Abstract

The allocating of temporary facilities within the boundaries of a construction site has been overlooked by the project managers in Singapore. They routinely performed the task of designing the layout plans on a trial and error basis throughout their years of fieldwork.

The study aims to review the current degree of utilization of site space for temporary facilities in Singapore, followed by the identification of the problems associated with and/or the factors affecting this degree of utilization. Finally, approaches are raised to provide solutions to the problems so as to improve the degree of utilization.

A survey with forty local project managers and a case study on Grange Residences were undertaken. Findings from the survey showed that delay in the project completion time is the most serious consequence resulting from a poor site layout. Site constraint was ranked as the most important determinant in design of site layout. This factor, together with the client’s requirement turned out to be the main difficulties faced by the project manager in the Grange Residences project. Formulae to calculate the degree of tower crane coverage and degree of tower crane’s inefficiency were also derived, to further examine the degree of tower cranes’ coverage in the case study.

Finally, an assessment system is recommended to be formulated by the Building and Construction Authority (BCA) to evaluate the degree of utilisation level of the construction site. The setting up of an Award of Excellence in efficient utilisation of site space issued by BCA, and the offering of incentive benefits for the construction firms, are highly recommended.

Keywords: Temporary Facilities, Utilisation, Site Layout, Efficiency, Degree