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# PROPOSED LANDSCAPE DEVELOPMENT OF KULIM HI-TECH PARK AT KULIM KEDAH

NOR AINIE BT ISHAK

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

# PROPOSED LANDSCAPE DEVELOPMENT OF KULIM HI-TECH PARK AT KULIM, KEDAH

By

**NOR AINIE BT ISHAK**
**(9919620)**

This Design Thesis report is submitted in partial fulfillment of the
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**TESTIMONIAL**

This is to clarify that the thesis has been read and verified by:

i. Mdm. Amira Mohyuddin (Studio coordinator)
ii. Mdm. Jamilah Othman (Supervisor)

This thesis is submitted in partial fulfillment of the Bachelor (Hons) Landscape Architecture, Kulliyyah of Architecture and Environmental Design (KAED), International Islamic University Malaysia (IIUM).

I declare that this thesis is my original work and any reference from other writer has been acknowledged in this research.

.....

Nor Ainie bt Ishak
9919620
6th October 2003

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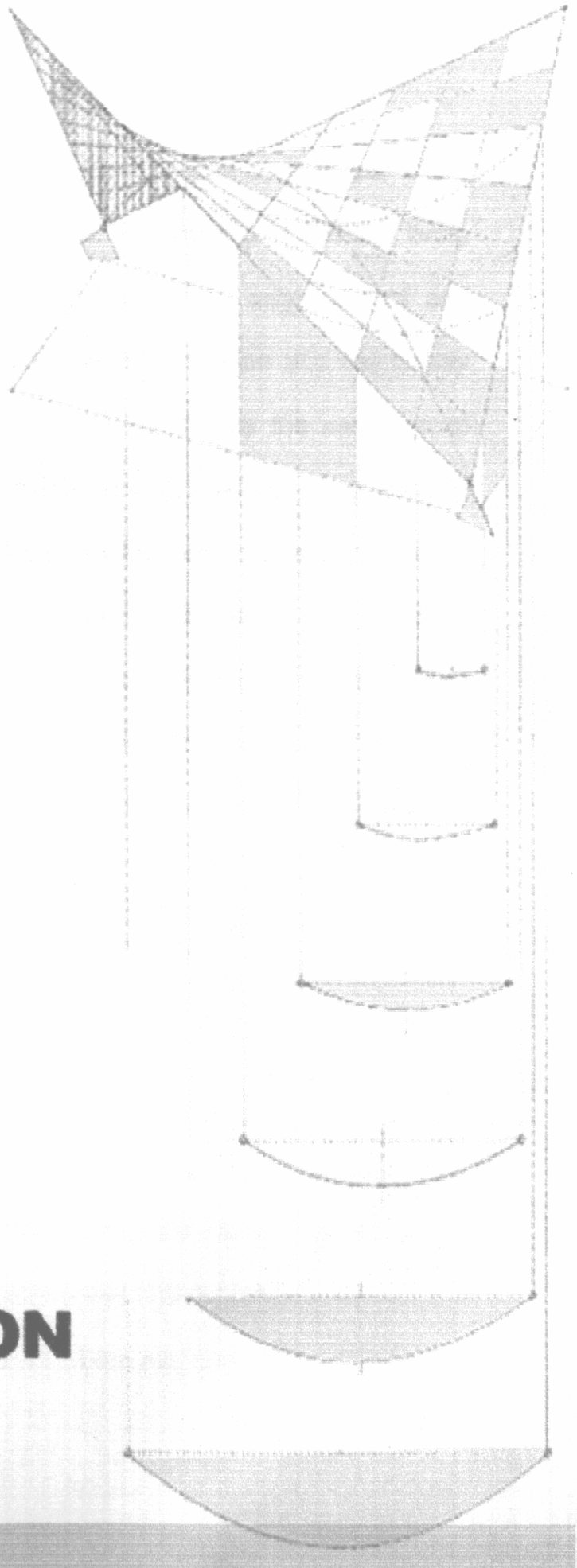
Nor Ainie Bt Ishak (9919620)

4th Year Bachelor of Landscape Architecture.

