



RECOMMENDATIONS AND GUIDELINES FOR DESIGNING VIETNAMESE BUDDHIST TEMPLES IN AUSTRALIA

Thanh C. Nguyen
Edu. Cert. (Vietnam); B. Arch. St., B. Arch. (Adelaide)

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ABSTRACT

This thesis examines the design of Buddhist temples in traditional Vietnamese style and characteristics within the context of the Australian environment.

Chapter one studies the background of Buddhism. The legends of the Buddha and his teaching are described with regard to the symbolism in temple components and the meaning of temple form. The chapter looks at the spread of Buddhism in south-east Asia.

Chapter two examines the Buddhist temple architecture in Asia. In particular, the chapter analyses the Buddhist temple architecture of India, China and Vietnam in order to show the variations of temple form against the background of local history and culture.

Chapter three analyses six traditional temples in Vietnam. Aspects of the site and design are studied, which include building layouts, floor plans and elevations, and the construction techniques in relation to symbolism, legend and history. The characteristics of Vietnamese pagodas are deduced. The study also compares Vietnamese pagodas with temples in China.

Chapter four studies the introduction of Buddhism in Australia, the development of Vietnamese Buddhist communities and the growth of the Buddhist population. The chapter also shows the existing Vietnamese Buddhist temples and discusses the need for temples in Australia.

Chapter five presents five case studies of Buddhist temples in Australia showing the project data, history of establishment, interviews with abbots, architects, and local authorities related to the projects.

Chapter six analyses and compares the facts from the five case studies. The problems of design are discussed by looking at the planning and building regulations, building construction, finance and community relations. The comparison studies axial planning, building layout, orientation-Feng Shui, building areas, ornaments, myths, characteristics of site, car park and finance. The study also compares the temples in Australia with temples in Vietnam.

Chapter seven introduces guidelines and recommendations for designing Vietnamese Buddhist temples in Australia. The guidelines discuss traditional temple design and its meanings. The recommendations address the problems which arose from the case studies.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university and, to the best of my knowledge and belief, it contains no material previously published or written by another person except where due reference is made in the text. The writer consents to the thesis being made available for photocopying and loan if accepted for the award of the degree.

Signed:

Date: 27th Jan. 1995.

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INTRODUCTION

Through the history of Vietnam, during the Ly and Tran dynasties (1010-1400), Buddhism was the national religion which deeply influenced the culture. The erection of temples was encouraged everywhere in Vietnam. The traditional temples have become the cultural monuments of the Vietnamese. To build these temples in Australia, the designer has to face several difficulties. The difference between cultures and the lack of knowledge of Vietnamese Buddhist temple architecture are the two main problems that make the designers' task difficult.

1. Aims of the study

The study aims to present the traditional Vietnamese Buddhist architecture, to guide and to recommend the design of traditional Vietnamese Buddhist temples in the context of the Australian environment.

Chapter one analyses Buddhism in relation to the meanings of symbolism in temple architecture.

Chapter two studies the evolution of Buddhist architecture in India, China and Vietnam.

Chapter three analyses six traditional Buddhist temples in Vietnam to deduce the characteristics of Vietnamese temple architecture and how they compare with temples in China.

Chapter four describes the development of Vietnamese Buddhist communities in Australia to show the need for temples.

Chapter five surveys five case studies of Vietnamese Buddhist temples in Australia in order to point out the conflicts arising from the differences in cultures and the problems in designing traditional buildings in a non-traditional environment.

Chapter six discusses the problems and outlines the differences between the temples in Australia and the temples in Vietnam.

Chapter seven concludes the study by presenting guidelines for designing traditional Vietnamese Buddhist temples, and recommendations to answer the existing problems.

2. Methodology

The first part of the study comprises a comprehensive description of six traditional Buddhist temples in Vietnam. The original sketches of sites, building layouts, floor plans, elevations, sections, detail drawings and photographs were collected in the field. The history of development and the legend of each temple were documented. The graphic material had to be redrawn and modified to suit the format of the thesis. The second part contains case studies of five Vietnamese Buddhist temples in Australia including interviews with abbots, architects and local authorities. A structured questionnaire was used to ascertain the problems of designing and building traditional temples in contemporary Australia. The case studies also include graphic material obtained during site visits. The answers are analysed and discussed. The data from the case studies are shown in tables for comparison. The results of the study are presented in the form of guidelines and recommendations.

CHAPTER I : BUDDHISM



The theory of Buddhist doctrine is so broad in scope, only that which is relevant to the context of this study is discussed because of its importance to the meanings of Buddhist symbolism in temple architecture.

A. Origins of Buddhism

1. Legend of the Buddha

Studies by Humphreys (1972), Saunders (1976) and Thera (1980) show that Buddhism was founded by Gautama Siddharta¹ in India circa 529 B.C. Siddharta was born about 563 B.C., at the border of Nepal and northern India. He belonged to the royal family of King Suddhodana and Queen Sirimahamaya.



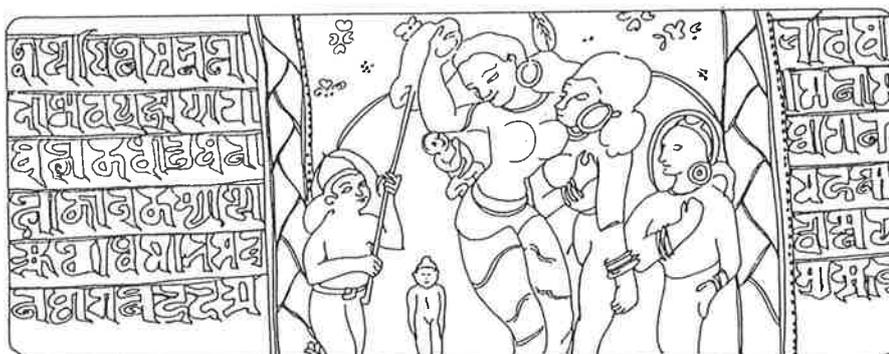
1. King Suddhodana and Queen Sirimahamaya.
(Robinson and Johnson, 1977:20)



2. Queen Sirimahamaya dreams of a white elephant.
(Lamotte, 1984:18)

¹ Bodhisattva, Gautama Siddharta, Shakyamuni and Tathagata are the different names of the Buddha. Bodhisattva is used to indicate Gautama Siddharta before he attained the state of Enlightenment. In Mahayana, the Bodhisattva vows to save all beings and work with compassion for suffering beings. Siddharta is his personal name; Gautama is his family name; he was a member of the Sakya clan, hence, Shakyamuni means the wise man of the Sakya clan (Morgan, 1956:408); Tathagata is the term used by the Buddha to speak of himself after Enlightenment (Robinson and Johnson 1977:219).

Robinson and Johnson (1977) and Lamotte (1984) studied the legend of the Buddha which describes that he was conceived when his mother, Queen Sirimahamaya, dreamed that a white elephant had entered her body. When her time approached, she retired to the Lumbini garden. She was standing with her right hand upstretched on the branch of a tree when she gave birth to Siddharta. The child stood up and walked seven steps and declared that this was his last birth. Asita, an aged sage, came, examined the marks on the infant and prophesied that he would become the Buddha. Other accounts specify that he would become such only if he chose to leave the palace to become a wandering ascetic, otherwise he would become a world-ruling monarch.



3. The birth of the Bodhisattva.
(Robinson and Johnson, 1977:21)

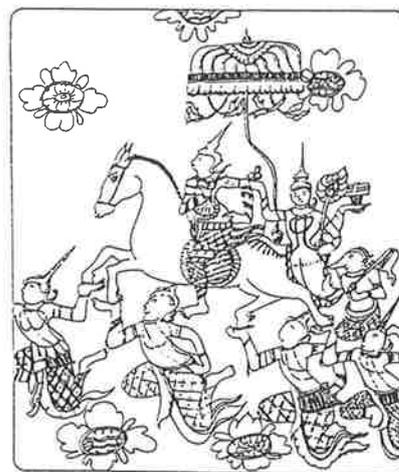
Seven days after giving birth, Sirimahamaya died. Suddhodana married her sister who brought up the young Siddharta. When he became of age, his father asked him to marry a young girl named Yasodhara. Suddhodana tried to prevent his son from leaving the palace and becoming an ascetic by tempting him with sensual pleasures, not only arranging his marriage but surrounding him with song-and-dance girls and every delight a man could desire.

When the time had come Yasodhara bore a son whom they named Rahula (Fetter), an indication that the young father's heart was already turning away from domesticity.

The legend says that Prince Siddharta, sheltered in the palace by his overprotective father, went riding. On the first encounter, he saw a decrepit old man and, shocked, he asked his guardian about the man's condition. The guardian explained that such is the destiny of all men. The prince turned back to the palace and thought sadly about it for a long time. On the second encounter, he saw a diseased man, it made him think that people were foolish to celebrate under the constant threat of disease. On the third encounter, he saw a dead body, dismayed, he marvelled that people could forget the fear of death and live heedlessly. The brooding prince sat under a tree, entered the first meditation and found some peace of mind. He meditated on the truth of suffering. On the fourth encounter, he met a religious mendicant and made up his mind to leave the palace.



4. The Four Encounters.
(Robinson and Johnson, 1977:22)



5. The prince leaves the palace.
(Robinson and Johnson, 1977:24)

In the depth of the night the prince took one last look at his wife and infant son, mounted his horse and rode out of the sleeping palace with his guardian. Later, they stopped and the prince sent the guardian back with his ornaments and a message. Afterwards Siddharta cut off his hair and exchanged clothes with a passing hunter.

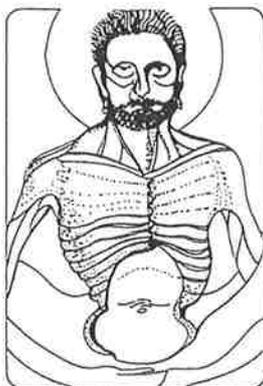
The new mendicant, twenty nine years old, went first to a teacher called Arada Kalama, who taught a method of meditation leading to "attainment of the state of nothing at all." Gautama practised this method and quickly attained the goal, but he concluded that this dharma (ideal truth) did not lead to enlightenment and nirvana so he left. He then met Udraka Ramaputra who taught the way to the "attainment of neither conception nor non conception." Gautama mastered this dharma but he still felt dissatisfied and abandoned it.

Gautama went eastward to Uruvela near Gava where he found a pleasant spot and settled down to austerities. He practised holding his breath to induce trances. He fasted and came as close as possible to eating nothing at all. He was joined in his striving by five ascetics and continued on this painful course for six years. At the end of that time he realised that, by this method, he had not achieved sublime knowledge and insight, therefore, he tried to think of another way. He remembered the time when he had entered the first meditation, a pleasant and zestful state, but he realised that his body had grown too weak to gain this blissful exaltation.

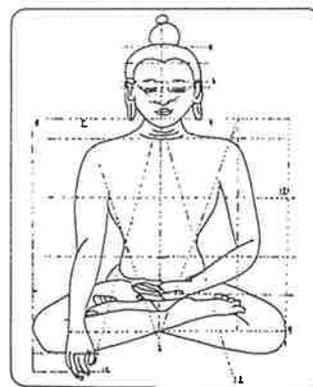
Gautama then sat under a tree. A woman came and presented food. He took solid food, rice and yogurt. The five mendicants left him in disgust, saying that he had given up striving. Gautama rejected the method of austerity realising that a healthy body is necessary for the pursuit of wisdom. In so doing he turned towards enlightenment. Facing east and sitting on a stone block beneath a bodhi tree, he began to train himself by meditating, and decided not to arise until he had attained enlightenment. Mara (Death) was alarmed at the prospect of Gautama's victory, which would allow him to escape from Death's realm, and came to assail him with an army of fearful demons. He also sent his three daughters, Discontent, Delight and Desire to seduce the future

Buddha, who remained as impervious to lust as he had to fear. As the sun set, Mara and his hosts gave up and withdrew.

On the night of the full moon, Gautama ascended the four stages of dhyana (trance) which led him to superknowledge. This process continued to develop until his mind became free from the outflows, and as the Sutra (Buddhist text) says, "In me emancipated arose knowledge of my emancipation. I realised that rebirth has been destroyed, the holy life has been lived, the job has been done, there is nothing after this." The new day dawned on Gautama, now the Buddha. The animate and natural worlds celebrated the event with prodigies. The earth swayed, thunder rolled and rain fell from a cloudless sky and blossoms fell from the heavens. Gautama's ancestors, then sages in paradise, observed his victory and offered him reverence. The Buddha thus acquitted on a higher level the family obligation that, as a Bodhisattva, he had forsaken in the worldly sense.



6. The austere Bodhisattva.
(Lamotte, 1984:42)



7. The enlightened Buddha.
(Robinson and Johnson, 1977:19)

For 45 years the Buddha travelled around the central Gangetic plain, visiting the sanghas' parks, receiving all callers and answering their questions, converting the unconverted and instructing the proselytes. In his 79th year, the Buddha set out on his last journey. When he reached Vaisali, he fell seriously ill, his last meal was at the

home of Cunda the smith. After eating a lot of pork (later commentators say mushrooms) he became very sick, blood flowed, and he suffered sharp dysentery pains. He bore it calmly, arose and went to lie down between two trees. The dying Buddha asked the assembled monks three times whether they had any last doubts or questions, but they were silent. The Buddha uttered his last words "Conditioned things are perishable by nature. Diligently seek realisation." (Robinson and Johnson, 1977:61), then he entered the first dhyana and ascended to the trance from which he passed into parinirvana. The Buddha thus died in meditation. The legend says that an earthquake and thunder marked the moment of his death.

2. Buddhist Basic Doctrine

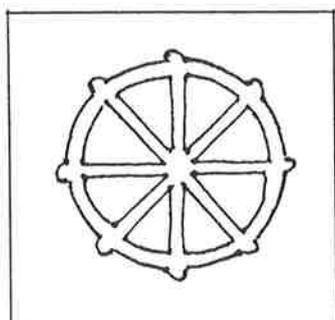
a. The Eightfold Noble Path

An important doctrine of Buddhist teaching is the Eightfold Noble Path: Right Vision, Right Representation, Right Word, Right Activity, Right Means of Subsistence, Right Application, Right Presence of Mind, and Right Positioning of the Psyche. The phases are explained by Saunders (1964:54-55) as follows:

- (1) *Right Vision*, that is, observing the phenomenal world as it really is and not as the illusions which usually dominate our vision of things dictate. Right vision means recognising objects for what they are, impermanent unities of parts, not for what they seem to be in their worldly forms. Such corrected vision leads inevitably to –
- (2) *Right Representation*. Having observed things as they are, it is important to represent them correctly, for, if objects are misrepresented, they in turn falsify subsequent vision, create illusions, and nullify all attempts to escape suffering.
- (3) *Right Word*, that is, a correct externalisation of the right concept as it has been perceived with respect to the above two points. This phase is obviously a reflection of pre-Buddhist, Hindu beliefs in the extreme importance of word and form (*nama-rupa*), the two being interdependent. Right Word leads to –
- (4) *Right Activity*, which is a result of the previous word-form rectification. It is the act that stems from the Word, the physical from the mental, with which the first three items have been concerned. Act leads to –
- (5) *Right Means of Subsistence*, that is, by correct action rectified livelihood is established in which all areas combine to make a good life. A good life, of course, implies –

- (6) *Right Application* of this means of subsistence. In Buddhist terms this means the observance of the Communal regulations, the Discipline, the Law, for without Right Application life is misguided, no matter how good our intentions. Right Application in turn leads to –
- (7) *Right Presence of Mind* (smriti), in other words, a right attitude to or understanding of Self, of Reality, of the Absolute. It is a psychic state dependent on the preceding four physical states and itself the basis of the eighth and final rectitude –
- (8) *Right Positioning of the Psyche* (samadhi), that “interior” state, often described as a kind of mystic raptness attained during profoundly concentrated meditation.

The Eightfold Noble Path became an object for worshipping in both Mahayana and Hinayana temples. It takes the form of a wheel with eight spokes, each spoke represents one phase.



8. Symbol of the Eightfold Noble Path.

b. The Wheel of Life

Another doctrine, studied by Saunders (1976), is the law of cause-effect which is explained in twelve preconditions, each depending on the one before it. The chain of preconditions forms a circle called the Wheel of Life. The preconditions are: ignorance, dispositions, consciousness, name and form, the six sense fields, contact, feeling, desire, appropriation, becoming, rebirth, ageing and dying. Lamotte (1984) used the term “Dependent Origination” to describe the preconditions. Robinson and Johnson (1977:32) relate the theory to the principle of affirmative and negative forms. For example, if B exists then A has existed and if A does not exist then B will not exist. They explain the preconditions backward as follows:

- (12) Aging and dying depend on rebirth (if there were no rebirth, then there would be no death).
- (11) Rebirth depends on becoming (if life *X* did not die and come to be life *Y*, there would be no birth of *Y*).
- (10) Becoming depends on appropriation (if the life process did not appropriate phenomenal (observable) materials just as a fire appropriates fuel, then there would be no transmigration).
- (9) Appropriation depends on desire (if one did not thirst for sense objects, for coming to be after this life, and for ceasing to be after this life, then the transmigrant process would not appropriate fuel).
- (8) Desire depends on feeling (if pleasant and painful feelings were not experienced, then one would not be conditioned to seek continuing experience of the pleasant or cessation of the unpleasant).
- (7) Feeling depends on contact (the meeting of sense and object is necessary before pleasure or pain can be felt).
- (6) Contact depends on the six sense fields (the six pairs of sense and datum, namely, eye-visible form, ear-sound, smelling-smell, tongue-taste, body-touchable, mind-dharma).
- (5) The six sense fields depend on name-and-form (mind and body; as the sense fields are equivalent to name-and-form, some lists of the preconditions omit the sense fields).
- (4) Name-and-form, the whole living organism, depends on consciousness, which here means the spark of sentient life that enters the womb and animates the embryo.
- (3) Consciousness depends on the dispositions accrued throughout life as karmic residues of deeds, words, and thoughts.
- (2) The dispositions, or karmic legacy that produces rebirth, depends on ignorance of the Four Holy Truths.
- (1) Ignorance.

Robinson and Johnson (1977:33) also give a metaphorical reading of the twelve preconditions:

Ignorance (1) is a blind man who does not see what is before him; the dispositions (2) are that he stumbles; the resulting consciousness (3) is that he falls; name-and-form (4) is that he develops an abscess, which accumulates matter inside the six sense fields (5); he presses against it, producing contact (6); and it begins to hurt, the feeling precondition (7). The man craves a cure, which is desire (8), uses the wrong medicine, appropriation (9), which, with the wrong ointment, becoming (10), results in the abscess swelling even more, rebirth (11) and bursting, the final precondition of aging and dying (12), which is the *duhkha* (suffering) that results from the original *avidya* (ignorance).

They conclude that “when the ignorance ceases, dispositions cease, and so on until aging and dying cease. One will reach a stage of salvation, a stage that one can attain by individual training, and it applies for everybody. All members of the laity are capable of self training in Buddhahood and could work forward to enlightenment.” The Wheel of Life is similar to the Eightfold Noble Path, but it has twelve spokes, both are frequently found in temple decorations.

Following the death of the Buddha, almost 500 years after his nirvana, in order to satisfy the craving of the laity, the original Buddhist doctrines were modified to allow the worship of image sculptures of the Buddha that had originally been forbidden. Robinson and Johnson (1977:85) suggest that "Perhaps prior to that time, symbols were sufficient to recall his memory and establish his presence for the worshipper; or, perhaps respect for his attainment of nirvana, a state entirely beyond representation, motivated the use of alternate symbols."

Later Buddhism declined in India but it has revived strongly in Burma, China, Japan, Sri Lanka, Thailand and Cambodia (Humphreys, 1972). After the seventh century A.D., Buddhism in India was divided into two major schools: the Mahayana (*Dai Thua*) and the Hinayana which is also called Theravada (*Tieu Thua*). Studies by Suzuki (1963) and Lester (1973) show that the Mahayana school mainly influenced the northern countries of Asia and the Hinayana school influenced the countries in Southeast Asia therefore, they are known as Northern Buddhism and Southern Buddhism, respectively. The differences between the Mahayana and Hinayana schools are explained by Suzuki (1963:2):

Mahayanism is more liberal and progressive, but in many respects too metaphysical and full of speculative thoughts that frequently reach a dazzling eminence: Hinayanism, on the other hand, is somewhat conservative and may be considered in many points to be a rationalistic ethical system simply.

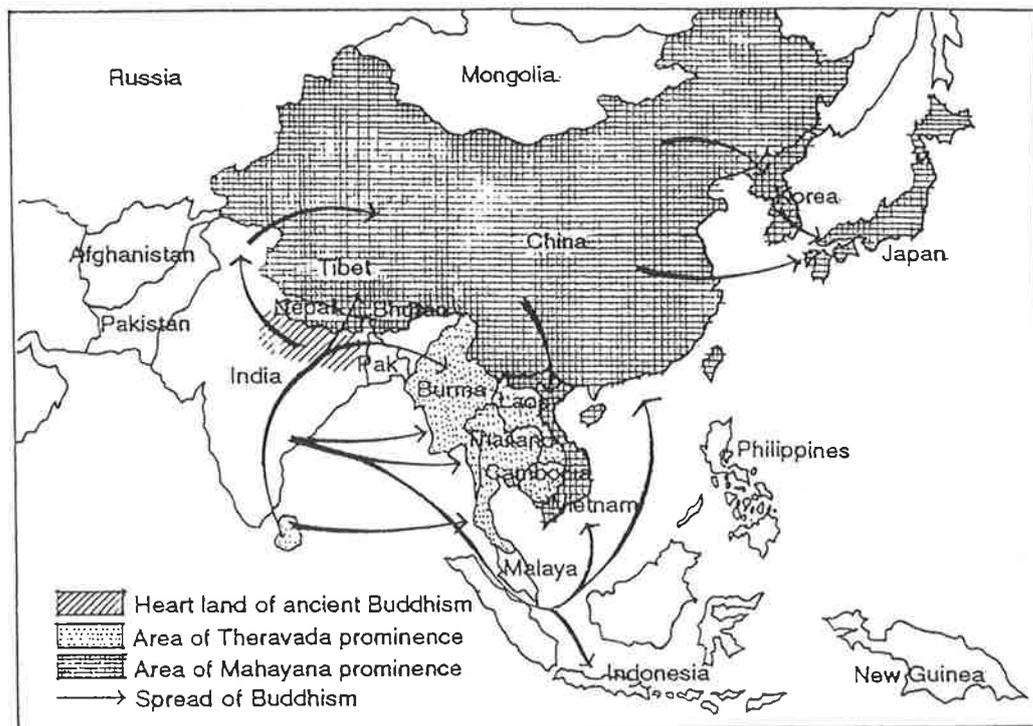
Humphreys' (1972) study also points out that the differences in doctrine of the two schools were naturally enhanced by the nations developing them and national variations are to be seen in the Buddhism of Tibet, China and Japan.

Other symbols of worship are the image of the Bodhisattva Avalokitesvara, stupas, the Buddha's footprint, swastika, the three jewels (meaning the Buddha, Dharma and Sangha), bodhi tree and lotus.

It would require a separate study to show all of the details of the Buddha and his teachings. It must suffice here to point out that the legend of the Buddha and the basic doctrines of Buddhist teaching which are the Eightfold Noble Path and the Wheel of Life are common themes in temple decoration.

B. The spread of Buddhism

Studies by Humphreys (1972) and Saunders (1976) indicate that, during the Asoka Dynasty, about 247 B.C., Buddhist missionaries began taking the religion beyond the Indian subcontinent. The missionaries began to spread Buddhism and the Indian culture throughout Southeast Asia.



9. The spread of Buddhism.

1. Sri Lanka (Ceylon)

Buddhism was introduced to Sri Lanka by missionaries *circa* 247 B.C. From the beginning the sangha maintained close relations with the government, and Buddhism became the state religion. Kings became practising Buddhists and patrons of Buddhist works of art, learning, culture and worship. They had shrines and monasteries built and helped regulate the affairs of the sangha. Nobles and commoners also supported Buddhism. Beautiful monuments were built which were adorned with Buddhist art, and monasteries became the centres of culture and learning. Buddhism in Sri Lanka has had a longer continuous existence than anywhere else in the world. Up to the 16 th century Ceylon was regarded by its brother Buddhist countries, Siam, Burma and Cambodia, with almost as much veneration as the holy places of Buddhism in India, as the fountain-head of the pure Theravada doctrines (Humphreys, 1972, citing Le May, 1949).



10. Ruwanveliseya Dagaba², Anuradhapura, Ceylon, second century B.C. (Fletcher, 1975:115)



11. The Mo-ni Hall, Longxing Monastery, Hebei province, China, 1052. (Fletcher, 1987:707)

² Dagaba means tooth relic chamber.

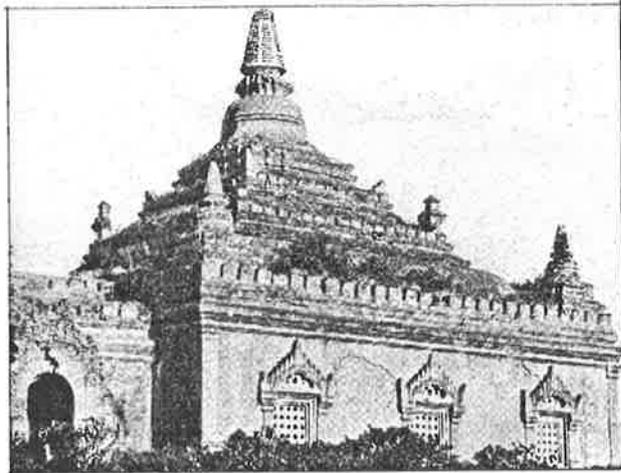
2. China

Buddhism spread to China early in the Han Dynasty (first century B.C.) by way of the Silk Road, but there is historic evidence that in 61 A.D. the Emperor Ming-ti sent messengers to India for Buddhist books and teachers. They returned with images and scriptures of the Mahayana school and a Buddhist temple was built at Anhui in 190 A.D. The research by Zurcher (1984) shows that, in the third century, Buddhism also reached China along the southern route (by sea from Tamraliti, Sri Lanka and Indo-China to Canton, and overland via Ch'angsha and along the coast to the lower Yangtse region). However, those contacts can in no way be compared with the constant influx of missionaries along the Silk Road. Before Buddhism spread to China, the country already had existing religions under the Han Dynasty. After the downfall of the Han Dynasty in 221 A.D., Buddhism developed rapidly and exerted great influence on architectural expression. Together with Confucianism (founded by Confucius in 551-479 B.C.) and Taoism (founded by Lao Tzu in 4th-3rd centuries B.C.), Buddhism reached its greatest strength during the T'ang Dynasty (620-907). It combined with the Chinese native genius to produce some of the greatest art. The architecture of Buddhist temples changed remarkably, it was modified and absorbed by Chinese architecture. From China, Buddhist architecture continued to influence Vietnam, Korea and Japan with this character.

3. Burma

Buddhism came to Burma by land and sea (Humphreys, 1972) when the Emperor Asoka of India sent two monks as missionaries to the commercial centre of Thaton, where they founded a monastic settlement. Buddhism was well received and was soon firmly established around Thaton. Local spirit cults were brought into art, including the making of images of the Buddha. Stupas were built. Soon Burma was a flourishing centre of Buddhist life, even spreading its Buddhist culture to other areas and enjoying a prosperity that allowed devout Theravada practice to flower. Education

and discipline were available to monks and laity alike in monasteries and convents. For three centuries Pagan was a city with over 9000 pagodas. Burmese Buddhism did much to preserve Theravada orthodoxy. The sangha remained accessible to the Burmese people. Today Buddhism in Burma is secure and paramount.



12. Abhayadana Temple, south Pagan, Burma
(11th Century).
(Fletcher, 1987:789)

4. Korea

Buddhism, together with Chinese writing, reached Korea about 372 A.D. Eliot (1957:336) states that, "The Buddhism of Korea cannot be sharply distinguished from the Buddhism of China and Japan ... there is little originality in art: in literature and doctrine none at all." In the thirteenth century a wave of Confucianism arrived in Korea from China, the Buddhist leaders of the day were unable to cope with the new and popular teaching. Thereafter, Buddhist influence began to decline and what remains of it today is almost entirely the dynamic Zen.

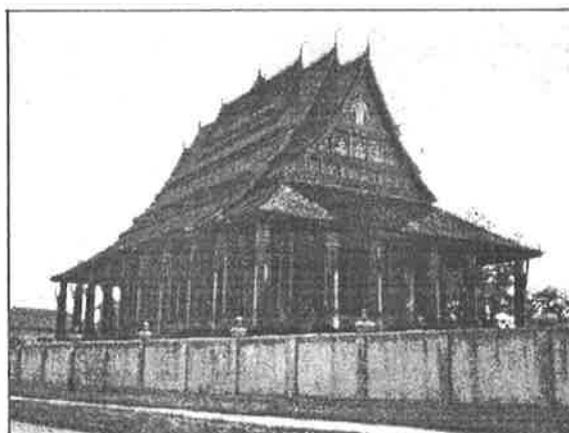
5. Japan

Shinto was the religion of Japan before the introduction of Buddhism. About 552 A.D., Buddhism was introduced to Japan from the Chinese mainland via Korea. Buddhism was patronised by Prince Shotoku Taishi (593-622), one of the great men that Japan has produced. He was responsible for the building of the city of Nara, and in Horyuji he built a monastery, completed in 607 A.D., which became the prototype of Japanese architecture to this day. Native craftsmen, taught by artist-craftsmen of all kinds who were imported from China and Korea, built the greatest of shrines and temples, many of which survive today.

In China Buddhism was always a religion without political affinities; in Japan it was early an 'established' cult under the Court. Zen was a major factor in the development of Bushido, similar to European medieval knighthood. Now Japan is a Buddhist country of Mahayana and, as the Buddhism of China is dying, and that of Tibet is in a sense a school of its own, Japan is now the country in which Mahayana Buddhism in all aspects can be described as the best.



13. Horyuji Pagoda, Japan, late seventh century. (Joshi, 1984:95)



14. Vat Pbraphra Kheo, Vientiane, Laos. Rebuilt in 19th century. (Rawson, 1967:159)

6. Laos

The Lao people emerged by the fourteenth century, with the help of Khmer power, the first Laotian state was founded and the Khmer missionaries introduced Theravada Buddhism into Laos. Previously, Mahayana was in the area, but the kings defended and supported Theravada Buddhism, which became the official religion. Gradually Buddhism deeply influenced the culture and architecture of Laos (Rawson, 1967).

7. Cambodia

In the pre-Khmer era people believed in the spirits of lightning, thunder, wind, fire, water, stone, mountain and other beliefs from different regions. Hinduism and Buddhism came to Cambodia from India about the third century A.D. Khmer power increased in the late seventh century, but the accompanying prosperity favoured both Hinduism and Buddhism. By 800 A.D., a unified Cambodian state was established with a god-king at the head of the state religion, which was distinctly Hindu of the Saivite sect. Later rulers built monasteries for both Saivites and Buddhists, and the Hindu cult coexisted with Buddhism throughout the tenth century. Saivism remained the main royal cult but Buddhism also received continuous patronage. Several rulers in the eleventh century favoured and promoted Buddhism, others blended various sects of Hinduism together, nevertheless Buddhism, primarily Mahayana, continued. During the late twelfth century, a monk from Burma introduced Theravada into Cambodia. Later it was supported by Khmer kings and eventually it supplanted Mahayana. Theravada Buddhist monks established temples in the capital by the end of the thirteenth century, by which time the Cambodian state had dropped Hinduism for Theravada. This situation remains today (Robinson and Johnson, 1977).



15. The Bayon, Angkor Thom, Cambodia, 13th century.
(Fletcher, 1975:136)

8. Champa

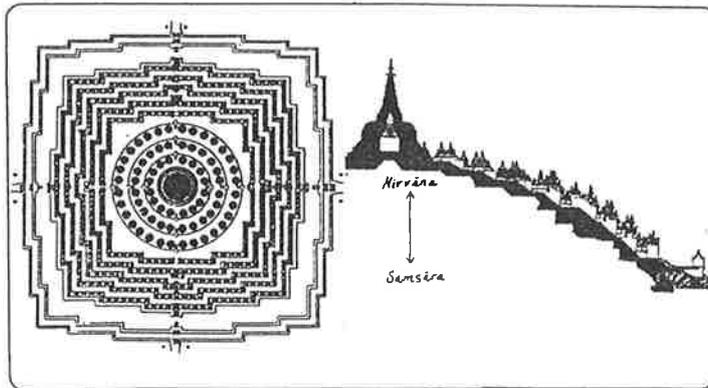
Indian colonists helped found Champa in the late second century A.D., and with them came Buddhism along with cultural and economic ties with India. Champa extended south to what is now Binh Tuy Province, west to the Mekong Valley of present-day Cambodia and southern Laos and as far north as Quang Binh Province. The state of Giao Chi (later the kingdom of Champa) was known by the Chinese as Lin-Yi (Lam-Ap) which centred around Quang Nam Province. Theravada Buddhism was probably present in Champa by the third century. In later centuries Mahayana arrived. By the ninth century, Buddhism was receiving royal patronage, but the dynasty probably supported Hindu Saivism as well, creating a syncretistic Buddho-Saivism similar to that in Cambodia. Mahayana continued in Champa until the fifteen century, when Annamite (Vietnamese), formerly settled in Tonkin (North Vietnam), invaded, bringing with them the Chinese forms of Buddhism which are characteristic of the north. These eventually replaced the earlier forms, except for Theravada survivals on the Cambodian border (Whitfield, 1976).

9. Thailand

Buddhism came to Thailand through Sri Lanka and Burma about the fifth century A.D., and was superimposed upon local beliefs in indigenous animism. With the passage of time Buddhism has remained the prevailing influence on the art and architecture of Thailand. Thai kings in the fifteenth century borrowed the Cambodian idea of the ruler as god-king and adopted Hindu law. But Theravada continued and Thais of all social classes considered themselves Buddhists. Buddhism at the popular level included monks who practised magic and the sangha filled a valuable social role in education and religion. Sri Lanka was the source of renewed Theravada contacts for the Thais, however, the situation was reversed in the eighteenth century when Sri Lanka turned to Thailand for the renewal of Buddhist knowledge. A Thai mission visited Sri Lanka to perform the ordinations of monks and novices. Since that time Thailand has remained Theravada.

10. Indonesia

Hinduism arrived in Indonesia by sea route in the fifth century A.D. At that time Buddhist missionaries had also come to the island, but the Brahmans had already brought the worship of Siva. On the island of Java, the rulers of the Sailendra Dynasty combined Mahayana and Saivism. One of them built the greatest and most glorious of all stupas, the Borobudur stupa. Only a half of century later, another Sailendra king built a great Siva temple, indicating that both religions had been accepted as showing the way to salvation. This form of Buddho-Saivism continued until the end of the fourteenth century when Islam came to the islands and gradually converted the people. However, the Hindu-Buddhist mysticism survives to this day (Robinson and Johnson, 1977).



16. The Borobudur Stupa, Java, 800 A.D.
(Robinson and Johnson, 1977:136)

11. Vietnam

Buddhism is the predominant religion of Vietnam. Recent studies by Whitfield (1976), Lamotte (1984) and Duiker (1989) indicate that it was introduced simultaneously by sea from India (Theravada Buddhism) and by land from China (Mahayana Buddhism). *Mau Tu* is credited with the introduction of Buddhism to Vietnam from China around 194-195 A.D. Although it was first carried to Vietnam by pilgrims and refugees, it was promoted and supported by diplomats, merchants and immigrants, but the religion did not gain popularity with the masses until much later.

Emperor Dinh Tien Hoang (968-979) instituted a policy for the royal support of Buddhism which was continued by the early Le Dynasty (980-1009) and reached a high point under the Ly Dynasty (1010-1225). This support included recognition and elevation of the Buddhist hierarchy, construction of pagodas, financial support and an active role for the clergy in the governance of the country. Emperor Ly Anh Tong (1138-1175) proclaimed Buddhism as the official state religion. By the eleventh century Buddhism had filtered down to the village level. By this time it was mixed with

Confucianism³ and Taoism⁴ and as such became an indigenous part of the popular beliefs of the common people. Under the Tran Dynasty (1225-1400) Buddhism began to experience competition from Confucianism as the main religion of the court. Confucian scholars gradually replaced Buddhist clergy in the mandarin corps. In 1414 The invading Chinese brought renewed vigour to the encouragement of Confucianism as well as the destruction of many Buddhist pagodas and writings. The Nguyen lord reversed this strength for political reasons. In 1601, Nguyen Hoang ordered the construction of the Thien Mu Pagoda in Hue. But the discipline of the religion continued to decline and became thoroughly mixed with mysticism, animism, polytheism and tantrism (rituals derived from Hinduism). In 1920, there was a revival of Buddhism throughout Vietnam. Starting in 1931 formal Buddhist organisations were established in Ha-Noi, Hue and Sai-Gon. This organisational emphasis has continued to the present. Most recently (1963), the Buddhist temple played a major role in the overthrow of president Ngo Dinh Diem which reflects the strength of Buddhism in the Republic of Vietnam.

The Mahayana or the Greater Wheel (*Bac Tong* or *Dai Thua*) school of Buddhism is predominant, especially in north and central Vietnam. The largest sect of Mahayana Buddhism is the *Thien* (Dhyana or Zen), otherwise known as the school of meditation. Theravada Buddhism or Lesser Wheel (*Nam Tong* or *Tieu Thua*) is practised mainly in the ten delta provinces of south Vietnam; its adherents are chiefly ethnic Cambodians

³ Confucianism (*Khong Giao*) was introduced into Vietnam by the Chinese who dominated the country during the thousand year *Bac Thuoc* period (111 B.C.-938 A.D.). It is one of the three components of the three doctrines (*Tam Giao*) which were promoted under the Ly Dynasty. Although Confucianism is not an organised religion, there are temples and shrines dedicated to Confucius which are located throughout Vietnam (Whitfield, 1976:49; Duiker 1989:36).

