

AN URBAN DESIGN FRAMEWORK
FOR THE PHYSICAL DEVELOPMENT
IN THE CITY OF ADELAIDE

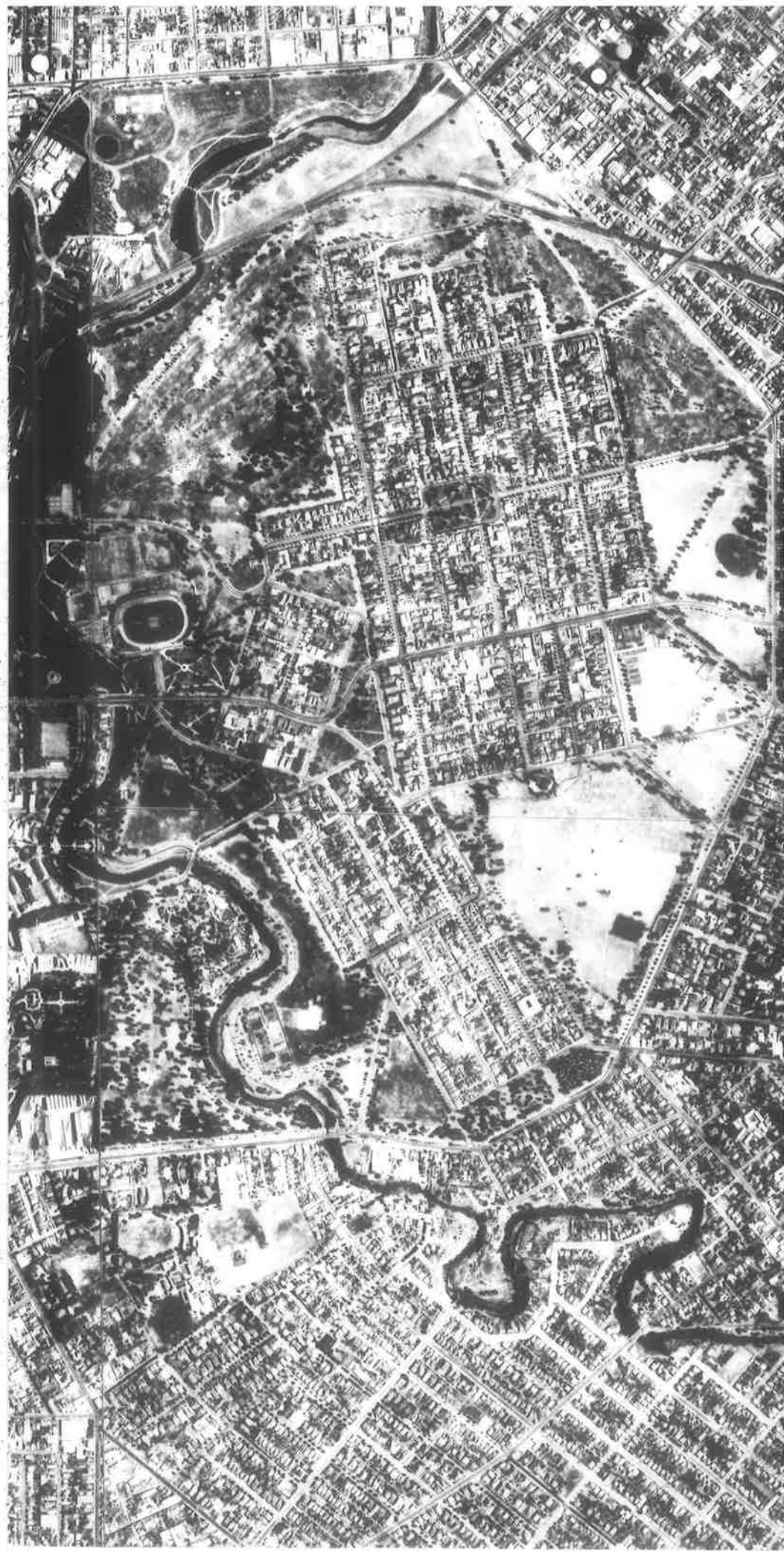
by

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INTRODUCTION

Every city has a character, a personality, something which is unique or at least it has the potential for this. The personality of a city can be expressed and perceived in many ways, but the visual form of its physical environment provides the most memorable manifestation, and allows the most direct perception, of this personality. Furthermore, the visible expression of this personality is given its most significant and symbolic form in the central area - "the heart of the city".

The subject of this thesis arose from the concern that the unique and distinguished character of Adelaide should find an adequate visual expression in the city's future physical development. The purpose of the thesis is to establish by what means the physical environment can be consciously shaped to give a meaningful and satisfying visual form to a city, and to suggest how this could be attained in the specific instance of the City of Adelaide.

Part I deals with the discipline concerned with giving visual form to a city which is termed urban design. In Chapter I the need for urban design is demonstrated, its nature and goals are defined and its role in the comprehensive planning process is explained. As a process it follows the same steps as the planning process - survey, plan, implementation.

In Chapter II a method for carrying out an urban design survey is outlined. Chapter III deals with the means and methods whereby urban design can be applied to the conscious shaping of the physical environment, establishes that this can best be achieved by means of a framework rather than an overall master plan and considers what factors should constitute such a framework. The methods of implementation are examined in Chapter IV.

In Part II attention is turned to the City of Adelaide. Chapter V is concerned with central areas in general. It notes their nature and problems, and outlines objectives and policies to be followed in planning for future

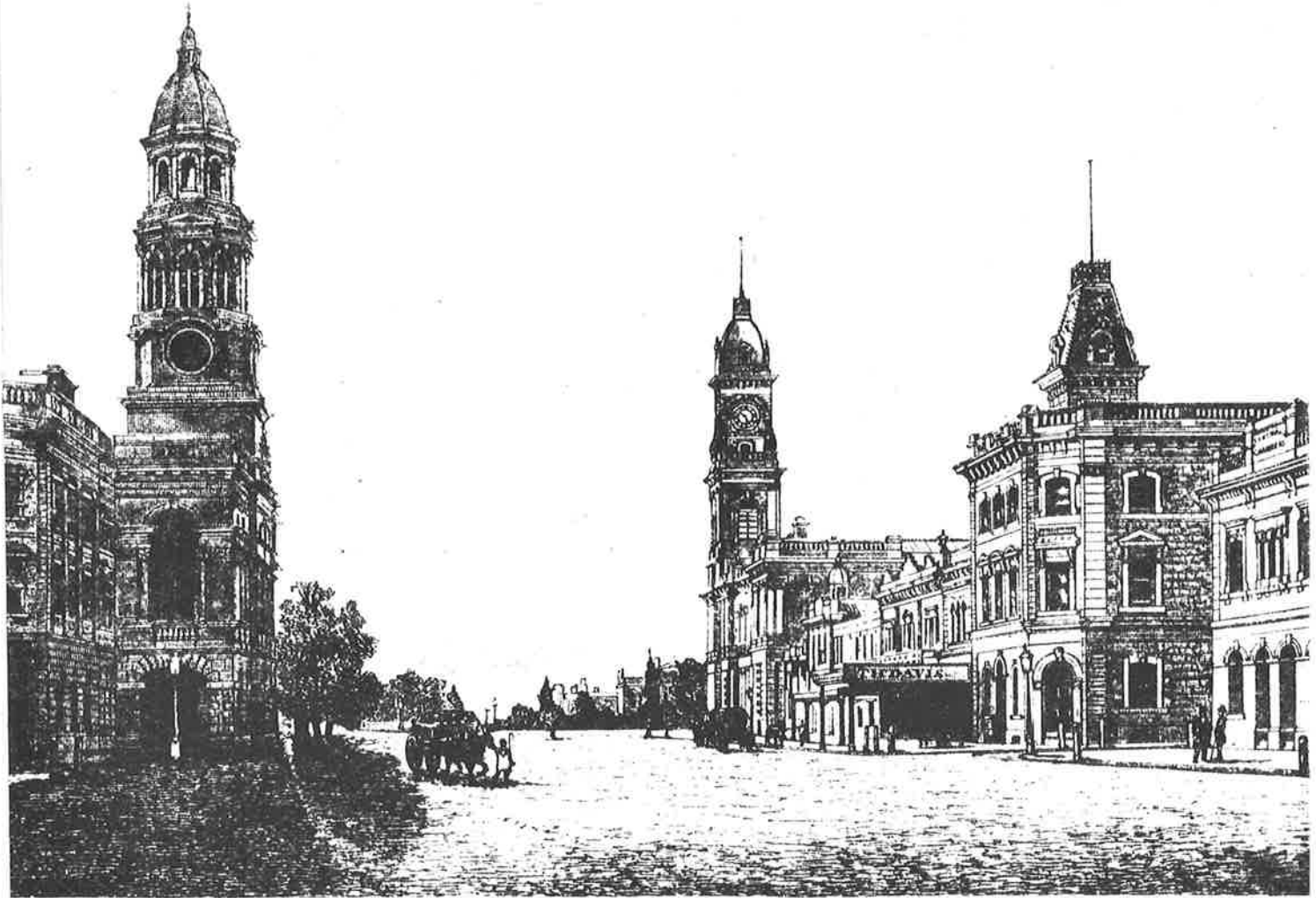
development. The historical aspects of the City of Adelaide are discussed in Chapter VI, with particular reference to the qualities of the original plan as an urban design framework. Chapter VII analyses the factors likely to influence future development in the City of Adelaide and attempts to formulate the pattern that this development is likely to take.

Part III deals with the actual urban design framework for the City of Adelaide. Chapter VIII presents the findings of a survey of the major features of physical form and structure, urban design qualities, potential image structure and the actual visual image as perceived by the people. In Chapter IX the proposed urban design framework, based on the assumed pattern of future physical development, is explained and methods of implementation are suggested.

The main object of the thesis was to create a three-dimensional design image which could serve as a link between the broad guidance provided by a comprehensive plan for the City of Adelaide and the actual physical development projects in future years.

STATEMENT

This thesis does not contain any material that has been accepted for the award of any other degree in any University nor, to the best of my knowledge, any material previously published or written by another person except when due reference is made in the text of the thesis.



"EVERY VIGOROUS AGE HAS HAD ITS OWN VISION OF URBAN SPLENDOUR.
WHY SHOULD WE BE DEPRIVED OF IT ?" WALTER GROPIUS



CHAPTER I

THE ROLE OF URBAN DESIGN

1. The Problems of the Urban Environment

Ever since man has had the power to shape his environment he has used it not merely to satisfy the growing needs of his activities, but also, to the best of his ability, to make it beautiful and meaningful to himself. He has always known, perhaps only unconsciously, that the patterns he creates in his external world will affect the patterns of the world within him.

In the building of cities and towns man has had the opportunity to use his powers of shaping the environment to the utmost. At times, in the past, he has been able to achieve an efficient organisation of the various activities of his cities and furthermore has made them beautiful. These are cities which we admire and regard almost as works of art.

At other times, particularly in the 19th and 20th centuries, he has been at a loss to produce even a more or less efficient container for his activities, and only in rare instances has the chaotic tissue of cities been structured into anything like a satisfying urban environment. The paradox is that, while the mechanical processes for fabricating urban structures have never been carried to a higher point, our cities do not fulfil the high hopes of our civilisation either as a working or social medium or as a work of art.

Many of the problems of our cities are social and economic ones, but in some ways more important than these is the problem of the harsh and confusing physical environment that has been created, and which aggravates the social and personal problems. The importance of the physical environment lies in the fact that each development in our cities, be it economic, social, political or moral, is an instrument of physical determination and a commitment to the visible shape and form and beauty or ugliness of the city.¹⁾ Thus, in the search for solutions to the problems of our cities, the emphasis placed on the character of our physical environment is justifiably based on the realisation that the physical environment is the mirror in which the other aspects of the city are most visibly reflected.

1) Sam T. Hurst, Introduction to article by Francis D. Lethbridge, "The Visible City - Seeing the City in Time", A.I.A. Journal, August 1964

Kevin Lynch ²⁾ has analysed the main physical deficiencies that make our cities less than satisfying places in which to live, as follows :

- 1) The burden of perceptual stress imposed by the city. The city is too hot, too noisy, too confusing. The sensations we experience often go beyond our limits of comfort and even tolerance.
- 2) The lack of visible identity. A good environment should be richly diverse; its parts have distinct, identifiable character; it should be marked by visible differences that allow choice and sensuous exploration and it should give a sense of place and home. Our cities rarely possess these qualities. Objective differences of activity, history and culture are glossed over and submerged.
- 3) The illegibility of our cities. It should be possible to relate one part of the environment to another and to ourselves, to locate these parts in time and space, and to understand their function, their activities and their meaning. Our cities display many ambiguities, confusions and discontinuities; significant activities are hidden from sight; history and natural setting are obscured.
- 4) The rigidity of the city. For his satisfaction and growth an individual needs opportunities to engage in active interchange with his environment: to use it, change it, organise it, even destroy it. To answer these needs the city must be a plastic physical setting, responsive to change and growth.

In addition to these specific problems of our environment there is also a general disappointment with the visual quality of our cities. Not only is there confusion, but also a pervading ugliness, monotony and drabness. The new injections into the urban fabric rarely match the quality of those of former days, and furthermore, they often inevitably destroy the historical heritage of the urban environment in the name of progress.

All this has produced a longing for something better, for an environment that would have some of the qualities of the past, for a city which would be a joy to live in instead of a struggle.

- 2) Kevin Lynch, "The City as Environment", Scientific American, September 1965.

This longing is regarded as nostalgic by those who insist that our cities, and the forces that shape them, are too complex for us to be able to create the kind of environment that we desire, and that our uncertainty about the nature of the city itself precludes any meaningful search for an appropriate three-dimensional expression of our cities.

However, the complexity of the city and man's uncertainty are not specific to our age only. Ever since there have been cities, men have wondered about them. They have endeavoured to understand the nature, the purpose and the function of this strange and complex organism they have created without knowing that they were creating it. Faced with these questions, they have not always been able to find ideal solutions and certainly not final ones.

But, as Lewis Mumford³⁾ has pointed out, whatever people made of their cities in the past they expressed a visible unity that bound together, in ever more complex form, the cumulative life of the community; the face and form of the city still recorded that which is desirable, memorable and admirable. Today we seem to have lost this art of introducing a pattern of order, logic and beauty in the physical structure of the city. We lack a vision or urban splendour appropriate to our age.

2. The Need for Urban Design

There has been a growing realisation of these problems and various ways of improving the physical environment have been attempted. A great deal of faith has been placed in town planning in this respect. In certain parts of the world town planning measures and practices have been applied over a long enough period for the results to be objectively assessed.

The kind of environment that planning measures have been able to achieve still leaves one with a sense of disappointment. They may have produced a better pattern of land use, better transportation facilities, more open spaces and in an overall way a better physical layout of our cities, but the visual environment they have produced is generally sterile, monotonous and uninspiring. The magnitude of effort has rarely been matched by the quality of design achieved.

3) Lewis Mumford, "The Future of the City", Architectural Record, October 1962, February 1963.

It is becoming apparent that planning alone can not create a wholly satisfying urban environment. At best it may be able to control the environment, but it cannot produce beauty and character. We must seek or re-discover some other positive discipline that will enable us to do this.

One of the stumbling blocks to this, however, is our attitude to planning itself. In our search for something to believe in, we have attached too much faith to the techniques of town planning. Many members of the planning team show far too great a concern for data. In fact "statistical planners" at present lead the field.⁴⁾ They believe that data, if it could be properly gathered and correlated, could somehow assume the power to transform the urban environment to our desires.⁵⁾ This attitude has seeped through to the public as well, and today the prevailing attitude is that, unless statistically quantified, opinions must be considered as value judgments, and value judgments are regarded as worthless. While the proper respect for data must be recognised, value judgments are far more important in any human situation and should form the very basis of our approach to any planning problem.

Our greatest need today is for the art of urban design - the art which concerns itself both with the function and beauty of a city. But beauty involves value judgments and for this reason urban design is often regarded with suspicion. There is no general acceptance of the necessity of urban design, as there is of town planning. However, it must be stressed that all the knowledge in the world and all the techniques of planning will not produce a basic pattern of order and a creative environment unless urban design is accepted as an integral part of a comprehensive planning process.

What is urban design, how does it solve the problems of the urban environment and where does it fit into the comprehensive planning process?

3. The Nature of Urban Design

In recent town planning literature the vital importance of urban design has been discussed and definitions of what this term means have been attempted.

4) Henry S. Churchill, "Architects, Planners and Understanding", A.I.A. Journal, January 1962.

5) Sam T. Hurst, loc. cit.

Garrett Eckbo⁶⁾ has said that urban design means giving form to urban areas. More explicitly, "urban design is not the design of specific urban facilities but is concerned with the relation between these facilities in time and space". He makes the distinction between planning and urban design as follows; "Planning establishes master plan patterns of land use and circulation then leaves the design of the actual physical development to others. Urban design says that we must think about how it is going to look and feel, what precise form the development will take".

Francois C. Vigier⁷⁾ defines urban design as "the wilful, three-dimensional interpretation of planning decisions". As such it is concerned with every aspect of shaping the environment - from the establishment of vehicular movement to that of the architectural character of individual buildings and their stylistic control; from the design of street furniture to that of grandiose perspectives. He further states that :

Planning consists primarily, but not exclusively, of those long term functional decisions which affect the overall structure of the community, such as transportation, land use and the policies to effectuate them.

Architecture consists primarily, but not exclusively, of the design of individual buildings or groups of buildings.

Landscape architecture consists primarily, but not exclusively, of the design of the environment between buildings, groups of buildings or built up areas.

Urban design links all three to the extent that it fills whatever gaps may exist between them.

The American Institute of Planners has issued a preliminary statement on urban design which stresses its visual aspects.⁸⁾ "Urban design is defined as attention to the perceptual elements of the urban environment. It is devoted primarily, but not entirely, to the perception, through sight, of urban elements which are primarily three-dimensional, and fixed, but which may include moving objects. Urban design is focused primarily on æsthetic

6) Garrett Eckbo, "Urban Design", A.I.A. Journal, September 1963.

7) Francois C. Vigier, "An Experimental Approach to Urban Design", A.I.P. Journal, February 1965.

8) Matthew L. Rockwell, "Urbanisms" A.I.A. Journal, April 1963.



rather than total perceptual experience - i.e. the kinds of experience that enhance and enrich daily life, rather than those which provide mundane information."

Urban design can thus be defined in terms of the following three characteristics :

- (i) Urban design is a distinct but integral part of the planning process and is concerned with giving three dimensional form to planning objectives.
- (ii) Urban design shapes the urban environment by arranging its elements, in time and in space, both functionally and beautifully.
- (iii) Urban design is a plastic art and emphasises the perceptual and aesthetic aspects of the physical environment.

At this point it may be useful to differentiate between "urban design" and "townscape". Townscape is concerned with the detailed aspects of the visual qualities of cities, whereas urban design implies a consideration of the broader questions of city form. Townscape considerations are essential in urban design, but the townscape approach by itself is too limited in the absence of an overall discipline.

The concern with urban design is not new. In the past, there was a general consciousness of what we now call urban design principles and this produced the functional and beautiful cities that we admire. Today there is a compartmentalisation of all the many specialists, each concerned only with one aspect of the city, and urban design is needed as a distinct discipline to provide a comprehensive picture and common goal for the efforts of these various specialists.

4. The Goals of Urban Design

In attempting to formulate what the goals of urban design should be it may be helpful firstly to establish what they should not be.

As a result of the general concern with the visual squalor of our cities, planners and architects are often exhorted to "beautify" them. The inherent fault of this directive lies in the nature of its inevitable piecemeal approach and its acceptance of the existing pattern. Urban design however must be concerned with the total environment; it must seek to establish what the

underlying pattern of our cities should be, and only then set out to achieve its functional and beautiful implementation in three-dimensional form. As August Heckscher⁹⁾ has reminded, "the true beauty of cities emerges as a kind of by-product from the efforts to make them genuinely habitable and answerable to human needs".

Robert C. Weinberg¹⁰⁾ has pointed out that the planning profession itself is often not conscious of the true relation of the design factor to city planning. Urban design does not generally mean arranging buildings and open spaces in an abstract pattern, pleasing perhaps to 'cognoscenti' but unnoticed by the mass of men. It should, rather, seek to create in the physical environment something so obviously striking, appropriate and pleasure giving to everyone that a certain inner satisfaction results which makes a man say: "Here is a city that is great and is beautiful and this is where I want to work and live".

This indicates that the starting point for urban design must be man himself and its purpose should be to satisfy man's needs and his natural desire for a rich, stimulating and beautiful environment. The beauty and character that it seeks to impart to the environment must be based on a deep sense of common purpose as to what is desired socially, physically and visually by the people of the city. It is only when a consensus of opinion as to the way of life exists, that urban design can properly perform its true role which is to give three-dimensional expression to the content. "The "City Beautiful" is a skin deep catchphrase as long as beauty is thought of only in terms of prettiness rather than an expression of a way of life.¹¹⁾

Within this broader concept the task of urban design is to give visual definition, identity and form to the city with emphasis on its uniqueness and character. The difficulty of this task lies in attempting to apply an overall beauty to a city which is a complex of an infinite number of aspects both large and small, which together make up the environment that we see. Only

- 9) "Report on the A.I.A. Convention", Progressive Architecture, August 1965, p.51.
- 10) The Future of Cities and Urban Redevelopment, Ed. by Coleman Woodbury, The University of Chicago Press, 1953, Chapter IV - "Not by Bread Alone : An Evaluation of the Design Element in Large Scale Planning" by Robert C. Weinberg.
- 11) Editorial, Progressive Architecture, September 1965.

by the application of a design discipline which can view buildings and streets, trees and ground forms, shrubs and signs, vehicles and people, street furniture and all the other things that we can see or sense, with a balanced eye, and by developing the most meaningful relations between them, can we begin to move toward that magnificent humane urban landscape which is in our dreams.¹²⁾ This calls for a hierarchy of scale from the monumental down to the smallest element, and for the combination of the small-scale aspects with the large-scale ones into a unified whole.

Above all, urban design does not seek to freeze the city into a mould, for it should be responsive to the changing needs and perceptions of man. As Lawrence Halprin¹³⁾ has pointed out, its search should not be directed towards an ideal form of the city, but to an expression of the ideal purpose of a city, which is to make possible a rich and satisfying life for all the city's people. What we really are searching for is a creative process, a constantly changing sequence where people are the generators, their creative activities are the aim, and the physical elements are the tools.

5. The Process of Urban Design

What is the attitude that we should adopt in our approach to this process of urban design?

Francis D. Lethbridge¹⁴⁾ says that the art of urban design can be mastered - imperfectly at best - by the prolonged application of intuition study and experience. For a start, we must first be able to see the city - not simply as a static body assaulted by a succession of unrelated acts and accidents, but as a living organism in the stream of time, a complex creation of nature and man that has responded to realities, ideas and, at times, visions. We must be able to recognise the forces that have given it what significant form and character it may possess today. We must become sufficiently familiar with the spirit of the city, its historic essence and continuous life, before we dare to attempt plans for its future. To do this we need humility rather than arrogance. Viewing the City in Time is vitally

12) Eckbo, loc.cit.

13) Lawrence Halprin, Cities, Reinhold Publishing Corporation, 1963, p.7.

14) Francis D. Lethbridge, "The Visible City - Seeing the City in Time", A.I.A. Journal, August 1964.



important in both the planning and urban design processes.

Edmund Bacon¹⁵⁾ says that urban design is the unity of apprehension, representation and realisation and that the interaction between these is the vital essence of the design process.

Urban design, in its preoccupation with urban form, is largely concerned with the spatial relationship between buildings. Apprehension of space is variable - the Greeks set their buildings as plastic objects in space, Mediaeval city builders enclosed space with their buildings, and in the Baroque period buildings and space were related in axial spatial systems. Just as these various stages of apprehension have influenced the form of cities in the past, our contemporary apprehension of space might influence contemporary forms.

Firstly, we require well developed sensibilities to effectively apprehend the nature of space. Secondly, we must be aware that our ability to see and feel space is limited by the scope of our techniques of representation just as our ability to think is bound by the scope of our vocabulary. New methods of representation in the past have had a very great influence on both apprehension and realisation, and we are limited in our current work by our lack of developed techniques for representation of space which parallel our contemporary apprehension of it.

Urban design must be based on an apprehension not simply of space but of space-time; the city must be viewed from both these aspects, new techniques, that take these aspects into account, must be developed, and realisation must be based on a vision that successfully combines these aspects.

Our vision of the city can be considered to be the result of three principal thrusts : the historical thrust, the sum and effect of things here and now, and the thrust of our own actions - what we should like the city to be.¹⁶⁾

The urban designer should examine and reconcile all these thrusts bearing in mind that the last factor should be strongly influenced by the evidence derived from a study of the first two factors. He must seek also to

15) Edmund N. Bacon, "Urban Design as a Force in Comprehensive Planning", A.I.P. Journal, August 1963.

16) Albert Mayer, "The Visible City - Factors and Facets in Design" A.I.A. Journal, August 1964.

discover the latent and dormant opportunities waiting to be expressed and articulated. The process of urban design can best be conceived as a kind of crystallisation and synthesis of these various factors in a visual form.

6. The Role of Urban Design

Having established the nature and objectives of urban design and its operation as a process, we can now determine its role in the comprehensive planning process.

Firstly it must be emphasised that urban design is not conceived as something superior to, or more effective than, other aspects of planning. It merely shows concern for the visual environment which the implementation of planning decisions will in any case produce, largely by accident and not by design. Up to now planning techniques have in this respect been hopelessly crude, adding little of positive value and almost guaranteeing the destruction of the existing environment. We know that the visible pattern of our cities has power to shape the people who inhabit them just as forcefully as other aspects of planning, and for this reason, urban design considerations must form an integral part of the comprehensive planning process on an equal basis with the economic, traffic and functional considerations. Urban design is not something that can be applied after the practical problems are solved, for as Charles A. Blessing¹⁷⁾ has pointed out: "Visual qualities are as important as functional and practical considerations. The end product cannot be compromised between design and function, for they go hand in hand". Furthermore, urban design considerations should form part of the planning process in all its stages from the very first surveys until implementation.

The importance of this approach has recently received significant acceptance in a number of planning schemes. At Leicester¹⁸⁾ in England, the City Planning Officer appointed a team of townscape consultants to carry out a visual survey of the existing environment and to make suggestions for future treatment, at the same time as the traffic analysis was being prepared.

17) "Detroit Urban Design Plan", A.I.A. Journal, June 1965, p.103-106.

18) Walter Carr, "Leicester Traffic Plan", Architectural Review, Feb. 1965.

The Consultants' findings strongly influenced the general planning at all stages.

Similarly at Liverpool¹⁹⁾ the planning consultant Graeme Shankland engaged Gordon Cullen to prepare an appraisal of the present townscape of the central area and possibilities for its development. This again influenced the other planning considerations.

Perhaps the most ambitious survey of this kind is that of Prof. Patrick Horsbrugh, who was commissioned by the City of Pittsburg to recommend "a design image for the city and a design goal to be followed".²⁰⁾

The concern with urban design aspects in one form or another as part of the comprehensive planning process is one of the features of American city planning today, the most important examples being Philadelphia, Boston, Detroit, Shreveport, Providence. In all cases it has been realised that urban design is a factor vital to the rebuilding of a city, but which has often been missing in the past. Between the broad guidance plan, provided by the land use and circulation plan for the city as a whole, and individual development projects, there has to be a design oriented, three-dimensional image.²¹⁾

The American Institute of Planners²²⁾ has suggested that among the key techniques needed to incorporate urban design into a master plan are :

- 1) An Urban Design Plan, illustrating improvement by conscious design of the perceptual character of the urban environment.
- 2) Methods to merge or incorporate the Design Plan recommendations into the Master Plan, as is the case at present with circulation and land use.

The urban design process should follow the pattern of the general planning process starting with a visual survey, leading to the urban design plan or framework and finally to its implementation by means of positive action coupled with controls. The urban designer would thus be working with other

19) Gordon Cullen, "A Liverpool Notebook", Architectural Review, April 1965.

20) Patrick Horsbrugh, "Pittsburgh Perceived", A.I.A. Journal, September 1963.

21) Dieter Hammerschlag, "A Tale of Two Cities, College Hill and Downtown Providence", A.I.A. Journal, November 1963.

22) Matthew L. Rockwell, loc. cit.



members of the planning team, his decisions would be based on the more general aspects of planning, and in turn would influence those of other team members. With this complete integration of planning and urban design we may indeed be in a position to improve the environment both in its physical and visual aspects.



CHAPTER II

THE URBAN DESIGN SURVEY

1. Introduction

The urban design survey is an appraisal of the physical form of a city or town. As such it is similar to, and should supplement, the more quantitative analyses and surveys carried out by the planner. It is the starting point for the urban design process and is concerned with observing and appreciating the salient elements of the urban environment.

The very useful townscape studies by Gordon Logie,¹⁾ Gordon Cullen²⁾ and the Architectural Review were the first attempts to establish a technique for noting and evaluating the assets and liabilities of the visual aspect of cities. More recently increasing attention has been given to this question and Kevin Lynch's study of "The Image of the City"³⁾ is probably the most significant contribution to this field.

The basic concepts and the procedure for an urban design survey have been outlined in one of a series of articles on urban design in the American Institute of Architects Journal⁴⁾ and forms the most comprehensive assemblage of the various approaches mentioned above.

2. Basic Concepts

The urban design survey is largely concerned with establishing the image of the city. From his environment each person constructs his own mental picture of the parts of the city in physical relationship with one another. A person's impressions of an environment are largely visual, but also include memories, experiences, hopes, crowds, smells and so on. While each person's image of the city is different the most essential parts of these individual images will form a collective image of the city as perceived by its inhabitants. This collective image is a useful starting point in assessing the unique character of a city.

- 1) Gordon Logie, The Urban Scene, London, Faber & Faber Limited, 1949
- 2) Gordon Cullen, Townscape, London, The Architectural Press, 1961
- 3) Kevin Lynch, The Image of the City, Cambridge Mass. Harvard University and Technology Press, 1960
- 4) A.I.A. Journal, "Guide Lines for the Visual Survey", April 1963



Kevin Lynch has suggested that there are five elements intrinsic to the image of a city. (Fig. 1)

Paths - The major routes of movement which also allow people to observe the city while moving through it.

Districts - The sections of the city recognisable as having some common identifying character.

Edges - The linear elements which serve as the termination of a district with another district or with a natural or man made barrier. An edge may also function as a seam joining two districts.

Landmarks - The prominent physical objects which can be easily identified. They are often ones which can be seen at a distance or from numerous viewing points.

Nodes - The major hubs or centres of activity serving as intensive foci. They may be junctions in a movement system or concentrations of some activity.

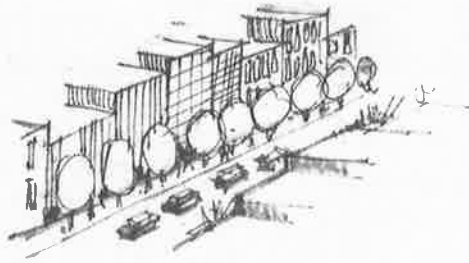
3. The Character of Urban Form

Paths, landmarks, nodes, districts and edges are the skeletal elements of city form which, together with the embellishing characteristics, constitute the personality of a city. Urban form can be considered in the following terms (Fig. 2).

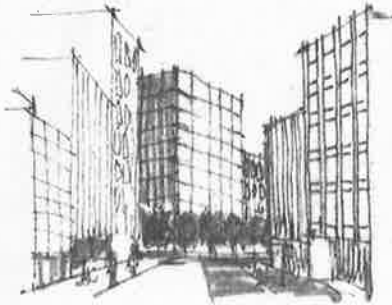
Firstly, the form of a city can be appreciated in terms of its size, shape (both horizontal and vertical), pattern, density and texture or grain.

The various parts of the city can be identified by their dominant visible activities which may be complementary or conflicting, and it is important not to mistake complexity for conflict in this respect. These areas of dominant visible activity can exist in sequence as linked accents and a periodic occurrence of such accents may develop a rhythm. High concentrations of activity, whether in a single building or an area, can be regarded as generators attracting large numbers of people.

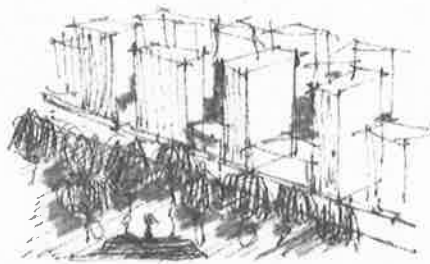
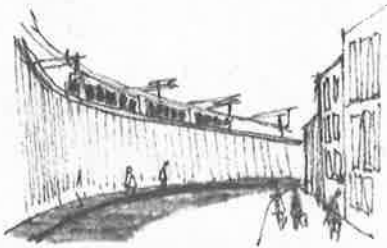
Patterns of movement relate the various activities; they form links and help to define the districts of a city.



Paths



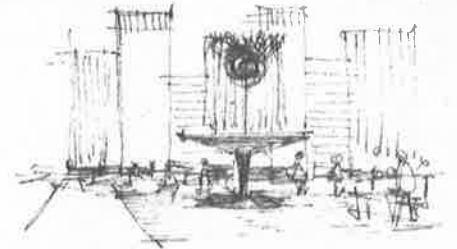
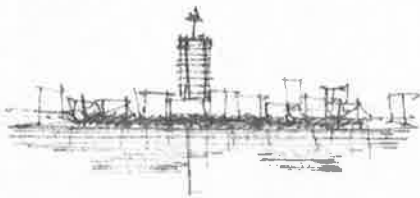
Districts



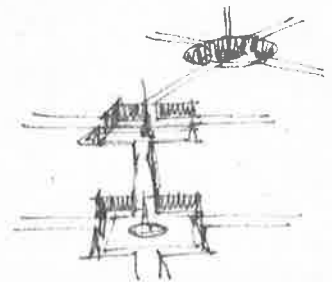
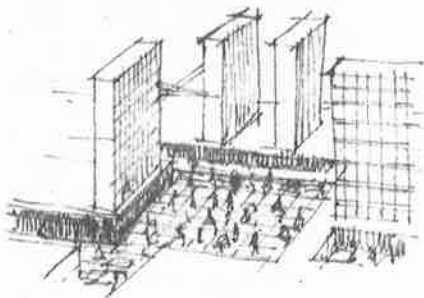
Barrier

Edge

Seam



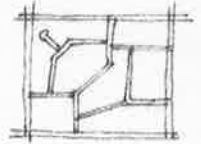
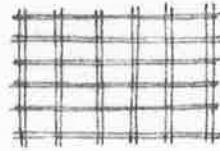
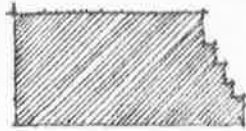
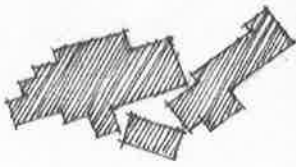
Landmarks



Nodes

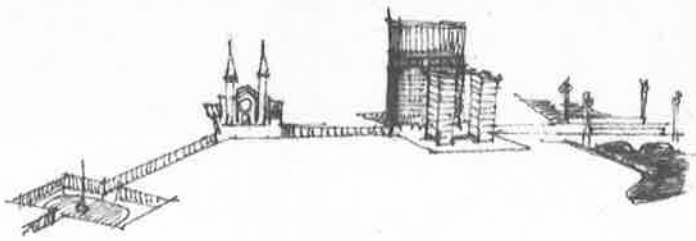
FIG. I - ELEMENTS OF THE IMAGE OF A CITY





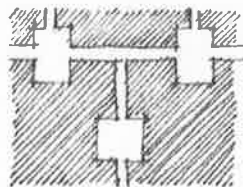
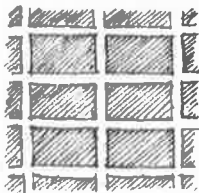
Shape

Pattern

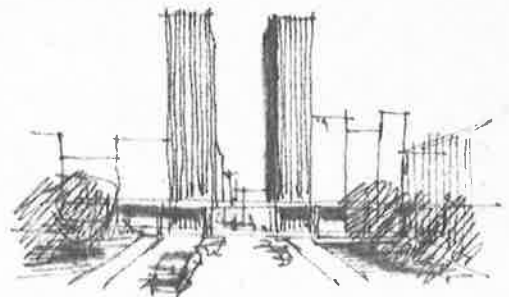


Rhythmic sequence of accents

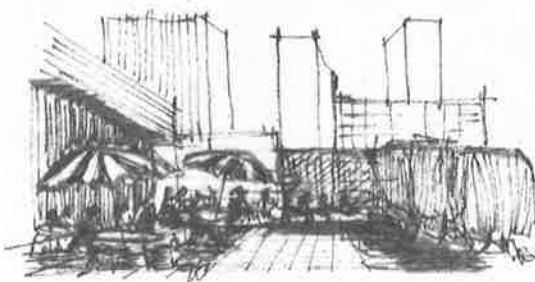
Topography



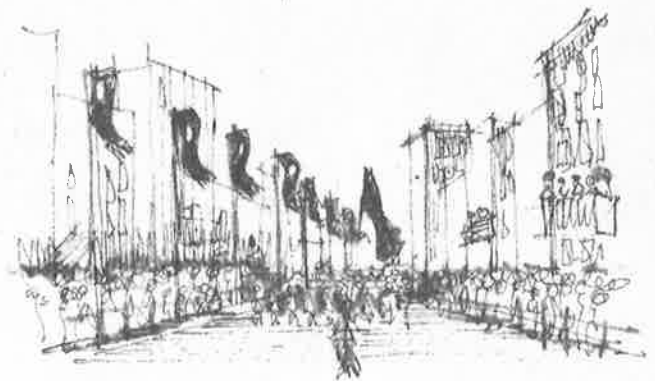
Building mass and urban space.



Gateways or Portals



Oases



Non-architectural aspects

FIG.2—SOME CHARACTERISTICS OF URBAN FORM





The visual experience of a city is enriched by major vistas and the nature of land surface. We are aware of both topography and natural landscape features in relation to urban form.

Arrangement of buildings form patterns of mass and, at the same time, urban spaces. The spaces may be regarded as patterns of channels (paths) and reservoirs (squares, parks etc.).

Entrances to a city can be accented by portals, which possess some of the psychological character of the old city gates, and can dramatise the sense of arrival or departure.

Pauses or relaxations in an intense area can be regarded as oases; as passive accents which complement intense activity.

While we are aware of the age of a city or its parts and the newness in buildings and places, we must avoid equating oldness with decay and newness with amenity. One of the objectives of urban design is to relate the old and the new in a unified whole.

In addition to the above there are also non-physical aspects of urban character. Examples of this in Adelaide are the Festival of Arts, the Anzac Day March and the Christmas Pageant. These form a distinct part of the image of a city and its personality. There may be visible signs of history, linking the city to its origins, which can form a major aspect of its appearance. We should also look for expressions of the particular purpose of the city in some visible form, and note where such expression is lacking.

4. Nature in Relation to Urban Form

We should also assess the relation between urban form and nature.

The character and beauty of cities is dependent to a considerable degree on the harmonious and artful relation to nature. This relationship can be either formalistic or naturalistic, and the effect created can be either one of contrast or supplementation.

Local climate also determines the appearance of the environment and affects urban form. The following aspects should be considered; - conditions of light, amount of rainfall, angles of sun in different seasons, prevailing seasonal winds, seasonal temperature and humidity.



In looking at land form we must firstly try to determine its character in its presumed natural state and then assess the degree to which the created urban elements enhance this. This will reveal both the possibilities for improvement and the need for correction.

5. Routes of Movement and Urban Form

The primary function of routes of movement is, of course, to facilitate movement. At the same time these routes are also a major factor in creating the imageability of a city - giving it clarity of form, and allowing the city to be seen in sequence while travelling along them. They should, therefore, be evaluated not only in terms of movement, but also with regard to their effect on city form, and general environmental character.

6. Summary

An urban design survey should seek to discover the image of the city and its significant urban design qualities, note its difficulties and opportunities, and attempt to draw out the structure and identity latent in the confusion. The findings of such a survey are extremely valuable in establishing the inherent physical character and form of the city and will provide guidance for its future development and improvement.

CHAPTER III
THE URBAN DESIGN FRAMEWORK

1. Urban Design Methods

While methods of analysing the visual appearance and townscape qualities of a city are reasonably well developed, we are less sure when it comes to the application of urban design principles in the form of proposals for the future development of a city. David Crane¹⁾ has commented that we do not yet possess a potent and universal theory of what makes a city beautiful and well ordered. Despite the tools at our disposal, we also lack a philosophy for approaching community design and do not have a systematic strategy for bringing about an æsthetic order even if we could agree on what kind.

A great volume and diversity of urban design literature suggests various approaches for modifying or creating the physical form of cities.²⁾ They vary in their basic assumptions, their techniques and in their scope. A study of these is worthwhile insofar as broad areas of agreement can be established and their shortcomings recognised.

The æsthetic approach is a promising and appealing one, but at the same time, the least rewarding. The city can be partly regarded as a work of art, but to ascribe to its complexity, diversity and changeability an all-embracing æsthetic beauty, and to use æsthetic means in shaping its physical form is not realistic. The city is more like an artifact and must be considered in both utilitarian and æsthetic terms.

Kevin Lynch's³⁾ analytical method is valued in establishing the organisation and structure inherent in the physical form of a city, but its usefulness is more suited to a survey of existing forms rather than in the creation of new ones. In its attention to clarity and "imageability" it neglects certain aspects of the city, which do not meet these strict

- 1) David A. Crane, "The Public Art of City Building", The Annals of the American Academy of Political and Social Science, Vol. 352, March 1964
- 2) Stanley M. Sherman, "On forming and Re-forming Towns and Cities - Current writings on the visual aspects of urban settings", A. I. P. Journal, May 1963.
- 3) Lynch, op.cit.



requirements, but are nevertheless valid and important in urban design.

The empirical approach of Gordon Logie,⁴⁾ based largely on townscape qualities, is more concerned with smaller groupings of buildings and detailed elements rather than overall city forms. Its devices are again more suited to a confirmation of existing qualities.

The architectural approach, perhaps best exemplified by Frederick Gibberd⁵⁾ and his work in the New Towns, is too limited because it omits other disciplines and neglects the importance of urban spaces as a shaping force of urban form. Moreover, architects are generally too concerned with the impact of their own buildings to realise that urban design considerations require a more restrained architecture in individual buildings.

The "ordered control" method, based on a central design idea acting as an organising force in the shaping of the physical form of a city, is advocated by Edmund Bacon.⁶⁾

Difficulties arise firstly in conceiving a "design idea" for the complexity of a city, and secondly in its implementation. It needs to be backed by a strong faith in this design idea by everyone concerned, somewhat similar to that which inspired the building of mediaeval cathedrals.

The organic approach offers valuable analogies in understanding the nature of our cities, and suggests that urban design could be considered in terms of such analogies, especially with respect to permanence and change. Bruno Zevi's and G.A. Jellicoe's approach, with Sherman⁷⁾ considered in his article, would seem to be more limited in application than the more comprehensive approach suggested by Gilbert Herbert.⁸⁾

The economic approach propounded by Victor Gruen and Larry Smith⁹⁾ places its faith in the large scale developers. It is argued that they can be

4) Logie, op.cit.

5) Frederick Gibberd, Town Design, The Architectural Press, London, 4th ed., 1962

6) Bacon, loc.cit.

7) Sherman, loc.cit.

8) Gilbert Herbert, "The Organic Analogy in Town Planning", A.I.P. Journal, August 1963

9) Victor Gruen and Larry Smith, Shopping Towns U.S.A., New York, 1960



convinced of their civic responsibilities, and in this capacity as patrons of art and civic design could be counted on to enrich the environment. However, any concessions to urban design by this method are likely to be prompted purely by economic motives and hence it offers a very shaky base indeed.

The "spontaneous order" approach is convincingly argued by Jane Jacobs.¹⁰⁾ She states that the city consists of bits and pieces and a mixture of diverse uses, resulting from a spontaneous expression of the many individuals of a city. However much we value the diversity and visual richness that this may produce, it is clear that an approach on these lines is applicable only to the smaller parts of a city. Its "laissez-faire" character will certainly produce confusion and visual disorder at the scale of the entire city.

The "accumulative" approach is somewhat similar to the above approach in its acceptance of the need for individual expression. It considers that the character of the environment is acquired partly from the initial design and partly from the way in which it is used. It shows great concern for historical aspects and continuity and conceives of urban design as a basic framework within which individual and contemporary character can be injected and furthermore changed in time. The approach is firmly based on the townscape methods of Gordon Cullen,¹¹⁾ and stresses accumulation of character rather than an imposition of character.

David Crane's concept of the "City Symbolic"¹²⁾ seeks to establish the essentials of large scale urban form by concentrating on the symbolic expression of key public buildings and sites and the urban spaces in a coherent system. His other suggestion is that the "Capital Design Web",¹³⁾ consisting of a programme of public works, can assist in the implementation of such a framework.

10) Jane Jacobs, "The Death and Life of Great American Cities", Jonathan Cape, New York, 1962

11) Gordon Cullen, op.cit.

12) David Crane, "The City Symbolic", A.I.P. Journal, November 1960

13) David Crane, "The Public Art of City Building", loc.cit.



All these various approaches are useful and valuable because each one spotlights some particular aspect that has to be considered in any attempt at urban design. However, no single one provides a comprehensive method, or guarantees success in the quest for beauty and purpose in our cities.

2. The Need for Particular Solutions

It must be admitted that urban design is undoubtedly a most ambitious design art. It is an enormous undertaking to design parts of the city, let alone the whole of it. Urban design can and must comprise all aspects of the urban environment, from the entire metropolitan region down to the detailed elements of the townscape. However it is clear that the nature of our urban design efforts must be related to the scale of the entity that we are designing for, and that we must have an appropriate urban design concept for each different scale.

In the case of an entire city the urban design concept and its specific proposals must inevitably be based on a large skeletal structure consisting of factors fundamental and meaningful to the form of the city at such a scale. As we deal with smaller areas or individual projects, a constant refinement and elaboration of more specific concepts and proposals can be made. In the very smallest areas or projects we finally arrive at tangible and specific things which can be designed and built as a whole. It is vitally important that we should recognise the essential elements of city form at any particular scale, and these should be used as a basis for our design concepts.

The subsequent discussion endeavours to clarify the most appropriate form that urban design proposals should take in the case of the central area of a city. Obviously the extent of the area is outside the scope of a detailed physical plan which would specify the placement of every element. The approach is, therefore, aimed at the establishment of a skeletal structure or framework rather than an overall plan. It is based on several of the approaches mentioned previously, most notably on those of

Edmund Bacon, David Crane and Gilbert Herbert. None of these have been accepted in their entirety, but an attempt has been made to weld some of their concepts into an appropriate solution for this particular case.

3. Urban Design in the Past

The historic cities, which we admire most for their unique spirit and continuity of form, were all produced under one or more of the following kinds of design disciplines:¹⁴⁾

- (i) Autocratic dictates or direct skeletal constructions by a ruler or his chief architects.
- (ii) An elite architectural style, resulting from experiment and common agreement, carefully practiced by cultivated designers and emulated by the less talented, uninformed or the poor.
- (iii) Homogeneous vernacular principles of construction, planning and appearance, reinforced by homogeneous ways of life and practiced without the benefit of architects.

We have no such mutually creative processes in our present day planning and city building. There is no true modern vernacular today and its creative power has been destroyed by the barrage of sophisticated materials and techniques used indiscriminately and superficially.

The cultivated designers have also withdrawn from the scene in reaction to the impossibility of making a contribution within the present planning processes. In many cases they have been responsible for some of the confusion of the urban scene by treating every building or project as a "masterpiece" to themselves, instead of making a disciplined contribution to urban design. Recently there has been an increasing awareness by architects that urban design implications are more important than individual buildings but as yet there is no consistent development of an urban architectural idiom.

The head of state has become a "hydra-headed monster" of overlapping and unco-ordinated governments, regulations and public works. These at present are not achieving the desired continuity in urban design, due to

14) David A. Crane, "The City Symbolic", loc.cit.



their lack of direct creative action in the placement, timing and design of public works, which should act as a generative framework of city form.

The urban design process must, once more, involve these formative disciplines of the historic cities into a common and mutually reinforcing framework of action, rather than try to recapture or recreate the townscape effects of these cities. However, we must realise that the cities we are dealing with are much more complex and dynamic than those of former days.

4. The City as a Dynamic Process

David Crane describes the dynamics of the city and their physical consequences in terms of three kinds of images.¹⁵⁾

- (i) City of Change and Permanence - the city as a volume of time.
- (ii) City on Wheels - the city as a volume of motion.
- (iii) City of a Thousand Designers - the city as a volume of building participants and processes.

All these images contribute to the larger picture of the city as a dynamic process which is continually changing. The necessity to consider the city in this light therefore poses two problems:¹⁶⁾

the formulation of planning procedures which are sufficiently flexible to deal with this factor of constant change, and
the creation of a city form that has adaptability without sacrificing its form, that has flexibility without sacrificing efficiency, and that caters for the present without sacrificing that continuity which is both history and future.