# ABSTRACT

The study about Hi-Tech Park is considered as the same as the study for a community or neighbourhood park. Hi-tech derived from the root word high technology which can be elaborate by a scientific study and use of applied science. As the country moving towards vision 2020, parks can be considered as one of precious things that could reflect healthy environment and tighten the integration between each other in a busy and hectic lifestyle. By considering the user needs in the Kulim Hi-Tech area and its neighbourhood context, different needs and character has been discovered. The intention to build hi-tech park comes with three basis; to developed mind, to pleased senses and needs of users towards a better living environment. Hi-tech will not only based on the character but the way or method on manipulating ideas and functions that it would serve the users. Besides that, as Kulim Hi-Tech is the first technology park in Malaysia, hi-tech would be as a best approach in designing the park and be as a stepping stone for other development of hi-tech park in northern part of Malaysia in the future.



# CHAPTER 1:

# INTRODUCTION

# 1.0 LITERATURE REVIEW

## 1.1 INTRODUCTION

As Malaysia move towards being a developed nation by the year 2020, landscape also play an important role in creating a better living environment for people. Behind the scenes at the beginning of any development process, the balance between urbanization and the quality of the environment being taken into consideration. By the invention of high technology, the eco-friendly environment should be developing in order to prove that living and working environment can suit with each other. For instance, the Silicon Valley and Celebration City in USA, Hyderabad in India, Dubai in United Arab Emirates also the close reference Cyberjaya and Putrajaya in Malaysia proves that with the right planning and vision, a sophisticated and high-tech environment can set amidst colourful and peaceful park.

## 1.2 HI TECH DEFINITION

Hi- tech is derived from the root word high technology. Technology means a scientific study and use of applied science or the application of this to practical tasks in industry (Oxford Advance Learners Dictionary; oxford University Press). Hence hi-tech normally deal with the use or application of information technology in daily life. Hi-tech can be classified in many ways:

Hi-tech in industrial:

Any manufacturing activities which are using the advance technology for instance microelectronics, biotechnology, electro-optics, silicon chips, robotic, computers and so on.

Hi-tech in architectural:

A particular style of buildings by the use of materials, certain techniques, forms, building systems and functions. The term intelligent or smart building being derived from the application and use of hi-tech style but it is more related with human and environmental response.

Hi-tech in system:

Cooperation with the information technology for comfortable and easy lifestyle through telecommunication services, online banking and so on.

Through the implementation of control system such as for lighting, ventilation, heat, sound and air quality for security, comfortable and cost effective.

Hi-tech in landscape:

Something which can be seen as a new materials, new working methods which have contributed to the evolution of the garden and then have been manipulated in order to create moods, emotions, habits and experiences The combination of forms, structure, layout and programs with the natural elements is simple and brought a sense of dynamism and practicality in the garden (Beazley.M, 2001).

### 1.2.1 WHY NEED HI-TECH

As we are going towards comfort and dynamic living environment, hi-tech is the solution. By providing more capable, dynamic and interactive mechanical based systems so users will have a great place to live work and play. Moreover " Modern design brought a sense of dynamism and a new decorative vocabulary that was unrestrained and full of visual metaphors." (Beazley.M, 2001)

### 1.2.2 HOW TO ACHIEVE HI-TECH ENVIRONMENT

Hi-tech environment can be performed or achieved through the composition of construction elements with the surrounding environment. Moreover the function of such elements can be adjusted to respond to unpredictable environmental variations and climatic conditions. As being stated by Beazley.M in the book The Modern Japanese Garden, " People enjoy comfortable life through the use of high technology within their beautiful natural surrounding." So by implementing the hi-tech approach in the design,

people can enjoy themselves while at the same time have a close contact with nature.

## 1.3 HI-TECH APPROACHES

Base on the study of hi-tech character and the natural condition of the site, the most effective way to design or create a park in a community area is through the use of three principles; materials, forms and functions.

Materials: According to Davies.C, in the book High-Tech Architecture, " Materials that reflect the characteristics of hi-tech are metal and glass." For comfort and dynamic use of elements in the park, materials other than metal and glass can be use but it should be secured, productive, cost effective, durable and comfortable.

