

Study on the Temples in Amyint Area, Monywa

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Abstract—Amyint become an important town after the falloff Bagan. Its significant location residing at the east bank of Ayeyarwaddy River was mainly due to communication linked with the Myanmar King's cities. Along with the spread of Buddhism in Myanmar, Amyint has developed with its religious buildings such as stupas, temples, monasteries, ordination halls, and public rest houses, etc. Amyint has a list of the most precious works of religious architecture following a historical timeline. Because of the lacking of analytical study of religious structures in Amyint, the author can trace up the ancient monuments in Amyint Area.

As there are still more than hundred ancient monuments, they are hardly recorded and studied in the aspect of architecture. Firstly, the religious structures will be invented or recorded based on historical background, physical background, social and economical background, religious faiths and belief of Amyint region.

Secondly, Study and Classification of Temples in Amyint Area. Finally, Temples in Bagan Period are studied by focusing with the architectural approach such as types, sizes, space, form, physical aspects, construction materials and decorative elements.

Keywords—Amyint, religious structures, Temple, ancient monuments, architectural approach

I. INTRODUCTION

Amyint is a big village located on the east bank of the Chindwin River, and included in Chaung-U Township, Monywa District, Sagaing Region. It is about twelve miles south to Monywa Township and seven miles west to Chaung-U Township shown in Figure 1. Amyint area was somewhat recorded and studied in the outlook of architecture [3].

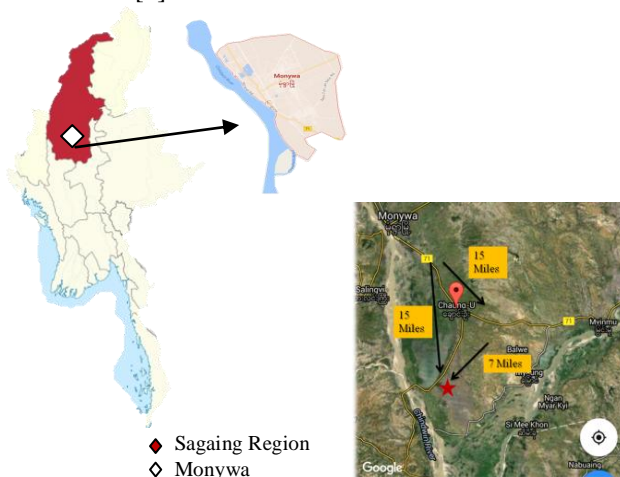


Figure 1, Monywa, Sagaing Region, Myanmar

After the Buddhism was firstly introduced and flourished in Bagan, Myanmar Kings tried to establish it in Amyint. During the reign of Myanmar Kings, Amyint was used to be a city with a high wall and moat. Also many religious structures from Bagan to Konbaung Period Style are mostly found in this area[1].

II. AIMS AND OBJECTIVES

1. To study and analyse the development and process of Myanmar Religious Architecture from ancient to present time.
2. To know Religious Architecture in Amyint
3. To record for survey of religious buildings or measure drawing for religious buildings of this area
4. To be a part of supporting for the inventing and recording of buildings.

III. SCOPE

Since 2013, the ancient buildings within Amyint areas have being maintained by the Department of Archaeology. Nowadays, this Department has recorded and numbered one hundred and sixty five ancient buildings. This study is emphasized to study about the religious buildings in the ancient monuments zone including one hundred and sixty five ancient buildings which is shown in Figure 2. And then these religious buildings are typological classification. Among them, Temples in Bagan Period are studied by focusing with the architectural approach such as types, mural painting, structural system and materials [3].

