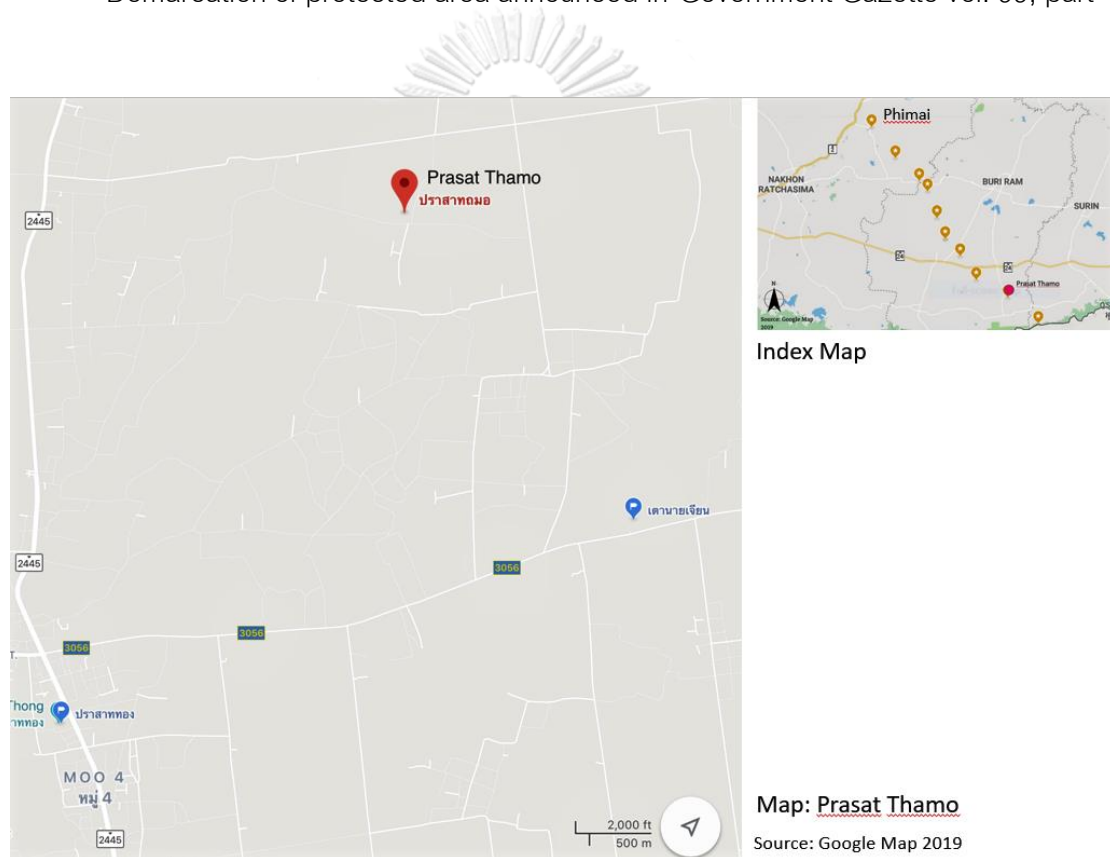
Location: Mu 2, Ban Lahan Sai Kao, Tambon Hin Lat, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.4544687, 103.1268721

14 27' 16.0876" N 103 07' 36.7396" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 99, part



155, 21st October, 2525 B.E. (1982).

Figure 50: Map: Prasat Thamo

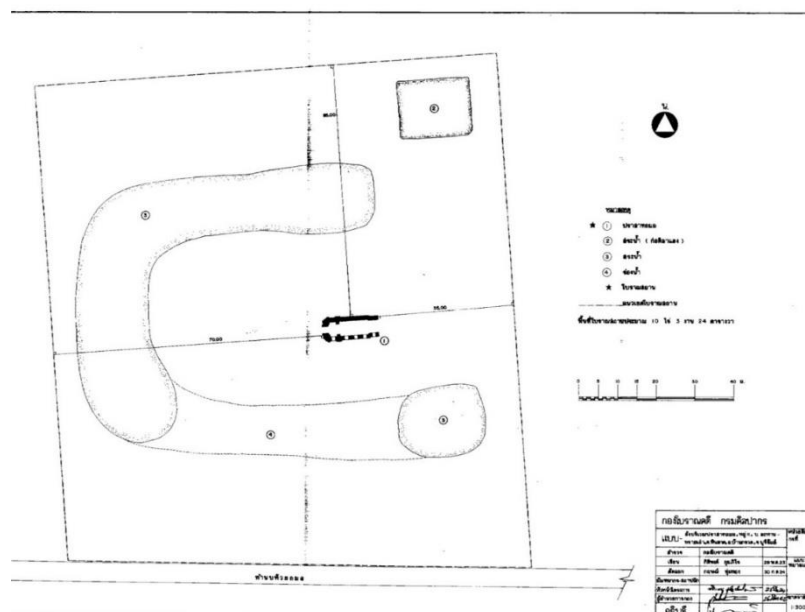


Figure 51: Prasat Thamo Registration Area Plan. Credit: Fine Arts Department



Figure 52: Prasat Thamo

Prasat Thamo is a dharmasala in an almost complete state, with approximately 80% remaining elements. It has been registered as a National Monument, and preserved by propping, waiting for restoration in near future. The environment of this site is agricultural area with no visual disturbances. Access road is convenient. Overall it is suitable for development for tourism purpose.

9. Prasat Ta Muean (ปราสาทตาเมือน)

Location: Mu 8, Ban Nong Khanna, Tambon Ta Miang, King Amphoe Phanong Dong Rak, Surin

Geographical coordinates: 14.3558964, 103.2585968

14° 21' 21.2273" N 103° 15' 30.9485" E

Protection status: Non-registered monument.

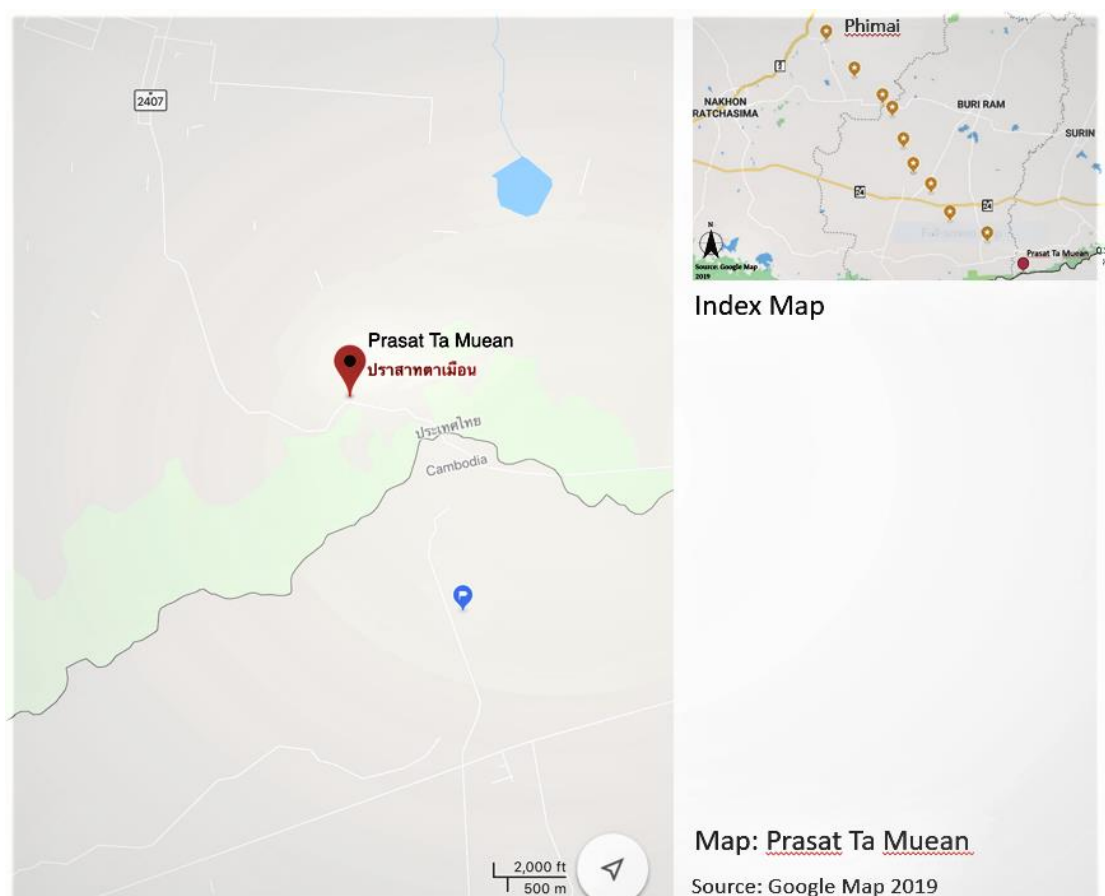


Figure 53: Map: Prasart Ta Muean



Figure 54: Prasat Ta Muean

Prasat Ta Muean is a dharmasala, part of the Ta Muean group of monuments, which comprises Prasat Ta Muean Thom, a Khmer temple, Prasat Ta Muean Tot, an arogayasala, and Prasat Ta Muean, a dharmasala. Prasat Ta Muean is restored by anastylosis method, with original materials, considered the most complete dharmasala in Thailand. It is made of laterite, with some sandstone parts, which are reused materials from other structures, used as window frames.

This site underwent archaeological study in 1991, and restoration and landscape development in 1992.

4.3.3.2 Group II: Components of the route based on archaeological and other evidences.

Components in Group II are not directly mentioned in the Preah Khan Inscription but are related to the Angkor – Phimai route based on archaeological evidence and others, especially historical and architectural evidences. Categories and names of components in this group are shown in the following diagram:

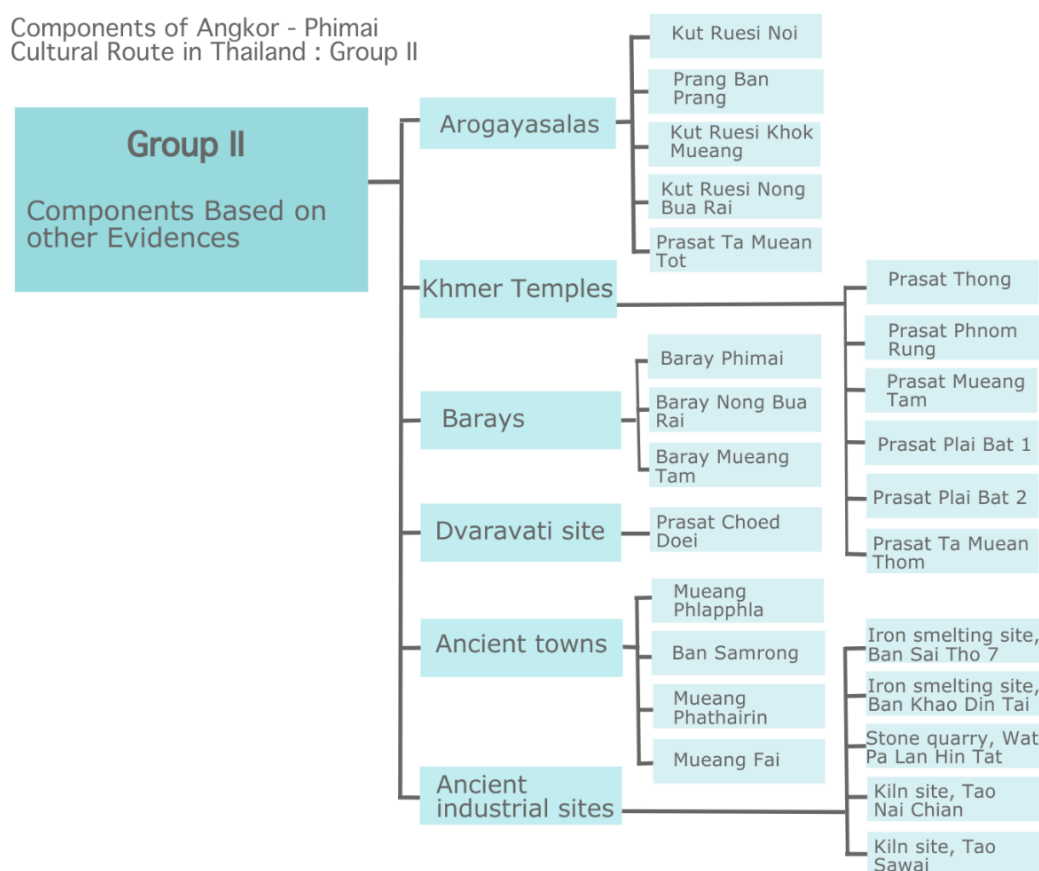


Figure 55: Diagram: Components of Angkor – Phimai Cultural Route in Thailand, Group II.

Descriptions of each category and components are as follows:

1. Arogayasala (hospitals)

Arogayasala is a type of public service buildings that King Jayavarman VII had built around his kingdom. Arogayasalas are mentioned in several inscriptions, for instance, Prasat Inscription found in Amphoe Prasat, Surin province, Thailand, Ta Muean Tot Inscription, found at Prasat Ta Muean Tot, Surin province, Thailand, which is one of the components of the Angkor-Phimai route(กรมศิลปากร หอสมุดแห่งชาติ, 2529 (1986)-b). Typically, an arogayasala comprises a sanctuary with tower hall for enshrining the Bhaiṣajyaguru, Buddha of healing and medicine in Mahayana Buddhism. The area is surrounded by walls, usually built of laterite, with a pond to the northeast of the grounds. The pond is believed to provide water used in the healing and medicine making. The sanctuary is the only structure remains, which functioned as sacred place of the hospital. Patients and healing activities are believed to be performed in other buildings built of wood and perishable materials on the grounds of the arogayasala, however, no evidences of these buildings remain. Information about hospitals, its personnel, and hospital supplies granted by the King is recorded in detail in several inscriptions (Smitthi & Moore, 1992). Arogayasala is called “Kut Ruesi” (rishi’s abode) by local people in Thailand.

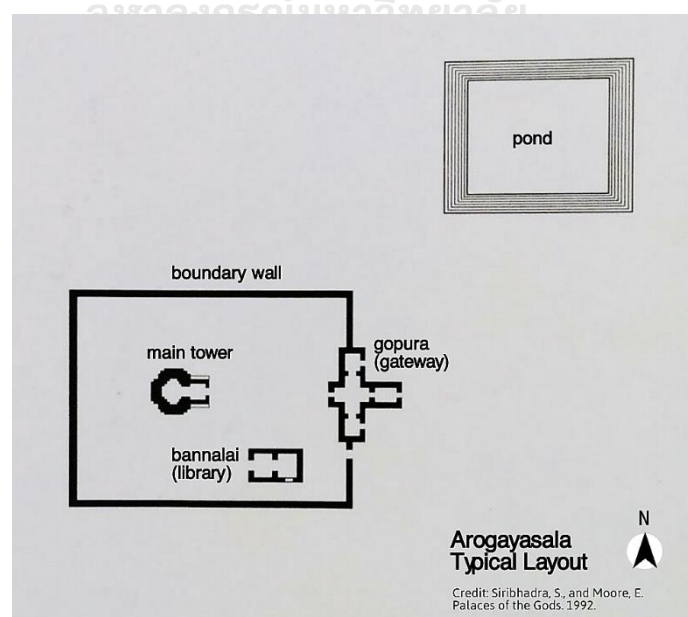


Figure 56: Typical Layout of Arogayasala.

Arogayasalas which are located along the Angkor – Phimai route and selected as components of the route are:

1. Kut Ruesi Noi (Kut Ruesi Phimai) (กู่ฤๅษีน้อย (กู่ฤๅษีพิมาย))

Location: Mu 17, Ban Phrommathat, Tambon Nai Mueang, Amphoe Phimai, Nakhon Ratchasima

Geographical coordinates: 15.2119354, 102.4985293

15° 12' 42.9713" N 102° 29' 54.7057" E

Protection status: Registered National Monument. Government Gazette vol. 53, part 34, 27th September, 2479 B.E. (1936).

Demarcation of protected area announced in Government Gazette vol. 100, part 36, 15th March, 2536 B.E. (1993).

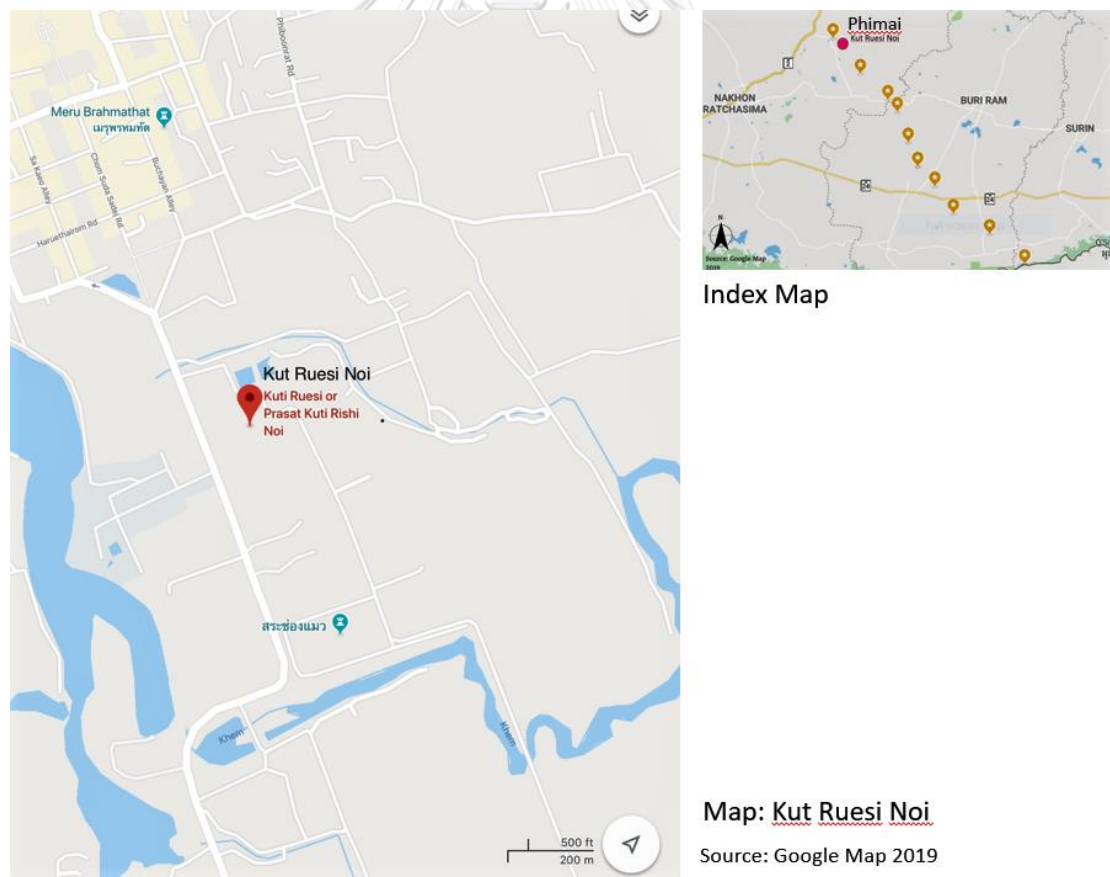


Figure 57: Map: Kut Ruesi Noi

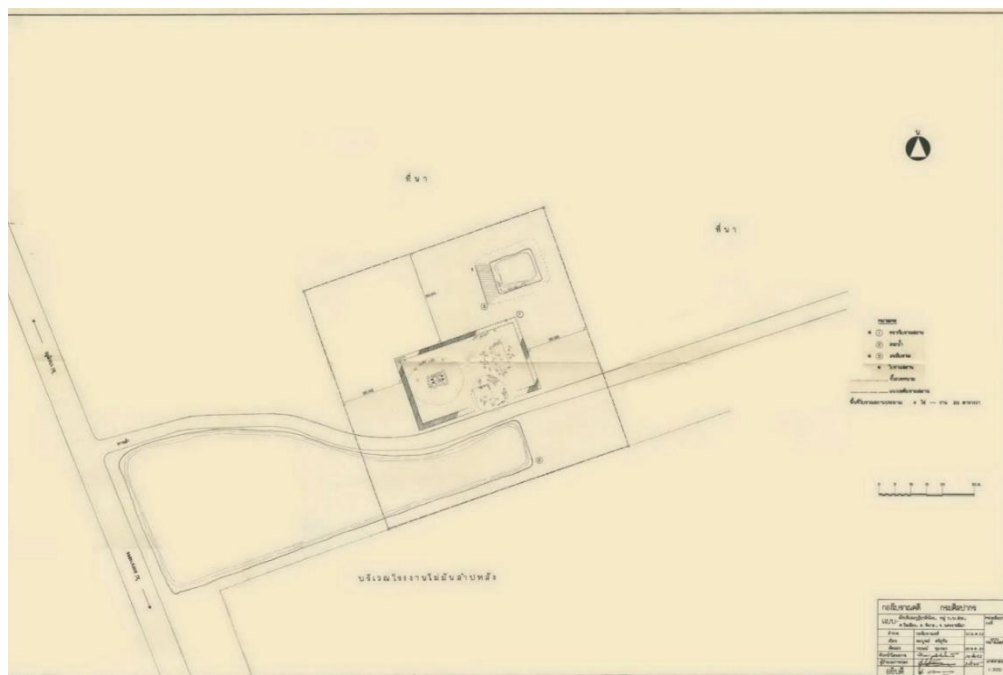


Figure 58: Kut Ruesi Noi Registration Area Plan. Credit: Fine Arts Department



Figure 59: Kut Ruesi Noi

Kut Ruesi Noi is an arogyasala, situated in the area of Phimai. This site has undergone archaeological study, including restoration and landscape development in 1988 - 1989.

2. Prang Ban Prang (ปราสาทบ้านปรางค์)

Location: Mu 11, Ban Prang, Tambon Hin Dat, Amphoe Huai Thalaeng, Nakhon Ratchasima

Geographical coordinates: 14.9421550, 102.6084284

14° 56' 31.7580" N 102° 36' 30.3425" E

Protection status: Non-registered monument.

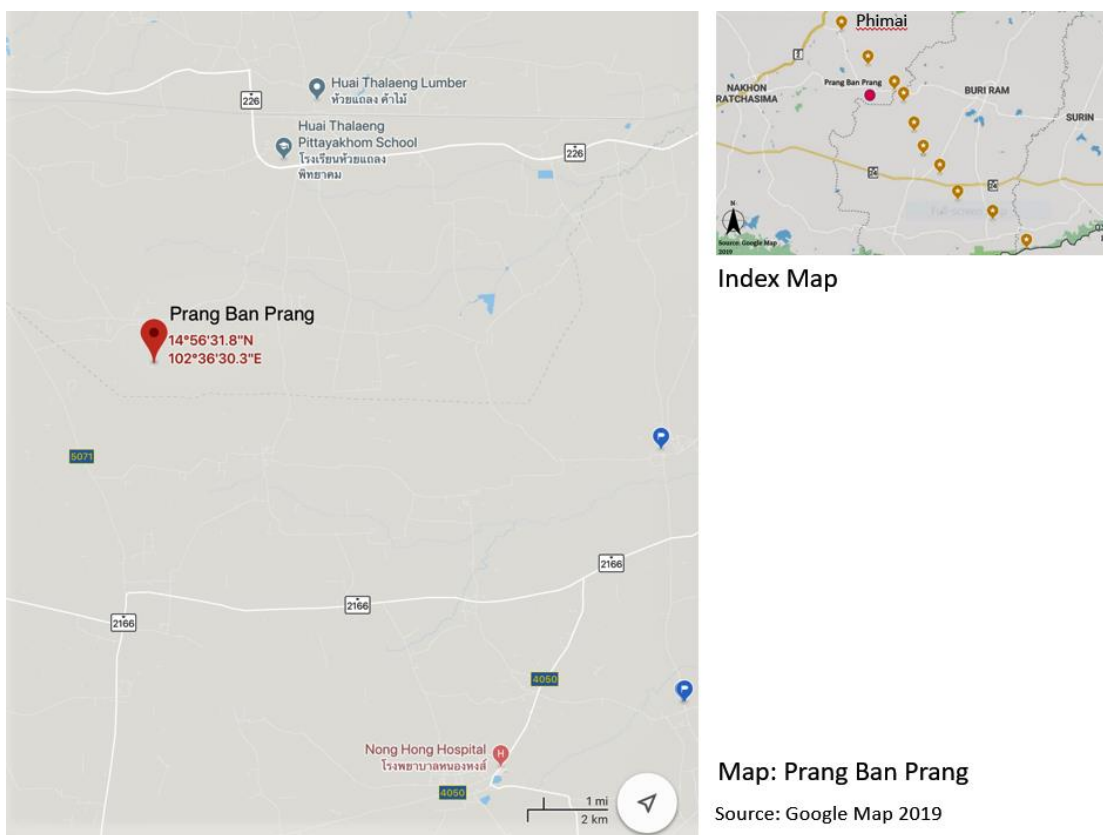


Figure 60: Map: Prang Ban Prang



Figure 61: Prang Ban Prang

Prang Ban Prang is an aroyayasala. It is a non-registered monument. The site underwent archaeological study in 2002, and restoration and landscape development in 2004. In 2015, an archaeological study of the pond area was carried out.

3. Kut Ruesi Khok Mueang (คู่มือศึกษาเมือง)

Location: Mu 6, Ban Khok Mueang, Tambon Chorakhe Mak, Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.501107, 102.9765598

14° 30' 03.9884" N 102° 58' 35.6153" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 115, special part 83 ง, 21st September, 2541 B.E. (1998) (comprising Prasat Mueang Tam, Baray Mueang Tam, and Kut Ruesi Khok Mueang).

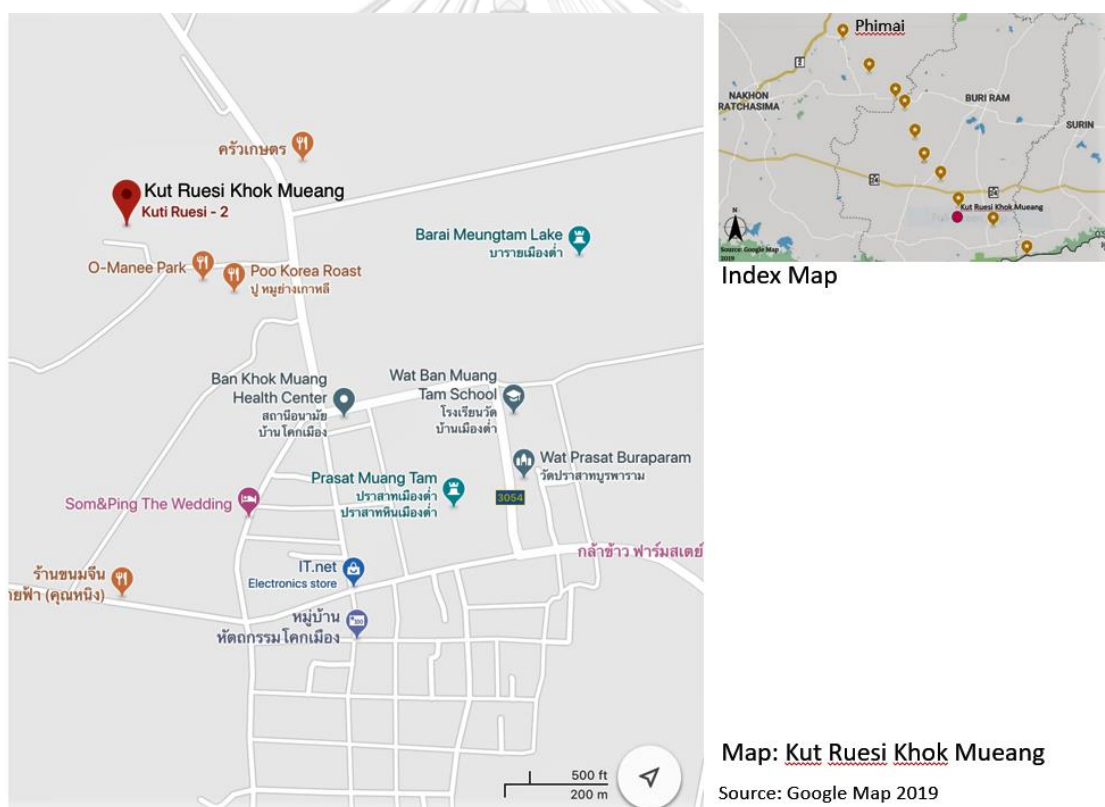


Figure 62: Map: Kut Ruesi Khok Mueang



Figure 63: Kut Ruesi Khok Mueang

Kut Ruesi Khok Mueang is an Arogayasala in the area of Prasat Mueang Tam temple. The site has undergone archaeological study in 2000, and restoration and landscape development in 2001.

4. Kut Ruesi Nong Bua Rai

Location: Mu 7, Ban Nong Bua Rai, Tambon Chorakhe Mak, Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.5315255, 102.9619972

14° 31' 53.4919" N 102° 57' 43.1900" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 99, part 155, 21st October, 2525 B.E. (1982).

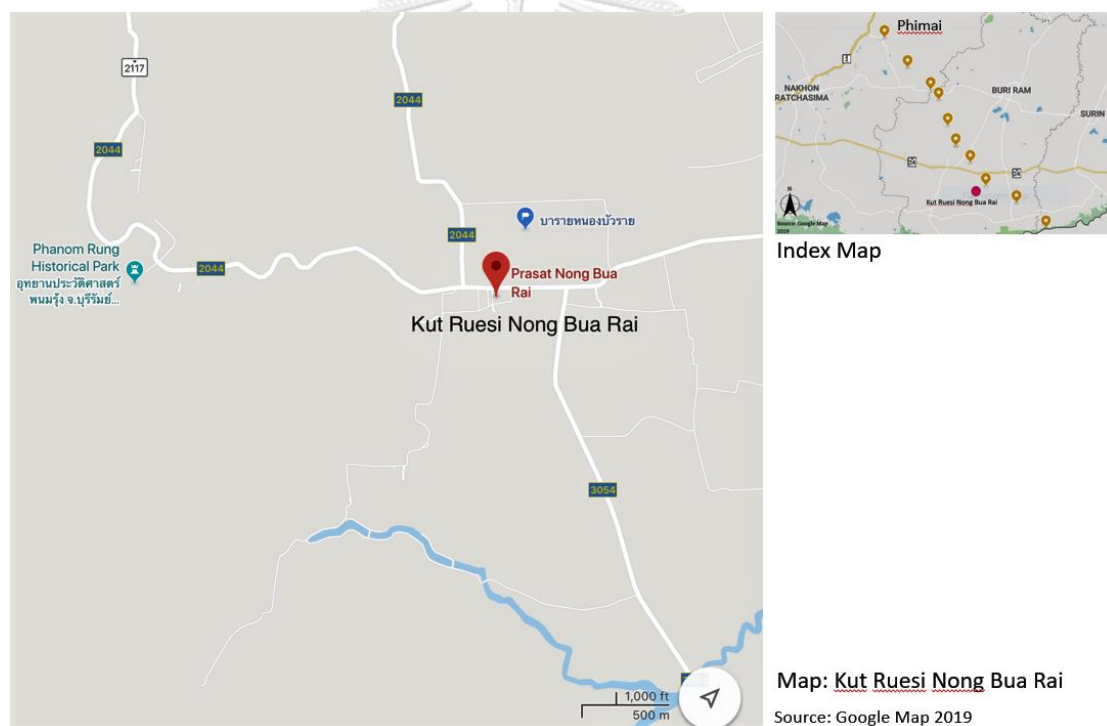


Figure 64: Map: Kut Ruesi Nong Bua Rai

Kut Ruesi Nong Bua Rai is an Aroyayasala which exists in an almost complete condition. It is a registered National Monument, restored and protected by Phnom Rung Historical Park.

The site underwent archaeological study in 2000, and restoration and landscape development in 2001.

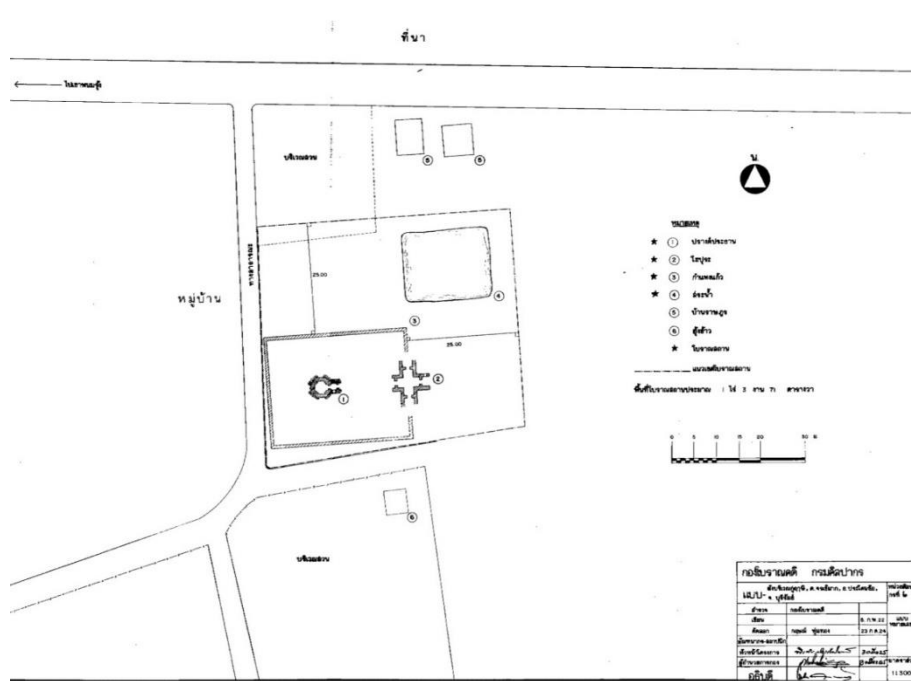


Figure 65: Kut Ruesi Nong Bua Rai Registration Area Plan. Credit: Fine Arts Department



Figure 66: Kut Ruesi Nong Bua Rai

5. Prasat Ta Muean Tot (ปราสาทตาเมือนโต๊ด)

Location: Mu 8, Ban Nong Khanna, Tambon Ta Miang, Ampho Phanom Dong Rak, Surin

Geographical coordinates: 14.3540264, 103.26128908

14° 21' 14.4954" N 103° 15' 40.6407" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 106, part 220, 14th December, 2532 B.E. (1989).



Figure 67: Map: Prasat Ta Muean Tot

Prasat Ta Muean Tot is an arogyasala (hospital) dated late 12th – early 13th centuries, the reign of King Jayavarman VII. It is one of the best examples of arogyasalas, with complete architectural features and important elements remaining in the compound. The structures are built of laterite and some parts are sandstone, comprising boundary walls with a Gopura to the east, a tower and a library. The landscape comprises a 20 metres square pond, typical of an arogyasala type of buildings. An important evidence, Prasat Ta Muean Tot Inscription discovered at the site

clearly states the order of King Jayavarman VII to build this hospital and assigned physicians, priests, servants, as well as allocated medicinal objects, herbs, food, etc. to be used at the hospital for public welfare.

This site underwent archaeological study in 1991, and restoration and landscape development in 1993 – 1995.

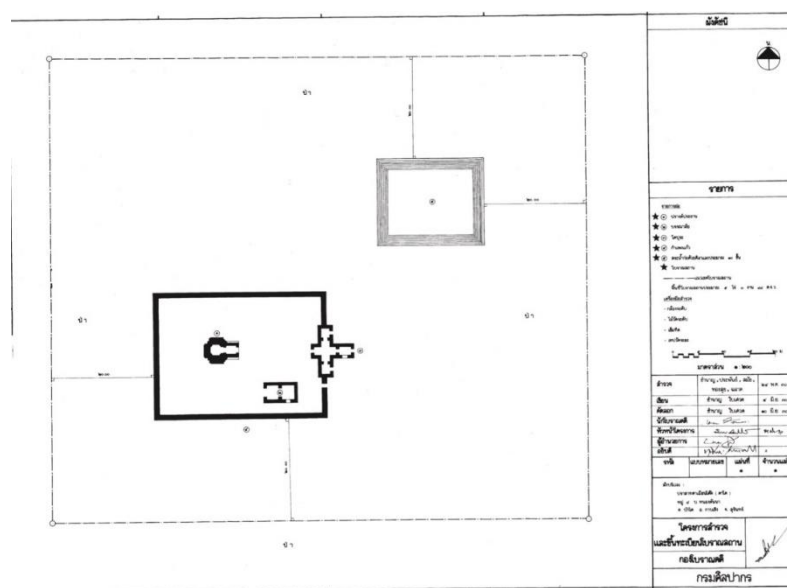


Figure 68: Prasat Ta Muean Tot Registration Area Plan. Credit: Fine Arts Department



Figure 69: Prasat Ta Muean Tot

2. Khmer temples

Khmer temples are found along the Angkor – Phimai route, some of which are important temples e.g. Prasat Phnom Rung, Prasat Mueang Tam, others are small temples that serve the community. Components in this category (not including Prasat Phimai because it is considered part of the town of Phimai, which has already been mentioned) are:

1. Prasat Thong (ปราสาททอง)

Location: Ban Prasat Thong, Tambon Ban Kruat, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.4170240, 103.1008362

14° 25' 01.2866" N 103° 06' 03.0105" E

Protection status: Non-registered monument.

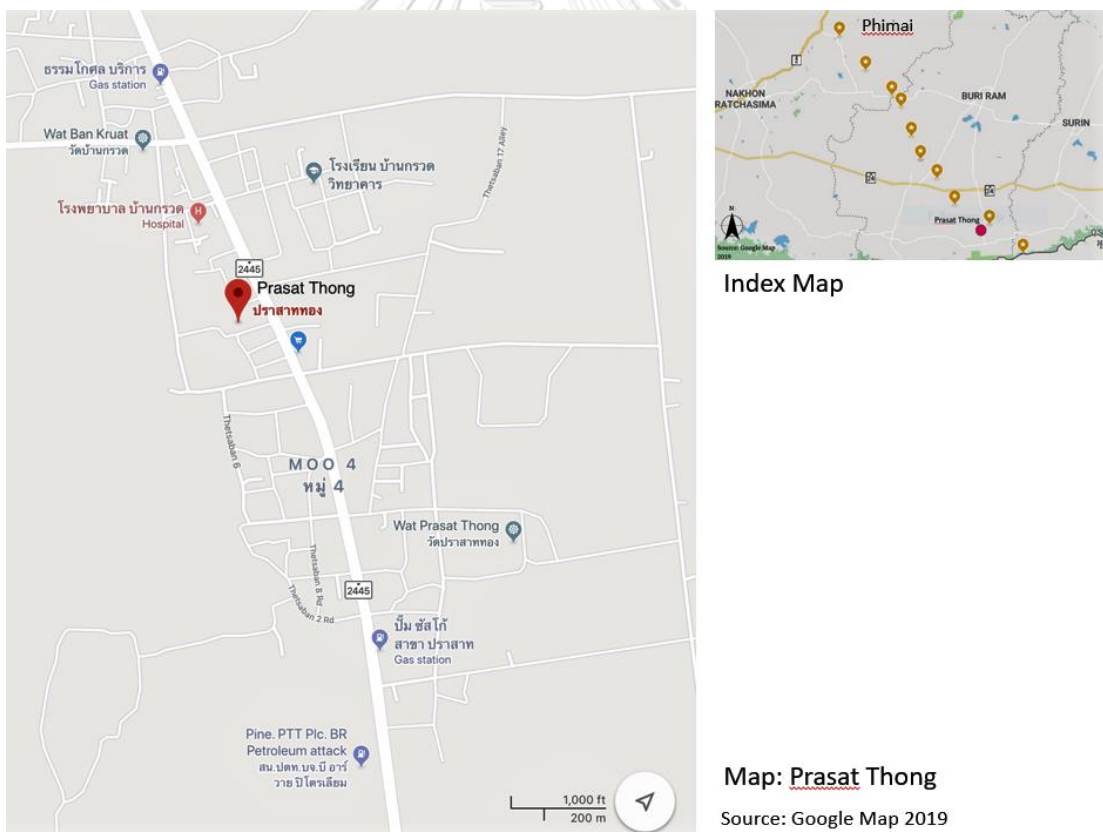


Figure 70: Map: Prasat Thong



Figure 71: Prasat Thong

Prasat Thong is a local sanctuary, situated in the market area of the present community. The site has undergone archaeological study in 2008, and restoration and landscape development in 2012.

2. Prasat Phnom Rung (ปราสาทพนมรุ้ง)

Location: Amphoe Chaloem Phra Kiat, Buri Ram

Geographical coordinates: 14.5299957, 102.9399981

14° 31' 47.9847" N 102° 56' 23.9933" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Established as Phnom Rung Historical Park on 21st May, 1988.

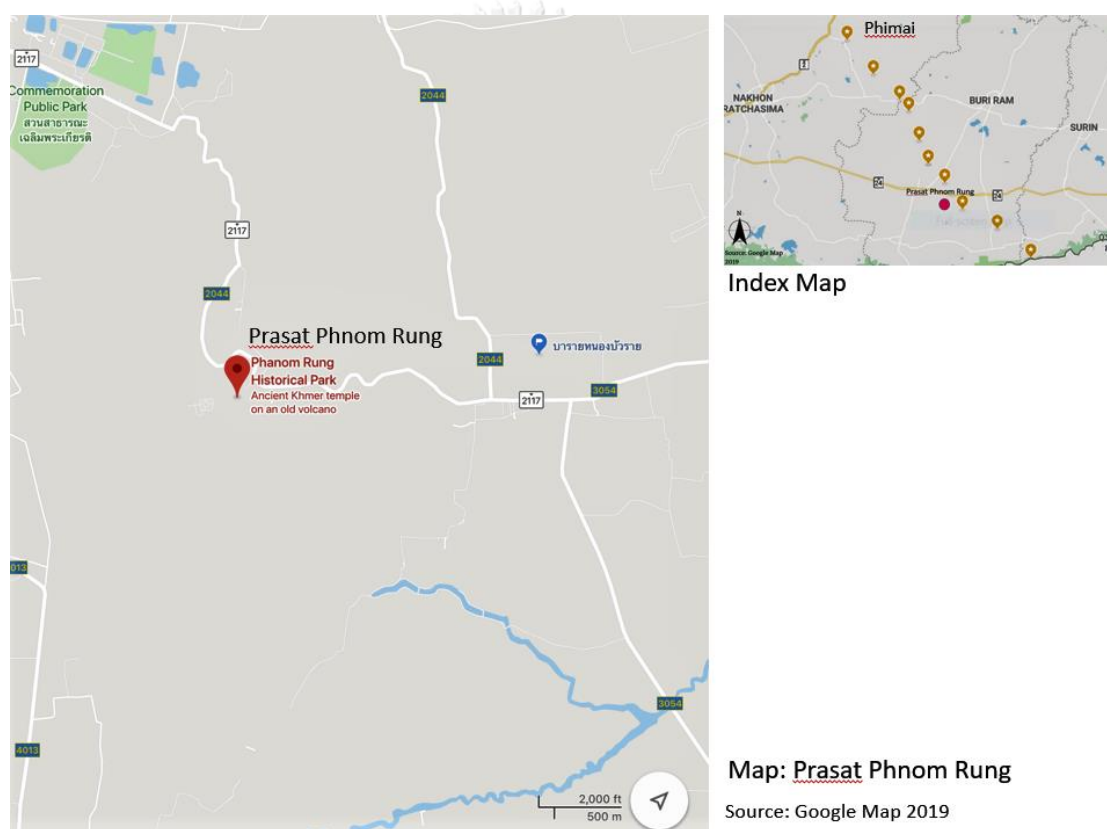


Figure 72: Map: Phnom Rung Historical Park.

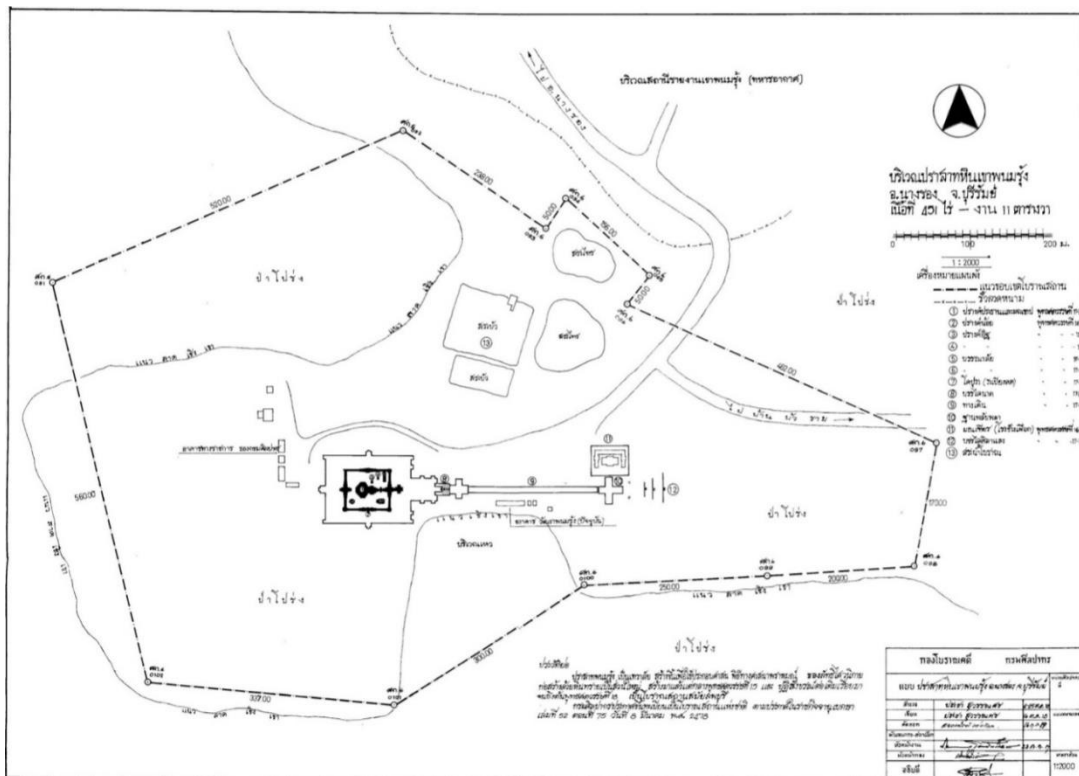


Figure 73: Prasat Phnom Rung Registration Area Plan. Credit: Fine Arts Department

Prasat Phnom Rung is a Khmer temple situated on top of Phnom Rung mountain, an extinct volcano, in Amphoe Chaloe Phra Kiat, Buri Ram province. It is a Hindu temple of Shaivite, Pasupata sect, originally named “Vnam Rung” evidenced by the record in Phnom Rung Inscriptions No. 2, 4, and K1090. Location of the temple on top of the mountain is the manifestation of the abode of Shiva, the Kailasa mountain, thus the place is highly sacred in its meaning and beliefs.

Phnom Rung is built of pink sandstone. Its planning, architecture, and decorations are regarded as being the most beautiful of all Khmer temples in Thailand. The founding of Phnom Rung began circa 10th century CE, evidenced by remains of 2 brick structures, now exist only the bases and door frames. The temple was extended and buildings were added in later periods until the main tower was built circa 12th century in the time of King Narendradit. The latest structures in the precinct of Phnom Rung were built during the reign of King Jayavarman VII, circa 13th century, namely, libraries and phlapphla, a hall believed to be used as preparatory hall for royal family who came to pay homage at Phnom Rung.



Figure 74: Prasat Phnom Rung. Tower seen from stairway.

The most distinguished landscape feature of Phnom Rung is the stone stairway that leads to the main sanctuary. The overall height of the stairway is 10 metres, divided into 5 landings. The top of the main tower can be seen from the base of the stairway, being a strong visual approach that prepares worshippers for accessing the temple, representing the heavenly abode of the God Shiva.

Important architectural elements of the temple are: the Phlapphla, Naga Bridge, Gopura, galleries, libraries, Prang Noi (small tower), and the main prang (tower). The main prang (tower) is the most important building of the temple complex. It is built of sandstone, facing east, height 267 metres, with 3 porches to the north, south, and west. The eastern side, which is the main entrance, comprises a rectangular-planned hall, measuring 8 x 10 metres, called Mandapa, which is connected to the tower hall by an enclosed corridor called Antarala, measuring 3.6 x 8.1 metres. The tower hall is the most sacred area of the building, called Garbhagrha, used for enshrining principal object of worship, originally a Shiva lingam, now remains only the open gutter on the floor that used for receiving holy water that was poured onto the Shiva lingam. The architectural style of the main sanctuary is circa 11th – 12th century CE (จรรยา มาณะวิท อัจฉรา แข็งสารี กิจ สามารถ ทรัพย์เย็น และ ดุสิต ทูมมากรณ, 2004).

