TOWARD A WAY TO BALANCE CONSERVATION AND DEVELOPMENT IN THE AYUTTHAYA HISTORIC TOWN CENTRES

Doosadee Thaitakoo[1]

Abstract

Disagreements about conservation and development in town centres of historic cities may emerge in a society because different interests have diverse wants in city conservation and development. If not reconciled, these can lead to unfavourable effects on historic towns/cities: urban development may threaten their special character and/or conservation restrictions may make town centres unattractive for investment. Observing these difficulties in the Thai historic cities, this research explores how the desires for conservation and development can be balanced in two historic towns in Ayutthaya, a World Heritage site in Thailand. Main points for discussions: 1) Conservation and development in historic town centres 2) Key concepts for balancing conservation with development including sustainability, viability and physical capacity. 3) The issues of conservation and development in Thailand, particularly in Ayutthaya. 4) A way to balance conservation and development in the case studies towns-Hua Ror and Chao Prom. The research confirms that city conservation is a public concern as well as a technical matter. This points to a significant role for stakeholders in increasing the acceptability and practicality of city conservation/development policy and its implementation.

Introduction

Historic town centres can be pressured from both development and from restrictions on development. Regulations intended to ensure conservation can have negative impacts on people's rights (Engelhardt, 1997; Phengtago, 1997; Watanabe, 1998). Some ask about whose history to conserve, or about the needs and rights of current inhabitants, while others ask about how the cities and their town centres should avoid commercial exploitation (Appleyard, 1979; Larkham, 1996; Cohen, 1999). Issues may arise about the threat of urban growth to the character of one town centre, and about the trend toward the loss of viability, which might lead to unemployment, social stress, and dereliction (DoE/URBED, 1994; Arup Economics and Planning, 1995; Drummond and Swain, 1996). Since the future of historic towns is uncertain, due to their ability to sustain change, the purpose of this article is to propose a way to balance conservation and development. In doing so, it seeks to contribute to conservation planning and management that supports historic cities' and their towns' abilities to cope with change (Thaitakoo, 2004)

[1] Assistant Professor, Department of Urban and Regional Planning, Faculty of Architecture, Chulalongkorn University, Thailand.

Conservation and Development in Historic Town Centres

Historic town centres

A town centre is a physical outcome of its evolution and reflects the interrelations between the main agents of change: property owners, investors, developers, interest groups, governmental organizations, especially local authority politicians, planning and estate professionals. The town centre is seen as the heart where a multitude of commercial, retail, cultural and governmental activities and social functions are uniquely concentrated (Evans, 1997). The essential functions and features of town centres may differ from place to place. They may have common characteristics, but variations in the mix of characteristics due to their historical origins, geographical locations and diverse cultural environments (DETR, 1998). Historic town centres have extraordinary qualities. Each centre has a distinct history, which unfolds through a variety of functions - commercial, administrative, social and cultural - and plays a special role, through its unique urban environment, in meeting the needs of its hinterland. A town centre's value as a place to work, rest, plays and visit is widely recognized (DoE/URBED, 1994; Evans, 1997; Sparks, 1998). Further, many towns have a very highly valued built environment heritage. They possess irreplaceable cultural assets such as city walls, monuments, structures, buildings, and groups of buildings, which contribute to their unique character (DoE/URBED, 1994; Drummond and Swain, 1996; Pickard, 1996), and offer a cultured environment. This creates a sense of community and pride of place for their residents. At the same time these assets provide a strong tax base, and serve local needs through offering a diversity of goods, services and employment (Smith, et al., 1996; Sparks, 1998; Cohen, 1999)

Conservation and development in historic town centres

The desires for conservation and the demands for development are often at odds in historic town centres. Possessing notable cultural qualities, they have been managed to avoid a conflict between conservation and development. Development could be seen by different interest groups as threatening the built heritage or as frozen in place by conservation restrictions. Generally, the former attitude appeared when new commercial development began in large-scale with buildings, a new transport system, and new social groups. So there were attempts to protect the heritage and town character from these forms of development (Drummond and Swain, 1996; Larkham, 1996; Pickard, 1996). The latter happened when some interests saw conservation as a policy that created business uncertainties about development; thereby making the towns less appealing to new investments, in comparison to those for development out-of-town (Pickard, 1996; Markham, 1998; Tiesdell, 1998). Such trends could cause heritage damage, weaken the local economy, and impair the social and living environment. The effects of conservation policy with different interests help to focus on questions such as: to what extent should development be allowed and why? A gap in knowledge of how to balance town development with conservation could lead to non-viable town centres that are too bound by the past. Such a development could handicap local economies and the towns' and cities' environments, encouraging disfavour of conservation policy, and make it unacceptable to certain groups. As a result, implementing conservation has tended to be difficult, due

to the lack of co-operation among diverse interests.

