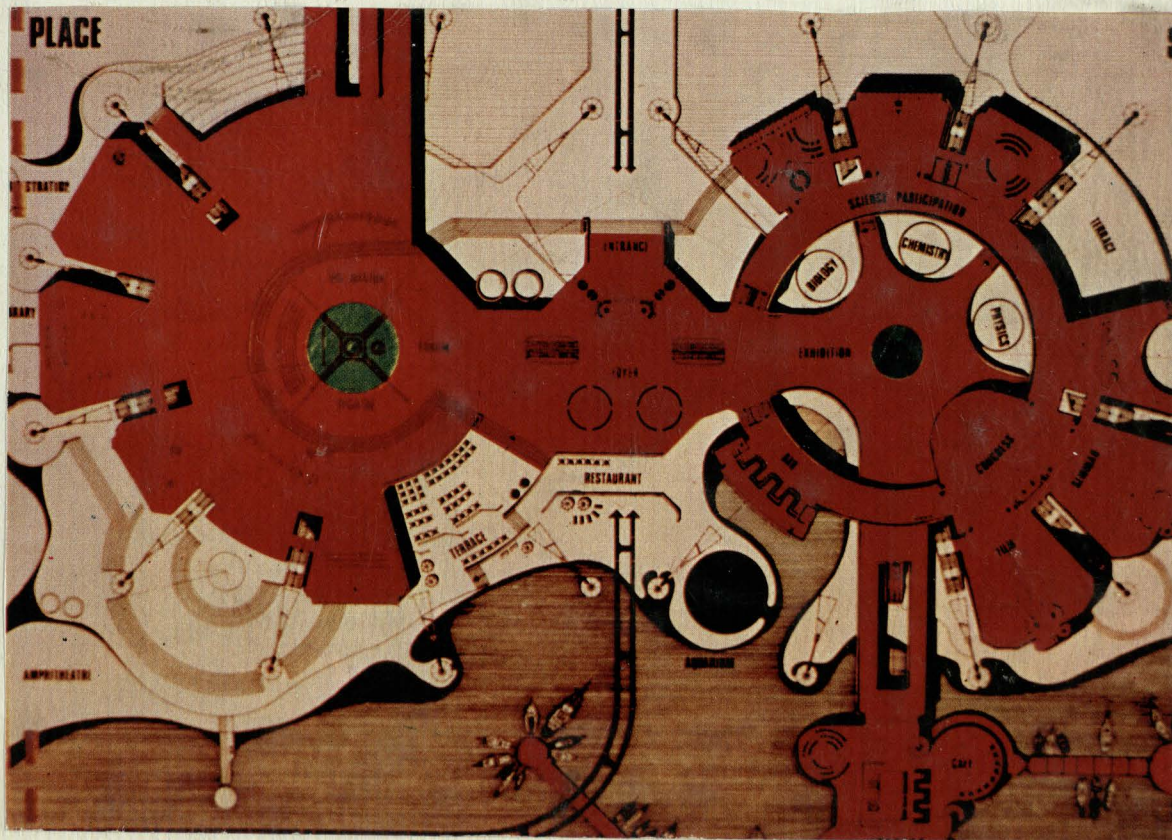


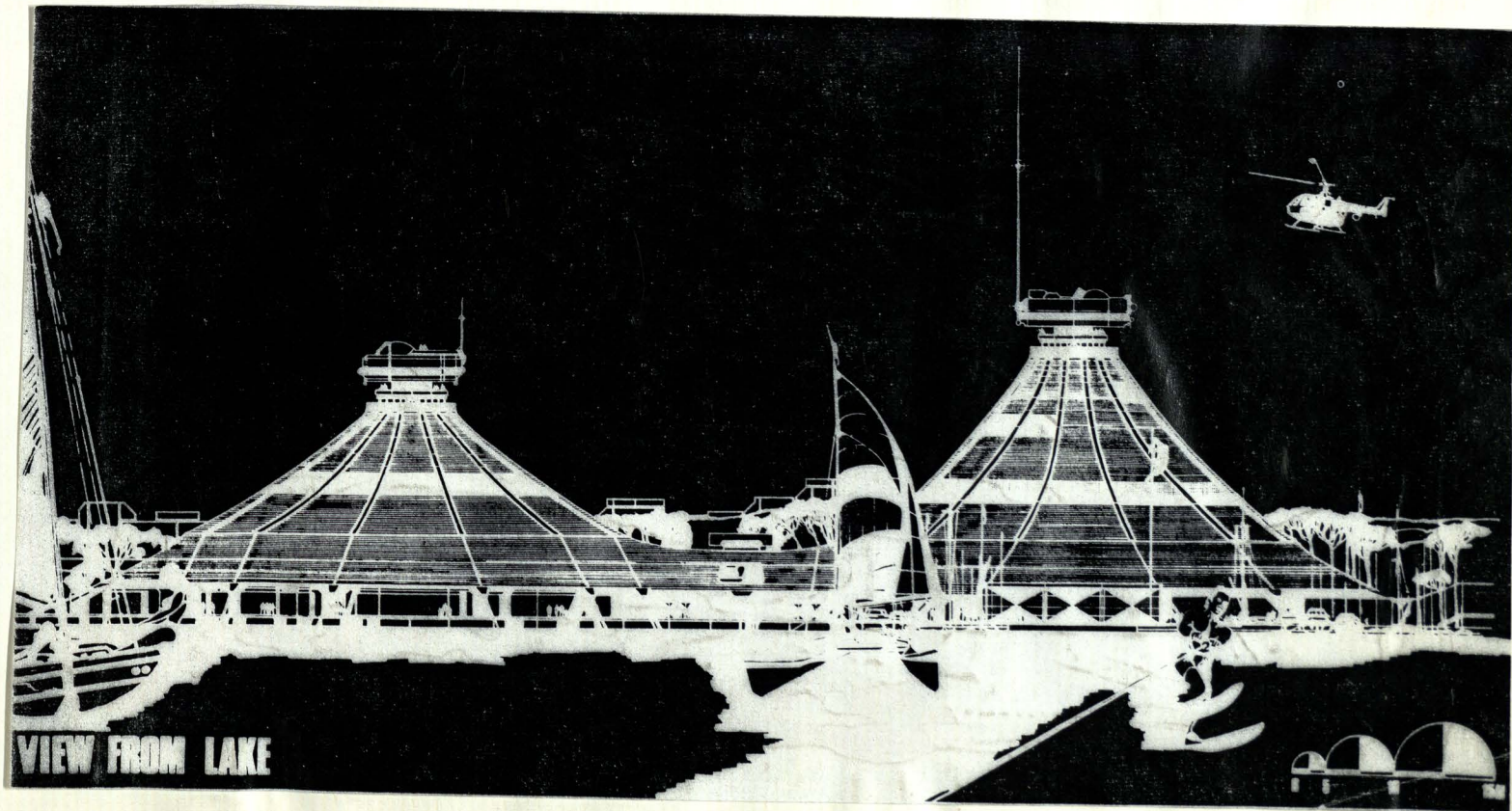
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# MONARTO HUB



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BACKGROUND TO THE PROJECT

- I** BACKGROUND TO THE PROJECT
- II** BASIC URBAN DESIGN PRINCIPLES
- III** ACTUAL DESCRIPTION OF THE PROJECT
- IV** CONCLUSION

