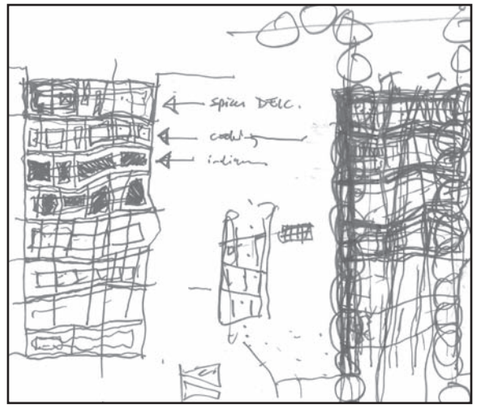

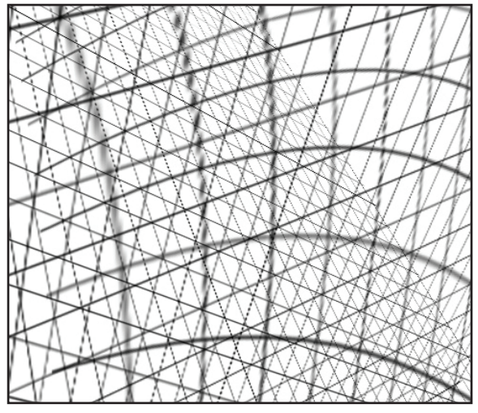

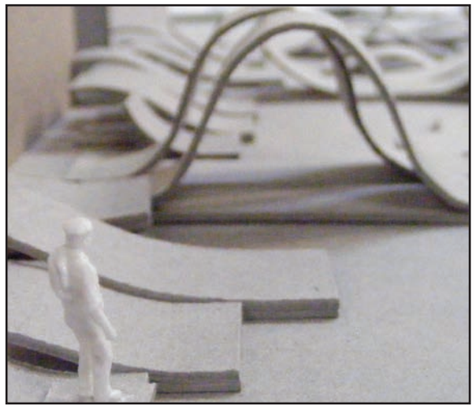

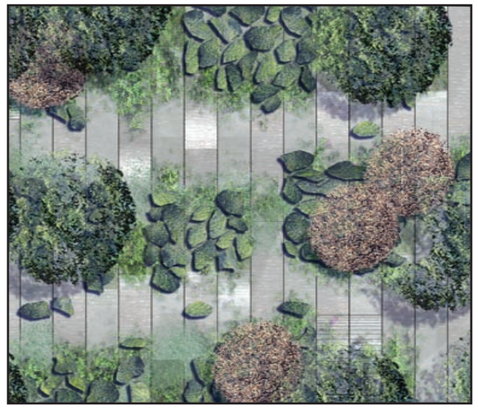

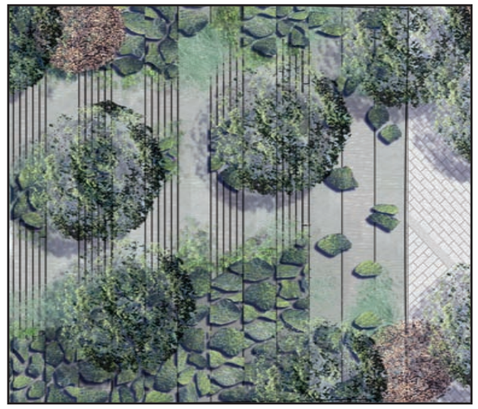

spice and medicinal garden

designing public spaces in Malaysia

Fakulteten för landskapsplanering, trädgårds- och jordbruksvetenskap
SLU Alnarp
Examensarbete inom landskapsarkitektprogrammet 30 HP av Julia Pütsep
2008:60

NUSAJAYA WATERFRONT PRECINCT

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Spice and Medicinal Garden
designing public spaces in Malaysia

This is a master thesis by Julia Pütsep
Faculty of Landscape Planning, Horticulture and Agricultural Science
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Master thesis in Landscape Architecture 30HP
Subject area: Landscape Architecture
2008:60
Supervisor: Tiina Sarap
Examiner: Pär Gustafsson

Spice and Medicinal Garden
utformning av offentiga rum i Malaysia

Det här är ett examensarbete av Julia Pütsep
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Huvudområde: landskapsarkitektur
2008:60
Handledare: Tiina Sarap
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PREFACE

This is a project based master's thesis in landscape architecture that has its origin in a project I have been working on for the landscape architect office OCULUS in Sydney, Australia.
It took place over 6 months in 2007/2008.

This is my report which presents the results achieved.

Julia Pütsep
Sydney, April 2008

ABSTRACT

One of the keys to success for a public domain is the strength and clarity of its pedestrian connections. In this Malaysian waterfront precinct overlooking the Straits of Johor, the waterfront pedestrian promenade is connected back to the streets via a series of lush and unique garden spaces. These gardens offer clear pedestrian movement and will provide differing entry and exit sequences to the promenade. They are also transitional in terms of level change. The design of the landscape will help integrate the built form with the waterfront and will create a vibrant and safe open space where the landscape forms a tropical setting for the buildings and provides usable green space for the occupants. The arrangement provides landscape rooms for people to inhabit, travel through as well as an interesting landscape to look down upon from the adjacent buildings.

The challenge in this master thesis has been to evolve the garden concept into the design of public space. The two gardens presented in this project both celebrate the botanic and culture of Malaysia and the design of the landscape reflects this. The overall planting concept is to create a bold, contemporary tropical landscape. Selected plant materials are predominantly Malaysian native species, with exotic species used in accent and contrast to this. The planting in the public domain will provide seasonal interest through texture, scents and colour.

Each garden has a strong theme and concept which gives them a unique identity.

The Spice Garden is a rich tapestry of colours, textures and fragrances celebrating the use of plants in Malaysian cuisine. The traditional kitchen garden grid has been skewed and folded and becomes a graphic composition of different types of planting and paving. The arrangement of hard and soft surfaces maximise pedestrian permeability through the garden, whilst also creating smaller shady places for people to sit and relax.

The concept for the Medicinal Garden is an abstraction of Malaysian tea plantations and focuses on species used in Malaysia for medicinal uses. The topography of the garden follows the rolling topography of plantations historically found in Malaysia. The different species of tea used in Malaysian culture are planted in amorphous forms, kept to a consistent height with spaces carved into the framework.

While initially both gardens shared the same conditions, they have evolved greatly over the duration of the project to contrast each other in a way that both complements the other and creating differing experiences for the people who visit.

SAMMANFATTNING

En nyckel till framgång för publika rum är dess förmåga och styrka att länka samman fotgängarens förbindelser. I detta hamnområde vid Johor-sundet i Malaysia är hamnpromenaden kopplad tillbaka till gatorna genom en serie av frodiga och unika trädgårdar. Dessa trädgårdar erbjuder en tydlig rörelseriktning för fotgängare och erbjuder en varierande väg till och från hamnpromenaden. Trädgårdarna har en höjdskillnad med fall mot vattnet. Landskapets utformning hjälper till att integrera byggnaderna med hamnområdet och skapar ett levande och tryggt publikt rum där landskapet utgör en tropisk grund för byggnaderna och tillhandahåller en användbar utemiljö för den som befinner sig här. Utformningen erbjuder landskapsrum för människor att vistas i, färdas genom och dessutom ett intressant landskap att se ner på från intilliggande byggnader.

Utmaningen i detta examensarbete har varit att utveckla trädgårdskonceptet i utformningen av offentliga rum. De två trädgårdarna som presenteras i detta arbete prisar båda Malaysias botanik och kultur och designen reflekterar detta. Det generella växtkonceptet är att skapa ett modernt tropiskt landskap. Det valda växtmaterialet är övervägande inhemska malaysiska arter med exotiska växter använda som kontrast för att betona dessa. Växterna i det publika rummet tillför intresse under säsongerna genom textur, doft och färg.

Vardera av trädgårdarna har ett starkt tema och koncept som ger dem en unik identitet.

Kryddträdgården är en rik väv av färger, texturer och dofter som hyllar användningen av växter i det malaysiska köket. Det traditionella rutsystemet i en kökskräddgård har skiftats och vikts och utgör en grafisk sammansättning av olika typer av växter och markmaterial. Arrangemanget av hårda och mjuka ytor skapar största möjliga framkomlighet för fotgängare genom trädgården medan det också skapar små, skuggiga platser för människor att sitta och koppla av vid.

Konceptet för medicinalträdgården är en abstrakt tolkning av de malaysiska teplantagen och fokuserar på växter som används i Malaysia i medicinskt syfte. Trädgårdens topografi följer den böljande topografin av planteringarna och de olika arter av te som används i Malaysia är planterade i oregelbundna former som hålls tillbaks till en jämn höjd. Platser är uthuggna ur strukturen.

Medan de båda trädgårdarna i inledningen delade samma förutsättningar har de under projektets gång utvecklats till att kontrastera varandra på ett sätt som både kompletterar och skapar skilda upplevelser för besökaren.

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NUSAJAYA WATERFRONT PRECINCT


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Fig. 09

INTRODUCTION

This thesis is about creating public spaces and to evolve the concept of garden design into designing public spaces. The aim and method is to apply this in Malaysia by using two examples. I will design two landscape gardens as part of a waterfront development in southern Malaysia and develop a detailed report in order to present my results.

The work has been based on an overall master plan that was predefined to the client's specifications. Although, the exact budget and staging of the project has been unclear and there has been an absence of a proper brief. This has had both positive and negative aspects. My project involves turning the master plan into a design development package which contains the final design for two of the gardens in the Nusajaya Waterfront Precinct. I will provide a design solution for the Medicinal Garden and the Spice Garden based on the work I have done with OCULUS, a landscape architecture office in Sydney.

In this new development, the journey to the waterfront takes on a variety of forms, through a series of designed landscape gardens that celebrate the botany and culture of Malaysia. The gardens become connective tissue, linking the major destination spaces and providing a reprieve from the climate. The experience of passing through these gardens will build anticipation and heighten the senses on the approach to the waterfront promenade. They are also unique and exciting sheltered spaces, offering respite from the busier areas of the waterfront precinct. The gardens become a place to breath and relax.

This report will cover the context of the project and then in detail show the design for each garden that has been designed as the purpose of this thesis. Following this, my results and final thoughts.

In the process of this project I have used other landscape architect's designs as references. The two main sources of inspiration have been Tadao Ando and Burle Marx. Literature studies, images of their and other designers work, has kept me inspired and motivated in order to create beautiful places throughout the project. To understand the conditions for vegetation in Malaysia's tropical climate, studies of plant literature has been necessary and something that I have enjoyed researching.

Another method has been to focus on building models, from simple sketch models to more detailed presentation models. I find that in order to achieve a good result the emphasis needs to be on research, model work and prototypes of materials, etc. to understand and get a picture of the ideas while they are developing. My method to create the project has been a matter of trial and error. Using different ways of testing my ideas in order to achieve the best suited design for the purpose of this project. This has resulted in the design changing along the way.

Fig. 10

*"**Process is more important than outcome.** When the outcome drives the process we will only ever go to where we've already been. If process drives outcome we may not know where we're going, but we will know we want to be there."*

-Bruce Mau, An Incomplete Manifesto for Growth

CONTEXT OF THE PROJECT

Nusajaya is one of South East Asia's largest urban developments. It is a city situated in the Johor Region of Malaysia on the north side of the Straits of Johor which separates Malaysia and Singapore. Planning was done in the mid 1990's when the Malaysia Singapore Second Crossing was in the planning process yet was delayed due to regional financial crisis.

It is a development planned to be sustainable and environmentally friendly for business, living and leisure. It will be an exclusive and integrated waterfront lifestyle destination and international gateway and hub for tourism, culture and business.

Nusajaya city has a waterfront precinct that is an integrated waterfront and marina that will be developed in phases and is estimated to be completed by 2021. It covers an area of 687 acres and offers a panoramic view of Johor Straits.

The waterfront precinct is one of the great assets of the city of Nusajaya. The variety of different uses such as commercial, retail, entertainment and residential, will create a range of vibrant public open spaces. A major objective of the Nusajaya landscape master plan is to provide an integrated public open space network with lively, pedestrian friendly streets, plazas, promenades and parks throughout the precinct.

The urban plazas and promenades within the precinct are busy, multi-dimensioned spaces which are still within the design process. No definitive architectural decisions have been made, so we have no context, or knowledge as to how these spaces and buildings will eventually look and feel. What we do know, however, is that these destinations will be drawing people to the waterfront at different times of the day. These major destinations will be complemented by a series of more intimate public gardens, which also connect to the waterfront.

Two of these particular public gardens are the basis of my project and will be presented in this report as the final outcome of my thesis.

Fig. 11

Fig. 12
Aerial Photo of Site, November 2007.

LANDSCAPE GUIDING PRINCIPLES

AS AGREED IN WORKSHOP

Create a bold, contemporary tropical landscape in scale with the overall waterfront development.

A design which celebrates the Malaysian native landscape, materials, culture and highlights the romance and qualities of the local landscape.

Create landscape spaces that speak clearly to their adjacent uses creating cooling micro climates through trees, shade, structures and the use of water.

Create landscapes for a variety of uses; large public gatherings, special events, celebrations as well as intimate fine grain gardens and spaces.

Create spaces that encourage people through the retail experience and draw visitors to the water.

Create a landscape that is multi layered and engaging to all ages, day and night .

Develop strong indoor-outdoor relationships between commercial, retail, residential and provide a clear delineation between public and private uses.

Provide seasonal interest and sensory gardens full of drama, scents, texture and colour contrasting native species with exotics.

Create destination landscapes at key locations to encourage a complete experience of the entire waterfront site.

Create distant views and vertical installations to draw visual views north and south, east and west.

MASTER PLAN

Fig. 13
MASTER PLAN

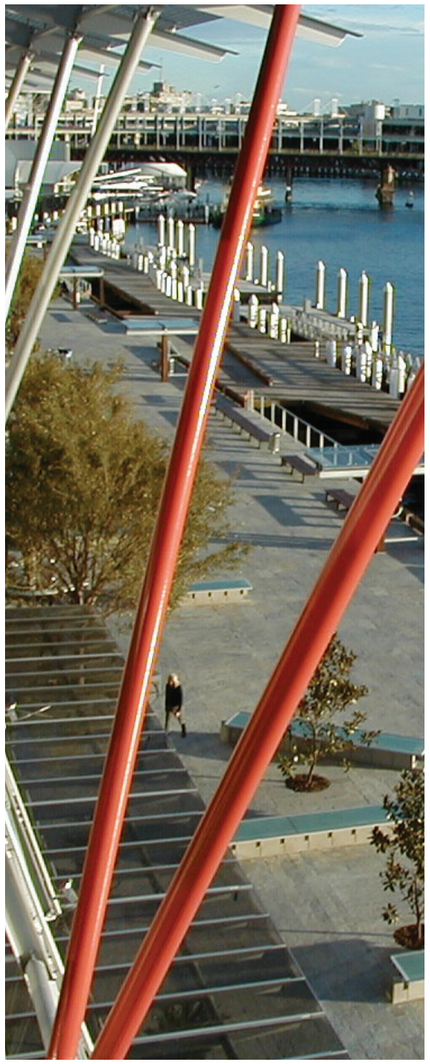


Fig. 14
King Street Wharf, Waterfront Precinct in Sydney.

The overall master plan was developed in 2007 by COX Architects (Urban Design Plan) and OCULUS (Landscape Master plan). The Waterfront Precinct will be developed in phases spanning 15 years and is estimated to be complete by 2021. The two gardens marked in plan together with the public Waterfront Promenade and a Clubhouse are a part of Stage 1 which is the first part to be built.

Fig. 15

NECKLACE OF LANDSCAPE SPACES

The site will consist of a series of different landscape typologies that are all interconnected. Each of the gardens explore different landscape themes and structures, which give them a clear identity and a strong sense of place that is distinctly Malaysian.

The gardens form transitional landscapes from the urban edge to the harbour promenade. They also form the vital pedestrian link to the harbour.

OPEN SPACE NETWORK

The variety of different uses such as commercial, retail, entertainment and residential will create a range of vibrant public open spaces. A major objective of the Nusajaya landscape master plan is to provide an integrated public open space network with lively, pedestrian friendly streets, plazas, promenades and parks throughout the precinct. Green streets, pedestrian linkages and bridges are designed for comfort and usability to enhance the experience of entering the public spaces.

PEDESTRIAN CIRCULATION

The success of the waterfront will depend on the integration and connection back to the other precincts and neighbourhoods within Nusajaya. Pedestrian paths provide many ways to reach the waterfront, each offering different experiences. Busy streets have been kept away from the waterfront which ensures that walking and cycling is an enjoyable experience where people can discover the attractions along the waterfront. The pedestrian paths will provide a high level of comfort, safety and amenity, using lighting, trees and planting to create a pleasant pedestrian environment.

ACTIVE EDGES

Buildings along the waterfront should add to the activity of the public spaces around it. A combination of commercial, retail and public uses will maximise the active building frontages along the waterfront. The occupants of these buildings should be encouraged to activate this space at various times throughout the day. This activation will create vibrant and safe open spaces.

ANALYSIS

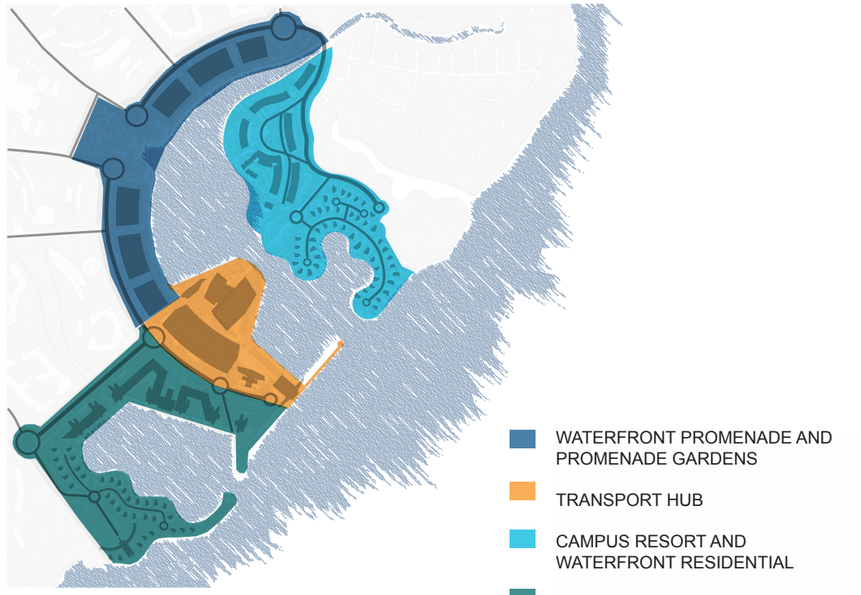


Fig. 16
LANDSCAPE PRECINCTS

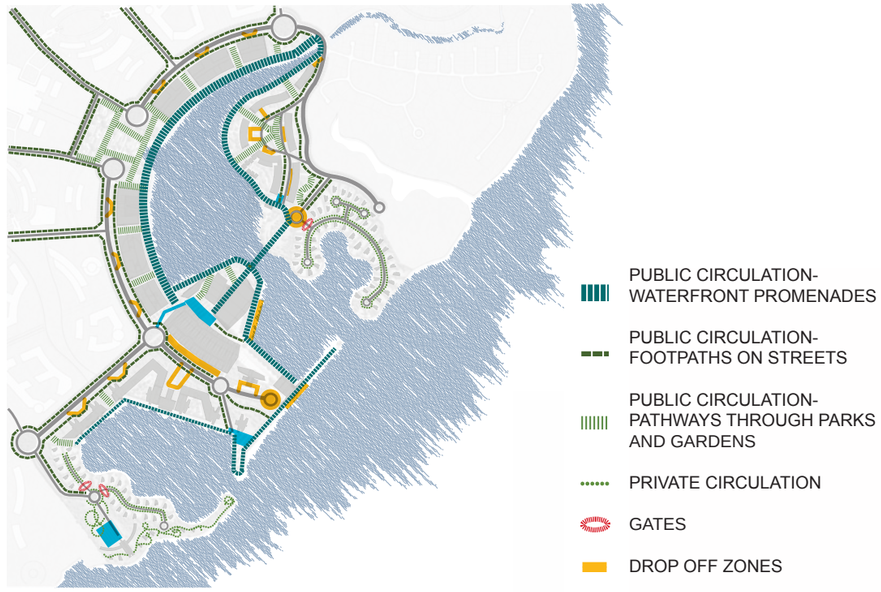


Fig. 17
PEDESTRIAN CIRCULATION

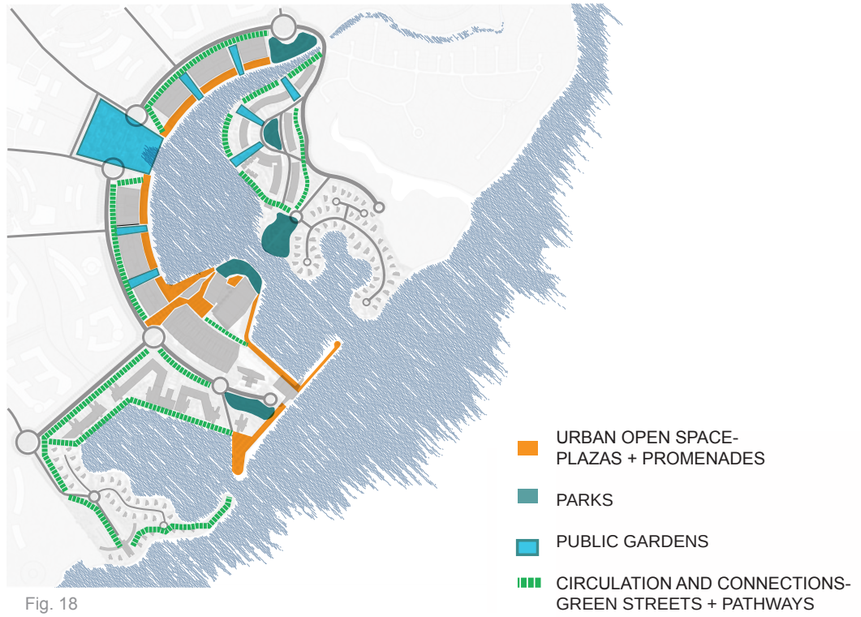


Fig. 18
OPEN SPACE NETWORK

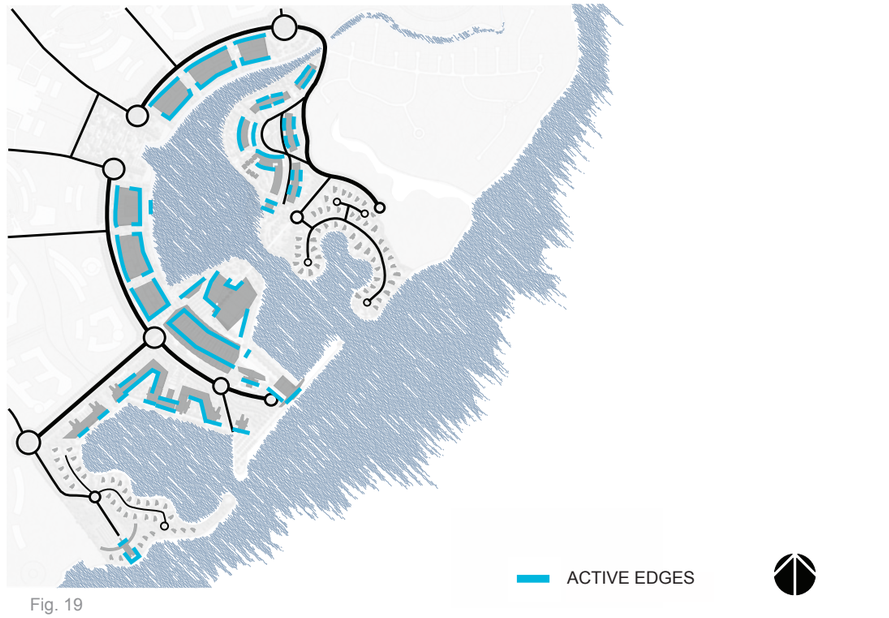


Fig. 19
ACTIVE EDGES

THE MASTER PLAN PRINCIPLE

MEDICINAL GARDEN

Fig. 20

me-dic-i-nal [muh-dis-uh-nl]

1. of, pertaining to, or having the properties of a medicine; curative; remedial; *medicinal properties; medicinal substances.*
2. unpalatable; disagreeable: *a medicinal taste.*[1]

EXTRUDED GRID RECALLS GEOMETRY OF TEA PLANTATIONS AND TRADITIONAL PRODUCTIVE GARDENS. PATHWAYS CREATED OUT OF VOIDS. EXTRUSIONS NEGOTIATE LEVEL CHANGES. DESIGN ELEMENTS ARE BENT AND TWISTED ORGANIC FORMS.