⁴ Taoism (*Lao Giao*) was introduced into Vietnam by the Chinese during their period of domination. Taoism is derived from the doctrine of Lao Tse, which is based essentially on the participation of man in the universal order. Although Taoism is not a major religion in Vietnam today, it has strongly influenced Buddhism and Confucianism and accounts for much of the mysticism, magic, and sorcery that is popular in Vietnam (Whitfield, 1976:264; Duiker, 1989:163).

(Khmer). The principal sect of Vietnamese Theravada Buddhism is the disciplinary school (*Luat Tong*).



17. One-Pillar Pagoda, Ha Noi, Vietnam (1049).

CHAPTER II: BUDDHIST TEMPLE ARCHITECTURE

The Buddhist temple architecture of India and China is studied in order to show the variety of temple forms against the backgrounds of local history and culture. These countries are selected because they are considered relevant to the evolution of Vietnamese Buddhist temple architecture.

A. India

1. The climate

A recent study by Fletcher (1987) indicates that in most of the peninsula, the temperature is equable throughout the year, except the differences between dry and wet seasons are clearly shown. In the north-west, the hot and cold seasons are of the same duration. The temperature rises to about 50°C (120°F) in the hot season, the winter often brings night frosts and sleet. In the plains of the north the temperature drops markedly in the winter and rises high in the summer (May to July). The climate on the whole is dry but with a cool winter. The rainy season is generally late and is of short duration. In the eastern coastal areas, there is a heavy monsoon season (May to August) and moderate rainfall throughout the year, the climate is warm and humid, but not excessively hot, there is little variation in temperature between summer and winter.

2. Architectural Character

Studies by Grover (1980), Fletcher (1950, 1975, 1987) and Bussagli (1989) show that, in the first century A.D., the Buddhist doctrine was modified to allow the worship of the image sculptures of the Buddha. Image houses were erected across the country. Stupas (reliquary chambers) were built in which to deposit relics

of the Buddha and the dead laity who had reached 'nirvana'. Other forms of worship associated with Buddhist religious buildings are Bodhi-Tree shrines, chaityas (rock-cut temples) and monasteries.

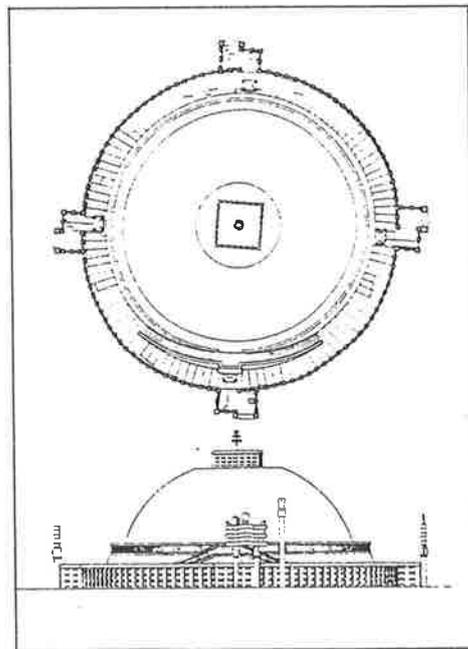
Derived from the above studies, the main features of Indian Buddhist architecture can be described as follows:

- 1) *Plan* of the chaitya consists of three aisles which are formed by two rows of columns. The Sanctuary Hall is usually semicircular in plan. A monastery generally consists of a Main Hall in square plan with or without columns and surrounded by monks' chambers. A stupa has a circular plan, it comprises a raised platform and is surrounded by a processional path with a railing and four gateways. The plans of Bodhi-Tree shrines and image houses are varied for example, square, circular and rectangular.
- 2) *Walls* are usually massive and made of granite, stone or marble. Sometimes the blocks are laid without mortar. Walls are often decorated with sculptures.
- 3) *Openings*, in rock-cut temples, are used mainly for lighting. They have a horse-shoe arch form and produce an impressive effect of light and shade to the interior. The thornas (gateways) are usually made of stone, their surfaces bear lively depictions of Buddhist legends.
- 4) *Roofs* for the rock-cut temples have semicircular ceilings with wooden ribs or expose the rock face. Stupas have cylindrical, bell-shaped, vase-shaped, parabolic and stepped pyramidal forms, with an umbrella which is placed above the dome to add to the symbolism and a mark of respect and distinction. The roofs are made of brick or stone masonry. The roofs of the external buildings have disappeared, Fletcher (1987) suggests that they were made of wood, thatch or tile.
- 5) *Columns* are ornamented at capital and base. Capitals have a variety of forms such as: lions, horses, elephants supporting men, women and the Buddhist wheel.

6) *Ornaments* are carved from hard stone. The life and religion of the Buddha, the worship of trees and relics are the common themes, while horses, lions and sacred geese are also frequently found.

3. Examples

The stupa at Sanchi in central India is typical of a great stupa. It was erected in the first century B.C. having a dome shape. The mound, terraces, staircases and fences are of stone. The thoranas are also of stone and are located at the cardinal points.

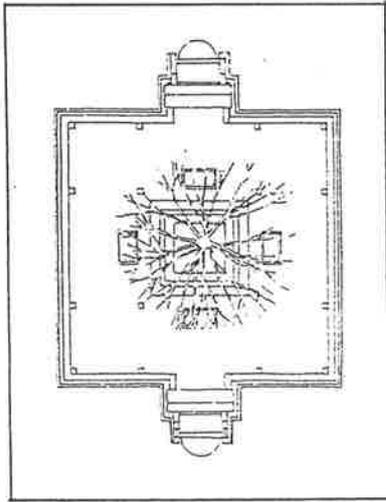


18. Plan and elevation, Sanchi Stupa, first century B.C.
(Joshi, 1984:95)

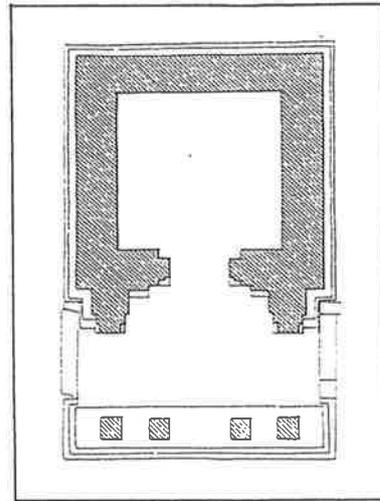
A typical example of a Bodhi-Tree shrine is seen at Nillakgama in Sri Lanka. The Bodhi tree became an object of worship after the Buddha found enlightenment. The shrine consists of a thatched roof, protective walls which surround the tree on all sides and has a square plan. The centre of the roof is left open to allow the tree to grow.

The free-standing image house at Sanchi (fifth century) is a typical example.

The house consists of a square inner cell and a porch.

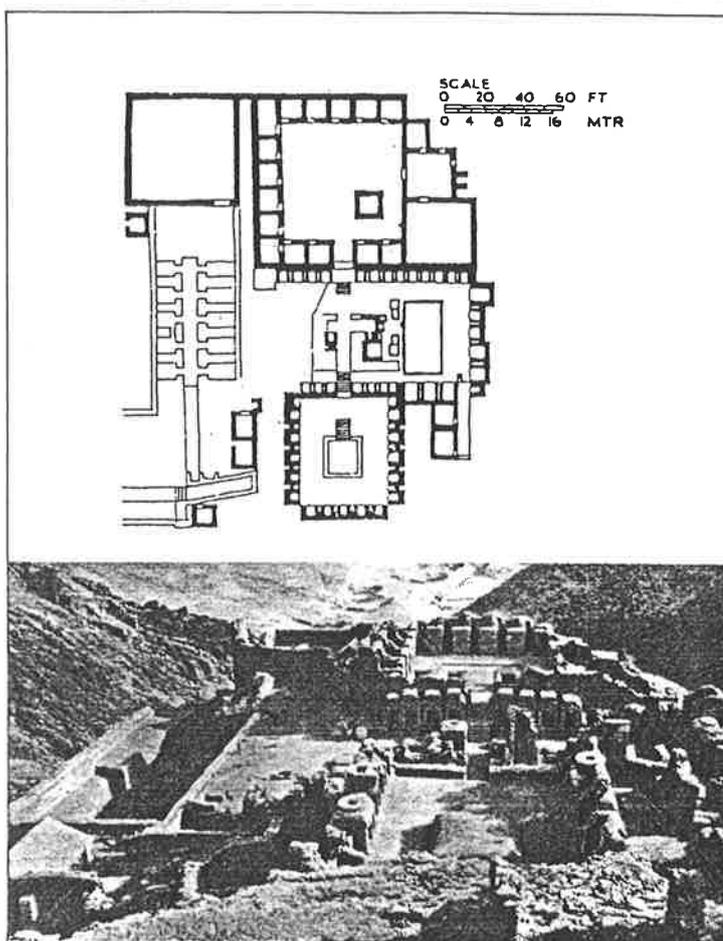


19. Bodhi-Tree shrine at Nillakgama, Sri Lanka.
(Fletcher, 1987:757)



20. Image house at Sanchi, fifth century.
(Fletcher, 1987:757)

The most typical monastery is at Takht-i-bhai which was built between the second century B.C. and second century A.D. It consists of a number of cells arranged around a quadrangle adjoining the main stupa. There are many large chambers for dining or assembly. The monastery was built of stone blocks, unfortunately the roofs have disappeared.



21. Monastery at Takht-i-Bhai, second century B.C. to second century A.D.
(Fletcher, 1987:757,760)

B. China

When Buddhism spread to China, the architecture of Indian Buddhist temples changed remarkably, it was modified and soon acquired the characteristics of traditional Chinese architecture.

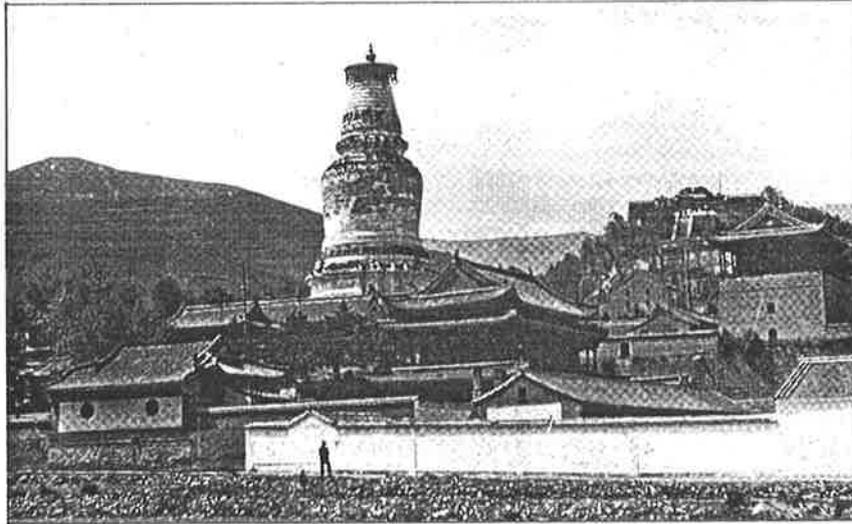
1. The Climate

China has a monsoon climate. The hinterland in the north-west has a tropical continental climate. The south-east monsoon brings humid air from the ocean between April and September, and the central, eastern, south-eastern and south-western parts

are hot and have high precipitation. From September or October to March or April, north winter monsoon winds from Siberia and the Mongolian Plateau cross China, becoming weaker as they move southward. As a result the weather in winter is cold and dry. In architecture, in the south, buildings are designed for shade and to encourage natural air movement; in the north, they are orientated southward to the sun as is common in tropical monsoon climates (Fletcher, 1987).

2. Architectural Character

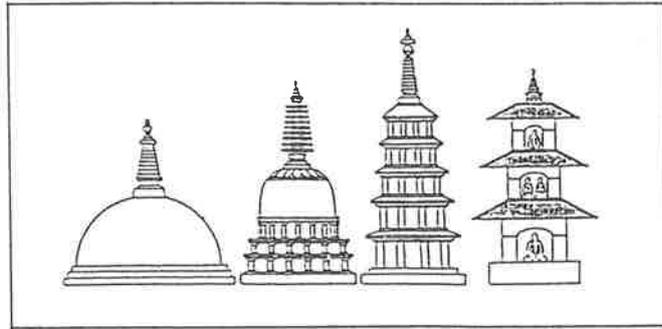
Fletcher (1950) and Liu (1989) state that Chinese Buddhist temples were of two types, one with a stupa or pagoda tower and one without. The temple with a stupa consisted of a group of religious buildings, the stupa was located in a separate courtyard but integrated with the group of buildings or combined with temple halls. The other consisted of only a group of religious buildings with no stupa. Originally, this type of temple belonged to bureaucrats, nobles and emperors, who believed in Buddhism. They donated their mansions for temples. Since there was no distinction between sacred and secular buildings, temples and residences all followed the same plan and structure whether the building was great or small. Liu's study classifies the Buddhist architecture into three types: grottoes (cave temples), pagoda towers and temples. Caffarelli (1989) describes the development of Buddhist architecture following the history of the Chinese dynasties.



22. Wutai Buddhist Monastery, the stupa integrated with the group of buildings.
(Fletcher ,1987:648)

The features of Chinese temple architecture are exhibited mainly in the pagoda tower, pai-lou (gateway), temple building (which includes roofs, columns, ornaments and spatial arrangement) and axial planning.

- 1) A *pagoda tower* has a religious significance and is a spectacular characteristic of Chinese temple architecture. It is usually polygonal in plan and the roofs in each storey are elaborately ornamented. Common material is brick, some towers have staircases to each floor. A pagoda tower can vary from three to 13 storeys in height, but the average is nine storeys. The tower was originally transformed from the image of the Indian stupa. It was combined with the indigenous pavilion tower to form a multi-storeyed pagoda tower. The transition of the Indian stupa into the Chinese pagoda tower is graphically described as follows:



23. The transformation of the Indian stupas into the Chinese pagoda towers.
From left to right: the basic Indian type, the later Indian type (Gandhara);
Chinese multi-storeyed stupa; multi-storeyed Chinese pagoda tower.
(Snodgrass, 1988:230)

- 2) A *pai-lou* is a distinctive Chinese gateway. Unlike the stone *thorana* of India, the *pai-lou* is made of timber, it consists of two or more posts which support the beams making one or three entrances. Usually it has roofs with multiple bracket layers like those under the temple eaves. A tablet is often introduced under the central roof and couplets are hung on the posts.
- 3) *Buddhist temples* usually contain the image(s) of the Buddha. A whole monastery often consists of a temple, relic shrine, Bell Tower, Pagoda Tower, refectory, kitchen, library, living quarters and courtyards. The monastery is surrounded by a wall and *pai-lous*. Common building materials are timber and brick. The wooden structure is raised on a stone or brick platform. Brick walls are often hollow and faced with glazed colour.
- *Spatial arrangement* is a typical character of Chinese temple building. Temple buildings are often erected followed the *Ting* which has an odd number of bays. The usual dimensions of a bay is three by three metres, later it was gradually widened. Another spatial unit is the *Jian*, the dimensions of a *Jian* is three by six metres.
 - The *roof system* is the most sophisticated feature of Chinese temple building. It is a sign of dignity to have double roofs, one is placed over another. The curvature of roofs appeared a long time ago, perhaps a logical explanation is that the

curvature was designed to protect the building from the direct sunlight, while the angle could still admit light to the interior. The roof frame, with beams and trusses, is usually exposed for aesthetic purposes. The beams are supported by multiple layers of brackets creating a distinctive character to Chinese temple architecture. Roofs are covered with glazed tiles in symbolic shape of the 'Negative and Positive'. The six common roof types are: hipped, hipped and gabled, overhanging gabled, parapet gabled, double hipped and conical.



Overhanging gabled roof



Parapet gabled roof



Double hipped roof

24. Common roofs of Chinese temples.
(Fletcher, 1987:63)

- *Columns* usually appear without capitals whether they are free standing or an integral part of the wall, they are connected direct to the roof beams which are supported by multiple brackets The connections are often rich with ornaments. Columns are situated following the *Ting* principle.
- The *podium* is an indispensable symbolic element of temple building. The height is usually one metre. The roof, columns and podium are not individual parts but they relate to each other as a system.
- *Ornaments* are another chief feature. Roofs are covered with brightly glazed tiles in symbolic colours (yellow for imperial palaces, red for mandarins, blue, green and purple for others). The ridges and hips are often decorated with coloured

dragons, fishes and grotesque figures. Building surfaces are painted depicting the story of the Buddha, landscape themes, figures, birds and flowers. The great yellow dragon means power of the spirit, the tiger is a symbol of the forces of nature.

4) *Axial planning* is an important feature of Chinese temple architecture. Temple buildings and courtyards are often situated along axes. Usually the longitudinal axis is the major axis and the cross axis is the minor. Three methods of arrangement are identified by Liu (1989):

- The first is to place the Main Hall at the centre of the major axis, other buildings are situated to the left and right of the main building.
- The second, called the central building layout, locates the main building at the intersection of the two axes. Other buildings are located symmetrical along both axes.
- The third is to extend the buildings in the following ways:
 - * *Longitudinal extension*: buildings are placed alternately along an axis.
 - * *Parallel extension*: buildings are located on a minor longitudinal axis which is parallel to the main axis.
 - * *Cross extension*: buildings are extended along both the horizontal and vertical axes.

3. Examples

Foguang Temple was built in 857 A.D. on Wutai Mountain, it is located on a sloped contour facing west therefore, it has an east-west axis. The buildings are situated on three terraces. The Main Hall is on the third terrace. The dimensions of the floor plan are seven bays (36.27m) in width and four bays (20.26m) in depth. It has a hipped roof curving slightly upward towards the ridge and multi-layers of brackets under the eaves. The building has a thick wall enclosing the space. The five central bays have the same width but the two end bays are not as wide.

Fogong Si Pagoda has an octagonal plan, the diameter at the base is 30.27m, it is 67.3m high (five storeys). The eaves and floor beams are supported by 60 giant brackets. The ground floor is surrounded by covered verandahs. The tower has two rings of columns firmly connected floor to floor and inclined slightly toward the centre.



25. Main Hall, Foguang Temple,
857 A.D.
(Liu, 1989:91)



26. Fogong Si Pagoda
(Great Wooden Tower), 1056.
(Liu, 1989:65)

C. Vietnam

1. The climate

The climate of Vietnam ranges from tropical in the south to subtropical in the north. Vietnam has one wet season and one dry season. The timing, length and intensity of these two seasons vary throughout the country. The rainy season in the south lasts from April to December with peak periods in June and in September. In Hue province (central Vietnam) the heaviest rains occur from September through to January. The winter monsoon reaches the Red River Delta area in the north about mid-September and continues until April. Constant fog and typhoons are common from August to October. The average rainfall for the three main cities is Hue - 297cm (117 inches), Saigon - 206cm (81 inches), Hanoi - 183cm (72 inches). Coastal typhoons are common in north and north-central Vietnam from July to November. The range of

temperatures in the north is much greater than in the south because of the difference in latitude. In Hanoi the temperature ranges from 5°C (41°F) to 42°C (107°F) with an average temperature of 17°C (63°F). The temperature in Saigon varies from 26°C (78.8°F) to 29°C (85°F) (Whitfield, 1976).

2. Architectural character

The history of Vietnamese Buddhist temple architecture shows definite Chinese influences, even so it still has several characteristics that are not seen in Chinese architecture. One of the differences is the term temple. The Vietnamese use this term for all places of worship which can include the village communal temple (*Dinh*), the temple for spirit worship (*Den*), the shrine (*Mieu*) and the Buddhist pagoda (*Chua*). They are the four major components of Vietnamese temple architecture. A dwelling house is not a temple but it is studied in this section because its style can influence temple buildings. Whitfield (1976) has made a comparison between those components as follows:

1) The *Dinh*, a multi-purpose communal house in the village, is the most important institution in the life of a village. It symbolises the soul and lifeline of that community. Both secular and religious functions are held in this sacred structure. The *Dinh* is unique to Vietnam. Above all, it is the place of worship of the guardian spirit or patron saint (*Thanh Hoang*) of the village. The *Dinh* also serves as a meeting hall for the council of notables as they settle local judicial disputes and take action on administrative, financial and electoral questions. Village ceremonies and festivals are organized here which often include large banquets. Finally, the important historical and genealogical records, together with the village charter (*Huong Uoc*), are stored here and guarded protectively.

It is understandable, therefore, why the *Dinh* is given so much attention and importance. Popular belief has it that the geomantically determined position of the *Dinh* would greatly influence the future of the people. The *Dinh* is designed and built

with great care. The most capable and renowned workmen are employed and the finest materials are used within the limits of the resources of the community. Each village strives to have the most elegant and majestic *Dinh*. The villagers, especially the wealthier ones, are called upon to maintain the *Dinh* in good condition (Whitfield, 1976:67).

2) The *Den* is a village temple used to honour and worship the spirit of a hero, popular ruler or one of the lesser spirits of the supernatural world at the village level. It is usually smaller than the *Dinh* but larger than the *Mieu* - and is used only for worship. If the village worships more than one major spirit in addition to the patron saint, then each spirit must have a separate *Den*. Like the *Dinh*, the *Den* is located away from the residential area of the village. The structure of the *Den* is similar to that of the *Dinh*. There are two main buildings, front and back, and a small courtyard. The *Den* is also distinct from the Buddhist pagoda, although certainly not in competition or conflict. The village usually selects one person to reside in the *Den* to oversee the grounds and maintain the altar, incense and other religious paraphernalia (*ibid*: 64).

3) The *Mieu* is a small village temple used to honor worship a spirit. The *Mieu* is usually dedicated to a specific spirit or saint. There is usually one or two buildings in a *Mieu*. It is usually located away from the residential centre such as on a river bank, on a hill or at the edge of the village. Unlike the *Dinh* and *Den*, the *Mieu* is maintained by the villagers who live closest to the *Mieu*. There is no full-time custodian to oversee the temple (*ibid*: 176).

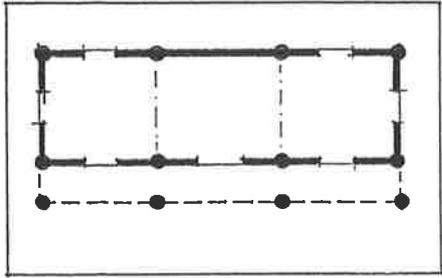
4) The Pagoda (*Chua*) is a place for worshipping the Buddha and to study. This is not to be confused with the village communal hall (*Dinh*), the temple for spirit worship (*Den*), or the shrine (*Mieu*). The Vietnamese pagoda is very similar to the Chinese pagoda. The Vietnamese pagoda usually has three large main doors (*Tam-Quan*) which are opened only on special holidays. Most pagodas also have a bell tower, yard and a sacred pond. The living quarters for the monks or nuns are in the back, oft times with a garden for flowers and vegetables. The pagoda proper consists of several sections

including the front hall, centre hall, and main altar hall. These various parts of the temple would sometimes be terraced in an ascending sequence with the three main doors on the lowest level. Certain pagodas would be served by nuns and others by monks, but never do both sexes serve as clergy in the same temple. Smaller pagodas that could not support a full time clergy would be maintained by laymen and laywomen and would be used only for worship. Many pagodas celebrate the death anniversary of the founder of the temple (*ibid*: 217). [Further details of pagodas are discussed in Chapter VII.]

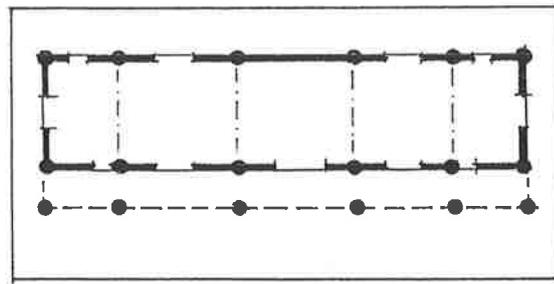
5) The Vietnamese house varies in style and substance according to region and social class. Traditional rural houses are usually constructed from bamboo, thatch, straw, reed and mud. They are built on the ground with a dirt floor. The courtyard is sometimes fenced but always with a gate (*Ngo*). The wealthier homes are sometimes made of brick and mortar with a tiled roof. Concrete block is also quite common. Urban dwellings are often made of concrete block with ceramic tile floors, various types of roofing and a whitewashed stucco exterior.

Since most Vietnamese practise ancestor worship, the home is a place of worship as well as a dwelling. It tends, therefore, to be a harmonious structure, emphasising the aesthetic and balance rather than comfort and convenience. A Vietnamese home usually consists of Three Bays (*Nha Ba Can*) constructed with eight columns, or Three Bays and Two Huts (*Ba Gian Hai Chai*) constructed with 12 columns. Located on the central axis of the middle bay is the family altar, dedicated to the ancestors, it is placed against the wall opposite the main entrance. The middle bay serves as a living room and is the holy centre of the house where all the family rituals take place. The bedrooms, study room, dining rooms, etc., are located in the two side bays. The more well-to-do houses might have a verandah added to the front along the length of the house. Unlike the Chinese houses, the Vietnamese kitchen is always separate from the main building. The kitchen is a small outbuilding and is located at the

back of the main structure. Another outbuilding serves as a utility shed, granary and storage room (*ibid*: 8,115).



27. Layout of the 'Three Bays'.



28. Layout of the 'Three Bays and Two Huts'.

CHAPTER III : SIX BUDDHIST PAGODAS IN VIETNAM

A. Descriptions

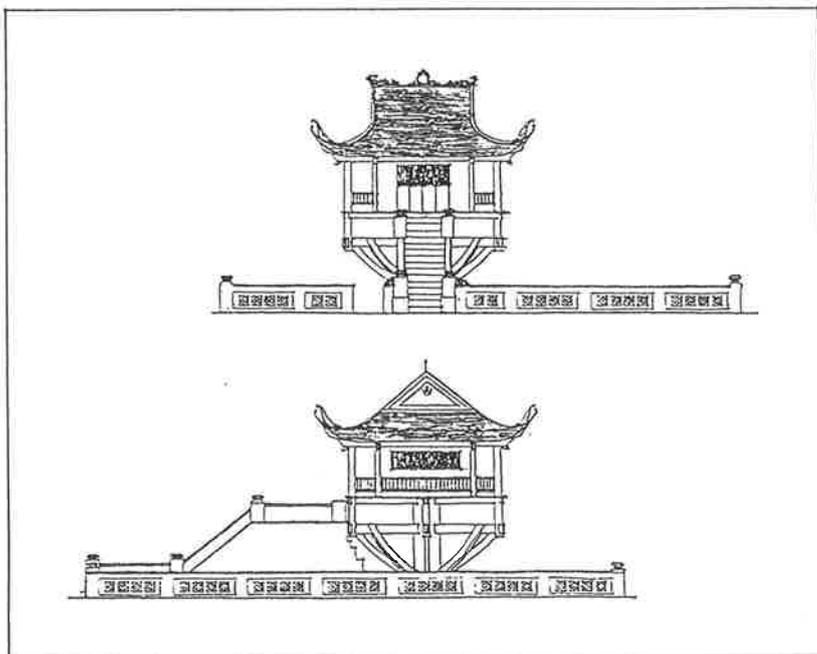
1. One-Pillar Pagoda

Location:	One-Pillar Pagoda Street Ba Dinh, Ha Noi
Date:	1049 A.D.
Founder:	King Ly Thai Tong (1028-1054)
Site Area:	265m ²
Building Area:	30m ²
Restoration:	The pagoda has been rebuilt many times. The present one was completed in 1955.
Legend:	King Ly Thai Tong dreamed that he had met the Avalokitesvara Bodhisattva sitting on a lotus pedestal. The King was led to the pedestal. The monk Thien Tue advised the King to build a pagoda by placing a wooden pillar in the midst of the pond, then build a lotus pedestal on the pillar as he had seen it in the dream. Vo (1992:14). The lotus pedestal was larger in the Ly Dynasty than it is today.
Graphic materials:	Nguyen Cong Trang Architect 148 Chi Lang, Hue, Vietnam

The pagoda was built in the 11th century A.D., initially without bolts or nails. The superstructure with a 3m x 3m floor area, is placed upon one stone column 4m high and 1.2m in diameter. Originally the column was made of wood. At the top is a timber-framed structure supported by a timber floor with terracotta 'shoe-shaped' tile. The remarkable timber connection techniques enable the structure to resist the wind loads.

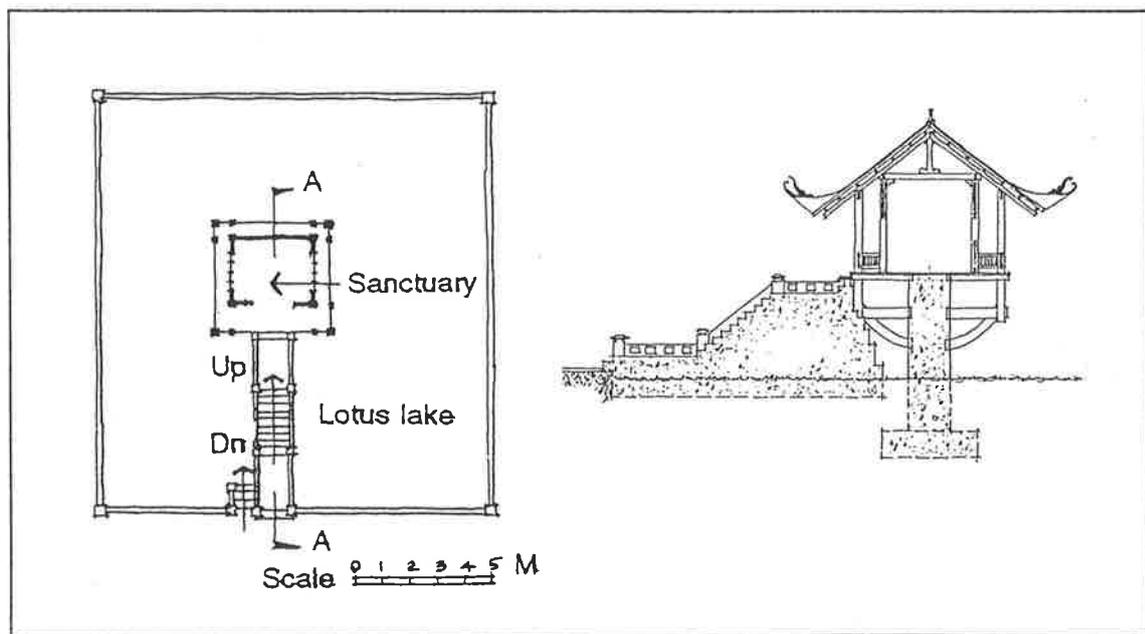
Nguyen (1990) states that, in 1954, before leaving Ha Noi, the French blew up the pagoda. It was then rebuilt by the government of the Democratic Republic of Vietnam. During the civil war between the North and the South, a similar pagoda was erected in Thu Duc. The great One-Pillar Pagoda has now become a national symbol of Vietnamese architecture.

A recent study by Vo (1992) indicates that the sense of beauty is to some degree cultural specific. Roof curves became more gentle with fewer brackets, certain structural elements became more delicate. Simplicity became the key of form. By the time of the Ly Dynasty, a simple and economical style had been perfected and the One-Pillar Pagoda can be considered as an example of genuine Vietnamese architecture.



29. Elevations, One-Pillar Pagoda, Hanoi, Vietnam, 1049.

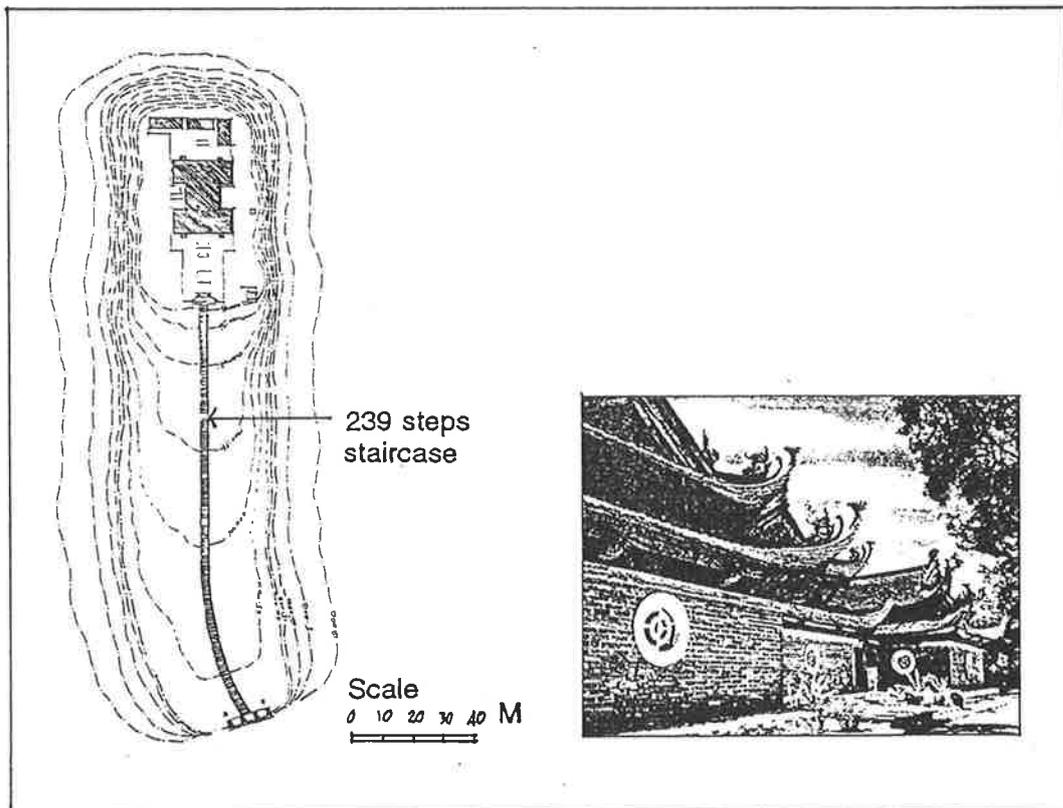
In Buddhism the lotus is used as a pedestal for Buddhist images. The Buddha and the Avalokitesvara Bodhisattva are expressed as sitting on a lotus throne or standing upon a lotus pedestal. In pagodas, the lotus is the flower offered by the laity for decorating the altar, and the landscaping usually includes at least one lotus lake. In the Vietnamese culture, the lotus is a symbol of purity. According to the dream of King Ly Thai To, the pagoda was built to resemble a lotus flower resting on a wooden pillar in the middle of a pond to symbolise a 'pure' lotus rising from the sea of sorrow (Vo, 1992).



30. Plan and section A-A, One-Pillar Pagoda.

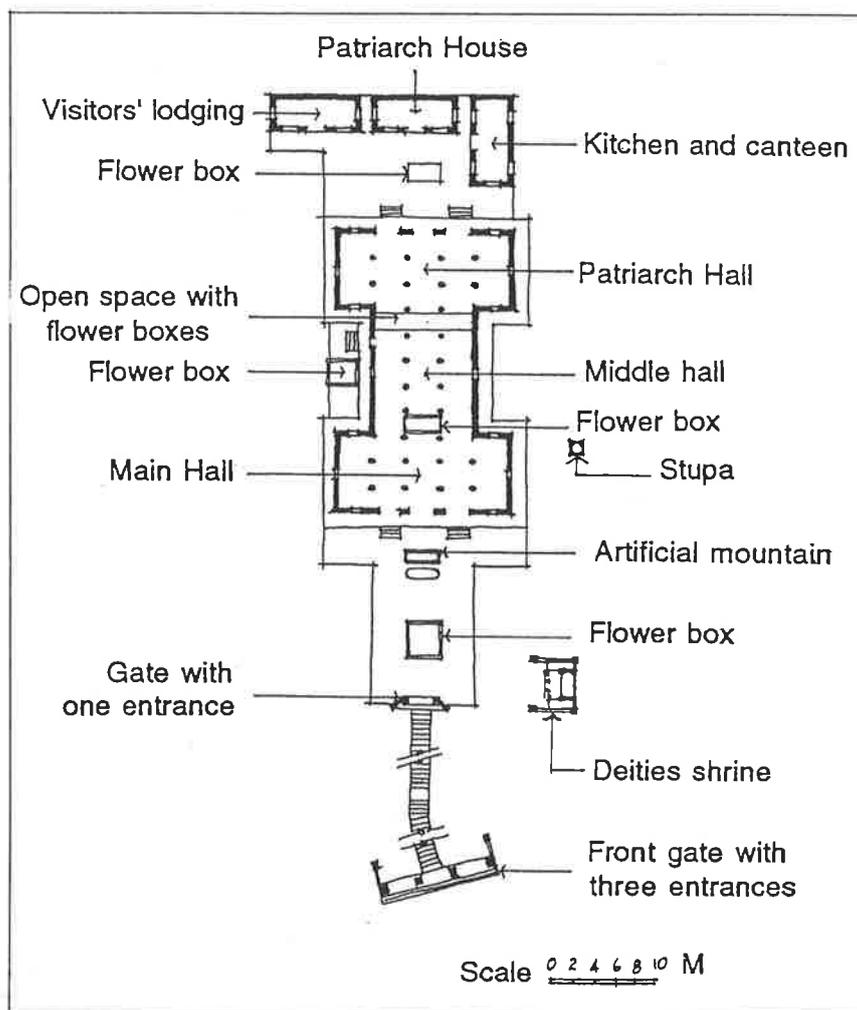
2. Tay Phuong Pagoda

Location:	Mount Cau Lau Thach Xa Village, Thach That District
Built:	Third century A.D.
Founder:	Unknown
Site Area:	Not enclosed
Building Area:	1009m ²
Restoration:	The pagoda was rebuilt in the fourth Duc Long (1632). Some years later statues were carved and the bell was cast. During the Canh Thinh Dynasty (1794) the pagoda was completely renovated (Vo, 1992).
Graphic materials:	Nguyen Cong Trang



31. Site plan and main building, Tay Phuong Pagoda, Thach That, Vietnam, third century. (Vo, 1992:85)

The pagoda is situated on the top of a hill and the main access is an impressive staircase with 239 steps. The main building consists of three parts: the Main Hall, Middle Hall and Patriarch Hall. The three halls are linked together forming the *Cong* character (*I*). The most impressive element of this temple is the double-layered roof and the 'knife-shaped' corners. The roofs are ornamented with dragon heads (*Dau Rong*) and unicorns (*Lan*). The windows are circular, with the bars representing the harmony of two opposites the 'positive' and the 'negative'. The internal beams and rafters are decoratively carved.