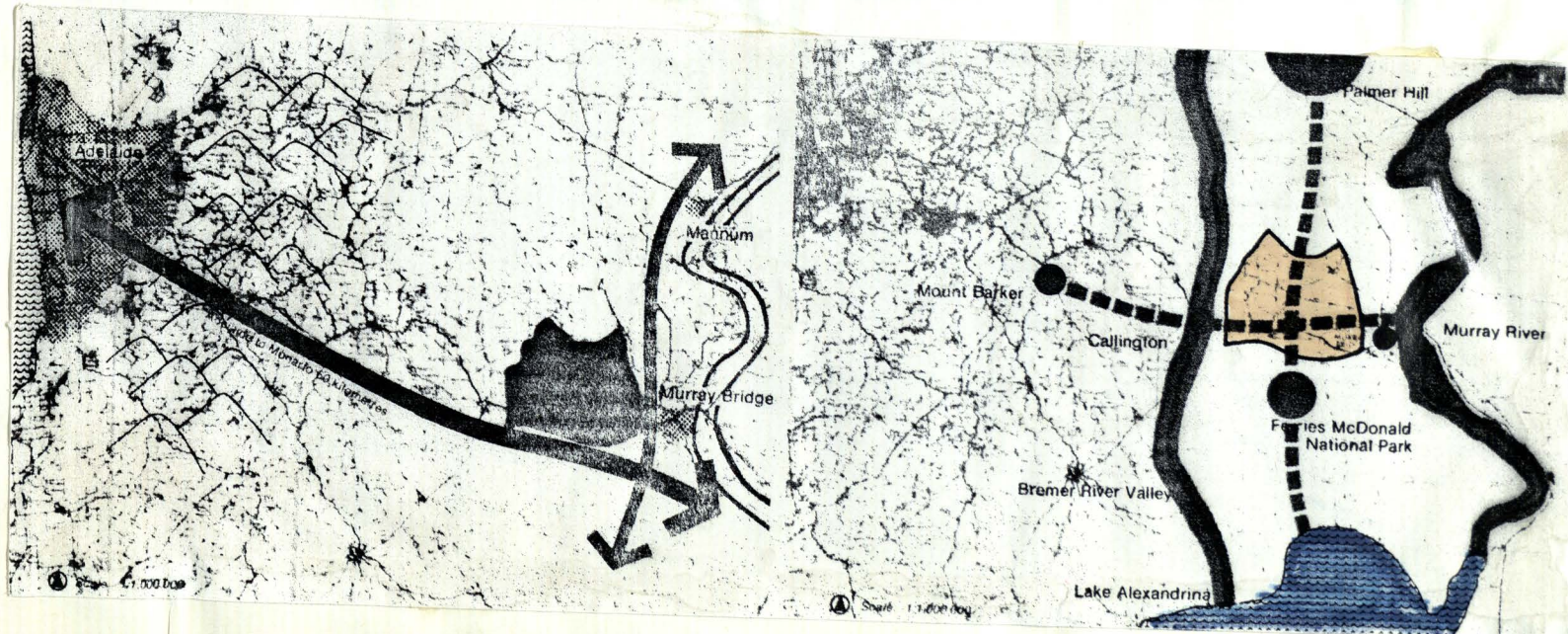
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# I

## BACKGROUND TO THE MONARTO HUB PROJECT

The construction programme for several new cities is now under way in Australia, to encourage decentralization of the population of which 85 per cent is at present crowded into the big existing cities. One of these is the capital of south Australia, Adelaide, which currently has a population of 850,000



and to avoid further growth, has laid the foundations for a new city sixty kilometers away, in the open country near the Murray river, on the Adelaide - Melbourne axis.

The new town takes its name, Monarto, from that of a dead Aboriginal tribal queen. The population is expected to reach 30,000 in 1983 and 200,000 in 2000.

Special attention is being paid to the Monarto Hub - a complex comprising a science and communication centre with fun and communal facilities - which is being proposed as one of the first projects to be built to give an image and identity to Monarto.