Phnom Rung is elaborately decorated with stone carvings, mostly depicting Shiva and other Hindu Gods e.g. Vishnu, Krishna. The most beautiful carving is the Shiva Natraja, or Dancing Shiva, on the pediment of the eastern porch of the main tower. Another important decorated element is the lintel depicting Reclining Vishnu, which was one of the most widely discussed issues in the 80s' when the lintel was smuggled, sold, and was found exhibited in a museum in Chicago, United States. The retrieving of the Vishnu lintel was carried out successfully with much attempts by the Thai Governments and scholars in Thailand. At present, it is restored to its original location, below the pediment of the eastern porch of the main tower. However, the back part of the lintel was cut off when it was stolen, believed to have been made to facilitate the smuggling and transportation of the object. Consequently, the lintel is unable to function as a structural element, therefore, it has been restored by fixing it to a reinforced concrete lintel, which was added for structural purpose (วสุ โปษยะนันท์, 2558 (2015)).

Phnom Rung was first mentioned in a report by Etienne Aymonier, a French scholar, in 1885 and was published as an academic paper by the same author in 1902. In 1906 and 1929, Prince Damrong Rajanubhap, the leading scholar and historian in Thailand during the early 20th century visited the site. These recognitions led to the registration of Prasat Phnom Rung as a National Monument, announced in the Government Gazette vol. 52, part 75, dated 8th March, 1935.

Survey of Phnom Rung complex was carried out in 1960 and 196. Restoration project by Anastylis method began in 1971. After the completion of restoration and landscape development, Phnom Rung Historical Park was officially opened, presided over by HRH Princess Maha Chakri Sirindhorn, on 21st May, 1988.

Phnom Historical Park is a management body of Phnom Rung and cultural heritage sites in the vicinity. The historical park status of the cultural heritage site of Phnom Rung ensures the stability and continuity of conservation, management and maintenance of the site, as well as being a special recognition of the site as one of the most important cultural heritage sites in Thailand.

3. Prasat Mueang Tam (ปราสาทเมืองต่ำ)

Location: Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.4899997, 102.989998

14° 29' 23.9990" N 102° 59' 23.9930" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

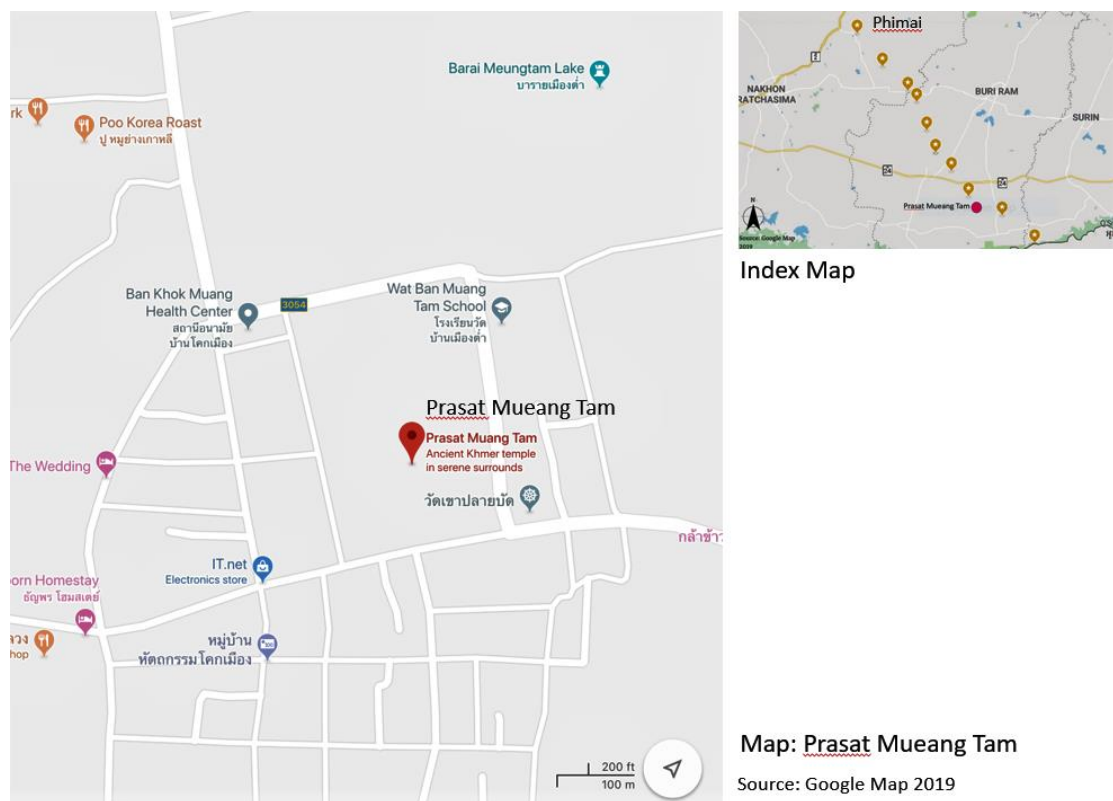


Figure 75: Map: Prasat Mueang Tam

Prasat Mueang Tam is a Khmer temple situated in Ban Khok Mueang, Tambon Charakhe Mak, Amphoe Prakhonchai, Buri Ram province. It is approximately 8 kilometres to the southeast of Phnom Rung.

The temple and its surrounding village are located on a round-shaped highland, approximately 1 – 2 metres higher than the surrounding agricultural area. To the north of the sanctuary, there is a large Baray (reservoir) called Thale Mueang Tam, which is one

of the main water sources of the community, other means of water supply are Lam Huai Pun (Pun stream) to the north and Huai Nam Khun (Nam Khun stream) to the east.

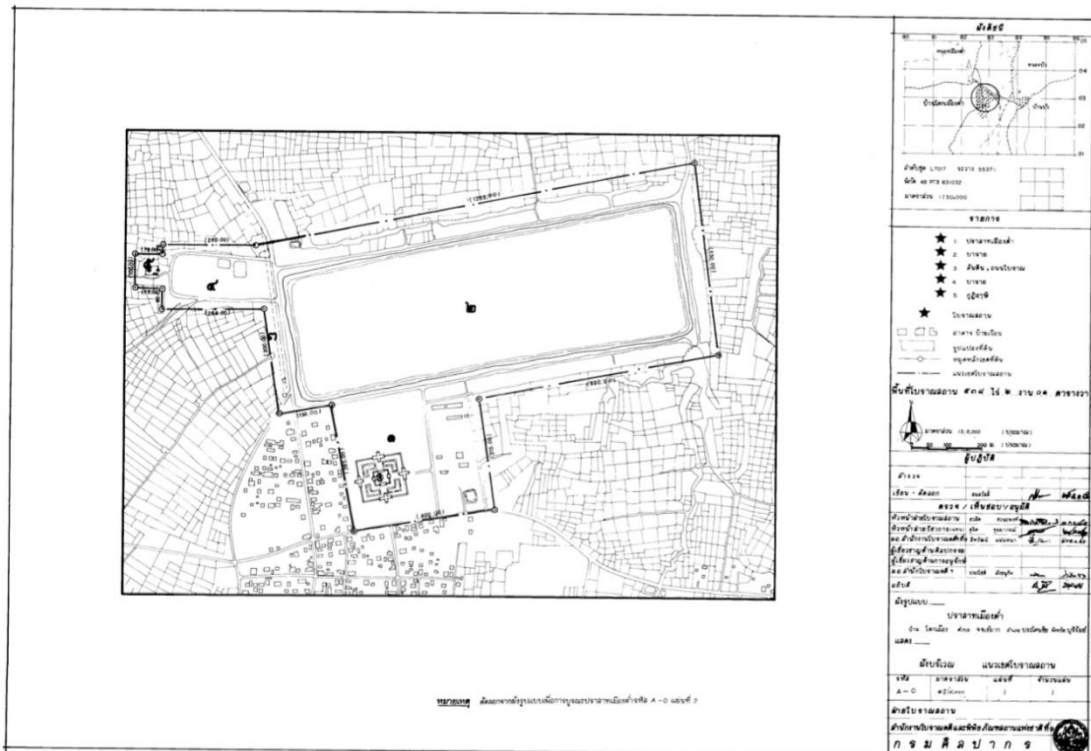


Figure 76: Prasat Mueang Tam Registration Area Plan, including Baray Mueang Tam and Kut Ruesi Khok Mueang. Credit: Fine Arts Department

Prasat Mueang Tam is a Hindu temple, dated late 11th – 12th centuries, however, archaeological evidence shows that the area has been inhabited since circa 1st century BCE, protohistoric period onwards, until the Khmer civilization spread into the area and the sanctuary was built in 11th century as mentioned.

Prasat Mueang Tam comprises boundary walls, square-planned, built of laterite, with Gopura (gateway) situated at centre of each side of the boundary walls. Overall planning follows the Hindu cosmological concept. The area inside the boundary walls comprises 4 L-shaped ponds, bordered with sandstone walls made in the shape of Naga's bodies that stretch around each pond from the five-headed Naga at each corner. These Naga ponds are the most distinguished and beautiful landscape elements which have become the icons of Prasat Mueang Tam.



Figure 77: Prasat Mueang Tam seen from Naga pond.

Between each pond is a pathway that leads to the inner area of the sanctuary, which is surrounded by galleries, with Gopura at centre of each side on the same axes as the outer Gopura. The roofs of the galleries, which are believed to have been made of brick, are lost possibly due to the non-durability of material. From the galleries, the principal structure is located in the middle of the grounds, comprising 5 brick towers built on the same laterite base, the central tower remains only the base. All structures have been restored and conserved under responsibility of Phnom Rung Historical Park.

Prasat Mueang Tam was first recognized by Etienne Aymonier, a French scholar, who recorded information about “Moeuong Tam” monument in his 1901 survey document. In 1929, Prince Damrong Rajanubhap visited the site. Prasat Mueang Tam is registered as National Monument, announced in the Government Gazette vol. 52, part 75, dated 8th March, 1935.

During 1960 – 1996, the Fine Arts Department carried out the survey, archaeological excavation and restoration of Prasat Mueang Tam. The site was officially opened, presided over by HR Princess Maha Chakri Sirindhorn on 10th November, 1997, which was the same year as the 50th Anniversary of King Bhumibol Adulyadej’s Ascension to the Throne (จรรยา มาณะวิท อัจฉรา แข็งสาริกิจ สามารถ ททรัพย์เย็น และ ดุสิต ทุมมากรณ์, 2004).

4. Prasat Plai Bat 1 (ปราสาทปลายบัด 1)

Location: Mu 9, Ban Khok Mueang, Tambon Chorakhe Mak, Amphoe Chaloe Phra Kiat, Buri Ram

Geographical coordinates: 14.4834727, 102.9572245

14° 29' 00.5019" N 102° 57' 26.0084" E

Protection status: Non-registered monument.

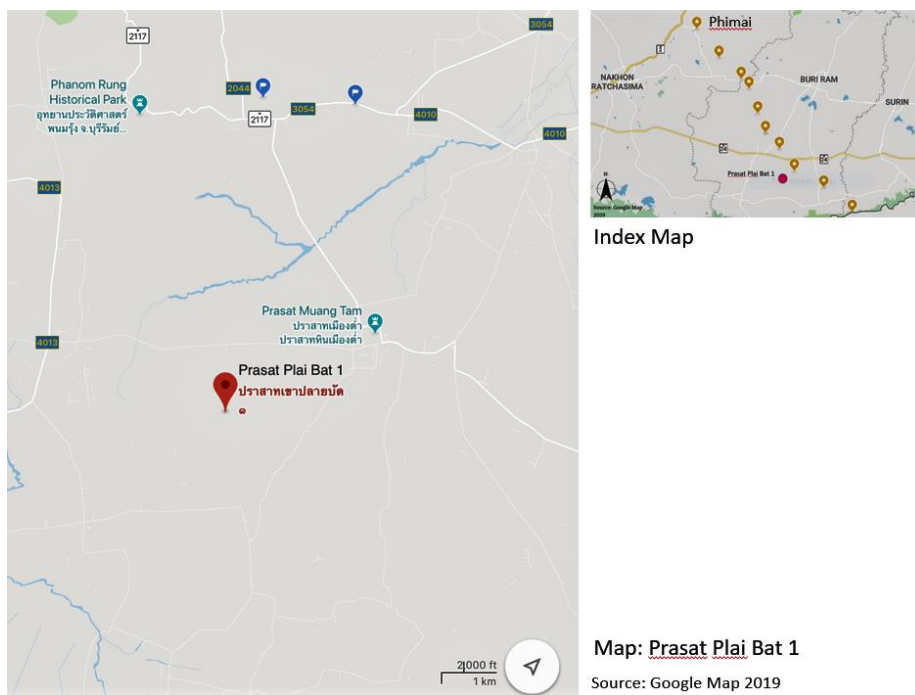


Figure 78: Map: Prasat Plai Bat 1



Figure 79: Prasat Plai Bat 1

Prasat Plai Bat 1 is situated on top of one of the peaks Plai Bat mountain, an extinct volcano situated near Phnom Rung. Prasat Plai Bat 1 is a Shaivite temple dated before Phnom Rung, as seen in architectural style and building materials, which are mixture of brick, sandstone and volcanic rock. LiDAR survey revealed evidence which clearly indicate its connection with Phnom Rung in their original beliefs. The temple is dated circa 11th century, contemporary with early period structures at Phnom Rung. It is significant as an evidence on development of religious beliefs in Phnom Rung area. At present, the main tower and library are in the restoration process (วสันต์ เทพสุริยานนท์, 2016).

5. Prasat Plai Bat 2 (ปราสาทปลายบัด 2)

Location: Ban Yai Yaem, Tambon Yai Yaem Watthana, Amphoe Chaloe Phra Kiat, Buri Ram

Geographical coordinates: 14.4853569, 102.9473854

14° 29' 07.2852" N 102° 56' 50.5877" E

Protection status: Non-registered monument

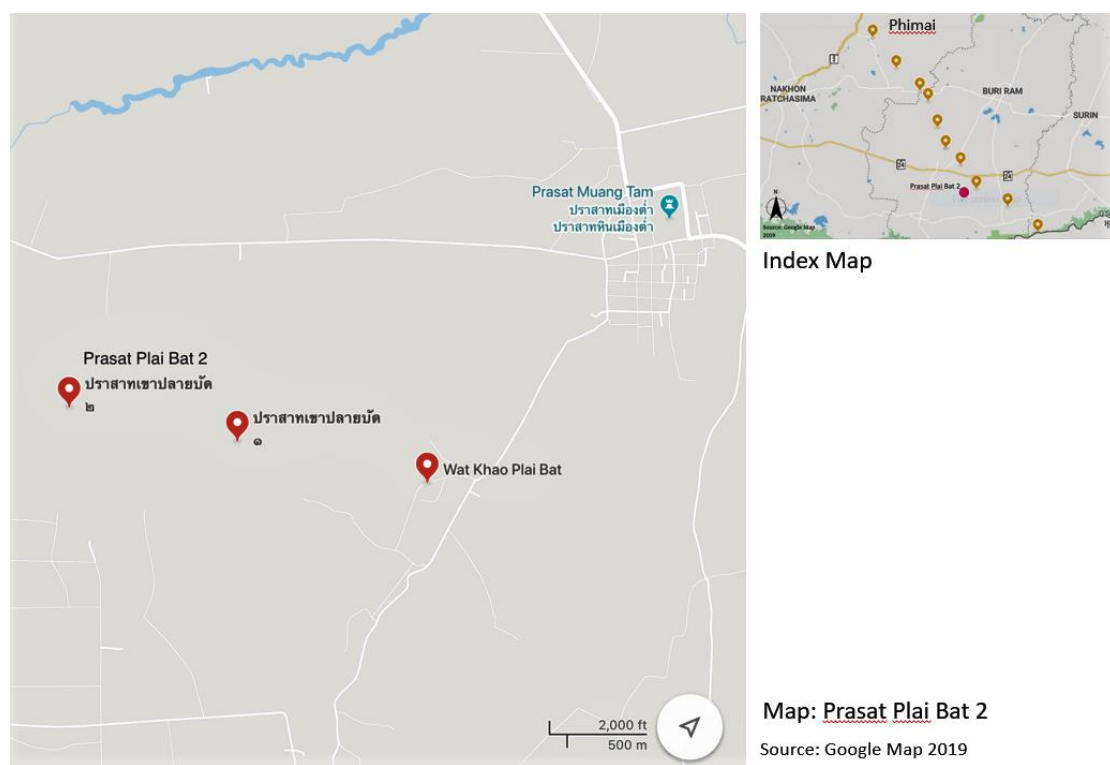


Figure 80: Map: Prasat Plai Bat 2



Figure 81: Prasat Plai Bat 2

Prasat Plai Bat 2 is situated on one of the peaks of Plai Bat mountain, an extinct volcano near Phnom Rung. LiDAR survey revealed its connection in beliefs with Prasat Plai Bat 1 and Phnom Rung, which is important as an evidence on development of religious beliefs in Phnom Rung area. Distinguished feature is the main sanctuary made of brick, now remains only part of the walls. The site is in archaeological study process (วสันต์ เทพสุริยานนท์, 2016).

6. Prasat Ta Muean Thom (ปราสาทตาเมือนธม)

Location: Ban Nong Khanna, Tambon Ta Miang, Amphoe Phanom Dong Rak, Surin

Geographical coordinates: 14.3499967, 103.2699987

14° 20' 59.9884" N 103° 16' 11.9956" E

Protection status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

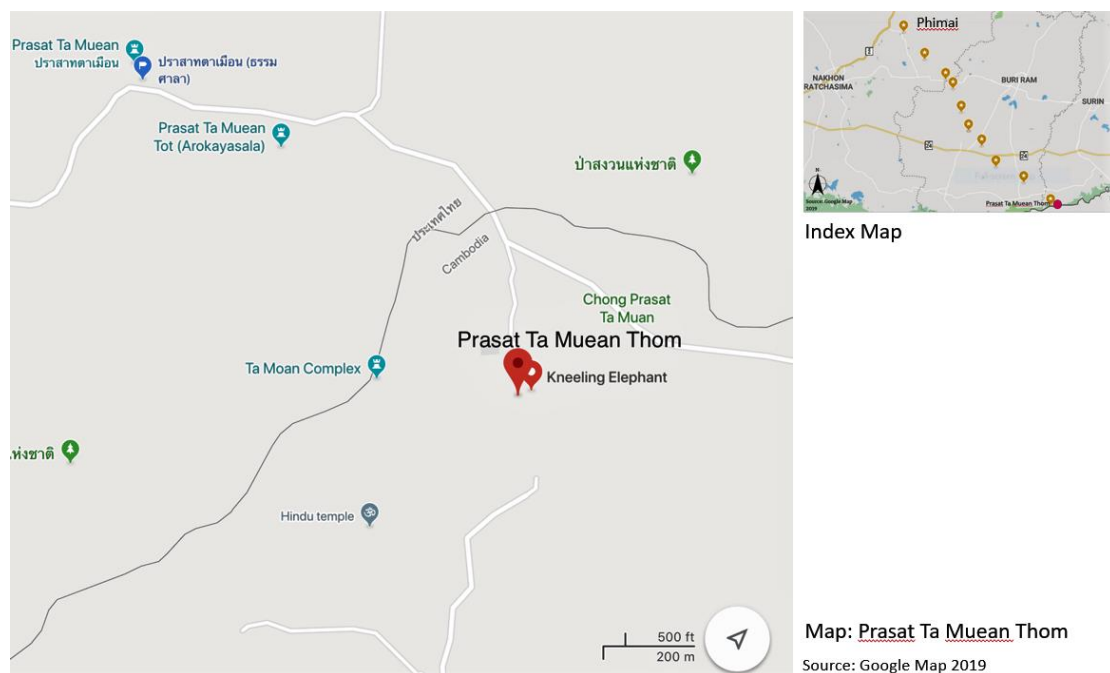


Figure 82: Map: Prasat Ta Muean Thom

Prasat Ta Muean Thom is a Khmer temple situated near the Thai – Cambodian border. It is dated late 11th century, late Baphoun period, in the reign of King Udayadityavarman II. The plan of Ta Muean Thom complex is squarish, based on Hindu cosmological concept, facing south, which is rather unusual, however, this orientation is the same as Prasat Phimai, which is believed to have been based on the direction of the route to Angkor. This temple is Hindu, with Shiva Lingam as the principal object of worship (Freeman, 1996).

The buildings in the compound are built of sandstone, decorated with elaborate carvings, especially on the exterior. The main prang (tower) is enshrined with a natural

stone Lingam. It should be noted that the temple is partly built by cutting into natural rock, which also served as foundation.

The exterior is distinguished with a large laterite stairway that leads from the temple to the valley below, which is an access into present day Cambodia.



Figure 83: Prasat Ta Muean Thom

Another interesting exterior element of the site is the Somasutra gutter, which served to receive the holy water that was poured onto the Linga. The Somsutra extends from the main sanctuary and runs across the exterior floor of the northeastern part of the tower.

3. Barays (water reservoirs)

Khmer is one of the most advanced ancient civilizations in terms of water management. The founding of Khmer town, apart from the systematic town planning based on Hindu or Buddhist cosmological concept, the irrigation system was also well-planned, as seen from levees, moats and large and small reservoirs which supply water to the towns and communities in the past, some of these reservoirs are still functioning at present. The large reservoirs, or baray in Khmer language, which are situated along the Angkor – Phimai route are important components, which are parts of important towns and religious places. These barays are:

1. Baray Phimai (บารายพิมาย)

Location: Tambon Nai Mueang, Amphoe Phimai, Nakhon Ratchasima

Geographical coordinates: 15.2000012, 102.5100026

15° 12' 00.045" N 102° 30' 36.0096" E

Protection status: Non-registered monument

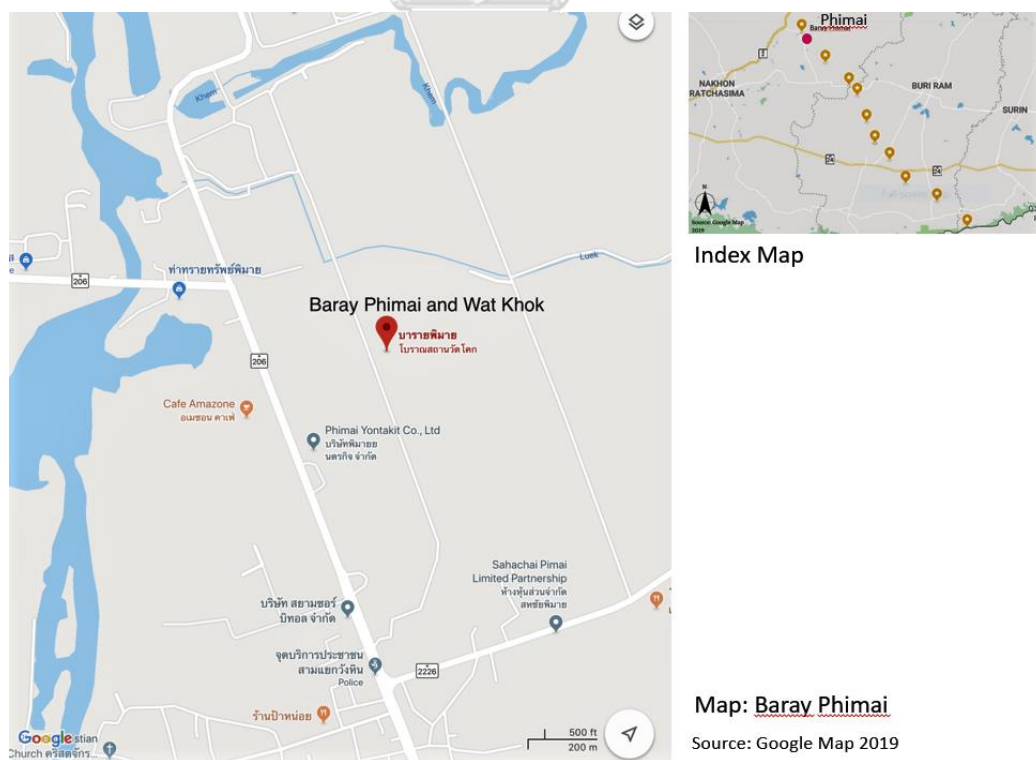


Figure 84: Map: Baray Phimai

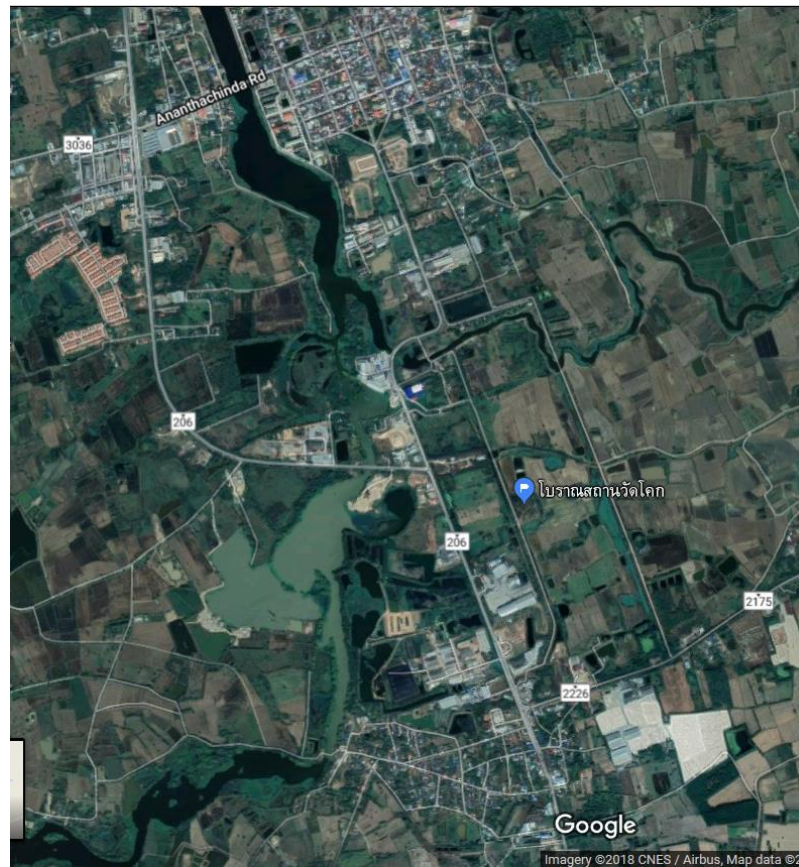


Figure 85: Baray Phimai, aerial view, with Wat Khok cultural heritage site at its centre.

The Baray Phimai, originally called “Vimayatataka” in Khmer inscriptions, was the main water reservoir of Phimai town, the distinguished feature of Khmer irrigation system (วรรณัย พงศาชลากร, 2011). At present, however, the baray has dried up and become a lowland, occupied by communities and agricultural area. The original features of the baray, however, can be seen from aerial view that is laid on north – south axis, sizing 770 x 1800 kilometres. There is a mound at centre of the site, which must have originally been an island. This mound has undergone archaeological excavation, which revealed evidence of a Khmer structure believed to be a sanctuary, called “Wat Khok”. The remaining structure has been restored.

2. Baray Nong Bua Rai (บารายหนองบัวราย)

Location: Tambon Chorakhe Mak, Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.534880, 102.963502

14° 32' 05.6" N 102° 57' 48.6" E

Protection Status: Registered National Monument under the name "Sa Phleng".

Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

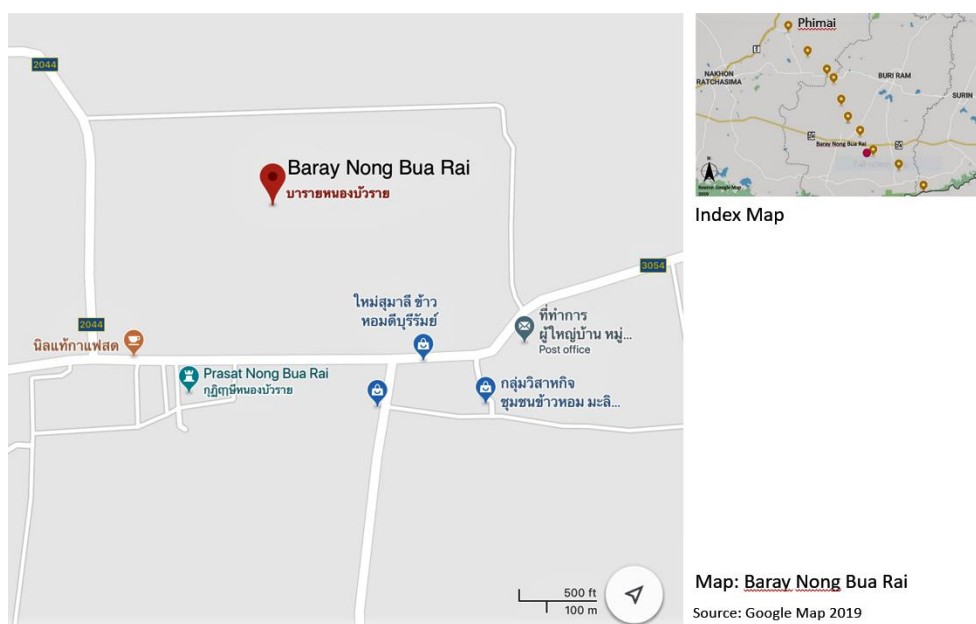


Figure 86: Map: Baray Nong Bua Rai



Figure 87: Aerial view of Baray Nong Bua Rai, showing its relationship with Phnom Rung.

Baray Nong Bua Rai is a living cultural heritage site situated to the east of Phnom Rung mountain. It was built to serve the Phnom Rung sanctuary and its surrounding community. The baray is built by constructing levees surrounding a rectangular area of 350 x 850 metres, topped with laterite curbs.

3. Baray Mueang Tam (บารายเมืองต่ำ)

Location: Tambon Chorakhe Mak, Amphoe Prakhon Chai, Buri Ram

Geographical coordinates: 14.4980555, 102.9836111

14° 29' 53" N 102° 59' 01" E

Protection Status: Registered National Monument. Government Gazette vol. 52, part 75, 8th March, 2478 B.E. (1935).

Demarcation of protected area announced in Government Gazette vol. 115, special part 83 ง, 21st September, 2541 B.E. (1998) (comprising Prasat Mueang Tam, Baray Mueang Tam, and Kut Ruesi Khok Mueang).

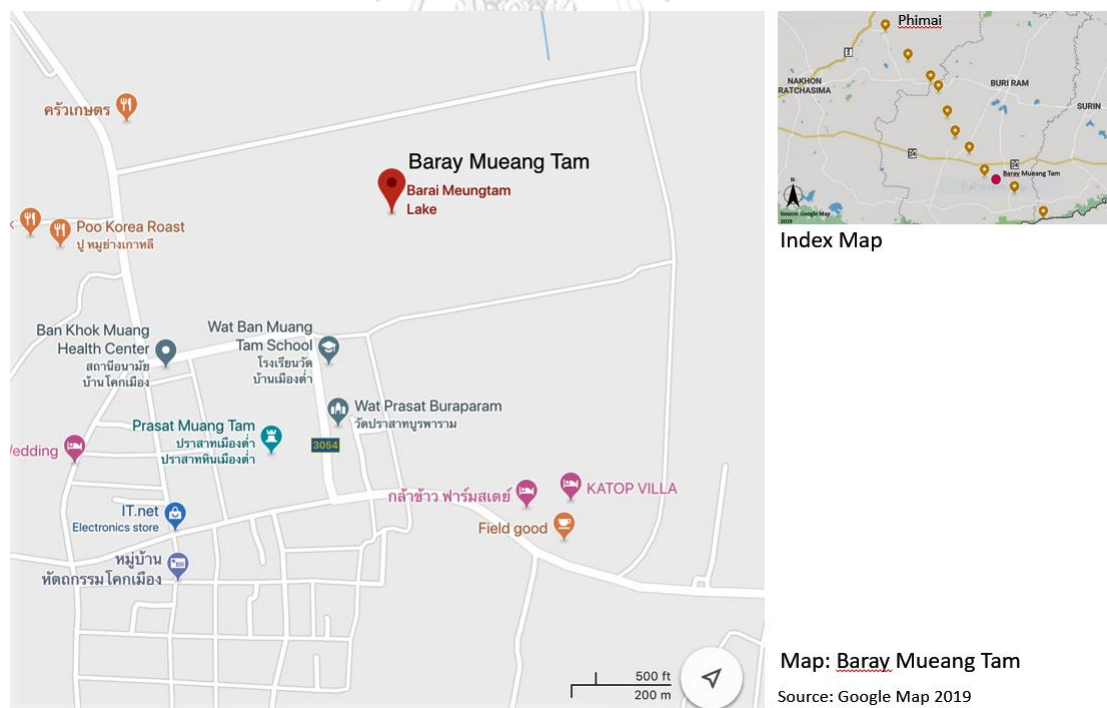


Figure 88: Map: Baray Mueang Tam



Figure 89: Baray Mueang Tam

Baray Mueang Tam is a living cultural heritage site built to serve the community around the area of Prasat Mueang Tam. The baray is very large, measuring 510 x 1,090 metres, thus local people call it “Thale Mueang Tam” (Mueang Tam Sea). The size of the baray indicates that the area was densely populated in the past.

4. Dvaravati site

There is a religious site which belongs to Dvaravati period situated on the Angkor – Phimai route. It is considered a component of the route, which is a testimony of the use of this ancient road in several periods. The site is:

1. Prasat Choed Doei (ปราสาทเจ็ดเศว)

Location: Tambon Mueang Fai, Amphoe Nong Hong, Buri Ram

Geographical coordinates: 14.864561, 102.73331

14° 51' 52.4196" N 102° 43' 59.9160" E

Protection status: Part of Mueang Fai ancient town, which is a Registered National Monument announced in the Government Gazette vol. 115, special part 83 ง, 21st September, 2541 B.E. (1998).

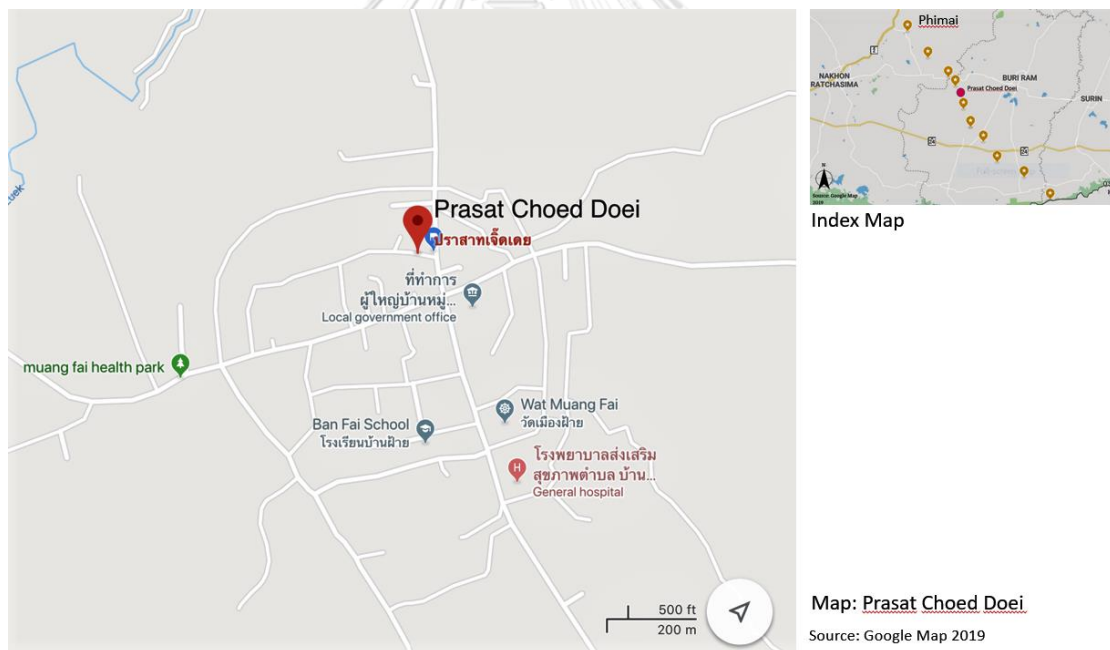


Figure 90: Map: Prasat Choed Doei



Figure 91: Prasat Choed Doei

Prasat Choed Doei is seen as a large mound of brick, dated to Dvaravati period circa 7th – 11th centuries CE. It has undergone initial survey. The site is located in Mueang Fai, an ancient town which is also a component of Angkor – Phimai route. and has been disturbed, with a sala (local open pavilion) built on top of the structure. Archaeological study and conservation is necessary and should be carried out urgently in order to prevent further disturbances and damage.

5. Ancient towns/settlements

There are 4 ancient towns/settlements situated near the Angkor – Phimai route, which are considered components of the route as sub-destinations. These towns/settlements are:

1. Mueang Phlapphla (เมืองพลับพลา)

Location: Tambon Mueang Phlapphla, Amphoe Huai Thalaeng, Nakhon Ratchasima

Geographical coordinates: 15.0500024, 102.6200029

15° 03' 00.0089" N 102° 37' 12.0106" E

Protection status: Registered National Monument. Government Gazette, 27th September, 2479 B.E. (1936).

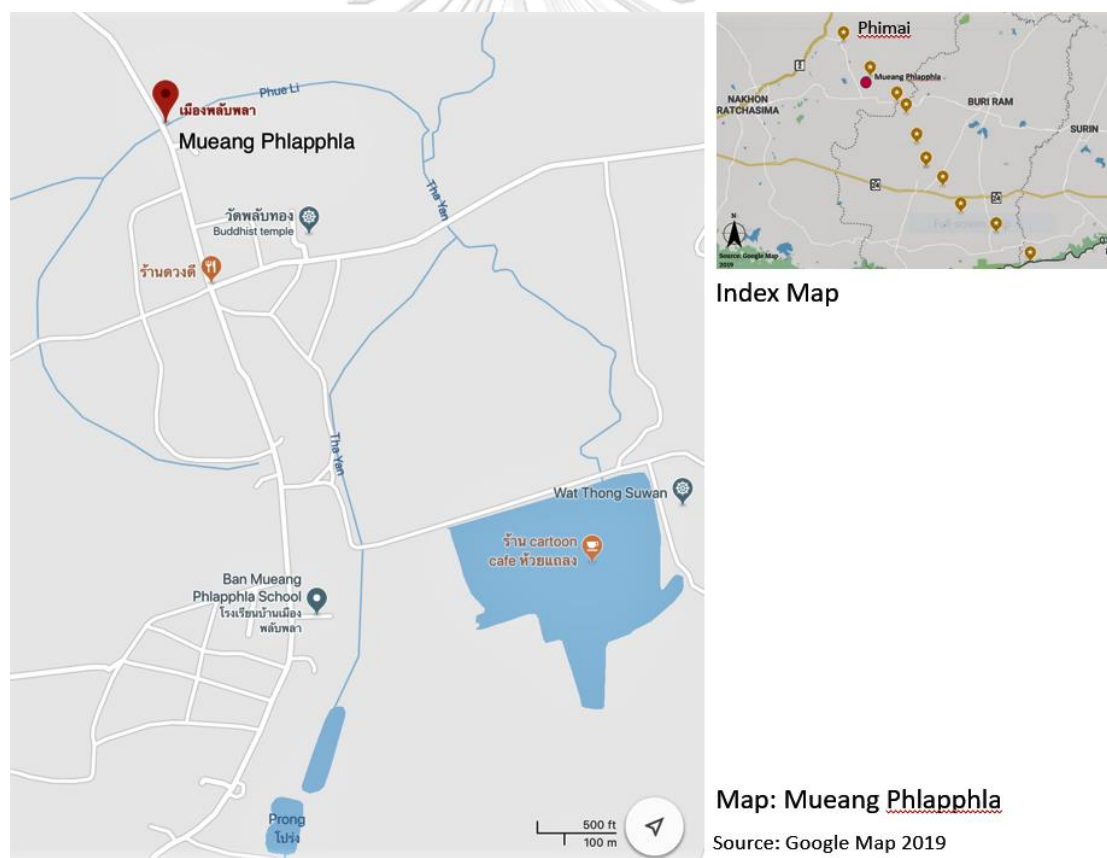


Figure 92: Map: Mueang Phlapphla



Figure 93: Mueang Phlapphla, aerial view.

Mueang Phlapphla is an ancient town situated approximately 2.8 kilometres from Ku Sila. The town is surrounded by moats and levees in round shape, which is surrounded by another layer of moats and levees in rectangular shape, forming inner town and outer town. The shape of the outer town indicates the Khmer influence which dominated the area in later period, encompassing the original round-shaped town. The area of the inner town is fully inhabited, the outer town is agricultural area. The state of town form, with levees and moats is well-conserved. It is registered as National Monument and has undergone preliminary archaeological survey (นภสินธุ์ บุญล้อม, 2017).

2. Ban Samrong (บ้านสำโรง)

Location: Ban Samrong, Tambon Phathairin, Amphoe Lam Plai Mat, Buri Ram

Geographical coordinates: 14.938588, 102.74973

14 56' 18.9168" N 102 44' 59.0280" E

Protection status: Non-registered monument.

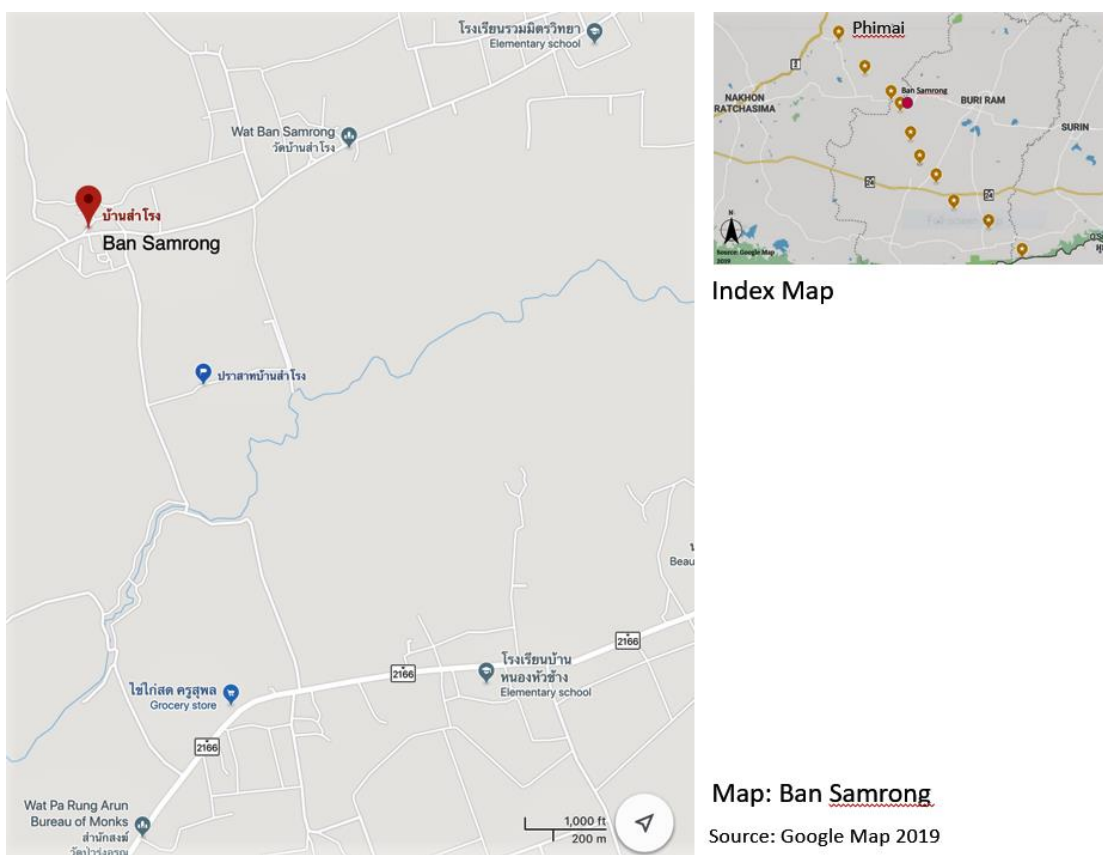


Figure 94: Map: Ban Samrong



Figure 95: Ban Samrong, aerial view.

Ban Samrong is a village located in the area of an ancient settlement. At present, it is in the administrative are of Ban Samrong, Tambon Phathairin.

The shape of the ancient town is round, surrounded by moats and levees, which is adjacent to a rectangular pond to the east. The town is fully inhabited. The outer area is agricultural area (นภสินธุ์ บุญด้อม, 2017).

3. Mueang Phathairin (เมืองผไทรินทร์)

Location: Tambon Phathairin, Amphoe Lam Plai Mat , Buri Ram

Geographical coordinates: 14.921375, 102.7288194

14° 55' 16.95" N 102° 43' 43.75" E

Protection status: Non-registered monument.

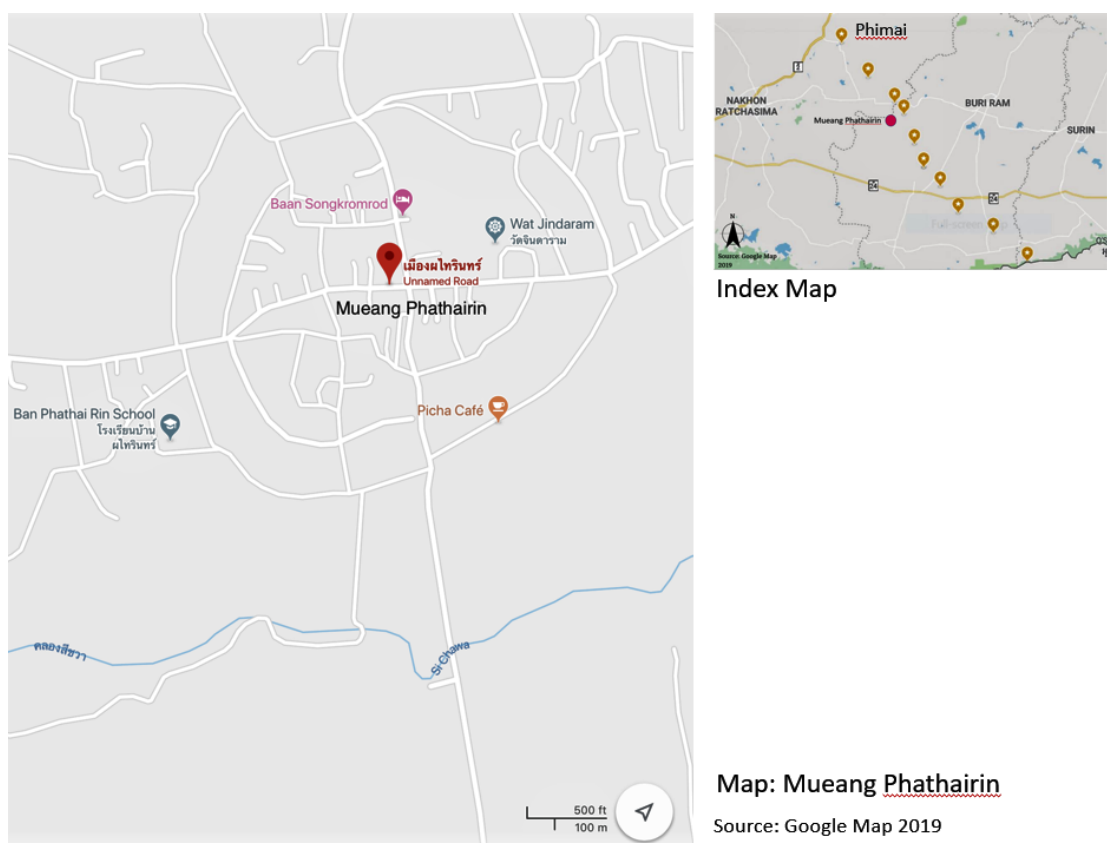


Figure 96: Map: Mueang Phathairin



Figure 97: Mueang Phathairin, aerial view.

Mueang Phathairin is a round-shaped ancient town, surrounded with moats and levees. Situated not far from Ban Samrong. The town from is in good condition, which can be seen clearly from aerial photographs. There are 4 entrances to the town, situated to the north, east, south, and west. With 2 axes roads that cross each other at centre of the town. The town is fully inhabited, with expanded settlements to the northeast and southwest outside the boundary moats and levees. Other parts of surrounding area are agricultural areas (นักสิษฐ์ บุญด้อม, 2017).

4. Mueang Fai (เมืองฝ้าย)

Location: Ban Fai, Tambon Mueang Fai, Amphoe Nong Hong, Buri Ram

Geographical coordinates: 14.86, 102.7400035

14 51' 36.0029" N 102 44' 24.0126" E

Protection status: Registered National Monument. Government Gazette vol. 115, special part 83 ง, 21st September, 2541 B.E. (1998).