Forms: Form also known as design or shape of elements that derived from specific concept. Normally the hi-tech or futuristic design is universal and it only can be achieved through the dynamic use of basic form or symbolic design with the hi-tech materials and colours. "The design not only brings new aesthetic but also has a practical benefits" (Beazley.M, 2001).

Functions: To create, encourage and provide opportunities to users to live in an intelligent lifestyle and environment. The landscape and elements not only provide an educational and learning purpose but also provide a practical and refreshing environment for mind and body.

### 1.3.1 ELEMENTS AND FACILITIES

Park is a place for recreation, which can boost morale and make cities attractive to settlers and tourists. Park also can be as a reminder of flora and fauna that existed outside the city. In the article of Reuniting Man and Nature stated that the value of successful park being measured by the numbers of visitors that regularly use and being served by the facilities provided there such as seating, shelter, refreshment and isolation. The purpose of those facilities being provided is to give comfort and pleasure to the users. The basic elements that could encourage users to the park can be studied in Islamic Garden such as:

Water: The most important elements in the garden as it symbolise eternal of life. Water can be in varied forms as it could reflect the meeting of humanity and creator as it being depended with each other.

Plants: The choice or selection of plants are determined by two factors; symbolic and utilitarian functions. Plants symbolise immortality and rejuvenation of life while utilitarian function is more towards needs of food, sight (shape, colour) and scent.

Structures: Pavilions, walls, pathways, footbridges, chini kanas, chadar for most users comfort, visual and sensory effect.

## 1.4 FUSION IDEAS OF HI-TECH GARDEN

Dramatic landscape: Can draw attention to the intrinsic beauty of nature and imitate natural effects. Can create dynamic relationship when deal with art. Views or vista may achieve when focal elements being located at the specific

spaces. Path is an important device to help define space and acts, as an invitation to walk through the garden and surprise elements could be use.

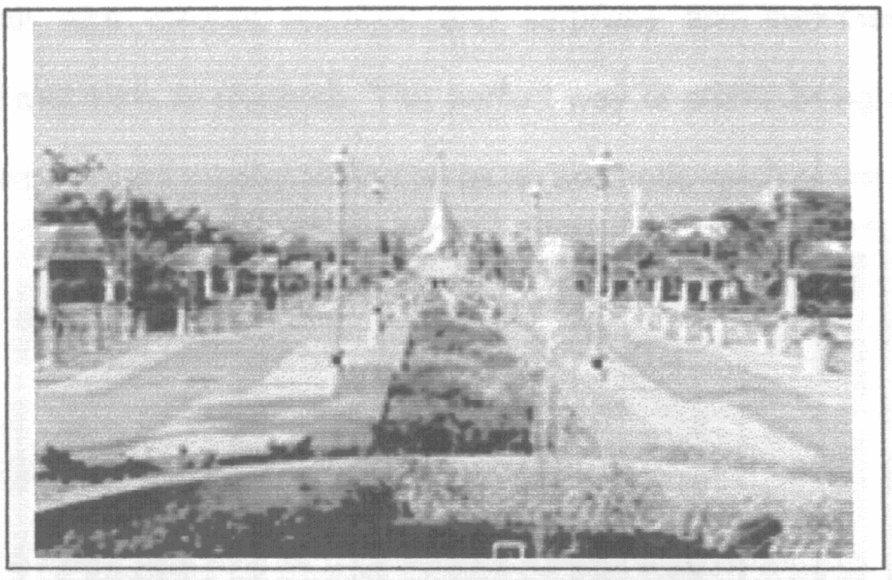


Image 1: By creating focal elements such as sculpture it can direct views or vista of users. (www. Putrajaya Park.com.my).

Play of light: Conjure up a mood that is almost theatrical. Lighting will create mystery and surprise as well as define areas. Lighting elements can also being used as a sculpture or focal elements during daytime.

