Housing design is the synthesis of social, economic, climatic and technological consideration as applied to human control of environment. A life shaped up by the well-designed house.

In Singapore, Housing and development Board set in 1960, provided about 85% of total housing. At the beginning, quick construction was made to overcome the housing need. As a result, good aesthetic and other amenities were not the important issue at that time. Housing blocks were placed in a linear shape kept with reasonable open space around the surface parking. This shape gradually changed to other shapes such as pentagon; circular with very elongated corridor placed in front of the units. After 1980's, long building shape changed to small form, grouped around a service core i.e. lift lobby and staircase and multi-storey car park with the complex. These residential environments are to be justified on 6 performance mandates i.e. spatial, thermal, acoustical, visual, indoor air quality and building integrity.

In the developed countries, professional bodies check the performance of built environment by 'POE' (Post Occupancy Evaluation), which can help to evaluate the status of the existing built environment and apply to the new design in order to provide more quality environment.

The study of the building performance can be divided into three parts. The first part is based on literature review and case studies. The second part, site measurement and data analysis to determine the actual performance of the described site and the third part is the subjective analysis through occupancy survey and expert walkthrough.

In this dissertation, the author has taken two housing estates of old and new of fifteen years age difference and compared the performance of the estates based on the six performance mandates.
The author has adopted three methods in the investigation that include (a) Occupancy Survey, (b) Simple Instrument Measurement and (c) Expert Walk through/Analysis of the surrounding and architectural plans.

By adopting these three methods, it has been shown that new precinct is better in spatial quality, thermal quality and building integrity as compared to the old precinct. But old precinct is better for visual privacy and its setback between two buildings could help to facilitate the wind flow in the leeward side or reduce the wind obstructions for the natural ventilated housing.

Visual performance exceeds the standard range at the old estate and is below standard range at the new estate. Visual performance and building integrity are to be taken into account for further improvement. Also acoustical performance should be given proper consideration for the apartment along the roadside. Hence building material and building orientation play an important role for better performance.

Final phase of the study was to analyse the collected data from the two sites. The measured data were compared to determine the actual performance against the standard and reconcile these data collected from objective and subjective measurement.

Finally an overall conclusion was drawn from the findings and some recommendations are set for the future research.