32. Floor plan, Tay Phuong Pagoda.

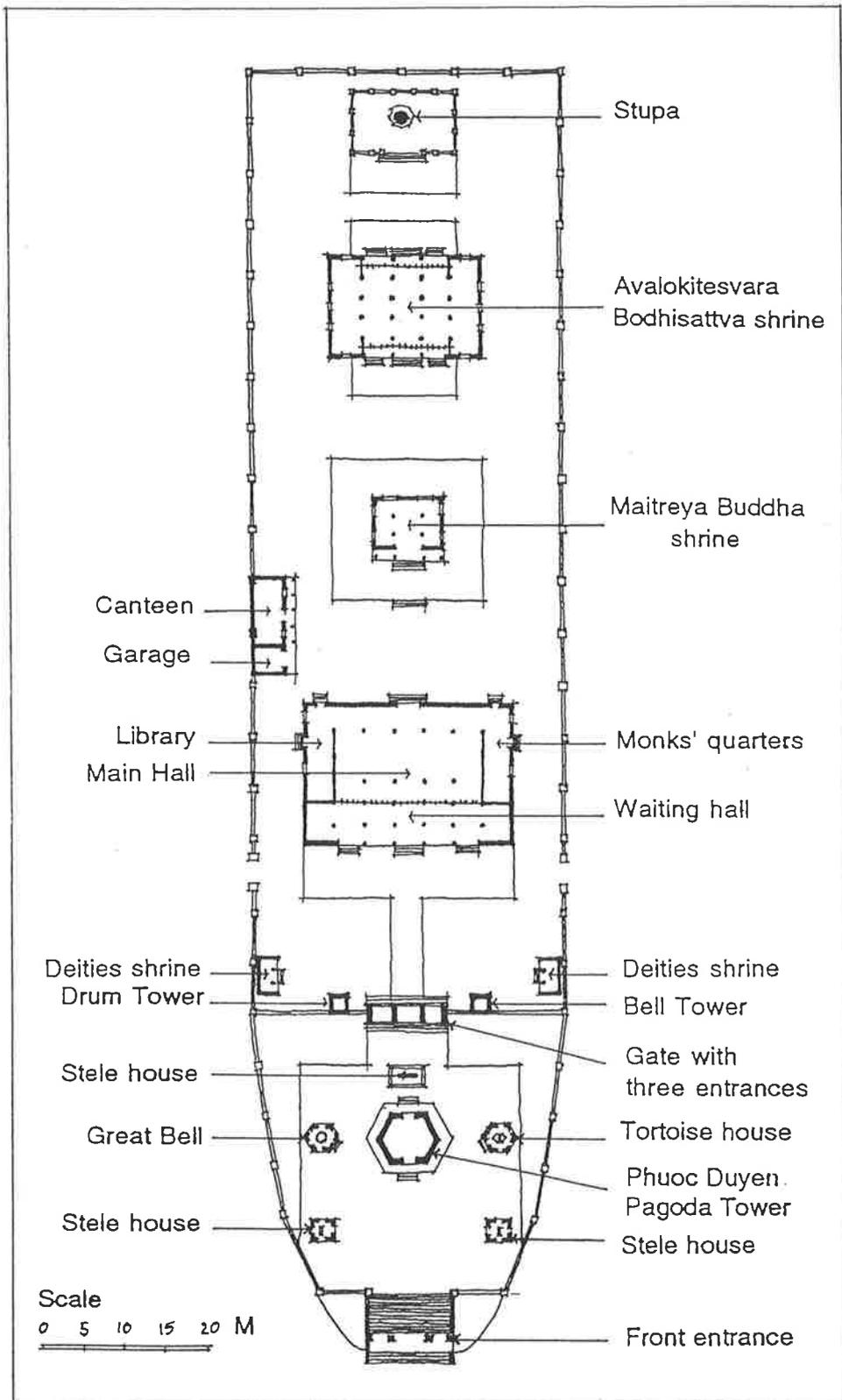
3. Thien Mu Pagoda

Location:	Ha Khe Hill 5 km west of Hue.
Date:	1601
Founder:	Lord Nguyen Hoang
Site Area:	7694 m ²
Building Area:	947m ²
Legend:	There was an old lady who stood on the Ha Khe Hill and said to Lord Nguyen Hoang that he should build a temple on this site. The temple was built and was named <i>Thien Mu</i> which means the Old Lady from Heaven. (Nguyen, 1990:102).
Graphic materials:	Nguyen Cong Trang



33. Main building, Thien Mu Pagoda, Hue, Vietnam.

The Thien Mu Pagoda was built by Lord Nguyen Hoang in 1601 and restored by Lord Nguyen Phuc Tan in 1665. In 1714 Lord Nguyen Phuc Chu continued to restore the pagoda. In 1815 and 1831, King Gia Long and King Minh Mang restored further, respectively. In 1844, King Thieu Tri built the Phuoc Duyen Pagoda Tower. In 1907, King Thanh Thai restored the pagoda after it was damaged by a storm in 1904. Since then the pagoda has been continuously under restoration (Vo, 1992).



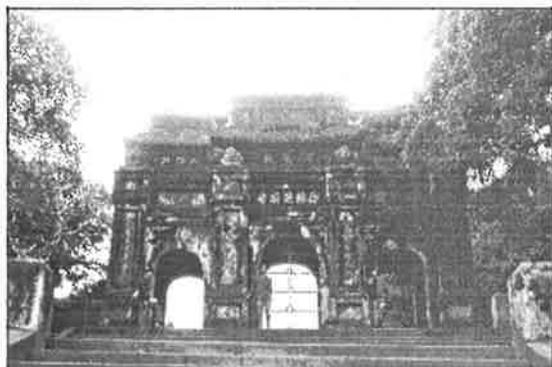
34. Floor plan, Thien Mu Pagoda.

The great bell was cast in 1710 on the orders of King Thieu Tri. It is 1.4m in diameter, 2.5m in height and weighs 3,285kg. It is a masterpiece of eighteenth-century Vietnamese art. The stele house was built in 1715 by Lord Nguyen Phuc Chu. The stele stands on the back of a marble tortoise and is 2.58m high, 1.25m wide and 0.24m thick. The Phuoc Duyen Pagoda Tower is 21.24m in height (seven storeys), with an octagonal plan. An image of the Buddha is worshipped on each storey. The Shakyamuni Buddha is enshrined on the seventh storey. Inside the main pavilion there are many Buddhas and a bronze gong cast by Jean de la Croix in 1674 (Vo, 1992).

4. Bao Quoc Monastery

Location:	Ham Long Hill Vinh Ninh, Hue
Date:	1674
Founder:	The Most Venerable Giac Phong
Site Area:	Not enclosed
Building Area:	529m ²
Graphic materials:	Nguyen Cong Trang

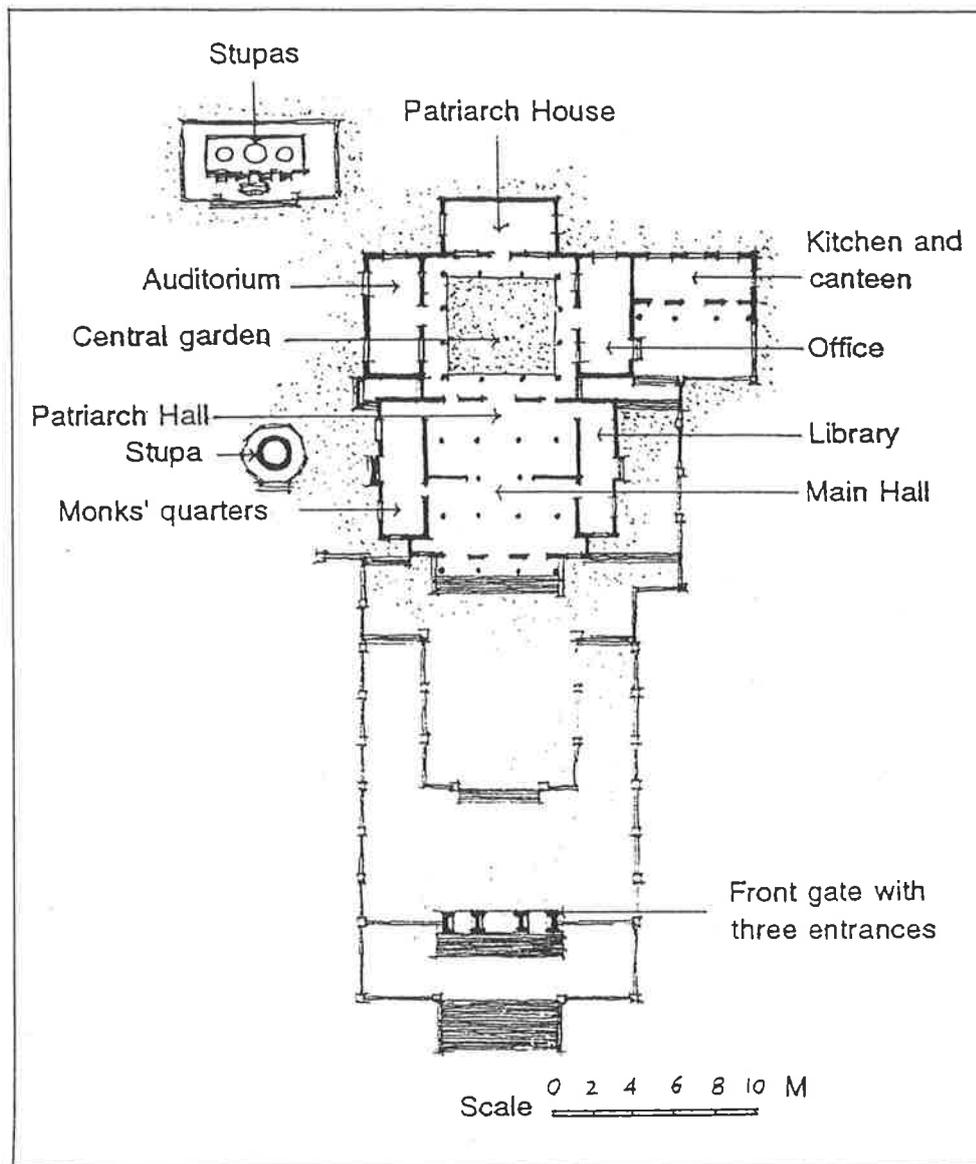
In 1808, this building was restored by Queen Hieu Khuong and renamed the Thien Tho Pagoda but, in 1824, King Minh Mang renamed it back to Bao Quoc Pagoda. In 1858, it was restored again by King Tu Duc. In 1957 the pagoda was reconstructed but the original form was preserved. The three entrances gate was built in 1808 and repaired in 1873. In 1940, the pagoda changed to a monastery of the School of Higher Buddhist Studies and has become the centre for training monks and nuns (Vo, 1992).



35. Front gate of the Bao Quoc Monastery, Hue, Vietnam, 1674.



36. Outdoor ornaments, steps to the main building.



37. Floor plan, Bao Quoc Monastery.

5. Vinh Nghiem Pagoda

Location:	339 Nam Ky Khoi Nghia Street Third District, Ho Chi Minh City
Date:	1964 -1971
Architects:	Nguyen Ba Lang Le Tan Chuyen Co Van Hau
Site Area:	7233m ²
Building Area:	3396m ²
Graphic materials:	Nguyen Cong Nghe Town Planner 464 B/29 Cach Mang Thang 8 P11, Q3, Ho Chi Minh City, Vietnam

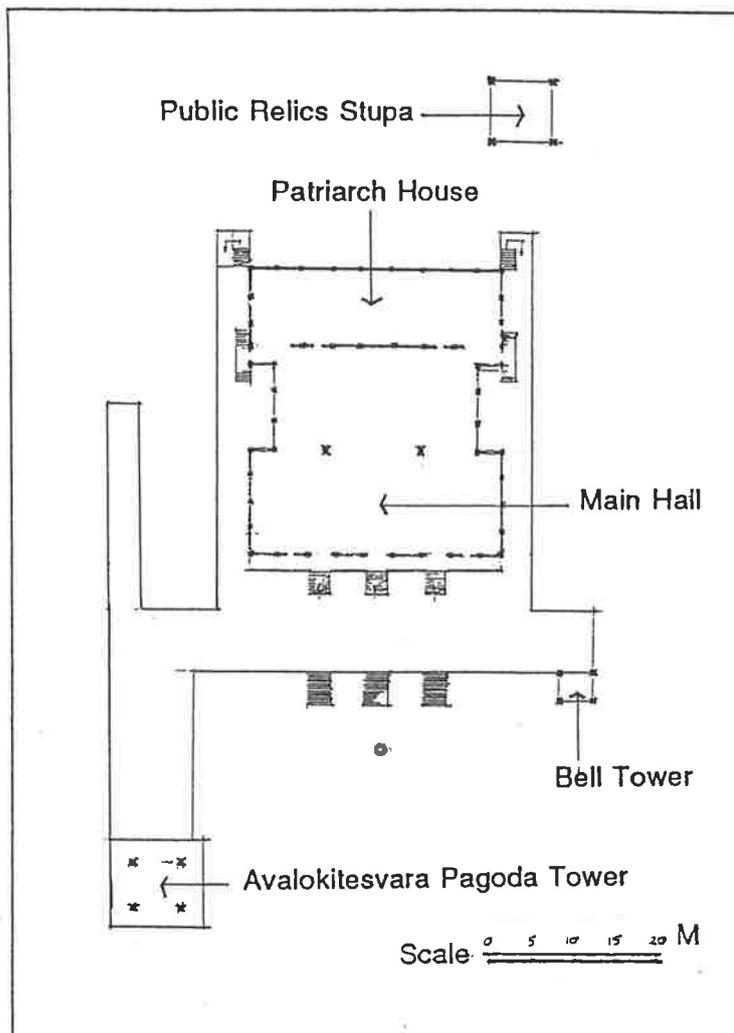
The illustration (Fig.84) shows that a massive three entrances gate shows the way to the pagoda. The pagoda tower (Fig.106) is 40 metres in height (seven storeys) and is located in the left corner of the front courtyard. The main building consists of two floors. The ground floor accommodates the Patriarch House, auditorium, offices, library, study rooms, living rooms, quarters for the monks and public relics tower. The second floor contains the Bell Tower and Sanctuary Hall.

The main building is a splendid structure 35m long, 22m wide and 15m high. The pillars, floor slabs, rafters and ridge-beams are made of reinforced concrete. The building has three sections: the altar for kowtow (*Bai Dien*)²¹, the main holy altar and the Kshigarbha altar (*Dia Tang Dien*). They form the *Cong* character. The curved roof is similar to a Chinese temple and some of the temples in north Vietnam. The symbol of the Eightfold Noble Path is on the roof of the main building and has phoenix heads placed at each corner. The Bell Tower is located on the right of the front courtyard. The Public Relics Tower, built in 1982, is located at the rear boundary.

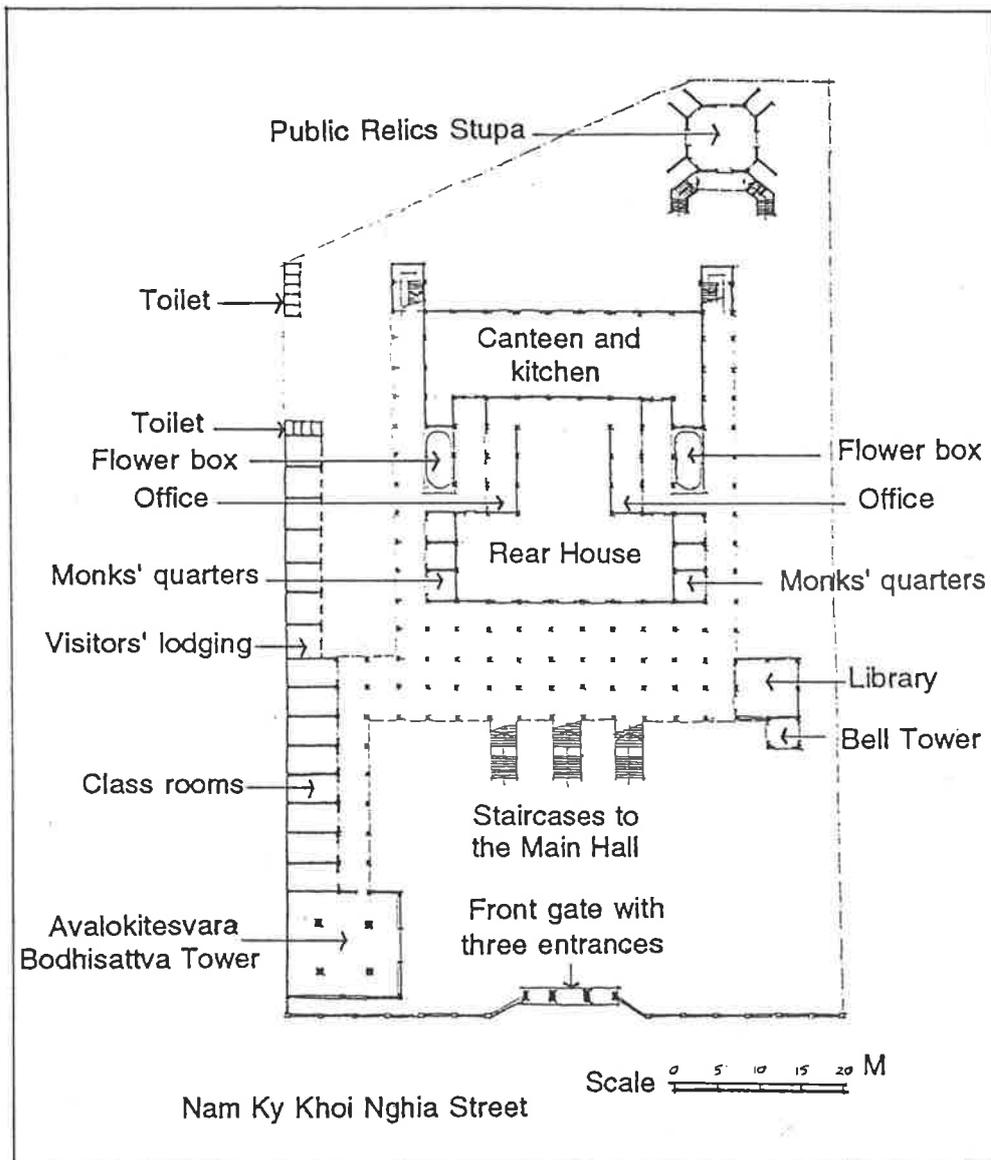
²¹ Kowtow (*Bai Dien*) is a hall which is used for praying.



38. Vinh Nghiem Pagoda, Ho Chi Minh City, Vietnam, 1971.



39. First floor plan, Vinh Nghiem Pagoda.



40. Ground floor plan, Vinh Nghiem Pagoda.

6. Xa Loi Pagoda

Location:	89 Huyen Thanh Quang Street Third District, Ho Chi Minh City
Date:	1956-1958
Architects:	Tran Van Duong Do Ba Vinh
Engineers:	Du Ngoc Anh Ha To Thuan
Site Area:	2500m ²
Building Area:	1606m ²
Graphic materials:	Nguyen Cong Nghe

The pagoda consists of the Main Hall, auditorium, library, offices, community hall, visitor lodgings and a waiting room. The Main Hall is 31m long, 15m wide, with an altar of the Buddha and on the walls paintings about his life. The statue of the Avalokitesvara Bodhisattva under the Bodhi tree is worshipped in the courtyard .

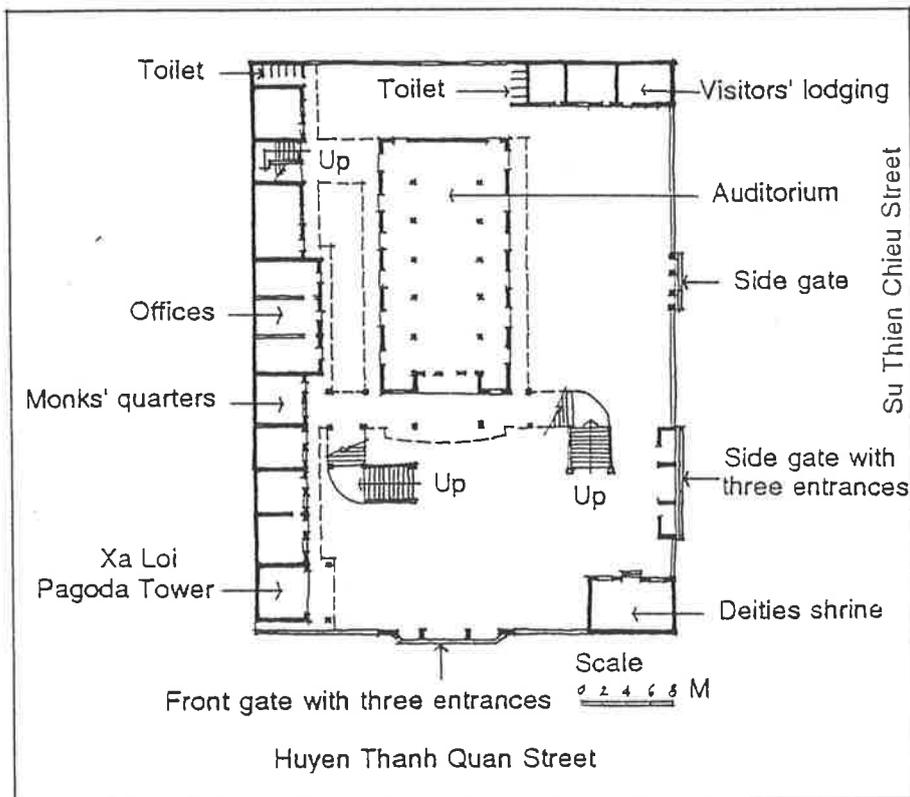
The statue of the Buddha is worshipped in the Main Hall on the second floor. This statue was cast in pink stone powder by the School of Fine Art of Bien Hoa in 1958. At present Xa Loi Pagoda is the office of the Vietnam Buddhist Sangha. The seven-storey tower was begun in 1960 and completed in 1981. The Great Bell was hung in the tower in 1961 under the honourable attestation of the Most Ven. Thich Tinh Khiet (Nguyen, 1990).



41. Xa Loi Pagoda Tower.



42. Side gate to Su Thien Chieu Street.



43. Floor plan, Xa Loi Pagoda, Ho Chi Minh City, Vietnam, 1958.

B. Characteristics of Vietnamese pagodas

From the study of 56 pagodas by Nguyen (1990), 171 pagodas by Vo (1992), and the six pagodas in this chapter, it can be concluded that pagodas may be large or small, the building forms may vary, they may be sited on a mountain, or within a residential area, but they all display certain common characteristics:

- axial planning is an integral part of site layout;
- a pagoda always has a front gate, front court, main building, Rear House and living quarters, usually these components follow in that order;
- there is a side gate to the right of the front gate which is open every day;
- the main building usually contains the Main Hall, Sanctuary Hall and Patriarch House.
- facades of the main buildings are balanced and follow the principle of *Ta Phu Huu Bat* (p.166);
- common symbolic ornaments include the four sacred animals (*Tu Linh*) (Fig.100), Wheel of Life, Eightfold Noble Path, lotus, *Swastika* character, *Hy* character (happiness) (Fig.99), *Tho* character (longevity), clouds, fishes and bats;
- common symbolic tiles are the flat, shoe-shaped tiles (*Ngoi Hai*) (Fig.97) and the Negative and Positive tiles (*Ngoi Am Duong*) (Fig.98);
- every temple has an artificial mountain(s) and a lotus lake(s);

- the Bell Tower is on the right of the central axis, the Drum Tower (if one exists) is on the left, and at the front of the Main Hall;
- pagoda tower, if any, is on the left of the central axis and in front of the main building;
- deity's shrine(s), if any, is on the right of the central axis;
- stupa(s), if any, is on the left of the central axis and behind the temple buildings; and
- there are no differences in temple form between the Mahayana and Hinayana Schools of Buddhism except in the layout of the Buddha altar. In a Mahayana temple many types of Buddhas are worshipped while in a Hinayana (Theravada) temple only one Buddha, who is the Shakyamuni, is worshipped (Thich Nhu Hue, pers.comm., 1991).

C. Comparison with temples in China

Vietnamese temple architecture has been strongly influenced by the Chinese tradition. However, the differences can be identified as follows:

- There is a clear difference between sacred and secular buildings such as the *dinh*, *den*, *mieu*, pagodas and homes. Buildings are classified by their layouts and their use.
- The front gate consists of three large main doors (*Tam Quan*), it is usually bulky and always permanent. This is not typical of Chinese gates.

- The layouts of the pagoda buildings follow the Chinese characters (*Khau, Dinh, Tam, Cong, Quoc*) (pp.180-181) and are influenced by the traditional Vietnamese house: the Three Bays and Two Huts (p.35). These characteristics are not found in China.
- The ornaments are covered with a shining skin made of colourful ceramic fragments collected from broken bowls or cups. This is a special feature of the Vietnamese traditional art. In China colour glazing is used to cover the ornaments.
- Several pagodas in *Hue* province (central Vietnam) have straight roofs and are rich with symbolic ornaments on the ridges (Fig. 94). The straight roofs are not found in Chinese temples.
- The kitchen is always separated from the main building, it is a small outbuilding and is located at the back of the main structure.

CHAPTER IV : THE DEVELOPMENT OF BUDDHISM AND VIETNAMESE BUDDHIST TEMPLES IN AUSTRALIA

A. Development of Buddhism

1. First arrivals and early establishment

The first Buddhists in Australia date back to 1848, with the arrival of Chinese coolie labourers. Croucher (1989) points out that one of the earliest Buddhist temples in Australia was built in South Melbourne, in 1875, by the secular Sze-Yap organisation. The first Buddhist monk to arrive in 1910 was the venerable U Sasana Dhaja from the Sagaing Hills in Burma. He was also known as Mr E. H. Stevenson, an Englishman born in Yarmouth in 1863.

The largest Buddhist temple in the southern hemisphere (now being built in NSW) is the Nan Tien Temple at Berkley, Wollongong. This sprawling structure, on a 22-hectare site and costing some \$50 million, is perhaps the most visual sign of the entrenchment of Buddhism in Australia. Ethnic Buddhist groups which have continued to grow up to the present time include Chinese, Cambodian, Lao, Thai, Malaysian, Indonesian, Japanese, Sri Lankan and Vietnamese. Croucher (1989) observes that Vietnamese Buddhists are now the largest single group.

2. Development of the Vietnamese Buddhist community

Following the downfall of the South Vietnamese government in 1975, many Vietnamese decided to leave their country because of human rights violations. Australia is one of the Western nations that had a close diplomatic relationship with the pre-1975 Vietnam regime, and has a policy to accept Vietnamese refugees for settlement. Since 1975 the number of Vietnamese refugees in Australia has grown very rapidly.

The 1991 census showed that the Vietnamese population was 133,400. The first Vietnamese communities were formed in Melbourne and in Brisbane in 1978, and in Sydney in the following year. The first Vietnamese monk in Australia was the Most Venerable Thich Phuoc Hue who arrived in 1980 from a refugee camp in Hong Kong. In April 1981 he helped to establish the Vietnamese Buddhist Federation of Australia. The basic constitutional aims of the Federation are interpreted by Croucher (1989:102) as:

1. To promote the understanding of the teachings of the Shakyamuni Buddha, the supreme Lord of three thousand million great chiliocosms, who out of the great compassion towards being shows the path to enlightenment;
2. To inculcate and develop fundamental Buddhist traditions and the Vietnamese culture in Australia;
3. To develop love and compassion necessary for the liberation of all being.

3. Vietnamese population and growth rate of Buddhists

Table 1: Vietnamese population 1981-1991

Year	Population	Population change	Buddhist Population
1981	43,400	-	15,900
1986	87,700	44,300	32,186
1987	94,500	6,800	34,682
1988	100,500	6,000	36,884
1989	108,700	8,200	39,893
1990	119,659	10,959	43,915
1991	133,400	13,741	48,957

Source: Australian Bureau of Statistics, Census 1989.

Table 1 gives the census figures for the Vietnamese population from 1981 to 1991. The population is calculated by subtracting the deceased (1%) from the number of immigrants arriving each year. The growth rate of Buddhists is calculated according to the research carried out by Luu (1991). He found that about 36.7% of the Vietnamese population were Buddhists. An earlier study made by Croucher (1989:102) shows that "On the 1986 census more than 35,000 Vietnamese

designated themselves as Buddhists, making up about 30 percent of that community's numbers." The figure is different from the one found by Luu (1991), however, both figures show that the Vietnamese Buddhist population in Australia had increased significantly.

Dr David Cox of Melbourne University (cited in Croucher, 1989) found that the level of practising Buddhists, who had immigrated from Asia, was declining. Only 60% of the very active members of the Buddhist society are introducing their children to the religion. In future the growth of the Buddhist population may slow down and the above figures are for showing the trends.

B. VIETNAMESE BUDDHIST TEMPLES IN AUSTRALIA

1. The climate

Drysdale (1975) states that the climate of Australia involves three major zones:

1) Hot-humid zone: temperatures remain high throughout the year and the daily ranges of temperature are small. In summer, high day-time dry-bulb temperatures (30°C to 35°C), high dry-bulb temperatures at night (25°C to 30°C), and high relative humidity day and night (70 to 80%). In winter, warm to hot days (25°C to 20°C), and mild nights (15°C to 20°C). Generally, heavy summer rainfall, dry winter; small diurnal temperature range, particularly during summer (5°C to 8°C).

2) Hot-arid zone: both the daily and the seasonal ranges of temperature are wide. In summer, very high day-time dry bulb temperatures (35°C to 43°C), hot nights (20°C to 25°C), low relative humidity day and night (20 to 35%), and prolonged heat waves; hot and dry winds. In winter, warm to hot days (18°C to 25°C), and cool to cold nights (5°C to 13°C). Generally, low rainfall, occurring principally in summer, large diurnal and seasonal variations in temperature (10°C to 20°C).

3) Temperate zone: experiences wide ranges of diurnal and seasonal temperatures. In summer, high day-time dry-bulb temperatures (30°C to 35°C), moderate dry-bulb temperatures at night (13°C to 18°C), and moderate humidity 30 to 40%. In winter, cool to cold days (10°C to 15°C), and cold nights (2°C to 7°C). Generally, rainfall throughout the year, with maximum except in northern N.S.W. Considerable diurnal temperature range (11°C to 16°C) and a seasonal range of about 16°C.

The movement of air masses across the continent causes some areas to experience climatic conditions peculiar to two or more zones. Other effects of elevation on climate are to temper day-time temperatures and often cause a sharp fall in temperature at night.

2. Existing Buddhist temples

The following table gives the location and cost of the eight Vietnamese temples and monasteries²⁶ which belong to the Vietnamese Buddhist Federation of Australia. The temples which show no cost operate in residential premises. There are a few more Vietnamese Buddhist temples in Australia but they are not included in the table because they do not belong to the Federation.

²⁶ In Australia, pagoda and monastery are used to indicate a temple. Pagoda is the common name in Vietnam. A monastery is a religious school for monks or nuns, it involves all the facilities of a temple.

Table 2: Vietnamese Buddhist temples in Australia

State	Title	Location	Architects	Cost(\$)
NSW	Phuoc Hue Temple	364 Victoria Street, Wetherill Park, NSW 2164	Loi Ha A. Vladimir Pham Van Ngoc	2,500,000
NSW	Phap Bao Temple	148-154 Edensor Road, St. Johns Park, NSW 2176	Nguyen Ky	1,000,000
VIC	Quang Minh Temple	177 Morris Street, Sunshine, VIC 3020	David Prest Tran Nam Sanh	2,500,000
VIC	Hoa Nghiem Temple	22 Princess Avenue, Springvale, VIC 3173	-	-
ACT	Van Hanh Monastery	32 Archibald Street, Lyneham, ACT 2601	Tran Nam Sanh	8,000,000
SA	Phap Hoa Temple	20 Butler Avenue, Pennington, SA 5013	-	478,000
WA	Pho Quang Monastery	91 Evandale Road, Marangaroo, WA 6064	Richard Hammond	2,500,000
QLD	Phap Quang Temple	12 Freeman Road, Durack, QLD 4077	-	-

3. The need for temples

Like other generations of migrants and refugees, the Vietnamese met with some difficulties. Generally, with support from government agencies as well as community support groups, their physical requirements were met fairly readily but in regard to their spiritual needs, particularly in the Buddhist groups, people were much worse off. In response to these spiritual needs, Buddhist societies were formed in each state and the Vietnamese Buddhist Federation of Australia was established in New South Wales in 1981. The Federation encouraged Buddhist communities to erect temples throughout Australia. As at 1993 the Federation had established eight temples, six of which were built, the others are in residential premises used as temples.

CHAPTER V : A SURVEY OF FIVE BUDDHIST TEMPLES IN AUSTRALIA

A. Approach to case studies

Five Vietnamese Buddhist temples and monasteries were selected for the survey. A structured questionnaire was prepared as the basic framework for use in personal interviews. The questions were designed for gathering factual data and also for eliciting statements of philosophy, approaches and opinions of the parties involved in initiating, organising, designing and constructing the temples. The interviewees were the abbots, architects and local authorities.

The writer wishes to point out that, in the process of conducting the interviews, the discussions at times digressed from the main topic, there was also the difficulty of translating the philosophical Buddhist meanings into English. Therefore, it was not always possible to translate the interviewees' responses to the questionnaire verbatim.

1. Project data

This section gives the factual information about the temples and the monasteries and each is illustrated with graphic materials and photographs.

2. History of establishment

The initiation of any building proposal and its subsequent development varies from project to project and, with community-type projects, it is of especial interest to examine the kind of triggers that generate such new projects. Social, economic and political conditions undoubtedly play a significant role. The survey investigates the reasons for the initiation of temple projects and their subsequent development.

3. The client

Any design project starts with the statement of the client's basic requirements. Often the most important need is functional efficiency. At other times it may be the creation of symbolic structures where not only the maximum area but spiritual needs are required. All good architecture should satisfy both. In the case studies, the brief for each project will be examined with respect to the desired outcomes and the balancing of the religious, community and economic factors.

4. The architect

It is normal for an architect to weigh the client's brief against the environmental conditions, existing technologies, design parameters and economic realities. The survey will attempt to examine the role of the project architects, their influence, obligations and responsibilities. The study will also seek to determine major problems and the ways of solving them experienced by both the client and the architect. In some cases a brief or a statement of detailed requirements was available to the architect, in others the project evolved gradually depending on the needs and available finances.

5. The local authority

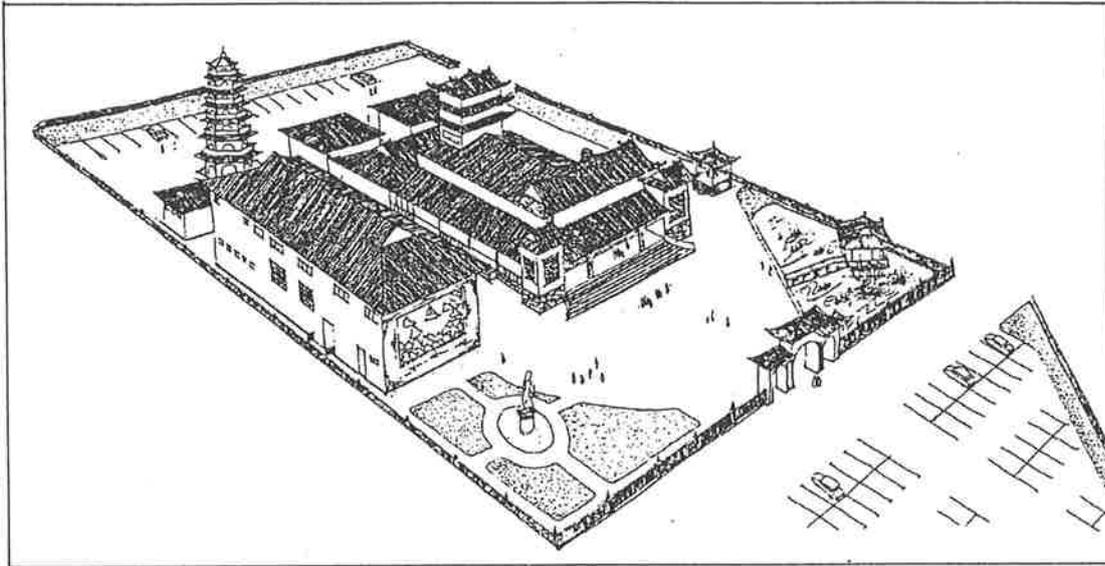
The problems of initiating a new building type of a religious nature in local communities would vary from place to place. Existing legal framework in terms of zoning and community attitudes as represented by the municipal councils may affect site selection and planning, design and construction. Also where specific information was available the attitudes and perceived problems of the local population and authorities will be discussed.