## II

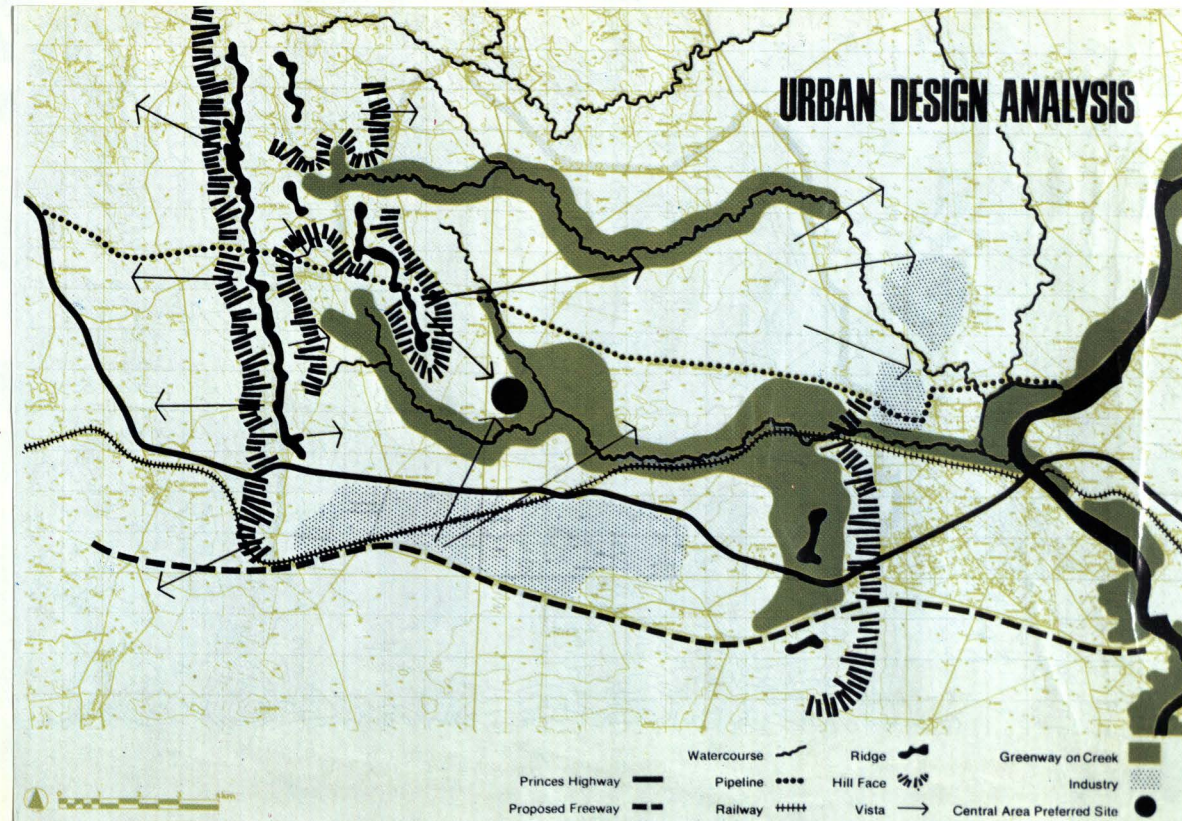
### BASIC URBAN DESIGN PRINCIPLES

#### - a - CONCEPT PLAN :

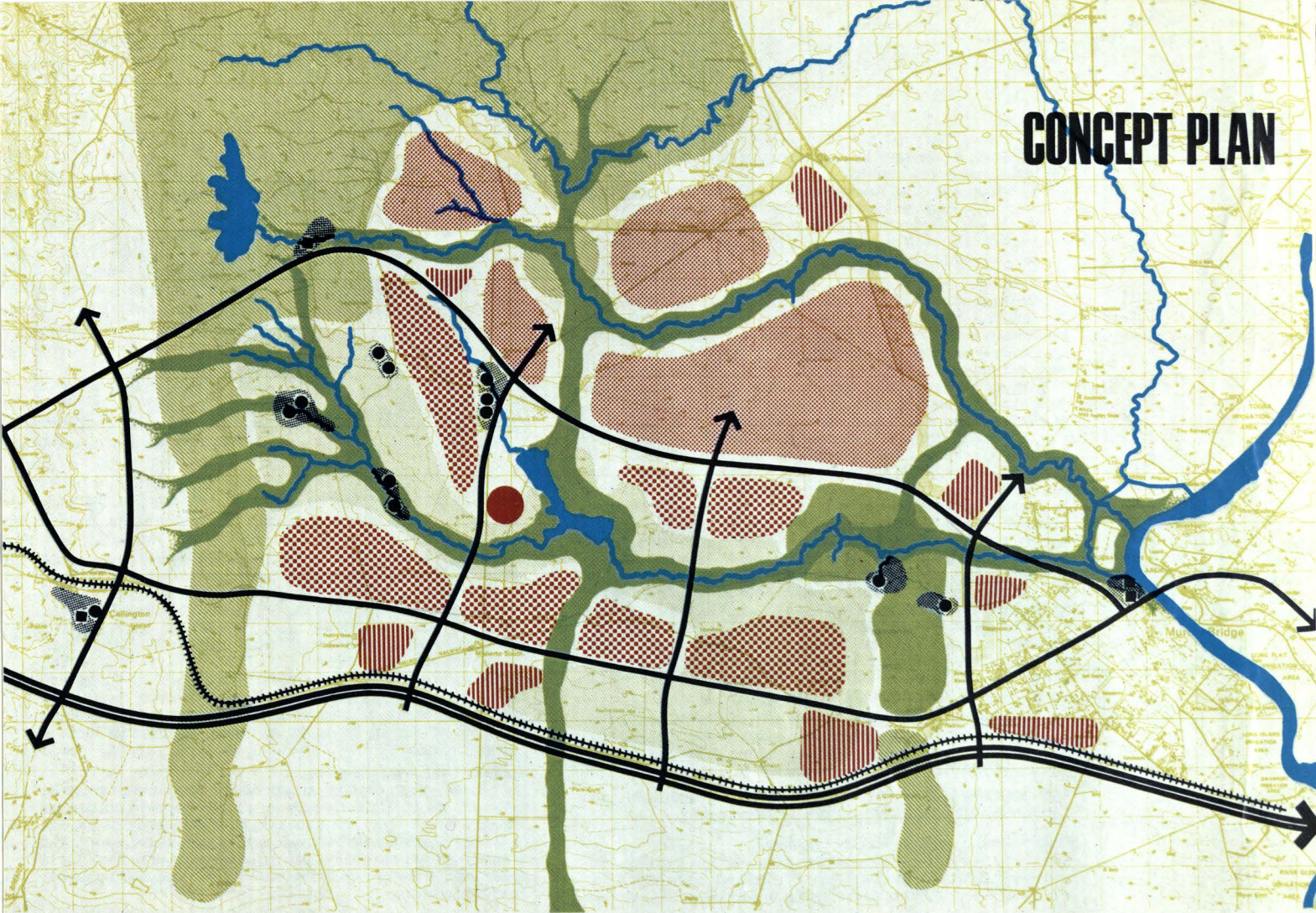
The concept plan for the new city developed from a logical sequence of studies which began with an urban design

analysis, identifying opportunities and constraints; and a close analysis of the landscape which suggested the location for the city center.

The plan then moved on to



# CONCEPT PLAN



- |   |  |                          |  |                |  |                       |  |
|---|--|--------------------------|--|----------------|--|-----------------------|--|
| Long Term Development                     |  | Conservation             |  | Green Spine    |  | City Centre           |  |
| Railway                                   |  | Major Open Area          |  | Freeway        |  | Residential           |  |
| Historical Buildings in Landscape Setting |  | Landscape Sensitive Area |  | Arterial Roads |  | Major Industrial Area |  |

consider the arterial road network, then to how the form of the centre should be conceived and finally to the identification of the residential and work areas.

A structure plan has been prepared for the first 130,000 inhabitants, as a guide-line for immediate decisions.

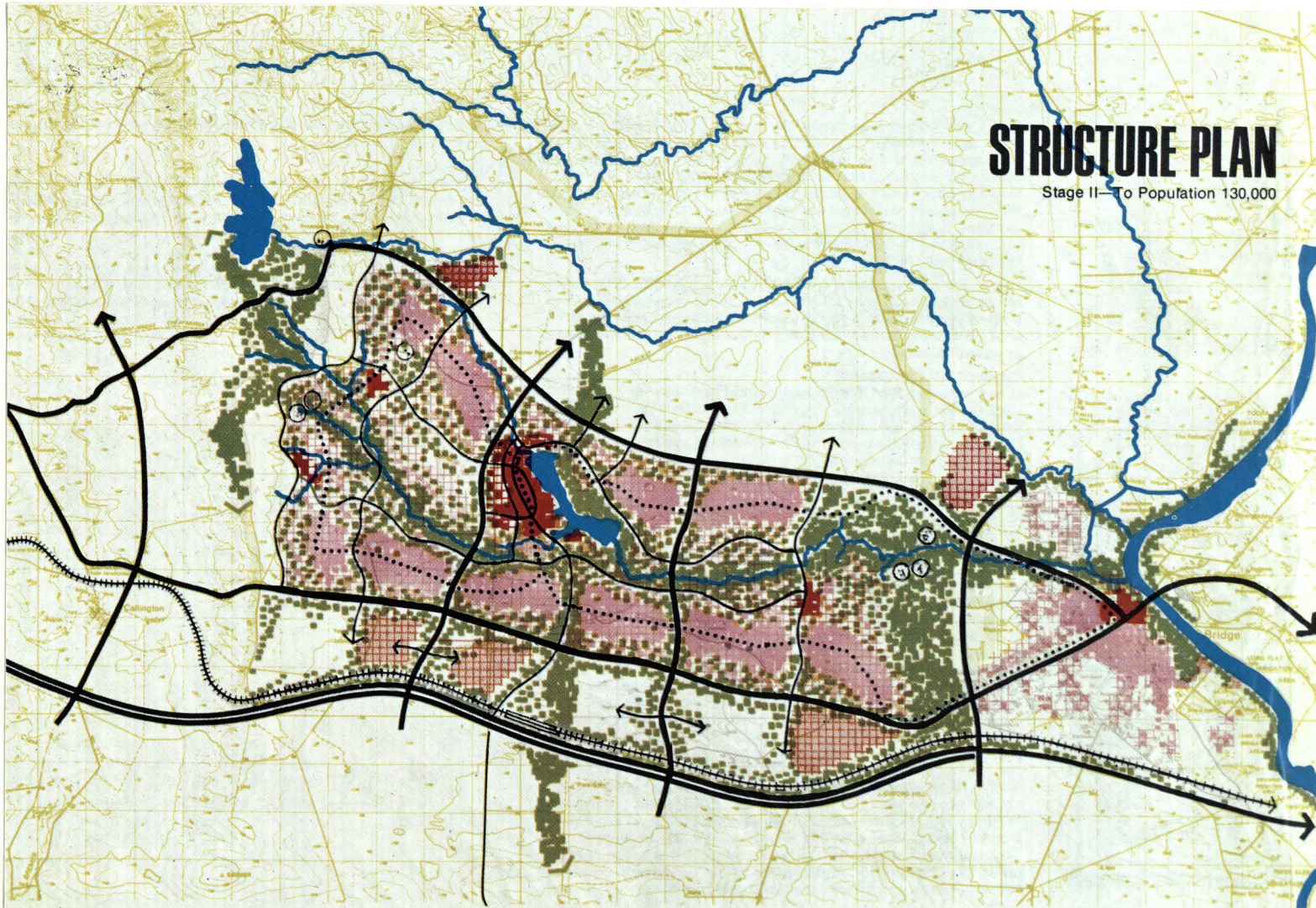
The designated area has a steep escarpment to the west, affording panoramic views over the site and out from it, and the Naringeri hills to the east where the fauna and flora are scheduled for conservation. The designated area is crossed by watercourses and creeks. The climate is slightly drier and hotter than that of Sdefaide, and therefore calls for the creation of shady areas and planting to increase humidity.

