

3. Components of the Sukhothai Historical Park Development Project

Aims of the project

The aims of the project are to revive the historical atmosphere of the ancient city by preserving and restoring ancient edifices, reviving the landscape, improving communications systems and developing the community. The work should be planned within the boundaries of the available expert advice, funds, time and staff involved.

The master plan

The historical park has been divided into five sections according to categories of land use, including areas for housing, farming, preserved forests and public facilities and utilities. The finished project will present the historical structures of Sukhothai against the agricultural scenery of the area. The rest areas, parking facilities and souvenir shops will encourage visitors. In all, an area of 2,887 rai will be developed. The public facilities and utilities (e.g. roads, schools, health centre, rest area, police station) will occupy a total area of 490 rai. Those houses which are scattered along the highway will not need to be relocated but they should be redeveloped to improve the environment. The houses which need to be relocated at present occupy a total area of 1,230 rai. Paddy-fields, plantations and orchards

Table 5. Land development

Description	Area		Percentage of 70 km ²
	Rai	Km ²	
Areas to be developed:	3 402	5.248	7.48
Ancient sites	875	1.40	2.0
Landscape development area	1 592	2.547	3.63
Service area	135	0.21	0.03
Orchards (described in stone inscriptions)	800	1.280	1.82
Public facilities area	490	0.748	1.06
Residential area:	1 231	1.769	2.81
Village renewal area	287	0.469	0.655
Village resettlement area	428	0.677	0.967
Houses which do not have to be renewed or relocated	520	0.833	1.19
Agricultural areas:	12 795	20.509	29.31
Paddy-fields	—	—	—
Sugar-cane cultivation	12 795	20.509	29.31
Preserved forest	26 057	41.96	59.56

comprise an area of 13,410 rai. Preserved forests lie in the hilly area to the west of the city. The Forestry Department, which has control of this area, is responsible for prohibiting encroachment in these forests. To determine zoning and land-use patterns, the following plans and regulations were drawn up: The owners of a 7,000-rai area consisting largely of rice fields have been issued settlers' rights. Except for those areas which are adjacent to the ancient sites, relocation of the inhabitants is not necessary. Although the inhabitants are allowed to continue living in this area, it will be necessary to prohibit further settlement.

The government must make arrangements to pay off those settlers who are to relocate.

An area outside the city walls should be reserved for the new settlements.

The restoration and preservation of the ancient structures

The restorers should adhere strictly to the Venice Charter—a series of regulations concerned with the restoration of ancient structures. If there is to be any restoration, the original ancient bricks will be used.

However, there will be some structures which will need to be fixed with modern building materials, but only to consolidate crucial points.

The temples that were prominent during the Sukhothai period will be given first priority as regards restoration. Those masses of ancient bricks that are half-buried in the ground should be left alone until a more detailed archaeological survey can be obtained.

The restoration project will take ten years. The first phase will be concerned primarily with finding archaeological evidence. A hundred and twenty-five test pits will be dug for this purpose. In

addition to this, the area within the city walls and the area north of the city (vicinity of Wat Phra Phai Luang) will be preserved and maintained. The second phase will be concerned with the digging of 400 additional test pits as well as preserving and restoring the remaining ancient sites.

Landscape development plan

In developing the landscape the aim is to create an atmosphere that closely resembles the one described in the stone inscription. Improving the environment will enhance the ancient historic structures. Roads joining the ancient sites should be planned aesthetically. A soil survey conducted by the Soil Development Department concluded that the soil was suitable for growing provided the plants or crops were well watered.

Design of the landscape

The hilly forested area to the west should be planted with those trees described in the stone inscription, for example coconut, areca nut, betel nut and tamarind. Local trees can be planted in public facility areas. All trees and plants should be cared for regularly. It has been laid down that trees, rather than plants and flowers, should constitute the vegetation; that plants and trees should be grown in large groupings—scattering them sparsely over large areas will not contribute to the improvement of landscape; and that the plants and trees should be grown in well-traversed areas, e.g. along roads and by park benches. To achieve the effect of orchards (as described in the stone inscription), the fruit trees should (a) be grouped together in small clusters, (b) be evenly spaced, and (c) be located in open areas which are not being used at present for any other purpose.

Landscape development regulations

Forest vegetation and shrubs that cover ancient structures should be cleared out.

Additional trees should be planted to block modern structures, for example service areas.

The design of the landscape should not distract visitors from the ancient sites.

Regulations for the building of new structures

Their height should not exceed two storeys, i.e. they should not be higher than the tree-tops.

The building materials should not clash with those of ancient structures. Wood, brick, slate and laterite are appropriate building materials.

