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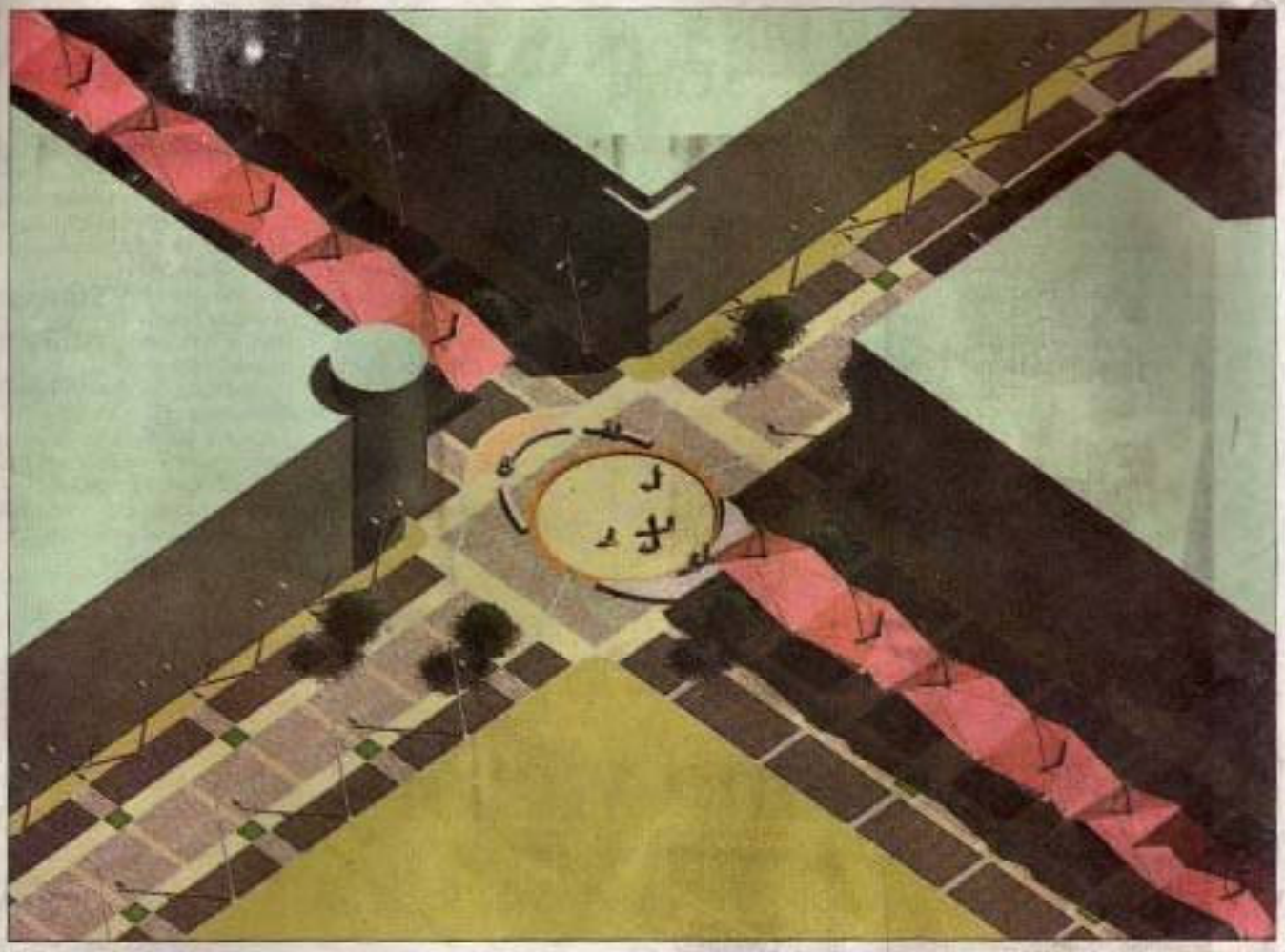
APPENDIX



TARGET AREA: An artist's impression of the area bounded by Rissik, Von Brandis, Jeppe and Market streets.

CBD set for night shopping

Property owners pledge to upgrade buildings in retail improvement district

BY ANNA COX

Joburg is set to get its own retail heartbeat – and the plan is to bring back night shopping.

The area bounded by Rissik, Von Brandis, Jeppe and Market streets has been declared a retail improvement district (RID).

Property owners have joined forces with the Joburg Development Agency (JDA), which has agreed to upgrade the streets and public space. They, in turn, have pledged to upgrade their buildings, including the shop fronts and building facades.

Reany Pitt, chairperson of the RID Board, said the idea is to make the district a target shopping area and restore it to a place where people want to shop and eat.

"We want to see night shopping back in the inner city. The idea is to have people going to eat at restaurants and coffee shops before or after shopping. There are huge residential developments going up and a whole new community being established," he said.

John Spiropoulos, of Kagiso Urban Management, which is facilitating the development, said property owners in the area, who had already established a central improvement district, wanted more done to improve the area.

"They had saved money over the years to invest in public space outside their buildings. A thorough investigation and detailed study was done, in parallel with the Inner City Charter, which identified this as one of the priority areas," he said.

The JDA then took the proposal to the Inner City Forum, which approved it.

The city agreed to pay for the upgrading of the public space and property owners agreed to fix the facades and building entrances.

Spiropoulos said the study found that the area was catering for those earning between R3 000 and R150 000.

"There are lots of lunchtime, white collar and weekend shoppers, as well as cross-border shoppers," he said.

Pedestrians were surveyed and it was found that 40% went there to shop, 15% to meet someone and between 20 and 25% were walking through to public transport. Almost 40% were from Soweto, with about 15% living in the inner city.

Among the problems identified were overtrading, crime, congestion, security, cleaning and a lack of parking for cars.

Kerk and Joubert streets are to be closed off to general traffic. Only delivery vehicles will be allowed in. A public space is to be created and the intersection of the two streets will be used for lunch-time theatre and other events.

APPENDICES

MOTIVATION

Cities around the world are expanding vertically as well as horizontally. With more and more people coming into the city everyday, we see the increases in the value of land space as well as living spaces.
Huge migration from rural regions to megalopolises will create a dramatic cultural and social crisis, with a loss of existing traditions and significant unemployment. Massive urbanizations will form random communities, severely deplete natural resources, exhaust urban infrastructures and transportation systems, and will increase air and soil pollution.

The report by the united nation in 2004 on City growth and development has shown some alarming statistics. 1950, 30% of people were living in urban areas, in 2003, that number had increase to 50%, and it is predicted that by 2030, 60% of population will be living in urban areas.

"It is expected that 60% of the worlds population will be living in cities by 2030, and more than 80% by 2050" (SA Hunter July, 2008:77). Similarly, according to city planners held recently in Johannesburg at the Planning Africa Conference, worldwide populations are expected to double within ten to fifteen years. (www.news24.com)

In the past few decades, environmental and social consequences of concentrated patterns of human activity in an environment have suggested that present living arrangements in western cities are unsustainable.

Thus, urban migrations is a current global trend which is beginning to have an enormous impact worldwide.

"The condition of the urban environment and how it is managed and used by its inhabitants are fundamental to human health and wellbeing. Many of the problems in cities today relate to poor residential and other environment, poverty, inequity, pollution, unemployment, lack of access to jobs, goods and services." (Barton, 2000:1)

Many migrants who come into the city find it difficult to live in the city, since finding economical accommodation is often hard. Those that do find a place to stay are places of illegal housing and even squatting, which frequently implies poor living conditions with poor unmanaged facilities.

