

DESIGN DISCOURSE

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02.01 DESIGN PHILOSOPHY

A PHENOMENOLOGICAL APPROACH

Phenomenology – “an approach that concentrates on the study of consciousness and the object of direct experience” (Concise Oxford Dictionary, 1999)

Existentialism – “philosophical theory which emphasizes the existence of the individual person as a free and responsible agent determining their own development through acts of the will” (GELERNTER, M. 1995 p.272)

Norberg Schultz proposed a theory of ‘existential space’, which describes the intimate relationship between the individual and the space he or she inhabits and experiences for him- or herself. The user then interprets it, responds to it and makes up his or her mind about the design and therefore learns from it.

The design of Mkhonda Lodge takes a phenomenological approach, where the individual is continually aware of a space and the objects within the space as he or she moves through the different buildings on site. In other words, knowledge is obtained through appearances that are perceived by the individual’s experiences. The idea would be that this experience should take place in the subconscious mind of the while an overall positive impression of the site and the design is brought about. Specifically, in designing Mkhonda Lodge, this would mean that people should be able to communicate with their surroundings when in and around the buildings, through overlooking the site from within buildings and being able to look into interior spaces from the outside. At the same time, the buildings should physically relate to their immediate surroundings. These visual and sensory experiences help create a vibrant place of interaction. Progression between spaces and their interaction with each other and the site will be some of the main design requirements. The design therefore becomes a mere tool, which guides the individual in planning his or her own course through the landscape. The user determines the nature of his or her experience. This experience is further enhanced by the use of materials and good detailing within the design, which means that **buildings must express what they**

are made of. Materials and building techniques must be used optimally, never using one material or method if another can do the job less expensively or more efficiently. It implies the honest use of materials and never making the material seem that which it is not. For example, windowsills should portray the

unconventional thickness of straw bale walls; timber structural poles should be used in their natural state to display the inherent load bearing qualities of timber and stone walls should be used in areas where an element or building needs to blend into its surroundings and where the structural potential of stone becomes evident in the construction of retaining walls.

This phenomenological approach ultimately aids in experiencing the site and its surroundings, which informs the design when investigating possibilities of creating a new vernacular.

THE GREEN MOVEMENT

Environmental consciousness has come of age. History shows that in the hour before a paradigm shift occurs, solutions to seemingly impossible problems present themselves. Lest we commit ecological suicide, we have been forced to come up with solutions to halt global warming, decontaminate our food and drinking water and de-pollute our air. This all gave rise to the 'The Green Movement', which is an encompassing awareness that places respect for the environment and human life at the forefront of each endeavor. For too long architecture has been dragged into the inaccessibility of fine art, only obtainable by the very rich or in a poor reproduction by those less wealthy. Maybe a green approach to the built environment will succeed, not least because it can provide again an architecture for all (VALE, B. & VALE, R. 1991 p.186), including future generations. This green movement constitutes a massive shift. It is not simply a trend that will die out as modernism did. Like us, it is here to stay. (SHANTALL, L. 2004, p.117-120)

02.02 DESIGN DIRECTIVES FOR A NEW VERNACULAR

VERNACULAR – to be connected to a place. It is the landscape, surroundings, history, traditions, people and time of a place.

'We should relish the opportunity to create an architectural vernacular redolent of our unique landscape that set an eco-friendly example for the rest of the world'
(SHANTALL, L. 2004, p.117-120)

The design of Mkhonda strives to create a new vernacular architectural style that is regional and pragmatic in nature, based on the following four main elements as design directives:

1. sustainable design
2. implications of straw bale construction
3. cultural significance of a courtyard; and
4. mushroom cultivation

In essence, the final solution portrays an architectural style similar to designs done by the architect, Glen Murcutt, where the use of materials are honest and simple to create a domestic architecture that is non-showy works of art.

"What is missed is the fact that Africa is a humble and soulful place where we mostly still build in an age-old tradition of bricks and mortar ...The intrusion of alien variants...indicates how poorly we are equipped to sense and then sell the real spirit of a place and our own rooted vernaculars to clients"
– **Henrie Comrie** (COMRIE,H.2003,p.36)

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02.02.1 Sustainable building practices and appropriate technologies

Green buildings are sensitive and respond to their sites and climates, instead of imposing invasive and ecologically ineffective structures upon us. Solar water heaters, grey rainwater harvester recycling programmes, natural ventilation, walls consisting of earth, stone, straw bales and planted gardens are all part of the new architectural language. The use of balanced lighting, therapeutic colours, fresh air, water features, the use of earthy materials, mood and atmosphere, and noise reduction all aid in creating an overall holistic design.