This has already forced a shift in focus from the map to the programme of action in the planning of cities. The ultimate master plan map as the goal of planning is being replaced by a planning process concept in which the master plan is regarded as an open-ended sequence of plans describing at each successive point in time a desirable equilibrium among ever changing activities.¹⁷⁾ Similarly, in the search for urban design principles

15) David A. Crane, "The Public Art of City Building", loc.cit.

16) Gilbert Herbert, "The Concept of Stability and Change in Planning", A.P.I.J., January 1965

17) Henry Fagin, "New Towns for the Baltimore Region", February 1963

applicable to the dynamic city, we must remember that it cannot be a still-life art, and that it is more like composing a painting on a flowing river.¹⁸⁾ This once more confirms the need for a workable framework rather than a plan.

Morton Hoppenfeld¹⁹⁾ has stated that the basic design framework must be simple enough to be comprehended, strong enough to withstand the inevitable variety of elements that will be part of it, and still flexible enough to adjust to necessary changes. What factors should constitute such an urban design framework?

5. Components of the Urban Design Framework

To have any degree of success the urban design framework must take into account and provide for the previously mentioned aspects of the dynamic city.

5.1 Change and Permanence

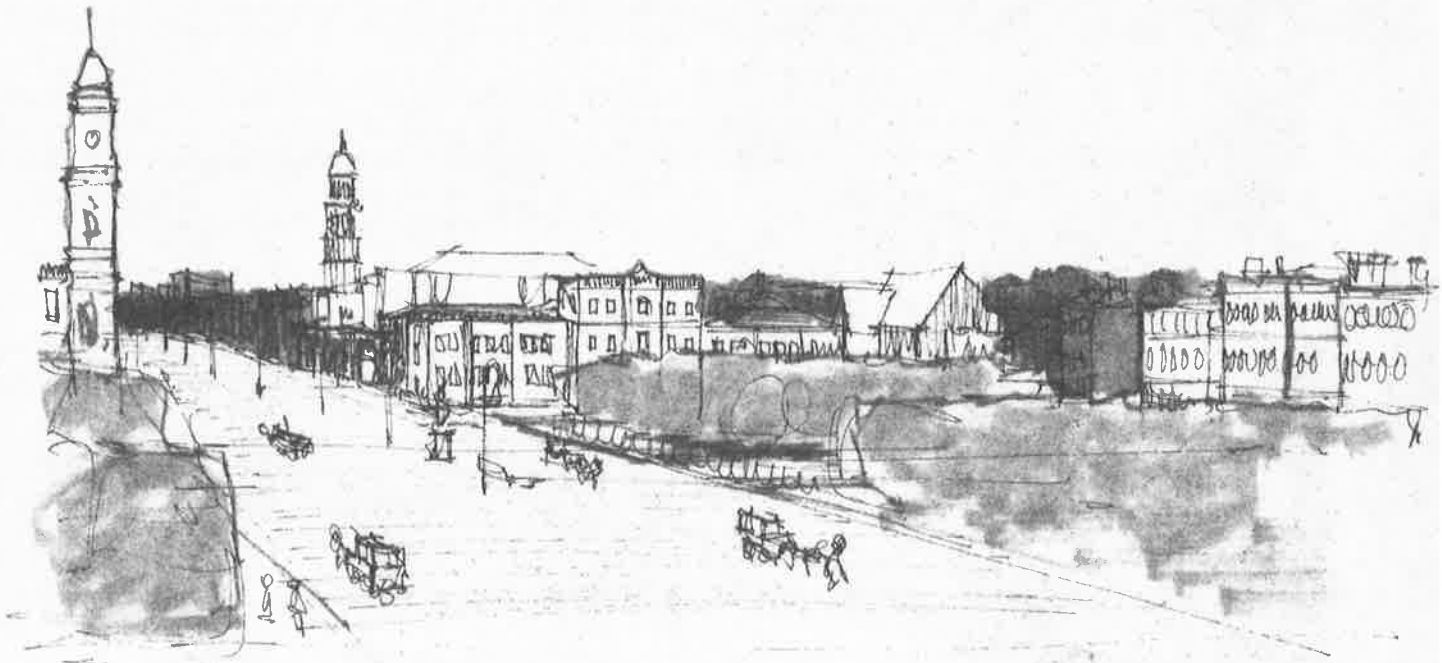
In the search for factors that can express and cater for the city as a continually changing complex, valuable guidance is provided by the organic theory of town planning as discussed by Gilbert Herbert.²⁰⁾ The organic analogy is valid and useful insofar that a city undergoes a similar process of growth, change, decay, and renewal as any organism in nature. A city, like any complex whole, is made up of entities in a spatial relationship but as all these entities have duration they are more correctly regarded as events. Thus we can regard a city as an inter-related network of events which come into being and perish. Furthermore these events vary in duration, there are major and minor events, which offer a measure of stability and change, ranging from relative permanence to relative transience.

Gilbert Herbert suggests that society's nodal points, its institutions, are events of relative permanence, and that the physical structures of our institutions provide functional points of significance as well as the visual symbols of our cities. (Fig. 3) These institutions and their symbols will

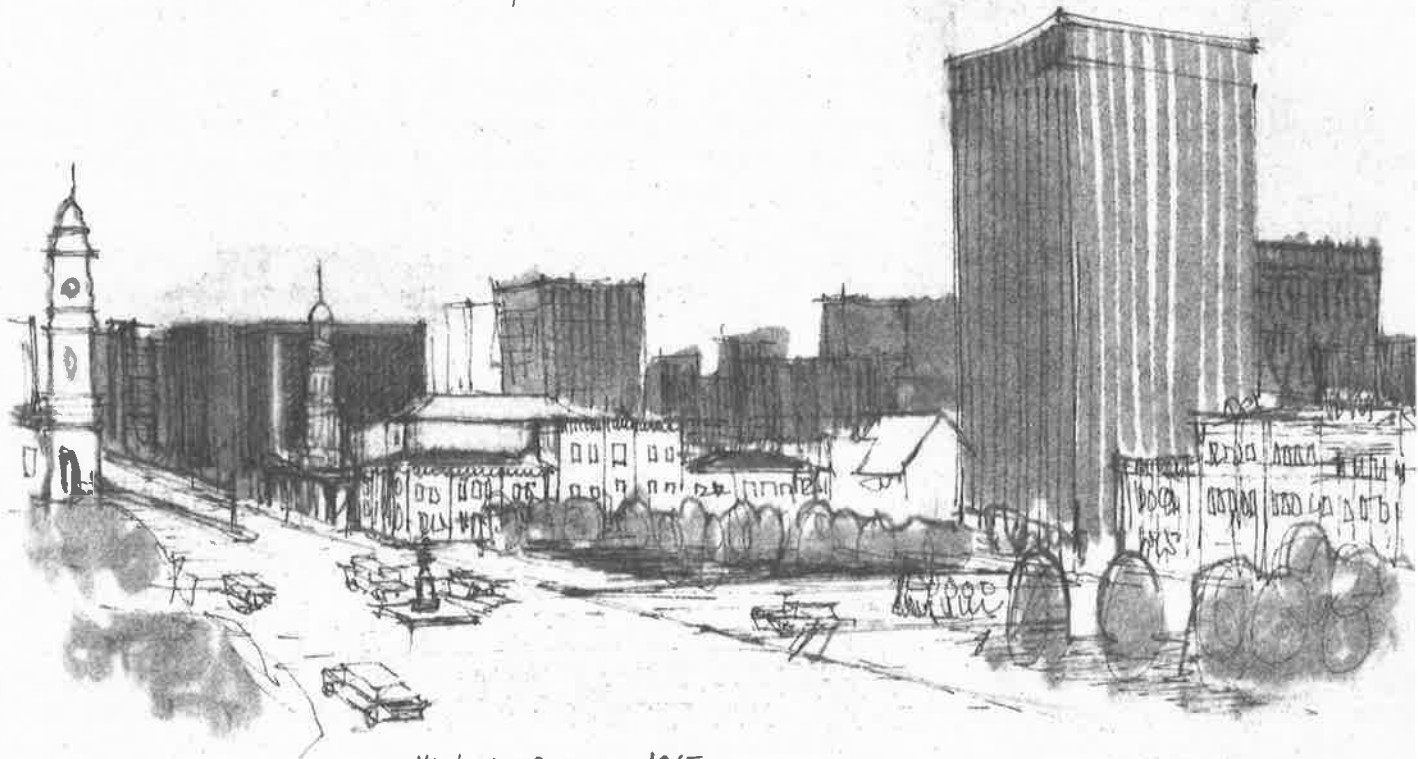
18) David Crane, "The Public Art of City Building". loc.cit.

19) Morton Hoppenfeld, "The Role of Design in City Planning", A.I.A. Journal, May 1961

20) Gilbert Herbert, "The Concept of Stability and Change in Planning" loc.cit.



Victoria Square - 1901



Victoria Square - 1965

FIG. 3 - BUILDINGS OF RELATIVE PERMANENCE
IN THE CHANGING CITY





no doubt change, but they do so slowly and over an extended time scale, and furthermore, they generally exhibit a tenacity of form which sustains transience of function; ancient symbols can often be invested with new meaning.

While our institutions - various forms of government, universities, churches etc. - are the main events of relative permanence, we can also detect other essential activities that have almost the same degree of permanence. In our cities we can find natural aggregation and clusters of intense activity - the central city is one example, which furthermore, contains several other major groupings such as retail, civic and financial. These groupings do occasionally shift location, but generally are relatively stable.

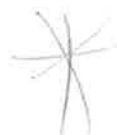
The arrangement of urban activities in the form of a land use plan is a basic element of planning. Its policy should be to consolidate major groupings of activities where they exist so that their potential value as factors of permanence can be realised.

The concept of factors of relative permanence acting as identifying points in the urban structure, within which the transient elements can be valued and absorbed, provides a useful starting point. By giving visual expression to these factors and by arranging them in a clear pattern of relationship, we obtain a strong visual framework which would provide a setting for the diversity of the transient factors both in space and in time. We should now seek to establish the basic structure to which our identifying points can be related.

5.2 Movement and Space

Consideration of the dynamic city as a volume of motion does not imply merely thinking of traffic and movement. As David Crane points out : "the city on wheels is also a factor in an evolving physical scheme of urban spaces, a force in urban growth and deterioration, and a fundamental conditioner of the æsthetic experience."²¹⁾ Looking at the city in this

21) David Crane, "The Public Art of City Building", loc.cit.



way presents new problems and requires new methods of solution. It involves a re-appraisal of our entire conception of urban spaces and suggests the need for a new aesthetic to deal with this.²²⁾

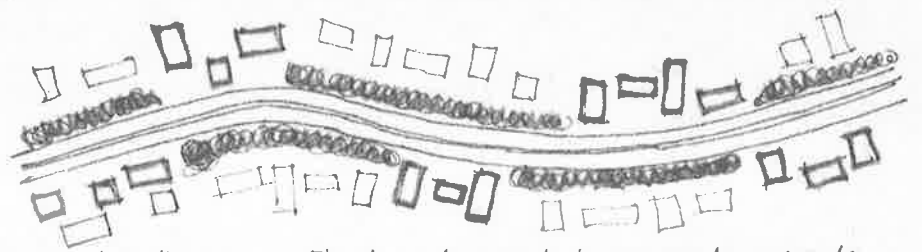
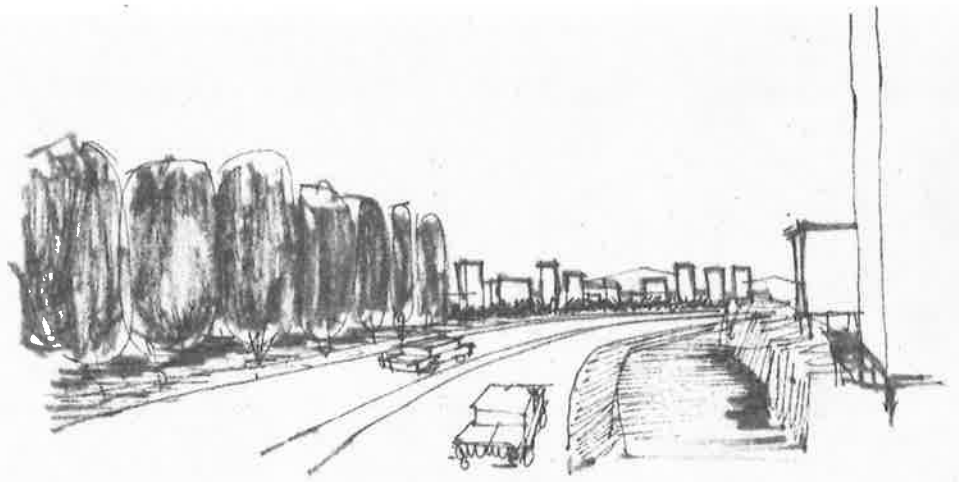
It has become obvious in any case that methods of urban design based on single buildings or groups of buildings are ineffectual in the total framework of a city for two reasons. Firstly, the extent of a city, or even parts of the city, are too great to be able to develop a complete three dimensional design for the entire area involved. Secondly, the various pieces of the city are built and rebuilt over varying time sequences.

A more useful approach might, therefore, be made in terms of the spaces between buildings. In fact, several urban designers have suggested that we should employ the concept of space as the dominating element in our physical design of the city.

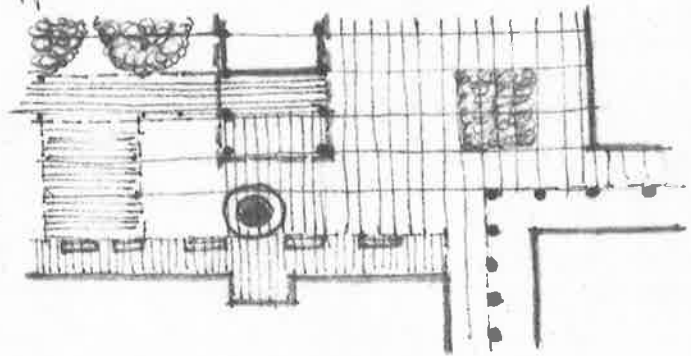
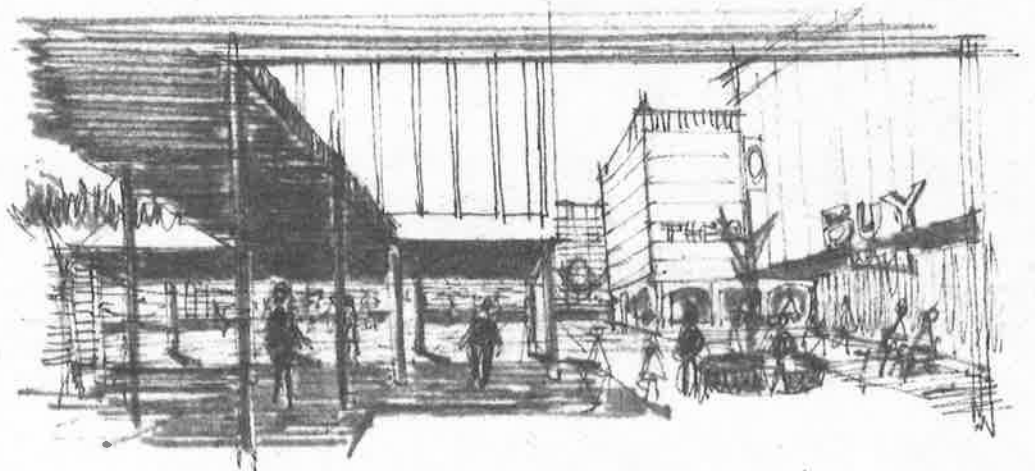
However we should not regard space as a static element. Any urban space, whether it is a street, a busy square or a secluded plaza, is a container of human activities, which generally involve some kind of movement ranging from vehicular speed to that of an ambling pedestrian. Thus, our experience of space itself is not something static - viewed from a single point and seen at a single glance. We appreciate space by moving within it, and our total experience consists of a sequence of impressions in time as well as in space. The design of urban spaces should therefore be based on the dynamic qualities of movement.

Our impressions of an urban space derive from the character and form of the spaces through which movement occurs, and also from the sensation of movement itself. Hence, the environment surrounding the spaces should be related to and should express the nature of each particular system of movement to produce a harmonic experience for the observer. (Fig.4) This amounts to a recognition of the movement system as a dominant organising force of urban spaces. Conversely, the character of an existing space can, in turn, influence the nature of movement through it. Perhaps

22) Edmund Bacon, "Urban Design as a Force in Comprehensive Planning", loc.cit.



A. Design for the car -- Direct routes and large scale accents



B. Design for the pedestrian -- Varied spaces and rich detailing

FIG. 4 - DESIGN FOR MOVEMENT

it is more correct, therefore to regard the mutual interaction of urban spaces and movement systems as the dominating force in urban design.

In any case we must recognise the qualities of urban spaces - direction, use, vitality and necessity - and our design should express these qualities. Only by realising that the shape of each space is generated by its inner nature will we be able to create functional, meaningful and visually satisfying urban spaces.²³⁾ In all this, we must avoid thinking of the relation of spaces in two dimensions only. We must rather conceive of one space continuum where, for example, such spaces as streets are free to move over, under, around and through other spaces or structures, and our aim should be to create a linked system of urban spaces.

This basic approach is implicit in Bacon's concept of simultaneous movement systems as an urban design tool. He considers that the goal of urban design should be to create "an environment conducive to a continuous flow of harmonious space experiences". This can best be understood, and arrived at, in terms of a series of movement systems based on different speeds and different modes of movement, each inter-related with the other and each contributing its part to the total living experience in the city.

This concept provides us with a rational basis for the establishment of a linked and coherent system of spaces throughout the city. Each part of this system will have to be related to a particular form of movement and will require a different setting, thus producing a system of diversified urban spaces. The points of transfer from one mode of movement to another, such as from a car or train to the pedestrian spaces, have potential as special points of significance.

By expressing the essential form of all these movement systems in three-dimensions in space, we enable the urban design structure of the city to emerge.

23) Martin Bloom, "Toward a Dynamic Architecture", A.I.A. Journal, January 1962

Bacon also turns to a form of organic analogy to explain the nature of such a simultaneous movement system. The strength of the system lies in its ability to influence the growth of a city in a logical and continuous way and to sustain variations and enrichment related to the central movement system much the same way as the trunk of a tree produces a predictable but variable growth of branches and leaves.

This concept then provides further assistance in the establishment of an urban design framework. In fact it provides us with the basic structure to which the factors of relative permanence can be most effectively related.

5.3 The Thousand Designers

Where and how do the Thousand Designers, the individuals that make up a city, fit into the framework that we have so far been able to establish?

The will and the creative power of the individual in a city cannot be under-estimated; we only have to observe the initial design of buildings and their subsequent use by people, the embellishments and changes that they make to fashion them to their needs and wishes. Each man, in fact, has a desire and a right to shape his environment. Jane Jacobs²⁴⁾ has justifiably said that the countless number of people who make and carry out countless plans "create an intricate order which is in many ways a wonder" and give a city vitality, diversity and intimacy.

While the creative participation by individuals can produce all these qualities and is therefore desirable, we must also realise its limitations. Reference has been made earlier to the lack of a true modern vernacular architecture. Our cities are a living example of the lack of unity, monotony and ugliness that this has created. Architects, as individuals, have often been sinners in this respect also. We must admit that the new ideas and means at our disposal have not been matched by guidance and education in their use.

24) Jane Jacobs, op.cit., ch.19.

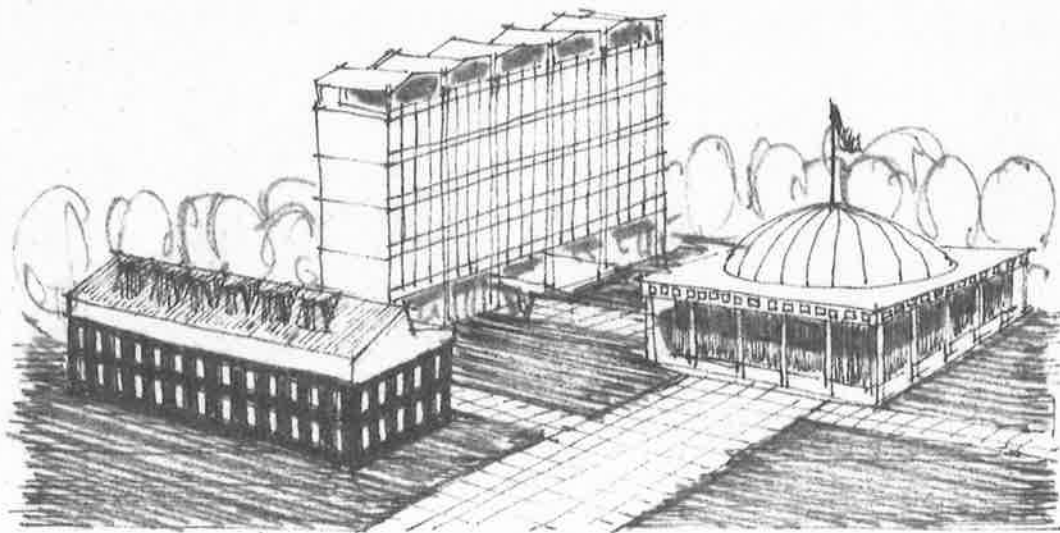
We may, of course, take refuge in the fact that most of the structures to be erected by the Thousand Designers are likely to be events of transience. As such they would make relatively little impact to a strong urban design framework from the point of view of time. But if we are to use these designers to their full potential as creators of the more intimate aspects of a city's character and if we agree with Crane that the basic design idea should become fully developed by their works, we must adopt a more positive approach.

A. Trystan Edwards²⁵⁾ some time ago showed concern for what he called the "good and bad manners in architecture" especially as it affects urban design. As he defined it, in order that a building may become urban, it must have urbanity - that is good manners. We cannot hope to have any kind of unity in our urban design unless we recognise that it is "bad manners" for each building to be selfish, to disregard its neighbours and the city of which it forms part. Continuity, sociability, order and fundamental respect for the adjacent buildings and character of the city are the "good manners", the true expression of the urbane spirit. (Fig. 5)

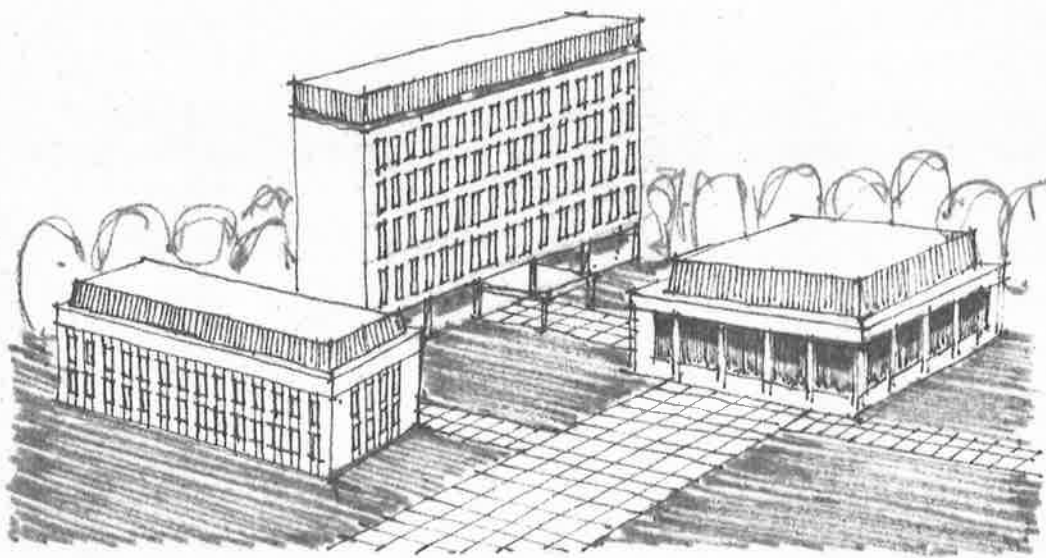
This can be achieved in two ways - by guidance and control. Emphasis should preferably be placed on guidance, rather than control, because of the inherent tendency of the latter to stifle originality and generally produce monotony. As Edwards points out, "good manners are a spontaneous expression of an 'inner spirit', and if the spirit is not present then it is useless to try to superimpose the forms of manners either upon a society of human beings or upon a society of buildings".

The urban design framework should thus enable the works of the Thousand Designers, reflecting their short-term needs and expressions, to be accommodated. With guidance and judicious control we could ensure that these enrich the framework during the brief time span that they exist, and furthermore, provide a satisfactory overall design of the city at any point in time.

25) A. Trystan Edwards, Good and Bad Manners in Architecture, John Tiranti Ltd., 1946

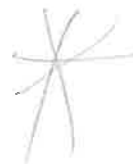


"Bad Neighbours"
Differing scales and multitude of materials



"Good Neighbours"
similarity of scale and materials.

FIG. 5 - UNITY IN URBAN DESIGN



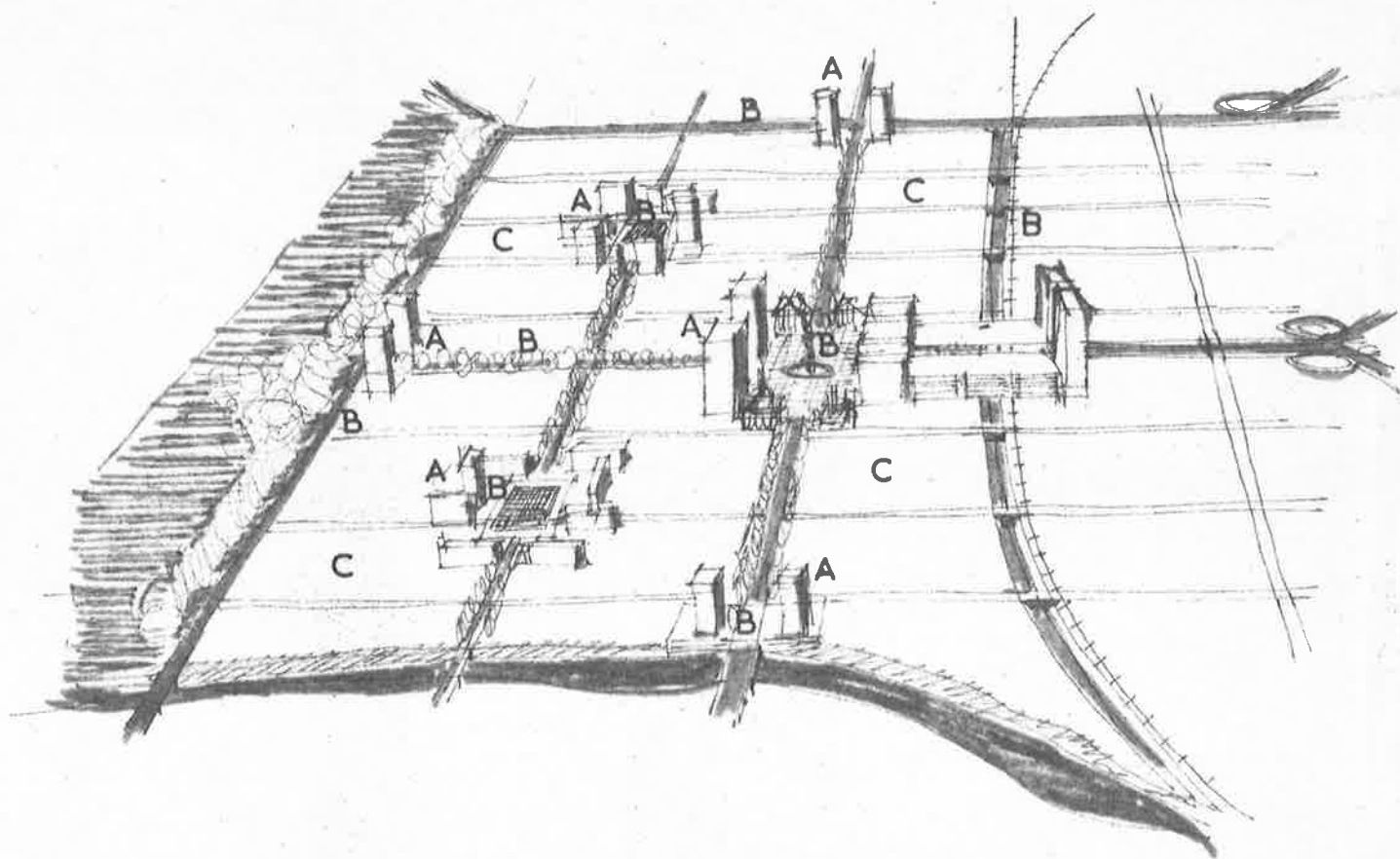
6. The Urban Design Framework

We have thus established the essential basis of an urban design framework. It relies on the expression of factors of relative permanence, and of simultaneous movement systems in three-dimensional terms to produce strong visual symbols related to a clear urban design structure of spaces. The framework is flexible enough to allow growth and change and to accommodate a diversity of transient elements. It is capable not only of satisfying the demands of a dynamically changing city, but also of giving symbolic expression to its various aspects. (Fig. 6)

The actual discovery of an appropriate design concept for any city - the discovery of the basic framework upon which the whole design can develop and which can be tested as the details are worked out - is similar to, but more complex than, arriving at an architectural design concept for a building. We must study the problem both in its totality as well as in its parts, eliminate the non-essentials and try to grasp the vital essence before we can commit ourselves to a solution.

As in architectural design, the process requires a combination of intuition and sound practical experience, and must pay attention to aesthetic and functional considerations. Furthermore, just as in architecture each building must be designed to solve particular requirements, in urban design we must remember that we are dealing with the particular problems of a particular city. Because each city is unique, because it has its own special character, there can be no "magic formula" of design or planning applicable to all cities. It would seem that an intuitive approach, relying strongly on the unique character of the city, coupled with a constant awareness of all aspects of the framework mentioned above may provide the best solution in attempting to form urban design proposals for any city. Needless to say, the whole approach must be based on sound and practical planning considerations as well.

We cannot assert that a conscious design of a city by this method will inevitably produce a beautiful environment, but we can be sure that it



- A. ELEMENTS OF RELATIVE PERMANENCE AT STRATEGIC POINTS IN THE CITY
- B. VARIOUS MOVEMENT SYSTEMS FORM BASIC STRUCTURE OF URBAN SPACES TO WHICH THE ABOVE ELEMENTS CAN BE RELATED
- C. WITHIN THIS FRAMEWORK THE TRANSIENT ELEMENTS EXPRESS THE CHANGING CITY AT ANY POINT IN TIME

FIG. 6 - THE URBAN DESIGN FRAMEWORK

will introduce some visual order and coherence and will offer us the chance to express "our vision of urban splendour" whatever it may be. Denise Scott Brown²⁶⁾ has said that "our need is to find that good base upon which subsequent encrustations of meaning and association can form as richly and with as much individual variation as the talents of the population permit - to find that order within which variety becomes meaningful, and the changing whole intelligible and beautiful". The urban design framework, at the very least, offers us this base.

26) Denise Scott Brown, "The Meaningful City", A.I.A. Journal
January 1965

CHAPTER IV

IMPLEMENTATION OF THE URBAN DESIGN FRAMEWORK

What methods can we employ to implement an urban design framework? Firstly, if it forms an integral part of a comprehensive planning process, we can assume that there will be some powers of execution and enforcement of urban design concepts within the planning process itself. These, however, are bound to be regulatory or control powers. A real tool in the shaping of the environment must have means of positive implementation rather than negative control.

In the implementation of an urban design framework, as in its actual selection, we must again seek particular solutions for each city. A useful starting point is provided by Crane's suggestion regarding the re-involvement of the formative design disciplines mentioned previously. A more specific discussion of the possible methods now follows.

1. Power of the Design Idea

Edmund Bacon¹⁾ has stressed the tremendous generating force that a powerful "design idea" can exert over the emotions and passions of the citizens. It can, by producing reactions and experiences that are shared by large numbers of people, lead to a concensus of agreement and loyalty to this design idea. Such a common state of mind can, in turn, produce the extension and enrichment of the idea. This creative design stimulus, he asserts, enables us to avoid many of the rigid controls and regulations which tend to make implementation of urban design concepts difficult under different conditions.

While this may be so, knowledge of human nature is inclined to make one sceptical of the complete success of such a simple approach. It would be wise at least to tie these generative aspects of the design idea to the city building forces which shape our cities.

1) Edmund N. Bacon, "Pei in the Sky and other Aspects of the Philadelphia Story", Architectural Association Journal, November 1963

2. Capital Design Concept

David Crane has recognised this in his Capital Design Concept.²⁾ Governments and public authorities, through their public works programme, emerge as a major city building force. Moreover, since governments and public authorities are generally long term institutions, they provide the very factors of relative permanence we are seeking. Even if some of the buildings may be discarded as rapidly as those by commercial establishments, we can at least find permanence and symbolic meaning in the land, places and relationships between these buildings. Nor are we limited to buildings alone, for public works also include the provision of utilities, highways, roads and other forms of transportation. The co-ordination and implementation of the movement systems discussed previously could also be achieved in this way.

If these various public works could be integrated into a strategic urban design programme, we would have a versatile tool for the implementation of many elements of the urban design framework. 'Capital design' would thus be used as an artful system for shaping and placing of public works in time and space for maximum encouragement and creative control of private development.

Crane considers that such generative works could be supplemented by what he calls platform works, demonstrating improved and practicable design standards, and multiplication programmes, facilitating the widespread use of new standards and techniques. These would act as a guide and a spur to the private city building forces.

The success of this approach will, of course, depend entirely on the degree to which the various government or public authorities can be brought into such a co-ordinated programme. While each department or institution takes great pride in its own projects or buildings, at present the chances of a common approach to design on the scale suggested seem very remote. Buildings for two different levels of government go up side by side without, it appears, the slightest consultation between the architects.

2) David Crane, "The Public Art of City Building", loc.cit.

Nevertheless an attempt will have to be made, for the urban design framework depends on the creative power of these public works for its eventual success. Some co-ordination into a common programme may become possible within the provisions of planning legislation once this is amended in South Australia. However, the only positive way would seem to lie in getting the various bodies interested by means of an architectural image, as suggested by Bacon which would vividly illustrate the symbolic strength and grandeur at the scale of the city, made possible by such a design oriented public works programme.

3. Process of Urban Renewal

The process of urban renewal, of adopting the city and its elements to changing needs is taking place all the time. The most important aspect of urban renewal is the comprehensive redevelopment of large areas of a city made possible by the need for improvement of its obsolescent parts.

The urban renewal process undertaken by public bodies has been maturing in recent years. Whereas initially it consisted largely of the planning and carrying out of individual projects in isolation, in the U.S.A. it is now being integrated with the general comprehensive planning framework of the city.

Urban renewal thus offers tremendous scope for implementation of the urban design framework, both in its redevelopment and conservation opportunities. The urban renewal process is, of course, basically directed by economic necessities and by its very nature involves factors of transience. But if we recognise these opportunities and create design objectives for them within the broader framework, we can at least enrich the visual character and qualities of the city. In some cases we may be able to use these projects for the establishment of more permanent visual symbols as well.

While the need for a comprehensive planning and design approach has developed in the public programmes of urban renewal, this has not yet been accepted in private redevelopment. Here we still find the individual owners replacing old structures with new ones on the existing sites in a piece-meal fashion. A vast amount of new development takes place, but the results are

disappointing - the new buildings are recognised, but are not related to others, existing inadequate sites and layouts are retained and the overall picture is one of confusion just as it was before redevelopment.

It is clear that a comprehensive approach to private redevelopment is also desirable and is often indeed necessary, particularly in areas where intense activities occur and are frustrated in meeting the needs of traffic and pedestrian movement by obsolete structures and layouts. Multiple ownership of small and inadequate sites prevents any meaningful redevelopment, and only by recognising the necessity to deal with larger site areas, under a single ownership, can any real solutions emerge.

With the acceptance of comprehensive private redevelopment, we would gain a further tool in the implementation of the urban design framework. With the redevelopment of areas containing, say shopping or commercial activities, we could attain a coherent visual expression of these groupings which could act as identifying points in the urban design structure of the city.

4. The Nature of Controls

In addition to the direct actions of the capital design programme and the opportunities created by the urban renewal process we will also need some kind of control or design review to fully implement the urban design framework. These will have to be applied to achieve co-ordination of the large scale projects involved in these actions, and also to instill some order and coherence into the various works of the Thousand Designers. While planning regulations have received quite a degree of acceptance, the question of design control or review is one of the most contentious points with the public, and particularly with architects.

What we should realise is that a form of "design control" already exists. All our regulations at present, such as zoning, floor area ratio, land plots etc. in fact influence and determine the shapes of our buildings before the architect has his say, and thus profoundly control the city's appearance. What we have not yet been able to do is to inject urban design considerations into these regulations that would allow a more creative shaping of the buildings of our cities. Thus the case for design control is

well founded but we must transform our regulations into something flexible and creative. Some possible ways of doing this within the framework of existing regulations have been suggested as follows :³⁾

- (i) Preservation - Some of the older parts of the city with a pervading urban scale are precious assets to the city. They should be insured against the threat of destruction, through policies of land taxation or road widening, by special protection measures designed to achieve their preservation and in some cases rehabilitation.
- (ii) Appearance and Design in Zoning - While generally zoning for appearance is not upheld by courts, 'special character areas' and 'historical districts' can be created under zoning ordinances.
- (iii) Special Site Controls - Every city has certain special sites, avenues or places, special in the sense that they are or could become outstanding features of the city and thus have public value. Groups of experts could be established to guide their development.
- (iv) Regulatory Measures in New Development - We must direct our attention to large-scale development control rather than individual building control. Any new development tangibly affects certain other areas and it should be made to relate to all the aspects which they affect. For example, highway construction should be accompanied by the creation of open space reserves by regulation to lessen its impact on adjacent areas.

5. Architectural Control of Large-Scale Projects

The implementation of the large scale projects which will form the key points of the urban design framework is not an easy task. As these are likely to involve many different architects, the problem is one of finding the right climate for creative design that will enable them to build sympathetically beside each other. It must also be borne in mind that in many cases the only precisely known factors will be general land use and circulation patterns and the desired density, and that the projects will be

3) A.I.A. Journal, "Urban Design Series - Article X - Regulations and Control", June 1964



completed over a long time span.

The earliest forms of control were the preparation of the set three-dimensional design of building shapes by the planner or project architect which the individual architects were required to fill in. This approach has been criticised and where implemented has invariably been a failure. Theo Crosby has said that in this process "where the planner fixes the position and form of the building without in any way being responsible for the architecture, the architect is reduced to merely filling in the pattern the way a child colours a drawing book. In this discrepancy the quality of wholeness is lost". Roger Montgomery⁴⁾ has suggested that the answer lies in a comprehensive process method taking the following form :

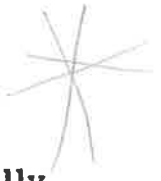
1. Preliminary Plan - Design objectives and controls are set forth and actions and procedures are devised. The preliminary plan deals only with broad aspects and should be flexible.
2. Design Plan - These are prepared in incremental but continuous fashion with varying levels of detail for each stage of the project, and may depart from the preliminary plan in response to changing needs.
3. Design Action - Each element of the project either follows the design plan or if alternatives are suggested, the design plan is used as a yardstick against which these are measured.

This would enable the planner or project architect to deal with broad design concepts and to exercise control over the individual architects, but at the same time allow them to suggest alternative solutions and thus express their ideas. The overall plan would be firm as regards basic design objectives, but would allow flexibility in detailed ones.

Kevin Lynch⁵⁾ has suggested that the structure of movement paths and urban spaces are probably the principal tools by which the visual form of large-scale and long-term projects can be shaped. This echoes Edmund

4) Roger Montgomery, "Improving the Design Process in Urban Renewal" A.I.P. Journal, February 1965.

5) Kevin Lynch, Site Planning, Cambridge, Mass. The M.I.T. Press, 1962, p. 107-110.

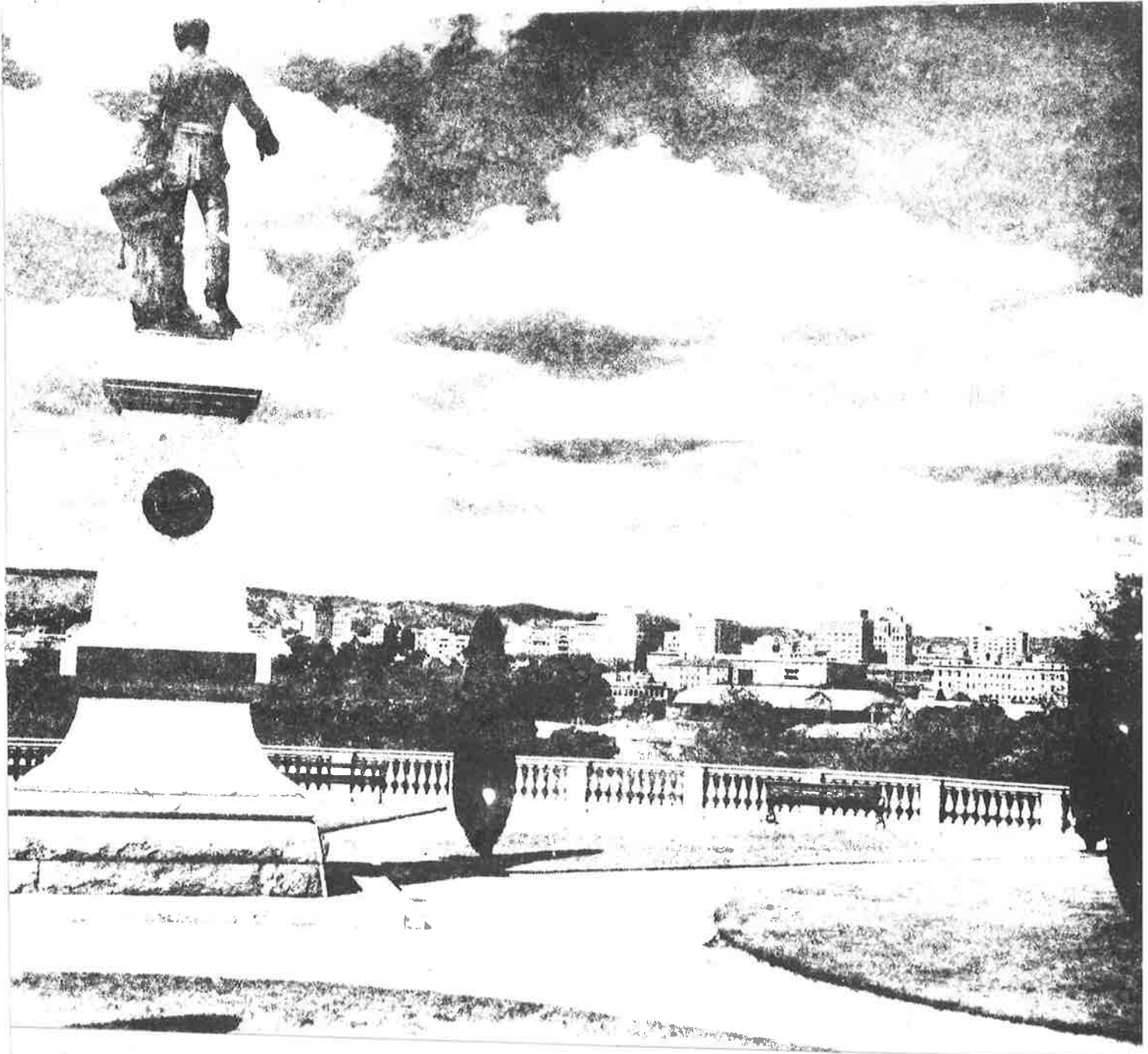


Bacon's idea of the formative influence of movement systems and generally confirms the view that urban space is the constant to which other elements can be related.

The first requirement, therefore, is the clear definition of the spatial form and character of the project, evolved from considerations of both vehicular and pedestrian movement. Design objectives for placement and shapes of buildings can then be illustrated with a view to conveying the broad concepts, while allowing flexibility in the architectural expression once it comes to actual construction. At times limitations may be placed on the scale, materials, colours, textures and details of the buildings to visually co-ordinate the various elements of the project. The control of design should be flexible enough to allow variations and alternatives in response to individual architect's suggestions or to necessary changes.

The procedure outlined above, with certain refinements of technique, could also be applied to the general co-ordination of the building works of the city. The generative nature of the movement systems together with bulk and daylight controls would predetermine building form to a certain degree. A further inclusion of some advisory directives regarding general character, materials, colours, etc., could lead to a greater unity of the buildings of the city, especially if the public at large could be persuaded in this direction by exhibitions, pamphlets, etc.

While all this suggests a single guiding hand, it is hoped that he would be more in the nature of a conductor of an orchestra, performing a work composed by the city itself and thus familiar to all his players, rather than a dictator of design playing his own tune.



|| HERE IS THE WATCHTOWER, THE PANOPTICON, THE HEADQUARTERS FROM WHICH
THE WORKING AFFAIRS OF THE GREAT SPRAWLING CITY ARE DIRECTED!!

HUMPHREY CARVER

||

THE HEART OF THE CITY



CHAPTER V

THE CENTRAL AREA OF THE CITY

1. The Heart of the City

In the cities of today, variously referred to as "Cities in the Suburbs" or the "Exploding Metropolis", we detect a questioning of the role of their central areas in the light of the city's new dimensions and complexity. The traditional attachment to these central areas, which were often emotionally referred to as "The Heart" or "The Core" has been loosened by the explosive sprawl of the metropolis. While we still admit that it is the core of the city, we wonder whether it is any longer the heart of the city.¹⁾

The answer seems to be that, although the central area may have lost some of its functions to the suburbs, in the general economic structure of the city, this strategic centre has become even firmer, more concentrated, and more valuable. It is the headquarters of the whole city. However, we should not allow its economic and functional importance to overshadow its other aspects.

J.M. Richards²⁾ has concisely expressed the symbolic significance of the central area - "At the Core, more than anywhere else, resides the personality that distinguishes one place from another and that fixes the nature of the place in the memory of the inhabitant and the visitor". He says that we must ensure that the essential personality is either preserved or transformed into a different, but equally vital personality.

This symbolic attachment to the core has been demonstrated in the rebuilding of the war-damaged central areas of Europe - they are massive testimonies to the persistent vitality of the urban centre.

1) Humphrey Carver, "Cities in the Suburbs", University of Toronto Press, 1962

2) C.I.A.M. 8, The Heart of the City, "Old and New Elements at the Core" by J.M. Richards

Leo Grebler³⁾ has remarked that the strong affection for the visible heritage of the past, its historical monuments, churches and treasured buildings has been intensified by the destruction.

In dealing with the problems of central areas we must always keep in mind the effect that our solutions will have on the core as a vital, lively and meaningful focal point for the whole urban area. Our solutions must be acceptable in terms of the visual and physical environment that will result. It will not be sufficient therefore to gather data, analyse it and statistically, predict that these are the trends and this is what the central area must be subjected to. We will also have to make value judgments about these trends, decide whether they are acceptable, and seek alternative solutions if they are not. As August Heckscher has said "A civilisation begins to manifest itself when men and women have begun to take thought about what it is they construct, and why, and to what end." If we do not do this we may indeed find ourselves with an impersonal and abstract nerve centre in place of the living heart of the city.

2. The Core Defined

In the study of central areas it is useful to differentiate between its various distinct parts and to define the core in the sense that it was discussed above. In their studies of the central business district, Horwood and Boyce⁴⁾ suggest the use of the core-frame concept as a tool to a better understanding of the central area.

The core is defined as the central part of the central business district and is characterised by the following properties - intensive land use, full site coverage, similarity of building types, upward growth, internal business linkages, pedestrian mode of transportation, very limited parking space. Its boundaries are definite and determined largely by internal factors of land use relationship. The core is devoted to people, paper work and parcels. In this

3) Urban Land Institute - Technical Bulletin No. 28, - March 1956, "Europe's Reborn Cities", by Leo Grebler

4) Edgar M. Horwood and Ronald R. Boyce, Studies of the Central Business District and Urban Freeway Development, University of Washington Press, Seattle, 1959

area of the greatest concentration of people the space is used predominantly for offices and retail trade but may also include civic uses. These uses may form internal functional sub-cores with distinct characteristics of their own.

The frame is differentiated from the core not so much by different activities as by the different attributes of these activities. The frame is characterised by less extensive land use, lower site coverage, dissimilar building types, outward growth, external business linkages, vehicular mode of transportation, generally adequate parking space. Its boundaries are not definite and are determined by external factors such as the quality of the surrounding areas. It usually expands into deteriorating residential areas, while good quality residential areas or natural barriers may arrest expansion in a particular direction. The frame is usually devoted to the following uses - car sales and servicing, special services, wholesaling and storage, transportation termini, light manufacturing and multi-family residential. These activities may be concentrated in a single area, diffused in several clusters or partially dispersed throughout the frame area. (Fig.7)

The Core and the Frame, because of their many linkages and complementary functions, together form the larger unit of the Central Business District, but they are nevertheless distinct and independent functional units.

Horwood and Boyce also point out other aspects of this concept. Their studies revealed that the horizontal extent of the core in different sized cities does not vary appreciably, the only difference being in the vertical scale apparent in visual height and bulk characteristics. This implies that the core does not expand but merely becomes more concentrated as city size and population increases.