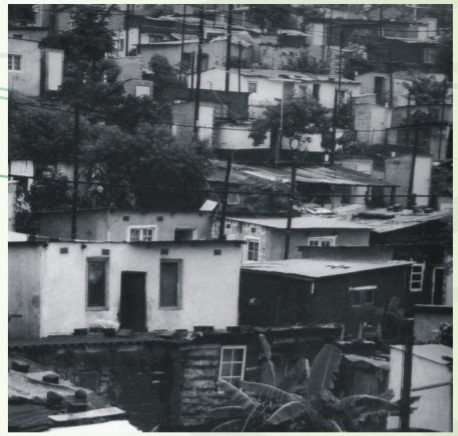
In addition, these migrants find it hard to find jobs and as a result there is also the concern of malnutrition. By reviewing the possibility of optimising land use for agriculture, multiple level farming, and low cost accommodations, this will hopefully alleviate rising food costs and hunger, poor living conditions and unemployment.

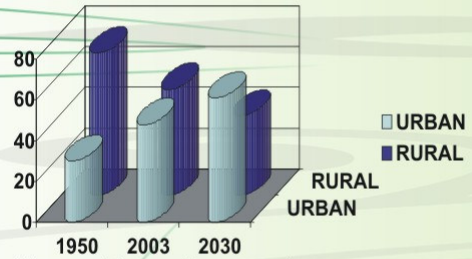
Though there are a number of Non Government Organisations (NGO) which aim to help alleviate these migrants by providing more habitable spaces, these housing schemes still require rental costs. Since these migrants are unable to find work, they are also unable to pay for rent and therefore cannot afford to live in decent living quarters.

"The prevalence of the medical model of health, which focuses on the individual and the treatment of illness and dominated the latter part of the twentieth century, is beginning to shift to the social model, in which health is the result of a series of socioeconomic, cultural and environmental factors, housing condition, employment and community."
(Barton, 2000:10)

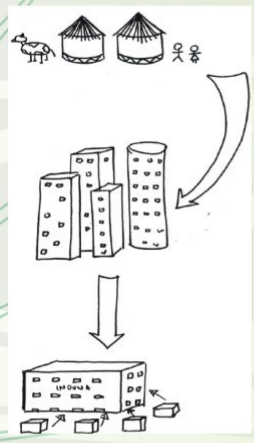
Accommodation should be closely related to transport interchange, so the intervention should have close ties to various modes of transport in and around the city to provide easy accessibility. Areas which would be ideal would be taxi ranks or bus stations.

In the past year food and petrol prices have increased, and the rand has depreciated, thus the plight of rising food costs and the need to provide for work has become the motivating force for this thesis. This thesis, therefore, will aim to combine these two issues for job creation, food production, accommodation and skills training the lack thereof.





Urban population growth versus rural.
Adapted from United Nations report


Migration of people from rural to cities

PROPOSITION

"Quality of life" and "urban regeneration" is the crux of this thesis. An interest in the way in which space and people interact and relate inspired an investigation of urban agriculture. The aim is to give rural people who are migrating into the city, a place, (through the proposal) of a communal farming and a housing model.

Agriculture, more specifically the various types of agriculture along with permaculture and how is it integrated with architecture will be the driving force with which to explore the idea or urban regeneration and improved quality of life. The use of spaces and how these spaces become spaces of production in terms of maximising areas for local vegetative farming will become important to the program.

This thesis began with an interest in equality for all, whereby many of the less fortunate who were 'promised' RDP housing for over a decade now, are still waiting for their subsidised homes.

"Quality of life" is a concept which began in the late 1960's according to Proshansky (Frick *et al.*, 1986). Although "quality of urban life" has different connotations to researchers of different fields but more importantly, it has a common general meaning that underlies all the more precise or specific uses of the term. "Quality of urban life is always concerned with whether people live well or poorly. Is life easy or hard? Are people satisfied or dissatisfied? Does the city help them realize their purposes and desires, or does it thwart them?"

It has emphasis on adequate services for those who live in the city, to concerns with economic matters including employment, income, and future economic development, to concerns with the level of satisfaction, or family life and other social interactions.

We see the effect the urban environment plays on one's health and ultimately how it may affect the quality of life for city residents.

As stated before, the main themes of "Quality of life" and "space" are the driving motivation for this thesis. Quality of life relies on the close co-operation between the social and engineering sciences. Spaces, more specifically, productive spaces - that are used productively to ensure that such a project is feasible.

To make the transition toward a sustainable society, it is imperative that we take responsibility for our own lives and meet our basic needs for food, shelter, energy, gainful employment, and supportive community.

The architectural intervention is to be an urban agriculture centre which comprises of 2 main components:

-**Training or skills development facility** for educating on agriculture,

-**Living typology-** apartments which addresses the need for accommodation.

This with much needed land makes for a urban agriculture farming model which will address the need for locally grown foods with costs of living increasing.

Cities are the main territories for interventions and planning strategies aimed at getting rid of hunger, poverty and improve livelihoods.

One such a strategy used to combat such issues is Urban Agriculture.

Advantages:

- Provide food security and income: it plays a significant role in providing a measure of food security and income for a rapidly increasing urban population.

- Create stronger local economies by creating jobs: localized food production in urban areas create stronger local communities by creating jobs. Researchers indicate that unemployed populations in large cities and suburban towns would decrease if put to work by local food movements.
- Meagre income: Food grown

- Energy efficiency: the current industrial agriculture system is accountable for high energy costs for the transportation of foods. The energy used to transport food would be greatly decreased if urban agriculture could provide cities with locally grown food.

Quality of food: urban agriculture supports a more sustainable production of the food that tries to decrease the use of pesticides. This also eliminates the need for preservatives, as their products do not need to travel long distances.

The success for such a project is realised by reasonable allocation of land per user as opposed to urban density scheme. Such schemes will prove to be sustainable socially and economically through maintenance and ownership taken by the people.

ISSUES

Spaces
The concept of space is quite a broad topic, therefore this thesis specifically looks at two main types of spaces, namely: threshold and public/private spaces

Threshold spaces
The idea of threshold was the first issue chosen as the connection movement and place is realized through the threshold. People are moving, be it from home to work, or visiting a friend. The fact is there is a link or connection between places. For this reason, the issue of threshold is looked at.

Public and private spaces
The arrangement of public and private spaces, both on an urban as well as domestic scale and how these spaces relate both to the individual and to the public.

Network society
Neighbourhoods are a network of people on a social level, the exploration and establishment of neighbourhood/community based on a production level would inform a programme which in turn would inform the author on a design.

Permaculture
Permaculture and the important impact it has on design and architecture

Agriculture
The importance of agriculture has grown given it has social and economical impact on society.

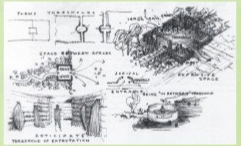
Urban Agriculture
Urban agriculture and the growing need to incorporate it in any design scheme and development for that scheme to be successful.

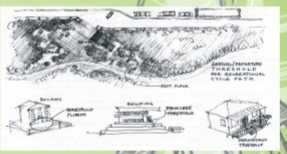
Urban Agriculture
Urban agriculture and the growing need to incorporate it in any design scheme and development for that scheme to be successful.

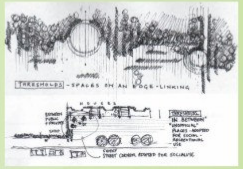
Aqualculture
How can livestock, in particular that of fish can be incorporated with agriculture

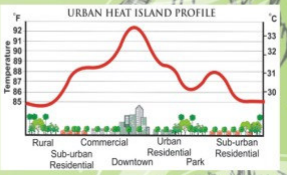
Hydroponics
The use of hydroponics when land is not available particularly in the city.