The planned decentralisation of housing sites, government offices, shopping and entertainment areas in order to reduce urban problems of overcrowding can lead people to spend most of their time on the city's periphery and cause a shift of employment away from town centres (DoE/URBED, 1994; Smith et al., 1996). An increase in car ownership and use in old towns often result in conflicts between pedestrians and vehicles, traffic congestion, and parking problems in narrow streets and squares (DoE/URBED, 1994; Arup Economics and Planning, 1995; Drummond and Swain, 1996). Hence, many people prefer spending time and money in new shopping centres out-of-town which can serve their needs better. The loss of visitors and customers in old centres is likely to push other trades and businesses to the new centres. This tends to further weaken the economic prospects of centres in historic cities, decreasing investment in them, and often results in a lack of local government finance due to lower local business rents and taxes, making them unable to preserve the heritage and maintain the environment and infrastructure. The town centre environment therefore may become dirty, deteriorated, and unsafe, erasing its favourable image (DoE/URBED, 1994; Sparks, 1998). In sum, growth and development can occur in historic and modern cities, but development and growth in the latter tend to face fewer restrictions.

To protect the city's character from adverse developmental effects, one may need to determine the extent to which economic viability should and could be promoted while socially and environmentally protecting the historic city. This can be aided by studying how development has been implemented in the UK historic environments while maintaining conservation and sustainable development goals. These examples help give momentum to a search for *balance* between development and conservation in historic town centres.

Key concepts for balancing conservation with development

Conservation and sustainability

The British government, through the Department of National Heritage and the Department of Environment (now ODPM) and other agencies, has focused on the interrelationships between the aims of conservation and sustainability increasingly demanded by environmental and social policy research organisations for proper planning and utilising resources (Mason, 1997). The *Planning Policy Guidance 15: Planning and the Historic Environment*, issued by central government states:

> Conservation and sustainable economic growth are complementary objectives and should not generally be seen as in opposition to one another…
>
> Plans should also include a strategy for the economic regeneration of run-down areas, and in particular to seek to identify the opportunities which the historic fabric of an area can offer as a focus for regeneration (DoE and DNH 1994: 2).

Many great efforts have been put into conserving the built heritage for multiple purposes: education, pride, appreciation of arts/culture, cultural tourism for understanding places/culture and job creation, and sustainable development. The type of built heritage considered suitable for conservation has extended from archaeological sites/remains, canals, structures, buildings, groups of buildings

and their settings, to townscapes, urban communities, street patterns and town character. Efforts to resolve the question of how the built heritage should be conserved can be seen in endeavours to combine conservation with development. This has produced enormous consequences worldwide, both theoretically and practically, providing each locale ideas for developing its own principles of best practices.

The combining conservation and development should be underscored. Generally, to *conserve* means to *keep something in a safe or sound state*, to prevent something from being changed, lost, or destroyed, while to *preserve* means to *keep something in its original state*, to keep something safe from harm or danger (Gove, 1993: 483, Crowther, 1995: 245, 913). To *develop*, meanwhile means to make something available or usable, to cause something to grow gradually, or to make something more advanced and more organized (Gove, 1993: 618, Crowther, 1995: 318). When people conserve something, they preserve a thing of high value, meeting the needs of those who preserve it, i.e. for their pleasure or aspirations. They maintain it simply to make best use of it, or because they want to prolong its value and usefulness into the future. In making the best use of it, they make it more available and usable by bringing out more possibilities for it, in effect allowing it to *develop*.

Therefore *conservation* in a historic environment means to keep and maintain it in a safe or sound state, preventing its character from being lost or destroyed, but allowing some change to it. One possibility in maintaining the historic environment may be to use it with care, and increase its value - by enhancing it - through bringing out further possibilities in it. This is *development*, which is appropriate for allowing constructive change while protecting the heritage from loss or threat. Hence, theoretically, conservation and development are able to coexist harmoniously. Thus, upholding conservation - continuing the heritage of the past, to the present and future - development in a town might also be encouraged to make it viable, economically, socially, culturally and environmentally. Below, the author will elaborate on the concept of viability for enhancing historic town centres.