SPICE GARDEN

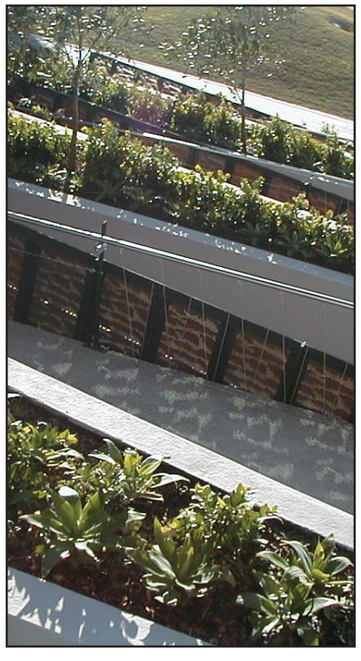


Fig. 21

spice [spahys]

1. any of a class of pungent or aromatic substances of vegetable origin, as pepper, cinnamon, or cloves, used as seasoning, preservatives, etc.
2. such substances collectively or as material: *cookies without spice can be tasteless.*
3. a spicy or aromatic odor or fragrance.
4. something that gives zest: *a spice of humor in his solemnity.*
5. a piquant, interesting element or quality; zest; piquancy: *The anecdotes lent spice to her talk.*
6. Archaic. a small quantity of something; trace; bit.
7. to prepare or season with a spice or spices.
8. to give zest, piquancy, or interest to by something added.[2]

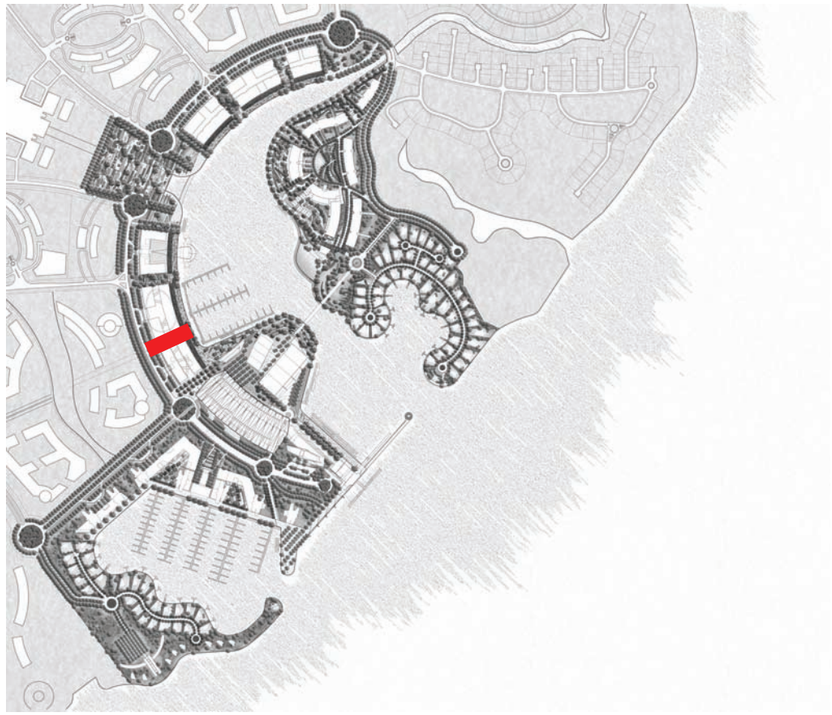
LINEAR GROVES OF SPICE TREES RUN THROUGH THE SPACE. THE GROUND PLANE BECOMES A FOLDED SURFACE. ROOMS ARE CREATED WITHIN THE GROVES THROUGH SCULPTING THE GROUND. GRID IS SKEWED, WARPED.

The main reason why these particular concept ideas have been chosen is due to the Malaysian climate giving the ability to drive the gardens from a plant perspective. Malaysia has a tropical climate and provides a wonderful environment for plants to grow and flourish. It is a prime location to allow the plants to be the driving force behind the design.

Also, a belief that both gardens can be made in such a way that they can be people friendly, open to a high level of people traffic and work as an urban design. Yet still feel intimate as a garden in a smaller scale.

The different concept and geometry for the planting is based on two specific Malaysian ideas of the two themes medicinal and spice gardens. The two gardens are contrasting each other to highlight the significance of both ideas and the two themes give them a strong character to work as an urban public space.

1. Dictionary.com, 30.10.2007
2. Dictionary.com, 30.10.2007



MEDICINAL GARDEN

Fig. 22

Fig. 23

Fig. 24

Fig. 25

CONCEPT

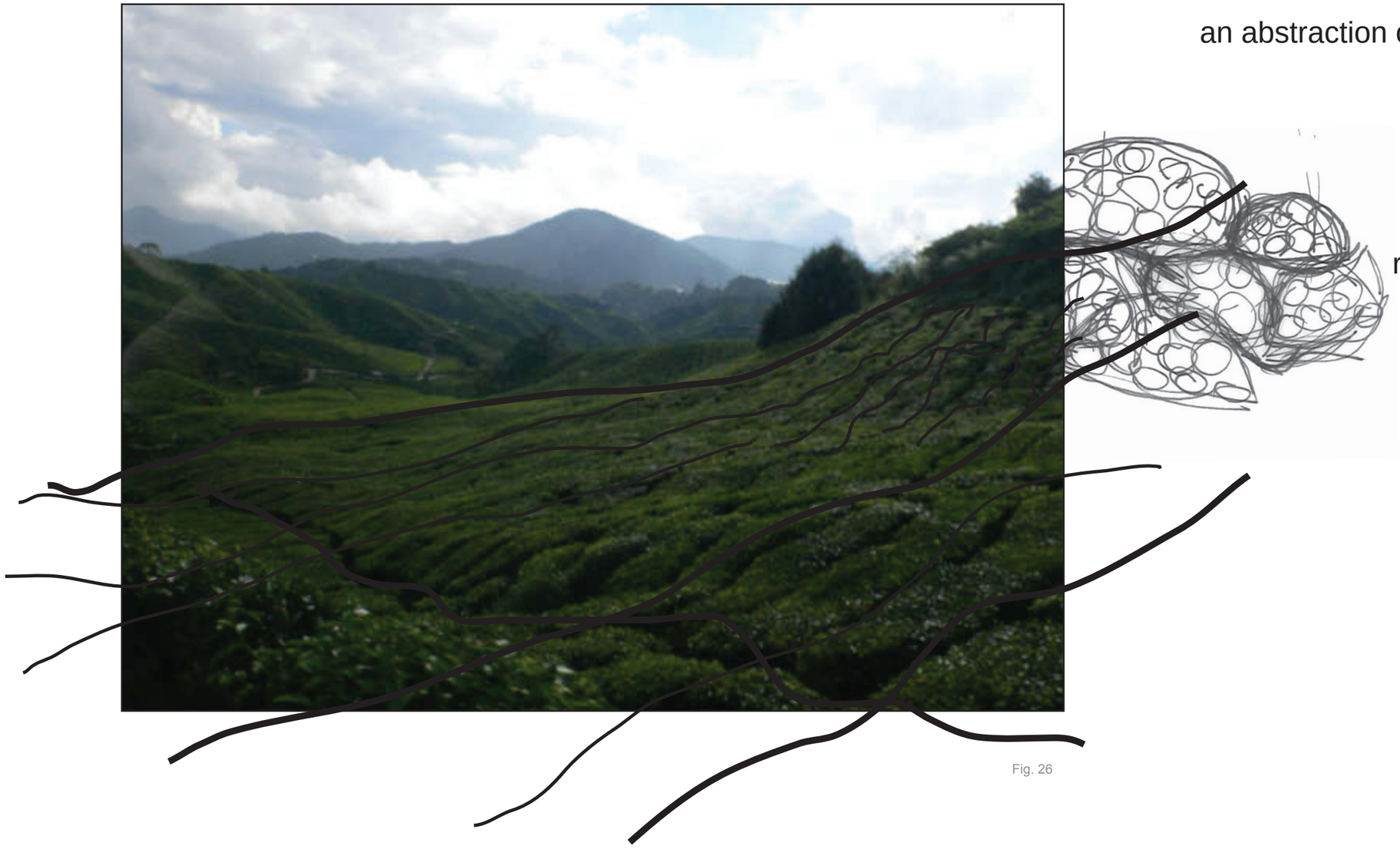


Fig. 26

The concept for the Medicinal Garden is

an abstraction of Malaysian tea plantations

and focuses on plant species used in Malaysia for medicinal purposes such as Java Tea.

The topography of the garden should follow the

rolling topography

of the plantations and the different species of tea used in Malaysia. Spaces are to be carved into the planting framework.

