

Introduction

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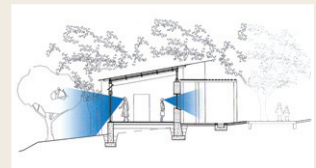
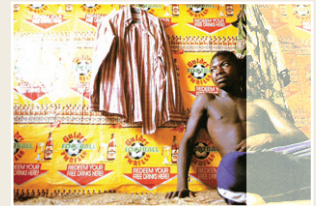
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1.1 Normative Position

The normative position outlined in this section discusses the formative concepts of the project. These concepts and design objective are turned into architecture and applied to this specific project in section 1.3 Design Development.

1.1.1 Dwelling and Place

Heidegger (1954) illustrates the idea of place by means of the bridge; a building which symbolises and gathers, and makes the environment become a unified whole. Heidegger says: *“The bridge swings over the stream with cause and power. It does not just connect banks that are already there, the banks emerge only as banks as the bridge crosses the stream. The bridge designedly causes them to lie across from each other. With the banks, the bridge brings to the stream the one and the expanse of the landscape lying behind them. It brings stream and bank and land into each other’s neighbourhood. The bridge gathers the earth as landscape around the stream.”* Heidegger also describes what the bridge gathers and so uncovers its value as a symbol. Before, the meaning of the landscape was ‘hidden’, and the building of the bridge brings it out into the open. The bridge gathers Being into a certain ‘location’ that we call ‘place’. This ‘place’ however, did not exist as an entity before the bridge (although there were many ‘sites’ along the river-bank where it could arise), but comes-to-presence with and as the bridge.

Architecture makes visible the inhabited world, and is the ‘concretisation of existential space’. (Meiss 1990:135). The building protected by its enclosure, walls and roofs, gathers within itself a specific world of the functional and emotional, of work and leisure, of traces of past and present events. A place has its roots and its history; and anchored in time and in a precise spot on earth.

Place is the mental construct of the temporal-spatial experience that occurs as the individual ascribes meaning to settings through environmental perception and cognition (Motloch 1991:279). It involves what is perceived, and the meanings ascribed through mental associations. Place occurs as the synergism of setting, context, previous experience and mental (emotional) state. It is a phenomenological concept that depends on then interrelationships of these variables.

Dwelling takes place when orientation in an environment occurs, or when an environment is experienced as meaningful (Norberg-Schulz 1980: 5). Dwelling therefore implies something more than ‘shelter’. It implies that the spaces where life occurs are places; a space with a distinct character. Since ancient times the genius loci, or ‘spirit of place’, has been recognised as the concrete reality one has to face and come to terms with in daily life. Architecture means to visualise the genius loci, and the task of the architect is create meaningful places.

The existential purpose of architecture is therefore to make a site become a place, that is, to uncover the meanings potentially present in the given environment. In this understanding of nature we thus recognise the origin of the concept of space as a system of places. Only a system of meaningful places makes a truly human life possible (Norberg-Schulz 1980:28). It is not the architect who decides on the values of places, but based on observation, reflection and research, provides a framework which has the best chance of accommodating man’s specific situations (Meiss 1990:138). A strong place presupposes that there is a meaningful correspondence between site, settlement and architectural detail. The built place has to know ‘what it wants to be’ relative to the natural environment (Norberg-Schulz 1980:179).



1.1.2 Experience and movement

“Those of us who are concerned with buildings tend to forget too easily that all the life and soul of a place, all of our experiences there, depend not simply on the physical environment, but on the patterns of events that we experience there...The action and the space are indivisible. The action is supported by the space. The two form a unit, a pattern of events in space... but this does not mean that space creates events, or that it causes them.” (Alexander 1977).

Intangible design is the design of the experience itself (Mitchell 1993:119). Whereas most design efforts focus on the built environment and the production of form, intangible design focuses on the patterns of use and experience. Objects and products are present, but are treated as secondary importance to the experience of the system as a whole. Peoples experiences and actions become the basis for designing. The intangible processes guide the development of the tangible artefacts. Intangible processes include social and cultural features, functions of the accommodation schedule, needs of the users etc.

Experiences of movement and settlement in three-dimensional space are dependent on the unique form of the ever-present body. The most fundamental organising principle in the formation of our body image is that people unconsciously locate their bodies inside a three-dimensional boundary, which surrounds the entire body and demarcates “inside”, personal space, from “outside”, extra-personal space (Bloomer and Moore 1977:37). This extension of the body in the form of an imaginary envelope modifies the perception of forces affecting a person by managing or suppressing the psychological effect of these forces.

Gibson, a psychologist, lists five basic senses: the visual system, the auditory system, the taste-smell system, the basic-orienting system and the haptic system, which are defined as perceptual “systems” capable of obtaining information about objects in the world without the intervention of an intellectual process (Bloomers and Moore 1977:33). Basic orientation refers to our postural sense of up and down which, because of its dependence on gravity, establishes our knowledge of the ground plane. The haptic sense is the sense of touch reconsidered to include the entire body. To sense haptically is to experience objects in the environment by actually touching them (by climbing a mountain rather than looking at it). The fit and movement of our bodies within and around buildings are significantly affected by our haptic sense, by the tactile qualities of the surfaces and edges that we encounter (Bloomer and Moore 1977:71).

The experience of movement can be in the difference between the path one’s body is actually travelling and the eye’s capacity to take in the route in larger leaps, or along an alternative route. The imagination can perceive places where the feet cannot reach. Imagination extends greatly the realm of the moving body and the richness of the path. As the eye sweeps around an impressive building it is bringing the body along on paths it can surmise but not achieve (Bloomer and Moore 1977:91). The movement of the body in space provides a measure for things, allowing people to appreciate the splendour and exploration of that which is hidden, and to organise what there is to see, hear, feel, smell and touch in a given environment (Meiss 15:1990).