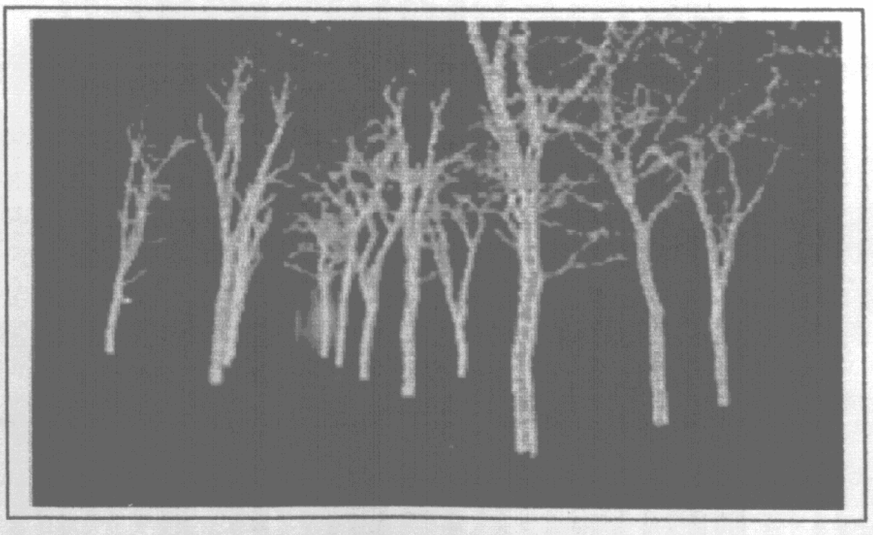


Image 2: Lighting effect could create mood and sense of surprise for users especially when it is directed to elements. (Beazley. M, 2001).

Ways of plants grow: In Islamic Garden, plants with spreading shade, fruits, scents and textures is encourages to be planted. It is not only to give comfort to users but also creates attention and surprises and becomes as an educational materials to students. The perfect way of plants being arranged could create harmonious balance and be as an aesthetic value of the park.

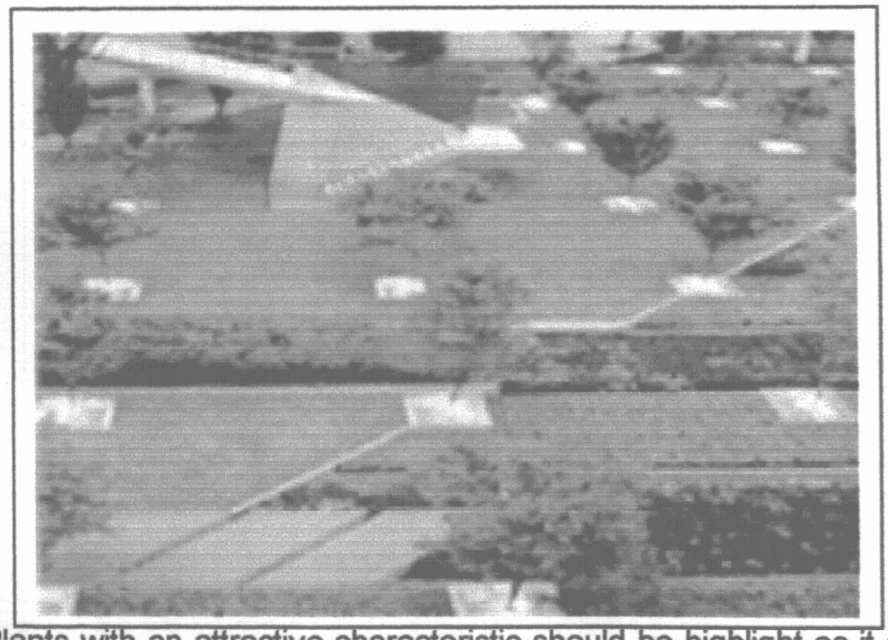
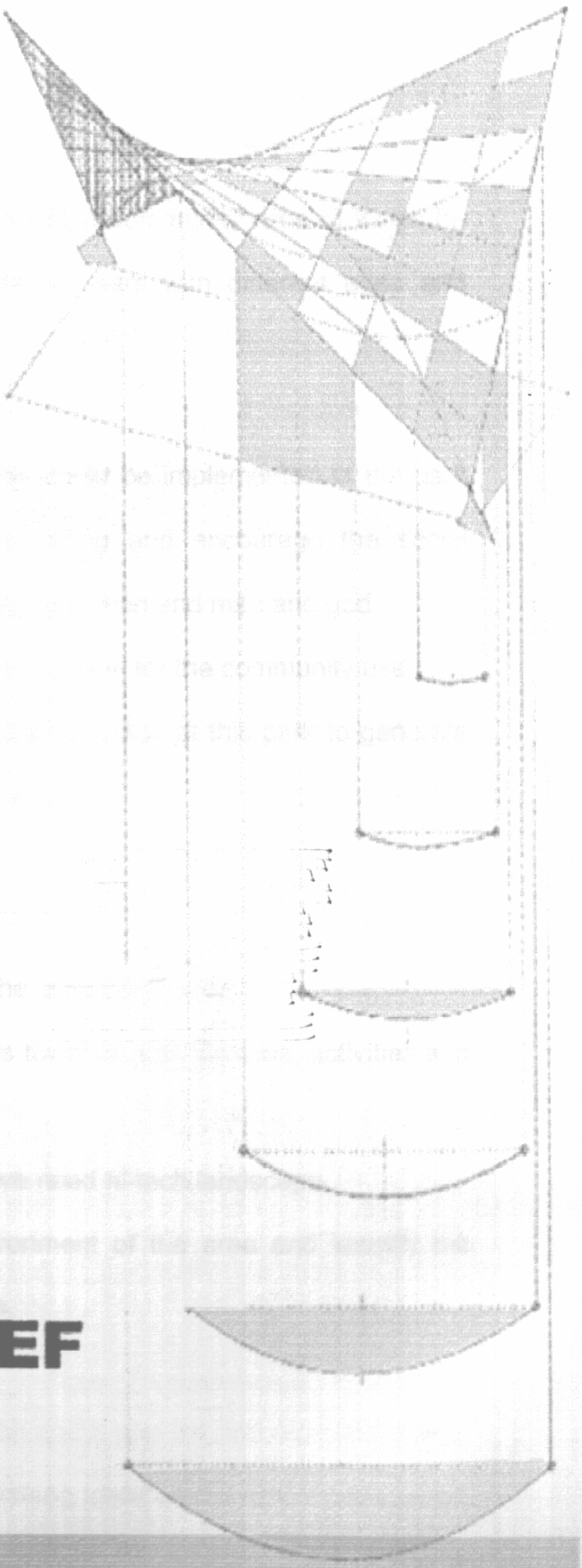