Fig. 27

form

SPACIAL ARRANGEMENT

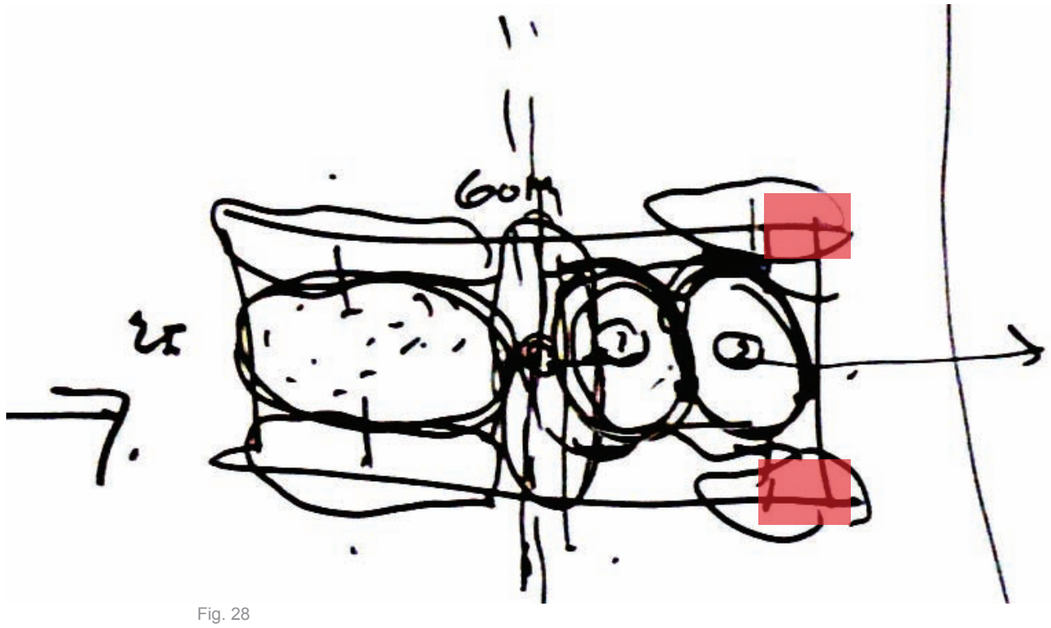


Fig. 28
ACTIVATED EDGES

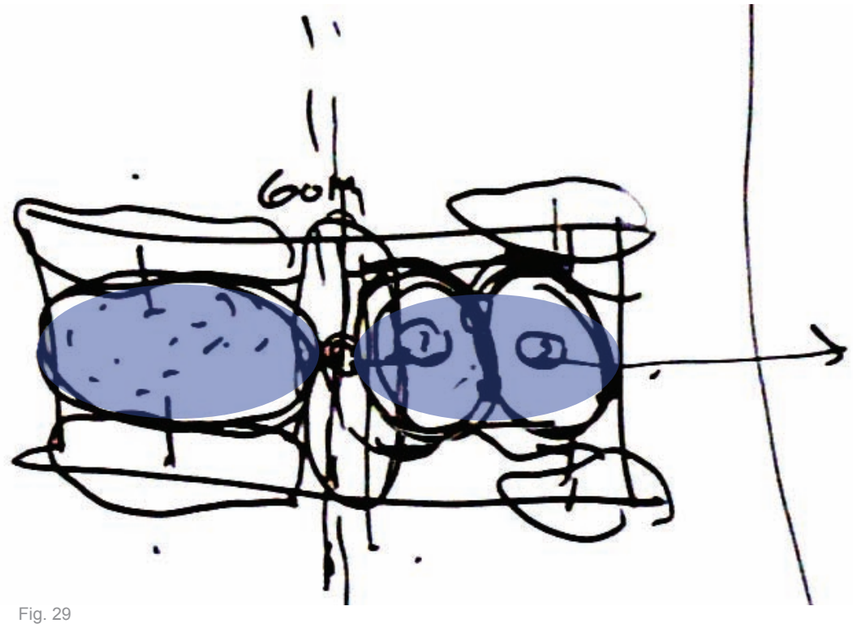


Fig. 29
SPACES

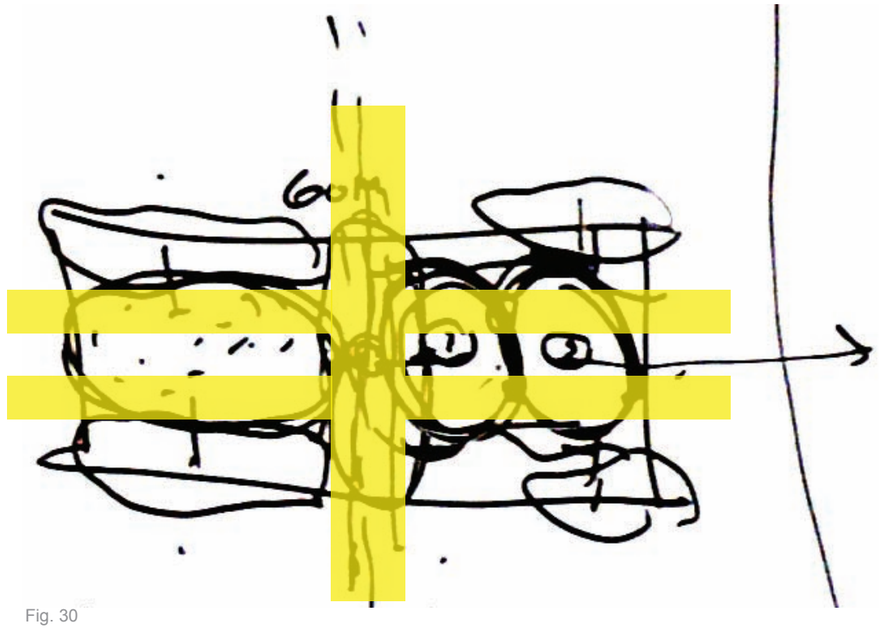


Fig. 30
MOVEMENT

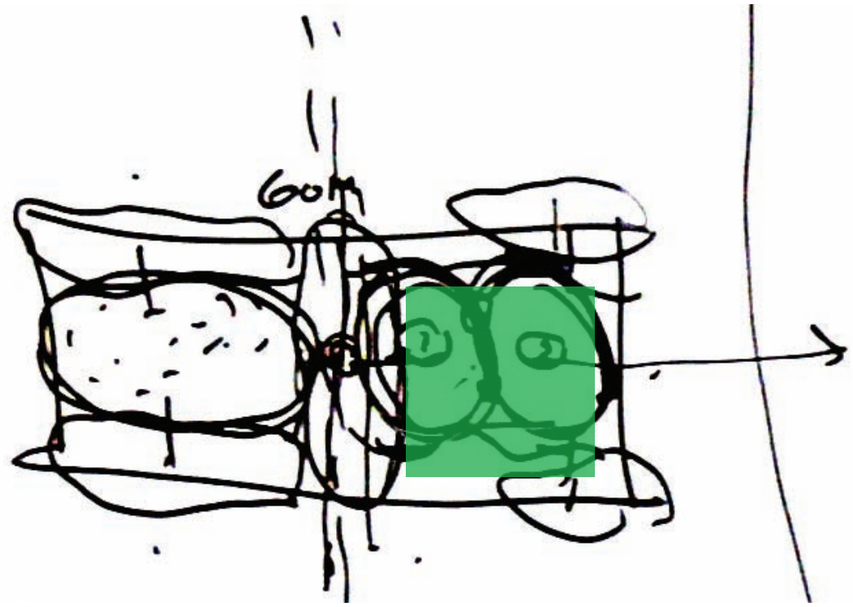


Fig. 31
TRANSITIONAL SPACE

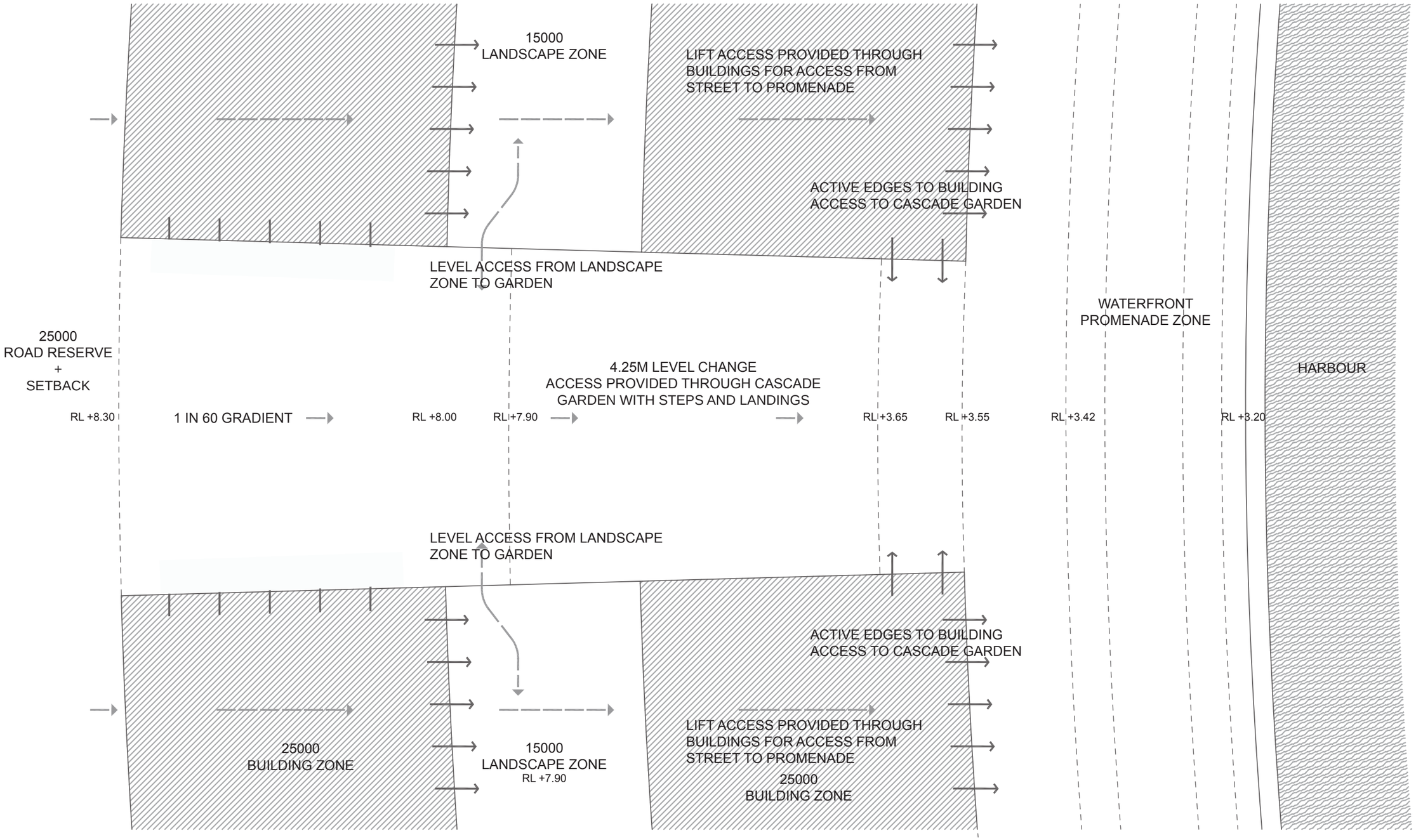


Fig. 32
GARDENS AND PROMENADE ACCESS AND GRADING DIAGRAM

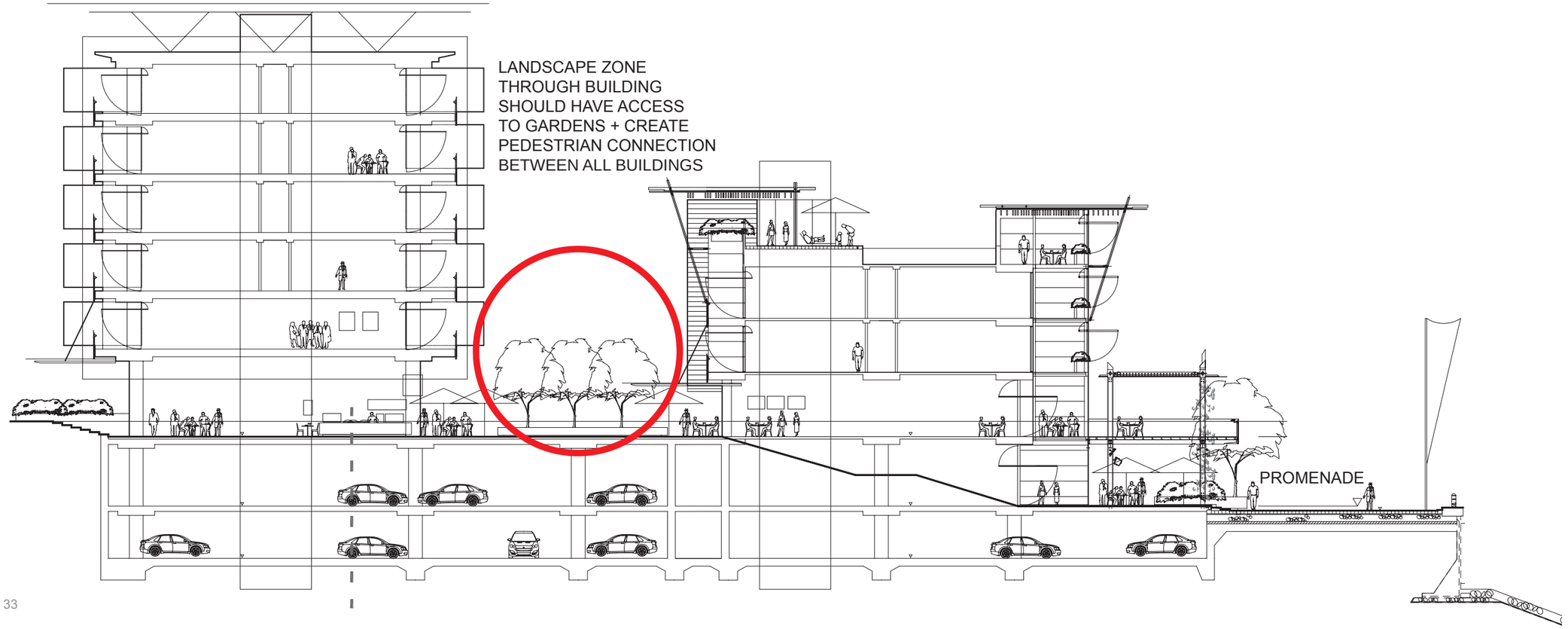


Fig. 33

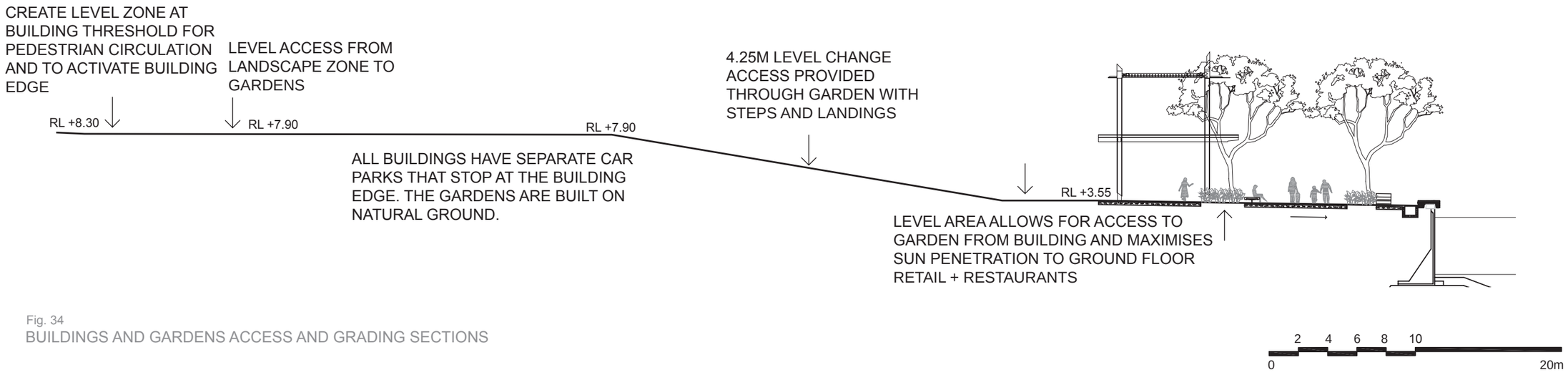


Fig. 34
BUILDINGS AND GARDENS ACCESS AND GRADING SECTIONS

PROCESS

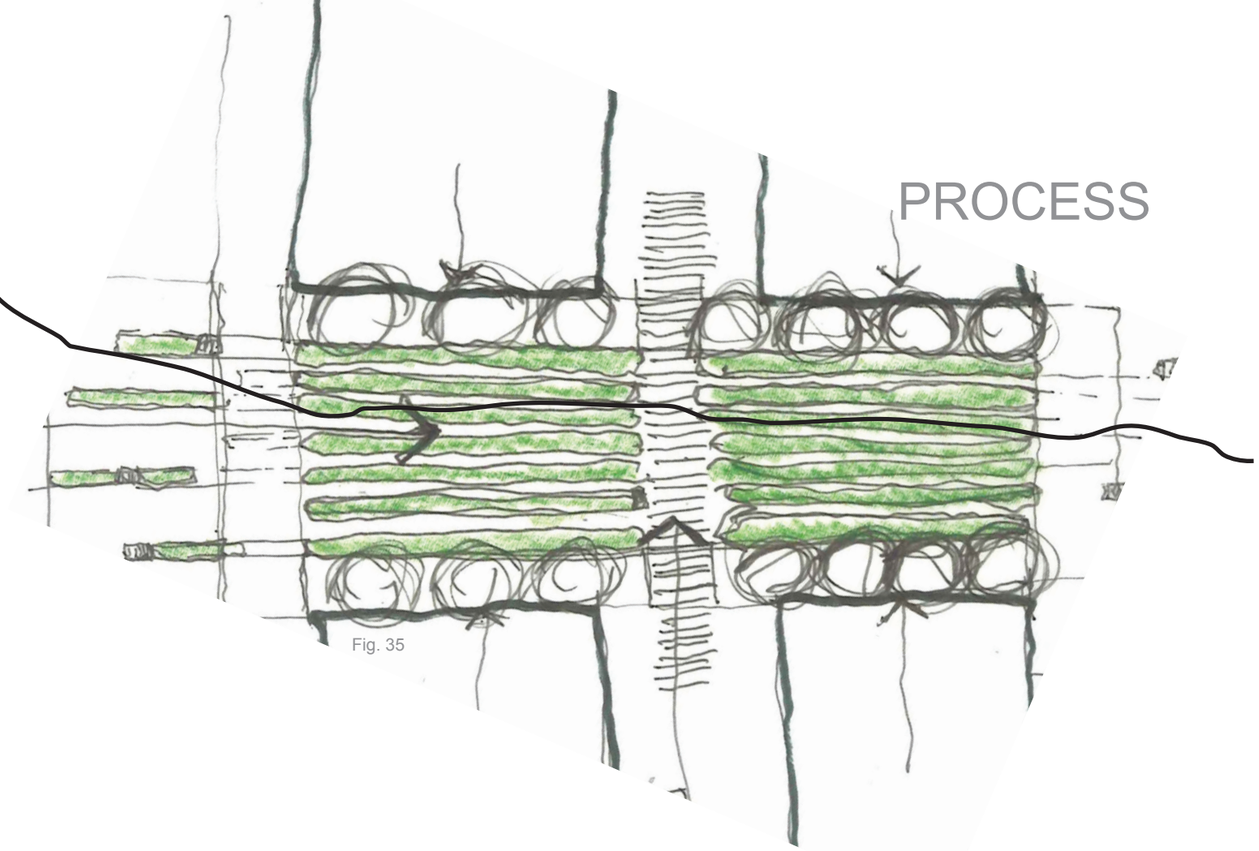


Fig. 35

One of the earliest designs for the Medicinal Garden is this idea based on the rolling topography of the tea plantations. It has a continuous ground surface and one plant material to really contrast the tapestry concept of the Spice Garden. The hedges of tea, cascade down towards the harbour, creating paths between them.

Further research showed that this is not how tea behaves in Malaysia. As well, the garden became too linear and focused more on the movement and less about being in the space. It was hard to navigate across, and too simplistic an abstraction, of the rolling topography, that did not work as a design.

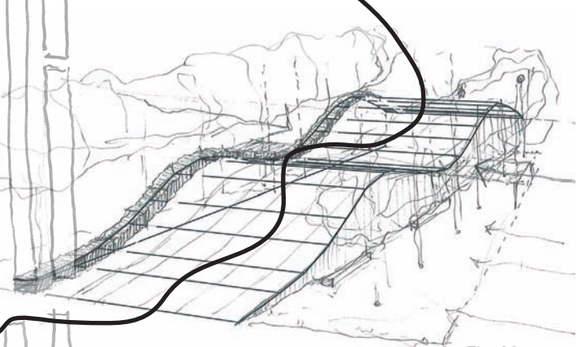


Fig. 36

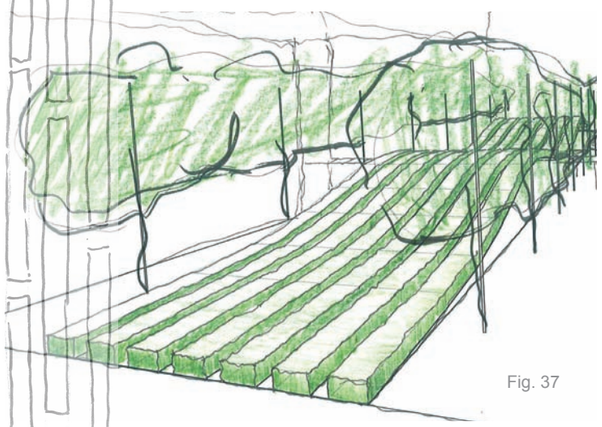


Fig. 37

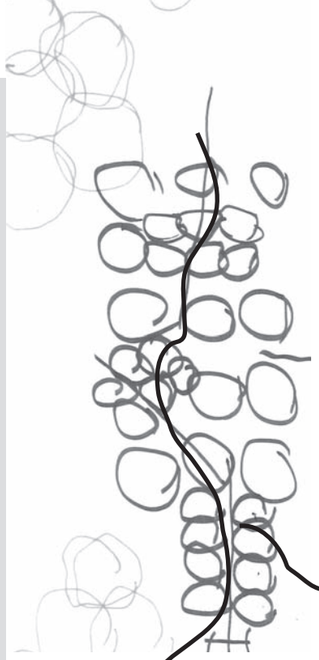
Fig. 38

Bringing the thought of the tea plantations to another level, this design is based on the way the tea behaves in Malaysia. The tea is arranged in amorphous forms, but kept at a consistent height to reflect the tea plantations. A variety of medicinal plants are used and the main structure is created by a range of Tea species, all found in Malaysia.

The coloured ground plane of a local gravel references paths cutting through tea plantations and provides a contrast in texture to the promenade paving. Clear pathways for pedestrian circulation are provided through the garden.

Building models and testing show that the pattern and shapes of the plantations do not read. The scale is too small and has a bad spacial creation.

Once again, it is an abstraction of a natural thing, yet appears too literal. The ground plane will have to be manipulated in a more structural way.



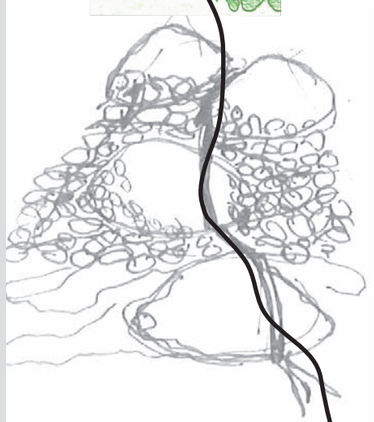


Fig. 40

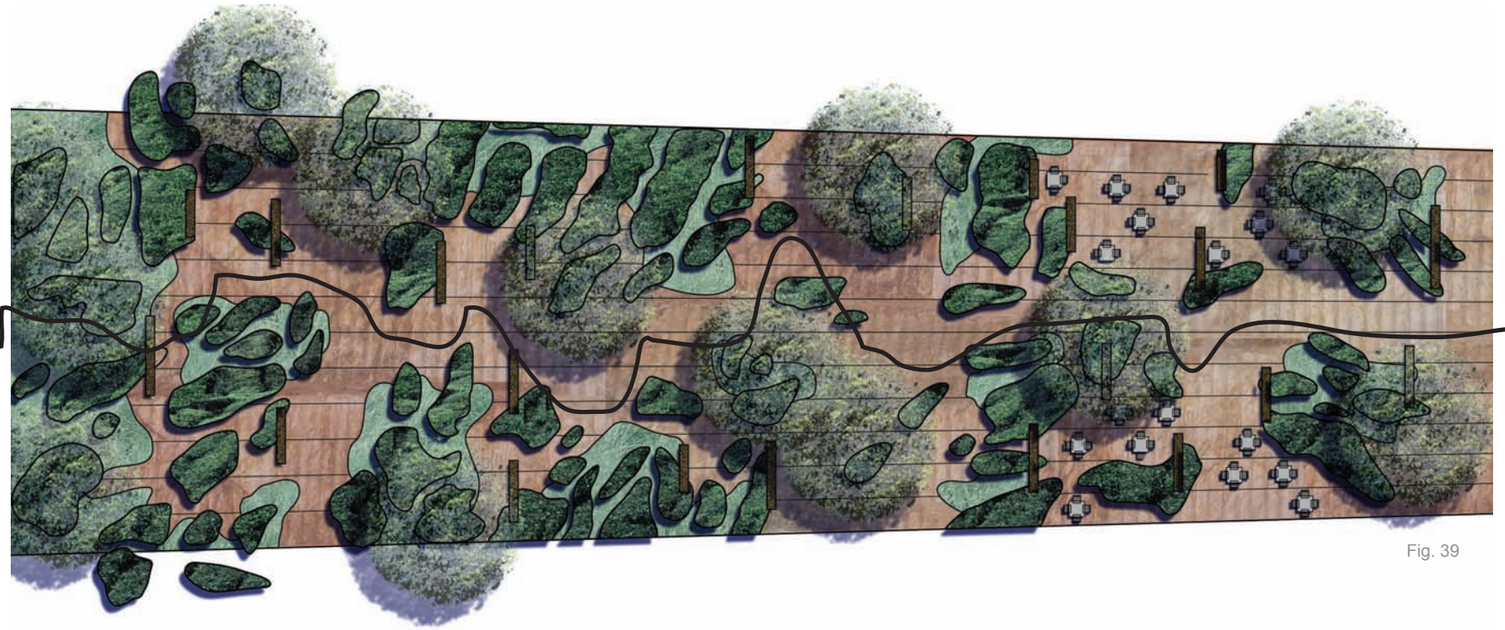


Fig. 39

Fig. 41

Fig. 42

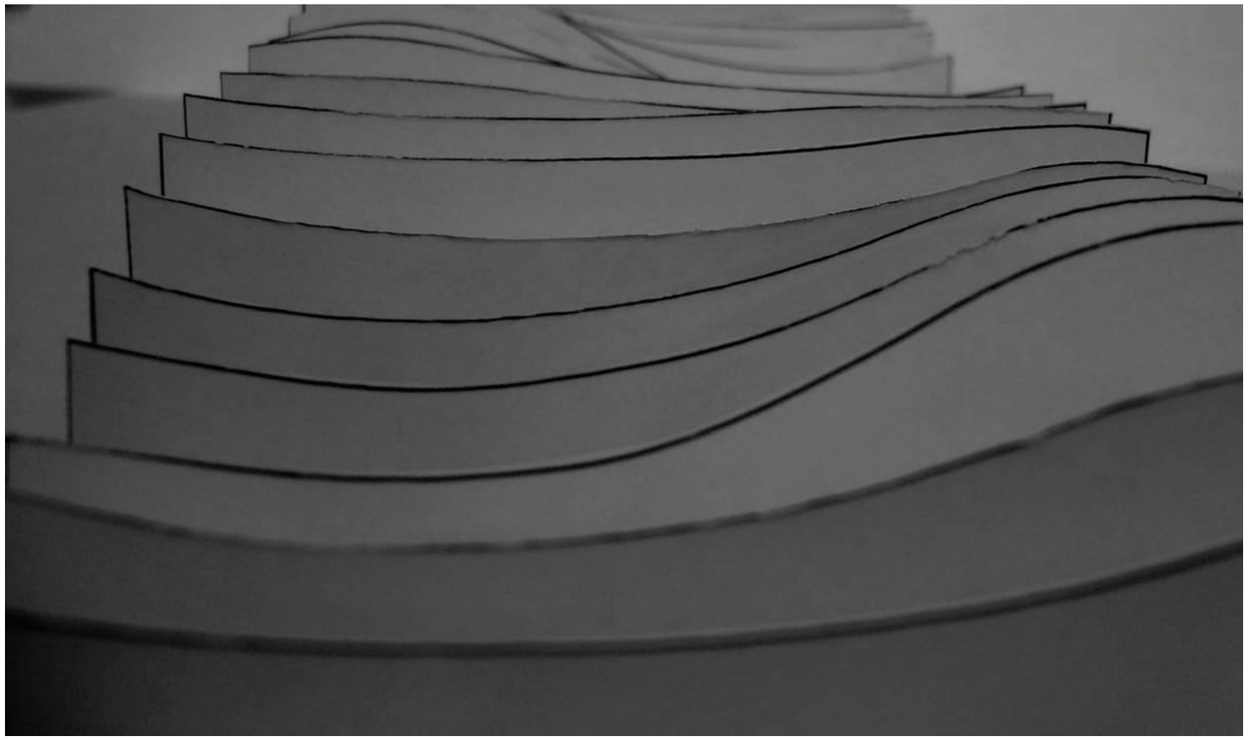


Fig. 43

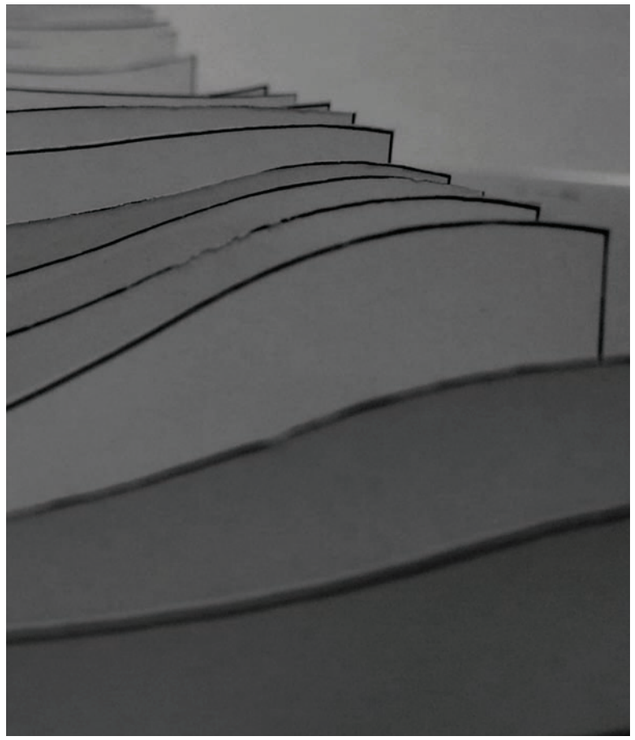


Fig. 44

key elements

ABSTRACT TOPOGRAPHY

USING THE TOPOGRAPHY TO CREATE SEMI-ENCLOSED SPACES

EMPHASISE THE FORM OF TEA

USING LEVELS TO CREATE A LARGE VARIETY OF SPACES/ SEATING ETC.

FOLD UP AROUND EDGES TO MAKE GARDEN INDEPENDENT FROM BUILDINGS

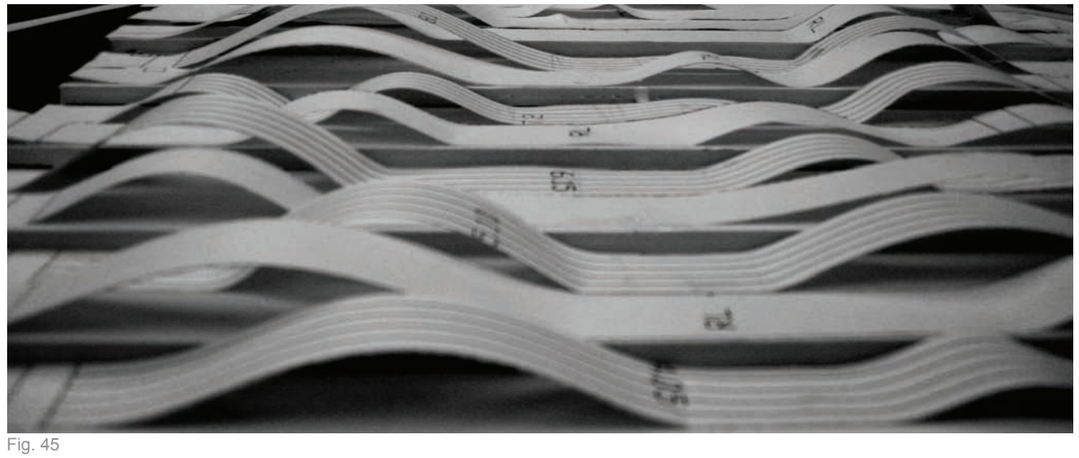


Fig. 45

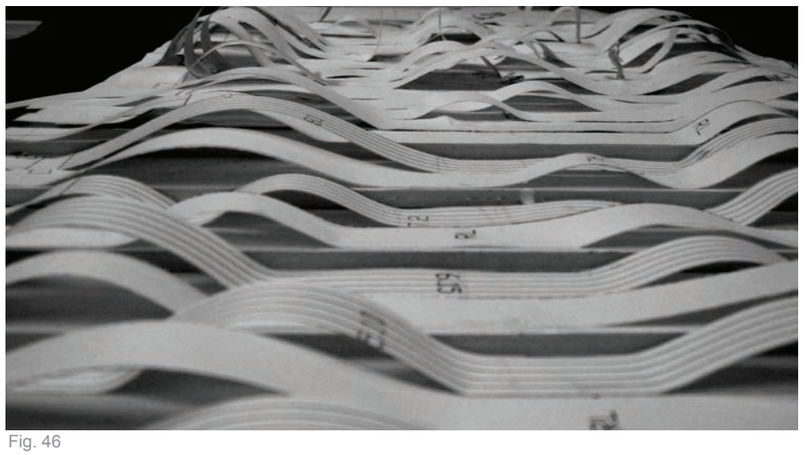


Fig. 46

Fig. 47

Fig. 48

Fig. 49

Developing and rationalising the concept in a more structural but abstract way, as well as, testing circulation and usable spaces, transforms the design into something less literal. Still providing focus on the tea plantations and it's rolling topography.