1.1.3 Environmental perception and cognition

“Our environmental image is still a fundamental part of our equipment for living, but for most people it is probably much less vivid and particular today” (Lynch 1960:124). Finding one’s way is the original function of the environmental image and the basis on which its emotional associations may have been based.

To be psychologically healthy, designed environments must satisfy basic human needs (Motloch 1991:7). Humans make two demands on their environment. Firstly they must be legible and understandable, thereby addressing the needs of safety and security. Secondly they demand that settings provide opportunities for involvement, thereby satisfying the users need to explore and to motivate oneself to action. People need to be able to situate themselves by affirming their identity as an individual, as a member of a group and as a human being (Meiss 1990:161)

The environmental image, which is related to the spatial organisation of an environment, influences one’s actions (Norberg-Schulz 1984:20). Spatial understanding of a space requires a cognitive mapping process, the product of which at a particular moment in time is a cognitive map or image. A person’s ability to comprehend the surrounding environment and position in it, relies on this image.

Cognition is a two step process (Motloch 1991:282). Firstly the precognitive stage, based on a nearly instantaneous response to the overall shapes or patterns in the environment, is believed to be rooted in the evolutionary need for rapid appraisal and action for survival and security. The second or cognitive phase of perception involves the decoding of the environment clues that reside in objects and their relations. In this stage the user has already established an intuitive understanding of the place and sense of security.

Cognitive maps contain information about the physical setting, establish the position in space, show direction and facilitate tasks such as wayfinding. A person continually acquires new information in interacting with the environment, and the map becomes more accurate. Cognitive maps are also modified by memory and learning (Passini 1992:46). These maps are often distorted due to perceptions about a space that are not accurate. A good environmental image gives its possessor an important sense of emotional security, which is obverse to fear and anxiety that comes with disorientation (Norberg-Schulz 1984:20). To make people truly comfortable in a setting, it must be immediately legible.

The main problems encountered in forming a coherent image of a building are due to difficulties in grasping spatial organisation, spatial enclosure and spatial correspondence (Passini 1992:130). A highly imageable city, building or interior is one that is perceived as a well-structured system of components that are related to each other (Lang 1987:137).

Wayfinding and spatial orientation are important aspects of an efficient environment. However simplistic functionalism must be avoided, as this leads to uninspiring and monotonous environments (Passini 1992:22). Spatial complexity and the unknown awaken curiosity and the desire to explore. The factors of surprise and discovery contribute to a full spatial experience. It is possible to plan interesting, complex and diversified design and still assure efficient wayfinding.

1.2 The Psychological Experience of Nature

1.2.1 Restorative Environments

Natural scenes or experiences have a positive potential, and may have a restorative effect (Bell 2001:47). Urbanization and population growth have created many stresses (Kaplan 1989:172). Countering the stress that humans endure, restorative responses may include reduced physiological stress, reduced aggression and a restoration of energy and health (Bell 2001:48). *“According to the functional-evolutionary perspective, humans should have a biologically prepared affiliation for certain restorative natural settings, but no such prepared response to urban environments, since these have generally affected only a few generations of human experience”* (Bell 2001:48).

From a wilderness study by Kaplan in the 1970's it emerged that in a setting less harassing and less distracting than the everyday environment, there was considerably greater opportunity to be open to information about oneself that might otherwise be ignored. The participants were able to find simplicity and even silence (Kaplan 1989:146). A deeply restorative experience is likely to include reflections on one's life, priorities and possibilities as well as on one's actions and goals.

A restorative garden is a healing landscape, and is intended by its planners to evoke rhythms that energise the body, inform the spirit and ultimately enhance the recuperative powers inherent in an infirm body or mind (Gerlach-Spriggs 1998:2). The restorative garden is intended to provide an ordered place where its occupants will experience a sense of wellbeing and wonder that will alter their mood (Gerlach-Spriggs 1998:7). Restorative gardens are meant for the healthy as well as the sick.

There is no firm scientific proof that gardens or horticulture have therapeutic value; however a steadily accumulating body of evidence compellingly suggests that nature and gardens fill a critical niche in the approach to patients (Gerlach-Spriggs 1998: 35). Restorative gardens are not replacements for medical interventions, they are not cures. At the broadest social level, learned cultural influences may determine our response to nature and to gardens; but virtually every society cherishes nature and gardens in some form as part of its tradition and culture.



1.2.2 Environmental Health

During 1943 McHarg became an Officer with the 2nd Independent Parachute Brigade Group in Italy (McHarg 1969:2). During his leave, he spent time at Albergo Palumbi, high on the Sorrento Peninsula. *“Here was peace absolute, the only noises were the sounds of footsteps on the stone floors, the whispering of servants, the ringing of church bells, the calls of the street vendor...here was equanimity and health”* (McHarg 1989:3).

After the war McHarg developed pulmonary Tuberculosis (McHarg 1989:4), and spent six months in a Glasgow infirmary that was dirty and cold. He describes the spirit of the place as acrid. He learnt of beds in a Swiss sanatorium and transferred there. McHarg describes in detail his journey from England to Switzerland, and the positive effect the air and countryside had on his morale and health. Once there, his examination was positive and was soon allowed to leave his bed as he wished and enjoy the countryside. McHarg says the following, *“such an experience engraves the belief that the sun and sea, orchards in bloom, mountains and snow, fields of flowers, speak to the spirit as well as the flesh”* (McHarg 1989:5). This statement of McHarg's is further reiterated through an environmental preference questionnaire that was conducted by the author (Appendix A).