B. Five case studies

1. Phuoc Hue Temple

a. Project data

- Location: 369 Victoria Street
Wetherill Park, NSW 2164
- Client: The Most Venerable Thich Phuoc Hue
- Architects: Loi Ha
Pham Van Ngoc
A. Vladimir
- Artists: Do Trong Nhon
Vo Dinh Khoa
- Engineer: A. W. Mc Carthy Pty Ltd
- Project & Construction
Manager: Andrew Nghiep Nguyen
- Builder: B.T. & NG. Consultants
13 Belvedere Arcade
John Street, Cabramatta, NSW 2166
- Local authority: City Council of Fairfield
P.O. Box 21, Fairfield, NSW 2165
Tel: (02) 725 0222
Fax: (02) 725 4249
- Built: 1990-1992
- Value of project: \$2,500,000
- Site area: 8138m²
- Building area: 1697m²
- Car park area: 3287m²
- Landscape area: 3154m²
- Plot ratio: 0.21
- Cost/m²: \$307.00
- Zoning: Public



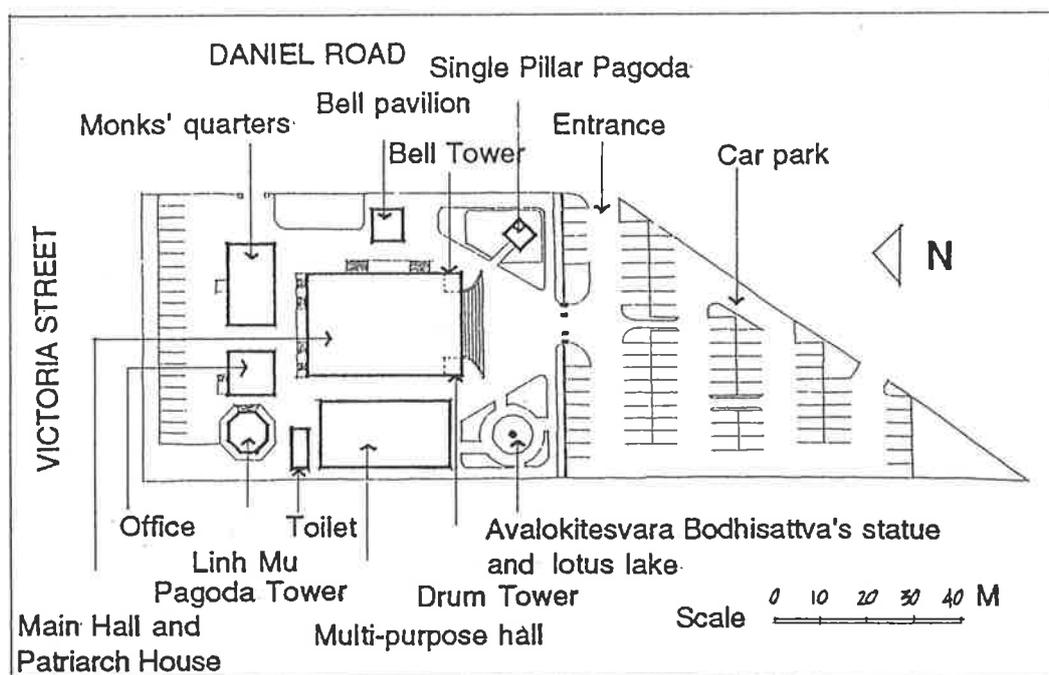
44. Proposal for the Phuoc Hue Temple, NSW, 1992.

b. History of establishment

Many people within the Vietnamese Buddhist communities in Australia dream of building a traditional temple in order to preserve their culture and continue the development of Buddhism. In Sydney, the dream became a reality when the Buddhist congregation and the Most Venerable Thich Phuoc Hue decided to build a temple at 369 Victoria street, Wetherill Park, NSW. The building committee decided that the temple should consist of:

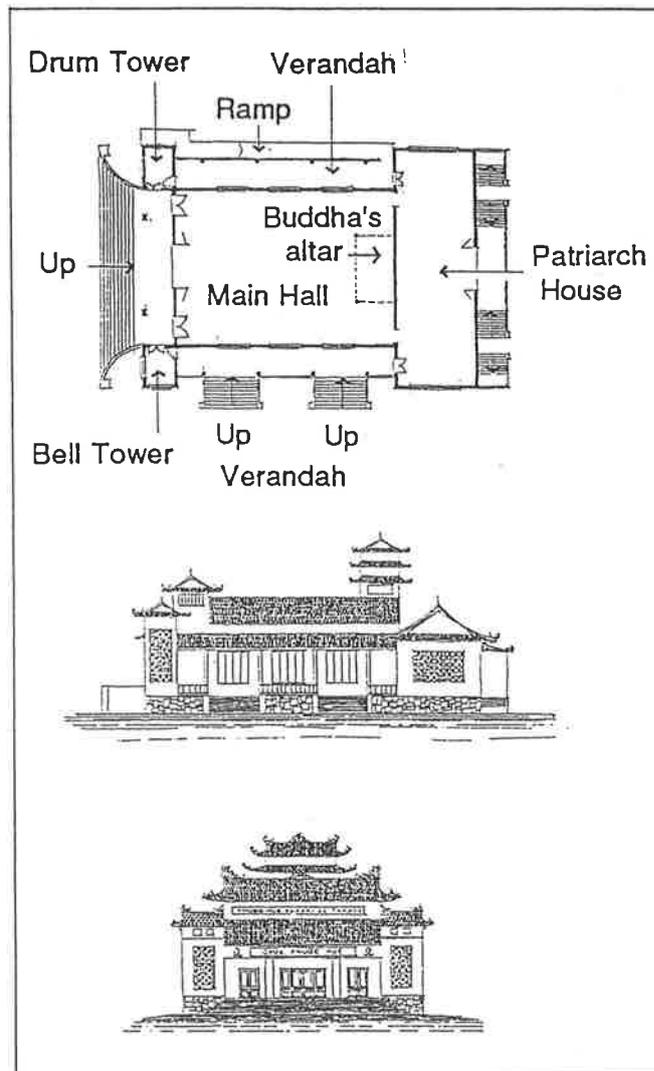
- 1) A front gate with three entrances and a fence in reinforced concrete made to look like bamboo.
- 2) Main Hall, Drum Tower and Bell Tower, Patriarch House.
- 3) Library (basement).
- 4) Multi-purpose hall and social offices (two storeys).
- 5) Monks' quarters 1 and monks' quarters 2.
- 6) Linh Mu Tower (seven storeys).
- 7) Single Pillar Pagoda.

- 8) Car park (83 spaces).
- 9) Bodhi-Tree garden.
- 10) Lotus lake, artificial mountain and a statue of the Avalokitesvara Bodhisattva.
- 11) Bell pavilion.
- 12) Toilets.



45. Site layout, Phuoc Hue Temple.

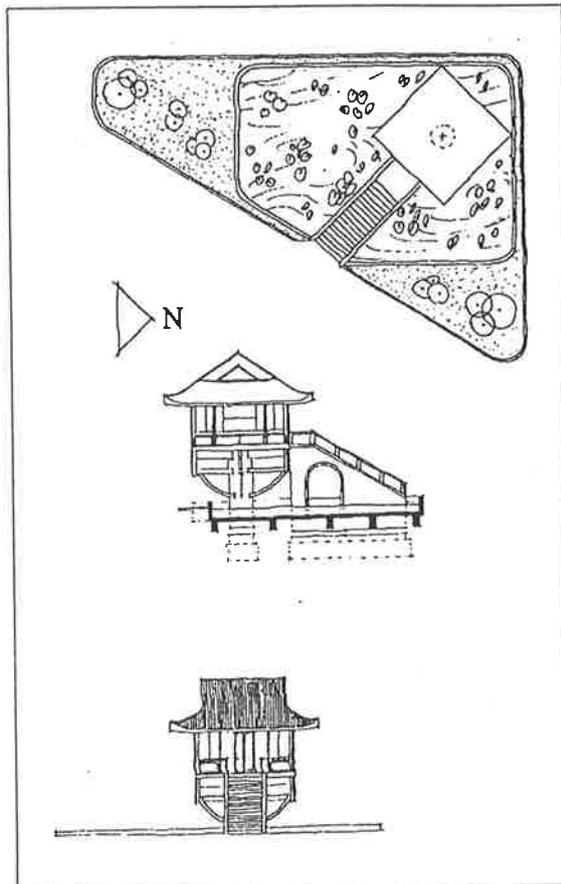
- 1980 The Phuoc Hue Buddhist community rented a house at 326 Hamilton Road, Fairfield, NSW, for the practice of Buddhism.
- 1982 The community decided to buy a house at 31 Landon Street, Fairfield, NSW, to be used as a permanent temple. Each member of the community donated \$300 towards its purchase.
- 1988 The temple's congregation had increased considerably. The local public complained about the crowds and the noise generated in the temple. The City Council of Fairfield sued the temple for non-compatible use of the site. The state government of New South Wales resolved the conflict by offering a site which could be either rented or bought for \$165,000, to be repaid over four years. The Most Venerable Thich Phuoc Hue decided to buy the site. The last payment was made in April 1992.
- 1987 The laying of the foundation stone was officiated by the Most Venerable Thich Phuoc Hue and the (then) Premier of NSW Barrie Unsworth.
- 1990 The (then) Premier Nick Greiner approved a grant of \$200,000 for the construction of the multi-purpose hall and cultural centre.
- 1991 The inauguration of the temple.



46. The main building, Phuoc Hue Temple.

c. The client

Interviewee: The Most Venerable Thich Phuoc Hue
 Position: Abbot
 Location: Phuoc Hue Temple
 369 Victoria Street
 Wetherill Park, NSW 2164
 Tel: (02) 725 2324
 Fax: (02) 275 5385
 Date: 6th August 1992
 Interpreter: the writer



47. Proposal for the Single Pillar Pagoda, Phuoc Hue Temple.

The need

Q : Why do the Vietnamese Buddhists need a temple?

A : The Vietnamese from anywhere in the world will always want to preserve their religion and culture. The temple is required for that purpose.

Q : How much support has the Buddhist community given the temple project from its early stages to the present?

A : In 1980 the congregation rented a house at 326 Hamilton Road, Fairfield, to operate as a temporary temple. In 1982 the congregation borrowed money from members of the Buddhist community to buy the house at 31 Landon Street,

Fairfield. In 1988 the congregation bought this block of land and decided to build the temple with a budget \$2,500,000. Without the financial support and encouragement of the Buddhists the temple would never have been completed.

Culture

Q : The activities and the practising of Buddhism by the Vietnamese in Australia are different to some extent from those in Vietnam. In Vietnam a temple is a place solely for worship but in Australia it has become a venue for social activities as well. Did the local public oppose the project? If so, how did the steering committee overcome the opposition?

A : During the early stages, we met opposition from both the public and the local council. In 1982 the temple was located at 31 Landon Street, Fairfield. Because the number of Buddhists in the community grew quickly, the local public complained about the noise, traffic congestion, etc. The temple was located in a residential zone therefore, it was sued for incorrect land-use by the council. The temple had to move to a new site which was zoned for public use and was suitable for religious activities.

In Australia the activities of the temple are similar to the activities of temples in Vietnam. The difference is that the ceremonial days, even the full moon ceremonies, needed to be changed to the weekends because most Buddhists are working during the weekdays and they can only visit the temple on the weekends.

In Australia, it is not common for Buddhists to worship their ancestors at home, they usually do this at the temple and, as a result, the temples have become overcrowded.

Unfortunately, this temple does not have services for women, children, aged persons and youth because the site is so small. For such facilities the Vietnamese have to use the local community centres.

Finance

Q : Finance is often the main problem in many projects. What method(s) was used for raising funds? If there were some financial difficulties, how did the steering committee deal with them?

A : For financing the temple we had applied for government funding but did not succeed. In NSW, there were no government policies for funding religious services. Only funding for social and educational services. It was difficult to obtain government grants. Therefore, the temple project was financed mainly by donations and loans from members of the Buddhist community. The total budget was \$2,500,000. Until 1991 the temple project had raised \$2,000,000 including the state government's grant of \$200,000 for the multi-purpose hall and cultural centre.

Management

Q : Who controlled the project, the abbot or the steering committee? How did the system work?

A : We all worked together, the steering committee and me. The design and construction of this temple was managed by Mr Nghiep Nguyen from B.T. & NG. Consultants. We gave the instructions to him.

Design

Q : In the early stages of the design process, did you advise the architect how a traditional temple should look? What are the main components? Have any myths and symbolism been included?

A : The temple was designed as a traditional Vietnamese temple. The form of the temple is similar to the Hue Long and Thien Lam Temples in Vietnam. It is larger in size, constructed with heavy materials and it is also very expensive.

It has a conventional temple layout. At the front of the main building is the entrance hall with the Bell Tower on the right and the Drum Tower on the left. Following is the Sanctuary Hall, behind this is the Patriarch House.

The temple is called *Khong Mon* which means nothingness place. The front gate is called *Tam Mon Thanh Tinh* which means when one passes through the gate with three entrances the soul becomes calm and pure. The three entrances mean *Vo Tam*, *Vo Tuong* and *Vo Nguyen*. *Vo Tam* means the pure in heart, *Vo Tuong* means no physiognomy, *Vo Nguyen* means neither covetousness nor desire. The outdoor ornaments are the Eightfold Noble Path, dragons, phoenixes and lions.



48. Front gate, Phuoc Hue Temple.

Site selection

Q : What factors were considered in selecting the site? Were any myths involved?

A : This site was assigned by the council.

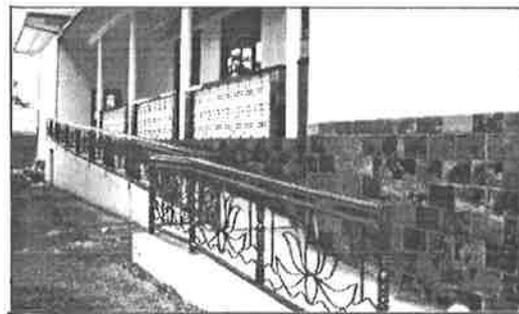
Other comments

Q : How did council respond to the temple development?

A : The City Council of Fairfield rejected the first proposal because of inadequate car parking. The architect had to provide for more parking spaces by reducing the area of the buildings and the area of the front courtyard. The length of the main building was reduced to 28 metres instead of the required 32 metres. A traditional temple in Vietnam has no gutters, no downpipes and no ramps for people in wheel-chairs. The council required gutters to all roofs and ramps to all public buildings. These requirements reduced the potential of reflecting the traditional image of a temple. For example, the straight gutters prevented the construction of a curved roof therefore, the roofs of this temple are only slightly curved with a small angle. Downpipes appear clearly on the external walls, these are not seen in a traditional temple.



49. Gutter and downpipe system.



50. Ramp for people in wheel-chairs.

d. The architect

Interviewee: Loi Ha
Position: Architect
Location: B.T. & NG. Consultants
 13 Belvedere Arcade
 Cabramatta, NSW 2166
Tel: (02) 724 4721
Fax: (02) 727 8701
Date: 7th August 1992
Interpreter: the writer

The brief

Q : Can you provide a copy of the brief?

A : Yes, it is in the booklet.

Site selection

Q : Were you involved in the site selection? If so, what factors were considered for selecting this site?

A : I did not take part in that stage, but I knew something about it. The location of the temple was selected according to the following criteria:

Zoning: The developments must comply with the conditions given in the Future Development Plan of the City Council of Fairfield. The site is in a public zone which is considered suitable for religious activities.

Finance: There were a few other locations suitable for temple development but they were too expensive for the Buddhist community. The existing site was offered by the state government for \$165,000 to be paid over four years. It was considered a suitable condition for the community to buy the site.

Activity: The traditional temples in Vietnam are usually located in quiet areas where there are views of a mountain or a river. We could find a similar location in Australia, but it would be too far away from town and the Buddhist community. The Phuoc Hue Temple is close to the centre of the Vietnamese community in Cabramatta. It is more convenient for people whether they use private or public transport.

Feng Shui: This theory shows how to select a site to build temples or monuments. It is based purely on beliefs. The site of the Phuoc Hue Temple was offered by the state government, the client had no opportunity to apply Feng Shui even though he was aware of its traditional importance.

Culture

Q : Due to the differences in culture, was there any local opposition to the project? If so, what strategies were applied to resolve the conflict(s)? The activities of the Vietnamese in Australia are different from those in Vietnam. Perhaps the language difficulties is a reason for drawing the Vietnamese together in most activities. What additional services were provided in this temple?

A : Now the temple has moved to this area, there has been no local opposition because the temple is located in a public zone and it complies with the local planning requirements. At the previous location many people complained about the activities of the temple. This temple does not provide any social services because the site is too small. We are going to build the Linh Mu Pagoda Tower to hold public relics. That is an important priority of the Buddhist community at the moment.

Design

Q : The form of a temple can be expressed through different methods, by:

- copying an image of a temple in Vietnam,
- blending with the local environment,
- creating a new form,
- a combination of the above,
- others.

What was your design approach? What was the design philosophy for this temple? Did you research Vietnamese temple architecture in developing your design? If so, what are the principles of form and function that you consider essential for the design of a Buddhist temple?

A: This is a Vietnamese temple, it should reflect the traditional Vietnamese architecture. We can use local technology and materials to achieve this purpose but we cannot change its traditional form, although it is expensive. The purpose of preserving the traditional form is to preserve the Vietnamese culture, the Vietnamese visiting the temple can see the images of their country and secondly the temple would contribute to the multicultural Australian society.



51. South elevation, main building, Phuoc Hue Temple.

The temple was designed to include three components which reflect the local architecture of three regions in Vietnam. The Main Hall with Bell Tower and Drum Tower is similar to the temples in south Vietnam. Thien Mu Tower reflects the image of the Phuoc Duyen Pagoda in central Vietnam. The Single Pillar Pagoda is analogous to the One-Column Pagoda in north Vietnam.

Environment

Q : If your design tries to reflect the image of a traditional Vietnamese temple, what components needed to be modified to adapt to the Australian environment and to follow the building regulations?

A : Vietnam is located in the tropical zone with a high level of humidity and most temples in Vietnam use natural ventilation to achieve comfortable conditions. Australia is located in the temperate zone, with dry air. The design of the temple form was modified by using adjustable openings to control ventilation. For comfort we use air conditioners in summer and heaters in winter.

Generally we used local materials and Australian construction techniques. There are a few 'Negative and Positive' tiles at the front gate which were imported from China and donated by a member of the community.

Materials and technology

Q : Did you find that the differences in materials, construction methods and technology allowed a broader range of solutions? If so, can you give details?

A : In this temple we used local materials and normal construction techniques such as: concrete slabs, double-brick walls, steel portal frames, and steel roof trusses with local terracotta tiles. The technique is still restricted in some ways, the curved roofs are not as elaborate as the temples in Vietnam. We need skilled tradesmen for some particular jobs. The symbolic materials are not found in

Australia such as the tiles which were very expensive to import from overseas.

Local materials were used instead but they do not achieve the image that we want.

Artists

Q : Some ornamental components of a temple such as: dragons, lions, statues, etc., need particular artists. How did you find them?

A : The abbot found those artists within the community. The role of Vietnamese artists is very important in temple design. A temple without ornaments such as dragons, phoenixes, Wheel of Life etc., will not look like a Buddhist temple.



52. Sculpture of the unicorn.



53. Symbolic ornaments on front gate.

Management

Q : Who controlled the project, the abbot or the steering committee? How did the system work?

A: I think the abbot controlled everything.

Myths and symbolism

Q : Did your design include some myths and symbolism of the Buddhist rituals?

A : The symbolic components in this temple are the front gate with three entrances and the ornaments. *Khong Mon* refers to the front gate, visitors should leave their problems of life outside the gate. The gate is usually very thick, if the site is larger, the gate would be four to five metres deep, so that people can walk through it like in a tunnel. They have time to meditate, to clear their minds before approaching the Main Hall. I think that is the reason why the gates of Vietnamese temples are massive. The Wheel of Life on the front gate represents Buddhism. The dragons, phoenixes and unicorns are the guardians to protect the temple from devils and ghosts. The concrete balustrades of the fence were moulded with the shape of the bamboo because bamboo is a common tree in Vietnam.

This temple faces south which does not follow Feng Shui but the abbot wanted to keep the two existing buildings for offices and the monks' quarters. The natural shape of the site allows the major buildings to be located in the middle of the site and the car park is located in the triangular area. The front gate faces the car park for direct access to the temple.

Evaluation

Q : Was a post-construction evaluation carried out? Did it show any deficiencies in the design? If so, would you now approach a design solution differently?

A : To conform with the council's requirements, the temple had to accommodate a minimum of 80 spaces in the car park. Therefore, the areas of the front courtyard and the building sizes were reduced. It affected the appearance of the temple. If the front courtyard had been deeper and the main building longer, the temple would be more elegant and dignified.

The multi-purpose hall is not long enough, the area between the stage and the rear wall is only 12 metres which is inadequate for youth activities.

Compared with other Vietnamese temples in Australia, this temple is the largest.

Walls are rendered and painted on both sides. It was an expensive project.

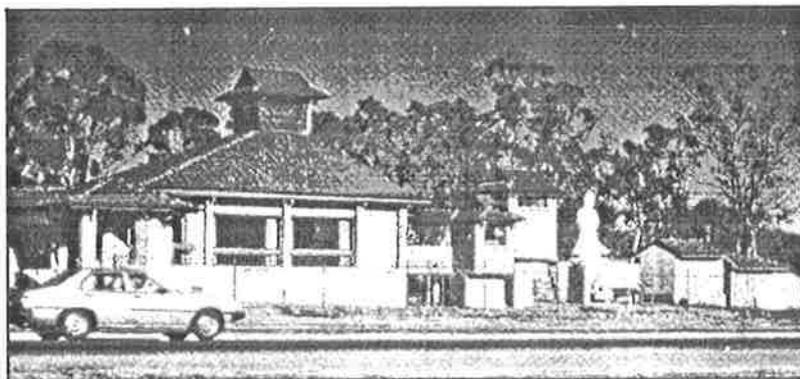
e. The local authority

The appointment made for 9th August 1992 was cancelled by the writer because the time taken to interview Mr Nguyen Ky, the architect of the Phap Bao Temple, was longer than expected. A second attempt to arrange an interview was made by mail on 5th September 1992 but the council did not respond to the request.

2. Phap Bao Temple

a. Project data

- Location: Corner Edensor and Bibbys Roads
Smithfield, NSW 2164
- Client: Venerable Thich Bao Lac
- Architect: Nguyen Ky
- Local authority: City Council of Fairfield
P.O. Box 21, Fairfield, NSW 2165
Tel: (02) 725 0222
Fax: (02) 725 4249
- Built: See history of establishment
- Value of project: \$1,000,000
- Site area: 5,000m²
- Building area: 681m²
- Car park area: 297m²
- Landscape area: 4022m²
- Plot ratio: 0.14
- Cost/m²: \$200.00
- Zoning: Public



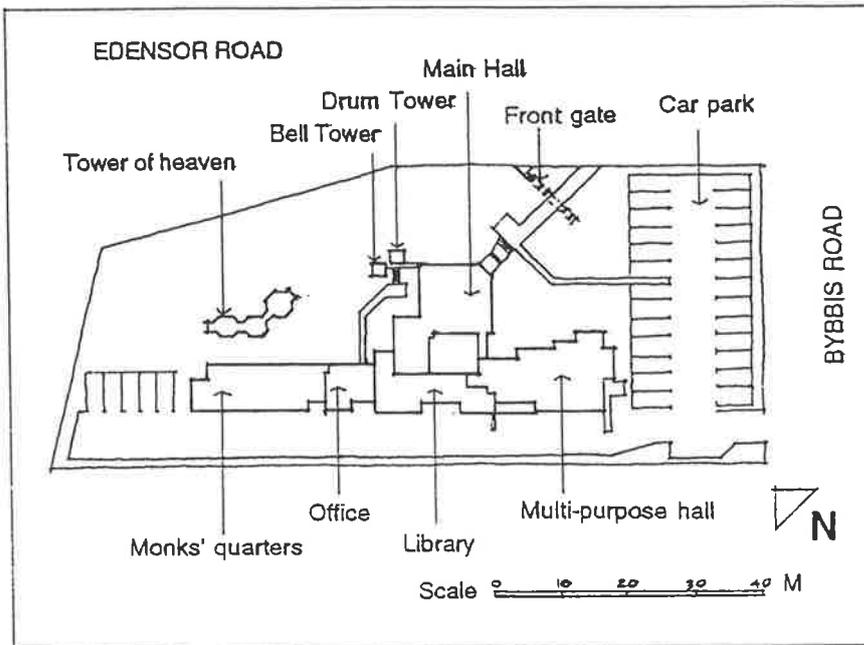
54. Phap Bao Temple, NSW, 1985.

b. History of establishment

- 1979 A group of Vietnamese Buddhists gathered and established the Vietnamese Buddhist Association of NSW. The congregation rented a house in Lakemba to operate as a temporary temple.
- Feb. 1981 Rev. Thich Bao Lac (now the abbot of the Phap Bao Temple) arrived in Sydney from Japan to become the leader of the Vietnamese Buddhist community in NSW.
- Apr. 1983 The Housing Commission offered a block of land of 5,000m² at Bonnyrigg to the congregation for building a temple. By the end of 1983 local council had approved the application.
- May 1985 The new temple was inaugurated.
- 1991 70% to 80% of the construction had been completed.
- 1994-1995 It is hoped that the whole project will be completed.

Having left their own country the Vietnamese Buddhists in NSW wished to see their religion preserved and their spiritual life fulfilled in their new country. Prompted by this spiritual need, as well as the intention to maintain and develop Buddhism, in 1983 the Buddhist community in NSW initiated a proposal to build a temple. The Phap Bao Temple became the first successful Vietnamese Buddhist temple built in Australia. The project comprised the following stages:

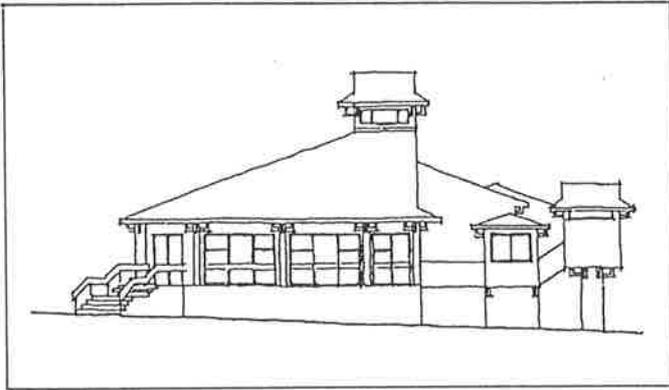
- Stage I: Main Hall.
- Stage II: multi-purpose hall.
- Stage III: library, offices, monks' quarters, front gate and fence, car park, ancestor worship hall, landscaping, outdoor statue.
- Stage IV: Public Relics House (Tower of Heaven), visitors' lodgings.



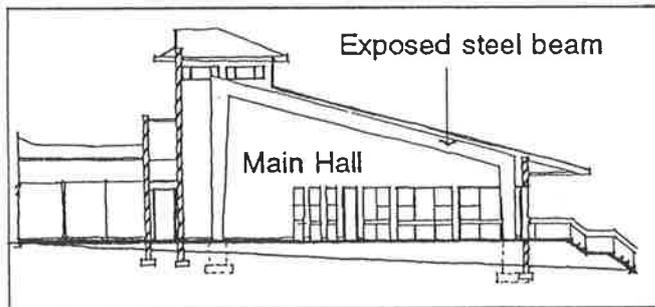
55. Site layout, Phap Bao Temple.



56. North-west elevation, Main Hall, Phap Bao Temple.



57. North-east elevation,
Main Hall,
Phap Bao Temple.



58. Section A-A,
Phap Bao Temple.

c. The Client

Interviewee: Venerable Thich Bao Lac
 Position: Abbot
 Location: Phap Bao Temple
 Corner Edensor and Bibbys Roads
 Smithfield, NSW 2164
 Tel: (02) 601 5452
 Date: 8th August 1992
 Interpreter: the writer

The need

Q : Why do the Vietnamese Buddhists need a temple? How much support has the Buddhist community given the temple project from its early stages to the present?

A : It is similar to other religions, the Vietnamese Buddhists arriving here want a place for worshipping and practising their religion. At the beginning there were only 10 people, they rented a house at Lakemba as a temporary place for the practice of Buddhism. Gradually the congregation grew to a few hundred, and the house was no longer suitable as it was located in a residential area. With the strong support of the community and the state government, we decided to buy a block of land to build this temple. Since the temple moved to the new location, the number of Buddhists and visitors has grown significantly. On ceremonial days, there may be up to 1000 people. During the Lunar New Year festival³², the number can reach 3000.

Culture

Q : The activities and the practising of Buddhism by the Vietnamese in Australia are different to some extent from those in Vietnam. In Vietnam a temple is a place solely for worship but in Australia it has become a venue for social activities as well. Did the local public oppose the project? If so, how did the steering committee overcome the opposition?

A : After the activities in the house at Lakemba increased significantly, they disturbed the neighbourhood. For example, during my chanting, strangers knocked at the front door and asked me to stop praying. I had stopped using the timber musical

³² The Lunar New Year festival (*Tet Nguyen Dan*) is the most important Vietnamese holiday. Tet is the celebration of the beginning of spring as well as a new year. At midnight on the eve of Tet, the temple performs the ritual of *Giao Thua* which ushers out the old year and welcomes the new. Firecrackers, drum, gong, bell and lion dance welcome the new year. Families visit the pagoda to pray for good fortune and happiness (Whitfield, 1976:269).

instrument³³. The local council ordered the congregation to cease all activities at the house because it was located in a residential zone.

Another difficulty was that the local authority required the congregation to prove the need for a temple. The council asked us to have at least 1000 signatures of support from people who live in the area. The list had to be completed within a certain time. We worked very hard and with the support of the local public we completed the list.

When the temple moved to the new location, we took the Great Bell and the Great Drum but we only use them during the main ceremonies such as, Lunar New Year and the Buddha's birthday. At other times we use the timber musical instrument and a small bell. The location is in a public zone, so there is no more opposition from the local public and council.

Finance

Q : Finance is often the main problem in many projects. What method(s) was used for raising funds? If there were some financial difficulties, how did the steering committee deal with them?

A : The congregation of the temple had two advantages. The first was a block of land which was offered by the Housing Commission. The Commission leased the land to the congregation for a period of 60 years and the lease is renewable. Each year the congregation has to pay a fee of one dollar. This decision was made by the state government to resolve the conflict between the temple and the local public. The second advantage was that during 1983-1984 unemployment was very high. The government encouraged any development which could employ people thus easing the unemployment. The congregation applied for assistance and the state government agreed to provide a grant of \$350,000.

³³ The timber musical instrument is repeatedly beaten by the monk while chanting.

Apart from the grant, to finance the construction of stages I, II and III the congregation needed to borrow, without interest, an amount of \$50,000 from the members of the Buddhist community. If the congregation relied only on the contributions from members of the Buddhist community then it would have been impossible to have a temple of this size. We had to organise vegetarian dinners, concerts and run a lottery in order to raise money. We also found volunteers who wanted to offer their salaries for the construction of the temple. The amount of money donated by the Buddhist community accounted for approximately half of the money raised. The debt incurred was completely repaid by the end of 1989. Until 1992 the congregation had spent about \$1,000,000. The final stage of the construction will proceed in 1994 to 1995 costing \$500,000.

Management

Q : Who controlled the project, the abbot or the steering committee? How did the system work?

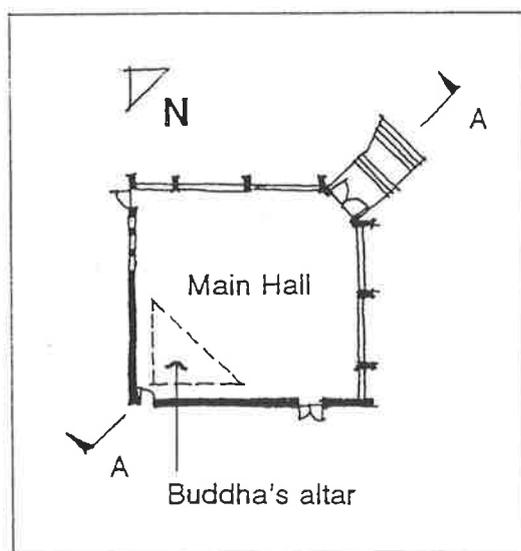
A : The steering committee is responsible for the construction of this temple. What I want to point out is that the grant offered by state government was under the Community Employment Program. A condition of this scheme was that the congregation had to employ the tradespeople provided by the Commonwealth Employment Service. This created a management problem for the committee. We had won the funding but the manner of payments was complicated. For example, the people who came to work here were of different types, they worked without responsibility as the government would pay them wages instead of receiving unemployment benefits. It was difficult to manage those people.

Design

Q : In the early stages of the design process, did you advise the architect how a traditional temple should look? What are the main components? Have any myths and symbolism been included?

A : The Phap Bao Temple is the first Vietnamese temple built in Australia. The appearance is very different from the temples in Vietnam. I had studied in Japan and was influenced by the Japanese architecture. I wanted the form to be a mixture of architecture from Japan and Vietnam, but also suited to the local environment.

The special features of the temple are the Buddha's altar, exposed steel beams inside the Main Hall, exposed timber roof trusses inside the multi-purpose hall, a cherry garden, footpath and the Tower of Heaven (relics house).



59. Floor layout, Main Hall, Phap Bao Temple.

The interior of the Main Hall is very different from other temples. The Buddha's altar is located in a corner of the hall instead of in the middle of the end wall. This is a new idea in temple design. The first reason for this location is that at this angle the Buddha faces to the east where the morning sunlight can shine on the altar. The fresh sunlight will sweep the dirt of life away. As an Asian, I believe

that the east represents oriental countries. The second reason is that if the Buddha's altar were located in a corner it would provide maximum area for the hall. If it were located in the middle of the end wall, the areas on either side of the altar would be useless.

In the Main Hall, instead of covering the steel beams we exposed them so that the ceiling appeared higher. People seeing those beams may think the temple is not finished but it was designed with a purpose. It is also similar to the ceiling of the multi-purpose hall.

Other design merits that are rarely found in other temples are the footpath and the cherry garden. The footpath around the temple is used for outdoor meditation like walking, praying and viewing. The cherry garden is characteristic of the temple and there are six big cherry trees. October is the season for cherry blossom. The garden provides a calm religious atmosphere to the temple.

Site selection

Q : What factors were considered in selecting the site? Were any myths involved?

A : In order to resolve the conflicts between the local public and the temple, in 1983 the Housing Commission offered the congregation a block of land at Bonnyrigg for building a new temple. The leasing contract required that the congregation pays only a honourable \$1 per year.

I do not know much about Feng Shui. At the early stages the Housing Commission offered two blocks of land. I selected the site at Bonnyrigg because the orientation is very convenient. The site is high at the rear and low at the front. Our ancestors believed that sloping land is a prosperous site. It is similar to the sites of the old traditional temples in Vietnam. Another advantage of the site is that it is located in a public zone which complies with the land-use policy.

Other comments

Q : You travelled around the world and visited some temples in Europe and America.

Can you comment about those temples?

A : I visited the United States in 1983 but I did not see any temples built at that time, only rented houses used as temples. I attended the inauguration of the Vien Giap Temple in Germany in 1991. The temple was built on a large scale but it did not reflect the traditional Vietnamese temple architecture.

The Vietnamese temples in England and France were built on small sites and they looked like apartments. The Linh Son Temple of Venerable Huyen Uy is a two-storeyed house. The Avalokitesvara Bodhisattva Temple of Venerable Chan Thuong is also a house converted to a temple.

d. The architect

Interviewee:	Nguyen Ky
Position:	Architect
Location:	111 Auburn Road Birrong, NSW 2143
Tel:	(02) 644 2430
Date:	9th August 1992
Interpreter:	the writer

The brief

Q : Can you provide a copy of the brief?

A: I have the notes but it is not a comprehensive brief.

Site selection

Q : Were you involved in the site selection? If so, what factors were considered for selecting this site?

A : At the early stages, the congregation had rented a house in a residential zone to operate as a temporary temple. Because of the incorrect zoning, the local council asked them to cease their religious activities. The state government tried to resolve the problem by offering a block of land in a public zone.

During the time of the conflict, the client was desperately looking for a site to build a temple. There were two criteria for selecting the site. The first was to be close to the Vietnamese community so that the temple could serve the community. The second was to locate the temple away from the general public. At last the site was designated by the government and the congregation did not have a choice, but it was a lucky circumstance. The site was close to the suburbs with Vietnamese populations, such as Cabramatta and Bankstown. As well as being in a public zone, it was located in a quiet area that was convenient for religious activities as people in the temple need quiet for practising Buddhism.

Culture

Q : Due to the differences in culture, was there any local opposition to the project? If so, what strategies were applied to resolve the conflict(s)? The activities of the Vietnamese in Australia are different from those in Vietnam. Perhaps the language difficulties is a reason for drawing the Vietnamese together in most activities. What additional services were provided in this temple?

A : (See answer to question on Design, p.90)

Design

Q : The form of a temple can be expressed through different methods, by:

- copying an image of a temple in Vietnam,
- blending with the local environment,
- creating a new form,
- a combination of the above,
- others.

What was your design approach? What was the design philosophy for this temple? Did you research Vietnamese temple architecture in developing your design? If so, what are the principles of form and function that you consider essential for the design of a Buddhist temple?

A : I think it was very easy for me to reproduce a temple similar to the temples in Vietnam, but I wanted to achieve something of the Australian culture. I did not copy a Vietnamese temple here, I intended to design a temple for Australian conditions. The local people were not against the temple but I did have opposition from the Vietnamese community. They did not like the form of the building, the appearance is so modern. They like something in traditional style. I had to explain to them and finally I had agreement and support from the abbot. Without him the proposal would never have been accepted.

From the beginning I had an image of a temple form at the back of my mind but I didn't use it. I generated the concept by research into Buddhism and tried to translate it into architecture. I asked people about the relationship between the Buddhist theory and shapes or volumes, and no-one could answer. At last I knew I was wrong. I discovered that the background of Buddhism is 'nothingness' and I came to the conclusion that there is no architecture in Buddhism, a temple can be anything like a block of stone or a palace. The Buddha could train and reach enlightenment in any environment. The monks and Buddhists are only normal people, they need a convenient place with a comfortable environment to practise

Buddhism. I think there are some volumes of spaces more suitable for the Buddhist life than others, if they could achieve a religious atmosphere then they would be ideal for a temple.

