

CHAPTER 4

Typological

Precedent

Farraday Muti Market

Functional Precedent

Warwick Junction

Tectonic Precedent

Gugulethu Central Meat Market

Precedents

Farraday Muti Market

Location: South of Johannesburg CBD
Architect: Albonico and Sack Architects and urban designers
Date: 1996

The Muti Market in Johannesburg's Faraday Street is active throughout the day with people buying and selling herbs and animal skins.

The Market is situated in city centre and has become an energetic hub of healing and socializing. (Southafrica.net, 2014)
There are many consulting rooms, each with a doorway that is only 1.6m high.

They are built like this to force clients to stoop as they enter. This is an attempt to recreate the traditional way of entering a healer's hut.

It gives the space a sense of ceremony, and by stooping you are also showing reverence for the healer and indicating that you are ready to submit to his or her wisdom.

The market has given a home to the sangomas (traditional healers) who used to trade out in the open beneath the highway a few blocks from where the Faraday Muti Market is now located.

This has formalized their presence and has allowed them to make a decent living doing what they love. And the presence of the nearby Faraday taxi rank means ease of access to customers coming from all corners of South Africa.

(Southafrica.net, 2014)
The FarradyMuti market is thus an excellent example of how the traditional herbal market is defined and structured to suit not only the herbalists but the public as well whilst still contributing to the surrounding area's social and economic growth.

The elements required to facilitate such an intervention in Mabopane will largely be based on these parameters and approaches taken.



Figure 41: Farradymuti market with lockable stalls, Johannesburg CBD, By artatwork



Figure 42 : Farrady covered mutimarket, Johannesburg CBD,



Figure 43 : Farrady covered mutimarket, Johannesburg CBD,

Warwick Junction-Urban Renewal Project

Architect: MA Gafoor, Kooblal and Steyn
Location: Berea, Durban 2001
Date: 2001

The Warwick Junction mentioned before is part of an even greater project, including the Durban Point Waterfront Development reaching Bridge City and the Moses Mabhida Stadium. These project's main goal is to kick-start an urban renewal strategy focused on the upliftment of the city's socio-economic elements.



Figure 44: Cad model of warwick junction, By archicadsa

The junction is one of South Africa's busiest transport and commercial nodes. Despite that it is situated in a rundown area of town it is still the most energetic and vibrant part of Durban perfect for a renewal initiative. Close to 60% of the city's informal traders gather at Warwick junction to cater and thrive off the 450 000 people that pass through it each day whether by foot, bus, train or taxi. The market also includes an herbal market consisting of 500 stall keepers and a broader network of almost 14000 herbalists outside the market area. (Veldsman, 2006)