Women were asked what environments they would most like to be if they needed to heal, and whether they thought certain environments were more conducive to healing than others. Their answers parallel McHarg's statement, stating they would rather be near nature, away from urban noise and pollution.

1.2.3 Environmental Preference

Survey

The conclusion to the Environmental Preference Survey is contained here. The detailed report and an example questionnaire are contained in Appendix A.

Report Conclusion

In terms of healing the general choice of environments was rural, quiet and with a high degree of nature present. Some of the low income group were concerned with quality of care, and believed that this would be better in an urban settings. This exposes the basic needs of survival that may be lacking in this group. Being well, and getting the correct care is more important than what environment they are in. However, all of the groups agree that your emotion and mental state are affected by environment.

There is consensus between the groups of women surveyed in the report that urban environments are the best for work opportunity.

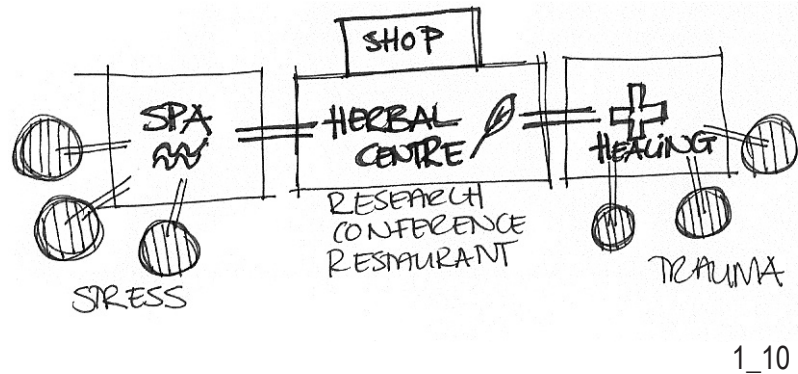
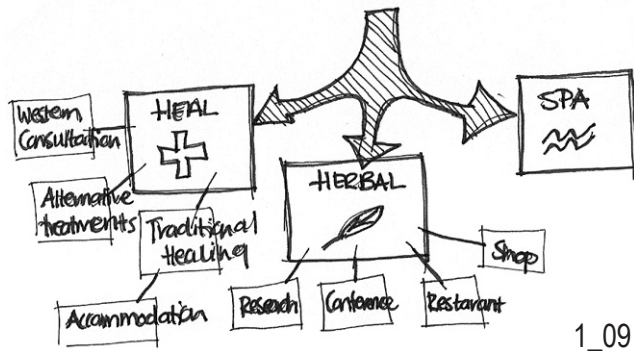
There is a much higher preference among the higher income women to environments that are undisturbed, natural with little human intervention for living and recreational purposes. The students preferred an area with slightly more human intervention. The low income group had a preference for urban residential neighbourhoods as living environments. This is most likely due to their current living conditions not being up to this standard, and the living environments of the other groups are. This links to Maslow's (1970) hierarchy of needs, where the low incomes needs are still at a basic level of survival and safety.

1.3 Design Development

The Design Development exposes the main design objectives that shape the project. These objectives are drawn from the topics discussed in the Normative Position. An appropriate built structure is produced once the Baseline Criteria and Accommodation Schedule have been included in the design. The Technical documentation reveals the final resolved building complex.

Design objectives

1. Integration of development (with site)
2. Reinforcing connections (nodes) with surroundings
3. Circulation and movement, experience
4. Site design



1.3.1 Integration of development (with site)

The site is a constant from the start, but it only emerges as a place of healing when the concepts and built form are applied to the landscape. The buildings bring together the site, its inherent healing forces and those that need healing. The building gathers being into a certain location we call place. There are many sites, but they only come-to-presence with built form. The mental construct of place occurs as the synergism of setting, context, previous experience and mental (emotional) state.

The building creates a space with a distinct character for life to take pace. This induces dwelling. The built form and the landscape provide a framework to accommodate the needs of the users, while meaning is given to the design through the experiences of users, and the concept of healing which the place embodies.

The development must be integrated with the site, acknowledging its location and context. The site for this project was specifically chosen with a spa, herbal and rehabilitation (healing) centre in mind. The Spa and Healing Centre need to be located on a site that is aesthetically pleasing and removed from the urban context.

The starting point for the design and construction of the building complex was the site. The functions of the building complex vary from public to private.

The topography of the site split the building complex into three sections, dictating placement according to the degree of privacy necessary. The most public facilities, the Herbal Centre, which includes the conference centre, research laboratory, restaurant and herbal shop, are located closest to the main entrance. These facilities occupy the area that is currently used as a caravan park and day visitor area. Picnic areas for day visitors are incorporated into the new design, near the dam and waterfall, retaining part of the current function of the site.

The Spa and Healing Centre lie upstream, separated from the Herbal Centre by rocky outcrops of hills. These facilities both lie on the stream, but have no visual connection. Both areas of the site are dominated by clumps of exotic Silver Birch that have been kept due to their place making qualities. These areas are inwardly focused due to the topography and vegetation, with little outside visual intrusion.

To keep noise levels down and control access, public parking is provided near the main entrance with a shuttle service to the Spa and Healing Centre. The rest of the site is limit to pedestrian movement, with controlled vehicular movement. Separate staff and delivery areas are located near the facilities which they serve.

In considering the features of the site, as well as the nature of the building complex, the aesthetics to be embodied in the design were formed. As the overall concept is healing, the materials chosen compliment this approach in that that they do not create a clinical environment.

Rammed earth within a timber frame was chosen as the main construction method. This method of building mimics traditional methods used by many South African races. Aesthetically rammed earth embodies the concept of 'building as close to nature as possible', which is important when designing healing facilities (Anyumba interview 2005). This system becomes a 'modular' system that is applied to all the buildings, and links them visually. Rammed earth architecture is not intimidating or exclusive, appealing to a wide range of users. The abundance of stone on site facilitated the choice as a building material.