In specifically designing Mkhonda Lodge, realistic and practical issues influenced decision making. Only local materials and labour are used and every effort is made to preserve energy resources on site. Systems used to portray sustainable practices become part of the design and the intention is that people will be informally educated through being exposed to these systems.

The design strives to simplify all elements, keeping the design modular and construction less complicated. Available local skills and techniques are adopted and modified in an appropriate way and displays the honesty of a design that has an architectural language derived from the local context.

02.02.2 Straw bale construction

The main construction material of Mkhonda Lodge is straw bales. A new set of design specifications accompanies straw bale construction, which has a significant effect on building forms and facades. The design is therefore subjected to these guidelines, which, to certain extent, determine the nature of the final product. Straw bales can be locally obtained or produced, keeping transporting costs to a minimum.

02.02.3 Cultural significance of the courtyard

COURTYARD – “an open area enclosed by walls or buildings”

(Concise Oxford Dictionary, 1999)

The Zulu villages in the surrounding areas are all based on a typical layout where buildings are arranged around a central and private courtyard. (Figures 02.01b,c) People are drawn from each individual unit to this central point where most of the social and daily activities take place. In effect, the courtyard plays a significant role in unifying the entire village. This function is of high value to a development such as Mkhonda. The users of the lodge and Zulu villages take



Fig.02.01a



Fig.02.01b



Fig.02.01c

part in similar activities, such, eating, leisure, relaxation and sleeping, which are all linked to one or more courtyard. In the design, the courtyard and variations thereof therefore become main features that symbolize the bringing together of a diverse group of people. Each enclosure is intimate and personal within which a high level of awareness is maintained through the use of textured materials and visual elements.

02.03 LAYOUT GENERATORS

In generating a suitable layout, the local context was analyzed, which provided Mkhonda Lodge with design essentials. The three subjects that were investigated included a study of local building typologies, the traditional courtyard and the cultural meaning of "Mkhonda". The final layout was generated through overlapping and refining these three aspects.

02.03.1 Local building typologies

Through reusing local old building methods, we are forced to relearn many of the traditions and disciplines lost to modern architecture and planning. While respecting these old traditions, the design modifies them according to the current needs and knowledge. The challenge is to synthesize the relevant pieces of the past with the progressive ideas of the present. Hence, the design demonstrates innovation in its translation and interpretation of the existing local vernaculars, which included traditional farmsteads (Figure 02.09) and local Zulu villages. (Figures 02.02 - 02.08)



Fig.02.02



Fig.02.03



Fig.02.04 - 02.08



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Fig.02.09



Fig.02.10



Fig.02.11



Fig.02.12

TRADITIONAL FARMSTEADS

Through analyzing a number of existing traditional farmsteads in the area, common key elements and layout principles were identified. People recognise, relate to these elements and find comfort in them. Therefore it was important that the design incorporated these features in a creative and unconventional way. This ensures that people are able to relate to the buildings of Mkhonda Lodge and at the same time are gradually introduced to a new design solution for the area. The idea was not to create a completely unorthodox building typology, but rather to use parts of the renowned architectural style in the area to be able to come up with a better solution in terms of construction methods and the overall design approach. The key elements that were identified include:

1. Corrugated iron roofs
2. Verandahs
3. Fire places
4. Use of stone as building material
5. Gardens around houses
6. Sheds/working areas of the farm have large doors and high, small windows
7. Buildings and avenues are aligned on an axis to give focus and direction
8. There exists hierarchy between buildings
9. Buildings are modest in architecture

One of the main elements of traditional farmsteads is how the werf is divided into a working and residential area. In the same way, the development on Madola is divided into these two distinct functions, the working area being the Mushroom Cultivation Area and the Farm Factory, while the residential area is represented by the lodge and all its various functions. The two different functions are characterized through the following:

1. WORKING AREA – Highly accessible, production takes place, views do not enjoy highest priority
2. RESIDENTIAL AREA – Peaceful and tranquil atmosphere, private, parking in close vicinity, provides accommodation, captures most important views.

When designing Mkhonda Lodge, all the abovementioned elements were reinterpreted in a modern way.

ZULU VILLAGES

The architecture of Mkhonda Lodge attempts to re-instill a sense of cultural pride and building techniques that are informed by traditional Zulu space, using methods where outdoor spaces become very important and where natural plant and earth materials are used. (Figures 02.10 - 02.12) Different buildings within a village spill out onto a central space, which becomes a private enclosed area. Each village that was analyzed has a courtyard that opens up at one end to embrace the most important view (Figures 02.01a, 02.13), as well as three layers that progress from semi-public to private and eventually to a very private inner space. (Figure 02.14) The semi-public and private layers are separated by a buffer of trees planted along three sides of each village. The fourth side opens up to the view.