Viability concept and criteria

The concept of viability

The success or failure of maintaining significant roles and functions in town centres over time depends largely upon their ability to recognize and adapt to social, economic and technological changes (DoE/URBED, 1994). Town centre's capacity for continued prosperity is termed 'viability' (DoE/URBED, 1994: 55). If viability is lacking, historic town centres are damaged in several ways. Without it they cannot sustain their distinctive role created by a functional mix, often seen in survival of traditional independent shops and businesses, and the investment in new ones. If they cannot continue private investment and local employment, environmental decay will ensure, due to a lack of an adequate tax basis for a local authority. A viable town centre is crucial to heritage conservation and economic health and pride of place because of its ability to offer quality commercial options, business stability and employment regeneration, which will result in sufficient tax surpluses to conserve heritage and maintain a quality environment (DoE/URBED, 1994; Pickard, 1996; Smith et al., 1996).

The concept of viability has become firmly associated with historic town centres and incorporated into the British development plans since the 1980s (DoE/URBED, 1994; Pickard, 1996). A study by the Urban and Economic Development Group (URBED) for the Department of the Environment (DoE) in 1994 defined the term *viability*, together with the term *vitality*, as those concerned with life. They were used to determine whether a town centre feels lively - vital - and has the capacity to earn its living. Vitality is expressed in how busy a centre is, while viability includes the ability of the centre to attract continued investment to maintain the environment and to encourage improvement in coping with changing needs (DoE/URBED, 1994: 55).

However, the word 'viable' also has the meaning of workable, practicable, possible, and feasible, especially in economic or financial terms (Brown, 1993: 3572; Crowther et. al., 1995: 1326). In this sense viability can be used to cover commercial and economic possibilities as well as wealth. Commercial refers to trade, and economic means relating to trade and the development of wealth, while financial refers to money (Crowther et al., 1995: 367, 435). Therefore the term 'economic viability' could be seen to describe a town centre's economic goal - commercial prosperity - which needs to be ensured that it retains a good combination of services and attractions, together with high accessibility. This economic goal, according to town centre's regeneration principles, should be balanced with social and environmental goals: such as social cohesion, cultural distinctiveness, and environmental sustainability (Evans, 1997).

The concept of viability can be differently construed according to the purposes of research (DoE/URBED, 1994; Evans, 1997).

Viability is defined here as a town's ability to develop, sustaining its distinctive roles/functions, while maintaining investment, employment and environmental quality. Viability is the fundamental ability of town centres to continue to evolve positively. It is a key concept to an appropriate development in historic town centres.

This concept of *viability* is later used to explain and evaluate the ability and state of development in the case study towns, as seen by key stakeholders[2]. Town centres in historic cities have developed over time; hence they always contain many elements with different abilities to develop and to attract people and investment. Therefore, in conducting an evaluation of viability, it is essential to pin down the elements that make up viability, and how they affect it. This is achieved by setting out clear 'viability criteria'.

Viability criteria

This research has focused on two major viability criteria: population levels and attractiveness.

Population levels have an effect on a town centre's state of development, due to losses or gains of consumer diversity. Population loss is critical to a reduction of viability, because this loss can discourage sales, rents, investments and taxes in town centres. It is evident that a loss of consumers and visitors can result in a closure or relocation of shops, which in turn, reduce consumer choices, and can

[2] *Key stakeholders* will be chosen from major interests, including the government and private sectors, voluntary groups, and citizens, all of whom have leading roles as producers, users, and/or intermediaries.

thereby make the town centres unattractive to developers and investors (DoE/URBED, 1994; Pickard, 1996; Sparks, 1998). Population growth, on the other hand, may result in too many people and activities and thereby threaten the heritage and town centre environments, even though, at a certain point of acceptable intensification, there are benefits in encouraging social interaction (DoE/URBED, 1994; Arup Economics and Planning, 1995; Jenks et al., 1996; Williams et al., 1996) which can motivate more demand and spending in the centre. Hence, population levels are prime viability criteria because they have a strong influence on the centres' state of development.