The buildings are placed within the landscape as a series of pavilions. In order to keep the scale of architecture down, and limit visual intrusion, a collection of smaller buildings was favoured over a large building. Landscaping and circulation areas are used to connect the buildings so that they form a cohesive whole. Outdoor 'rooms' are created between facilities. These 'rooms' create places within the building complex for transition between facilities and social interaction.



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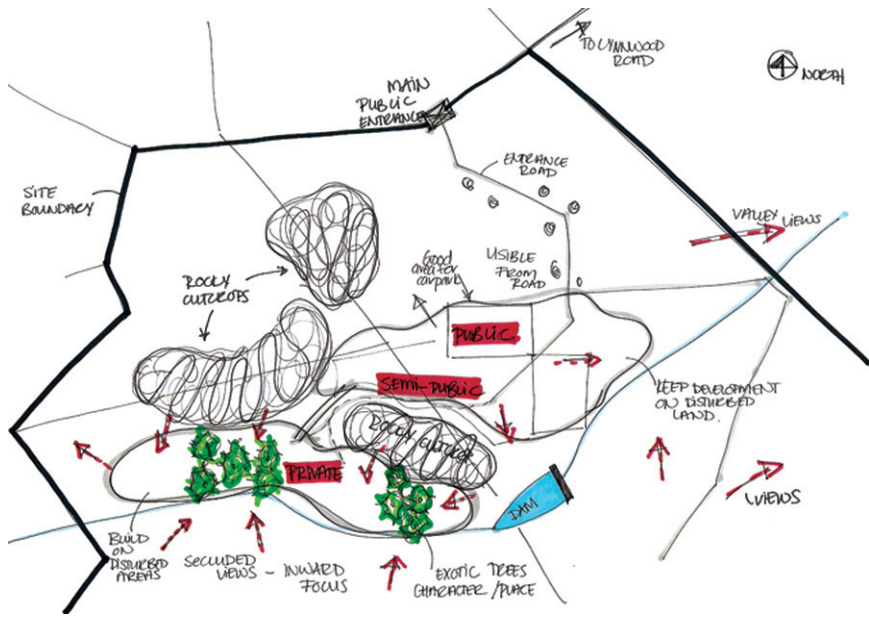
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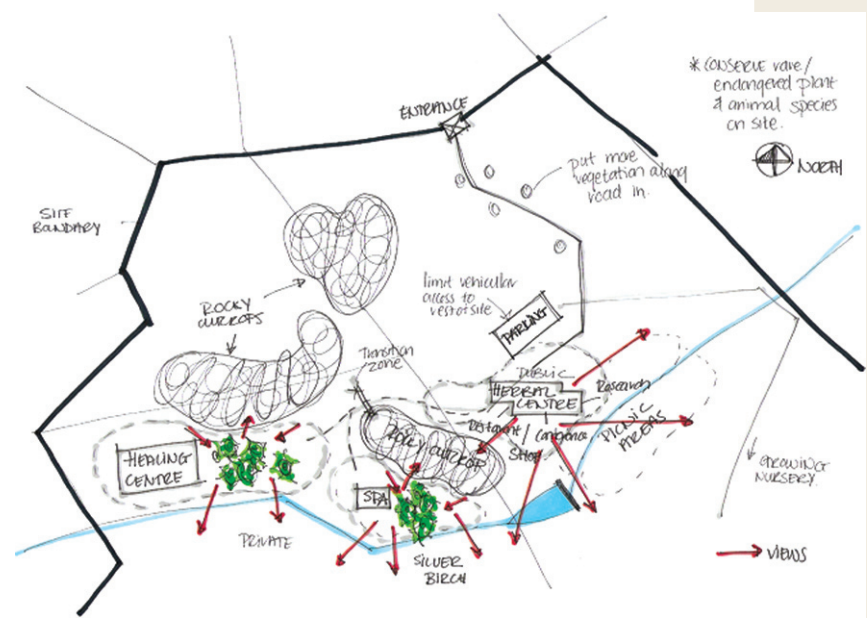
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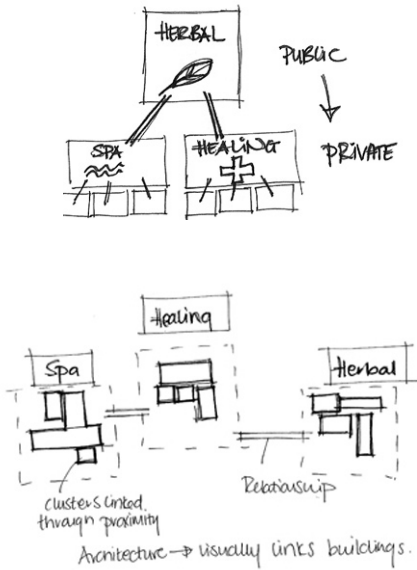
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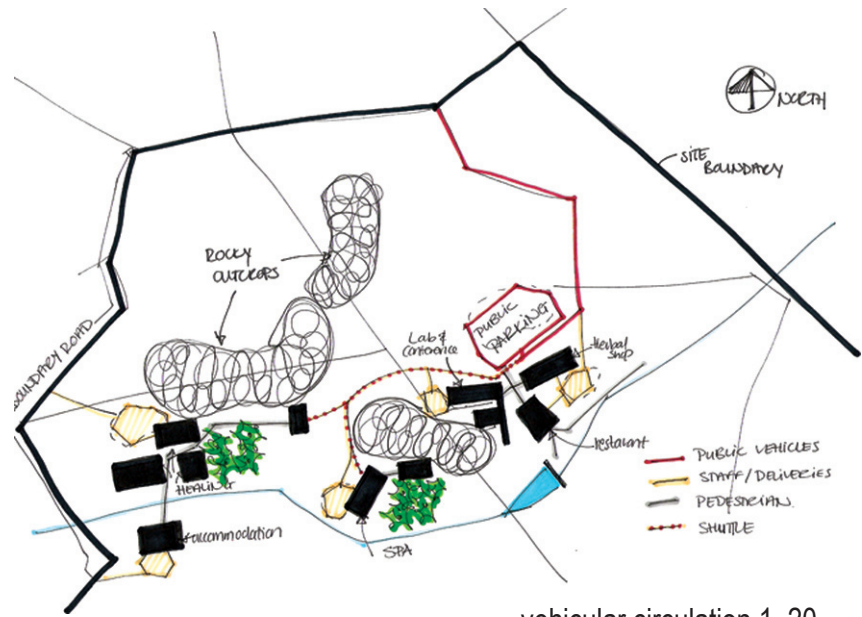
separation of public and private zones 1_17