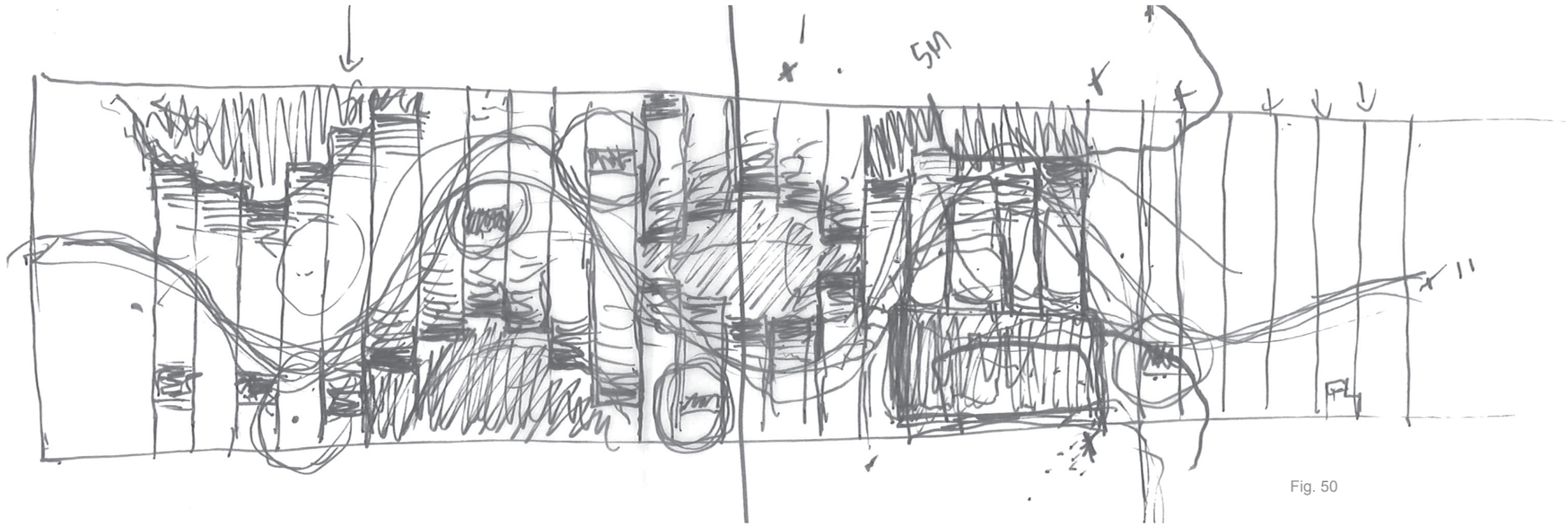


Fig. 50

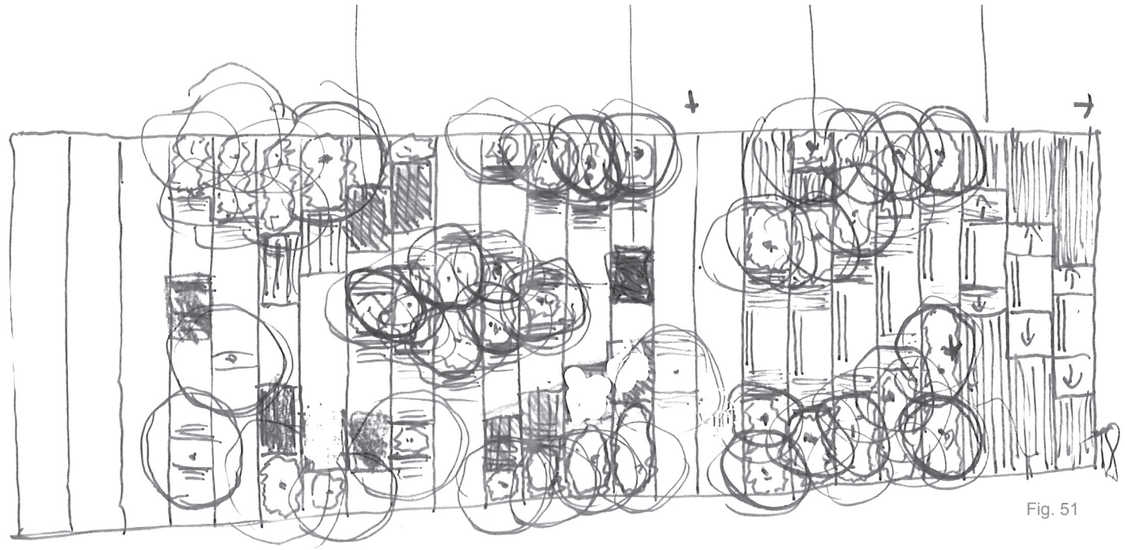


Fig. 51

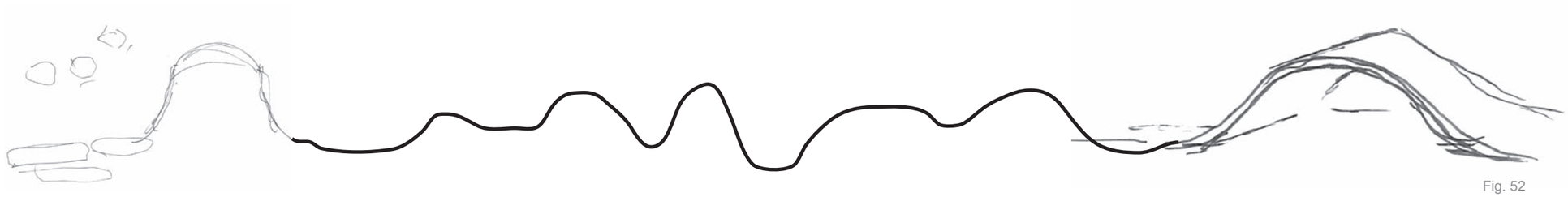


Fig. 52

FINAL DESIGN

A variety of medicinal plants are used and the main structure is created by a range of tea species. Seasonal interest and texture is created through the use of accent ground covers, providing variety in foliage, fruits and flowers. Since the garden is on natural ground it gives the plants great potential to grow and flourish in this very fertile soil.

The ground floor is made out of concrete and acts like one continuous surface that folds up. In order to get access across the centre of the garden the top bit is relatively flat. Most level change happens on the promenade side of the garden. This creates an amphitheatre like space with views to the harbour. Level changes, walls and steps, are also designed to maximise informal seating possibilities.

Trees along the waterfront have a high open canopy allowing views to the water, while providing shade and a cooler micro climate. Seating is provided on the waterfront, whilst maintaining an open pathway along the waterfront promenade.

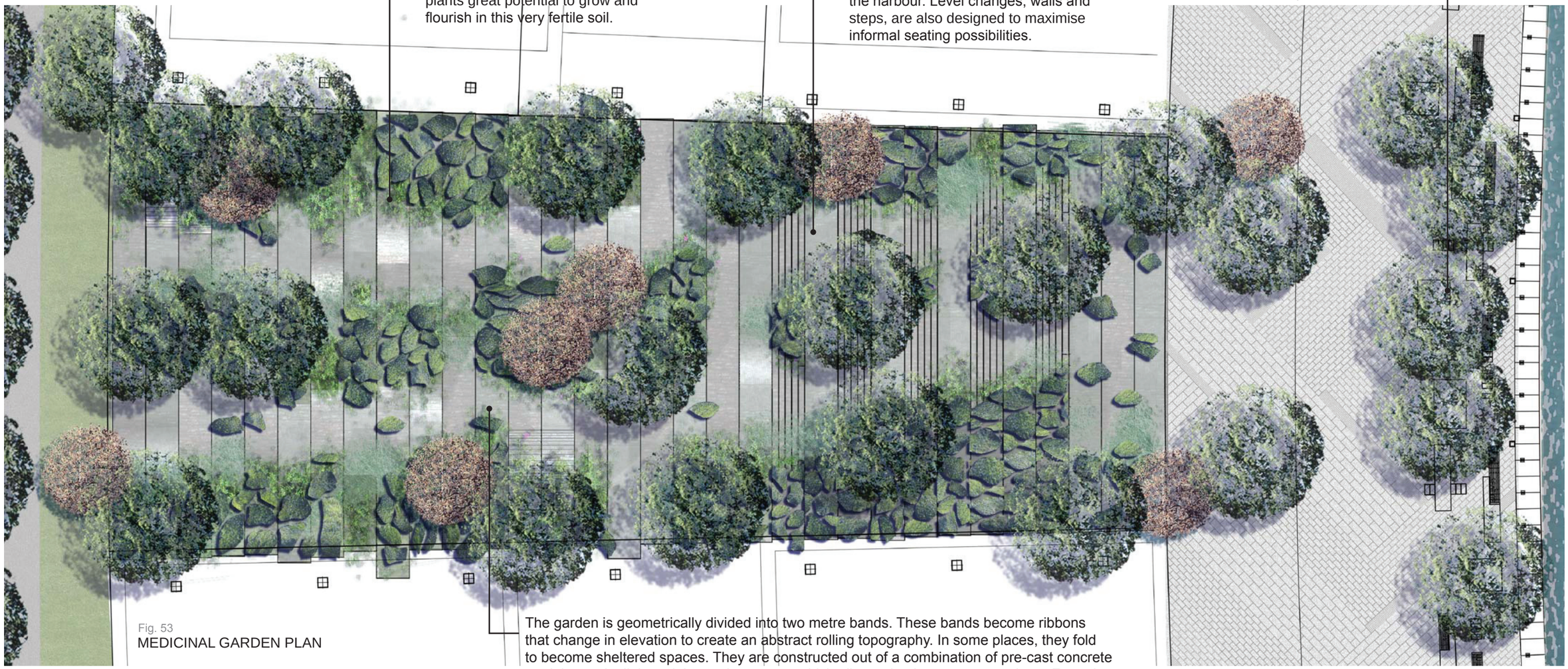
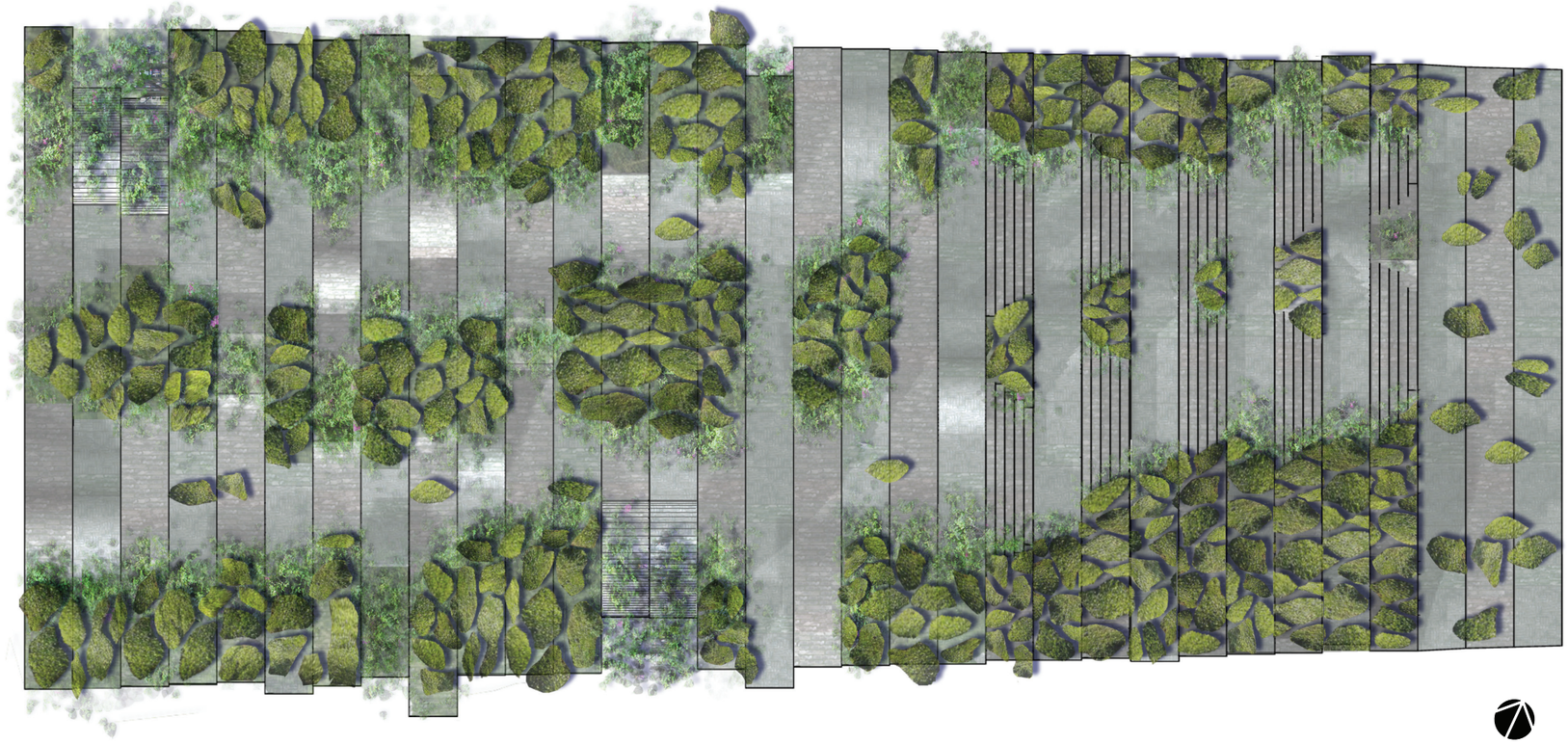


Fig. 53
MEDICINAL GARDEN PLAN

0 5 10 15 20 25m

The garden is geometrically divided into two metre bands. These bands become ribbons that change in elevation to create an abstract rolling topography. In some places, they fold to become sheltered spaces. They are constructed out of a combination of pre-cast concrete modules and a light weight steel structure, which allows planting to occur on them. From the water looking up, the bands create a layered, rich, complex view of the garden.

THE CONCEPT FOR THE MEDICINAL GARDEN IS AN ABSTRACTION OF MALAYSIAN TEA PLANTATIONS AND FOCUSES ON PLANT SPECIES USED IN MALAYSIA FOR MEDICINAL PURPOSES SUCH AS JAVA TEA. THE TOPOGRAPHY OF THE GARDEN FOLLOWS THE ROLLING TOPOGRAPHY OF PLANTATIONS AND DIFFERENT SPECIES OF TEA USED IN MALAYSIA ARE PLANTED IN AMORPHOUS FORMS, KEPT TO A CONSISTENT HEIGHT. SPACES ARE CARVED INTO THE PLANTING FRAMEWORK,



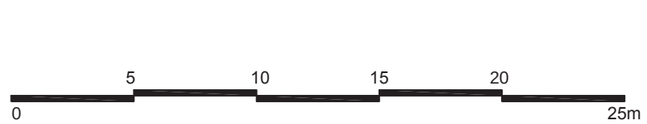


Fig. 54
MEDICINAL GARDEN PLAN WITHOUT TREES

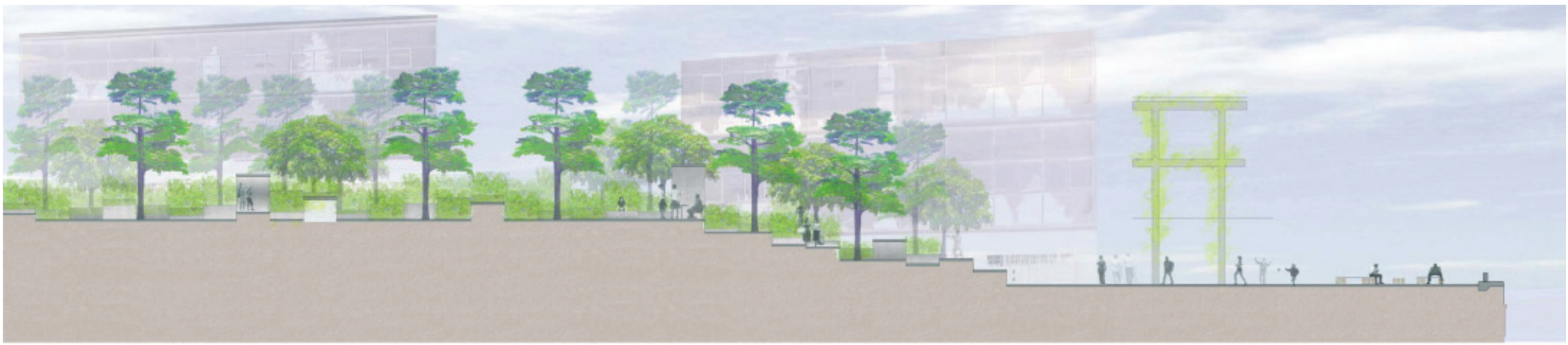


Fig. 55
MEDICINAL GARDEN SECTION

Fig. 56
MEDICINAL GARDEN SECTION

Fig. 57
MEDICINAL GARDEN SECTION

Fig. 58
GARDEN VIEWS

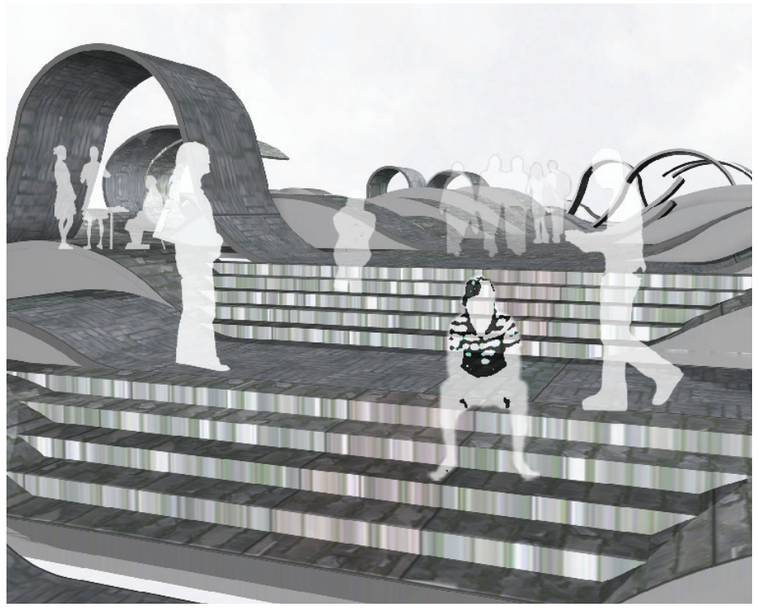


Fig. 59

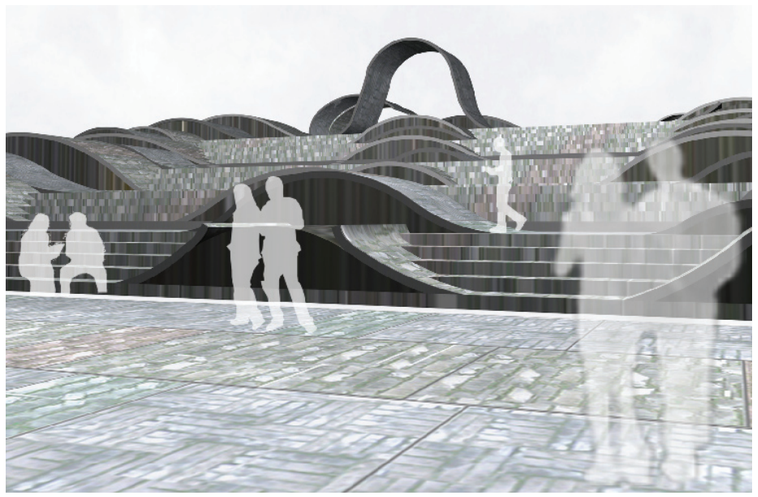


Fig. 60

PLANTING

Planting will focus on the use of important plants used in traditional Malaysian medicine. Based on the rolling Malaysian and Javanese tea plantation landscape formation, planting types will use loose and structured hedging plants as the dominant form. This structure will be marked at intervals with changing foliage forms for interest and colour.