The city will develop in the higher parts of



# STRUCTURE PLAN

Stage II—To Population 130,000



Freeway		Public Transport		Industrial Area	
Arterial Road		Historical Buildings		Residential	
Railway		District and City Centre		Parkland	
Sub-Arterial Road					

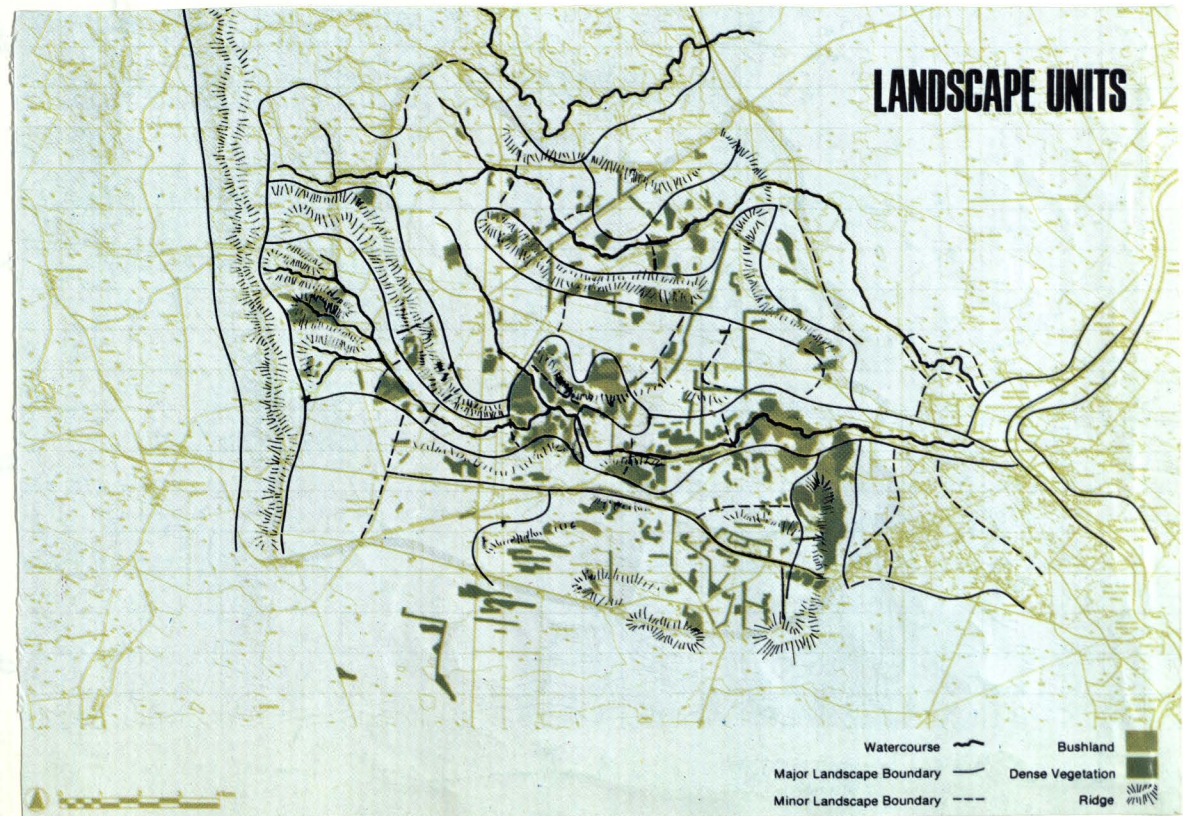
the site, whilst the lower lying zones and those adjacent to transport links are earmarked for industry.

The existing man-made elements in the landscape are a large water pipe line, an overhead electricity transmission line, a highway and the railway line. Both the major natural topographical features of the site and the existing man-made elements crossing it, lie generally in an east-west orientation. This bias provided a dominant theme for the urban design concept.

#### - b. LANDSCAPE UNITS

The designated area has been divided into "landscape units" according to physical site characteristics, each unit being identified by natural original qualities. These subdivisions

have also served as a basis for the locating of main arteries and for different land uses. The "heartland" of the area, with its juxtaposition at the junction of major creek systems and with outcrops vegetations, could be used for the creation of a large central lake and as the site of the city centre itself.

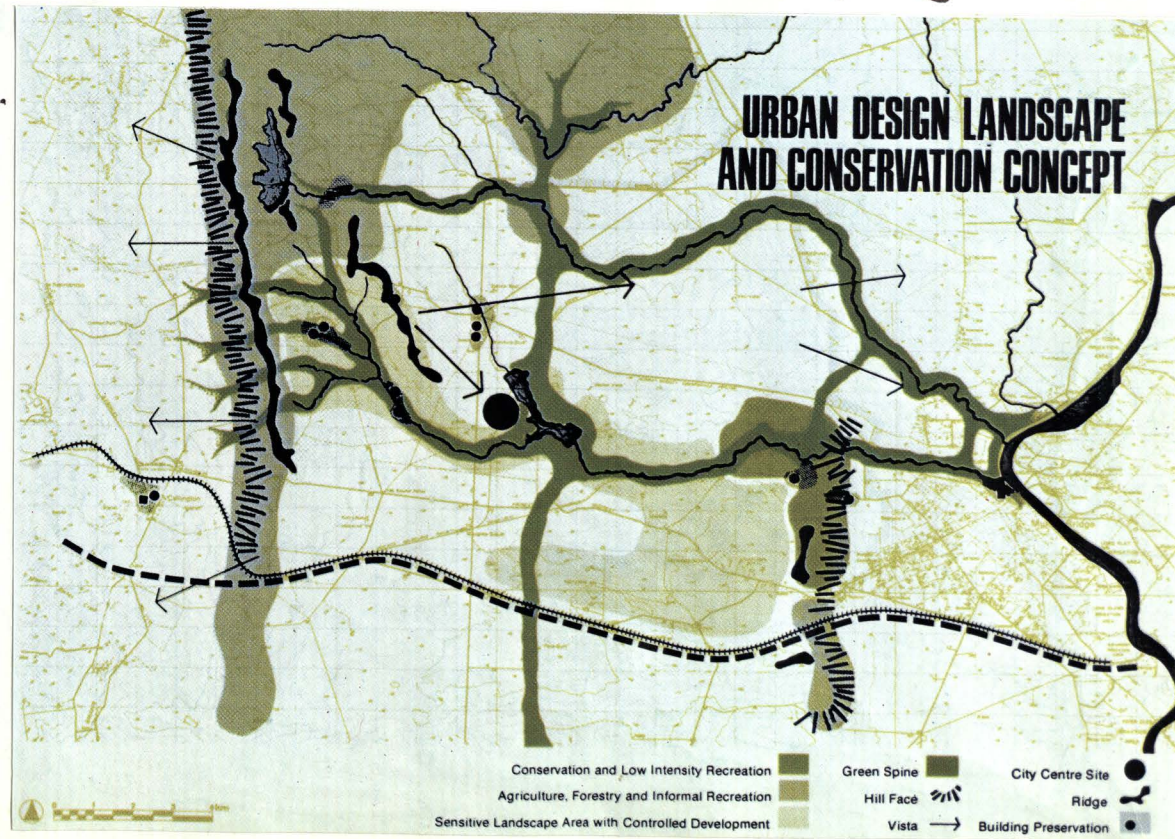


- C. URBAN DESIGN LANDSCAPE AND CONSERVATION CONCEPT.

Some of the stone-built farmhouses and thatched sheds in the area are of cultural or historic interest and will accordingly be preserved and in some cases restored. The general design of the city will take the following elements into account: conservation of extensive areas to the eastern and northern boundary areas for farmland, afforestation and recreational purposes; the identification of a "protected" landscape for cautious development where existing natural and man made features should be preserved; the creation of a major linear "green spine" on the east-west axis following the orientation of major creek systems, and of another major north-south green spine, cutting the

east-west spines and focusing on the "heartland area": planting of trees in large numbers, not only along the green spines but around the central lake and to provide windbreaks, animal sanctuaries and an identifying feature of the landscape.