functional placement 1_18



1_19



vehicular circulation 1_20

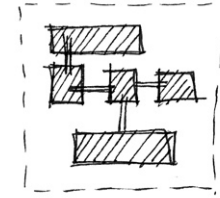
1.3.2 Reinforcing connections (nodes) with surroundings

The form and plan of the design evolved due to spatial organisation, accommodation schedule, topography, views and vegetation. The angular placement of walls emphasises views, topography and creates place. Interior walls placed at an angle create visual axes that lead the user into the landscape. Although the user may not be physically standing outdoors, the experience is that of a disintegration of the boundaries between outdoor and indoor space. The shape of the rooms make the user constantly aware of their surroundings and the context of the site.

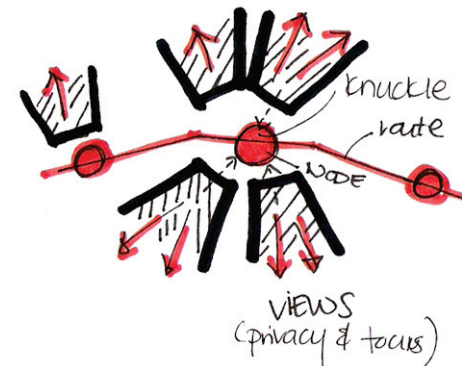
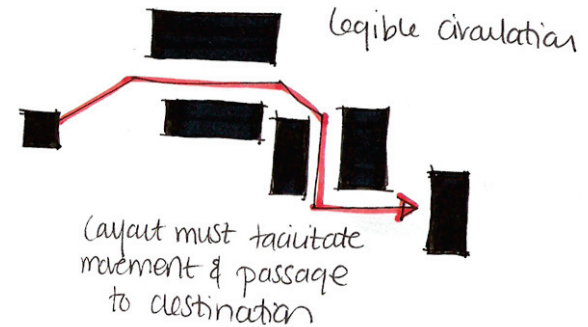
All rooms have openings that provide visual connection to the site. These openings aid orientation within the building complex. The three areas of the site have main features which act as orientation points for users. These orientation points are elements such as the stream, the clumps of Silver Birch and rocky outcrops on site. The built form creates additional orientation points through the creation of nodes and gathering places. The views emphasized by the built form create visual links and orientation points.

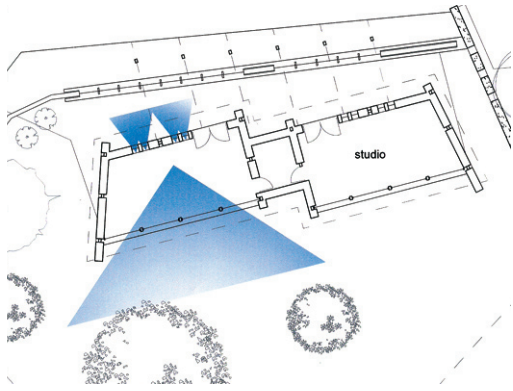
Facilities back onto the main circulation axis, with the main visual axis being in the opposite direction, onto the site. This provides privacy and focus in the rooms. Users of the rooms are not disturbed by [people moving around the building complex. Small windows face onto the main circulation axis, linking the occupant to their 'escape route'.

Orientation and cognition are extremely important when dealing with victims of trauma and abuse. Clear mental images, inducing orientation, facilitate the feeling of safety and comfort on the part of the user. Once this level of security is established, this mental image is enriched through exploration and enjoyment of the site. The buildings must be legible and understandable. Entrances and paths are clearly distinguished. Initially users will be accompanied by staff members, but must be able to find their way around the building complex to return to main nodes or use outdoor spaces. Strong visual axes are a feature of the project to aid orientation. Circulation axes and visual axes link to main nodes of the complexes. From the main nodes links are created to most areas. These nodes form 'knuckles' around which the other facilities are organised. Some axes are made up of a series of axes, that is that the buildings are not dominated by one straight axis. Paths are ordered so that they do not cause disorientation by changing direction often, or breaking the visual link to the main nodes and orientation points