The viability element that most stakeholders seem to want for their town centres is the ability to attract people and investment (DoE/URBED, 1994; Evans, 1997; Sparks, 1998). More specifically, town centres need to arouse interest, and encourage people to come and enjoy spending time and money or to do business and invest. DoE/URBED (1994) suggested that enhancement of attraction, accessibility, amenity, and action through management could help create the centres' attractiveness (DoE/URBED, 1994: 26, 63-66). However, there may be divergent ideas about what constitutes town centre attractiveness. Desirable qualities include multi-dimensions of economic, socio-cultural, physical, and management factors (DoE/URBED, 1994; Evans, 1997; Sparks, 1998). Hence, to understand how stakeholders view the attractiveness of towns, attractiveness criteria are classified into locational, economic, social, cultural, physical, and management dimensions.

Based on the viability criteria, a framework for conducting an evaluation of viability is developed. Town attributes that might be essential characteristics supporting viability are included. Using this list, different views about viability, arising from different interests and wants, should become clear. It helps support stakeholders in seeing viability. This will permit their views, evaluation outcomes and wishes to be expressed and communicated more effectively.

Method for assessing viability

The aims of the viability evaluation are to find both the present state of development of a town, and its potential for future development, as viewed by key stakeholders. It seeks to find how different stakeholders evaluate the town's present state of development, what they might consider needed for the town's improvement, or envision for improving the town's viability in the future. The use of viability criteria should assist informants to isolate the town's elements for convenient evaluation. The concept of SWOT analysis, that classifies an item in terms of its strengths, weaknesses, opportunities and threats (Piercy, 1992; Ferrell, 1994; TCMD, 1998), helps informants to evaluate the present state of the town's elements clearly, and communicate them more effectively. In the interviews, informants were given the following list of viability criteria (Table 1) and asked to evaluate them.

The other table reflects stakeholders' views about future development. It shows stakeholders' priority for developments. This evaluation helps identify stakeholders' common aims for the worn development and to integrate it within the town's environments.

Physical capacity

Any attempt to reconcile conservation and development in an environment has to accept the concept of limits - limits to growth, limits to use, limits to exploitation and limits to adaptability (Arup Economics and Planning, 1995; European Commission, 1996; Stovel, 1999). These limits should be spelt out when any form of development is likely in heritage environments, in order to manage the diverse demands on them. The empirical research of a town's physical capacity should help identify the limits to development in historic towns and help judge what degrees of development are possible within these limits, and to identify the developments that are most likely to be acceptable to most stakeholders. Moreover, identifying the absorbtion capacity of a historic environment should show what development in that environment is possible without affecting adversely its key environmental qualities.

Table 1 The list of town elements for viability evaluation

Viability criteria	
Population	Attractiveness
Town's inhabitants; diversity of visitors; visitors catchment areas	location accessibility public transport parking spaces trade/business mix tourism potential investment opportunities centre of activity reputation and image social ties facilities absence of crime built heritage town character way of life quality of market environment shop arrangements footpaths streets/traffic amenity; public toilets, sitting areas, trees and open spaces vacant space for new development management of activities management of traffic management of improving the worn's environment co-operation between agencies to prevent the towns from decline

Physical capacity here means the capacity of three-dimensional town spaces to absorb development, how much they are wanted by the stakeholders, and to enhance the towns' viability, without causing damage to the built heritage, the town's character, and quality built environment. The stakeholders had different views of future developments for their towns. Each town itself may have a limited capacity to absorb developments, because its environment has already been filled with built forms and allocated spaces. In other words, it is already occupied by the built heritage and other urban forms, and has only a limited capacity to accommodate more development. Hence the physical capacity of historic town centres need to be determined in order to discover whether or not they can absorb future developments and how far if they can.

In the light of the physical capacity working definition, criteria, and method developed here, the evaluation is undertaken both in the built heritage and non-built heritage areas. The evaluation focuses on four major elements: built heritage, townscape, other urban forms and open spaces. The main source of data was obtained from the physical survey and observation. However, there are facts about physical features, such as building areas, uses and number of storeys, and road widths, that were organized in the form of a digital map and database produced by the Department of Town and Country Planning. This data is based on aerial photographs taken in 2001. Some of the data is very helpful to the research. The way the data are recorded makes the data ready for analyzing through the use of the software programme ArcView GIS (ESRI, 1995; ESRI, 1996).