Initial design sketches were made using a mirrored version of the layouts of Zulu villages as a starting point for the arrangement of functions within the main development area. (Figures 02.15 - 02.18a,b)

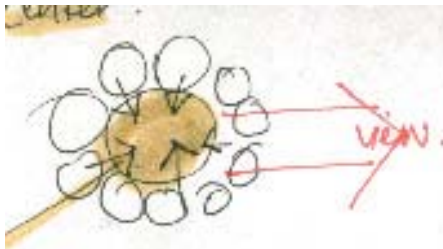


Fig.02.13

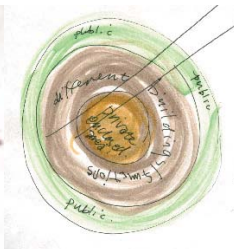


Fig.02.14

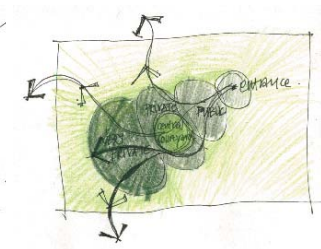


Fig.02.15

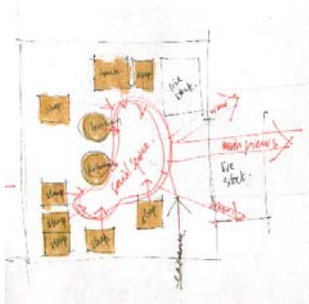


Fig.02.16

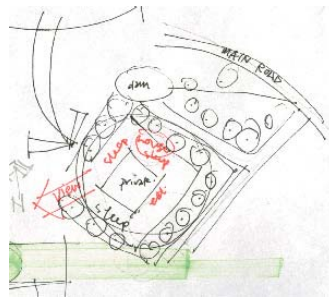


Fig.02.17



Fig.02.18a

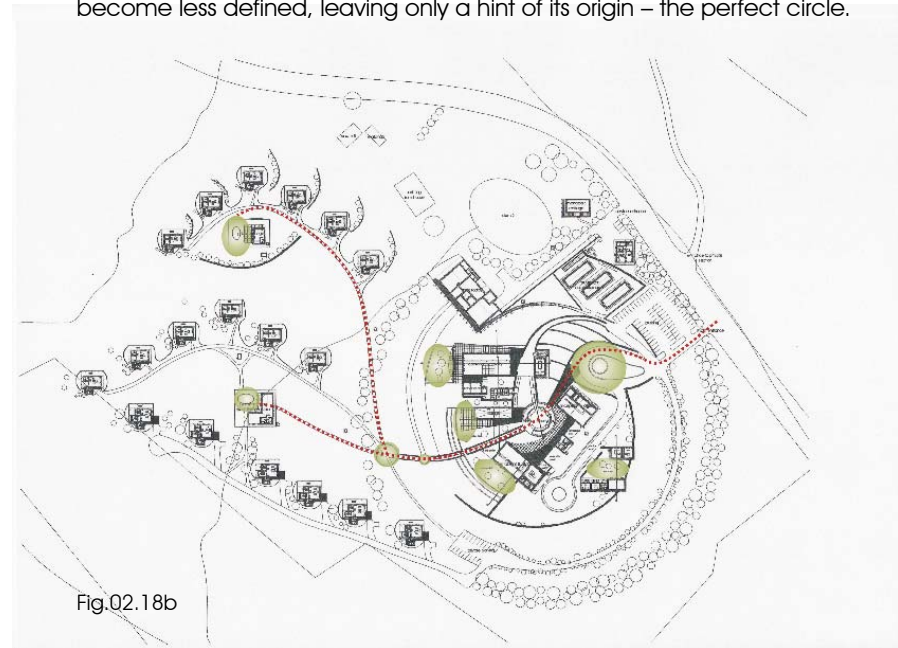


Fig.02.18b

02.03.2

Significance of courtyard

A courtyard is significant in that it has the ability to gather people and provide opportunity for social interaction. The arrangement of buildings around a central courtyard was an integral design consideration and influenced various layout proposals from the outset of the project. In terms of layout, the main courtyard, with a formal and clearly defined circular arrangement, becomes the central focus in generating an appropriate plan. (Figure 02.18a,b) As one begins to move away from this central point, different courtyards or enclosed spaces are created, which are less formal until they eventually spill out to become less defined, leaving only a hint of its origin – the perfect circle.