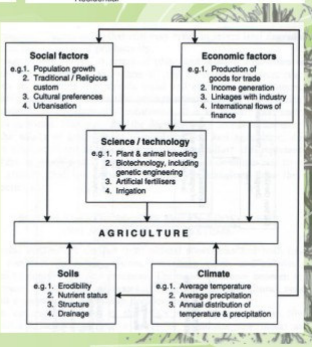
Aeroponics
When neither land nor medium is available for farming, how aeroponics can be utilised











PERMACULTECTURE - GROWING FOR THE FUTURE MOTIVATION, PROPOSITION AND ISSUES
Creating intervention for the rapid new urbanisation of the Johannesburg inner city.
CLINTON FOK. STUDENT NUMBER: 9802365P

APPENDICES

SITE CHOICE

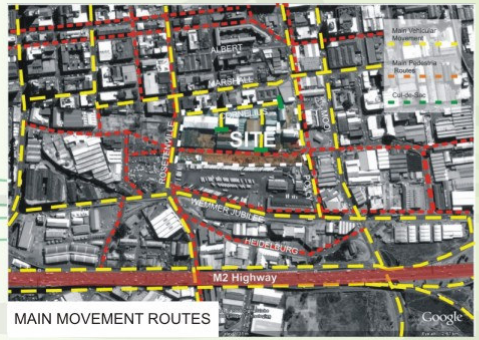
The site is an abandoned open green field next to the Metropolitan bus depot. The field in essence is a 'lost space' in the city and I felt this site addressed the issues I wanted to explore and offers potential growth for the future. The site lies behind an number of industrial buildings, 1 of which is an closed down furniture manufacturer which has now been let out informally to illegal immigrants. The site is located between the city CBD outlying areas. The connection to the main highway M2 is within 1km of the site and an existing informal taxi rank across the street on the west side of the site.

There are a number of public amenities in the surrounding context such as primary school, fire station, ministry, social housing and even a bath house. These amenities may help create a self-supportive community all of which are in close proximity

GREEN SPACES

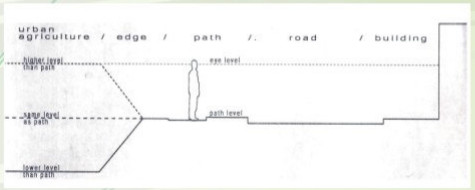
URBAN FABRIC

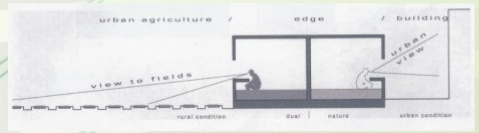
BUILDING DESIGNATION

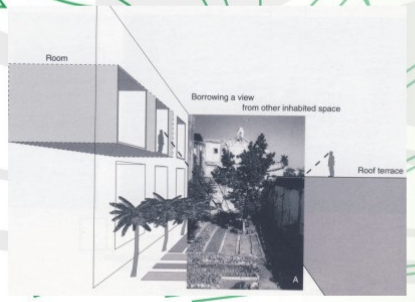


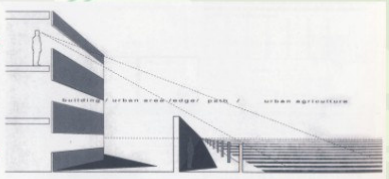
MAIN MOVEMENT ROUTES

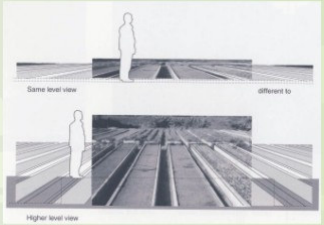
DESIGN CONCEPT











Programme & Schedule

After looking at a number of case studies, the programme which I feel to be worth exploring further consists of 4 aspects:-

1: Residential
2: Farming
3: Market space
4: Skills training

The idea is providing housing and farming for both personal and community. Creating community garden space. And how that can allow community to engage with their surroundings.

Residential	Single men Single women Single women with child Couples/family Elderly	
Farming	Private -subsistent Community - subsistent - retail	
Market space	Selling	
Skills training	Playing Teaching Gathering space Processing of foods	

The programme of the scheme must respond to the argument of improving the quality of lives of people but at the same time the programme must respond to the context of the site.

The scheme will be a mixed-use development; this will help to create a sustainable development.

An important component of the design will be the agriculture influence on the whole scheme. This will help with the connection of the various components of the design in a coherent manner. By connecting the various components, the scheme will operate successfully on a social and economical level.

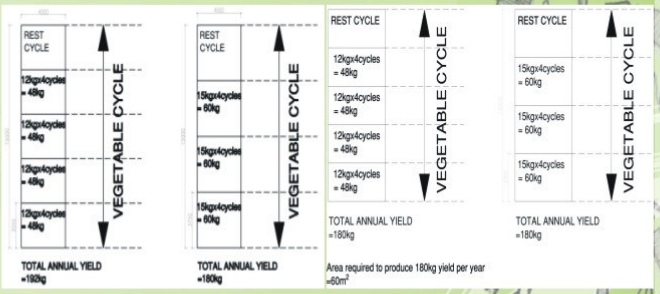
The **farming component** occurs both on the residential apartment blocks as well as on the land itself. Since the land only allows for a certain amount of vegetable to be grown, the inclusion of greenhouses to the scheme will ensure that productivity is not a problem. Various types of farming ranging from hydroponics to aquaculture will help to realise such a scheme to be successful.

The following information is the amount of space / land which is required by a person and is based on a person consuming vegetables. Such information is derived from the Royal Institute of Agriculture.

500g (daily)
3,5kg (week)
15kg (month)
180kg (annual)

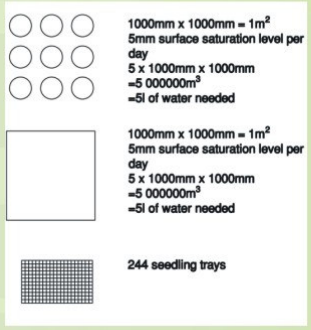
Standard Agriculture
Root vegetables: 300g/sqm x 4 cycle = 1,2kg
Leaf vegetables: 750g/sqm x 4 cycle = 3,0kg
Ave production 1kg/sqm

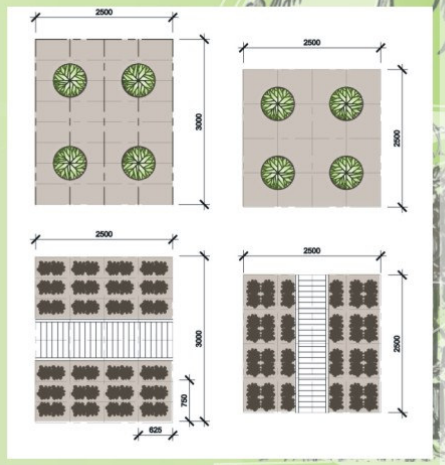
Area of land needed per person = 60sqm
4 x 15 = 60sqm



Hydroponics
Root vegetables:
300g/sqm x 4 cycle = 1,2kg (x 4 or 9)
Leaf vegetables:
750g/sqm x 4 cycle = 3,0kg (x 4 or 9)
Ave production 1kg/sqm (x 4 or 9)