They also conclude that parking garages are disfunctional in the core, in that they add to pedestrian-vehicular conflict and tend to break up the pattern of homogeneous land use within the core.

The core - frame concept is useful in the study and evaluation of traffic and goods movements, congestion, functional arrangements and linkages of land use, and space allocation for planning and redevelopment

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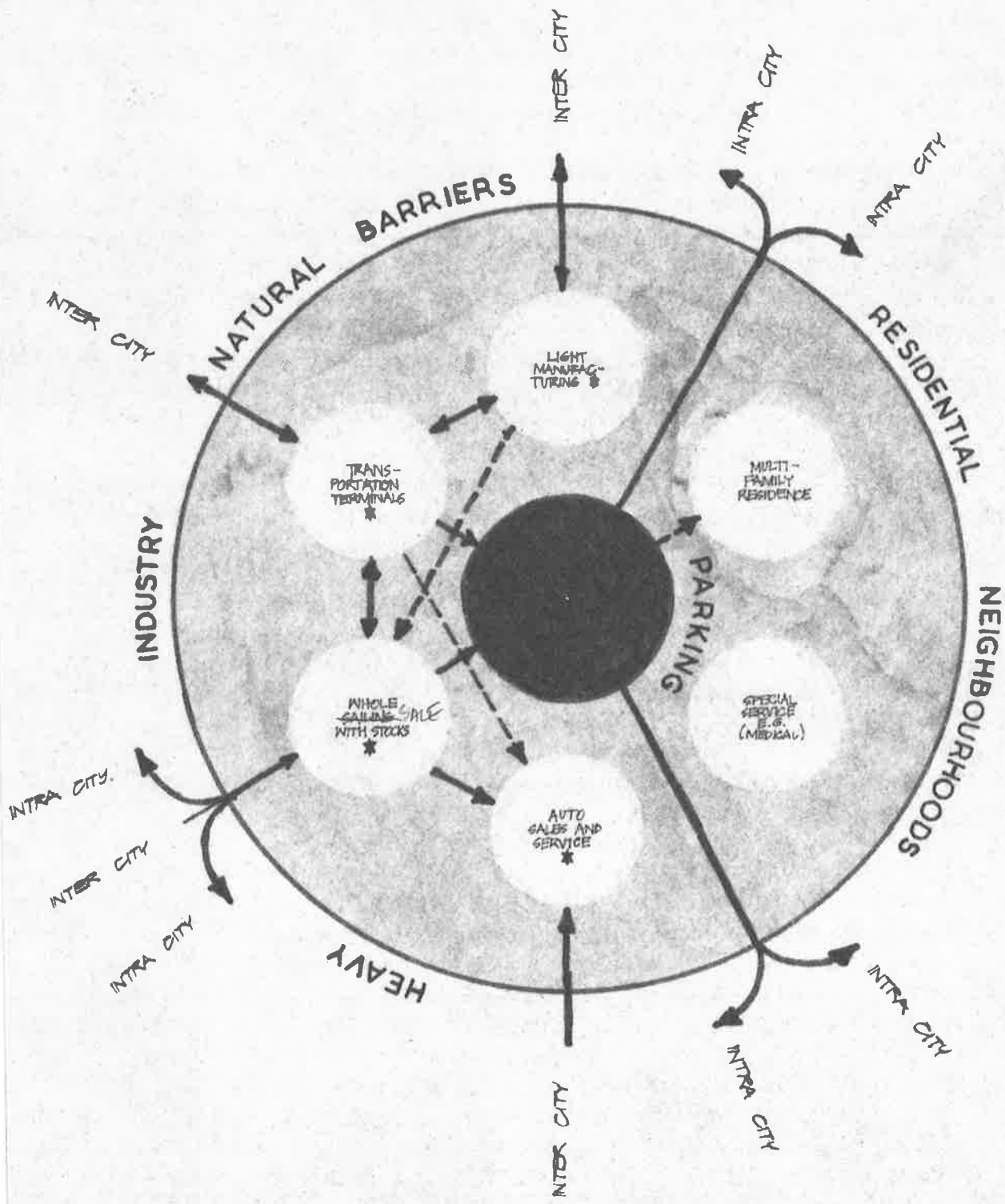







FIG. 7
CBD CORE -
FRAME CONCEPT

CBD CORE	
CBD FRAME	
PRIMARY GOODS FLOW	
SECONDARY GOODS FLOW INCLUDING WAREHOUSES	
	

purposes in the central area of the city. In particular it is the most important determinant in the route locations of the traffic system within the central area.

3. The Central Area and its Problems

The central area with its concentration of people and traffic, variety of land use, intensity of building, historic and civic interest, diversity of ownership and high land and property values is the most vital part of the city and, at the same time, one with the most problems.

3.1 Challenge of the Motor Car

First and foremost among these problems is the challenge of the motor car. The car threatens to disintegrate the very essence of the central area. As traffic flows increase, the city streets become congested. The streets are widened, more cars pour in and require parking facilities. Buildings are demolished to make way for parking stations, these in turn attract more cars and the call goes out for freeways. The results are evident in our cities of today - surrender of the streets to the car, forests of street furniture dedicated to the car, great gaping spaces in the city's fabric for freeways and parking garages. The pedestrian is left to make the best of what little environment has remained. As Ernesto N. Rogers has commented⁵⁾ - "The mistake has often been committed of destroying old centres in order to resolve banal traffic problems, because intensity of traffic has been confounded with intensity of life. But even the most alive crossroads will never be the Heart of the Community".

It has become obvious that the demands of the car are insatiable. While we should not, of course, ignore the importance and validity of the car, we must not, in our preoccupation with it, lose sight of other important considerations. We must remember that the central area is not primarily a place to which travel, but in which people work, shop, meet and sometimes live.

5) C.I.A.M. 8, The Heart of the City, "The Heart : Human Problems of Cities", by Ernesto N. Rogers

The Buchanan Report⁶⁾ indicates the approach that we should adopt. It establishes the importance of environmental needs in traffic planning and states that a solution of the problems in terms of accessibility alone will result in the destruction of the environment. The basic problem is the unsuitability of the present layouts of central areas for motor traffic. We must re-design the physical structure of our cities for the needs of the motor age, while at the same time recognising the environmental needs.

3.2 Loss of Retail Trade

Another problem in itself, and also in its influence on the traffic problem, is the loss of retail trade in the central area. The suburban shopping centres, with ample parking provision, are becoming more attractive than the central area for the shopping needs of the city's population. The immediate reaction of retail concerns in the central area is to call for the creation of more parking facilities and increased accessibility to the central core, which results in an additional load to the traffic problem. While they can exert only indirect pressure for road improvements, there is little to stop them erecting huge parking garages to serve their customers, particularly if these are not provided by the city itself. These garages contribute to the congestion in the city streets and inevitably destroy the environmental qualities of the shopping core and the surrounding area.

How serious, in fact, is this loss of retail trade in the central area?

Horwood and Boyce in their study confirmed that, as a city becomes larger, a greater percentage of retail sales inevitably occurs in outlying areas, while the more specialised sales and services become prominent in the core. However, as they point out, while the car has had its impact in this respect, the general process of commercial decentralisation has been in effect ever since the cities grew beyond the range of convenient walking distance from the central shopping area. Furthermore, it is considered very

6) The Buchanan Report, Traffic in Towns, H.M.S.O., 1963

unlikely that any physical improvements to the central area or the transportation system will exert a radical influence on this situation. Looking at the core as a whole it is evident that the loss in retail sales is more than compensated by additional office space.

We can therefore conclude that, while improved accessibility and more parking facilities may be needed to arrest a further decline of retail trade in the core, the real solutions would seem to lie elsewhere. One solution may be to increase the facilities for high density living adjacent to the core, which would thus provide more trade for the shopping core. But the best answer, however, probably would be to make the central area more magnetic, attractive, interesting, unique, lively and with character. Means and ways of doing this have been demonstrated and basically this implies the creation of attractive pedestrian streets or malls within the shopping core, where shopping would be as convenient and safe as it is in the suburban centres, but where the cultural heritage and other aspects of the central area would be an added attraction.

Max Lock⁷⁾ has said - "It is not enough to talk about traffic and trade, a third partner must be added, namely tradition, the qualitative factor that relates not only to the architecture of streets and buildings, but to local social and collective shopping and recreational habits".

3.3 Other Problems

The central area also suffers from factors of obsolescence - of buildings, of circulation and land use patterns. Even though its growth is generally vertical, it can rarely do this satisfactorily within the framework of the existing street and building lot pattern. In any case, there is a multiplicity of ownership of small and inadequate sites, which prevents any attempt at a comprehensive approach.

It also has problems of a social nature in that it is largely a place where people work and shop. In the daytime it is crowded, lively and busy - at night it is a dark, deserted place without any life. It is certain that many

7) Max Lock, "The Missing Half of Planning", R.I.B.A. Journal, January 1965

people would like to live in the city and they should be allowed to do so. Many of the deteriorating residential areas within the city provide opportunities for multi-storey flat development. The increase in the population of the central area would add to its vitality, trade and functional importance.

Many of the above problems suggest solutions involving a renewal or redevelopment of the central area to meet present day needs and conditions. In all this we must ensure that redevelopment is comprehensive in nature. However, we should not ignore existing qualities, for they strengthen the sense of continuity between the past and the present, without which the core can become anonymous and dull. To destroy these, and to reorganise the area in a way foreign to the character of the area, is to de-humanise its personality and impoverish it.⁸⁾

4. Objectives and Policies for Central Areas

The Ministry of Housing and Local Government and Ministry of Transport in the United Kingdom have suggested certain objectives and policies to be followed in the planning of central areas,⁹⁾ and the following discussion is based largely on its recommendations.

The broad objective is to make the central area more efficient, convenient and attractive. Detailed objectives will emerge from a consideration of the following aspects :

Function - The present and future size and purpose of the central area must be carefully analysed. The central area is continually shedding, acquiring and re-arranging activities and it is important to appraise the needs of various activities in terms of land use requirements. The concept of the core and the frame is helpful in deciding where these activities are best situated. Activities requiring to be within the core may displace more marginal activities to the frame.

8) Max Lock, *ibid.*

9) Ministry of Housing and Local Government, Ministry of Transport Planning Bulletin No. 1, Town Centres, Approach to Renewal, H.M.S.O. 1962
 Planning Bulletin No. 4, Town Centres, Current Practice, HMSO 1963

Layout - The present relationships of land uses should be examined and defects noted with regard to intrusive uses, public transport facilities, accessibility, environmental conditions. Decisions have to be made about the intensity of development related to traffic capacity. The need and scope for re-shaping the present layout must be assessed.

Circulation - Traffic movement in the central area is inter-dependent with function and layout. The basic objectives must be worked out in terms of pedestrian and vehicular movement. A satisfactory solution to the traffic problems is fundamental and the primary objective is to segregate conflicting types and provide adequately for each. All modes of transport must be considered, and the question of parking must be assessed from both the demand and desirable capacity points of view.

Character - The character of a central area is a delicate and elusive quality, and requires sympathy and resourcefulness to ensure that it is not lost in meeting traffic needs and pressures of growth and renewal. Urban design considerations are indispensable in this respect.

Certain detailed objectives have emerged in recent planning policies for central areas and can be summarised as follows :

4.1 The Pedestrian Core - The concept of the central core as a place where people can walk about freely and safely is certainly not new, but one which has almost been destroyed by the impact of the motor car in the present century. Pedestrians in today's core have learned that walking is not something to be done for pleasure - the narrow sidewalks are too crowded, the sounds, smells and danger of traffic perilously near.

We have reached the stage where something as natural as walking has to be called "pedestrian circulation" or "mode of transportation" before its case is given a respectable hearing by traffic planners. It is, of course, the one transportation element that offers the highest degree of flexibility.¹⁰⁾ Because of this, it is ideally suited to the needs of the core with its

10) Robert L. Morris and S. B. Zisman, "The Pedestrian, Downtown and the Planner", A.I.P. Journal, August 1962

multiplicity and complexity of uses and activities. As Paul Ritter¹¹⁾ has pointed out, the chief criterion for design in central areas is the convenient and pleasant continuity of the pedestrian's routes and spaces.

The first requirement in this is the segregation of pedestrian and vehicular movement. This can take the forms of either horizontal or vertical segregation or a combination of both. A more limited form is segregation in time only, such as a street closed to traffic between certain hours. A limited amount of mixture of cars and people can be acceptable and is sometimes even desirable, but the pedestrian should always take precedence, and the vehicular traffic in such cases must be relatively slow.

The pedestrian routes and spaces must be well chosen and attractively designed in relation to their functions - quick movement, strolling, resting. The detailed design of the paths and spaces and its surroundings is also important.

Several mechanical aids for pedestrian circulation within the core can also be considered - moving belts, escalators, "pedestrains" (consisting of low, small, slow-moving carriages) and "carveyors" (moving belt with seats).¹²⁾

4.2 Transportation - The basic problem is how to enable the various transportation modes to reach the central area, bring people to it, deliver goods, etc. without dominating the area itself.

In recent planning literature it has been increasingly stated that only a balanced transportation system, comprising the private car and public transport, can serve the central area satisfactorily. Cities in the USA, which have placed too great a reliance on the provision for the private car, have often destroyed their central areas and are gradually recognising the need for an efficient public transport system.

11) Paul Ritter, "Planning for Man and Motor", Pergamon Press, 1964, p. 156

12) Paul Ritter, op. cit., p. 52-55

The basic considerations are as follows. Firstly through traffic must be directed from the central area. Public transport needs to get as close as possible to the central core, as their termini are key factors in central area planning. Private cars need to get close to the core, but do not have the special requirements of service traffic, which requires direct access to buildings.

Planning should proceed from a consideration of environmental areas. The central core can be regarded as one such area containing several smaller environmental areas. The roads that serve these areas should be arranged in a hierarchial structure of distributor and access roads.¹³⁾ The location of the boundaries of the environmental areas must be carefully considered to ensure that pedestrian circulation within them forms a continuous system.

It has not and will not be possible to provide for all potential car traffic in most cities. Some traffic, such as the cars brought in by central area workers and parked all day, is obviously non-essential in the functioning of the central area, and this traffic can be reduced. It is only when a decision has been reached on the acceptable level of optional vehicle use in the central area, that traffic planning can be worked out.¹⁴⁾ The capacity for optional vehicle use will then determine how much and what form of public transport will be necessary.

Great skill and imagination must be employed in the planning of the network of pedestrian and vehicular circulation in central areas. It involves thinking in terms of buildings and movement paths together as constituting the basic material of cities.¹⁵⁾ Buchanan calls this "traffic architecture" and the concept is somewhat similar to Bacon's simultaneous movement systems as determinants of building form. The complexity of the transportation network will require varied solutions and will inevitably involve multi-level solutions especially in the crowded central area, and thus implies a three-dimensional approach to the whole question.

13) The Buchanan Report, op.cit., p.44

14) A. MacEwen, "The Redevelopment of Central Areas in the Light of the Buchanan Report", I.T.P.I., January 1965

15) The Buchanan Report, op.cit., p.46

4.3 Parking - Basically there are five kinds of parking to consider in central areas.¹⁶⁾

- (i) Shoppers and visitors short-term parking - from a functional point the most important.
- (ii) Workers long-term or all-day parking.
- (iii) Service and delivery vehicle parking, which should be provided within the premises.
- (iv) Residents' parking if there are multi-storey flats in the central area.
- (v) Evening entertainment parking which could use (i) or (ii).

Parking estimates, based on how many motorists would like to park in the central area, are relevant only if the central area is planned for full use of the private car. In most cities this appears unlikely and hence the provision of parking becomes a matter of deciding how many people are best provided for, by which kind of parking, in what position and for how long. The decisions should be made with these considerations in mind :

- (i) How much total parking space and associated road can be provided without ruining the central area?
- (ii) What percentage of this shall be for commuters and shoppers?
- (iii) Where therefore are the strategic places for the parking?
- (iv) How does this fit in with existing road capacities and proposals?

Each city must establish a parking saturation figure related to the traffic capacity of roads and the environment desired. John Brierley¹⁷⁾ has calculated that, if there is no restriction or limit on the parking places to be made available, then it will mean that after allocating land for roads and public open spaces, a quarter of the area of land available for development will be for buildings and three-quarters for car parking. Something like this situation already exists in Los Angeles where two-thirds of the central area is devoted to parking and roads. The provision for parking must not get beyond the acceptable saturation point no matter what the study of parking demand indicates.

16) Paul Ritter, op.cit., p.162

17) John Brierley, Parking for Motor Vehicles, C.R. Books Ltd., 1962, p.17

The parking areas must be strategically placed. Hitherto only the parkers' convenience has been emphasised. It was mentioned earlier that parking is a disfunctional use within the core area, and thus it needs to be sited where it will not create 'dead' spots. Long-term parking is best provided directly off the inner distributor road and preferably outside the core area itself. Short-term parking may need to be closer to the core itself, and usually there is pressure for it to be located as close as possible to the shops themselves. This trend should not necessarily be accepted. Even short-term parking can be placed further out if some form of mechanical pedestrian movement system links the parking areas to the core. If it is considered essential to have parking within the core itself, some form of multi-level solution is preferable, where shopping or other activities occupy the ground floor. A better solution in the long term, of course, would be to place all shops above the parking level and this may be achieved in multi-level solutions made possible by comprehensive redevelopment.

4.4 Buildings, Land Use and Layout - Changes in the layout of central areas and the growing complexity of uses are introducing new ideas on function and design.

The land use pattern can be arranged in two different ways - the uses can be either evenly distributed or concentrated in functional groups. The even distribution has the advantage of distributing traffic and creating a maximum of variety and interest. The other method accentuates intensity, compactness, concentration and visual impact. The existing land use pattern will affect the distribution to a certain degree, and it will usually consist of some form of aggregation in functional groups. The main objective should be to express and reinforce the individual character of each of these groups and areas, but at the same time to allow them to overlap and create strong linkages between them, so that as a whole, they form an intense, diverse, yet ordered central area.

As a result of the pressure of land values and the complexity of uses, new building forms are developing. These often take the form of multi-level schemes with mixed development. A new scale in the redevelopment of central areas is evident in terms of site size, building masses and time.¹⁸⁾ Hugh Floyd in his study of building shapes in central areas,¹⁹⁾ considers that in today's central area the unit of development must accommodate on-site car parking and its access points, fire escapes, vertical circulation and various other services. Many of the existing sites in central areas are too small and consequently, to avoid congestion by developing these sites individually, they must be consolidated into a unit large enough to be planned as an entity. There is no generally accepted site size, but one acre is possibly a minimum, and the range is something like 1 - 4 acres for each unit of development. There is a tendency to think more and more in terms of superblocks of up to 20 acres of size.

Concurrently with this, the specific three-dimensional planning of development schemes has also greatly increased in scale and comprehensiveness. A new scale is evident also in the time span of projects, which may vary from 10 - 20 years and even longer.²⁰⁾

This new scale has been received with reservations as regards its human and social implications. The large scale of new development, especially where clearance is involved, is liable to de-humanise the city and to wipe out its interesting older sections. Much of it is too uniform and dull.

It is obvious that existing site sizes restrict the orderly development and growth of cities, and piecemeal re-development of these must give way to comprehensive redevelopment of larger areas. However, the design must be such that it respects human scale and provides the flexibility necessary to give successive generations the freedom to alter their environment.

18) Leo Grebler, "Reflections on the New Scale", The Town Planning Review, April 1963.

19) Hugh Floyd, Building Shapes in Central Areas, A.A. Bakema (Cape Town), 1963, Part I - "Investigations of Principle - Scale"

20) Leo Grebler, loc.cit.

Leo Grebler also comments on the lower building coverage in central area redevelopment as a result of more space being given to plazas, green areas and other open spaces and that this reduction in coverage is generally achieved by using taller buildings. With the increase of taller buildings it is essential to work out appropriate bulk and daylighting controls, in place of the existing arbitrary height and set-back regulations.

4.5 Living in the Centre - The need for again attracting people to live in the central area is becoming widely recognised. Residential development adds to the vitality, variety and interest of the area. The form of living it provides must be attractive, high density and truly urban in character. It can and should be integrated with commercial development to be of maximum value to the central area in terms of diversity.

Generally the opportunities for the introduction of residential uses into the central area will result from the redevelopment of older parts of the city which though obsolete in parts and eroded by intrusive uses, may still have a distinguishing residential character. The injection of the new development must be approached with sensitivity, the aim being to retain as much as possible of the existing character of the area. Charles Abrams has outlined the objectives of central area residential redevelopment as follows.²¹⁾

We must be careful about what we build and destroy and generally it is better to graft on to what is valid in the existing area, rather than to superimpose something. Our design for the area should provide maximum diversity of residential building types and freedom for choice. The new buildings and environment must "harmonise with the voice of the city", must give a feeling of belonging to its occupants and must have room for them to add something.. There must be intimate urban spaces for pedestrians within the area and strong pedestrian linkages to other parts of the central area. The project as a whole should add to the diversity of the city and to its urban design qualities.

21) Charles Abrams, "Criteria for Urban Renewal", Arch. Record, May 1962

5. Overall Plan and Urban Design Framework

All the elements and objectives of central area planning must be co-ordinated in a comprehensive plan. The need for a broad concept of totality must be constantly realised. The individual project approach is doomed to failure whether it applies to buildings, transportation or land use. These things constitute the necessary foundation and base upon which the plan is built but they are nothing more than this. The plan must co-ordinate and bring them into a living, vibrating, evolving, constantly changing process.

The elements and objectives discussed above involve thinking of the city in terms of three dimensions and also in time. In addition to the master plan therefore, an urban design framework embodying all these considerations is essential in the planning of central areas.

CHAPTER VI

THE CITY OF ADELAIDE - HISTORICAL ASPECTS

1. Factors in the Founding of Adelaide

Geoffrey Dutton¹⁾ has said that "the foundation of South Australia exemplifies that stress between the practical and the ideal which in some persons can be exasperating, in others admirable; which can lead to a prosaic rigidity, or to a fertile inventiveness".

On the one hand South Australia was to be the first planned colony in Australia as distinct from other colonies, which started off with convict shipments. On the other, it was based on Wakefield's principles of land sales and organised emigration, the proceeds gained from the sale of lands being used for an emigration fund. Thus it was not merely a utopian or ideal experiment in colonisation but one which depended on its success on very practical economic considerations as well.

The birth of the City of Adelaide was thus also a direct result of these two factors. The men concerned with the enterprise, no doubt, had a vision of it as the capital of the prosperous future colony; at the same time they were anxious to have the site of this dream-city fixed and laid out on the ground as soon as possible in order to proceed with the sales of land.

The selection of the site and the laying out of the town were entrusted to Colonel William Light, a man whose life "was almost always most successful when it was strenuously employing both his imagination and his practical ability."²⁾ His instructions from the Board of Commissioners were : "When you have determined the site, you will proceed to lay it out in accordance with the regulations for the preliminary sales of colonial lands. You will make the streets of ample width and arrange them with reference to the convenience of the inhabitants and the beauty and salubrity of the town;

1) Geoffrey Dutton, Founder of a City, F.W. Chesire (Melbourne) 1960, p. 145

2) Dutton, *ibid.*

and you will make reserves for squares, public walks and quays. The site of the principal town will be determined, and the plan of the town mapped, and exhibited for public inspection. "

Even in these instructions we detect the stress between ideal considerations and practical ones. It has been said that, what Light was asked to do, was to lay out a business, mercantile or traders' grid as fast as he could.³⁾ It is indeed fortunate that Colonel Light was able, in the difficult circumstances and in the short time allotted, to unite all these demands into a coherent, ordered and imaginative plan.

2. The Original Plan

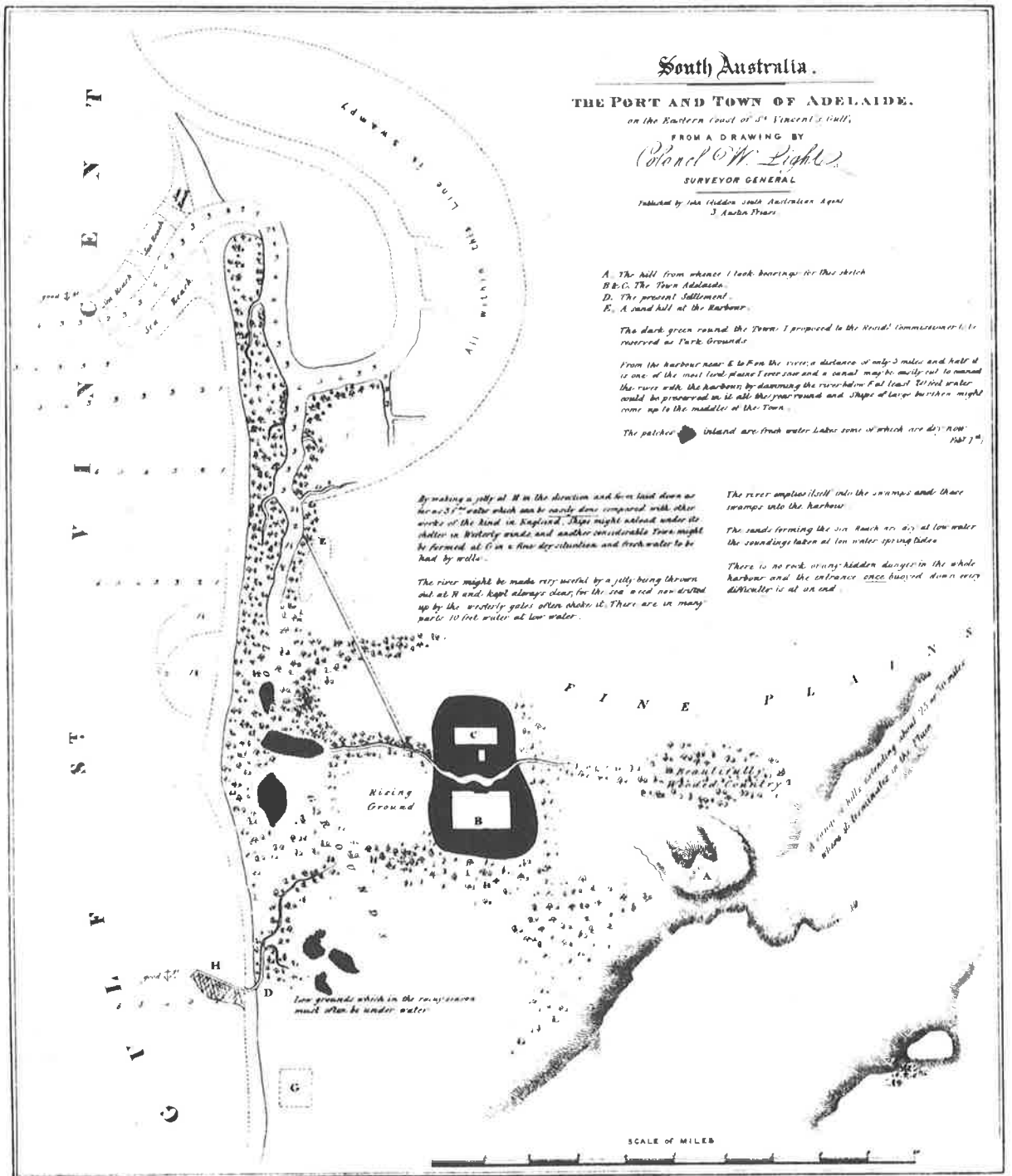
Light made his final choice of the site on 31st December 1836. By 10th March 1837 the survey of the town was completed, and on 23rd March 1837 the preliminary purchasers of land could choose their lots.

The site was chosen near the River Torrens because it assured water supply to the town and offered a pleasant elevated situation. The town was divided into two parts - North Adelaide and Adelaide separated by the River Torrens.

Both parts were laid out with a rectangular street grid, but were carefully adapted to the topography. The eastern side of Adelaide was stepped to follow the contours. Even more noticeably, at North Adelaide Light departed from his original concept of a rectangular block parallel to the Adelaide block shown on a sketch plan of 7th February 1837. (Fig.8) Instead he re-arranged this part into three separate blocks related to the character of the land and joined them together in a rather irregular manner. His final plan for Adelaide is shown in Fig.9.

The regular grid was relieved in its severity by these modifications and also by the provision of open spaces in the form of squares. One square was provided at North Adelaide, while at Adelaide there was a symmetrical arrangement of four squares together with a larger central square. It is clear that the latter was meant to be the principal square in the heart of the

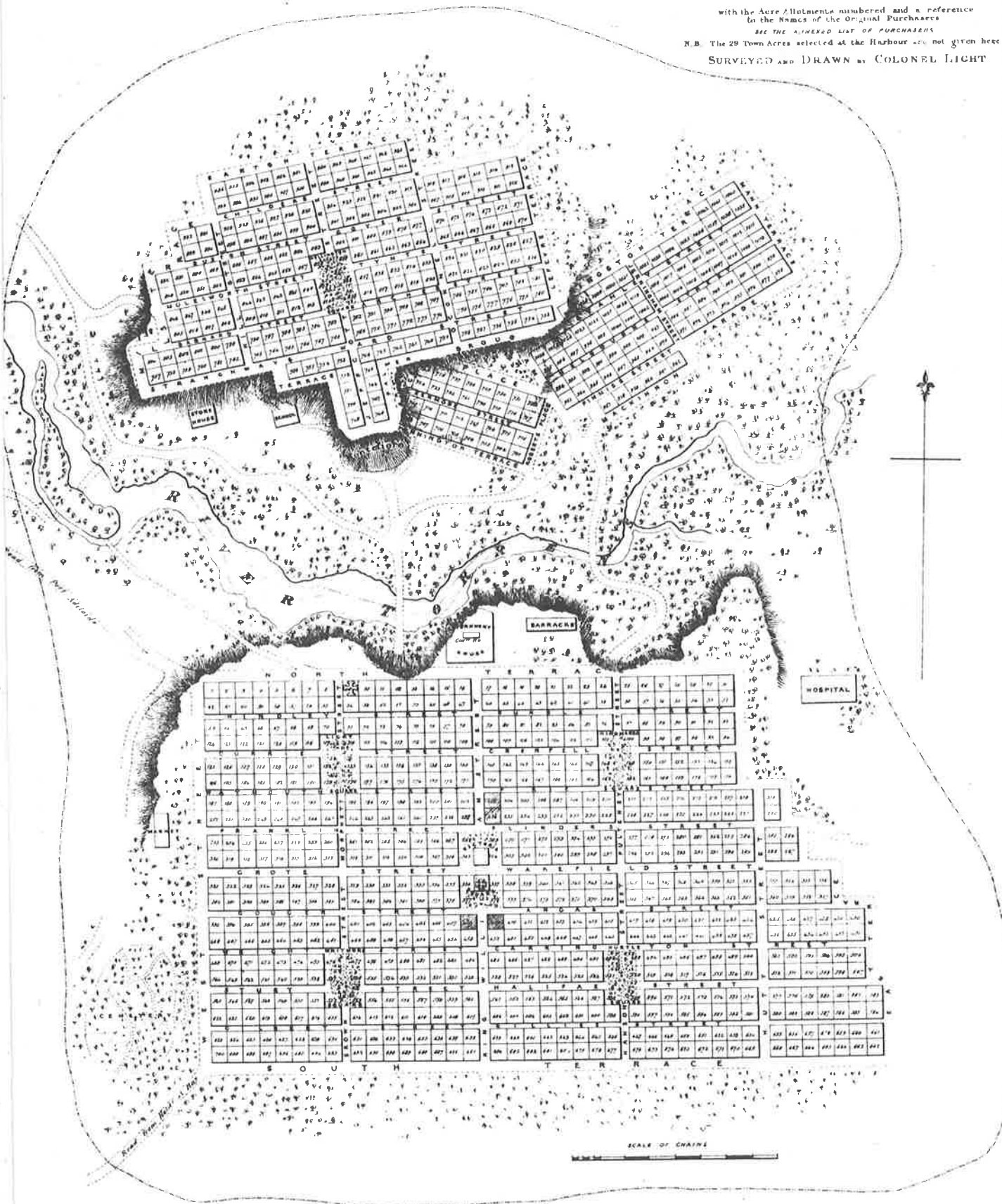
3) F.D.W. Van Zyl, "Adelaide and the "Gridiron" Plan in History", Architecture in Australia, June 1963



8. THE PORT AND TOWN OF ADELAIDE

Plan of THE CITY OF ADELAIDE. IN SOUTH AUSTRALIA.

with the Acre Allotments numbered and a reference to the Names of the Original Purchasers
SEE THE INDEXED LIST OF PURCHASERS
N.B. The 29 Town Acres selected at the Harbour are not given here
SURVEYED AND DRAWN BY COLONEL LIGHT



9. THE CITY OF ADELAIDE

future city. Light even showed the location of a Cathedral at the southern end of the square which would be visually linked down King William Street to Government House placed across its northern end.

Both parts of the town were separated and surrounded by a belt of parklands about half a mile in width, which thus formed a boundary to the town as definite as any of the mediæval city walls.

Thus Light fulfilled his given task, he laid out a "trader's grid", but at least he did this with "fertile inventiveness" rather than "prosaic rigidity". It may not be a perfect grid (it has been criticised for its lack of north-south streets) but it is an imaginative one, and one which avoids the sterility of many examples of gridiron layouts. With some speculation, we may today regard it almost as a form of urban design framework; the sequence of Cathedral - Government House certainly indicate that Light was concerned with more than a two dimensional plan.

In the following discussion we will therefore consider how this original framework has adapted itself to the growth and change of the city since its founding, taking into account only those factors which are relevant to such an appraisal.

3. The Development of the City

From the very first it was quite clear that the city would not develop quite as Light had perhaps hoped. The first settlers inevitably located themselves near the River Torrens, the only source of water supply, and not near Victoria Square.

Other important factors that influenced the early development were the roads connecting to Holdfast Bay, the first landing place, and to the Port at the south west and north west corners of the city and the position of the connecting ford and bridge to North Adelaide west of the present King William Road. All these tended to attract settlement to the north west part of Adelaide.⁴⁾

4) A. Grenfell Price, The Foundation and Settlement of South Australia 1829-1845, Chapter VIII



No. 12. Distribution of houses in Adelaide, 1842.
 Reduced from a map by G. S. Kingston.

The shaded areas represent fairly close settlement, the dots single houses. The thick black lines show the evolution of secondary streets, not created in Light's original plan.

10. DEVELOPMENT OF ADELAIDE TO 1842

By 1842 this pattern was already quite evident (Fig. 10) and the centre of gravity was thus firmly established north of the geographical centre at Victoria Square. The shopkeepers also naturally preferred the crowded, narrow Rundle and Hindley Streets and the retail activities anchored the pattern of settlement .

The communications with North Adelaide posed considerable difficulties in the early years. Light had indicated two roads linking the two parts of the city as shown on his original plan. The first bridge was built in 1839 roughly in the position where Light had shown his western road. In 1842 the Frome Bridge was built opposite Pulteney Street. King William Road was soon formed as an extension of King William Street and a bridge was constructed in 1843. These were subsequently destroyed by floodwaters, but the pattern finally became established with the building of more permanent bridges in their present locations as follows - Adelaide Bridge in 1856, Victoria Bridge in 1869-70, Frome Bridge in 1878.

Communications with the developing townships and villages on the other side of the parklands demanded the creation of several roads through the parklands. In 1856 the railway line to Port Adelaide was opened and the Railway Station became an additional factor in attracting and consolidating development in the northern half of Adelaide.

A description of Adelaide in 1861⁵⁾ mentions that Hindley Street had lost its prominence as the retail trade centre - "the current had flowed eastwards and the corner of Rundle Street and King William Street was now the heart of the business portion". Two factors may have contributed to this eastward shift - the location of the railway station, which may have attracted other uses and thus discouraged retail trade, and the development of townships on the eastern side of the parklands. Shops, warehouses and houses were generally concentrated north of Pirie Street. North Adelaide had

5) J.J. Pascoe - History of Adelaide and Vicinity, Hussey & Gillingham, Adelaide, 1901, p.137-8.

become a "favourite place of residence of the wealthier people" due to its attractive sloping land. Even at this early date the present day pattern is apparent in Pascoe's description - retail trade in Rundle and Hindley Streets, offices and banks in King William Street, Government offices adjacent to Victoria Square, warehouses in Grenfell and Currie Streets, churches in Wakefield Street, medical offices in North Terrace, breweries and mills south of Victoria square, handsome residences along South Terrace.

Consideration of these factors serves to confirm the adaptability of Light's original framework to the changing or unforeseen patterns of land use. Until this point it required very few alterations and consisted mainly of the introduction of smaller secondary streets within the main regular grid.

However in its urban design aspects the framework had already lost some of its shaping force and was to lose even more in later years. This involves a consideration of the five squares in Adelaide.

With the early removal of the Government House site further east along North Terrace, Light's conception of its axial relationship along King William Street to the Cathedral in Victoria Square was destroyed. However Victoria Square itself could still have become a very significant urban space framed by public buildings at the northern and southern ends and dominated by the Cathedral set within it. However, this possibility was also denied, when in 1885 the Bishop of Adelaide's claim to the one acre site within Victoria Square was rejected by the Supreme Court on the grounds that the square was deemed to be a public open space.⁶⁾

Ever since those days the main concern of the people who have been and are responsible for the public squares in Adelaide, has been merely to retain them as "reserves" for the enjoyment and recreation of its citizens without recognising their potential significance as urban spaces.

All the squares were originally shown without any bisecting roads, with the exception of Victoria Square which was bisected by Grote and Wakefield Streets. As early as 1858 moves were made by the City Council

6) Thomas Worsnop, History of the City of Adelaide (1836-1877), 1878

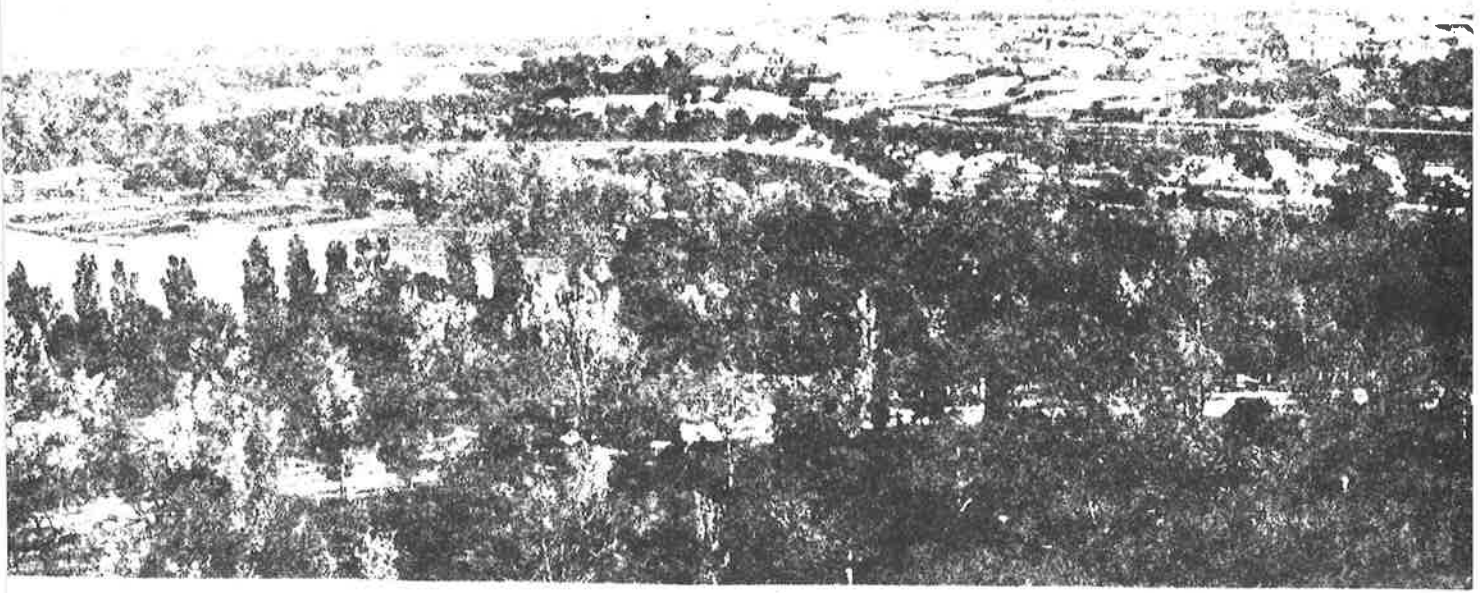
to open roads for traffic through the four smaller squares. This was not proceeded with, because the Attorney-General advised that this could not be done for the same reasons that applied to the Cathedral land.

By 1887 the smaller four squares were still intact but King William Street had been opened up through Victoria Square. One by one bisecting streets were introduced in Hindmarsh, Hurtle and Light squares. By these actions the significance of the squares as potential elements in the urban design structure were considerably diminished. However, the squares were at least thickly planted in contrast to their generally bare appearance today.

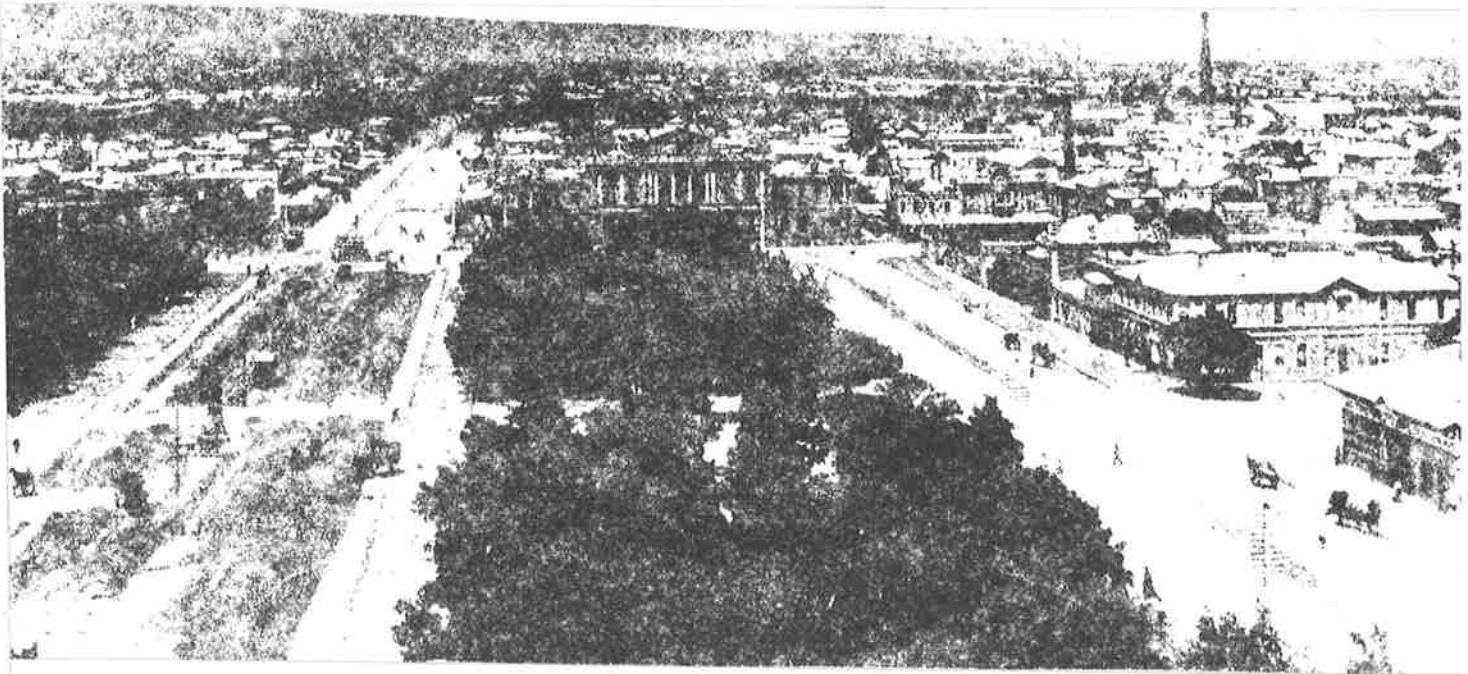
Victoria Square also attracted a significant number of public buildings such as the Supreme Court, Police Building, Treasury Buildings, G.P.O., and Government offices (at present used by the E. & W.S. Department). Until the erection of higher buildings, these served as quite a satisfactory frame to the sides of the square, although the square, of course, was too vast to talk of any space enclosure by this frame. But it formed quite an attractive civic grouping of buildings; the heavy planting of the square in the four sections contained by the roads, provided a contrast to these buildings and reduced the overwhelming openness of the space. (Fig. 12) The substitution of ornamental planting and the increase in motor traffic destroyed whatever character the square possessed in those days.

The parklands - the "green wall" of the city - were also reduced in their effect as a result of the destruction of their continuity. While Light did show more Government buildings set in the parklands, he certainly did not expect their general abuse for buildings and uses of various kinds. We can only regret that succeeding generations allowed such flagrant violations as the Railway land and M.T.T. and E. & W.S. depots to occur. The thickly planted character that the parklands possessed earlier has also been lost. (Fig. 11)

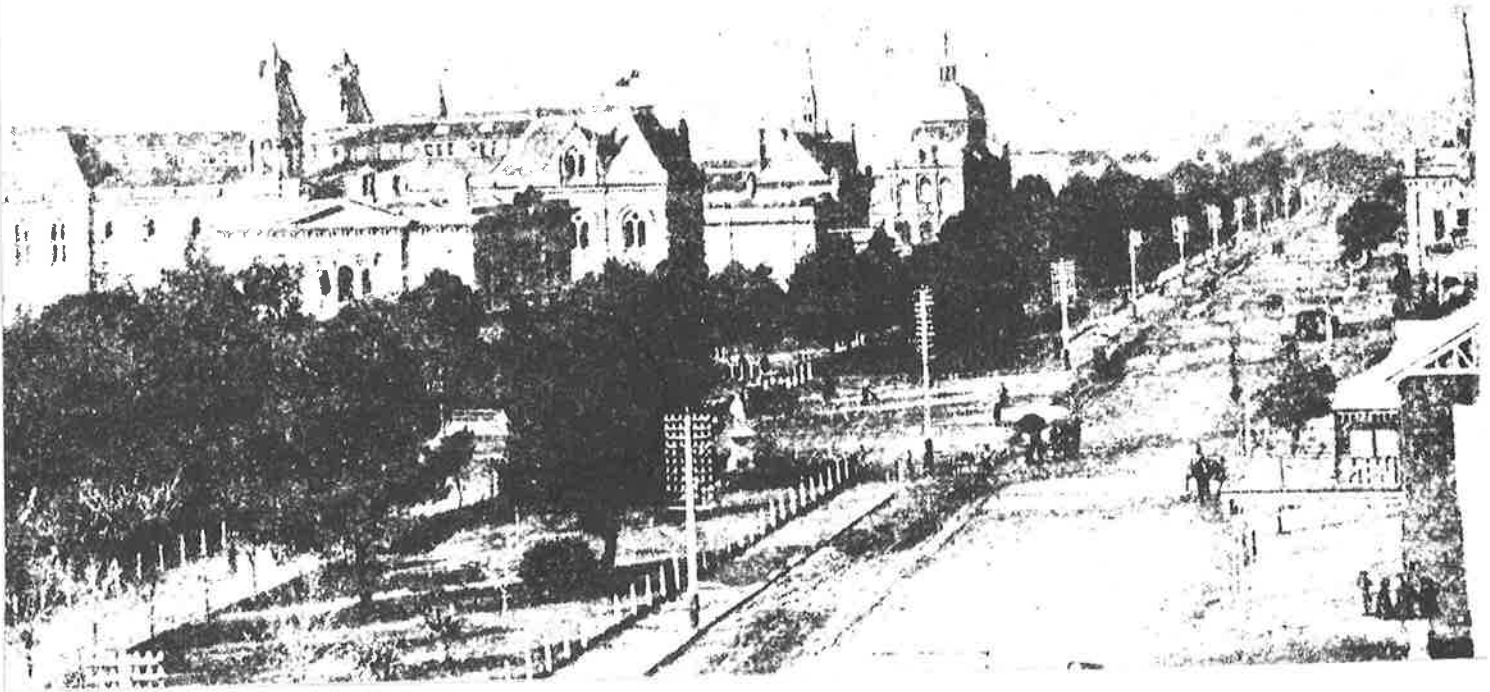
There are some things on the credit side also. While one may still think that the original parklands on the northern side of North Terrace should not have been used for the erection of public buildings, one must



11. ADELAIDE FROM MONTEFIORE HILL - 1908



12. VICTORIA SQUARE - 1908



13. NORTH TERRACE - 1908



14. KING WILLIAM STREET - 1908

admit that we have been adequately compensated for any loss of parklands' continuity by the acquisition of a magnificent and unique boulevard. This character of North Terrace already emerged in the early part of this century after the main public buildings had been erected. (Fig. 13)

Similarly King William Road, with the completion of the Cathedral at its northern end, was established as a significant approach route to the city. (Fig. 14)

4. Conclusions

From the above we can see that the original grid framework has reasonably withstood and adapted itself to the development and changes since Light first laid it out. However, somewhere along the way it has lost its potential force for shaping urban character and form. It is these qualities that we must seek to restore by allowing the squares and the parklands once more to become the determining factors of the framework as they were originally intended to be.