02.03.3

The meaning of "Mkhonda"

The original meaning of Mkhonda is "spoor" or the track or scent of an animal. (See Appendix 02.03.3) Instead of using the actual footprint of an animal or human to generate a possible layout, the focus shifted to representing the action associated with a spoor. Tracking a spoor means that one is actually led along a specific path towards the final destination. By strategically placing the buildings, circulation routes are created and the user is led along these movement lines and patterns within the design. As is the case with Zulu villages, the spoor allows public spaces to gradually flow into private enclosed areas.

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02.04 DESIGN EXPLORATION

The modern industrial culture has banished most of us from the essential connection with our environment and community. Our future lies in re-establishing those links. The above discussion is a broader interpretation of the local context which moves beyond the visual to the social, environmental, economic, and climatic context. Buildings then respond to the public needs as well as their private function, and respect the uniqueness of the site rather than the mechanistic universality of a modern industry. The design strives to amalgamate the concept of green buildings and modern convenience to create a built environment that serves its users effectively and ensures harmony with our precious environment.



Fig.02.19 Contour model of farm Madola



Fig.02.20 Contour model of farm Madola



Fig.02.21 Contour model of farm Madola

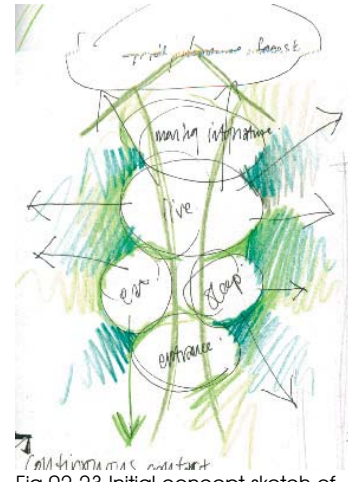


Fig.02.23 Initial concept sketch of experience within cottage

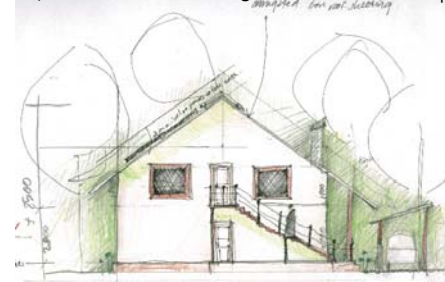


Fig.02.25 Initial concept sketch of cottage elevation

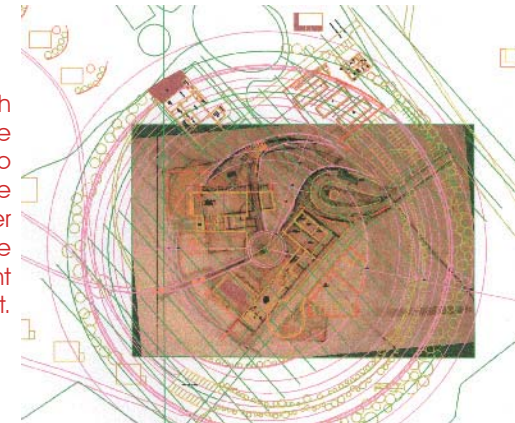


Fig.02.22 Circle / Courtyard as layout generator

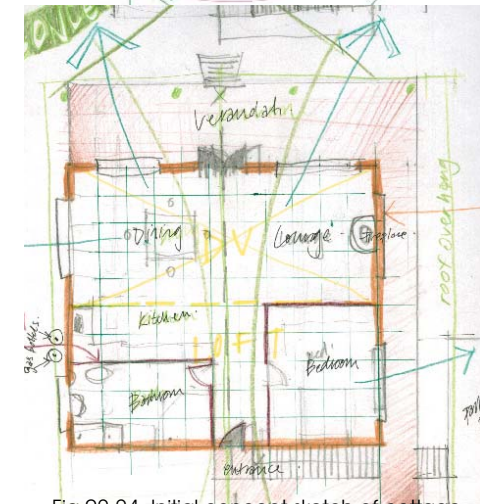


Fig.02.24 Initial concept sketch of cottage plan

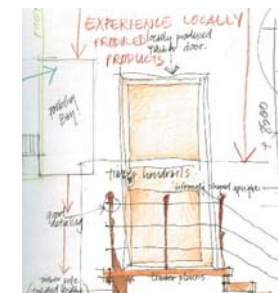


Fig.02.26 Initial concept sketch of locally produced elements within each cottage