Area of space needed per person = 7sqm

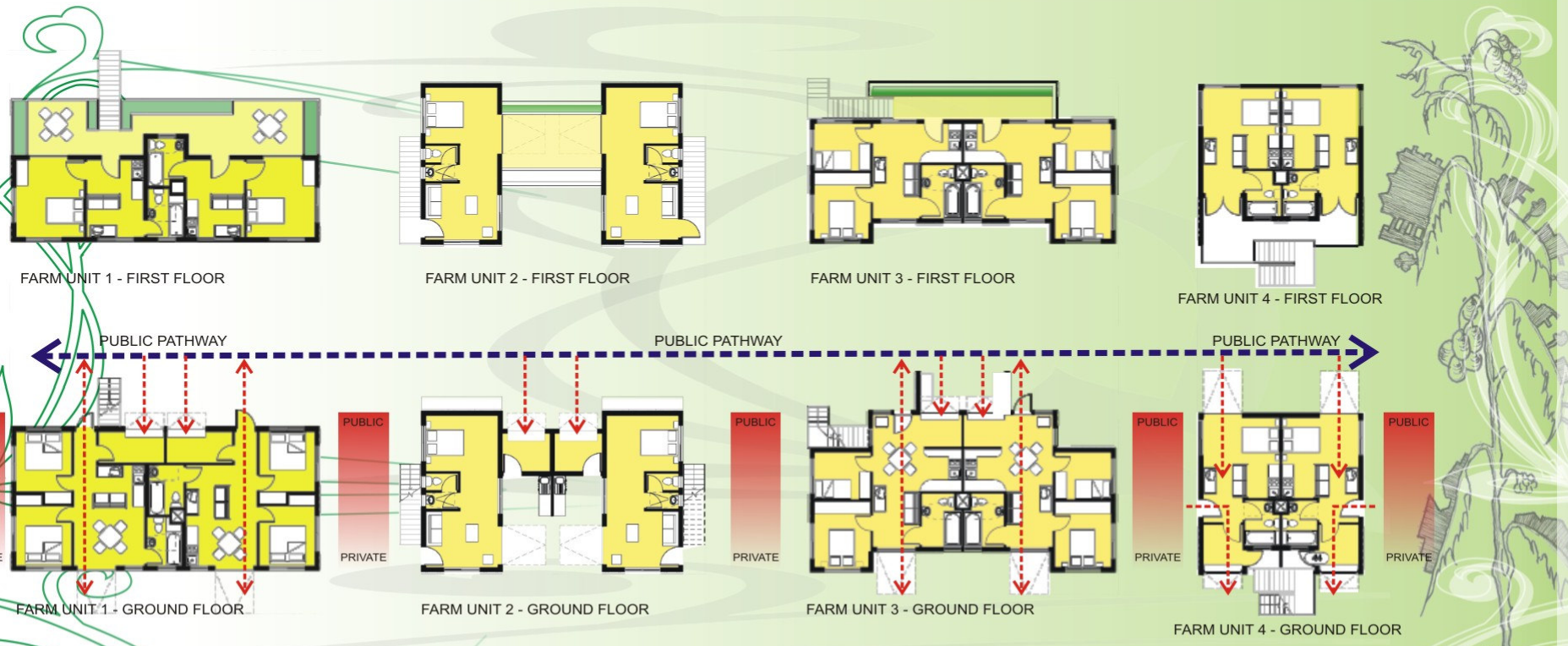


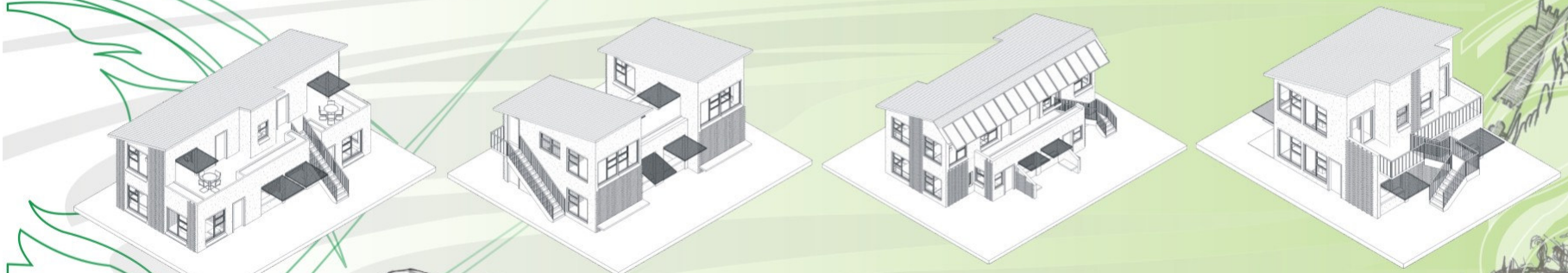


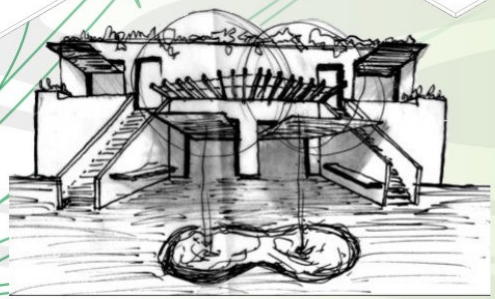
PERMACULTECTURE - GROWING FOR THE FUTURE SITE ANALYSIS AND DESIGN CONCEPTION

Creating intervention for the rapid new urbanisation of the Johannesburg inner city.

CLINTON FOK. STUDENT NUMBER: 9802365P







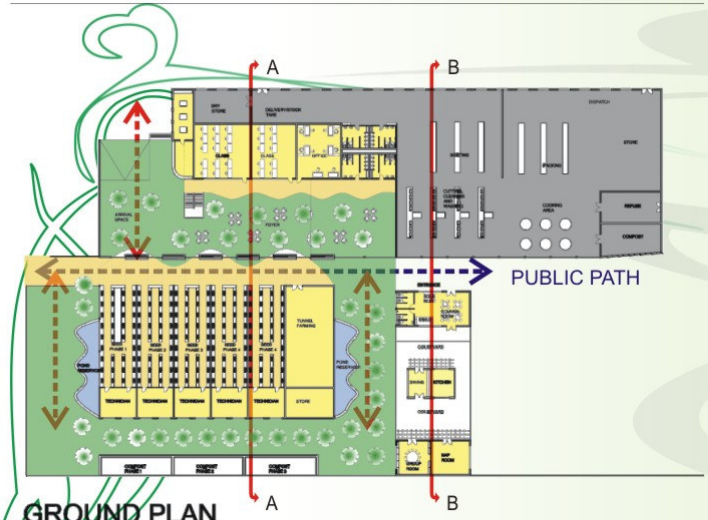
PERMACUL[TEC]TURE - GROWING FOR THE FUTURE

Creating intervention for the rapid new urbanisation of the Johannesburg inner city.