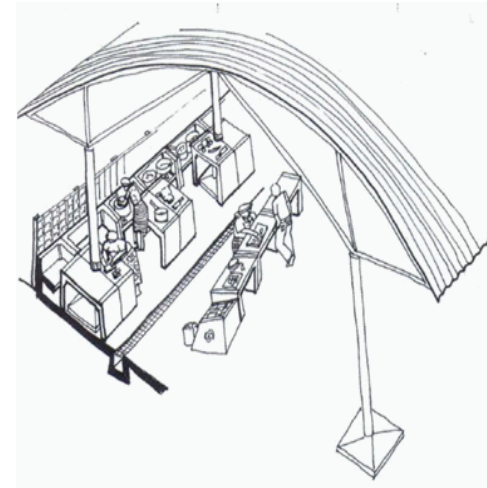


Figure 45 :Illustration of Warwick junction market area, by D. Veldsman, 2006

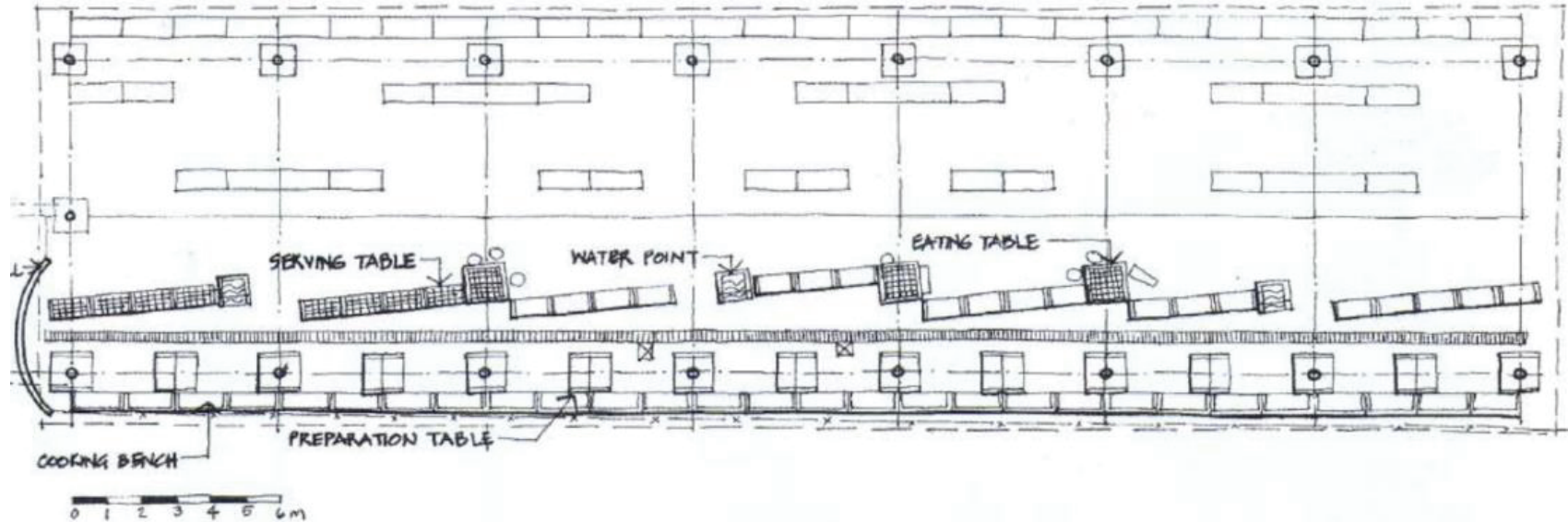


Figure 46: Plan of Warwick Market, by D velsman2006

Warwick junction has been praised internationally for its urban renewal approach and strategies and has become a benchmark for future projects situated in the same type of context. Thus it is chosen as one of the main precedents to base the proposed thesis project in Mabopane on. The way in which the differential space is defined and articulated at Warwick junction gives great insight into the possibilities of what public space in the African context can become if approached in the correct manner. Further more highlighting the importance of public space and the provision of it in any proposed intervention.

Gugulethu Central Meat Market

Architects: CS Studios

Location: Gugulethu, Western Cape

Date: 1966-1998

In 1994, it was decided by government to proceed with the development of the Gugulethu Central Market as the first of the small business development initiatives.

The Central meat Market site is located in Section 3, Gugulethu, and is surrounded by hostels and informal shelters. The site forms a central gathering point and is an important public space.

The building is in an L shape which was requested by the traders to screen off the prevailing winds. This L shape also houses the public toilets, spazashops, officesect. The north and east sides of the market are open while the roof covers the whole trading area. Roller shutter doors are used to shut the market at night. Stainless steel tables, sinks and indoor fire places allow for braaing under the roof. The roof, resembling a giant wave, provides a pleasant and iconic shelter. At night when the roof is lit up, it creates the impression that it floats, allowing all the 'informal' market and "African restaurant" activity to take place beneath it. This adds to a positive and vibrant urban space. (Csstudio.co.za, 2014)



Figure 47: Meat market in relation to exterior streetscape with covered colonnade, By csstudio



Figure 48: Meat market stalls and exhibition space, By csstudio

This is an influential precedent because of its approach to informal situations, its robustness and the way in which it accentuates the surrounding architectural expression whilst introducing an iconic and recognisable form. The site chosen in Mabopane to implement the intended project share a lot of the characteristics of the Meat Markets site in Gugulethu, thus the tectonic approach seems to a viable solution in Mabopane.