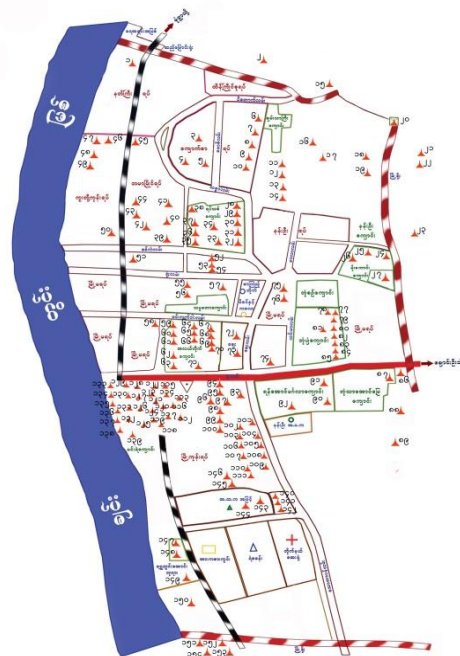


Figure 2, Research Area Amyint boundary in Monywa District

IV. METHOD OF APPROACH

The following methods are approached to study architectural aspects of temples in Bagan. Literature review for a brief history, economic, socio-economic and religious beliefs of Amyint Area. Architectural aspects of Temple No. 118 and Temple No. 131 would be studied with three aspects such as space, form, physical aspects,

construction materials and decorative elements. Development and changes of architectural typology of temples along Bagan periods are studied. Finally, conclusions on architectural aspects of temples in Amyint Area are described from the above studies.

V. BACKGROUND HISTORY OF AMYINT

Traditionally, the name Amyint derived from Kan-Myint or Kyan-Ku-Myint. In a story, a rhinoceros carried by the water current in the Chindwin River could not land on shore at a particular place because the river had a deep cliff there. The place was named as Kan-Myint (high bank) or Kyan-Ku-Myint after this incident. According to the inscriptions, King Manaw Raza donated a land as Amyint village and ten pagodas, nine deities, nine caves, nine hills, nine lakes and nine open sluice gates were built with the establishment of Amyint. In 1174 AD, King Narapati Sithu refounded and renovated the moat, city wall, etc... Besides, Amyint was contemporary to Bagan because it is one of the twenty-two towns which had to support 400 soldiers to Bagan royal army [1].

The history of Amyint goes back to Bagan Dynasty. It has gone through ages and during the reign of Myanmar Kings, it used to be a city with a high wall and moat. Amyint, a big village, is in Chaung-U Township, Monywa District, Sagaing Region. Chaung-U was used to be included in Amyint Township through the Konbaung Period. But in colonial period Chaung-U became a township while Amyint became a village. At present Amyint is a big village under the administrative unit of Chaung-U Township [3].

Nowadays, Amyint Town with a total area of 2 square miles has population of about 7043 with 1042 householdings in 2017. Due to dealing with the outline of Amyint from the earliest times to the end of Innwa Period in 1752, it evidences Amyint was contemporary to Bagan [3].

VI. ECONOMY

The place is close to the confluence of two great rivers – Chindwin and the Ayeyarwady - and there are many streams, lake, pond and creeks. Some people of the time live on fishing. The water from those streams and lakes were very useful in plantations. Not only rice but also other crops and vegetables were also grown in the region. Inscriptions revealed the fact that the soil was rich in Amyint and therefore rice was grown mainly [1].

At the time of Myanmar Kings, all people except those of governing status who lived in the royal city were farmers. Agriculture was the country's main source of income. In the post Bagan period, the damage was done in agriculture due to Chinese invasion. At the time of Myanmar Kings, the important transportation and communication depended upon the water route [1].

Cultivation and manpower were the most basic source of productive force in feudal economic system. Therefore Myanmar Kings engaged wars as an easy means to recruit manpower as wars provided prisoners of wars. And Kings placed people of crown service groups, especially soldiers in fertilized regions which are the

centre of communication. They worked in farms when there was no war in the country. Amyint became a place of good business with cleared out human resources. Amyint was a place of agriculture and animal husbandry [1].

Palmyra palm production was the second most important source of income in Amyint. Some inscriptions mentioned that Palmyra palm trees were one among offering things for religious purposes. Palmyra palm trees are used many ways like the production of Palm sugar or Jiggery, cheroots from palm leaves, hand-fans, huts, chairs, toys and other types of containers or baskets. Therefore, Palmyra palm is still important basic material for people in Amyint. Another family business was cloth weaving. The weather in this area is suitable for cotton plantation since it is hot and dry. Therefore, cloth weaving was very common in Amyint [1].