One further lesson may be learnt from this brief historical description - we can see only too readily how the shortsighted practical considerations of the day have, in the past, often destroyed many significant qualities of the original plan. We should therefore strongly resist any further short term solutions, and instead, seek to ensure that the "vision of Light", to which so many lip-service is paid, is truly retained as a framework for future development.

CHAPTER VII

THE CITY OF ADELAIDE - FACTORS INFLUENCING FUTURE DEVELOPMENT

1. Introduction

To date no planning at all has been done for the future development of the City of Adelaide. The Town Planning Committee of South Australia, in its Report on the Metropolitan Area of Adelaide in 1962, did not make any planning proposals for the City of Adelaide apart from designating Adelaide as the Central Business District and North Adelaide as a high density living area. It is rather difficult to consider a suitable urban design framework for its physical development in the absence of any firm planning policy. It is therefore proposed to briefly consider factors which are likely to influence the future development of the central area and to base the urban design framework on the broad implications arising from this analysis. The basic information used is derived from the above mentioned Report.¹⁾

2. General Factors

The metropolitan area of Adelaide is likely to continue its dominating role in the expanding economy of the State as the administrative and commercial centre, as the transport centre, as the principal consumer market and as the largest concentration of industrial activity.²⁾

The population of the metropolitan area, which was 652,000 in 1961, is predicted to reach 1,384,000 by 1991.³⁾

The City of Adelaide is expected to retain its importance as the centre of economic, social and political life of the metropolitan area, and of the State.⁴⁾

1) Report on the Metropolitan Area of Adelaide 1962 - Prepared by the Town Planning Committee, Published by the Government of South Australia

2) Ibid p.45

3) Ibid p.281

4) Ibid p.175

3. Population⁵⁾

The population of the City of Adelaide has decreased from 39,552 in 1921 to only 23,119 in 1961. About 20% of the population at present resident in the City of Adelaide are overseas migrants attracted by the availability of housing near the central area. However, the predicted population for 1991 is 31,000 - an increase of about 8,000 above the present population.

4. Land Use⁶⁾

4.1 Existing Land Use - The central business area of the City of Adelaide is considered to be that part bounded by North, South, East and West Terraces. This area contains the principal shopping and commercial activities, the main centres of entertainment and the principal government offices as well as industrial, warehousing and residential areas.

The main shopping and business core adjoins Rundle Street and the northern part of King William Street, between Victoria Square and North Terrace. Hindley Street forms a continuation of the Rundle Street shopping core. A secondary shopping area has developed to the west of Victoria Square in Grote and Gouger Streets in association with the Central Market.

The principal banks and commercial offices are situated in King William Street with secondary branchings into Currie, Waymouth, Grenfell and Pirie Streets and North Terrace.

The principal State Government buildings and the Commonwealth Reserve Bank building face Victoria Square although many departments are located throughout the city and some have transferred to locations in the inner suburbs.

Car showrooms, and the showrooms and warehouses of wholesale establishments immediately adjoin the central core. Industrial, storage and service establishments interspersed with sub-standard housing form the next grouping of uses. Towards East, South and West Terraces housing predominates, although many buildings are sub-standard and industrial and commercial activities are gradually moving in.

5) Ibid p.54, 281

6) Ibid p.175-180

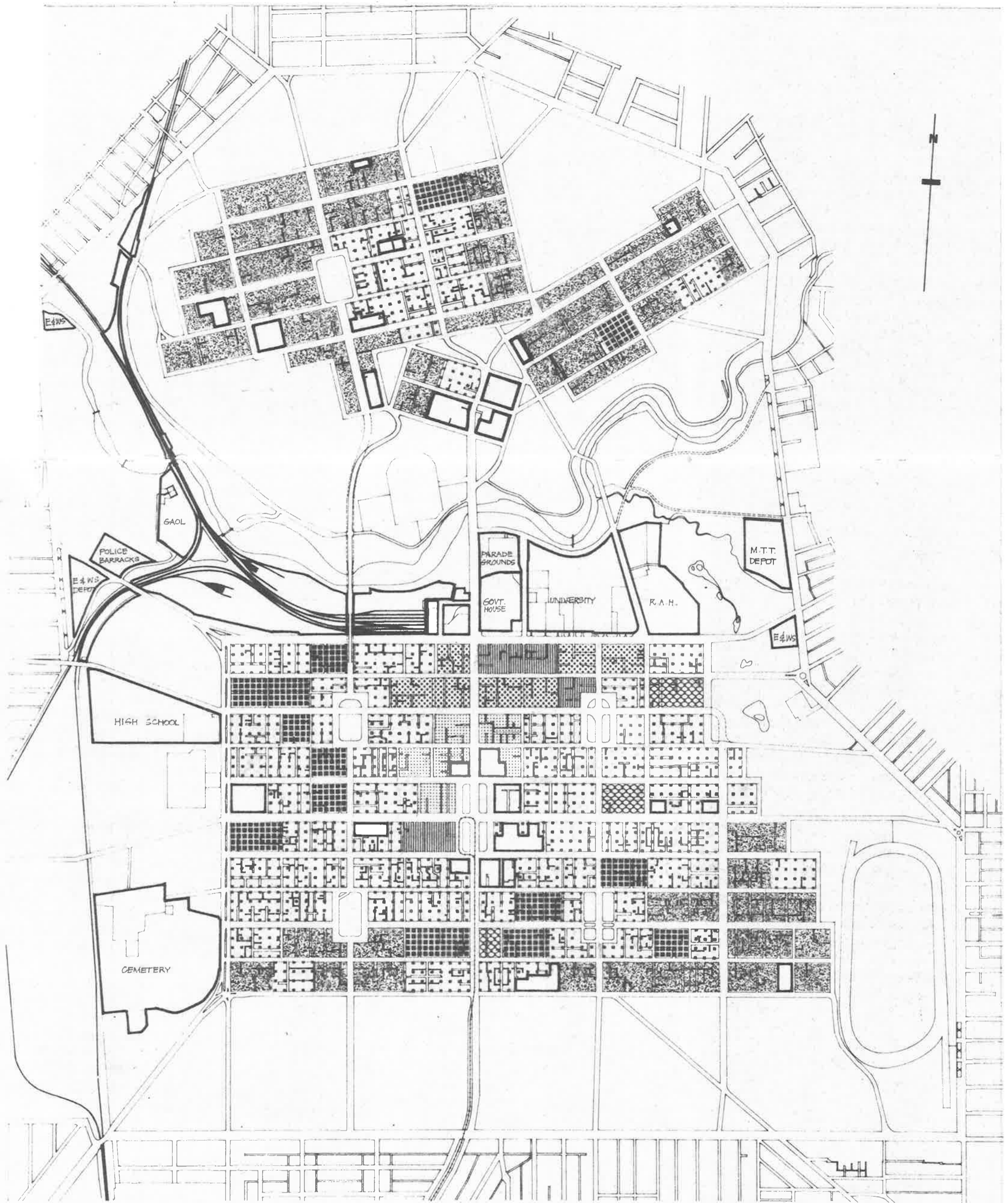







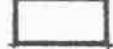


FIG.15 - PREDOMINANT EXISTING LAND USES - 1965

INFORMATION FROM A.C.C. LAND USE SURVEY 1965.

- | | | | |
|---|------------------------|---|-------------|
|  | RETAILING |  | INDUSTRIAL |
|  | COMMERCIAL |  | WAREHOUSING |
|  | RETAILING & COMMERCIAL |  | RESIDENTIAL |
|  | MIXED |  | PUBLIC USES |

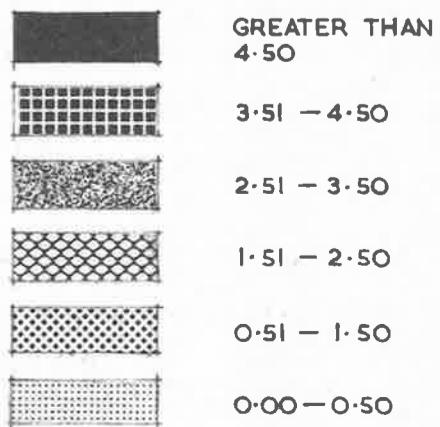


CITY OF ADELAIDE



FIG. 16—FLOOR AREA RATIOS — 1965

INFORMATION FROM A.C.C. LAND USE SURVEY 1965.



CITY OF ADELAIDE

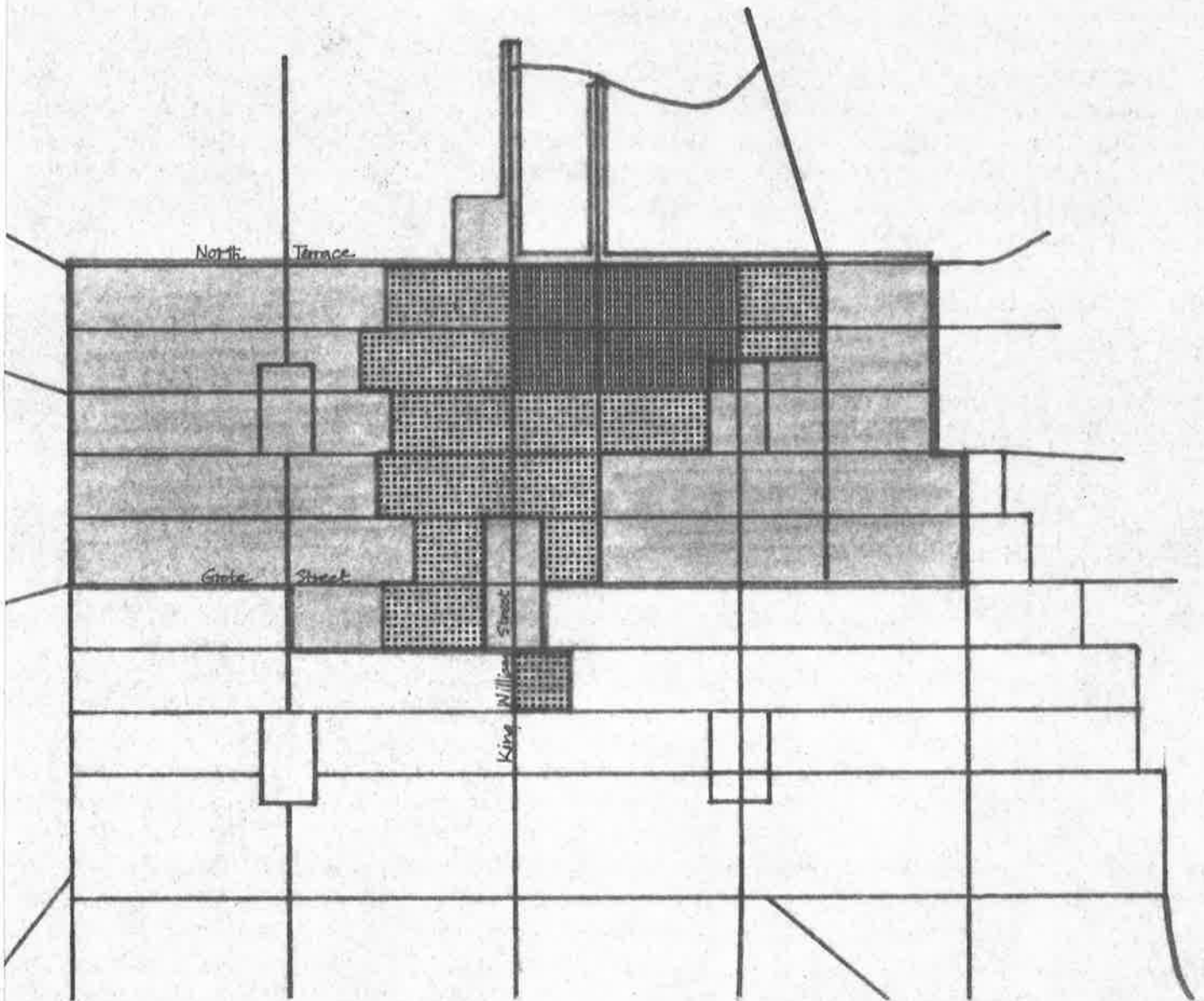


FIG. 17

DEFINITIONS OF
CBD AND CBD CORE



CBD CORE AS DEFINED FROM
1965 LAND USE DATA.



CBD AS DEFINED BY WILBUR SMITH & ASSOC.
IN "ANALYSIS OF PARKING NEEDS".



CBD CORE AS DEFINED BY WILBUR SMITH & ASSOC.
IN "ANALYSIS OF PARKING NEEDS".

The Adelaide City Council carried out a land use survey of the City of Adelaide area early in 1965, and data regarding land use and floor area ratios was obtained. The predominant existing uses for each block were noted and are shown in Fig. 15.

The intensity of land use, expressed in terms of floor area ratio of each block, is shown in Fig. 16.

The core of the central business district shown in Fig. 17 has been defined by two criteria as suggested in the Report.⁷⁾ Firstly, the total shopping and private office floor space within a block divided by the site area of the block is greater than one and secondly, more than 50% of the floor space within a block is used for shopping and offices. About two-thirds of the shopping and office floor space in the central business area is situated in this core area. Other definitions of the core have been made as shown in Fig. 17.

4.2 Future Land Use - The following table shows the existing floor space and employment in the central business area in 1957⁸⁾ and the future estimated requirements in 1991.⁹⁾

Use	1957		1991	
	Floor Space square feet	Employees	Floor Space square feet	Employees
Office (private and Government)	6,959,000	42,000	15,670,000	94,000
Retail (including shops, hotels, motor vehicle sales and supplies)	7,541,000	21,000	13,400,000	37,000
Industry	3,489,000	15,000	1,160,000	5,000
Wholesaling and Storage	4,927,000	3,500	4,670,000	7,000
Other Uses (including health, education, cultural, entertainment)	3,248,000	3,500	6,360,000	7,000
TOTAL	26,164,000	85,000	41,260,000	150,000

7) Ibid. p.175; 8) Ibid. Table 53, p.175; 9) Ibid. Table 54, p.178

The suggested floor area ratios, and the net and gross land requirements of these uses in 1991 are shown in the following table.

Use	Proposed Floor Area Ratio	Net Land Requirements	Gross Land Requirements
Office	5:1	73 acres	137
Retailing	5:1	61	143
Industry	0.75:1	36	84
Wholesaling & Storage	2:1	54	106
Other Uses	1:1	146	230
All Uses	2.5:1	370	700

This indicates that a total of 700 acres, or 80% of the central business area bounded by the terraces, would be needed to accommodate these uses. However this should not be accepted too readily. The Committee was dealing only with this area and no consideration was given to North Adelaide in these calculations. Since the Report's survey work was carried out, a substantial amount of commercial development and also cultural and educational development has occurred in North Adelaide, particularly in Melbourne Street. It can be expected that this development will continue and it would seem that some of the required acreage could be provided in North Adelaide. It will be assumed that 650 acres would be provided in Adelaide and 50 acres at North Adelaide. The remaining 25% of the central business area, it was suggested, could be used for residential purposes or unforeseen development and could be regarded as a form of reserve for the possible expansion of the central area uses after 1991. However, it would be in the best interests of the City to retain this area and the larger part of North Adelaide for residential purposes. The Report itself indicated that an area of 400 acres was needed for residential development to provide for the needs of the population in 1991.

4.3 Future Distribution of Land Use - It is expected that shopping uses may extend southwards from Rundle Street, and Grenfell Street, Gawler Place and Pirie Street could become more intensively used for shopping. An eastwards extension is also foreseen, due to the introduction of the north-south road in line with Frome Road, particularly if redevelopment of the East End Market is undertaken. The shopping area west of Victoria Square has received some impetus from the redevelopment of the Central Market site and can be expected to become firmly established as a result of office development in a southerly direction.

Commercial offices will probably expand mainly west of King William Street along Currie, Waymouth and Franklin Streets and can also be expected to be attracted to North Terrace east of King William Street. State Government offices will be consolidated in a new office block adjacent to the Reserve Bank and further such development may take place in future years at Victoria Square.

Other commercial uses requiring relatively large areas of land will probably be forced to move outwards from their present locations as a result of pressures by more intensive uses. Industrial uses are likely to become less important and a reduction in the area at present used is foreseen.

Residential uses in the form of multi-storey flats will be attracted towards the terraces overlooking the parklands, and to North Adelaide. Cultural and entertainment uses will require central locations, but these are not predictable. It is nevertheless very important to consider appropriate and suitable sites for these as they are likely to be important elements in the overall land use and urban design structure of the city.

5. Land Values¹⁰⁾

The most valuable frontages occur in King William and Rundle Streets. Values are also high for sites adjacent to the core and along King William Street between Victoria Square and South Terrace.

10) Ibid, p. 175 and 177

Changes in land values indicate the trends in development quite clearly. The central core has increased in value more slowly than the city as a whole due to its established character and increases in value represent only a more intense development of existing sites. Values to the west side of the core have increased at a faster rate than those on the east and the whole of the southern part has also had a fast rate of increase.

Horwood and Boyce have commented on the high land values in the framed area of central business districts.¹¹⁾ The values rise because of the nearly central location of the land in this frame area and in anticipation of the future expansion of commercial activities. The deteriorating structures of the frame area and the relatively high land values encourage commercial development in preference to retention of these structures for residential uses. The frame area is particularly attractive for commercial establishments which cannot afford the high rents in the core area. These factors often profoundly influence zoning policy. There is a tendency for all highly valued land to be regarded as suitable for commercial development, and if an area is at present zoned residential, there is a strong pressure to have it rezoned for other uses. The area rezoned is not related to what would actually be required to accommodate the likely commercial uses, but is determined by the demands of the owners of this highly valued land, who wish to obtain the maximum return that commercial zoning makes possible.

6. Zoning Policy

The existing zoning by-law of the Adelaide City Council, besides being a very unsatisfactory form of zoning ordinance, also illustrates the trends mentioned above. (Fig. 18)

The most significant feature is that the larger part of Adelaide is zoned as factory area which permits almost any kind of development including residential. An amendment in 1958 has rezoned vast areas of former residential zones to commercial and administrative zones and it is apparent that this has not been based on any sound land use requirements, but clearly reflects the influence of high land values. As a result the

11) Horwood and Boyce, op.cit., p. 19

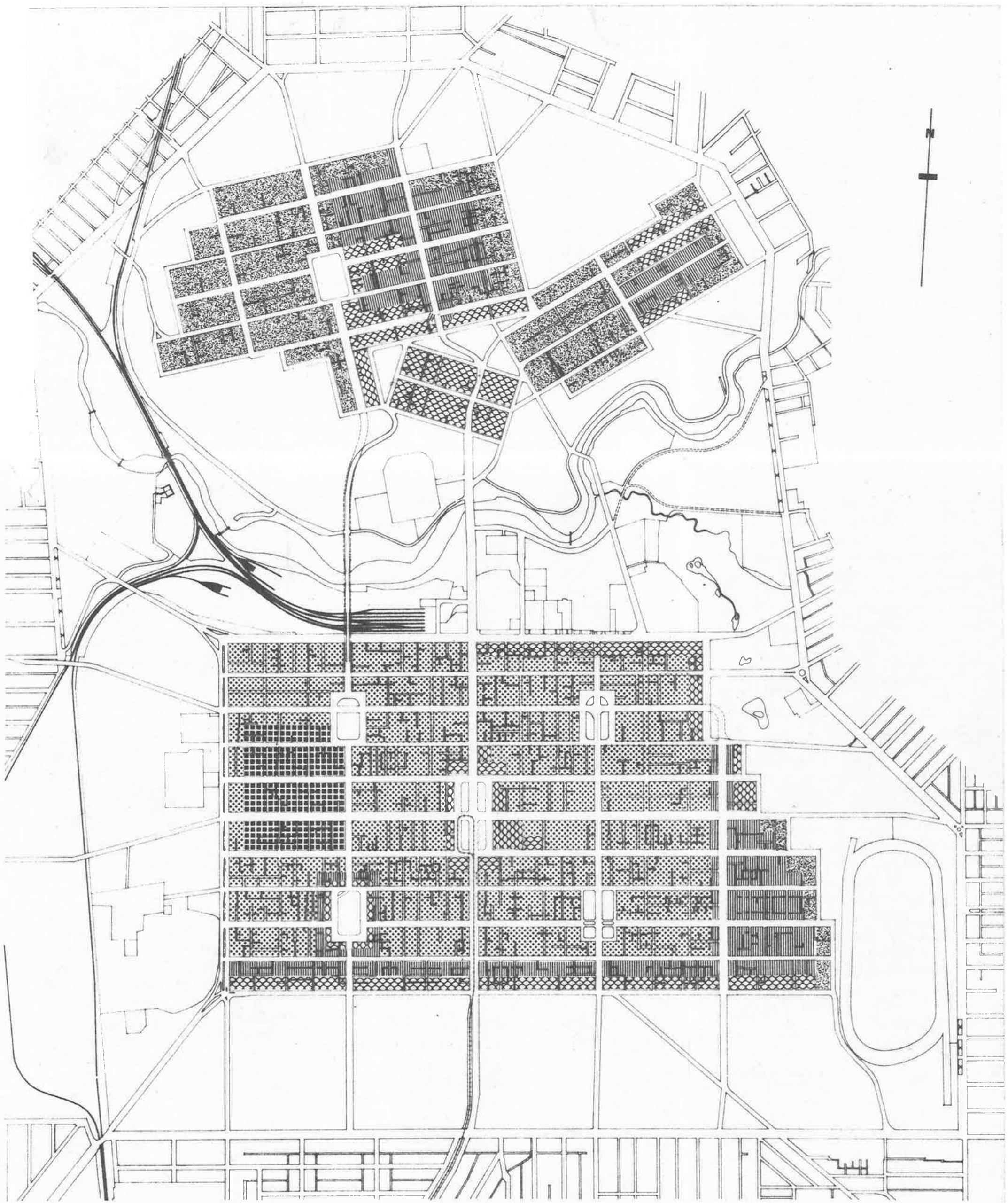







FIG. 18—EXISTING ZONING — 1965

-  INDUSTRIAL
-  COMMERCIAL
-  ADMINISTRATIVE
-  FACTORY
-  RESIDENTIAL



CITY OF ADELAIDE

residential zone in the City of Adelaide consists of a mere 12 acres in Adelaide and 188 acres in North Adelaide. These large areas zoned for other uses encourages scatteration of these uses throughout what are at present predominantly residential areas. This is neither desirable nor necessary. The residential areas which may be run-down become entirely neglected in the face of these intruding uses, whereas if they were protected by some zoning measures, attempts could be made to preserve and improve them.

It is clear then that a proper zoning ordinance must be worked out based on the realistic and predicted needs of various land uses. Its policy should be to separate non-conforming uses, while allowing mixed development to occur where this is desirable and can be controlled. For example, it is likely that South Terrace will continue to attract commercial offices, motels, institutions etc. and at the same time it is very suitable for residential purposes. Both these uses should be permitted but only in such a way as to cater adequately for the requirements of each use. A satisfactory solution may be to permit commercial development on the lower floors with residential uses above in multi-storey flats.

7. Control of Building Bulk

The intense development in central areas can lead to an excessive and undesirable concentration of buildings and people. The control of building bulk is essential to ensure adequate daylighting and ventilation for the adjacent buildings and the street. Control is also necessary because of the implications that the population housed in a building will have on vehicular and pedestrian circulation, public transport, public services and the environment generally. For instance, each building generates traffic in direct proportion to the number of people in the building and hence the bulk of buildings must be related to streets and their traffic capacities. From the point of view of urban design, control of bulk is important in achieving development that is in scale with other city development, both existing or

proposed. The regulations used to control building bulk, in fact, determine their shapes, especially if developers seek to fill the regulation envelope permitted to its maximum.¹²⁾ To sum up in the words of J.R. Dart¹³⁾: "Since central area buildings, in terms of bulk and use, have an effect on the city environment, they must be assessed for the nature and degree of this effect and their needs must be balanced against the needs of the community. Where conflict occurs, bulk and location controls, in conjunction with land use controls, must be available in adequate and legal form to ensure that the welfare of the community is not subjugated to the wishes of the individual".

Regulations which control building development merely by arbitrary height limits have proved inadequate. At present, under the Building Act, commercial buildings in Adelaide can have full site coverage and be built to a maximum height of 200 feet. Prof. R.A. Jensen¹⁴⁾ has said: "As things stand in Adelaide the 100% site coverage allowed in commercial buildings, with a fixed maximum height, is quite inflexible and therefore unsatisfactory in securing better town planning. The formulæ as applied to flat and other forms of residential development are at best arbitrary and somewhat incomplete in any effects they may hope to achieve, consistent with good town planning".

It is therefore imperative that a more satisfactory method of controlling bulk of buildings should be adopted in the City of Adelaide. For commercial buildings this could be achieved by reference to permitted floor area ratios, which could be related to the boundaries of the more detailed use zones. This would also need to be coupled with a daylighting code based, perhaps, on the use of permissible indicators similar to those evolved in the United Kingdom.¹⁵⁾ In the case of residential buildings a combination of floor area ratio, allotment area per dwelling and open space ratio controls would

12) Hugh Floyd, op.cit. Part I and II

13) J.R. Dart, "Bulk and Location Controls for Central City Buildings", A.P.L.J., April 1965

14) Prof. R.A. Jensen, "Density Control in Australian Cities", Australian and New Zealand Association for the Advancement of Science, 35th Congress, Adelaide, June 1961

15) D.H. Crompton, "The Daylight Code", The Town Planning Review, October 1955

provide a suitable method.¹⁶⁾

In some areas, in addition to these controls, it may be necessary to use a method of review similar to that adopted by the London County Council in connection with high buildings. They study each case on its individual merits and take into account such factors as the effect of the proposed development on existing development, the skyline or the landscape, its positive visual or civic significance in relation to the city, suitability of the site, the quality of design and materials of the buildings.¹⁷⁾

8. Traffic and Transport¹⁸⁾

The Town Planning Committee recommended the adoption of a traffic and transport system that would combine public transport improvements with a limited number of freeways, stressing the need for co-ordination of all forms of transport into a balanced system that was used to capacity to provide for the efficient circulation of people and goods.

As far as the City of Adelaide is concerned it was recommended that the following measures should be implemented :

Railways - The construction of an underground railway from the Adelaide railway station under King William Street and along the Glenelg tramway route to Goodwood, thus providing a rail service through the city. However, it was pointed out that, as this would be dependent on the electrification of the railway system, it is unlikely to be built until after 1981.

Freeways - An 8-lane freeway as a ring route along the outer edge of the parklands connecting to the various radiating freeways. It was mentioned that, while ideally the freeway should be closer to the business area, it was recognised that a route located near the enclosing terraces of the central area would mean sacrificing the attractive features of the parklands. The existing outer terraces would continue to provide access to property and also distribute traffic from the freeway to the local road system. (Fig. 20)

16) Report on the Metropolitan Area of Adelaide, op.cit. p.228

17) London Plan, Administrative County of London Development Plan First Review 1960, County Planning Report, The London County Council, 1960, Chapt. 17

18) Report on the Metropolitan Area of Adelaide, op.cit. p.262 & p.265-275

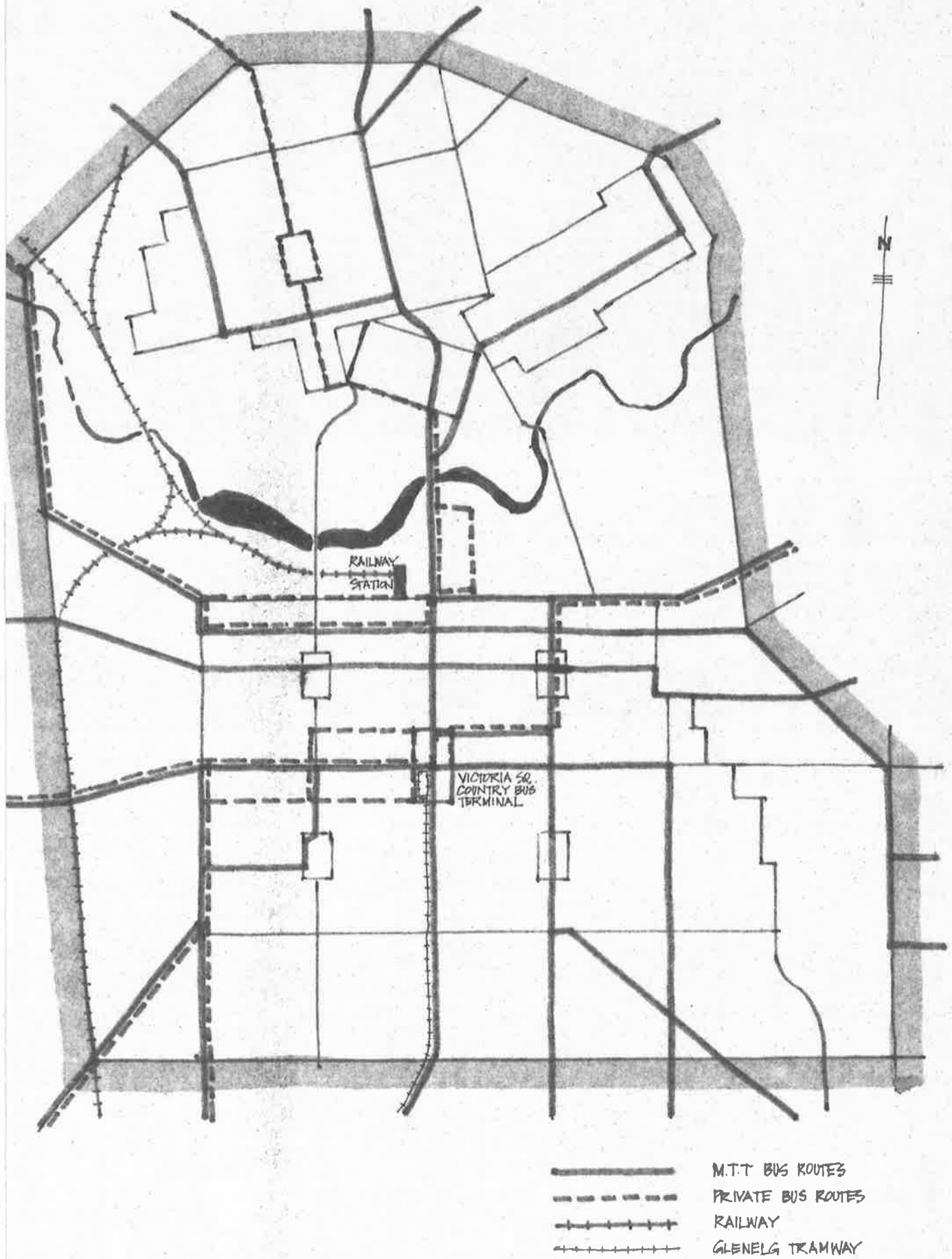
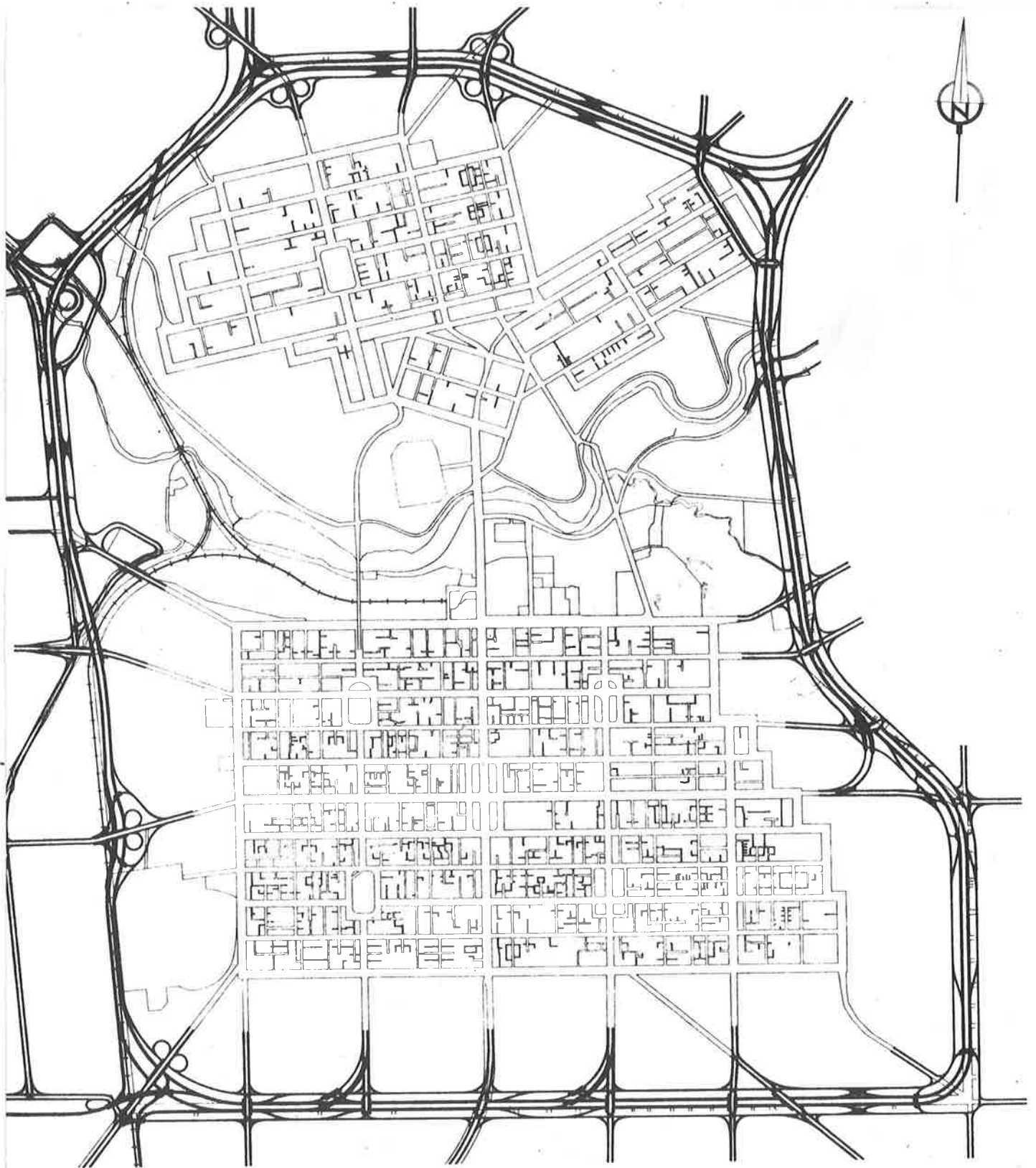



FIG.19-EXISTING PUBLIC TRANSPORT ROUTES



FREEWAY  **ON-OFF RAMPS** 
FREEWAY SERVICE ROAD AND OTHER MAJOR ROAD 

*Each single line represents a one-way traffic stream.
 Proposals are diagrammatic only and not drawn to scale.*



**20. FREEWAY AROUND THE CITY OF ADELAIDE
 PROPOSED BY TOWN PLANNING COMMITTEE**

These recommendations should not be accepted too readily in view of the fact that they are based on many variables. At the present time, freeways appear to be the only satisfactory means of catering for the heavy road traffic which is associated with a wide-spread, low-density city. They are, nevertheless, an extremely expensive solution to the problem of travel, and one which has a large scale, and often devastating, effect on the urban environment.

To illustrate the latter point let us consider the effect of the proposed ring route. The width needed for an 8-lane freeway would be a minimum of 168 feet which, together with the existing terraces which are to be retained, could add up to a total width of 300 feet. Near the interchanges and ramps vastly greater widths would be needed. The effect of this, irrespective of whether the freeway was depressed, on-grade or elevated, would be to completely cut off the development on the outer terraces from contact with the parklands. When those urban design implications are realised we have some justification for doubting the wisdom of what is proposed. What are the alternatives?

Firstly, we must concentrate on the provision of an adequate public transport system in place of the merely token service that is provided at present. (Fig. 19) This may involve the question of subsidy, but may still be more economical, from an overall point of view, than freeway construction. Secondly, more drastic measures may have to be adopted to control the expansion of the metropolitan area and to implement higher density residential development. Thus we have three variables - intensity of land use, public transport and freeways that can be manipulated to produce whatever combination is thought best and desirable for the community as a whole.

No planning regarding the future road system within the City of Adelaide has yet been attempted. Until now attention has merely been turned to facilitating the flow of traffic along the existing streets, widening one here, another one there, installing traffic lights etc. The pedestrian is

completely ignored, and he is frankly regarded as a nuisance, especially to turning traffic at street intersections.

It is essential that a satisfactory solution to both vehicular and pedestrian traffic should be found, and this is further considered later. At the moment only the general approach to the traffic problem will be outlined.

We must be bold enough to decide how extensively we can adjust our environment to meet the demands of traffic - if what is proposed means the destruction of our environmental values we must seek other solutions. This is particularly important and essential when dealing with the central area. Perhaps Stockholm is the best illustration of such an approach.¹⁹⁾ The capacity of the road system has been used to set a limit on private motor traffic in the central area and parking is provided in accordance with this capacity. The most important instrument for the restriction of traffic in the central area is mass transportation, by means of subways serving the metropolitan area and buses serving the inner towns and the central area itself, together with high density residential development in the suburbs.

Neil Everist,²⁰⁾ a Victorian architect, who recently returned from the Pan American Congress in Washington dealing with problems of cities, said: "Freeways have not solved the problem. Planners overseas are trying to reorganise cities by striking a balance between public transport, road and pedestrian traffic. However well transport systems are developed, no city will develop its greatest potential if it ignores or destroys natural legacies". This warning is particularly applicable to Adelaide.

For the purposes of a suitable basis for the urban design framework it will therefore be assumed that the freeways as recommended are not an acceptable solution, and that a greater concern will be shown for a more balanced transportation system.

19) Yngve Larsson, "Building a City and a Metropolis : The Planned Development of Stockholm", A.I.P. Journal, November 1962

20) Neil Everist, "Planning for Balanced Transport", Architecture and Arts, September 1965, p.34.

The system could consist of immediate improvements to the public transport system and to the road network in the city by the introduction of a hierarchial pattern related to environmental areas. It is assumed that the underground railway line will become a less distant possibility than suggested in the Report. This system must, of course, be integrated with that of pedestrian movement.

9. Parking

The Report predicted that 55,000 parking spaces would be required in the central area using the recommended transport system.²¹⁾ Subsequently the Analysis of Parking Needs²²⁾ prepared for the Adelaide City Council indicated a need for substantial additional parking spaces both in the central business district and the core area as follows :

- A. Central Business District (bounded by West, North and East Terraces and Grote - Wakefield Streets and including the block north of Gouger Street between Brown and King William Streets).
- 1964 Parking demand - 10,800 spaces requiring 2,300 spaces in addition to existing provision.
- 1969 Parking demand - 13,000 spaces requiring 4,500 spaces in addition to existing provision.
- B. Core Area (bounded by North Terrace, Pulteney, Grenfell and King William Streets.
- 1964 Parking demand - 1,500 spaces in addition to existing provision.
- 1969 Parking demand - 2,100 spaces in addition to existing provision.

The large amount of parking demand created by the blocks adjacent to North Terrace has already led to moves by the Adelaide City Council to acquire parking stations accessible from, or in close proximity to, North Terrace. This can only lead to the destruction of perhaps one of the finest streets in Australia. The present ground level car park operated by one of the retail concerns has already indicated what we are faced with. The

21) Report on the Metropolitan Area of Adelaide, op.cit. p.262

22) Wilbur Smith & Associates - Len T. Frazer & Associates, Analysis of Parking Needs, Central Business District, City of Adelaide, 1964.

present open lot has created a huge gap in the spatial structure of the street. It furthermore removed some very pleasant buildings which may not have been architectural gems but were a significant contribution to the character of North Terrace. In addition to these visual considerations, it has created several nuisance factors to the users of the street - dust, traffic crossing footpaths and congestion of traffic in North Terrace. Once it becomes established as a multi-storey parking station, it will further increase all these problems, and probably lead to the widening of North Terrace resulting in a loss of the charm and character it now possesses.

The location of these parking stations have been considered only from two aspects, demand and acceptable walking distance from destination. However, in the case of parking provision, we should generally follow the same principles as in our approach to traffic and transport - decide firstly what environmental standards we desire and then proceed to provide parking in locations that do not destroy these standards.

For instance, the character of North Terrace could be retained if a large parking station was provided, say, on the site of the Parade Ground in Kintore Avenue. The distance problem could be overcome by installing a moving footway connection to the retail core as has already been done in the case of the Domain Parking Station in Sydney.

Furthermore, an analysis of parking needs, at best, indicates how many people are likely to require parking space if the present situation remains. It is quite irrelevant in the absence of any detailed planning for a transport system of the kind suggested above. Only when such a system is decided upon can there be a realistic appraisal of how many people are going to arrive by car into the city, for what purpose and what parking should be provided to meet these needs.

It is therefore proposed that parking provision should be related to the hierarchial road system mentioned above and while locations are indicated no calculations regarding numbers have been attempted.

10. Redevelopment

There are several areas and sites in the City of Adelaide that either need to be redeveloped or offer opportunities for redevelopment.

Most of the southern and western parts of Adelaide as well as smaller areas in North Adelaide and Lower North Adelaide consist of poor class housing. Furthermore the areas in Adelaide contain many intrusive industrial and commercial uses, the dwellings are sub-standard, there is noise, odours, dirt, smoke and heavy traffic. Perhaps they cannot be classed as slums, but a recent newspaper article revealed that parts of these areas do indeed show some characteristics of slum areas.²³⁾ The need for redeveloping these areas is great and extremely urgent. Redevelopment will not only serve to remove these undesirable living conditions but will also provide an opportunity for housing a much larger central area population within walking distance of the central core.

The southern area of Adelaide appears to be the most suitable one for residential redevelopment because it is still largely residential in character and the intrusive uses are generally small scale ones. The added attraction of the parklands and the two squares make it ideal for residential purposes. The western area of Adelaide has more extensive industrial and commercial establishments and its remaining residential area is relatively small and of poor quality. It may be better to redevelop this section for industrial and commercial purposes. At North Adelaide the areas involved are generally more suited to rehabilitation and small scale redevelopment. However large scale redevelopment may be needed at some time in the future to absorb the expected and desirable increase in the population living near the centre.

The following sites offer potential redevelopment possibilities.

1. Railway land adjacent to North Terrace - A more intensive use could be made of such an extensive area near the central core.

23) John Miles, "The Shocking Slums of Adelaide", The News, 8th November 1965

2. East End Markets - Better facilities need to be provided for the conduct of the market and this large site could also be more intensely used.
3. New North-South Road - Redevelopment of the small and useless sites left in the process of cutting through this new road must be consolidated with that of larger sites in the area.
4. Parade Grounds - The site offers potential for a more attractive and functional use than it has at present.
5. Rundle Street - Some redevelopment may be necessary in the Rundle Street Shopping Core to resolve the vehicular and pedestrian conflict.
11. Assumed Future Development in the City of Adelaide

The assumed future development in the City of Adelaide has been considered in the light of the above mentioned factors and the proposed land use pattern is shown in Fig. 21.

Further assumptions and suggestions, regarding future development of a more detailed nature, were worked out in conjunction with the proposals for the urban design framework in Chapter IX. This allowed for a mutual interchange between urban design and general planning factors, that would occur in actual practice if urban design formed part of the comprehensive planning process.

Similarly the transportation system was also worked out in this fashion. It was not possible to obtain any real basis for the system simply because no planning for the city area had been done, or alternatively, because whatever plans had been prepared were not disclosed by the responsible authorities contacted.

All these assumptions are as realistic as the available information and the requirements of this thesis permitted them to be, in the absence of detailed planning proposals or objectives.

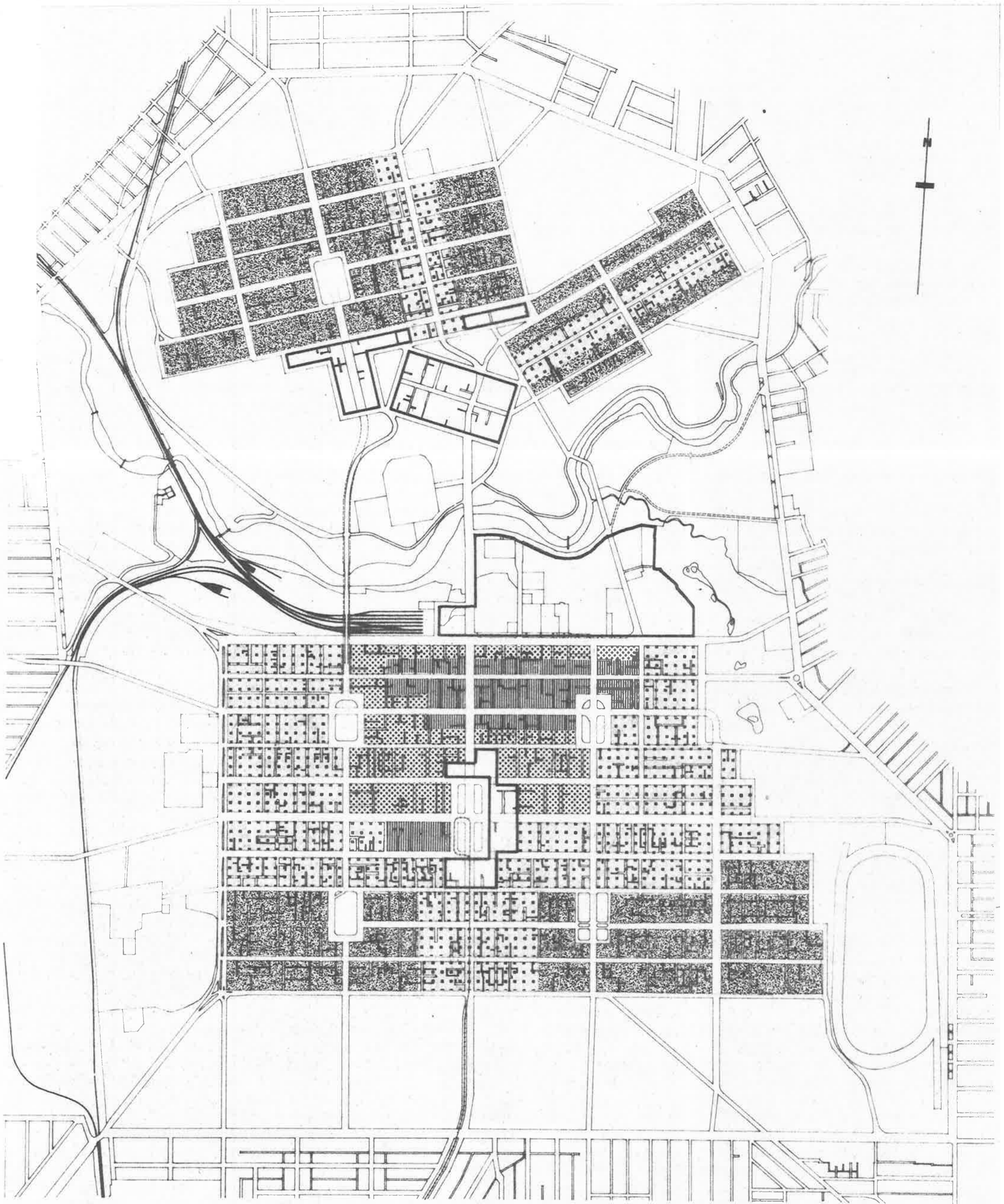

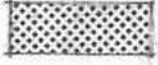

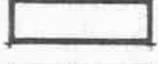



FIG. 21 - ASSUMED LAND USE PATTERN FOR FUTURE DEVELOPMENT

-  RETAIL
-  CORE COMMERCIAL
-  GENERAL COMMERCIAL
-  PUBLIC USES
-  RESIDENTIAL

0 100 200 300 400 500 600 700 800 900 1000 FEET

CITY OF ADELAIDE



"OUR NEED IS TO FIND THAT ORDER WITHIN WHICH VARIETY BECOMES
MEANINGFUL AND THE CHANGING WHOLE INTELLIGIBLE AND BEAUTIFUL."

DENISE SCOTT BROWN

III URBAN DESIGN FRAMEWORK FOR THE CITY OF ADELAIDE

CHAPTER VIII

URBAN DESIGN SURVEY OF THE CITY OF ADELAIDE

1. Objectives of Survey

The survey was carried out with a view to determining the major features of the physical form and structure of the City of Adelaide, its present urban design qualities, its potential image structure and the actual visual image as perceived by its people. It also includes an appraisal of other visual and non-visual aspects that may influence urban design considerations. The findings of the survey provide a significant background and basis for the future development and design structure of the area.

2. Area Included

The area considered in this survey and in the urban design framework proposed in Chapter IX is that contained within the boundaries of the Corporation of the City of Adelaide and is shown in Fig. 22. However, physical features outside this area were taken into account, where it was considered that they affected the design area, particularly in the case of development surrounding the outer edges of the parklands.

3. Physical Form and Structure

3.1 Land Form.

The character of the topography within this area is shown in Fig. 23. It shows both Adelaide and North Adelaide on raised, relatively flat ground separated by the valley of the River Torrens. Light's careful adaptation of the plan forms to the topography has been mentioned earlier. Two shallow drainage streams from the East parklands and from St. Peters converge in the Botanic Gardens and join the River Torrens west of the Frome Bridge.