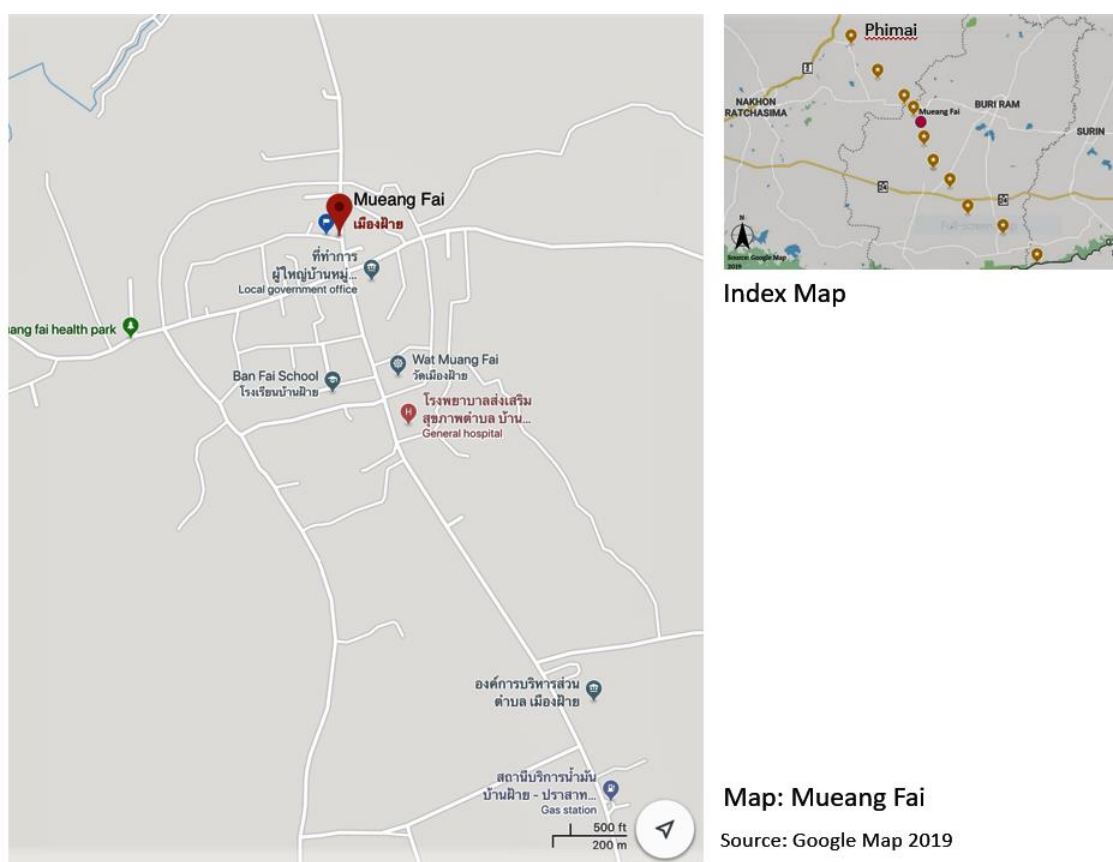


Figure 98: Map: Mueang Fai

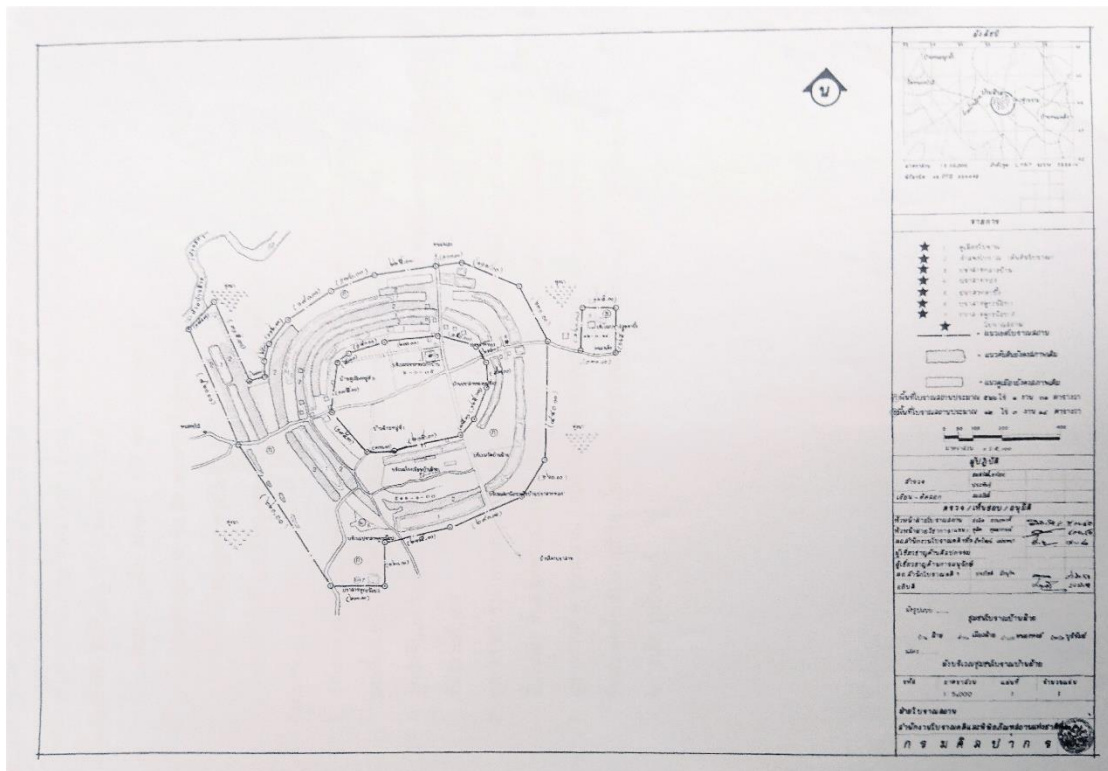


Figure 99: Mueang Fai Registration Area Plan. Credit: Fine Arts Department



Figure 100: Mueang Fai, aerial view.

Mueang Fai is a living village, situated in the area of an ancient settlement surrounded by moats and levees. At present, it is in the process of National Monument registration and demarcation of protected area (นภลีนันท์ บุญล้ำคม, 2017).

6. Ancient industrial sites

Ancient industrial sites are important components which verify and illustrate the functions and significance of the route. There are a large number of industrial sites along the Angkor – Phimai route. Selected representatives of this group comprises iron smelting sites, pottery kiln sites, and stone quarry, which are:

1. Iron smelting site, Ban Sai Tho 7, Amphoe Ban Kruat, Buri Ram (แหล่งโลหะกรรม บ้านสายโท 7 อำเภอบ้านกรวด จังหวัดบุรีรัมย์)

Location: Ban Sai Tho 7, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.3900015, 103.1800032

14° 23' 24.0056" N 103° 10' 48.0018" E

Protection status: Non-registered monument.

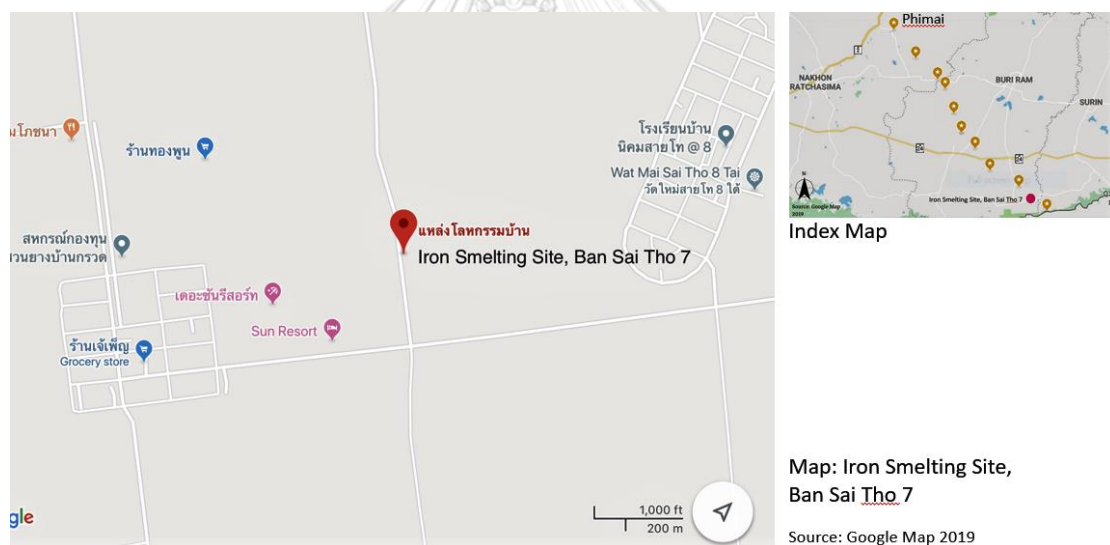


Figure 101: Map: Iron smelting site, Ban Sai Tho 7

Iron smelting site at Ban Sai Tho 7 comprises several large mounds located in a para rubber plantation. Each mound comprises earth and large amount of slags. The site has undergone initial surveys. The site is at risks due to its location in agricultural area, therefore, archaeological survey and study is urgently required to prevent damages or disturbances.

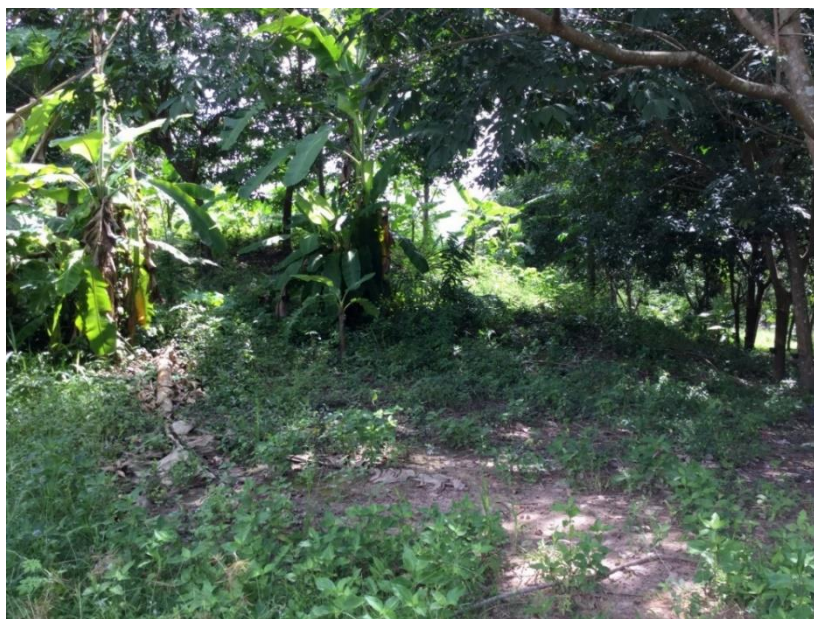


Figure 102: Iron smelting site Ban Sai Tho 7.



Figure 103: The ground surface is scattered with slags mixed with soil.

2. Iron smelting site, Ban Khao Din Tai, Amphoe Ban Kruat, Buri Ram

Location: Ban Khao Din Tai, Tambon Ban Kruat, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.4399996, 103.0899955

14° 26' 23.9987" N 103° 05' 23.9839" E

Protection status: Non-registered monument.

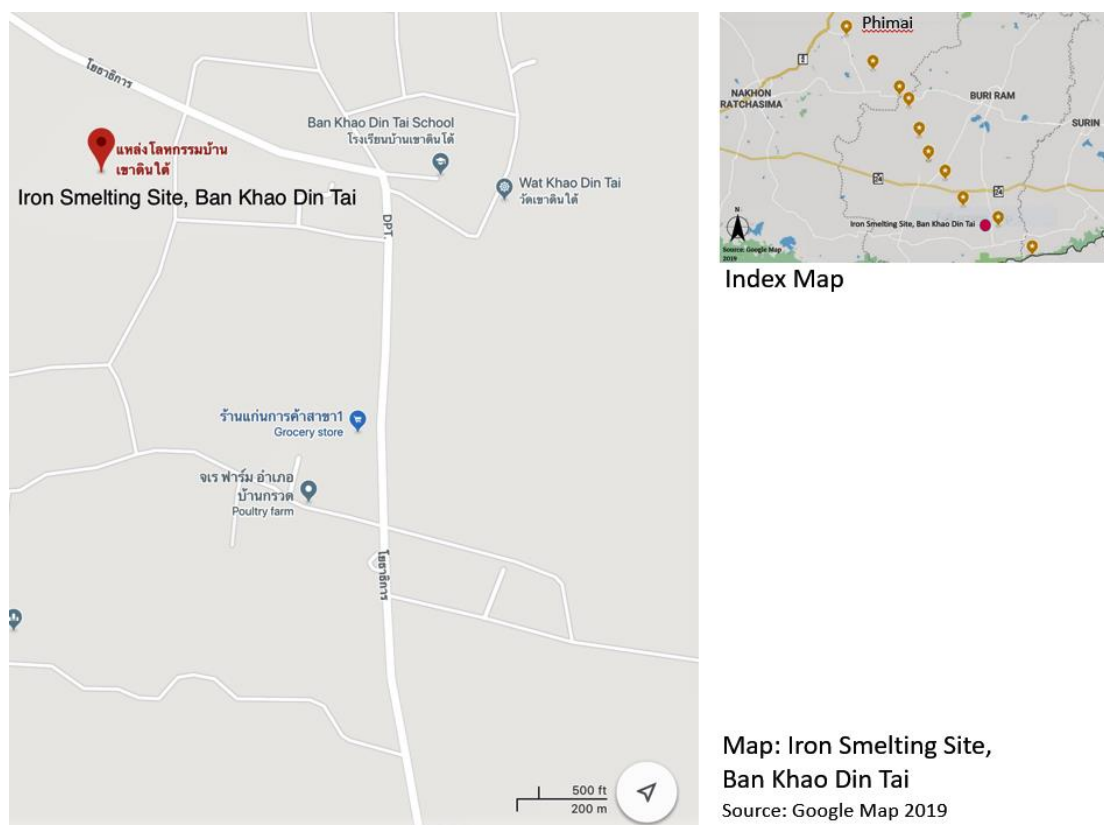


Figure 104: Map: Ban Khao Din Tai iron smelting site

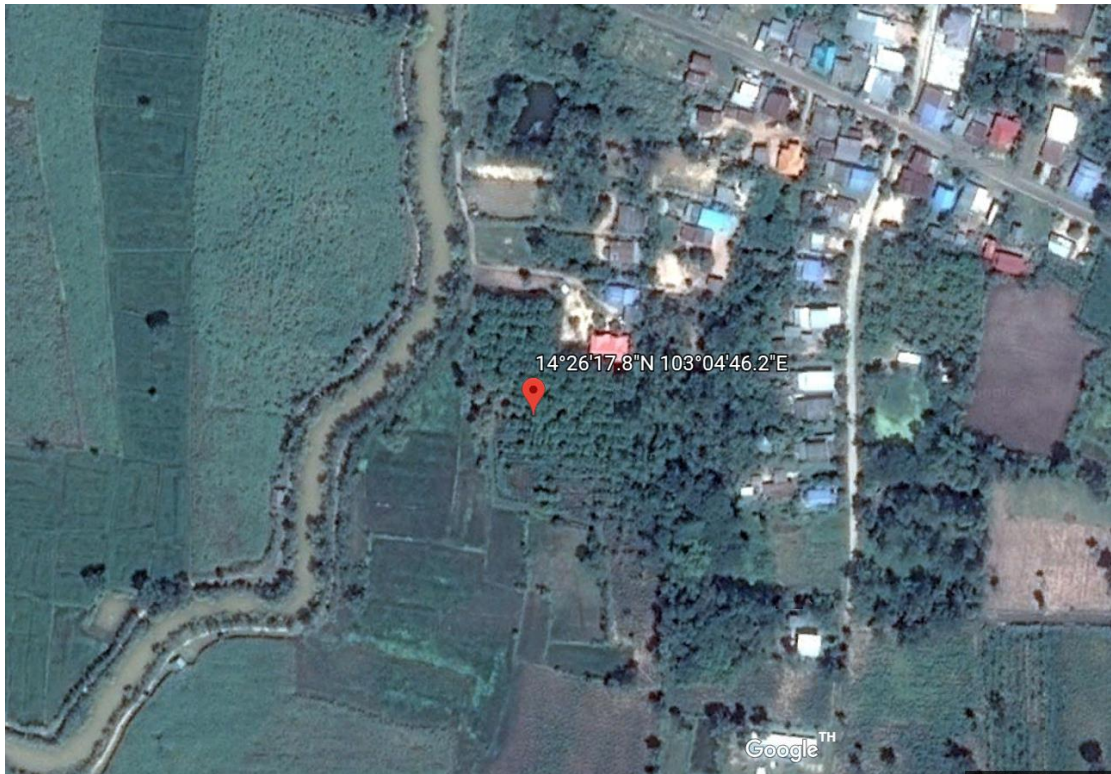


Figure 105: Ban Khao Din Tai iron smelting site, aerial view.

Iron smelting site at Ban Khao Din Tai comprises several large mounds located in a para rubber plantation. Each mound comprises earth and large amount of slags. The site has undergone archaeological excavation which was part of the research for a Master's degree thesis by Miss Issarawan Yoopom, Faculty of Archaeology, Silpakorn University, submitted in 2010 (อิศราวรรณ อยู่ป้อม, 2553 (2010)). However, the site is at risks due to its location in agricultural area, therefore, prevention from damages or disturbances is necessary.

3. Stone quarry, Wat Pa Lan Hin Tat, Ban Sai Tri 3, Amphoe Ban Kruat, Buri Ram
(แหล่งตัดหิน วัดป่าลานหินตัด บ้านสายตรี 3 อำเภอบ้านกรวด จังหวัดบุรีรัมย์)

Location: Wat Pa Lan Hin Tat, Ban Sai Tri 3, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.364969, 103.086296

14° 21' 53.8884" N 103° 15' 10.6656" E

Protection status: Registered National Monument. Government Gazette vol. 113, special part 50 ง, 18th December, 2539 B.E. (1996).

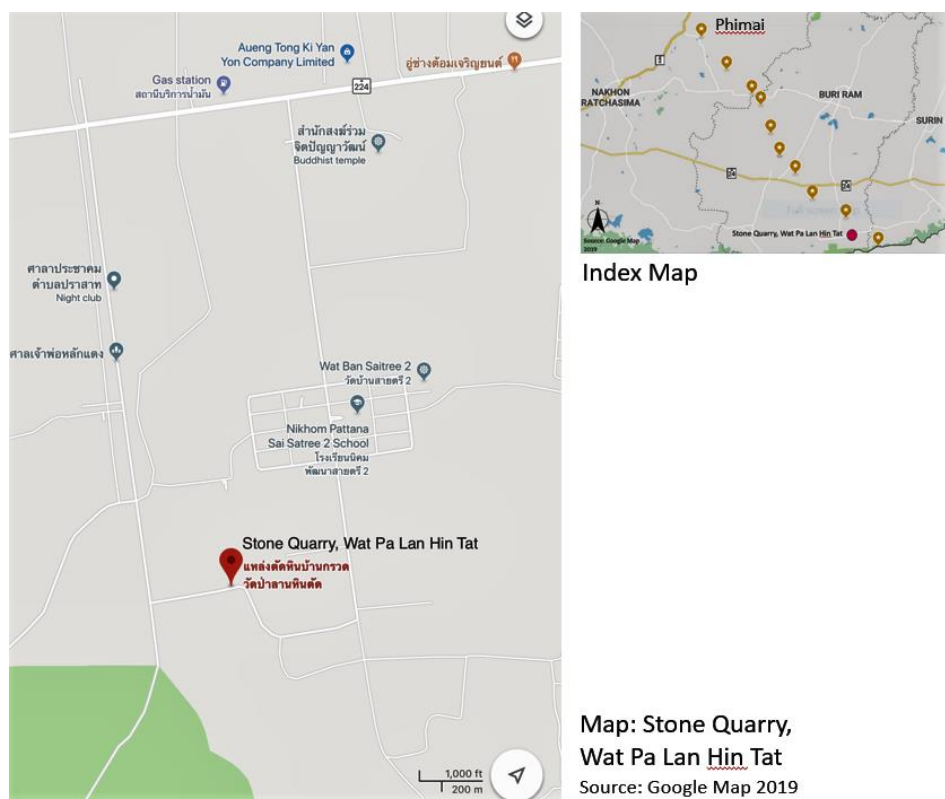


Figure 106: Map: Stone quarry, Wat Pa Lan Hin Tat.

The site is a sandstone quarry situated in the area of a forest temple, Wat Pa Lan Hin Tat. Fortunately, the forest temple concept is to live in harmonized with nature, thus the heritage site is not damaged or much disturbed. It is apparent from the existing stone cutting area that the sandstone blocks were used for building Khmer style structures. The site is protected as a registered National Monument, with demarcation of protected area.

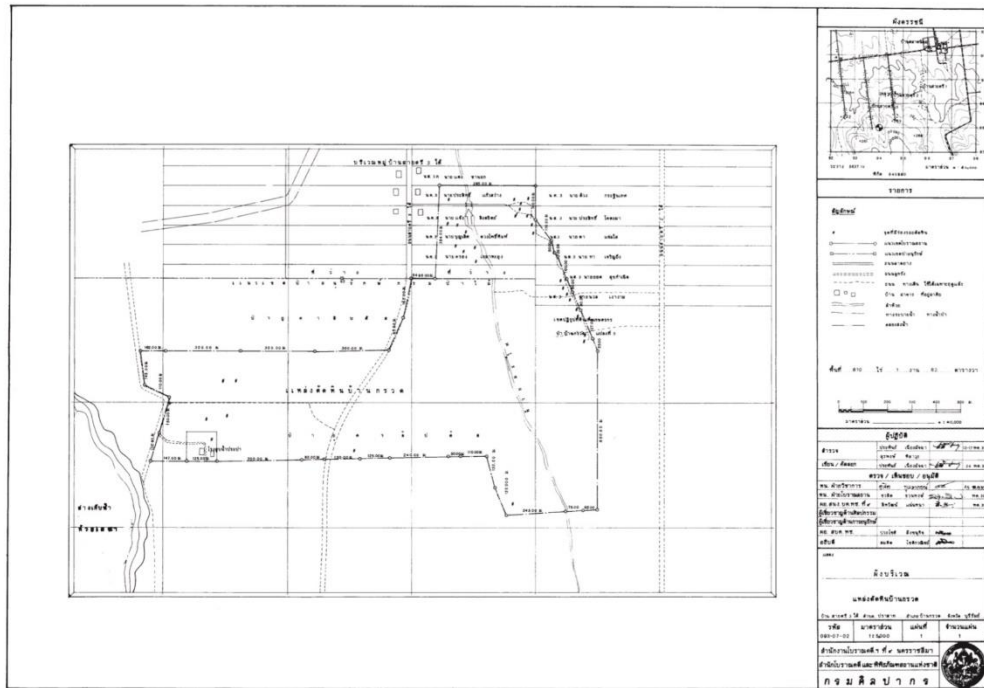


Figure 107: Stone quarry, Wat Pa Lan Hin Tat Registration Area Plan. Credit: Fine Arts Department



Figure 108: Stone quarry, Wat Pa Lan Hin Tat.

4. Tao Nai Chian (Nai Chian Kiln) (เตานายเจียน)

Location: Tambon Hin Lat, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.4300038, 103.1500039

14° 25' 48.0138" N 103° 09' 00.0142" E

Protection status: Non-registered monument. Developed as site museum.

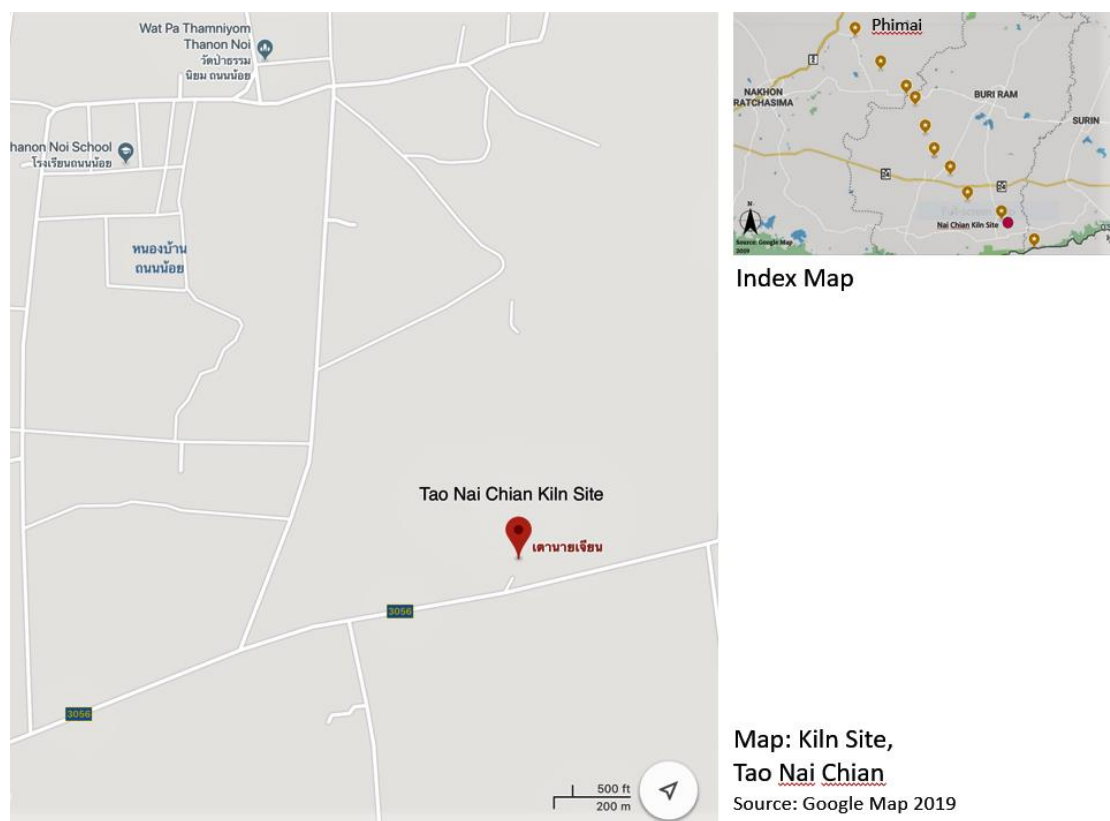


Figure 109: Map: Tao Nai Chian



Figure 110: Tao Nai Chian site museum.

Tao Nai Chian is an ancient kiln site, which produced Khmer style potteries. It has been restored and conserved as a site museum. The site is a non-registered monument.

5. Tao Sawai (Sawai Kiln)

Location: Tambon Hin Lat, Amphoe Ban Kruat, Buri Ram

Geographical coordinates: 14.4399962, 103.1600019

14° 26' 23.9865" N 103° 09' 36.0070" E

Protection status: Non-registered monument. Developed as site museum.

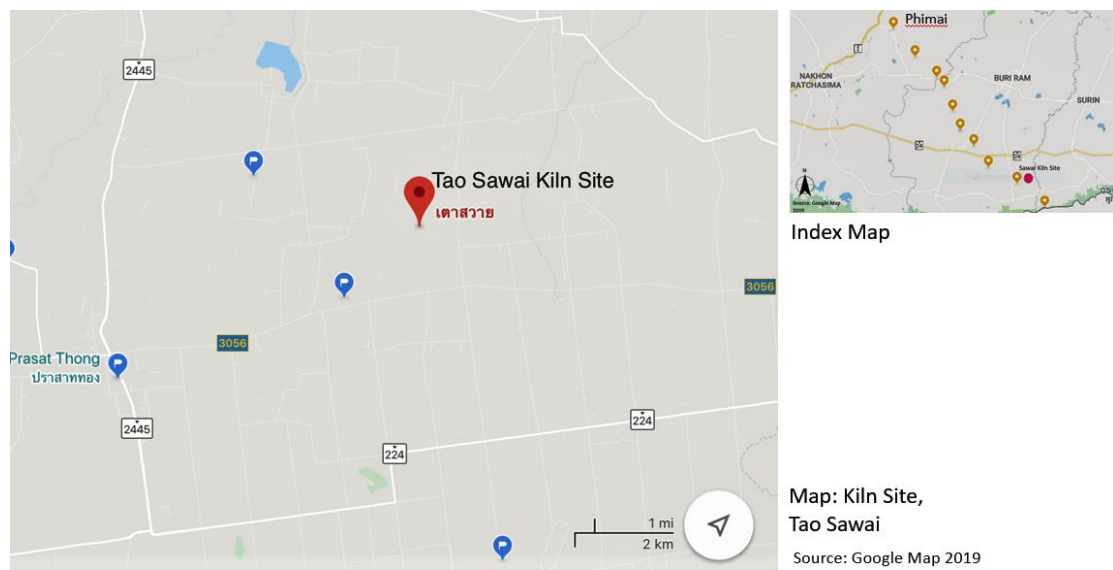


Figure 111: Map: Tao Sawai

Tao Sawai is an ancient kiln site, which produced Khmer style potteries. It has been restored and conserved as a site museum. The site is a non-registered monument.



Figure 112: Tao Sawai site museum.



Figure 113: Examples of pottery from Tao Sawai kiln.

4.4 Management System

Management system for the components of the Angkor – Phimai cultural route in Thailand do exist, although the system varies depending on each component. It should be noted that the concept of cultural route has not been perceived for these sites, therefore, the establishment of management systems has been considered based on individual values of each site, not collective values of the series. State of protection and management status of all components listed previously are presented in the following table:

Table 4: Protection and Management Status of Angkor – Phimai Cultural Route (in Thailand).

No.	Group	Type	Name	Province	Protection Status	Management System	Responsible Authority
1	I	Destination	Phimai	Nakhon Ratchasima	***Registered National Monument	Administrative unit, Historical Park	Ministry of Interior, Fine Arts Department
2	I	Road	Physical remains of Angkor – Phimai route	Nakhon Ratchasima	***Registered National Monument (part of Phimai Town)	Phimai Historical Park	FAD 10 th Regional Office
3	I	Dharmasala	Ku Sila	Nakhon Ratchasima	*Registered National Monument	-	FAD 10 th Regional Office
4	I	Dharmasala	Prasat Huai Khaen	Nakhon Ratchasima	Non-registered monument	Restored and maintained	FAD 10 th Regional Office

5	I	Dharma sala	Prasat Ban Samrong	Buri Ram	Non-registered monument	-	FAD 10 th Regional Office
6	I	Dharma sala	Prasat Nong Ta Pleng	Buri Ram	Non-registered monument	-	FAD 10 th Regional Office
7	I	Dharma sala	Prasat Nong Plong	Buri Ram	**Registered National Monument	-	FAD 10 th Regional Office
8	I	Dharma sala	Prasat Nong Kong	Buri Ram	*Registered National Monument	-	FAD 10 th Regional Office
9	I	Dharma sala	Prasat Ban Bu	Buri Ram	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office
10	I	Dharma sala	Prasat Thamo	Buri Ram	**Registered National Monument	-	FAD 10 th Regional Office
11	I	Dharma sala	Prasat Ta Muean	Surin	Non-registered National Monument	Restored and maintained	FAD 10 th Regional Office
12	II	Arogay asala	Kut Ruesi Noi	Nakhon Ratchasi ma	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office
13	II	Arogay asala	Prang Ban Prang	Nakhon Ratchasi ma	Non-registered monument	Restored and maintained	FAD 10 th Regional Office
14	II	Arogay asala	Kut Ruesi Khok	Buri Ram	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office

			Mueang		Monument		Office
15	II	Arogay asala	Kut Ruesi Nong Bua Rai	Buri Ram	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office
16	II	Arogay asala	Prasat Ta Muean Tot	Surin	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office
17	II	Khmer sanctua ry	Prasat Thong	Buri Ram	Non- registered monument	Restored and maintained	FAD 10 th Regional Office
18	II	Khmer sanctua ry	Prasat Phnom Rung	Buri Ram	**Registered National Monument	Historical park	FAD 10 th Regional Office
19	II	Khmer sanctua ry	Prasat Mueang Tam	Buri Ram	**Registered National Monument	Managed under Phnom Rung Historical Park	FAD 10 th Regional Office
20	II	Khmer sanctua ry	Prasat Plai Bat 1	Buri Ram	Non- registered monument	During restoration process	FAD 10 th Regional Office
21	II	Khmer sanctua ry	Prasat Plai Bat 2	Buri Ram	Non- registered monument	During restoration process	FAD 10 th Regional Office
22	II	Khmer sanctua ry	Prasat Ta Muean Thom	Surin	*Registered National Monument	Partially restored, maintained	FAD 10 th Regional Office
23	II	Baray	Baray Phimai	Nakhon Ratchasi ma	Non- registered monument	-	FAD 10 th Regional Office
24	II	Baray	Baray	Buri Ram	*Registered	Restored and	FAD 10 th

			Nong Bua Rai		National Monument	maintained	Regional Office
25	II	Baray	Baray Mueang Tam	Buri Ram	**Registered National Monument	Restored and maintained	FAD 10 th Regional Office
26	II	Non-Khmer monument	Prasat Choed Doei	Buri Ram	**Registered National Monument (part of Mueang Fai)	-	FAD 10 th Regional Office
27	II	Ancient town	Mueang Phlappla	Nakhon Ratchasima	*Registered National Monument	-	FAD 10 th Regional Office
28	II	Ancient town	Ban Samrong	Buri Ram	Non-registered monument	-	FAD 10 th Regional Office
29	II	Ancient town	Mueang Phathairin	Buri Ram	Non-registered monument	-	FAD 10 th Regional Office
30	II	Ancient town	Mueang Fai	Buri Ram	**Registered National Monument	-	FAD 10 th Regional Office
31	II	Ancient industrial site	Iron smelting site, Ban Sai Tho 7	Buri Ram	Non-registered monument	At risks, located in agricultural area	FAD 10 th Regional Office
32	II	Ancient industrial site	Iron smelting site, Ban Khao Din Tai	Buri Ram	Non-registered monument	At risks, located in agricultural area	FAD 10 th Regional Office

33	II	Ancient industrial site	Stone quarry, Wat Pa Lan Hin Tat	Buri Ram	**Registered National Monument	Maintained by FAD and temple	FAD 10 th Regional Office
34	II	Ancient industrial site	Tao Nai Chian kiln site	Buri Ram	Non-registered monument	Site museum	FAD 10 th Regional Office
35	II	Ancient industrial site	Tao Sawai kiln site	Buri Ram	Non-registered monument	Site museum	FAD 10 th Regional Office

Note: *Registered by name, no registration area plan.

**Registered, demarcated, with registration area plan.

***During demarcation process (2019).

As seen in the Table, management systems for the components of Angkor - Phimai cultural route in Thailand vary remarkably, from the highest level of management system of historical park to no management system, with minimal legal protection as non-registered monument²⁰ (กรมศิลปากร, 2548 (2005)). It can be summarized that among the 35 listed components, there are:

- 2 historical parks, the highest level of established management systems
- 2 site museums, both of which are non-registered monuments
- 12 restored and maintained sites
- 1 maintained site, no restoration required (stone quarry)
- 2 sites, during restoration process

²⁰ Non-registered monuments are also protected by the Act on Ancient Monuments, Antiques, Objects of Art and National Museums, B.E. 2504 (1961), as last amended by the Act on Ancient Monuments, Antiques, Objects of Art and National Museums (No.2), B.E. 2535 (1992). The difference lies in the penalties that the offence committed to non-registered monuments will be subjected to less penalties than that which committed to registered monuments. Non-registered monuments may be registered as national monuments, or may be listed as local cultural heritage sites in the future.

- 2 sites at risks (iron smelting sites)

The above information are shown graphically in the following diagram, which is based on the grouping of components presented in this chapter.

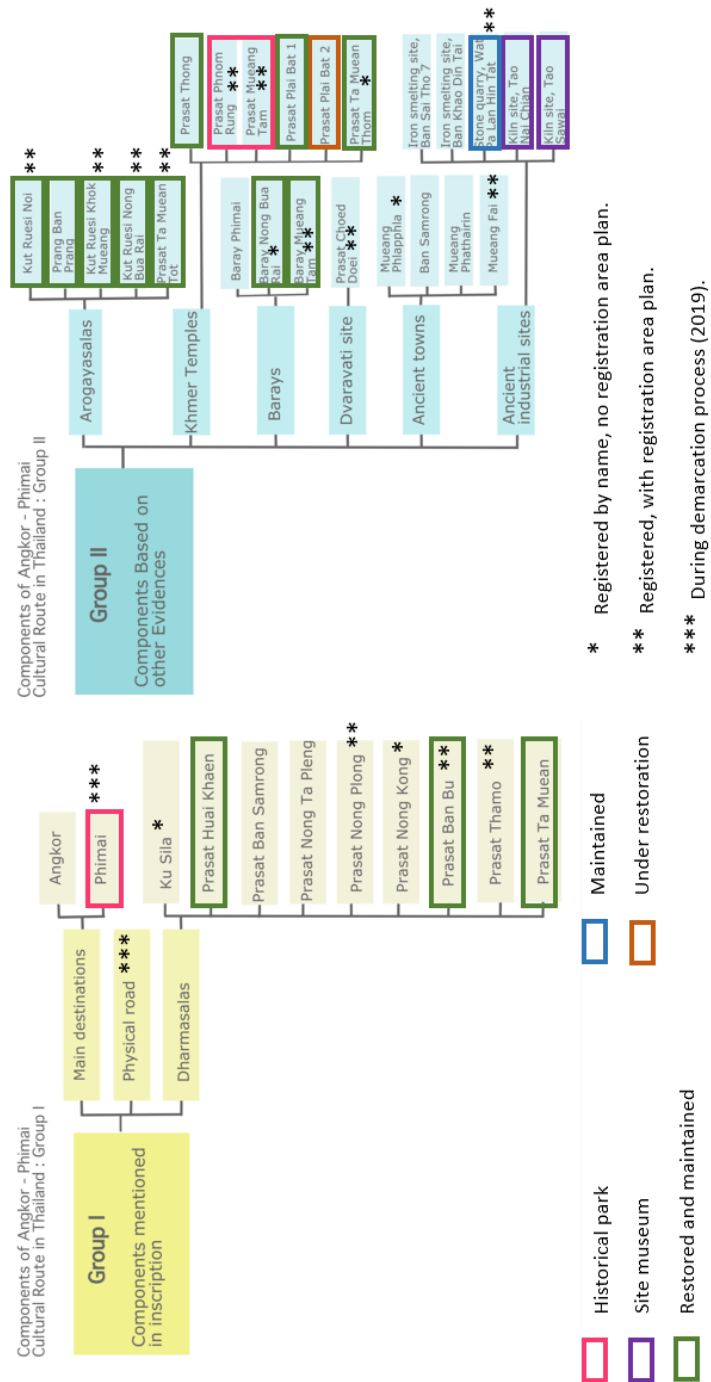


Figure 114: Diagram: Protection and Management Status of Angkor – Phimai Route components

From this summary, it can be concluded that, although all components are legally protected as monuments, most of them have very basic management system, only maintenance. The historical parks, Phimai, Phnom Rung, and Mueang Tam; as well as 2 site museums, Nai Chian Kiln and Sawai Kiln, are the only 5 components which have well-established management systems.

Consideration on management system appears to depend on the characteristics of the site rather than legal protection status of the site, as seen in the establishment of Nai Chian and Sawai kilns as site museums although these 2 sites are non-registered monument.

From the serial cultural heritage and cultural route point of view, the most important components, the dharmasalas, are the group which has very basic management system applied to only a few sites, that is, only 3 in 9 of the sites are restored and maintained. This may be due to the simple architectural features, and the comparatively small size of the structure and area, which are characteristics of the dharmasala.

Analysis and discussions on management will be conducted in the following chapter

4.5 Recognition of Angkor – Phimai Cultural Route

The aforementioned aspects of the case study have led to the conclusion on the serial perspective recognition of Angkor – Phimai cultural route. As mentioned in the historical background, the road, means of communication between Angkor and Phimai, had existed before King Jayavarman VII period, which dates back to circa late 9th century CE, however, the recognition of the route itself as a serial cultural heritage site has been less significant than that of the outstanding components of the route, especially the important Khmer temples namely, Prasat Phimai, Prasat Phnom Rung, and Prasat Mueang Tam. The author, therefore, has summarized the development of recognition of Angkor – Phimai cultural route, including related events concerning important components of the route, as follows:

- 9th century CE (868 CE): Bo Ika Inscription mentions Si Canasa “a kingdom outside Kambudesa”, which existed in the area of the present Nakhon Ratchasima, Thailand, not far from the present Phimai Town. This verse indicates that there must have been means of communication between Khmer Empire (Kambudesa) and the area, which should have been a road.
- 10th century CE: the founding of Angkor as capital city of Khmer Empire.
: the building of Phnom Rung Temple.
- 11th century CE: the founding of Phimai town, which was part of the Khmer Empire, therefore, a road which connected the 2 cities must have existed.
: the building of Prasat Mueang Tam.
- 1181 – 1218: the reign of King Jayavarman VII. Dharmasalas, arogayasalas, were built by the King's order for public services.
: Preah Khan Temple built, and the inscription, known as Preah Khan Inscription, was made to be installed at the temple. The inscription is the most important written document on the Angkor road network, including the Angkor – Phimai road.
- 1910: Etienne Lunet de Lajonquiere made a map of Angkor road network based on survey.
- 1935: Registration of Prasat Phnom Rung, announced in Government Gazette Vol. 52, Section 75, 8th March, 1935 (registered by name).
: Registration of Prasat Mueang Tam, announced in Government Gazette Vol. 52, Section 75, 8th March, 1935 (registered by name).
- 1936: Registration of Phimai town as Registered National Monument announced in Government Gazette Vol. 53, 27th September, 1936. This was a registration by name, without demarcation of registration area.
- 1939: M. M. Glaize discovered Preah Khan Inscription at Preah Khan Temple,

Cambodia, on 13th November, 1939. The inscription mentions roads from Cambodia to important towns in the kingdom, Angkor – Phimai road is one of these roads.

- 1951: Initial restoration of Phimai Temple, mostly by propping and basic consolidation.
- 1960 – 1996: restoration of Prasat Mueang Tam.
- 1964: restoration of Phimai Temple by anastylosis method, with collaboration from French Government that sent experts to help in the restoration project.
- 1971: restoration of Prasat Phnom Rung by anastylosis method.
- 1988: Official Opening of Phnom Rung Historical Park on 21st May, 1988.
- 1989: Official Opening of Phimai Historical Park on 12th April, 1989.
- 1997: Official Opening of Prasat Mueang Tam, managed by Phnom Rung Historical Park, on 10th November, 1997.
- 2004: “Phimai its Cultural Route and the Associated Temples of Phanomroong and Muangtam” was submitted to the UNESCO and was included in the World Heritage Tentative List.
- 2006 – 2014: Survey and mapping of Phimai town and important cultural heritage sites for demarcation of monument area. However, although the registration area map has been completed, the announcement in Government Gazette has not been made due to conflicts between the Fine Arts Department and certain groups of people who opposed the demarcation because of misunderstanding that they will have to be relocated after demarcation is announced.
- 2007: Living Angkor Road Project, by Asst. Prof. Dr. Panjai Thanthassanawong, Col. Asst. Prof. Dr. Surat Lertlam, Mr. Pongdhan Sampaongern, and Mr. IM Sokrithy, was completed, which is one of the most thorough studies on the Angkor – Phimai route and components, presenting their physical features in detail based on survey technologies and archaeological study.

- 2015: Fine Arts Department held meetings for the preparation of Nomination Dossier for the nomination of “Phimai its Cultural Route and the Associated Temples of Phanomroong and Muangtam”.
- 2016: “LiDAR Technology and Archaeological Works at Phnom Rung and Plai Bat Mountains” was carried out by Mr. Wasan Thepsuriyanont, then Head of Phnom Rung Historical Park. The project rendered an important result, which is the discovery of the remains of physical road at base of Phnom Rung mountain, which is an important evidence for the verification of the actual delineation of Angkor – Phimai route.
- 2019: Thailand requested to have “Phimai its Cultural Route and the Associated Temples of Phanomroong and Muangtam” removed from World Heritage Tentative List, and proposed “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” instead, which, at present, has been included in the World Heritage Tentative List.

The following diagram presents events concerning the Angkor – Phimai cultural route and important components in timeline form. On the left side are events concerning important components and on the right side are events concerning the Angkor – Phimai road/route, from the first recognition to the present (2019).

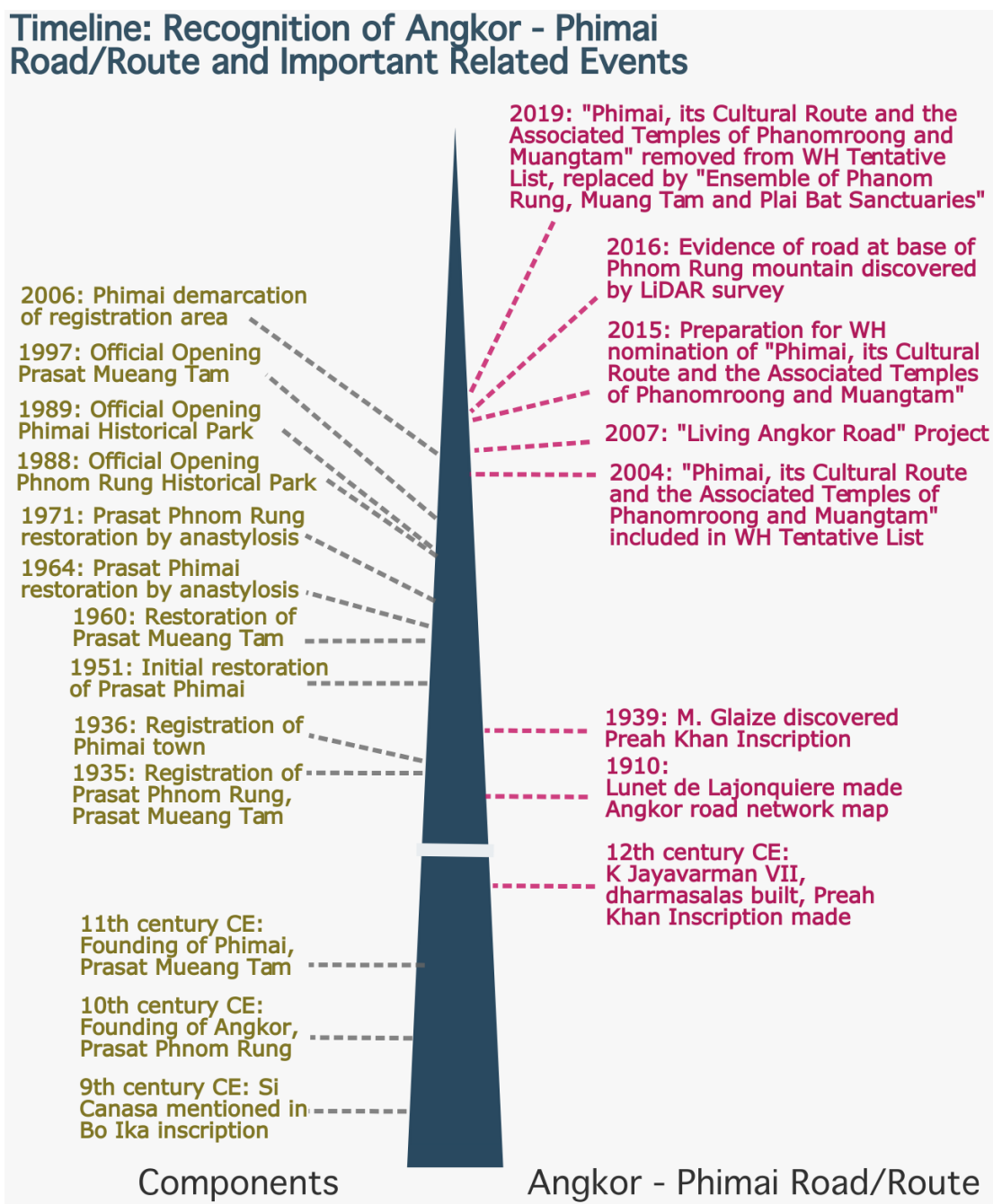


Figure 115: Timeline: Recognition of Angkor – Phimai Route and Important Related Events.