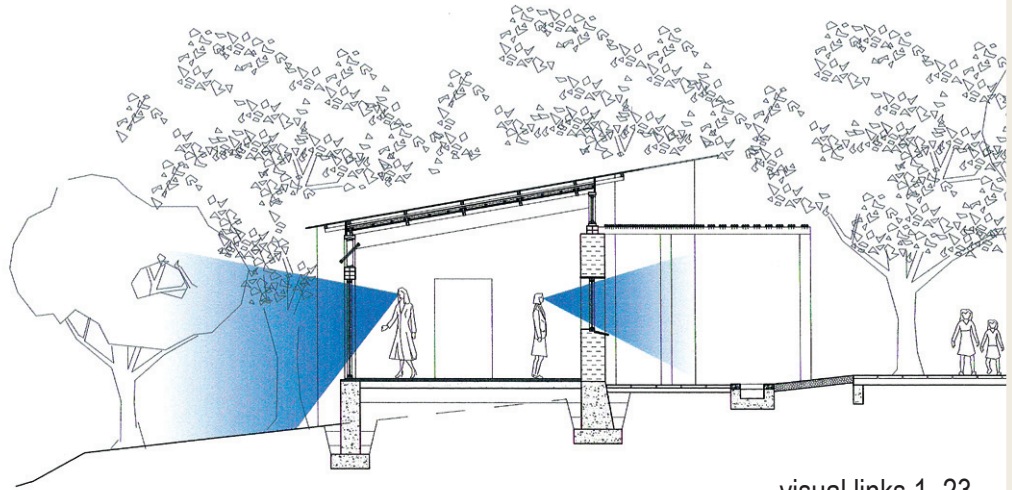


Complex must have
interconnectedness
↳ function as a whole

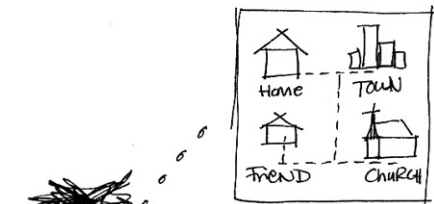




visual links 1_22

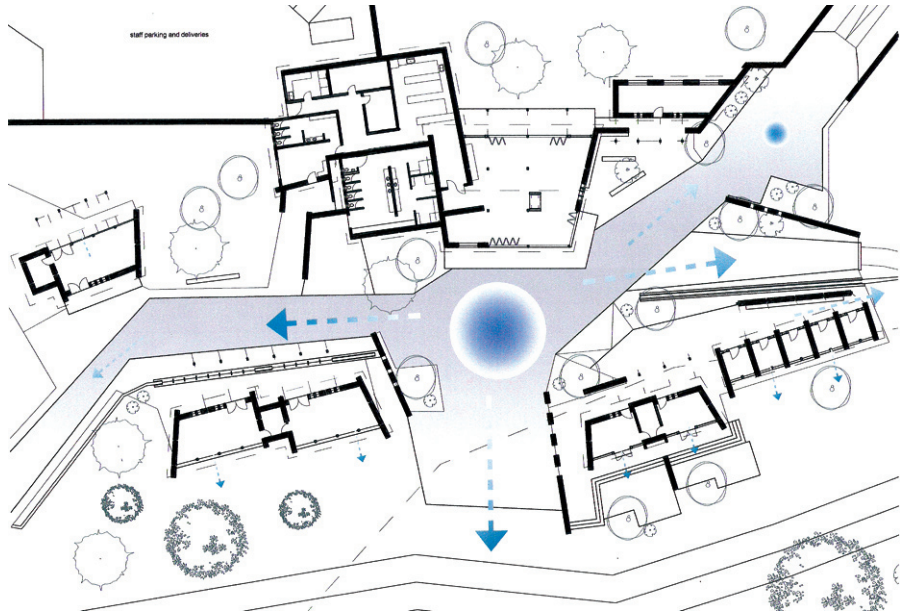


visual links 1_23



Mental image

orientation and cognition 1_24



nodes and visual axis 1_25

1.3.3 Circulation, movement and experience

Circulation among the buildings is largely via outdoor areas. These circulation areas are linked through a series of nodes. Primary facilities are located off the main nodes. Main facilities such as dining areas, ablutions and administration offices are located at central nodes. From these nodes there are visual links to other parts of the site.

Circulation is facilitated through surface texture. The main circulation has a particular dense pattern of paving. Secondary circulation pathways leading off the main route have a more permeable paving texture. The paving is not as dense and interspersed with gravel and planting. Circulation surfaces are all wide enough for wheel chairs, and a suitable surface to allow easy passage over the surface.

The spa is made up of a central building housing the café, lounge, gym, indoor studio and ablutions, with a separate hydrotherapy facility, hydrotherapy garden and treatment rooms located outside in the landscape. Circulation within the building complex is such that it supports unobtrusive use of the primary facilities. Treatment rooms and the hydrotherapy garden are located away from the main areas, taking advantage of the site.

The Herbal Centre has a central circulation spine that links the parking to the restaurant, nursery and picnic areas. The research facility and conference centre have a separate entrance, dividing their semi-public function from the public domain. Circulation within each part of this complex prevents disruption of activities in progress.

The clumps of Silver Birch located on the Healing Centre portion of the site separate its entrance from the rest of the facility. Transition from the entrance to the Healing Centre, into the facility itself is via a pathway carved into the side of the hill. This pathway forms a threshold. Screens along this pathway separate it from the facilities located adjacent to it. Openings in the screens provide brief glimpses of the stream and outdoor areas. The path of the eye and the path that the body physically travels are different. The eye is able to anticipate the outdoor areas, before the body experiences them. A main circulation spine runs from the entrance to accommodation unit. The facilities all branch off this spine.