Fig. 61

Fig. 62

Fig. 63

Fig. 64

Fig. 65

Fig. 66

Fig. 67

Fig. 68

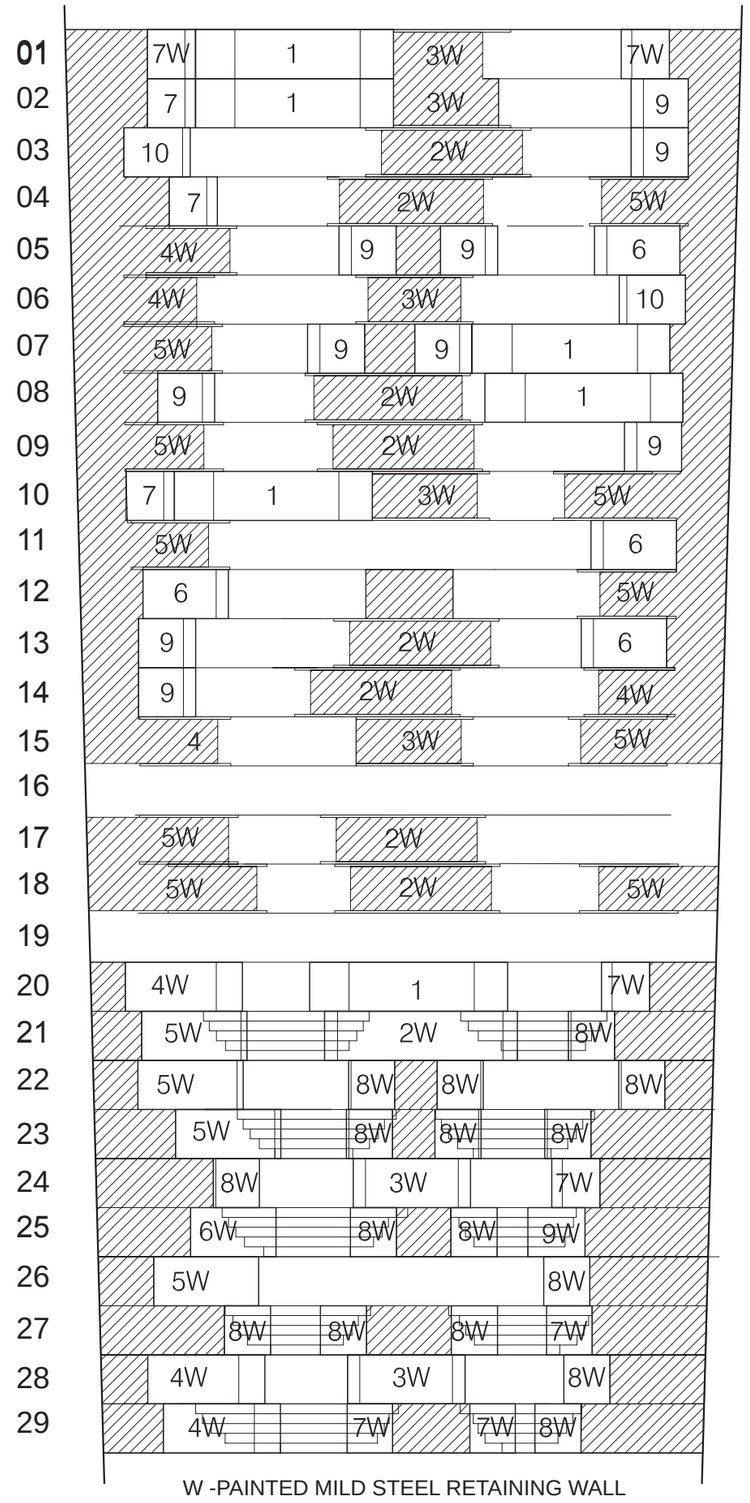
Fig. 69

Fig. 70

TREES
Alstonia angustifolia – Pulai (1)
Azadirachta indica – Neem tree (10)
Averrhoa bilimbi - Cucumber Tree
Eurycoma longifolia – Tongkat ali (2)
Mimusops elengi – Bunga tanjung
Sesbania grandiflora - Vegetable Hummingbird

TEA
Acalypha siamensis – Wild tea (9)
Camellia sinensis - Java tea
Orthosiphon ardistus – Misai kucing (6)

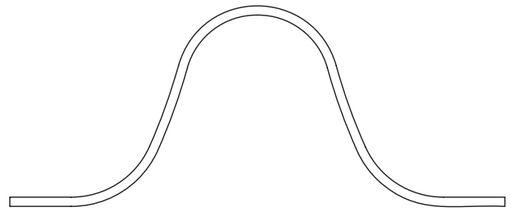
PLANTS
Aloe vera – Aloe (8)
Alpinia galangal - Thai Ginger
Ardisia crenata - Coral Berry
Catharanthus roseus – Pink Periwinkle
Centella asiatica - Indian Pennywort
Costus speciosus – Crepe Ginger (3)
Crinum asiaticum – Crinum Lily (4)
Cymbopogon citratus - Lemon Grass
Cymbopogon nardus – Citronella (5)
Dianella ensifolia – Dianella
Justicia gendarussa – Gandarussa
Kaempferia galanga - Sand Ginger
Piper betle – Betel
Selaginella 'Gold-Tip' - Gold Tip Spikemoss
Tinospora crispa – Petawali
Wedelia biflora - Wedelia (7)
Zingiber officinale – Ginger



W -PAINTED MILD STEEL RETAINING WALL

Fig. 71

PRE CAST CONCRETE MODULES AND STEEL WALL MODULES



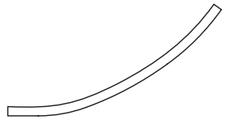
PRE CAST CONCRETE MODULE 1

PRE CAST CONCRETE MODULE 2

PRE CAST CONCRETE MODULE 3

PRE CAST CONCRETE MODULE 4

PRE CAST CONCRETE MODULE 5



PRE CAST CONCRETE MODULE 6

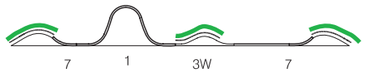
PRE CAST CONCRETE MODULE 7

PRE CAST CONCRETE MODULE 8

PRE CAST CONCRETE MODULE 9

PRE CAST CONCRETE MODULE 10

Fig. 72



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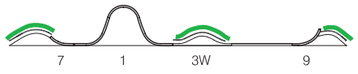

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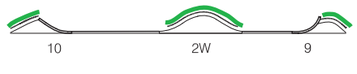

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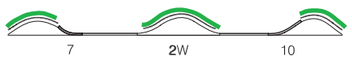

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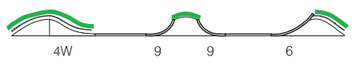

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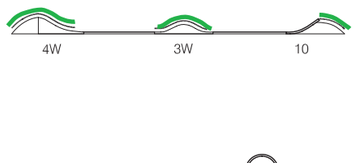

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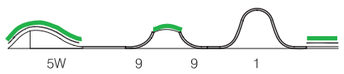

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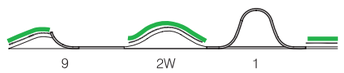

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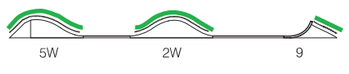

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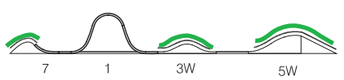

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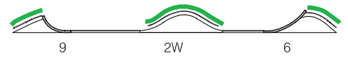

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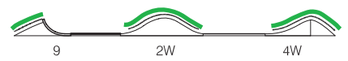

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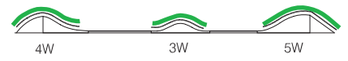

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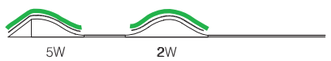

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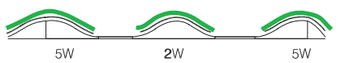

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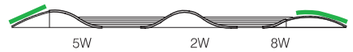

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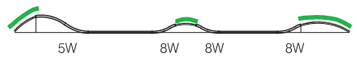

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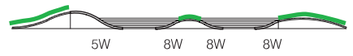

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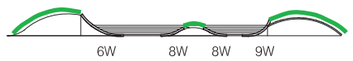

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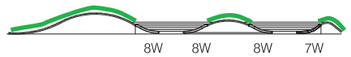

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Fig. 73

NUSAJAYA WASTE FRONT PRECINCT

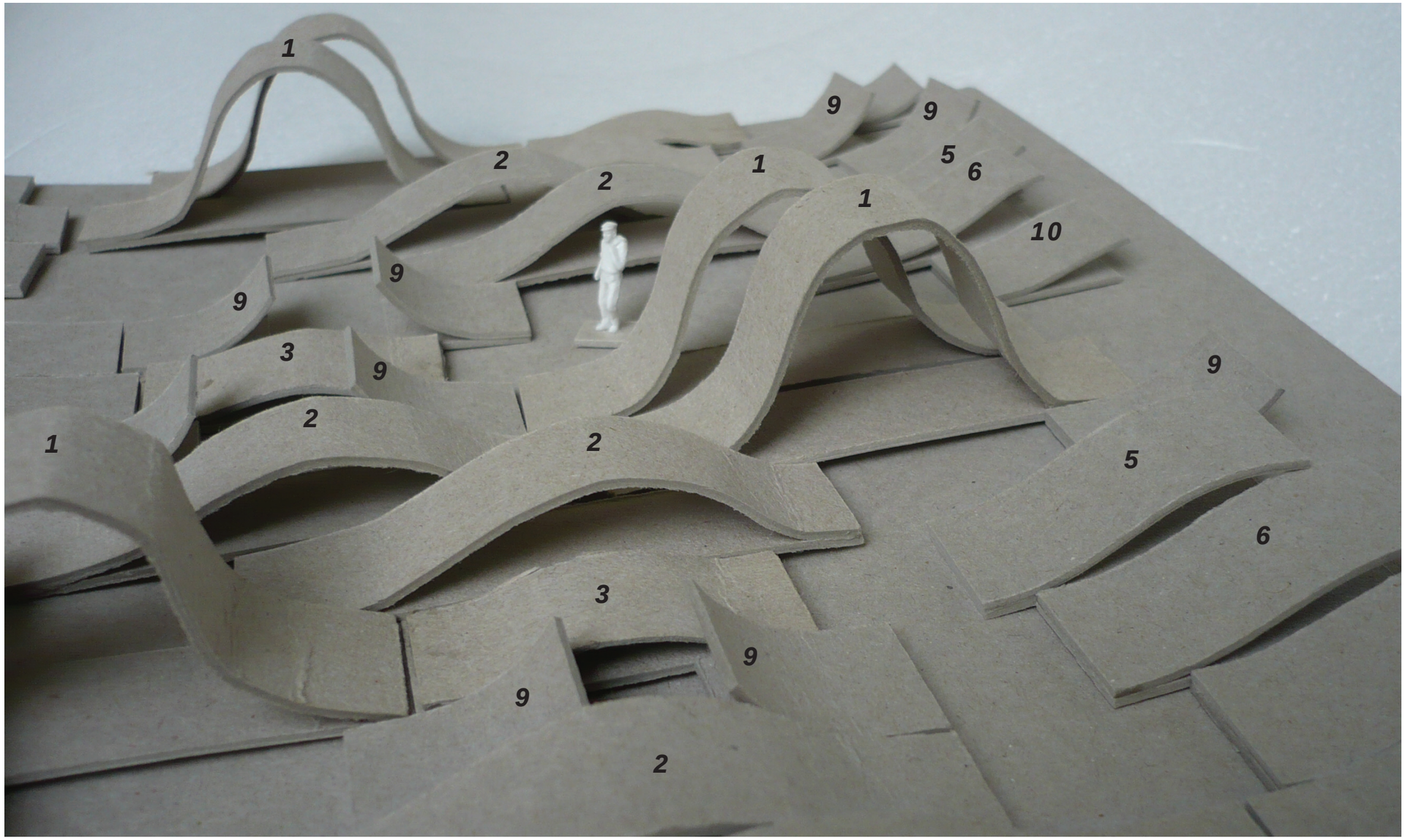


Fig. 74

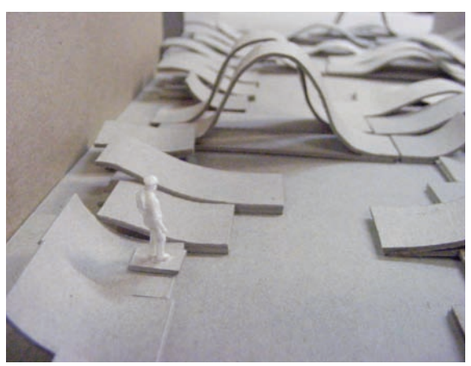


Fig. 75


Fig. 76


Fig. 77


Fig. 78

PAVING AND WALLS

The ribbons that create the base and paving of the garden are constructed out of a combination of pre-cast concrete modules in three different shades of grey and with different aggregate as well as a more light weighted steel structure.

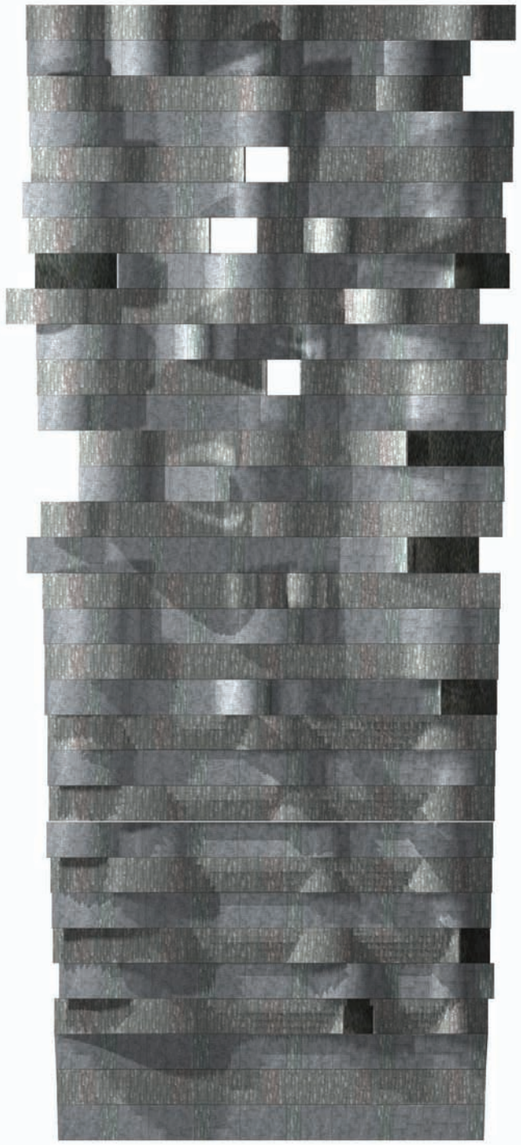


Fig. 79
BANDS OF PAVING

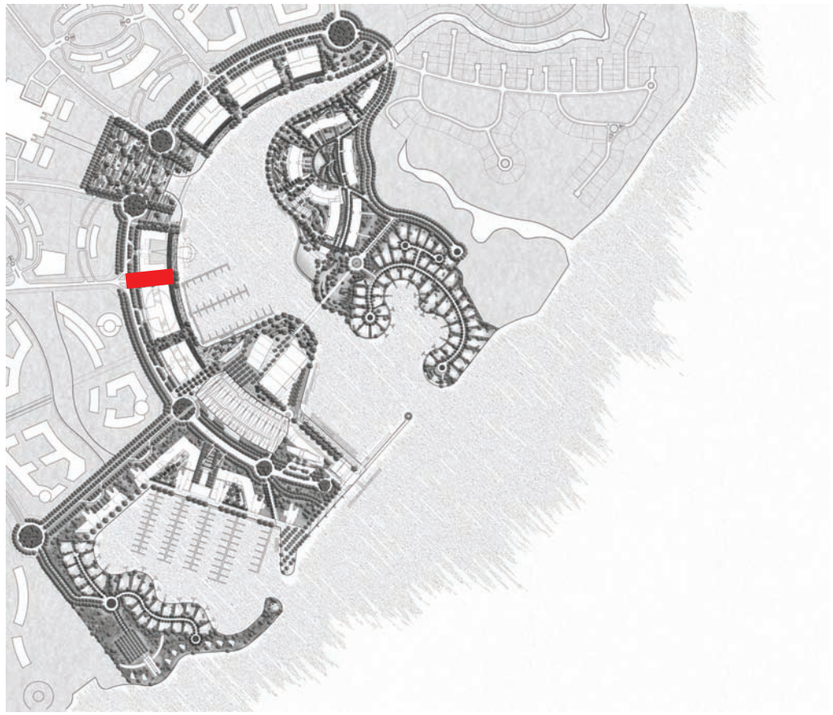
Fig. 80

Fig. 81

Fig. 82
EXAMPLE OF CONCRETE COLOUR VARIATIONS

Fig. 83
STEEL WALLS

Fig. 84



SPICE GARDEN

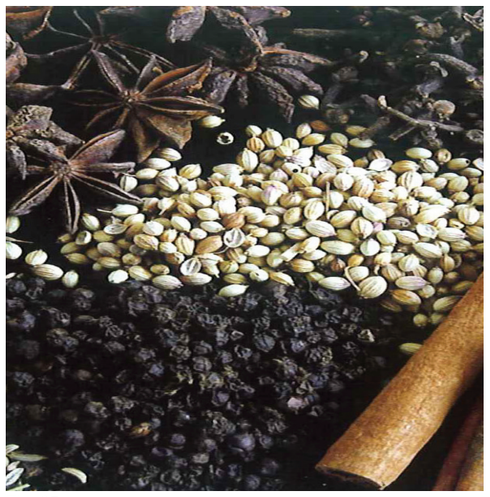


Fig. 85

Fig. 86

Fig. 87

Fig. 88

CONCEPT

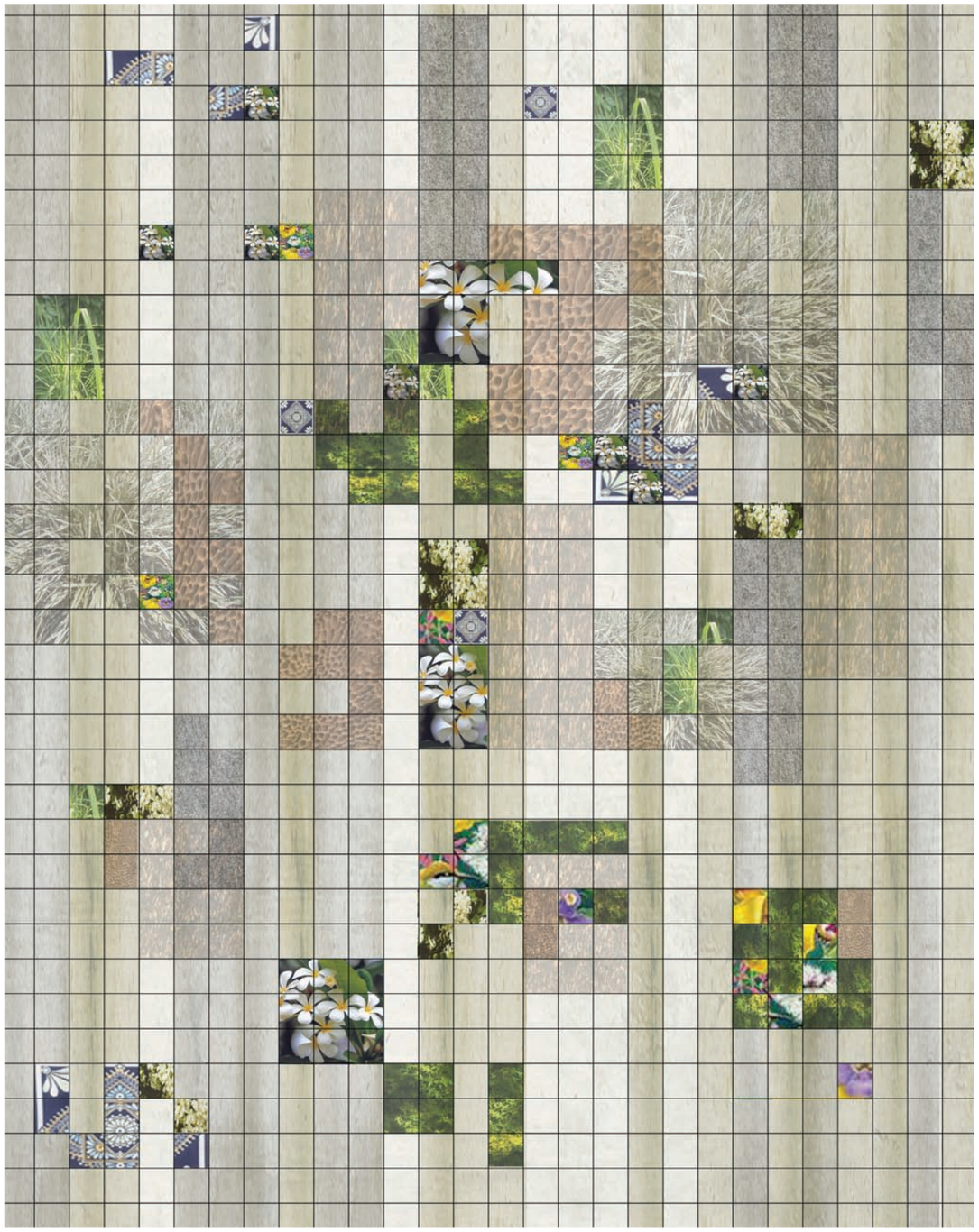


Fig. 89

Fig. 90

Fig. 91

The Spice Garden is

all about the plants.