The issues of conservation in Thai historic cities

Conservation practises in Thailand data back to the time of Sukhothai seven centuries ago (Khanjanusthiti, 1998). More recently, we see the first law for the care of historic monuments and ancient artefacts enacted in AD 1934. As a result of this Act, the ancient monuments in Thai historic cities were registered. After that several laws have been issued by different agencies to protect the historic environment, including building control and land use regulations. Conflicts among agencies did occur (Pimonsathean, 1999). Besides, these laws receive criticisms for lagging behind conservation requirements (SU et.al, 1999a; Kammeier, 2004) and limiting people's rights over their properties (Phengtago, 1997).

Different interests in Thai society are likely to encourage the emergence of different views of conservation and development. In Phuket old town, many local residents, academics and tourists view a number of old-style shop-houses, colonnaded walkways, and narrow streets, built around a hundred years ago, as worth conserving. Yet this built heritage of historic and architectural values has not been protected by law. Listing the buildings or monuments does not have any legal effects. The land use regulations for safeguarding the town, proposed by the central government, were refused by the local government, local retailers and traders because they viewed the regulations as damaging to economic viability of the town and their businesses. Hence the built heritage falls into the commercial land use regulations, which cannot protect it from excessive development (Thaitakoo, 1994; Pimonsathean, 1999). Disagreement about conservation measures may bring about damage to the heritage caused by new development.

In Ayutthaya historic city, different interests in conservation and development are likely to result in conflicts among the actors involved (SU et. al, 1999). The development interests, e.g. developers, landowners, the Chambers of Commerce, politicians, the local municipality who has to invest in infrastructure to provide public services, and some town-dwellers perceive conservation as a barrier to the economic growth of the town. Those responsible for historic conservation, interested academicians, and people who appreciate the merits of a historic city on the contrary willingly accept conservation. However, they have different ideas and concepts of how to achieve conservation. As a result, the conflict on to what extent that urban development could be shaped in town centres persist among these social groups.

Case studies: Hua Ror and Chao Prom town centres in Ayutthaya

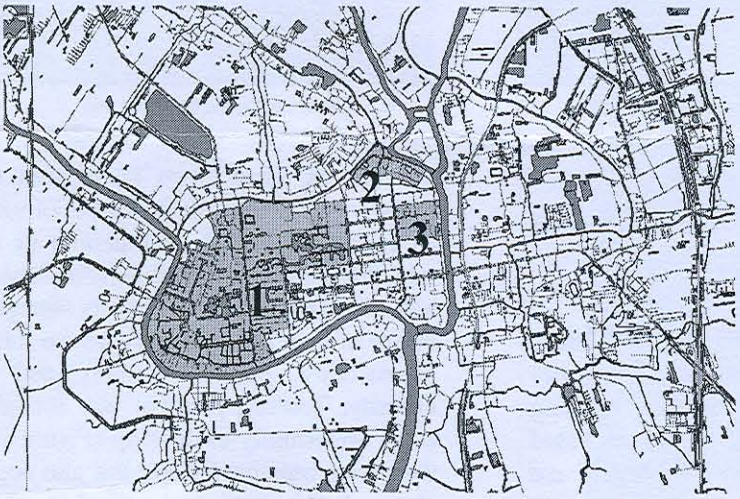
Ayutthaya is regarded as one of the world's most important historic cities because it is an old capital of Thailand and was listed as a World Heritage site by UNESCO in 1991, because of its outstanding universal assets, embodying city planning, architectural, artistic and cultural values (WH Committee, 1991). The merit of the city planning system, used during AD 1350-1767, converted the natural features of an island town at the junction of three main rivers into a protected capital city and a prosperous central place in Southeast Asia. Moreover, the city's historical, archaeological, architectural, and artistic merits have led to the claim that there is no historic city of its like in any other part of the world (DFA, 1994; Suzuki, 1996). Considerable numbers of cultural heritage buildings and ruins are found throughout the city at present. The Thai government has protected this old capital for about a century, ever since King Chulalonkorn's initiatives in 1907 (Boran Rajathanin, 1968; SJA and Three D, 1994).