The new structures should not be painted or glazed.

Their shape should blend with the atmosphere of the ancient city.

They should not block any ancient structures.

Facilities such as water tanks and electricity poles should not be located within view of the ancient monuments.

Regulations in designing facilities

Roads and pathways should rise, fall and curve naturally with the characteristic physical features of the area.

They should be of a size that will accommodate the expected number of visitors within each particular area.

Park benches should be made of wood, laterite or concrete and should be permanent, immovable facilities.

Signposts should be designed uniformly to blend with the historical environment. The Thai and English lettering should be easy to read and the contents should be short, simple and informative.

Spotlights in specific areas of the complexes should be directed at the

ancient structures. The height of the lamp posts should not exceed eye level. All electric wiring within the vicinity of the historical structures should be placed beneath the ground. Lampposts along the highway and roads should not be decorated with any 'Thai designs', in order to eliminate any confusion concerning their historical origin.

Road-building regulations

Absolute precision must be ensured before running a tractor over areas designated for roads—a mistake would produce unsightly scarring.

The roads should curve naturally with the surrounding countryside (this will also help to discourage fast driving).

Curved linears joined by shorter straight lines will be much more aesthetic than the reverse.

All roads should be laid out to pass ancient sites and parking lots should be provided near by.

Roads should be as narrow as possible.

Maintenance regulations

A greenhouse area should be set up to pot young plants.

The grounds within the city walls should be regularly watered. Pipes channelling water from Saritphong Dam (with a water level of 20-25 metres higher than the ancient city) could be installed for this purpose.

An adequate supply of lawn-mowers should be obtained. A repair centre will help to keep up the work flow.

Workers should be trained in gardening.

As many refuse disposal facilities (dust bins) as possible should be installed, particularly in park service areas.

Landscape development components

The present project consists of the following programmes:

Category A: Measures for maintaining the ecological balance of the park development area of 617.2 rai. This includes groves, trees and plants. The existing groves of mango, coconut, palm, tamarind, etc., could provide a basis for establishing the size of the fruit orchards that are described in the stone inscriptions. Their location could be based on the soil composition of particular areas.

Category B: Restoration of ancient wells, ponds and moats. The surface of the wells will be raised and laid with bricks.

Category C: Provision of infrastructure facilities. This includes the construction of parking facilities and pathways (within temple complexes) and the erection of street-lights and signposts in a total area of 63 rai.

Village renewal and resettlement

At least one-third of the 600 families living within the old city walls will be relocated and the houses of about 400 families along the highway and roads will be redeveloped to improve the environment of the area.

The houses in the historical park have been classified under the following categories: houses that will be relocated; houses that will be redeveloped; and houses that can be left alone. The first category includes those houses which block the pathway to, or obstruct the viewing of the ancient sites. The new settlements area will be located inside and outside the city walls. The villagers involved should be given adequate compensation. Most of the houses in the second category, although they overlap the park development area, do not have to be relocated. They should, however be redeveloped to improve the living environment. The present building materials should be replaced

by materials that existed in ancient times. The houses in the third category do not need to be renewed or relocated because they do not block any sites and their appearance does not clash with the atmosphere of the ancient city.

The new settlement area will be situated beside paddy-fields and some already established villages. A adequate water supply system must be provided. Small lanes should connect every house to the main road. A primary school, a health centre and a co-operative store should be provided.

The programme of village renewal and resettlement work involves: (a) registering the number of persons in each family and prohibiting further settlement in the historical park area; (b) issuing official orders to relocate those families involved; (c) providing all the villages, whether or not they need to be relocated or renewed, with more public facilities, while at the same time improving the existing ones; and (d) taking measures to prepare for a possible increasing the population among the present inhabitants.

Tourist development programme

The total number of foreign arrivals in Thailand in 1974 was 1.1 million; in 1975 it was 1.2 million. International tourism in Thailand has earned foreign exchange equivalent to 10 per cent of the total value of exports in 1975. In 1975 about 3 per cent of the total number of foreign tourists in the country visited Sukhothai (about 33,000 persons) whereas 21 per cent visited Pattaya beach. Table 6 gives an estimate of the number of foreign tourists who will visit Sukhothai after implementation of the tourist development plans.

After 1987 it is estimated that there will be an additional 10 per cent increase to 185,185.