Image 3: Plants with an attractive characteristic should be highlight as it creates attention of users. (Beazley.M, 2001)

Colours: Colour theory is fascinating and can create perfect backdrop to attract attention. Colours when being manipulating in perfect way can become as an art performance and could direct users view.

Image 4: Colours have power to create mood and fascinate users. (Homes and Living gardens:Annual 2001).



# CHAPTER 2:

# PROJECT BRIEF

# 2.0 PROJECT BRIEF

## 2.1 STUDY GOAL AND OBJECTIVES

### 2.1.1 Goal

To proposed a hi-tech landscape design within community area in Kulim hi-tech which can boost the quality of life of users with different ages and different needs.

### 2.1.2 Objectives

1. To introduce the ideas of hi-tech that could be implemented in the park which can generate harmony surrounding and encourage the social contact between man and nature, man and man and man and god.
2. To design a hi-tech elements which is suitable for the community use.
3. To propose activities that could be implemented at this park to generate users to enriched their mind, body and soul.

## 2.2 SCOPES OF STUDY

1. To study the importance of park in the community area.
2. To understand the community needs towards park facilities, activities and spaces.
3. To understand what, how and why we need hi-tech landscape.
4. To study on the surrounding environment of the area and identify the benefits that it could serve the users.

## 2.4 ISSUES

As Kulim hi-tech park is a new develop township, several issues arises due to the needs and comfort of community living environment. As the study area is located at the institutional zone where most of the area being covered by educational buildings, housing area and hospitality, there is no specific space or area for the community inside this zone to gather or integrate with each other. Even though there exist open spaces it might not suitable for the community to conduct different activities cause by the capacity that it can hold at one time. So that people at different ages and different area have different need towards the use of the park. As a conclusion, a large area should be developed as a community center for them to integrate with each other, conducting various activities and have close contact with nature in order to improve their quality of life.