The Garden is going to be a rich

tapestry

of colours, textures and fragrances

celebrating the use of plants in Malaysian cuisine

and based on a grid, like in a traditional Spice Garden.

grid

SPACIAL ARRANGEMENT

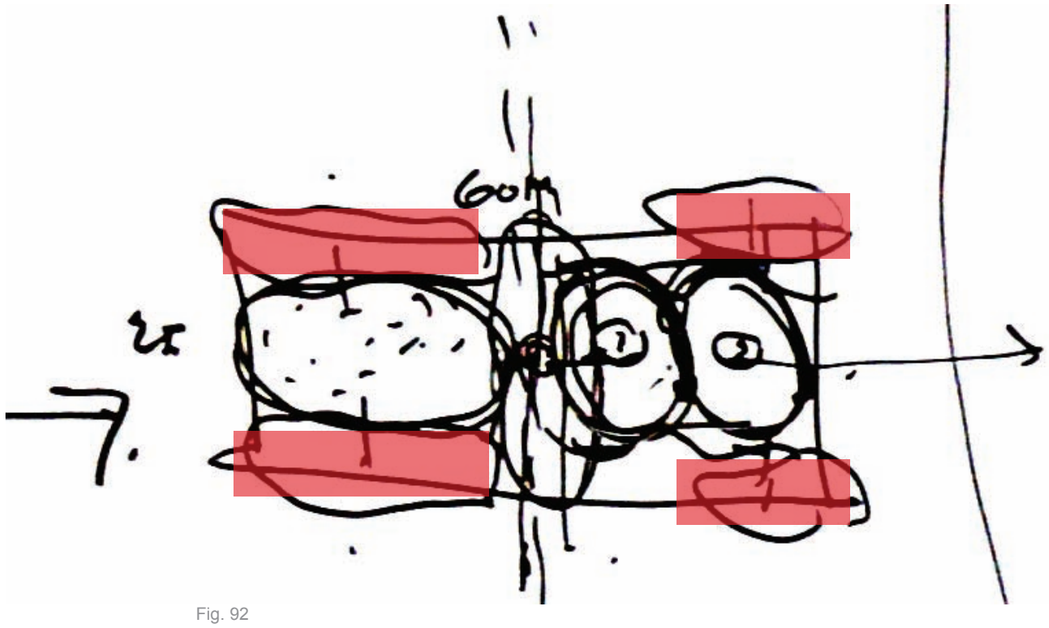


Fig. 92
ACTIVATED EDGES

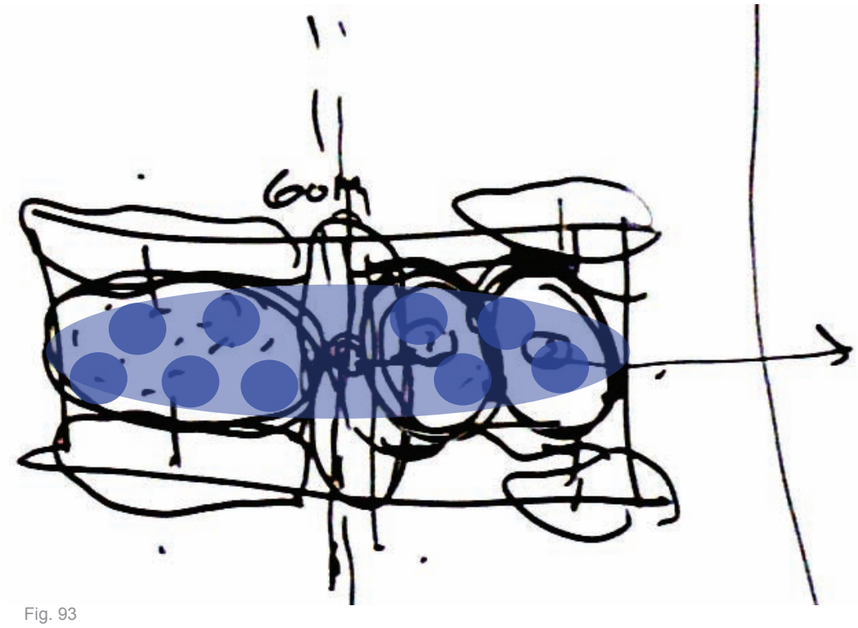


Fig. 93
SPACES

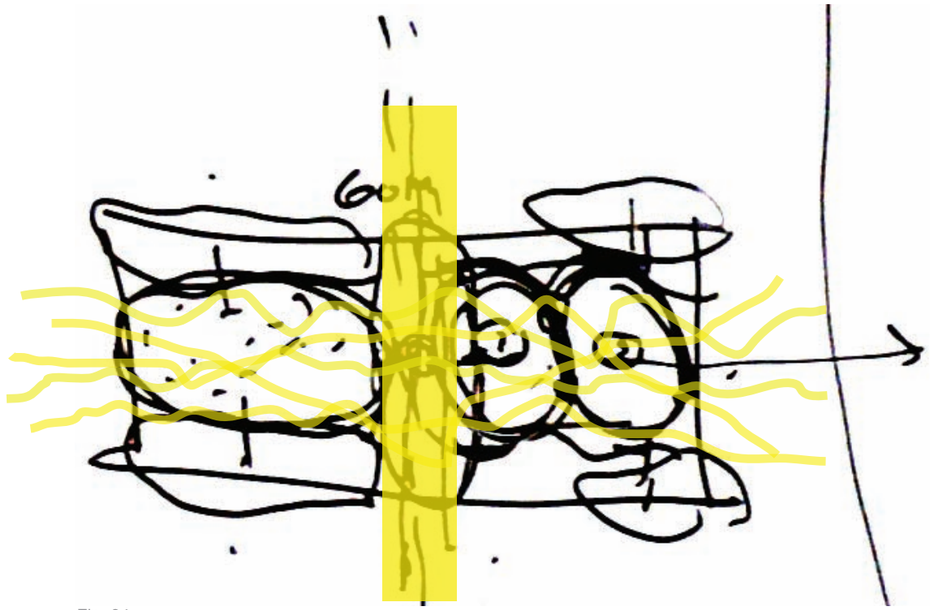


Fig. 94
MOVEMENT

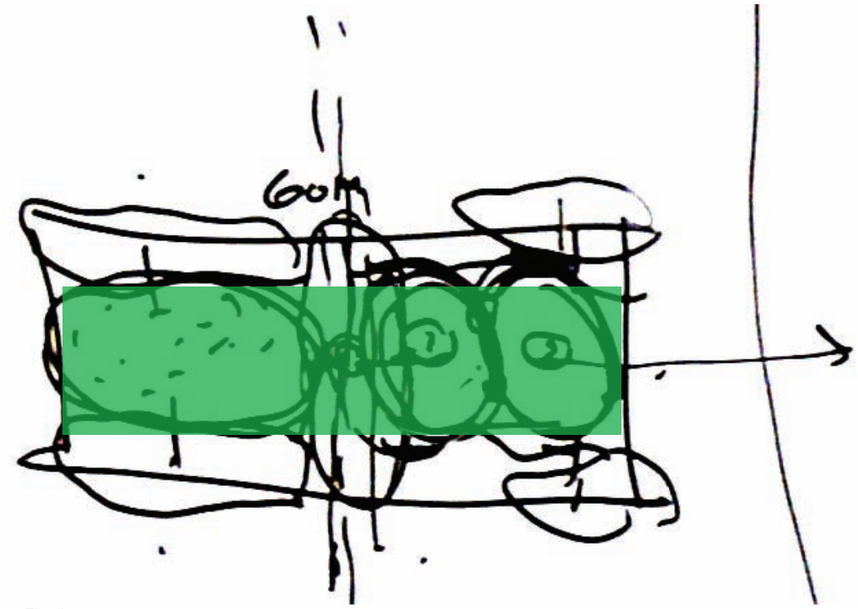


Fig. 95
TRANSITIONAL SPACE

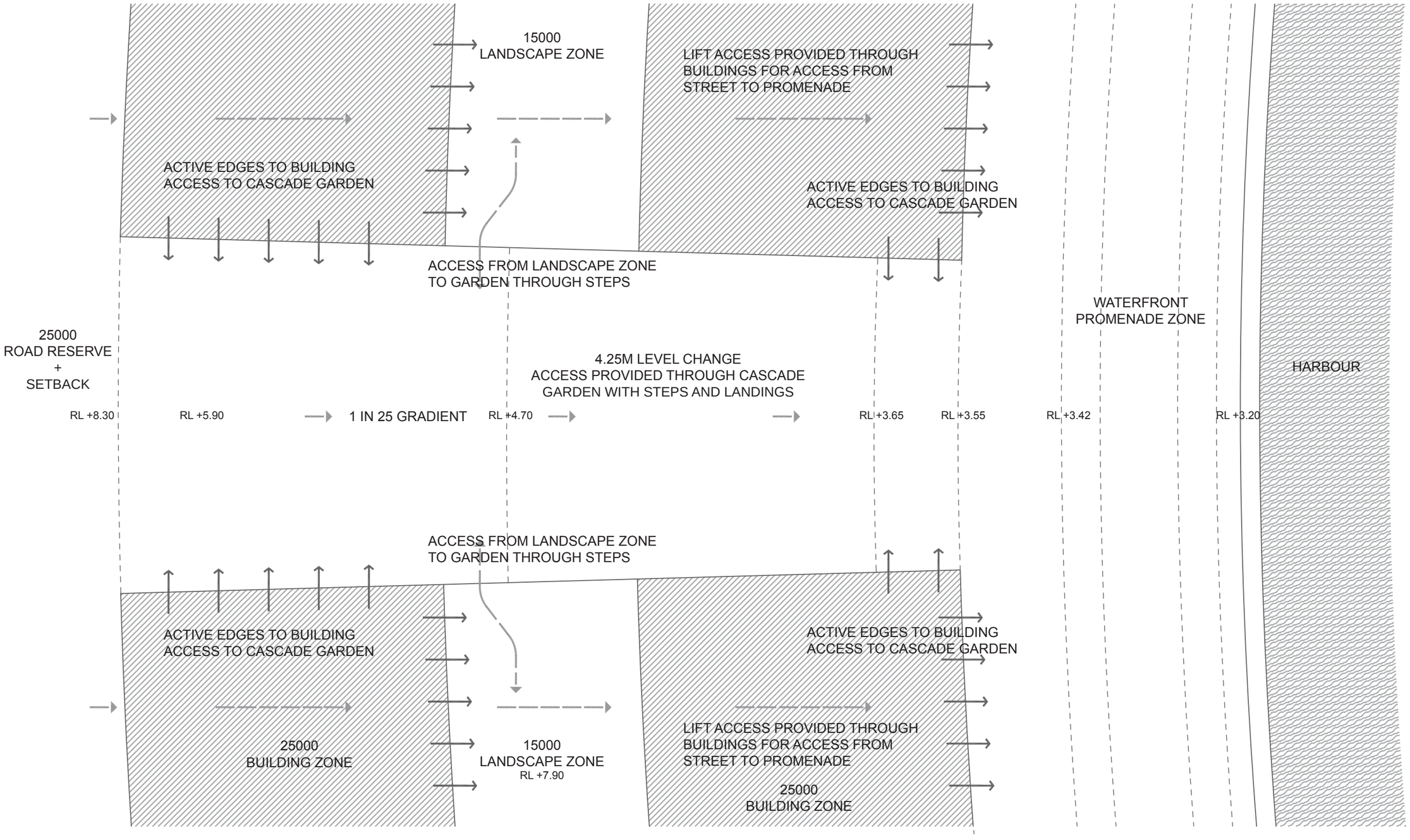


Fig. 96
GARDENS AND PROMENADE ACCESS AND GRADING DIAGRAM

Starting with a two times two meter rectangular grid that has allowance for space and sits between the buildings but turns into a mesh during the development of it.

It still creates a pallet that allows colours and plants to come through as well as allowing the pattern not to be too consistent. The mesh rules the form and when warped and twisted, it creates a rich and interesting base for the tapestry of the garden.

key elements

SPICES

CANVAS OF PLANTS

GRID

CULTIVATION

TEXTURE

COLOUR

SCENT

EDUCATIONAL

DISPLAY

PROCESS

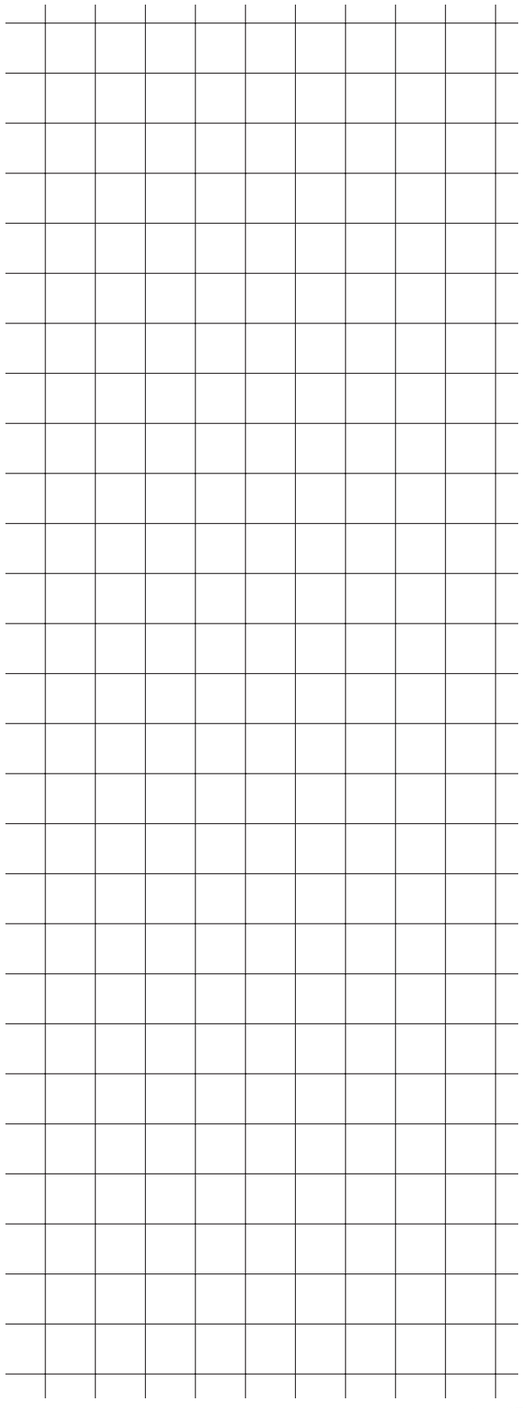


Fig. 97

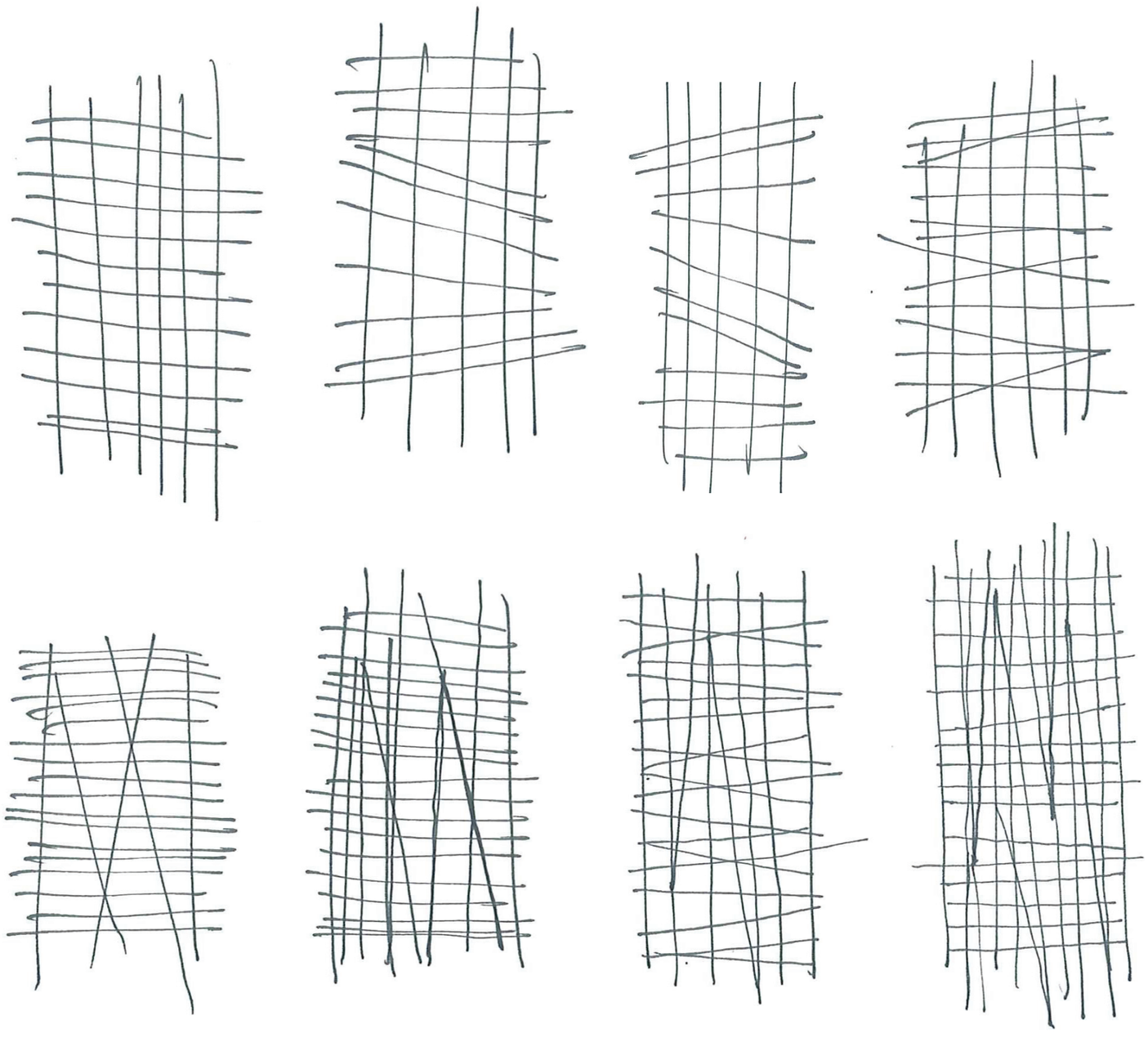


Fig. 98

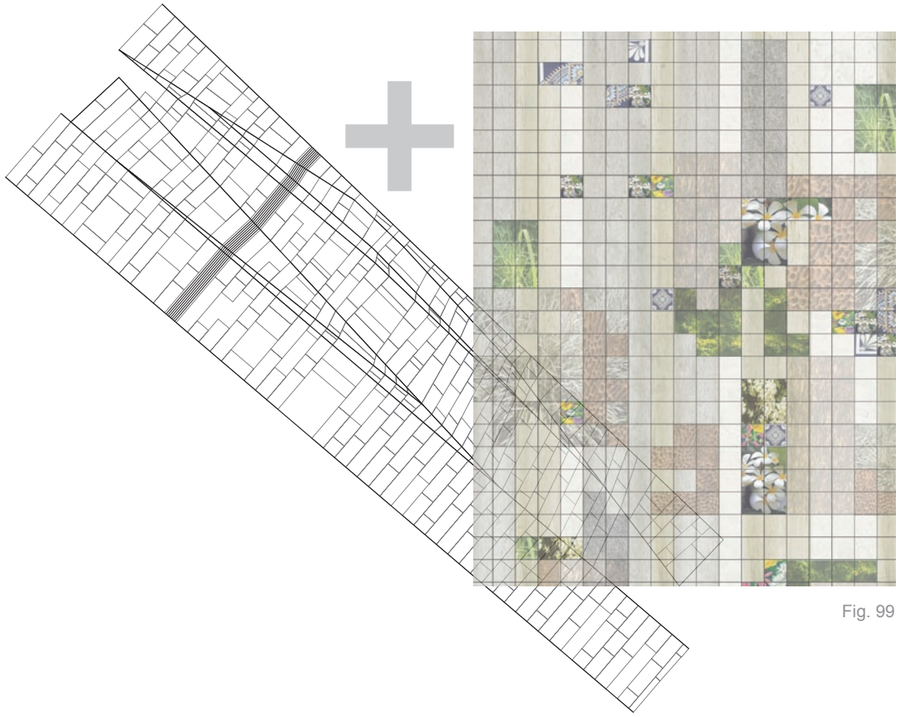


Fig. 99

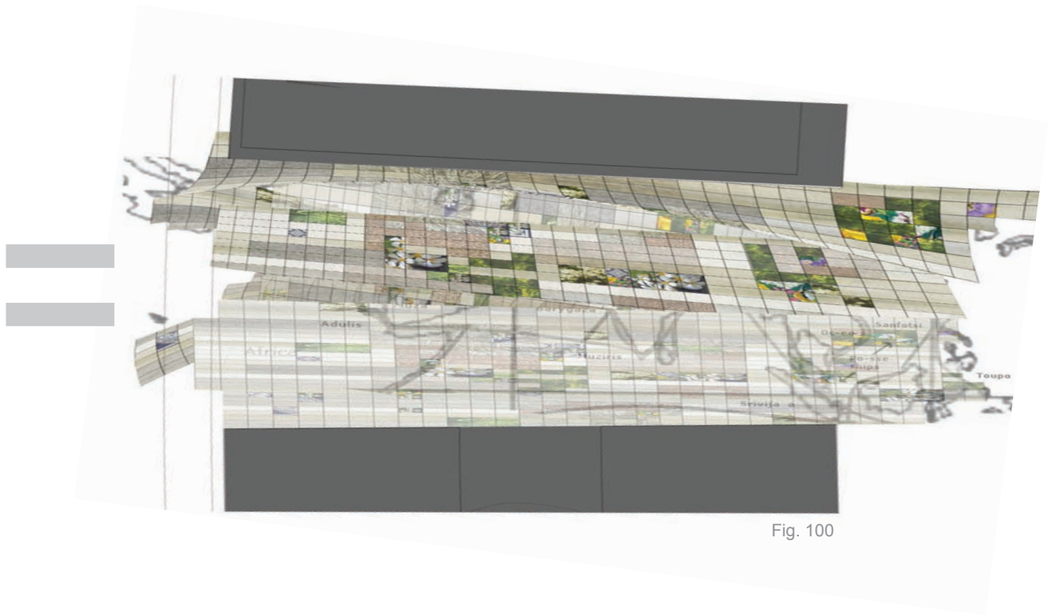


Fig. 100

Combining the concept of a traditional spice garden with the new grid layout gives strength to the idea of a rural garden as an urban design and gives the space more interest. The folds create the spaces and access routes throughout the garden and the grid/mesh works well as both hardscape and softscape within the space.

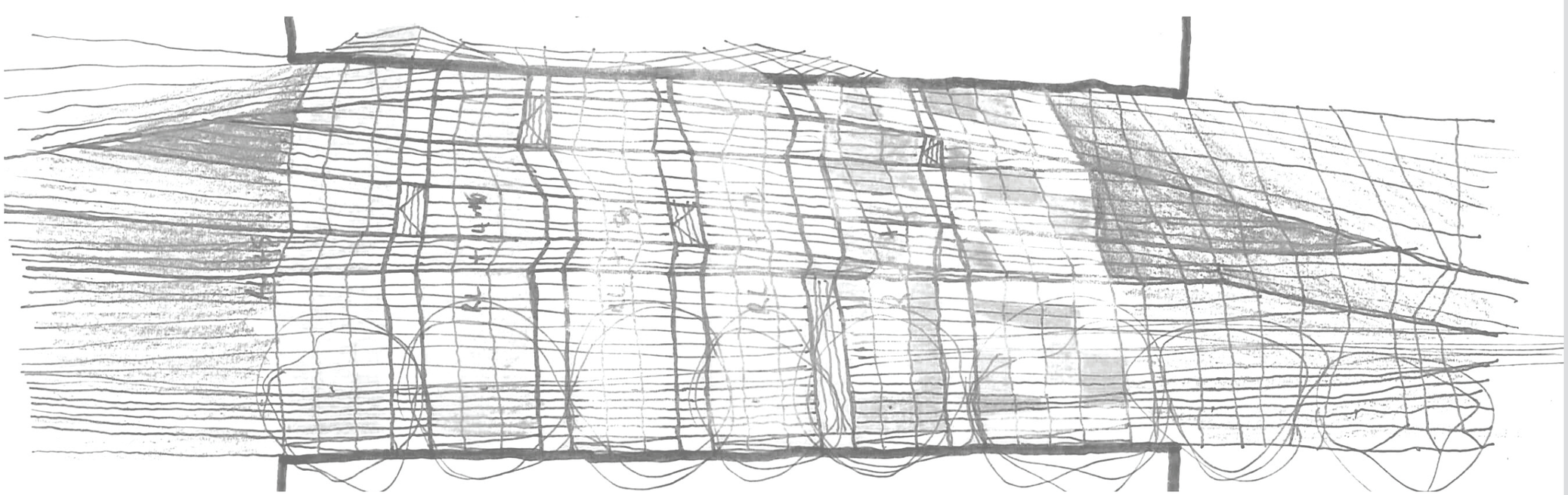


Fig. 101

FINAL DESIGN

A flight of steps extend across the entire garden and follow the geometry of the skewed grid. The garden also slopes gently from Crescent Road down to the waterfront promenade.