FARMING UNIT TYPOLOGIES

CLINTON FOK. STUDENT NUMBER: 9802365P

APPENDICES



GROUND PLAN
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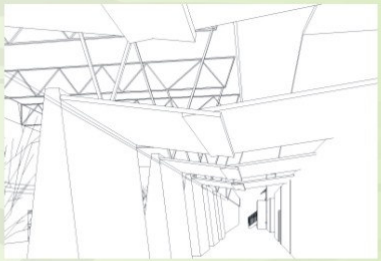
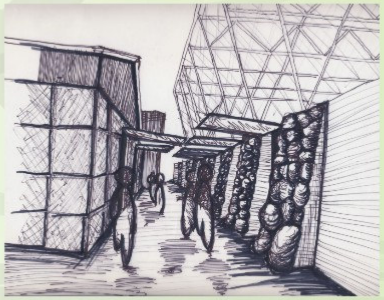
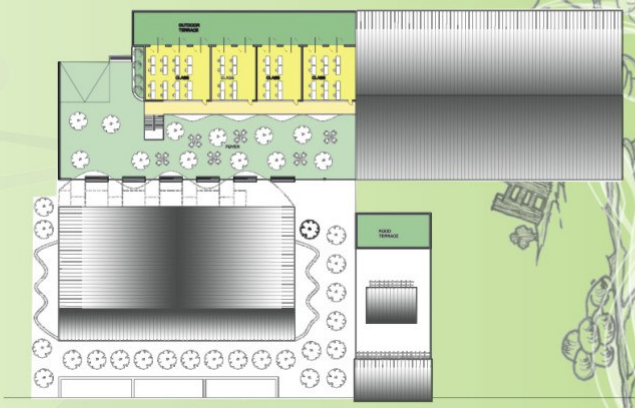
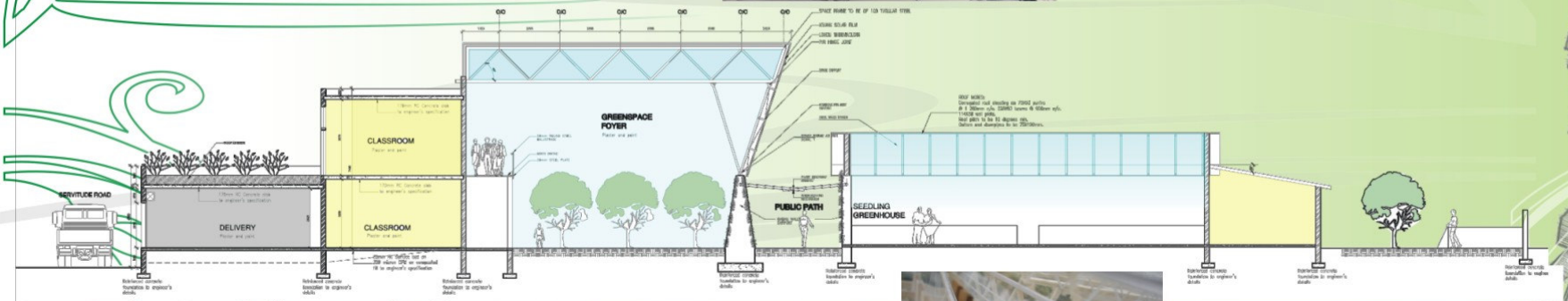




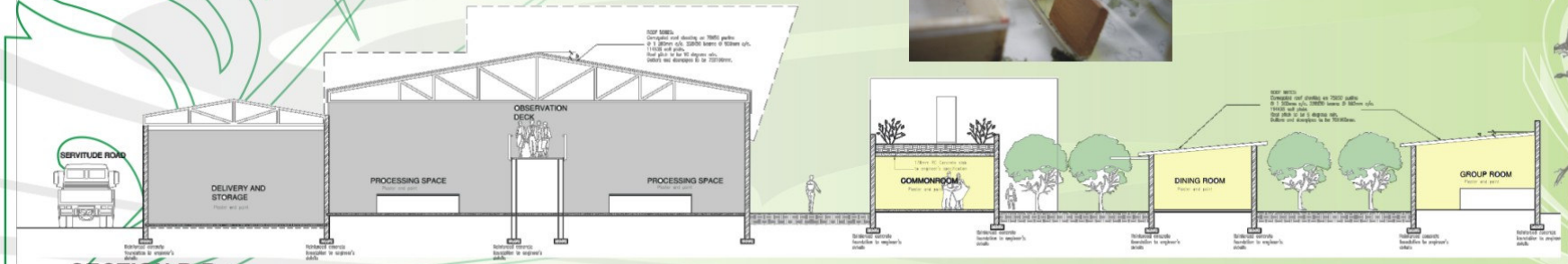
Interlocking glass flaps connecting green foyer space to seedling greenhouse



FIRST FLOOR PLAN
SCALE 1:400



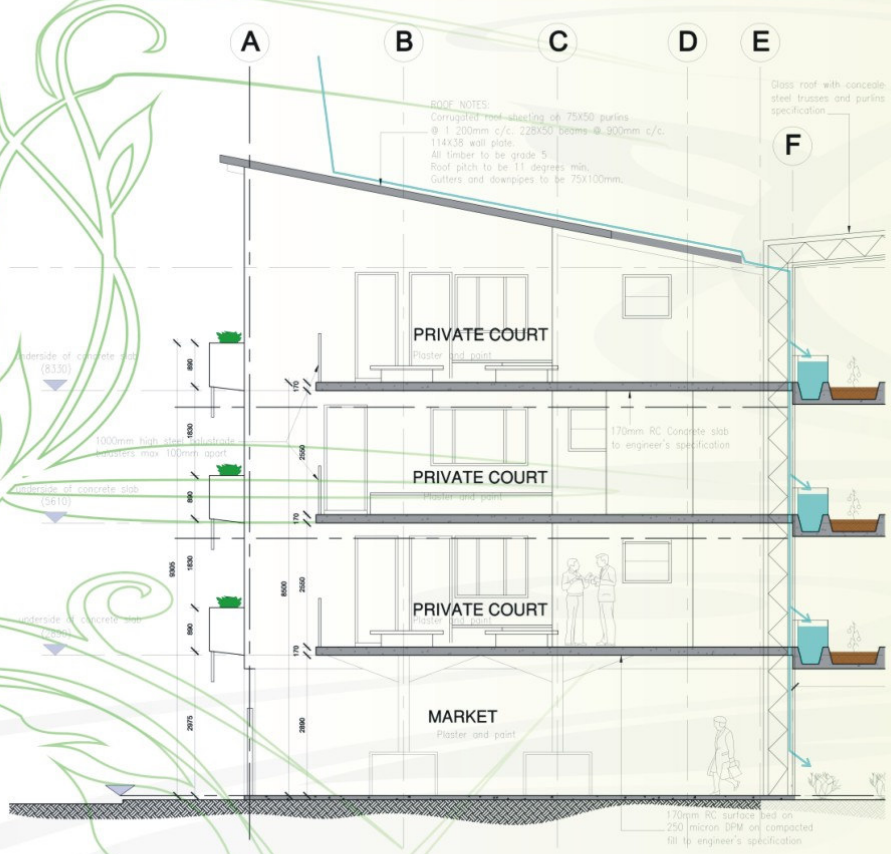
SECTION A-A
SCALE 1:100
Section indicating the open green foyer space connecting the facility to the public path