Ayutthaya city which has a population of 77000 has two town centres, Hua Ror and Chao Prom with populations of 5330 and 3270 respectively (Ayutthaya Municipality, 2000). They have been the dominant focus of public debate for a number of years (Khanjana, 1994; SU et al., 1999). They supply economic and social necessities to their inhabitants, while possessing cultural heritage. Yet, in Thailand, economic growth has been given the highest priority by the state; hence, development is strongly emphasised. This rapid development may threaten heritage - the irreplaceable asset which includes ancient monuments and sites dispersed throughout Ayutthaya. Together with implementing the Venice Charter 1964, to guide heritage conservation, the Department of Fine Arts (DFA) has needed to protect the historic city against future development through adoption of the concept of the 'conservation area', seen in legally binding rules for Ayutthaya city. These limits for the city are supported by legislation, particularly height control over developments within it. Height control by legal designation has caused disagreement and opposition to conservation: because it limits development opportunities. People's liberty to express opinions and their rights over property are protected by the Constitution of the Kingdom of Thailand in Sections 39 and 48 (Council of State of Thailand, 1997; Phengtago, 1997).

Ayutthaya, in common with many other cities, has the key features of a growing, medium-sized city based on a service economy (ESCAP, 1991a; ESCAP, 1991b; TDRI, 1999). In the future, dispersal to the suburbs, conservation policies which may be too rigid, economic recession (Arndt and

Hill, 1999; Montez and Popov, 1999), and new forms of retailing (Khanthong, 2001; Chotana, 2001) may have negative effects on the particular role and functions of the towns and city, as well as on the city's character. That is, the towns' futures need to be clarified.

The reasons for choosing Ayutthaya and its two town centres - Hua Ror and Chao Prom - for exploring a path toward balancing conservation and development were: 1) conservation in the city, led by conservation interests through conservation policy and legislation, is likely to have unfavourable effects on development; 2) it reflects urban essence, development potential, and the problems about a balance between conservation and development in many historic cities in Thailand; 3) information relevant for this research is highly accessible, different interests exist in the city, and its centres are compact and open to visitors.



Map 1 Ayutthaya historic city

1 Historical park
2 Hua Ror town centre
3 Chao Prom centre

(DTCP, 2001)

Figure 1 The built heritage - Wat Khun Saen

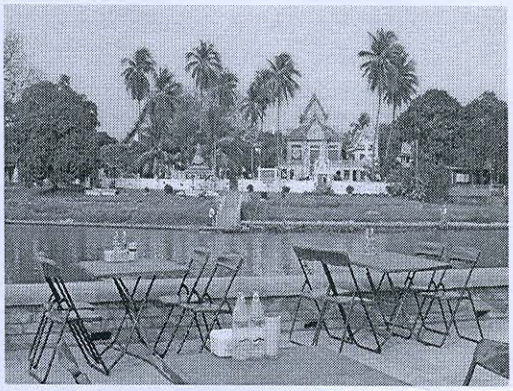


Figure 2 The riverside open space

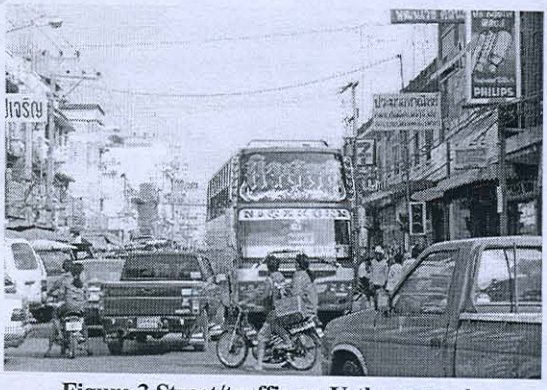


Figure 3 Street/traffic on U-thong road

Figure 4 Trade/business mix

Research findings

Viability evaluation in Hua Ror and Chao Prom

The results of the research are as follows: Several factors were agreed by the majority of key stakeholders as together building Hua Ror's viability. Its strengths included reputation/image, cultural heritage, and trade/business mix. These qualities support Hua Ror's claim to have a strong ability to develop, and a potential for development in tourism, cultural heritage (figure 1), and riverside open space (Figure 2). However, Hua Ror was also viewed negatively in terms of street/traffic (figure 3), public transport, parking space, and reduction of trade/business mix (figure 4). These led to a need for future development in terms of promotion, enhancement and improvement: a consensus in promoting cultural heritage, strong agreements on promoting tourism potential, enhancing its reputation/image and riverside open space, and some agreement on improving public riv transport.