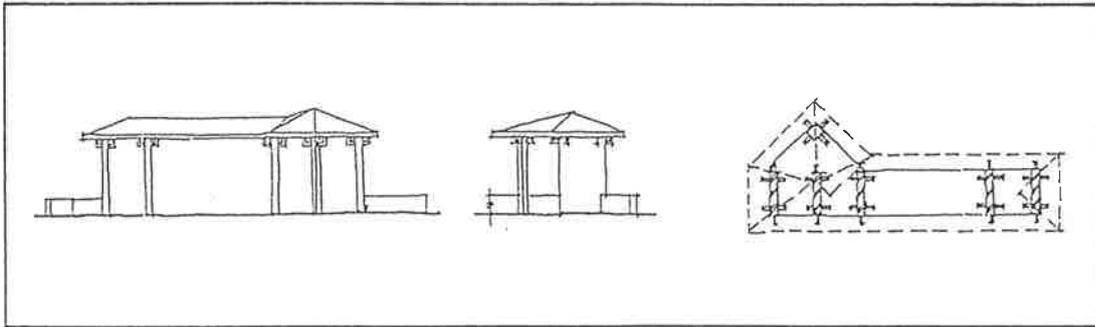
I had some design sketches for the temple before we had the land. When we had the land, and it was level, I had to change my drawings. I intended to locate the temple at the highest point in the corner of the site. I emphasised the Main Hall as a main component of the composition by providing it with the highest roof, other lower buildings were located around the Main Hall. On the Main Hall I used a one-roof system while for the multi-function hall which had a bigger area I provided two roofs to make it look lower. The Main Hall became the main element which dominated the whole complex.

I am against symmetry, it is something that creates rigidity, sternness and solemnity. It isn't intimacy. I produced a meditative atmosphere by creating an intimate environment. I proposed non-symbolic decoration so that the temple architecture was only generated from the composition of volumes and spaces.

There are many design factors which should be considered in architecture, not just the functional factors. I don't accept the functional theory, it is only a basic background. I think we can achieve something far better than that.

I did not know about the origin of the front gate with three entrances. In Vietnam a temple usually comprises three to five buildings. I accepted those presumptions but when designing I forgot them all and tried to find some things for myself. I remembered in Vietnam my grandfather lived in the village, his house had a bamboo gate with a thatched roof. I wondered if perhaps the rich people wanted to display their wealth by having such a gate. I asked a friend and he explained that it was because of wet weather, the gate was used to protect people from the rain. I was interested in the idea and applied it to my gate. With that purpose I could

design the gate in any form, I did not need to follow the standard principle of the three entrances gate.



60. East elevation, north elevation and plan, front gate, Phap Bao Temple.

The decision to place the Buddha's altar in the corner was my idea. I wasn't sure how it would be accepted. Perhaps there weren't any temples where this idea had been applied. Usually the altar is placed in the middle of the end wall. I think it was the first temple to have the Buddha's altar in the corner. The arrangement of space was reasonable, it provided maximum floor area for the hall. Another benefit was the sound. In a large square hall, the location of the sound source in the corner would produce a clear direct sound and also reflect sound to the audience.

The form of the temple was intended to be different from the traditional Vietnamese temple but I was influenced by the architecture of the One-Column Pagoda. Actually the roofs of the Bell Tower and Drum Tower are similar to the roof of the One-Column Pagoda. I took advantage on this occasion to reflect the Vietnamese architecture in the temple.

Other elements of the temple are the footpath and the Public Relics Tower. The footpath around the temple buildings provides a place for meditation walking, this was an idea of the abbot and only the Phap Bao Temple has this component. The Public Relics Tower, located at the right of the Main Hall, is used for worshipping

the deceased relatives of the Buddhists. This tower was extended to satisfy the new needs of the community.



61. Bell Tower on the right and Drum Tower on the left, Phap Bao Temple.

Environment

Q : If your design tries to reflect the image of a traditional Vietnamese temple, what components needed to be modified to adapt to the Australian environment and to follow the building regulations?

A : The temple was designed to suit the local environment. Perhaps it is the reason why the form of this temple is different from other Vietnamese temples. I intended it to blend with the local environment by using local materials and colour. I chose chocolate to the roof tiles as it reflected the brown of the monk's cloth, it was also in sympathy with the colour of the surrounding buildings.

Materials and technology

Q : Did you find that the differences in materials, construction methods and technology allowed a broader range of solutions? If so, can you give details?

A : My design did not follow the traditional form, therefore it was easy for me to use local materials and construction techniques.

Artist

Q : Some ornamental components of a temple such as: dragons, lions, statues, etc., need particular artists. How did you find them ?

A : My design did not include ornaments. Recently the abbot invited a Vietnamese artist to carve two curving dragons on the columns in the Main Hall. I do not have any opinions about that.

Management

Q : Who controlled the project, the abbot or the steering committee? How did the system work?

A : I think that the abbot controlled the project. My role was limited by other parties like the abbot and the builder and I often felt powerless. In the multi-purpose hall I intended to place the stage in the corner but the abbot changed it to the middle of the end wall and many other things were done without consulting me, it was very disappointing.

The abbot also listened to the builder, the man who always criticised my design decisions when they were difficult to make. He introduced simple things for his own benefit.

Myths and symbolism

Q : Did your design include some myths and symbolism of the Buddhist rituals?

A : Neither myths nor symbolism are involved in the proposal.

Evaluation

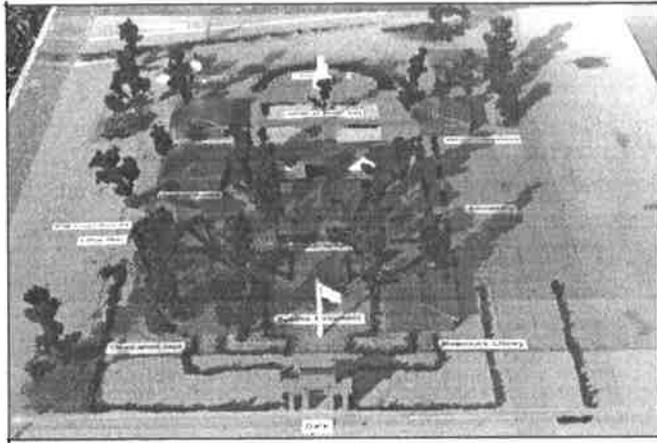
Q : Was a post-construction evaluation carried out? Did it show any deficiencies in the design? If so, would you now approach a design solution differently?

A : There were many Vietnamese who criticised the proposal, they wanted the temple to be in traditional form. Next time I will design a temple in traditional character.

e. The local authority

Similar to the Phuoc Hue Temple, the City Council of Fairfield is also the council of the Phap Bao Temple. The interview on 9th August 1992 was missed for the same reason.

3. Van Hanh Monastery

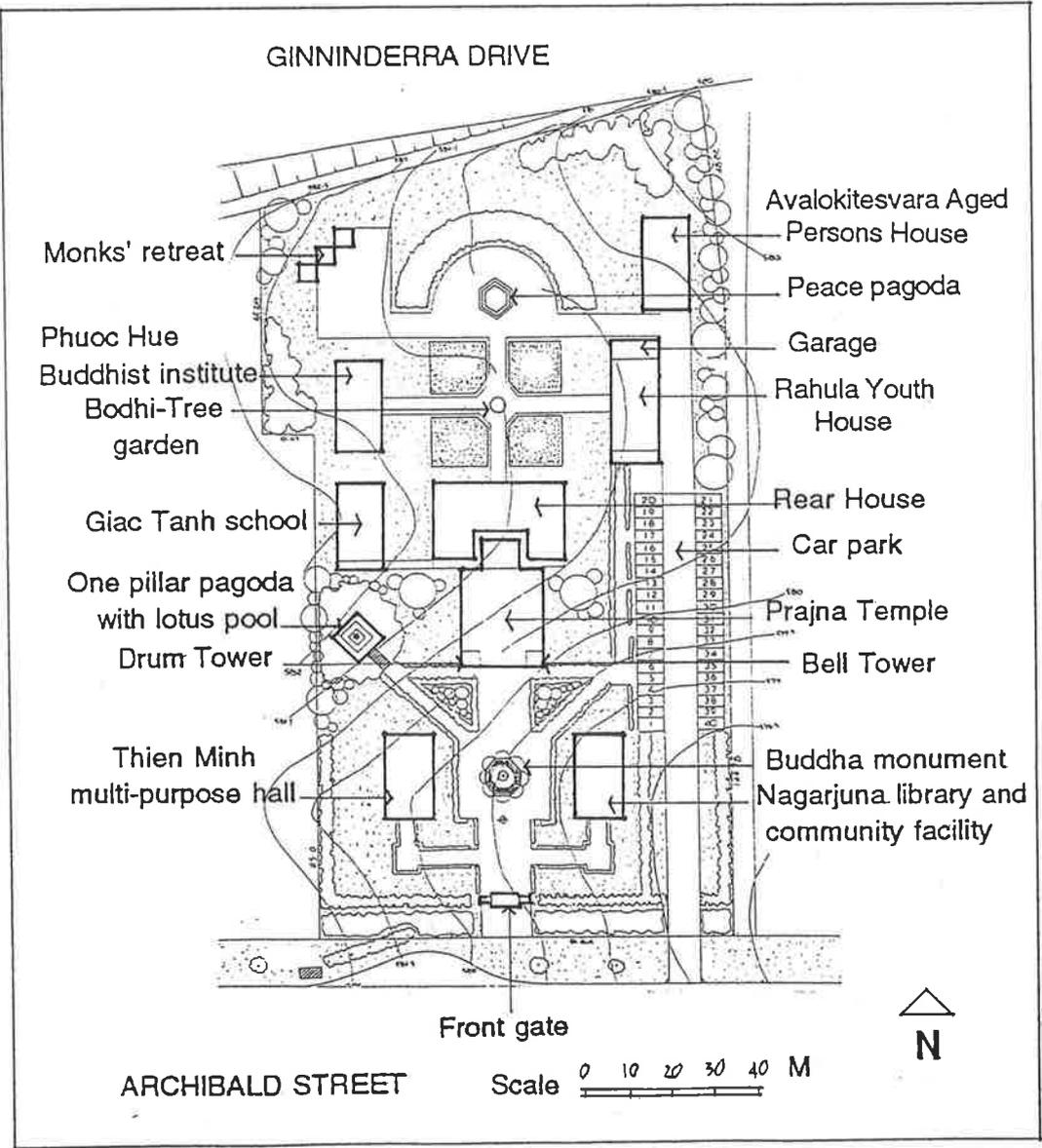


62. Model, Van Hanh Monastery.

a. Project data

- **Location:** 32 Archibald Street
Lyneham, ACT 2602
Tel: (062) 575 517
- **Client:** Venerable Thich Quang Ba
- **Architect:** Tran Nam Sanh
Van Kim Pty Ltd
347 Victoria Street
Abbotsford, VIC 3067
Tel: (03) 429 8969
- **Builder:** IMCS Builder
- **Local authority:** Dan Johnson
Planning Officer
City Council of ACT
270 Northbourne Avenue
Braddon, ACT 2601
- **Built:** See history of establishment
- **Value of project:** \$8,000,000
- **Site area:** 16,650m²
- **Stage 1:** \$410,000

- Cost/m²: \$480.48
- Building area: 3502m²
- Car park area: 2072m²
- Landscape area: 11,076m²
- Plot ratio: 0.14
- Zoning Public



63. Site layout, Van Hanh Monastery, ACT, 1989.

b. History of establishment

Van Hanh is the name of a famous Dharma Master in the Buddhist history of Vietnam (9th century).

- | | |
|------|---|
| 1984 | The Van Hanh Monastery was established. |
| 1986 | The local authority leased to the congregation a 16,650m ² block of land located at 32 Archibald Street, Lyneham, ACT. |
| 1988 | Ceremony to lay the foundation stone. |
| 1989 | Completion of stage 1 of the Rear House and the Shakyamuni monument. |

The project was planned in several stages:

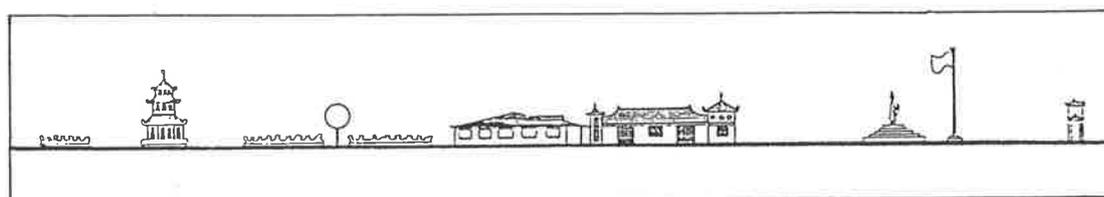
Stage 1: Rear House, Buddha monument and court of the Buddha.

Stage 2: Prajna temple, flat pole, entrance gate, lotus pool with Pagoda on One Pillar, Bodhi-Tree garden, Peace Pagoda Tower (three storeys), monks' retreat, garage, car park and landscaping.

Stage 3: Thien Minh multi-purpose hall, Nagarjuna library and community facilities.

Stage 4: Phuoc Hue Buddhist Institute, Giac Tanh Sunday school and Asian language school.

Stage 5: Rahula Youth House and Avalokitesvara Aged Persons House.



64. Longitudinal section, Van Hanh Monastery.

c. The client

The interview for 10th August 1992 was cancelled as Venerable Thich Quang Ba was travelling overseas.

d. The architect

No interview because the architect did not respond to the request.

e. The local authority

Interviewee: Dan Johnson
Position: Senior Town Planner
Location: City Council of ACT
220 Northbourne Avenue
Braddon, ACT 2601
Tel: (062) 207 757
Date: 11th August 1992

Culture

Q : Did the local public oppose the project due to cultural differences? If so, what strategies were applied for reconciliation?

A : We live in multicultural society, it is acceptable to have another culture in this society, nothing wrong about it. There was some opposition but no more than you would expect in any type of new development. You always have those people who do not like changes in their suburbs.

We have a new system now. Under the old system, there was very little public input to the process and we were not required to consult them on the application. Under the new system there is input from the public. The developer should satisfy the policy of land-use and all the development conditions for the site such as:

height control, setback, type of landscaping, the access point, car parking and other services. If the applicant satisfies all the requirements then the application will be approved.

For instance, the setback control requires the building to be six metres from the front boundary, but if the setback is 5.9 metres it does not meet the development condition then you are required to have public consultation.

Q : How did the local authority react to the establishment of a Buddhist temple in the area?

A : Normally we consider a temple the same as a church or any place for worship.

Q : Could the local authority modify the rules to accept the new culture?

A : Yes, we would formulate a development condition to satisfy a particular development. For instance, the height limitation is two storeys and only the Bell Tower is going to be 3.5 storeys but the rest of it is going to be two storeys. Should the planning authority determine that it is a suitable proposal, then we are willing to support it.

When we prepare the development conditions, we normally prepare some model sketch plans which illustrate the provisional development issues. We prepare them in consultation with the applicant. For instance, while we are preparing the development conditions, the applicant says that he needs to have a Bell Tower of three storeys but the rest of the development is going to be two storeys. We will accept the height of the Bell Tower and that will be written into the development conditions.

Q : The traditional activities of the Vietnamese Buddhist community may disturb the local public in terms of noise and traffic congestion. If so, how did the local authority resolve the situation? Did the Vietnamese Buddhist community have to change their traditional activities to fit in with the local environment?



A : I do not know about the drum or bell-ringing but the problem is no different from some of the old churches that have bell towers. Some churches ring the bell(s) before services. I do not think that is a problem.

Design

Q: The size and the scale of a temple, such as the number of storeys and height of the pagoda, may not comply with the local planning and building regulations. How did the planning officer resolve the problem? Were any regulations changed? What are the standard planning requirements for this type of project?

A : Firstly, the representatives of the Buddhist community approached the planning department and applied for a site on which to build a temple. At that time the state government had a responsibility to find a site and lease it to the community. When the site was found, the department prepared a guide which set down all the conditions in terms of site area, number of buildings, car park, landscaping and whether it would be two storeys with a tower for services. The conditions were prepared together with the representatives of the community.

We then asked them to prepare a preliminary sketch of the site to demonstrate how they proposed to use it. They came back with plans showing the buildings and landscaping. They came up with a timetable for the different stages of development. The department required them to show how financially they could meet each stage. We were generally happy with the plan. We then prepared the development conditions for the site. We had their sketch plans of what they proposed to do so we could decide the parameters for that proposal. We gave them the development guidelines and the lease. They accepted and they came in to submit the working drawings.

Building regulations

Q : If a temple is designed in the traditional form with a curved roof, pagoda tower, traditional tiles, without gutters and chimney etc., how would the building and health inspector(s) respond? Were there any conflicts between the Building Code of Australia and the temple construction methods? If so, how did the building inspector(s) handle them?

A : Originally the drawings had that and from our point of view we were quite happy. We were looking to encourage that style. What I understand is that the cost of building something like that is very expensive. The community could not afford it and so they ended up with something like a standard building. The planning authority would have been pleased to have a temple in terms of traditional Vietnamese architecture.



65. North elevation, Rear House, Van Hanh Monastery.



66. West elevation, Rear House, Van Hanh Monastery.

Other comments

Q : In South Australia, the local council asked us to complete the landscape, car park and roads before starting construction of the buildings. Are you doing the same with this temple?

A : Yes, if we don't start the landscaping before the construction phase, all the funds will go to buildings. It is like building your own home, you put everything into the house and do not worry about the landscaping, then a year down the track you still have not completed the landscape. Therefore, it is important to complete the landscape in the first stage.

Q : What would happen if the deadline for each stage came and the community did not comply?

A : I suppose that we are at that point of time now, the temple really needs to be developed further. There are a couple of things that will happen. One is that the representatives of the community may approach us and say that they have not got enough funds and they are running behind schedule and want to adjust the timetable. We will consider whether they are able to adjust the timetable. The other option is that the government could respond by saying that they have not satisfied the contract. They have completed stage one but at this point of time they should be at stage two or three. The government may decide to cancel the lease, but I think that is unlikely to happen.

Q : From a planner's point of view, what would you advise the architect to do when building a temple?

A : I think it is important to come and talk to us at the very early stage of the process. When you get the design brief then approach the relevant planning authority or local council. You just go in and have a chat with somebody about your proposal. Perhaps even before you put pen to paper. Talk to a planner or somebody in the

department about the development controls relevant to your particular site. Any type of development can be controversial with many problems.

Whenever you are involved in a project like a temple or a church, in the early stages of the process you must have a talk. The planners cannot formally give you an approval but they can certainly talk about the proposal. After the initial discussion you may go away and come back with some draft sketches. From our point of view that tends to save time. If I can have two or three minutes with the architect, I can point out where we prefer the temple buildings to be, the height, car park, etc. When you submit the development application, we are already familiar with your design and we can approve the application. We may have to change something before you reach the working drawing stage. Say we want the temple set back 10 metres, that can affect the levels, drainage, etc. It is easier to make this type of change during the preliminary stages.

4. Phap Hoa Temple



67. Phap Hoa Temple, SA, 1989.

a. Project Data

- Location: 20 Butler Avenue
Pennington, SA 5013
- Client: Venerable Thich Nhu Hue
- Designer: Ven. Thich Nhu Hue and David Knights Homes
- Builders: David Knights Homes (Main Hall)
Duyet Design and Construction (Rear House)
- Local authority: Lou Fantasia
Chief Planning Officer
City Council of Woodville.
72 Woodville Road
Woodville, SA 5011
- Built: See history of establishment
- Site area: 5,000m²
- Building area: 832m²
- Total cost: \$487,000
- Cost/m²: \$97.40
- Car park: 675m²

- Landscape area: 3493m²
- Zoning: Residential
- Plot ratio: 0.17

b. History of establishment

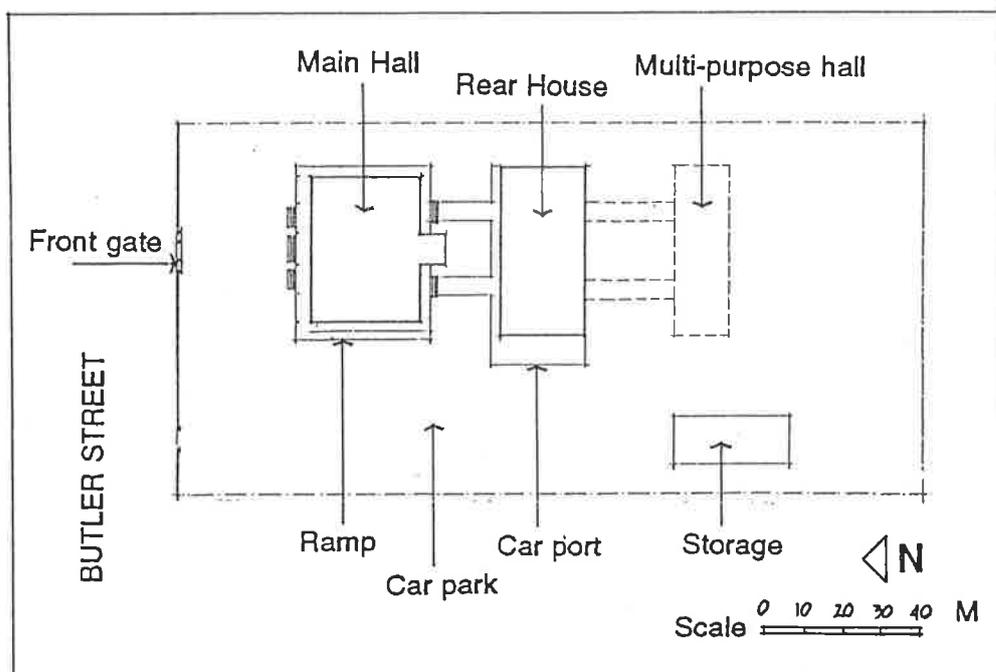
- Mar. 1979 The Buddhist Association of South Australia was established by the Buddhists in Australia and those coming from India, Sri Lanka, Thailand, Vietnam and so forth.
- Apr. 1981 The Vietnamese Buddhist Association of South Australia was established and registered.
- Aug. 1981 The congregation bought the house at 83 Addison Road, Pennington to use as a temporary temple.
- Jun. 1983 The Venerable Thich Nhu Hue arrived in Adelaide and became the leader of the Vietnamese Buddhist community in South Australia.
- Mar. 1984 The congregation bought 5,000m² of land at 20 Butler Avenue, Pennington for \$60,000.
- Mar. 1984 Ceremony to lay the foundation stone and construction of the Rear House (\$200,00).
- 1988 The Vietnamese Buddhist Association of South Australia changed its name to the United Vietnamese Buddhist Congregation of South Australia.
- Mar. 1989 Construction of the Main Hall (\$287,000).
- Dec. 1989 Ceremony to inaugurate the Main Hall.

The Association was united in all activities but some difficulties arose because of the differences in language, culture and the Mahayana and Theravada schools of Buddhism. The Vietnamese Buddhists decided to form a separate association and the Phap Hoa Temple was built for that reason. The proposal for the temple involved three stages:

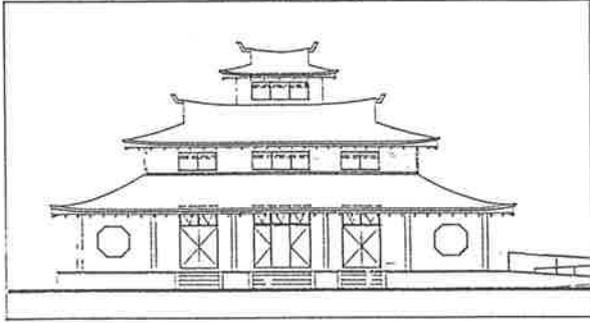
Stage 1: Rear House

Stage 2: Main Hall, front gate and fence, car park, landscaping, outdoor statue of the Avalokitesvara Bodhisattva

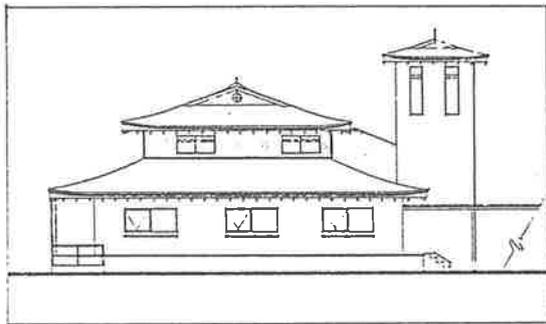
Stage 3: Multi-purpose hall



68. Site layout, Phap Hoa Temple.
(David Knights Homes, 1991)



69. North elevation, Main Hall,
Phap Hoa Temple.
(David Knights Homes, 1991)



70. West elevation, Main Hall,
Phap Hoa temple.
(David Knights Homes, 1991)

c. The client

Interviewee: Thich Nhu Hue
 Position: Abbot
 Location: Phap Hoa Temple
 20 Butler Avenue
 Pennington, SA 5013
 Tel: (08) 478 477
 Date: 6th August 1991
 Interpreter: the writer

The need

Q : Why do the Vietnamese Buddhists need a temple?

A : Like the Christians, Muslims etc., the Vietnamese Buddhist community in South Australia needed a place for worship.

Q : How much support has the Buddhist community given the temple project from its early stages to the present?

A : The development met with many difficulties, but with the support of the Buddhist community and government, at both state and federal levels, we have achieved the goal at last. At the early stages the congregation was not convinced that a traditional temple could be built here because of the lack of designers, artists, materials etc. I had to demonstrate my experience in building a temple and a school in Vietnam in order to gain the support of the community. They trusted me and started to get behind the development.

Culture

Q : The activities and the practising of Buddhism by the Vietnamese in Australia are different to some extent from those in Vietnam. In Vietnam a temple is a place solely for worship but in Australia it has become a venue for social activities as well. Did the local public oppose the project? If so, how did the steering committee overcome the opposition?

A : The first difference is that this temple attracts different types of visitor. For the ceremonies, people from different religions such as, Christians, Cao Dai

Buddhists³⁴ and Hoa Hao Buddhists³⁵, visit the temple to worship the Buddha, play games, meet friends or talk in their own languages. The temple is part of their culture, the appearance and the atmosphere have more traditional characteristics than other places.

The second difference is the services for the deceased. In Vietnam people usually worship their ancestors at home but in Australia it is inconvenient. People usually bring relics of their ancestors to the temple so that they can visit them during the weekend. It has become a priority service of the temple here.

The third difference is that in Australia the temple provides services for various communities such as: Australians, Sri Lankans, Indians, Chinese, Cambodians, Thais and the Vietnamese. Buddhism is translated into English to satisfy the needs of these people.

The fourth difference is the program of activities. In Vietnam the schedule of ceremonies is fixed but in Australia it has to be changed to weekends as people are working during the week and only visit the temple at weekends.

There are two reasons why we did not have any opposition from the local public. Firstly, this block of land was vacant and located close to the Pennington Migrant Hostel. The state government understood that 80% of the Vietnamese refugees were Buddhists and they needed a place for worship. This block of land was bought with

³⁴ *Cao Dai (Dai Dao Tam Ky Pho Do)* was founded in 1919 by visionary and spiritualist, Ngo Van Chieu. Cao Dai is actually a composite of several religions and includes elements of Buddhism, Christianity, Islamism, Taoism and Confucianism. The centre of the Cao Dai faith is the city of Tay Ninh. Cao Dai temples can be found throughout south and central Vietnam. It is estimated that there are about two million followers (Whitfield, 1976:34; Duiker, 1989:26).

³⁵ *Hoa Hao* is a Buddhist sect which originated in the Mekong Delta in 1939. The founder was Huynh Phu So. The seat of the sect is Hoa Hao Village in Chau Doc province. It is estimated that there are one and a half million members. Hoa Hao emphasises simplicity in worship, the elimination of temples and intermediaries in order to better communicate with the Supreme Being. It has become a viable and significant political force in south-west Vietnam (Whitfield, 1976:110).

the agreement of the Housing Commission. Secondly, we always keep up contact with the neighbours. We inform them about the late evening ceremonies involving firecrackers and larger crowds, etc. The neighbours have become familiar with these. They also visit the temple to enjoy the ceremonies with us.

Finance

Q : Finance is often the main problem in many projects. What method(s) was used for raising funds? If there were some financial difficulties, how did the steering committee deal with them?

A : Funds were raised by seeking donations from members of the Buddhist community periodically like weekly or monthly contributions. Another source was the donations from visitors who attended the ceremonies. This temple did not receive any funding from the government or any businesses. The congregation applied for a government grant but it was refused.

Management

Q : Who controlled the project, the abbot or the steering committee? How did the system work?

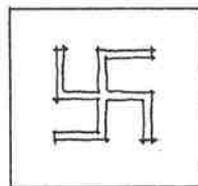
A : The construction of the temple was controlled by the steering committee. I was the designer because I had grown up in a temple and, to become an abbot, I had trained and researched temple building. For this temple I produced preliminary sketches and presented the proposal to the committee. The committee invited an Australian building company to do the working drawings and manage the construction of the temple.

Design

Q : In the early stages of the design process, did you advise the architect how a traditional temple should look? What are the main components? Have any myths and symbolism been included?

A : I think the main components of a traditional temple are the front facade, interior decoration and symbolic ornaments. The front facade is very important, it defines a temple. The two octagonal windows represent *Ta Phu Huu Bat* (p. 166) which replaced the Drum Tower and the Bell Tower. The front facade of the Phap Bao Temple in New South Wales does not look like a temple but if people look at the front facade of the Phuoc Hue Temple, they recognise it as a temple.

There are three main symbolic elements that have meaning in Buddhism: the Wheel of Life, Eightfold Noble Path and the Swastika character. The Eightfold Noble Path is expressed as a wheel with eight sections. The Eightfold Noble Path is the main route linked to bliss, it means Right View, Right Resolution, Right Speech, Right Behaviour, Right Living, Right Meditation, Right Effort and Right Mindfulness. The Swastika character represents 32 good physiognomies and 80 beauties of the Buddha such as long ears, high nose, big eyes, long arms, etc.



71. Swastika character.

Site selection

Q : What factors were considered in selecting the site? Were any myths involved?

A : The site was a large vacant land located behind the Pennington Migrant Hostel.

Between 1980 and 1990 Pennington was the suburb with the highest number of Vietnamese residents, and the Pennington Hostel was a hostel for the new arrivals including refugees and migrants. Vietnamese Buddhists from the hostel could get to the temple on foot. For those reasons the government agreed for the Buddhist congregation to purchase the site to build the temple. Now the area has been developed into a residential zone with new houses surrounding the temple.

Other comments

Q : Do you have any comments about the future development of this temple?

A : In the near future a multi-purpose hall will be built behind the Rear House to contain services such as an activity hall, a canteen, kitchen and toilet. The multi-purpose hall will also have accommodation for Buddhist visitors. The cost is estimated at about \$155,000.

Q : Why does this temple have a traditional form while the Phap Bao Temple in NSW has a modern form?

A : We wanted to have temple in the traditional form in order to symbolise the Asian architecture and preserve our culture. Venerable Thich Bao Lac wanted to combine Western architecture and Asian architecture, in the Phap Bao Temple the exterior is very modern but the interior is decorated in traditional Buddhist style.

I would like to reflect the Vietnamese temple architecture in the traditional form of this temple but it was very difficult because of the lack of skilled people. We could invite them from Vietnam or China but the Master Builders Association

would forbade them to work here as they would not be qualified. On the other hand, the Australian tradesmen could not satisfy our requirements because of the differences in culture and the building regulations. For example, gutters and car parks are not required for temples in Vietnam but they are compulsory in this country. We would never see a wheel-chair ramp or the fire protection equipment in the temples in Vietnam. They are very unusual elements in a traditional temple.

d. The architect

There was no architect, the temple was designed by the abbot and built by David Knights Homes.

e. The local authority

Interviewee:	Lou Fantasia
Position:	Senior Planning Officer
Location:	City Council of Woodville 72 Woodville Road Woodville, SA 5011
Tel:	(08) 348 6180
Fax:	(08) 348 6348
Date:	7th August 1991

Culture

Q : Did the local public oppose the project due to cultural differences? If so, what strategies were applied for reconciliation? How did the local authority react to the establishment of a Buddhist temple in the area? Could the local authority modify the rules to accept the new culture? The traditional activities of the Vietnamese Buddhist community may disturb the local public in terms of noise and traffic congestion. If so, how did the local authority resolve the situation? Did the

Vietnamese Buddhist community have to change their traditional activities to fit in with the local environment?

A : This location was probably different from other locations because the land itself was owned by the state government. Adjacent to the land is the Pennington Migrant Hostel and the Pennington Primary School. So it is a very large, open area. It was ready for ethnic contact because the migrant theme was there at the hostel. The hostel was right up to the front door of the temple. Particularly after World War II we had a lot of people coming to Australia, some were migrants, some were refugees, so the area had absorbed different ethnic communities. From that point of view the ethnic contact already existed in the area.

My understanding is that the application to build the temple went through the public notice process. No objections were received. Except for the fact that the council put within the development car parking, arranged the setback of buildings, landscaping to the area, even though the landscaping did not fit particularly well with Australian landscaping. Council had to consider the issue of location. We had some large institutional buildings such as the Primary School and they were very dominant. We had a church down the street, so the existing context was suitable to temple development.

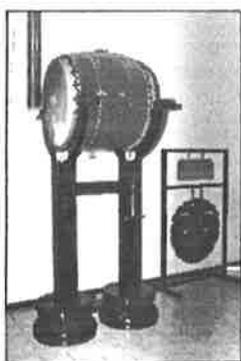
I think the building is not quite a typical temple in the traditional sense. It is somewhere along that way but not all the way. Perhaps the materials were difficult to obtain, maybe the tradesmen were not around. If you look at the finishes, the temple is built in simple materials incorporating a very Vietnamese character in terms of design. Such cream clay brick, timber doors and roof tiles are not the typical materials for a temple.

I suppose the way that the council resolved a lot of issues was making a series of compromises. In the end it was successful, the buildings and some layouts were slightly different from what we approved originally. The scale of the building, in

the context of a church, is that it is not a big building. Traditionally a church is a very dominant building in most cultures. I expected that the temple would be a dominant structure similarly. I do not think people would oppose the temple because of its size.

I believe there was some debate but experience has shown that the development has worked well. Now people are living around the temple, a new housing development has recently been completed and there are some celebrations associated with the temple. A lot of people tend to use the temple, so the community is mixed, the culture is mixed. That is the characteristic of the area. There are some traffic problems and other issues but I do not think those issues are any different from other places of worship when they have celebrations. The temple started in isolation but now it has become part of the area.

From the council's point of view, I do not think this facility has caused any cultural clashes. The impact is in terms of ceremonies, firecrackers, crowds moving around, etc. It is a place for worship, it is classified in that category and it seems to be working.



The great drum
and gong



The great bell



The timber musical
instrument (*Mo*)

72. Buddhist musical instruments, Phap Hoa Temple.

Design

Q : The size and the scale of a temple, such as the number of storeys and height of the pagoda, may not comply with the local planning and building regulations. How did the planning officer resolve the problem? Were any regulations changed? What are the standard planning requirements for this type of project?

A : There are a number of issues that council has to consider. One thing is that, in the old traditional church, the bell tower is normally higher than the church but it is not significantly higher. The question I would raise is, how much higher would it be? Are we talking about seven storeys or seven levels of the structure? The facility may look like seven levels but in fact it is a low building. We need to define what is a level or a storey in this context.

If the tower is located close to the main building then it may work. I do not object to the concept. I think we need to look at the details and work out a solution. Maybe the building needs to be reduced in height to keep within the general character. The way we would handle this is to look at the context and the relationships because if the tower is located away from the main building, it starts to affect other properties and you come up with a different character. Maybe we would try to work out whether or not it is absolutely critical in terms of the culture. Is it essential to have seven storeys? What would be the situation if we had to refuse it? What sort of compromise could we achieve?

Building regulations

Q : If a temple is designed in the traditional form with a curved roof, pagoda tower, traditional tiles, without gutters and chimney, etc., how would the building and health inspector(s) respond? Were there any conflicts between the Building Code of Australia and the temple construction methods? If so, how did the building inspectors handle them?

A : There is no requirement to install gutters. There is a requirement that the rainwater must be disposed off. There are two points that I want to address. Firstly, what you traditionally build and expect to be part of the building project. Secondly, what is the requirement. The disposal of storm water from the site and the buildings is crucial under the Building Code and also crucial in terms of site engineering. No engineer would allow a house or a building to be constructed where there is no proper control of the storm water. So it depends on how you arrange the storm water disposal.

In traditional Australian construction, a gutter is required because it serves other purposes. Now it is possible for the council to say that the temple does not need gutters if the designer can demonstrate a proposal of resolving water disposal. If it can be shown that the method works and achieves the given objectives then it would be allowed to be built.

Other comments

Q : The abbot intends to build a multi-purpose hall behind the Rear House. Will this raise some planning issue?

A : If he adds more facilities to the project, he changes the emphasis and that may attract different reactions. The activities in the hall are going to attract more people. This would raise all sorts of different planning issues in terms of what the hall is going to be used for and the hours during which the hall will be used. What impact is it going to have in terms of car parking etc? If both the temple and the hall are in use at the same time, then a whole new car park equation would have be considered.

If social events such as the Buddha's birthday, community meetings and whatever are going to be held in the hall, what impact are these activities going to have? Are they going to have music? If so, what sort of music? Are they going to have a lion

dance and firecrackers? That is going to wake up the whole neighbourhood. People do not expect to be woken up with music they do not know. We would evaluate the hall in those kind of terms.

The council in the end would put into place an assessment procedure which would allow public comment. In terms of planning, we would assume that all the relevant information about what is going to happen is presented so people can come and comment on it. We would look at those comments and through consultation we would try to work out a compromise.

Q : In Perth the temple was located in a residential area. Council had to rezone the land to satisfy the planning requirements. This temple is also located in a residential area, but why didn't the council rezone?

A : I think the two churches in Woodville are in a residential zone. Yes, we have the temple on the fringe of the residential zone but in front of the land is the Migrant Hostel, the state depot is on the left, vacant lands are behind and a state school is on the right. The temple development is basically within the context of the area. We could not ask for a better location. The council can approve the existing situation without rezoning.