Figure 49: Meat market braai facility, By csstudio

The elements:

- Lockable units (Security)
- Communal ownership
- Creates Arcade

Tectonic elements:

- Robustness
- Thick concrete columns
- Light Steel roof.
- Natural ventilation
- Umbrella roof

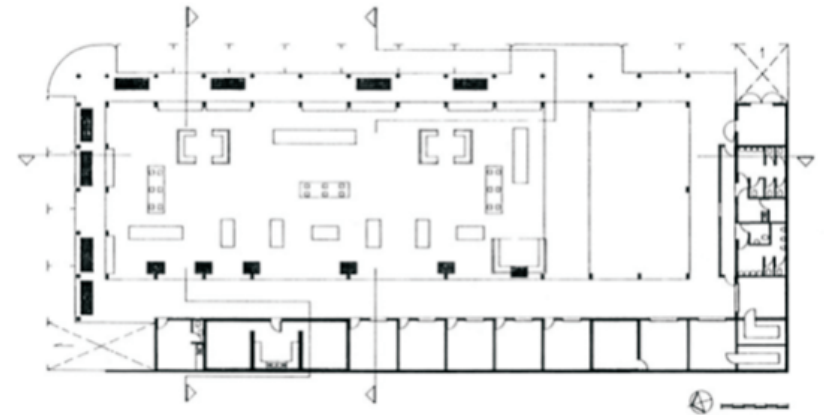


Figure 50: Meat market plan by csstudio

CHAPTER 5

Introduction
Herbal Medicine
Traditional Herbalist
Herbalist Network
African vs. Western medicine
The Organization

Program

Introduction

Traditional African medicine is a holistic discipline involving indigenous herbalism and African spirituality, typically involving diviners, midwives, and herbalists. Practitioners of traditional African medicine claim to be able to cure various and diverse conditions and successful in numerous instances. The field which would become the basis of the proposed buildings program is that of traditional herbalists (inyanga) and not the aspect of African spirituality involving diviners (sangomas).

True traditional healing uses plants, minerals and animal products so as to bring about physiological or psychological effects in a person. Even though animal products such as Rhino horn have aroused much anger due to exploitation, many of the animal products used such as horns and fats used in TCM etc have been shown to have hormonal actions on the body and are therefore medicinal. Minerals too have effects on mood and can be used to relax a person. All of nature can be used as medicines, even poisons in very small doses. The problem with animal muti is that it is not sustainable and the animal dies in the process of obtaining the medicine. Plant muti is a sustainable source of medicines because it can be cultivated in abundance without having an impact on the environment. (Francois, 2014)



Figure 51: Bags of herbs found in market area, Image by Author



Figure 52: Txama herbs found in market area, Image by Author

Herbal Medicine

What is herbal medicine?

Herbal medicine, also known as botanical medicine or phytomedicine -- refers to using plants seeds, berries, roots, leaves, bark, or flowers for medicinal purposes. Herbalism is known for having a long tradition of using non-conventional medicine and approaches. It is becoming more acceptable as improvements in analysis and quality control along with advances in clinical research show the value of herbal medicine in the treating and preventing of diseases (University of Maryland Medical Center, 2014). This research is unfortunately limited to mainly first world countries as they have the necessary facilities to perform these tests thus not a lot is known about Southern African herbs.

Manjishta (Ayurveda) or *Rubiacordifolia*, Intalibombo (Zulu). A very useful plant for cleaning the liver (ie blood cleansing), destroys tumors and invigorates the body. One of my favourite medicines for personal use.



Figure 53: Rubia herb, Image by Marco



Figure 54 : Ubulawu, Image by Marco Schmidt

Ubulawu medicine *Popoma silenepilosellifolia* used to vomit with to open the mind-intuition and dreaming.



Figure 55: Uzara herb, Image by Marco Schmidt



Figure 56: Maphipa herb, Image by Marco Schmidt

Uzara *Xysmalobium undulatum* (left) traditional medicine. Well known in Germany. It is used for diarrhea other infections and as a tonic.
Maphipa bark *Rapanea melanophloeos* (Right) (old botanical name). A great cleansing medicine for stomach acidity and for nervous conditions

What is the history of herbal medicine?

Medicine came in the form of plants long before it could even have been documented and recorded in history. Ancient Chinese and Egyptian papyrus writings describe medicinal uses for plants as early as 3,000 BC. Indigenous cultures namely African and Native Americans used herbs in their healing rituals which is still occurring today. Researchers found out that people and cultures that were located in completely different location in the world that used the same herbs where using them for the same purposes.