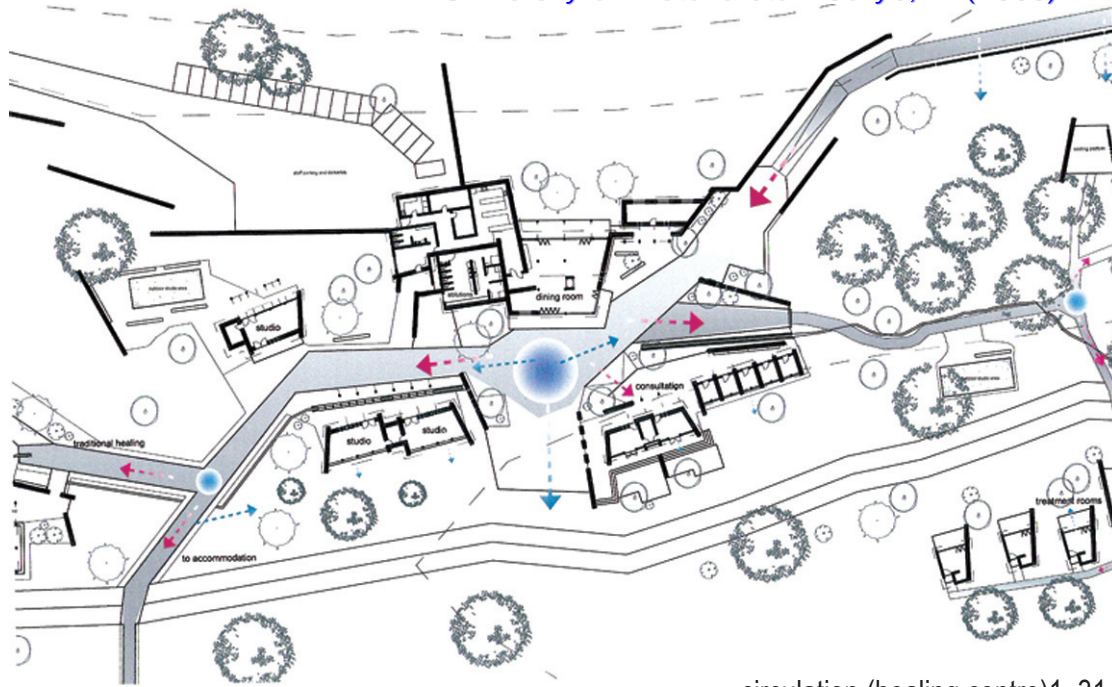
Intangible design explores the patterns of use and experience. Circulation and movement through the complex are encouraged by the design and layout. The textures of the materials used create certain visual qualities that induce meaning and enhance the experience of the user. Movement through the site is ordered, but evokes interest and exploration through the character of space created. The physical path of the body and path of the eye are often different, letting the imagination perceive areas of the site before the body experiences them in their totality.

The separate areas of the building complex provide different experiences based on their layout and the perception of the user. The buildings are arranged in such a way that users can stay within the building compound and find security, or choose to move into nature, to areas with built mass.

The environment created by the Healing Centre must not be perceived as threatening or harmful by its users. Meanings are manifested in the landscape through the experiences and prejudices of the user. The overall experience that the building complex should provide is one of healing and rejuvenation. The architecture on site is the concretization of the concept of healing.

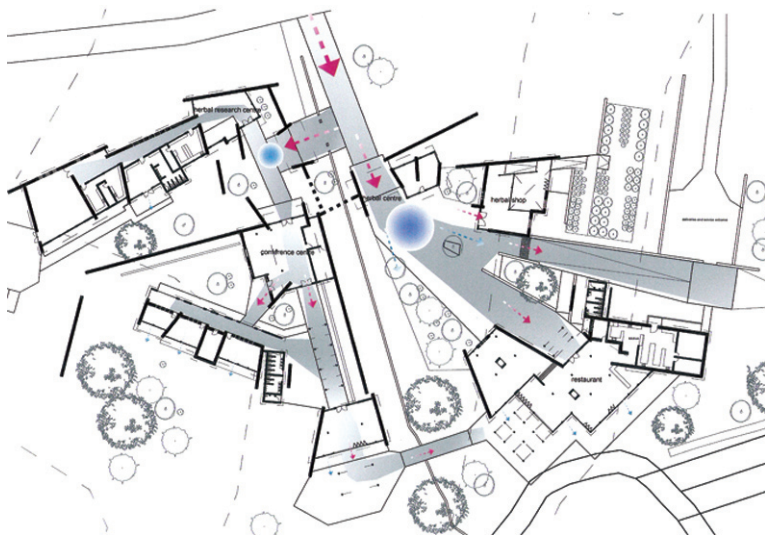


silver birch trees

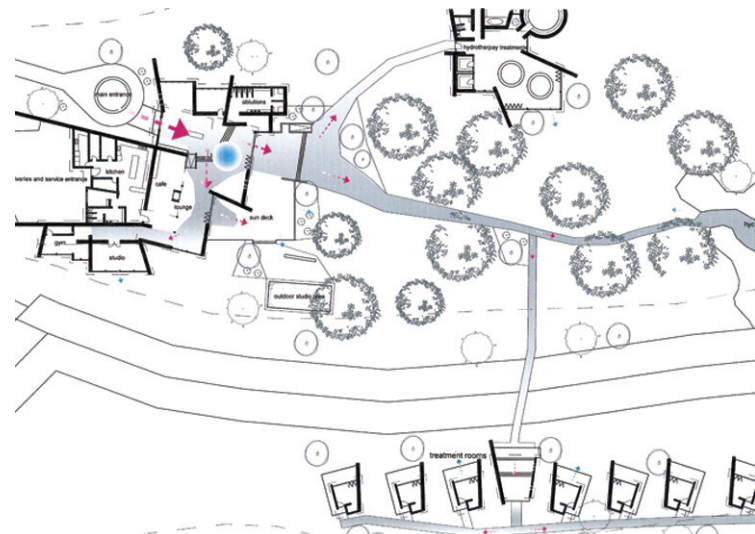


Key
grey - main circulation
red arrow - circulation
blue dot - node
blue arrow - visual axis

circulation (healing centre)1_31



circulation (herbal centre) 1_32



circulation (spa) 1_33

1.3.4 Site design

The building is rooted in nature, anchored in its surroundings by its physical and cultural context. The placement of the buildings, acknowledges the inherent features of the landscape, and accommodates them in the design. The topography of the site separates the building complex into three parts, and determines their location on site due to privacy and noise considerations. The materials and design of the building make it harmonious with the landscape; where the natural healing power of nature is not overshadowed. Retreat from the urban realm into a natural surrounding that helps to induce relaxation, reflection and healing is important to the design concept.

