

Thesis Submitted in Partial Fulfilment of
the Requirements for a
Master of Town Planning Degree

"THE USE OF MODELS IN PLANNING - THE
DEVELOPMENT OF A LAND USE PLANNING STRATEGY"

by

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SUMMARY

With the advent of comprehensive transportation studies over the last several years in Australia, some inadequacies in land use planning have been highlighted. In general there is seen to be a need for a more systematic approach and a greater use of models or analytical techniques.

This thesis briefly reviews transportation studies and planning techniques and then discusses the development and current status of urban development models, classifying them into three classes, viz;

- (i) descriptive models,
- (ii) predictive models, and
- (iii) prescriptive or planning models.

It is noted that the models form only a part of the planning process and that they are really sub-models of the total system.

Using a systems analysis approach, a planning framework or system model is then developed which forms the basis for the preparation of a planning strategy, within which detailed development and transport plans can be evolved. The framework is designed to facilitate the use of models as befits their operational status and to highlight areas where judgements and intuition are required.

In developing the planning system model a discussion is given on forecasting techniques, problems relating to the definition of objectives and criteria, difficulties encountered in obtaining community goals and rational public participation, considerations relating to the formulation of plans, techniques of plan evaluation including sensitivity

analysis and flexibility tests, and implementation strategy.

Two case studies are given to illustrate the efficacy of the procedures proposed. The first example related to the preparation of a strategic plan for a city with an expected population of 200,000 people, whereas the second case study concerns the hypothetical choice between two alternative forms of development over the next five years for metropolitan Adelaide.

In the final chapter a brief discussion is given on worthwhile research items.