By contrast, Chao Prom, in the view of the majority of stakeholders, is capable of sustaining its centrality through maintaining its unique roles/functions as a commercial/business centre and a tourism centre, seen in its strengths: the centre of activity, its trade/business mix, high accessibility, public transport, and visitor diversity. Tourism potential was strongly seen as its opportunity to develop (Figure 5). But there were negative features that also need to be changed: the poor qualities of street/traffic, parking space, footpaths (Figure 6), market environment (Figure 7), and amenities, poor management of traffic, activities (figure 8), and of improving the town's environment and town character, and the lack of vacant space for new development. The consensus among their views on the future development of Chao Prom centred on promoting its trade/business mix and enhancing its reputation/image. There was also strong agreement for promoting tourism, riverside open space, public transport, and keeping its role as a centre of activity, enhancing cultural heritage, accessibility, and visitor catchment areas, and improving market environment, footpaths, street/traffic, and town character.

Figure 5 A hotel in Chao Prom

Figure 6 Tourists in Chao Prom market

Figure 7 Dark market environment

Figure 8 Overcrowded footpath

Physical capacity evaluation in Hua Ror and Chao Prom

The evaluation of the physical capacity of Hua Ror and Chao Prom town centres helps to identify the limits of their three-dimensional town space to absorb developments as desired by the stakeholders without damaging the built heritage, the town character and quality environment.

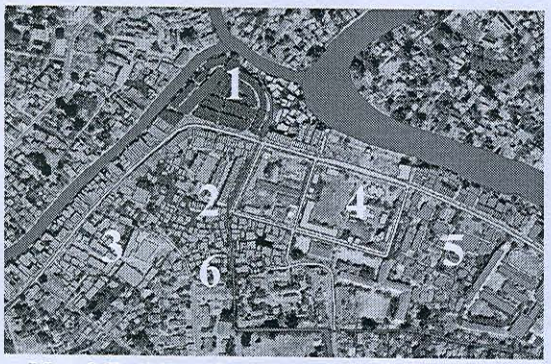
The areas of the built heritage with all kinds of monuments, buildings, sites, canal and street lay-out, have limited capacities to absorb activity and development. The townscape has limited good views to the built heritage, streetscape, and landmark that hold unique character of the towns.

Other physical capacity limits are on Open Space Ratio (OSR), Building Coverage Ratio (BCR), and Floor Area Ratio (FAR), measured in the two towns. The results indicate the commercial centres (block H-1, H-2, and C-1) and the residential communities (H-6 and H-3) are already full of urban forms, leaving open spaces of just 22.47-43.86%, while other blocks have limited areas to accommodate new development (table 2, map 2 and 3). The physical capacity limits of these two towns' environments to absorb development will help to determine the extent to which development hoped for by the stakeholders might be acceptable in their environments.

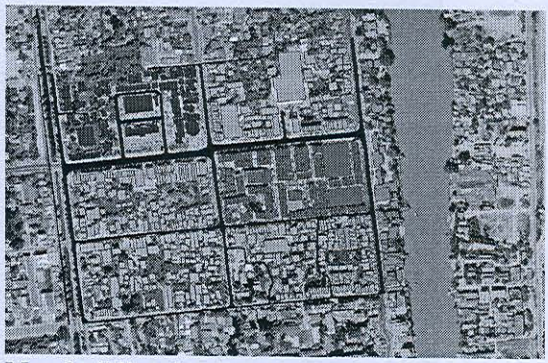
Table 2 The BCR, OSR, and FAR in Hua Ror and Chao Prom

	Hua Ror Block No.						Chao Prom Block No.						
	H-1	H-2	H-3	H-4	H-5	H-6	C-1	C-2	C-3	C-4	C-5	C-6	C-7
BCR	77.53	65.07	56.14	20.46	46.12	65.23	56.32	41.34	43.04	49.65	35.09	34.69	35.22
OSR	22.47	34.93	43.86	79.54	53.88	34.77	43.68	58.66	56.96	50.35	64.91	65.31	64.78
FAR	2.10	1.65	0.90	0.30	1.09	0.86	1.17	1.19	0.78	0.86	0.84	0.68	0.59

Source: measurements were made on the DTCP digital map and data



Map 2 Building density measured in Hua Ror



Map 3 uilding density measured in Chao Prom

Balancing conservation with development in Hua Ror and Chao Prom

Balancing conservation with development in the two centres can be achieved by:

- First, by weighing the stakeholders' consensus views about development against the limits of the towns' physical capacity while respecting the built heritage. The towns' physical capacity limits are outlined in relation to each possible development to determine how far the towns can absorb it.
- Second, by combining developments within the towns' capacity with the stakeholders' conservation aims in order to develop strategies for attaining balanced conservation in the towns. Examples of projects are suggested for strengthening the strategies.