4.6 Conclusion

This chapter presents information about cultural heritage sites which are related to the Angkor – Phimai cultural route, focusing on the route in Thailand. To summarize, the distance of Angkor – Phimai route is 253.9 kilometres, and the part of the route in Thailand from the last dharmasala, which is nearest to the Thai-Cambodian border, namely Prasat Ta Muen, to Phimai is 128.9 kilometres. Components of the cultural route can be categorized into 2 groups, Group I comprises the sites which are directly mentioned in the Preah Khan Inscription, and Group II comprises other sites which are related to the route by history and/or archaeological evidences. There are 11 sites in Group I, comprises 2 important towns, and 9 dharmasalas. Group II comprises 23 sites, which are: 5 arogayasalas, 6 Khmer sanctuaries, 3 barays, 1 ancient religious site which does not belong to Khmer culture, 4 ancient towns, and 5 ancient industrial sites. Thus, the total number of components of Angkor – Phimai cultural route in Thailand is 35.

Management systems of these 35 sites vary considerably, which is an important aspect to be analyzed and discussed further. It is clearly seen that the approach of cultural route has never been applied to these sites, in spite of the initiation and attempt of the Fine Arts Department in nomination of the Angkor – Phimai Cultural Route to the World Heritage List so that, at present, the property has been included in the Tentative List. The present management situation will be one of the problems that the Fine Arts Department has to face in its future work on World Heritage nomination.

The diverse characteristics of these components is observed from field survey and document study, which will be discussed in detail in the following chapter on case study analysis.

Chapter 5 Case Study Analysis

5.1 Introduction

In the previous chapter, the case study, Angkor – Phimai Cultural route and its components have been described. To summarize, the Angkor - Phimai cultural route comprises 35 components which represent its cultural significance, use, and duration in time. In this chapter, the author analyzes the route and components on 4 aspects, namely, values, interpretation, management, and tourism. Analysis of each aspect covers the following issues:

1. Values

- Identification of Angkor – Phimai cultural route and components
- Values identification of Angkor – Phimai cultural route
- Problems on identification and values identification
- OUV of Angkor – Phimai Cultural Route

2. Interpretation

- People's perception of Angkor- Phimai cultural route
- Existing means of interpretation
- Problems on interpretation

3. Management

- Existing management system
- Aspects for consideration on management
- Problems on management

4. Tourism

- Existing tourism facilities
- Tourism potential of components

- Tourism-related problems

The reason that the author raised the issue of tourism to be discussed specifically instead of including it as part of management is because serial cultural heritage concept has been continually and actively applied in tourism (see Chapter 2.4.2) Serial cultural heritage sites are naturally supportive to the design of cultural tourist routes, which have become popular since such routes enrich tourists experience with knowledge based on 'story', the intangible aspect of each route. Therefore, tourism is discussed as a specific issue in this chapter.

As mentioned in the introduction of previous chapter that this study does not cover specific study of communities related to the case study unless they have direct impact on the components, however, communities and people are mentioned as stakeholders of the series and components in the management topic.

The analyzed results lead to the ideas on future requirements for Angkor – Phimai cultural route, which will be addressed in the following chapter.

5.2 Analysis of Angkor – Phimai Cultural Route

Angkor – Phimai cultural route in Thailand is analyzed and discussed as follows:

5.2.1 Values

Values of Angkor – Phimai cultural route can be considered on 2 aspects, firstly, collective values of all components based on serial cultural heritage concept, and, secondly, individual values of each component. For the purpose of this study, collective values are emphasized because the focal point of study is on serial cultural heritage perspective.

5.2.1.1 Identification of Angkor – Phimai cultural route and components

Identification process of a cultural route, according to the Charter on Cultural Route should consider the following aspects (ICOMOS, 2008b):

- The route's specific functionality: to serve a concrete and well-determined purpose of the route.

- Tangible and intangible values of its heritage: which have dynamically generated as results of reciprocal cultural influences.
- Its structural configuration: including the structure of the route and its physical characteristics.
- Its geographic and historic contexts: upon which it exerts/exerted influences and helps/helped to characterize and enrich with new dimensions as part of an interactive process.
- Its natural and cultural setting: in which the route is located and has become an inseparable part of it in terms of delineation, creation of related elements, and diversification of the route's characteristics.
- Its characteristic environmental values: which is related to the setting of the route.
- Its relationships to the landscape: where the route is located, being an indicator of its cultural landscape value.
- Its duration in time: indicates the timeframe of influence which the route has/had on its environment and other relating cultural and natural elements, continuity of the road's function is also a factor of consideration.
- Its symbolic and spiritual dimension: these intangible aspects of the route are fundamental for understanding its significance and its associative heritage values.

Since the Charter acts as a guideline for the cultural routes type of heritage, these aspects are applied to the identification of Angkor – Phimai cultural route, as follows:

Identified Characteristics of Angkor – Phimai Cultural Route in Thailand

- Functionality:

The Angkor – Phimai cultural route in Thailand is a historic cultural route that was an important route of communication between Angkor, the capital of Khmer Kingdom, and Phimai, an important town in the region, especially during 12th century CE, the reign of King Jayavarman VII.

However, the use of the road declined after the Khmer Kingdom lost its power. It is not known precisely when the road ceased its function, but presumably, it should have gradually declined after 14th century when Khmer Kingdom was defeated by Ayutthaya.

The present road network of Northeast Thailand in the area where the Angkor – Phimai road existed does not have any linkage or reference to the ancient road. Therefore, the only remaining evidences of the road are the dharmasalas, which indicate the delineation of the ancient road as seen in the following map.

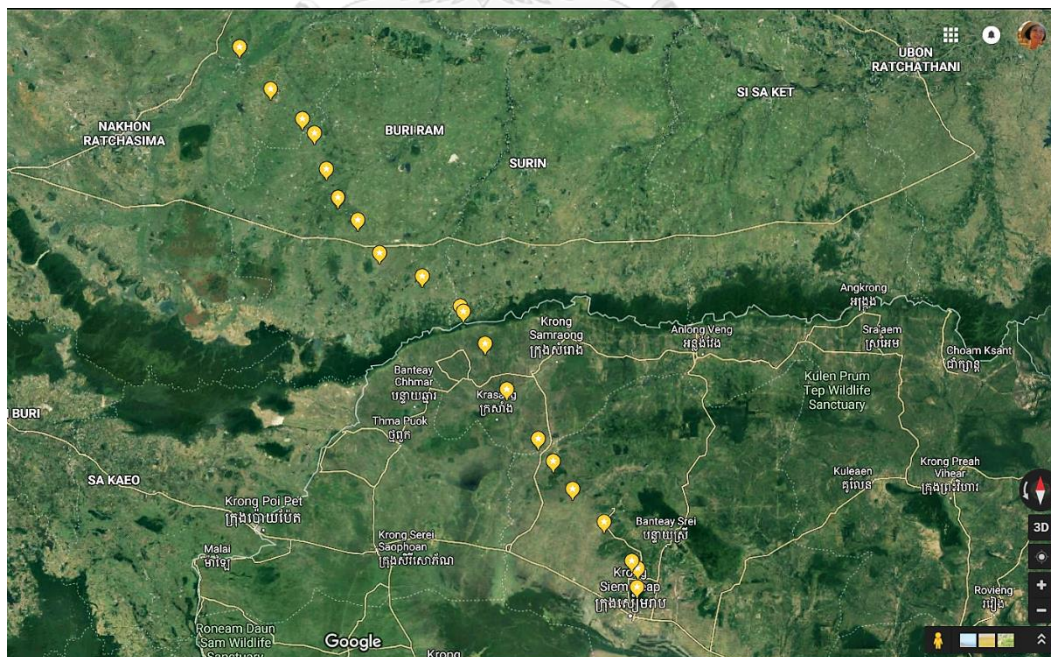


Figure 116: Map: Locations of Dharmasalas from Angkor to Phimai, hypothesized delineation of Angkor – Phimai road.

In Thailand, specific study on physical remains of Angkor – Phimai ancient road have not been conducted, however, evidence of the road has been discovered and some parts are designated as important elements of Phimai Town²¹, which is in the process of boundary demarcation and announcement in the Government Gazette. (V. Poshyanandana, 2018).

The latest discovery of the ancient road, as mentioned in the previous chapter, is part of the LiDAR survey conducted by Phnom Rung Historical Park. A trace of ancient road is seen at the base of Phnom Rung mountain, passing Baray Nong Bua Rai, which is one of the most important discovery that verifies the existence and functionality of the road (วสันต์ เทพสุริยานนท์, 2016).

- **Tangible and intangible values:**

The tangible and intangible values discussed here are those which belong to the related heritage sites, or components of the route, therefore, the 35 components of the Angkor – Phimai cultural route in Thailand are subjects of consideration. Descriptions of each component are not included here because they have already been presented in the previous chapter.

Tangible values:

All 35 components are legally considered and protected as monuments, which means they are valuable cultural heritage sites. Nevertheless, since the physical conditions of these sites vary considerably, as seen in the previous chapter, common people's perceptions on these sites differ consequently. The tangible values of these site, especially in terms of economic and tourism values, are applicable only to sites which possess special characteristics in terms of architecture, art, history, and

²¹ See Figure 31, Chapter 4.

symbolism. These sites may be called “iconic” places, which, consequently, have become important tourist attractions, these are:

- Prasat Phimai and Phimai Historical Park
- Prasat Phnom Rung and Phnom Rung Historical Park
- Prasat Mueang Tam (under Phnom Rung Historical Park)

These sites are well-known to both Thai and foreign tourists. They are regularly visited and have generated considerable income from tourism, which has benefited both the responsible authority (the Fine Arts Department) and local businesses.

Number of tourists to the 3 most important tourist attractions amongst the components are shown in the following table.

Table 5: Number of Tourists to Phimai Historical Park, Phnom Rung Historical Park, and Prasat Mueang Tam, Fiscal Year 2013 - 2017

Fiscal Year	Phimai Historical Park (no. of tourists -persons)	Phnom Rung Historical Park (no. of tourists - persons)	Prasat Mueang Tam (no. of tourists - persons)
2013	279,244	444,924	80,255
2014	278,419	439,488	89,109
2015	320,288	623,760	128,738
2016	241,678	573,247	135,883
2017	285,340	769,605	164,780

It is seen from the table that Phnom Rung Historical Park is the most popular tourist attractions amongst all components of the Angkor – Phimai cultural route in Thailand. Number of tourists to Phnom Rung

appears to be increasing, whereas the other 2 places do not have remarkable increase in this aspect.

It should be noted that Prasat Ta Muean group of monuments, which comprises Prasat Ta Muean (a dharmasala), Prasat Ta Muean Tot (an arogayasala), and Prasat Ta Mean Thom (a Khmer temple), is not included although the sites feature significant art and architectural characteristics because it is not a popular tourist attraction due to its location on the Thai-Cambodian border, thus the access is still under strict control by the Thai military for political reasons.

Other components, apart from being recognized as national monuments, do not have economic or touristic values.

Another type of tangible values of the components is the use value or functional value, which is applicable to the barays, water reservoirs, most of which are living cultural heritage and have been used by local people since ancient time. Among this type of components, only Baray Phimai is not functioning, the other barays, namely, Baray Nong Bua Rai, and Baray Mueang Tam, still function as water reservoirs.

Intangible values:

At present, intangible values of the route and components are not perceived collectively but individually. The perception of each component as monument or sacred place is apparent for some sites, especially important monuments such as Prasat Phimai, Prasat Phnom Rung, Prasat Mueang Tam, and Prasat Ta Muean Thom. Other sites such as dharmasalas, arogayasalas, barays, and ancient industrial sites have less significance in terms of sacredness. However, it is noticeable that the area around some dharmasalas have been set up as temples or local monasteries, which implies that the existence of 'monument' renders

spiritual meaning to the place, and such spiritual quality is favourable for selection as location of new temples.

The most important of all spiritual places among all components are Prasat Phimai and Prasat Phnom Rung, both of which are locales of special festivals, namely, the Phimai Festival (originated in 1988) organized during the 2nd week of November annually, for which there are cultural activities e.g. Korat songs, Korat cats contest, Korat food competition, traditional folk dances, light and sound display, and long boat racing as highlights of the festival (จังหวัดนครราชสีมา, 2018), and the Climbing Phnom Rung Mountain Festival (originated in 1942) during the full moon of the 5th lunar month, which usually falls on mid-April, the time when sunrise can be seen through the 13 gateways of Phnom Rung temple, which is the most memorable and special occasion of the place (www.prapayneethai.com, 2018). Although these festivals were initially created mainly to serve tourism purposes, they indicate the significance of these 2 places in people's perception.

- **Structural configuration:**

Angkor – Phimai ancient road was part of the road network that connected Angkor, the capital of Khmer Kingdom, to important towns in 5 directions. At present, most parts of the original roads are not functioning, however, remains of the physical elements of the roads can be seen, for instance, bridges, levees, and dharmasalas (travelers' rest houses), which were built by order of King Jayavarman VII. Delineations of these roads, based on hypothesized lines that connect the dharmasalas, are considerably straight, directly connecting the capital to each destination in the shortest distance.

Focusing on the Angkor – Phimai road in Thailand, it is noticeable that the road passed several important cultural heritage and archaeological

sites en route, e.g. ancient towns, Khmer sanctuaries, iron smelting sites, pottery kilns, etc. These sites are situated at distance between 1 – 15 kilometres from the road, which are believable that these sites used the road as means of transportation, however, studies on branches of the road that lead to these sites have not been conducted, therefore, no information is available at present.

The sites which are situated in 2 kilometres radius from hypothesized road (the line which links dharmasalas) are selected as components of the Angkor – Phimai cultural route in Thailand, which is the case study of this thesis.

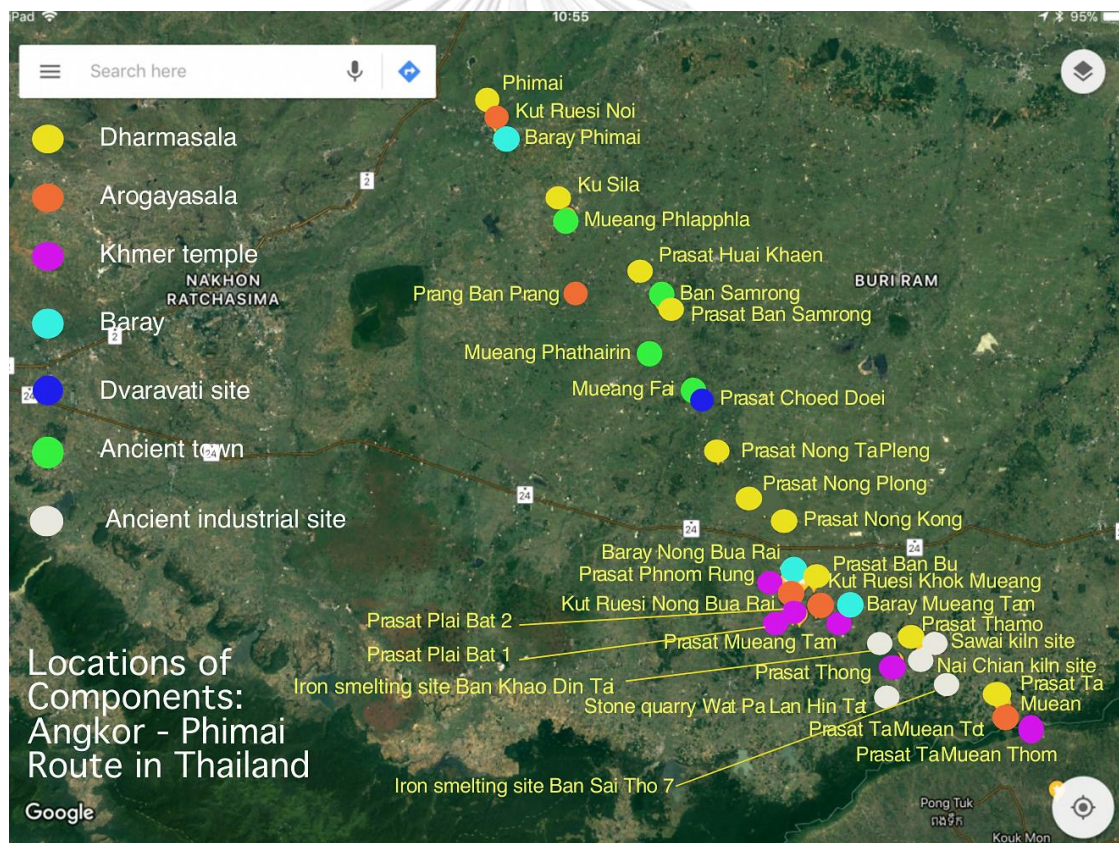


Figure 117: Map: Locations of Components: Angkor – Phimai route in Thailand

- **Geographic and historic contexts:**

Geographic Context:

the road, or route, runs from Cambodia, which is locally called “Lower Khmer” to Phimai in Thailand, passing the Dangrek pass into the area called “Higher Khmer”, part of Northeast Thailand which was influenced by Khmer culture in ancient times. Geographical features along the route comprise deciduous forests, flat plains, and agricultural area.

The area where the route is located in Thailand is known geographically and geologically as “Khorat Plateau” (ที่ราบสูงโคราช), a natural region named after the common name of Nakhon Ratchasima. The average elevation of the plateau is 200 metres, covering the area of approximately 155,000 sq.kms. This area is located with several prehistoric sites, dated to 2,000 BCE (Ban Chiang World Heritage, Udon Thani). In historic period, the most influential civilizations on the plateau are the Dvaravati (circa 7th – 11th centuries CE) and the Khmer (circa 9th – 13th centuries CE), evidences of both cultures are present along the Angkor – Phimai cultural route.

Historic context:

Angkor – Phimai road is mentioned in the Preah Khan Inscription, which was made in King Jayavarman VII period, circa 12th century CE. The inscription is the most relevant written document about the road and the “vahnigrhani” (house with fire), travelers’ rest houses, also known as “dharmasalas”, that the King had built along the road. The road however, had existed before the time of King Jayavarman VII as means for communication between Angkor and Phimai, an important town northeast of Angkor, which was part of the roads network centered at Angkor in its most influential period (ศานติ ภัคดีคำ, 2557 (2014), pp. 11-20)The road and existing dharmasalas are the best testimonies of the accuracy of the

inscription. This information and existing archaeological and architectural evidences have led to further study and investigation on the relationship between the route and relevant cultural heritage sites.

Number of dharmasalas as mentioned in the Preah Khan Inscription is 17, however, study made by Dr. Panjai Thanthassanawong and fellow researchers of the Living Angkor Road Project (LARP) found 18 sites which they believed to be dharmasalas. The author has reviewed this study and found that one of the quoted dharmasalas , Prasat Jan, in Cambodian side of the route has different features from the typical dharmasala architecture, noticeably, the building does not have the tower part and has different style of openings²². Presented below are photographs of Prasat Jan from Archeological Study Report, The Living Angkor Road Project by Mr. Pongdhan Sampaogern (พงศ์ฉันวี สำเภาเงิน, 2557 (2014), pp. 17-21).



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²² See Fig. 14, Chapter 4, for comparison.

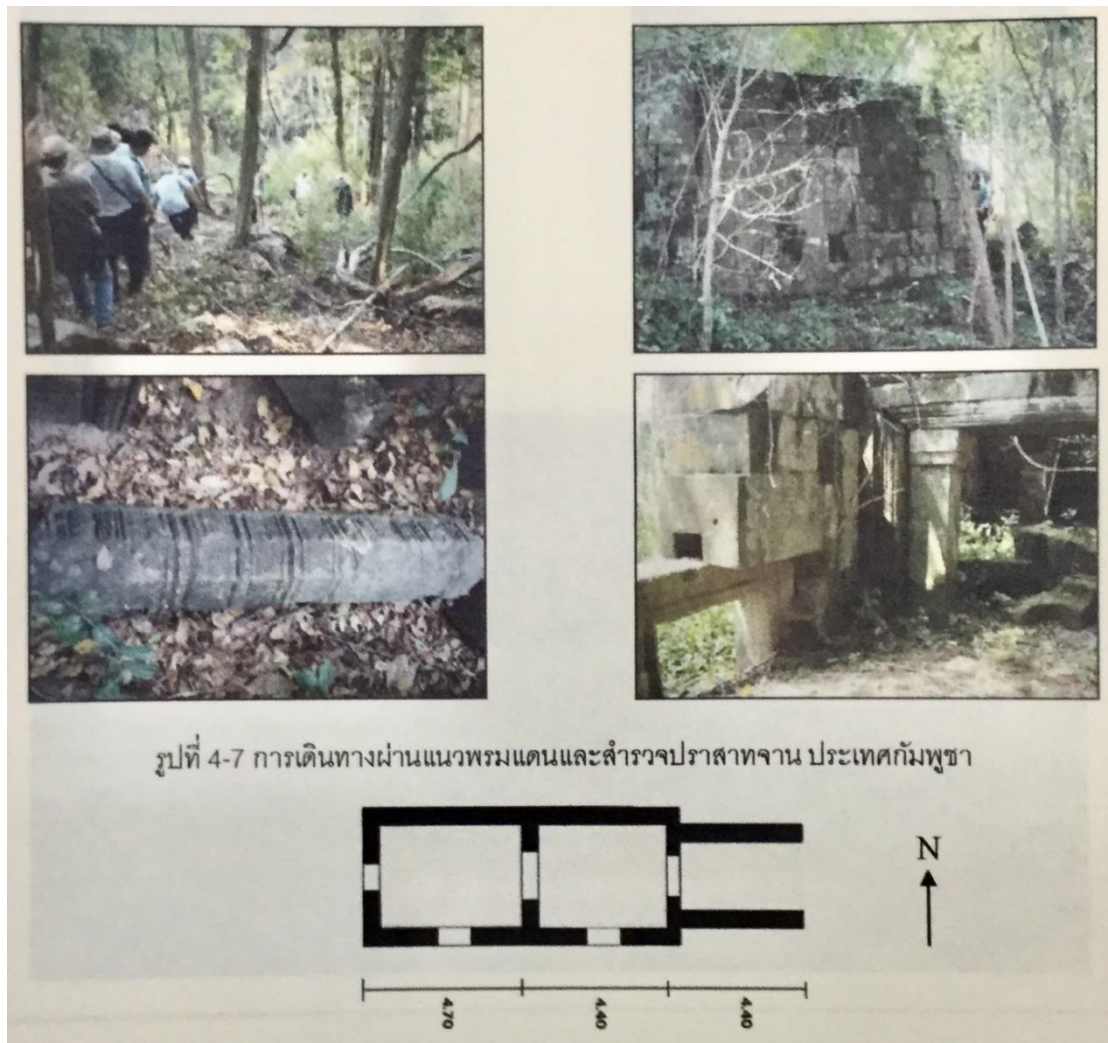


Figure 118: Photographs and plan of Prasat Jan, Cambodia. Credit: Sampaongern, P. *Archaeological Study Report: The Living Angkor Road Project*. 2014.

Dr. Vasu Poshyanandana, Expert in Architecture, Fine Arts Department, specialist in Anastylis and Khmer architecture, gave his opinion that according to architectural feature of Prasat Jan, it should be a structure from the period before the time that King Jayavarman VII had the dharma-salas built. The location of the building, which is before the main stairs leading to Prasat Ta Muean Thom, the main temple on the cliff which is in the present Thai territory, suggests that it could have been a small shrine for people to make worship before going further to the Ta Muean temple (Vasu Poshyanandana, 2018).

Furthermore, the location of Prasat Jan is not in accordance with the average distance between the other 17 dharmasalas, that is, the distance from Prasat Jan to Prasat Ta Muean is only 2.30 kilometres (พงศ์ฉัตร สำภาเงิน, 2557 (2014)), therefore, the author believes that Prasat Jan is not a dharmasala but a building built for different purpose, possibly a shrine, therefore, the number of dharmasalas on the road from Angkor to Phimai should be exactly 17, as mentioned in the inscription.

- **Natural and cultural setting:**

Natural setting:

Natural setting of the route comprises forests, open fields, and agricultural area. The road is not related to the present road network at all, therefore, the physical evidence of the road is still hidden in the landscape or has been demolished in some parts, which requires archaeological excavation and other forms of study to obtain more information apart from a few evidences discovered up to the present.

Cultural setting:

The route in Thailand passes different ethnic groups, namely, the Khmer in Surin province, the Lao and the Thai in Nakhon Ratchasima province. However, it cannot be said that these ethnic groups have impacts or cultural influences on the route because the road has long been disused.

The present cultural setting of the area along the route and its vicinity is rather new and has not much connection with the Khmer culture.

However, Khmer influence still exists in some area and is perceivable through language and way of life of some ethnic groups e.g. the Kuy people in Surin province.

- **Environmental values:**

The Angkor – Phimai route itself does not have remarkable environmental impact. The physical road is, at present, mostly imperceptible, especially the part of the road in Thailand as there are no clearly visible evidences, for example, ancient bridges as exist in Cambodian side. Nevertheless, most of the components of the route are still visible, especially important Khmer monuments, for instance, Phnom Rung, Mueang Tam, and Ta Muean Thom. Other important cultural heritage sites along the road e.g. towns, barays, dharmasalas, arogayasalas, etc. are visible and recognized by visitors, users, and inhabitants although some of which are in ruinous condition. It can be said that the components of the route are part of its cultural landscape and have positive environmental impacts to their surroundings due to their intrinsic quality as monuments and cultural heritage sites.

- **Relationships to the landscape:**

It is rather difficult to define the relationships of Angkor – Phimai route in Thailand to the landscape because the physical road is mostly imperceptible and has no connections to the present road network. Furthermore, since the physical road cannot be seen, components are perceived as stand-alone monuments and sites without physical connections. The ancient road appears as levees in some parts, which are blended into their surroundings. This is one of the challenges in terms of interpretation.

Baray Phimai is one of the most imperceptible components of the route because it has dried up, thus its physical quality of a reservoir is lost. Consequently, most part of the baray has been disturbed and altered. It is interesting, however, that the sanctuary at its centre still exists and is

protected as a registered National Monument, and the aerial view still clearly shows the form and features of the original baray.

- **Duration in time:**

The Angkor – Phimai road had existed before the time of King Jayavarman VII, as verified by the Preah Khan Inscription that, (Maxwell, 2007: 84-85):

“122.

On the roads from Yasodharapura (Angkor) to the [capital] city of Campa (Vietnam), there are fifty-seven buildings that are staging posts with fire.

123.

[On the road] from the city (Angkor) to Vimayapura (Phimai, in north-east Thailand), there are seventeen houses of fire.”

However, dating of the road itself has not been made, therefore, the author tried to find out rough dating of the road by investigating into the dating of components of the road. Information obtained from relevant inscriptions and results of archaeological studies, are summarized as follows:

Dating of components of Angkor – Phimai cultural route

1. Phimai: the termination of Angkor – Phimai road was founded before Angkor. Location of Phimai is in the Mun river basin, northeast Thailand. The town of Phimai is situated in Amphoe Phimai (Phimai district) in the present administrative area of Nakhon Ratchasima province. Archaeological evidences indicate that the area of Nakhon Ratchasima has been inhabited since prehistoric period, due to its favourable location as contact centre between the Mun and the Chao Phraya rivers (Higham, 2014, pp. 314-315), as well as its abundance

in natural resources, however, circa 9th century CE, the area was part of Sri Canasa Kingdom which was not part of the Khmer Kingdom, as mentioned in the Bo Ika Inscription that Sri Canasa was “outside Kambudesa” (outside Cambodia (Khmer), (กรมศิลปากร หอสมุดแห่งชาติ, 2529 (1986)-a, p. 25).

The founding of Vimayapura (Phimai) as a Khmer town is believed to start from circa 11th century CE, when the Mahidhrapura Dynasty was founded by King Jayavarman VI (1082 – 1107) in the area of Khorat Plateau. Since then, the Khmer culture spread into the Mun and Kong river basins, which brought about changes to the local communities which originally belonged to Dvaravati culture. The change can be seen, for instance, in town form, which originally was round-shaped, but was changed to rectangular shape as seen in Mueang Phlapphla (see Chapter 4, description of components Group II).

When King Suryavarman I expanded his kingdom into Mun river basin, Phimai became an important town due to its location that enabled convenient communication and trade with other towns in the area.

The original Phimai temple which was built circa early 11th century CE, was enlarged during the reign of King Jayavarman VI, facing south, the direction of Angkor. The architecture of Phimai main tower is believed to have influenced the design of Angkor Wat, which was built in 12th century CE by King Suryavarman II²³ (คณะสถาปัตยกรรมศาสตร์ ผังเมืองและนฤมิตศิลป์ มหาวิทยาลัยมหาสารคาม, 2552 (2009)).

²³ It should be noted that the information about the rise of Mahidharapura Dynasty which is related to the founding of Phimai as important town is debatable because there are no reliable evidences, especially inscriptions, that verify this conclusion. This hypothesis is generally accepted at present, based on the proposal of some scholars, the comparable styles of Phimai and Angkor Wat, and the mentioning of Vimayapura in the Preah Khan Inscription. The

2. Angkor: was founded in early 10th century CE by King Yasovarman. The city was the capital of Khmer Kingdom from 10th to 13th century, then King Jayavarman VII had the capital moved to Angkor Thom, which became the capital for approximately 100 years before the capital was moved to Basan in early 14th century, then to Phnom Pehn. The reason for moving was the decline of Khmer powers and the rise of Ayutthaya, which waged wars with Cambodia successively in late 13th to early 14th centuries until Angkor Thom was eventually abandoned in 1431 CE (สุภัทรวดี ดิศกุล, 2546 (2003), p. 143).
3. Important Khmer temples
 - Prasat Phnom Rung: dated 10th – 12th centuries CE (พงศักรินทร์ สำเภาเงิน, 2557 (2014), p. 59).
 - Prasat Plai Bat 1 and 2: no dating found (2019).
 - Prasat Mueang Tam: dated 11th centuries CE (พงศักรินทร์ สำเภาเงิน, 2557 (2014), p. 59).
4. Baray: dated 10th – 11th centuries, contemporary with the founding of Khmer towns and sanctuaries.
5. Dvaravati site: Prasat Choed Doei: Dvaravati period (circa 7th – 11th centuries CE).
6. Ancient towns: dated 1st – 8th centuries CE (พงศักรินทร์ สำเภาเงิน, 2557 (2014), p. 57).
7. Dharmasalas, arogayasalas: these 2 types of components are contemporary, dated to the reign of King Jayavarman VII, 1181 – 1218 CE.

8. Iron smelting sites: dated circa 14th – 15th centuries CE (อิสราวรรณ อยู่ป้อม, 2553 (2010), p. 68).
9. Kiln sites: dated circa 10th – 12th centuries (พงศ์ธินวิ สำเนาเงิน, 2557 (2014), p. 87).
10. Stone quarry: dated circa 9th – 13th centuries CE.

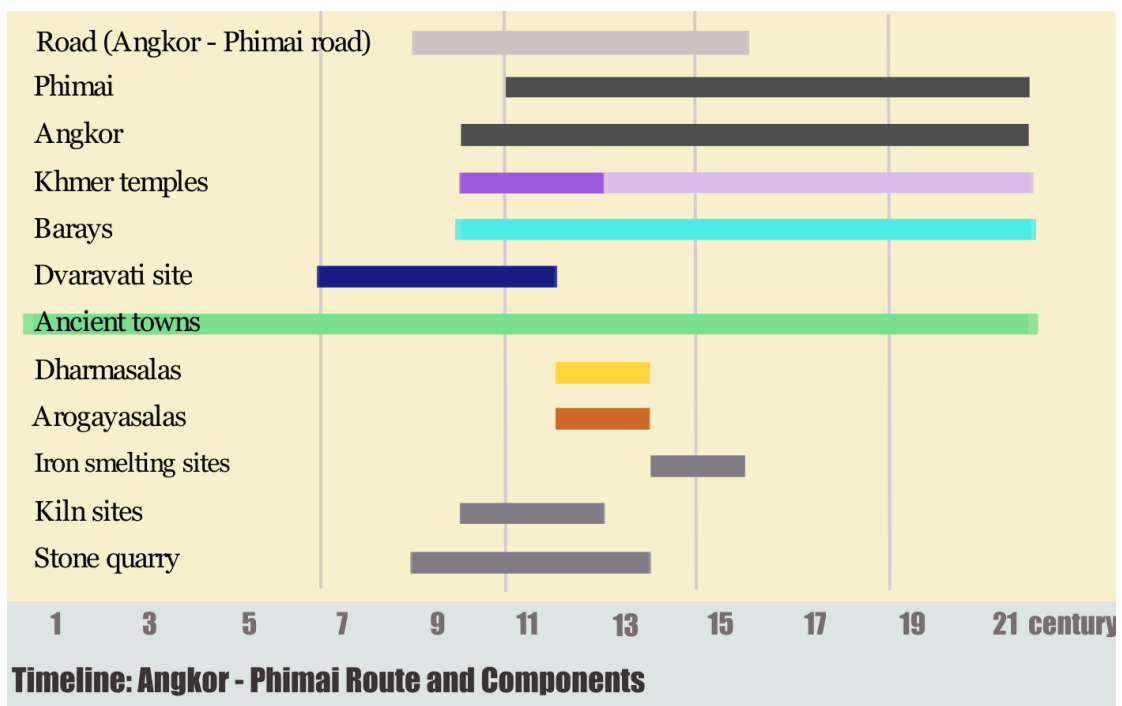


Figure 119: Timeline of Angkor – Phimai Route and Components

Note: colour of Khmer temples timeline comprises 2 shades of purple, that is because even though the temples had ceased to be used in their original beliefs since c. 13th century CE, their sacredness still remains until the present time, therefore, they still function as spiritual places.

Conclusion on dating of Angkor – Phimai road, according to the aforementioned list, is possible to be based on the Bo Ika Inscription, 9th century CE, due to the contents of the inscription that mentions the area of Phimai as “Sri Canasa”, which was a kingdom outside Kambudesa (Cambodia) (กรมศิลปากร หอสมุดแห่งชาติ, 2529 (1986)-a, p. 25). This piece of information is an evidence that the area was known by the

Khmer thus there should have been means of communication between these 2 lands, possibly a road, although further study is required to confirm this hypothesis on.

The latest date of the components of the route is circa 15th century CE, which is the date of iron smelting site. This evidence is interesting that it implies the use of the road as means of transportation that served industrial sites even after the decline of Khmer powers. Location of the iron smelting sites is in Thai side, near to the Thai – Cambodian border, approximately at centre between Phimai and Angkor. Such location indicates that the iron smelting area was still active and functioning until 15th century CE, and the road should have been used until that period or some time later.

Dating of ancient towns which are situated along the route is 1st – 8th centuries CE, Dvaravati period, which was an older culture than the Khmer (รุ่งโรจน์ ธรรมรุ่งเรือง, 2558 (2015)). Nevertheless, it is possible that the road should have served these ancient towns, as suggested by their locations. Furthermore, one of the ancient towns, Mueang Phlapphla, is evident to have been altered, from round-shaped town enlarged into rectangular town, which is distinctly Khmer-influenced. Another ancient town, Ban Samrong, has a rectangular reservoir, a baray, built attached to the eastern side of its levee²⁴. It is believable, therefore, that these ancient towns were founded in Dvaravati period and have existed through time, passing the Khmer period. Continuity of their functions, however, is not exactly known. It is possible that these towns were abandoned from time to time, maybe due to wars, yet inhabitants returned to settle in these towns until today. The road, therefore, could have been used as means of transportation for these towns until new

²⁴ See Fig. 94, Chapter 4.

means of transportation were created and the road eventually ceased its function.

Based on applicable information at present, therefore, the Angkor – Phimai road should be dated to 9th – 15th century CE.

- **Symbolic and spiritual dimension:**

Angkor – Phimai cultural route has not been perceived by general people as a road and has not had spiritual significance in local traditions.

Nevertheless, there is a legend of Pachit - Oraphim²⁵, which is connected to Prasat Phimai and cultural heritage sites in its vicinity. Although the legend does not have supportive historical evidence thus it remains a folktale rather than a historical-based story, it has rendered a romantic appeal to places which are mentioned in the story e.g. Angkor Thom, Pachit's town, Phimai, King Phrommathat's town, Mueang Tam, the palace that Pachit built for Oraphim by magic, etc. Dr. Rungsima Kullapat proposed "Pachit – Oraphim Cultural Routes", which mostly comprised towns and villages mentioned in the story, as means to conserve this legend which could be applied for tourism purposes (Kullapat, 2016). Some of the places in her proposed routes are components of the Angkor – Phimai cultural route²⁶.

The characteristics of Angkor – Phimai cultural route in Thailand have been identified by the previously mentioned aspects. Each aspect has different level of significance, which is summarized in the following table:

²⁵ The legend of Pachit – Oraphim is a romantic story about Thao Pachit, a prince, and Nang Oraphim, lovers who had parted, and had been through great difficulties and adventures before reuniting. Part of the story is located at Prasat Phimai, therefore, it has become an iconic local legend of Phimai.

²⁶ Angkor Thom, Phnom Rung, Mueang Tam, Ban Phlapphla (Mueang Phlapphla), and Phimai town.

Table 6: Identification of Angkor – Phimai Cultural Route in Thailand:

Level of Significance by Aspects of Consideration

Aspects of Consideration	Very high/very clear	High/clear	Medium	Low/unclear	Very low/very unclear	Note
Functionality					●	At present.
Tangible & intangible values		●				
Structural configuration			●			Perceivable by mapping, not by sight.
Geographic & historic context	●					
Natural & cultural setting			●			Changed, but not damaging
Environmental values					●	
Relationships to the landscape				●		
Duration in		●				

time						
Symbolic & spiritual dimension					●	

From the Table, it can be concluded that the significance of Angkor – Phimai cultural route in Thailand can be ranked by aspect of consideration as follows:

1. Highly significant: in geographic and historic contexts
2. Significant: in tangible/ intangible values, and duration in time.
3. Moderately significant: in structural configuration, and natural/ cultural settings.
4. Not very significant: in relationships to the landscape.
5. Insignificant: in functionality, environmental values, and symbolic/ spiritual dimensions.

These aspects and levels of significance can be used to determine the appropriate management and interpretation schemes for Angkor – Phimai cultural route.

5.2.1.2 Values identification of Angkor – Phimai cultural route

Values identification of Angkor – Phimai cultural route in Thailand are considered in 2 methods: firstly, values identification based on cultural heritage valuation, which considers 5 aspects: historical value, use value, educational value, authenticity and integrity (De la Torre, 2002, p. 9; Denyer, 2011); secondly, values identification by type of serial cultural heritage as laid out in Chapter 3, which considers 3 aspects: distance, impacts and existing evidences. Following are discussions on values identification for each layer.

1. **Values identification by cultural heritage valuation method:** levels of value in each aspect are summarized in a table at the end of this topic.

- **Historical value**

Angkor – Phimai cultural route has very high historical value because the existence of the route, or road is strongly supported by written document, that is, the Preah Khan Inscription, especially since the inscription was made in the same date as the building of Travelers' rest houses or dharmasalas, which were intended as facilities to serve travelers on existing Angkor – Phimai road.

- **Use value**

Use value of Angkor – Phimai cultural route, particularly the part in Thailand is not applicable since the road has long been disused. Components of the route, or road, are accessible via present roads which do not have any relationship to the ancient road.

- **Educational value**

Educational value of the Angkor – Phimai cultural route is high, although the road itself is imperceptible but components of the route still exist, which are testimonies to the Preah Khan Inscription and the study of the Khmer history, especially the period of King Jayavarman VII. The inscription and components also serve as archaeological evidences of former periods. Furthermore, if future study on physical features of the road is conducted, it is believable that more information will be revealed which will highly benefit the learning and understanding of Khmer history, as well as knowledge on infrastructure, relationship, and communications between Angkor and important towns in the Kingdom, especially Phimai.

- **Authenticity**

Authenticity of the Angkor – Phimai cultural route in Thailand must be considered on 2 aspects, firstly, authenticity of the physical Angkor – Phimai road; and, secondly, authenticity of components.

1. Physical Angkor- Phimai road: the authenticity of the road is not applicable at present since there is not sufficient information to

consider this aspect. However, it is presumable that the physical road still remains, but requires survey and studies, especially archaeological study, in order to obtain accurate and reliable information.

2. Components of Angkor – Phimai route: authenticity of components is high. Most of the components still exist in perceivable, or restorable, condition, especially all of the dharmasalas, which are core components, still exist. Although the environment of some of the components have been disturbed but the components themselves still remain undisturbed.

- **Integrity**

Integrity of Angkor – Phimai cultural route in Thailand is low. Since there is no physical road that acts as linkage between components, these cultural heritage sites appear to be individual sites rather than serial cultural heritage sites that are part of the cultural route. This aspect is a weak point of this cultural route, which cannot be improved immediately or very soon in the future. Compensation to this weak aspect is necessary.

*Table 7: Values identification of Angkor – Phimai Cultural Route in Thailand:
Cultural Heritage Valuation Method*

Values identification Aspects	High	Medium	Low	Note
Historical value	●			
Use value			●	
Educational value	●			
Authenticity :	n/a	n/a	n/a	Not sufficient information

Physical road				at present.
Authenticity : Components	●			
Integrity			●	No physical linkage between components.

Values of the Angkor – Phimai cultural route in Thailand are ranked in levels as shown in the above table. The ranking is high for historical value, educational value and authenticity of components, whereas the values are low in use and integrity. Authenticity of the physical road is not applicable at present due to lack of information.

2. Values identification by type of serial cultural heritage: cultural route of communication. Aspects of consideration are as follows:

- **Distance**

Angkor – Phimai cultural route is the longest route among the 5 routes (roads) mentioned in the Preah Khan Inscription. The distance of entire route is 253.9 kilometres, and for this study, the distance between Phimai and the last dharmasala nearest to the Thai-Cambodian border is 128.9 kilometres, approximately half of the total route distance, therefore, value of Angkor-Phimai cultural route in this aspect is considered high.

- **Impacts**

The Angkor – Phimai cultural route was an important route of communication between Khmer kingdom and the area in present day northeast Thailand. Along with goods and natural resources that were transported along the route, several intangible features were transferred which still remain until the present day. The most dominant Khmer culture which has blended seamlessly into Thai culture is language. Thai language has adopted Khmer language in considerable part, especially the Royal language, and even words used in everyday life such as “^๑ทึ”

(pronounced “thi” = at), “โดย” (pronounced “doi” = by), “ศอก” (pronounced “sok” = elbow), etc. Apart from language, architecture, art, literature, performing arts, etc. of Thailand and Cambodia have mutual influences that still exist until today, therefore, the impacts of the route as means of communication are high.

- **Existing evidences**

There are existing physical evidences of the road in Cambodia, especially stone bridges (see Chapter 2, description of components Group I), however, in Thailand, which is the scope of the study in this research, such evidences are very few due to lack of studies. In this aspect, the value of the route is low.

The following diagram presents the result of the above mentioned values identification aspects.

**Table 8: Values identification of Angkor – Phimai Cultural Route in Thailand:
Valuation by Type: Cultural Route of Communication**

Values identification Aspects	High	Medium	Low	Note
Distance	●			Compared to othe roads in Angkor network.
Impacts	●			Lasting impacts until the present day.
Existing evidences			●	Lack evidence of physical road.

Values identification of the series and components is useful for conservation planning and management, as well as being essential part in the preparation for the World Heritage nomination, which will be addressed in later topic.

5.2.1.3 Problems on values identification

At present, the most important aspect which is missing is the information on the physical road, which can be seen as a problem in terms of values identification of the Angkor – Phimai route in Thailand. Study and investigation are critically required, especially, if the work on nomination of the site to the World Heritage List is to be proceeded. Knowledge on the physical Angkor – Phimai road will be the best testimony to the existence and significance of the road, which will provide the most accurate information on e.g. date, use, physical structure and building techniques of the road, etc.

5.2.1.4 Angkor – Phimai cultural route in World Heritage context

The Angkor – Phimai Cultural Route in Thailand was included in the Tentative List of the World Heritage since 2004, under the name “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” (UNESCO World Heritage Centre, 2004b). The proposed criteria are (i)(ii)(iii)(iv)(vi). The description on the Tentative List focuses on the 3 important monuments on the Angkor – Phimai route, namely, Prasat Phimai, Prasat Phanomroong (Phnom Rung), and Prasat Muangtam (Mueang Tam). The cultural route is mentioned at the end of the description, focusing on the travelers’ rest houses (dharmasalas), and the hospitals (arogayasalas). It can be surmised from the description that the intention of the National World Heritage Committee of Thailand during the time of preparation and submission of the site to the Tentative List was to nominate the site as serial cultural property, comprising Prasat Phimai, Prasat Phnom Rung, Prasat Mueang Tam, dharmasalas, and arogyasalas (Kitchoteprasert, 2017; Tangchoedcha, 2017; วสุ ไปรษณีย์, 2558 (2015)).

However, even though the Fine Arts Department had begun the project on preparation of nomination dossier of the mentioned serial site, Thailand National Committee on the World Heritage Convention has eventually decided to remove the site from World Heritage List and replaced it with “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries”. The removal and submission of the new site was completed on 11th April, 2019, thus the present World Heritage Tentative List has included “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” as one of the 7

sites²⁷ proposed by Thailand State Party (UNESCO World Heritage Centre, 2019d).

Reasons for this change are:

1. Disputes in demarcation of registration area of Phimai Town between local people and Fine Arts Department, therefore, the announcement of demarcation in the Government Gazette has been suspended. This is a serious problems concerning the nomination of the site, which require the well-established management and protection systems. Moreover, Phimai is the most important components of the proposed cultural route, therefore, such conflicts and problem is unacceptable. Unless the problem is solved, it is not possible to include Phimai in the World Heritage nomination.

2. Difficulties which had been encountered during working on preparation of nomination dossier for Phimai cultural route, especially regarding the selection of components and preparation of management plan for the series.

3. Apart from Phimai, Phnom Rung and Mueang Tam are eligible for World Heritage Nomination in the opinion of Thailand National Committee on the World Heritage Convention, which, along with Plai Bat 1 and 2, this ensemble form a cultural landscape series that the Committee perceived as having Outstanding Universal Value.

Nevertheless, although the series was removed from the Tentative List, the OUV of “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam”, was analyzed and is presented in this research because the author considers that it is relevant to the study, and although the site has been removed from the Tentative List, there could be re-submission of the Angkor – Phimai cultural route in the future when Thailand is ready to work on the nomination of cultural route, which is more challenging than working on the cultural theme series. Furthermore, since the values of the series as a cultural route are the highest in historical aspects, the nomination of the series as a cultural route should be the best possible means for

²⁷ Thailand's sites in World Heritage Tentative List (2019) are: Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries; Kaeng Krachan Forest Complex; Monuments, Sites and Cultural Landscape of Chiang Mai, Capital of Lanna; Phra That Phanom, its Related Historic Buildings and Associated Landscape; Phuphrabat Historical Park; The Ancient Town of Si Thep; and Wat Phra Mahathat Woramahawihan, Nakhon Si Thammarat.

conveying the meaning of this cultural heritage series. OUV of “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” will also be discussed afterwards.

- **OUV of “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam”**

The Outstanding Universal Value (OUV), is one of the 3 pillars of World Heritage, which are: OUV, Authenticity and Integrity, and Management. The OUV is the most important aspect which justifies the suitability of a cultural, or natural heritage site, to be inscribed as World Heritage Site. This topic aims to consider the Angkor – Phimai cultural route in Thailand from the World Heritage point of view, which will be discussed based on the proposed Phimai Cultural Route which is already in the World Heritage Tentative List.

For “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam”, the proposed criteria, (i)(ii)(iii)(iv) and (vi) are debatable, because it should be noted that, for a serial nomination, the proposed criteria must be applicable to all proposed components of the series (Kono, 2018). Accordingly, since it is apparent that these 3 important temples and dharmasalas do not share the OUV of criterion (i)²⁸ (UNESCO World Heritage Centre, 2004a), this criterion is not applicable in this case.

Criterion (ii)²⁹ focuses on important interchange of human values on developments in architecture or technology, monumental arts, town-planning or landscape design, which is not applicable to this case due to the function of the route as means of communication between important towns in Khmer Kingdom, there are not sufficient supportive evidences of the interchange on the mentioned aspects.

Criterion (iv)³⁰ is partially acceptable, if regarding the dharmasalas as a special type of buildings that was initiated by King Jayavarman VII for public service, however,

²⁸ (i) to represent a masterpiece of human creative genius;

²⁹ (ii) to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

³⁰ (iv) to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

this is not applicable to other components, especially the temples of Phimai, Phnom Rung, and Mueang Tam, which are similar, and were created in the same beliefs as many other temples in Khmer Kingdom, therefore, they cannot be said to be an outstanding example of this type of building.

The most applicable criteria, therefore, are criteria (iii) and (vi), which are:

“(iii) to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;” this criterion is applicable to all components of the series, which are testimony to the life and tradition of the Khmer and pre-Khmer cultures and civilizations which were linked by the Angkor – Phimai cultural route in ancient times.

“(vi) to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);” this criterion is strongly applicable to the Angkor – Phimai cultural route based on the Preah Khan Inscription, which is a primary source of information on the road and the building of dharmasalas. The temples, hospitals, and other components which exist along the road are considered to have benefited from the road as means of communication.