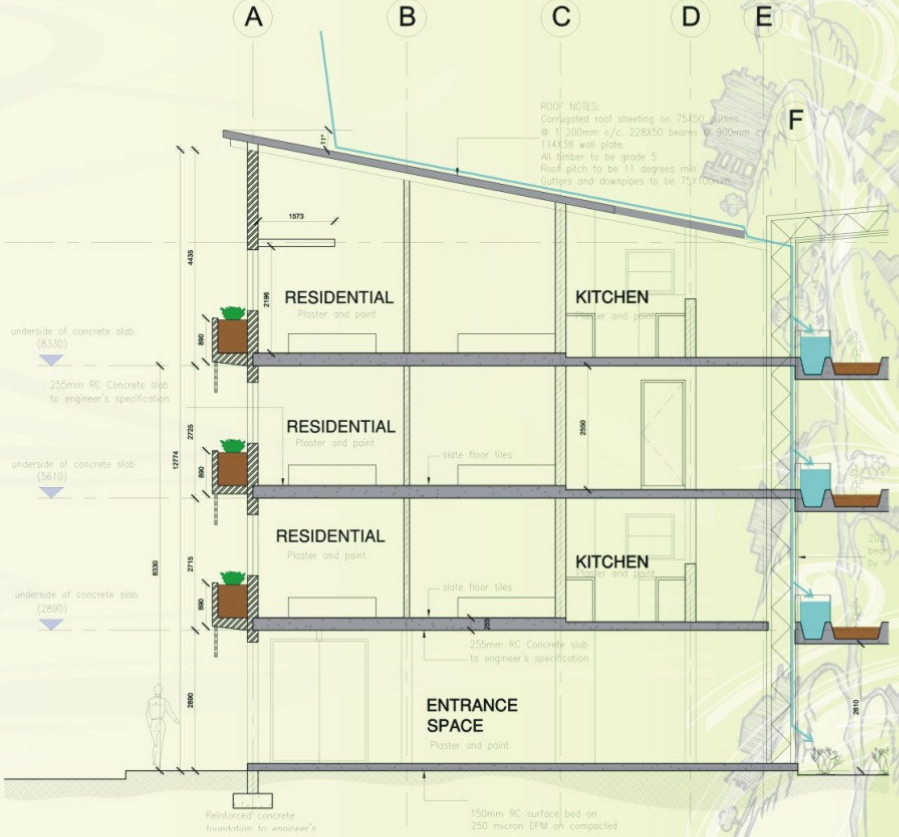


SECTION B:B
SCALE 1:100
Section of processing plant reusing the existing building.

PERMACULTURE - GROWING FOR THE FUTURE
Creating intervention for the rapid new urbanisation of the Johannesburg inner city.

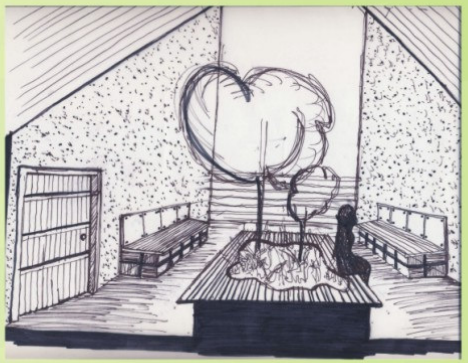
FARMING TRAINING FACILITY
CLINTON FOK. STUDENT NUMBER: 9802365P





Brick and Concrete construction reflect the existing urban fabric with the addition of green houses as the focus of healthy living and improvement of quality of life.

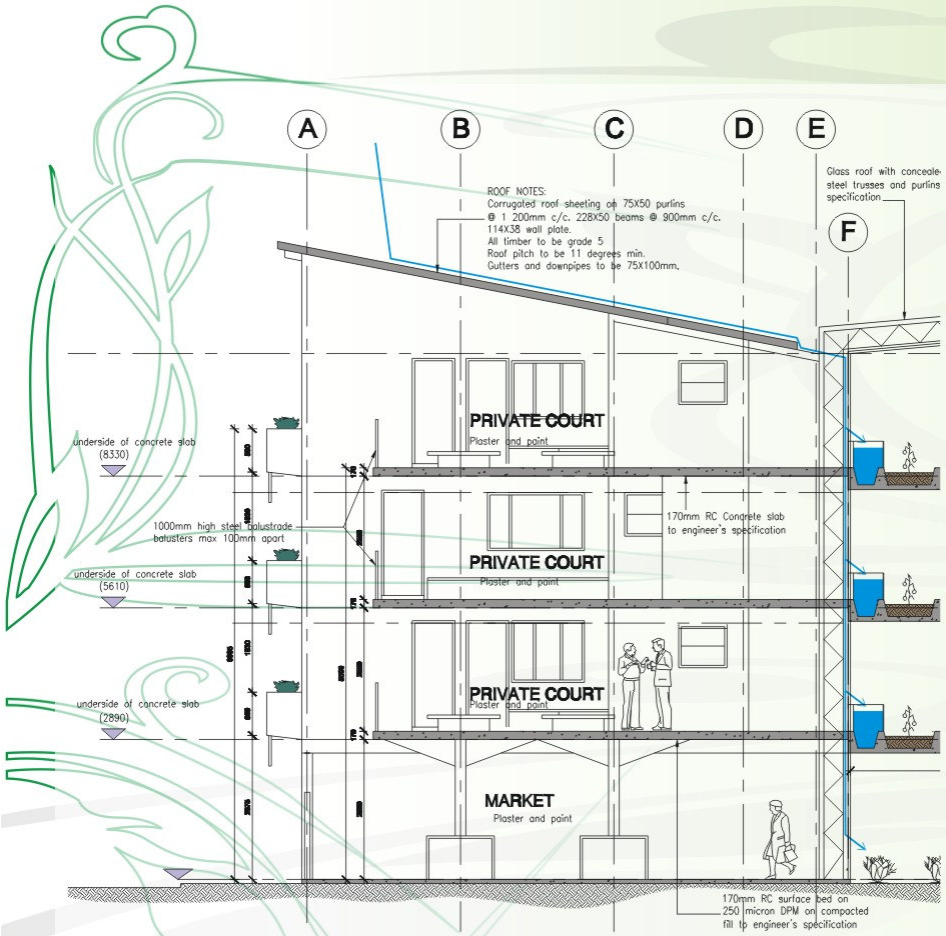
Common courts shared by units offers spaces of interaction and promote community living.

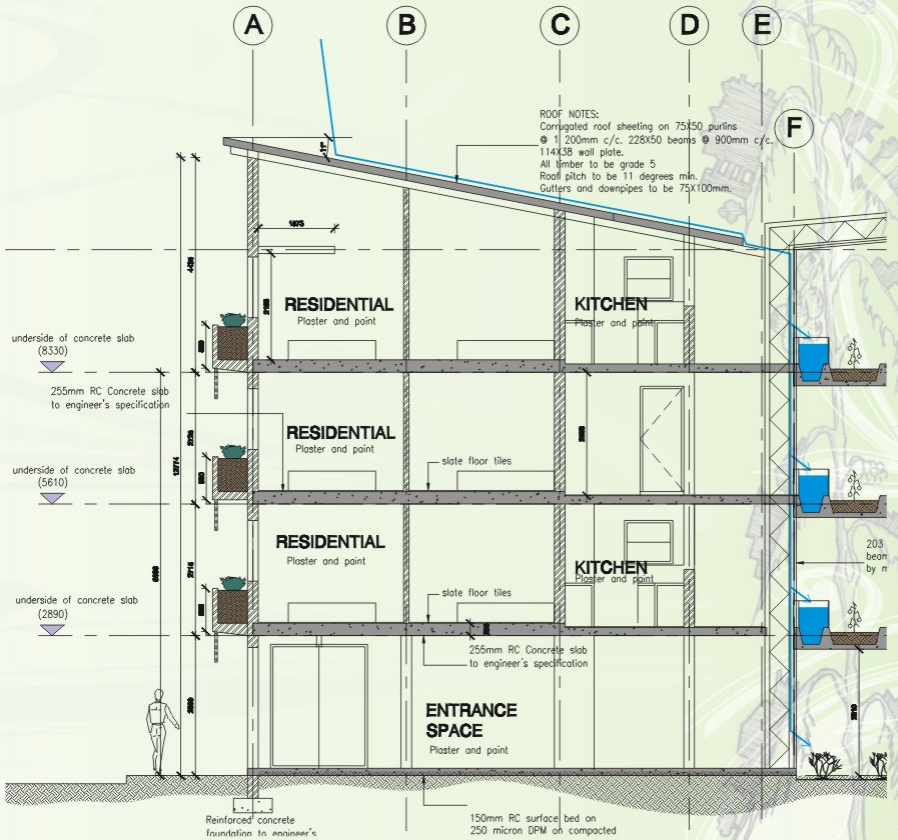


PERMACULTECTURE - GROWING FOR THE FUTURE STRIP SECTION : RESIDENTIAL BLOCK

Creating intervention for the rapid new urbanisation of the Johannesburg inner city.