VII. SOCIO-ECONOMIC LIFE

The society of Amyint before the Konbaung Period was divided into two social groups; ruler and the ruled. Some people of Crown service groups were settled in Amyint. The later of that comprised of crown servicemen and A-thi (commoner) [1].

After the Bagan dynasty, kings made to promote human resources out of bad times to expend military power, to promote agriculture in regions and to increase the country's strength and to extend territory by force of arms [4].

During the post Bagan dynasty, villages were inhabited by crown servicemen and majority of common people. According to the inscriptions, economically also Amyint was quite strong since it was one of the places where Thugywe (rich people) lived [1].

Amyint was the centre of Buddhism and there were many religious places in the area. Some evidences pointed to the fact that before Bagan and Konbaung Period, people were donated to pagodas, monasteries and Pitaka literature as slaves. Those slaves were called Kyun-thi-taw [1].

Different kinds of livelihoods differentiated people into different classes. The most basic form of business was cultivation. Over eighty percent of total population belonged to cultivating. Therefore, the social system at the time of Myanmar Kings was based on farming [1].

VIII. RELIGIOUS FAITHS AND BELIEFS

Majority of people at Amyint Township in Konbaung Period were Myanmar and there were also minority foreign immigrants such as Portuguese, Thais, Indian and Manipuri. Amyint was a centre of Buddhism and education. Majority of the population in Amyint were Buddhists, but traditional nat-worship was also part of their lives. There were few people who believed in Catholicism in the society of Amyint. They are lived in Chaung-U and Nabet [2].

A number of pagoda festivals were held on every week of Sabbath from the full moon day of Wa-Khaung to full moon day of Thi-din-gyut for three month. Most festivals were held when the weather and communications were

open and favourable. Of course, the pagodas festivals were country fairs where local and regional products were either exchanged or transacted in the rural society [1]. During the time, they bought necessary tools for the farms at the pagoda festival. Therefore, pagoda festivals stood as essential parts of the religious, social and economical lives of people in the rural areas [3].

IX. CLASSIFICATION OF RELIGIOUS STRUCTURES

Firstly, the Religious Structures in Amyint Area should study before study on the architectural character of these structures. These study bases on type [2]. One hundred and sixty five religious structures are typological classified. They are found as Stupa, Temple, Monastery, Pya-that and Thein [1]– [2].

All of the one hundred and sixty five Religious Structures will be divided into four types and calculated as the percentages . Four types of Structures are classified as follows [2];

1. Stupa Type Structure (105 numbers, 65%)
2. Temples Type Structure (42 numbers, 25%)
3. Monasteries (11 numbers, 5.7%)
4. Miscellaneous Structure (7 numbers, 4.3%)

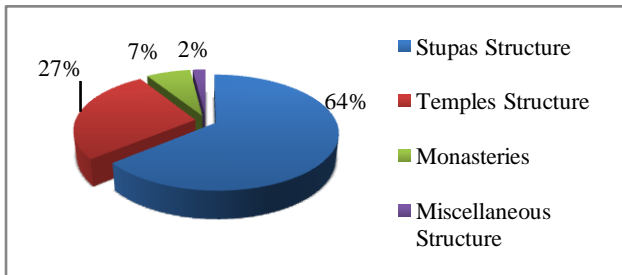


Figure 3, Inventory of Religious Structures in Amyint

There were three hundred religious structures in Amyint, but one hundred and sixty five Religious Structures are illustrated in inventory list because the Archaeological Department numbered them. Most of the monasteries have been had in this ancient area [3]. 11 numbers of monasteries in Amyint area. The monasteries that include numbered structures are 11 numbers because they numbered the famous monasteries and neglected other small monasteries. Less number types are Thein and Pya-that and this less groups are combined that is called Miscellaneous [2].



Figure 4, Monasteries and Religious Building

X. STUDY AND CLASSIFICATION OF TEMPLES

A. Temple

The word “GuPhara”, very common in the inscription, usually means much the same as a “ku” which derivative of Pali “guha” meaning a cave and therefore it has internal spaces[3]. Temple is mainly for worship and mediation. It is usually hollow structure and they are built

for private worship not for public because there is no entrance that does not have a huge size hall. Temple can be found in one storeyed and two storeyed in Amyint Area. In most of the temples, exterior wall are ornamented with stucco carvings and interior walls and ceiling are decorated with mural paintings[2].