Healing is a process that can only take place from within ourselves, but this process can be triggered and supported by things and actions outside us. We can, therefore, talk about healing environments and healing qualities of environment (Day 1990:138). To be healing, a place must be harmonious, bringing change as an organic development so that new buildings seem not to be imposed aliens but inevitably belong where they are (Day 1990:19). Buildings must be nourishing to the human spirit.

Materials and views are chosen for their aesthetic and concept of healing they embody. Stone, earth and water are the main elements in the design. The sound of running water and wind in the trees has its own restorative quality (Anyumba interview, 2005). The landscape of the building complexes seeks to nurture healing by providing a safe and visually harmonious environment.

Due to the nature of the facilities, noise levels in many areas of the facility must be kept as low as possible. Functions have been zoned so that noisy and quiet areas are separated, and do not interfere with one another. This is especially important in the Healing Centre, where noise is unwanted in some areas. Noisy functions such as traditional healing, music and drumming therapy are separated from quieter activities such as consultation and alternative treatments. The main dining and service areas are located as a buffer between the two zones.

The orientation of the buildings on site is composed of many factors: local topography, the requirements for privacy, views, reduction of noise and the climatic factors of wind and solar radiation. Passive systems of climate control and environmentally responsible design are included in the design. This topic is discussed in further detail in the Technical Documentation, chapter 5.



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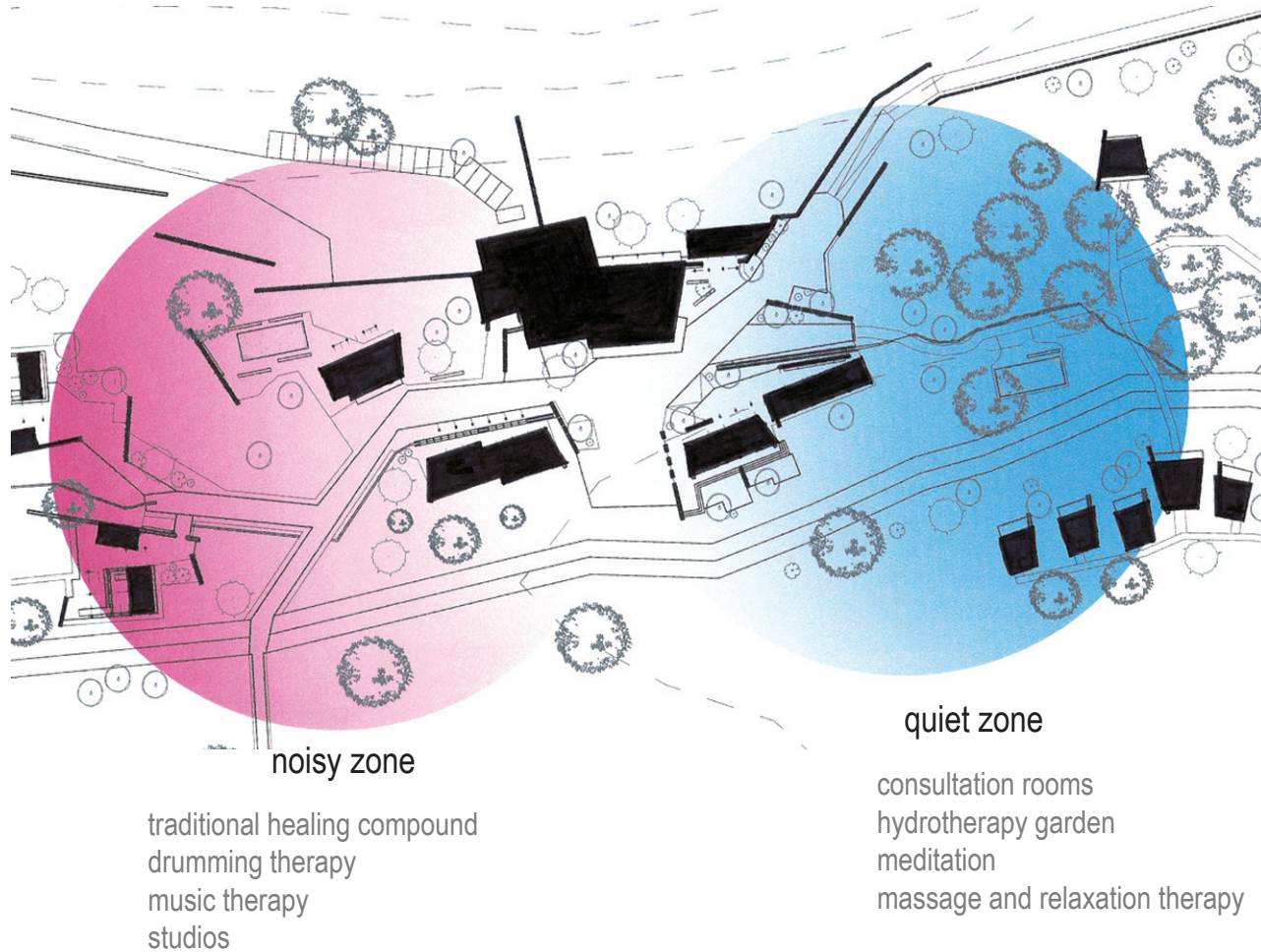
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noise zones (healing centre) 1_39