

**UNIVERSITI TEKNOLOGI MARA**

**ADAPTIVE REUSE PRACTICE FOR  
TOWER HOUSES IN THE OLD CITY  
OF SANA'A, YEMEN**

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## ABSTRACT

The practice of adaptive reuse at the Old City of Sana'a, Yemen became noticeable, from the changes on the Tower Houses from residential to commercial. The practice unofficially established by the private owner with high intervention on the traditional materials and elements. Currently, the local authority conservation concerns only on the building exterior when major intervention on the interior materials and space layout. The study aims to obtain an appropriate adaptive reuse practice and guidelines for the Tower Houses of Sana'a, towards sustainability of the built environment and cultural identity. It was achieved with the examination and understanding of the Tower Houses condition under adaptive reuse. The research framework focuses on the evaluation and criteria of adaptive reuse application within the Old City wall of Sana'a at three zones, contains eleven (10) quarters. through six phases of investigation; i) identification of issues and criteria assessment ii) preliminary survey and mapping to establish the current elements of adaptive reuse practice, iii) On-site investigation on three case studies; physical condition, the degree of intervention, and traditional materials and methods. iv) evaluate the policy and guidelines by structured interview with 10 correspondents of; decision makers, authority in charge, and experts in the field, v) validation of the (ARP) model by experts in the field, vi) propose the (ARP) for the Tower Houses. The data collection was based on a qualitative data with various instruments conducted independently with the intention of complimenting each other. The study findings reveal two categories; first finding; generate a list of on-site evaluation on the physical condition of the Tower Houses to identify; buildings defects, the degree of intervention and traditional materials and modern methods of application. Second finding; proposed a policy model for the adaptive reuse practice with a set of guidelines and criteria. Both findings were validated by the authority in charge, related experts from the field local and foreign. The study outcome expected to benefit in few aspects; social, economical, architectural conservation, adaptive reuse, and legal. The beneficiary of the study is; the private owners, investors, on-site investigator, architects, authority in charge, and scholarly. Overall, it is expected to create sustainability in the built environment of the Tower Houses in various regions of Yemen.

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