The skewed grid pattern on the ground plane becomes a graphic composition of different types of planting, paving and gravel. The arrangement of hard and soft surfaces maximise pedestrian permeability, through the garden, whilst also creating smaller shady places for people to sit and relax. The garden is built on natural ground and this creates a great condition to let the plants be the driving force behind the design.

Seats are provided throughout the garden, intersecting the planting, and creating smaller intimate spaces for relaxing.

Trees along the waterfront have a high open canopy allowing views to the water, while providing shade and a cooler micro climate. Seating is provided on the waterfront, whilst maintaining an open pathway along the waterfront promenade.

Fig. 102
SPICE GARDEN PLAN

0 5 10 15 20 25m

THE SPICE GARDEN IS A RICH TAPESTRY OF COLOURS, TEXTURES AND FRACRANCES CELEBRATING THE USE OF PLANTS IN MALAYSIAN CUISINE. THE TRADITIONAL KITCHEN GARDEN GRID HAS BEEN SKEWED AND FOLDED AND EXTENDS FROM THE URBAN EDGE DOWN TO THE WATER.

Fig. 103
SPICE GARDEN SECTION

The tapestry of paving creates the potential of setting up market stalls in the garden. This completely changes the feel of the garden when emphasised. It is an experimental and flexible space.

With the possibilities of a culinary school in the adjacent building, the garden has been created to get the public involved. The culinary school will be involved in the maintenance of the garden which will be an educational experience due to signage of plants and trees which will be utilised in the cooking.

Trees are essential in urban environments to ameliorate air quality, stabilize soil, reduction of storm water runoff, provision of wildlife habitats, reduction of wind and noise, formation of micro climates, shelter and shade, and reduction of air temperatures. Not to mention their natural beauty and place-making qualities. In creating lots of small spaces under the tree canopies, cooler spaces are created as a result of the micro climate.

The small spaces created in this garden also contrast the generous proportions of the waterfront.

Fig. 104
SPICE GARDEN VIEW

Fig. 105

Fig. 106

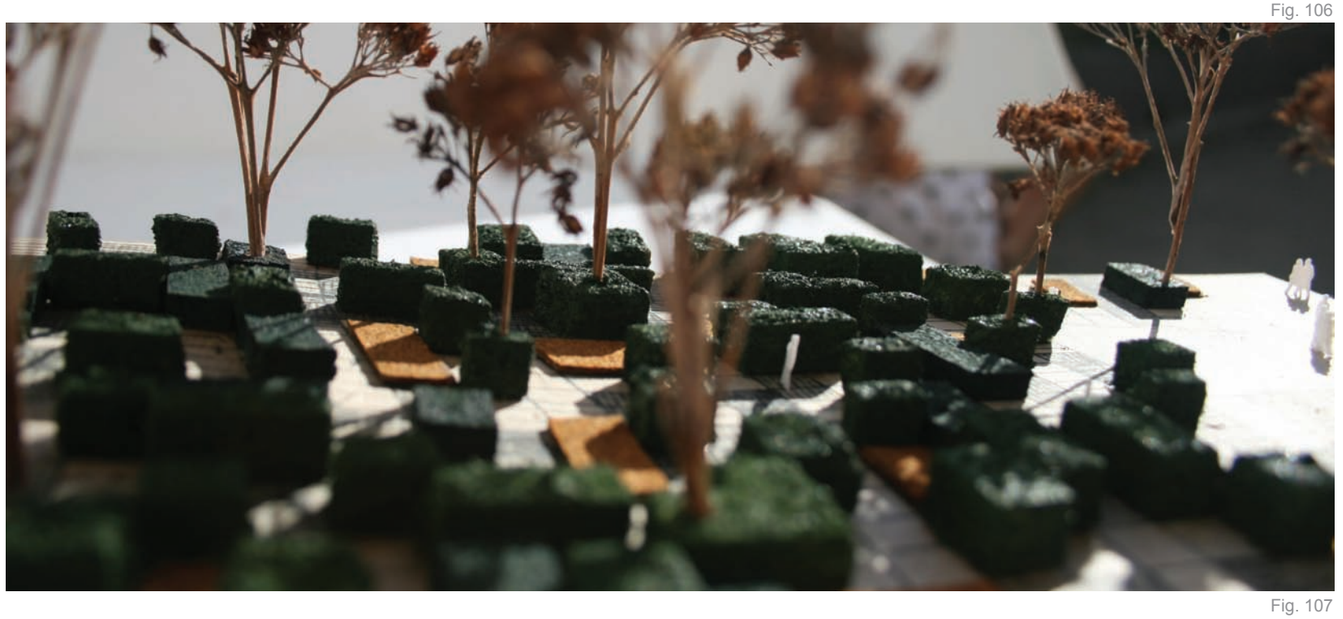


Fig. 107

Fig. 108

PLANTING

Planting will focus on the use of plants used in traditional Malaysian cooking. Squares of planting will change from single species use where plants of feature have striking attributes, to combination planting to compliment less dramatic spices or herbs. As well the planting will promote visual interest through the space.

Fig. 109

Fig. 110

Fig. 111

Fig. 112

Fig. 113

Fig. 114

Fig. 115

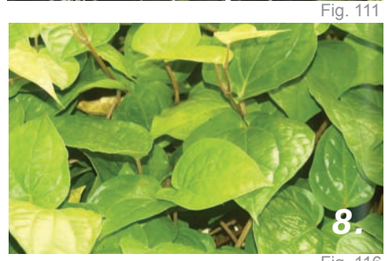


Fig. 116

Fig. 117

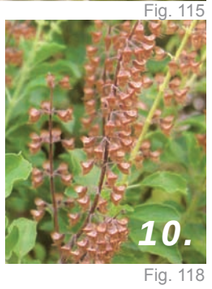


Fig. 118

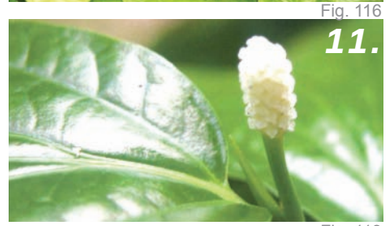


Fig. 119

Fig. 120

Fig. 121

Fig. 122

Fig. 123

Fig. 124

TREES

Averrhoa bilimbi - Cucumber Tree (5)
Averrhoa carambola - Star fruit
Cinnamomum verum - Cinnamon Bark Tree (3)
Myristica fragrans – Nutmeg
Syzygium aromaticum - Clove Tree
Tamarindus indica – Tamarind

PLANTS

Allium ascolonicum – Shallots
Allium fistulosum - Spring Onion
Allium sativum – Garlic
Allium tuberosum – Chives
Alpinia galangal - Thai Ginger (12)
Ardisia crenata - Coral Berry (1)
Capsicum annum – Chili
Centella asiatica - Indian Pennywort
Cosmos caudatus - Wild Cosmos (2)
Curcuma longa – Turmeric
Cymbopogon citratus - Lemon Grass (4)
Dichorisandra thyrsiflora - Blue Ginger
Hibiscus sabdariffa – Rozelle (13)
Jasminium sambac - Jasmine (7)
Justicia gendarussa – Gandarussa
Kaempferia galanga - Sand Ginger (6)
Murraya koenigii - Curry Leaves
Musa paradisiaca 'Pisang Mas' – Banana
Musa ornata - Banana leaves
Mussaenda philippica 'Aurorae' - Lady Flowers
Nicolaia elatior - Torch Ginger
Ocimum basilicum – Sweet Basil (9)
Ocimum tenuiflorum - Sacred Basil (10)
Pandanus amaryllifolius - Pandan Leaves (14)
Piper betle – Betel (8)
Piper nigrum – Pepper
Piper sarmentosum – Pepper (11)
Plectranthus amboinicus - Indian Borage
Pogostemon cablin – Patchouli
Polygonum minus - Small Water Pepper
Polyscias scutellaria - Shield Aralia (15)
Vitex trifolia - Simpleleaf chastetree (16)
Zingiber officinale – Ginger

TESTING DIAGRAMS

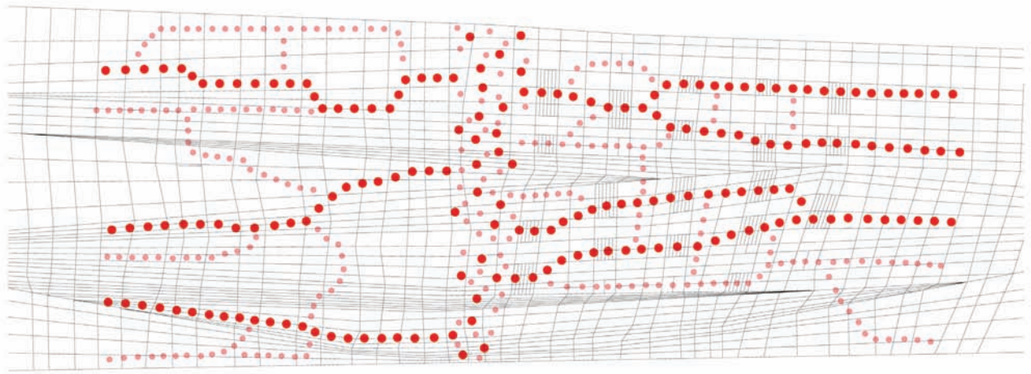


Fig. 125
CIRCULATION

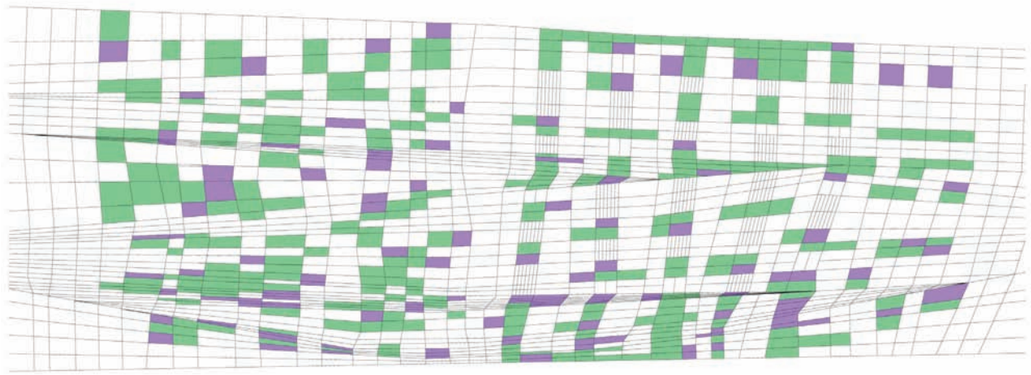


Fig. 126
SCENT

FRAGRANCED PLANTS

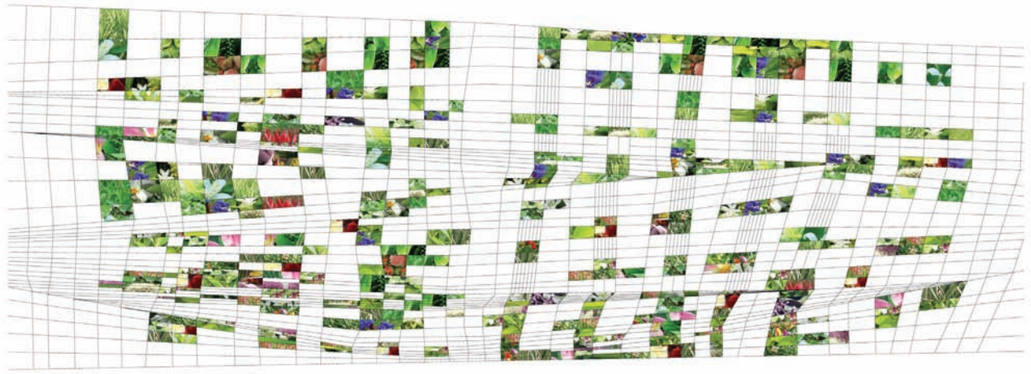


Fig. 127
COLOUR

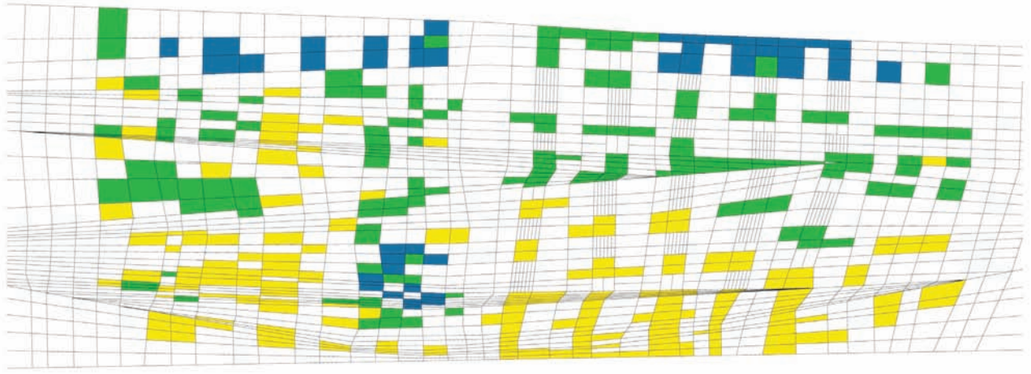


Fig. 128
POSITION

SUN SEMI SHADE SHADE

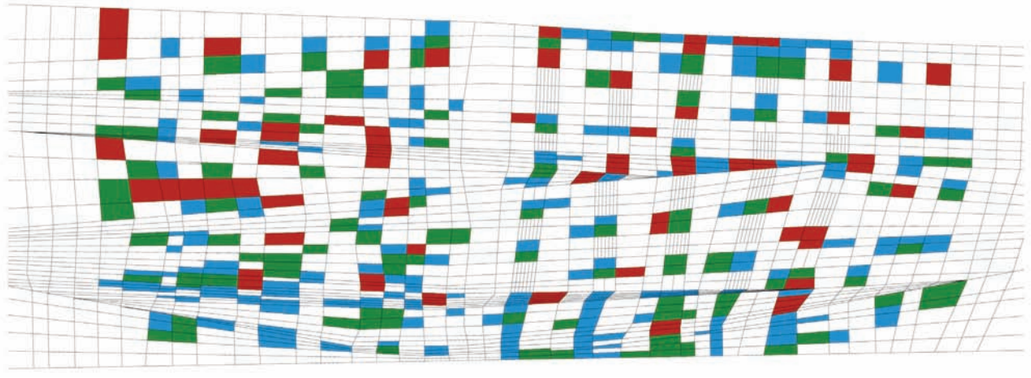


Fig. 129
HEIGHT

<1M 1-2M >2M

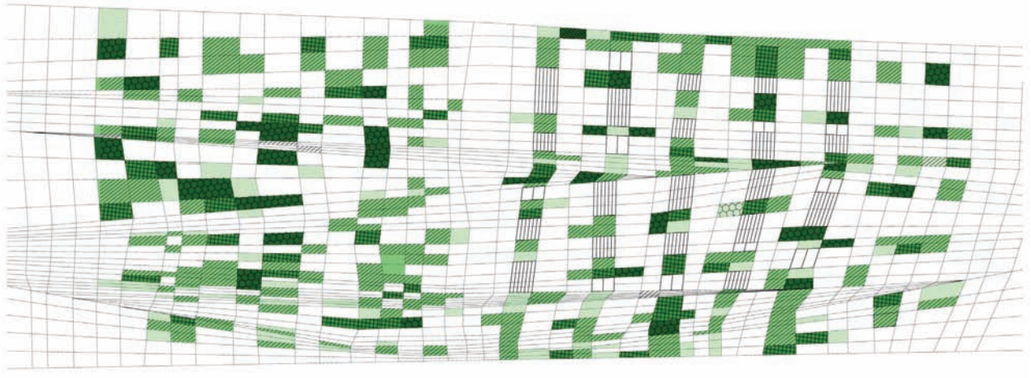


Fig. 130
TEXTURE

STRAIGHT SMALL MEDIUM BROAD

PAVING

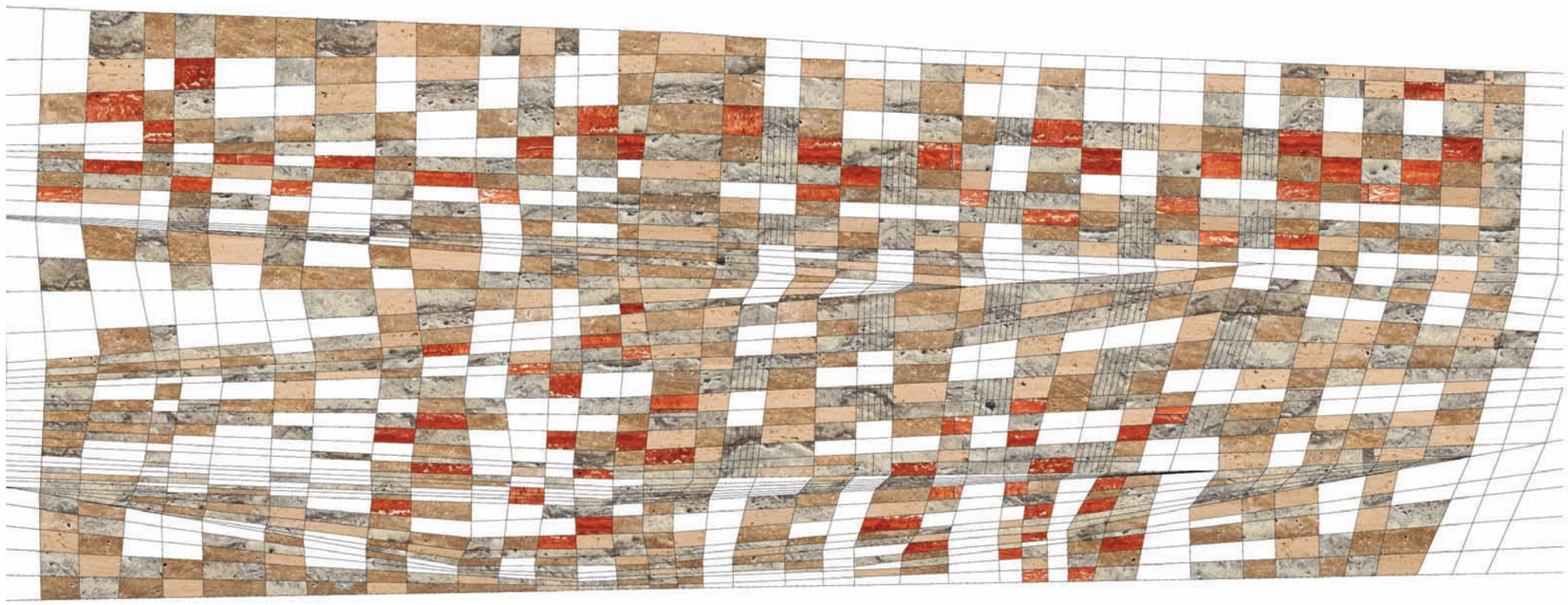


Fig. 131
TESTING OF COLOUR COMBINATION

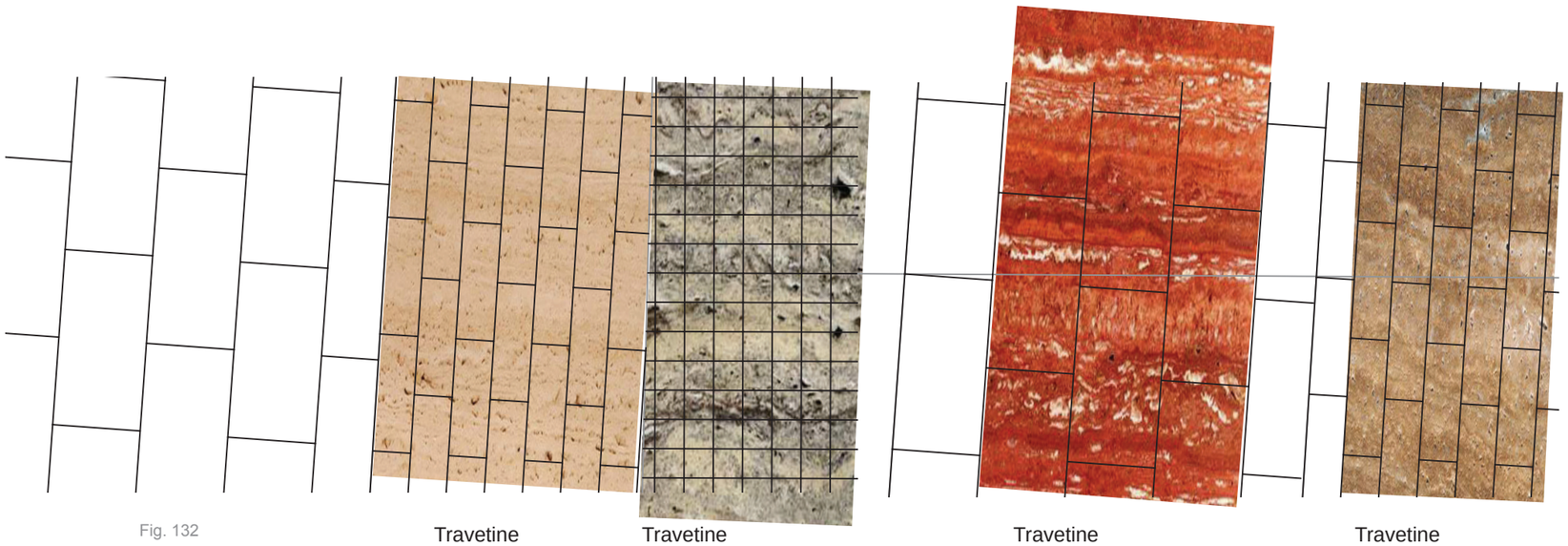


Fig. 132

Travetine
Sand
200x600mm

Travetine
Grey
100x100mm

Travetine
Red
450x900mm

Travetine
Brown
200x600mm

Interest and texture in the paving is created with the paving pattern through the variation in colour and size. The paving has four different colours and the pavers vary in size from 100x100mm setts, 200x600mm to 450x900mm large format pavers.