The above discussion on the applicability of criteria can be applied to the case study, Angkor – Phimai cultural route in Thailand, although Tentative Listed Phimai Cultural Route and the case study are different especially in terms of number of components. The case study has included representative cultural heritage sites which are relatable to the route in the list of components, for instance, ancient towns, iron smelting sites, ancient kiln sites, and stone quarry, however, the author sees that criteria (iii) and (vi) are still applicable since all components are testimonies of cultures and traditions of the pre-Khmer and Khmer periods, which were developed and linked by the ancient route; and the Preah Khan Inscription clearly verifies the existence of the road as mentioned. The relationship between the route and components can be verified and

justified, especially if there are studies and investigations to learn more about the physical road and other relevant aspects of the route in the future.

- OUV of “Ensemble of Phnom Rung, Muang Tam and Plai Bat Sanctuaries”

The “Ensemble of Phnom Rung, Muang Tam and Plai Bat Sanctuaries” is a serial cultural heritage site in the category of cultural theme series (interpretation-based theme series)³¹ proposed by criteria (iii)(iv)(v). The main idea for proposal is that *“The sanctuary of Phnom Rung, sacred tower of Plai Bat, and temple of Muang Tam are a unique complex of Angkorian structures that, with the associated barays and water control systems, reflect outstanding aspects of architecture, engineering, arts, skilled craftsmanship, stone building and brick construction, irrigation, universal astronomy, governance and theology, landscape, human settlement and land use”* (UNESCO World Heritage Centre, 2019a). The proposal does not mention about the Angkor – Phimai cultural route although the ensemble is a group of components of the route, as has been mentioned in this study.

Justification of criterion (iii) highlights the architectural characteristics of the components; criterion (iv) states that the ensemble is an outstanding example of sacred monuments with associated man-made water control system, and criterion (v)³² describes the interactions between humans and environment reflected in the location of the sanctuaries on the crater of extinct volcano and on the plain, with associated man-made water control system that transferred water from the craters which acted as a reservoirs down to the plain in descending order, indicating profound wisdom of world gravity knowledge (UNESCO World Heritage Centre, 2019a).

From the above mentioned information, it is clearly seen that the proposal of this ensemble is based on totally different idea from the cultural route. Components are situated in the Phnom Rung – Mueang Tam area, which are interpreted as cultural

³¹ See Chapter 3.3.3.

³² (v) to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

landscape of sacred mountain and settlements in lower plain. The uniqueness of the series, however, is based on hypothesis and interpretation, which require solid supportive archaeological and historical information. Further studies must be carried out in this respect, although the protection and management systems are well-prepared for the selected components.

The following table compares differences between “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” and “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” in the issue of World Heritage nomination.

Table 9: Comparison between Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” and “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” on World Heritage Nomination.

Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam	Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries
Supported by written document “Preah Khan Inscription”, with existing tangible evidences, the dharmasalas, to verify the information in the inscription. High historical values.	Requires further studies to verify the hypothesis, especially on the aspects of cultural landscape and water management.
Components other than those written in the inscription are verifiable by studied archaeological evidence.	Selection of components intended to avoid mentioning the Angkor – Phimai route, which could be considered incomplete in terms of historical information.
Requires further studies on the physical road.	Most of the physical evidences of the series are presented.
Problems concerning Phimai demarcation is still unsettled.	Protection and management systems are well-prepared and functioning without

	problems.
Preparation of nomination dossier is difficult due to numbers and diverse characteristics of components.	Preparation of nomination dossier involves only a few components.
Management is expectable to be complicated due to numbers of components.	Management is not difficult because the series comprises only a few components, which are under responsibility of only one organization, the Fine Arts Department.
The series is transnational, therefore, future cooperation with Cambodia is required in order to cover the entire route.	The series is located in Thailand, therefore, nomination can be completed without foreign relations issue.

Note: The highlighted parts are advantages of each mentioned issue.

From the table, it is evident that advantages of “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” lie in its values, whereas the advantages of “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” lie in its preparedness in protection and management systems, as well as its uncomplicated potential for preparation of nomination dossier. The actual nomination, however, is the future issue which will be proceeded in due time.

5.2.2 Interpretation

Interpretation is a very important and challenging aspect concerning serial cultural heritage, since component sites are situated in different location. In this topic we shall look at the existing condition and problems of the cultural route in this aspect.

5.2.1.1 People’s perception on Angkor – Phimai cultural route

The author had conducted a questionnaire survey titled “เส้นทางวัฒนธรรมเมืองพระนคร – พิมาย” (Angkor – Phimai Cultural Route), which was intended to obtain information from general people (Thai people) on the perception and opinions on the route and its components. The questionnaire was distributed online during April – May,

2018, and had received 409 responses from Thai people in various fields of occupation, of which age group ranged from approximately 20 – over 61 years old, who were located in Thailand and some in foreign countries.³³ In the questionnaire, the first part asked respondents if they knew Angkor, Angkor Wat, Phimai town, Prasat Phimai, and if they had visited these places. The second part provided photographs of 15 cultural heritage sites which are representatives of every group of components of Angkor – Phimai cultural route in Thailand, and respondents were asked if they knew the sites, and if they did, they were asked to specify the name of the site. Then they were asked opinions, whether they perceived these cultural heritage sites to have relationship or linkage; the significant of each site; the suitability of each site to be developed as tourist attraction; and the suitability of each site to be nominated to the World Heritage List, as seen from photograph. The third part provided a map showing locations of these 15 sites, and respondents were asked the same questions on linkage, significant, potential for development as tourist attractions and potential for nomination to the World Heritage List.

The results are summarized as follows:

1. Part 1: Most respondents know Angkor (73.9%), almost all respondents know Angkor Wat (95.8%), however, less than half of respondents (45.5%) have visited Angkor, or Angkor Wat.

Most respondents know Phimai town (87.5%), almost all respondents (95.5%) know Prasat Phimai, more than half of respondents (66.6%) have visited Phimai town or Prasat Phimai.

More than half of respondents (60.1%) do not know there was an ancient road that connected Angkor and Phimai town.

2. Part 2: First 3 rankings of components of Angkor – Phimai cultural route which are best known and respondents can correctly specify their names are Angkor Wat (71.7%), Prasat Phimai (53.6%), and Prasat Phnom Rung (42.7%).

³³ See Appendix II: Questionnaire Survey.

Table 10: Top 3 Most Recognized Components of the Angkor – Phimai Cultural Route

Name of Component	Percentage of Recognition
Angkor Wat	71.1
Prasat Phimai	53.6
Prasat Phnom Rung	42.7

Components which are least known, first 3 rankings from lowest are: Prasat Choed Doei (non-Khmer cultural heritage site, 1.2%), Ban Sai Tho 7 iron smelting site (4%), and Prasat Ban Bu, a dharmasala (5%).

Table 11: Top 3 Least Recognized Components of the Angkor – Phimai Cultural Route

Name of Component	Percentage of Recognition
Prasat Choed Doei, Mueang Fai	1.2
Ban Sai Tho 7 Iron Smelting Site	4
Prasat Ban Bu	5

Top 5 rankings of places that respondents perceived to be of special significant are: Angkor Wat (94.4%), Prasat Phimai (79.5%), Prasat Phnom Rung (72.7%), Prasat Mueang Tam (71.4%), and Kut Ruesi Khok Mueang, an aroayasala (41%).

Top 5 rankings of places that respondents perceived to be suitable to be developed as tourist attractions are: Angkor Wat (82.8%), Prasat Phimai (80.7%),

Prasat Mueang Tam (79.6%), Prasat Phnom Rung (78.8%), and Kut Ruesi Khok Mueang, an arogayasala (63.3%).

Top 5 rankings of places that respondents perceived to be suitable for nomination to the World Heritage List are: Angkor Wat (79.4%), Prasat Phimai (72.2%), Prasat Mueang Tam (67.6%), Prasat Phnom Rung (65%), and Mueang Fai ancient town (31.9%).

More than half of respondents (54.6%) perceived that these cultural heritage sites are related or have certain linkage.

Table 12: Perceptions on Potential of Components before Seeing the Map

No.	Places (shown in photographs for each question)	Special significance (% from 395 responses – top 5 rankings in bold)	Potential for tourism (% from 373 responses– top 5 rankings in bold)	Potential for World Heritage nomination (% from 389 responses– top 5 rankings in bold)
1.	Angkor Wat	94.4	82.8	79.4
2.	Prasat Phimai	79.5	80.7	72.2
3.	Ku Sila (Dharmasala)	11.9	21.2	7.2
4.	Prasat Huai Khaen (Dharmasala)	19.5	41.8	12.6
5.	Mueang Fai ancient town	40.8	42.1	31.9
6.	Prasat Choed Doei, Mueang Fai	4.8	7.8	2.6

7.	Prasat Phnom Rung	72.7	78.8	65
8.	Kut Ruesi Khok Mueang (Arogayasala)	41	63.3	31.6
9.	Prasat Ban Bu (Dharmasala)	23.3	45.8	18.3
10.	Prasat Mueang Tam	71.4	79.6	67.6
11.	Baray Mueang Tam	36.7	36.7	29.3
12.	Tao Sawai kiln site	22.8	32.7	13.4
13.	Ban Kruat sandstone quarry	20.3	29	11.6
14.	Ban Sai Tho 7 iron smelting site	6.8	13.9	5.9
15.	Prasat Ta Muean (Dharmasala)	27.1	42.1	18.8
16.	No potential places.	-	-	0.8

3. Part 3: after seeing the map of locations of cultural heritage sites, number of respondents who perceived that these cultural heritage sites are related or have certain linkage is 69.9%, which increases from 54.6% before seeing the map. Number of respondents who perceived that some places have linkage also

increases from 1% to 7% after seeing the map, and number of respondents who perceived no linkage between the places decreases from 33.7% to 18%, as shown in the table below.

These percentage indicate that visual perception of the map has remarkable impact on the perception of people on linkage, as well as leading to an understanding that these sites belong to the same group (in this case, a route). This conclusion is better confirmed when comparing the reasons that respondents gave on the linkage as shown in subsequent table. After seeing the map, 19.5% of respondents who gave reasons perceived the sites as part of the route, which increases from 4.4% before seeing the map.

Table 13: Opinions of Respondents on Linkage Before and After Seeing the Map

Opinions	Before Seeing the Map (%)	After Seeing the Map (%)
All places have linkage	54.6	69.9
Some places have linkage	1	7
No linkage	33.7	18.3
Not sure	13.2	40

Table 14: Top 5 Reasons for Perception of Linkage between Components

Reasons for Perception of Linkage	Before Seeing the Map (%) ³⁴	After Seeing the Map (%)
Sites have similarities in art and architectural style.	4.8	0.3
Sites are located on the same	4.4	19.5

³⁴ Percentage is low because only some respondents gave reasons for their perception on linkage as requested in the questionnaire.

line/route/Royal Road to Angkor.		
Sites belong to Khmer culture.	4	2.1
Sites belong to contemporary culture and continuous periods.	3.4	-
Sites are important historical places with historical linkage	0.6	-
Sites belong to the same civilization/culture.	-	2.1
Sites were built for related purposes	-	0.6

Top 5 rankings of places that respondents perceived to be of special significant are: Angkor Wat (91.7%), Prasat Phimai (81.6%), Prasat Phnom Rung (69.8%), Prasat Mueang Tam (68.3%), and Mueang Fai ancient town (44.3%).

Top 5 rankings of places that respondents perceived to be suitable to be developed as tourist attractions are: Angkor Wat (79.8%), Prasat Phimai (79.8%), Prasat Mueang Tam (75.4%), Prasat Phnom Rung (74.3%), and Kut Ruesi Khok Mueang, an arogayasala (57.7%).

Top 5 rankings of places that respondents perceived to be suitable for nomination to the World Heritage List are: Angkor Wat (76.8%), Prasat Phimai (76.5%), Prasat Mueang Tam (67.9%), Prasat Phnom Rung (65.2%), and Kut Ruesi Khok Mueang, an arogayasala (35%).

Top 5 rankings of sites which are perceived as significant, suitable to be developed as tourist attractions, and suitable to be nominated to World Heritage List, are not changed (apart from slight difference in percentage).

Table 15: Perceptions on Potential of Components after Seeing the Map

No.	Places (shown in photographs for each question)	Special significance (% from 395 responses – top 5 rankings in bold)	Potential for tourism (% from 373 responses – top 5 rankings in bold)	Potential for World Heritage nomination (% from 389 responses – top 5 rankings in bold)
1.	Angkor Wat	91.7	79.8	76.8
2.	Prasat Phimai	81.6	79.8	76.5
3.	Ku Sila (Dharmasala)	19.1	27.1	14.8
4.	Prasat Huai Khaen (Dharmasala)	30.2	43.4	21.6
5.	Mueang Fai ancient town	44.3	46.1	31.5
6.	Prasat Choed Doei, Mueang Fai	9.8	13.5	8.6
7.	Prasat Phnom Rung	69.8	74.3	65.2
8.	Kut Ruesi Khok Mueang (Arogayasala)	42.3	57.7	35
9.	Prasat Ban Bu (Dharmasala)	30.5	46.1	27.2

10.	Prasat Mueang Tam	68.3	75.4	67.9
11.	Baray Mueang Tam	39.8	40.1	32.6
12.	Tao Sawai kiln site	21.4	32	20.5
13.	Ban Kruat sandstone quarry	21.7	30.4	19.4
14.	Ban Sai Tho 7 iron smelting site	12.3	19.9	10.8
15.	Prasat Ta Muean (Dharmasala)	33	43.9	26.7
16.	No potential places.	-	-	1.9

Percentage of the lowest ranking sites remarkably increases, as seen in No. 6, Prasat Choed Doei, No. 14, Ban Sai Tho 7 iron smelting site, and No. 3, Ku Sila (dharmasala), which indicates that the significance of these sites are perceived to be higher when their locations are related as seen from the map. Comparative percentages are shown in the table below. This is a supportive indicator that linkage has certain effects to perception on significance. This is one of the beneficial characteristics of serial cultural heritage, that is, the enhancement of values and significance of smaller cultural heritage sites when they are parts or components of a series.

Table 16: Comparative Percentage of 3 Lowest Ranking Sites Before and After Seeing the Map

3 Lowest Ranking Sites	Special significance (%)		Potential for tourism (%)		Potential for World Heritage nomination (%)	
	Before	After	Before	After	Before	After
Prasat Choed Doei, Mueang Fai	4.8	9.8	7.8	13.5	2.6	8.6
Ban Sai Tho 7 iron smelting site	6.8	12.3	13.9	19.9	5.9	10.8
Ku Sila (Dharmasala)	11.9	19.1	21.2	27.1	7.2	14.8

4. Dharmasalas, or travelers' rest houses, which are core components to the cultural route, are perceived as insignificant and are mostly unknown, which could be due to their simple features, whereas general people recognize and place more significant on Khmer temples, which are important monuments and tourist attractions.
5. Angkor Wat is undoubtedly a world-famous place. It is better known than Phimai although it is situated in foreign country. It also ranks the top in all questions on perception, significant, and potentials, including the potential to be nominated to World Heritage List (it is already a World Heritage site).
6. It is noticeable that Thai people do not know most of the places which are components to the Angkor – Phimai cultural route, even respondents who live in 3 provinces where these sites are located, namely, Nakhon Ratchasima, Buriram,

and Surin, do not show differences in knowledge and perception on the sites when compared with respondents who are located elsewhere. However, since the presentation of the map resulted in better perception on significance of the sites, even the lowest ranking ones, it is believable that knowledge and understanding of the cultural route depends heavily on interpretation, which should be one of the top priorities in future conservation and management planning for this cultural route.

5.2.2.2 Existing means of interpretation

The results of questionnaire survey show that general people (Thai) do not have sufficient knowledge about components of Angkor – Phimai cultural route. Means of interpretation should play important roles in establishing such knowledge. The existing means of interpretation are:

1. Information signboards

Information signboards are located at every monument, near the entrance. Information given is on history of the site and the date of Monument Registration, if applicable, and information about the site development and restoration. There is no information about the site being part of the Angkor – Phimai cultural route. Information provider is the responsible Fine Arts Department Regional Office.

2. Guided tour (official)

Official guided tour is provided at important monuments, namely, Prasat Phimai, Prasat Phnom Rung, and Prasat Mueang Tam, organized by the Historical Park Office. Generally, guided tours are available by appointment, therefore, general tourists do not use this service. Visitors who use official guided tours are mostly students and official guests.

3. Pamphlets, guide books, publications

Published books, pamphlets, information leaflets are available at tourist information centres at important monuments, namely, Prasat Phimai, Prasat Phnom Rung, Prasat Mueang Tam, and museums. This means of interpretation,

at present, provide information about each specific monument but does not provide information about the Angkor – Phimai cultural route.

5.2.2.3 Problems on interpretation

The Angkor – Phimai cultural route delineation is believed to follow the location of dharmasalas, however, these dharmasalas and the route or road, are not at all related to the present route of communication. As seen in the following map, the access to these sites is by the present roads, which have their own network that is not relatable to the ancient route. Therefore, these rest-houses are perceived as individual sites rather than a series, and the ancient route is only perceivable via satellite photograph that have all the locations plotted. The meaning of the ancient road is completely lost in the present environment and contexts. The most important problem on interpretation is, therefore, lack of perceivable route that people can relate to the information given by the provided means and tools. However, the problem will be mitigated when further study is carried out and more information on the actual road is discovered and is perceptible or accessible to people, even though it may not be able to serve as means of transportation as a living heritage.

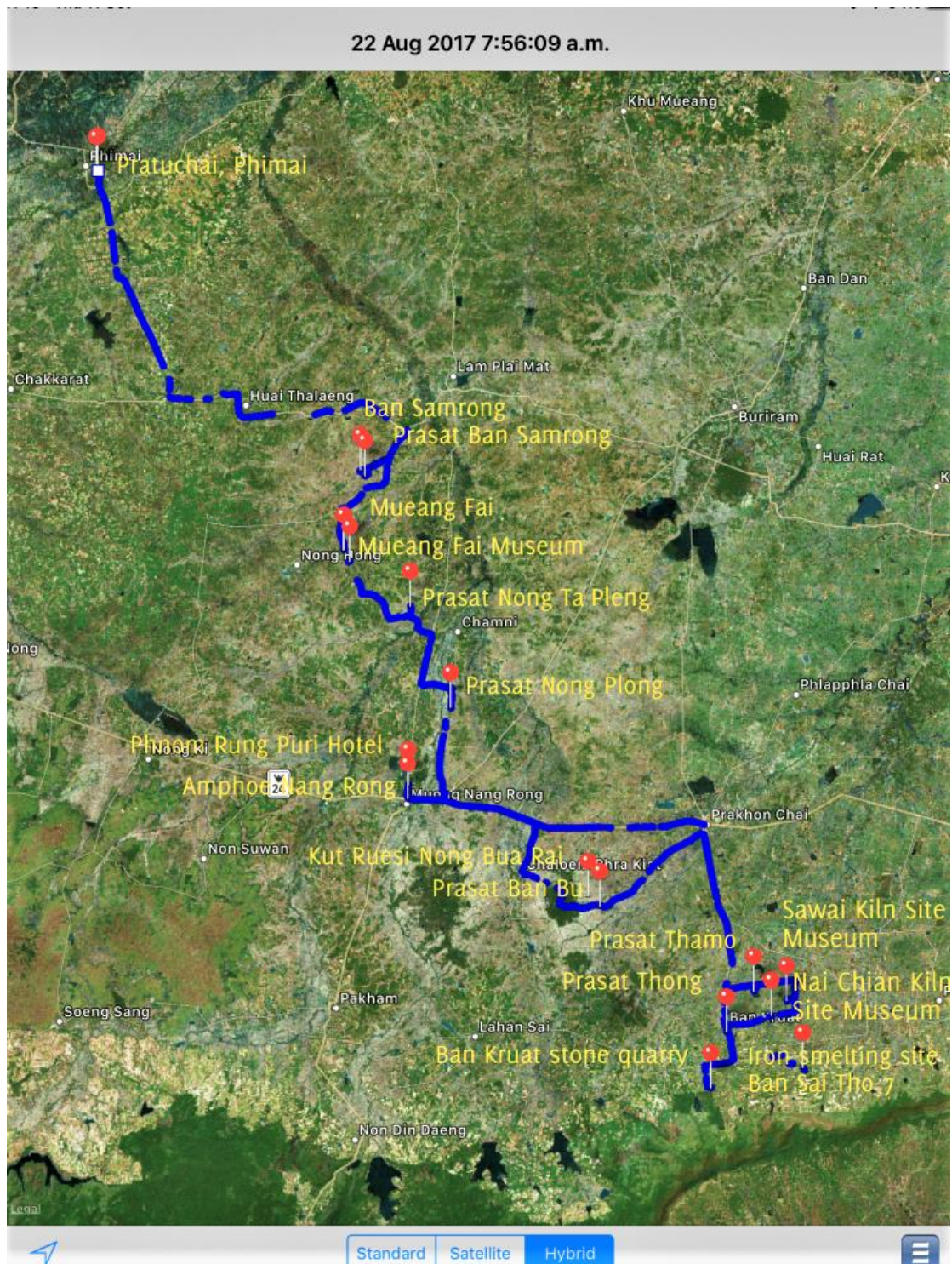


Figure 120: Map: Present access roads (blue lines) and locations of components on Angkor – Phimai route.

5.2.3 Management

Management for analysis of Angkor – Phimai cultural route, focuses on the part of route in Thailand. It should be noted that, at present, recognition of the route as serial cultural heritage does not exist, therefore, each component of the route has been treated and managed as individual cultural heritage site.

5.2.3.1 Existing management system

Components of Angkor – Phimai cultural route in Thailand are monuments by Thai law, both non-registered and registered national monuments. They are legally protected by the Act on Ancient Monuments, Antiques, Objects of Art and National Museums, B.E.2504 (1961), as last amended by the Act on Ancient Monuments, Antiques, Objects of Art and National Museums (No.2), B.E.2535 (1992)³⁵ (กรมศิลปากร, 2548 (2005)).

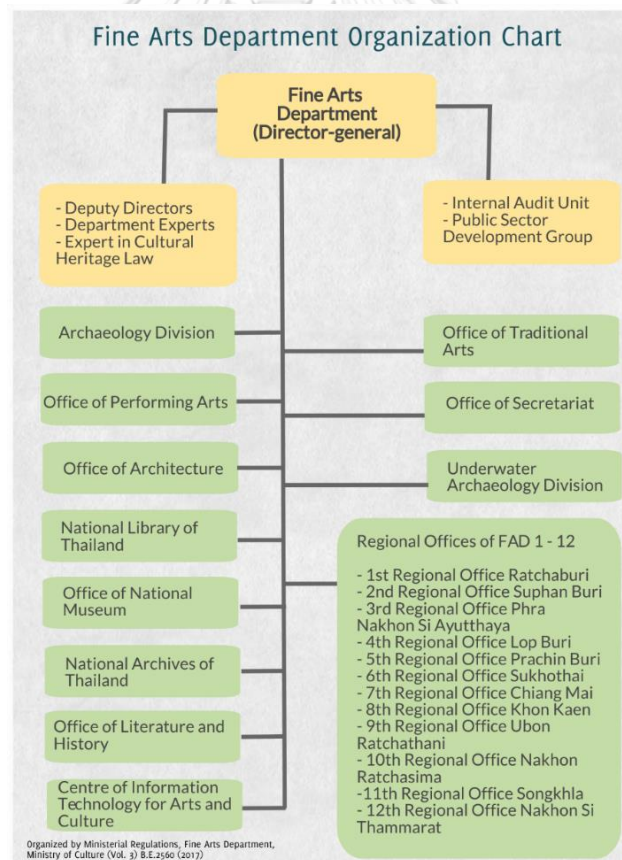


Figure 121: Fine Arts Department Organization Chart

³⁵ Published in the Government Gazette Vol.109, Part 38, dated 5th April B.E.2535 (1992).

The management and general maintenance of the sites are in the responsibility of the Fine Arts Department 10th Regional Office Nakhon Ratchasima, which is in charge of management and maintenance of monuments in Nakhon Ratchasima, Chaiyaphum, Buriram, and Surin provinces. Organization charts of the Fine Arts Department and the Fine Arts Department 10th Regional Office are presented in Figure 117 and 118 respectively.

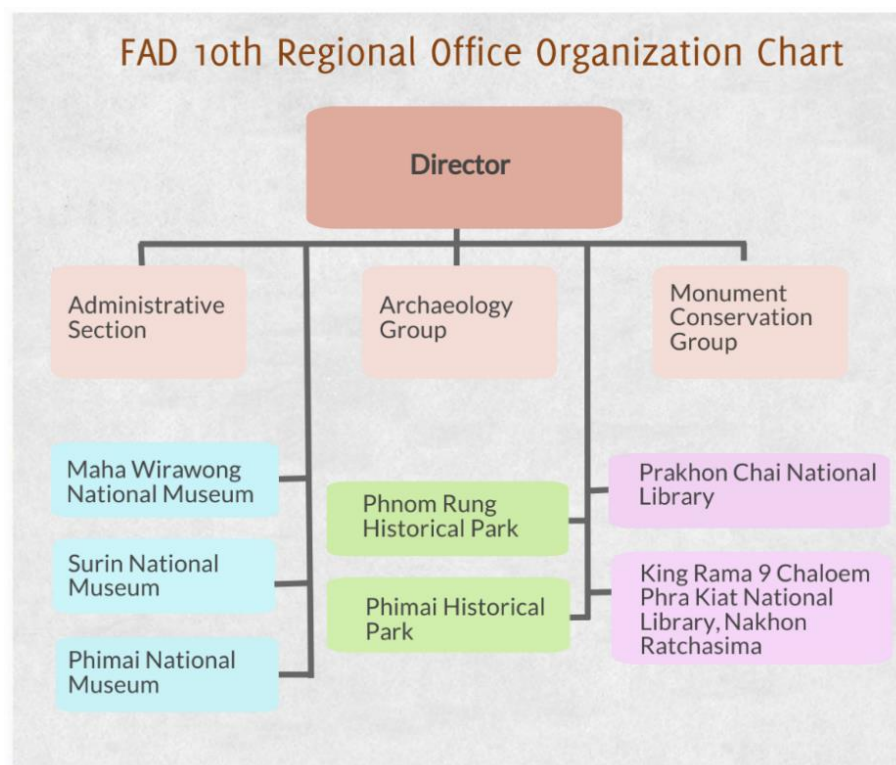


Figure 122: Fine Arts Department 10th Regional Office Organization Chart

It should be noted that 3 of the components, Phimai, Phnom Rung, and Mueang Tam have been established as special management units called Phimai Historical Park, and Phnom Rung Historical Park (with Mueang Tam included). This indicates the special significance of the sites in terms of history, archaeology, art, architecture, and tourism.

At present, all components are regarded as individual sites. There has not been consideration on the management of these sites as serial cultural heritage although the Phimai cultural route has been submitted and included in the Tentative Lists of World Heritage.

An example case of Historic Town of Sukhothai and Associated Historic Towns, World Heritage Site (inscribed 1991), in Thailand is an interesting case of serial cultural heritage site, which comprises 3 historic towns, Sukhothai, Si Satchanalai, and Kamphaeng Phet (UNESCO World Heritage Centre, 2018a). These 3 sites are managed individually, established as 3 historical parks, namely, Sukhothai Historical Park, Si Satchanalai Historical Park, and Kamphaeng Phet Historical Park. These 3 sites have not been managed as serial cultural heritage site, although the directors of all 3 sites agrees that management by serial cultural heritage approach will be beneficial, especially in terms of shared knowledge, understanding of shared values, and unity of the sites. The Fine Arts Department had a collective master plan of Sukhothai, Si Satchanalai, and Kamphaeng Phet, 2017 – 2021, made in the World Heritage Framework, however, the result of the implementation based on the mentioned master plan is still unknown (Chaisuwan, 2017; Kaongoen, 2016; Sangthong, 2017).

5.2.3.2 Aspects for consideration on management

As previously mentioned, the management of the components of the route has been carried out based on consideration of these sites as individual monuments, therefore, the aspects for consideration on management, which are to be discussed in the following topics, will focus on serial cultural heritage approach. The topics to be discussed are: general characteristics of the route, boundary for management, and stakeholders and users.

- Characteristics of Angkor – Phimai cultural route in Thailand

Characteristics of Angkor – Phimai cultural route is the first topic to be clarify as base information for further consideration on management. Important characteristics of this serial cultural heritage sites are:

- The Angkor – Phimai cultural route is a transnational and transboundary serial cultural heritage site. Consideration of the route in Thailand is a partial approach, which is suitable for the present situation that several factors, especially, political, do not allow

working for the entire route. Nevertheless, preparation should be made for future project, which should cover the entire route from Angkor to Phimai.

- The Angkor - Phimai cultural route in Thailand is a non-functioning cultural heritage site. The physical road is believed to exist but has not been studied, therefore, the exact delineation of the road is still unknown.
- The remaining components of the route are considered monuments by Thai law, both registered and non-registered, therefore, legal protection for these sites already exists.
- Components of the route are remarkably diverse in physical characteristics, state of conservation and protection status, as seen in Chapter 4. This issue is important for management and tourism consideration, as well as World Heritage nomination in the future.
- The Angkor – Phimai cultural route is a factual historical route, not theme route. This is the most important aspect to be considered for conservation, management and application of the series to other uses, especially tourism.
- **Boundary for management**

It is necessary to define boundary of the cultural heritage site for management, which, for the case of Angkor – Phimai cultural route in Thailand, there is none. Boundary for some individual sites have been demarcated but only for those which are among the group of registered national monuments³⁶ whereas the non-registered national monuments have no demarcated boundaries.

It should be noted that monument registration in Thailand has begun since 1935, before the enactment of the Act on Ancient Monuments, Antiques, Objects of Arts and

³⁶ See Table 3, Chapter 4.

National Museum, B.E. 2504 (1961). The first intention of monument registration was to protect the nation's cultural heritage sites from being damaged or destroyed by people, both unintentionally or intentionally, therefore, the early registration was carried out by announcement of the names of cultural heritage sites in the Government Gazette, with no demarcation of protected area. Later, registration of monument is carried out along with demarcation and making of registration area plan before announcement in the Government Gazette. As for monuments which had been registered by name, the Fine Arts Department have been working on demarcation and preparation of registration area plans, which is not finished until today due to the large number of sites to be worked on as mentioned. This has resulted as one of the problems that the Fine Arts Department has to deal with at present when working on demarcation of protected area for these sites. An example case is Phimai, which, at present (2019) is in the process of demarcation and preparation of registration area plan but the process is not yet completed because conflicts between the Fine Arts Department and local people³⁷ still goes on, therefore, the demarcation cannot be officially announced in the Government Gazette.

As for registered cultural heritage sites which are completed with demarcation of monument boundary, the protected area is clearly and graphically specified in the Registration Area Plan, which comprises boundary of the monument (registered cultural heritage site), important elements of the monument, and area coverage. Nevertheless, the registration area plan does not have prioritized zoning i.e. core zone and buffer zone.

Existing boundaries for components of Angkor – Phimai cultural route in Thailand are boundaries of some Registered Monuments as mentioned. Among the 35 components, there are only 13 sites which are registered monuments with Registration Area Plans (one of the plans includes 3 sites, that is, the Registration Area Plan of Prasat

³⁷ Demarcation of Phimai includes the area of Baray Phimai, a dried-up ancient reservoir where some business premises are located. The business owners, unwilling to be relocated, raised issues and caused misunderstanding among local people that the demarcation will result in relocation of large area in Phimai, therefore, local people protested against the demarcation. The dispute has not been settled at present (2019).

Mueang Tam, which includes Baray Mueang Tam and Kut Ruesi Khok Mueang). As for Phimai Town, the registration area plan has been made but cannot be announced because there are still conflicts with local people on the issue of demarcation. In the prepared registration area plan of Phimai, there are 2 sites which are marked as important cultural heritage sites, specified as “Ancient Roads”.

A clear boundary for management is fundamental requirement for the Angkor – Phimai cultural route, which should be made based on the perception of the site as serial cultural heritage site. Therefore, the hypothesized physical route, although there is no evidence at present, should be included in the boundary as conservation zone, preserved for future survey and studies.

An example is seen in the demarcation of boundaries for Silk Roads: the Routes Network of Chang'an – Tianshan Corridor, a World Heritage Site which is a transnational serial cultural property (China, Kazakhstan, Kyrgyzstan). The property comprises 33 cultural heritage sites situated along a 5,000 km route which is one of the Silk Roads network. Boundaries have been set up for the route components, which are clearly defined, with maps, plans, and prioritized zoning (core zone and buffer zone). The systematic boundary setting enabled the site to be inscribed on World Heritage List, as well as being a strong platform for management, which involves management authorities from 3 countries and a great number of stakeholders. The concept for management of Silk Road World Heritage Site is based on “transnational coordination management system” (State Administration of Cultural Heritage of the People's Republic of China, 2014).

- Stakeholders and users

In terms of stakeholders and users, it is necessary to find out ‘who?’ identify with this cultural route. This is a paradoxical question since the actual road does not exist at present, as mentioned in the previously mentioned topics. However, components of the route do exist and most of them have been recognized as monuments, both legally and practically, yet perception of the route as a serial cultural heritage has never been

introduced to the public even though it has been included in the Tentative List, waiting for submission of the nomination dossier to World Heritage Committee.

“Stakeholders”, literally, means people who “hold a stake” or own an interest, a right (Institut Europeen Des Itinéraires Culturels, 2015, p. 130), therefore, all stakeholders should benefit from the cultural heritage sites in one form or another. Fundraising, business opportunities, especially tourism-related businesses are generally some forms of benefits that stakeholders can gain from cultural heritage sites. However, in the case of Angkor – Phimai cultural route in Thailand, all components may not be applicable for tourism development, therefore, negotiation with stakeholders should be aware of this point and try to find other form of incentive or encouragement for stakeholders’ participation.

Since the components of the route (apart from the physical road) are the only recognized cultural heritage sites, therefore, present stakeholders and users of the route are categorized into groups based on level of involvement to the components, as follows:

1. Management and administrative authority:

- Provincial offices, and Provincial Administration Organizations, who are responsible for the areas where components are located.
- Local administrative offices: Municipality, Subdistrict Administrative Organizations, who are responsible for the area where components are located.
- Fine Arts Department Regional Offices, namely, Fine Arts Department 10th Regional Office (in charge of Nakhon Ratchasima, Chiyaphum, Buriram, and Surin provinces).
- Historical Parks, namely, Phimai Historical Park, and Phnom Rung Historical Park.

2. Local people who live in the area of components, for instance, inhabitants of ancient towns, owners of lands where components are located, as well as monks and laypeople who live in the temples or monks' compound set up in the area of component.
3. Local people who live in the surrounding areas of components, who will be affected by change occurred to the components.
4. Visitors, both Thai and foreigners, which are divided into 2 groups:
 - Tourists, and other visitors whose purpose of visit is mainly for sightseeing.
 - Students, researchers, and visitors whose purpose of visit is mainly to study the sites.

Level of involvement of each group of stakeholders varies according to the degree and intensity of effects resulted from change to each particular component.

5.2.3.3 Problems on management

Although the management system for the Angkor – Phimai cultural route in Thailand has not been established, problems on management are expectable, these are:

1. Diverse characteristics of components

As previously presented in Chapter 4, components of the Angkor – Phimai cultural route in Thailand, which is the subject of management, are greatly diverse in several aspects e.g. physical characteristics, state of conservation, protection status, etc. However, since the management of the serial cultural heritage site should aim to treat these components equally as a series, this issue is, therefore, a challenge which must be overcome, especially when there are no example cases of successful serial cultural heritage management in Thailand, even for the Sukhothai and Associated Towns World Heritage, which comprises only 3 sites of similar characteristics.

2. Boundary setting

At present, clear boundary has not been set for all components of the route, or even for all components which are Registered National Monuments. This is an issue to be earnestly considered and worked upon, otherwise management of the route is not possible. Furthermore, apart from setting up boundary for each component, boundary must also be set for the physical road, or the area which are protected for future excavation and study of the physical road of Angkor – Phimai cultural route.

3. Lack of understanding by the managing authority

The serial cultural heritage approach is rather new to Thai conservation professionals and authorities, especially, the Fine Arts Department, which has always worked on cultural heritage sites on individual approach. It is necessary that the managing authority, and all parties who are directly involved, should thoroughly understand the serial cultural heritage and cultural route concepts before proceeding to management planning and related works.

4. Conflict of interests between stakeholders.

Due to the large number of people involved in the cultural route, it is rather unavoidable that a certain level of conflict of interests will occur. This should be expected and prevented by giving clear information on the purpose of the cultural route conservation project from the beginning. Participation of all stakeholders should be encouraged and provided for in most, or all, stages of the conservation and management procedure.

5. Sustainability

The managing authority, especially, the Fine Arts Department, may perceive the necessity to establish a management system, master plan, and other related schemes for the management of Phimai Cultural Route in order to proceed on nomination of the site to the World Heritage List in the near future, however, the successful, long-term management of the serial cultural heritage site requires

real and thorough understanding as well as determination and commitment. Sustainability of the cultural route should be taken seriously, or the efforts may disintegrate, and the individual site conservation approach, which is less complicated, will be re-applied to the series, leading to loss of meaning and original purpose.

5.2.4 Tourism

Since one of the benefits of cultural heritage conservation is economic advantage, which is mainly generated via tourism, analysis of the case study in tourism aspect is an important topic to be worked upon. Serial cultural heritage approach, especially, cultural routes, opens opportunities for tourism which are beneficial in as means for cultural exchanges within the country and between countries (Institut Europeen Des Itinéraires Culturels, 2015, p. 19), as well as means for generating tourism-related income for local people who are stakeholders of the cultural heritage sites as previously mentioned.

As seen in the previous chapter and previous topics in this chapter, components of Angkor-Phimai cultural routes belong to various categories and have remarkable differences in their existing condition, state of conservation, and management level, which are factors for consideration on tourism issue to be discussed as follows:

5.2.4.1 Existing tourism facilities

The most basic form of tourism facilities, that is, information boards, are provided for most sites which are regarded as monuments, both registered and non-registered. Nevertheless, components of the route belong to various categories, with different physical conditions, some are still used as local infrastructure e.g. the barays, and some have been designated as historical parks which have their own conservation and management units. The following table shows existing tourism facilities provided for each component. Please note that the facilities marked in the table refer to those which are intentionally provided for the site, not those which belong to the place where each component site is located, for example, the present location of Prasat Ban Bu is a school,

therefore, visitors may use school facilities e.g. toilets, if required although the toilets have not been specifically provided for the component itself.

*Table 17: Existing Tourism Facilities at Components of Angkor – Phimai Cultural Route
(in Thailand)*

No.	Group	Name	Status	Facilities						
				Information Board	Toilet	Parking	Food/ Beverage	Information Centre	Management Unit	Accommodation
1	I	Phimai (Phimai Historical Park)	R	●	●	●	●	●	●	-
2	I	Physical remains of Angkor – Phimai route	R	-	-	-	-	-	-	-
3	I	Ku Sila	R	●	-	-	-	-	-	-
4	I	Prasat Huai Khaen	N	●	-	-	-	-	-	-
5	I	Prasat Ban Samrong	N	●	-	-	-	-	-	-
6	I	Prasat Nong Ta Pleng	N	●	-	-	-	-	-	-
7	I	Prasat Nong Plong	R	●	-	-	-	-	-	-
8	I	Prasat	R	●	-	-	-	-	-	-

		Nong Kong								
9	I	Prasat Ban Bu	R	●	-	-	-	-	-	-
10	I	Prasat Thamo	R	●	-	-	-	-	-	-
11	I	Prasat Ta Muean	N	●	-	-	-	-	-	-
12	II	Kut Ruesi Noi	R	●	-	-	-	-	-	-
13	II	Prang Ban Prang	R	●	-	-	-	-	-	-
14	II	Kut Ruesi Khok Mueang	R	●	-	-	-	-	-	-
15	II	Kut Ruesi Nong Bua Rai	R	●	-	-	-	-	-	-
16	II	Prasat Ta Muean Tot	R	●	-	-	-	-	-	-
17	II	Prasat Thong	N	●	-	-	-	-	-	-
18	II	Prasat Phnom Rung (Phnom Rung Historical	R	●	●	●	●	●	●	●

		Park)								
19	II	Prasat Mueang Tam (under Phnom Rung Historical Park)	R	●	●	●	●	●	●	-
20	II	Prasat Plai Bat 1	N	●	-	-	-	-	-	-
21	II	Prasat Plai Bat 2	N	●	-	-	-	-	-	-
22	II	Prasat Ta Muean Thom	R	●	-	-	-	-	-	-
23	II	Baray Phimai	N	●	-	-	-	-	-	-
24	II	Baray Nong Bua Rai	R	●	-	-	-	-	-	-
25	II	Baray Mueang Tam	R	●	-	-	-	-	-	-
26	II	Prasat Choed Doei	R	●	-	-	-	-	-	-
27	II	Mueang Phlappla	R	●	-	-	-	-	-	-
28	II	Ban	N	●	-	-	-	-	-	-

		Samrong								
29	II	Mueang Phathairin	N	●	-	-	-	-	-	-
30	II	Mueang Fai	R	●	-	-	-	-	-	-
31	II	Iron smelting site, Ban Sai Tho 7	N	-	-	-	-	-	-	-
32	II	Iron smelting site, Ban Khao Din Tai	N	-	-	-	-	-	-	-
33	II	Stone quarry, Wat Pa Lan Hin Tat	R	●	-	-	-	-	-	-
34	II	Tao Nai Chian kiln site (site museum)	N	●	●	●	-	●	-	-
35	II	Tao Sawai kiln site (site museum)	N	●	●	●	-	●	-	-

Note: Status N = non-registered monument, R = registered national monument

From the table, most of the components have not been provided with tourism facilities apart from information board, therefore, it can be said that at present the cultural route is not suitable to serve tourism functions, however, the 2 historical parks



which are part of the route, the Phimai Historical Park and Phnom Rung Historical Park are famous tourist attractions, with high number of both Thai and foreign tourists. These



facts strike high contrast within this serial cultural heritage site and pose challenges to its future development in the aspect of tourism.

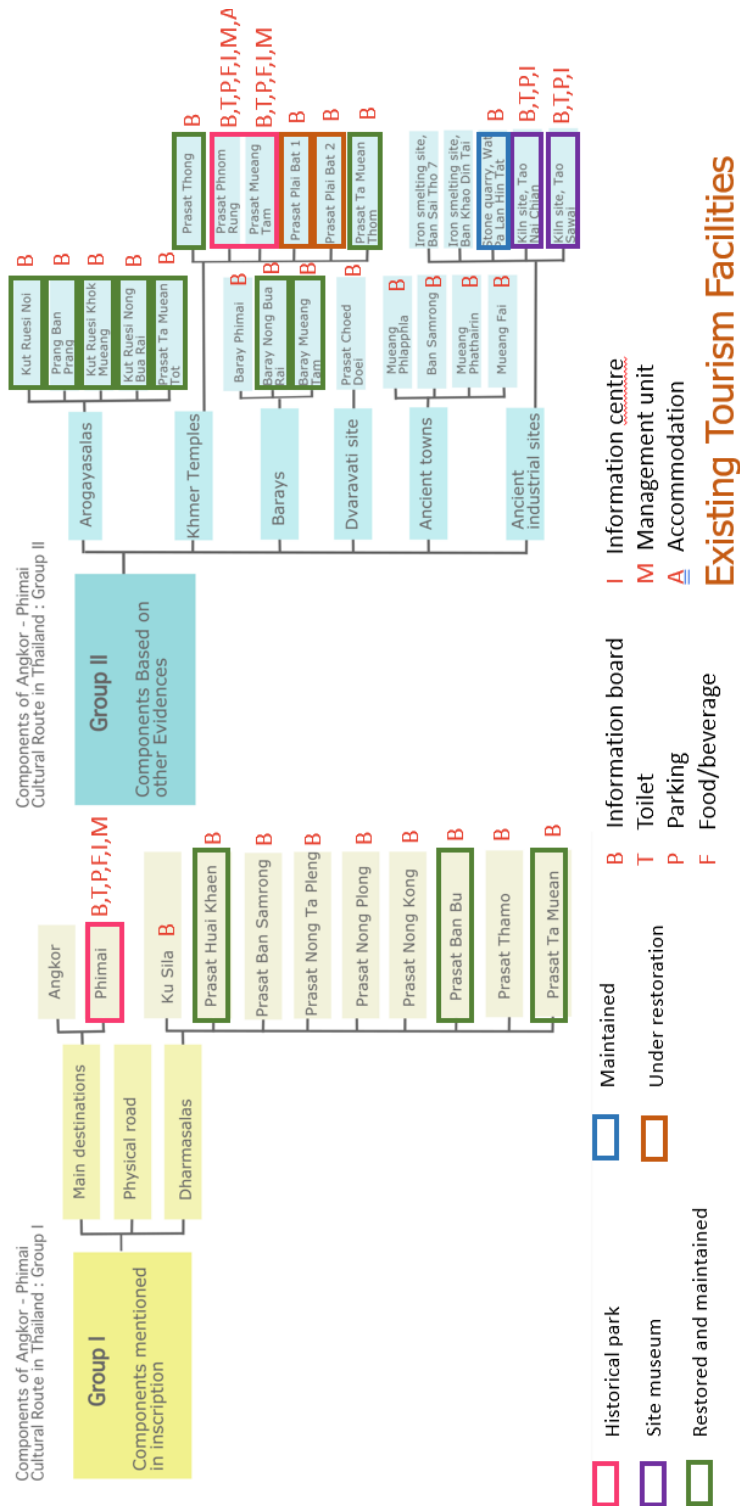


Figure 123: Existing tourism facilities.

5.2.4.2 Tourism potential of components

Tourism potential of each component varies depending, mostly, on physical condition and aesthetic values of each place. Components which are tourist attractions are conserved and systematically managed, therefore, tourists statistics have been recorded, as shown in the following tables:

Table 18: Number of Visitors, Fiscal Year 2014 - 2018: Phimai Historical Park

Source: Phimai Historical Park

Number of Visitors, Fiscal Year 2014 - 2018: Phimai Historical Park									
Year	Thais	Foreigners	Students	Monks/Priests	Official Visitors	Families*	Elderlies*	Disabled Visitors*	Total
2014	173,696	21,773	64,580	3,562	11,508	3,300	0	0	278,419
2015	182,875	19,695	86,059	4,028	11,189	16,442	0	0	320,288
2016	148,336	17,812	62,364	5,251	4,936	2,979	0	0	241,678
2017	188,154	17,186	72,202	4,086	3,712	0	0	0	285,340
2018	171,353	22,751	84,899	4,076	1,734	0	33,091	2,137	320,041

Note: *Numbers of visitors in these categories (families, elderlies, and disabled visitors) show remarkable discrepancies, which could have resulted from counting method or other factors. However, this point is not to be analyzed as it is not significantly relevant to the issue of the thesis.

Table 19: Number of Visitors, Fiscal Year 2014 - 2018: Phnom Rung Historical Park

Source: Phnom Rung Historical Park

Year	Thais	Foreigners	Students	Monks/Priests	Official Visitors	Elderlies*	Total
2014	312,645	15,170	84,392	12,505	14,776	0	439,488
2015	446,960	15,370	122,799	10,680	27,951	0	623,760
2016	369,509	14,870	145,435	9,650	33,783	0	573,247
2017	454,847	15,800	219,859	10,935	8,565	59,599	769,605
2018	414,855	15,325	177,085	10,262	10,418	61,164	689,109

Note: *From fiscal year 2017 onward, number of elderlies has been recorded and the number is remarkably high, ranked third largest group of visitors.

Table 20: Number of Visitors, Fiscal Year 2014 - 2018: Prasat Mueang Tam

Source: Phnom Rung Historical Park

Year	Thais	Foreigners	Students	Monks/Priests	Official Visitors	Elderlies*	Total
2014	44,884	2,015	35,068	3,233	3,909	0	89,109
2015	66,209	3,795	48,607	3,388	6,739	0	128,738
2016	59,649	2,391	60,629	3,557	9,657	0	135,883
2017	72,773	4,059	71,102	3,285	1,944	11,617	164,780
2018	61,743	2,338	52,126	2,681	1,705	10,062	130,655

Note: *From fiscal year 2017 onward, number of elderlies has been recorded and the number is remarkably high, ranked third largest group of visitors.

Mueang Tam Historical Park is managed by Phnom Rung Historical Park. These 2 places are very near to each other, however, number of visitors to Mueang Tam is significantly lower than that of Phnom Rung. This should be noted as one of the issues to be dealt with in terms of tourism.