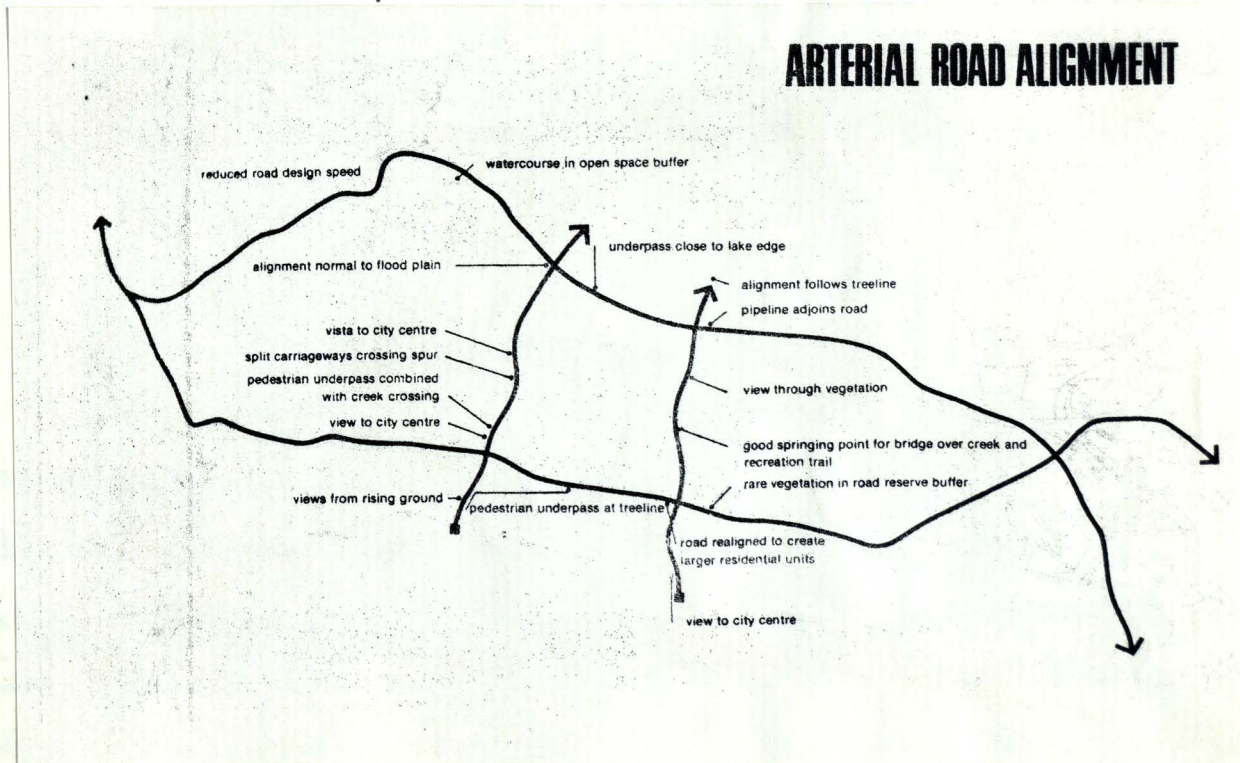
follows the east-west course and will be set at right angles by two north-south axes. The major arteries will be located



- d - ARTERIAL ROAD ALIGNMENT

Particular attention has been devoted to the public transport system which will provide a fast and frequent service as an alternative to the private car. The main

traffic axis follows the east-west course and will be cut at right angles by two north-south axes. The major arteries will be located



outside residential planning units within wide landscaped corridors.

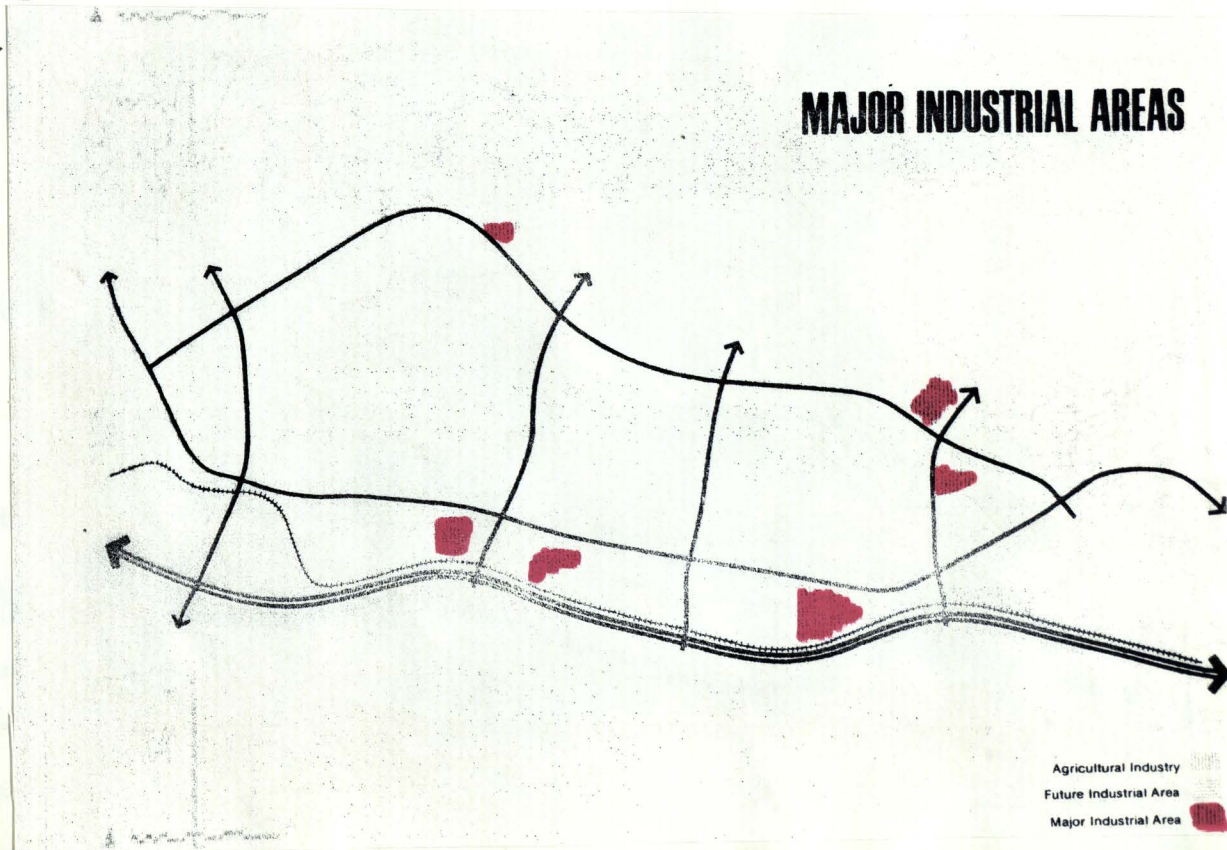
The railway east of Howato south should be relocated to adjoin the proposed freeway, so as to serve the industrial areas to the south of the city. A station for Howato would be located south of the city centre, to which it will be linked by a bus service.

#### - e - MAJOR INDUSTRIAL AREAS

Most of the industrial activity will be concentrated in the major industrial estates, which would be big enough to permit the planning flexibility required by the variety of industries that may be attracted to these estates. They would cover an average of 100 hectares, with one large site of some

175 to 200 hectares for the possible location of major industrial concerns. These areas would be located on the city boundaries, so as to allow for possible expansion, and would be screened by thick belts of woodland.