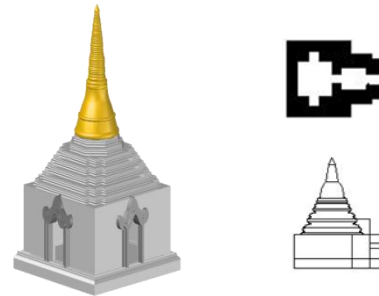


Figure 5, Temple, Sample of Temple

B. Terminology of Temple

Temples in Amyint Area are studied and analysis into each parts or portions. They are divided into eight parts according to each portion in Temple and as in [3]denoted by "A" to "H" such as Platform or Plinth (A), Kalar-Kyaung or Plinth (B), Terraces (C), Kyiwun (Circular Bell Rest), Bell shape dome (E), conical spires (F), Bulb (G), and Hti or umbrella (H). [5].

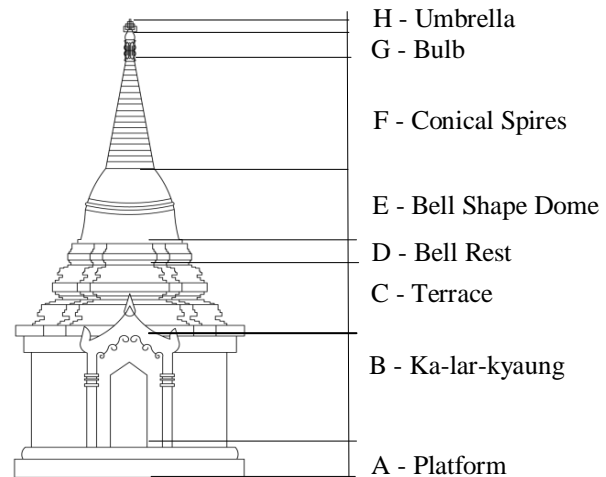


Figure 6, Terminology of Temple

C. Study and Classification of Temples

The religious structures were classified by type. The Temple type structures are 42 numbers (25%) in Amyint area. The total numbers of Temples which decorated with mural paintings are 5 numbers. Temples can be divided into two type[2];

- (1) space at the central core and
- (2) solid mass at the central core.

Temples are found in different period style such as Bagan style, Innwa style, Nyaung period style, Konbaung period style. Some examples will be focused on the architectural point of view[2].

The size of Temple is classified and based on their width and breath. They are divided into four kinds of size; small size, medium size and large size[2]. Small size – under 6 meters (20 ft), medium size – between 6 meters and 12 meters (40 ft), large size – over 12 meters (40 ft)[3]. Reference [4], 0% of Temples are small size, 35% of

Temples are medium size, 40% of Temples are large size and 25% of Temples are very large size.

Types of Temples are classified according to each periods. Amyint is contemporary to Bagan. Bagan Kings carried out to establish the religious institutions together with the giving endowment of virgin and forest lands to the pagodas and monastery and made to be developed the reclamation of lands and Buddhist religion. Most of the Temples in Amyint were rebuilt in Bagan Period but they are recognized as Temples renovated in early Konbaung Period with ornaments of Bagan period style, Innwa period style, Nyaung-yan period style, early Konbaung period style and Colonial period style[2].

Two numbers of Temples in Bagan Period are found to be studied with architectural point of view[2];

- (i) Significance of Space in Bagan Period Architecture
- (ii) Significance of Form in Bagan Period Architecture
- (iii) Study of the Construction Materials
- (iv) Study of the Decorative Elements

(i) Significance of Space in Bagan Period Architecture

Temple No. 118 shown in Figure 7 was built in Bagan period (9 AD to 13 AD). It is located within the Min-ye' monastery compound of Amyint Area. This Temple is one of the central shrine type of Temples in Amyint Area. Three main features and functions of the temple can be distinctly identified; the central shrine, the vestibule and the porch. The central shrine is a chamber to keep the Buddha image. It is also a sanctuary. It is composed of two units, the hall and the shrine, which are usually oriented in an east facing direction. The features of the central shrine are divided into the parts; the foreparts, the niches and the windows or openings. Between hall and shrine, whether set in a recess or cella, is an ambulatory that runs continuously around the central block or shrine. Its interior space has 154 sq-ft and is proportion to 1:4 of the existing space. It is based square shaped plan. It is large in size[2].