In the early 19th century, when chemical analysis first became available, scientists began to extract and modify the active ingredients from plants. Later, chemists began making their own version of plant compounds and, over time, the use of herbal medicines declined in favour of drugs. Almost one fourth of pharmaceutical drugs are derived from botanicals. (University of Maryland Medical Center, 2014)

Recently, the World Health Organization predicted that close to 75% of people worldwide rely on herbal medicines for some part of their primary health care. In Germany, 70% of physicians prescribe plant based medicines with over 700 to choose from. In the past 20 years the world has become dissatisfied by the growing costs of prescription medication as well as finding an interest in organic or natural remedies has once again led to herbal medicine becoming more and more popular.

How do herbs work?

Herbs like any plant is made up of different materials and substances and even in some cases scientists are not even sure what ingredient in the herb allows it to heal or treat a condition or illness.

Some herbs consist of multiple chemicals that work together to produce an effective result whether it is healing pain, stomach irregularities and even mental fatigue.

The effectiveness of an herb is determined by a lot of factors for example the climate, soil and moisture it grew in, as well as when it was harvested and how it was processed (University of Maryland Medical Centre, 2014).

How are herbs used?

Herbs are used in various ways some more effective than others or effective only when used in the correct manner. The most common way of using an herb is by ingestion either by eating or drinking it in a tea form. Other forms are include smoking or inhalation.

The five most common herbs in South Africa are The Buchu herb, Devil's claw, African potato, South African Geranium or Umckaloabo and the African ginger only to name a few. (Arabella.co.za, 2013)

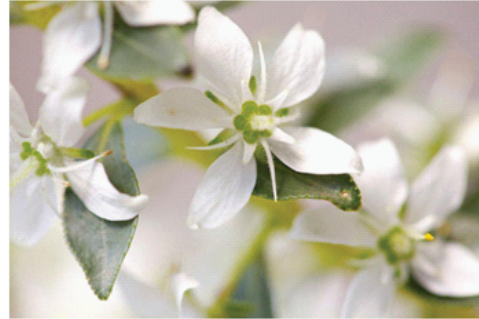


Figure 57 : Buchu, Image by Marco Schmidt

The buchu (Agathosma betulina) herb is already commercially grown in the Western Cape region for its essential oils which is known worldwide for its anti-inflammatory and antiseptic properties to treat high blood pressure, UTI infections, arthritis, gout and countless other ailments.

Devils claw is common to the arid areas of Southern Africa, Namibia and Botswana. The healing properties of the Devils claw is found in the roots that are then dried to the extent where it is then turned into a powder, extracts and solutions. It used to treat pain, increase mobility and provide relief from a wide range of musculoskeletal conditions, diabetes, neuralgia, headaches and menstrual problems. (Arabella.co.za, 2013)



Figure 58 : Devils Claw, Image by Marco Schmidt



Figure 59: Geranium, Image by Marco Schmidt

The South African Geranium or Umckaloabo (*Pelargonium sidoides*) is alike to a common geranium and is filled with natural healing capabilities that is found in its fleshy blood red stem. The stems are dried and also made into infusion, tinctures and powders. It has a potent antibacterial and antiviral property that is ideal in the treatment of chronic respiratory tract infections such as bronchitis, sore throat, sinusitis, colds and flu.



Figure 60 : Geranium, Image by Derek Ramsey

The African potato (*Hypoxis*) is mainly found in Gauteng, Limpopo, Mpumalanga, KwaZulu-Natal and Eastern Cape. This herb is commonly known to boost one immune system and is alleged to reduce and battle cancer cells, HIV, asthma, TB and other chronic illnesses. The bulb of the African potato is dried and crushed into powders which can be mixed with water and consumed or mixed with cream for creating ointments.

African ginger (*Siphonochilusaethiopicus*) which can be found at almost every fresh food store or market is mainly found in the Northern Province and Mpumalanga. It is the most commonly used medicinal herb in South Africa's informal sector and is so popular that it has become almost endangered due to its over harvesting. The roots of the ginger plant are dried and crumpled to a powder or formed into tablets and is used to treat countless health problems, from coughs, colds, asthma and flu to menstrual cramps.