Studies have been carried out to ensure that employment areas are distributed within the quickest possible reach of housing estates, and in the case



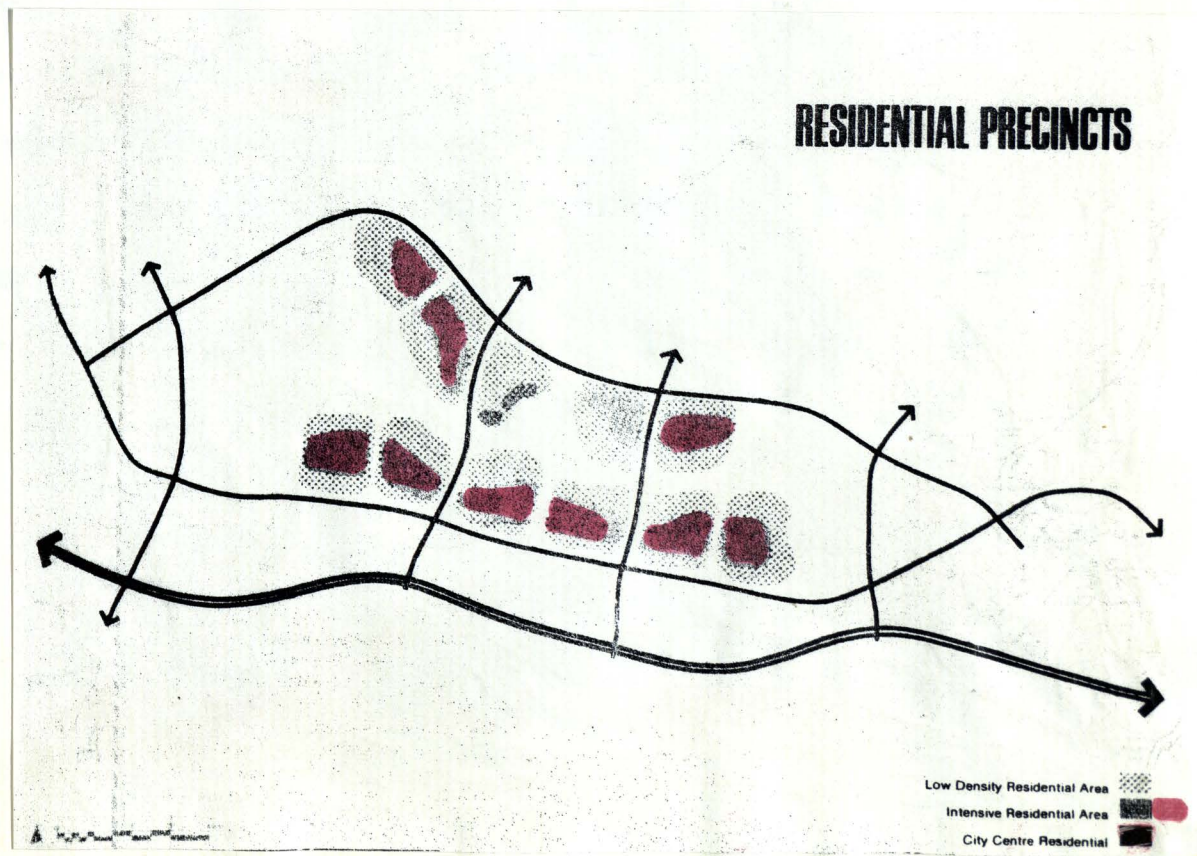


of minor industrial areas, within walking distance, industrial traffic would not then pass through residential areas.

the smaller

-f- RESIDENTIAL PRECINCTS

Various residential housing typologies will be used. It is envisaged that 65% will consist of detached houses, whilst attached housing (town houses, terrace houses, semi-detached houses) would



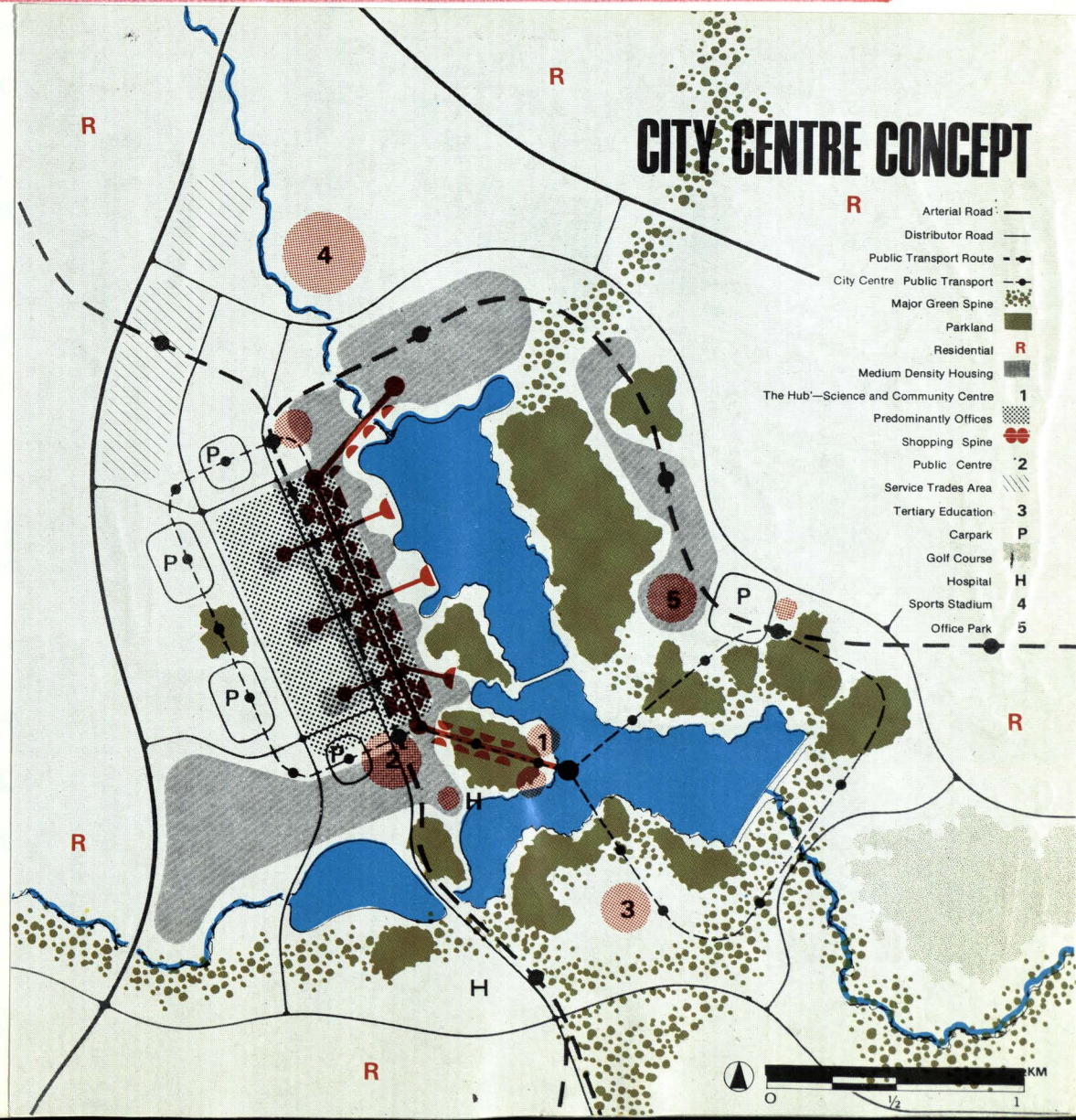
III  
form 15% of the total, flats and other forms of housing would be 20%. Density will be varied, the average being 50 persons per hectare.

the smallest residential planning "unit" would be 3,000 population which would support local services such as primary school and local shopping. The larger "units" for 12,000 persons would support higher order services such as a secondary school, health and welfare facilities and community activities such as a library and a swimming pool.

# III

## ACTUAL DESCRIPTION OF THE PROJECT.

The city centre is envisaged as having a 400 to 500 hectare site, including the big artificial lake to be created, the residential areas, recreational areas, the stadium, the medical centre, the service, and light industry areas ect...



For 2 reasons to do with landscape qualities the area to the west of the lake has been chosen as the ideal position for the centre, the linear green spines intersect near the lake and merge with the surrounding parkland. The health and educational institutions will be located in the parkland around the lake. The city's real core, on the west side of the lake, will be highly urban.