The balanced conservation strategies in Hua Ror are to promote cultural heritage and tourism, enhance its reputation and image and riverside location, and improve its public transport. The strategies in Chao Prom are to enhance its reputation/image, built heritage and its role as a centre of activity, to promote tourism potential, its riverside location and open space, and to promote its trade/business mix, public transport, enhance its accessibility and its visitor catchment areas, and improve its market environment, streets/traffic, footpaths and town character.

The town environment in both Hua Ror and Chao Prom is fully built up, lacking vacant space for new development and green open space, except in the built heritage sites and the back-lands. The limits to the physical capacity of the two towns determine the extent to which they can accommodate the

stakeholders' aims for development, while also respecting their desire for onservation. Balanced conservation solutions for Hua Ror and Chao Prom provide guidance about what, where and how to develop yet conserve the two towns.

From these balanced conservation strategies, conservation and development proposals were developed in detail to recommend how balanced conservation should be strengthened in the towns. Proposals included creating different attractions to welcome visitors, based on the stakeholders' visions. For Hua Ror, pilot projects should be implemented to promote cultural heritage, enhance the riverside open spaces as cultural venues, revive the water-based culture in the spacious open space of the prison site along the old Mahachai canal attached to the palace site, as well as promote traditional businesses, improve public transport and feeder roads. For Chao Prom, suggestions were made to restore the open space and historic environment of the old pagoda and the old canal for cultural activity, establish a traditional floating market and bazaar, renovate the old hospital along the river as a luxurious Thai-style riverside hotel and provide public leisure facilities, and use Thai revival architecture style to redevelop the market. These programmes would create more investment and jobs for the locals, a good quality historic environment for them and for tourists, while also promoting local culture. These findings answer the question: how to balance conservation with development in stakeholders' minds and in the towns' environments?

Conclusion

Attitudes toward development in town centres may vary greatly according to locality. This research suggested a way to balance conservation with development in historic town centres. It provides guidance on integrating the towns' elements that, as perceived by the key stakeholders, were most in need of development. The SWOT analysis helped reveal their attitudes, while exploring the degree of consensus. This was the starting point to achieve a balance of conservation and development. This approach could be extended from the limited number of key stakeholders seen in this research to broader bands of stakeholders in towns and cities. It could still maintain the benefit of producing a practical outcome, based on information obtained from in-depth interviews. The focus group technique may be needed to secure agreement and/or commitment, but it should be employed after collecting and analysing views in in-depth interviews. Otherwise views may be overshadowed by powerful stakeholders, and do not reflect the actual wishes of the majority.

By weighing what was wanted against what is possible within a town's limited space, and by finding solutions to problems one by one, agreement on balanced conservation could be achieved. However, stakeholders' views on viability and development are subject to change as more stakeholders are included and the quality of town elements improved by local efforts over time. Thus, follow-up research, updating views about conservation and development, should be undertaken after such efforts have made a difference in towns. Even a town's physical capacity to accommodate development can be increased, within limits, by careful rearrangement of

uses and town space. These rearrangements were fundamental in developing the tactics which can achieve balanced conservation in potential sites in Hua Ror and Chao Prom.

Ayutthaya was selected as the case study because it reflects the problems about a balance between conservation and development which exist in many historic cities in Thailand and Asia (Kim, 1997; Pimonsathean, 1999; Chapman, 2001; Kammeier, 2003). Thus the methodology for balancing conservation with development may be used in building agreements on conservation and development among different interests in other Thai and Asian historic cities, and may enable acceptable development potentials for those historic environments to emerge. After the stakeholders' commitment is made the balanced conservation strategies should be implemented for mutual benefits, supporting the historic cities to maintain their viability: conserve built heritage; create jobs; and enhance the environment quality for local inhabitants and visitors.

The methodology is applicable to other democratic countries because it was developed in the light of the collaborative approach (Healey, 1997). Other countries where human rights are encouraged could successfully balance a conservation process that includes all parties' judgments in a rational discussion to identify common goals and strategies. Mutual understanding constructed through the process of sharing different views and reasons can help to prevent and/or minimise conflicts and build collaboration and cooperation. This possibility, therefore, can have a significant role in city conservation which greatly contributes to finding a way to balance conservation with development in other historic towns and cities.

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