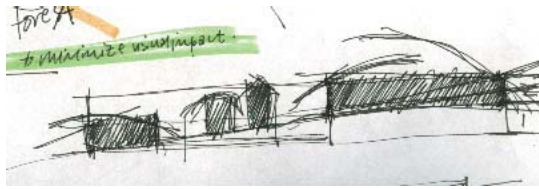


Fig.02.27 Exploration of sloping site - Main development area

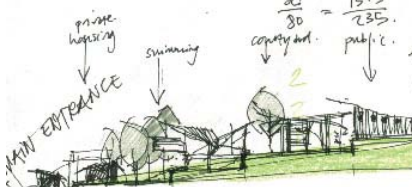


Fig.02.28 Exploration of sloping site - Main development area

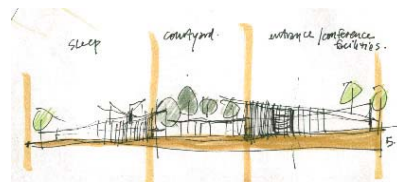


Fig.02.29 Arranging functions around central courtyard

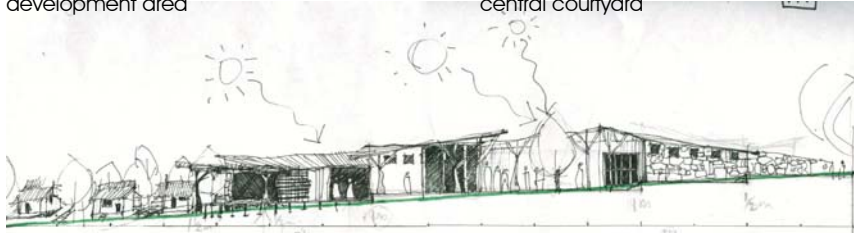


Fig.02.30 Concept sketch of proposed architectural character & aesthetic quality of the design



Fig.02.31 Initial proposed layout of Main development area



Fig.02.32 Stone walls proposed as landscaping elements to improve overall legibility within the landscape



Fig.02.33 Developing the layout of the Main development area

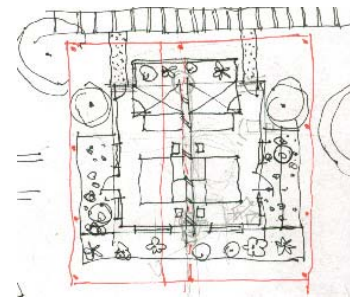


Fig.02.34 Investigation of joining two sleeping units

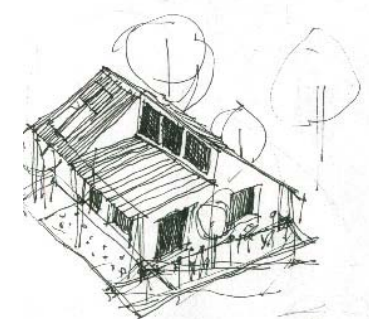


Fig.02.35 Incorporating solar panels into the design

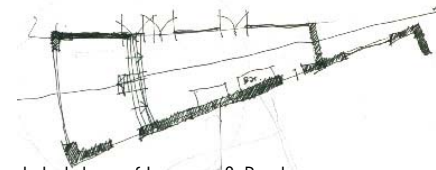


Fig.02.36 Concept sketches of Lounge & Bar to embrace the most important view

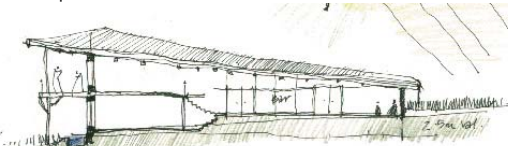


Fig.02.37 Lounge & Bar opening up towards the view

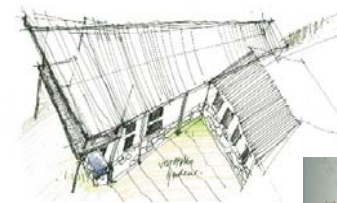


Fig.02.38 Lounge & Bar overlooking vegetable gardens

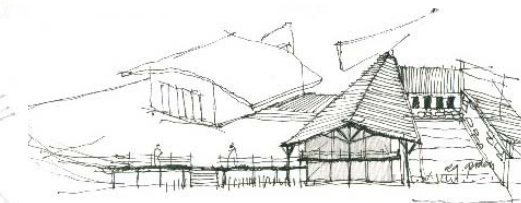


Fig.02.39 Initial sketch of outdoor deck area overlooking the landscape

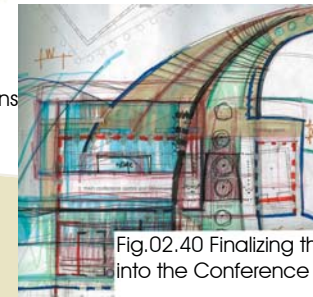


Fig.02.40 Finalizing the entrance into the Conference Facility

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University of Pretoria etd – Krynauw, A (2005)