This was only to name a few herbs that are the most popular in the informal herbal market at the present time. There are hundreds more that cater for multitudes of different illnesses each distinct in their own way namely ginkgo (*Ginkgo biloba*), St. John's wort (*Hypericum perforatum*), garlic (*Allium sativum*), saw palmetto (*Serenoa repens*), ginseng (*Panax ginseng*, or Asian ginseng), goldenseal (*Hydrastis canadensis*), valerian (*Valeriana officinalis*), chamomile (*Matricaria recutita*), feverfew (*Tanacetum parthenium*), evening primrose (*Oenothera biennis*), and milk thistle (*Silybum marianum*). (Arabella.co.za, 2013)



Figure 61: Wild Garlic, Image by Delphine Menard

Traditional herbalist

Almost 75% of people in South Africa make use of traditional herbal medicine to cure illnesses, pains and irritations. This raises the question of why is this field of practice not managed and improved if it's so important to South Africa's health. Why is it seen as being a lesser option compared to western medicine, is it because of the misperception affiliated with traditional healers or the fact that one is afraid of what one doesn't understand.

One of the main reasons herbal medicine is more popular in the informal sector is that it is more affordable and easily accessible compared to pharmaceuticals found in clinics and pharmacies. The connotation to the healer also plays a role, as in modern medicine one would tend to use the same doctor as one's parents, the same applies to traditional herbalist in the informal sector. (Francois, 2014)



Figure 62 : Traditional Herbalist, By Author

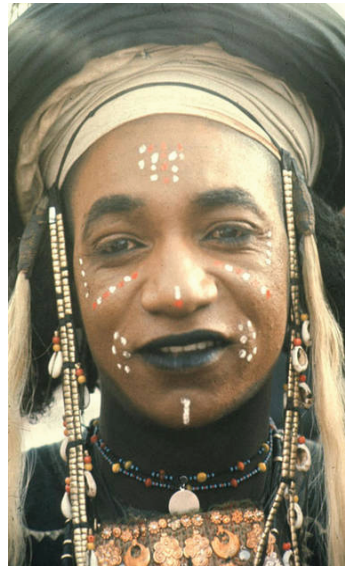


Figure 62 : Traditional Herbalist

Herbalist Network

The herbalist network is extremely integrated with the way in which the information is carried down from generation to generation usually between the oldest member of the family and the oldest of the children. After gathering all the information from the older generation the aspiring herbalist must then apprentice for at least 7 years under a senior herbalist before he is allowed to start practicing. This is to allow that the knowledge that would be carried on is of high accountability and safe.

The herbalist also gather once a month at a pre-disclosed location to exchange knowledge about herbs and to broaden their frame of reference. This allows the herbalists to learn about new herbs from other herbalists that have tried and tested them.

African vs. Western medicine

Although Western medicine is successful in developed countries, it doesn't have the same positive impact in many of the underdeveloped African countries. Though Western practices can make an impact in health care practices, in certain areas such as in the spread of various diseases, it cannot integrate wholly into the culture and society. This makes the traditional African practitioners a vital part of their health care system.

In recent years, the treatments and remedies used in traditional African medicine have gained more appreciation from researchers in Western science. Developing countries have begun to realize the high costs of modern health care systems and the technologies that are required, thus proving Africa's dependence to it. Due to this, interest has recently been expressed in integrating traditional African medicine into the continent's national health care systems.

The Organization

The proposed program for the thesis project is that of creating an organization that specifically focuses on the traditional herbalist and the study of traditional herbal medicine.

Goals:

- To create the first organization that caters specifically for traditional herbal practices in Africa.
- To bring herbal medicine into the same light as western medicine.
- Create an intervention that grows and analyses herbal medicine, and conveys it back to the traditional herbalists.
- To introduce an organization that will manage, regulate and represent the traditional herbalist community.
- To change perception of traditional herbal practices.
- To create facilities that cater for the herbal healer as well as the informal herbal market.

To propose such an organization and secure its success in its field and context it has to consist of certain elements that would ultimately strengthen one another and achieve its goals.

As one can see in the diagram above five elements are required by the organization for it to reach its full potential. Firstly the centre would have to grow herbs and new types of herbs in order to analyse them thus a greenhouse. Secondly it requires a facility that is capable of analysing every aspect of the herbs thus laboratories. Thirdly the information gathered should be stored for future reference and studies in the field thus a herbarium. The organisation created must also be managed and requires an administration facility. Lastly this information must then be conveyed back to the herbalists to improve their services to their patients in a space which they have ownership of in the form of conference facilities and auditorium.

All of the above mentioned elements are obsolete without the presence of the herbalists themselves and the herbal market thus illustrated by the diagram these facilities would be on the ground floor being the human connection, the most important element of them all.