The Travetine paving was chosen on the following basis:

-The recommendation by client

-Cost effectiveness

-Low maintenance

-Suitable colour variation

RESULTS AND THOUGHTS

As with many projects this particular one started off with an exciting design which has later become a watered down version of how it was originally conceived. In many ways the design has lost some interesting and exciting components. The concept ideas for the gardens were sold in the master plan and the client was enthusiastic. We were informed there were to be no regulations and we had total design control. I have chosen to present the final designs for the two gardens which were originally submitted, rather than the watered down versions, which are a result of limitations enforced upon the company in the end.

I have provided a design solution for the two gardens where the concept of garden design has been interpreted in the design of public spaces. By focusing on reflecting a smaller scale I have achieved to create two gardens that celebrate the plants traditionally used in Malaysia and that offer areas for gathering and relaxing with good views to the water. The design provides many options for moving through the garden.

It has been a very landscape driven project and the tropical climate, with hot and humid weather all year round, is an ideal growing condition for a wide range of vegetation that can not be used anywhere else. Being so horticulturally rich and diverse, it gives the spaces great potential.

The strengths of the project have been the strong themes of the design and the spacial arrangements. The individuality of the gardens and how they are unique make them exciting. The process has been about clarifying strong ideas and making them obvious. The forms and variations in the two gardens make them interesting and both gardens work well as a hardscape (paving) and a softscape (vegetation).

Other designers have been a great source of inspiration. Studying Geoffery Bawa's contemporary take on aesthetics in the use of local plants and materials and Burle Marx's way of using amorphous shapes in his design, have both influenced my project. The designs also relate to other projects and designs, for example Tadao Ando's grid garden in Awaji Yumebutai, Japan, was one of the impetuses behind the concept of the Spice Garden. Mainly, it was the way in which Ando's composition of geometrical shapes form an amazing context in relation to each other. Also, Alain Provost's Thames Barrier Park in London, United Kingdom, inspired me through the way in which the planting creates a linear movement throughout the site. Originally, it was the symmetry in Provost's piece which was employed in the initial design process, however, this later evolved into something more fluid and abstract.

One of the main issues has been the vagueness of the client and the lack of information provided has been a big challenge. Working without a brief is difficult, considering it is hard to know what the client is actually after. With endless possibilities it has required me to set the limits of what to achieve. It has enabled the design to change the brief along the way. The design has continuously evolved and the main focus has been on testing the design to make sure it works.

Another big issue has been the lack of clarity regarding the architecture. There has been no context, yet the design will be heavily influenced by this nonexistent surrounding once it is there. Collaboration with other professions required adjustment and adaptation which lead to changes in the design. A lot of time has been spent on testing and studies. The fact that it has been an overseas project has required more research because of the unfamiliarities with local codes, materials and designing for a different culture, on a site I have never visited.

Although the process of model making has been very time consuming, it has been the best tool for me to actually understand how the design works and it has been a fun and interesting way of exploring. It has made it clear and legible to visualise the ideas and it has made it easier to make choices in the design process. This method has been a different process to generate ideas, concepts and testing of concepts to achieve a high level of resolution. This has helped me to live up to my expectations of not having a clear image of the final result from the beginning and to have in mind that there is always room for improvement. The method of trial and error and continuously evolving the style of thinking has formed the design. It has helped me to keep my mind open to changes along the way and being experimental.

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Fig. 155. Furniture Option, Long Bench

many thanks to: bob, matt, paula, sunita, carly, tiina, pinge, alfred, tristan and rebecca

APPENDICES

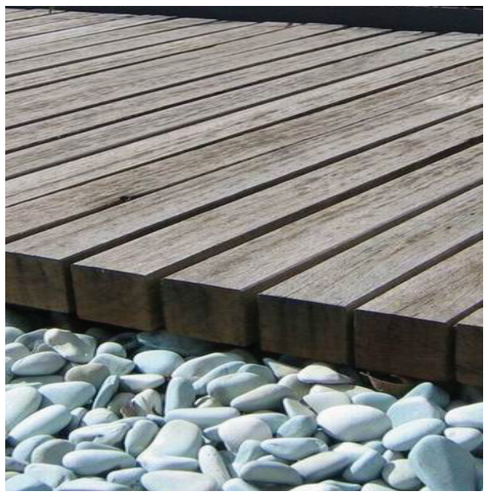


Fig. 133

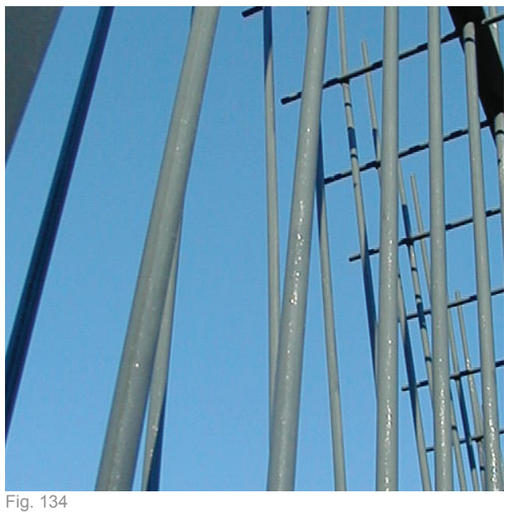


Fig. 134

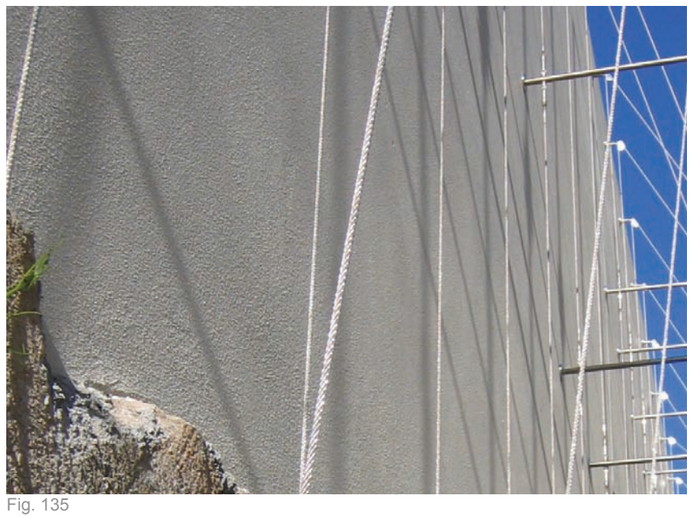


Fig. 135

Fig. 136

RAMP STUDY

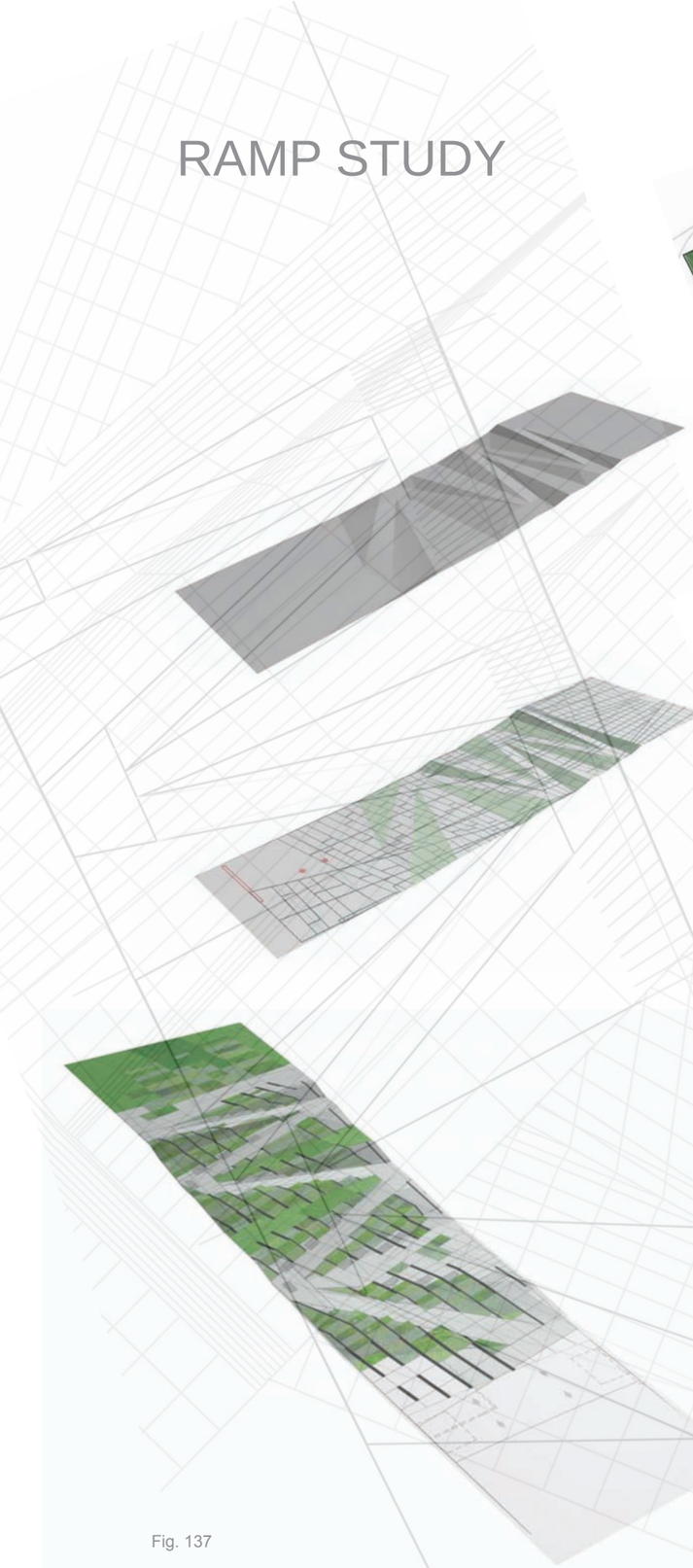


Fig. 137

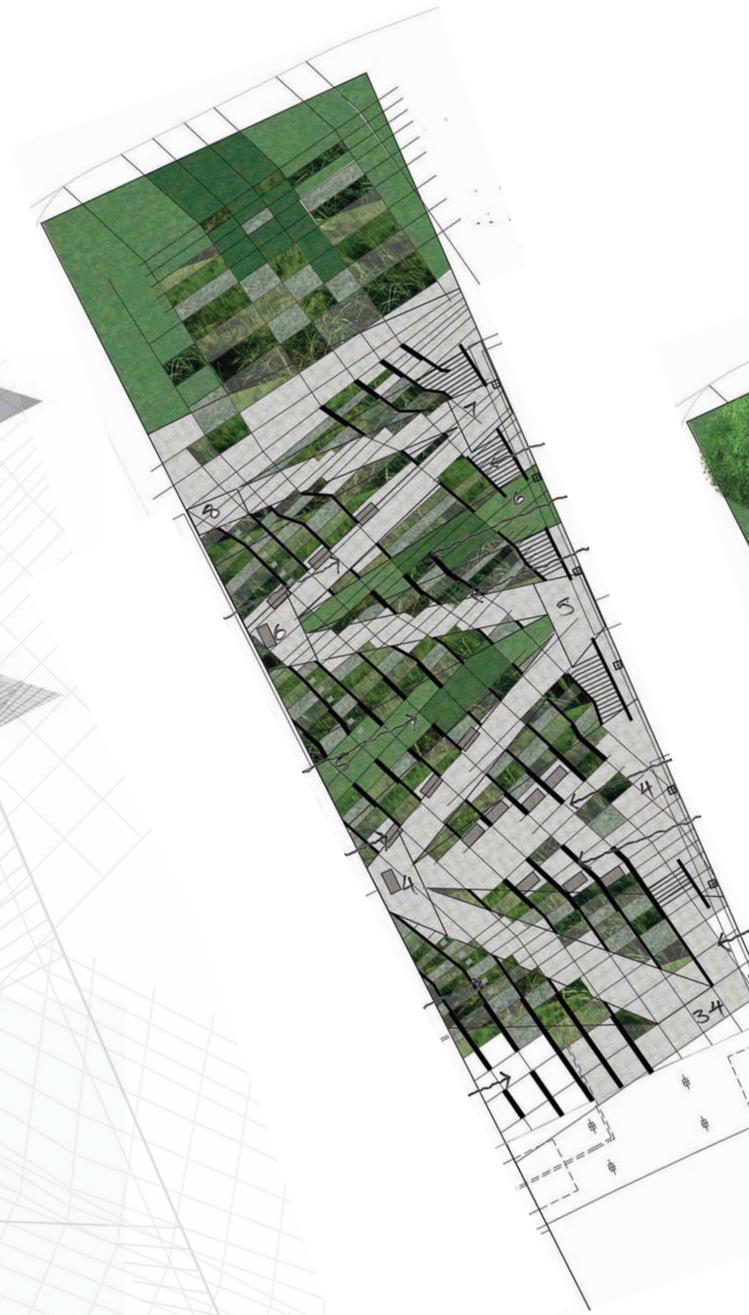


Fig. 138

Fig. 139

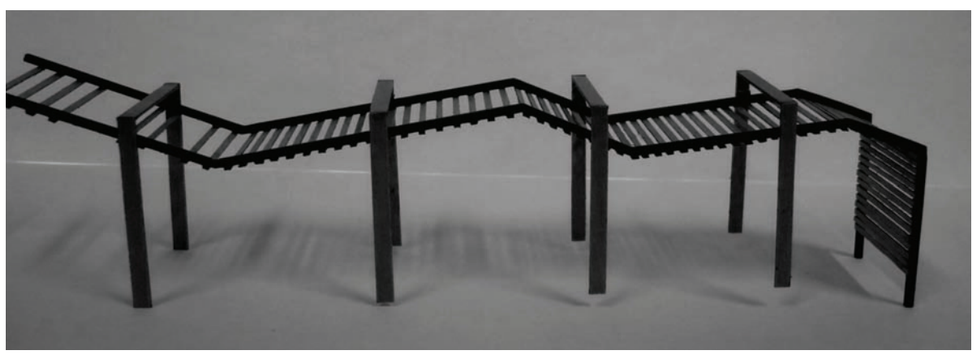
Testing out a ramp system shows that the ramp ends up taking up most of the site and resulted in co-ordination with the architects to provide wheelchair access through the buildings as an alternate option.

PERGOLA OPTION

SPICE GARDEN SECTION WITH PERGOLA OPTION
Fig. 140

SPICE GARDEN SECTION WITH PERGOLA OPTION
Fig. 141

Fig. 142



Study of a timber pergola for an early design of the the Spice Garden.

Fig. 143

Fig. 144

TIMBER PODIUM OPTION

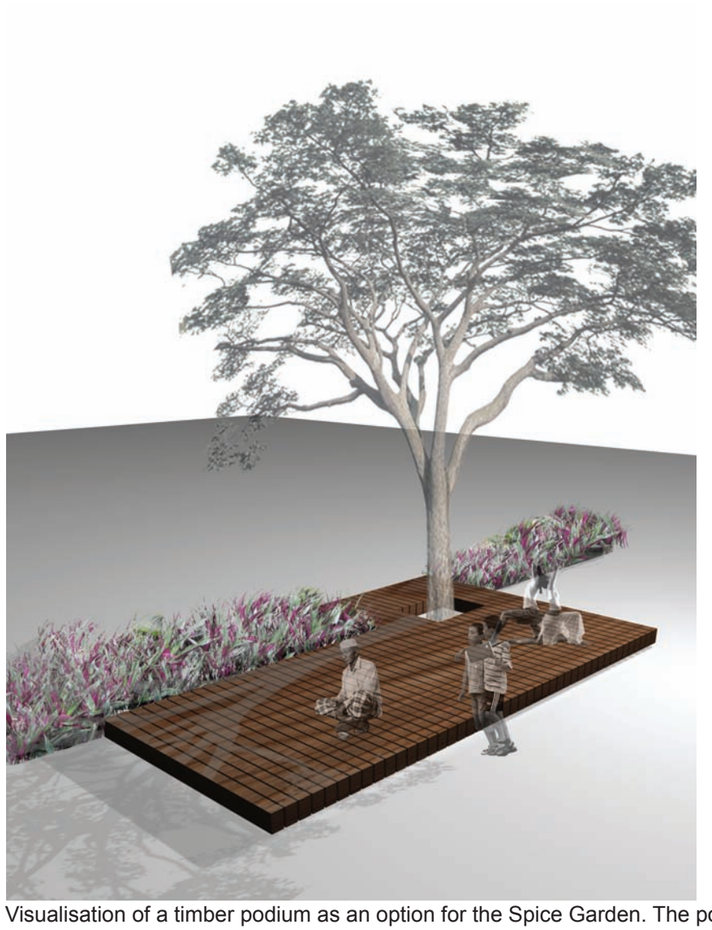


Fig. 145

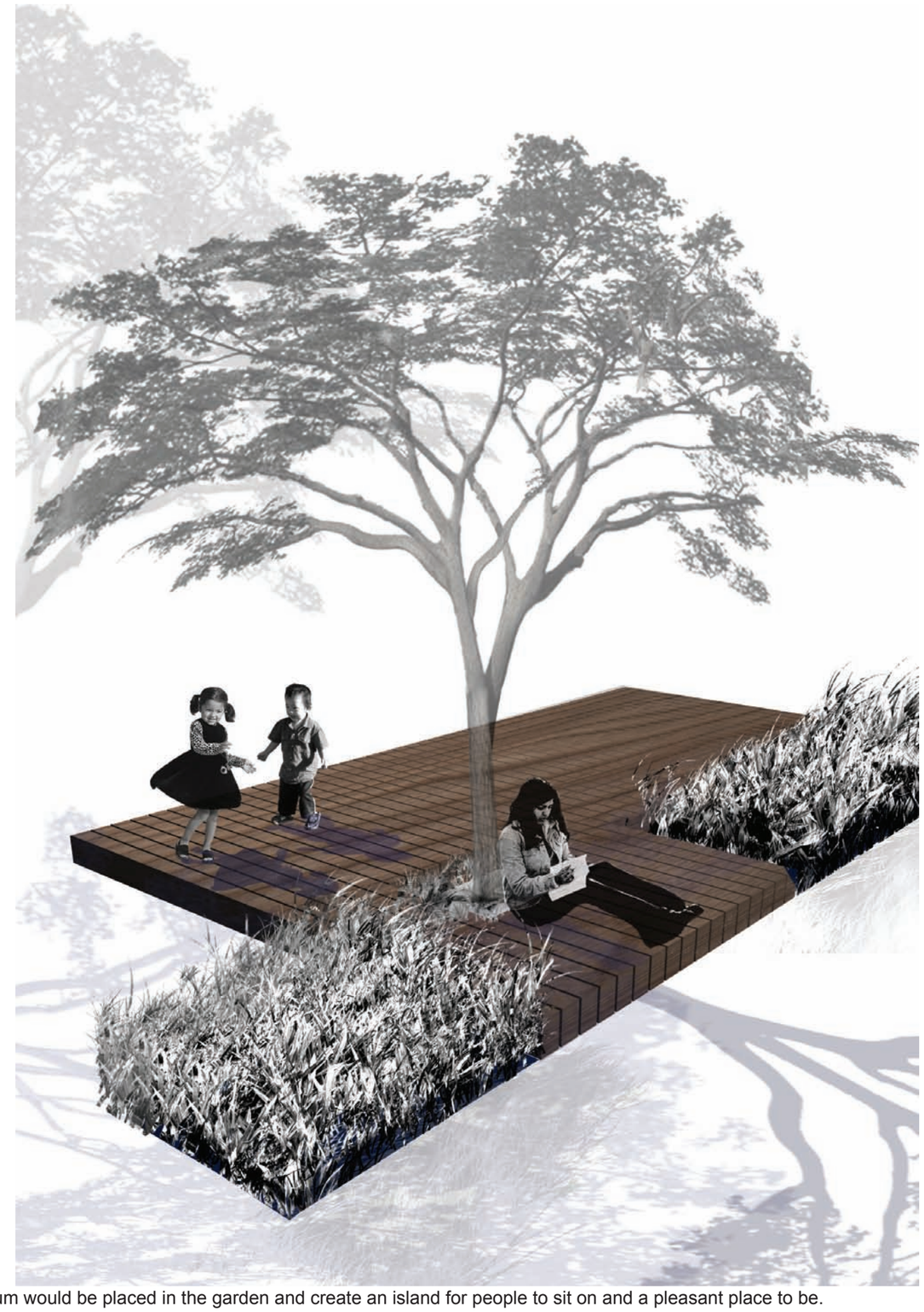


Fig. 146

Visualisation of a timber podium as an option for the Spice Garden. The podium would be placed in the garden and create an island for people to sit on and a pleasant place to be.

FURNITURE OPTIONS


Fig. 147

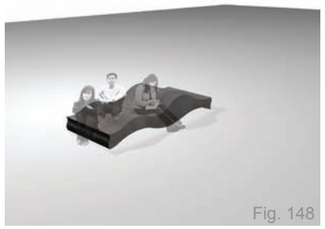


Fig. 148

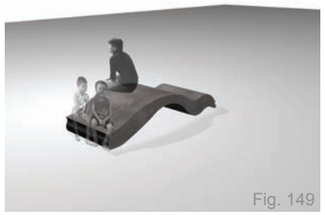


Fig. 149

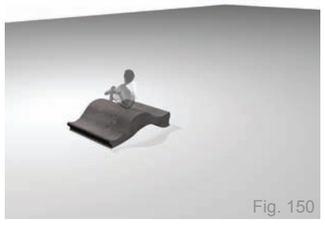


Fig. 150


Fig. 151


Fig. 152

Furniture option for the Waterfront Precinct with concrete modules that can be combined together to create a range of different combinations and seating options.

Fig. 153

Fig. 154

Long bench and movable timber seats as furniture options for the Waterfront Precinct .

Fig. 155