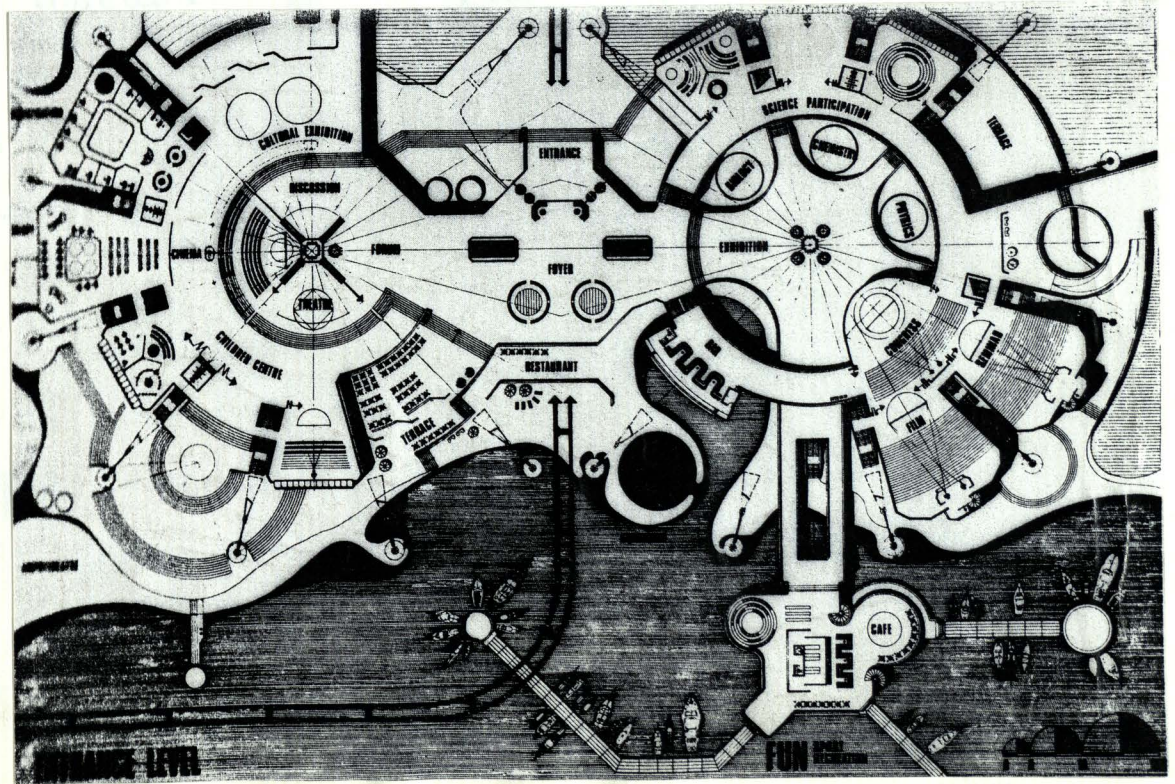
A feature of the city centre will be the "MONARTE HUB" this is to be the pivot of science, social life and fun, and will be situated at one end of the city centre's longitudinal axis, parallel to the lake. The lake is one of the city's major attractions. The majority of city workers would be able to walk to the lake within a time of five minutes.

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re's exhibition and scientific research centre, and hub of social life and public entertainment should act as a visual and mental "magnet" to focus attention on the new city being planned. It will be available to the population of Monarto as well as to that of the state. The Monarto hub will be built close to the city centre, on the west bank of the lake and within walking distance of the other principal nuclei of city life. It will be recognisable from a distance and visible from many points. It will be linked to the city centre by public transport (later by a monorail) and with Adelaide by a helicopter service. The MONARTO HUB'S architectural appearance is that of two enormous circular tents. It will have three main functions:

- 1- science function (exhibitions, congresses)
- 2- place function (a place where communal amenities are grouped; theatre, forum, cinema, music)
- 3- "FUN" (boating, restaurant, coffee shop, aquariums, pubs).



these 3 functions are split in the following way :

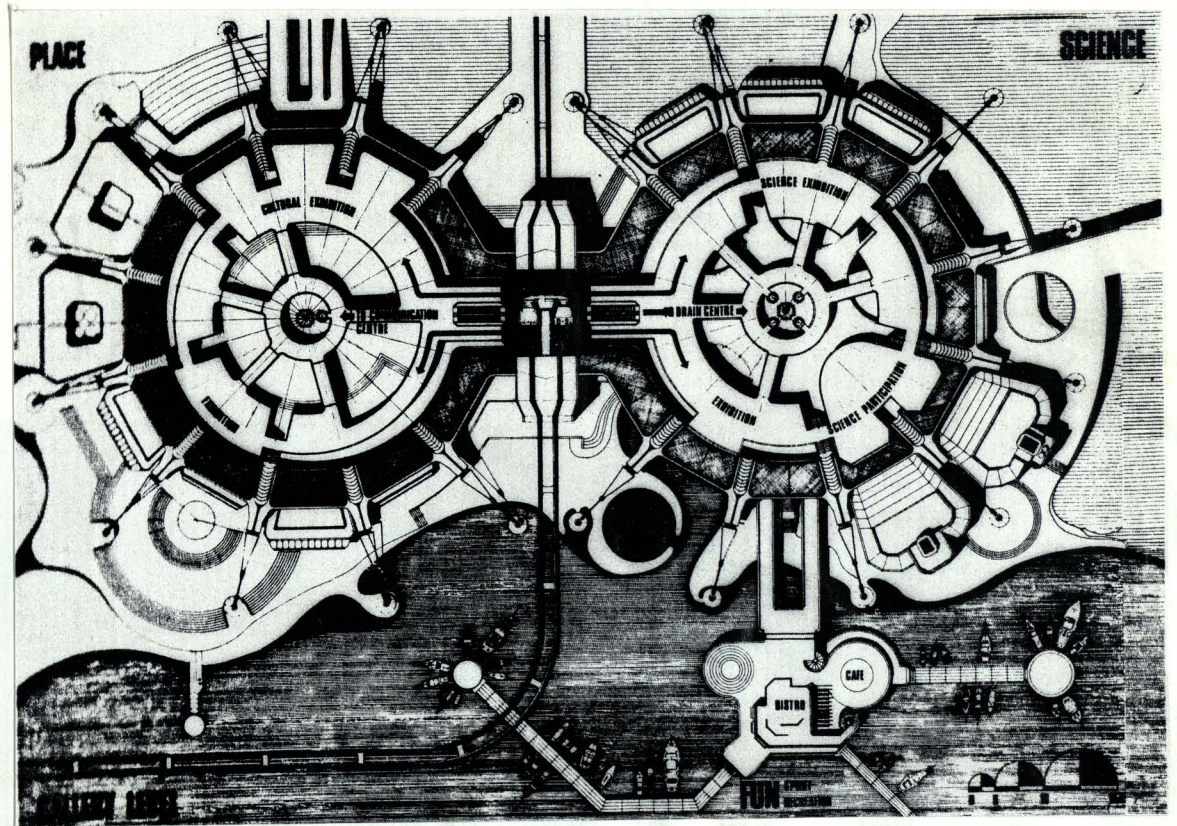
at the entrance level : the foyer and restaurant - which are common functions to the 2 tents - are at the meeting point of the 2 circular tents on the left side of the foyer all the "place" functions are distributed ( children centre, cultural exhibition, discussion ... )

while on the right side all the Science functions are found ( science participation, biology, chemistry, physics ... )

projecting into the lake, on the right side of the restaurant, the fun centre is spreading ( cafe, sports recreation ... ).