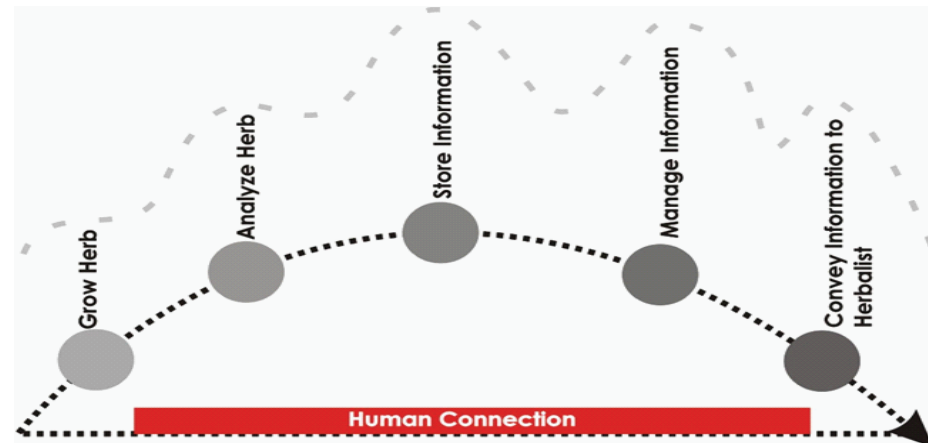


Figure 63 : Illustration depicting the building requirements, structure and functions. Illustration by Author

Ordering Principles

Introduction

For the buildings element to function properly certain requirements should be present. Each element should thus be approached in a different manner but must still adhere to national building regulations.

Traditional herbal market and Herbal healers

The herbal market and herbal healer facilities which occupy the entire ground floor and public domain requires elements which also serves the public and creates a functioning civic space.

- 1) Open market space.
- 2) Routes through the market linking surrounding urban elements.
- 3) 25 Lock up storage space for the market area. (9m² each)
- 4) 14 Consultation rooms for the herbal healers. (14m² each)
- 5) 8 Private greenhouses for the herbal healers. (9m² each)
- 6) Ablutions for public use (45m²)
- 7) Open green space (225m²)



Figure 64 : Farrady closable herbal market.
By artatwork.

Greenhouse

The greenhouse which will cater for the growing of different types of herbs must be equipped to cater for different growing methods and climates to insure that all types can be grown.

- | | | |
|----|---------------------------|----------------------|
| 1. | 1 Greenhouse office | (16m ²) |
| 2. | 1 Workshop | (16m ²) |
| 3. | 1 Fertilizer store | (32m ²) |
| 4. | 1 Irrigation control room | (32m ²) |
| 5. | 1 Seedling grow room | (32m ²) |
| 6. | 1 Hydroponics room | (36m ²) |
| 7. | 1 Worm farm room | (36m ²) |
| 8. | 1 Large indoor greenhouse | (360m ²) |
| 9. | Ablutions | (16m ²) |



Figure 65 : Enclosed Greenhouse, by static



Figure 66: Grow rooms ,By bcm



Figure 67: Seedling grow rooms , By bcm



Figure 68: Hydroponic growing facility, By egasusagritech

Laboratories

To analyse the herbs the laboratories require a number of different elements to operate. Some of the elements are highly specialized and ordered in a specific way.

- | | | |
|----|--------------------------|-------------------------|
| 1) | Laboratories | |
| a) | Reception | |
| b) | 2 General Labs | (72m ² each) |
| c) | 1 Microbiology Lab | (24m ²) |
| d) | 2 Clean Labs | (30m ² each) |
| e) | 4 Chemical stores | (16m ² each) |
| f) | 4 Cold rooms and freezer | (16m ² each) |
| g) | 2 Prep rooms | (20m ² each) |
| h) | Specimen room | (20m ²) |
| i) | Ablutions | (16m ²) |
| j) | 2 Lab offices | (9m ² each) |
| k) | Equipment store | (9m ²) |
| 2) | Laboratory admin | |
| a) | Reception | |
| b) | 1 Head office | (16m ²) |
| c) | Open plan office | (42m ²) |
| d) | 3 Offices | (9m ² each) |
| e) | 1 Boardroom | (30m ²) |
| f) | Staff relaxation area | (30m ²) |
| g) | Kitchen | (9m ²) |
| h) | Ablutions | (16m ²) |
| i) | Stationary store | (8m ²) |
| j) | Server room | (8m ²) |
| k) | Cleaning room | (4m ²) |



Figure69: Proposed Laboratory facilities,



Figure 70: Proposed Laboratory facilities,

Herbarium

A herbarium is a facility that stores and preserves dead or living specimens for future research and documentation in other words an organic library focused on herbs. This facility doesn't require a lot of occupants to function and consists mainly of large storage space to house the organic archives.

