

Abstract

In Bangkok, there are many historic buildings that are functionally converted to serve contemporary needs particularly the palaces built in King Rama V period that has the nation's cultural heritage values. This research is aimed to the study the adaptive re-use of such buildings in line with the keeping of cultural value. The study includes the assessment of heritage values of the building and facility management methods in order to purpose the proper guidance forth-adaptive reuse. In this study, Prince Dilock Nabarath's palace is selected as the case study. At present, this building is occupied and used as the office by The Fleet Management Department, Metropolitan Electricity Authority. The objective of this research is to analyze the various factors that have impacts on the changes of values and function of the palace including the physical characteristics.

Various data are gathered through documentation, field survey with the use of questionnaires and interview. Data are analyzed by simple statistics interpretation.

In this research, it is found that architectural elements of Prince Nabarath's Palace had been changed overtime. The changed elements are existing walls, floors, ceilings, roofs and windows as well as the installation of technology building systems. As a result, authenticity in design, materials, colors, and craftsmanship have been reduced. Moreover, new functions of the building do not serve the occupant's needs due to substandard interior lighting, noises from air - conditioners and lack of fire protection systems. These factors have reduced the cultural heritage values as well.

Main causes of such changes are as follows: 1) the installation of air conditioning system that affects the ceiling level and the existing form and design of windows, floors and doors as well as wall demolition. 2) the occupants or owner do not have the common understanding in the operation and maintenance of the historic building together with the lack of coordination among the departments in involved in building development and conservation.

From this study, the design guidelines to restore Prince Dilock Nabarath's Palace can be concluded as follows: All building alterations and additions should be limited. The installation of air condition system should be replaced with serious care for keeping the building's original design. The workshop building located in front of the palace should be removed in order to keep the setting of the heritage. The additional concern is the management that the organization should have conservation policy on historic building operation. In long term, the Metropolitan Electricity Authority shall refrain from occupying the building. The building shall be renovated in to its original condition.

For re-functioning the historic buildings to serve the modern needs, this study proposes the suggestions having two aspects as which are physical conditions of the building, and facility management. For physical conditions, the structures and elements of the historic building should be brought to its original state and modern materials in fills that provide unity with the original elements without reducing the cultural values. The mechanical, electrical and plumbing systems can be installed with 2 options, the first the use of hidden system, the second is the use of system with visual appearance installed with special care to physical appearance.

For the facility management, it can be divided into 3 parts. 1) The organization occupying these historical building should have the policies regarding the cultural heritage values and set up the special department to operate the design and maintenance of these buildings. 2) The government involved should provide the funding, develop the regulation with incentives for the restoration of historic buildings and register these buildings as national movement to prevent the deterioration of the building and cultural heritage values. 3) The occupants of the building should be educated and have understandings in maintenance and conservation of the historic building for cultural heritage values and traditional values.