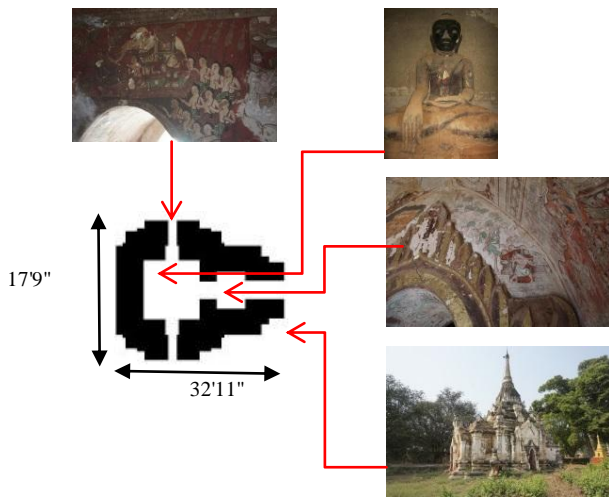


Figure 7, Temple No. 118, Plan with Photos

Temple No- 131 shown in Figure 8 was built in Bagan period (9 AD to 13 AD). It is located within the Min-ye' monastery compound of Amyint Area. This Temple is one of the solid core type of Temples in Amyint Area. The central shrine, the vestibule and the porch are identified as the functions of this type of Temple[5]. The solid core is created inside the temple in the place of the central

shrine and solid pillars are used which are the same structural principle with it. Buddha images with pedestals were placed at four sides of solid core. The innovation of the solid core is the four niches extracted from the pillar at the four cardinal directions, therefore forming four visually separate shrines, which are connected through the vestibules and the passages[2]. The sub-features of the solid core include the corridor. The solid core was run with single corridor inside the temple. Its interior space has 305sq-ft and is proportion to 1:1 of the existing space. It is based on square shaped plan with zigzag indentation. It is medium in size[2].

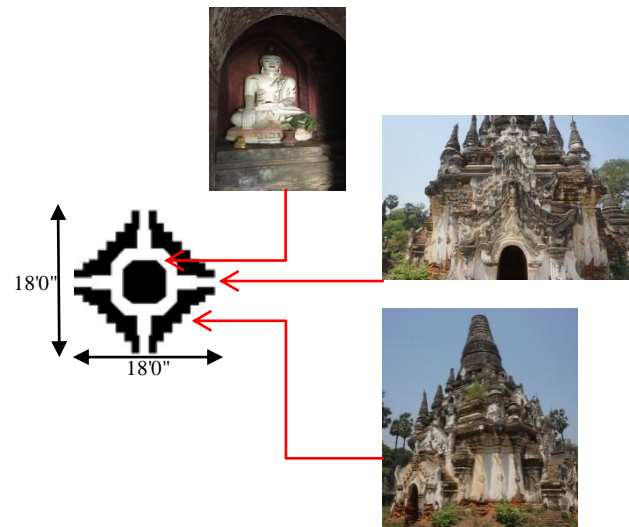


Figure 8, Temple No. 131, Plan with Photos

(ii) Significance of Form in Bagan Period Architecture

The Temple No. 118 which was built in Bagan Period (9 AD to 13 AD) has Temples with Mahabodi type. This is composed of square sanctuary (shrine) and a forepart with a porch facing east. Temples of the Mahabodhi type are rarely found in Bagan Era. This type of Mahabodhi, which, with its pyramidal shape, straight edges and flat planes, is a direct copy of the Bodh Gaya type, was to lead to this form's proliferation across the Bagan area. The temple's elevation is tall and narrow shown in Figure 9, its height emphasized by the three receding terraces and corner stupas. There have the foreparts on exterior walls, except to the east, where two arched niches on each side wall[2].