CLINTON FOK. STUDENT NUMBER: 9802365P





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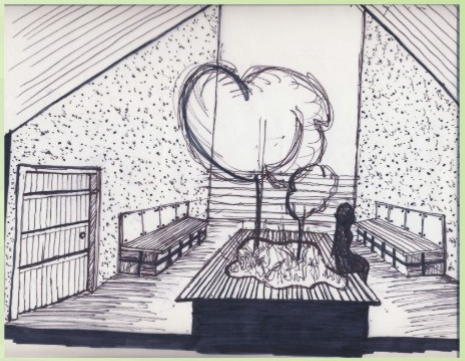


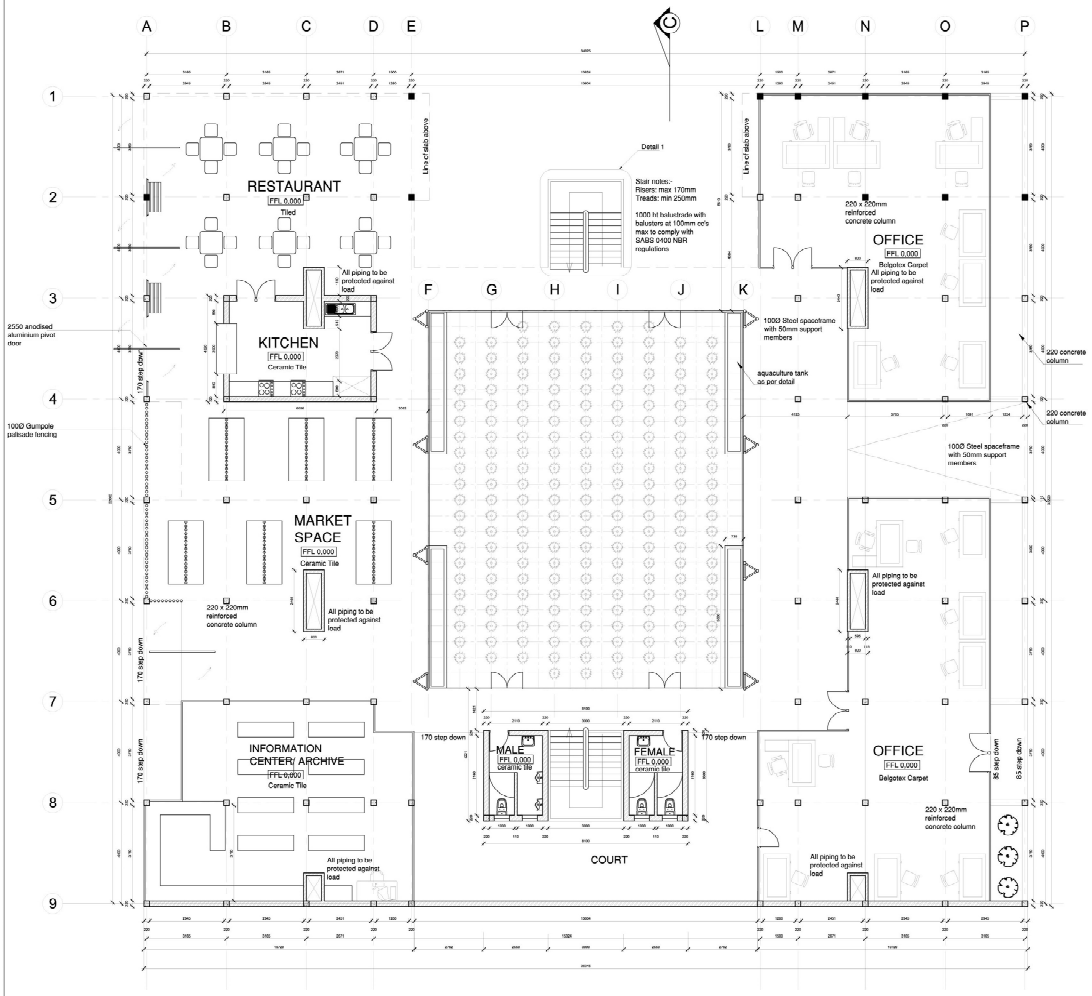
PERMACUL[TEC]TURE - GROWING FOR THE FUTURE

Creating intervention for the rapid new urbanisation of the Johannesburg inner city.

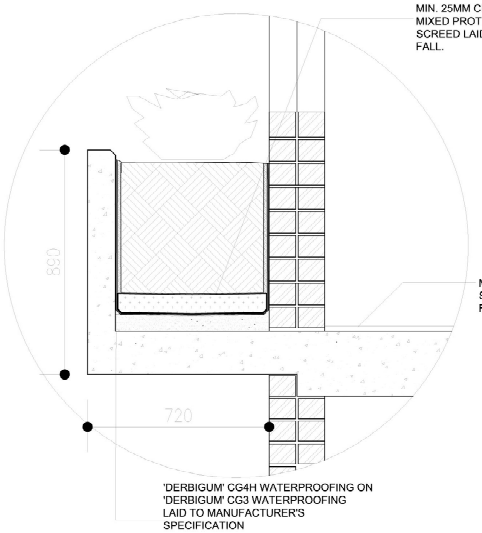
STRIP SECTION : RESIDENTIAL BLOCK

CLINTON FOK. STUDENT NUMBER: 9802365P

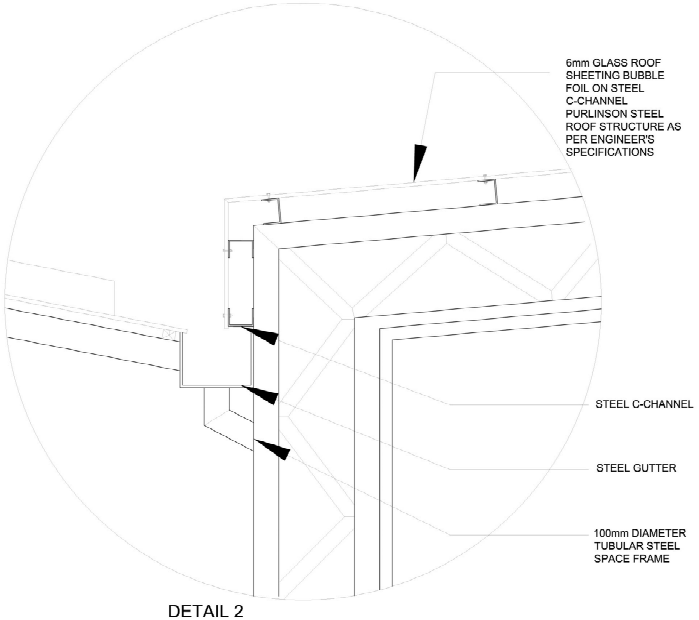
APPENDICES



GROUND FLOOR PLAN
Scale 1:100



DETAIL 1
Scale 1:10



DETAIL 2
Scale 1:10

GENERAL NOTES:

A. FIGURED DIMENSIONS TO BE TAKEN.
B. THIS DRAWING IS NOT TO BE SCALED.
C. ALL LEVELS SHOWN ARE FINISHED LEVELS, UNLESS OTHERWISE STATED.
D. ANY DISCREPANCY MUST BE REPORTED TO THE ARCHITECTS BEFORE THE WORK IS PUT IN HAND.
E. CONTRACTORS TO SET OUT ONE COURSE OF BRICKWORK AND DOOR AND WINDOW FRAMES IN TYPICAL SECTIONS FOR ARCHITECTS' APPROVAL, BEFORE PUTTING WORK IN HAND.
F. AIR BRICKS AS INDICATED ON 1:50 PLAN.
G. WINDOW DRENCHERS ABOVE ALL WINDOWS WITHIN 3M OF FIRE ESCAPE STAIR