Q : Future extension is a common process of temple development. For example, the master plan of the Van Hanh Monastery in Canberra shows five stages of development which includes nine buildings, the front gate, a monument, landscaping, car park, etc. The master plan of the Phap Hoa Temple shows only the present stage, and ignores the future extensions. How would council react?

A : For the temple in Canberra, maybe the design was good or the council guided it. If you have a big block of land and you are starting here and what are you going to do next. If you need an extension, what are you going to do. The council forced them to think about the future. In this particular proposal, it does not appear that they thought about future extensions. It seems to me that all they wanted here were the

temple and accommodation. They never talked about the multi-purpose hall or the tower but they should have. If they want to do some extensions, they would need to submit a new application. What happened with the temple in Canberra was that the council saw nine buildings in the master plan so maybe we need to do the same here otherwise we do not know what is going on. In fact the statue of the Buddha outside the building was not part of what the council approved. It should be a driveway instead. The development on the site does not follow the plan that was submitted to the council. Perhaps the abbot or building contractor did not understand the requirements, maybe the designer did not explain, or no-one thought that a typical temple should have the Buddha standing outside. For outdoor activities they needed space so that people could worship outside the building. Maybe no-one explained that or never thought about it, maybe the designer did not understand or did not have any idea about the religious facilities. He may have thought about the present and forgot about the future.

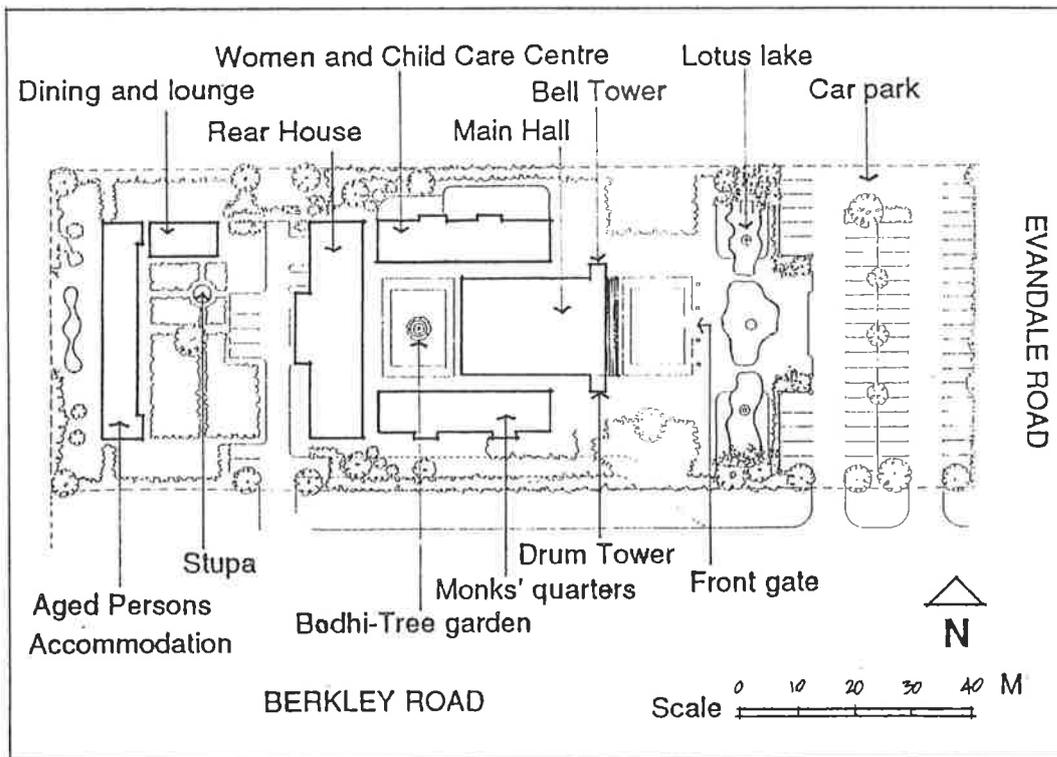
5. Pho Quang Monastery

a. Project data

- Location: Lot 91, Evandale Road
Marangaroo, WA 6064
- Client: Venerable Thich Phuoc Nhon
- Architect: Richard Hammond Architects
76B George Street
East Fremantle, WA 6158
- Engineer: W. H. Smalley and Associates
Suite 8/100, Mill Point Road
South Perth, WA 6151
- Builder: Gillard Builders Pty Ltd
63 Walter Drive
Osborne Park, WA 6151
- Artist: Vo Dinh Khoa
- Local authority: Phil Melling
Planning Officer
City Council of Wanneroo
Boas Avenue
Joondalup, WA 6027
- Zoning: R20 (residential area with 20 dwellings per hectare)
- Built: See history of establishment
- Site area: 12,000m²
- Building area: 1483m²
- Value of project: \$2,500,000
- Cost/m²: \$208.33
- Car park: 974m²
- Landscape area: 9543m²
- Plot ratio: 0.12
- Zoning: Cultural



73. Pho Quang Monastery, WA, 1989.



74. Site plan, Pho Quang Monastery.
(Hammond, 1992)

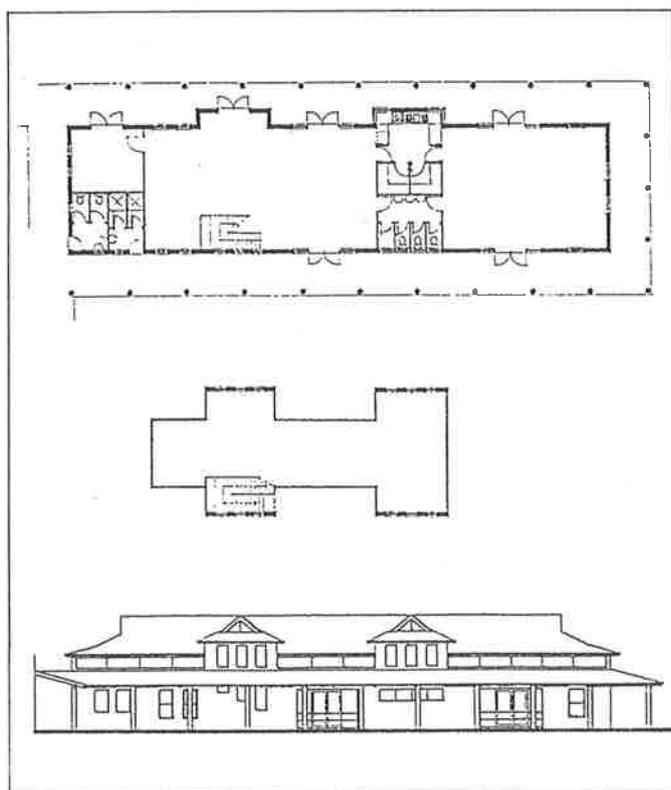
b. History of establishment

- Dec. 1983 The Venerable Thich Phuoc Nhon arrived in Western Australia. He established the United Vietnamese Buddhist Congregation of Western Australia and is also the abbot of the Pho Quang Monastery.
- Jan. 1984 The monastery was formally established as the official seat of the congregation on the occasion of the enshrinement of a statue of the Buddha.
- Feb. 1985 The congregation was officially registered.
- Oct. 1985 The congregation bought a 12,000m² block of land for \$60,000.
- Mar. 1988 Foundation stone was laid.
- May 1989 Construction of the Rear House. This stage accounts for 30% of the total project and is valued at approximately \$400,000.
- Jan. 1990 The inauguration of the Rear House.
- Dec. 1992 Construction of the north wing.

The monastery was established for two reasons: 1) to support the Buddhist community in Western Australia and to develop Buddhism; and 2) to provide facilities for the local Vietnamese community such as the Aged Persons Centre, Women and Child Care Centre and Youth Centre. The proposal involves:

- Rear House with Patriarch House, Youth Centre, kitchen and dining area;
- north wing (two storeys) consists of:
 - * ground floor: Women and Child Care Centre and playground,
 - * second floor: offices;

- south wing consists of monks' quarters and visitors' lodging;
- Aged Persons Centre;
- Main Hall with Bell Tower and Drum Tower;
- front gate and fences;
- car park with 65 spaces for visitors and four spaces for residents;
- lotus lake with two bridges, the statue of Avalokitesvara Bodhisattva and a dragon sculpture;
- Bodhi-Tree garden;
- Stupa;
- landscaping.



75. Floor plans and south elevation, north wing, Pho Quang Monastery. (Hammond, 1992)



76. East elevation, north wing, Pho Quang Monastery.
(Hammond, 1992)

c. The client

Interviewee: Venerable Thich Phuoc Nhon
 Position: Abbot
 Location: Pho Quang Monastery
 Lot 91, Evandale Road
 Marangaroo, WA 6064
 Tel: (09) 343 3238
 Date: 30th September 1992
 Interpreter: the writer

The need

Q : Why do the Vietnamese Buddhists need a temple? How much support has the Buddhist community given the temple project from its early stages to the present?

A : Firstly, life consists of two parts, the rational life and the spiritual life. The two parts have to be balanced. When people meet struggles in life, the spiritual part becomes more important. The temple is a place for Buddhists to worship the Buddha and practise Buddhism which is the spiritual part of life. Secondly, most Vietnamese accept the fact that the temple represents their culture, their history has proved that. In Australia, to build a temple in traditional Vietnamese style means of preserving their culture.

Culture

Q : The activities and the practising of Buddhism by the Vietnamese in Australia are different to some extent from those in Vietnam. In Vietnam a temple is a place solely for worship but in Australia it has become a venue for social activities as well. Did the local public oppose the project? If so, how did the steering committee overcome the opposition?

A : After we bought the site in 1985, we approached the City Council of Wanneroo with an application to build the temple. Council had to rezone the area and the application was not approved until 1988. There were seven letters from local residents who were against the proposal and 117 submissions in support. Between 1985 and 1988, I approached the local politicians and the State Premier. When the council had a meeting, some of the members were in favour and our proposal was given the go-ahead. Without their support this project would have been rejected. They also advised the congregation on how to apply for, and win, government funding.

During the Lunar New Year, the temple is allowed to have a festival with firecrackers. It proved that local councils can formulate the regulations to suit a different culture.

Finance

Q : Finance is often the main problem in many projects. What method(s) was used for raising funds? If there were some financial difficulties, how did the steering committee deal with them?

A : The financial arrangements for the construction of the temple was a difficult task, but we did have support from government. The State Government granted \$60,000 for the construction of the Rear House and the Federal Government granted \$120,000 for the north wing. Another source was the donations from

members of the Buddhist community. The congregation also organised festivals to raise money. The proposal was large but the community was small. If we had depended only on the donations of the community, we could not have had a temple this size.

The first stage involved the Rear House (\$400,000) and the lotus lake with a statue of the Avalokitesvara Bodhisattva and a dragon sculpture (\$80,000). The second will be the north wing (\$180,000). The third will be the south wing (\$150,000). The fourth will be the Aged Persons Centre, the front gate and fences (\$300,000). The last stage will be the Main Hall comprising two storeys. The construction of the monastery is in the second stage and is continuing. If our generation cannot complete the project, then the next generation will.

Management

Q: Who controlled the project, the abbot or the steering committee? How did the system work?

A: The steering committee controlled the project. I am president of the committee and also the abbot of the monastery.

Design

Q: In the early stages of the design process, did you advise the architect how a traditional temple should look? What are the main components? Have any myths and symbolism been included?

A: I instructed the architect to reflect the characteristics of a traditional Vietnamese temple in order to preserve the culture. The Rear House and other buildings have a few characteristics of the Vietnamese temple architecture but they are not the major components. The Main Hall will be the major component. It will be designed with the characteristics of a traditional temple which involve curved roofs,

double roofs and columns. The curved roofs of the Main Hall will be made of reinforced concrete. The rows of columns around the building will support the verandahs. In Vietnam or China, curved timber roofs are common but in Australia if we tried to produce a similar roof, it would be too expensive.

The main building will have two storeys, the basement will be used as a multi-purpose hall, the height between floor to ceiling is 2.5m with 1.5m above ground, the floor area will be 33m x 18m. On the basement will be the Main Hall which will appear impressive with a high podium and front stairs.

The layout of this monastery is in the shape of the *Khau* character (囗). The Main Hall will be located at the front, the south wing will be placed parallel to the north wing, the Rear House is at the back. Four buildings surround a sand covered courtyard. This layout is the ancient Vietnamese architecture. The *Khau* character has no meaning in Buddhism. The building layout following this character originated in Vietnam, not China, perhaps it started in the *Ly* and *Tran* Dynasties. I have visited some great temples in Taiwan, China and Japan. The layout of those temples did not follow the *Khau* character. The Main Halls of those temples are usually located at the front. Behind the Main Halls are the Rear Houses. Other buildings are located behind the Rear House. The buildings are separated from each other.

Site selection

Q : What factors were considered in selecting the site? Were any myths involved?

A : I know some Feng Shui. Selecting a correct site for the temple was very difficult in Australia. The site of the monastery was selected according to the following:

- 1) The site is close to the city.
- 2) The suburb has a high Vietnamese population. Gurawheen and Koondoola are two suburbs which also have high Vietnamese populations and they are next to Marangaroo. The three suburbs are in the same polling area.
- 3) Here is a new development area, the Vietnamese can move into this area.
- 4) The temple would face to the east, according to Feng Shui it was a good site.

Selecting a site close to the Vietnamese population could achieve other goals. For example, the votes from the large number of Vietnamese could put pressures on the local politicians. If we apply for government funding the local politicians would support our proposals. I have twice won government grants.

Other comments

Q : Do you have any comments about the activities of the monastery?

A : Buddhism develops without discrimination between nations, the monastery was founded by the Vietnamese but now other Buddhist communities are involved as well. There are two Australians and two Chinese on the executive committee. The weekly timetable of the monastery involves a Buddhism class on Monday and a meditation class on Tuesday, both classes are taught in English. The activities of the congregation take place over the weekends.

Q : Pho Quang Monastery is the first Vietnamese temple designed by an Australian architect. What do you think about working with him?

A : We met Mr Richard Hammond through a mutual friend. He had thought of many good ideas. In 1988 we asked him to manage everything such as, producing the drawings, preparing and submitting the application to the council, selecting a builder and supervising the construction.

Q : What additional services are provided in this temple?

A : In Vietnam, the Buddhists only visit a temple to practise Buddhism. While Mr Hammond's proposal involved social services, such as facilities for the aged, women and children. There is a social worker who works part-time in the monastery. In the north wing, the ground floor will be used as a Women and Child Care Centre, and on the second floor will be offices. In general, the activities of this monastery are half religious and half social which is required by the Vietnamese community.

d. The architect

Interviewee:	Richard Hammond
Position:	Principal architect
Location:	Richard Hammond Architects Pty Ltd 76B George Street East Fremantle, WA 6158
Tel:	(09) 339 1260
Fax:	(09) 430 1509
Date:	29th September 1992

The brief

Q : Can you provide a copy of the brief?

A : We worked out the programme jointly with the master by a series of notes and sketches which are in the file but it is not a coherent brief.

Site selection

Q : Were you involved in the site selection? If so, what factors were considered for selecting this site?

A : They had already bought the site before I met them but I know a bit about the selection of the site. From the beginning they were looking for a block close to the city. In fact Mr Peter Wilson who was President of the Planning Committee encouraged them to go for a big area because of the opportunity it would give them for a more complete development. Another factor was the large Vietnamese community in Wanneroo and the Council of Wanneroo was willing to support them. I do not think there was a problem about distance, from the city probably about 20 minutes driving by car. It was also close to the Vietnamese people working in the market gardens up there, so I think the location is very good.

Culture

Q : Due to the differences in culture, was there any local opposition to the project? If so, what strategies were applied to resolve the conflict(s)?

A : Coming back to the political situation in Wanneroo, the Vietnamese people there had enough numbers to become a good voting block. They had done a lot of work at the political level, they had friends in the local council and government at both state and federal levels. They had good support from politicians. There was a major campaign against the proposal but the council supported it.

Q : The activities of the Vietnamese in Australia are different from those in Vietnam. Perhaps the language difficulties is a reason for drawing the Vietnamese together in most activities. What additional services were provided in this temple?

A : The existing building is only a temporary temple, but we are going to build a proper temple on that site with services surrounding it. At present the temple is going to be more of a community meeting place. The design shows that it can operate as a Youth Centre or Community Centre with a large dining area. It has a large kitchen with space for a big cold room so that it can cater for several hundred people. It has office space for social workers in the future but now the master, monks and some nuns are living in there. For that reason, we built showers and bathrooms in addition to normal toilet provisions.



77. The kitchen, Pho Quang Monastery.

I think it has to be looked at in the context of other things, like the next building is a Women and Child Care Centre which has meeting space, counselling space and room for children. The upper floor can be used for people to stay. We are also looking at an accommodation for the aged Vietnamese people.

The external work includes a tower for public relics so that people can come and visit. There are a lot of things to be added particularly to the building for cooking

a large number of meals. It worked well for the ceremonies like the Buddha's birthday and Lunar New Year etc. We have seating for several hundred people there while services are going on in the same space.

Design

Q : The form of a temple can be expressed through different methods, by:

- copying an image of a temple in Vietnam,
- blending with the local environment,
- creating a new form,
- a combination of the above,
- others.

What was your design approach? What was the design philosophy for this temple? Did you research Vietnamese temple architecture in developing your design? If so, what are the principles of form and function that you consider essential for the design of a Buddhist temple?

A : I think it was blending, the master knew the way he would have done it in Vietnam, he talked through all of that. I combined things like design for climate here, certainly for our construction methods. I picked up the images that he felt comfortable with, in a form that we could afford to build, and local people could do the job. So it was very much a blending.

He showed me illustrations in magazines and photographs and said he wanted the temple to be like that. In terms of selecting materials, I drove him around and showed him things. He picked the colours, tiles, etc. Sometimes there was a problem with communication. His English is very good but our concepts were difficult for him to understand. I did not speak any Vietnamese so I just sketched. Generally the process worked like it should with any other client.

We certainly wanted it to be close to the Vietnamese Buddhist tradition. For us it was a learning process of finding and understanding the rituals and spaces required, the significance of things like the columns and gate, the symbolic components like the mountain and lotus lake and so on. How to interpret that within the Australian context, again I would rely on the abbot to teach me these things. I would ask him to explain those issues and talk about the significance of colour and I tried to interpret that in the drawings for him.



78. Temporary Buddha's altar, Pho Quang Monastery.

It is just a matter of being in that process. I could bring my ideas and directions to the project but in terms of cultural aspects it was, yes, for him to teach me the important parts. While my role was to make it possible in terms of technical and economical context. I also pointed out the works that could be improved.

Environment

Q : If your design tries to reflect the image of a traditional Vietnamese temple, what components needed to be modified to adapt to the Australian environment and to follow the building regulations?

A : In terms of orientation, access to the sun particularly, also the wind, we face the back of the building to the west. For the buildings to be built to the west we have a

courtyard behind them. We limited the size and shaded the openings. We have verandahs around the buildings. We have high ceilings for ventilation. I think the form of building is quite influenced by various solutions to those issues.



79. West elevation, Rear House, Pho Quang Monastery.



80. Verandah, Rear House, Pho Quang Monastery.

Council had some major requirements such as car parking. They were concerned about the Bell Tower and Drum Tower that they saw on the drawings. They worried about the noise but it was very insignificant really. They also indicated a road to be built at the rear of the site and we lost some land to it.

Materials and technology

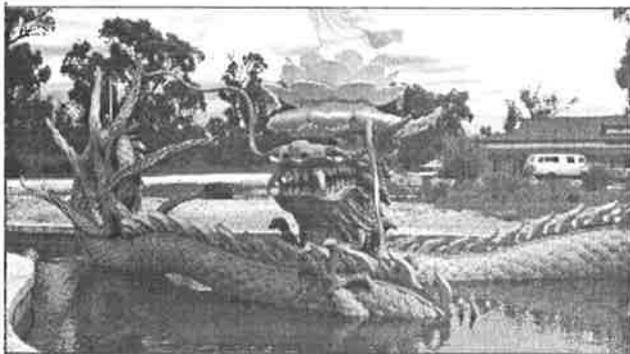
Q : Did you find that the differences in materials, construction methods and technology allowed a broader range of solutions? If so, can you give details?

A : I think what we have done here in the design of the current building is that we basically used standard Australian construction vernacular - concrete laid on the ground, brick walls, aluminium frame openings, gang nail trusses - that the tradesmen would understand.

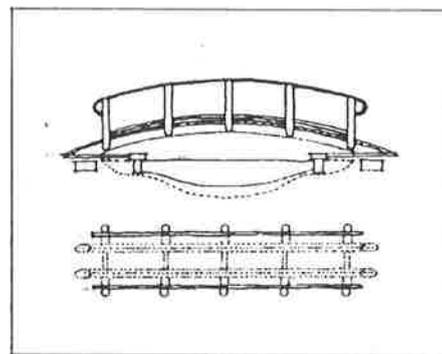
Artists

Q : Some ornamental components of a temple such as: dragons, lions, statues, etc., need particular artists. How did you find them?

A: When we did the statue and the lotus lake, the craftsmen from the Vietnamese community who built the dragon demonstrated significant skills. I would like to do more work using those skills for example, the bridges across the lake and so on. They talked about how they are able to cast bamboo balustrades in concrete. I think it would be good to get more of that. I would like to involve the Vietnamese community more in the construction, particularly with the main temple building. I think with other buildings such as the Welfare Centre, monks' quarters and the Administration Centre, we should keep going with this sort of standard vernacular. It would be cheap, simple and quick. With the Main Hall, I think it would be nice to get more community involvement. I would like to do that, I wish I could afford it.



81. Dragon sculpture done by Vo Dinh Khoa, Pho Quang Monastery.



82. The bridge, Pho Quang Monastery. (Hammond, 1992)

Management

Q : Who controlled the project, the abbot or steering committee? How did the system work?

A : I really have only one client, that was the abbot. He ran everything, so I only deal with him. What really happened with this project was that I interpreted what he wanted in a local fashion through our regulations, building practices and building code. I interpreted what he would have done in Vietnam.

Myths and symbolism

Q : Did your design include some myths and symbolism of the Buddhist rituals?

A : Not in the first building, in the temple, we have not designed the temple yet, but I would like to include them. It is very important to understand things like the symbolism of the mountain and the gate, etc. I would like to learn more, to find out more.

Evaluation

Q : Was a post-construction evaluation carried out? Did it show any deficiencies in the design? If so, would you now approach a design solution differently?

A : We evaluated the current building in terms of modifications for the next stage. The crowds were getting bigger, we had more people in the building than we expected. The building is not large enough. We will design the next building with a spacious hall for larger gatherings. I guess it would be a multi-use space. We do not see that phenomenon during the week but, at the weekends or ceremonies, many people come to the temple.

Other comments

Q : The main temple will be designed in traditional form. Do you have any idea about the curved roof?

A : At the moment we have three pitches in the trusses of the current building, they start to form the curve. Before we do the main temple, what I suggest is I will go to Vietnam to visit some temples then I think it would be possible for us to develop a structure that gives the abbot what he wants within the financial constraints. We wanted to make the current building more elaborate than it is, but the abbot did not want it to be too elaborate because he did not want it to compete with other temple buildings in the future.

Q : Religious atmosphere and the space that accommodates that atmosphere were the crucial parts of designing a temple. Could you comment on that?

A : I have been to the current temple a lot of times when people were worshipping or when functions were occurring, the feeling I had was that it is very different from the Western religions. It was really a part of life and while people were in that space, other things were going on around them at the same time. So it was a very different concept of space.

e. The local authority

Interviewee:	Phil Melling
Position:	Senior Planning Officer
Location:	City Council of Wanneroo Boas Avenue Joondalup, WA 6027
Tel:	(09) 405 0333
Fax:	(09) 300 1383
Date:	28th September 1992

Culture

Q : Did the local public oppose the project due to cultural differences? If so, what strategies were applied for reconciliation?

A : The congregation of the monastery had bought the land before they approached the council. That was the main reason for some of the difficulties. The temple had some oppositions from the local public but, on the other hand, they had the support of the local council. When the application was submitted, we had to advertise the site for 30 days which is a standard requirement under our residential development zoning regulations. You find that when you advertise you will get objections no matter what type of proposal. It really depends on the number of objections. If there were 117 letters against the proposal and seven in support then we probably would think differently or the council would. In this particular case we had far more support from the people in the area than we had objections. Probably because of the location, the area was considered very large, very few residential homes, the nearest residential development was far away to the south and that is only being built now. Everything happened in favour of the temple.

Q : How did the local authority react to the establishment of a Buddhist temple in the area? Could the local authority modify the rules to accept the new culture?

A : We have a long history. The area was first developed in the late 1800s, and from the early 1900s we had a lot of Chinese market gardens in here. Then many Middle Europeans came. They're still running the market gardens. Now we have Vietnamese working in the market gardens. Some of them are in partnership with Italians and Yugoslavs. The main residential boom started in 1972, the population was 8000, now we have about 190,000. There is quite a large proportion of Vietnamese living in the area.

From the council's point of view, we look more at the land-use which is reserved for religious institutions, we tend not to look at which religion it is or anything like that. We consider its merits in terms of how it fits into the locality.

Q : The traditional activities of the Vietnamese Buddhist community may disturb the local public in terms of noise and traffic congestion. If so, how did the local authority resolve the situation?

A : The main complaint we normally get with any public building is the car parking. People park on the side streets, etc. In this particular case I have not heard of any complaints at all, perhaps it is because of the location. The problem now is that the monastery is situated in a residential area. It causes us to look more closely in terms of whether a religious type of building within a residential area is still appropriate, considering the traffic generated on weekends. The only condition that we did put on the site at that time was that it is residential development. Of course that could change with the proposed Aged Persons Accommodation and the other institutions.

Q : Did the Vietnamese Buddhist community have to change their traditional activities to fit in with the local environment?

A: If the Environmental Protection Authority allows this council to control the noise, that means we are responsible for showing everybody how to meet a satisfactory sound level. If there are complaints, we have to look at what can be rescheduled or anything like that. It really depends on who bought in the area, like if you build a house next to a main road, you should expect to put up with the noise of traffic. I could not answer now how we will treat the problem until people build around the area. Maybe the Buddhists will buy the blocks in the area, that could occur.

Design

Q : The size and the scale of a temple, such as the number of storeys and height of the pagoda, may not comply with the local planning and building regulations. How did the planning officer resolve the problem? Were any regulations changed?

A : Our department is looking at multi-purpose dwellings more than two houses on one block. Architects and designers come up with a lot of different designs. We ask them to come and explain their proposals. If they conform with our requirements in terms of development standards then there is no problem.

When the original application came in, because we had no experience with the Buddhist religion, we contacted the City Council of Perth as they had been involved with the temple in Perth. They said that initially there were some concerns but, once it was approved, they did not have any problems at all. There were no complaints and so we just took that on its merits.

Q : What are the standard planning requirements for this type of project?

A : Certainly with this type of project, you get a normal setback requirement, car parking, etc. All are written down in the scheme. We do not differentiate between religions. Our scheme is very flexible, for example, if this way will produce a different setback, if you have good reasons then we can accommodate the solution. What we actually run here is that every Tuesday we have what we call advance assessment where officers from the planning, building, health, engineering and market garden sections sit down together and look at the applications. If one application has been explained, we will call in the architect, community or developer to discuss, to explain the ideas or design principles. We have a round table discussion and we find that it is far more effective than just getting involved in paper work.

Building regulations

Q : If a temple is designed in the traditional form with a curved roof, pagoda tower, traditional tiles, without gutters and chimney, etc., how would the building and health inspector(s) respond?

A : Our main requirement is water run-off from the site. We do not really look at the individual components as long as water does not run out on the road. I do not know how the Building Department would handle it. I am not too certain how the Building Department would resolve the issue. Normally it just requires a demonstration of how the water runs off. As long as it does not wash back to the foundation and affect the structure of the building.

Q : Were there any conflicts between the Building Code of Australia and the temple construction methods? If so, how did the building inspectors handle them?

A : We use the Building Code of Australia for our building requirements in terms of structural design, construction, etc. We want safe buildings so that they do not fall down when people walk through the door. I think the main difficulty was that the architect did not provide what we wanted to see on paper. Our requirement was not by any means unusual. From memory, people occupied the building prior to what we call practical completion. We wrote a letter about it and they complied with our requests. Our main concern was the structure and some things like that to make sure everything conformed to the standards.

Other comments

Q : The site was in residential area and council had to rezone it to conform with the land-use policy. What are the planning problems in the area?

A : The actual problem of the site does not relate to the land-use or the culture. It is a planning problem in terms of future residential development design. We still have difficulties in planning this area. Wanneroo is a very new area. The

residential density is R20 which is 20 dwellings per hectare. That is the ideal situation but in fact what has happened is that it is normally around 12 to 15 dwellings per hectare, which is very low. The block sizes are normally between 600m² and 800m². In some areas they are down to between 400m² and 450m².

When the designs were submitted the plan showed quite a lot of landscape. There was a lot of natural bush around the place, so it really fitted in with the character of the area, whether all those bushes will remain after the development of the adjoining blocks, we do not know.

Q : A Buddhist temple has a very different form from the local architecture. Its unusual character may affect the architecture of the area. What is the council's point of view?

A: Wanneroo is a new area, the architectural design has no common theme. We are fairly flexible. I think our main concern is as long as the proposal conforms with the regulations, in terms of health requirements, Building Code of Australia and things like that, it is acceptable. If you note the design of buildings around the city centre here, they take completely different forms. We do not want everything to look the same.

CHAPTER VI : ANALYSIS AND COMPARISONS

The survey of five Vietnamese Buddhist temples in Australia has shown that there were several problems which caused them to be less than satisfactory. These problems arose from various aspects but were mainly related to design, planning and building regulations, building construction, finance and community relations.

A. Analysis

1. Design

a) The Phuoc Hue Temple (NSW) was designed following the traditional form: the site layout with axial planning, the main building follows the *Cong* character (*I*) with the entrance hall at the front, the Main Hall at the middle and the Patriarch House in the rear. The buildings are decorated with symbolic ornaments. The main building reflects the temples in south Vietnam, the Linh-Mu Tower reflects the Thien-Mu Pagoda in central Vietnam and the Single-Pillar Pagoda reflects the One-Column Pagoda in north Vietnam. The Vietnamese can see the images of their country in these components, especially the typical architecture of the three regions. This is the outstanding design merit of the proposal.

To introduce this traditional form, the designer faced certain difficulties such as: the lack of skilled tradesmen for the curved roof, and the lack of symbolic materials. The present technology allows the designers to handle the curved roofs easily. Local products may replace the symbolic materials except the 'Negative and Positive' tiles which are imported from overseas.

b) Nguyen Ky, architect for the Phap Bao Temple (NSW), introduced new concepts:

- non-axial planning,
- against symmetry and balance,
- non-symbolic decoration,
- altar of the Buddha is situated in the corner of the Main Hall, and
- front gate with neither three entrances nor one entrance.

In other words, his concepts are contrary to the traditional Vietnamese temple architecture. The question arises, can a temple be designed without following the traditional Vietnamese Buddhist architecture? Up to a point, yes. The architect has won the support of the abbot and the local council. Local materials were used for the buildings and the construction techniques were familiar to the tradesmen. The temple blends with the surrounding environment in terms of form, height and colour. Conversely, he met strong opposition from the Vietnamese community, they wanted a traditional temple. From their point of view, the term Buddhist temple is synonymous with their culture. Vietnamese visit the temple to see the merits of their national architecture, others visit in the hope of seeing something outstanding and quite different from the local architecture, but it is very disappointing because the appearance of the temple is no different from the local buildings.

c) The Phap Hoa Temple (SA) was designed by the abbot and the work was carried out by a building contractor. The abbot took on the role of designer because of his knowledge of temple architecture and the fact that he had built a temple and a school in Vietnam. He also had the support of the council, the congregation and the local public. The Phap Hoa Temple could be considered successful in terms of building layout and traditional symbolism. The temple exhibits the concepts of:

- axial planning,
- building layout in the *Tam* (ㄇ) character, and
- the facade is balanced following the concept of *Ta Phu Huu Bat*.

Unfortunately, the main problem with this temple was that the abbot did not take into account any future developments. Consequently, should he wish to carry out further development he would have to submit a new application to the council. Another factor was that he was not aware of the conditions required by the council. The statue of the Bodhisattva Avalokitesvara was placed in the driveway which was not originally approved by the council. Perhaps this can be explained by the difference in customs, the abbot may have thought that, as it was temple land, he could do anything within the temple boundaries. This case study proved how important the role of an architect can be in this type of project, even though the abbot has a broad knowledge of temple architecture, he still cannot replace the designer. Nevertheless, in the design process, the abbot can play a vital role as an adviser to the architect.

d) Interpreting the client's ideas instead of expressing his own was a problem for Richard Hammond, who designed the Pho Quang Monastery in Perth. He relied on the abbot's photographs of temples in China and California and the abbot's explanation of how a temple should look, the meanings of Buddhist symbolism, construction of the curved roofs and so forth. He tried to resolve these issues by applying the abbot's ideas within the Australian context in terms of the technical and economical aspects. He felt that it was a safer process for handling a foreign cultural project. He could not put in his own ideas because he was unsure. His role became very restricted because he was unfamiliar with traditional Vietnamese temple architecture, particularly its meaning. His design resembled the temples in China, instead of being uniquely Vietnamese. This is culturally misleading.

e) In Australia there is one person, Mr Vo Dinh Khoa, who has the necessary skills to make the symbolic ornaments. He has done the dragons, the Eightfold Noble Path and the bamboo balustrade fence for the Phuoc Hue Temple (NSW). At Pho Quang Monastery (WA), he did the dragon at the lotus lake. At Phap Bao Temple (NSW), he cast two dragons curled up on two columns in the Main Hall. It would be ideal if this skill could

be passed on within the Vietnamese community so that the lack of skilled artisans would no longer be a real concern.

2. Planning and building regulations

Planning and building regulations are very similar among councils. The common requirements are setback, car park, landscaping, zoning, height control, access points, fire services, ramps and toilet for disabled people. All councils have a public input process. Councils do not require the installation of gutters and downpipes if the designer can demonstrate an alternative and viable method of controlling rainwater. The regulations are flexible, the requirements can be discussed and negotiated.

The car park was the major problem of the Phuoc Hue Temple (8138m²). The proposal was rejected when first submitted, because of insufficient car park spaces, the City Council of Fairfield required at least 80. The site plan (Fig.45) shows that the car park occupies more than one-third of the block. Actually the car park fills only on the three special Buddhist celebrations in a year, at other times the car park is almost empty. For other temples, councils required only a reasonable number of parking spaces, such as 31 for the Phap Bao Temple (5000m²) and 40 for the Van Hanh Monastery (16,650m²). Perhaps it is difficult to estimate the number of people who will attend a temple because, by tradition, the congregation either stands or sits on the floor. Therefore, car park requirements are not the same with all councils, in other words, the councils did not have a quantitative criteria for the number of parking spaces for cultural projects.

The master plan of the Phuoc Hue Temple shows a pagoda tower of seven storeys and the Van Hanh Monastery (ACT) involves a tower of three storeys. Most councils allow only two storeys in temple development. Councils may not accept the height of the pagoda tower but it is an essential element of a temple. This presents a conflict between the traditional, religious character of the temple and the building regulations.

Zoning, also, is not consistent among councils. Temples are usually classified as public buildings and should be located in public areas, but the case studies show that the Van Hanh Monastery (ACT) and the Phap Hoa Temple (SA) are situated in residential areas but they have successfully integrated into the local lifestyle. Other case studies show that, in the past, temples met with opposition from both councils and the local public because of incorrect zoning. As a result, they had to be moved to new locations in public zones. Therefore, zoning is a sophisticated condition which depends upon the behaviour of the people in the temple and the point of view of the local public.

The analysis shows that car parks, height control and zoning are still controversial issues between architect and council. Fire services and the ramps and toilets for disabled people are alien to a traditional temple. The facts prove that there are contradictions between temple design and regulations.

3. Building construction

a) Curved, timber roofs are major components of temple architecture and they require skilled tradesmen. The roofs of the Phuoc Hue Temple (NSW) and Phap Hoa Temple (SA) exhibit a slight curve. The roofs of the Pho Quang Monastery (WA) clearly display three pitches to form the curvature (Fig.76). The three examples prove that the timber construction technique of curved roofs needs skilled tradesmen, no temple has brackets under the eaves, perhaps the technique is not familiar to the local builders. It is neither economical nor practical to import tradesmen from Vietnam or China. Even if it were possible, under the Master Builders Association they are not allowed to work here. In short, the lack of skilled timber tradesmen for making curved roofs is shown.

b) Symbolic materials, such as the 'Positive and Negative' tiles, are not made in Australia. They can be imported from overseas but they are so expensive that the congregations cannot afford them. Hence, the lack of symbolic materials is another of the problems which face temple designers.

c) There are major differences between the contract for a temple project and a contract for normal building work. The latter usually involves a contractor who agrees to supply labour and materials for the construction and the client agrees to pay for such works, whereas the contract for a Vietnamese Buddhist temple project should contain other requirements, such as:

- The inclusion of Vietnamese artisans in the construction team.
- The contractor should provide jobs for non-skilled members of the community who want to work as volunteers.
- Most temples are built in stages, sometimes the period between stages can be years. Temple buildings are usually occupied before the completion of the project, therefore, the contract should include conditions which guarantee the safety of the occupiers while the project is being completed.
- Expenses must be reported to the committee, hence the contract should be simple, clear and written in both English and Vietnamese.

Therefore, a contract should be prepared and modified to satisfy the above conditions.

4. Finance

The case studies show that temple projects rely mostly on government grants and donations by members of the Buddhist communities. Unfortunately, government does not have a policy for funding religious buildings, but it does have a policy for funding cultural and social projects. This is the reason why most temples have included social services. Nevertheless, limited budgets have presented a real problem to temple projects.