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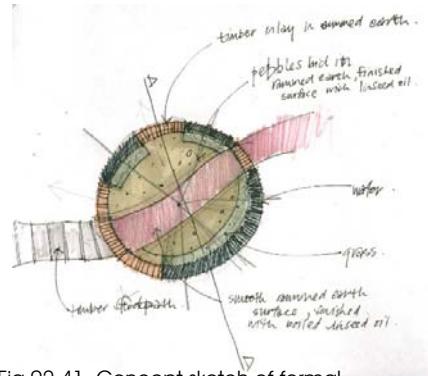


Fig.02.41 Concept sketch of formal courtyard layout

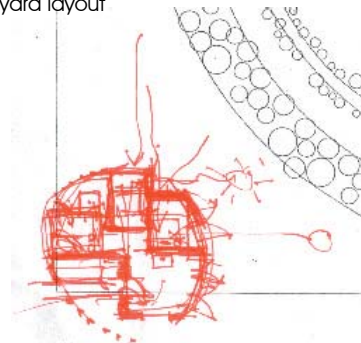


Fig.02.42 Sketch indicating the influence of circular lines on cottage's layout

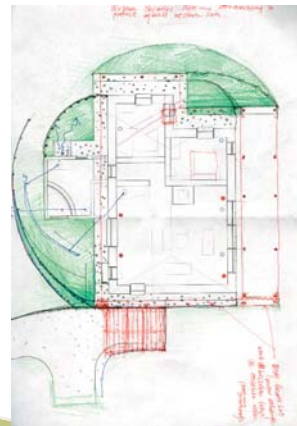


Fig.02.43 Developed cottage plan



Fig.02.44 Investigating the possibility of an outside shower

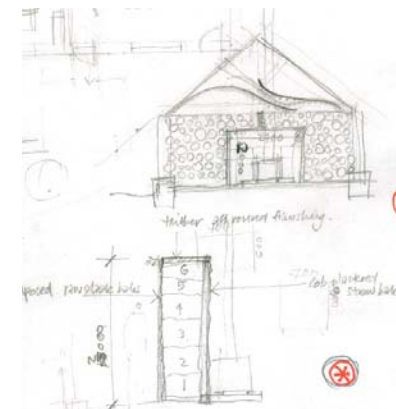


Fig.02.46 Concept design of an exposed straw bale wall

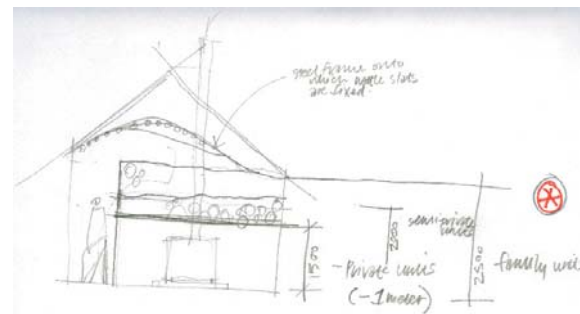


Fig.02.47 Designing cordwood space dividers within the various cottages

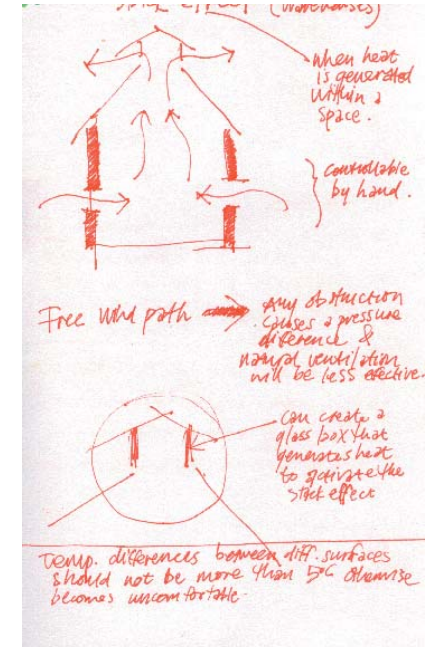
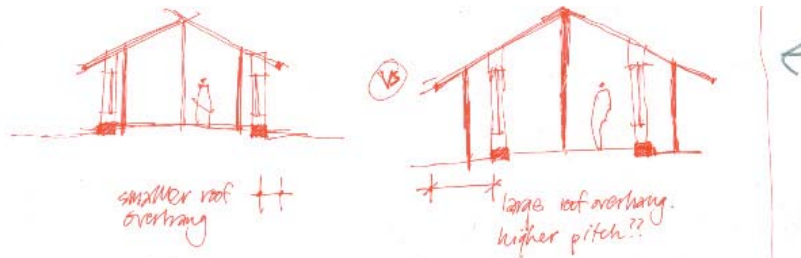


Fig.02.45 Influence of natural ventilation patterns to displace warm air through clerestory windows



Both methods will be used depending on each bldg's function. Placing of structural poles outside walls allows for a longer roof overhang & therefore less sunlight into interior spaces. → good for western facades as it blocks out direct sunlight but allows for a view. By placing poles outside, more interior space becomes more enlarged → good idea to use @ cottages as interior spaces are already very limited.