The more detailed topographical features are as follows :

- a. The steep banking of the land just north of North Terrace creates a marked change of level in the area occupied by the public buildings. This bank sweeps in to the northern end of Light Square, thus



FIG.22 - OUTLINE OF DESIGN AREA



CITY OF ADELAIDE

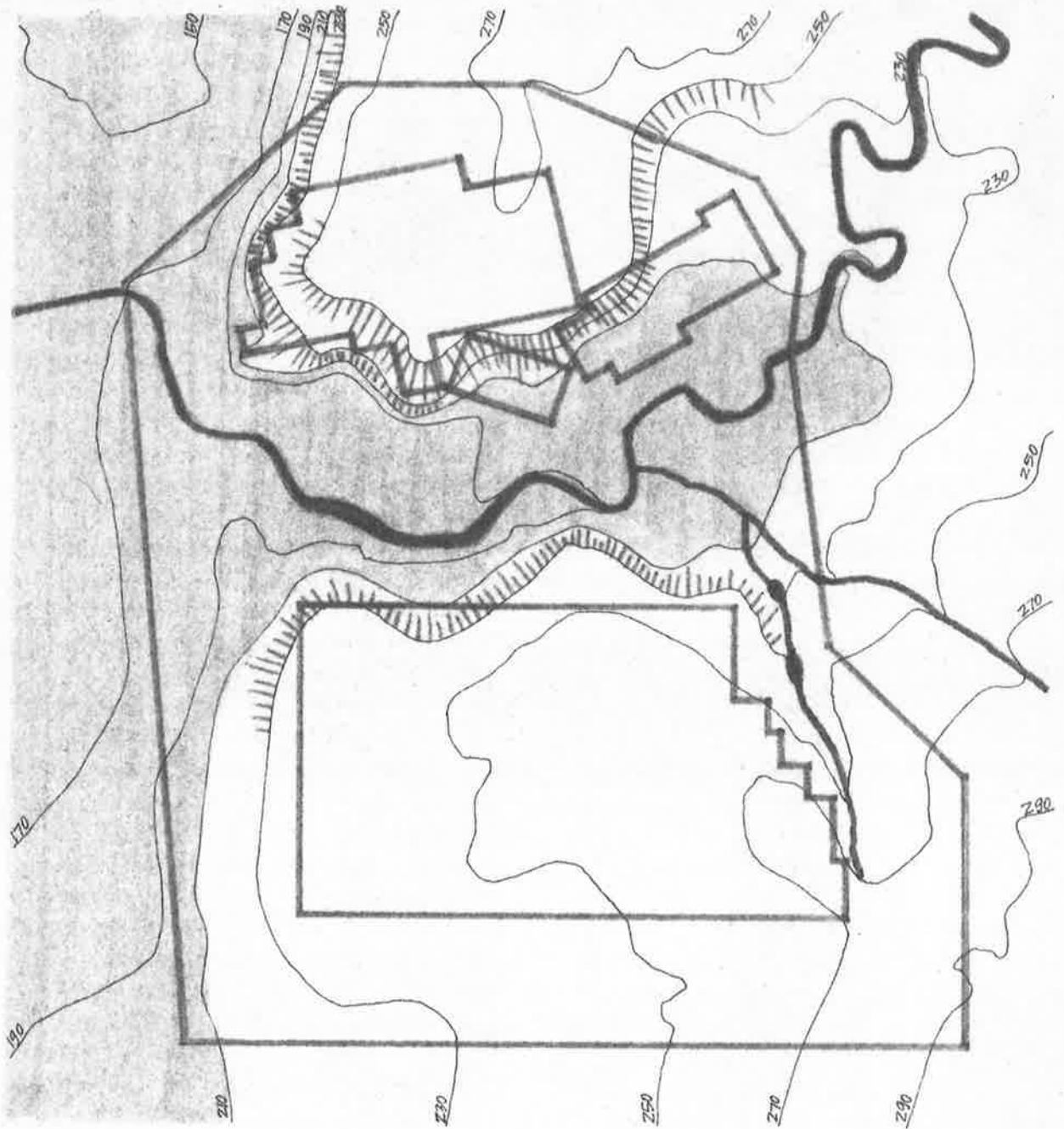


FIG. 23 - TOPOGRAPHY

creating interesting changes of level along the western half of North Terrace and Hindley Street.

- b. More gradual slopes of land occur away from the West and East Terraces, and the South parklands are notable for their flatness. The East parklands and Botanical Gardens have intimate and charming slopes in conjunction with the shallow streams.
- c. The steep slopes on the southern side of North Adelaide give this area distinct visual prominence when approached from the city.

Single sites of visual prominence are relatively rare, Montefiore Hill and the St. Peters Cathedral sites being perhaps the most significant. However, due to the nature of topography outlined above, all the parkland frontages offer great possibilities for effective visual expression of building forms, especially at points where the approach roads through the parklands intersect the terraces. The areas within the enclosing terraces are generally flat, and points of visual significance would be determined by functional groupings rather than topographical considerations.

3.2 Circulation patterns

The most dominant vehicular routes which define the physical form are as follows :

1. The enclosing outer terraces of the parklands.
2. The approach routes to the city through the parklands.
3. Most, but not all, of the enclosing terraces of Adelaide and North Adelaide.
4. O'Connell Street, Jeffcott Street and Melbourne Street in North Adelaide.
5. King William Street, Grote-Wakefield Streets, Pulteney Street, Hutt Street, Currie-Grenfell Streets and Morphett Street in Adelaide.

Roads and streets can be regarded as connectors along which the main movement of vehicles and people from one part of the area to another occurs. The pattern of these connectors is shown in Fig.24. The volume of movement is expressed by the line thickness, while the extent to which the line is broken indicates the relative ease which vehicles have in moving along these

streets. Pedestrian paths of movement are considered later in this chapter.

3.3 Generators of Activity

Concentrations of land use which serve and attract large numbers of people can be regarded as generators of activity. Within the central area, which itself acts as a generator for the whole metropolitan area, actual buildings rather than groupings of land uses are to be regarded as generators. Buildings such as department stores, large commercial and government offices, or those providing cultural, entertainment, community and institutional facilities provide points of functional, and often visual, significance. They attract large numbers of people and vehicles and thus create a large part of the parking demand; they provide employment and services for these people and are essential to the prosperity of the central area.

The principal generators in the City of Adelaide are listed below and are shown in Fig. 24, the size of the symbol indicating the relative importance and vitality of the generator described.

Retail facilities : Myer Emporium Ltd., John Martin & Co. Ltd.,
David Jones Ltd., Clarkson Ltd., Charles Moore Ltd.,
Harris Scarfe Ltd., Cox-Foys Ltd., Craven & Co. Ltd.,
Miller Anderson Ltd., G.J. Coles & Co. Ltd.,
Woolworth Ltd., Peoplestores Ltd., Adelaide Arcade,
City Market, East End Market.

Commercial Facilities: Bank of N.S.W. building, Shell House, Prudential building, Security House, Elizabeth House, News building, Ansett-A.N.A. and T.A.A. terminals, Colonial Mutual Life building, Savings Bank of S.A., Commonwealth Savings Bank, Dalgety building, Royal Exchange Assurance building, A.M.P. building, N.M.L.A. building, Pearl Assurance building, Guardian Assurance building, Da Costa building, T & G building, R.A.A. building, S.A. Gas Co. building,

Advertiser building, State Bank of S.A., BP House, M.L.C. building, Mutual Hospital Association building.

Public Offices : G.P.O., Adelaide Town Hall, E. & W.S. Department, Foys building (Government offices), Lands Department, Police building, S.A. Housing Trust, Master Builders Association building, Railway Station (Government offices).

Cultural and Educational facilities : University of Adelaide, Institute of Technology, Medical School, Teachers College, Institute building, Public Library, Museum, National Gallery, Adelaide Girls High School, Adelaide Boys High School, Pulteney Grammar School, School of Arts.

Hotels and Entertainment facilities : Wests, Metro, State, Sturt, Regent, Plaza, Majestic and Her Majestys theatres; Hotel Australia, The Grosvenor, and The South Australian.

Hospitals : Calvary Hospital, Childrens' Hospital, Memorial Hospital, Royal Adelaide Hospital, Wakefield Street Hospital, and St. Andrews Hospital.

Several of these generators also act as landmarks in the visual structure of the city and this aspect is considered in the Potential Image Structure section.

3.4 Natural Features

The most outstanding natural feature of the area is the belt of parklands surrounding both Adelaide and North Adelaide, which defines the City of Adelaide and separates it from the surrounding development. They contain a large number of sports fields, playing fields, children's playgrounds and gardens, which provide for the active and passive recreation needs of the population of the central area as well as the metropolitan area as a whole. Within the parklands belt smaller areas can be identified as follows :

- a. South parklands generally containing sporting facilities
- b. West parklands generally containing sporting facilities
- c. West Terrace Cemetery
- d. Victoria Park Racecourse
- e. East Parklands with emphasis on passive recreation containing shallow lakes , picnic areas etc.
- f. Botanic Garden and Park and Zoological Gardens
- g. Adelaide Oval and Memorial Drive Tennis Courts
- h. North Adelaide Golf Links
- i. North and north-east parklands surrounding North Adelaide generally containing sporting facilities
- j. North-west parklands containing picnic areas.

The parklands adjacent to the River Torrens between Victoria Bridge and Frome Bridge have a distinct character as riverside walks or parks. Elder Park, containing a Soundshell, is a venue for large-scale outdoor entertainment, such as open air concerts and art exhibitions.

We can also include the squares in the category of natural features because of their parklike characteristics and recreational value.

All these natural features are shown in Fig.24.

3.5 Barriers, Edges and Seams

Linear elements, generally defined as edges by Lynch,¹⁾ have been considered in three different categories as follows :

- a. Barriers - elements generally constituting a physical as well as a visual barrier, but in some cases a physical one only.
- b. Edges - elements forming a visual boundary and definition but not necessarily creating a barrier in a physical or visual sense.
- c. Seams - elements uniting areas of different activities or character physically and visually.

The following barriers, edges and seams can be detected in the City of Adelaide and are shown in Fig.24.

1) Lynch, The Image of the City, op.cit., p.62

- | | |
|-----------------|--|
| Barriers | <ol style="list-style-type: none"> 1. The railway lines form a major barrier and the Glenelg tramlines through the parklands a minor one. 2. The River Torrens is a distinctive natural barrier. 3. The M.T.T. bus depot and E. & W.S. Department depots form physical and visual barriers in the parklands. |
| Edges | <ol style="list-style-type: none"> 1. The outer terraces of the parklands and the enclosing terraces of Adelaide and North Adelaide form distinctive edges. 2. The enclosing wall of the Cemetery along West Terrace. 3. The grandstands of Victoria Park Racecourse. 4. The enclosing wall of Government House grounds. 5. The enclosing wall of Botanic Gardens along North Terrace. 6. The enclosing wall of the Zoo and the thick planting in Botanic Park along part of Frome Road. |
| Seams | <ol style="list-style-type: none"> 1. North Terrace between King William Street and Pulteney Street linking the shopping core with the gardens and public buildings on its northern side. 2. Grenfell Street between King William Street and Pulteney Street and Currie Street between King William Street and Peel Street linking the shopping core with other activities south of Grenfell-Currie Streets. |

3.6 Composite Physical Form and Structure

Figure 24 shows the composite physical form and structure of the City of Adelaide illustrating principal circulation patterns, generators of activity, natural features, barriers, edges and seams. They present an objective statement of the main physical features of the area.

4. Urban Design Qualities

A thorough and comprehensive visual survey of the design area was made on foot and by car to observe and note the urban design qualities of the existing environment. This was supplemented by a study of an aerial

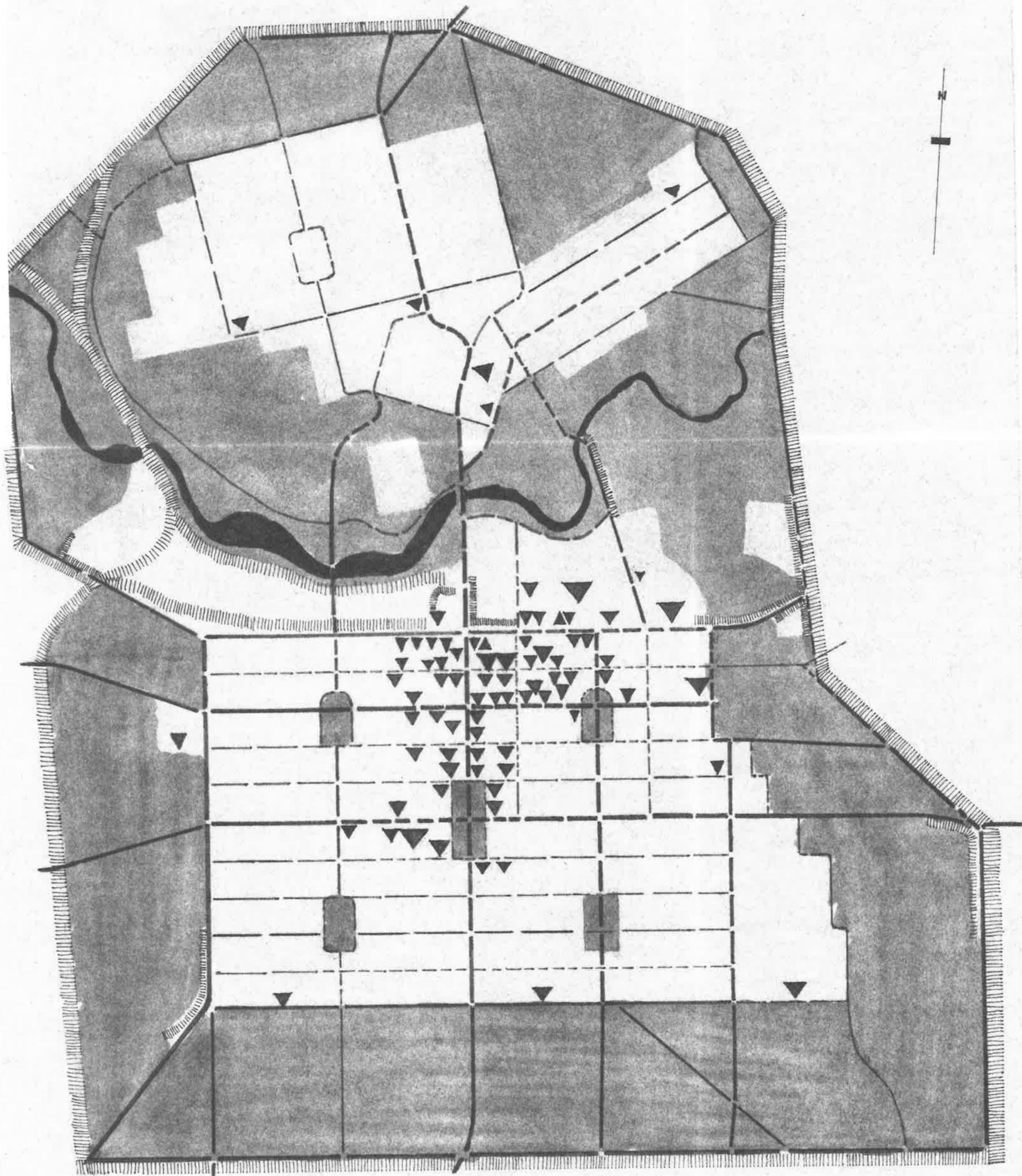
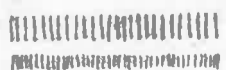


FIG. 24 — PHYSICAL FORM AND STRUCTURE

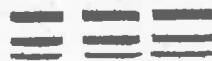
GENERATORS



BARRIERS & EDGES



CONNECTORS



PARKS



photograph of the whole area (Frontispiece) and several aerial photographic views of various parts of the city.

The description that follows endeavours to list and evaluate the urban design assets and weaknesses of the area at present, as well as to indicate their potential and their need for improvement. It is inevitably subjective and is not presented in any sense as conclusive determinations, but rather to illustrate the kind of approach that must be adopted in such a survey.

4.1 Physical Form Relative to Topography

In the discussion of Land Form it was established that the general character of the topography within the enclosing terraces is relatively flat. Consequently there are no major problems regarding the relation of building forms or road patterns relative to topography. At North Adelaide, however, the plan forms chosen by Light and the subsequent road patterns are not ideally related to the interesting character of the topography. Some improvement in this respect may be necessary to unify the awkward open spaces created between the three blocks and to integrate the road pattern more closely to the topography and to the block forms. The proposed new alignment of Montefiore Hill Road may have been necessary, but unfortunately it ignores the existing topography. Even in these early stages of construction the indications are that it may destroy the distinctive character of Montefiore Hill, topographically one of the most prominent sites in the area.

The interesting changes of level within the area occupied by the University and other public buildings north of North Terrace have been generally reasonably well exploited. The University site has been particularly well conceived on two different levels, even though in some of the actual buildings the possibilities have not been fully used. One hopes that in future development and redevelopment the potential of the site will be even more adequately expressed.

4.2 Approach Routes and Gateways

Few city centres possess approach routes of such potential significance as the ones passing through the parklands in Adelaide. The word 'potential' needs to be stressed because the possibilities have not been fully exploited.

The sequence usually consists of the following impressions - one emerges from the congested roads passing through the inner suburbs and traverses the expanse of parklands, which clearly signal the approach to the central area usually visible across the width of the parklands, to arrive at the enclosing terraces marking the entrance into the central area. Approaching from the north, the sequence also includes travelling through North Adelaide and involves crossing two stretches of parklands. It was pointed out previously that the slopes of land leading up to the terraces further accentuate this feeling of approach.

Two suggestions for the improvement of this sequence can be made. Firstly, the routes crossing the parklands could be made more distinctive in their individual visual character, by stressing their relative flatness or gradient and by differing landscape treatment along their sides. Secondly, the visual prominent points where the roads enter the city could be given a more appropriate expression of their "gateway" function, by tall buildings or other means.

Thus the already significant sequence of approach and sense of arrival to or departure from the central area could be further dramatised and their visual impact strengthened.

At present the most significant approach routes are as follows : King William Road and its continuation O'Connell Street in North Adelaide are equally satisfying whether one is arriving or leaving the city. There is a dramatic downhill descent from O'Connell Street near Hotel Australia past St. Peter's Cathedral (Fig.26) across the River Torrens, and then a gradual sweep uphill to the satisfactory gateway formed by the tall buildings in King William Street. (Fig.25). The sequence is reversed in departing from

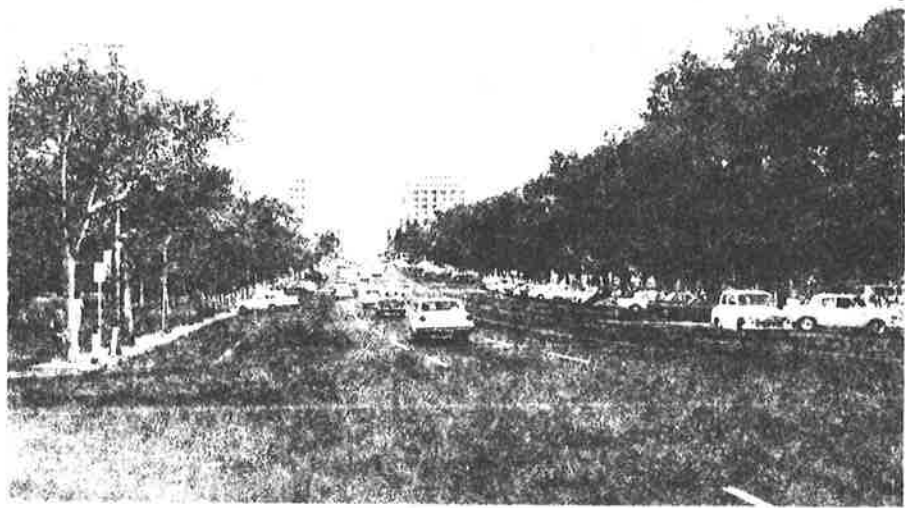


FIG. 25 - GATEWAY - KING WILLIAM ROAD

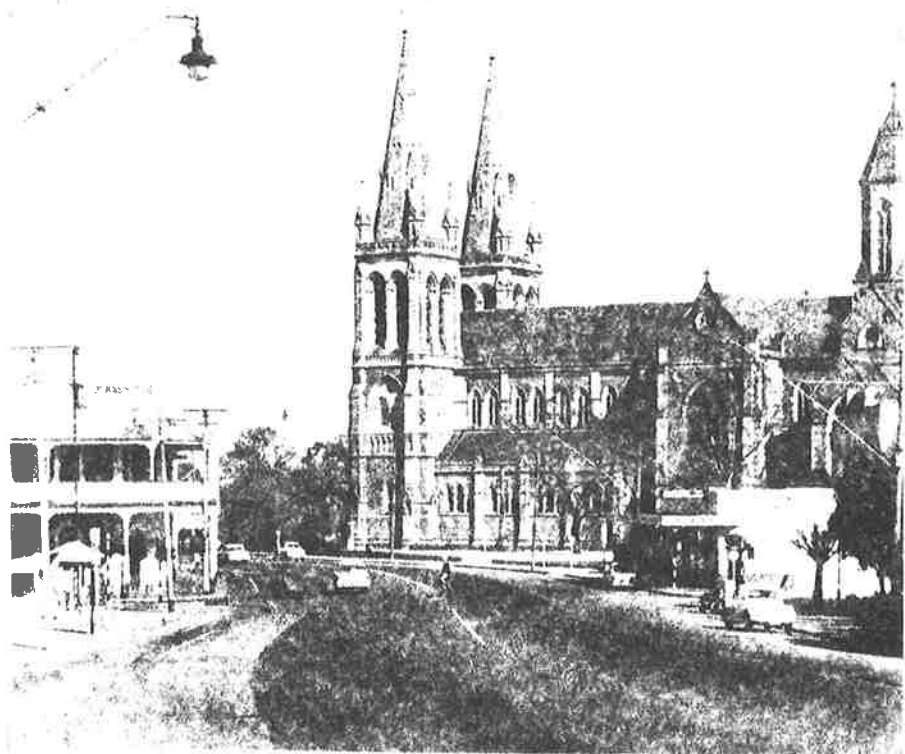


FIG. 26 - ST. PETERS CATHEDRAL

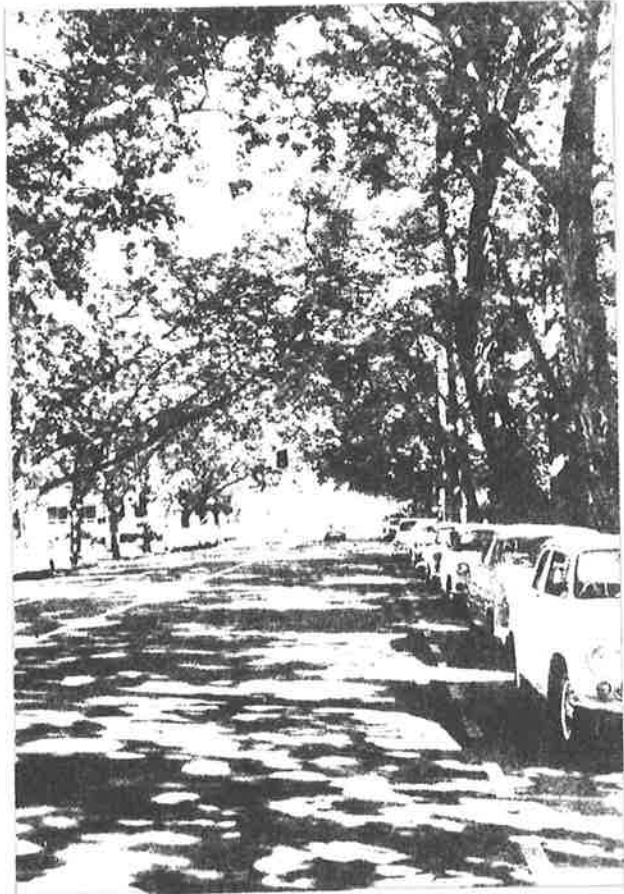


FIG.27 - FROME ROAD



FIG.28 KING WILLIAM ROAD

the city. (Fig. 28) The other linking roads from North Adelaide into the city also have strongly marked sequences. Montefiore Hill Road, after its curving descent, leads over the Victoria Bridge to the Morphett Street bridge above the railway tracks with its elevated view of the city, but then leads rather abruptly down into the congested Hindley Street. Frome Road after the descent from Brougham Place with its confused road junctions, presents a glimpse of the city skyline after crossing Frome Bridge and then provides an attractive ascent along its shadowy tree lined length into the city, where the point of arrival is dramatised by its emergence into the openness and brilliant light of North Terrace. (Fig. 27) The approach roads through the East parklands such as North Terrace, Rundle Road, Bartels Road and Wakefield Road are more satisfying than those through the South and West parklands, but are not quite as dramatic as those from a northern direction. Kintore Avenue, though fairly short in length, also forms a visually significant approach route into North Terrace.

4.3 Path Structure and Visual Qualities of Paths

Roads and streets can be regarded as paths or connectors. The functional importance of certain roads and streets as connectors has already been discussed. We should now examine whether they form a coherent structure and what visually distinguishing qualities they have as paths of movement.

The path structure of Adelaide is relatively easy to grasp due to its rectangular grid layout, but the individual paths have little differentiation. North Adelaide appears to have a more complicated path structure due to the informal layout of its main blocks. The awkward juxtaposition of these confuses the otherwise regular pattern within the blocks. The connecting roads to Adelaide clarify the structure to some extent by emphasising certain streets as the continuations of these roads through North Adelaide.

In Adelaide the visually most distinct paths are the enclosing North, South and West terraces and King William Street. Prof. Gordon Stephenson²⁾ has referred to North Terrace as "one of the world's most interesting central

2) Prof. Gordon Stephenson, "The Physical Planning of Universities", A.P.I.J., July 1965, p. 150



FIG. 29 - NORTH TERRACE



FIG.30 KING WILLIAM STREET

boulevards". (Fig. 29) This, of course, applies only to the section between King William Street and Pulteney Street where it is distinguished by the contrast between the character of the central core on its south side and the row of public buildings set behind a linear park on its north side. Without a doubt this section of North Terrace is one of Adelaide's greatest urban design assets. Elsewhere along its length it does not have such a distinct quality but in its western approach it has quite an interesting variation in topographical gradient as it passes under the Morphett Street bridge and then rises up towards King William Street. The increasing intensity of use is well expressed by the buildings along its side and the Railway Station marks its point of arrival to the core area. However the two pedestrian crossings detract from its continuity. A more satisfactory visual and physical solution may be to either raise or lower the pedestrian crossings. Its descending eastern section past Pulteney Street is also visually interesting and is particularly distinguished by the broad sweep past the Botanic Gardens stone wall.

King William Street also has quite an impressive appearance between North Terrace and Victoria Square. Generally distinguished by the median strip and the tall buildings along its side it is punctuated near Victoria Square by the Town Hall and G.P.O. towers. (Fig. 30) South of this point it loses its character and is responsible for destroying that of Victoria Square; south of the square it becomes a visual jumble. King William Street is also the general route for pageants and parades, such as the Anzac Day March, Christmas Pageant etc. and is admirably suited for this.

West and South Terraces gain their distinction by the general edge characteristics of buildings on one side and parklands on the other. West Terrace also has a pleasant, dividing nature strip and provides a distant view over the sea, but the mixture of uses along its length create an unsatisfactory visual picture. South Terrace is lined by institutional, commercial and residential buildings of reasonably uniform character and is further enhanced as a path in an eastern direction by the imposing views of the hills as a backdrop to the parklands.

East Terrace is generally recognised for its stepped form but its importance as a path is minor. Hutt Street which connects more directly, than East Terrace itself, into that part of East Terrace north of Pirie Street can be regarded as the effective "fourth terrace". The almost completed curving of Hutt Street into Grenfell Street may improve the road junctions at this point but does not recognise the above aspect of Hutt Street. The street itself is visually quite satisfying; both the older buildings that face onto it and its trees lend it some distinction.

Hanson-Pulteney Streets are distinguished by the sequence of Hurtle and Hindmarsh Squares leading to a visual termination in Bonython Hall at North Terrace. Brown-Morphett Streets similarly connect Whitmore Square and Light Square. In both cases the architectural character of the buildings along these streets is poor.

The only other north-south path of any importance is the new street continuing on from Frome Road. The chaotic visual appearance reveals its essential nature as a road carved through the city. Furthermore it disrupts the continuity of the paths in an east-west direction. Redevelopment of the properties along its length, to improve its visual qualities, is desirable.

Gawler Place has path characteristics which are basically pedestrian; its use as a vehicular path conflicts with this and may need to be remedied.

Most of the east-west paths have distinct directional qualities provided by the distant view of the hills at their eastern extremities, but apart from this they generally lack differentiation in individual character.

Hindley-Rundle Streets form a path distinguished by the intensive character of the shopping core through which they pass, but have conflicting demands of pedestrian and vehicular traffic which at present are unresolved. Its visual aspects are chaotic due to the conglomeration of traffic signs, parking meters, advertising signs, mixture of awning and building colours; and overseas visitors comment on its "comic-strip appearance".³⁾ At night, the chaos is more resolved into the bright lights.

3) Professor Mario Praz, "Streets Seen as 'Comic-Strips'", Advertiser, 4th August, 1965

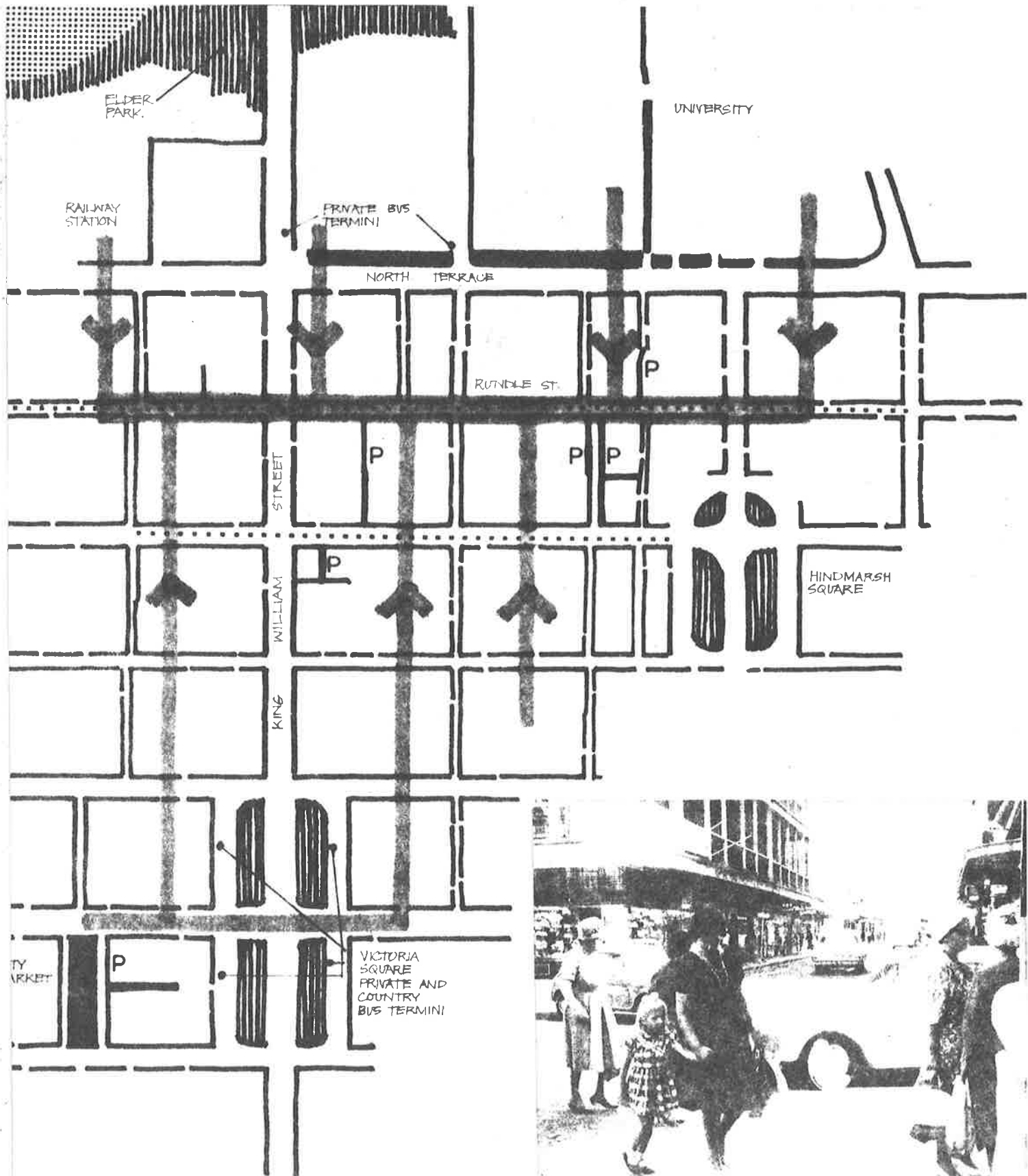
Currie-Grenfell Streets have a satisfactory expression of intensity of use as one approaches the core area, but the general architectural character is not particularly distinguished. Recently, pedestrian and vehicular conflicts in its character have become noticeable.

Grote-Wakefield Streets are wide tree lined paths that are readily distinguished. Waymouth-Pirie Streets and Franklin-Flinders Streets are more distinct than the remaining east-west streets because of their proximity to the core, but are visually poor.

One other path in the east-west direction, Sturt-Halifax Streets, has some potential significance in that it visually connects Whitmore and Hurtle Squares.

At North Adelaide O'Connell Street, as the continuation of King William Street, is marked by the mixture of commercial activities along its length and by the punctuations provided by Hotel Australia and some distinguished older buildings. The character of Melbourne Street has been improved recently by the extensive rehabilitation of many older buildings. Stanley Street, Jeffcott Street, Ward Street and Hill Street are also pleasant paths passing through areas containing distinguished old houses. Barton Terrace and Lefevre Terrace gain their distinction from the edge characteristics of the parklands. Most of the paths through North Adelaide are extremely pleasant due to the character of the area, and therein lies the danger that, by attracting too much traffic, they may destroy this pleasant environment. Memorial Drive and Victoria Drive are visually pleasing scenic paths along the banks of the River Torrens. In the case of the latter much of this character has been destroyed as a result of the all-day parking that occurs and which completely cuts off the sight of the river from the road.

The outer enclosing terraces of the parklands form an incomplete ring route. Generally their visual character appropriately expresses the relationship of the city and their enclosing parklands to the surrounding suburban residential development. Their frequent changes of direction along the northern side provide a sequence of changing views over various parts of the metropolitan area.



RUNDLE STREET

FIG.31- PEDESTRIAN MOVEMENT WITHIN CORE AREA

4.4 Pedestrian Path Structure

The pedestrian path structure is shown in Fig.31 . This is generally provided for only by footpaths along vehicular paths. As the structure consists mainly of paths in a north-south direction when approaching the central shopping core, conflict arises where these paths must cross the east-west vehicular paths. As a whole the pedestrian path system is characterised by an extreme lack of continuity and an almost non-existent physical and visual expression of the pedestrian character. The only satisfactory examples are the footpaths and linear park along the north side of North Terrace, whose continuity however is disrupted by Kintore Avenue; the Adelaide Arcade and James Place. A great deal of thought needs to be given to the satisfactory solution of pedestrian movement within the core area and physical solutions must be reinforced by adequate visual expression.

4.5 Visual Definition of Area

The barriers, edges and seams, listed previously, act as strong definitive elements of the physical form of the area. The natural features of the parklands provide a clear definition of Adelaide and North Adelaide, even though at times the actual form of the edge is more vague as a result of the stepped form of the terraces and their frequent change of direction (Fig.32).

The railway tracks also provide strong definition to the eastern half of the northern side of Adelaide, but unfortunately create a physical and visual barrier to the effective relation of this area with the River Torrens (Fig.33).

The River Torrens itself is a natural physical barrier but acts as a visual seam between the gardens and parklands on either side. It is most vivid in the section between the Weir and Frome Bridge.

Some of the intrusions in the parklands such as the M.T.T., E. & W.S. depots and Victoria Park Racecourse have created undesirable



FIG. 32 - CITY FORM DEFINED BY PARKLANDS



FIG. 33 - THE PHYSICAL BARRIER OF THE RAILWAY TRACKS

edges and barriers. The smaller scale edges formed by the various enclosing walls of large grounds are less objectionable because they act as strong, but not disruptive, defining elements.

The function of North Terrace and Grenfell Streets as defining edges to the shopping core area is complicated by their qualities as seams which attract pedestrians to cross them at several points. In both cases physical separation of the conflicting pedestrian and vehicular traffic will become necessary and may enable a satisfactory visual expression of the seam qualities to be attained. A similar seam character can also be detected in King William Street, but here the problem is overcome to some extent by the frequency of crossing points provided by the east-west streets.

A very strong edge, though a distant one, is provided by the 'backdrop' of the hills. It can, in fact, be regarded as one of the essential elements of the visual image of Adelaide, and provides strong directional qualities to the physical environment of the city and of the whole metropolitan area.

4.6 Character of Buildings and Physical Environment

A larger area of a city can be identified in terms of various districts distinguished by similarities of activities, building form or other unifying characteristics. We have noted that Adelaide and North Adelaide owe their identity as such districts to the strong definition given by the parklands.

The parklands themselves, because of their consistent natural character, can be regarded as a district. Within this larger district, further smaller districts can be identified and have been previously mentioned. In some cases they interrupt the continuity of the district, but generally they appear as more intensive nodes within the parklands.

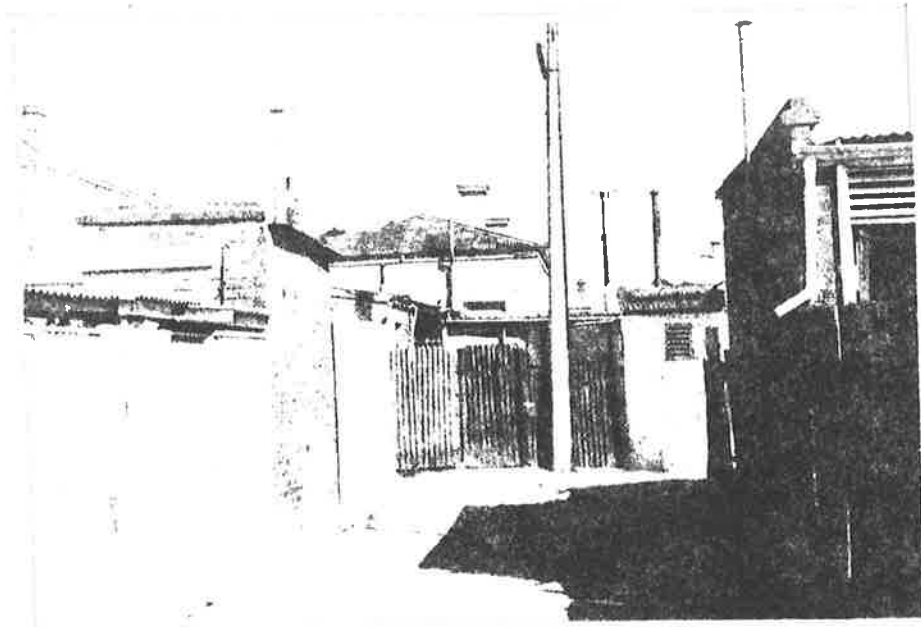
In the built-up areas we can firstly identify the core area by its intensity of pedestrian traffic and its vertical building forms. The remaining part of Adelaide, its frame area, displays the generally confused character of mixed uses. This can be observed by a visual inspection of the area, but is also quite apparent in the aerial photograph (Frontispiece). Some groupings into districts can however be traced.

The East End Wholesale Market with its associated retail and other activities both in Grenfell Street, Rundle Street and East Terrace has some of the interesting character usually associated with such establishments - activity, smells, trucks with produce etc. The area surrounding the retail Central Market, has lost some of its distinctive character as a result of its redevelopment, but can still be regarded as separate from the core area. At the western end of Hindley Street a warehouse district centred around the West End Brewery can be noted.

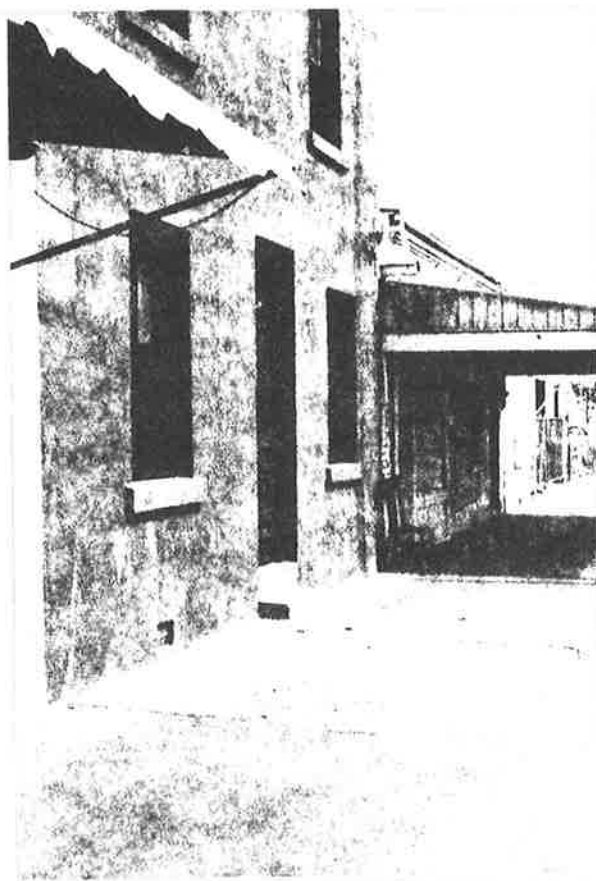
As one moves south of the core area towards South Terrace the mixed uses gradually crystallise into a more or less homogeneous grouping of residential areas. These are usually old, with some slum characteristics and are being invaded by commercial and industrial activities. There is a generally run-down appearance, numerous "For Sale" signs, but at the same time a distinctly urban residential character in parts. There is a certain unity of the stone fronted houses with their cast-iron verandahs and galvanised iron roofs, tiled verandah floors and closeness to the street. There are little corner shops, old hotels of pleasant character, children playing in the streets and back alleys. Often pathetic attempts at "prettifying-up" the houses by violent use of strong colours, pot plants etc. have been made, one suspects in a vain hope of staving off the inevitable encroachment of other uses.

One certainly does not wish to suggest the retention of these dilapidated structures, but one cannot help admiring the strong residential character and attachment that exists in the area. The proximity of these areas to Hurtle and Whitmore Squares and to the Parklands make them eminently suitable for their redevelopment as residential areas. Redevelopment is most urgent in these areas, but it should be approached sympathetically by using and retaining as much of the existing character as possible. (Fig. 34)

To the east of Hutt Street, there is a similar district of strong residential character. It has been protected from a large-scale intrusion of other uses and has sounder structures and consequently presents a more unified appearance. An atmosphere of quiet seclusion and isolation from the



EAST ADELAIDE



SOUTH ADELAIDE

FIG.34-NEED FOR REDEVELOPMENT

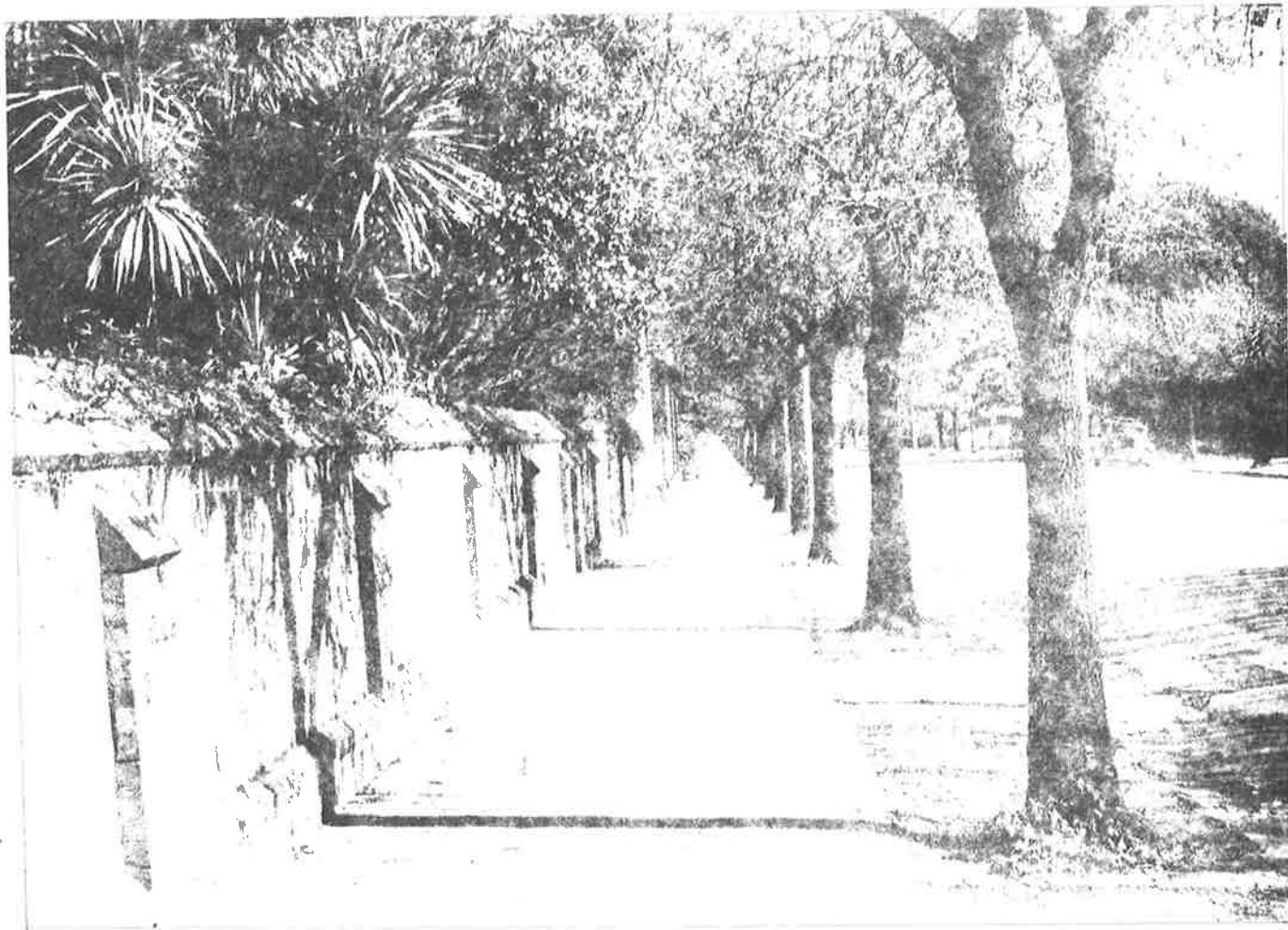
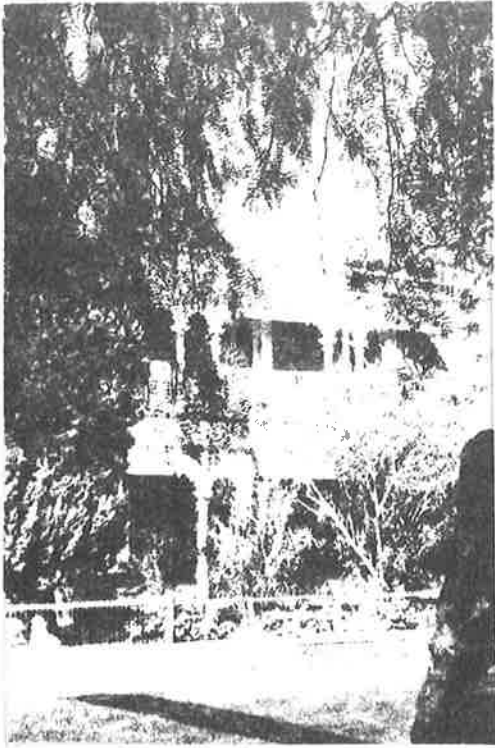


FIG.35 - GILLES STREET, EAST ADELAIDE



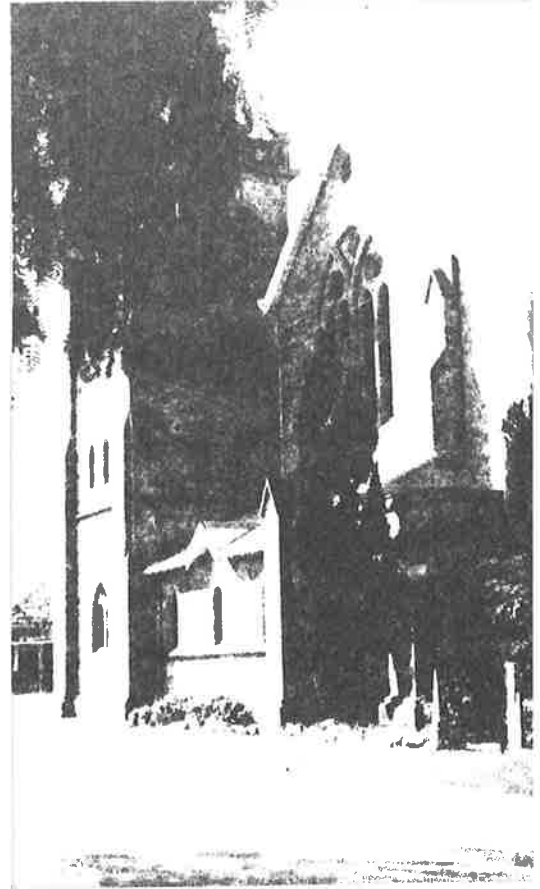
VIEW 3



VIEW 2



VIEW 1



VIEW 4



FIG.36-PEDESTRIAN PATH
EAST ADELAIDE

distractions of the city pervades this area. (Fig. 35) There are many small terrace houses in charming tree-lined streets of intimate scale and character. Some of these are run-down, but in the context of their setting in the area they are not as obtrusive as those in the southern area. Along East Terrace and South Terrace there are many stately stone houses, surrounded by stone or wrought iron fences which particularly distinguish this district. The whole area has a strong sense of relation to the parklands and possesses some interesting pedestrian paths which could have great potential in redevelopment. (Fig. 36) Even more than the southern area this area needs to be retained for residential uses. Its character implies an approach in terms of rehabilitation and some small-scale redevelopment, rather than large-scale redevelopment.