5. Community relations

a) It has been shown that Feng Shui is a traditional and practical approach to site selection but, in Australia, it is influenced by other factors: planning controls and the social needs of the Vietnamese community. The site is required to be located in a public area and close to the Vietnamese population instead of involving the criteria of *Long and Thuy* (pp.183-184). However, the designer can negotiate with the abbot and local authority regarding Feng Shui and work out a solution instead of ignoring it. For example, the site of the Phap Bao Temple (NSW), offered by the Housing Commission, favours Feng Shui because the site is high at the back and low at the front which is similar to the sites of the old traditional temples in Vietnam. The location of the Phap Bao Temple also satisfies the needs of the community and the requirements of the council, it is situated in a public zone and it is close to the suburbs with a high Vietnamese population.

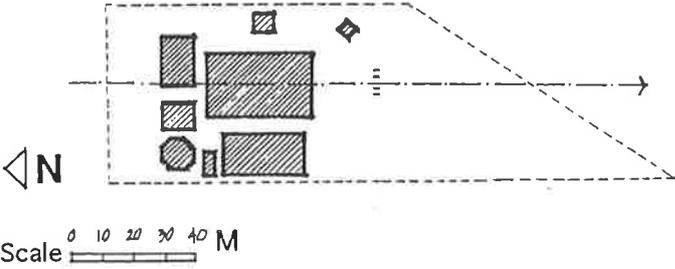
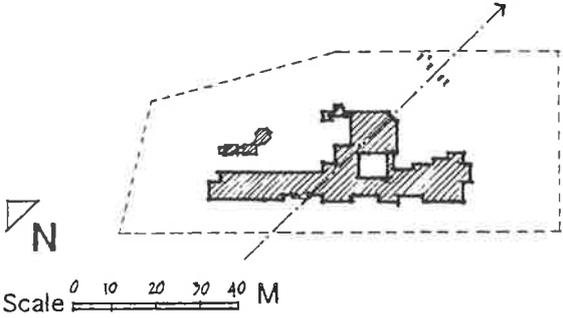
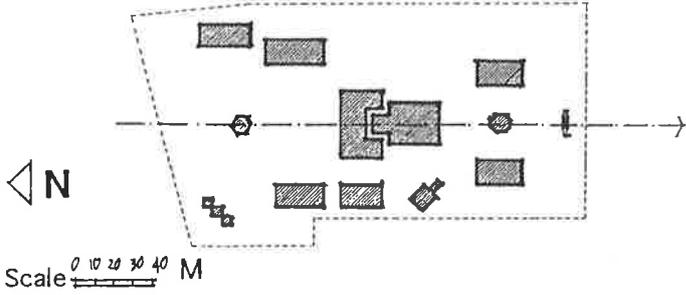
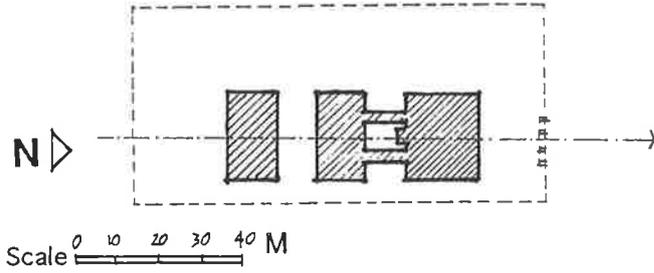
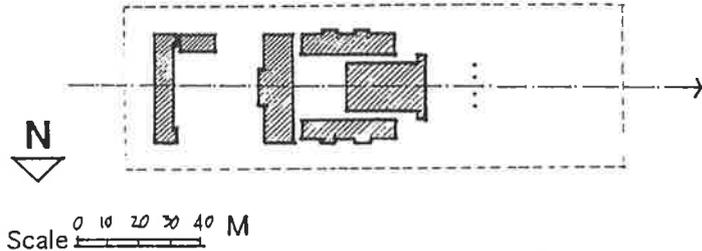
b) The Pho Quang Monastery (WA) has just completed the Women and Child Care Centre. The monks' quarters and the Aged Persons Centre will be built according to the master plan. Similar developments are also planned for the Van Hanh Monastery (ACT) and the Phap Hoa Temple (SA). The Phap Bao and Phuoc Hue Temples (NSW) cannot be developed further because the sites are too small. It shows that: firstly, the size of the land becomes the main criterion when selecting a site. Secondly, to fulfil certain needs of the local Vietnamese Buddhist community, temples are encouraged to become involved in social services.

c) The Pho Quang Monastery (WA) exemplifies the political factors relating to site selection. The site is located close to the suburbs with high Vietnamese populations, therefore the monastery became a target for political campaigns in order to gain votes. In return the politicians supported the monastery to win government funding. Since then the political aspect has become a criterion in site selection.

d) The sounds associated with the traditional activities in a temple are a real problem. The great bell, great drum, gong and timber musical instrument (*Mo*) are common used in temples. Monks and nuns use the *Mo* for praying, the great bell, great drum and gong are used in ceremonies. Another problem is traffic congestion. For example, approximately 3000 people visit the Phap Bao Temple (NSW) on the eve of Lunar New Year. Thus noise and traffic congestion present a major concern for both designers and the local authorities as they are the two main reasons for the local public to be against a temple.

B. Comparisons

The survey of five Vietnamese Buddhist temples in Australia has shown that three are almost completed and two are in various stages of development. Therefore, the comparisons are based on the existing data. Some typical characteristics can be described as follows:

 <p>Scale 0 10 20 30 40 M</p>	<p>Phuoc Hue Temple</p> <p>Site Area: 8138m² Bldg. Area: 1697m² Plot Ratio: 0.21 Car Park: 80 spaces Orientation: South Zone: Public Chinese Character: No</p>
 <p>Scale 0 10 20 30 40 M</p>	<p>Phap Bao Temple</p> <p>Site Area: 5000m² Bldg. Area: 681m² Plot Ratio: 0.14 Car Park: 31 spaces Orientation: East Zone: Public Chinese Character: No</p>
 <p>Scale 0 10 20 30 40 M</p>	<p>Van Hanh Monastery</p> <p>Site Area: 16650m² Bldg. Area: 2390m² Plot Ratio: 0.14 Car Park: 40 spaces Orientation: South Zone: Residential Chinese Character: No</p>
 <p>Scale 0 10 20 30 40 M</p>	<p>Phap Hoa Temple</p> <p>Site Area: 5000m² Bldg. Area: 832m² Plot Ratio: 0.17 Car Park: 45 spaces Orientation: North Zone: Residential Chinese Character: Tam</p>
 <p>Scale 0 10 20 30 40 M</p>	<p>Pho Quang Monastery</p> <p>Site Area: 12000m² Bldg. Area: 1483m² Plot Ratio: 0.12 Car Park: 62 spaces Orientation: East Zone: Cultural Chinese Character: Khau</p>

83. Site analysis.

1. Axial planning

Figure 83 shows that four temples have axial planning. The exception being the Phap Bao Temple (NSW) because the architect intended no axial planning, he was against symmetry and balance. The Van Hanh Monastery (ACT) and the Pho Quang Monastery (WA) have the parallel extensions, the buildings are situated parallel to the main longitudinal axis. The Phap Hoa Temple (SA) has a longitudinal extension. The buildings and courtyards are placed alternately along the main axis, forming a series of halls and courtyards. The Phuoc Hue Temple (NSW) has the central building layout. The main building is located on the major axis with the bell pavilion on the right and the multi-purpose hall on the left, the gate at the front and other buildings are behind. These facts show that axial planning is an important approach for designing traditional temples.

2. Building layouts

The plans in figure 83 show that two temple layouts follow Chinese characters. The Phap Hoa Temple (SA) has the Main Hall, Rear House and multi-purpose hall placed separate from each other by courtyards, follows the *Tam* character (三). The Pho Quang Monastery (WA) has the Main Hall, Rear House, north and south wings surrounded by an open courtyard which follows the *Khau* character (口). The layout of the Phuoc Hue Temple (NSW) does not follow a Chinese character because the site is too small. This study shows that Chinese characters are a traditional concept for the arrangement of buildings which could be applied for designing the temples in Australia.

3. Orientation - Feng Shui

The case studies show that two temples face south, it may appear that the designers intended to follow Feng Shui as the theory encourages the buildings to face in that direction. Actually, the Phuoc Hue Temple and the Van Hanh Monastery face south because the features of the site allowed them to have this orientation. It is similar to the Phap Hoa Temple (SA) faces north (in case that Feng Shui is applied in southern hemisphere then the building faces north). The designers did not apply Feng Shui to select the orientation. Therefore, the concept of selecting orientation by using Feng Shui was not shown in these case studies.

4. Building areas

It should be noted that the building development areas shown in figure 83 do not include a car park, footpath, artificial mountain and lotus lake. The comparison shows that :

- minimum building area = 681m²
- maximum building area = 2390m²
- average building area = 1535m²

Table 3: Comparison of temple buildings

Temple	State	Main Hall (m ²)	Patriarch House (m ²)	Rear House (m ²)	Multi-purpose hall (m ²)
Phuoc Hue Temple	NSW	309	256	-	392
Phap Bao Temple	NSW	114	-	322	168
Van Hanh Monastery	ACT	418	-	438	211
Phap Hoa Temple	SA	296	-	264	308
Pho Quang Monastery	WA	240	-	388	395

- Main Hall: is a part of the main building. Table 3 shows:

- minimum hall area = 114m²
- maximum hall area = 418m²
- average hall area = 306m²

- Patriarch House: is usually situated in the main building or Rear House. Services required in the Patriarch House vary among temples. For example, the Patriarch House of the Phuoc Hue Temple (NSW) include an altar for Patriarch Bodhisattva, altars to commemorate deceased relative, and a large hall. The average area of a Patriarch House is 256m². Table 3 shows that only the Phuoc Hue Temple has the Patriarch House, the other temples' Patriarch Houses are contained in the Rear Houses.

- Rear House: in most temples the Patriarch House and the Rear House are found in one building. Usually the Rear House is built first so that people can occupy the building before or during the construction of other buildings.

Table 3 shows:

- minimum building area	=	264m ²
- maximum building area	=	438m ²
- average building area	=	351m ²

- **Multi-purpose hall:** is used for various activities. Table 3 shows:

- minimum hall area	=	168m ²
- maximum hall area	=	395m ²
- average hall area	=	295m ²

5. Ornaments

In temple building, ornaments are used as major design elements to express the traditional temple architecture and Buddhism. The common ornaments shown in the case studies are: the Eightfold Noble Path, dragons on roof and on columns, bamboo balustrades, statues of the Buddha and Avalokitesvara, lotus on the Buddha's thrones and on hand-rail of ramp, and unicorns. The Phuoc Hue Temple is fully ornamented, other temples are still developing. It can be seen that ornaments are an important aspect for temple decoration (the meanings of the ornaments are discussed in Chapter VII).

6. Myths

Except for the Phap Bao Temple (NSW), where the myths were found by the abbot, myths are rarely found in temples in Australia. In the Main Hall, myth was expressed by the Buddha facing east, which means towards the eastern countries (Vietnam is usually referred to as an eastern country even though it is situated to the north-west of Australia). According to Feng Shui, a site which is low at the front and high at the rear is a good site, the owner of that site will be healthy, wealthy and happy. Therefore, myth is a spiritual guide which is still practised.

7. Characteristics of site

- Site area: Fig 83 shows that the Van Hanh Monastery (16,650m²) has the capacity to accommodate nine temple buildings. The Pho Quang Monastery (12,000m²) comprises six large temple buildings. If, in the future, the buildings, courtyards or car parks fail to provide sufficient space, these monasteries can be extended further to fulfil the functions required without difficulties. This proves that the size of the site should be as large as possible. The comparison shows:

- minimum site area	=	5000m ²
- maximum site area	=	16,650m ²
- average site area	=	9,358m ²

- Distance from the city centre: most Buddhist congregations would like their temples to be as close as possible to the city for easy accessibility, but the location of a site is influenced by other factors:

- * sites close to city centres are very expensive and the congregations could not afford to buy them;
- * size of the blocks could be too small and, therefore, not suitable for temple developments; and
- * like other ethnic communities, the Vietnamese tend to settle in groups in suburbs that are usually away from city centres. As a result, most temples are located close to the suburbs with high Vietnamese populations.

Therefore, to select a site close to the city centre is no longer an important criterion.

Table 4: Distance from city centre

Temple	State	From city centre (km)
Phuoc Hue Temple	NSW	30
Phap Bao Temple	NSW	25
Van Hanh Monastery	ACT	4
Phap Hoa Temple	SA	11
Pho Quang Monastery	WA	14

The comparison shows :

- minimum distance = 4km
- maximum distance = 30km
- average distance = 17km

- Zoning: is a major factor in site selection. Figure 83 shows that most Buddhist temples are located in public or residential zones with the exception of the Pho Quang Monastery (WA) whose zone was classified as cultural. Zoning policies vary in each state and depend on the attitude of the local public. The case studies show that temple sites were assigned by government with the agreement of the local councils. Consequently, zoning becomes a matter for the local council as well.

8. Car park

To comply with local building regulations, temple developments usually had difficulty in terms of car parking. The number of spaces required for a temple is not clearly defined in the planning controls. The comparison shows :

- minimum number of spaces = 31
- maximum number of spaces = 80
- average number of spaces = 55

9. Finance

Table 5: Financial comparison

Temple	State	Site cost (\$)	Total cost (\$)	Cost/m ² (\$)	Gov. grants (\$)
Phuoc Hue Temple	NSW	165,000	2,500,000	307.00	200,000
Phap Bao Temple	NSW	Leasing	1,000,000	200.00	350,000
Van Hanh Monastery	ACT	Leasing	8,000,000	480.48	None
Phap Hoa Temple	SA	60,000	547,000	109.40	None
Pho Quang Monastery	WA	60,000	2,500,000	208.33	180,000

- Site cost: depended on the current land values in each state. Table 5 shows the price of the Pho Quang Monastery (WA) was \$60,000 which equals that of the Phap Hoa Temple (SA) but the area of the Pho Quang Monastery is more than double that of the Phap Hoa Temple. Temples such as the Van Hanh Monastery (ACT) and the Phap Bao Temple (NSW) lease land from the government.

The comparison shows :

- minimum price = \$ 60,000
- maximum price = \$165,000
- average price = \$ 95,000

- Total cost: table 5 shows the variation between the minimum and maximum values which can be attributed to the different stages of development. The Phap Hoa Temple (SA) cost only \$547,000 because there will be no future development, whereas the value of the Van Hanh Monastery is \$8,000,000 because it includes future developments. The comparison shows :

- minimum value = \$ 547,000
- maximum value = \$8,000,000
- average value = \$2,909,400

- Cost/m²: table 5 shows that the cost per square metre was calculated on the basis of the total cost in relation to the area of the site in square metres. It includes the building area, car park, landscaping, entrance gate, fence and so forth. This method was used as a more accurate guide for the comparing of temple costs, although it may not be accurate for the Phap Hoa Temple because it was estimated without future development. The comparison shows :

- minimum cost/m² = \$109.40
- maximum cost/m² = \$480.50
- average cost/m² = \$261.00

- Government grants: table 5 shows there are three types:

- 1) funding through the Community Employment Program: in 1983, the grant of \$350,000 for the construction of the Phap Bao Temple (NSW) was given under the Community Employment Program, which means that the Commonwealth Employment Service employed the people and also paid them;

- 2) direct funding: in 1988, the Pho Quang Monastery (WA) was given a grant of \$60,000 for the Rear House. In 1992 the monastery received a second grant of \$120,000 for the Women and Child Care Centre. The abbot will apply for further funding for the Aged Care Centre; and
- 3) funding under a leasing scheme: the Van Hanh Monastery (ACT) and Phap Bao Temple (NSW) have leased land for a period of 60 years, renewable afterwards.

As stated earlier, government encourages and funds social and cultural developments but it does not usually provide grants for religious developments.

C. Comparison with temples in Vietnam

The survey of five Vietnamese Buddhist temples in Australia shows that four temples have been designed to reflect the traditional Vietnamese Buddhist architecture. Because of the difference in environment, some modifications are required in order to adapt to the local climate and society, they can be described as follows:

- 1) Cultural aspect: Buddhism has deeply influenced the Vietnamese people and traditional temple architecture is part of that culture, the temple in Vietnam is a national monument, whereas a temple in Australia is represents the culture and it also serves another purpose, that is the preservation of the culture of their nation.
- 2) Building form: Because of the lack of skilled tradesmen and symbolic materials, there are certain differences: the degree of curvature of the roofs is much higher in Vietnam; no symbolic materials are shown properly such as the 'Negative and Positive' tiles; and lack of symbolic ornaments on roofs, openings and columns.
- 3) Social needs: temples in Australia play a more extensive role than those in Vietnam. Normally the temple is used for religious purpose only but in

Australia a temple is required to serve the needs of the community. The common facilities are the Aged Persons Accommodation, Women and Child Care Centre, Youth Centre, Social Worker, Cultural Centre. Such services not only change the religious image of the temple but they also reflect the activities of the temple. The temple has now become a social centre for the community.

- 4) Regulations: in Australia, the local councils require a temple to provide services such as: car parks, setbacks, fire equipment, fire escapes, access and toilets for disabled people. These services are not required for temples in Vietnam because there are no councils to look after temple developments.
- 5) Feng Shui: is an important criterion for site selection of temples in Vietnam. In Australia it has become less important because it contradicts the needs of the Vietnamese community and government policy. The orientation in Feng Shui needs to be modified to suit with the location of Australia (pp.183-184).
- 6) Building layout: of temples in Australia is similar to the traditional layout of temples in Vietnam, except for the location of the Patriarch House which is usually part of the main building, but the study of temples in Australia shows that it can belong to the Rear House. It can be explained that because the Rear House is built at first stage for people to occupy, a temporary altar of the Buddha can be located in the Rear House. When the main building is completed, the altar of the Buddha can be moved to the new building and the vacancy in the Rear House can be used for the Patriarch Shrine.
- 7) In Australia, the schedule of ceremonies is changed to weekends instead of having them on certain days.
- 8) The Vietnamese usually worship their ancestors at home but in Australia people worships them at the temples.

CHAPTER VII : GUIDELINES AND RECOMMENDATIONS

The analysis and comparisons indicate that: firstly, there are certain difficulties for designing a Vietnamese Buddhist temple in Australia, and secondly, designing a temple in traditional Vietnamese architecture is a common theme. Hence several questions arise:

- What is the traditional form of a temple?
- What are the meanings of the temple components?
- How to design a traditional Vietnamese temple?
- How to resolve the conflicts described in the five case studies?

The following guidelines and recommendations are put forward for these purposes.

A. Guidelines

The main components of a traditional Vietnamese temple in Australia are:

- a) Front gate
- b) Front courtyard
- c) Main building
- d) Rear House
- e) Multi-function hall
- f) Public Relics Stupa
- g) Car park

1. The main components of temple

a. Front gate

The front gate is the main entrance to a temple and in Vietnam great significance is attached to this gateway. It is considered a reflection of the living inside. A well-kept, great gate is indicative of great order inside the temple. The two standard types are the gate with three entrances and the gate with one entrance. The common characteristics of the gates are symmetry and massiveness.

In Buddhism, there are two definitions of the front gate: firstly, is the entrance to a place of nothingness (*Khong Mon*), visitors passing through this gate mean they have passed beyond all suffering, the temple is a place of nothingness (Ven. Thich Phuoc Hue, pers. comm., 1992); and, secondly, is the peaceful gate with three entrances (*Tam Mon Thanh Tinh*), one should become calm when walking through. People should visit the temple with a fresh mind and soul, the troubles of life should be left outside. For that reason, the size of the gate should be thick so that people will take time to walk through. The front gate is only opened for special ceremonies, there is a side gate which should be located on the right of the front gate for everyday use.



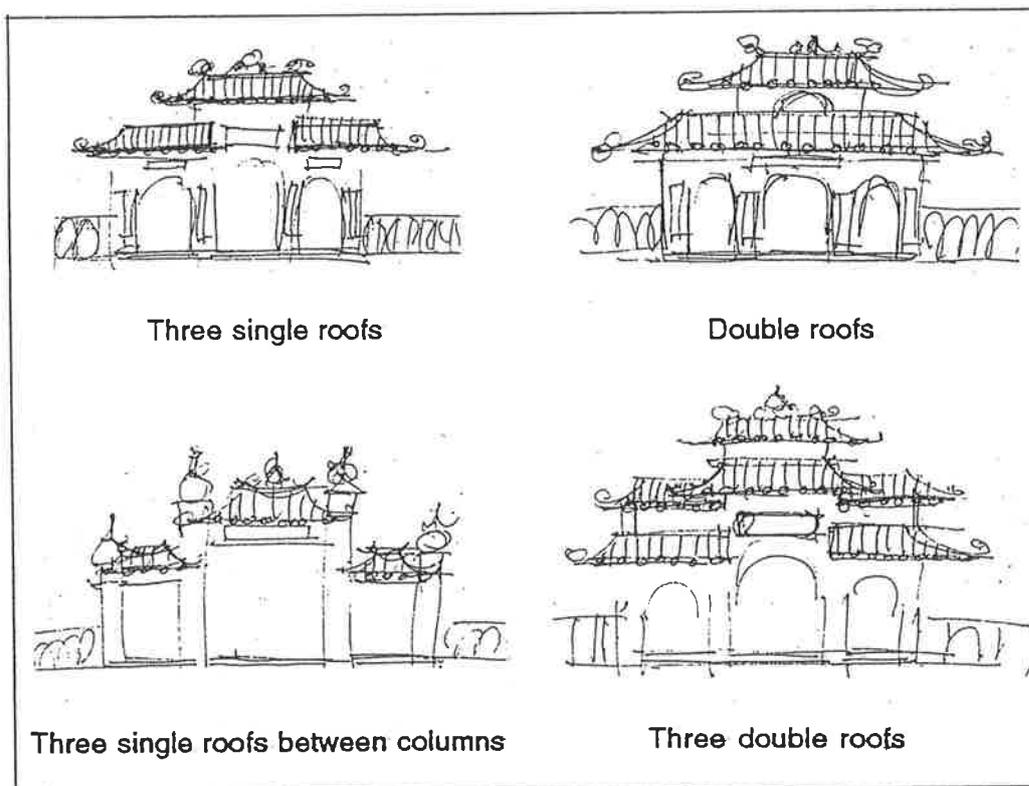
84. Front gate with three entrances, Vinh Nghiem Pagoda, Vietnam, 1971.



85. Front gate with one entrance, Tay Phuong Pagoda, Vietnam, third century A.D.

The roof is an intrinsic characteristic of a front gate. The four common types are:

- 1) gate with three single roofs, suitable for small- and medium-size temples;
- 2) gate with double roofs, also suitable for small- and medium-size temples, is usually massive and commonly found in central Vietnam;
- 3) gate with three single roofs between columns is elegant and usually found in south Vietnam. It is suitable for small- and medium-size temples; and
- 4) gate with three double roofs which is complicated and heavy. The appearance of two layers of roof gives a dignified character to the gate. This type is usually found in south Vietnam. It is only suitable for large temples.



86. Common roofs of the front gate.

b. Front courtyard

This is located between the front gate and the main building, it is used for outdoor functions such as: worship, lion-dances, speeches and concerts. The courtyard should be large enough to accommodate these activities. A large courtyard with a well-designed landscape would create a formal religious atmosphere to the temple and it should be paved for neatness.

c. Main building

The main building usually includes the Main Hall (*Chinh Dien*), the altar of the Buddha, the Patriarch House (*Nha To*), two corridors and the Great Bell Tower and the Great Drum Tower.

- Main Hall: is a place for worshipping the Buddha, it should comprise a large hall (*Nha Bai Duong*) at the front of the altar where people worship and monks or nuns pray, and a sanctuary where the altar of the Buddha is situated. It should be noted that, for traditional reasons, in the Main Hall the congregation usually stands or sits on the floor. The area of the hall is required according to this characteristic. The average area for the Main Hall is 306m².
- The Great Drum Tower and Great Bell Tower: should be located on the left and right of the entrance to the main building, respectively. The rule of left and right originated in China. The locations of the two towers follow the principle *Ta Phu Huu Bat* which means two parts are attached to the right and left of the central component to balance and emphasise the central building.
- Two corridors: at either side of the Main Hall link the Main Hall to the Patriarch House.
- The Patriarch House: which should be located right behind the Main Hall, is used to worship the Patriarch Bodhidharma. The layout of the Patriarch House usually involves a large area where people can worship, an altar of the Patriarch

Bodhidharma and altars for the deceased relatives of the Buddhists. Average area for a Patriarch House is 344m^2 .

The layout of the main building should be on a symmetrical axis. According to Feng Shui, the best orientation for the main building is to face north or north-east (p.184).

For example, the main building of the Phuoc Hue Temple (NSW) involves the Main Hall, altar of the Buddha, two corridors and the Patriarch House. The Great Bell Tower and Great Drum Tower are situated on the left and right of the building, respectively. Each component is laid symmetrically about the central axis. The building facade is balanced about the vertical axis (Fig.46). The Phuoc Hue Temple is typical of traditional Vietnamese temple architecture.

d. Rear House

The Rear House (*Nha Hau*) is a separate building and is usually located behind the main building. It should consist of the abbot's room, a living room, office, canteen, kitchen and toilet. The layout can follow the principle of 'Three Bays' or 'Three Bays and Two Huts' of the traditional Vietnamese house. Traditionally, the kitchen is separated from the building, it is a small outbuilding and should be located at the back of the house. The Rear House should have a verandah added along the length of the building in the front. The Patriarch shrine can be located in the Rear House. Average area for a Rear House is 325m^2 .

e. Multi-purpose hall

As the name implies the hall is used for various purposes such as: seminars, concerts, youth activities, weddings, canteen, etc. For that reason the hall is required to be as large as possible. Average area for a multi-purpose hall is 295m^2 .

g. Public Relics Stupa



87. Public Relics Stupa, Vinh Nghiem Pagoda, Vietnam.



88. Stupa at the Tay Phuong Pagoda, Vietnam.



89. Stupa at the Bao Quoc Monastery, Vietnam.

A Public Relics Stupa is used to lodge the relics of the deceased relatives of the Buddhist members. This service is not usually required for temples in Vietnam but it is a priority for the temples in Australia. The location of the tower can be anywhere in the temple, but is usually on the right-hand side of the main building or to the rear. At the Phap Bao Temple (NSW), the tower is located on the right of the Main Hall. At the Vinh Nghiem Pagoda (Vietnam), the tower is located at the rear of the site. Common forms of stupa are square, hexagonal, octagonal, or vase-shaped and their height varies. For example, the stupas of the Tay Phuong Pagoda (Vietnam) and the Bao Quoc Monastery (Vietnam) have only three storeys, with an hexagonal or square plan.

h. Car park

Unlike the temples in Vietnam, a car park is a compulsory requirement for temples in Australia. Councils tend to base their estimates on the number of people visiting a temple at peak hours like the eve of Lunar New Year, this should be avoided. Car park spaces should be worked out between the architect and the local authority

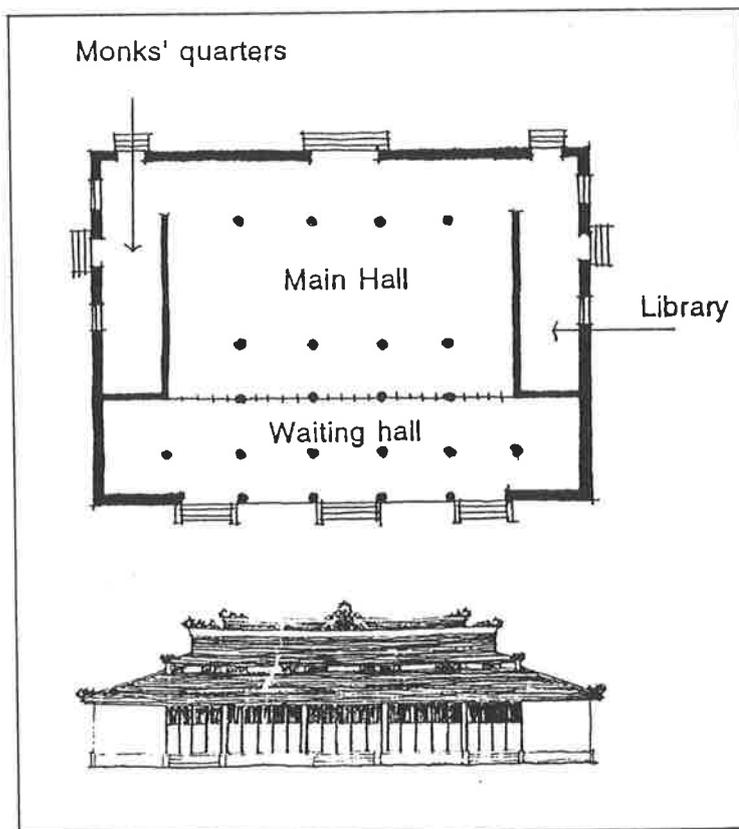
during the early stages of design. The equation should be clearly defined by investigating the following factors:

- type of facilities in the temple;
- maximum and minimum number of visitors;
- mode of transport people use to get to the temple; and
- how many special celebrations occur in each year.

The estimation should then be drawn up with the agreement of both parties. The average number of car park spaces is 55 spaces.

2. Religious building elements

a. Building envelope



90. Main building, Thien Mu Pagoda, Hue, Vietnam.

The concept of space in a Vietnamese temple is similar to that of a Chinese temple (p.29). The Vietnamese temple building is simply a large enclosed area, all religious services take place within it. Partitions are provided between columns. Internal doors are not required unless they serve to provide privacy.

b. The floor and the front steps

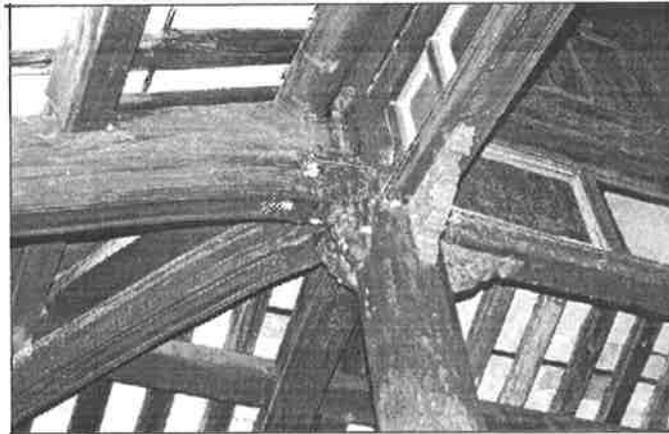
The floor level of the main building, especially the Main Hall, should be higher than the other buildings as it accommodates the altar of the Buddha which is the main element of a temple. The front stairs are an intrinsic feature of the facade of the main building, they signify the steps leading towards the land of the Buddha. The Tay Phuong Pagoda (Vietnam) has a staircase with 239 steps (Fig.31). A wide and high stair is recommended. Three narrow stairs are acceptable, they should be in line with the three entrances of the front gate.

Following on from the stairs is the entrance hall where people wait and deposit items such as shoes, raincoats, umbrellas and so forth, before entering the Main Hall. It should be noted that no-one is allowed to wear shoes inside the Main Hall.

c. Columns

Timber columns and beams are the chief features of traditional Vietnamese temple architecture. In the old temples, the columns and beams are exposed to display the magnificent timber handcraft. The columns are located on a grid. The internal columns run parallel to those of the external facade. The external columns become an integral part of the wall. Bays of columns become the unit for measuring the length of the hall. The average length of a bay is usually three metres. In the new temples, columns and beams are made of reinforced concrete, such as in the Vinh Nghiem and Xa Loi Pagodas.

The column system is very important in traditional Vietnamese architecture. The 'Three Bays' and the 'Three Bays and Two Huts' are mainly defined by the column grid (Figs.27,28). For that reason the column grid system is highly recommended for designing temple buildings. Except for the auditorium, elsewhere it is acceptable if columns block the view of the congregation.



91. The exposed art of the timber structure, Thien Mu Pagoda, Hue, Vietnam.

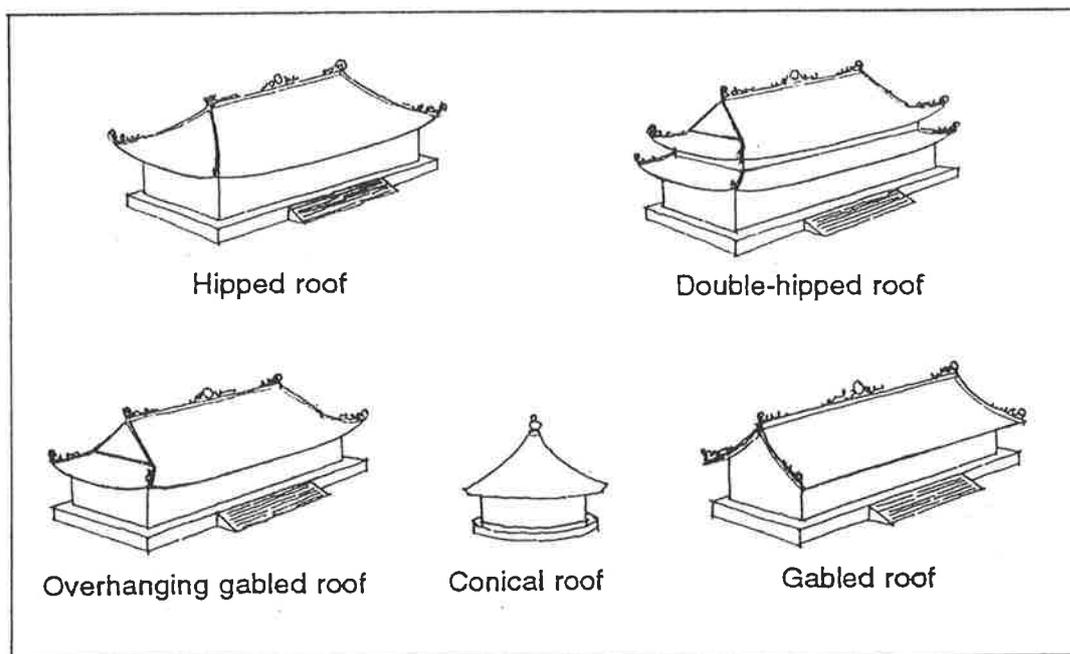
d. Walls

Timber, brick and lime stucco rendering are the common building materials used in the old temples in Vietnam. As a rule the walls are thick, thus providing an even temperature inside the building. Walls fill in the spaces between the columns to enclose the interior as well as provide bracing for the timber-framed structure. In Australia, the designer can follow the concept but can also take advantage of technology and local materials to achieve a better result and more economically.

e. Roofs

There are five basic types for a traditional temple:

- 1) *Hipped roof*: is suitable for important buildings such as the Main Hall. The roof form is characterised by an inward curve and upturned corners. The roof has five ridges, a main ridge and four sloping ridges. All the ridges are decorated with sculptures.
- 2) *Double-hipped roof*: is a symbol of dignity and suitable for important buildings such as the Main Hall. It is difficult to construct because of its complicated fabrication. In fact, it consists of an overhanging gabled roof and a hipped roof, one lies on top of the other.
- 3) *Gabled roof*: is suitable for less important buildings such as the Rear House, monks' quarters, etc. It is easy to construct. There are two types: one where the roof hangs over the end wall and the other where the wall is flush with the roof. Sometimes the walls are about one metre higher than the roof, like parapet walls.



92. Roof types.

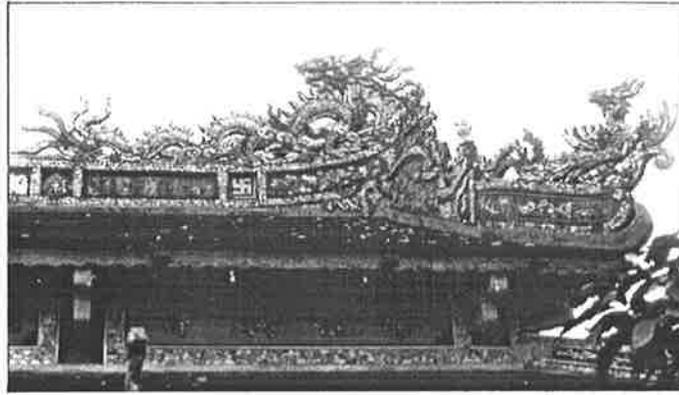
- 4) *Overhanging gabled roof*: at each end of the gable is a gable board which is usually decorated, making the gable end very pretty.
- 5) *Conical roof*: can be placed on top of almost any compact, symmetrical building plan of square, hexagonal, octagonal or circular form. A conical roof is suitable for pavilions and pagoda towers.

A suitable roof for the Australian climate should have a high ceiling to protect the interior from extremes of heat and cold. It should have wide eaves or a verandah to allow cool air to circulate.

The curved roof is the most distinctive feature of a temple. The degree of curvature increases at the roof corners in the shape of a knife-head (*Mui Dao*). A timber construction technique is the traditional method for making curved roofs. The art is expressed by several complicated layers of brackets displaying intricate carving. Obviously, this technique requires skilled artisans who are rarely found in Australia. The designer should resolve this matter before designing the roof.



93. Curved Roof in the shape of a knife-head. Tay Phuong Pagoda, north Vietnam, third century A.D.



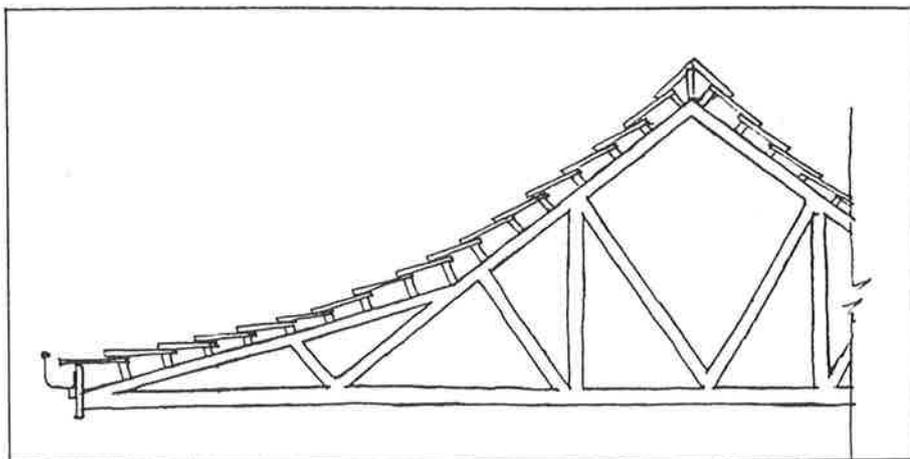
94. Roof without curvature, Bao Quoc Monastery, Hue, central Vietnam, 1674.