Table 6

Number of foreign tourists, at estimated increase rate of 10%

Year	No. of foreign arrivals in country (in millions)	Percentage who visit Sukhothai	No. of persons
1978	1.1	3	
1979	1.21	3	36 300
1980	1.33	3	39 900
1981	1.46	3.5	51 100
1982	1.61	4.0	64 400
1983	1.77	4.5	79 650
1984	1.95	5.0	97 500
1985	2.15	5.5	117 700
1986	2.36	6.0	141 600
1987	2.59	6.5	168 350

Approximately 10 per cent of the total Thai population are financially able to travel within the country for purposes of sightseeing. About 25 per cent of this select number (approximately 1.1 million persons) will actually undertake such journeys; 100,000 Thais or 10 per cent of those who sightsee in Thailand will visit Sukhothai. Within the ten-year project period it is estimated that there will be a 10-20 per cent increase. Table 7 gives estimates of local sightseers visiting Sukhothai.

Measures have been taken to provide adequate facilities for these estimated numbers. A survey revealed that about 33,000 foreign tourists visit Sukhothai during September to January (tourist season in Thailand), which means that two out of every three tourists who visit Sukhothai come during this time. The remaining numbers usually come from February to August. About 30,000 local tourists (24 per cent of the total number of local tourists) come during festivals (which take place ten days a year); 36,400 local

tourists come during weekends (104 days of the year-350 persons per day). On week days (251 days of the year) 59,487 persons come (46 per cent of the total number per year-approximately 350 persons per day). Altogether a total number of approximately 126,000 local tourists visit Sukhothai each year. Table 8 gives daily estimates of the number of local and foreign tourists in Sukhothai.

From these figures it was calculated that at least five more hotels should be built during various intervals of the project and at various locations in the province. Appropriate locations are Phitsanulok, Sukhothai, Kampaeng Phet and Si Satchanalai. Investment is estimate at 15 million baht per hotel (one hotel having 100 rooms). If the room charge is 200 baht per day, the investment money should be recovered in six and a half years.

While 80 per cent of the tourists come in tour buses (approximately 368 persons a day), 20 per cent come in private cars (approximately 92 persons).

Table 7

Year	No. of local sightseers	Percentage who visit	
	in country (in millions)	Sukhothai	No. of persons
1977	1.1	10	110 000
1978	1.13	10	113 000
1979	1.16	11	127 600
1980	1.20	12	144 000
1981	1.23	13	159 900
1982	1.27	14	177 800
1983	1.31	15	196 500
1984	1.35	16	216 000
1985	1.39	17	236 300
1986	1.43	18	257 400
1987	1.47	19	279 300
1988	1.51	20	302 000

Adequate parking facilities are therefore a must. The parking area should accommodate at least eleven tour buses and twenty-three private cars. Tour buses should be discouraged from taking passengers on sightseeing tours, since the roads connecting ancient sites

were designed for smaller vehicles. These should be available at regular intervals throughout the day. In phase 2 of the project, parking facilities should be enlarged to accommodate at least twenty buses and forty private cars and/or trailers.

Table 8

Year	No. of foreign tourists per day		No. of local tourists per day		
	Sept. to Jan	Feb. to Aug.	Festivals	Week-ends	Weekdays
1979	160	58	3062	370	230
1980	176	64	3456	417	259
1981	225	82	3838	464	288
1982	283	103	4267	516	320
1983	350	127	4716	570	354
1984	429	156	5184	626	389
1985	517	188	5671	685	425
1986	623	221	6178	746	463
1987	740	269	6703	810	503
1988	814	296	7248	876	544

At present there is one first-class hotel in Phitsanulok, with 120 rooms; 50 per cent of the foreign tourists and 20 per cent of the local tourists need first-class accommodation. Table 9 gives estimates of the number of local and foreign tourists in Sukhothai during the specified seasons.

Table 9

year	No. of foreign tourists (Sept. to Jan.)	No. of local tourists on week-ends	Total no.	No. of persons to a room (average of 1.5 persons per room)
1979	80	74	154	102
1980	88	83	171	114
1981	113	93	206	137
1982	142	103	245	163
1983	175	114	289	193
1984	215	125	340	203
1985	259	137	396	264
1986	312	149	461	307
1987	370	162	532	355
1988	407	175	582	455

A cultural centre for lectures, films and exhibitions should also be set up. The main auditorium should have a seating capacity of 150-280 persons. A vigorous public relations programme, particularly one co-ordinated with the Tourist Authority of Thailand (TAT), should attract more people to Sukhothai. **Promoting economy through increased job opportunities**

The residents of old Sukhothai should be encouraged to participate in the maintenance functions of the historical park. Cottage industries should be promoted and subsidized. When the farmers are not working in the fields and plantations, they should be encouraged to produce handicrafts.

Development components are as follows:

Only those industries with which people are already familiar (e.g. weaving cotton, bamboo baskets, mats, etc.) should be encouraged. It is easier to train and advise people in skills that they have already acquired.

