

## Abstracts

Public parks are recreational spaces for serving people in various scales - neighborhood, community, city and region. Sustainable development of public parks involves a process of integrating social, economic and environmental factors. A sustainable park, then, becomes a park that focuses on solving environmental issues, saving expenses and improving quality of life in the area that the park is located. The Bangkok metropolitan area, is currently encountering environmental problems as air pollution, flooding, public hazard, and overcrowding, etc. The city lacks open spaces for serving recreational function because of the increase of population.

This research consists of five main objectives as follows: 1) to study the existing physical elements, social, management and economic factors, including investigating the categories of public parks in Bangkok; 2) to study the activities and spatial utilization in each category of the public park; 3) to explore the idea of sustainable park in terms of physical characters, activities and management including, the design approaches of sustainable park in brownfield site in the context of Bangkok metropolitan area; 4) to conclude the design and development guidelines for sustainable park in Bangkok metropolitan area and; 5) The guidelines are tested in their application to the design of sustainable public park on brownfield site of Tobacco Factory. The research method involves case studies and the survey of the study area, specialists interview, application of questionnaires in surveying attitude of park users.

The result of the research reveals that Bangkok's public parks have 5 categories by considering size, location, accessibility and physical elements. They are neighborhood park, community park, district park, city park and regional park. The main common activities include passive recreation activities and active activities especially jogging and aerobic exercise. The spatial utilization in neighborhood parks are planned in one area which can serve various activities because of the small size of the neighborhood parks. Most community parks are located in urban areas that can be

accessed easily and the size of the parks is fit to the need of activities causing high spatial utilization. The city parks have various zoning to serve different activities including recreational and educational facilities such as library, sport center and community center.

The design and development guidelines for a sustainable park in Bangkok metropolitan area reveal that the physical characters of the park have to directly relate to its context. The physical elements emphasize on using self-sufficiency resources and low cost maintenance including the use of native plants, restoration of wetland, using non-polluting and permeable surface material, renovation and rehabilitation of existing building, recycling fertilizers and integration of appropriate technologies or infrastructure. The parks should have zoning for activities relating to natural values and general active activities relating to context. The management focuses on community participation and low cost maintenance. The three sustainable design approaches, taken to artistically and ecologically dramatize the spirit of the brownfield site are: preservation, modification and creation of new form.

The design of sustainable public park, located at the Tobacco Factory brownfield site, is the second phase extending from first phase of Benjakiti park project which has already been opened for public use. The guidelines for the sustainable public park in brownfield site of the Tobacco Factory were proposed together with site analysis for the primary design process of the park project. Then, evaluations by specialists were undertaken, revealing the potentials of the park in response to the needs of users. Thus, the park as planned fulfills the objectives of the project.