Fig.02.48 Advantages & disadvantages of placing timber roof structure in- and outside straw bale walls

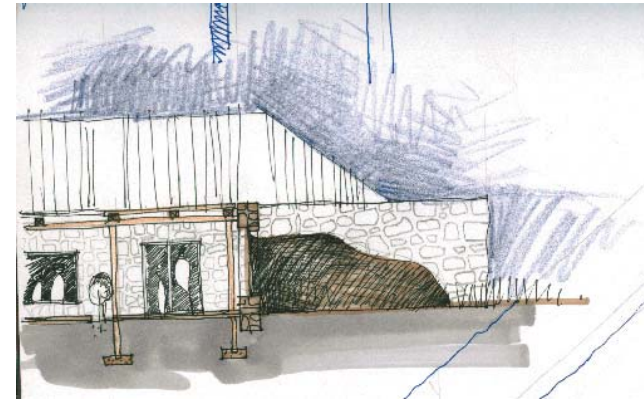


Fig.02.52 Concept sketch of exposed composting area

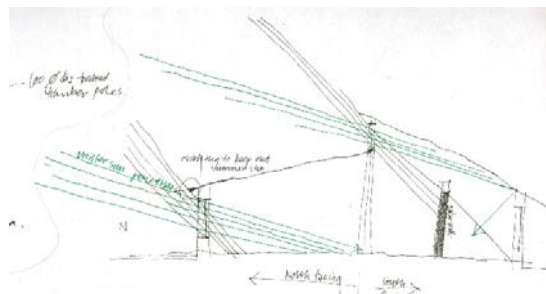


Fig.02.49 Exploring natural sunlight penetration into larger buildings

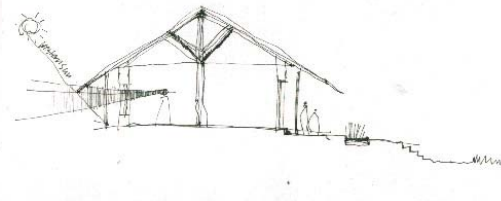


Fig.02.50 Designing roof overhangs for optimal interior temperatures

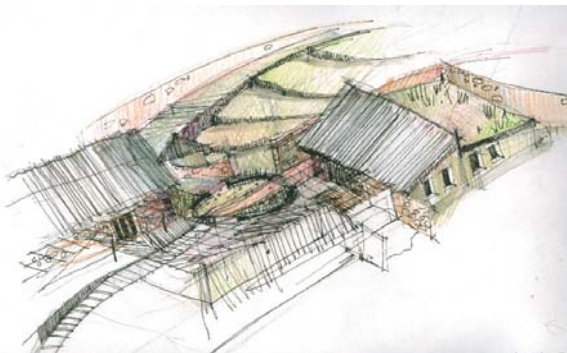


Fig.02.51 Concept sketch of central courtyard as focus point in Main development area