The development along South and West Terraces is not related to the areas behind them but forms a continuous edge to the area, and their character has been described previously. They have a great potential for a more unified visual expression than exists at present.

North Adelaide, forms quite a distinct district reinforced by its dominant position on raised ground. It is characterised by quiet tree-lined streets, some narrow and intimate, others wide and imposing; by old houses, some large and in good condition, others small and dilapidated, but unified by similar materials and pervading residential scale.

However, Lower North Adelaide must be regarded as a somewhat separate district, as a result of its visual and topographical isolation from the prominent hill. It is closer in character to the surrounding suburban development across the parklands. Nevertheless it contains many fine old buildings which have been converted to retail and commercial uses, professional offices, art galleries, restaurants etc. The alterations to these buildings have been done with an admirable sympathy for the existing structures and thus their character has been successfully preserved.

North Adelaide itself consists of an outer shell of good class residential development along the terraces and the more imposing streets, enclosing a poorer quality area in its centre, where the streets are narrower

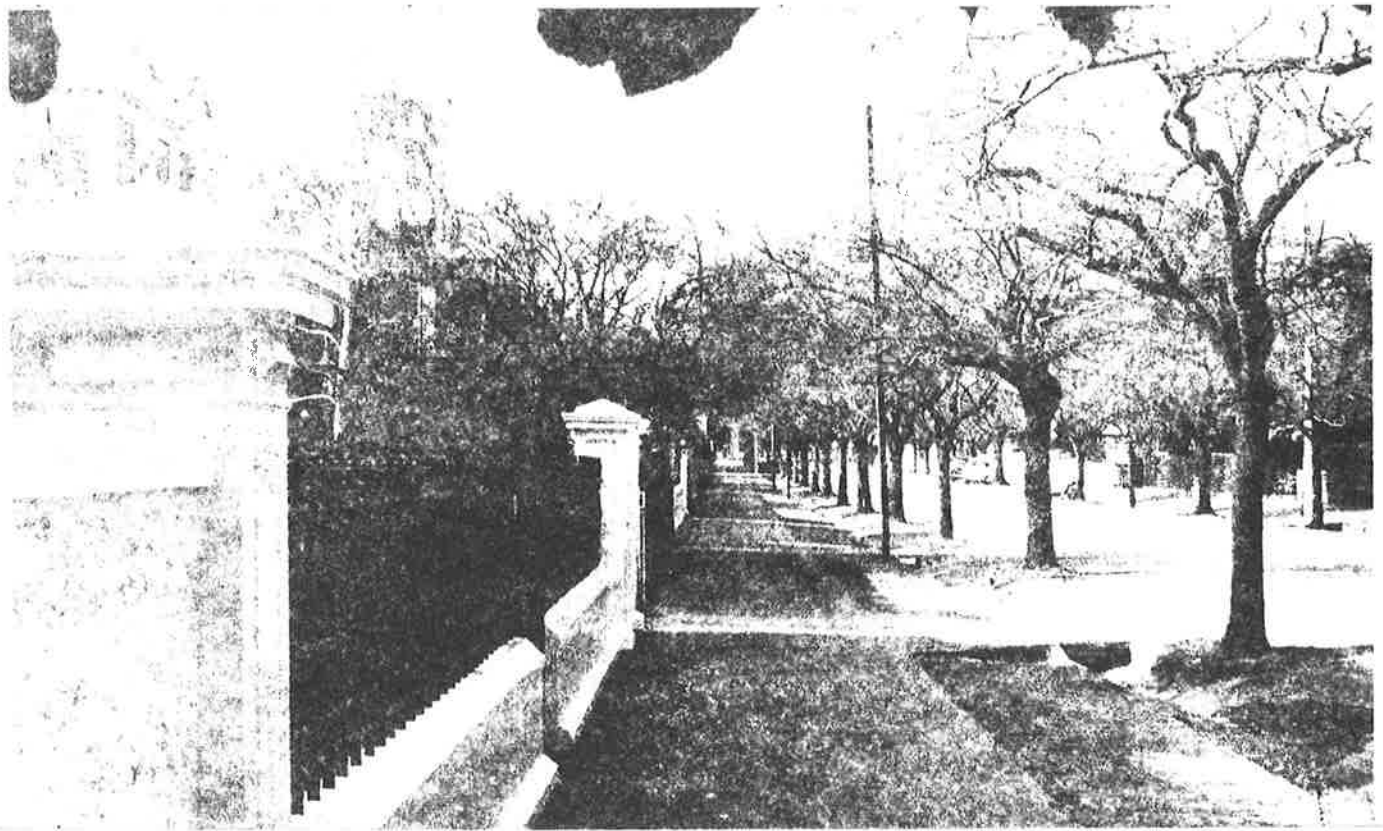


FIG. 37 - BARNARD STREET, NORTH ADELAIDE



FIG. 38 - STANLEY STREET, NORTH ADELAIDE

though tree lined, and the buildings are generally single-storey terrace houses, or narrow fronted detached houses quite often in a slightly neglected condition. The development along the terraces and in some of the better streets consists of well kept, two storey residences in large grounds with brush and wrought iron fences, all exhibiting a unity in materials and scale. (Fig. 37 & 38)

The smaller block containing St. Peters Cathedral and the Children's Hospital has a pleasant character and the institutional and public uses have not disturbed residential development greatly.

From some parts of North Adelaide important views over other parts of the city and metropolitan area are provided. Another minor feature is provided by the pleasant narrow footways between some streets, which have an old-world charm that is rare to find in Australia.

The district as a whole provides a very satisfying and distinctive residential area. The other uses - Cathedral, churches, hospitals, university colleges etc. - it contains do not conflict with this character but reinforce it and add interest to it. (Fig. 38) Any new development in this area should respect and attune itself to this.

While all these districts within the area do have some unifying character that distinguishes them as such, there are few really strong districts with consistent and unmistakable features. There is a need for the large areas of nondescript or monotonous character to be structured into more coherent forms.

4.7 Character of the Squares

The squares can best be described in Zucker's words : "There exist today in towns and cities 'squares' marked as such on maps which actually are no more than plain voids, empty areas within the web of streets".⁴⁾ At best they provide visual relief and reference points in the otherwise monotonous and regular street pattern and undistinguished character of the area.

4) Paul Zucker, Town and Square, Columbia University Press, 1959

In their present form they do not possess any of the spatial character usually associated with true urban squares, and are perhaps best regarded as natural features occurring within the built-up areas. Wellington Square, Whitmore Square, and to some extent Hurtle Square, are fairly pleasant residential type squares, and they may well be retained in this form.

Wellington Square is rather too large for a residential square. Its scale is not suited to the intimate character that such a square demands. Its vastness discourages the pedestrian from crossing it and the formal layout and planting does not invite social use and activity. Besides, the houses facing onto it are generally large ones, and the lives of the people who inhabit them are conducted in the privacy of their extensive gardens. Thus the square is generally empty of people and activity, but it does provide a pleasant aspect for motorists who drive around it and for the houses that look out on it.

Whitmore Square is visually the most satisfactory one, and has the true character of a residential square. (Fig. 39) The unity of the square has remained intact, there is a generous unbroken expanse of lawn, shaded by large trees and crossed by paths. It is framed by small, old stone buildings with cast iron verandahs, while a church and other larger buildings provide points of interest. It is visually linked to the parklands by a pleasant tree lined road. The square is fairly intensively used by the surrounding residents, but is not popular with others due to its association with the Salvation Army Men's Home and general reputation as a place for drunks and tramps.

Hurtle Square is also attractively planted and has a reasonably unified if somewhat mixed and dilapidated architectural frame. It is unfortunately crossed by two roads with traffic lights at each intersection, which detract from its potential use as a residential square by the surrounding residents. (Fig. 41) However, the roadway surrounding the square is only wide enough to give access to properties and thus the relationship of buildings to the square is very satisfying. (Fig. 40)

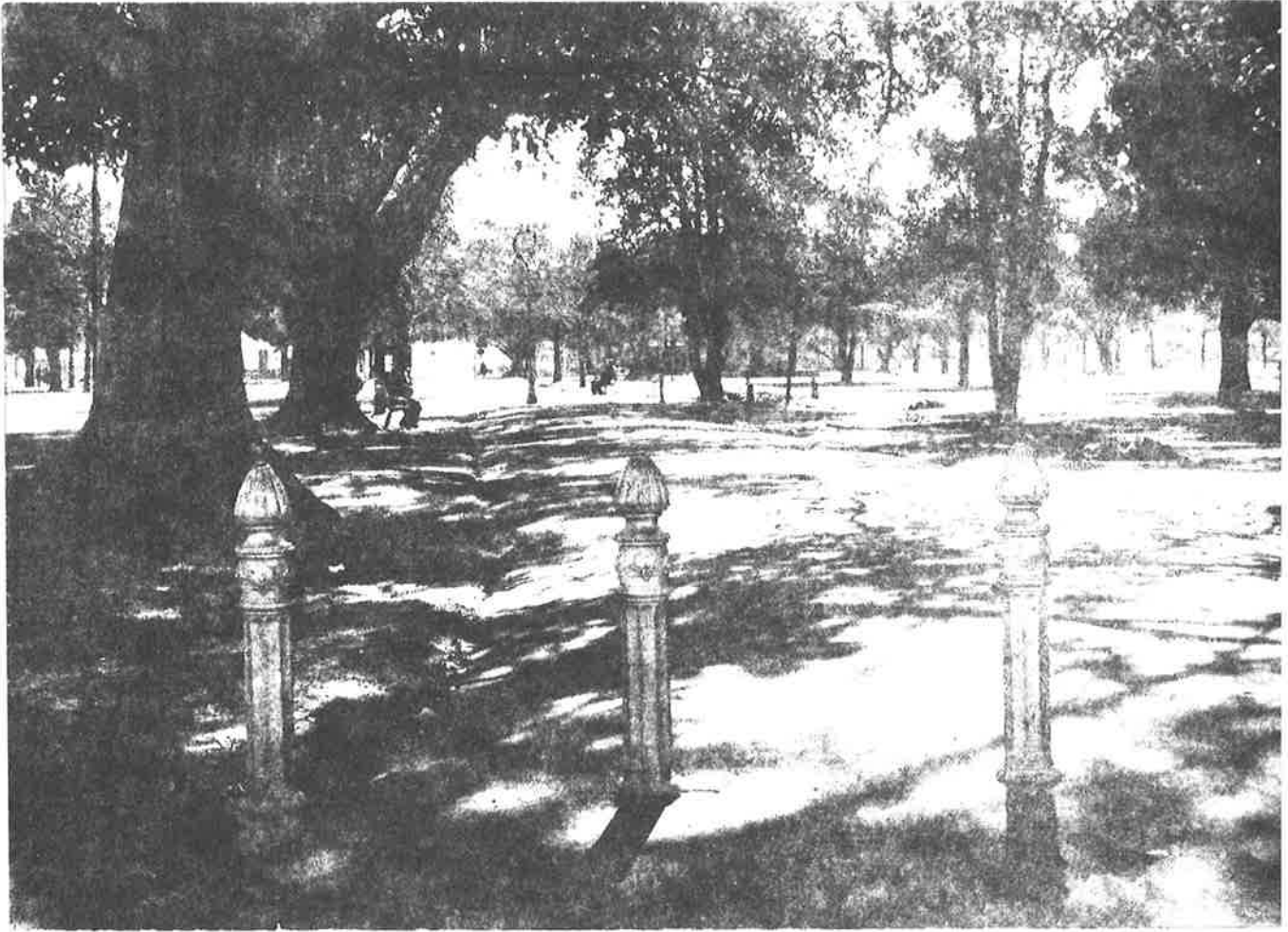


FIG. 39 - WHITMORE SQUARE

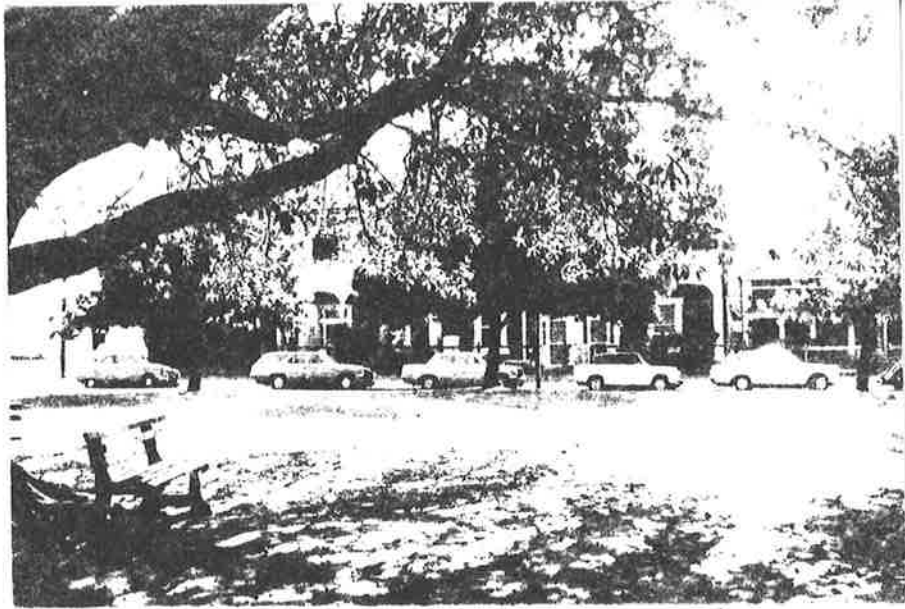


FIG.40- HURTLE SQUARE - INTIMACY...



FIG.41-... SPOILED BY WIDE ROADS

The other three : Light Square, Hindmarsh Square and Victoria Square, have potential possibilities for development into squares of an urban type.

Light Square is the most unsatisfactory square in its present form. It has no big trees, and the artificially imposed pattern of formal planting is entirely out of character with the surrounding commercial buildings. It is bisected only by Currie Street, but the circulatory traffic is fairly intense and as a result the square is nearly always empty of people. Its vastness also does not encourage its active use, and it has furthermore been isolated from the remaining residential areas by commercial uses which completely enclose it. Its character should be more closely related to whatever development is envisaged in the vicinity of the square. If it is to be industrial and commercial, it could be quite useful as a lunch-time park for the employees.

Hindmarsh Square could be placed in a similar category of open spaces as the linear park along North Terrace- as a "green oasis" a short distance away from the core. It has large shade trees and lawns ideal for shoppers and workers relaxation. It attracts a large number of pedestrians who cross the square in walking to the core from eastern and south-eastern parts of the central area. Another added feature is its visual link to Bonython Hall in North Terrace. The only intrusion in this pleasant square are the busy streets that pass through it.

Particular significance must be attached to Victoria Square as the symbolic civic centre of Adelaide as originally conceived by Light. At present it is a vast, open area with a weak architectural frame dominated by traffic on its bisecting and surrounding roads. (Fig. 43) The four quadrants are laid out in a formal, geometric pattern of flowers and ornamental trees and shrubs which have little impact at ground level and are only significant in an aerial view. (Fig. 42). In this openness the statue of Queen Victoria and the public conveniences are the conspicuous features. It lacks unity and is uninviting for any other use than passing through. Its generally busy appearance is due to its function as a terminal point for country and private bus lines and as a

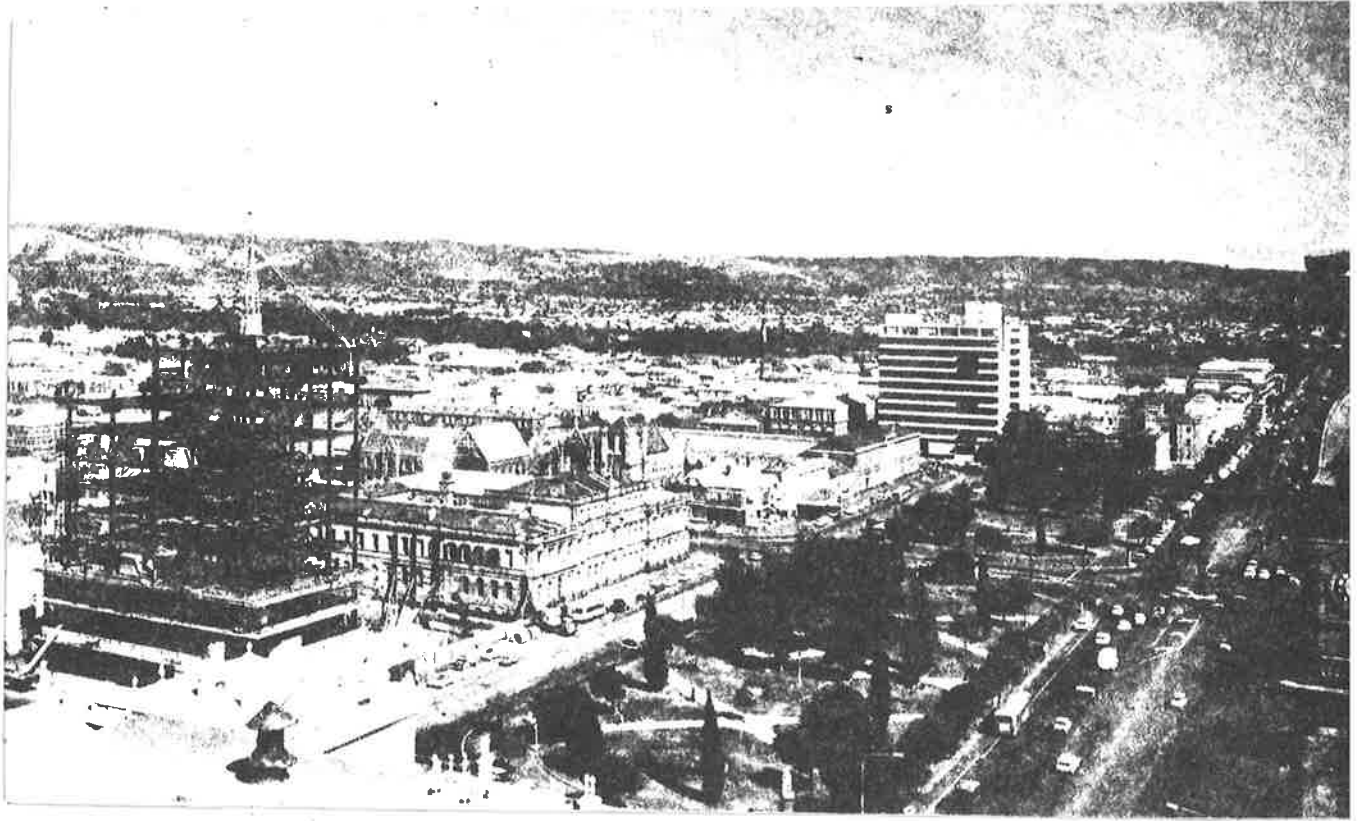


FIG.42 - VICTORIA SQUARE

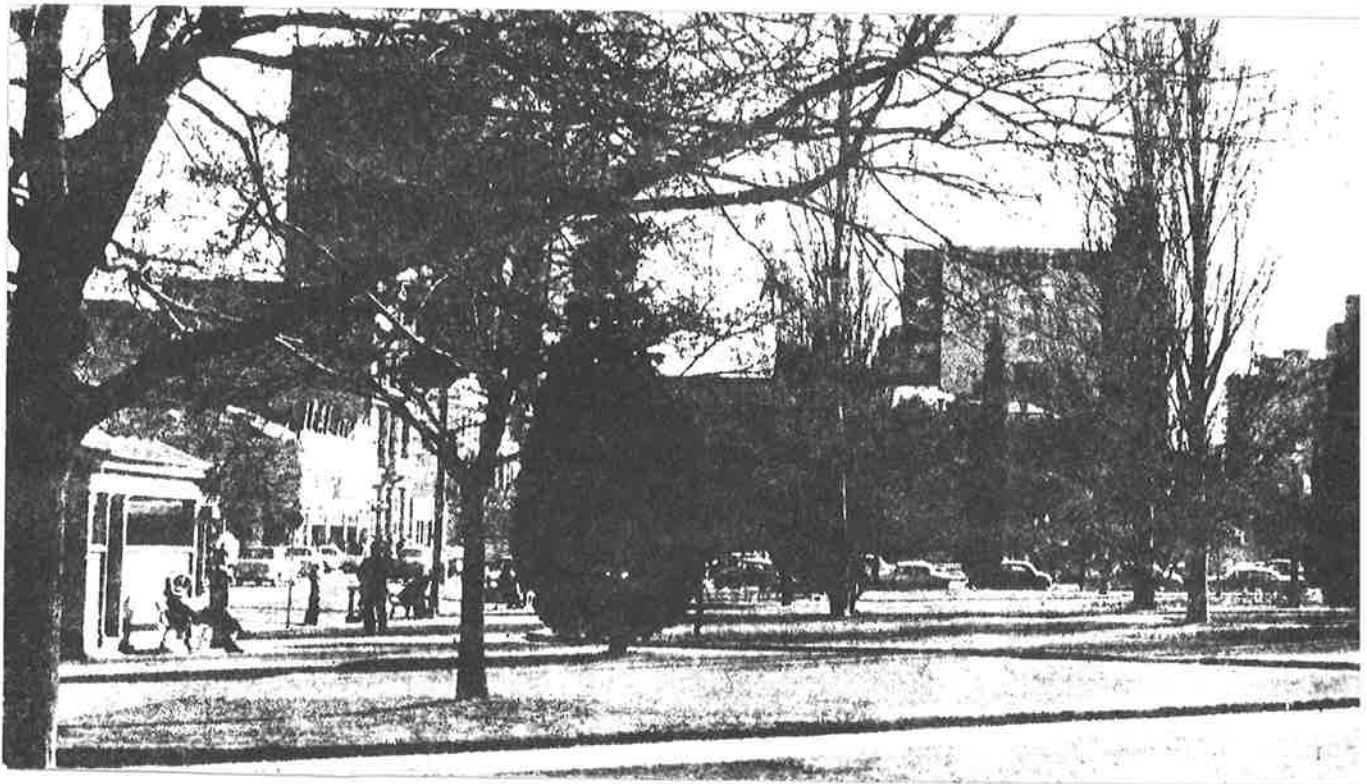


FIG.43 - VICTORIA SQUARE

stopping place for many M.T.T. buses. In a visual and social sense the square does not fulfil its role as a central square. Some encouraging trends are evident. The completion of the Police Buildings, the construction of the Reserve Bank, the Central Market Redevelopment and the impending start on the new State Government office block all indicate the possibility of its reinstatement as a civic square. With the already existing older buildings on its north and south sides providing historical character, with the erection of the tall government or public office buildings on its eastern side and with the consolidation of commercial activities on the western side it could develop into symbolic centre for the city. The concern of the Adelaide City Council with its fountain and closure of King William Street is to be commended, but one is apprehensive about the results that will be achieved. We only have to look at the results of the Council's previous attempts at "improvement" of the parklands and River Torrens to see that its admirable zeal is often misguided.

One is also concerned about the piecemeal approach to such a significant urban space - it appears that the State Government office block will pay little attention to its neighbour the Reserve Bank. Surely, Victoria Square is a site of the greatest symbolic significance, and as such any approach, other than a comprehensive one, will not do it justice nor exploit its potential to its fullest. A comprehensive scheme prepared by the final year students in the Faculty of Architecture and Town Planning indicated what such an approach could achieve in terms of a unified three-dimensional concept based on a realistic appraisal of its function and importance.⁵⁾

The policy regarding all the squares would seem to be quite clear - they should be reinstated, as much as possible, to their original conception as traffic free squares and their development should be dealt with in a comprehensive way, for only in this way can their true urban design potential be realised. Some further aspects of the squares regarding vegetation are treated in the next section.

5) "£30 million plan - How Victoria Square could look", The News, 5th August 1965



FIG.44 - PARKLANDS - NATURAL ...



FIG.45 - ... "BEAUTIFIED" ...



FIG.46 - ... INTENSIFIED

4.8 Character of Natural Features and Vegetation

The parklands generally have a pleasant, natural character and consist of native and exotic trees and grass. (Fig. 44) While nowhere near as thickly planted as some 50 years ago, they have quite a pleasant and green appearance in winter. However, in summer their dry and dusty appearance is not very satisfactory. Some attempts have been made at the improvement or "beautification" of the parklands with lawns and flower beds, gardens and boating lakes. Generally these "Alpine rock gardens" and "rose gardens" are sadly lacking in their landscaping qualities and are entirely out of sympathy with the rest of the parklands. (Fig. 45) This is confirmed even in the aerial photograph (Frontispiece). The most successful areas are those where the improvements have simply intensified the character of the parklands but have not changed it significantly. (Fig. 46) The East Parklands shallow lake area is a good example of this, although its landscaping is not completely satisfactory. (Fig. 47) The Botanic Park is perhaps the best example of the effect that can be achieved, without destroying the innate character of the parklands.

The River Torrens is a modest stream, that has been made more of an asset since its damming in 1881. The Lake thus created and its landscaped banks form a pleasant restful park relatively close to the central core. In fact, Elder Park and the riverside areas below the University, are the only large open spaces which can be used for relaxation by the workers and shoppers of the central core. The squares are generally of such a character as to prevent their use for quiet relaxation, and the linear park along North Terrace is already used almost to capacity at lunchtimes and in any case has a more busy atmosphere. Furthermore the riverside areas have the attraction of a large area of water which all the other areas lack.

Elder Park is physically close to the central core, but the physical barrier of the railways makes it relatively inaccessible from and not directly related to the core. A better physical and visual linkage would be desirable. Those parts of the river which have been "beautified" can again be criticised for the same reasons as the parklands improvements.

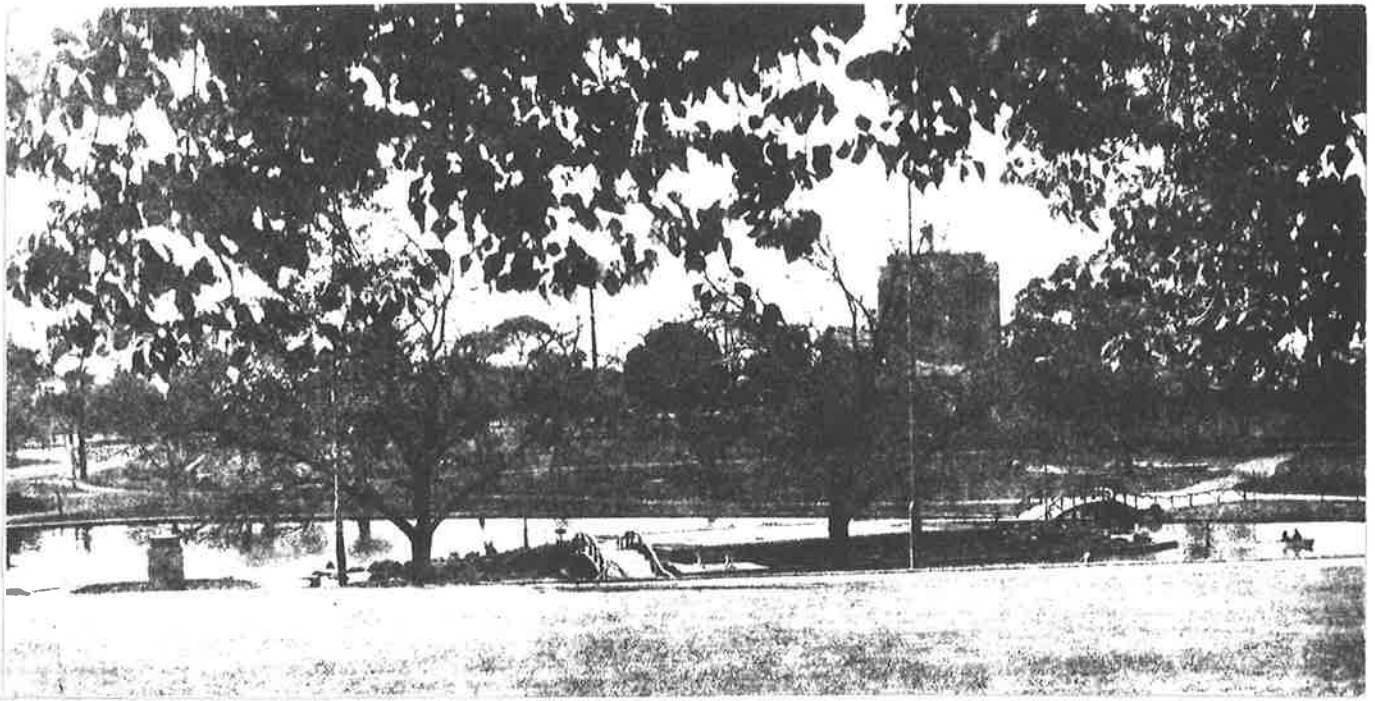


FIG. 47 - EAST PARKLANDS - SHALLOW LAKE



FIG. 48 - PARKLANDS IN CONTRAST TO THE
REGULAR FORMS OF THE CITY

Trees and other forms of vegetation are a vital part of a city. They give people some contact with nature and 'soften the hard lines and surfaces of urban construction with the green of leaves, texture and shadow.⁶⁾ The need is particularly great in Adelaide because of its hot and dusty climate in summer and its large expanse of natural parklands. An inspection of the aerial photograph reveals just how bare the parklands really are.

Vegetation also has a more useful purpose than mere adornment. Besides providing shade, it can help to screen busy roads from quiet parks, deaden the noise of traffic and absorb fumes and dust. It can provide coolness in summer and shelter from winds in winter. Indigenous vegetation is probably more important and valuable than exotic kinds, i.e. foreign to the country. The healthy appearance of a city, throughout the seasons, depends more upon an understanding of the qualities of indigenous vegetation than is generally realised.⁷⁾ They are generally extremely adaptable, and are more hardy than exotic varieties.

Reference has been made earlier to the fact that nature can be related to urban forms either formally or informally depending on the size and location of the areas in question.

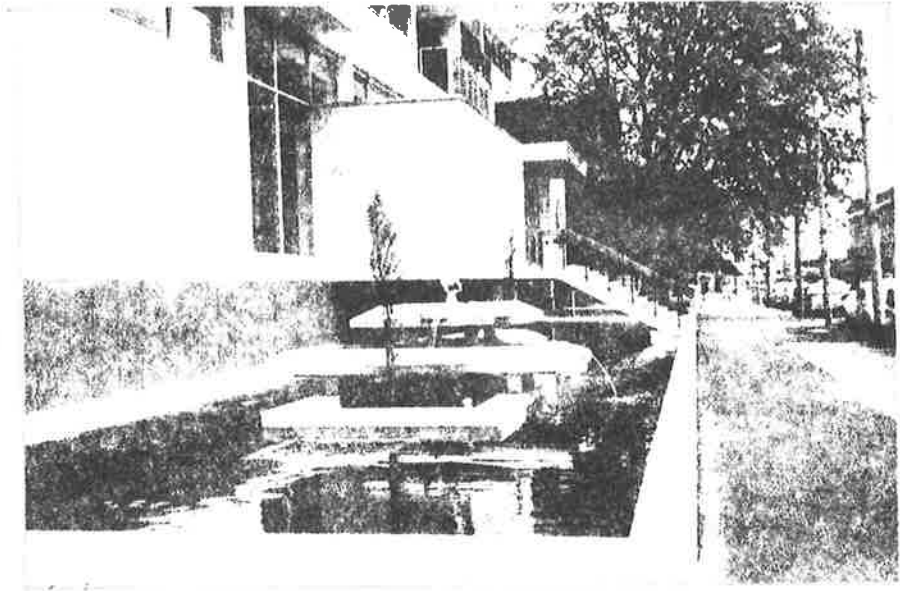
In Adelaide, the parklands form the informal natural features of the city, while some of the squares can be considered as formal natural features. Both can be accentuated and improved in these qualities to act as foils or to supplement the urban qualities of the built up areas. The character and type of vegetation could be different in each case. Indigenous vegetation and an informal character of landscaping would be appropriate for the parklands to enhance their natural qualities and to provide the maximum contrast to the regular appearance of the city. (Fig. 48) Exotic, in the sense of not being indigenous, planting in a more formal arrangement might be more appropriate in the squares where they would need to complement the urban character.

6) Lawrence Halprin, op.cit., Chapter 7

7) Patrick Horsbrugh, loc.cit.



STREAMS...



...AND FOUNTAINS

FIG.49- WATER SIGHTS

Water in a city can also serve both functional and æsthetic purposes. Here again our climate demands the sight and touch of water. At present the only really large area of water is the River Torrens with smaller lakes and ponds in the parklands. Attention has recently turned to the provision of fountains, but the need is for a varied display and provision of water in all its conceivable forms - quiet waters, running waters, ponds, lakes, pools, etc. (Fig. 49)

4.9 Nodes

Nodes are particularly significant in the urban design structure of an area - they are the strategic foci formed either as junctions of paths or concentrations of some activity or characteristic. The latter are probably visually more important, but junctions and breaks in transportation can be equally powerful if their function and character is given an appropriate visual expression.

The Rundle Street shopping core forms a strong node characterised by intense pedestrian and vehicular activity, retail and entertainment use concentration, bustle, noise, clash of colours and signs, bright lights at night, and a general atmosphere of vitality. (Fig. 51) At the same time it is physically and visually rather chaotic it imposes a strain on our faculties.

Hindley Street forms a secondary node continuing on from Rundle Street but having distinct characteristics. It contains some retail facilities but is largely made up of entertainment facilities - theatres, restaurants, coffee bars, night clubs, skating rink as well as various private national clubs - and it has a strong ethnic flavour. It is bright, animated and possesses a Mediterranean character and is the only lively area of the core on Sundays.

North Terrace, between King William Street and Pulteney Street, has nodal characteristics and is visually the most satisfying node in Adelaide. Its spatial qualities have been mentioned previously; its linear park along the northern side provides delightful spaces for pedestrian use. The arrangement of the public buildings create sheltered square-like spaces between them which provide interest to its generally linear form. This

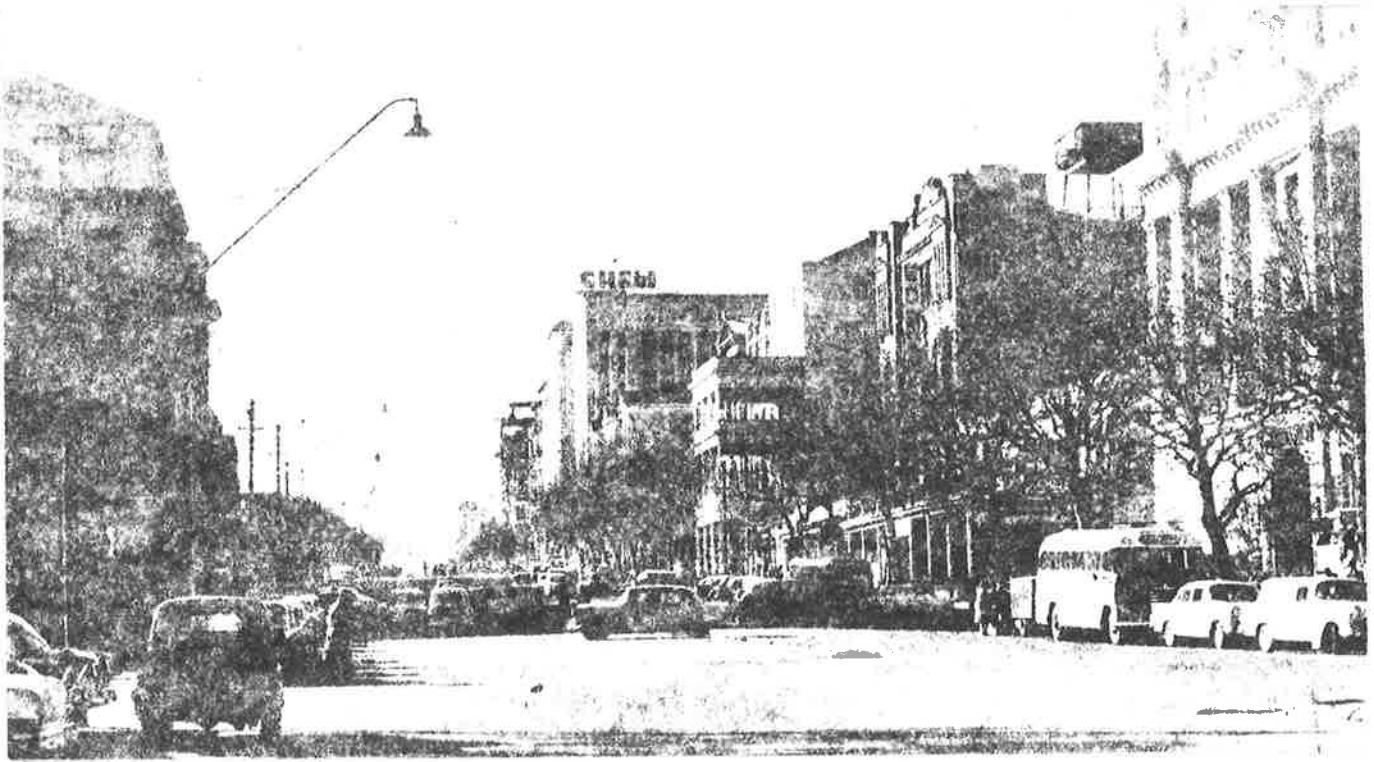


FIG 50 RAILWAY STATION NODE



FIG 51 - RUNDLE STREET NODE

overall setting of lawns, trees, planting, flowers, studded with the public buildings, invites pedestrian use. There is the activity of lunchtime crowds, the relaxing shoppers and workers on the lawns, the old men on the benches, there is the texture of sun and leaves on its shaded pavements, there is the bustle of traffic on North Terrace, but the pedestrian feels safe and secure in this rich environment. North Terrace is unique in its characteristics and at the same time it concentrates and absorbs all of the surrounding elements - the core, the University, the roadway, the parklands - in a single and vivid image.

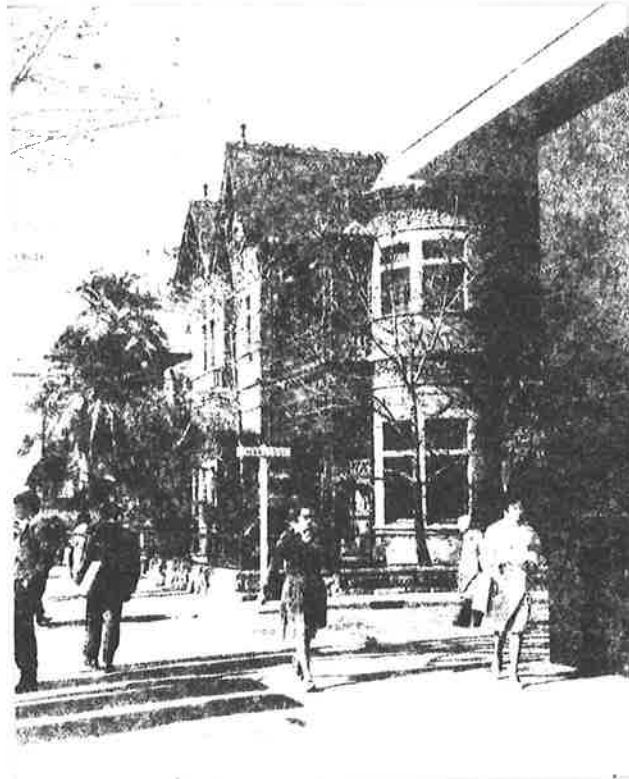
The Railway Station area with its concentration of transportation activities - the railway, airline offices, the roadway - and its hotels forms another strong node distinguished by its activity and the important landmarks of Parliament House, the Old Legislative Buildings and other older buildings. (Fig. 50)

The part of King William Road between St. Peter's Cathedral and the Children's Hospital also has some nodal characteristics, but it lacks pedestrian activity to make it into an even stronger node. It is distinguished by the strong forms of the Cathedral and the Hospital and contains other pleasant older buildings.

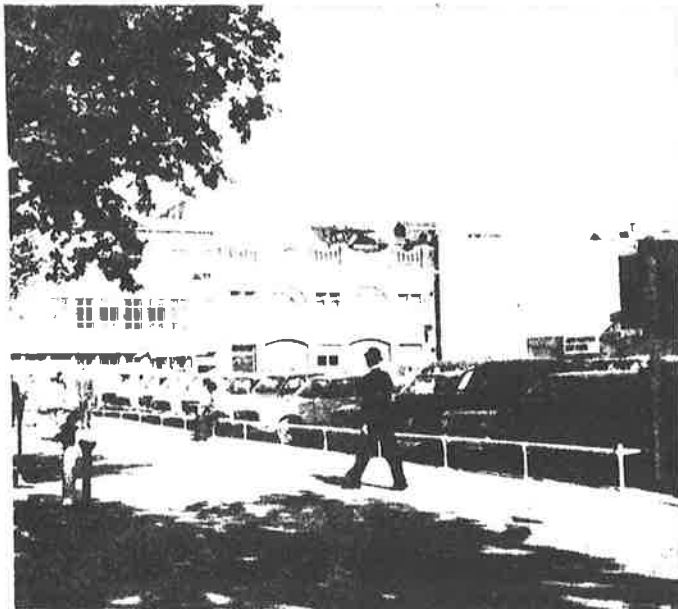
The other nodes are formed by the squares of Adelaide. Their character has been previously discussed. They all lack a sufficiently intense use by pedestrians to class them as really strong nodes. Their frame character is also usually poor and hence the nodal character is given largely by their qualities as open spaces with trees and lawns. Victoria Square in spite of its poor visual character, is a relatively strong node because of the activity generated by the transportation termini and the surrounding development.

There are several nodes formed by junctions of paths. The most important are the following :

1. West Terrace, North Terrace, Port Road junction
2. West Terrace, South Terrace, Goodwood Road, Anzac Highway junction
3. Frome Road, North Terrace junction



THESE BUILDINGS WERE LOST...



...TO GIVE WAY TO A CAR PARK IN A STREET OF GREAT CHARM

FIG.52 -NORTH TERRACE

4. Pulteney Street, North Terrace junction
5. Hutt Street, Bartels Road, Pirie Street, East Terrace junction
6. Morphet Street Bridge, Hindley Street junction

All the various nodes described above, with the exception of North Terrace, could be given a more satisfying visual expression of their characteristics. The path junctions particularly, are at present extremely vague. In the case of North Terrace preservation of the existing characteristics is most important and any disruptions to it, such as road widening involving removal of trees and the introduction of parking stations along its southern side, should be strongly resisted. (Fig. 52)

4.10 Landmarks

Landmarks are the reference or identity points within an area and are generally provided by simple, unique and memorable elements in the visual form of a city. They may be large scale ones visible from a distance, or small scale ones which have a strong impact in the more immediate area. Tall objects, such as spires of churches, or tall office blocks are the more obvious types of landmarks. (Fig. 53) However, in this respect, it is worth noting that while single tall buildings in an otherwise low city skyline provided strong landmarks some years ago, with the increase in the numbers of such buildings, individual ones cease to act as landmarks. It is the group of tall buildings, as such, that form a landmark when approaching the city but once inside it they become less important. Individual tall buildings may still be distinguished where they occur on the outside of the group and in line with approach routes. In fact, inside the city, one can regard them more as a background against which the more intimate smaller buildings act as jewel-like landmarks. (Fig. 54) In any case, the eye-level environmental qualities take over and attention is turned to more detailed features once the core area is entered on foot.

Most of the landmarks in the area are concentrated in King William Street, North Terrace and Victoria Square and at North Adelaide. Along King William Street, the Bank of New South Wales and the A.M.P. Building, form a "gateway" when approaching from the north, further down there is the C.M.L.

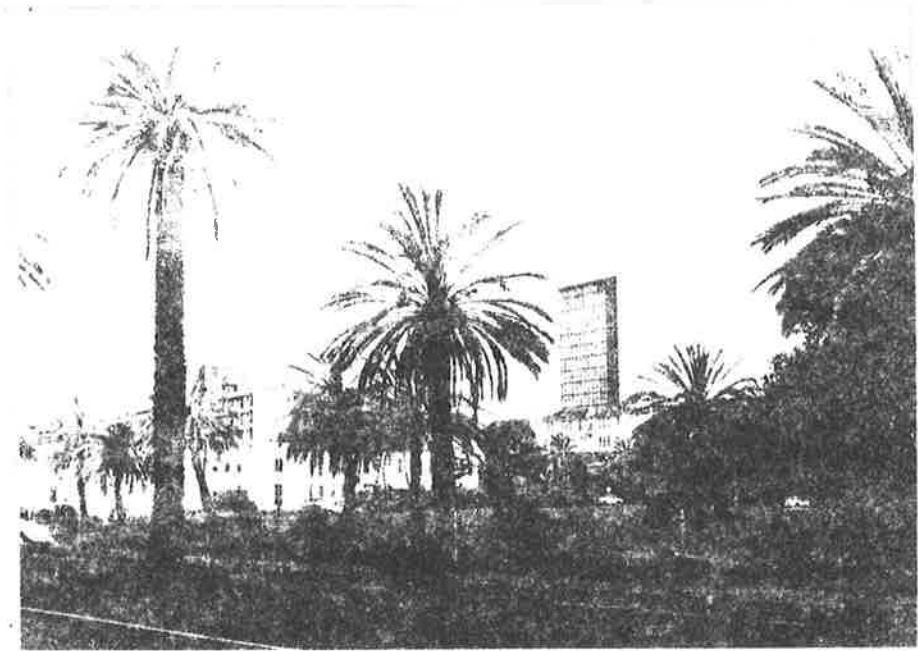


FIG.53 - TEACHERS COLLEGE
DISTANT LANDMARK



FIG.54 - E.S. & A. BANK
INTIMATE LANDMARK



FIG. 55 — G.P.O. AND TOWN HALL

Building, the N.M.L.A. Building, the Savings Bank, City Manual Life Building and the Advertiser Building, with the towers of the G.P.O. and Town Hall marking its termination in Victoria Square. The visual impact of these towers when approaching from the south has been somewhat destroyed by the tall office buildings behind them, but at a closer distance it is still quite strong. (Fig. 55)

Victoria Square is also rich in landmarks both large and small ones - the Reserve Bank Building, the Police Building, the M.L.C. Building and its weather beacon, Treasury Buildings, E & W.S. Department, Police Court, Supreme Court, Moores, M.T.T. Depot and St. Xaviers Cathedral just off it.

North Terrace has a more consistent quality in its landmarks - Old Legislative Building, Parliament Building, Government House, War Memorial, Institute Building, Public Library, Museum, National Gallery, University, Bonython Hall, Institute of Technology and Royal Adelaide Hospital. The Teachers' College Building and Napier Building in the University are important but their visual quality is not related to the general North Terrace character.

Other tall buildings form landmarks along the approach routes - Royal Exchange Assurance building and Dalgety Building in Currie Street, Da Costa Building and Guardian Assurance Building in Grenfell Street, BP House in Flinders Street. The two church spires of the Catholic Church in Grote Street form a landmark when approaching from the west.

Among the smaller scale landmarks one could list - the dome of Adelaide Arcade, South Australian Hotel, Botanic Garden gates and wall, Botanic Hotel, City Market, East End Market, wall along Government House in King William Road, Scots Church - North Terrace. One should have included the E.S. & A. Bank in King William Street but at the time of writing this important little landmark was being demolished. (Fig. 54)

At North Adelaide St. Peters Cathedral, Children's Hospital and Hotel Australia form a dynamic sequence of landmarks when moving along King William Road. The Congregational Church as well as others throughout the area form intimate landmarks within the district. The television masts near Wellington Square constitute a distant landmark.