DRAINAGE NOTES:

A. ALL PLUMBING AND DRAINAGE WORK AND INSTALLATION OF SANITARY FITTINGS TO COMPLY WITH THE NATIONAL BUILDING REGULATIONS.
B. PROVIDE I.E.'s TO ALL BENDS AND JUNCTIONS WITH SUITABLE MARKERS AT GROUND LEVEL.
C. MINIMUM FALL TO ALL DRAIN PIPES TO BE 1:60.
D. PROVIDE APPROVED RESEAL TRAPS TO ALL WASTE FITTINGS, TO COMPLY WITH NATIONAL BUILDING REGULATIONS.
E. PROVIDE A.E.'s TO FOOT OF ALL SOIL STACKS.
F. I.E.'s TO WASTE PIPES TO BE FULLY ACCESSIBLE AT ALL TIMES.
G. ALL WASTE FITTINGS ON THE SINGLE STACK SYSTEM TO HAVE 75mm DEEP-SEAL RESEALING TRAP AND AN APPROVED VENT VALVE WHERE REQUIRED.
H. DRAINS UNDER BUILDINGS TO BE ADEQUATELY PROTECTED AGAINST LOAD.
I. PROVIDE ADEQUATE ACCESS TO WASTE AND SOIL PIPES FOR CLEANING, REPAIRS, ETC.

NO.	REVISION	DATE	DFLT
1	Issued For Construction	01/11/2008	C.F.

ISSUED TO | DATE, REVISION, NO. OF PRINTS

PROJECT TITLE
Permacul[tec]ture

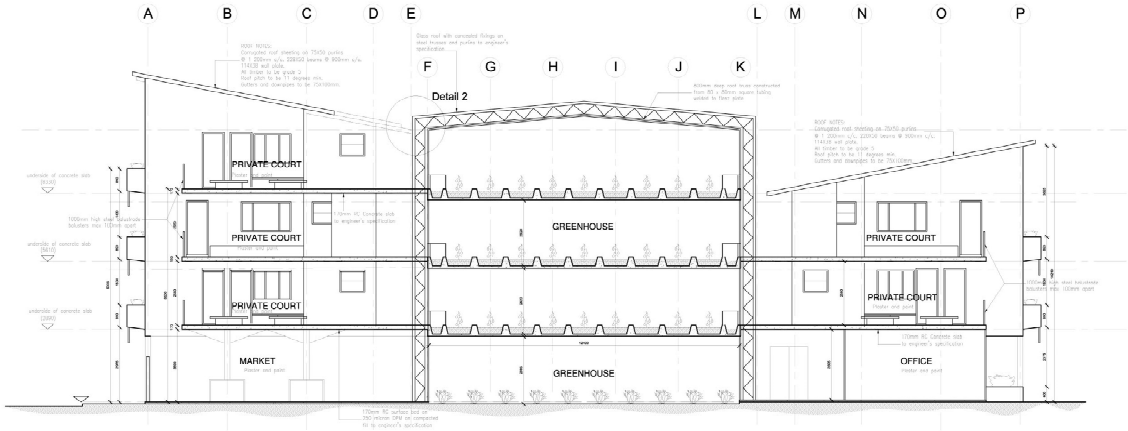
DRAWING TITLE
RESIDENTIAL BLOCK
GROUND FLOOR PLAN
DETAILS

SCALE	COM NO
1:100	

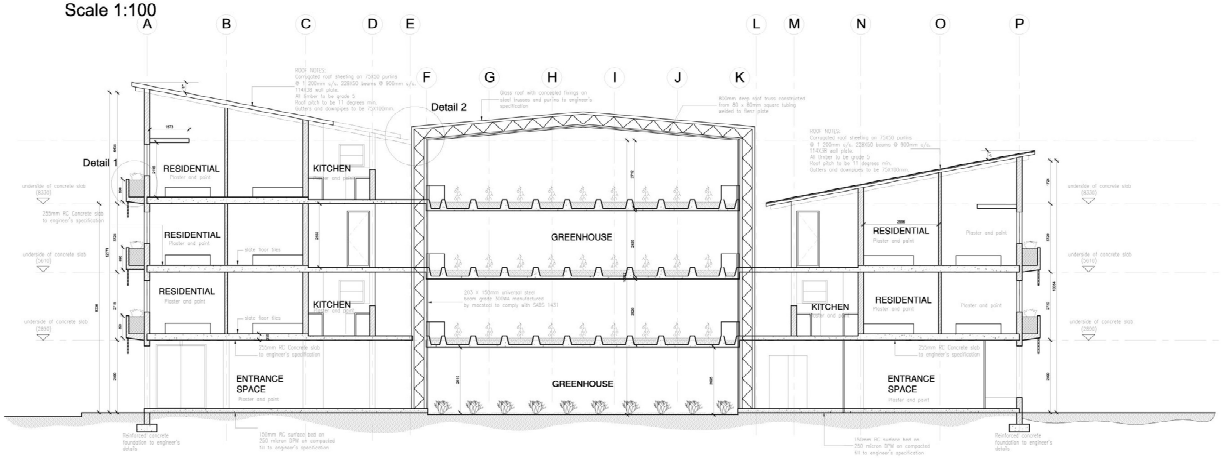
DRAWN	DWG NO	REV NO
C.F.	9883/1043-01	1

DATE
NOVEMBER 2008

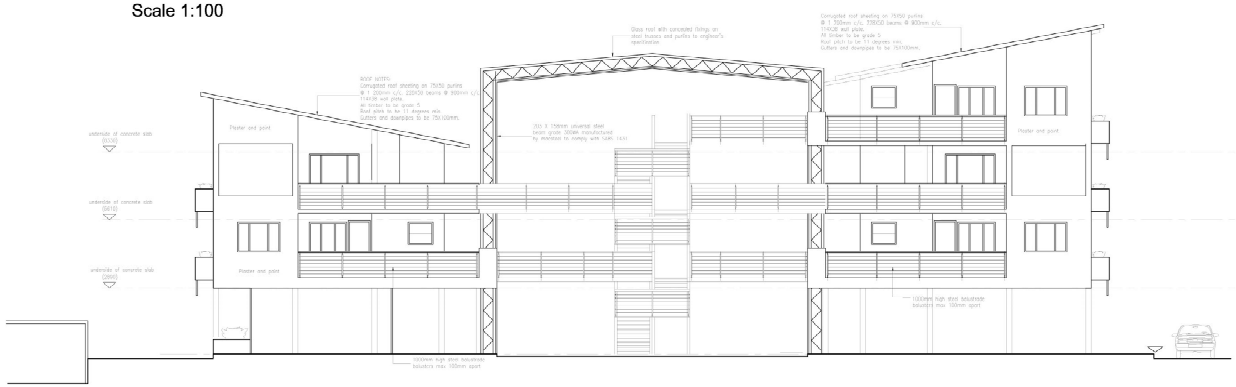
APPENDICES



SECTION A-A
Scale 1:100



SECTION B-B
Scale 1:100



NORTH ELEVATION
Scale 1:100

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1	Issued For Construction	01/11/2008	C.F.

ISSUED TO | DATE, REVISION, NO. OF PRINTS

PROJECT TITLE
Permacul[tec]ture

DRAWING TITLE
RESIDENTIAL BLOCK
SECTION AND ELEVATION

SCALE	COM NO
1:100	

DRAWN	DWG NO	REV NO
C.F	9883/1043-02	1

DATE
NOVEMBER 2008