Questionnaire results reflect opinions of respondents regarding tourism potential of the components (representative of components used in the questionnaire). The top 10 components (from 15 samples) which have tourism potential are ranked as follows (referred to Table 5.9):

1. Angkor Wat 79.8%
2. Prasat Phimai 79.8%
3. Prasat Mueang Tam 75.4%
4. Prasat Phnom Rung 74.3%
5. Kut Ruesi Khok Mueang (Arogayasala) 57.7%
6. Prasat Ban Bu (Dharmasala) 46.1%
7. Mueang Fai Ancient Town 46.1%
8. Prasat Huai Khaen (Dharmasala) 43.4%

- | | |
|-------------------------|-------|
| 9. Baray Mueang Tam | 40.1% |
| 10. Tao Sawai kiln site | 32% |

These components, except Angkor Wat which is in Cambodia, have one common characteristic that all of them are in good physical condition, in other word, they are visually comprehensible. The information obtained from questionnaire can be used as guideline for tourism planning, especially for selection of components to be included in the tourist route.

5.2.4.3 Tourism-related problems

The 3 components which are tourist attractions, namely, Phimai, Phnom Rung, and Mueang Tam, are managed as historical parks, with substantial numbers of tourists as seen in the previous topic. From these sites, the author obtained information on tourism-related problems from Report on Tourism Problems at Phimai Historical Park and by interviewing former Head of the Phnom Rung and Mueang Tam historical parks. Results from interviews are summarized as follows:

Phimai Historical Park:

1. Feedback from tourists:
 - 1.1 Parking area is insufficient.
 - 1.2 Direction signage is insufficient.
 - 1.3 There should be activities for promotion of the site to attract more tourists.
 - 1.4 Private business on photographing tourists have been conducted, which tourists see as violating personal rights and privacy. It is not acceptable to take photographs of tourists without permission and try to sell the photographs to tourists.
 - 1.5 Lack of public relations staff and official English guides.
2. Problems from Phimai Historical Park's side:
 - 2.1 Communication with foreigners.
 - 2.2 Insufficient staff (of the historical park).
 - 2.3 There are no waste dump area and waste elimination system at Phimai Historical Park, therefore, the waste has to be taken to the dump site of the

Phimai Municipality, which is expectable to become a serious problem in the future. Besides, the Municipality does not have good waste management system.

2.4 Local authorities always use Phimai tourism as part of their proposal for annual budget, however, they do not consult with Phimai Historical Park and Fine Arts Department 10th Regional Office, therefore, their projects could have inappropriate effects to the monuments.

Phnom Rung Historical Park:

1. Accessibility

Phnom Rung Temple is located on top of a mountain, therefore, there are considerable limit on accessibility and provision of facilities at the place. The access road, for instance, is small and curvy, following the mountain slope, which requires attentive and careful driving. There had been several road accidents especially during high season.

2. Walking distance

As for tourism facilities, the area of the site on mountain top does not allow much space for parking, which means that tourists are required to walk a certain distance from parking area and up the stairs to the temple, which is troublesome especially for Thai tourists who do not like walking and disabled elderly tourists however, this is not problematic to foreign tourists.

3. Carrying capacities

Number of tourists to Phnom Rung is high, more than 600,000 persons average (5 years), which is higher than carrying capacities of the site, resulting in the overloaded use of toilets, water, etc., and most importantly, the temple itself. The former Head of Phnom Rung Historical Park, Mr. Wasan Thepsuriyanont, opined that the appropriate number of tourists should not exceed 500,000 persons annually, however, the Fine Arts Department views that high number of tourism reflects the achievement of the Department, therefore, the more tourist, the better. As for the case of important cultural heritage site such as Phnom Rung,

however, the increase of facilities to serve tourism purpose is not always acceptable because the values of the place should be the first priority for consideration.

4. Communication and guiding

There is a problem on lack of official English guides at the office, which is one of major drawbacks in tourism aspect.

5. Waste management

Due to high number of tourists, there have been enormous amount of waste generated by tourists, which has become one of the most serious problems at the site although the historical park has adopted garbage separation scheme. The non-recyclable waste is taken to a waste dump site which, at present, is overflowing. Incineration is one of the solutions being considered, however, the environmental problem resulted from burning is one of the serious relation problems which must not be overlooked.

Mueang Tam Historical Park:

1. Disorderliness

Mueang Tam Temple is located in village area, therefore, local people set up stalls or vendor vehicles all around the place to sell goods to tourists, resulting in disorderliness.

2. Parking space

Parking space provided at Mueang Tam is not appropriate for large tourist coaches, therefore, these coaches park at roadside, creating traffic problems.

3. Traffic

The road that runs in front of the temple is a public road that is used by all types of vehicles, including large trucks for transporting farm produce e.g. sugar canes, and truck with trailers, etc. These heavy vehicles create vibrational effects to the temple and ancient elements. Apart from affecting the monument, accidents could happen to schoolchildren crossing the road from the school

situated opposite to the site. At present, however, there is no policy or plan to build a bypass to alleviate this problem.

4. Inappropriate use of the cultural heritage site

Mueang Tam Temple, as mentioned, is easily accessible by villagers, therefore, youngsters and teenagers often come to the place at nighttime for certain inappropriate activities. This problem persists even though the site is 24-hour surveilled by guards due to the vast area of the place, with many inconspicuous corners.

In conclusion, tourism problems encountered at the 3 components which are important tourist attractions can be summarized into 2 main groups, that is, problems on site preparedness for tourism and problems caused by tourism. Problems in each group are listed as follows:

1. Problems on site preparedness for tourism:

- Insufficient facilities

Insufficient parking space, toilets, etc. in some cases such as Phnom Rung is difficult to solve due to area limitation of the place. However, even for sites which have ample area, the building of new facilities should be carefully considered so that they do not disturb or have negative effects on the cultural heritage.

- Communication and guiding

All 3 sites mention problems on communication with foreign tourists. This problem can be solved and should be solved as soon as possible.

Furthermore, the Fine Arts Department should have policy to provide competent English guides at all historical parks in Thailand.

- Accessibility

The problem is most serious at Phnom Rung due to the location of the site on mountain top, however, although it is not possible to solve the problem for this case, the accessibility issue should be considered for development of other components for tourism in the future because the

access to some components are, at present, very inconvenient up to inaccessible especially in rainy season.

- Waste management

The more visitors, the more garbage, therefore, waste management should be one of the first priority in site preparedness for tourism, however, it appears that all of the 3 sites discussed here do not have proactive measures to handle this problem. At present, overflowing garbage in dump site has become a serious problem. This should be a lesson for future development of all cultural heritage sites, especially those which are tourist attractions or having tourism potential.

- Carrying capacities

Carrying capacities of each place should be considered for the sake of both the cultural heritage place and the environment, however, the government policy prefers high number of tourists, and in cases of historical parks the Fine Arts Department sees high number of tourists as an index for the Department's achievement regardless of the fact that cultural heritage sites are valuable and vulnerable. This problem must be solved otherwise it may lead to irretrievable loss.

2. Problems caused by tourism:

- Waste

Visitors produce waste. This problem is encountered in all 3 sites discussed here as well as everywhere else. Solution to the problem must be made by both tourists and the site, which must prepare good waste management system.

- Inappropriate use of cultural heritage site

This problem is encountered at Mueang Tam, where young visitors could enter the site during nighttime for inappropriate activities. Other sites do not report this problem, however, warning should be made for tourists in

terms of appropriate clothing, prohibition of climbing and doing disrespectful to religious images, etc.

- Tourism related business

Local people can benefit from tourism by selling souvenirs and services to tourists, however, in the case of Phimai, photographing tourists is seen as violating personal privacy of tourists, which should be prohibited. As for Mueang Tam, local vendors have become a problem of disorderliness of the site. These problems should be handled by negotiating with local people and businesses. Area for local stalls should be allocated and measures should be made for tourism-related business that are acceptable by all concerning parties.

5.3 Reconstruction of the Angkor – Phimai Road Based on Results of Analysis

The analyzed data and information have led to a better understanding of Angkor – Phimai cultural route, by which the author has made a reconstruction, or a hypothesis, of the history and uses of the road as follows:

The area where the Angkor – Phimai road was located has been inhabited since prehistoric period. There were several ancient towns, circular-planned, surrounded by moats and levees, located in the area. These towns belonged to Dvaravati culture which flourished in Northeast Thailand circa 7th – 11th centuries CE.

Circa 9th century CE, an independent kingdom in Mun river basin called Sri Canasa was mentioned in Khmer inscription. Later, Angkor was founded as a capital of the powerful Khmer kingdom in early 10th century, and Khmer influence spread into the area evident by the building of an important temple, Prasat Phnom Rung, towns, and barays, the reservoirs which are parts of the distinguished Khmer water management system. Khmer influence also affected the existing towns as seen in Muang Phlapphla, where a rectangular-planned town was added to the original, and Ban Samrong where a baray was built adjacent to the original levee. The building of Mueang Tam temple and the enormous baray Mueang Tam in 11th century indicate that the area was developed

into well-populated town. Eventually, Vimayapura, founded circa 11th century, has become an important centre on Khorat plateau, with close connection with the capital (Angkor).

The area between Angkor and Phimai, located with several large and small towns as mentioned, required route of communication, thus it is believable that the road between these 2 important towns had existed since 11th century CE, apart from the network of roads that connect the towns and settlements mentioned earlier, which must have existed long before the Angkor – Phimai road.

King Jayavarman VII ((1181 – 1218 CE), established himself as a Buddhist King, had initiated public services projects throughout his kingdom, among which were the building of vahnigrihani (house of fire, dharmasalas) along the roads from Angkor to important towns in 5 directions, one of which is Phimai. Preah Khan Inscription clearly mentions that he had 17 houses of fire built on the road from Angkor to Phimai. These houses of fire (at present known as dharmasalas) acted as travelers' rest houses, however, it is not certain whether travelers really stayed in the building or they stayed outside and the buildings were used as places of worship and landmarks. Apart from dharmasalas, the King had "arogayasalas" (hospitals) built for the people, which are mentioned in several inscriptions found in Cambodia and Thailand. Prasat Ta Muean Tot is one of the arogyasalas situated on the route where an inscription has been discovered, which clearly specified that the place was an arogyasala, built by order of the King, who assigned physicians, priests, staff, as well as allocated medicines, food and other necessities for the hospital to be used for public services.

The road passed through an area where iron smelting and pottery factories were located. The area is near to the border between Thailand and Cambodia where several ancient industrial sites, as well as stone quarry sites, are located. The road, therefore, must have been an important transportation route for iron products, potteries and stones, important construction materials in those days.

Apart from normal transportation and commutation, the Angkor – Phimai road was the route for an important ceremony which was held annually in Phalguna month (February – March) when Buddha images and sculptures of deities from several provinces were brought to Preah Khan temple to be worshipped, including the Buddha of Vimaya, as mentioned in the inscription. Such activity clearly indicate the importance of the road in ceremonial use, which involved a great number of people who must have traveled on the road to the capital, as well as the significance of dharmasalas that accommodated and served these people during the time of the ceremony.

The Angkor – Phimai route was actively used as mentioned until the Khmer declined in power. However, evidence points out that iron smelting was carried out until 15th century CE, thus the road should have functioned until that period, then the use declined until the road and route is no longer in use and most of the physical remains of the road are no longer visible. Nevertheless, dharmasalas, arogayasalas, stone bridges (in Cambodia), temples, barays, and ancient towns still stand as testimonies to the existence of the road that used to be one of the main communication routes of the ancient times.

5.4 Conclusion

The analysis of Angkor – Phimai cultural route in Thailand provides important insights into the case study as well as the cultural route type of serial cultural heritage in general. The most outstanding problem of the case is lack of perception of the route since the physical road is almost imperceptible at present due to several factors. The high historical value of the route is in contrast with the low tangible and interpretational values. This is a critical problem which could affect conservation, protection and management of the sites. Further studies on this specific issue must be carried out so that information on the physical road and the exact delineation of the route will be clarified, which will remarkably enhance the values of this serial cultural heritage site.

In World Heritage context, “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” submitted and included in World Heritage Tentative

List since 2004 have been removed and replaced with “Ensemble of Phanom Rung, Muang Tam and Plai Bat Sanctuaries” in 2019. Discussion on OUV, reasons for change and comparison on the advantages/disadvantages of these 2 serial sites are presented, which should be useful for future work and study in this respect. Although the focus of World Heritage nomination has been changed from cultural route, it is undeniable from analysis that Angkor – Phimai cultural route has high potential for World Heritage nomination especially in terms of values, verified by written document and existing evidences, therefore, in the future when relevant problems are solved, Thailand National Committee on the World Heritage Convention may reconsider the submission of this cultural route to the World Heritage List.

At present, it is clearly seen that most of the components of the route do not have tourism values that can generate income. This is also a point to be considered because, one of the benefits of serial cultural heritage is the establishment of meaning to seemingly insignificant cultural heritage sites, thus increasing their attractiveness, which could lead to creation of new tourism experiences. Serial cultural heritage approach opens opportunities for opening new tourism routes, as seen in the Council of Europe Cultural Routes Project.

Future requirements for the Angkor – Phimai cultural route, especially the part in Thailand, will be discussed in the following chapter based on the results of analysis.

Chapter 6 Future Requirements for Angkor – Phimai Cultural Route and Lessons Learned from Serial Cultural Heritage Study

6.1 Introduction

After the analysis of case study, Angkor-Phimai Cultural Route in Thailand, the author has noted some ideas on its future requirements in the perspective of serial cultural heritage. Apart from case study, there are issues which are applicable to serial cultural heritage in general context. This chapter, therefore, is divided into 2 parts as follows:

The first part is recommendations on future requirements for Angkor – Phimai cultural route, focusing on the part in Thailand. Recommendations are made on 4 main aspects:

1. Values
2. Interpretation
3. Management
4. Tourism

The second part summarizes ideas and recommendations derived from the study of serial cultural heritage and Angkor – Phimai cultural route. It should be noted that, although the case study is a cultural route of communication, which is one of the 4 categories of serial cultural heritage, there are lessons learned from the case study which are also useful for serial cultural heritage in other categories, which are addressed as follows:

- Applications of serial cultural heritage concept
- Identification of serial cultural heritage
- Recommendations on interpretation
- Management issues concerning serial cultural heritage

- Values-based management
- The transboundary issue of serial cultural heritage
- Serial cultural heritage and tourism

Apart from the case study, cases of serial cultural heritage in Thailand and foreign countries, especially World Heritage serial cultural properties, are used as comparative examples and guidelines.

6.2 Future Requirements for Angkor – Phimai Cultural Route

6.2.1 Future requirements for values

The issue on values is the most important issue to be discussed because it is the foundation of all issues concerning cultural heritage. From case study analysis, the most serious problem concerning Angkor – Phimai cultural route is lack of recognition. The route has not been recognized and perceived as a route, in other word, a series, therefore, all consequent issues e.g. conservation, interpretation, and management, are not possible to be carried out accordingly and appropriately. Future requirements, therefore, should be based on recognition and perception of this cultural heritage site from serial cultural heritage perspective. Following is the list of recommendations on future requirements regarding values of Angkor – Phimai cultural route:

6.2.1.1 Recognition and perception of the site in serial perspective

The first and most important point in addressing the issue of Angkor – Phimai cultural route is the recognition and perception of the site as a serial cultural heritage, a cultural route comprising several cultural heritage sites which are complementary to its history and meaning. Such recognition and perception do not exist at present, although “Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam” is included in the Tentative Lists of World Heritage, submitted by the Fine Arts Department since 2004 (UNESCO, 2018b).

In order to proceed with the nomination of the Phimai series as mentioned, the Fine Arts Department has to establish a management system which is reliable and

convincing to be included in the Nomination Dossier. Consequently, recognition of the Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam as a serial cultural heritage must be built, especially for people who are stakeholders of the site, otherwise it is not possible to establish the management system as mentioned. Therefore, the Fine Arts Department, which is the responsible authority, should be the leader in this matter by setting up a working unit, for instance, a project, for promoting the Angkor – Phimai cultural route in Thailand as a serial cultural heritage site. This working unit should aim to collect data and information about the route and its components, which will be useful for future work on nomination of Phimai, its Cultural Route and the Associated Temples of Phanomroong and Muangtam to the World Heritage List, as well as being information centre that serves students, researchers, and general people who are interested. The application of social media can be applied to this project, which will help in accessibility of information and news.

When recognition and perception of the Angkor – Phimai cultural route as serial site is established, related works on the series are possible to be planned out and to proceed accordingly.

6.2.1.2 Supportive studies for verification and enhancement of values

From analysis, it is noted that the most concerned weak point of the Angkor – Phimai cultural route in Thailand is the lack of physical remains of the road. At present, some remaining parts of the ancient road are recognized and registered as national monuments (parts of Phimai town) but they are not easily perceptible, for instance, a part of the road leading to Tha Nang Sa Phom pier is overlaid with new road, the other part appears as levee situated in agricultural area. Therefore, it is necessary to carry out studies to find out more evidence on the physical road, which is the most important element of the route. Studies on components of the route should also be encouraged, as well as conservation works for sites which require physical treatments and landscape improvements.

Some of the supportive activities in the aspect of values are:

1. Survey and archaeological study on physical remains of Angkor – Phimai road in Thailand.

At present, technological advancement has enabled the study of sites which are hidden by trees and vegetations by Lidar survey, which is useful in this case. It is expectable to find evidence of the road hidden in the landscape, which will be highly valuable to further study by archaeological excavation and other methods.

2. Study on components of Angkor – Phimai cultural route

Study on components of Angkor – Phimai cultural route should be encouraged to continue, although most of the components have been studied to certain extent. Further study may render more information on the road and its function apart from the information on the studied site itself, which will enhance the values of both the route and the components as individual sites.

The Angkor – Phimai cultural route in Thailand still requires further study in several aspects, especially study on the physical remains of the road, therefore, opportunities are abundant for professionals who are interested. Study on the route as serial cultural heritage site will also pave way to future serial cultural heritage projects, as well as reconsiderations of some groups of cultural heritage sites by serial cultural heritage approach.

In case that Thailand decides to carry out the nomination of the Angkor – Phimai cultural route to World Heritage List, international seminars, conferences, and workshops will be necessary before, or during nomination process. Opinions from international experts, professionals, and academics will be beneficial to the decision on OUV, criteria to be proposed, and points to be considered for the preparation of Nomination Dossier.

6.2.1.3 Supportive activities for building understanding on values

1. Dissemination of knowledge on Angkor – Phimai cultural route

Seminars, scientific meetings, books, academic papers, social media, etc. should be prepared, carried out and applied for dissemination of knowledge on Angkor – Phimai cultural route, both on national and international levels.

2. Activities for building understanding in local people who are stakeholders

Although components of the route still exist, some of them are disturbed by new buildings which are not visually appropriate, even if they are not physically damaging to the sites. It is necessary to organize group discussions on the significance, values, and appropriate treatments to these sites. Negotiations may be necessary for some sites which require landscape improvement e.g. moving or removing of disturbing structures. World Heritage nomination may be useful as an incentive strategy to negotiate with owners of problem places.

Knowledge and understanding on the Angkor – Phimai cultural route should be built in local people by organizing regular programs e.g. training for local guides, basic maintenance training for owners of the site or people who live in its vicinity, etc. Programs for children should be created in collaboration with schools in the area in order to build new generation of caretakers of cultural heritage sites. People who live in the area or provinces where the route passes and components are situated should be expectable to have better knowledge on the route and components in general, therefore, learning programs should focus on local people and should be carried out consistently.

6.2.2 Future requirements for interpretation

As presented in the previous chapter, existing means of interpretation do not provide information on the Angkor – Phimai cultural route but only giving information on individual sites. It is necessary, therefore, to look at this aspect as requirements for

future improvement on interpretation, which should focus more on the serial cultural heritage perspective of the route and its components.

According to the ICOMOS Charter for the Interpretation and Presentation of Cultural Heritage Sites, interpretation refers to “the full range of potential activities intended to heighten public awareness and enhance understanding of cultural heritage site” (ICOMOS, 2008a). For the case of Angkor – Phimai cultural route, the required awareness and understanding should focus on the “route” which comprises a series of components, or the perception of the route based on serial cultural heritage approach. Results of questionnaire³⁸ show that, at present, level of awareness and understanding of the route and components is very low. This is a critical problem for this case since public awareness and understanding is essential for conservation and management of all cultural heritage sites. Recommendation on requirements for interpretation of Angkor – Phimai cultural route in Thailand are categorized as follows:

6.2.2.1 Fundamental interpretation

Referring to the results of questionnaire, the public (Thai people) requires information on the Angkor – Phimai cultural route and components on very basic level, as in the following topics:

- Knowledge on the beginning and termination of the ancient road (route), Angkor and Phimai. What are these 2 places and their significance in history?
- Knowledge on the existence of the Angkor – Phimai road, which should be based on Preah Khan Inscription. Location and delineation of the road based on locations of dharmasalas.
- Knowledge on components of the route, especially dharmasalas which are the core components of the route, to better known places e.g. Prasat Phimai, Prasat Phnom Rung, Prasat Mueang Tam, etc.

³⁸ See Appendix II: Questionnaire Survey and Results.

These groups of basic information should be disseminated, and public awareness and understanding should be established by means of exhibition, television program, internet media, guided tours, and additional subject especially in schools or academic institutions in the localities of components, namely, Nakhon Ratchasima, Buriram, and Surin provinces.

6.2.2.2 Academic interpretation

This level of interpretation is aimed for people who are already informed, having awareness and understanding on the route and components, e.g. archaeologists, conservation architects, and conservation professionals. Means for interpretation should be provided in the form of publications, academic papers, scientific reports, etc., which can be obtained via academic studies, researches, and academic activities.

6.2.2.3 Tourism interpretation

Interpretation for tourism purpose should aim to present the sites to create the most favourable experiences to tourists, not only by learning about the sites, but also by experiencing cultural aspects of the area as a whole. Therefore, interpretation should guide tourists to:

- Learning about the route, its components, and cultural aspects of the route at present, e.g. ethnic groups and cultures, local traditions, food, souvenirs, etc.
- Important monuments, as iconic places on the cultural route.
- Important components e.g. dharmasalas, arogayasalas, barays, as testimonies of architecture, public services, and infrastructure in the time of King Jayavarman VII. However, the recommended places to be visited should be those which are perceivable and have interesting art and architectural characteristics.

- Local cultural places e.g. markets, restaurants, local crafts manufacturers, etc.
- Good accommodations.

It should be noted that all components of the route are not necessary to be recommended for visiting e.g. the Dvaravati archaeological sites, iron smelting sites, ancient Dvaravati towns. Results of questionnaire can be used as guidelines for tourism planning and interpretation. However, if there are further studies that reveal the physical Angkor – Phimai road, recommendation for tourists to visit and see the actual road should be added.

Means of interpretation for tourism purpose can be in forms of leaflets, maps, guidebooks, internet media, or TV programs.

6.2.2.4 International interpretation

Since Angkor – Phimai cultural route is, basically, a transnational and transboundary serial cultural heritage site, interpretation on international level should be considered and established. The most convenient means of interpretation, at present, is via internet media.

This thesis focuses on Angkor – Phimai cultural route in Thailand due to convenience in surveying, studying and obtaining in-depth information, however, the author always bears in mind the fact that this series is transnational, and the highest goal for study, conservation, management, and the inscription of the site to World Heritage List, is the coverage of complete route from Angkor to Phimai. International interpretation, therefore, should present the entire route for future works on the aspects as mentioned.

6.2.2.5 Supportive activities for interpretation

For the purpose of interpretation, information on the route and its components should be disseminated to the public by various means, therefore, the following

activities should be carried out continuously, both on national and international levels.

These activities are such as:

- Seminars
- Scientific conferences/ symposiums
- Workshops
- Discussions
- Trainings
- Etc.

These activities open opportunities for academics and professionals, stakeholders, and general public who are interested, to exchange knowledge and opinions which will lead to expansion of understanding, learning, conservation and management planning, or discussion on the possibility to carry out the nomination of the Angkor – Phimai cultural route, which is already in the Tentative Lists, to the World Heritage List.

6.2.3 Future requirements for management

Management of Angkor – Phimai cultural route in Thailand has not been conducted based on serial perception of the site although management of individual sites which are components of the series do exist. It is necessary, therefore, to recognize and perceive the site as a cultural route, a serial cultural heritage site in which all components have shared identities and values that contribute to the series as a whole. The goal of management, in this case, is to conserve collective values of the series, apart from individual values for which management system is already in place. Future management requirements, therefore, cover 3 main aspects: firstly, the vision; secondly, the planning; and thirdly, the responsible organization. These 3 aspects should lead to the creation of a management system for the serial site of Angkor – Phimai cultural route.

6.2.3.1 Vision for Angkor – Phimai cultural route

The most important vision for Angkor – Phimai cultural route is to make people perceive the site as “Route”. This may be concisely phrased as, “To establish the perception of Angkor – Phimai cultural route as a serial cultural heritage site”.

6.2.3.2 Management planning

Management planning should be prepared, generally, in form of master plans, which can be made after considerations on all the aforementioned aspects. However, it should be noted that long term master plan, for instance 10-year plan, has not been successful due to several factors and occurrences during this long period of time that always affect the plan unavoidably. Therefore, short and medium term plans, 3 – 5 years, should be more appropriate and flexible in the dynamic situations of today’s world.

Management plan should aim to achieve the realization of the management vision. As for Angkor – Phimai cultural route, the establishment of the perception of the route should be the guiding light for all the goals to be laid out in the plan.

The goals set in management plan should be divided into phases, and evaluates identification indices should be provided for the evaluates identification of results of each set phase. Management plan should comprise:

1. Rationale: including background information of the cultural route and description of its values.
2. Boundary for management, which should be prioritized as core zones, buffer zones, for both the cultural route and components (see Figure 120 below).
3. Management framework, which clearly states the concept, purpose/s and extent of the management system in relation to the specified boundary.
4. Time frame for achievement of the management purpose/s.
5. Goals, which are broken down from the purpose/s.

6. Phases of activities to accomplish the goals.
7. Responsible parties to carry out the planned activities.
8. Budget plan.
9. Monitoring and evaluates identification plan.

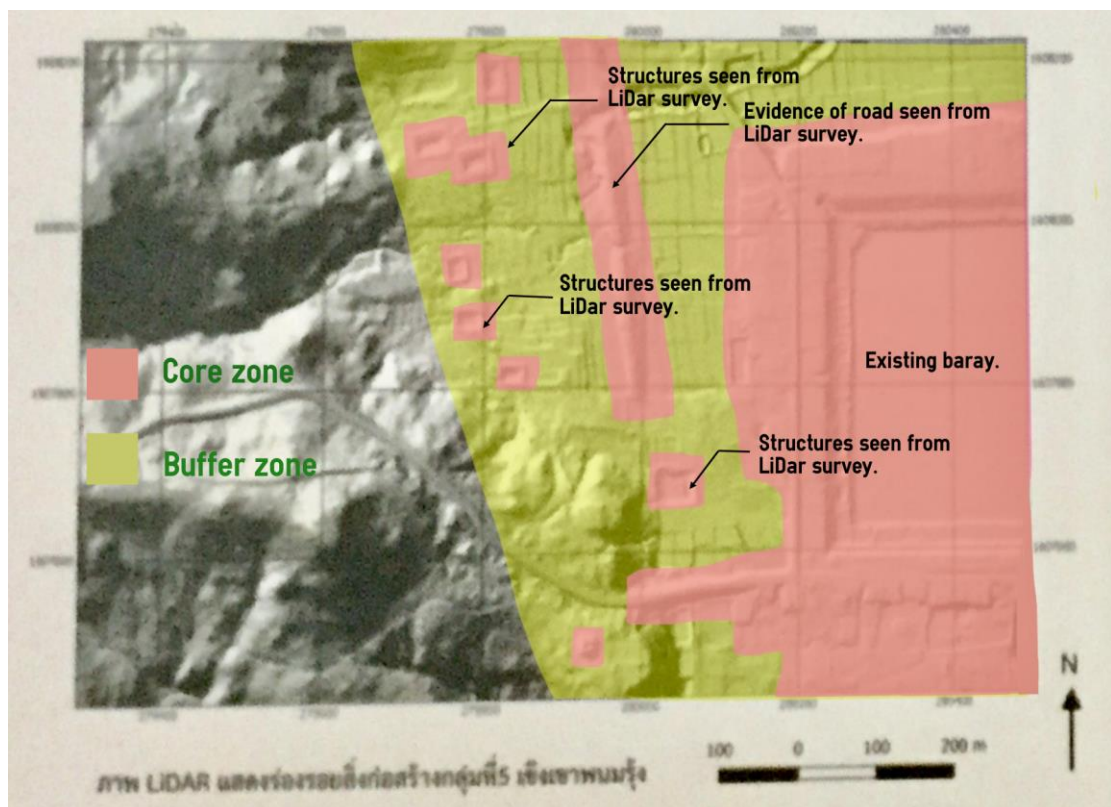


Figure 124: Boundary demarcation model for Angkor – Phimai cultural route, based on the LiDAR survey map that revealed trace of the road at base of Phnom Rung mountain (วสันต์ เทพสุริยานนท์, 2016).

These issues are not applicable only to the Angkor – Phimai cultural route but are also applicable to other cultural heritage sites in general, both serial and individual sites. The difference, however, lies in the purpose/s and vision for each site, which would result in the difference of management planning.

6.2.3.3 Managing organization

The serial cultural heritage approach to conservation and management involves more people and resources than individual site conservation, therefore, consideration on

appropriate organization to be responsible for this task is necessary. At present, all components of the route are under the 10th Regional Office of Fine Arts Department, with 2 historical parks for managing the 2 most important area, Phimai and Phnom Rung. Nevertheless, there has not been any integrative program for the integrative management of the cultural route as a serial cultural heritage site, which is urgently required, especially if the Fine Arts Department plans to proceed on the nomination of Phimai Cultural Route to the World Heritage List.

Suggestions on managing organization of the Angkor – Phimai cultural route in Thailand should be included in the master plan. The size of the organization is not very important, it can be a small unit, for instance, a steering committee for the Angkor – Phimai Cultural Route under the 10th Regional Office, which focuses on the mission of conservation, management, and interpretation of the route as a serial cultural heritage site. The most important missions of the managing organization should include:

1. Preparation of conservation plans for cultural heritage sites which are the components of the cultural route.
2. Preparation of development plans for required facilities for the cultural route.
3. Serving as knowledge centre for all information concerning the cultural route.
4. Serving as centre for discussion and monitoring of the cultural route, which involves all stakeholders.
5. Management and maintenance of the route (future) and its components.

Participation of stakeholders in these missions should be encouraged. Representatives from all groups of stakeholders should be invited to take part as members of the steering committee or the advisory committee of the managing organization, which will be useful in creating sense of belonging, and understanding,

raising awareness in the shared values and identities of the route and components, which should lead to a sustainable conservation and maintenance of the entire series.

Examples can be taken from other similar cultural heritage sites, for instance, the Silk Roads: the Routes Network of Chang'an-Tianshan Corridor, World Heritage Site (inscribed 2014) (UNESCO World Heritage Centre, 2018b). This site comprises 33 components situated in 3 countries, China, Kazakhstan, and Kyrgyzstan. The management is set up as an Intergovernmental Coordinating Committee due to the transnational nature of the site, with the ICOMOS International Conservation Centre – Xi'an, as the Secretariat of the Committee. The Committee aims to implement a coordinated management system based on mutual agreement and to provide guidelines on conservation principles, methods, and management. Furthermore, due to the great area coverage of the site (42,668.16 ha./ 426.68 sq.km.), smaller management units are established, for instance, Steering Committee, Working Group, and national managing units. Nevertheless, it is noted that the international collaboration supported by national collaboration may not be equally effective between China, which has well-developed management structure, and Kazakhstan and Kyrgyzstan where the collaboration still requires reinforcement.

Struve Geodetic Arc, World Heritage Site (inscribed 2005) is another interesting example of serial cultural heritage. This site comprises 34 components, situated in 10 countries in Europe, namely, Belarus, Estonia, Finland, Latvia, Lithuania, Norway, Republic of Moldova, Russian Federation, Sweden, and Ukraine (UNESCO World Heritage Centre, 2018c). It is similar to Angkor – Phimai cultural route that there are no physical connections between components, thus each site appears to be individual site, without much physical remains. The management of the series is conducted on 2 levels, national level by national representative organization of each state party, and international level by Coordinating Committee, which meets every other year.

According to the cases of Silk Roads, and Struve Geodetic Arc, the future work on Angkor – Phimai cultural route should be to establish a transnational serial cultural

heritage site that covers the entire length of the route, from Angkor to Phimai. A proposed management mode is presented in the following diagram.

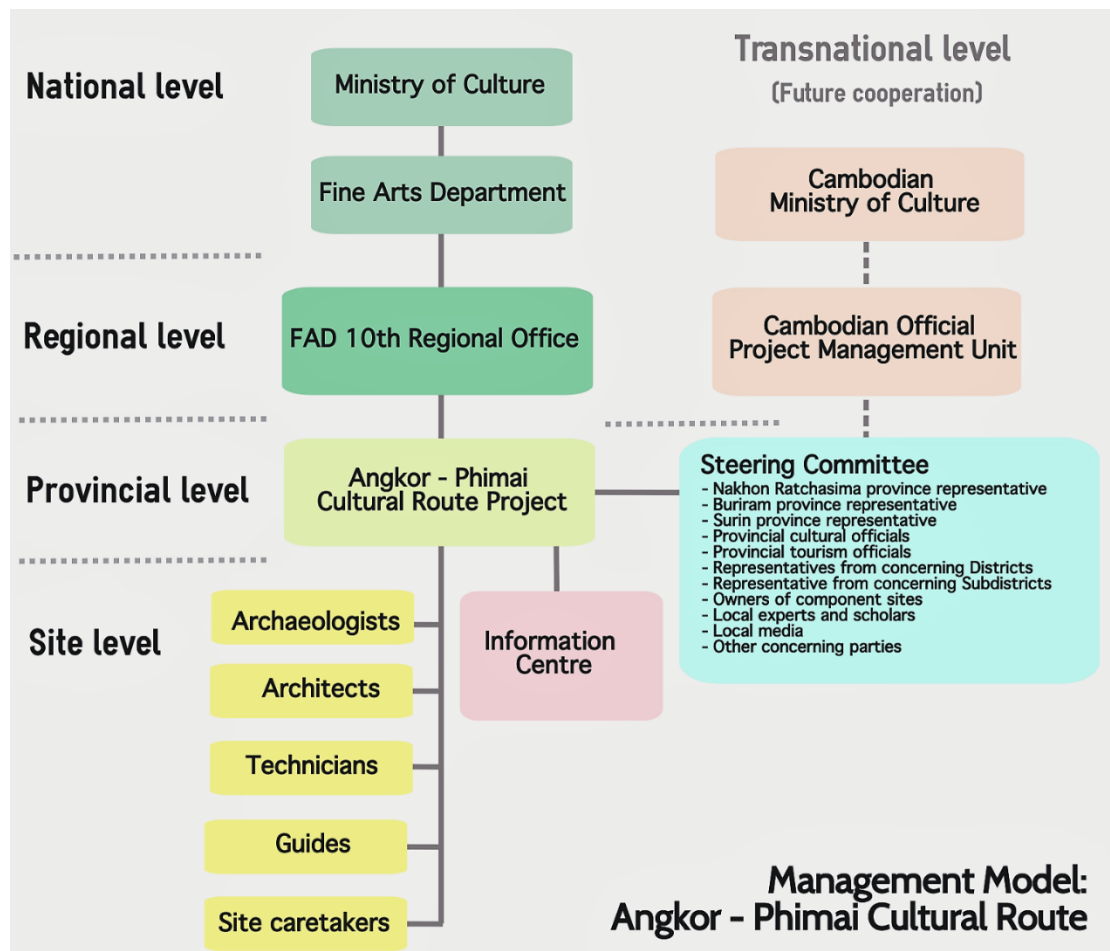


Figure 125: Management Model for Angkor – Phimai Cultural Route

The above diagram is a proposed management model for Angkor – Phimai cultural route, focusing on the part in Thailand, which is divided into 4 levels: national level, regional level, provincial level, and site level. The Fine Arts Department is the key organization who takes responsibility from national to site level. The management can be set up as a 'Project' under the Fine Arts Department 10th Regional Office which is responsible for cultural heritage sites in the region, covering all concerning provinces, namely, Nakhon Ratchasima, Buriram and Surin. The management of the Angkor – Phimai Cultural Route Project is supported by a Steering Committee which comprises representatives from all concerning parties, both from government and private sectors. In the future, if cooperation between Thailand and Cambodia on the management of this

cultural heritage series can be established, the Steering Committee will act as contact and monitoring centre. Furthermore, an information centre will be set up for continuous interpretation activities.

6.2.4 Future requirements for tourism

Tourism has both positive and negative effects on cultural heritage sites. As for Angkor – Phimai cultural route in Thailand, it can be said that there have not been tourist programmes set up specifically for this route, however, a few of the route's components are famous tourists attractions, namely, Prasat Phimai, Prasat Phnom Rung and Prasat Mueang Tam. Issues on tourism are discussed in previous chapter based on these 3 sites and questionnaire results. Accordingly, future requirements for tourism are laid out as follows:

6.2.4.1 Tourism concept and planning

Cultural route tourist plan should be planned based on appropriate concept. In the case of Angkor – Phimai route in Thailand, which is a historic cultural route with factual places for visit, emphasis should be made on interpretation of the route through existing cultural heritage sites, or route components. Important aspects of consideration on concept and route planning are:

1. Emphasizing on the characteristic of the 'route' in serial perspective. The planned trip should result in experience and knowledge on the route rather than appreciation of individual cultural heritage sites.
2. Understanding of the series weak points, especially, the lack of evidence of physical road and diverse characteristics and state of conservation of components, which should be compensated by good interpretation and selection of sites for visit.
3. In the future, if studies are conducted and physical road is more evident, tourist plan should be made to visit the actual road, or to travel along, or parallel to the actual route, if possible, which would remarkably enhance the experience and understanding on the cultural route.

6.2.4.2 Site preparation

As mentioned in previous chapter, components which are tourist attractions are facing several problems on inadequacy of facilities, which has occurred due to imbalance between number of visitors and carrying capacity of the sites. However, sites which are less frequent, or rarely, visited are simply conserved with no facilities provided. These issues should be considered along with the laying out of tourism concept and planning. Suggestions for future requirements for site preparation are:

1. According to tourist plan, facilities should be prepared adequately for all sites, or sites which are planned for tourist visits.
2. Information and guiding for foreign visitors have been one of the problems, therefore, English speaking guides should be provided for main tourist attractions. Leaflets, brochures and maps in English and other languages should be provided for tourists who want to visit sites by themselves.
3. Environmental protection plan should be made, especially on waste management, which has become one of the most serious problems at sites which are tourist attractions. Requests, warnings, or advises should be prepared for visitors so that they can help mitigate these problems.
4. On administrative level, there should be negotiations between site managers and the authority on appropriate number of visitors, especially at main tourist attractions in the route. This issue is very important for conservation of values of cultural heritage sites, which should be the first priority and must not be neglected for the sake of income from tourism.

6.2.4.3 Encouragement for community participation in tourism

Tourism should benefit local community, which is one of the most important stakeholders of all cultural heritage sites. "*Business plan should be presented to local people when talking about conservation of cultural heritage sites*", quoted by a member of Romanian Conservation Office (Institutul National al Patrimoniului (National Institute of Heritage), 2019). At present, some local businesses have been created, some of which

are very successful, for instance, homestay at Mueang Tam area. However, some of these businesses have caused problem to the site such as mobile stalls and hawkers at Mueang Tam, and souvenir shops at Phnom Rung, which are disorderly. Suggestions for community participation in tourism are as follows:

1. Negotiations between site managers and local people on the appropriate business approach and boundary for local businesses at cultural heritage sites, especially main tourist attractions.
2. Encouraging local participation, especially in cultural activities, for instance, local guides, local craftmaking for souvenirs, etc. These activities must be supported by training, which can be organized by the Fine Arts Department, local academic institutions, local cultural authorities or cultural groups, etc.
3. Local tourist steering committee should be set up, which should comprise representatives from all stakeholders and site managers. The committee should work on monitoring and controlling tourism-related businesses, mutual benefit generation between the site authority and local groups, as well as supporting tourism-related activities and steering these activities in appropriate directions.

6.3 Lessons Learned from Serial Cultural Heritage Study

From the study on serial cultural heritage and the specific study on Angkor – Phimai cultural route, the author has learned several issues which are not relevant only to the case study or the cultural routes of communications type of serial cultural heritage but are applicable to serial cultural heritage in general, which are:

- Applications of serial cultural heritage concept.
- Identification of serial cultural heritage.
- Recommendations on interpretation.
- Management issues concerning serial cultural heritage.
- Transnational issue of serial cultural heritage.

- Tourism and serial cultural heritage.

These issues are listed and discussed as follows:

6.3.1 Applications of serial cultural heritage concept

Serial cultural heritage concept was initiated within the World Heritage context, and up to the present, the applications of the concept is mostly involved with the World Heritage nominations. The concept has been used as means for successful nominations of groups of cultural heritage sites, especially in the present situation that most of the world-recognized outstanding individual sites have already been inscribed on the World Heritage List, remaining only those smaller sites with less outstanding values, therefore, State Parties tend to group these small sites together as series for World Heritage nominations.

In general context, however, sites which are serial by nature, for instance, the sites which have strong cultural linkage, such as the case study, Angkor – Phimai cultural route, are seen and treated as individual sites. The serial characteristic of these sites is neglected, which the author sees as a gap to be fulfilled because the recognition of the series should lead to a more profound and better understanding of the sites, its history and meaning.

Nevertheless, serial cultural heritage concept is most popularly and practically applied in tourism context, as seen in the creation of tourism routes. This can be considered the most active application of the concept, which seems to be ongoing in the present-day trend of cultural tourism. Tourism routes, however, are created for the sites which already have potential and attractiveness in view of tourism, therefore, sites which are not well-conserved, inaccessible, or situated too far away, may not be considered parts of the tourism routes even though they may have high historical, archaeological, or other academic values.

6.3.2 Identification of serial cultural heritage

Identification of serial cultural heritage, including categorization and values identification, is another challenging aspect. The author would like to propose that, for

identification of a certain serial cultural heritage sites, consideration must be based on these following aspects:

- Purpose of identification
- Purpose of categorization
- Purpose of values identification

If these 3 sets of purpose are clear, the results of identification, categorization, and values identification should be solid and verifiable, leading to successful means of treatment.

Identification should not be difficult for certain types of serial cultural heritage, for instance, pilgrimage routes and cultural routes of communication, however, the most challenging task in identification concerns the cultural theme series. Identification of cultural theme series depends on consideration and judgement of people involved in identification process. Designation of the series, selection of components, categorization, and values identification of the series and components, all of these activities should be conducted with thorough consideration, which should be based on solid understanding on the purpose of identification, for instance, identification for World Heritage nomination or identification for developing local conservation project; identification for creation of tourism route or identification for creation of spiritual route, etc. These purposes must be clear first and foremost. Failure in the identification process leads to creation of unconvincing series, which affect the series in terms of recognition and perception, conservation, management, and may lead to future disputes on values and other related aspects.

6.3.3 Recommendations on interpretation

For all types of serial cultural heritage recommended means of interpretation can be categorized into 2 types, 1st type: in-situ interpretation; and 2nd type: ex-situ interpretation:

1. Type 1: In-situ interpretation

Means of interpretation in this group are located, or conducted, in-situ, which include information boards, models, signage, and guided tour. Visitors learn about each cultural heritage site at the place itself, which is appropriate and satisfactory in the sense that visitors learn about the place during their actual visit. Many of the components of Angkor – Phimai cultural route in Thailand are already provided with information boards by the Fine Arts Department Regional Offices. However, the information is made in the approach of individual cultural heritage site, not the serial cultural heritage approach. This problem can be improved or solved by adding the map that shows the reconstructed line of the Angkor – Phimai route and locations of its components, highlighting the site where the information board is located. This will enhance visitors understanding of the route, the components, the immediate site and its relationship to the route and other components.

Guided tours are important means of interpretation, which is very useful and has better advantage over other means that visitors and the guide can exchange and learn about the site, and the route, interactively. It should be emphasized, however, that the presentation of the site should be based on the cultural route, instead of focusing on each individual site. The introduction to the site should make use of the provided information board and map before proceeding to the characteristics of the site, and its art and architecture.

As for other types of serial cultural heritage, information should be provided so that visitors can perceive linkage between components in the series as well as role and significance of each individual component in the series. This will be helpful not only in tourism aspect but also in other aspects, especially management which require clear understanding and perception of stakeholders of all components of the series.

2. Type 2: Ex-situ interpretation

Ex-situ interpretation comprises all forms of interpretation which are conducted outside the site, for instance, exhibitions in museums, pamphlets, brochures, publications, television programmes, internet media, etc. from which people can learn about the site without having to come to the actual place. This type of interpretation is convenient and is more accessible by general public, suitable to be used extensively to disseminate knowledge about the route and its components, as well as to establish general awareness and understanding of the series comprehensively.

Ex-situ interpretation should be inspiring and attracting people to come and visit the sites. In the best possible expectation, it should raise people's inquisitiveness, which should result in further research, study, and investigation of the route and its component. One of the most effective forms of ex-situ interpretation is drama, which has great impact and inspiration on the public in massive scale, as seen in the recent (2017-18) period drama “บุพเพสันนิวาส” (Love Destiny), based on history of late Ayutthaya period, that inspired people to wear Thai traditional costumes and increased the number of visitors to the historic city of Ayutthaya remarkably and unexpectedly. Nevertheless, it should always be noted that the effect of dramas is short-lived, and, although it can arouse interests in a great number of people, it does not always lead these people to be more aware of, or better understand the values of cultural heritage apart from the emotions and perceptions induced by the dramas. Combination of means, in this case, should be applied, that is, when people are interested in the cultural heritage site and come to visit in large number, the responsible organization should be well-prepared and simultaneously provide other forms of interpretation to give

knowledge, raise awareness and build understanding of the site before the popularity and public enthusiasm declines.

The author sees that ex-situ interpretation is very important for serial cultural heritage, of which the most important values is the meaning of the series. A very good example is the 7 Wonders of the World which still exists in people's memory even though all but one of the components of the series, the Great Pyramid of Giza, have been lost. Focus should be made on establishing knowledge and understanding of the series, represented by components, to the public, which can be conducted conveniently by means of communication technology of the present day.

6.3.4 Management issues concerning serial cultural heritage

Issues of management which are relevant to serial cultural heritage to be addressed in the following topics: management purposes, and values-based approach on conservation and management.

6.3.4.1 Management purposes

The main objective of management of cultural heritage is to find means of manifestation of the heritage's values (Pimonsathean, 2017), which, in case of serial cultural heritage, the most important value is the meaning of the series, in other words, the story, an intangible matter, that can be learned and understood by means of tangible elements, the series' components.

For the achievement of the main objective as mentioned, there are subsequent activities which must be clearly laid out in the management plan. The management plan, consequently, should be made to cover 3 sets of purpose which are essential to development and sustainability of cultural heritage series, that is, the educational, conservation, and tourism purposes, as follows:

1. Educational purpose

Management for educational purpose aims to make the site a place of learning. This set of purpose is based on the highest values of the site,

which are historical value, educational value, and authenticity.

Management plan should regard this set of purpose as the highest priority, therefore, knowledge and information about the site should be disseminated to the public as much as possible.

2. Conservation purpose

This set of purpose is related to the educational purpose that the conservation of the site, which should begin with in-depth study of the route and its components before making conservation plans and related works in conservation procedure, will be useful for the educational purpose of the site in terms of interpretation, and awareness raising. Conservation purpose should be set as the second priority after educational purpose.

3. Tourism purpose

Tourism is another set of purpose that should be considered, however, it may not be applicable for all components of the site since each component has different level of tourism potential, as seen in the results of questionnaire survey. Consequently, the tourism purpose should be the last in management priority and should be considered based on potential of each component.

The first 2 sets of purposes concern the values of the site, whereas the 3rd set of purpose concerns the use of the site, thus the fulfilment of all 3 purposes should cover both cultural and economic aspects of the serial cultural heritage.

6.3.4.2 Management planning

In Thailand, management of serial cultural heritage which are based on the serial cultural heritage concept has not been implemented. The most well-recognized series, Sukhothai and Associated Towns of Si Satchanalai and Kamphaeng Phet World Heritage site is an example, that is, the management of the 3 towns, Sukhothai, Si Satchanalai, and Kamphaeng Phet, which form the series, is carried out as separate

management units namely, Sukhothai Historical Park, Si Satchanalai Historical Park, and Kamphaeng Phet Historical Park, each historical park is managed individually under the Fine Arts Department. Very little information on the serial characteristics of these towns is provided, as seen in information boards at the site or at museums, although the World Heritage emblem marks are installed at all 3 sites (Chaisuwan, 2017; Kaongoen, 2016; Sangthong, 2017). This presents lack of joint management approach and ‘shared set of overall goals’ (see Chapter 2.5.3, management of serial cultural heritage).