Surveys should be conducted prior to promoting any industry. The handicrafts should be of high craftsmanship and new designs should be encouraged.

They should be made available in both the old and new city.

The Development Bureau of Sukhothai province should be advised to head these promotional activities.

The money which tourists spend when in Sukhothai should in itself be an incentive for the residents to improve their economic status.

Setting up public facilities and utilities

Facilities should be designed to accord with the existing archaeological structures. If additional ancient structures are uncovered and restored, some public facilities may need to be relocated.

A major part of the land development plans involves ridding the area of shrubs and other untidy vegetation. This will allow easier access to the archaeological structures.

Two hundred and sixty families living in areas which obstruct the view of the ancient sites will be relocated to the area north-west of the city walls. The new settlement area will be divided into four separate villages, each consisting of fifty houses. Each house will have an area of 1.5 rai for kitchen gardening or tending animals. Altogether this new settlement area, totalling 428 rai, will be divided into a housing area ($1.5 \times 200 = 300$ rai) and public facility (128 rai). Ten thousand baht will be provided by the government for the building of each house.

Developing water resources

Water resources should be developed for daily consumption, irrigation of farmlands and purposes of landscape development.

To provide water for the villagers, during phase 1 the Mae Lamphan Canal and the Mae Chon Canal should be restored (i.e. they should be dug to a depth of about 2.5 metres). Large-scale machinery should be employed to pump water from the Mae Lamphan Canal into (a) the village area and (b) the Mac Chon Canal (to be stored for use during

the season). After pipes have been installed, the Mac Lamphan Canal should have the capacity to provide the village area with about 400 cubic meters of water per day. In phase 2 there should be an efficient supply of pipe water for all areas of the historical park.

Also, the newly planted trees in the historical park will need an adequate supply of water if they are to survive. About 86,000 cubic metres of water will be needed in the area during the dry season (November-April). If the Sao Hor Canal is restored, water from the Saritphong Dam (which can store up to 100,000 cubic meters of water) can be channelled right into area inside the city walls. From the canal, pipes can be laid throughout the historical park.

In the rainy season there is a high possibility that every five years water from the Saritphong Dam will flow at the rate of 35 cubic metres per second. This will cause floods in the ancient city. To prevent this from happening, the moats surrounding the triple city walls and all the ancient drainage canals should be restored. The restored moats and canals will be another major source of water supply during times of drought.

Road development

Procedures in road development include building a new highway (Tak-Sukhothai) from the north to go around the ancient city. This Project will be undertaken by the Highway Department. Once vehicles start using this road, the ancient structures will experience fewer 'destructive vibrations'. Table 10 gives details of the roads to be developed.

Roads connecting the ancient sites within the city walls will be developed. This will coincide with the building of the new highway. Two additional roads

will be developed in the northern part of the city, joining the sites of Wat Phai Luang and Wat Sri Choum.

The road development components include: cutting 5.7 km for the new highway; improving the 4.55 km of dirt roads (which join ancient sites); and building 1.9 km of roads to join village areas to the main road. The remaining areas of the historical park will be provided with roads in the second phase of the project.

To provide electricity within the historical park, both high voltage and low-voltage electricity wires should be laid underground—ordinary poles should be employed in other places. The following equipment will be used: (a) high-voltage electricity wires (underground), 6.7 km; (b) high-voltage electricity wires (overhead), 10 km; (c) low-voltage

Table 10

Road level	Length(km)			Description
1	30.14	7	Asphaltic	A1
2	22.4	6.5	Penetrated	A3
3	=13.8	6	Asphaltic	A4
4	8.16	4	Laterite	A5

electricity wires (underground), 6.5 km; (d) low-voltage electricity wires (overhead), 10 km; and (e) 100 kVA transformers which have the capacity to receive 10,000 kVA (100 units).

Communications will also be developed. This involves connecting the telephone and telegraph lines from the new city of Sukhothai (12 kilometres

away) to the historical park.

The safety of the inhabitants of and the visitors to Sukhothai is vital to the project. Development in this area includes the establishment of an efficient police force to maintain law and order, and updating the health service, especially for emergency cases.

Construction within the historical park includes:

A cultural centre comprising a conference room, a laboratory and a seminar room. The size of the building should be 1,800 square metres and there should be provision for a service area and parking facilities.

Service areas for visitors throughout the park, with parking facilities.

An office for the project staff, a staff service area, repair centre, greenhouse area, and living quarters for maintenance workers.

Hotels. Private investment in hotel construction should be strongly encouraged. The new city of Sukhothai should be a good location, since electricity and communications systems have already been established.