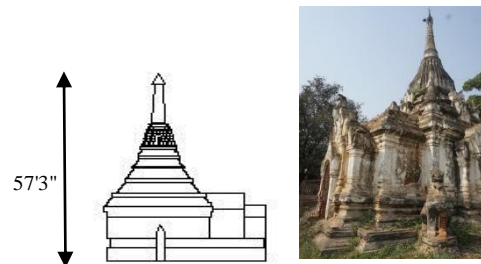


Figure 9, Stupa No. 106, Elevation

The Temple No. 131 has Temples with bell shaped dome type. This is composed of square sanctuary (shrine) and a forepart with a porch facing east. The temple's elevation is tall and narrow shown in Figure 10, its height emphasized by the three receding terraces and corner stupas. There have four entrance porches and larger extended vestibules on each sides[2].



Figure 10, Stupa No. 106, Elevation

(iii) Study of the Construction Materials

Temple No. 118 is the type of an open vaulted sanctum, also surrounded by a covered corridor. Another structural system in the vestibules is using the four columns to have the wider vestibules. This system is used by the columns as load bearing elements in the inner space. The sub-features of the vestibule are the entrance hall and the passage. The entrance hall is connected in front of the shrine and covered with the vault. The passage is the connection between the central shrine and the entrance hall. Figure 13 shows that the floor of central shrine is usually paved with natural bricks [1].



Figure 13, Temple No. 118

Temple No. 131 is the type of a solid brick core encircled by a vaulted corridor. From the technical point of view, that pillar has three functions; 1) to stand for barrel vaults spanning the main shrine and the exterior walls, 2) to have built-in niches for the images as the main function of the temple, and 3) to take over the functions as load bearing element.

Typically, the solid core was used in the large temples, which seem to provide the building load. The solid core with a broad area, approximately 8 ft. x 8 ft, is meant to bear the loads from top to the bottom and to distribute it equally to the ground to avoid the concentrated pressure directly to the soil at certain points. Figure 14 shows the binding of stone masonry into the brick work to strengthen joints and other stress bearing points [2].



Figure 14, Temple No. 131

(iv) Study of the Decorative Elements

In Temple No. 118, the outer ambulatory was conceived as a gallery with the floral sculpture and stucco mouldings. The outer ambulatory inner wall and the inner

ambulatory niches contain reliefs of the Buddha. There are also a random selection of scenes from the life of Buddha in the halls and shrines. Typically, the windows are beside the passage [2]. The difference in level from the entrance hall to the shrine sometimes is from low to high. The main entrance and lateral porches have flame pediments which consist of Banana Chute (in Burmese Nga-Pyaw-Phu), Yama forefingers (Yama-Latt-Nyo), and Lotus Pedals (Kyar-Nyat). All the mural paintings of this temple belong to Konbaung Period; the paintings of people who were dancing and playing musical instruments at pagoda festivals, with crossing mythical serpents, the pictures of Kinnara, Kinnari and Jamani, etc. were painted in minute detail on the gable ends at the entrances serving as the decoration, life scenes of the previous Buddhas includes the birth, the renunciation, the Buddha's cutting his hair. All paintings are shown in Figure 15 [1].

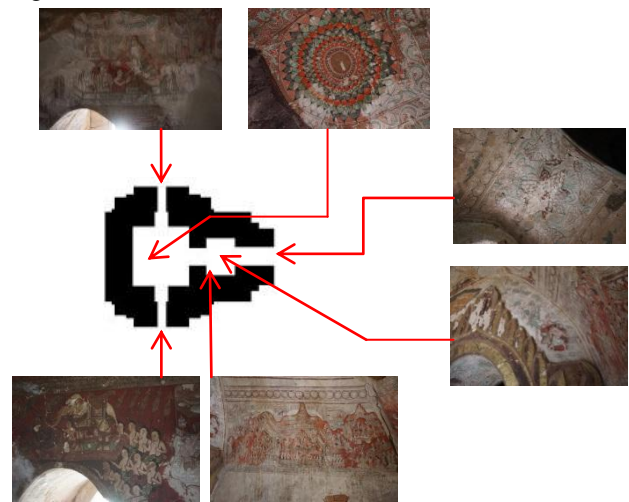


Figure 15, Temple No. 118, Decorative Elements

In Temple No. 131, the four entrances have flame pediments which consist of Banana Chute (in Burmese Nga-Pyaw-Phu), Yama forefingers (Yama-Latt-Nyo), and Lotus Pedals (Kyar-Nyat). The component of the pediment of Yama-Latt-Nyo, the central pillar, the Kyae-Kwe, the Sainh- Paung, has a brick core which is ornamented with stucco relief. Many of these, especially repetitive motifs are molded. There is no mural painting shown in Figure 16 in this type of Temple in Amyint Area [2].