Approaching the city through the South Parklands the Master Builders' building and St. Andrew's Hospital in South Terrace, a church in Gilbert Street, and the new building with a clock tower at the corner of King William Street and South Terrace, are all visible landmarks. The E.T.S.A. building and North Terrace house provide large scale landmarks, while Romilly House, the silos opposite Rundle Street, St. Peters College, Kings College and the Queen Victoria Hospital provide minor landmarks along the outer enclosing terraces.

4.11 Historical Buildings and Character

The following buildings erected prior to 1886 have been listed for preservation by the Early Buildings Committee of the National Trust of South Australia.⁸⁾

- The Victoria Square Group : The Police Court, The Supreme Court, The Treasury Building, the General Post Office (particularly Victoria Tower)
- The North Terrace Group : Ayers House (at present called Austral House) The Old Legislative Council Building, Government House, The Institute Building, Mitchell Building (University of Adelaide)
- King William Street Group : The Town Hall (particularly the Albert Tower and Balcony), the former Union Bank (now A. & N.Z. Bank)
- The North Adelaide Group : Bishop's Court, Christ Church and Christ Church Rectory
- Individual Buildings : The Friends Meeting House, Pennington Terrace

Mr. W.H. Bagot⁹⁾ in his list of buildings of architectural interest prepared in 1951, also included the following : The Adelaide Club, North Terrace, and the National Bank and the E.S.&A. Bank in King William Street.

However in our approach to preservation we should not limit ourselves to individual buildings and only those which have historical associations.

8) Building & Architecture, Adelaide, Vol.4. No.3, June 1965, "News From Here and Abroad", p.10 and 12

9) Report on The Metropolitan Area of Adelaide, op.cit., p.79 and 80

South Australia, because of its short history, is not richly endowed with early buildings of architectural or historical value. But there are many buildings, groups of buildings and indeed whole districts containing older buildings, which may not have a great deal of historical value and architectural merit but which contribute much to the character of Adelaide and its physical environment. (Fig. 37 & 38 and Fig. 56)

James Lees-Milne of the British National Trust has stated that the purpose is to preserve "those parts of the old fabric of our towns which have some value apart from their use as living space, and which can play a part, even if it is a purely æsthetic part, in the life of the community as it actually is". Thus a comprehensive plan for future development must respect and preserve such buildings and areas as part of our cultural heritage of a living environment. These buildings and areas provide a visible expression of history, they provide contrast to the newer elements of a city and constitute factors of relative permanence against which the changing city can be evaluated.

The approach to preservation must be based on a sound inventory of such areas and buildings, and must proceed on an intelligent relative value system to make its operation meaningful. Unfortunately, the scope of the thesis did not permit a thorough survey or evaluation of this kind, but attention has been drawn to the areas where preservation must be an important consideration in future development and redevelopment. Such development could very well be integrated with the existing character by compatibility of scale, materials, colours and textures - elusive qualities admittedly, but ones which are essential if we are to add to the existing qualities of the environment and not destroy it.

One particular aspect of the regard for older buildings should be mentioned. Patrick Horsbrugh¹⁰⁾ has spoken of the "trough of disregard" that exists between each successive generation and its immediate predecessor, and which occurs in all the arts as well as in popular taste. Familiarity seems

10) Patrick Horsbrugh, loc.cit.

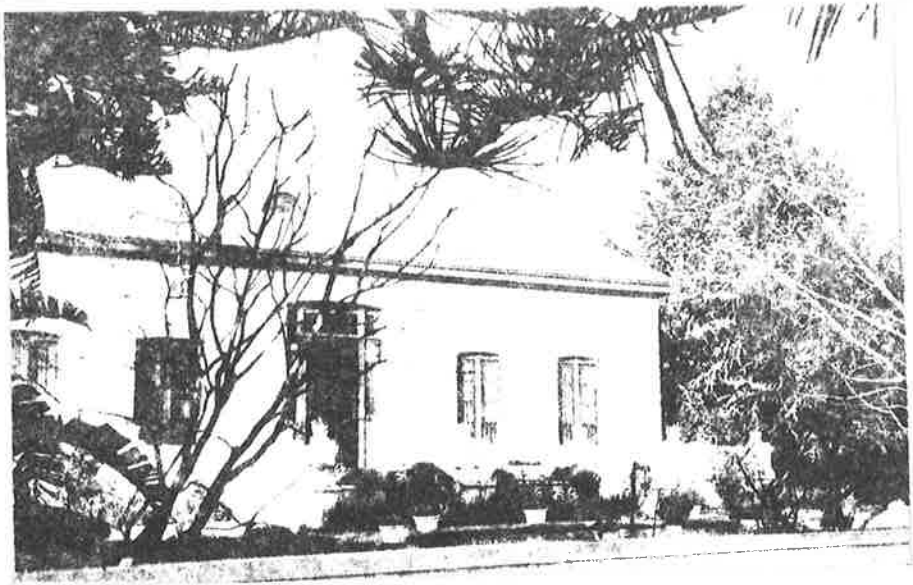


FIG. 56 - PLEASANT OLD BUILDINGS ...

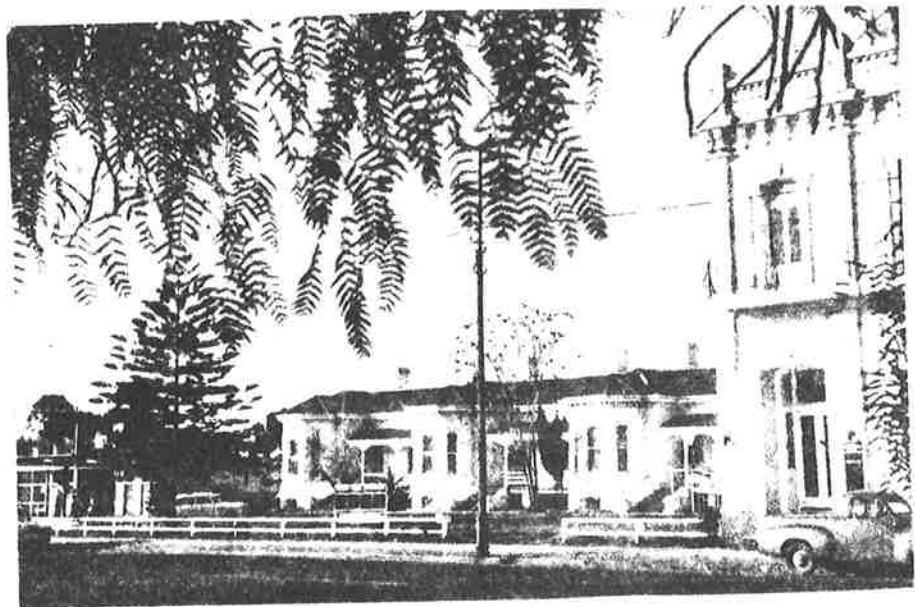


FIG. 57 - ... SHOULD BE PRESERVED ...



FIG. 58. - ... AND GIVEN A NEW AND USEFUL LIFE .

to breed contempt and whereas age-long history is valued, the more recent history and its visible expressions tend to be ignored. It is only recently that Victorian architecture, previously condemned for its eclecticism, has been given a more just appraisal. This period of disregard may last as long as seventy-five years and it is during this period that works of distinction are deliberately or thoughtlessly destroyed. Horsbrugh says that it is imperative, that in matters of architectural appreciation, this period of disregard be recognised for exactly what it is, a period of temporary æsthetic blindness.

We must also avoid regarding historical buildings and areas as museum pieces; we should try to find appropriate contemporary uses for these buildings, that are compatible with their character, and that would prevent their destruction for economic reasons. (Fig. 57 & 58) Preservation as an element of design can best be accomplished when fine buildings and beautiful places can be given a new and useful life. This may not be possible in all cases, particularly in the core area, but older buildings elsewhere in the city could form an integral and functional part of redevelopment schemes.

4.12 Building Forms and Colours Related to Climate

The effect of climate on the needs for natural features and water have already been stressed. South Australia enjoys a Mediterranean type of climate with a relatively large amount of sunshine and little rain, which allows outdoor life in almost all seasons. This fact should be recognised and should be encouraged by the provision of outdoor cafes and small open spaces in the core of the city. It is often claimed that the temperament of the people does not favour outdoor social life, but it is probably more true to say that the lack of such facilities have not encouraged its demonstration.

The need for colour planning in cities and the effects that can be achieved have only recently been recognised.¹¹⁾ In the past the colours were reasonably uniform as a result of the limitations imposed by the common building materials. Today with the large proliferation of materials

11) Howard Ketchum, "Human Needs Demand Effective Colour", A.I.A. Journal, April 1964

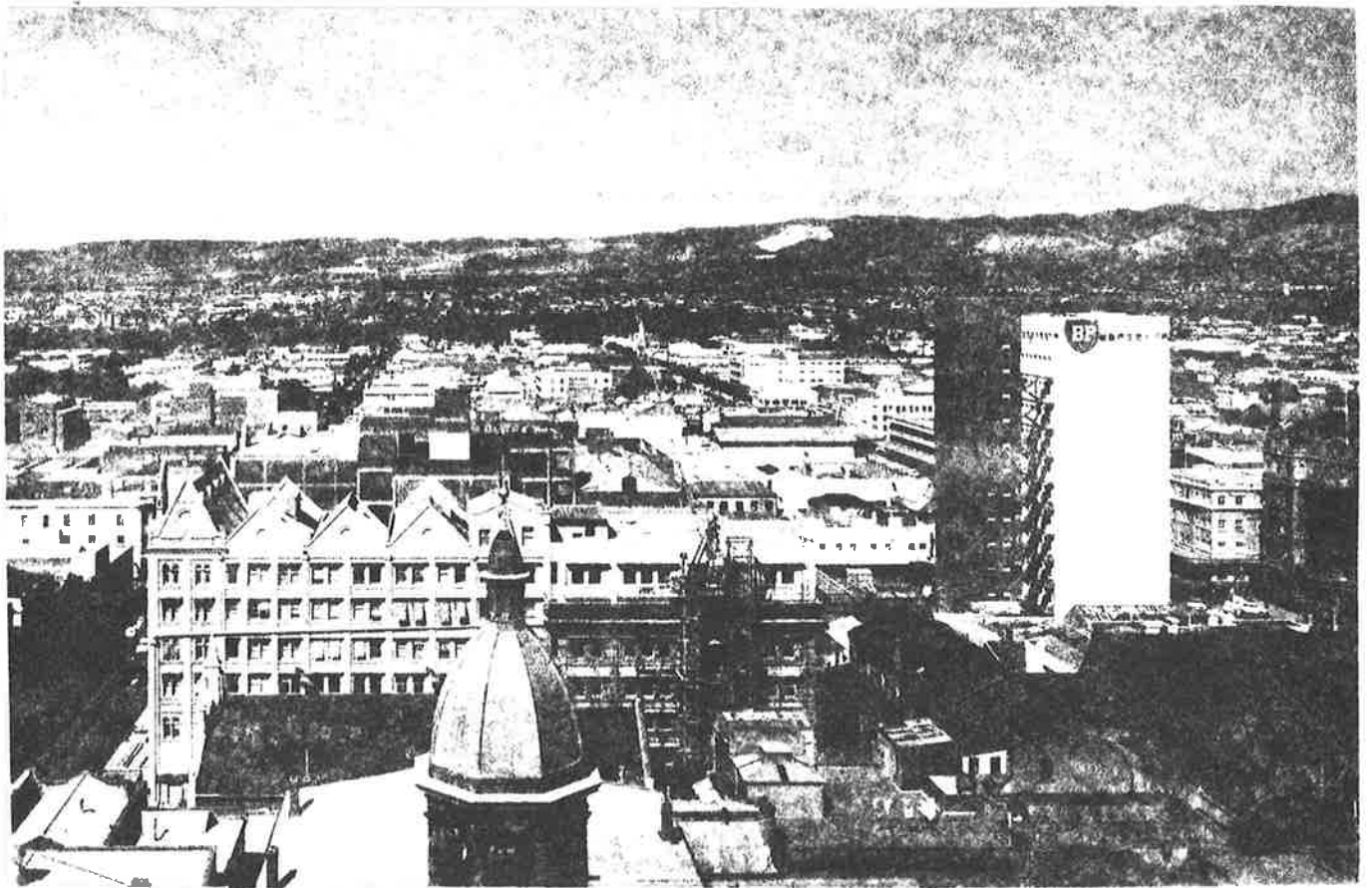


FIG.59 -NEW BUILDINGS LIGHT COLOURED TO CONTRAST WITH OLD

and colours some conscious effort at colour relation in the city must be made.

Paris has recently embarked on a programme of giving the city a "golden complexion", replacing the old elephant-grey¹²⁾ look, by a systematic clean-up and consistent colouring of older buildings. Similarly Charmian Clift has commented on the extensive use of whitewash in Sydney domestic buildings and the unity of street picture that this was achieved.¹³⁾

Our climate provides light qualities similar to those in the Mediterranean area, where white has long been recognised as the best colour to produce harmony and beauty in such conditions of light.

At present the buildings in Adelaide generally consist of the uniform, stone or brick older buildings which contrast with the newer ones displaying a more varied character and materials. A more satisfactory expression of this contrast could be achieved if the newer buildings were more unified in their character. For instance to take full advantage of the qualities of sunshine and light the buildings could generally have a light appearance with careful modelling of their surfaces that expressed the play of light and shadow. The older grey, brown and red buildings would contrast strongly with these lighter buildings. (Fig. 59)

4.13 Illumination

Until now the lighting of streets has been governed purely by functional considerations and even these have been based on minimum standards. But illumination can also be used in an æsthetic way to improve the night time image of the city. We must remember that at night, the pattern of man-made lighting is the city visually. The backbone of the pattern is the street lighting, which gives structure to the otherwise random pattern of light provided by illuminated signs and buildings. A more artistic use of illumination in addition to this is, of course, a social luxury, but one which an affluent society is quite capable of indulging in.

12) Roland Pullen, "Golden Complexion for Central Paris", Advertiser, 5th December 1964

13) Charmian Clift, "Whitewash Cure for Ugliness", Advertiser, 16th January 1965

At present the quality of illumination in the City of Adelaide and its night time image is extremely poor. There is very little structure given by the street lighting as it takes various forms and colours. The only exception is King William Street between North Terrace and Victoria Square, which provides a strong and consistent image. The quality of the illuminated signs is generally acceptable but some of the sky-signs on the higher buildings are too obtrusive. An indication of what can be done with illumination is illustrated during the biennial Festival of Arts. The whole city comes to light, and while the actual examples are often poor, at least the vitality and night-time image is tremendously improved.

William C.M. Lam¹⁴⁾ has stated that the aim should be to provide an integrated lighting system, which would express its character, define different types of streets and their relationships and provide drivers and pedestrians with information and visual orientation. At the same time consideration must also be given to the day-time appearance of the lighting system, the design and colour of its fixtures, to provide a quiet, orderly, repetitive background effect in the general townscape. Lighting fixtures should be considered together with all other kinds of street furniture.

4.14 Street Furniture and Paving

Street furniture includes all the various utility elements that are placed in streets such as directional signs, lighting fixtures etc. Because they are utility elements their design is often neglected and very little attempt is made to co-ordinate them into an orderly system. However, they influence the visual character of a street perhaps even more than its buildings. The multiplicity of signs and signals needed in our streets makes it imperative that they should not be allowed to dominate the visual scene.

The conglomeration of street furniture provided in Adelaide constitutes a visual mess. Each particular kind of fixture whether it be a traffic sign,

14) William C.M. Lam, "The Lighting of Cities", Architectural Record, June, 1965; July, 1965

bus stop sign, traffic signal, parking meter, street name, phone box or litter basket is generally badly designed in itself and completely unrelated to any of the other fixtures. An attempt at a co-ordinated approach to the whole system is needed as well as a greater attention to its individual elements. Several fixtures could be combined into one, and with a repetitive spacing of regular fixtures the street scene could be greatly improved. Street furniture may be one of the smallest elements, yet visually it plays a large part in urban design considerations.

Pavement surface is also generally considered merely from a utility viewpoint. To the pedestrian, however, it is extremely important - it should differentiate his walking surface from that of vehicular traffic and should provide an attractive and comfortable walking surface.

Generally the pavement surfaces provided in Adelaide are a patchwork of different materials which express nothing more than the fact, that only the economy of providing the footpath has been considered and not its suitability or attractiveness for pedestrian use. Perhaps there is some kind of logic in Adelaide's extensive asphalt paving - it is meant to discourage the pedestrian by making the surface look like part of the roadway.

Street furniture and paving as well as other detailed elements of the street can be and should be used as creative urban design elements. They can be employed to express the character of the various urban spaces and can be related to the different movement systems, thus helping to establish the basic structure of the city.

5. The Potential Image Structure of Adelaide

During the visual survey of the urban design qualities of the area, an attempt was made to discover the potential visual structure as it would appear to an observer. The idea and technique of this was derived from Kevin Lynch's book "The Image of the City".¹⁵⁾

The various elements of the physical form of the city were considered in terms of paths, districts, nodes, edges and landmarks. Their visibility,

15) Lynch, op.cit., p.15

their strengths or weaknesses as images and their interrelations were noted. The elements were divided into major and minor categories.

A survey of the area had previously been undertaken by the author,¹⁶⁾ and it is worthwhile noting that a more detailed appreciation of the technique and the nature of the elements of the image gained since that survey, produced some variations from the visual image previously established.

The results of the survey are shown in the following diagrams :

Fig.60 - The potential image structure

Fig.61 - Problems of the image

In the previous survey the first figure had been denoted : "The visual form of Adelaide as seen in the field". It seemed that as the findings of such a survey do not completely cover all aspects of the visual environment, it is better to regard them as the "potential image structure".

6. Visual Image of the City of Adelaide

At the same time as the previous field survey was made, the fifth year architectural students and post-graduate students in the Master of Town Planning course carried out interviews with a sample of inhabitants throughout the metropolitan area, to determine their individual images of the City of Adelaide. There were 22 interviewers who, on the average, each questioned 3 persons. The interviews were carried out generally according to the technique suggested by Lynch.¹⁷⁾ Each interviewer had compiled a map showing the common image of the three persons interviewed. It was felt that by co-ordinating these a valid image of the city as perceived by its inhabitants could be arrived at. The maps and reports of the interviewers as well as the actual records of the interviews were therefore analysed and the various elements appearing in each category were statistically tabulated. (See Appendix A) Any element that appeared in more than 10 of the interviewers composite images was regarded as a major element, while those that appeared in more than 5 were regarded as minor elements. The

16) A. Siksna, "Visual Survey - City of Adelaide", August 1962, Manuscript, Copy in Faculty of Architecture and Town Planning Library, University of Adelaide

17) Lynch, op.cit., p.155

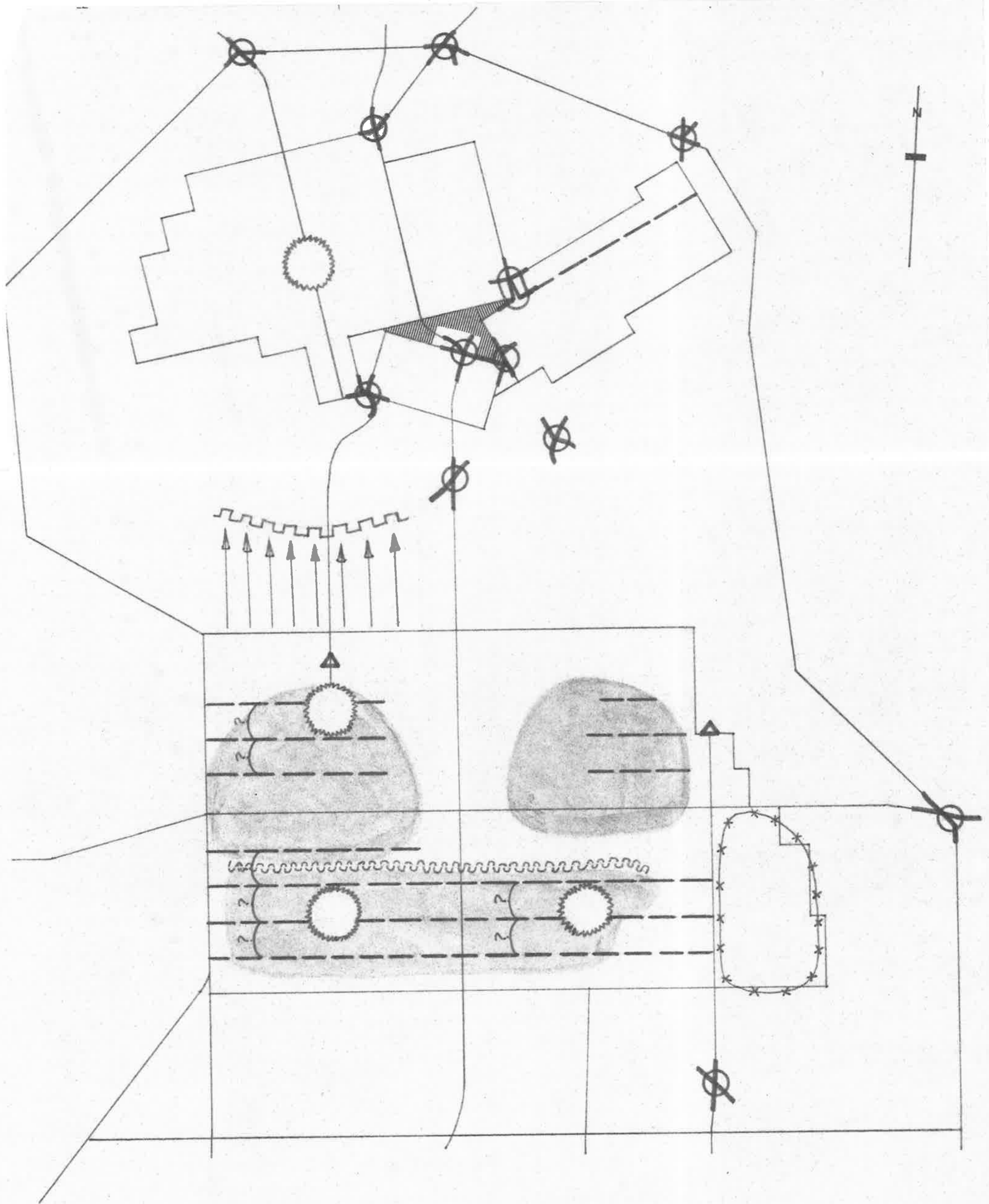


FIG. 61 — PROBLEMS OF THE IMAGE

- | | | | | | | | |
|--|--|-----------------------------------|--|-----------------------------------|--|-----------------|--|
| CHARACTERLESS PATHS | | WEAK OR ABSENT BOUNDARY | | ISOLATION | | SHAPE AMBIGUITY | |
| LACK OF DIFFERENTIATION | | POINT OF CONFUSION | | CHAOTIC AND/OR CHARACTERLESS AREA | | | |
| FRONTAGE INACCESSIBLE AND HIDDEN FROM VIEW | | AMBIGUOUS OR ELASTIC INTERSECTION | | FLOATING NODES | | | |

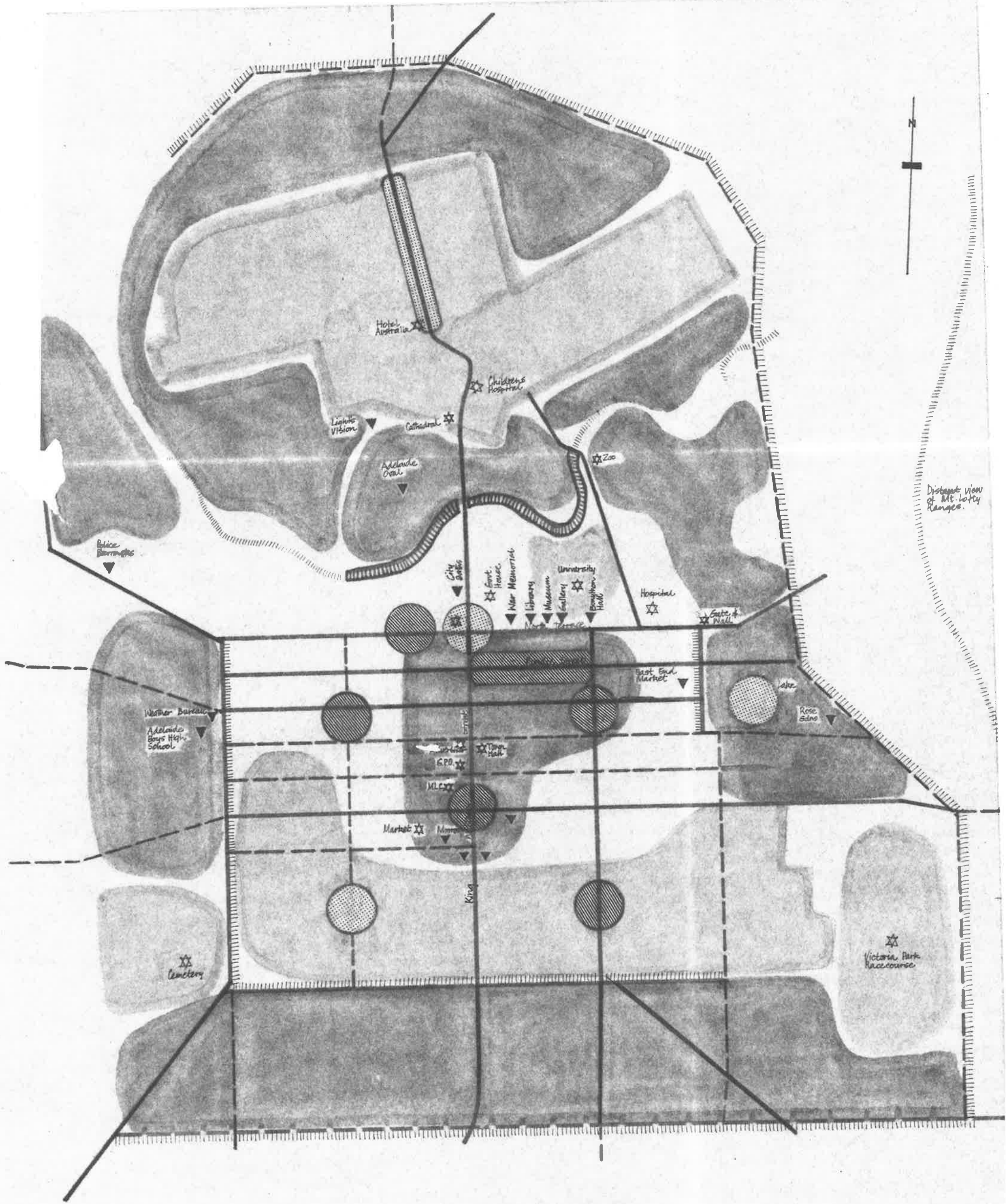


FIG. 62 — VISUAL IMAGE OF ADELAIDE — AS DERIVED FROM INTERVIEWS

	PATH	EDGE	NODE	DISTRICT	LANDMARK
MAJOR	—————		●	■	☆
MINOR	- - - - -		●	■	▼

results of this evaluation are shown in Fig. 62, designated as the Visual Image of the City of Adelaide.

This resulting image cannot be regarded as a complete and final statement - there is some uncertainty regarding the accuracy and quality of the actual interviews, and the evaluation of the statistics is somewhat arbitrary. However, the people interviewed represent a cross section of the city's population, and their addresses were selected to give a representative coverage of the metropolitan area. The visual image derived can therefore be accepted with some validity.

A study of the visual image as perceived by people actually residing in Adelaide and North Adelaide carried out by H.M. James¹⁸⁾ was also referred to, but was not included in the statistical analysis. In general the image corresponded to that of the residents of the metropolitan area, and also included more detailed elements perceived by the residents in the central area.

7. Some Non-Visual Aspects

The visual aspects of our urban environment often express some underlying social characteristics and attitudes of the place and its people. A most interesting evaluation in such terms can be derived from an appraisal of Adelaide in the Current Affairs Bulletin by an Adelaide poet.¹⁹⁾

The "genius loci" of Adelaide is regarded as somewhat less pretentious than Sydney or Melbourne - "Wealth and power tend to eschew excessive ostentation: they prefer a reassuring front and solid worth. The image projected is one of merit modestly veiled rather than merit blatantly displayed."²⁰⁾ For example, the older bank buildings and commercial offices are modest and tasteful in comparison to some of the excessively ornamented and gilded ones that are found in Sydney and Melbourne.

18) H.M. James, Image Survey of Adelaide, July 1962 - Manuscript, Copy in Faculty of Architecture and Town Planning Library, University of Adelaide.

19) Adelaide, Current Affairs Bulletin, Vol. 36, No. 1, 24th May 1965

20) *Ibid.* p. 4

The article comments on the use of the motor car : "The automobile is worshipped in Adelaide. One of the sacrifices to the petrol-consuming deity has been the tramway system. Indeed it sometimes appears as if Adelaide is destined to resemble one of those Californian cities in which it is said that public transport has entirely disappeared".²¹⁾

It remarks that South Australian life has a distinctive flavour, due to the circumstances of its founding and its history. It had no convict associations but "the broadcloth of the merchant, the white neckpiece of the dissenting clergyman and the corduroy of the yeoman farmer are the garb of its early years".²²⁾ The present day ethical and social attitudes can be distinctly traced to those which prompted the foundation of the colony and "bear the marks of evangelical religion, pragmatic radicalism and the bourgeois virtues of prudence, industry and respectability".²³⁾ Adelaide's image as the "City of Churches", its "six o'clock closing" of hotels, and lack of public entertainment on Sundays illustrate these attitudes only too obviously. Socially the city on Sundays is a depressing sight, neon signs and shopfronts blaze with light, but there are only wistful window shoppers and small bands of juveniles.

It does not mean to say that change has not been encouraged but "the difficulty of living technologically in the twentieth century and psychologically in the nineteenth century seems to have been obscurely felt. The situation has been approached timidly and with typical indirection".²⁴⁾ It is doubtful whether this gap can be maintained. The danger lies in the fact that an attempt may be made to bridge this gap quickly. Some indications of this are apparent in the approach to traffic problems. After a general neglect of the problems posed by the use of cars, there is a rush to solve these in a short period of time. This inevitably means that practical short-term solutions are adopted, rather than well-formulated long-term ones.

- 21) Ibid. p.5
- 22) Ibid. p.5
- 23) Ibid. p.7
- 24) Ibid. p.7

This is particularly evident in the Adelaide City Council's indiscriminate street-widening approach and "crash-programme" of parking stations in the central core. It will be regrettable if these processes of adapting to the necessary changes in such a hurry result in the destruction of the individual character of Adelaide. The character may not be everyone's taste, but it is strong and unique, and it would be a pity to lose it completely.

The pervading solemnity and soberness of the place, have in recent years, given way to a more cosmopolitan atmosphere, as a result of the increase in the number of migrants and a generally more lively outlook of its younger people. There are good restaurants, night clubs and adequate cultural facilities. The greatest impetus may have been given by the biennial Festival of Arts first held in 1960.

One aspect of this is that at Festival time, or during the short duration of the Christmas Pageant, the potential vitality of the people is given full expression. It demonstrates that, given the chance, the people do enjoy the attractions and outdoor social life that the central city can provide. At these times crowds stroll through the city to view the decorations, listen to open-air concerts and visit open-air exhibitions. Instead of heading straight to their suburban homes, the workers and shoppers linger in the city to enjoy all that it has to offer - the place throbs with life, activity and gaiety. These are certainly special occasions, but they strikingly illustrate the possibilities for making the central area more attractive at other times also. By improving the amenities of the area and by attracting more people to live there, these scenes could become everyday ones in the life of the central area and it would then be a rich, satisfying and beautiful place - "the true heart of the city".

All these invisible characteristics of the city must be taken into account and influence the planning of the city, and urban design should try to give this some visible form or representation.

8. Summary

This survey of the present physical environment establishes the following as the salient elements of the City of Adelaide.

The overall form of the area is quite clear and distinct. It consists of the two built-up areas - Adelaide and North Adelaide-separated by the River Torrens but visually fairly strongly linked by the riverside parks between Victoria Bridge and Frome Bridge. The parklands give a strong definition to this overall form and thus create a particularly vivid image of the central area.

The City of Adelaide is symbolised by this simplicity of form, its regular layout, its feeling of openness and breadth. The wide straight streets make orientation easy but are generally too undifferentiated. The squares provide focal points within the regular pattern of streets but are undistinguished in their character.

The most vivid elements are the Rundle Street shopping node, the North Terrace boulevard and King William Street with its tall landmarks and imposing buildings. This T-form provides the basic structure of the core area. The core area is somewhat more vaguely expressed in three dimensions also, by its tall buildings.

Outside the core area there are few districts with strong and consistent characteristics. Some of the older residential areas in the southern and eastern part however still retain a pleasant and distinct character. North Adelaide is a district typified by old stone buildings, cast iron verandahs and stone or wrought iron fences.

The edges of the area are strongly expressed along the various enclosing terraces abutting the parklands and the visual definition provided by the buildings is adequate in this respect.

There are distinctive views from within the city to the distant hills, across the river to North Adelaide and through the parklands to the inner suburbs. Equally important are the views of the city from North Adelaide or from the approach roads throughout the parklands.

Generally there are no serious or disturbing problems in the physical environment but there are many elements whose character could be and should be more vivid. The streets should express more strongly their function and their character should be more individual. The River Torrens lacks adequate physical and visual relation to the built-up areas in many parts.

However the most important problem is the lack of well defined districts within the area - characterless and confused areas cover more than half the area of Adelaide. Another problem is the lack of integration of the squares in a social and visual sense into the life of the city.

Any framework for the future physical development of the area should be strongly based on its distinguishing elements and should try to overcome the problems mentioned.

CHAPTER IX

URBAN DESIGN FRAMEWORK FOR THE CITY OF ADELAIDE

1. Objectives

The urban design survey revealed that a strong potential for a rich and satisfying physical environment already exists in the City of Adelaide. In the future development of the area we should utilize this potential and allow it to emerge fully. The main objective is to ensure that additions to the physical fabric of the area will take place within a coherent design framework thus expressing the pattern of activities and the various elements of the city in a visually satisfying and meaningful way. The physical setting should create a strong sense of place and provide a continuity of visual experiences so that the people of Adelaide and visitors will be aware of its uniqueness and distinctive qualities. The final objective of the framework is not so much the actual physical shape of all the elements but a design concept or image to which the physical development should be related.

2. Design Concept Based on Comprehensive Plan

Any attempt at the formulation of a design concept for the physical form of the city purely from a visual aspect is bound to be an academic design exercise and as such it is doomed to failure. The physical form of a city at any particular time is shaped by the pattern and intensity of its activities, the patterns of movement and economic and social factors. Any design concept must therefore be firmly based on the likely physical development of the area.

Some indication of future physical development is usually provided by a comprehensive plan. In the case of the City of Adelaide a comprehensive plan for its future development has not yet been prepared. It was therefore necessary to arrive at some broad goals and objectives for the area's physical growth and changes in future years.

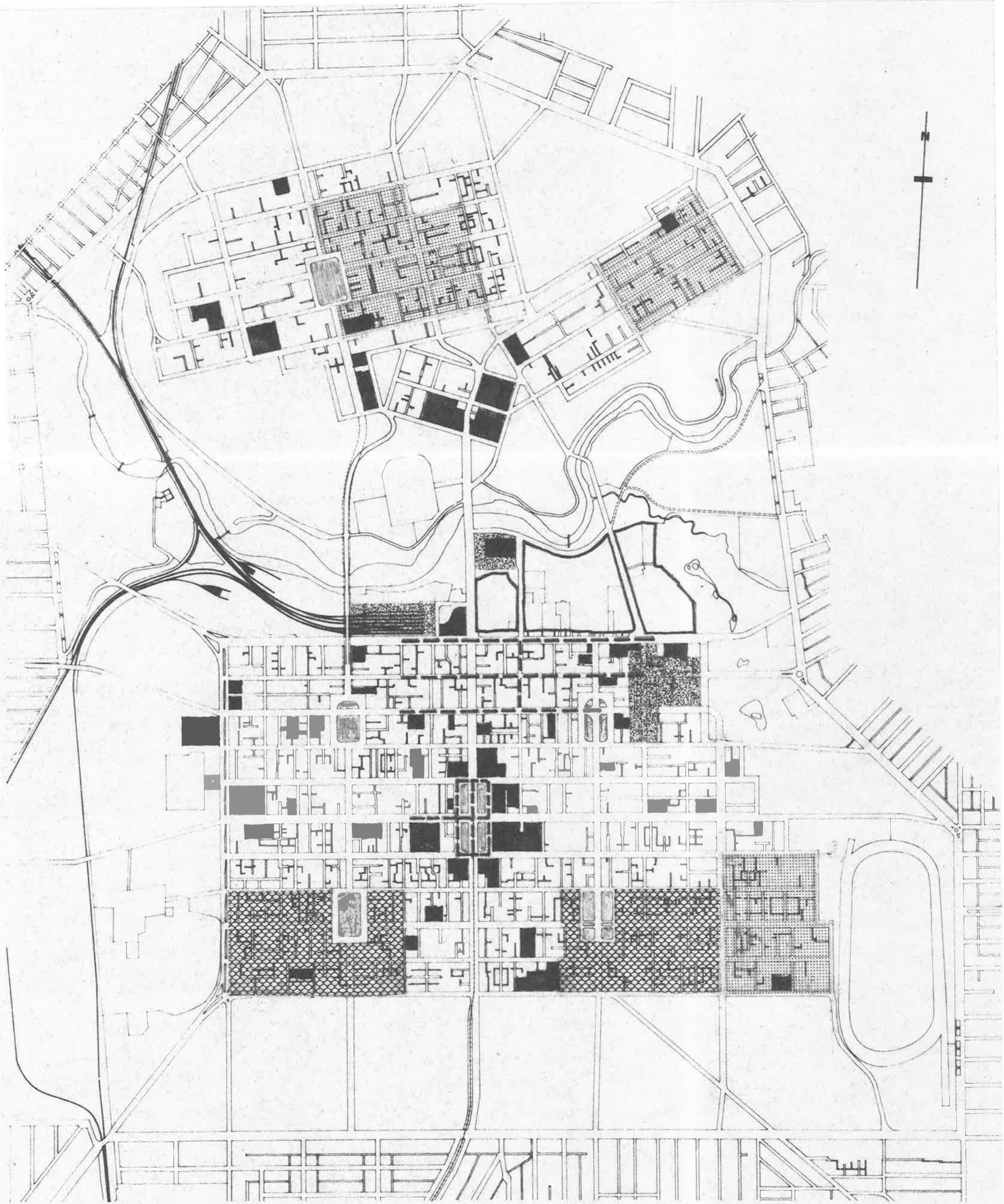


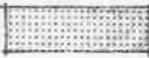

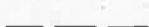
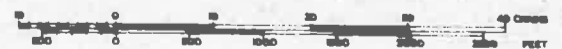


FIG. 63 - FACTORS OF RELATIVE PERMANENCE OPPORTUNITIES AND NEED FOR CHANGE

- 
 LAND OWNED BY VARIOUS LEVELS OF GOVERNMENT AND INSTITUTIONS.
- 
 AREAS WHERE REDEVELOPMENT IS NECESSARY.
- 
 AREAS WHERE REDEVELOPMENT MAY BECOME NECESSARY.
- 
 SITES WITH REDEVELOPMENT POTENTIAL.
- 
 AREAS WHERE PEDESTRIAN AND VEHICULAR SEPARATION IS DESIRABLE.



CITY OF ADELAIDE

3. Significant Visual Elements in the Land Use Pattern

The future distribution and relationship of land uses was considered in Chapter VII and the assumed pattern is illustrated in Fig. 21. Aspects of land use that may have an effect on the physical form of the area were also examined as follows :

- (i) Land and buildings owned by various levels of government and other large institutions.
- (ii) Areas and sites where a need or an opportunity for redevelopment exists.
- (iii) Areas whose dominant activities form strong functional and visual foci.

All these are indicated in Fig. 63.

It was considered that the essential elements of the land use pattern as far as the physical form is concerned are as follows :

- (i) The parklands are the most permanent and unchangeable element of the physical form. They will continue to form a strong part of the image of Adelaide, no matter how good or how bad the physical development of the built-up areas, merely because of their contrasting character. This character could however be even further enhanced and enriched. They could certainly become more thickly planted, but any attempt at "beautification" should be resisted. One would also hope to see their continuity restored wherever possible by the removal of such uses as the M.T.T. and E. & W.S. depots.
- (ii) The core area containing shopping and office activities. Its physical shape would be roughly triangular defined by Light Square, Hindmarsh Square and Victoria Square. Rundle - Hindley Streets would form the main axis of the linear shopping core and its lateral width would extend from North Terrace to Grenfell Street. King William Street would constitute the primary spines of tall office building development, while Grenfell - Currie Streets and North Terrace could form secondary spines.

The core is envisaged as a complex, intense and active area containing a large concentration of people and buildings. It would therefore be a largely pedestrian area and would provide the most dominant grouping of vertical building masses in the design area.

- (iii) Victoria Square as the civic and Government centre containing a concentration of Government office buildings on the north, south and east sides and a variety of commercial buildings on the west side. The shopping activity associated with the Central Market would be the main use, but there could also be commercial offices and possibly hotels and even residential flat buildings. Victoria Square is also likely to retain some of its aspects as a transportation terminal even though the actual terminal might be located some distance away from the square.

The large concentration of buildings and people near Victoria Square will probably require it to be a pedestrian urban space. It would need to be closely related to the core area but it should form a distinct entity in itself.

Being the main civic square it would need to have a unified and consistent character in its buildings. The tall buildings should be of uniform height and they should preferably be higher than any other buildings to achieve maximum impact as an entity distinct from the core area. It is imperative that all buildings erected in the vicinity of the square should form part of a comprehensive overall design, and that they should respect the scale and character of the older buildings that are retained. The crossing of the visual axes of King William Street and Grote - Wakefield Streets may need to be defined by a tall sculptural object thus visually confirming it as the geographical centre of Adelaide.

- (iv) North Terrace should retain its distinctive boulevard character and if possible this should be further enriched. The new buildings erected along its south side will probably increasingly consist of tall office

buildings. Eventually, if the City Council repeals its restriction on shopping activities, it could also have a more intensive use at ground level than at present. In either case, the new buildings and activities such as, say, open air restaurants or specialised shops, should respect and be in sympathy with the character of the street. Any uses such as parking stations or other commercial development of a similar nature which would destroy the environmental character would need to be excluded.

North Terrace will need to be closely linked to the core area and may in fact constitute one edge of the core. This linkage should extend to its northern side across the roadway where its linear park provides a "green oasis" in contrast to the busy and crowded shopping core. The building forms are likely to be distinctive because of their character rather than their vertical mass.

- (v) The Parade Ground site provides an excellent opportunity for the creation of a significant element in the physical form of the area. The Parade ground is ideally suited for the siting of the proposed Festival Hall. The site is much larger than the present one at Montefiore Hill, it is closer to the central area and enjoys a magnificent view across King William Road to the River Torrens. Part of the site could also be used as a multi-storey parking station providing for shoppers' needs during the day and for Festival Hall needs at night, while the Parade ground itself could be located on top if its retention was necessary.
- (vi) The Railway Station site is one whose functional significance may in future be increased by more intensive use of the air space above the railway tracks. A redevelopment of this site could include the provision of a new railway station itself, multi-level car parking, and tall commercial buildings or even a hotel above. It could also assume a more intensive transportation use by the inclusion of airline and general public transport bus terminals as well as a heliport.

The increased intensity of development will concentrate large numbers of pedestrians and there would be a need for a pedestrian concourse directly linked to the core area.

- (vii) The East End Market site together with properties along the new north-south road is also an area where a more intensive use of land can be foreseen. The redevelopment could provide better facilities for the operation of the market and increased commercial activities, and offer an opportunity for the introduction of multi-level parking. In addition, the closeness of the site to the parklands would make it suitable for multi-storey residential development above the parking levels overlooking East Parklands and Botanic Gardens, Residential flats may be required for doctors and nurses of the Royal Adelaide Hospital and in any case it would be a splendid opportunity for providing residential accommodation for those who either wished to or needed to live close to the core area.

The area could take the form of mixed but compatible development providing a rich and intense visual character at ground level and a significant grouping of tall buildings.

- (viii) Hurtle and Whitmore Squares are likely to become the nuclei of residential redevelopment areas in the southern part of Adelaide. They would provide these areas with a large open space for recreation and could contain the community shopping and social buildings grouped around their sides.

This development would have the effect of restoring the squares as functionally and socially significant elements in the physical form of the city. They would attain a much more intense but visually pleasing character. Their importance as urban spaces may be given visual expression by the tall multi-storey flats surrounding them, whereas the development would probably be more horizontal further away from the squares.

- (ix) In Eastern Adelaide where rehabilitation, rather than redevelopment, is the main concern, the process could be used to ensure the preservation of the strong historical character that it possesses. This would provide some historical continuity in the physical form of the area as well as a contrast to the redeveloped areas. Small scale redevelopment which may be necessary in parts would presumably be carried out in sympathy with the existing character.
- (x) North Adelaide is also an area where preservation of the present distinctive character would seem appropriate. However it is likely that the area will also attract quite a lot of new development and there are some inner areas which may need to be redeveloped. At present the area contains many attractive small "pubs", distinguished residences and tastefully renovated older buildings which give it a historical character. The more recent development such as the School of Art, the wine shops, the restaurants, the art galleries reinforce and augment this with a faint bohemian atmosphere. It should be possible to ensure that any new development will similarly be in sympathy with the existing character and could thus produce a lively area of diverse and mixed uses within a strong and distinctly historical framework.
- New commercial development is likely to take place along the main spines of O'Connell Street and Melbourne Street. Residential development will probably be attracted to the outer terraces, while Wellington Square could provide a nucleus for multi-storey flat redevelopment of the inner area.
- Institutional and public uses would probably be attracted to the block containing St. Peters Cathedral, Children's Hospital and University colleges and to the frontages of Palmer Place and Brougham Place. These could form a visual transition area between the historical district and the central area.

- (xi) The enclosing terraces in conjunction with the parklands provide a strong visual definition to the built-up areas of Adelaide and North Adelaide. This definition must be given an equally adequate visual expression by the buildings fronting on to the enclosing terraces. The building forms along the terraces form an edge to the built-up area and it should therefore have some unity. Generally the existing older building forms could serve as a model for future development - it should create an orderly and repetitive enclosing frame with special points of significance at places where roads from the parklands enter the built-up areas. This visual unity may be difficult to achieve if there is not some degree of compatibility in the land uses themselves. It may therefore be necessary to ensure such compatibility by appropriate zoning measures. Residential development, public uses and some forms of prestige-type commercial development would be most suitable in this respect.
- The development fronting onto the outer enclosing terraces of the parklands will in some parts consist of inner suburban redevelopment which may be residential but could also include some commercial uses. This linear frame would generally need to have the same qualities as in the case of the inner terraces, but the fact that the development is suburban should be evident. This could be achieved by retaining a frame of relatively low buildings along these terraces with the taller multi-storey buildings being placed further away.
- (xii) Institutions such as the University, Royal Adelaide Hospital, Teachers' College, Institute of Technology and some of the larger hospitals, and individual buildings, such as Parliament House and Government House, will continue to act as strong functional and visual focal points in the area providing distinctive groupings of building masses.

We have thus established a number of points or areas where the three-dimensional expression of their activities could provide significant, and in most cases relatively permanent, elements in the physical form of the area.

4. Movement Systems and Urban Spaces

From these broad considerations of future land use, and the general aspects of transportation discussed in Chapter VII, a system for movement within the design area was developed on the following principles :

- (i) The provision of a balanced transportation system consisting of cars, buses and railways penetrating close to the core area, with easy and pleasant transfer from vehicle to foot.
- (ii) The exclusion of traffic not destined for the central area.
- (iii) The provision of essential parking facilities and bus terminals outside the core area to reduce congestion of streets within the core.
- (iv) The need for separation of pedestrian and vehicular movement in the core area and other environmental areas as far as practicable.
- (v) The need for urban spaces to provide for public gatherings, and processions, quiet spaces for relaxation and places for enjoying the bustle and excitement of the crowd.