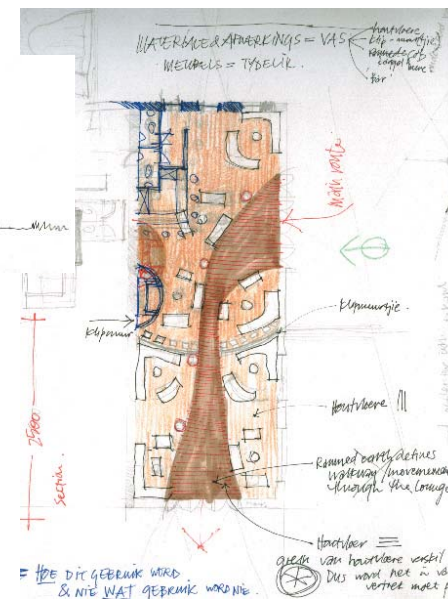


Fig.02.53 Detail investigation of the Lounge's layout and finishes used

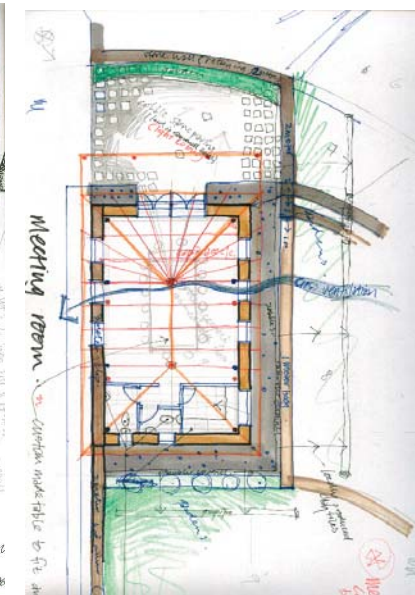


Fig.02.54 Finalizing the plan of the Meeting room

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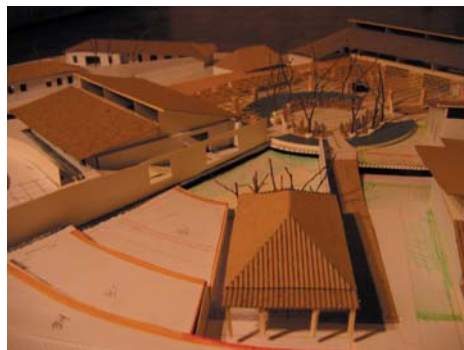
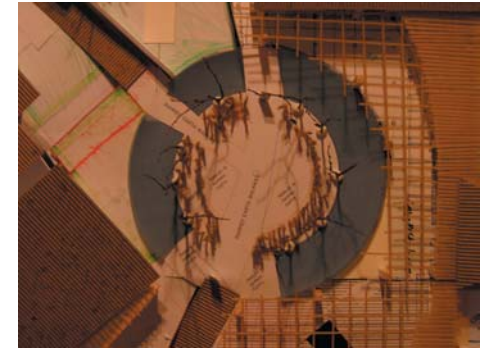
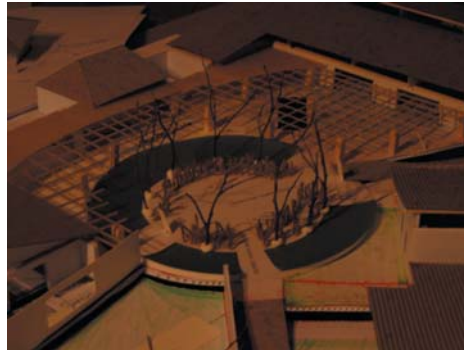
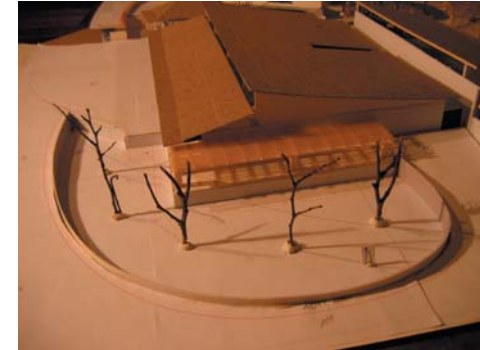


Fig.02.55 - 02.63 Photos of concept model before finalizing the design.

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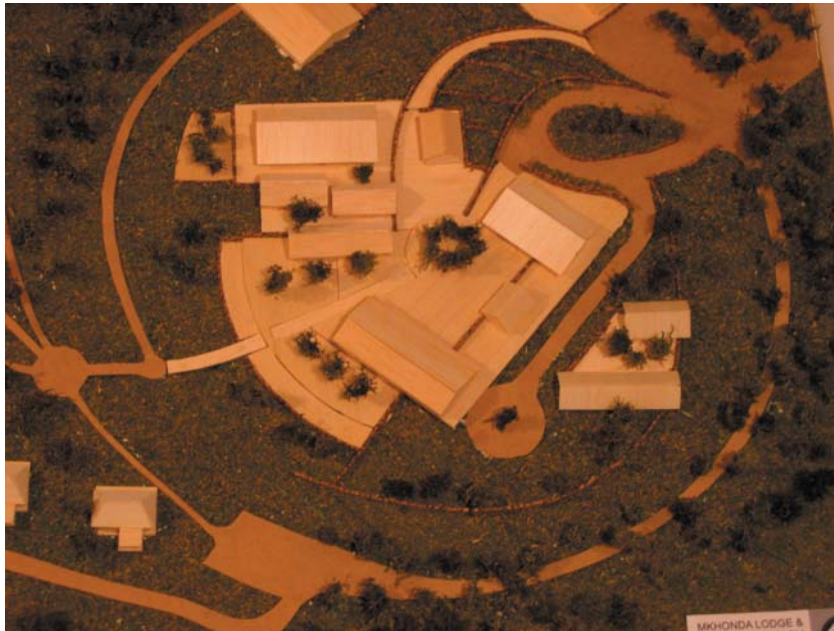
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