Figure 16, Temple No. 131, Decorative Elements
XI. EVOLUTION OF TEMPLES IN BAGAN PERIOD

There are generally three basic types of plan; circle, square and octagonal plan. Two numbers of Temples in Bagan Period was based on square plan. These can be

found as the sub-divided into two types; Temple with central shrine and Temple with solid core. Both types include more than a shrine and have larger extended vestibules[2].

Table 1: Temples in Bagan Period Style

Period	Style	Size	Photo	Remarks
Bagan	Bagan & Early Konbaung	37'7"		-square plan -Mahabodi Form -conical spire -porch -single shrine -extended vestibules
Bagan	Bagan & Early Konbaung	57'3"		-circular plan -bell shape -dome -conical spire -conical shape

XII.CONCLUSION

Temples were designed for worshippers to enter a sanctum that featured one or more principal Buddha images. Generally, there are two basic types, with the one based on a solid brick core encircled by a vaulted corridor, while the other has an open vaulted sanctum, usually also surrounded by a covered corridor.

The solid core is designed with an extra large area not only because it is aesthetically needed to designate this as an important building, but this core is also assigned with the additional task to reduce point loads by having broader area in the plinth level. In some big temples, there is a passage way like the corridors in which one enters the interior from the entrances, with broad, spacious porches, and one passes through the ambulatories into the temple's core.

In Bagan Period, Temples use wider spans, very large in size, more decorative motifs and well-developed construction technology. Nowadays, historical heritages and ancient structures are almost disappearing in Monywa District, Sagaing Region. But most of the religious structures are still remaining at Amyint Area.

Although structures are not enormous, every structure has its elegant handiwork. Amyint is a big village and religious structures are scattered in this region. As all the structures have no protection like fence, screens, destructions caused by natural disasters. Half of the structures are damaging more or less. Nowadays, as the more technology develop, the more the building form and materials would change too.

Many foreigners come and study in this Amyint area. Though there are many precious religious structures, there has no income from it. Historical park should be created systematically with the good drainage system, good road networks and other development plans for it. According to the existing conditions, many bushes and trees are mushrooming in the areas of religious structures.

Many farming tools are being around these structures and this can cause the crimes and stealing the precious things from the religious structures. So, site clearing is necessary for this research area.

Most of the religious structures are become damaging day by day. Vehicles are touching with these areas and vibrations causes the collapsing of these religious structures. Maintenance and conservation is well needed to do in this area. Systematic development plan should be done urgently for Amyint and this area becomes the precious things for Myanmar.

All of the religious structures are recorded and also considered which part of building need for conservation. The characteristics, culture and history of Amyint should be revealed. Amyint is going be an essential region to study Myanmar history for many years in the future. We need to try and share the information of the precious history and how to conserve the historical structures. It is believe that this paper would be a good record of Religious Buildings in Amyint Area.

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REFERENCES

- [1]. Than Hlaing, Mg: *History of A-Myint Township in Konbaung Period*, Ph.D Dissertation, Department of History, University of Mandalay, Myanmar, October, 2013.
- [2]. Toe Ei Ei Mon, Ma: *Self Measure and Self Drawing*, Amyint Area, Monywa, 2017.
- [3]. Anonymous, *Amyint Records*, Monywa Archaeological Department, Monywa, 2013.
- [4]. Than Hlaing, Mg: *History of A-Myint Township in Konbaung Period*, Ph.D Dissertation, Department of History, University of Mandalay, Myanmar, October, 2013.
- [5]. Htet Htet Hlaing, Ma: *Religious Architecture in Pakhan Area*, Ph.D Thesis, Department of Architecture, Mandalay Technological University, Myanmar, December, 2008