- | | | |
|----|--------------------------------------|---------------------|
| 1) | Herbarium archives | |
| a) | Collection managers office | (16m ²) |
| b) | General specimen preparation area | (18m ²) |
| c) | Botanical preparation area | (9m ²) |
| d) | WC | |
| e) | Cold room and freezer | (18m ²) |
| f) | Wet storage (spirit collectors room) | (36m ²) |
| g) | Dry collectors room | (36m ²) |
| h) | Main dry collectors archive | (96m ²) |
| 2) | Herbarium administration | |
| a) | Reception | |
| b) | Manager office | (16m ²) |
| c) | 1 Office | (9m ²) |
| d) | Library | (30m ²) |
| e) | Information Lab | (30m ²) |
| f) | UPS room | (14m ²) |
| g) | Server room | (4m ²) |
| h) | Tea kitchen | (6m ²) |
| i) | Cleaning room | (3m ²) |



Figure 71: Inergen fire suppressing gas system and spirit storage,
<http://bgbaseserver.eeb.uconn.edu/floorplan/index.htm>



Figure 72: system and spirit storage

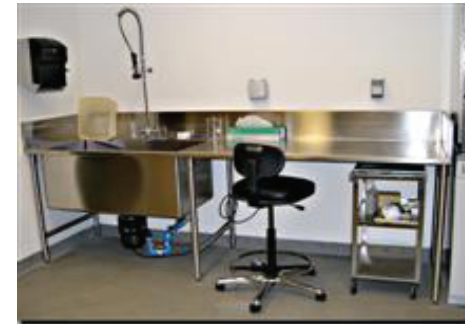


Figure 73: Inergen fire suppressing gas



Figure 74: Herbarium archive room in Munich



Figure 78: Cooler and freezer room



Figure 78: Herbarium stackable



Figure 79: Herbarium filing system, By anbg

Admin

The main administration facility is implemented to manage the herbal community, registering herbal healers and assist in legal matters.

- | | | |
|-----|---------------------------|------------------------|
| 1) | Main Entrance to facility | |
| 2) | Security | |
| 3) | Lobby | (48m ²) |
| 4) | Reception | |
| 5) | Directors office | (20m ²) |
| 6) | WC's | |
| 7) | Store room | (9m ²) |
| 8) | Stationary store | (6m ²) |
| 9) | Server room | (4m ²) |
| 10) | Board room | (36m ²) |
| 11) | 2 Offices | (9m ² each) |
| 12) | Photo copy room | (9m ²) |
| 13) | Clean room | (4m ²) |
| 14) | Kitchen | (18m ²) |
| 15) | Open plan office | (96m ²) |



Figure 80: Confrence facilities proposed

Conference Facilities

The conference facility will cater for medical summits and the monthly gathering of the herbal healers. It will also be available for external congresses and the community if a venue is required.

- | | | |
|----|--|----------------------|
| 1) | Dining hall/exhibition space | (144m ²) |
| 2) | Dining hall extension/exhibition space | (96m ²) |
| 3) | Bar facilities | (12m ²) |
| 4) | Kitchen | (36m ²) |
| 5) | Storage room | (18m ²) |
| 6) | Cold room | (12m ²) |
| 7) | Service Yard | |

Auditorium

The auditorium will be used for herbal seminars where the herbalists would be educated and informed by the new scientific developments founded by the facility. The auditorium would also multi-function in the sense that the community also has access to it for external uses if it is not in uses by the herbalist organization.

- 1) Entrance and lobby
- 2) Security
- 3) 2 Sound lobbies (9m² each)
- 4) WC's
- 5) Auditorium (324m²)
- 6) Translators room (12m²)
- 7) Storage room (48m²)



Figure 81: Proposed space for auditoriumhttp