## 2.5 BACKGROUND OF THE SITE

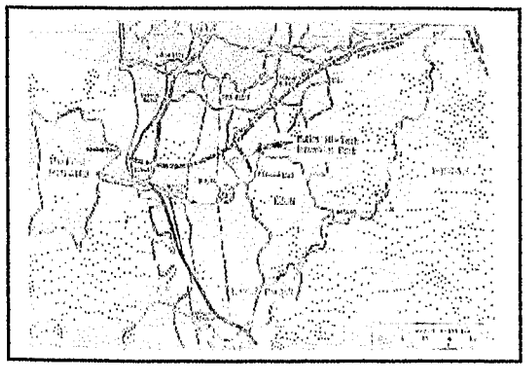


Figure 1: Key plan

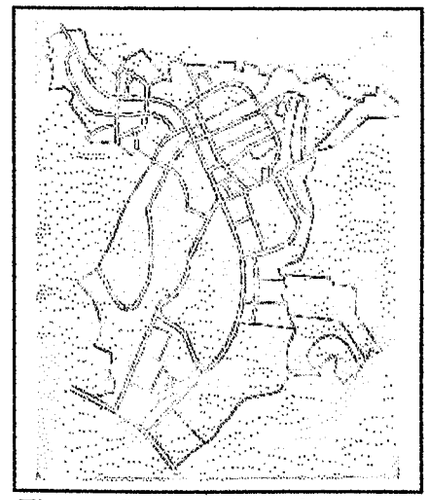


Figure 2: Location plan

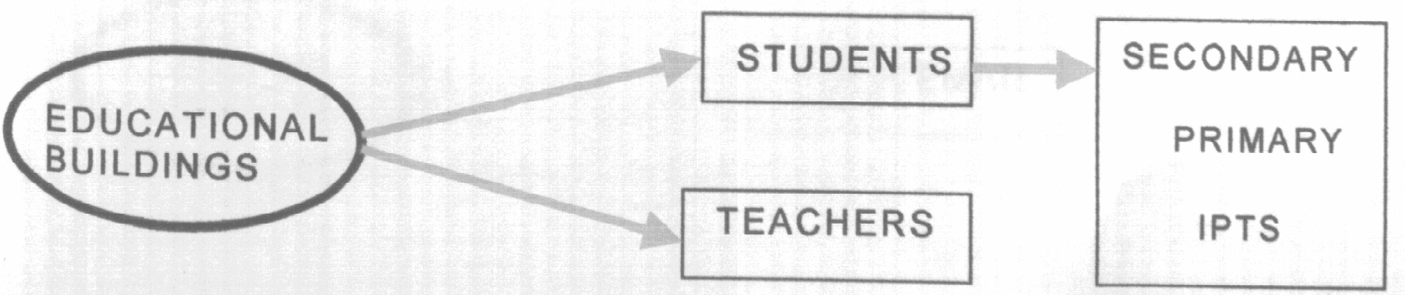
Kulim Hi-Tech is situated at Kulim, Kedah and it was the first high technology park in Malaysia. It lies between the Penang state border and covers about 1450 hectares area. It was officially launch by Prime Minister Dr. Mahathir

Mohammad on 1993. The main function of this park is for hi-tech industrial, research, development, new township and facilities. The Kulim Hi-Tech Park consist of six zones- High tech industrial zone, Urban zone, Housing zone, Amenity zone, R&D zone and Institutional zone.

The proposed site is located at the main entrance of Kulim Hi-Tech between Jalan Mahang and Jalan Kilang Lama. The park covers about 24.92 acres area and fully owned by Kulim Hi-Tech Park (KHTP) authority. The site formerly is a mix plantation area; rubber and oil palm plantation and irrigate by natural river with clean water. Nowadays the site being developed with an educational buildings such as Kulim Polytechnic and Malaysian Spanish Institute, government institution; Police station and Fire station, Kulim Hospital and also housing areas. So they are many types of users in different ages and races will be used the park and different needs and activities will be conducted there.