Roofs can be straight such as those found in central Vietnam. Although they have no curvature, but they are rich with magnificent decorative sculptures, for example, the Bao Quoc Monastery, Hue, central Vietnam. Thus, the straight roof is another option.

An example of a curved timber roof can be seen at the Zhu Lin Temple in Ottoway (SA). Although it shows a lesser degree of timber construction skill, it does have advantages such as the technique being familiar to local tradesmen and, by using local materials, it is more economical.

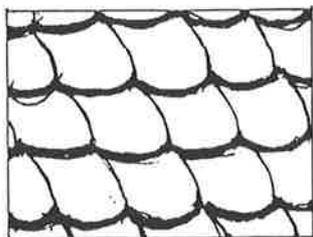


95. Roof of the Zhu Lin Temple, Ottoway, SA, 1993.

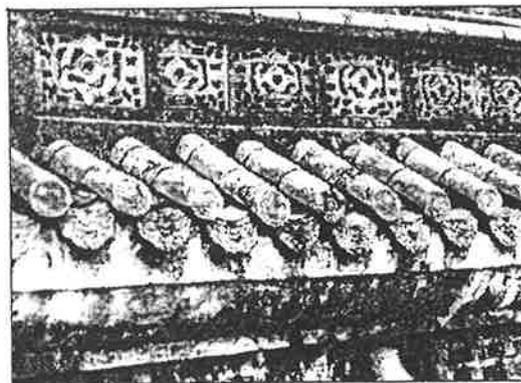


96. Section of the roof-truss, Zhu Lin Temple.
The pitches of the truss and the different high battens form the curvature.

Recent studies (Nguyen, 1990; Vo, 1992) have shown that roofs of terracotta tiles with a flat, shoe-shaped profile are mostly found in temples in north and central Vietnam. Roofs with 'Negative and Positive' tiles are common to temples in the south. These traditional symbolic materials are not made in Australia, they can be imported from overseas. Using local materials is an option, for example, the yellow terracotta tiles at the Zhu Lin Temple achieve a similar result but at only one-third of the cost of the imported tiles.



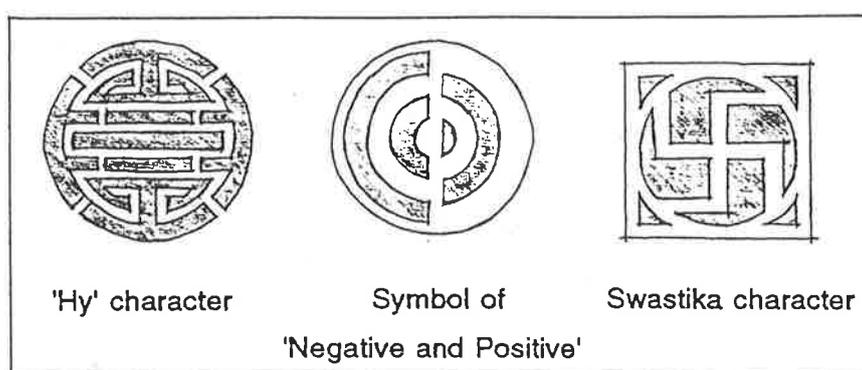
97. Shoe-shaped tiles.



98. 'Negative and Positive' tiles,
Phuoc Duyen Tower, 1844,
Thien Mu Pagoda, Vietnam.

f. Openings

Openings are used for lighting and ventilation. Openings with no fly screen are quite common in tropical buildings. Doors are made of solid timber with handcrafted work. The upper part of a door is left open with a wooden grille as a screen, this characteristic should be modified to adapt to the Australian climate. Folding doors are used for large openings. Windows can be square, rectangular, circular, hexagonal or octagonal.



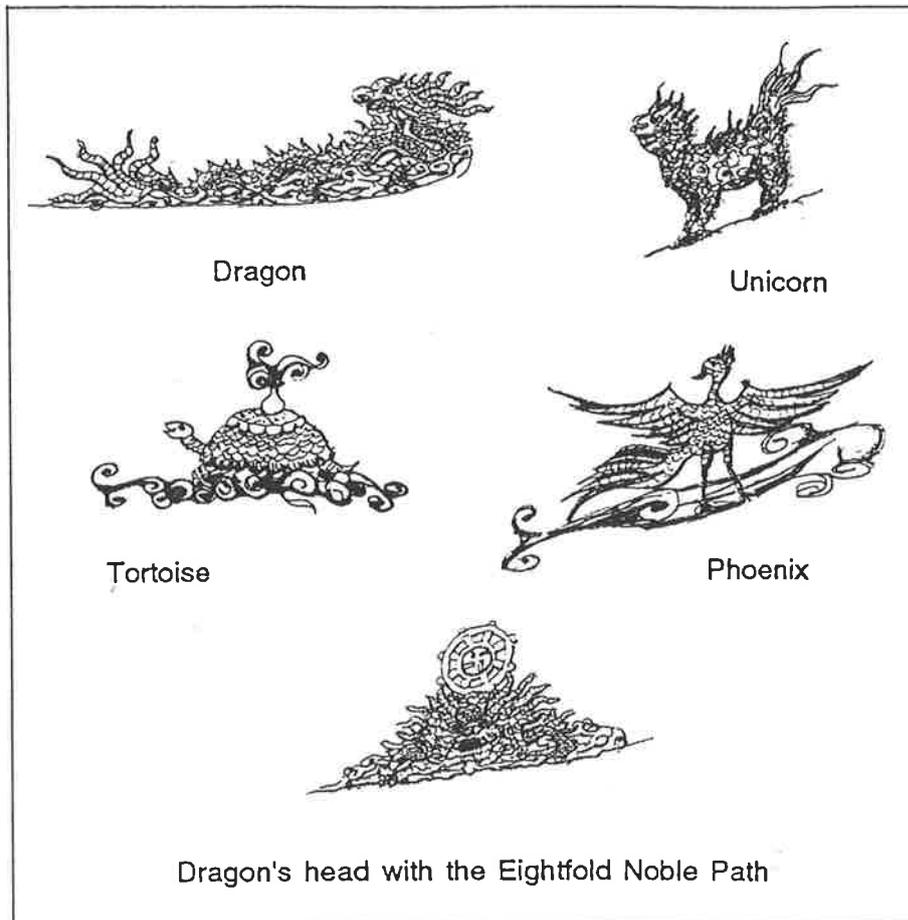
99. Symbolic openings.

Symbolic windows are preferred in traditional temples. Window grilles can be cast in reinforced concrete with ornaments of the *Swastika* character, *Hy* character (happiness), *Tho* character (longevity), lotus flower, symbol of the 'Negative and Positive'. For example, the windows of the Tay Phuong Temple (Fig.31) are consistently circular and moulded in the symbol of the 'Negative'.

g. Ornaments

The Buddhist religion expresses its love of mystery and symbolism by displaying great ornamental sculptures. They are usually found on roofs, columns, walls, windows and fences. Typical examples are the four sacred animals (*Tu Linh*) which comprise the Dragon (*Long*), Unicorn (*Lan*), Turtle (*Qui*) and Phoenix (*Phung*). The *Tu Linh* are guardians and protect the temple from devils and ghosts.

Other common decorative figures are the Wheel of Life, the Eightfold Noble Path, lotus flowers, *Swastika*, *Hy* and *Tho* characters, clouds, fishes and bats. Whitfield (1976) defines the four sacred animals as follows:



100. Symbolic ornaments.

The dragon (*Long*) is a principal character in Vietnamese mythology, it represents power, strength and nobility, and was used as a special symbol of the emperors. Unlike the Western concept of a dragon, in Vietnamese folklore the dragon is a benevolent and revered animal. It has the head of a camel, horns of a deer, eyes of a fish, ears of a buffalo, body and neck of a snake, scales of a carp, claws of an eagle and feet of a tiger. A long barb hangs on either side of its mouth and a precious stone shines brilliantly on its tongue. It has crests running the entire length of its backbone. It can breathe smoke, fire, or water at will. It is immortal. The five-clawed dragon was used

on the official dress of the emperors and in Buddhist temples. Vietnamese legend has it that the dragon was the procreator of the ethnic Vietnamese stock. The mighty Mekong River is named *Song Cuu Long* (River of Nine Dragons).

The unicorn (*Ky Lan*) symbolises intelligence and goodness and is extremely gentle. It appears only on rare occasions. For example, it is said to have appeared when Confucius was born in 481 B.C. The Vietnamese unicorn is somewhat similar to the English griffin, it has the body of an antelope, the feet of a horse, the tail of a buffalo and a single horn on the head.

The tortoise (*Qui*) represents longevity and perfection and is usually seen with a coral branch in its mouth and a crane on its back. The tortoise is believed to live 10,000 years. The crane often has a lotus flower in its beak. It also symbolises longevity but is not usually featured in Buddhist temples. Generally, the crane is found on the tortoise's back in temples dedicated to Confucius, emperors or local spirits.

The phoenix (*Phuong*) represents virtue, grace, peace and concord. It is a symbol of womanhood and female virtue and was used as the principal emblem of queens and other female royalty as the dragon was used by the emperors. The Vietnamese phoenix has a small bill, the neck of a snake, breast of a swallow, the back of a tortoise and tail of a fish. It is characterised by pride, nobility and grace of movement. It is said that its song includes all five notes of the traditional Vietnamese music scale, and its feathers include the five basic colours. The phoenix appears only during times of peace and prosperity and hides when there is trouble. The male phoenix (*Phuong*) is distinguished from the female phoenix (*Hoang*).

Ornaments can be cast in reinforced concrete covered with a shining skin made of colourful ceramic fragments which are collected from broken bowls or cups. This particular decoration is a special characteristic of traditional Vietnamese art.



101. Decoration on wall, Bao Quoc Monastery, Vietnam, 1674.



102. Interior decoration, altar in the Vinh Nghiem Pagoda, Vietnam, 1971.

Walls can be decorated with Buddhist paintings, carvings of Buddhist symbols and Chinese characters. Corner figures are usually decorated with bats, birds, clouds, flowers and plants. Rich coloured ornaments should be displayed under the roof eaves following the bracket layers, between two roofs and on beams. The interior ornaments should be handcrafted in wood. Common figures are humans, flowers, animals and dragons. Rich ornaments should be shown at the altar of the Buddha to express respect.

h. Fire services and facilities for the disabled

These are not found in temples in Vietnam but they are compulsory for all public buildings according to the Building Code of Australia. Hose-reels, fire extinguishers and ramps for wheelchairs should be located unobtrusively so that they do not affect the atmosphere of the temple. Obviously these services change the traditional image of a temple.

3. Layout of religious buildings

Vietnamese temple architecture has been most strongly influenced by the Chinese tradition such as axial planning. However, Vietnamese pagodas have their own layout plans which follow the Chinese characters (*Khau, Cong, Quoc, Tam, Dinh*) and 'Three Bays and Two Huts'. These characteristics are not found in Chinese temple architecture.

Khau (口), meaning mouth, has four strokes forming a rectangle. Following the rectangular shape, four separate buildings are located around an open courtyard. The front building contains an altar of the Buddha, Main Hall, the Patriarch House and two corridors. The rear building contains an altar dedicated to the founder(s) of the temple. The left wing, which is known as *Thuyen Duong* or *Thuyen That*, contains the living quarters. The right wing is used for various purposes. For example, the layouts of the Bao Quoc Monastery (Vietnam) (Fig.37) and the Pho Quang Monastery (WA) (Fig.74) follow the *Khau* character. Layout of buildings following this character is suitable for large- and medium-size temples.

Cong (工), meaning public, labour or peacock⁴⁹, has three strokes, two parallel bars and a linking stroke. It is the most common layout for the main building. For example, the main buildings of the Vinh Nghiem Pagoda (Fig.40) and the Tay Phuong Pagoda (Fig.32) follow this character. Layout of buildings following the *Cong* character is suitable for large- and medium-size temples.

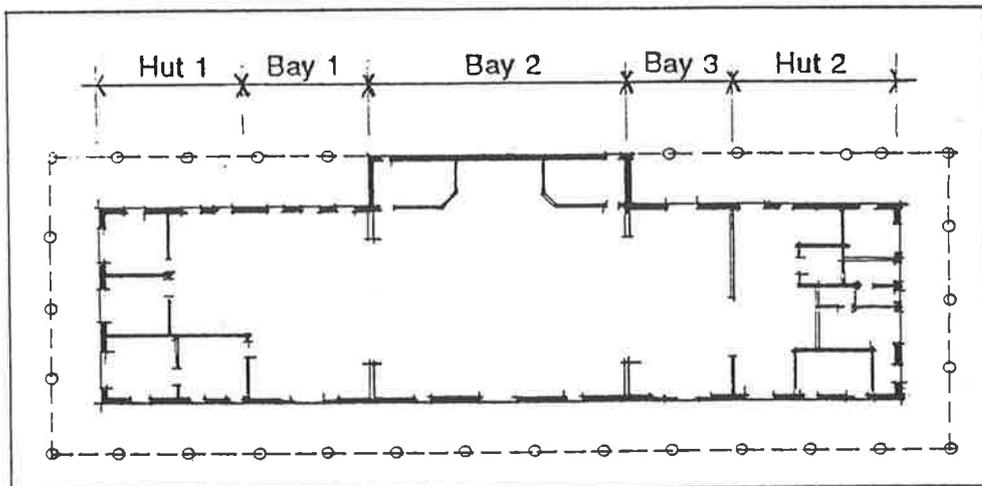
Quoc (國), meaning nation, has seven strokes. The layout of temple buildings following this character is usually found in royal palaces, such as the imperial palace at Hue, central Vietnam. Layout of buildings following this character is suitable for large-size temples.

⁴⁹ One Vietnamese word may have several meanings.

Tam (三), meaning the number three, has three parallel strokes. Layout of temple buildings following this character is found at the Phap Hoa Temple (Fig.68). Layout of buildings following this character is suitable for small- and medium-size temples.

Dinh (丁), meaning nail, has only two strokes. Layout of buildings following this character is found at the Prajna Temple, Van Hanh Monastery (Fig.63). Layout of buildings following this character is suitable for small- and medium-size temples.

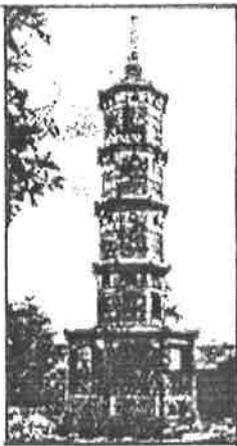
The 'Three Bays' and the 'Three Bays and Two Huts' are the interior layouts of traditional Vietnamese houses. The principles can be applied to the Rear House, living quarters, aged persons accommodation etc. For example, the Rear House of the Pho Quang Monastery (WA) consists of three bays. The Patriarch Shrine is located on the very axis of the central bay. The Youth Centre and the kitchen are located in the two side bays. Two huts were extended on either sides of the house for library, offices, administration, dining, toilets etc. The house has verandahs all around.



103. Floor plan, Rear House, Pho Quang Monastery, WA, 1989.
(Hammond, 1992)

4. Stupa and pagoda tower

A stupa (*Bao Thap*) is the tomb of the founder or patriarch of a temple. Common forms should be square, hexagonal, octagonal or vase-shaped; its height varies. The pagoda tower is another form of stupa but it is used to worship a relic of the Buddha, the pagoda tower represents the existing Buddhist disciplines. The common forms of a pagoda tower can be square, hexagonal or octagonal. The height can be varied with multi storeys. Pagoda towers and stupas are suitable for medium- and large-size temples, they can also be used to lodge the relics of the deceased relatives of the Buddhist congregation. Some famous pagoda towers in Vietnam are:

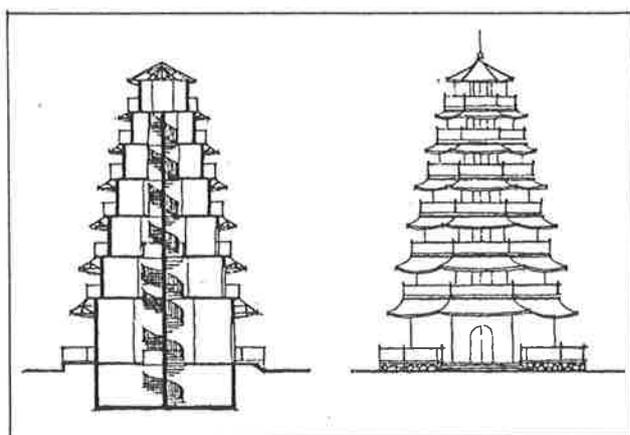


- 104.** Bao Nghiem Pagoda Tower, But Thap Pagoda, Vietnam, 16th century. (Vo, 1992:48)
- 105.** Phuoc Duyen Pagoda Tower, Thien Mu Pagoda, Vietnam, (1844).
- 106.** Avalokitesvara Pagoda Tower, Vinh Nghiem Pagoda, Vietnam, (1971).

The Bao Nghiem Pagoda Tower is octagonal and made of stone blocks. It is 13m (five storeys) high with curved roofs between the storeys. The platform has three metres each side and is surrounded by handrails.

The Phuoc Duyen Pagoda Tower, built by King Thieu Tri, is octagonal, built of red bricks and is 21m (seven storeys) high. A statue of Tathagata is worshipped on each storey. The top storey is used for the worship of Sakyamuni Buddha.

The Avalokitesvara Pagoda Tower is square, and made of reinforced concrete. It is 35m (eight storeys) high. Each side of the first storey is seven metres long. The pagoda tower is used to worship the Buddha and patriarchs.



107. Proposal for the Linh Mu Tower, Phuoc Hue Temple, NSW, 1992.

5. Landscaping

a. Influence of Feng Shui

Feng Shui (meaning Wind and Water) plays a vital role in site selection, the layout of temple buildings and landscaping. Nguyen (1990) states that, according to belief, a good site should involve the criteria of *Long* (dragon) and *Thuy* (water). *Long* is the highest area and *Thuy* is the lowest area where water is collected to form a pond or lake. The site should involve *Long Bao* and *Thuy Tu*, *Long Bao* is known as the mountain and *Thuy Tu* is known as the lake where water is collected before flowing to the sea.

It is believed that a site should be surrounded on three sides by higher land to provide protection from inclement weather. The lie of the land should be gently sloping and, if possible, there should be a river or valley nearby to allow surface water to drain easily.

Buildings face south or a little to east. Rooms facing east and west are usually minor rooms and are shaded by shading devices such as wide eaves, verandahs, or large trees. Because of the orientation, the longer side of a rectangular hall is parallel to the east-west axis, therefore the courtyard becomes longer to provide more sunshine. The principle of Feng Shui originated in the northern hemisphere, if it is applied in the southern hemisphere, the orientation must be reversed. Accordingly, buildings in Australia should face north or north-east.

Following Feng Shui, for those temples which did not have mountains and lakes nearby, people created artificial mountains and lotus lakes to represent the *Long* and *Thuy*. Gradually the artificial mountain and the lotus lake became familiar components of temple landscaping.

Feng Shui is not only applied to the geometry of the site and the orientation of buildings, it also has relevance to the arrangement of rooms in the building and the placement of furniture. It would required a separate study to discuss the theory in detail.

b. Artificial mountain and lotus lake

An artificial mountain is a pile of stone blocks laid to form a small mountain, which represents the *Long Bao*. The lotus lake represents the *Thuy Tu*. The lotus is the main plant in the lake which usually contains goldfish. The artificial mountain and the statue of the Avakolitesvara Bodhisattva should be situated in the middle of the lake with a foot-bridge linking the banks. The artificial mountain and lotus lake are preferred to all temple landscaping.

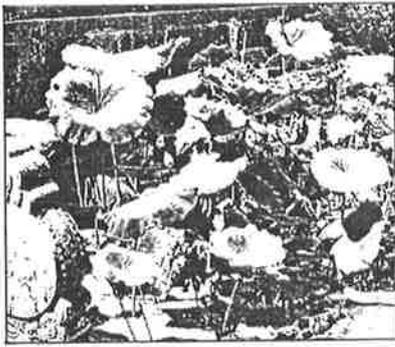


108. Artificial mountain and lotus lake,
Bao Quoc Monastery, Vietnam, 1674.

c. Planting

The most commonly used plants in temple landscaping are:

- 1) Bodhi tree (*Bo De*)
- 2) Lotus (*Sen*)
- 3) Pine (*Thong*)
- 4) Plum blossom tree (*Mai*)
- 5) Orchid (*Lan*)
- 6) Chrysanthemum (*Cuc*)
- 7) Bamboo (*Truc*)
- 8) Peony (*Thuoc Duoc*)
- 9) Narcissus (*Thuy Tien*)
- 10) Marigold (*Tho*)



Lotus



Pine



Bodhi tree



Bamboo

109. Common tropical plants in temple landscape.

The bodhi tree has great significance in Buddhism. The study has shown that the Bodhisattva trained himself by meditating beneath a bodhi tree. During the 49 days he attained enlightenment and became the Buddha. Later the bodhi tree became an object of worship.

The lotus is one of the most popular plants in Vietnam. Whitfield (1976) points out that the flower became a symbol of early Asian religions. It was mentioned in Hindu legends. The Buddha used it as a symbol of man's potential achievement. Since the beautiful flower grows in the dirtiest of waters, the analogy was made that man can achieve spiritual serenity in spite of his environment, it is similar to the meaning described by Robinson and Johnson (1977) and Tsu (1988). In Indian art the lotus is

drawn or carved facing up, the outer petals hang down showing the pistil which represents the centre of the universe. The lotus became the throne of the Buddha and is an ornament for decoration in temples. The lotus flower is a popular offering in the act of worship. In Vietnam, the lotus flower is a common motif in art, especially in sculpture and architecture. As a result, lotus flower is highly recommended in temple decoration and landscaping.

Pine is a strong tree with small leaves and, because of its characteristics, in heavy storms it is more difficult to blow down than other trees. It is an evergreen, symbolising lasting friendship which does not wither in adversity.

The plum blossom tree is a symbol of longevity. The yellow flowers appear on leafless branches. The many-seeded symbolises the desire for many offspring.

The romantic orchid is delicate charm. It is loved for its subtle fragrance, blossoms of refined beauty and especially the sheath-like leaves that suggest both strength and gracefulness.

The chrysanthemum has a long-lasting fragrance, it is cultivated as a symbol for "those who defy frost" and "those who survive all others" (Tsu, 1988). The chrysanthemum plant flowers in late autumn with blossoms of innumerable shapes and colour.

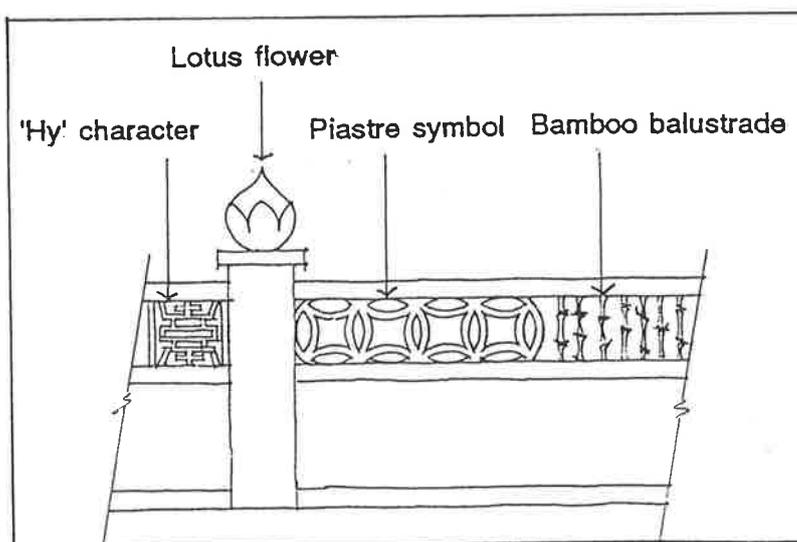
The bamboo is by far the most versatile plant in southeast Asia and one of the most important. Two types are grown in Vietnam. *Tre* is the thick bamboo with cylindrical stalks, tough knots and a thick, durable lining. *Truc* is a thin and slender variety with well-spaced knots and a fine lining. The young shoots are eaten as a vegetable. The mature plant is used in housing construction, fencing and for innumerable other purposes (Whitfield, 1976). Bamboo flourishes throughout the winter, it is also a symbol of longevity, durability and unbending character. It is selected to symbolise the upright character and moral standards of a gentleman (Tsu, 1988).

The plum blossom tree, orchid, chrysanthemum and bamboo are the most common plants portrayed in traditional Vietnamese art. The straight, smooth, shining green stems of the bamboo, compare with the stretching, dark in colour, sculpture branches of the plum blossom tree. The orchid and the chrysanthemum fulfil the ground cover, medium height, the contrasting texture and colour of leaves and flowers. They symbolise the “four virtuous gentlemen” (Tsu, 1988).

The peony has large and rich flowers, it is a symbol of spring, an omen of good fortune and nobility. It has been referred to as the ‘king of flowers’. The narcissus blossoms on New Year’s Day and foretells good fortune, numerous offspring, longevity and friendship. The marigold has large yellow flowers, it is a symbol of spring and longevity.

In Australia, the pine, orchid, chrysanthemum, bamboo and marigold are found but not the Bodhi tree, lotus, plum blossom tree, peony and narcissus, although they may grow in the hot northern areas.

d. Fences



110. Symbolic fence.

The characteristics of a fence are similar to the front gate, it should be massive and permanent. The same materials are used for both. Common ornaments on fences are lotus flowers, piastres, *Hy*, *Tho* and *Swastika* characters and the bamboo balustrade.

e. Censer

The small censer is used for burning incense and the large censer is used for burning votive paper. The act of burning votive paper or imitation paper money is a sacrifice or offering to an ancestor's spirit. The practice of making votive offerings is a well-know rite in many parts of the world. In Vietnam it is practised especially on the anniversary of a death (*Ngay Gio*). Coloured paper, representing silver and gold, is burned for the spirits of the deceased to use in the afterlife. Whitfield (1976) points out that this practice predated the arrival of the Chinese colonists into Vietnam in the first century A.D. Therefore, the censer is essential to temple landscaping and it should be situated in the centre of the front courtyard.

f. Outdoor statues

Common outdoor statues are the Bodhisattva Avalokitesvara and male and female unicorns. These statues can be imported from Taiwan or South Korea. The unicorns should be located on the front steps of the Main Hall or at the front gate, they are the symbols of guardianship.

A study by Robinson and Johnson (1977) shows that, in the Mahayana text, the Bodhisattva Avalokitesvara (*Quan The Am Bo Tat*) is portrayed as a man but in Vietnam, he is metamorphosed into a female. Her name means that she has the power to hear all sounds from everywhere. She possesses all virtues and is especially rich in love and compassion. She grants favours to those who remember her and recite her name. Buddhists believe that those who adore her are saved from hostility, lust and folly. Anyone in distress will be freed from anxiety. A woman who worships her will have a son or daughter, whichever she wishes. She rescues people from dangers such as

demons, witchcraft, thunderbolts, shipwreck, missiles, falling of a precipice, armed robbers and enemies, execution, wild beasts and snakes. *Quan The Am Bo Tat* is usually depicted as a female wearing a high crown, she is often seen holding a vase in her hand pointed down to the lotus lake.



111. Statue of the Avalokitesvara Bodhisattva, Pho Quang Monastery, WA, 1989.

6. External and internal circulation

The principle of *Nam Ta Nu Huu* means that men go to the left and women go to the right of the Buddha, this is a traditional pattern for circulation in the temple. The principle was first applied to keep order at public meetings in Vietnam, it gradually became a custom. The same rule applies to people moving in and out of the main building and, during ceremonies, to those standing or sitting on the floor in the Main Hall.

For external circulation, a footpath around a temple is recommended which can be used for meditation, walking, breathing, praying and viewing. The Phap Bao Temple (NSW) has a footpath for people to walk in the cherry garden.

7. Layout of the Buddha's altar

The layout of the Buddha's altar has its own rules. It should be noted that the method of altar layout in a Mahayana temple is different from that in a Theravada temple. A study by Toan (1987) indicates that a more complicated method is found in the Mahayana temple. The altar is divided into four layers. The top layer worships the *Tam The* (meaning three generations). This has three similar statues of the Buddha which represent the past, present and future. The second layer worships the statues of the *Di Da Tam Ton* (meaning three Bodhisattvas) which has the Shakyamuni in the centre, the Avalokitesvara on the left and the *Dai The Chi* Bodhisattva on the right. The third layer has the statues of the Shakyamuni in the centre, the *Van Thu* Bodhisattva on the left and the *Pho Hien* Bodhisattva on the right of the Shakyamuni. The *Van Thu* Bodhisattva who sits on a blue unicorn or lotus represents intelligence and the *Pho Hien* Bodhisattva who sits on a white elephant represents the clear truth with stabilisation. The bottom layer has the statue of the *Cuu Long* (meaning nine dragons) which involves a statue of the infant Bodhisattva standing on a lotus with his right hand pointing upward and the left hand pointing down to the earth. It is surrounded with nine dragons spraying water.



112. Altar with the *Tam The*, Shakyamuni, *Van Thu* and *Pho Hien* Bodhisattvas (Nguyen, 1990:33)



113. Altar with a statue of the Shakyamuni Buddha. (Nguyen, 1990:31)

A simpler method is found in Theravada temples, where there is only the statue of the Shakyamuni. The presentation at the altar is very simple but it achieves a dignified atmosphere.

A small censer, filled with sand, is usually placed in front of the altars for burning incense. It is believed that the smoke of the incense will curry favour with the Buddha or will please the spirit of the Bodhisattvas. The act of burning incense is called *Thap Huong*⁵⁰. Some incenses are circular or spiral and will burn for many weeks.

8. Social, cultural and educational services

The temples in Australia can receive financial support from the government if, in the proposals, provision is made for social, cultural and educational services. Typical services are: multi-purpose hall, Women and Child Care Centre, Youth Centre, Aged Care Centre, language school.

Social, cultural and educational services are very necessary to the Vietnamese community. Aged Vietnamese who may not have family in Australia and who, perhaps, have never learned English, need the support of other Vietnamese. The same applies to new arrivals who usually have a language problem, particularly the women and children. A language school is required for the youth who want to learn Vietnamese and the aged who want to learn English. The temples are encouraged to provide such services.

⁵⁰ *Huong* are used in the ritual of worship. They are handmade from a thin stick of bamboo rolled in a putty-like substance made from the sawdust of incense woods. Usually about a foot in length, they are lit and placed in a sand-filled censer on the altar of the temple (Whitfield, 1976).

B. Recommendations

1) Design

- a) Gutters, downpipes, fire services and ramps and toilets for disabled people may not be familiar to the traditional temple. Nevertheless, for reasons of safety and to provide facilities for disabled people, all temples should accommodate these services.

Although designing a traditional temple has met several difficulties: lacking of skilled tradesmen for the curved roofs and lacking of symbolic materials, the traditional form is encouraged in this study because of its cultural value.

- b) A new temple design concept as shown on the Phap Bao Temple (NSW) is an option. It is not recommended because this study is concerned with traditional form, preferred by the Vietnamese community.
- c) In the design process, the abbot can play a vital role. Having grown up in a temple, he knows temple symbolism and ceremonies intimately. As the user, he can be a good adviser but not a designer. A temple needs an expert architect.

The architect should explain to the abbot the role of local councils and the planning and building regulations as he may not be familiar with the legal system of Australia.

- d) Pho Quang Monastery (WA) is an example that an Australian architect can be a technical expert. What is lacking is the knowledge of the Vietnamese temple architecture. The architect should know the meanings of Buddhist symbolism in order to use and to construct the traditional temple elements.

To avoid the problem of cultural confusion, the architect should not borrow or copy Chinese temple images for Vietnamese temple design.

- e) The lack of skilled artisans for the symbolic ornaments is not a concern, they are found in the Vietnamese community.

2) Planning and building regulations

- a) The car park and height control are still the controversial issues. They should be resolved at an early stage of design between designer and local authority.

Zoning is a flexible requirement, different councils have different zoning policies. A temple can be located in both public and residential zones. To be safe, a public zone is recommended for a temple. It can be situated in a residential area if the local public do not oppose the temple.

3) Building construction

The lack of skilled timber tradesmen for curved roof construction requires a decision in design. The curved roof at Zhu Lin Temple (SA.) (Fig. 96) is a solution and it proves that the matter can be handled by a designer.

The lack of symbolic materials is another problem, again, at the Zhu Lin Temple, the architect's solution was to use similar local materials. The cost of the local tiles was only one-third of that for imported tiles (\$50,000 as against \$150,000). It appears that, accept the 'Negative and Positive' tiles, some materials can be replaced by a careful investigation of locally available materials.

The building contract for this type of project should be prepared to satisfy the conditions shown on p.149.

4) Finance

The case studies shown that finance is a real concern to temple projects, but it is out of the scope of this study. To make financing easier, temple developments are encouraged to include social, cultural and educational services.

5) Community relations

a) Feng Shui should be modified to suit the southern orientation of Australia. The site, selected by government, is close to the suburbs with high Vietnamese population. Except for these conditions Feng Shui is a practical approach and is encouraged for temple design.

Selecting an ample site is recommended. The site should be large enough to accommodate the temple itself, car park, and social services such as the services for the aged, children, women and youth.

Political support becomes a vital criterion for selecting a site. Politicians should be encouraged to support the temple to enable the project to win government funding.

b) Traditional activities in the temple may cause noise pollution and traffic congestion. Satisfying the car park requirements and conforming the zoning policy may solve the problems, but the temple is similar to any places of worship, its activities should be considered normal by people.

6) Others recommendation

The Vietnamese pagoda has its own characteristics: layout plan, ceramic decoration, front gate and straight roof (pp. 53-54). The architect should bring forward these traditional characteristics to achieve continuity of Vietnamese culture.

7) Conclusion

The successful design of a traditional Vietnamese Buddhist temple in Australia must incorporate the spiritual and cultural essence embodied in the temple forms as reviewed within the history of Vietnamese Buddhism. The process of design evolution springing from the strong roots of tradition must be nourished by the practical absorption of the new environment to thrive and prosper.

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APPENDIX

THE QUESTIONNAIRE

A. Outline

1. Title of the project:
2. Location:
3. Telephone:
4. Fax:
5. Client:
6. Architect:
7. Engineer:
8. Builder:
9. Date started/completed:
10. Costs:
 - a. Total cost:
 - b. Building cost:
 - c. Land value:
 - d. Other costs:

B. The Client

1. The need

Why do the Vietnamese Buddhists need a temple? How much support has the Buddhist community given the temple project from its early stages to the present?

2. Culture

The activities and the practising of Buddhism by the Vietnamese in Australia are different to some extent from those in Vietnam. In Vietnam a temple is a place solely for worship but in Australia it has become a venue for social activities as well. Did the local public oppose the project? If so how did the steering committee overcome the opposition?

3. Finance

Finance is often the main problem in many projects. What method(s) was used for raising funds? If there were some financial difficulties, how did the Buddhist steering committee deal with them?

4. Management

Who controlled the project, the abbot or the steering committee? How did the system work?

5. Design

In the early stages of the design process, did you advise the architect how a traditional temple should look? What are the main components? Have any myths and symbolism been included?

6. Site selection

What factors were considered in selecting the site? Were any myths involved?

7. Other comments

C. The Architect

1. The brief

Can you provide a copy of the brief?

2. Site selection

Were you involved in the site selection? If so, what factors were considered for selecting this site?

3. Culture

Due to the differences in culture, was there any local opposition to the project? If so, what strategies were applied to resolve the conflict(s)? The activities of the Vietnamese in Australia are different from those in Vietnam. Perhaps the language difficulties is a reason for drawing the Vietnamese together in most activities. What additional services were provided in this temple?

4. Design

The form of a temple can be expressed through different methods, by:

- copying an image of a temple in Vietnam,
- blending with the local environment,
- creating a new form,
- a combination of the above,
- others.

What was your design approach? What was the design philosophy for this temple? Did you research Vietnamese temple architecture in developing your design? If so, what are the principles of form and function that you consider essential for the design of a Buddhist temple?

5. Environment

If your design tries to reflect the image of a traditional Vietnamese temple, what components needed to be modified to adapt to the Australian environment and to follow the building regulations?

6. Materials and technology

Did you find that the differences in materials, construction methods and technology allowed a broader range of solutions? If so, can you give details.

7. Artists

Some ornamental components of a temple such as: dragons, lions, statues, etc., need particular artists. How did you find them?

8. Management

Who controlled the project, the abbot or the steering committee? How did the system work?

9. Myths and symbolism

Did your design include some myths and symbolism of the Buddhist rituals?

10. Evaluation

Was a post-construction evaluation carried out? Did it show any deficiencies in the design? If so, would you now approach a design solution differently?

D. Local Authority

1. Culture

Did the local public oppose the project due to cultural differences? If so what strategies were applied for reconciliation? How did the local authority react to the

establishment of a Buddhist temple in the area? Could the local authority modify the rules to accept the new culture? The traditional activities of the Vietnamese Buddhist community may disturb the local public in terms of noise and traffic congestion. If so, how did the local authority resolve the situation? Did the Vietnamese Buddhist community have to change their traditional activities to fit in with the local environment?

2. Design

The size and the scale of a temple, such as the number of storeys and height of the pagoda, may not comply with the local planning and building regulations. How did the planning officer resolve the problem? Were any regulations changed? What are the standard planning requirements for this type of project?

3. Building regulations

If a temple is designed in the traditional form with a curved roof, pagoda tower, traditional tiles, without gutters and chimney, etc., how would the building and health inspector(s) respond? Were there any conflicts between the Building Code of Australia and the temple construction methods? If so, how did the building inspectors handle them?

4. Other comments