Therefore, the future of serial cultural heritage management in Thailand should be considered in earnest, following these proposed steps in management procedure:

1. Identification of serial cultural heritage site.
2. Defining boundary for management.
3. Deciding on the purpose of treatment for the site.
4. Categorize and evaluate the site according to the set purpose(s).
5. Considering means for management e.g. does it require a special management unit, or is it sufficient to be managed by existing management unit?
6. Preparing management plan.
7. Monitoring the progress of the plan.
8. Revising the plan as necessary.

All of these steps must be based on the perception of the cultural heritage site as a series, which requires an overall management plan. Treatments for individual sites, or components of the series should be part of the management plan and must follow the policy of the series.

6.3.4.3 Values-based approach in conservation and management

Values-based approach in conservation and management has been introduced in heritage field around a decade ago. This approach takes a holistic view of the site,

based on the values that have been thoroughly examined by all parties involved before conservation and management policy and activities plan are made (de la Torre, 2001).

The concluded values as mentioned, contributed by all stakeholder groups, is made into a Statement of Significance, which will be used as basis for conservation and management. This statement should be made by a clear understanding of purpose and values, which can be stated based on aspect of consideration e.g. architectural, historical, archaeological, social, technological, etc.

As for the issue on serial cultural heritage, values-based conservation and management approach can be applied although the application of concept and implementation may be difficult because a serial cultural heritage site involves many groups of stakeholders, therefore, a lot of work must be carried out to find a consensus in conclusion on values and production of Statement of Significance, which must be made before proceeding with conservation and management planning.

Nevertheless, the values-based approach is commendable and should be encouraged for conservation and management of all types of cultural heritage sites, not only serial sites. Lessons learned from past conservation projects that had been carried out by top-down approach should be sufficient in confirming that cultural heritage belongs to people who should always have their opinions heard in all stages of conservation and management otherwise conservation projects could become causes for disputes and discriminations, which can be prevented or mitigated if the government and people work together from the beginning (see Chapter 2.5.2.2, Values-based approach in cultural heritage management) (Pimonsathean, 2017).

Finally, from values-based approach, the below quotation from Thailand Charter on Cultural Heritage Management, the most recent legal document on conservation and management adopted in 2011 (ICOMOS Thailand, 2011), articulates as follows:

“In the past, general people have understood that heritage conservation was the responsibility of the government carried out by the Fine Arts Department, Department of Religious Affairs, Office of Contemporary Art and Culture and National

Office of Buddhism, with certain level of collaborations from academic institutions and people who were interested, which was insufficient for covering the required works on conservation. Furthermore, there have not been incentive measures for owners of cultural heritage to encourage them to conserve their property, therefore, a large number of cultural heritage sites have been demolished or devalued due to lack of understanding. It is, therefore, greatly necessary for cultural heritage sites in Thailand to have guidelines for conservation and management that cover a greater diversity, based on participation from all concerning parties, especially, people who live in the sites, as well as respect for equality of human rights. People of our nation must share responsibility in protection, conservation and transfer of our cultural heritage to live as sources of learning to future generations, as stated in the Constitution of the Kingdom of Thailand: policy on decentralization and the expansion of the field of cultural heritage.”

6.3.4.4 Challenges in management

From field survey and interviews with several people who are involved in cultural heritage management, the author has noted some challenging aspects that concerns most of the cultural heritage cases in Thailand as follows:

- Balance of interests

Balancing of interests among various groups of stakeholders maybe the most serious problem that has been encountered in cultural heritage field, especially when values-based approach has been applied. The case of Phimai town is an interesting example, as Mr. Danai Tangchoedcha, Mayor of Phimai Subdistrict Municipality expressed in the interview on 21st August, 2017 that *“The people are concerned with their interests, gaining, losing; the Fine Arts Department concerns with conservation and cultural works; the Subdistrict Municipality concerns with taking care of the area and making the people satisfy”*, (Tangchoedcha, 2017).

The issue that the Mayor was referring to is the demarcation of Phimai Town for National Monument registration, which has been going on for

several years but there are still disputes on expropriation of land, remuneration, relocation, etc. Consequently, registration process of Phimai Town is not yet completed. Future work on nomination of Phimai and its cultural route to the World Heritage List, therefore, is expectable to encounter with rather serious obstacle, especially since demarcation of Phimai, the most important component of the series, is not concluded and not announced in the Government Gazette. Pimnara Kitchoteprasert, Head of Phimai Historical Park in 2017, opined on the World Heritage nomination of Phimai and its cultural route that she was worried about the boundary of the series and future management implementation (Kitchoteprasert, 2017).

- Time frame

Time frame is one of the most serious challenges in conservation and management in Thailand, since time and budget allocation are inseparably connected for all government projects. Conservation works should not be limited by time since there are possibilities to discover new evidence which could affect conservation plan and design, however, government procedure in financial management cannot be easily changed. As for serial cultural heritage, the application of values-based management approach must be supported by appropriate, or flexible time frame in order to reach the best conclusion on values and planning of successive activities. This may be the reason why cultural heritage sites in Thailand are managed individually even though it is recognized as series, as the case of Historic Town of Sukhothai and Associated Historic Towns World Heritage Site. It would be difficult, at present, to set up and implement a collective management plan for the Sukhothai series when time and annual budget does not allow for this matter.

Improvement on time frame for cultural heritage conservation and management is earnestly required for future success, especially if

perception on cultural heritage sites is expanded from individual sites to serial sites.

Time frame does not affect conservation and management of private cultural heritage sites, however, in case of serial cultural heritage, the government always plays important roles as owner, caretaker, or supporter of the series and components, therefore, it is unavoidable that serial cultural heritage would more or less be affected by the problem of time frame.

The 2 main challenges in cultural heritage field that the author lists here still prevail and do not seem to be easily overcome in the present situation and management environment.

6.3.5 The transnational issue of serial cultural heritage

Many of the serial World Heritage Sites are transnational properties. The Angkor – Phimai cultural route is also a transnational serial cultural heritage site although this thesis focuses on the part of the route in Thailand, therefore, the author would like to briefly address this issue.

In World Heritage terms, a transnational property is a type of serial property whose component parts exist within the territory of different States Parties what are not necessarily contiguous (UNESCO, 2012, p. 31). An interesting example is the nomination of the Qhapac Ñan-Camino Principal Andino (the pre-Hispanic Andean road) which started in 2003. The nomination projects involved representatives from the governments of 6 countries namely, Argentina, Bolivia, Colombia, Chile, Ecuador, and Peru, and almost 300 researchers. The most difficult challenge of this project lied in the differences in legal systems for cultural heritage protection that varied between countries, some countries had to enact specific laws to regulate and protect this road system. Argentina had to deal with the problem of differences in its provincial laws (Endere, 2014). Finally, the heritage site was inscribed in 2014 as “Qhapaq Ñan, Andean Road System”, by criteria (ii)(iii)(iv) and (vi) (UNESCO, 2018c).

From the mentioned case, difficulties should be foreseen and prepared for in all cases of transnational serial sites. Management must be well-planned and monitoring should be actively and continuously conducted to ensure stability and sustainability of the series. Failure in these respects may lead to weak linkage between components and disintegration of the serial management system, especially when components are located in different countries with different ideas on cultural heritage protection and management, as well as unequal capacities in management implementation.

As for the study of Angkor – Phimai cultural route, since political tension between Thailand and Cambodia still exists, it was not convenient to conduct field survey in Cambodia, therefore, the author used existing documents when referring to sites in Cambodia. Future works on joint nomination of the cultural route as a transnational serial site, hopefully, may take some time before situations allow. Nevertheless, interpretation of the cultural route as transnational serial site should always be understood and established because the values of the route lies in its holistic meaning which is not restricted by politics or physical boundary of the present day.

6.3.6 Tourism and serial cultural heritage

Cultural tourism and cultural theme series are mutually cooperative issues, since cultural tourism have been one of the most important sectors in tourism nowadays. It is interesting to understand that although the 'theme' of the tourist program is not a cultural route, for instance, a trip to historic city of Ayutthaya, the implementation of the program must follow a set 'route' to visit places that illustrate the meaning of "Ayutthaya historic city", thus a cultural series is formed or created to represent Ayutthaya for tourism purpose, although Ayutthaya is not a serial cultural heritage site.

As mentioned, theme tourist routes can be created in any circumstance as long as the created routes serve the purpose and satisfy tourists' expectations. These tourism theme series do not have to be permanently established or firmly based on academic values but are flexible and changeable, depending on tourists' demands, business factors, tourism trends, etc.

Benefits of the tourist routes are underlined by Zabbini (Zabbini, 2012, pp. 64-65), of which the most relevant to the serial cultural heritage issues are:

- Attraction of new tourists and repeat visitors;
- Diffusion of visitors and dispersion of income from tourism, leading to even distribution of economic benefits;
- Bringing lesser known attractions and features into the tourism business/product regions, states and countries;
- Tying up several attractions that individually have less tourism potential;
- Increase of the overall appeal of a destination.

However, it is interesting to see the summary of trends studies from World Heritage Sites in Asia and the Pacific, 2010 – 2012, that tourism had negative impact on cultural heritage in all studies regions, namely, West and Central Asia, South Asia, North-East Asia, South-East Asia, and the Pacific (UNESCO, 2012, pp. 58-59). It is mentioned further that although tourism has a wide range of positive consequences, especially as being an important source of income, it also creates pressures to the heritage properties when the demand of tourism industry is not geared towards sustainability. Examples of negative activities resulted from tourism are, for instance, major construction of facilities in and around the heritage sites, excessive use and inappropriate behaviour of tourists, vandalism, general disturbance and pollution (UNESCO, 2012, p. 80).

Commercialized management of culture to serve tourism industry is one of the most serious threats that lead to devalues identification or loss of culture, especially local culture which is vulnerable to external influences (ปิ่นรัชฎ์ กาญจนนัฐิธิ, 2552 (2009), p. 143). This issue should be considered for serial cultural heritage sites since their values greatly depend on the meaning, or intangible cultural values of the components which are integrated into the meaning of the series as a whole.

Problem in discrepancies among components of the series should also be noted as seen from the case of World Heritage Site in Thailand, Historic Town of Sukhothai and Associated Historic Towns. This serial site comprises Sukhothai, Si Satchanalai and Kamphaeng Phet, however, visitors tend to visit Sukhothai and Si Satchanalai as main destinations, whereas Kamphaeng Phet is the least visited although there are several interesting and unique historic sites worth visiting. Tourist program includes Kamphaeng Phet in its itinerary only when time permits, most of the programs simply pass the town on its way and go directly to Sukhothai. Tourism Authority of Thailand prioritizes Sukhothai first in promotion of World Heritage Site, with continuous tourist activities whereas such activities are held only once a year in Kamphaeng Phet (Sangthong, 2017). This incident indicates that the World Heritage status of the serial site does not ensure equally distribution of tourists among all components. In the case of Sukhothai, Si Satchanalai and Kamphaeng Phet, values and characteristics of cultural heritage sites at each town are considered equal as a serial World Heritage property, still discrepancies in recognition and popularity occur. As for Angkor – Phimai cultural route, great diversity of components could be one of the main challenges that this serial cultural site has to acknowledge and be prepared for.

6.4 Conclusion

Recommendations and discussions presented in this chapter are based on the study of serial cultural heritage and case study of Angkor – Phimai cultural route, with examples from serial sites in Thailand and foreign countries. They are not meant to form a rigid conclusion to the issues of Angkor – Phimai cultural route and serial cultural heritage in generic perspective, but rather a set of ideas for further thinking and explorations which could expand and enrich the knowledge in the subject.

As for Angkor – Phimai cultural route, its best possible future in the aspects of values, interpretation, and management lies in the establishment of recognition and perception of the site in serial perspective, which will also lead to successful tourism planning and activities. This, however, requires further studies, especially on the physical evidence of the road which will greatly enhance the values of the route and

verify the actual delineation of the road, which, at present, is hypothesized based on the locations of the dharmasalas.

Interpretation of the Angkor – Phimai route can be conducted in various forms: fundamental interpretation, academic interpretation, tourism interpretation, and international interpretation, each of which serves different purposes but all are complementary and can be carried out simultaneously.

Management should follow the vision to establish the perception of Angkor – Phimai cultural route as a serial cultural heritage site. Boundaries for management should be set up with prioritized zoning, that is, with core zone and buffer zone, in order to prepare appropriate measures for areas with different requirements for protection and management.

Tourism for Angkor – Phimai cultural route should emphasize the characteristics of the 'route' and, at present, when evidence of the physical road is imperceptible, good interpretation is required to make tourists understand the linkage between components of the route. Visit to actual road should be included in the tourist programs when evidence of the road is discovered, prepared, and accessible in the future. Plan for local participation in tourism should be encouraged and, if possible, local tourist steering committee should be set up for tourism management and monitoring that will benefit all parties equally.

Lessons learned from studying serial cultural heritage addressed in this chapter give an overview to several aspects concerning serial cultural heritage. It is clearly seen that the serial cultural heritage concept is most actively applied in tourism, which must be carefully planned so that the tourist programs can most successfully convey the meaning of the series.

Identification of serial cultural heritage should follow clear purposes of identification, categorization, and values identification. This is most evidently seen in the cases of World Heritage nomination.

Interpretation should consider various means, including dramas, which can greatly attract attention of people, however, after seeing dramas, the site should be well-prepared to provide visitors with knowledge and understanding to complete the learning process otherwise the actual information may be distorted by imagination and impressions created by dramas, which could lessen the true values of the cultural heritage.

Management of serial cultural heritage is expectable to be more challenging than management of individual sites due to the characteristics of the series that involve large and diverse groups of stakeholders. Nevertheless, the values-based management approach should be encouraged and attempted so that the series can best serve all parties, from the local people to the administration organizations, even to the government. The rights of people as owners of cultural heritage sites should always be respected and the authorities should aim for public participation and cooperation in all levels of management.

The final point of consideration is the transnational issue of serial cultural heritage, as the case of Angkor – Phimai cultural route, it is not possible at present (2019) to work on joint nomination that covers the entire route due to political tension. Serial cultural heritage sites which have been inscribed in World Heritage List have encountered difficulties that we can learn from. One of the most difficult challenges is the differences in legal systems between countries, which must be foreseen and prepared for all transnational serial sites.

Apart from the issues discussed in this chapter, there must be other relevant issues to be investigated further, especially, if the serial cultural heritage concept is recognized and practically applied to cultural heritage field in Thailand, which has not occurred up to the present. Nevertheless, the presented issues can be seen as initial recommendations and points of consideration for future works on serial cultural heritage.

Epilogue : The Philosophy of Serial Cultural Heritage

From the beginning of study until now, the author's understanding on the issue of serial cultural heritage has considerably expanded. All the topics covered in this thesis are the results of this understanding, supported by literature, field study, questionnaire and interviews, which are valuable sources of information and, the author hopes that this thesis, even though it is only part of the picture, could serve as a small contribution to the knowledge on serial cultural heritage.

An important point which the author would like to emphasize here is on the special characteristics of serial cultural heritage is its core value, that is, the meaning, or the 'story' that each serial cultural heritage site conveys. Such story is the essence, the life, of the series, which are learned and remembered regardless of physical existence of the components. As mentioned earlier in this thesis about the Seven Wonders of the World, which are always remembered by people although how the "Colossus of Rhodes" looks only depends on our imagination. The Angkor – Phimai road, as soon as the map is shown, was perceived in the mind's eyes of respondents to the questionnaire, even without having to see the actual road at all. Imagination plays such an important role in the perception and understanding of the story, represented by selected components. By means of storytelling, the series and components become alive, and, as Mr. Toshiyuki Kono, President of ICOMOS mentioned, "*opens a new page in history*" (Kono, 2018).

Thus, the author observes that serial cultural heritage is remarkable in its 'living' nature. Stories never die as long as people remember them and relate them to their descendants, thus serial cultural heritage sites will live on as long as their stories prevail. In the case of serial cultural heritage, tangible evidence comes after intangible values. We can visit a cultural heritage site and appreciate its architectural beauty without having to know anything about its history, on the contrary, visiting a dilapidated dharmasala may seem to be a waste of time until we learn that it is a travelers' rest house mentioned in an inscription of King Jayavarman VII of one thousand years ago. By learning the story, the ruinous dharmasala would become meaningful as part of a

picture of the long past, akin to the complete dharmasala of Ta Muean, the magnificent Phnom Rung and Mueang Tam, and the town of Phimai. The story is an intangible linkage that binds the places together, which is the strength and uniqueness of serial cultural heritage.

Because serial cultural heritage is based on intangible values, interpretation plays the most important role in conservation. Physical conservation of components may have to come second in this case. Interpretation and dissemination of knowledge are essential in the continuity of the stories which are foundation of cultural series. However, revision and refreshment of information should be regularly conducted for sustainability and development in terms of learning.

Nevertheless, since a cultural series is formed by selection of representative sites which are called 'components' of the series. These representative sites are not all which are related to the story and may be changed if new information or new evidences are discovered, therefore, a series is not rigid or complete, it only exists to convey the meaning or tell the story at a certain duration of time. Continuous study and exploration should be encouraged otherwise the series will become less inspiring and may 'die'.

Words of warning from scholars that the author would like to highlight here is, firstly, Relph's discussion on '*inauthentic attitudes to place*' (Relph, 1976), the lack of awareness of the deep and symbolic significances of places and no appreciation of their identities, which could occur self-consciously or unselfconsciously when people are not involved in places, especially when the relationship between people and places are based on tourism. This is interesting in the case of serial cultural heritage because it is, undeniably, heavily involved with tourism. In this point, the author's opinion is that we should be aware that the 2 main groups of people who are involved with the series are: firstly, the owners of components and their immediate communities, and secondly, tourists or visitors. Both groups have different purposes of use of the sites, however, it is necessary that they know the values of each individual site and its collective values as part of the series. People who live in the places and visitors should be able to use and

appreciate the places, which are components of the series, without creating negative impacts on the places and their values.

Since interpretation is required for the serial cultural heritage sites, it is unavoidable that a set of information has to be established, components have to be conserved, restored, or prepared to make them accessible to visitors. Relph's term '*museumisation*' is another word of warning in this respect (Relph, 1976). This is a critical issue that has prevailed in cultural heritage conservation field, not specifically relating to serial cultural heritage but to all categories of cultural heritage sites. Conservation, however, means interference to certain extent. The achievement in balancing the values to the treatments for most satisfactory or 'accurate' results has always been a great challenge to all involved in cultural heritage conservation. As for serial cultural heritage, the most important aspect of conservation is the interpretation of values. Museumisation of knowledge and information, therefore, should be the challenge that we have to concern.

'The managed past may end up not merely segregated but unwittingly destroyed', quoted Lowenthal (Lowenthal, 1985). This is interesting to the serial cultural issue since a series is formed by representative sites, called components, which, in most cases, do not comprise all relevant sites. The inclusion of all relevant sites, on the other hand, is not possible or very difficult, and may not be necessary to serve the purpose of the series yet the selection of representatives is often disputable. By personal experience, the author has observed that sometimes a visit to heritage town seemed like a guided tour that visitors were taken by the hand to places marked out on tourist map and the trip was supposedly complete. The town could be known and experienced by those places and visitors should be satisfied. Such incident deprived the place of adventurous spirit, there was no room for exploration, thus the series has lost its inspiring quality. This is another challenge to serial cultural heritage identification, creation and management.

The mentioned issues have led to the final remark that the author would like to conclude this thesis that, the most important attitude is to keep an open mind. A good

story can be retold, elaborated, expanded, annotated, and interpreted in various lights, and this should be the same with serial cultural heritage.



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Appendix I: World Heritage Serial Cultural Properties

World Heritage Serial Cultural Properties

The following table is the list of World Heritage serial cultural and mixed properties, 1982 – 2019, sorted by Date of Inscription:

Legend for Types:

A	=	Architecture
AL	=	Agricultural landscape
C	=	Representation of culture, kingdom, administrative system
CL	=	Cultural landscape
CR	=	Cultural route
De	=	Defence, military architecture and site
I	=	Industrial, manufacturing site
M	=	Mining site
Mo	=	Monuments
O	=	Others
Pi	=	Pilgrimage site
Pr	=	Prehistoric site
R	=	Religious places e.g. churches, temples, shrines
RA	=	Rock art site
S	=	Settlement, village, district
T	=	Town, city, capital
TC	=	Tombs, cemeteries
VIP	=	Association with important person(s)
W	=	Works of architect, engineer
WM	=	Water management site

World Heritage Serial Cultural and Mixed Properties (August 2019)

Reference: <http://whc.unesco.org/en/list>

No	Name	State Party/ Parties	Date of Inscription/ Extension(s)	Criteria	No. of components	Main Function/ Features	Type/ Note
1	Wieliczka and Bochnia Royal Salt Mines	Poland	1978/2008/2013	(iv)	3	Salt mines and saltworks castle.	M
2	Old City of Dubrovnik	Croatia	1979/1994	(i)(iii)(iv)	2	Important Mediterranean town from 13 th century.	T
3	Ancient Thebes with its Necropolis	Egypt	1979	(i)(iii)(vi)	3	Thebes, ancient capital of Egypt and its necropolises.	T
4	Historic Cairo	Egypt	1979	(i)(v)(vi)	5	Historic quarter of the city of Cairo.	T
5	Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur	Egypt	1979	(i)(iii)(vi)	2	Capital of Old Kingdom of Egypt. A site of the Great Pyramid, one of the Seven Wonders of the World.	T
6	Nubian	Egypt	1979	(i)(iii)(vi)	10	Group of	Mo

	Monuments from Abu Simble to Philae					monuments, saved from the dam project by UNESCO during 1960-1980.	
7	Fasil Ghebbi, Gondar Region	Ethiopia	1979	(ii)(iii)	8	Remains of Fasil Ghebbi fortress city.	T
8	Mont-Saint-Michel and its Bay	France	1979	(i)(iii)(vi)	2	Benedictine abbey and its cultural landscape.	CL
9	Prehistoric Sites and Decorated Caves of the Vézère Valley	France	1979	(i)(iii)	15	Prehistoric sites, Palaeolithic period and decorated caves, including Lascaux Cave.	Pr
10	Vézelay, Church and Hill	France	1979	(i)(vi)	2	Benedictine abbey, masterpiece of Burgundian Romanesque art and architecture, and its cultural landscape.	CL

11	Forts and Castles, Volta, Greater Accra, Central and Western Regions	Ghana	1979	(vi)	11	Fortified trading posts 15 th – 18 th centuries.	De
12	Antigua Guatemala	Guatemala	1979	(ii)(iii)(iv)	9	Capital of Captaincy General of Guatemala.	T
13	Rock Drawings in Valcamonica	Italy	1979	(iii)(vi)	6	Prehistoric rock drawings sites.	RA
14	Kathmandu Valley	Nepal	1979	(iii)(iv)(vi)	7	Representatives of culture of Kathmandu Valley.	C
15	Bryggen	Norway	1979	(iii)	2	Wharf of Bergen, part of Hanseatic League.	S
16	Auschwitz Birkenau German Nazi Concentration and Extermination Camp (1940-1945)	Poland	1979	(vi)	2	The principal Nazi concentration and extermination camp.	O
17	Stari Ras and	Serbia	1979	(i)(iii)	4	Archaeologica	T

	Sopocani					I remains of medieval town and church.	
18	Archaeological Site of Carthage	Tunisia	1979	(ii)(iii)(vi)		Ancient trading empire of the Mediterranean .	C
19	Paphos	Cyprus	1980	(iii)(vi)	3	Archaeological remains of Paphos ancient town.	T
20	Historic Centre of Rome, the Properties of the Holy See in that City Enjoying Extraterritorial Rights and San Paolo Fuori le Mura	Holy See, Italy	1980/1990	(i)(ii)(iii)(iv)(v)(vi)	2	Historic centre of Rome and the Holy See.	T
21	Megalithic Temples of Malta	Malta	1980/1992	(iv)	6	Megalithic temples.	R
22	Røros Mining Town and the Circumference	Norway	1980/2010	(iii)(iv)(v)	2	Copper mine town and cultural landscape.	M
23	Buddhist	Pakistan	1980	(iv)	2	Buddhist	C

	Ruins of Takht-i-Bahi and Neighbouring City Remains at Sahr-i-Bahlol	n				monastic complex and ruins of a fortified city.	
24	Taxila	Pakistan	1980	(iii)(vi)	18	Remains of Taxila ancient town.	T
25	Fortifications on the Caribbean Side of Panama: Portobelo-San Lorenzo	Panama	1980	(i)(iv)	2	Military architecture.	De/ In Danger
26	Ancient city of Bosra	Syrian Arab Republic	1980	(i)(iii)(vi)	2	A capital of Roman province of Arabia.	T
27	Kakadu National Park	Australia	1981/1987/1992	(i)(vi)(vii) (ix)(x)	3	Cave paintings, rock carvings, and archaeological sites.	RA/ Mixed site.
28	Roman Theatre and its Surroundings and the	France	1981	(iii)(vi)	2	Ancient theatre and Roman arch.	A

	“Triumphal Arch” of Orange						
29	Würzburg Residence with the Court Gardens and Residence Square	Germany	1981	(i)(vi)	2	Baroque palace and gardens.	CL
30	Medina of Fez	Morocco	1981	(ii)(v)	2	Ancient capital.	T
31	Fort and Shalamar Gardens in Lahore	Pakistan	1981	(i)(ii)(iii)	2	Masterpieces of architecture and gardens from Mughal Civilization.	CL
32	Ruins of Kilwa Kisiwani and Ruins of Songo Mnara	United Republic of Tanzania	1981	(iii)	2	East African ports.	T
33	M'Zab Valley	Algeria	1982	(ii)(iii)(v)	27	Human settlements, urban architecture.	S
34	Tipasa	Algeria	1982	(iii)(iv)	3	Archaeological remains of ancient port town.	T
35	Old Havana and its	Cuba	1982	(iv)(v)	11	Centre of Havana,	T

	Fortification System					Baroque and neoclassic architectural ensemble.	
36	From the Great Saltworks of Salins-les-Bains to the Royal Saltworks of Arc-et-Senans, the Production of Open-pan Salt	France	1982/2009	(i)(ii)(iv)	2	Saltworks sites, industrial architecture.	M
37	Jesuit Missions of the Guaranis: San Ignacio Mini, Santa Ana, Nuestra Senora de Loreto and Santa Maria Mayor, Ruins of Sao Miguel Das Missoes	Argentina, Brazil	1983/1984	(iv)	30	Remains of Jesuit Mission settlements	S/ Transnational
38	Rila Monastery	Bulgaria	1983	(vi)	5	Monastery complex.	R
39	City of Cuzco	Peru	1983	(iii)(iv)	4	Historic city centre.	T

40	Monastery of the Hieronymites and Tower of Belem in Lisbon	Portugal	1983	(iii)(vi)	2	Places representing Portuguese achievements	C
41	La Fortaleza and San Juan National Historic Site in Puerto Rico	United States of America	1983	(vi)	3	Military architecture, fortresses.	De
42	Group of Monuments at Mahabalipuram	India	1984	(i)(ii)(iii)(v) i)	3	Group of rock-carved sanctuaries.	R
43	Baalbek	Lebanon	1984	(i)(iv)	n/a	Remains of Baalbek ancient city	T
44	Alhambra, Generalife and Albayzín, Granada	Spain	1984/1994	(i)(iii)(iv)	2	Architectural ensembles.	A
45	Monastery and Site of the Escorial, Madrid	Spain	1984	(i)(ii)(vi)	2	Monastery and site.	R
46	Works of Antoni Gaudi	Spain	1984/2005	(i)(ii)(iv)	7	Works of an architect (Antoni Gaudi)	W

47	Royal Palaces of Abomey	Benin	1985	(iii)(iv)	2	Traditional palace architecture.	A
48	Painted Churches in the Troodos Region	Cyprus	1985/2001	(ii)(iii)(iv)	10	Churches	R
49	St Mary's Cathedral and St Michael's Church at Hildesheim	Germany	1985	(i)(ii)(iii)	2	Romanesque churches.	R
50	Medina of Marrakesh	Morocco	1985	(i)(ii)(iv)(v)	2	Historic sites of Marrakesh city.	T
51	Rock Art of Alta	Norway	1985	(iii)	5	Rock art in Alta Fjord.	RA
52	Cave of Altamira and Paleolithic Cave Art of Northern Spain	Spain	1985/2008	(i)(iii)	18	Decorated caves, Paleolithic cave art.	RA
53	Monuments of Oviedo and the Kingdom of the Asturias	Spain	1985/1998	(i)(ii)(iv)	6	Religious architecture (churches).	R
54	Old Town of Ávila with its	Spain	1985	(iii)(iv)	11	Sites representing	T

	Extra-Muros Churches					Avila old town, and 4 churches	
55	Santiago de Compostela (Old Town)	Spain	1985	(i)(ii)(vi)	2	Pilgrimage site, religious places and architecture.	Pi
56	Punic Town of Kerkuane and its Necropolis	Tunisia	1985/1986	(iii)	2	Remains of ancient town.	T
57	Göreme National Park and the Rock Sites of Cappadocia	Turkey	1985	(i)(iii)(v)(vii)	7	Rock-hewn sanctuaries and remains of human settlements.	RA
58	Historic Areas of Istanbul	Turkey	1985	(i)(ii)(iii)(iv)(v)	4	Representatives of Istanbul historic capital.	T
59	Roman Monuments, Cathedral of St Peter and Church of Our Lady in Trier	Germany	1986	(i)(ii)(iv)(vi)	9	Remains of ancient Roman town.	T
60	Khajuraho Group of Monuments	India	1986	(i)(iii)	15	Temples of Hinduism and Jainism.	R

61	Hattusha: the Hittite Capital	Turkey	1986	(i)(ii)(iii)(iv)	4	Archaeological remains of ancient capital.	T
62	Castles and Town Walls of King Edward in Gwynedd	United Kingdom of Great Britain and Northern Ireland	1986	(i)(iii)(iv)	4	Castles, walls military architecture.	De
63	Stonehenge, Avebury and Associated Sites	United Kingdom of Great Britain and Northern Ireland	1986	(i)(ii)(iii)	2	Megaliths, Neolithic sites.	Pr
64	Studley Royal Park including the Ruins of Fountains Abbey	United Kingdom of Great Britain and Northern Ireland	1986	(i)(iv)	2	Remains of church, castle and historic landscape.	CL
65	Imperial	China	1987/2004	(i)(ii)(iii)(iv)	2	Forbidden	A

	Palaces of the Ming and Qing Dynasties in Beijing and Shenyang			v)		City, Beijing, and Imperial Palace, Shenyang.	
66	The Great Wall	China	1987	(i)(ii)(iii)(iv)(v)(vi)	3	Military structure from c. 220 BC.	De
67	Hanseatic City of Lübeck	Germany	1987	(iv)	3	Elements of Lübeck, the former capital and Queen City of Hanseatic League.	T
68	Frontiers of the Roman Empire	Germany, United Kingdom of Great Britain and Northern Ireland	1987/2005/2008	(ii)(iii)(iv)	414	Boundary walls of the Roman Empire.	De/ Transnational
69	Budapest, including the Banks of the Danube, the Buda Castle	Hungary	1987/2002	(ii)(iv)	2	Important elements of Budapest, capital of Hungary.	T

	Quarter and Andrassy Avenue						
70	Great Living Chola Temples	India	1987/2004	(ii)(iii)	3	Temples built by kings in Chola Empire.	R
71	Group of Monuments at Pattadakal	India	1987	(iii)(iv)	3	Temples in Hinduism and Jainism.	R
72	Historic Centre of Mexico City and Xochimilco	Mexico	1987	(ii)(iii)(iv)(v)	2	Elements of historic part of Mexico City and Xochimilco urban heritage.	T
73	Historic Centre of Oaxaca and Archaeological Site of Monte Albán	Mexico	1987	(i)(ii)(iii)(iv)(v)	2	Cultural landscape of Monte Albán sacred site and city of Oaxaca.	CL
74	Cathedral, Alcazar and Archivo de Indias in Seville	Spain	1987	(i)(ii)(iii)(v)	3	Architectural heritage at centre of Seville.	A
75	Chaco Culture	United States of America	1987	(iii)	10	Cultural sites in Chaco Canyon, centre of	C

						Pueblo culture.	
76	Monticello and the University of Virginia in Charlottesville	United States of America	1987	(i)(iv)(vi)	2	Architectural design works by Thomas Jefferson, 3 rd President of USA.	W
77	Trinidad and the Valley de los Ingenios	Cuba	1988	(iv)(v)	2	Elements of Trinidad historic city.	T
78	Paleochristian and Byzantine Monuments of Thessalonika	Greece	1988	(i)(ii)(iv)	15	Early Christian architectural elements of Thessalonika town.	A
79	Old Towns of Djenné	Mali	1988	(iii)(iv)	4	Remains of Djenné old town	T/ In Danger
80	Old City of Salamanca	Spain	1988	(i)(ii)(iv)	8	Sites representing Salamanca, ancient university town	T
81	Kairouan	Tunisia	1988	(i)(ii)(iii)(v)(vi)	4	Monuments and sites representing Kairouan	T

						ancient city	
82	Xanthos-Letoon	Turkey	1988	(ii)(iii)	3	Capital of Lycia.	T
83	Canterbury Cathedral, St Augustine's Abbey, and St Martin's Church	United Kingdom of Great Britain and Northern Ireland	1988	(i)(ii)(vi)	3	Churches, religious architecture.	R
84	Cliff of Bandiagara (Land of the Dogons)	Mali	1989	(v)(vii)	2	Natural and cultural landscapes of Bandiagara plateau.	CL/ Mixed site.
85	Monasteries of Daphni, Hosios Loukas and Nea Moni of Chios	Greece	1990	(i)(iv)	3	Monasteries, Byzantine art.	R
86	Tongariro National Park	New Zealand	1990	(vi)(vii)(viii)	2	Natural and cultural landscapes of Maori people.	CL/ Mixed site.
87	Jesuit Missions of the Chiquitos	Plurinational State of Bolivia	1990	(iv)(v)	6	Settlements of Jesuit Christians.	S

88	Historic Centre of Saint Petersburg and Related Groups of Monuments	Russian Federation	1990	(i)(ii)(iv)(vi)	126	Elements of Saint Petersburg city.	T
89	Kiev: Saint-Sophia Cathedral and Related Monastic Buildings, Kiev-Pechersk Lavra	Ukraine	1990	(i)(ii)(iii)(iv)(v)	3	Cathedral and related buildings.	R
90	Abby and Altenmünster of Lorsch	Germany	1991	(iii)(iv)	2	Abbey and entrance building.	R
91	Borobudur Temple Compounds	Indonesia	1991	(i)(ii)(vi)	3	Buddhist temple compounds.	R
92	Historic Town of Sukhothai and Associated Historic Towns	Thailand	1991	(i)(iii)	3	3 historic towns representing Sukhothai Kingdom	T
93	Angkor	Cambodia	1992	(i)(ii)(iii)(iv)(v)	3	Ancient capital of Khmer Empire.	T

94	Historic Centre of Prague	Czech Republic	1992	(ii)(iv)(vi)	2	Elements of historic centre of Prague.	T
95	Mines of Rammelsberg, Historic Town of Goslar and Upper Harz Water Management System	Germany	1992/2010	(i)(ii)(iii)(iv)(v)	2	Copper, lead and tin mines; associated ancient town of Goslar; water management system	M
96	Pythagoreion and Haraion of Samos	Greece	1992	(ii)(iii)	2	Remains of port, temple, and related elements.	C
97	Cultural and Historic Ensemble of the Solovetsky Islands	Russian Federation	1992	(iv)	6	Churches, religious heritage.	R
98	Historic Monuments of Novgorod and Surroundings	Russian Federation	1992	(ii)(iv)(vi)	11	Historical monuments of Novgorod, 1st capital of Russia	T
99	White Monuments of Vladimir and Suzdal	Russian Federation	1992	(i)(ii)(iv)	8	Architectural heritage sites.	A

100	Buddhist Monuments in Horyu-ji Area	Japan	1993	(i)(ii)(iv)(vi)	2	Buddhist architecture.	R
101	Jesuit Missions of La Santísima Trinidad de Paraná and Jesús de Tavarangue	Paraguay	1993	(iv)	2	Remains of Jesuit Missions.	S
102	Baroque Churches of the Philippines	Philippines	1993	(ii)(iv)	4	Churches	R
103	Churches of Moldavia	Romania	1993/2010	(i)(iv)	8	Churches	R
104	Architectural Ensemble of the Trinity Sergius Lavra in Sergiev Posad	Russian Federation	1993	(ii)(iv)	n/a	Churches and associated buildings	R
105	Villages with Fortified Churches in Transylvania	Romania	1993/1999	(iv)	7	Villages, settlement system and religious architecture.	S
106	Levoca, Spišský Hrad and the	Slovakia	1993/2009	(iv)	2	Remains of military architecture	C

	Associated Cultural Monuments					and historic town.	
107	Archaeological Ensemble of Mérida	Spain	1993	(iii)(iv)	22	Remains of old city of Mérida.	T
108	Routes of Santiago de Compostela: <i>Camino Francés</i> and Routes of Northern Spain	Spain	1993/2015	(ii)(iv)(vi)	20	Christian pilgrimage routes	Pi
109	Birka and Hovgården	Sweden	1993	(iii)(iv)	2	Archaeological sites of Viking Age.	C
110	Coro and its Port	Venezuela	1993	(iv)(v)	2	Elements of Coro town.	T/ In Danger
111	Complex of Hué Monuments	Vietnam	1993	(iv)	14	Elements of Hué ancient capital.	T
112	Historic Ensemble of the Potala Palace, Lhasa	China	1994/2000/2001	(i)(iv)(vi)	3	Potala Palace, Buddhist temples and related elements.	CL
113	Historical	Georgia	1994	(iii)(iv)	3	Churches	R

	Monuments of Mtskheta						
114	Collegiate Church, Castle and Old Town of Quedlinburg	Germany	1994	(iv)	2	Church and historic town.	CL
115	City of Vicenza and the Palladian Villas of the Veneto	Italy	1994/1996	(i)(ii)	25	Palladian villas; city of Vicenza	T
116	Historic Monuments of Ancient Kyoto (Kyoto, Uji and Otsu Cities)	Japan	1994	(ii)(iv)	17	Elements of Kyoto ancient capital.	T
117	Earliest 16th-Century Monasteries on the Slopes of Popocatepetl	Mexico	1994	(ii)(iv)	14	Monasteries	R
118	City of Safranbolu	Turkey	1994	(ii)(iv)(v)	3	Elements of Safranbolu city.	T
119	San Agustín Archaeological Park	Colombia	1995	(iii)	3	Religious monuments and megalithic sculptures.	Mo

120	Kutná Hora: Historical Town Centre with the Church of St Barbara and the Cathedral of Our Lady at Sedlec	Czech Republic	1995	(ii)(iv)	2	Medieval town and religious architecture.	T
121	Ferrara, City of the Renaissance and its Po Delta	Italy	1995/1999	(ii)(iii)(iv)(v)(vi)	2	Elements of Ferrara city and landscape.	T
122	Historic Centre of Naples	Italy	1995/2011	(ii)(iv)	4	Monuments and sites representing Naples	T
123	Historic Villages of Shirakawa-go and Gokayama	Japan	1995	(iv)(v)	4	Vernacular villages.	S
124	Rice Terrace of the Philippine Cordilleras	Philippines	1995	(iii)(iv)(v)	5	Rice terrace cultural landscape.	CL
125	Monasteries of Haghpat and Sanahin	Armenia	1996	(ii)(iv)	3	Byzantine monasteries, religious architecture.	R

126	Mount Emei Scenic Area, including Leshan Giant Buddha Scenic Area	China	1996	(iv)(vi)(x)	2	Buddhist temple, Giant Buddha image and cultural landscape.	CL/ Mixed site.
127	Bauhaus and its Sites in Weimar, Dessau and Bernau	Germany	1996/2017	(ii)(iv)(vi)	11	School of architecture and its associated elements.	CL
128	Luther Memorials in Eisleben and Wittenberg	Germany	1996	(iv)(vi)	6	Places associated with Martin Luther	VIP
129	Archaeological Site of Aigai (modern name Vergina)	Greece	1996	(i)(iii)	2	Remains of Aigai, ancient capital of Macedon	T
130	Early Christian Monuments of Ravenna	Italy	1996	(i)(ii)(iii)(iv)(v)	8	Early Christian monuments	Mo
131	The <i>Trulli</i> of Alberobello	Italy	1996	(iii)(iv)(v)	6	Limestone dwelling architecture.	A
132	Ancient <i>Ksour</i> of Ouadane,	Mauritania	1996	(iii)(iv)(v)	4	Remains of ancient towns in the Sahara.	T

	Chinguetti, Tichitt and Oualata						
133	Pre-Hispanic Town of Uxmal	Mexico	1996	(i)(ii)(iii)	4	Remains of Mayan town.	T
134	Defence Line of Amsterdam	Netherl ands	1996	(ii)(iv)(v)	8	Fortification, means for controlling the waters.	WM
135	Historic Walled Town of Cuenca	Spain	1996	(ii)(iv)	4	Medieval town.	T
136	Ancient City of Ping Yao	China	1997	(ii)(iii)(iv)	3	Ancient city, its architecture and urban planning.	T
137	Classical Gardens of Suzhou	China	1997/2000	(i)(ii)(iii)(i v)(v)	9	Classical gardens design.	CL
138	Old Town of Lijiang	China	1997	(ii)(iv)(v)	4	Historic townscape.	T
139	Archaeologic al Areas of Pompei, Herculaneum and Torre Annunziata	Italy	1997	(iii)(iv)(v)	7	Archaeologica l sites of Roman towns.	T
140	Portovenere, Cinque Terre,	Italy	1997	(ii)(iv)(v)	4	Cultural landscape of	CL

	and the Islands (Palmaria, Tino and Tinetto)					towns on the coast.	
141	Residences of the Royal House of Savoy	Italy	1997	(i)(ii)(iv)(v)	14	Royal residences complex.	CL
142	Archaeological Site of Panamá Viejo and Historic District of Panamá	Panama	1997	(ii)(iv)(vi)	2	Historic town.	T
143	Las Médulas	Spain	1997	(i)(ii)(iii)(iv)(v)	4	Cultural landscape of ancient gold mining area.	M
144	Palau de la Música Catalana and Hospital de Sant Pau, Barcelona	Spain	1997	(i)(ii)(iv)	2	Barcelona architecture by Lluís Domènech i Montaner.	A
145	San Milán Yuso and Suso Monasteries	Spain	1997	(ii)(iv)(vi)	2	Monasteries, pilgrimage site.	Pi
146	Flemish Béguinages	Belgium	1998	(ii)(iii)(iv)	13	Architectural ensembles of	A

						houses, churches and related buildings and green spaces.	
147	Gardens and Castle at Kromeríž	Czech Republi c	1998		2	Baroque gardens and castle.	CL
148	Routes of Santiago de Compostela in France	France	1998	(ii)(iv)(vi)	78	Pilgrimage route	Pi
149	Cilento and Vallo di Diano National Park with the Archaeologic al Sites pf Paestum and Velia, and the Certosa di Padula	Italy	1998	(iii)(iv)	3	Cultural landscape of sanctuaries and settlements.	CL
150	Historic Monuments of Ancient Nara	Japan	1998	(ii)(iii)(iv)(vi)	7	Buddhist temples, Shinto shrines and remains of Imperial Palace.	Mo
151	Ouadi Qadisha (the Holy Valley) and the	Lebano n	1998	(iii)(iv)	2	Christian monastic settlement in cedars forest	S

	Forest of the Cedars of God (Horsh Arz el-Rab)					landscape.	
152	Prehistoric Rock Art Sites in the Côa Valley and Siega Verde	Portugal , Spain	1998/2010	(i)(iii)	17	Rock art sites.	RA/ Transn ational
153	Rock Art of the Mediterranean Basin on the Iberian Peninsula	Spain	1998	(iii)	758	Rock art sites.	RA
154	Naval Port of Karlskrona	Sweden	1998	(ii)(iv)	11	Naval city.	T
155	L'viv – the Ensemble of the Historic Centre	Ukraine	1998	(ii)(v)	2	Elements of medieval city.	T
156	City of Graz – Historic Centre and Schloss Eggenberg	Austria	1999/2010	(ii)(iv)	2	Historic city centre, urban heritage.	T
157	Belfries of Belgium and France	Belgium , France	1999/2005	(ii)(iv)	56	Belfries	O/ Transn ational

158	Dazu Rock Carvings	China	1999	(i)(ii)(iii)	5	Rock carving sites, religious and secular.	RA
159	Archaeological Sites of Mycenae and Tiryns	Greece	1999	(i)(ii)(iii)(iv)(v)(vi)	2	Remains of Mycenaean cities.	T
160	Mountain Railways of India	India	1999/2005/2008	(ii)(iv)	3	Railways in mountain topography.	CR
161	Dacian Fortresses of the Orastie Mountains	Romania	1999	(ii)(iii)(iv)	6	Fortresses, military and religious architecture.	De
162	Wooden Churches of Maramures	Romania	1999	(iv)	8	Wooden churches, architectural heritage.	R
163	Fossil Hominid Sites of South Africa	South Africa	1999/2005	(iii)(vi)	3	Fossil hominid sites	Pr
164	Ibiza, Biodiversity and Culture	Spain	1999	(ii)(iii)(iv)(ix)(x)	4	Marine and coastal ecosystems and archaeological sites.	CL/ Mixed site.
165	State Historical and Cultural Park	Turkmenistan	1999	(ii)(iii)	33	Remains of an oasis city.	T

	“Ancient Merv”						
166	Heart of Neolithic Orkney	United Kingdom of Great Britain and Northern Ireland	1999	(i)(ii)(iii)(iv)(v)	4	Neolithic monuments.	Mo
167	Jesuit Block and Estancias of Córdoba	Argentina	2000	(ii)(iv)	6	Jesuit block, architectural heritage and farming estates.	S
168	Major Town Houses of the Architect Victor Horta (Brussels)	Belgium	2000	(i)(ii)(iv)	4	Works of architect Victor Horta.	W
169	Churches of Chiloé	Chile	2000	(ii)(iii)	16	Churches	R
170	Ancient Villages in Southern Anhui – Xidi and Hongcun	China	2000	(iii)(iv)(v)	2	Traditional villages.	S
171	Imperial Tombs of the Ming and	China	2000/2003/2004	(i)(ii)(iii)(iv)(v)(vi)	14	Imperial tombs.	TC

	Qing Dynasties						
172	Archaeological Landscape of the First Coffee Plantations in the South-East of Cuba	Cuba	2000	(iii)(iv)	7	Remains of 19 th century coffee plantations.	AL
173	Assisi, the Basilica of San Francesco and other Franciscan Sites	Italy	2000	(i)(ii)(iii)(iv)(v)(vi)	2	Medieval art and architecture of Assisi.	A
174	Gusuku Sites and Related Properties of the Kingdom of Ryukyu	Japan	2000	(ii)(iii)(vi)	9	Remains of Ryukyu Islands culture.	C
175	Maloti-Drakensberg Park	Lesotho, South Africa	2000	(i)(iii)(vii)(ix)	2	Natural heritage and cave paintings sites.	CL/ Mixed site.
176	Land of Frankincense	Oman	2000	(iii)(iv)	4	Frankincense trees landscape and remains of caravan oasis.	CL
177	Gochang,	Republi	2000	(iii)	3	Prehistoric	TC

	Hwasun and Ganghwa Dolmen Sites	Republic of Korea				cemeteries	
178	Gyeongju Historic Areas	Republic of Korea	2000	(ii)(iii)	5	Buddhist monuments and sites	R
179	Archaeological Ensemble of Tàrraco	Spain	2000	(ii)(iii)	14	Monuments and sites representing the city of Tarraco	T
180	Catalan Romanesque Churches of the Vall de Boí	Spain	2000	(ii)(iv)	9	Churches.	R
181	Three Castles, Defensive Wall and Ramparts of the Market-Town of Bellinzona	Switzerland	2000	(iv)	3	Fortifications, castles and defensive walls. Defensive architecture.	De
182	Historic Town of St George and Related Fortifications, Bermuda	United Kingdom of Great Britain and Northern	2000	(iv)	24	Urban heritage and fortifications.	T

		n Ireland					
183	Medina of Essaouira (formerly Mogador)	Morocco	2001	(ii)(iv)	2	Fortified town, military architecture.	T
184	Churches of Peace in Jawor and Swidnica	Poland	2001	(iii)(iv)(vi)	2	Churches.	T
185	Samarkand – Crossroad of Cultures	Uzbekistan	2001	(i)(ii)(iv)	5	Historic town.	T
186	Minaret and Archaeological Remains of Jam	Afghanistan	2002	(ii)(iii)(iv)	4	Minaret and archaeological remains	C/ In Danger
187	Historic Centres of Stralsund and Wismar	Germany	2002	(ii)(iv)	2	Medieval towns.	T
188	Tokaj Wine Region Historic Cultural Landscape	Hungary	2002	(iii)(v)	7	Cultural landscape of wine production region.	AL
189	Late Baroque Townships of the Val di Noto (South-	Italy	2002	(i)(ii)(iv)(v)	8	Baroque towns.	T

	Eastern Sicily)						
190	Cultural Landscape and Archaeological Remains of the Bamiyan Valley	Afghanistan	2003	(i)(ii)(iii)(iv)(v)(vi)	8	Religious sites.	CL/ In Danger
191	Jewish Quarter and St Procopius Basilica in Trebic	Czech Republic	2003	(ii)(iii)	3	Jewish quarter ensemble.	S
192	Kunta Kinteh Island and Related Sites	Gambia	2003	(iii)(vi)	7	Remains, representation of European occupation of the African continent.	C
193	Rock Shelters of Bhimbetka	India	2003	(iii)(v)	2	Rock shelters with paintings, Mesolithic period.	RA
194	White City of Tel-Aviv - The Modern Movement	Israel	2003	(ii)(iv)	3	Planned modern urban area.	T
195	<i>Sacri Monti</i> of Piedmont and	Italy	2003	(ii)(iv)	9	Chapels and related elements of	R

	Lombardy					sacred mountain.	
196	Franciscan Missions in the Sierra Gorda of Querétaro	Mexico	2003	(ii)(iii)	5	Franciscan missions and related vernacular settlements.	S
197	Wooden Churches of Southern Malopolska	Poland	2003	(iii)(iv)	6	Wooden churches.	R
198	Renaissance Monumental Ensembles of Úbeda and Baeza	Spain	2003	(ii)(iv)	2	Urban heritage, Moorish period.	Mo
199	Gebel Barkal and the Sites of the Napatan Region	Sudan	2003	(i)(ii)(iii)(iv)(v)(vi)	5	Archaeological sites representing Napatan and Meroitic cultures.	C
200	Capital Cities and Tombs of the Ancient Koguryo Kingdom	China	2004	(i)(ii)(iii)(iv)(v)	5	Archaeological remains of cities and tombs.	C
201	Complex of Koguryo Tombs	Democratic Peoples'	2004	(i)(ii)(iii)(iv)(v)	12	Tombs	TC

		Republic of Korea					
202	Champaner-Pavagadh Archaeological Park	India	2004	(iii)(iv)(v)(vi)	12	Archaeological, historic and living heritage including prehistoric sites.	C
203	Etruscan Necropolises of Cerveteri and Tarquinia	Italy	2004	(i)(iii)(iv)	2	Etruscan cemeteries.	TC
204	Sacred Sites and pilgrimage Routes in the Kii Mountain Range	Japan	2004	(ii)(iii)(iv)(vi)	23	Shinto religious sites and pilgrimage routes	Pi
205	Um er-Rasas (Kastrom Mefa'a)	Jordan	2004	(i)(iv)(vi)	2	Archaeological remains from Roman, Byzantine and Early Muslim periods.	C
206	Landscape of the Pico Island Vineyard Culture	Portugal	2004	(iii)(v)	3	Cultural landscape of viniculture.	AL
207	Medieval	Serbia	2004	(ii)(iii)(iv)	4	Byzantine-	A/

	Monuments in Kosovo					Romanesque architectural heritage.	In Danger
208	Historic Centres of Berat and Gjirokastra	Albania	2005	(iii)(iv)	2	Ottoman architectural heritage, elements of towns.	T
209	Qal'at al-Bahrain – Ancient Harbour and Capital of Dilmun	Bahrain	2005	(ii)(iii)(iv)	2	Archaeological remains of ancient towns.	T
210	Struve Geodetic Arc	Belarus, Estonia, Finland, Latvia, Lithuania, Norway, Republic of Moldova, Russian Federation, Sweden, Ukraine	2005	(ii)(iv)(vi)	34	Station points of survey triangulations by astronomer Friedrich Georg Wilhelm Struve	O/ Transnational.