## 2.6 USERS AND CLIENT

The park is fully owned by Kulim Hi-Tech Park (KHTP) and it is situated within a community area where many type of user in different ages will be found. Type of users that could be found in this community area can studied in the diagram below:



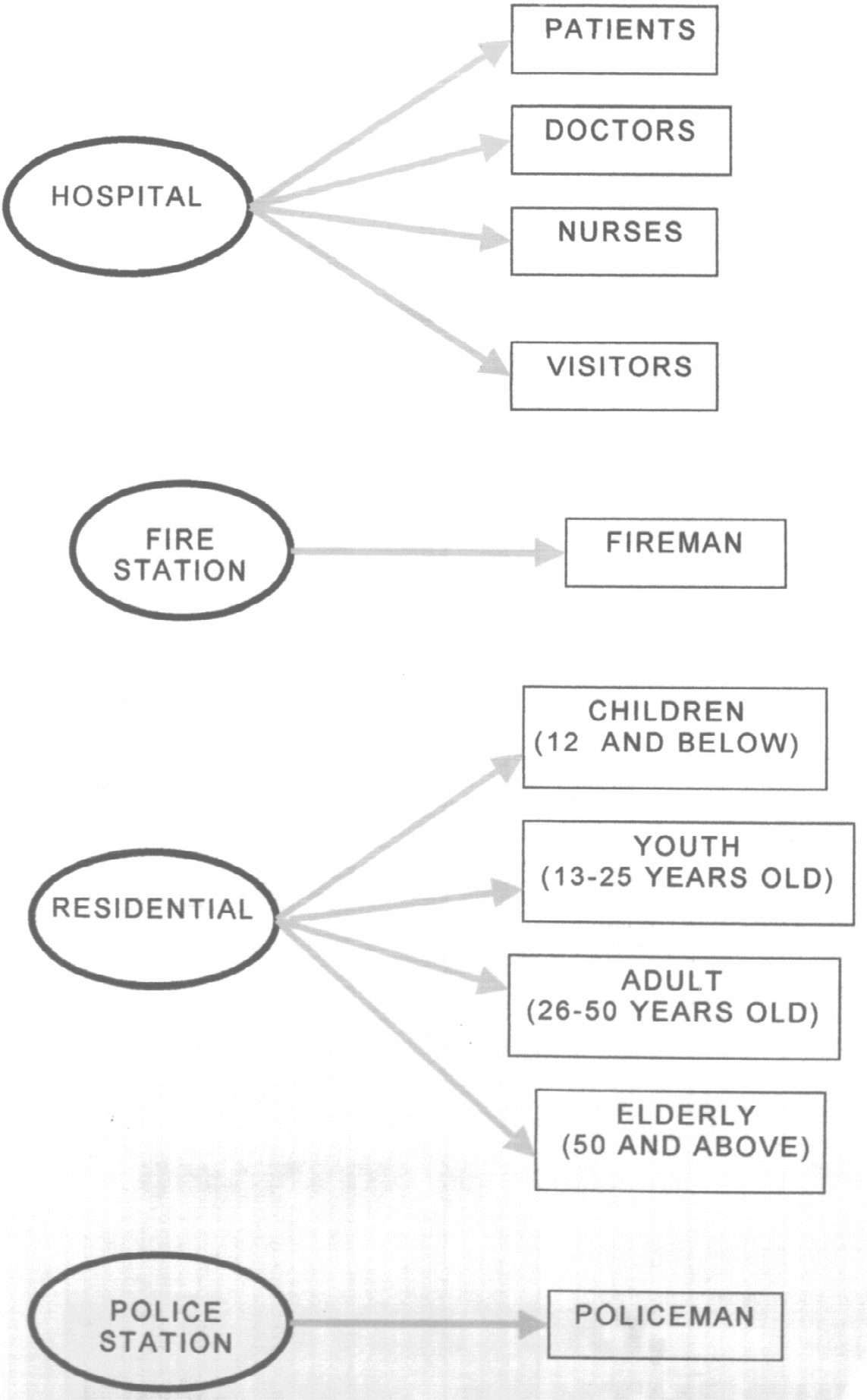

HOSPITAL
PATIENTS
DOCTORS
NURSES
VISITORS
FIRE STATION
FIREMAN
RESIDENTIAL
CHILDREN (12 AND BELOW)
YOUTH (13-25 YEARS OLD)
ADULT (26-50 YEARS OLD)
ELDERLY (50 AND ABOVE)
POLICE STATION
POLICEMAN

Diagram 1