The movement systems proposed are designed to give improved accessibility to the activities within the design area without destruction of its environmental character, to provide opportunities for social interaction and to contribute to the design of a more coherent physical form. The movement systems have therefore been integrated into a continuous spatial pattern and have been related to the existing urban spaces. The system proposed is shown in Fig. 64 and consists of the following elements :

- (i) Motor Vehicle Traffic and Parking. It is assumed that motor vehicle access will continue to be provided by the existing pattern of roads with some adjustments as indicated. Any freeways required to serve the area would need to be provided outside the design area. They would thus allow traffic not destined for the

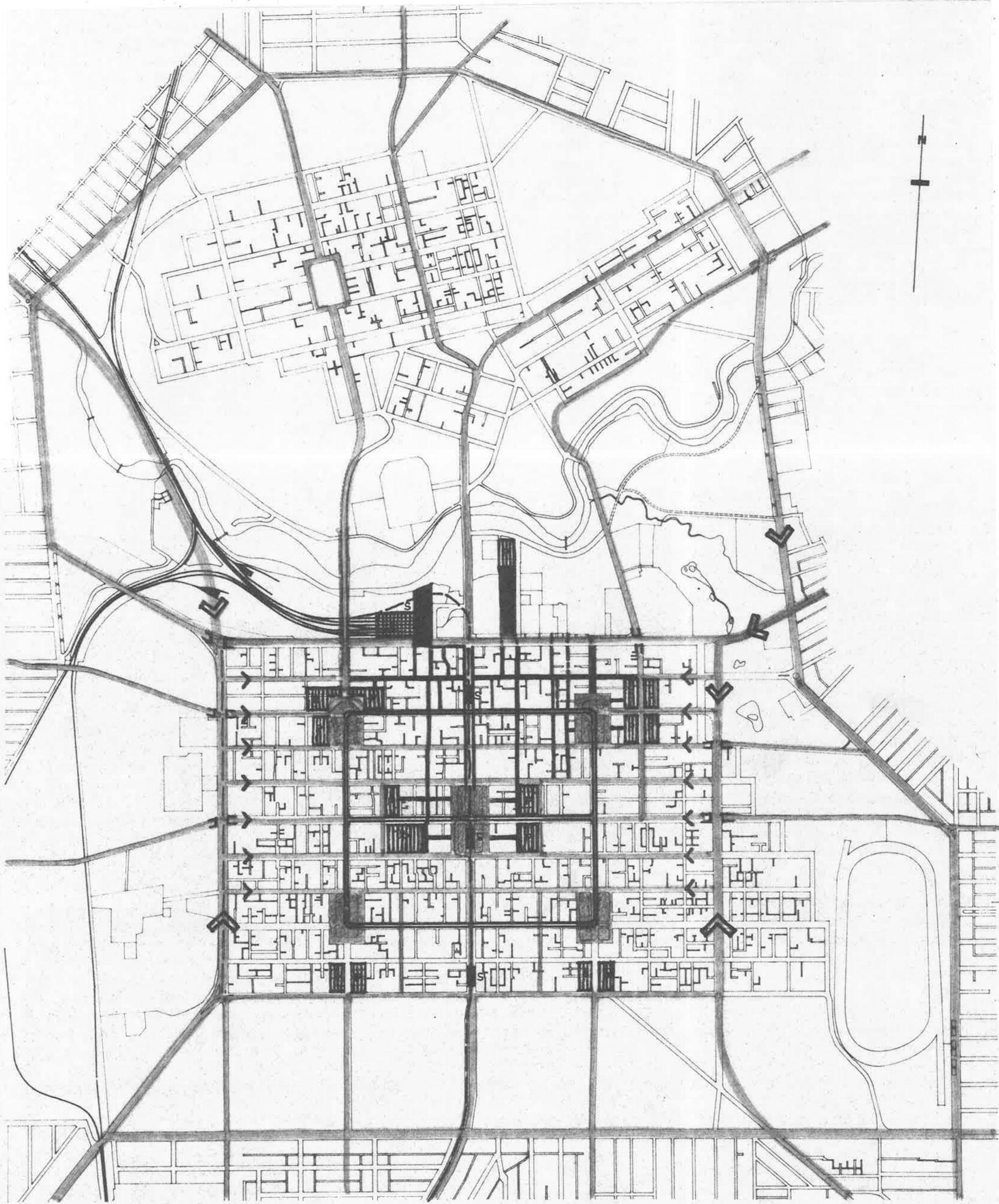


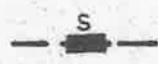




FIG. 64 - MOVEMENT SYSTEMS

- 
 MAIN ACCESS AND DISTRIBUTOR ROAD.
- 
 INTERNAL PUBLIC TRANSPORT.
- 
 UNDERGROUND RAILWAY AND STATIONS.
- 
 PEDESTRIAN PATHS.
- 
 PARKING STATIONS.



CITY OF ADELAIDE

design area to by-pass it. Access from these freeways could then be provided along main distributor roads feeding into the design area.

The existing pattern of streets in the central area run in an east-west direction. This would seem to imply feeding traffic into the central area from main distributors running in a north-south direction on either side. Any attempt to provide north-south distribution within the central area is likely to create confusion in the internal system as has been demonstrated by the part of the new south road already constructed. Its proposed continuation should not be proceeded with.

It has therefore been envisaged that West Terrace and Hutt Street would form the main distributors of the central area traffic. The continuation of West Terrace across the railway tracks to meet Port Road, and the continuation of Hutt Street to link up with North Terrace and thence to Hackney Road would place the emphasis on this pattern of distribution. The present approach roads from the south and north would provide minor feeds into the central area but would not facilitate cross traffic movement through the central area. The approach roads in an east-west direction through the parklands should be grade separated where they cross the main distributors and feed directly into the central area.

Direct links from the main distributors and from the other east-west and north-south feeders should be provided to the major parking facilities in the locations shown in Fig. 64. Thus the main impact of the traffic load on the central area would be absorbed outside the core area and the streets within would need to provide only for general circulation and access to buildings. By assuming five levels of parking in the case of the parking facilities at Light Square, Hindmarsh Square and near Victoria Square and three levels for the other locations a total of 20,000 parking spaces could be provided. This number could be increased by the provision of more levels.

It is further proposed that no street parking should be permitted once these facilities are provided. This will ensure that all the approach roads can be used to full capacity and thus provide for the expected increase in traffic flow. No major parking facilities should be allowed within the core area, but smaller ones to serve essential traffic associated with business establishments may be provided in certain cases. In the frame area any off-street parking provision made should also be restricted to essential rather than optional requirements and should be closely related to the traffic capacity of the street system.

The local distribution of traffic within the central area has been worked out to ensure that environmental areas are retained as much as possible. Vehicular circulation is excluded from Rundle - Hindley Streets within the shopping core, from Victoria Square and it has been adjusted within the residential redevelopment areas in accordance with their character.

By this method an increased traffic flow can be accommodated and parking facilities provided without destroying environmental characteristics.

- (ii) Bus Transport. Increased public transport services by the M.T.T. and private buses would need to be provided. However these should also be limited in their penetration of the core area and it may be best to provide terminal points for these in conjunction with the major parking facilities near the core. Major bus terminals for interstate and country buses could be located at the Railway Station and Central Market.
- (iii) Underground Railway. An underground railway as proposed by the Town Planning Committee would provide a greatly increased and more efficient rail access to the central area. The route would pass under King William Street with stations in the locations indicated closely related to the retail, office and commercial facilities in the central area.

- (iv) Internal Public Transport. The most important element of the system would be a fast and efficient system of public transport within the central area, which would link the various major parking facilities, bus terminals and rail access points and would provide quick and easy access to any point in the core area and a large part of the central area as well. The routes would consist of two smaller loops within a larger loop connecting the four outer squares. This system could consist of mini-buses but could also take several other forms that would be capable of providing frequent service.
- (v) Pedestrian Movement. The present system of pedestrian movement within the core area must not only be improved but significantly reorganised to serve future needs. The conversion of Rundle Street to exclusively pedestrian use is imperative immediately, and in time Hindley Street could also become a pedestrian area for at least part of its length. Eventually the shopping core may be developed on two levels and this would provide an excellent opportunity for the creation of a continuous pedestrian system throughout the core area. The proposals for pedestrian circulation have been based on this assumption.
- Rundle - Hindley Streets are envisaged as a continuous linear pedestrian shopping core with pedestrian linkages through the squares to the major parking facilities at either end. A section of the core between Pulteney Street and the Railway Station could take a multi-level form. Pedestrian connections above ground level could link the shopping core above the vehicular streets to the rest of the core area, and to the Railway Station. King William Street could also have pedestrian walkways above the footpath at the first floor level of office buildings leading to Victoria Square and then descending to ground level. Other elevated links could be provided along Gawler Place and to the east of King William Street to connect with the parking facilities near Victoria Square.

Underground links may be more appropriate for connecting the core to the North Terrace linear park strip, as elevated links would tend to destroy the visual character of North Terrace.

A pedestrian connection would also be required from the core area leading to Festival Hall, the parking facilities at the Parade Ground and further on to the River Torrens. This could be achieved by the creation of a linear park or formal walkway along the eastern side of Government House. The eastern wall could be located further west and the formal entrance into Government House grounds could be opened up onto this formal walk, where a large number of people could congregate on public occasions, as they do at present near the inconvenient entrance from North Terrace and King William Street. Redevelopment of the Railway Station site would allow a more direct physical and visual linkage to the riverside park, by continuing the pedestrian concourse to lead down to Elder Park.

The opening up of these two pedestrian ways will make the riverside more accessible and thus allow it to be fully enjoyed in conjunction with the core activities. Its visual relation to the core will thus be made more direct and memorable.

Other forms of pedestrian activities will also require special provision. Part of King William Street between Flinders Street and Pirie Street could be converted to meet the need for a civic plaza in front of the Town Hall where important civic receptions could take place. King William Street has always been used as the route of all important processions, pageants and marches. The sequence of civic square and civic plaza leading to the wide processional way lined on both sides by elevated walkways as viewing platforms would dramatise and enhance these activities. (Fig. 65)

Quiet restful parks and places are needed near the core area and these could be provided by Hindmarsh Square, the linear park in

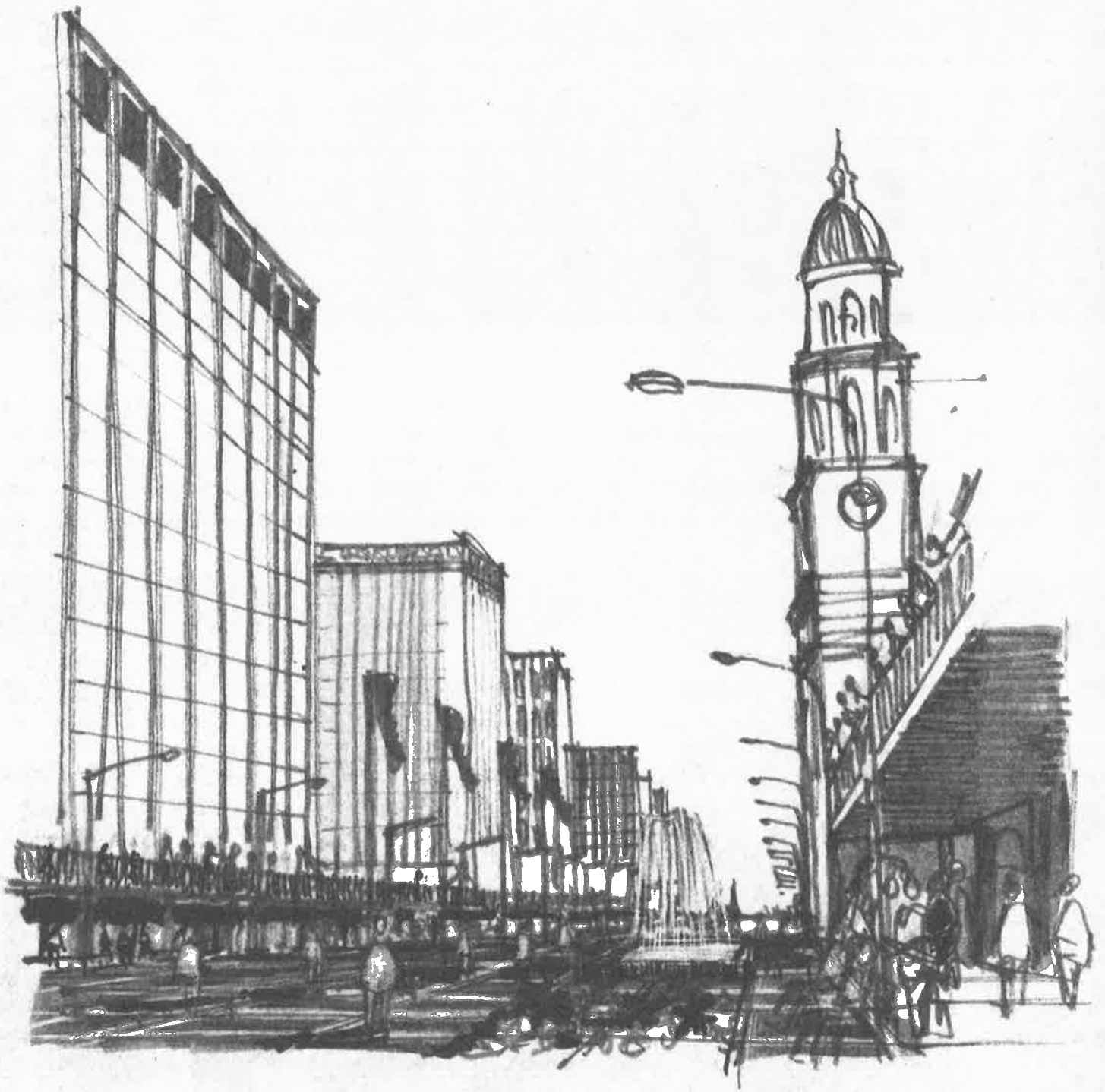


FIG. 65 - CIVIC PLAZA - KING WILLIAM STREET

North Terrace and by an appropriate design of the pedestrian shopping mall. A further element in this system could be created by the inclusion of Pulteney Street between North Terrace and Grenfell Street as a "green oasis" linking the shopping mall to Hindmarsh Square and North Terrace. The axial relationship of Bonython Hall to this space would create a visually strong and distinctive pedestrian area.

The continuation of Hutt Street through to North Terrace would create a linear space in front of the East End market. This could be made to assume the character of a 'market' square between Grenfell Street and North Terrace. The existing character of the area already has a strong flavour; with provision of such a space and the introduction of residential uses in the vicinity this could be further intensified. The space could form a strong linking element between the Botanic Gardens and the East Parklands Lake.

Certain mechanical aids may also be considered to facilitate pedestrian movement. The linear nature of the shopping core could well require some mechanical system connecting the major parking facilities and proceeding down Rundle-Hindley Streets. The nature of this system would have to be in scale and character with the pedestrian mall and could take the form of moving pavements, "pedestrains" or "carveyors". Moving pavements may also be necessary to connect the parking facilities at the railway station and Parade Ground to the shopping core.

All the previously described movement systems will constitute a linked series of spaces throughout the design area and will thus provide a basic structure to which the various physical elements of the city can be related. This spatial system will enable the physical form of the city to be experienced by moving through it and seeing its several parts individually and in their relationships.

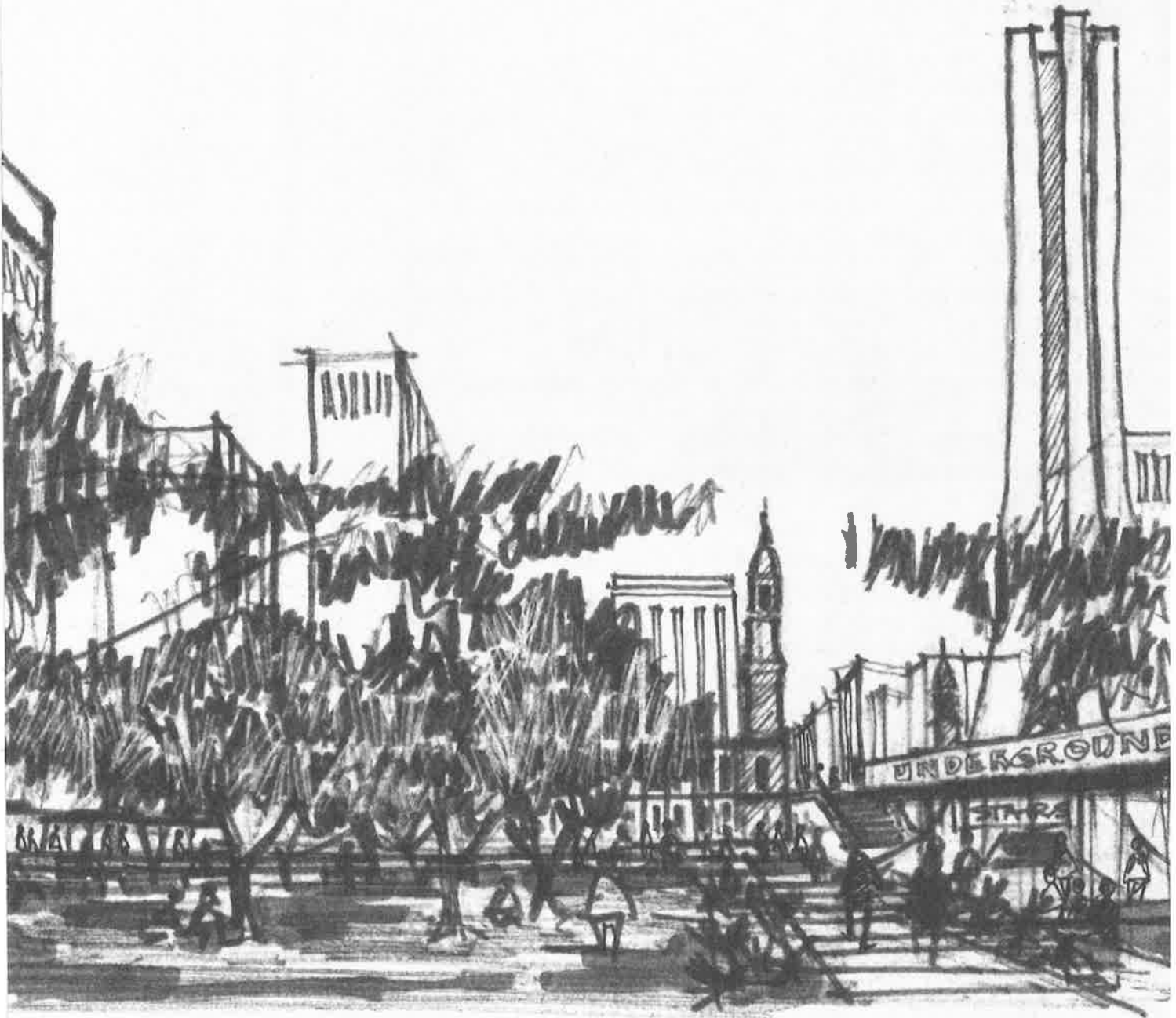


FIG.66-VICTORIA SQUARE - CIVIC CENTRE

5. Relationship Between Physical Form and Movement Systems

5.1 Gateways

The most powerful mutual impact of the physical forms and the movement systems will occur at entrance points to the central area.

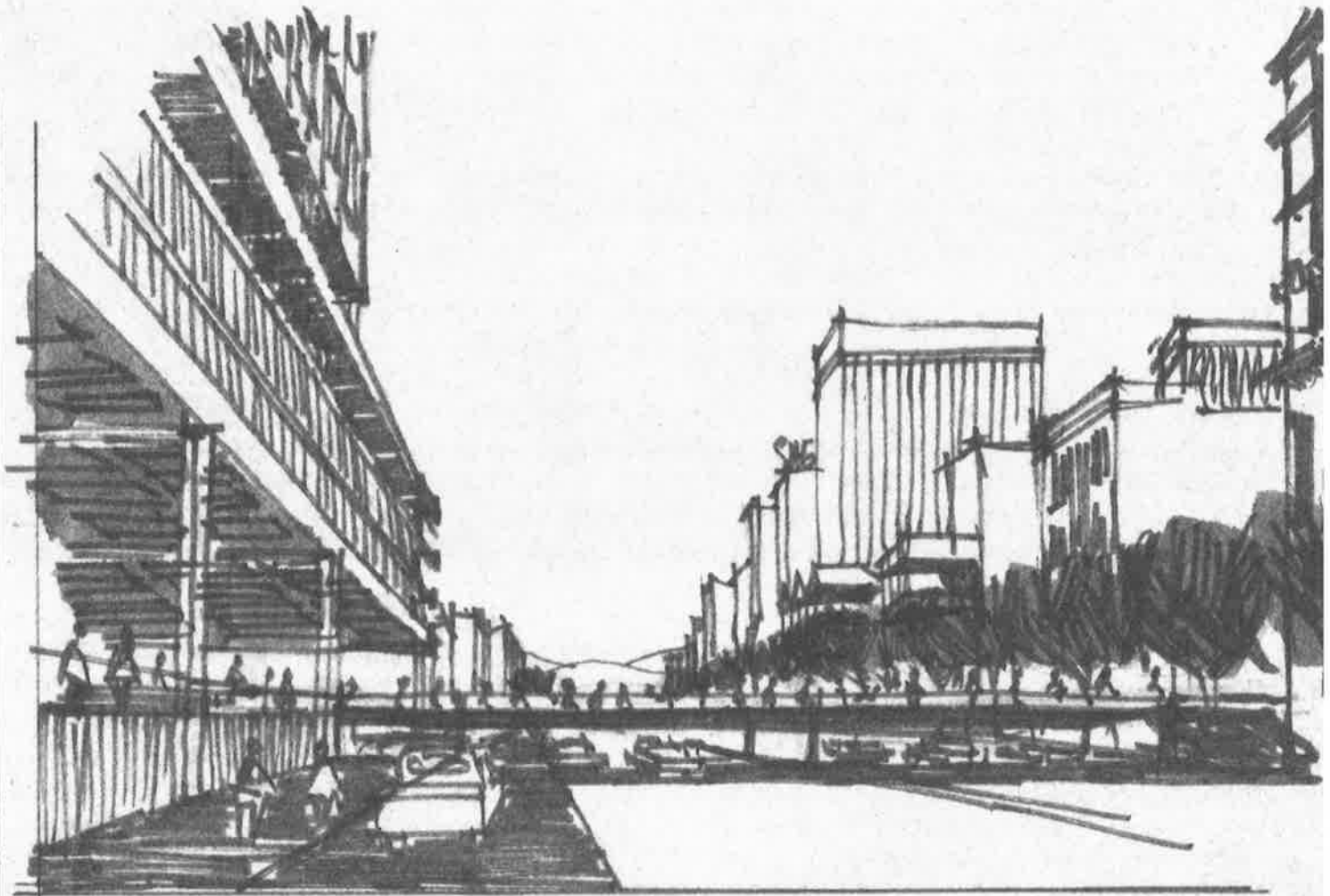
These gateways should be given a visual expression that dramatises and strengthens the sense of arrival and departure. The gateways have been generally related to the five squares in Adelaide. Arriving by motor car or bus the gateway function would be expressed by the large parking stations framing the access routes. From there, one would proceed on foot through the varied character of the squares to the internal public transport stops. At Hindmarsh and Light Squares the proximity of the core area would be indicated by the spines of tall buildings leading to it. At Victoria Square, emerging from the underground or proceeding from the parking stations, one would enter the dignified civic square framed by tall office buildings with the King William Street spine of tall buildings leading to the core. (Fig. 66) At Whitmore and Hurtle Squares a sense of anticipation would be provided by the tall residential buildings with the vertical building masses of the core area visible in the distance. At the Railway Station the pedestrian concourse would open up views over the River and lead one directly into the bustle of the core area. (Fig. 67) In all cases the arrival and departure will be a memorable and clearly defined experience.

5.2 Path Structure

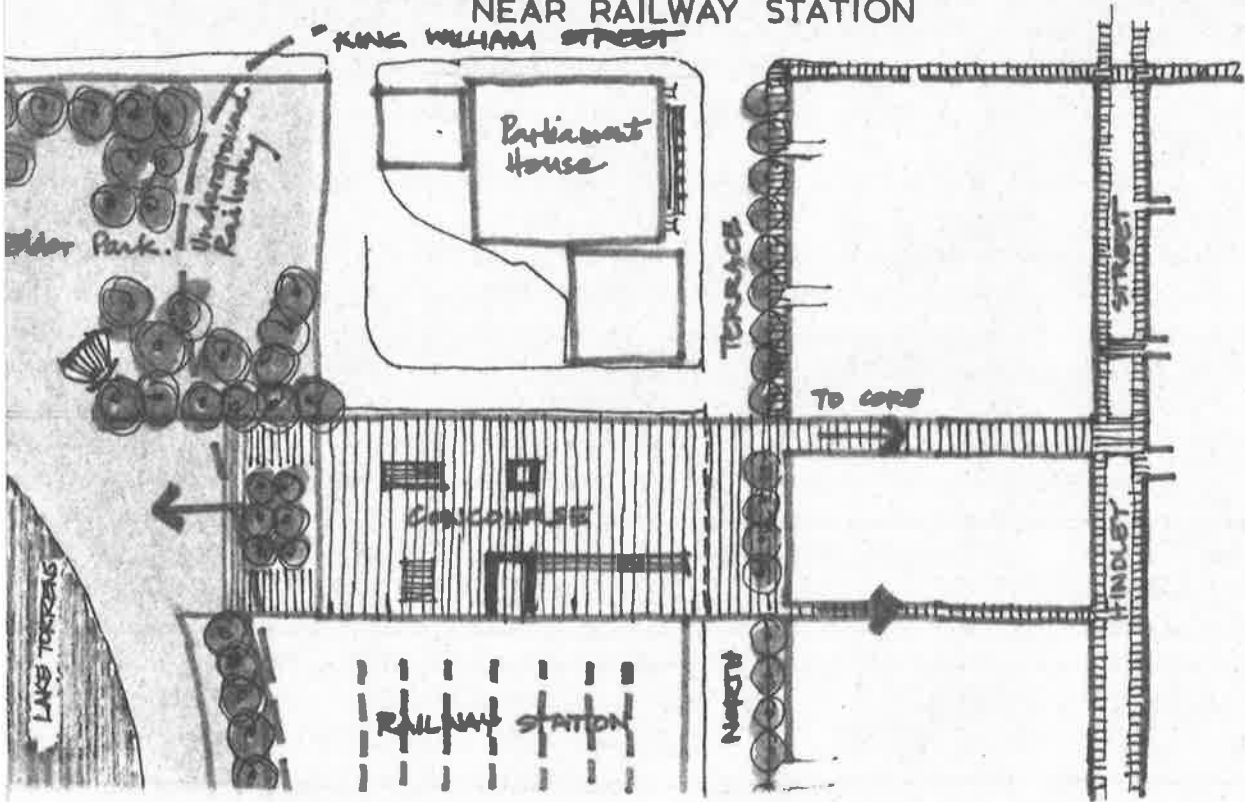
The physical form will become evident by moving through it either by vehicle or on foot and the paths should therefore be located so that they reveal the most significant elements to the moving observer. Generally the vehicular and pedestrian paths will be clearly separated and each will have different visual impressions related to its speed of movement.

The intensity and complexity of the core area and certain residential areas will be revealed mainly to the pedestrian, who will resume his rightful place in the "heart" of the city. (Fig. 68)

Generally the significant elements will be related to, and perceptible from, all the various movement systems, as was already illustrated in the case of gateways.

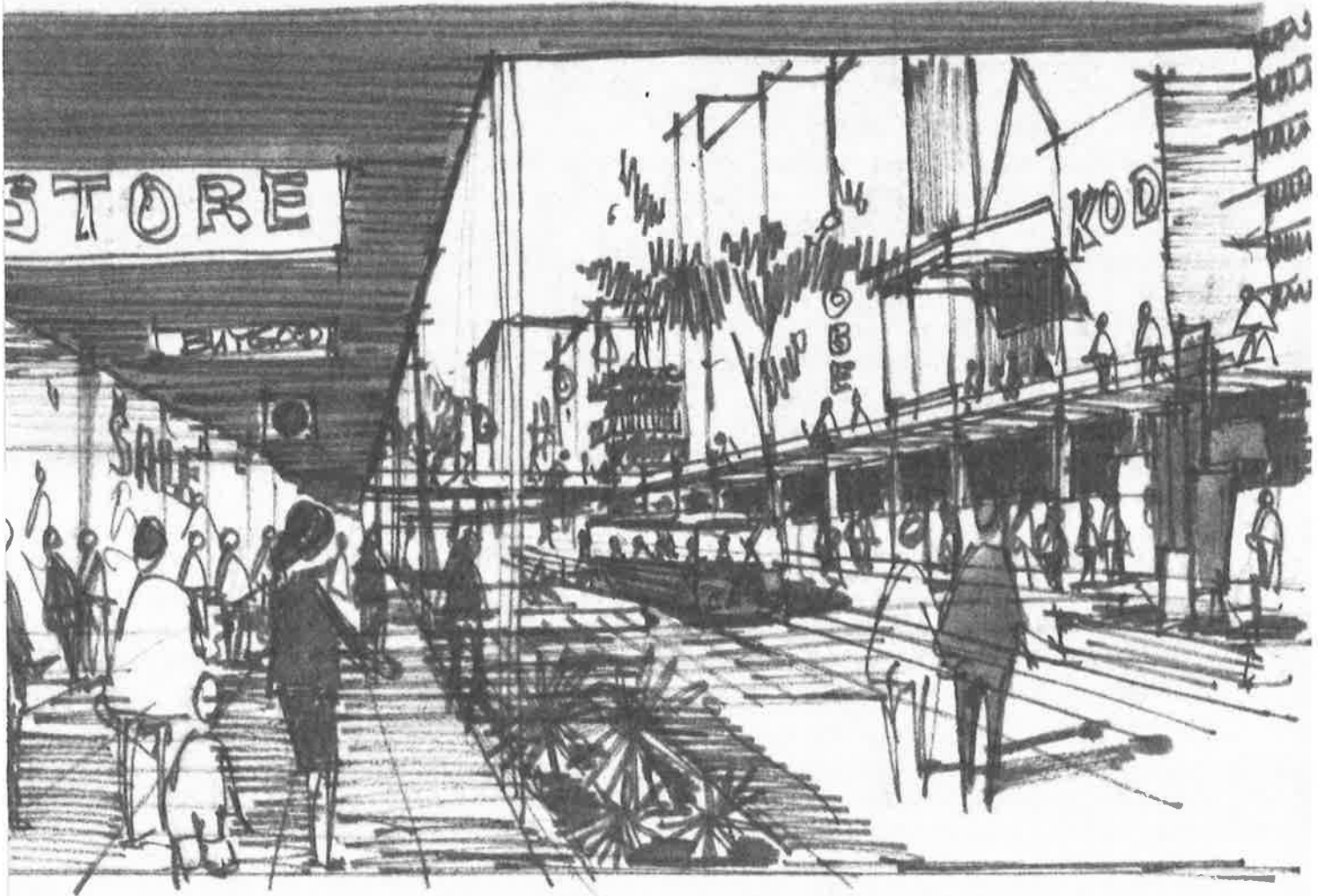


VIEW OF NORTH TERRACE
NEAR RAILWAY STATION

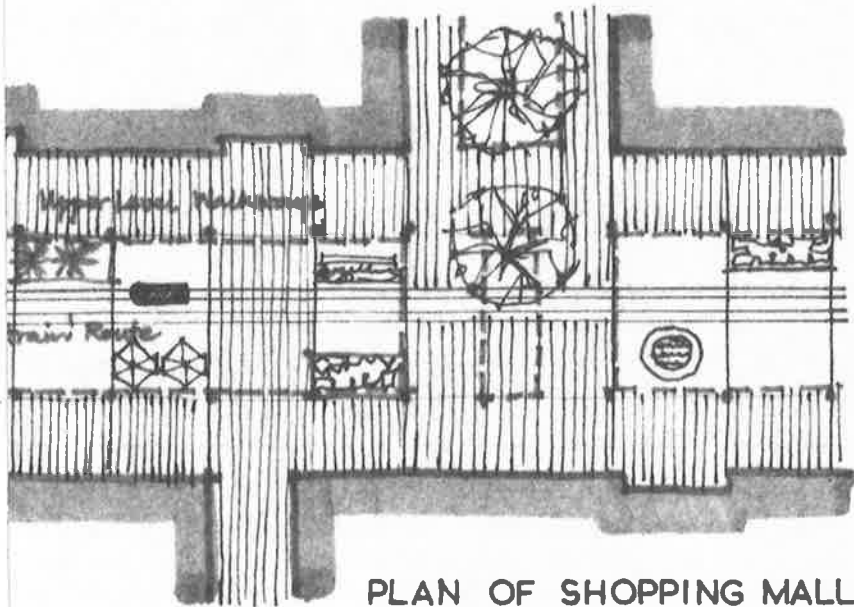


PLAN

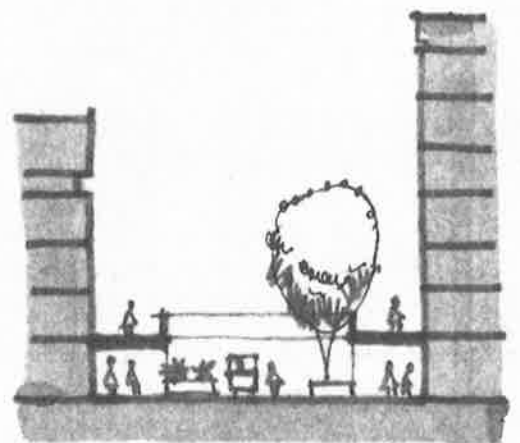
FIG.67-RAILWAY STATION GATEWAY
CONCOURSE LINKING CORE TO RIVER



VIEW OF PEDESTRIAN SHOPPING CORE



PLAN OF SHOPPING MALL



SECTION

FIG. 68 - SHOPPING CORE



FIG. 69- GRENFELL-CURRIE STREETS
BOULEVARD CHARACTER

The main vehicular paths will be distinguished from the minor ones by their boulevard characteristics. These tree-lined streets will provide a "greenway" system linking the five squares and gateways into a coherent and recognizable pattern. They will also be the internal public transport routes. The "greenways" will also continue to the edges of the built-up central area thus tying the internal system visually with the parklands.

The boulevards will allow for increased pedestrian circulation along widened footpaths. Grenfell - Currie Streets will function as a seam connecting the shopping core with the rest of the core area and the boulevard character will greatly enhance this aspect as well as providing an attractive setting for the tall office buildings. (Fig.69) These boulevard streets will provide two kinds of visual experience related to vehicular and pedestrian movement. Travelling by car the general impression will be one of a street unified by the trees with large scale accents of taller buildings behind this. The pedestrian on the other hand will proceed along the tree shaded pavements and enjoy the complex and varied picture at street level, provided by the ground level uses of the tall buildings.

6. The Urban Design Framework

The design concept thus evolved from a realistic appraisal of the future physical development. Its main purpose was to crystallize the complexity of the various factors and their inter-relationships into a basic design structure, consisting of the elements discussed above, which would enable the physical form of the area to grow and change while retaining its unique and identifying character.

The symbolic expression of the significant and relatively permanent activities of the area will provide a strong measure of identity and stability to the continually changing form of the city with respect to time. The pattern of urban spaces will provide a spatial structure to which the physical form of the city can be related at any point in time.

The urban design framework shown in Map A illustrates the three-dimensional aspects of this basic design structure. It does not present a static picture of the physical form of the area at any particular

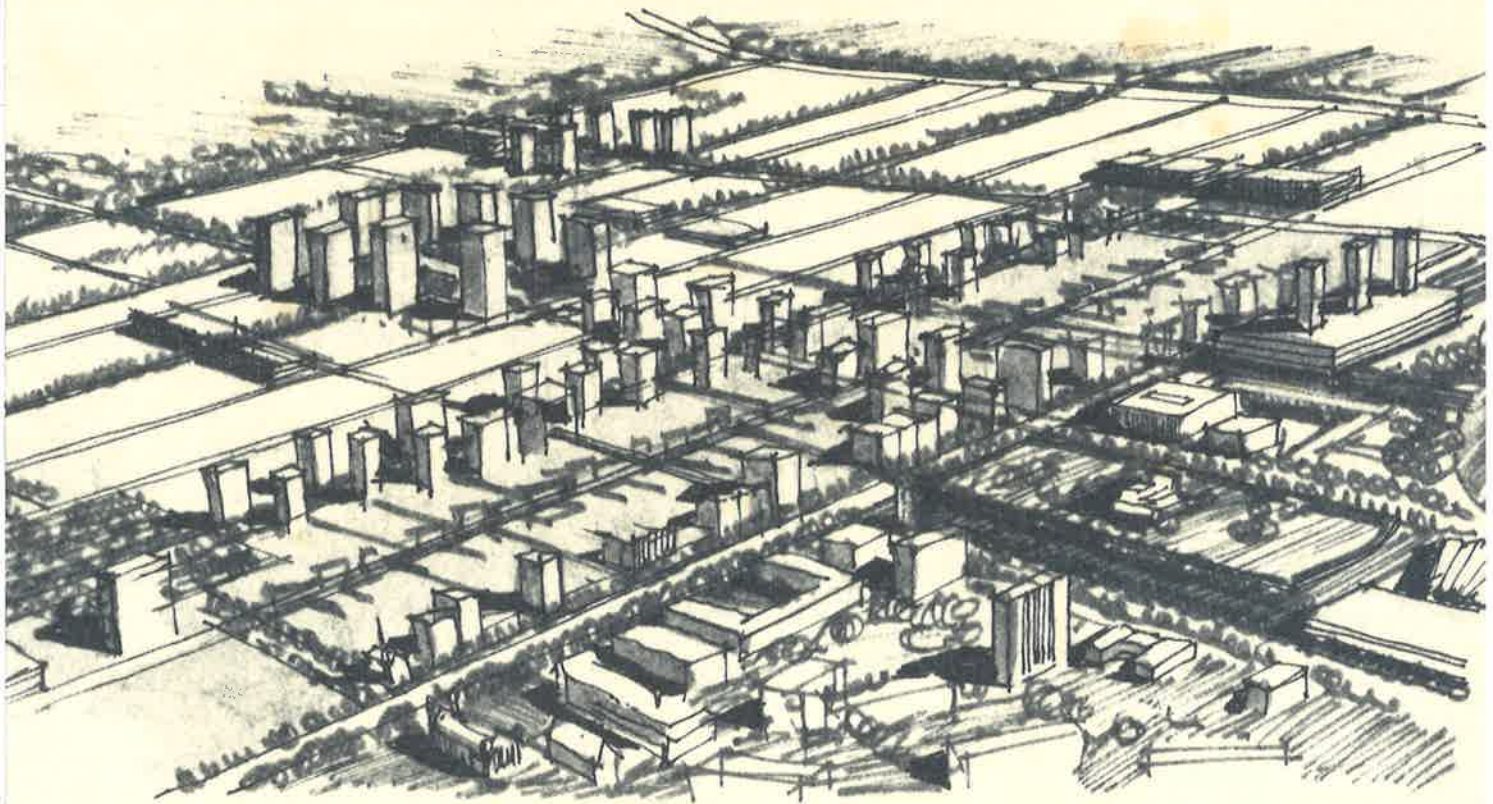


FIG.70 -DESIGN STRUCTURE OF ADELAIDE

time, but indicates the framework which the changing physical form should at all times be fulfilling. The actual buildings forming part of the framework may change in time but the overall three-dimensional character would be largely retained. The design image presented should not, of course, be regarded as eternal or even conclusively determined. It would need to be reviewed, just as the comprehensive plan needs to be reviewed, to take account of unforeseen or changing conditions in the physical environment. Nevertheless, it is a basic framework that is designed to permit and even encourage change and extension, and as such it would not conceivably need to be radically altered to meet changing circumstances.

The framework proposed will provide for a continuity of visual experiences within the design area. Its forms are varied, meaningful and memorable, their scale is related to movement either on wheels or on foot and the spatial system is purposeful and expressive of its function.

The overall physical form of the design area will retain the clarity that it has at present and it will be further enhanced by the greater continuity and more intensified character of the parklands.

Internally the physical form will be made more meaningful and identifiable by the visual expression of various elements - activities, movement paths, urban spaces - forming the underlying internal structure of the area. (Fig. 70)

Within the basic structure provided by the framework, the future additions to the area's physical fabric, whether they be large-scale projects or small contributions by individuals, will be able to find a rich and meaningful visual expression.

7. Implementation of the Urban Design Framework

Ideally, to fully implement the proposals of the urban design framework, one would need to have complete control of land use and its physical development. This kind of control can be achieved only if the whole of the land is in public ownership. Canberra is the only example in Australia where such control is exercised. The land belongs to the Crown

and all leasehold land development is subject to strict design and siting controls. The covenants applied to the sites before they are released for private development ensure that development will proceed as envisaged by the Commission. The "Design and Siting" ordinance also empowers the Commission to control materials, textures, general appearance and siting of buildings.¹⁾

Such sweeping control is, of course, impossible in the case of the City of Adelaide, where most land is privately owned. Even if such control was available, one wonders whether it would be desirable. On seeing what has been achieved in Canberra, it becomes clear that such strict controls have generally produced compromise solutions that are uninspiring in their architectural qualities. It may, therefore, be preferable to rely on more conventional methods of control in most cases, and to use stricter controls only where absolutely necessary.

The prime concern must be to ensure that a broad agreement on the framework as a whole is held by the public in general and the authorities responsible for its implementation. The "power of the design idea" will not, of course, produce spontaneous implementation, but if the people of the city are deeply aware of the implications of this idea, a much better climate for its implementation is created.

The case of the purely advisory Metropolitan Adelaide plan is an example of this process. Although there is no real legal backing for it, many people are accepting and working to its recommendations simply because they consider them sound and reasonable. In the same way once people realise that the urban design framework will produce a city that they would be proud of, they may be prepared to act in accordance with those recommendations. It is true that very little notice is taken of urban design considerations at present, and this may be explained by the fact that they are presented in a piecemeal way and are generally in the nature of protests against destructions of the physical environment. What we need is a positive and comprehensive statement similar to that suggested in this thesis.

1) "Canberra's Design and Siting Ordinance", A.P.I.J., July 1965

Professor Robert M. Anderson²⁾ has said that if planners were only able to make a comprehensive design plan for the city, then maybe even the courts will support the idea of urban æsthetics in law. Edward Bacon has also referred to a statement by a leading private developer, James Rouse, who considered that planners had failed miserably to produce an image for the urban environment, that was worth backing.³⁾

Even if such general acceptance was forthcoming, certain controls would be necessary. The framework has been based on certain assumptions regarding land use and transportation. It is essential that the location of land uses and the provision of transportation facilities should be guided in accordance with a comprehensive plan. As a first step, therefore, it would be necessary to have a planning authority for the City of Adelaide which could co-ordinate development along the lines proposed in the framework by adequate zoning and building bulk controls. In addition there should also be some powers to ensure that the development is comprehensive in nature.

Co-ordination, however, is not going to be sufficient, for it will not achieve positive implementation of the specific proposals of the framework. These would have to be carried out either by the planning authority itself or by other authorities.

The provision of the various movement systems would be the most essential of these specific proposals. They form a vital part of the framework and will exert a powerful shaping effect on the character of the physical environment. For instance, the implementation of a pedestrian system in Rundle Street, could lead to its further extension once its advantages had been demonstrated. The provision of major parking facilities in the locations suggested, and their connection to the core by means of the internal public transport system would reduce the pressure for car parks within the core itself, once the fact that accessibility had not been diminished had been proved.

2) Robert M. Anderson, "Aspects of Legal Aesthetic Control", Planning for Urban Aesthetics, p. 35-40

3) Edmund Bacon, "A Tale of Two Cities", Planning for Urban Aesthetics, p. 63

In general the formative influence of the movement systems and control of development within the comprehensive planning process will be sufficient to ensure that the aims of the framework are fulfilled. However, in some areas more detailed and stricter controls will need to be applied.

Victoria Square would need to be designed comprehensively, and after such a design had been worked out, design and siting controls similar to those used in Canberra could be applied to ensure that development follows this design.

In the case of North Terrace and King William Street it may be more appropriate to set up a design review committee which would examine each proposed development in these streets on its merits to ensure that it would not destroy the character of the street but rather enhance it.

The redevelopment projects that provide significant visual elements near the squares would probably be carried out by a single authority and hence some unity of design could be expected. However if for some reason this should not be so, the development surrounding the squares and also the parklands frontages could be placed in the hands of a design review committee.

In North Adelaide and East Adelaide where it was considered that their historical character should be preserved, some form of "historical zoning" or at least "special character zoning" may need to be applied. It must prescribe the standards and quality of design to be followed in new development.

The control of large scale projects has been discussed previously and this would need to be applied in all large groupings of buildings where more than one architect was involved.

The question of implementation is not an easy one to solve and the purpose here has been to briefly indicate what measures are available and may need to be adopted.

8. Conclusion

The purpose of this thesis has been to demonstrate that the future physical development in the City of Adelaide, consistent with urban design considerations, can be achieved by means of an urban design framework. The specific proposals contained in this framework are realistic, practical and, one hopes, imaginative. They are by no means presented as a complete and final statement on what should happen but rather what could happen if they were implemented. It is also realised that it is one of many solutions that could have been adopted. The main concern has been to demonstrate the approach that should be used and to illustrate what such an approach could achieve.

APPENDIX ASTATISTICAL SUMMARY OF VISUAL IMAGE INTERVIEWS

There were a total of 22 interviewers and their classification of the image elements has been assembled in the following table :

	Maj.	Min.	Total
<u>I Paths</u>			
North Terrace	20	-	20
King William Street	20	-	20
Rundle - Hindley Streets	17	1	18
Anzac Highway	15	1	16
Pulteney Street	8	7	15
Port Road	14	1	15
Glen Osmond Road	13	2	15
Main North Road - O'Connell Street	12	2	14
Currie - Grenfell Streets	12	1	13
Grote - Wakefield Streets	7	6	13
East Terrace	3	10	13
West Terrace	10	2	12
South Terrace	8	4	12
Greenhill Road	8	3	11
Frome Road	5	5	10
Goodwood Road	3	6	9
Unley Road	7	2	9
Henley Beach Road	6	2	8
Flinders - Franklin Streets	3	4	7
Hutt Street	1	6	7
Wakefield Road	4	2	6
Park Terraces generally	6	-	6
Fullarton Road	2	4	6
Waymouth - Pirie Streets	3	3	6
Hilton Road	2	3	5
Prospect Road	2	3	5
Morphett Street	1	4	5
Gouger - Angas Street	-	5	5
Glenelg Tramline	-	4	4
Sturt Street	-	4	4
Victoria Drive	2	1	3
Hackney Road	2	-	2
Gawler Place	1	1	2
Jeffcott Street	1	-	1
Kintore Avenue	1	-	1
James Place	-	1	1
Stephens Place	-	1	1

	Maj.	Min.	Total
<u>II Edges</u>			
River Torrens	12	1	13
West Terrace	7	1	8
Parklands	6	2	8
South Terrace	6	1	7
East Terrace (North Section)	5	2	7
Park Terraces	5	-	5
View of Hills	5	-	5
North Terrace	3	-	3
Robe - Fitzroy Terraces	2	1	3
Hackney Road	2	-	2
Railway lines	1	-	1
<u>III Nodes</u>			
Victoria Square	16	6	22
Railway Station	13	2	15
Hindmarsh Square	9	6	15
Light Square	3	9	12
Hurtle Square	2	9	11
Rundle Street	10	-	10
Whitmore Square	1	7	8
East Parklands	4	3	7
Victoria Park Racecourse	3	3	6
O'Connell Street	4	1	5
North Terrace - King William Street Intersection	5	-	5
"Beehive" Corner	2	2	4
West - North Terraces Intersection	3	1	4
Alpine Gardens	1	-	1
Pulteney Street - North Terrace Intersection	1	-	1
Pulteney Street - South Terrace Intersection	1	-	1
Elder Park	1	-	1
<u>IV Districts</u>			
Shopping Area	15	-	15
Business Area	11	1	12
Parklands	10	2	12
North Adelaide	1	7	8
Botanical Gardens	3	2	5
Adelaide Residential	1	4	5
Railway Yards	3	-	3
North Terrace - professional offices	1	2	3
Hindley Street	-	3	3

	Maj.	Min.	Total
<u>V Landmarks</u>			
Town Hall	13	3	16
M.L.C. building	9	7	16
G.P.O.	14	1	15
Hotel Australia	9	6	15
St. Peters Cathedral	11	3	14
Government House	10	4	14
Parliament House	11	2	13
Advertiser building	7	5	12
University	6	5	11
Royal Adelaide Hospital	10	-	10
Central Market	6	4	10
Botanical Gardens (gate)	7	3	10
Children's Hospital	7	3	10
Zoological Gardens	5	5	10
Victoria Park racecourse	6	4	10
Adelaide Oval	8	1	9
Art Gallery	7	2	9
Library - Museum	8	1	9
St. Xavier Cathedral	4	5	9
Adelaide Boys' High School	4	4	8
War Memorial	2	6	8
East End Market	1	7	8
Moore's	3	3	6
Olympic Pool	1	5	6
Light's Vision	2	4	6
Police Barracks	2	4	6
Weather Bureau	2	3	5
Bonython Hall	2	3	5
Alpine Gardens	3	1	4
David Jones	2	2	4
E.T.S.A. building	2	2	4
Torrens fountain	2	1	3
Scots Church	-	3	3
Railway Oval	-	2	2
Elizabeth House	-	2	2
Parade Grounds	1	1	2
Botanic Hotel	1	1	2
South African War Memorial	2	-	2
Weir Restaurant	-	2	2
Hutt Street Hospital	-	1	1
St. Patrick's Church (spires)	-	1	1

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Abbreviations for Magazines

- | | |
|------------------|---|
| A.A. Journal | Architectural Association Journal |
| A.I.A. Journal | American Institute of Architects Journal |
| A.I.P. Journal | American Institute of Planners Journal |
| A.P.I.J. | Australian Planning Institute Journal |
| J.T.P.I. | Journal of the Town Planning Institute |
| P.A. | Progressive Architecture |
| R.I.B.A. Journal | Royal Institute of British Architects Journal |

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