211	Historic Centre of Macao	China	2005	(ii)(iii)(iv)(vi)	2	Macao urban heritage.	T
212	Soltaniyeh	Islamic Republic of Iran	2005	(ii)(iii)(iv)	14	Persian architectural heritage.	A
213	Biblical Tels – Megiddo, Hazor, Beer Sheba	Israel	2005	(ii)(iii)(iv)(vi)	3	Remains of cities with Biblical connections.	T
214	Incense Route – Desert Cities in the Negev	Israel	2005	(iii)(v)	4	Towns and related elements of ancient incense and spice route.	CR
215	Syracuse and the Rocky Necropolis of Pantalica	Italy	2005	(ii)(iii)(iv)(vi)	3	Ancient city and tombs.	C
216	Kunya-Urgench	Turkmenistan	2005	(ii)(iii)	3	Elements of towns, including fortresses, mausoleums and minaret.	T
217	Yin Xu	China	2006	(ii)(iii)(iv)(vi)	2	Archaeological site of city and tomb.	C
218	Stone Circles of	Gambia	2006	(i)(iii)	4	Stone circles.	Mo/

	Senegambia	Senegal					Transnational.
219	Agave Landscape and Ancient Industrial Facilities of Tequila	Mexico	2006	(ii)(iv)(v)(vi)	2	Cultural landscape of agave fields and elements for tequila production.	AL
220	<i>Aflaj</i> Irrigation Systems of Oman	Oman	2006	(v)	5	Irrigation systems.	WM
221	Crac des Chevaliers and Qal'at Salah El-Din	Syrian Arab Republic	2006	(ii)(iv)	2	Castles.	Mo/ In Danger
222	Cornwall and West Devon Mining Landscape	United Kingdom of Great Britain and Northern Ireland	2006	(ii)(iii)(iv)	10	Cultural landscape of copper and tin mining.	M
223	Gobustan Rock Art Cultural Landscape	Azerbaijan	2007	(iii)	3	Rock art sites.	RA
224	Rideau Canal	Canada	2007	(i)(iv)	6	Canal and related	WM

						elements.	
225	Kaiping Diaolou and Villages	China	2007	(ii)(iii)(iv)	4	Villages, defensive village houses.	S
226	Samarra Archaeologic al City	Iraq	2007	(ii)(iii)(iv)	10	Elements of an Islamic capital.	T/ In Danger
227	Iwami Ginzan Silver Mine and its Cultural Landscape	Japan	2007	(ii)(iii)(v)	14	Cultural landscape of silver mine.	M
228	Parthian Fortresses of Nisa	Turkme nistan	2007	(ii)(iii)	2	Elements of cities.	T
229	Fujian Tulou	China	2008	(iii)(iv)(v)	10	Circular dwellings and landscape.	CL
230	Fortifications of Vauban	France	2008	(i)(ii)(iv)	12	Works of a military engineer (Sebastien Le Prestre de Vauban)	W
231	Berlin Modernism Housing Estates	German y	2008	(ii)(iv)	6	Housing estates, Modern architecture.	A
232	Armenian	Islamic	2008	(ii)(iii)(vi)	8	Armenian	R

	Monastic Ensembles of Iran	Republic of Iran				Christian monastic ensembles.	
233	Mantua and Sabbioneta	Italy	2008	(ii)(iii)	2	Renaissance towns.	T
234	Sacred Mijikenda Kaya Forests	Kenya	2008	(iii)(v)(vi)	8	Cultural landscape of forests and fortified villages.	CL
235	Melaka and George Town, Historic Cities of the Straits of Malacca	Malaysia	2008	(ii)(iii)(iv)	2	Historic cities.	T
236	Protective Town of San Miguel and the Sanctuary of Jesús Nazareno de Atotonilco	Mexico	2008	(ii)(iv)	2	Mexican Baroque town and religious architecture.	T
237	Wooden Churches of the Slovak Part of the Carpathian Mountain Area	Slovakia	2008	(iii)(iv)	9	Churches	R
238	Mount Wutai	China	2009	(ii)(iii)(iv)(2	Sacred	CL

				vi)		Buddhist mountain, architecture and cultural landscape.	
239	Royal Tombs of the Joseon Dynasty	Republic of Korea	2009	(iii)(iv)(vi)	18	Tombs	TC
240	La Chaux-de-fonds / Le Locle, Watchmaking Town Planning	Switzerland	2009	(iv)	2	Factory towns for watchmaking.	I
241	Australian Convict Sites	Australia	2010	(iv)(vi)	11	Convict sites	O
242	Historic Monuments of Dengfeng in "The Centre of Heaven and Earth"	China	2010	(iii)(vi)	8	Historical monuments of Dengfeng, a capital of China	T
243	Tabriz Historic Bazaar Complex	Islamic Republic of Iran	2010	(ii)(iii)(iv)	3	Ancient commercial centre.	O
244	Camino Real de Tierra Adentro	Mexico	2010	(ii)(iv)	60	Silver trade route	CR

245	Historic Villages of Korea: Hahoe and Yangdong	Republic of Korea	2010	(iii)(iv)	5	Historic villages	S
246	Prehistoric Pile Dwellings around the Alps	Austria, France, Germany, Italy, Slovenia, Switzerland and	2011	(iv)(v)	111	Remains of prehistoric pile-dwelling (stilt house) settlements	Pr/Transnational.
247	Coffee Cultural Landscape of Colombia	Colombia	2011	(v)(vi)	6	Cultural landscape of coffee fields and related buildings.	AL
248	The Persian Garden	Islamic Republic of Iran	2011	(i)(ii)(iii)(iv)(v)(vi)	9	Gardens, representative of Persian garden designs.	CL
249	Longobards in Italy. Places of the Power (568-774 A.D.)	Italy	2011	(ii)(iii)(vi)	7	Places associated with the Lombards.	VIP
250	Hiraizumi – Temples, Gardens and	Japan	2011	(ii)(vi)	5	Elements of Buddhist Pure Land concept.	CL

	Archaeological Sites Representing the Buddhist Pure Land						
251	Petroglyphic Complexes of the Mongolian Altai	Mongolia	2011	(iii)	3	Rock carvings and funerary monuments sites.	RA
252	Archaeological Sites of the Island of Meroe	Sudan	2011	(ii)(iii)(iv)(v)	4	Archaeological sites representing the Kingdom of Kush.	C
253	Ancient Villages of Northern Syria	Syrian Arab Republic	2011	(iii)(iv)(v)	8	Ancient villages.	S
254	Cultural Sites of Al Ain (Hafit, Hili- Bidaa Bint Saud and Oases Areas)	United Arab Emirates	2011	(iii)(iv)(v)	21	Prehistoric cultural sites of Al Ain.	Pr
255	Citadel of the Ho Dynasty	Vietnam	2011	(ii)(iv)	3	Citadel buildings and landscape.	De
256	Pearling, Testimony of an Island	Bahrain	2012	(iii)	20	Buildings and elements of pearling,	CL

	Economy					cultural landscape.	
257	Major Mining Sites of Wallonia	Belgium	2012	(ii)(iv)	4	Coal-mining sites	M
258	Rio de Janeiro: Carioca Landscapes between the Mountain and the Sea	Brazil	2012	(v)(vi)	4	Key natural and structural elements of Rio de Janeiro	CL
259	Historic Town of Grand-Bassam	Cote d'Ivoire	2012	(iii)(iv)	2	Colonial town.	T
260	Nord-Pas de Calais Mining Basin	France	2012	(ii)(iv)(vi)	108	Coal mining town	M
261	Cultural Landscape of Bali Province: the <i>Subak</i> System as a Manifestation of the <i>Tri Hita Karana</i> Philosophy	Indonesia	2012	(ii)(iii)(v)(vi)	5	Cultural landscape of rice terraces and water management systems.	CL
262	Archaeological Heritage of the Lenggong	Malaysia	2012	(iii)(iv)	4	Archaeological sites, prehistoric periods.	Pr

	Valley						
263	Rabat, Modern Capital and Historic City: A Shared Heritage	Morocco	2012	(ii)(iv)	3	Representatives of Rabat city in various periods.	T
264	Garrison Border Town of Elvas and its Fortifications	Portugal	2012	(iv)	7	Fortifications and bulwark dry-ditch system.	De
265	Bassari Country: Bassari, Fula and Bedik Cultural Landscapes	Senegal	2012	(iii)(v)(vi)	3	Settlements	S
266	Heritage of Mercury. Almaden and Idrija	Slovenia, Spain	2012	(ii)(iv)	12	Mercury mining sites	M/ Transnational.
267	Decorated Farmhouses of Hälsingland	Sweden	2012	(v)	7	Timber houses architecture.	A
268	Historic Monuments and Sites in Kaesong	Democratic People's Republic	2013	(ii)(iii)	8	Historic monuments and sites in Kaesong ancient capital	Mo

		c of Korea				of Koryo Dynasty.	
269	Hill Forts of Rajasthan	India	2013	(ii)(iii)	6	Forts.	De
270	Medici Villas and Gardens in Tuscany	Italy	2013	(ii)(iv)(vi)	14	Places associated with the Medicis.	VIP
271	Fujisan, Sacred Place and Source of Artistic Inspiration	Japan	2013	(iii)(vi)	25	Places associated with Fujisan	O
272	Wooden <i>Tserkvas</i> of the Carpathian Region in Poland and Ukraine	Poland, Ukraine	2013	(iii)(iv)	16	Tserkvas (churches)	R/ Transn ational.
273	University of Coimbra – Alta and Sofia	Portugal	2013	(ii)(iv)(vi)	2	University buildings.	O
274	Ancient City of Tauric Chersonese and its Chora	Ukraine	2013	(ii)(v)	8	Remains of Greek city.	T
275	Qhapaq Nan, Andean Road	Argenti na, Bolivia,	2014	(ii)(iii)(iv)(vi)	137	Road network.	CR/ Transn

	System	Chile, Colombia, Ecuador, Peru					ational
276	Silk Roads: the Routes Network of Chang'an- Tianshan Corridor	China, Kazakhstan, Kyrgyzstan	2014	(ii)(iii)(v)(vi)	3	A section of Silk Roads network.	CR/ Transnational
277	The Grand Canal	China	2014	(i)(iii)(iv)(vi)	n/a	An inland waterway system.	CR
278	Precolumbian Chiefdom Settlements with Stone Spheres of the Diquis	Costa Rica	2014	(iii)	4	Archaeological sites of ancient settlements	S
279	Vineyards Landscape of Piedmont: Langhe- Roero and Monferrato	Italy	2014	(iii)(v)	6	Vine growing areas and associated buildings.	AL
280	Tomioka Silk Mill and Related Sites	Japan	2014	(ii)(iv)	4	Silk production complex.	I
281	Pyu Ancient Cities	Myanmar	2014	(ii)(iii)(iv)	3	Remains of cities in Pyu	T

						Kingdom	
282	Palestine: Land of Olives and Vines – Cultural Landscape of Southern Jerusalem, Battir	Palestine	2014	(iv)(v)	2	Cultural landscape of hillside agricultural area.	AL/ In Danger
283	Namhansangong	Republic of Korea	2014	(ii)(iv)	2	Elements of a capital of Joseon Dynasty.	T
284	Bolgar Historical and Archaeological Complex	Russian Federation	2014	(ii)(vi)	2	Elements of medieval city.	T
285	Bursa and Cumalikizik: the Birth of the Ottoman Empire	Turkey	2014	(i)(ii)(iv)(vi)	8	Monuments and sites representing urban and rural systems of Ottoman Empire	C
286	Pergamon and its Multi- Layered Cultural Landscape	Turkey	2014	(i)(ii)(iii)(iv)(v)(vi)	9	Elements of an ancient town and landscape.	T
287	Tusi Sites	China	2015	(ii)(iii)	3	Archaeological	C

						l sites, representation of Tusi governance system	
288	Christiansfeld , a Moravian Church Settlement	Denmar k	2015	(iii)(iv)	n/a	Settlement of the Moravian Church (a planned town)	S
289	The par force hunting landscape in North Zealand	Denmar k	2015	(ii)(iv)	9	Hunting forests and park.	CL
290	Champagne Hillsides, Houses and Cellars	France	2015	(iii)(iv)(vi)	14	Sites of champagne production.	AL
291	The Climats, terroirs of Burgundy	France	2015	(iii)(v)	2	Vineyards cultural landscape.	AL
292	Susa	Islamic Republi c of Iran	2015	(i)(ii)(iii)(i v)	2	Archaeologica l sites of ancient settlements.	S
293	Arab-Norman Palermo and the Cathedral Churches of Cefalú and Monreale	Italy	2015	(ii)(iv)	9	Monuments and sites representing social-cultural linkage between	C

						Western, Islamic and Byzantine cultures	
294	Sites of Japan's Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining	Japan	2015	(ii)(iv)	23	Industrial heritage.	I
295	Baekje Historic Areas	Republic of Korea	2015	(ii)(iii)	8	Archaeological sites representing late period of Baekje Kingdom	C
296	Rock Art in the Hail Region of Saudi Arabia	Saudi Arabia	2015	(i)(iii)	2	Rock art sites.	RA
297	Ephesus	Turkey	2015	(iii)(iv)(vi)	4	Archaeological sites of ancient settlements.	S
298	San Antonio Missions	United States of America	2015	(ii)	6	Franciscan mission complexes	S

299	The Architectural Work of Le Corbusier, and Outstanding Contribution to the Modern Movement	Argentina, Belgium, France, Germany, India, Japan, Switzerland and	2016	(i)(ii)(vi)	17	Works of an architect (Le Corbusier)	W/ Transnational.
300	Stecci Medieval Tombstones Graveyards	Bosnia and Herzegovina, Croatia, Montenegro, Serbia	2016	(iii)(vi)	28	Cemeteries, tombstones.	TC/ Transnational.
301	Zuojiang Huashan Rock Art Cultural Landscape	China	2016	(iii)(vi)	3	Rock art sites.	RA
302	The Ahwar of Southern Iraq: Refuge of Biodiversity and the Relict Landscape of the Mesopotamia	Iraq	2016	(iii)(v)(ix)(x)	7	Archaeological sites of cities and wetland marsh areas.	CL/ Mixed site.

	n Cities						
303	The Persian Qanat	Islamic Republic of Iran	2016	(iii)(iv)	11	Qanat water management system.	WM
304	Antequera Dolmens Site	Spain	2016	(i)(iii)(iv)	4	Megalithic monuments.	Mo
305	Kujataa Greenland: Norse and Inuit Farming at the Edge of the Ice Cap	Denmark	2017	(v)	5	Subarctic farming landscape.	AL
306	Caves and Ice Age Art in the Swabian Jura	Germany	2017	(iii)	2	Archaeological sites of prehistoric human settlements in Ice Age.	Pr
307	Historic City of Yazd	Islamic Republic of Iran	2017	(iii)(v)	3	Sites representing historic city.	T
308	Venetian Works of Defence between the 16 th and 17 th Centuries: <i>Stato da Terra</i> – Western	Italy, Croatia, Montenegro	2017	(iii)(iv)	6	Defence works.	De/ Transnational.

	<i>Stato da Mar</i>						
309	Sacred Island of Okinoshima and Associated Sites in the Munakata Region	Japan	2017	(ii)(iii)	8	Representation of sacred island worship.	C
310	Aphrodisias	Turkey	2017	(ii)(iii)(iv)(vi)	2	Remains of ancient town.	T
311	Archaeological Border Complex of Hedeby and the Danevirke	Germany	2018	(iii)(iv)	22	Archaeological site of town and related elements.	T
312	Sassanid Archaeological Landscape of Fars Region	Islamic Republic of Iran	2018	(ii)(iii)(v)	8	Archaeological sites representing Sassanian Empire	C
313	Hidden Christian Sites in the Nagasaki Region	Japan	2018	(iii)	12	Christian villages, castle, cathedral.	S
314	Tehuacán-Cuicatlán Valley: originary habitat of	Mexico	2018	(iv)(x)	3	Natural heritage and archaeological remains of water	WM/ Mixed site.

	Mesoamerica					management system.	
315	Sensa, Buddhist Mountain Monasteries in Korea	Republic of Korea	2018	(iii)	7	Buddhist temples.	R
316	Al-Ahsa Oasis, an Evolving Cultural Landscape	Saudi Arabia	2018	(iii)(iv)(v)	12	Oasis and related elements.	CL
317	Ancient Ferrous Metallurgy Sites of Burkina Faso	Burkina Faso	2019	(iii)(iv)(vi)	5	Iron production sites.	I
318	Archaeological Ruins of Liangzhu City	China	2019	(iii)(iv)	4	Evidence of ancient urban civilization.	T
319	Bagan	Myanmar	2019	(iii)(iv)(vi)	7	Elements of ancient city.	T
320	Budj Bim Cultural Landscape	Australia	2019	(iii)(v)	3	Aquaculture system.	CL
321	Churches of the Pskov School of Architecture	Russian Federation	2019	(ii)	10	Churches	R
322	Dilmun Burial	Bahrain	2019	(iii)(iv)	21	Burial sites	TC

	Mounds						
323	Erzgebirge/K rušohorí Mining Region	Czechia , German y	2019	(ii)(iii)(iv)	22	Mining sites.	M
324	Krzemionki Prehistoric Striped Flint Mining Region	Poland	2019	(iii)(iv)	4	Prehistoric mining sites.	Pr
325	Megalithic Jar Sites in Xienkuang – Plain of Jars	Lao PDR	2019	(iii)	15	Prehistoric stone jars sites.	Pr
326	Mozu- Furuichi Kofun Group: Mounded Tombs of Ancient Japan	Japan	2019	(iii)(iv)	45	Ancient tombs.	TC
327	Ombilin Coal Mining Heritage of Sawahlunto	Indones ia	2019	(ii)(iv)	12	Coal mining sites.	M
328	Seowon, Korean Neo- Confucian Academies	Republi c of Korea	2019	(iii)	9	Academies.	O
329	The 20 th - Century	United States	2019	(ii)	8	Architectural works of Frank	W

	Architecture of Frank Lloyd Wright	of America				Lloyd Wright.	
330	Writing-on-Stone / Áísínai'pi	Canada	2019	(iii)	3	Rock art sites.	RA
331	Paraty and Ilha Grande – Culture and Biodiversity	Brazil	2019	(v)(x)	6	Cultural landscape and protected forests.	CL

Note: - Serial cultural World Heritage sites (properties) listed by year of inscription, as of August 2019, numbered 331 sites in total.

- Serial cultural World Heritage sites in this Table include Mixed World Heritage sites and sites which are in In Danger List.
- A cultural/mixed World Heritage property is considered as series when it comprises components situated in multiple locations (2 or more), as shown in the enclosed Map.
- Some properties, which are marked n/a in the Table, do not have information on location of components on the map, or number of components in the description, however, they are searchable by the keyword “serial” in the website of World Heritage List.

Number of Inscribed Serial Cultural and Mixed Properties by Type

Types are categorized by the author based on main function/feature of each property.

Number of sites in each type, from 1978 - 2019 are:

A - Architecture = 15 sites

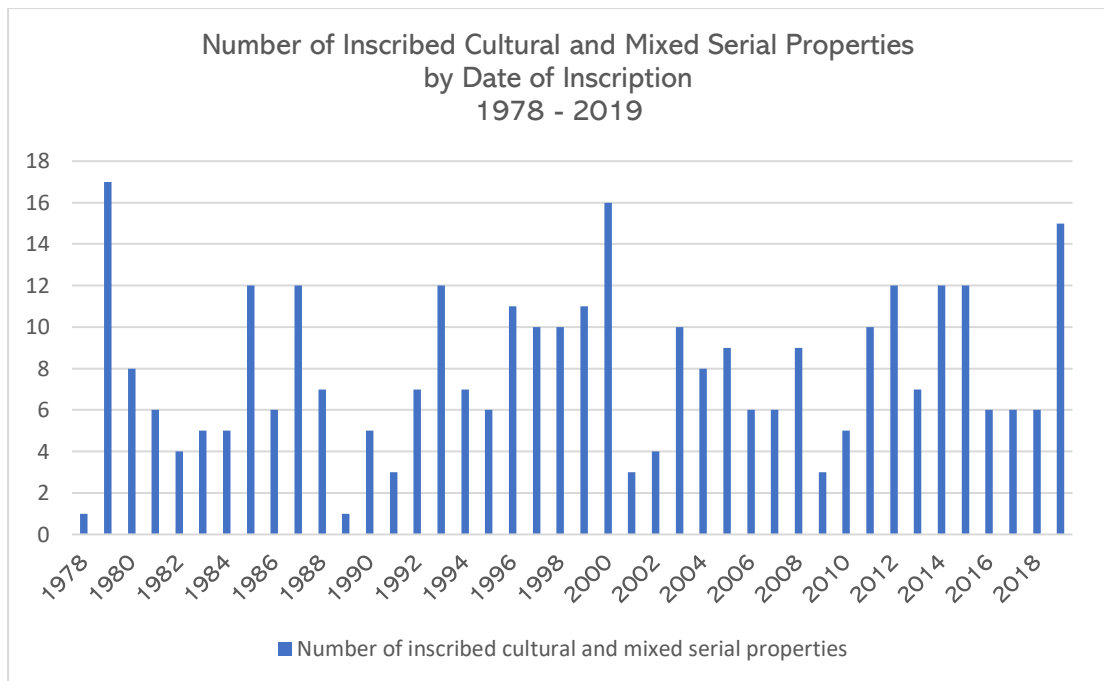
AL - Agricultural landscape = 10 sites

C - Representation of culture, kingdom, administrative system = 24 sites

CL - Cultural landscape	=	35	sites
CR - Cultural route	=	6	sites
De - Defence, military architecture and site	=	12	sites
I - Industrial, manufacturing site	=	4	sites
M - Mining site	=	12	sites
Mo - Monuments	=	10	sites
O - Others ³⁹	=	8	sites
Pi - Pilgrimage site	=	5	sites
Pr - Prehistoric site	=	9	sites
R - Religious places e.g. churches, temples, shrines	=	35	sites
RA - Rock art site	=	14	sites
S - Settlement, village, district	=	22	sites
T - Town, city, capital	=	88	sites
TC - Tombs, cemeteries	=	8	sites
VIP - Association with important person(s)	=	3	sites
W - Works of architect, engineer	=	6	sites
WM - Water management site	=	5	sites
Total	=	<u>331</u>	<u>sites</u>

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³⁹ Serial cultural properties specified as type "Others" comprise: 1 Nazi concentration camp, 1 group of belfries, 1 geodetic survey points site, 1 convict site, 1 commercial centre site, 1 group of places associated with Fuji San, 1 university site, and 1 series of academies, total 8 serial sites. "Site" here refers to a group of sites which are components of each serial property.



Number of World Heritage cultural (and mixed) properties by date of inscription, after organized and presented in chart form, shows continuity in the nomination and inscription of serial cultural heritage sites to the World Heritage List. Only in 1987 and 1990 that the number of inscribed serial site is 1 only. In other years there are no less than 3 inscribed serial sites. Average number of annually inscribed serial cultural and mixed properties from 1978 – 2019 is 7.88.

Appendix II: Questionnaire Survey and Results

Angkor – Phimai Cultural Route

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1. Questionnaire Survey on knowledge and perception of general people to the Angkor – Phimai Cultural Route (in Thailand)

Questionnaire is divided into 4 sections as follows:

Section 1: General knowledge on Angkor – Phimai Cultural Route.

Section 2: General knowledge and opinions on cultural heritage sites.

Section 3: Perception and opinions after getting additional information.

Section 4: Respondent's personal information.

Results of the survey are presented in the next part of this appendix.

Questionnaire Survey: Angkor – Phimai Cultural Route

Section 1: General knowledge on Angkor – Phimai Cultural Route.

1. Do you know Angkor?

Yes No

2. Do you know Angkor Wat?

Yes No

3. Have you been to Angkor or Angkor Wat?

Yes No

4. Do you know Phimai town?

Yes No

5. Do you know Prasat Phimai (Phimai Temple ปราสาทพิมาย)?

Yes No

6. Have you been to Phimai town or Prasat Phimai?

Yes No

7. you know that there was an ancient road that connected Angkor to Phimai?

- Yes
- No

Section 2: General knowledge and opinions on cultural heritage sites.

1. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

2. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

3. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

4. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

5. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

6. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

7. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

8. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

9. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name



10. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

11. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

12. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

13. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

14. Do you know this place, if you do, please specify place name?



- Yes
- No
- Not sure
- Place name

15. Do you know this place, if you do, please specify place name?



- Yes
 No
 Not sure
 Place name

16. Among places No.1 – 15, which place(s) has(have) special significance in your opinion (can choose more than 1 place)?

- No. 1 No. 2 No. 3 No. 4 No. 5
 No. 6 No. 7 No. 8 No. 9 No. 10
 No. 11 No. 12 No. 13 No. 14 No. 15

17. Among places No.1 – 15, which place(s) should be developed as tourist attraction in your opinion (can choose more than 1 place)?

- No. 1 No. 2 No. 3 No. 4 No. 5
 No. 6 No. 7 No. 8 No. 9 No. 10
 No. 11 No. 12 No. 13 No. 14 No. 15

18. Among places No.1 – 15, which place(s) should be nominated to the World Heritage List in your opinion (can choose more than 1 place)?

- No. 1 No. 2 No. 3 No. 4 No. 5
 No. 6 No. 7 No. 8 No. 9 No. 10

No. 11 No. 12 No. 13 No. 14 No. 15

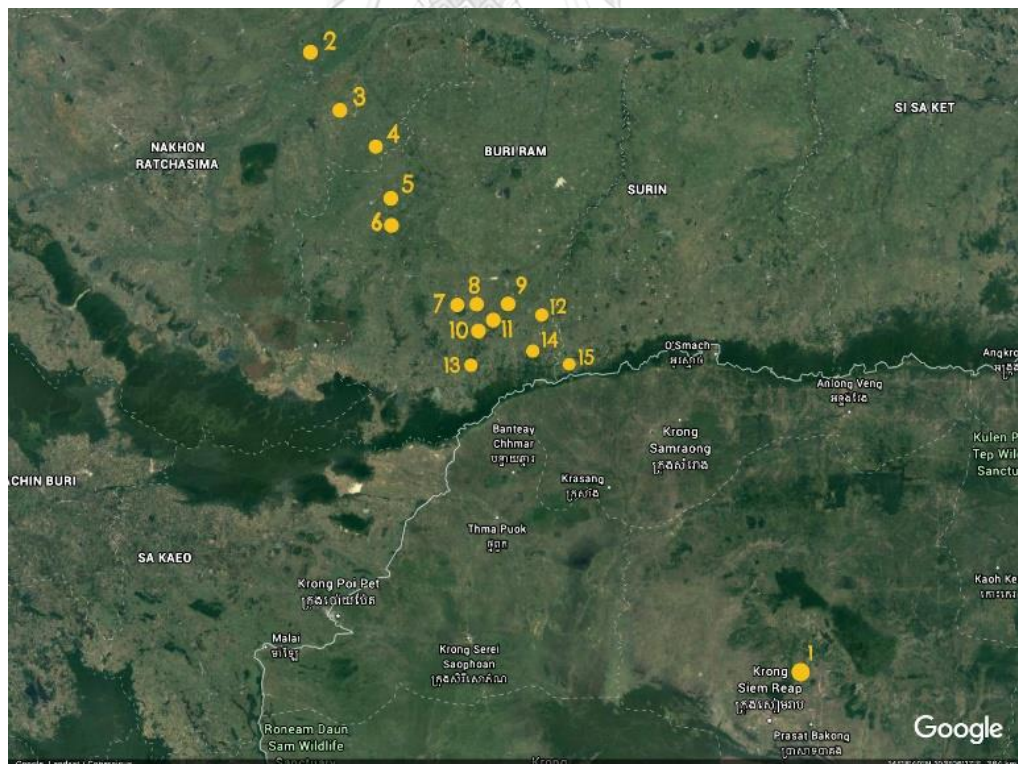
No potential place

19. Do you think that places No.1 – 15 have certain relationship or linkage, please specify reason?

- They have relationship or linkage.
- They do not have relationship or linkage.
- Some places have relationship or linkage, some have not.
- Not sure.
- Reason

Section 3: Perception and opinions after getting additional information.

Map of locations of cultural heritage sites no.1 – 15 is added



1. After looking at the map, do you think that places No.1 – 15 have certain relationship or linkage, please specify reason?

- They have relationship or linkage.
- They do not have relationship or linkage.
- Some places have relationship or linkage, some have not.
- Not sure.
- Reason

2. After looking at the map, among places No.1 – 15, which place(s) has(have) special significance in your opinion (can choose more than 1 place)?

- | | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <input type="radio"/> No. 1 | <input type="radio"/> No. 2 | <input type="radio"/> No. 3 | <input type="radio"/> No. 4 | <input type="radio"/> No. 5 |
| <input type="radio"/> No. 6 | <input type="radio"/> No. 7 | <input type="radio"/> No. 8 | <input type="radio"/> No. 9 | <input type="radio"/> No. 10 |
| <input type="radio"/> No. 11 | <input type="radio"/> No. 12 | <input type="radio"/> No. 13 | <input type="radio"/> No. 14 | <input type="radio"/> No. 15 |

3. After looking at the map, among places No.1 – 15, which place(s) should be developed as tourist attraction in your opinion (can choose more than 1 place)?

- | | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <input type="radio"/> No. 1 | <input type="radio"/> No. 2 | <input type="radio"/> No. 3 | <input type="radio"/> No. 4 | <input type="radio"/> No. 5 |
| <input type="radio"/> No. 6 | <input type="radio"/> No. 7 | <input type="radio"/> No. 8 | <input type="radio"/> No. 9 | <input type="radio"/> No. 10 |
| <input type="radio"/> No. 11 | <input type="radio"/> No. 12 | <input type="radio"/> No. 13 | <input type="radio"/> No. 14 | <input type="radio"/> No. 15 |

4. After looking at the map, among places No.1 – 15, which place(s) should be nominated to the World Heritage List in your opinion (can choose more than 1 place)?

- | | | | | |
|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <input type="radio"/> No. 1 | <input type="radio"/> No. 2 | <input type="radio"/> No. 3 | <input type="radio"/> No. 4 | <input type="radio"/> No. 5 |
| <input type="radio"/> No. 6 | <input type="radio"/> No. 7 | <input type="radio"/> No. 8 | <input type="radio"/> No. 9 | <input type="radio"/> No. 10 |
| <input type="radio"/> No. 11 | <input type="radio"/> No. 12 | <input type="radio"/> No. 13 | <input type="radio"/> No. 14 | <input type="radio"/> No. 15 |

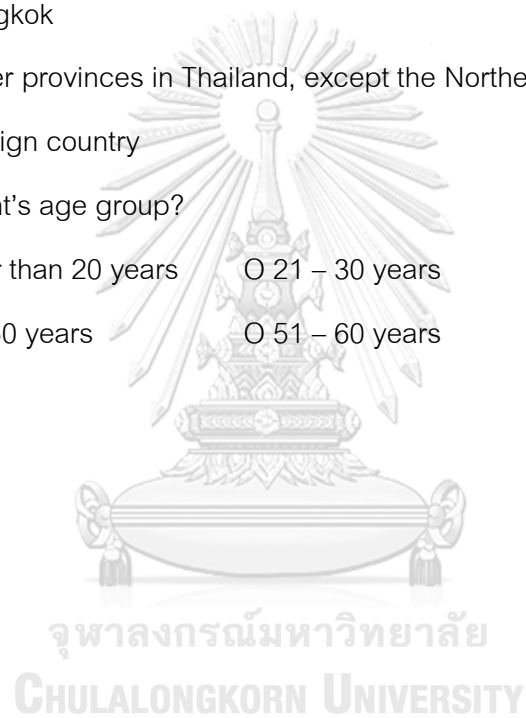
No potential place

Section 4: Information about respondent.

1. Respondent's occupation?

- Student
- Architect, landscape architect, town planner, interior designer, graphic designer, or visual art designer.
- Archaeologist, historian, art historian, or cultural academician.
- Painter, sculptor, photographer, or art professional.
- Tour guide, or professional in tourism and hospitality industry.
- Actor, singer, musician, or professional in performing art.
- Engineer, technician, or professional in engineering.
- Scientist.
- Computer professional.
- Teacher, or academic professional.
- Doctor, pharmacist, nurse, or professional in medicine.
- Accountant, economist, or professional in finance.
- Literature artist, linguist, or professional in language and literature.
- News reporter, journalist, or professional in public communication.
- Lawyer.
- Public administrator, diplomat.
- Politician.
- Business person, or private business owner.
- Social welfare, or occupation in charity and non-profit organization.
- Manager or administrator in public or private organization.
- Soldier, police officer.
- Monk, priest, monastery caretaker.
- General worker.

- Housewife, house caretaker.
 - Others.
2. Respondent's location?
- Nakhon Ratchasima province
 - Buriram province
 - Surin province
 - Other provinces in Northeast Thailand
 - Bangkok
 - Other provinces in Thailand, except the Northeast.
 - Foreign country
3. Respondent's age group?
- | | | |
|---|-------------------------------------|---|
| <input type="radio"/> Lower than 20 years | <input type="radio"/> 21 – 30 years | <input type="radio"/> 31 – 40 years |
| <input type="radio"/> 41 – 50 years | <input type="radio"/> 51 – 60 years | <input type="radio"/> 61 years and over |



2. Results of Questionnaire Survey: Angkor – Phimai Cultural Route

The questionnaire survey: Angkor – Phimai Cultural Route was conducted between 23rd April – 14th May, 2018, which was answered by 409 respondents. Results are presented in percentage, by section, as follows:

1. Section 1: General knowledge on Angkor – Phimai Cultural Route.

Table 1: General Knowledge on Angkor – Phimai Cultural Route

No.	Questions	Recognition (%)		Visit (%)		Responses
		Know	Don't know	Have visited	Have not visited	
1.	Do you know Angkor?	73.9	26.1			402
2.	Do you know Angkor Wat?	95.8	4.2			402
3.	Have you been to Angkor or Angkor Wat?			45.5	54.5	402
4.	Do you know Phimai town?	87.5	12.5			400
5.	Do you know Prasat Phimai?	95.5	4.5			402
6.	Have you been to Phimai town or Prasat Phimai?			66.6	33.4	401
7.	Do you know that there was an ancient road that connected Angkor to Phimai?	39.9	60.1			401

2. Section 2: General knowledge and opinion on cultural heritage sites.

Table 2.1: General Knowledge on Cultural Heritage Sites

No.	Places (shown in photographs for each question)	Recognition (%)			Name specification (%)*		Responses
		Know	Don't know	Not sure	Correct	Incorrect	
1.	Angkor Wat	71.7	5.2	16.4	57.4	1.7	403
2.	Prasat Phimai	53.6	17	24.7	44.1	1.2	405
3.	Ku Sila (Dharmasala)	18	74.9	20.4	1.5	2.2	402
4.	Prasat Huai Khaen (Dharmasala)	6.5	61.1	31.7	1.6	3.4	401
5.	Mueang Fai ancient town	5	71.9	22.6	2.7	3.1	398
6.	Prasat Choed Doei, Mueang Fai	1.2	87	11.7	0.4	4	401
7.	Prasat Phnom Rung	42.7	30.4	19.5	34.2	4.4	405
8.	Kut Ruesi Khok Mueang (Arogayasala)	9	51.6	38.4	2.3	5.8	401
9.	Prasat Ban Bu (Dharmasala)	5	71.3	23	4.5	3.3	400
10.	Prasat Mueang Tam	29.7	33.9	31.9	20	6.7	404
11.	Baray Mueang Tam	16	60	21	15.6	2.6	400
12.	Tao Sawai kiln site	7.3	76.2	15.3	6	2.8	399
13.	Ban Kruat sandstone quarry	10	73.9	13.4	7.8	3.9	402
14.	Ban Sai Tho 7 iron smelting site	4	85.3	10.4	1.2	1.9	402

15.	Prasat Ta Muean (Dharmasala)	8.8	72.5	17.8	6.9	3.1	400
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*Note: Percentage based on total number of responses, of which some respondents did not specify place name.

Table 2.2: Potentials of Cultural Heritage Sites

No.	Places (shown in photographs for each question)	Special significance (% from 395 responses)	Potential for tourism (% from 373 responses)	Potential for World Heritage nomination (% from 389 responses)
1.	Angkor Wat	94.4	82.8	79.4
2.	Prasat Phimai	79.5	80.7	72.2
3.	Ku Sila (Dharmasala)	11.9	21.2	7.2
4.	Prasat Huai Khaen (Dharmasala)	19.5	41.8	12.6
5.	Mueang Fai ancient town	40.8	42.1	31.9
6.	Prasat Choed Doei, Mueang Fai	4.8	7.8	2.6
7.	Prasat Phnom Rung	72.7	78.8	65
8.	Kut Ruesi Khok Mueang (Arogayasala)	41	63.3	31.6
9.	Prasat Ban Bu (Dharmasala)	23.3	45.8	18.3
10.	Prasat Mueang Tam	71.4	79.6	67.6
11.	Baray Mueang Tam	36.7	36.7	29.3
12.	Tao Sawai kiln site	22.8	32.7	13.4

13.	Ban Kruat sandstone quarry	20.3	29	11.6
14.	Ban Sai Tho 7 iron smelting site	6.8	13.9	5.9
15.	Prasat Ta Muean (Dharmasala)	27.1	42.1	18.8
16.	No potential places.	-	-	0.8

Table 2.3: Perception and Opinions on Linkage between Cultural Heritage Sites

No.	Question	Opinion (%)				Responses
		All places have linkage	No linkage	Some places have linkage	Not sure	
1.	Do you think that places No.1 – 15 have certain relationship or linkage, please specify reason?*	54.6	1	33.7	13.2	401

*Reasons concerning linkage between cultural heritage sites

Respondents think that the sites have relationship or linkage because:

- Sites have similarities in art and architectural style. (4.8%)
- Sites are located on the same line/route/Royal Road to Angkor. (4.4%)
- Sites belong to Khmer culture. (4%)
- Sites belong to contemporary culture and continuous periods. (3.4%)
- Sites are important historical places with historical linkage. (0.6%)
- Sites are related by the same beliefs. (0.6%)

- Sites are located near to each other/ located in the same place. (0.4%)
- Sites were built based on ancient beliefs. (0.2%)
- Sites were built for related purposes. (0.2%)
- Sites are related by political powers. (0.2%)
- Other reasons. (5.5%)

3. Section 3: Perception and opinions after getting additional information.

Table 3.1: Perception and Opinions on Linkage between Cultural Heritage Sites after Seeing the Map

No.	Question	Opinion (%)				Responses
		All places have linkage	No linkage	Some places have linkage	Not sure	
1.	After looking at the map below, do you think that places No.1 – 15 have certain relationship or linkage, please specify reason?*	69.9	7	18.3	40	399

*Reasons concerning linkage between cultural heritage sites

Respondents think that the sites have relationship or linkage because:

- Sites are located on the same line/route/Royal Road to Angkor. (19.5%)
- Sites belong to Khmer culture. (2.1%)
- Sites belong to the same civilization/ culture. (2.1%)
- Sites were built for related purposes. (0.6%)
- Sites have similarities in art and architectural style. (0.3%)
- Sites are important historical places with historical linkage. (0.3%)

- Sites are located near to each other. (3%)
- Photographs taken from the same place. (0.3%)
- Sites are tourist attractions. (0.3%)
- Sites are located in Phimai area. (0.3%)
- Other reasons. (8.3%)

Table 3.2: Potentials of Cultural Heritage Sites after Seeing the Map

No.	Places (shown in photographs for each question)	Special significance (% from 395 responses)	Potential for tourism (% from 373 responses)	Potential for World Heritage nomination (% from 389 responses)
1.	Angkor Wat	91.7	79.8	76.8
2.	Prasat Phimai	81.6	79.8	76.5
3.	Ku Sila (Dharmasala)	19.1	27.1	14.8
4.	Prasat Huai Khaen (Dharmasala)	30.2	43.4	21.6
5.	Mueang Fai ancient town	44.3	46.1	31.5
6.	Prasat Choed Doei, Mueang Fai	9.8	13.5	8.6
7.	Prasat Phnom Rung	69.8	74.3	65.2
8.	Kut Ruesi Khok Mueang (Arogayasala)	42.3	57.7	35
9.	Prasat Ban Bu (Dharmasala)	30.5	46.1	27.2
10.	Prasat Mueang Tam	68.3	75.4	67.9
11.	Baray Mueang Tam	39.8	40.1	32.6
12.	Tao Sawai kiln site	21.4	32	20.5

13.	Ban Kruat sandstone quarry	21.7	30.4	19.4
14.	Ban Sai Tho 7 iron smelting site	12.3	19.9	10.8
15.	Prasat Ta Muean (Dharmasala)	33	43.9	26.7
16.	No potential places.	-	-	1.9

4. Section 4: Respondent's personal information.

Table 4.1: Respondents Occupations

Occupations	%	Responses
Architects, landscape architects, town planners, interior designers, graphic designers, or visual art designers	24	329
Teachers, or academic professionals	9.4	329
Students	9.1	329
Archaeologists, historians, art historians, or cultural academicians	7.3	329
Accountants, economists, or professionals in finance	5.5	329
Engineers, technicians, or professionals in engineering	5.2	329
Business persons, or private business owners	5.2	329
General workers	5.2	329
Others	5.2	329
Scientists	3.6	329
Doctors, pharmacists, nurses, or professionals in	3.3	329

medicine		
Managers or administrators in public or private organizations	2.7	329
Soldiers, police officers	2.1	329
Tour guides, or professionals in tourism and hospitality industry	1.8	329
Computer professionals	1.8	329
Housewives, house caretakers	1.8	329
Literature artists, linguists, or professionals in language and literature	1.5	329
News reporters, journalists, or professionals in public communication	1.5	329
Painters, sculptors, photographers, or art professionals	1.2	329
Public administrators, diplomats	0.9	329
Actors, singers, musicians, or professionals in performing art	0.6	329
Social welfare, or occupations in charity and non-profit organization	0.6	329
Lawyers	0.3	329

Table 4.2: Respondents Locations

Locations	%	Responses
Bangkok	71.1	405
Other provinces in Thailand, except the Northeast	16	405

Other provinces in Northeast Thailand	5.9	405
Nakhon Ratchasima province	4.7	405
Foreign countries	1.7	405
Buriram province	0.2	405
Surin province	0.2	405

Table 4.3: Respondents Age Groups

Age Groups	%	Responses
51 – 60 years	32.1	405
41 – 50 years	20.5	405
31 – 40 years	20	405
21 – 30 years	14.3	405
61 years and over	11.4	405
Lower than 20 years	1.7	405

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Monuments in Phuket Town”), Archaeology Division, Fine
Arts Department, 1990 (researcher and co-author)

- “The Thai Houses”, River Books, Bangkok, 2001 (co-
author)

- “174 มรดกสถาปัตยกรรมในประเทศไทย” (“174
Architectural Heritage in Thailand”), Association of Siamese
Architects under Royal Patronage, 2004 (co-author)

- “สึนามิกับมรดกวัฒนธรรมอันดามัน” (“Tsunami and
Andaman Cultural Heritage”), ICOMOS Thailand, 2005
(editor, author)

- “หนังสือสมุดภาพพระประวัติเจ้าพระคุณสมเด็จพระสังฆราชเจ้ากรมหลวงวชิรญาณวงศ์ วัดบวรนิเวศวิหาร”
 (“Somdej Phra Sangkharatchao Krommaluang
Vajirañanavongse, the Supreme Patriarch : Biography”),

2008 (author)

- “สมเด็จพระวันรัต สมัยรัตนโกสินทร์” (“Somdej Phra Vanarat in Rattanakosin Era”), 2010 (author)

- Nomination document for UNESCO’s Asia Pacific Awards for Cultural Heritage Conservation 2011 “Wat Thepthidaram Worawihan : Scriptures Hall Conservation Project”, 2011 (author, the project received UNESCO’s Award of Merit in 2011)

- Nomination document for UNESCO’s Asia Pacific Awards for Cultural Heritage Conservation 2013 “Phra Borammathat Maha Chedi and Pharin Pariyattithammasala Conservation Project, Wat Prayurawongsawas Worawihan”, 2013 (author, the project received UNESCO’s Award of Excellence in 2013)

- Nomination Dossier of Phu Phrabat Historical Park for Nomination on the World Heritage List, 2015 (translator, author, editor)

AWARD RECEIVED

Thai Contemporary Design Award, 1988, for Si Satchanalai Historical Park Tourist Information Centre, Si Satchanalai, Sukhothai. Awarded by Association of Siamese Architects under the Royal Patronage.