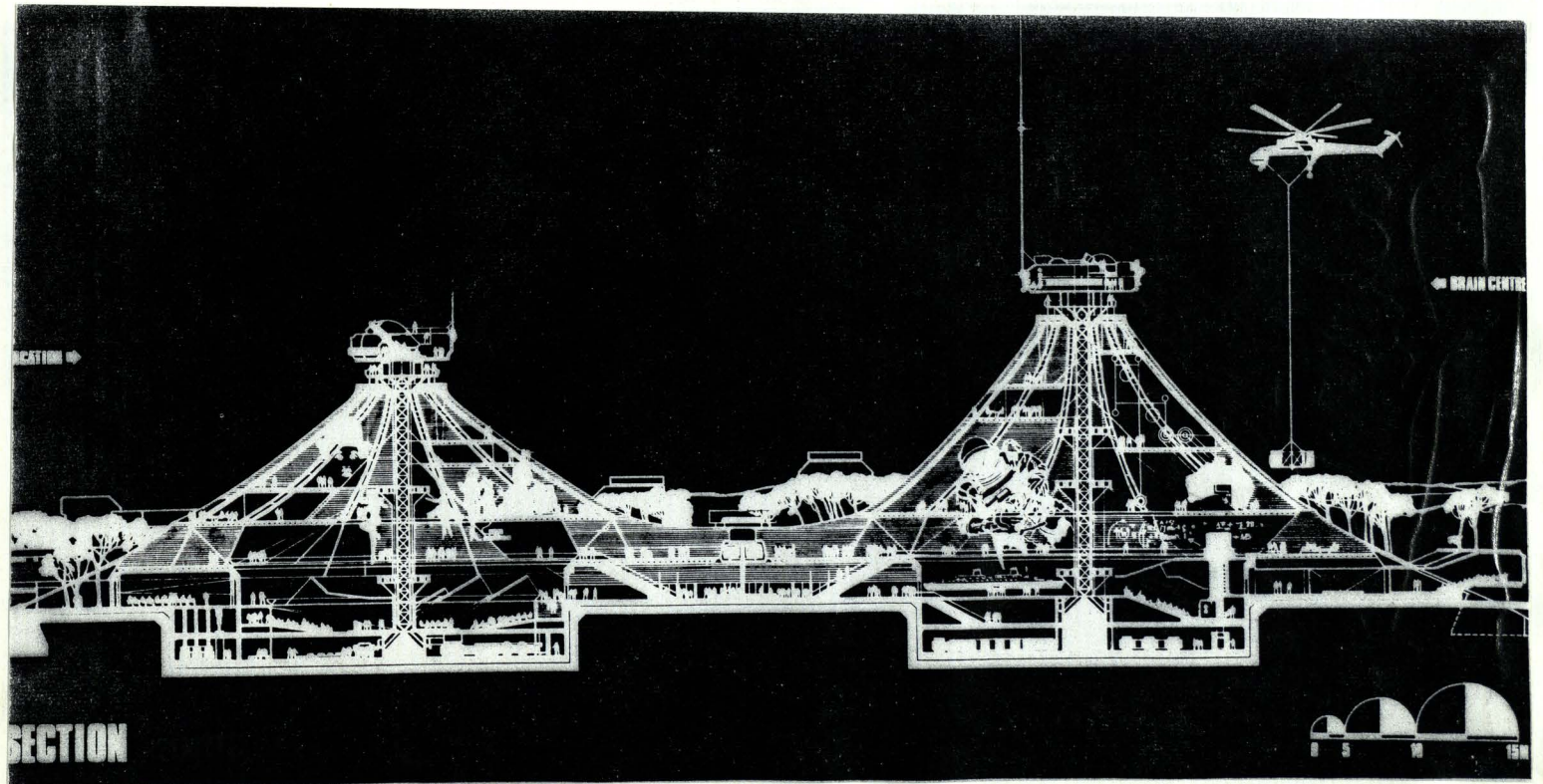
in the upper floors of the tents galleries are connecting the functions together as we can see in the picture below.





these 2 tents are built on many levels, some of these levels are connected together with galleries others are not as we can see in the sections.

as for the materials of construction. these tents are made of steel cables resting on a circular ring at the top and tied to the ground at the bottom. between these cables the gaps are filled with a very light material, prefab. elements which make the whole project very

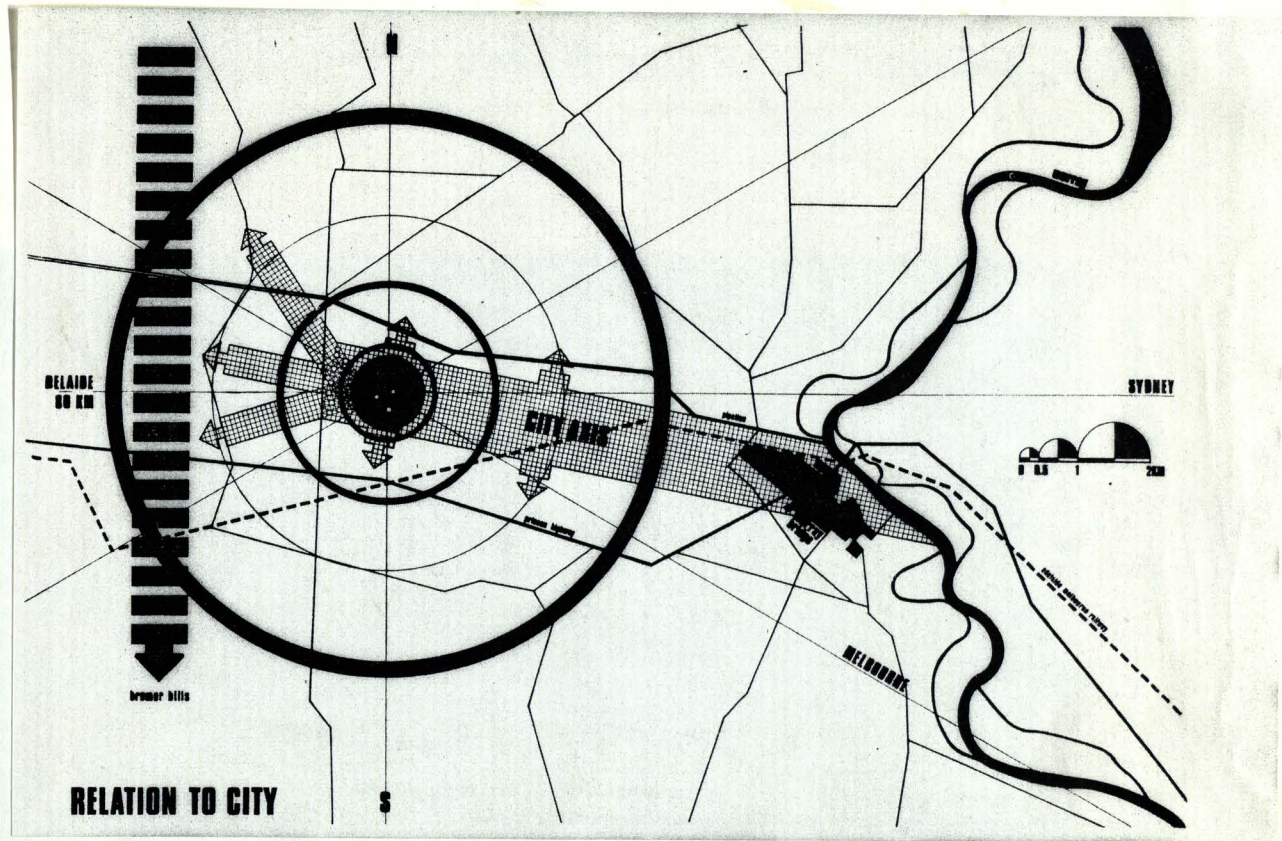


feasible and economical  
at the top of each tent a heliport is  
built. and as seen in the ~~the~~ view  
from nature reserve a Monorail is connected  
to the galleries which will then distribute  
people to the different functions.



## IV CONCLUSION

In my opinion this project was a full success. It succeeded to fulfill many of its objectives. First of all it helped avoiding the future growth to which site was exposed. Second it was able to combine many functions in one place providing all the facilities in particular transportation facilities. The city centre location was also very well chosen specially that all the surrounding cities axis are passing through this city centre. The design was also very well integrated to the nature surrounding, lake, greenery were all kept and exploited to the maximum. The design was also very economical because of the very light construction and materials used in the project.



As we can see above Monarto's city centre is related and connected to very important cities like Adelaide, Melbourne, Sydney. The potential uses are also very important in this project. Different kinds of transportation

are used monorail, helicopter, railway  
which also makes <sup>the center</sup> very easily accessible from  
everywhere.

