

Master of Architecture (Professional)

Design Dissertation

Ritual space: an Architecture of Connection and Orientation

Design Research Project APG 5058S

Submitted in partial fulfilment for the degree

Master of Architecture (Professional)

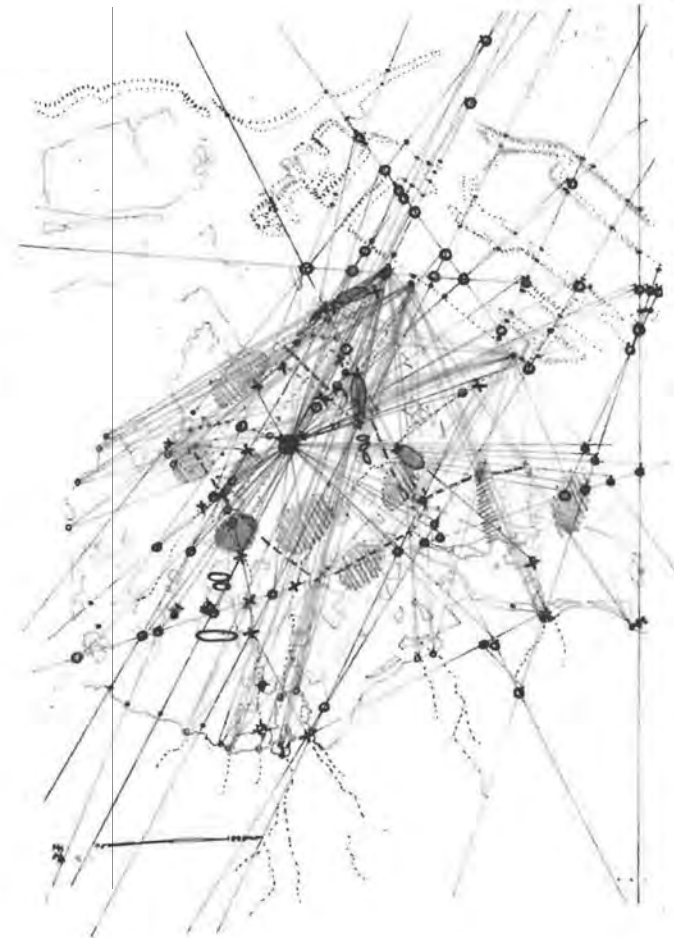
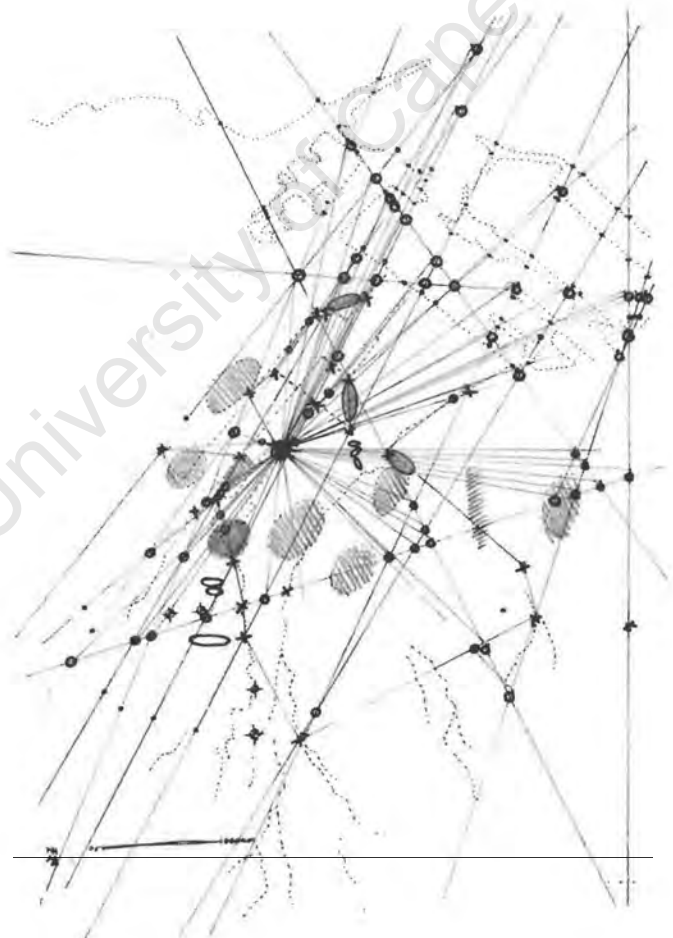
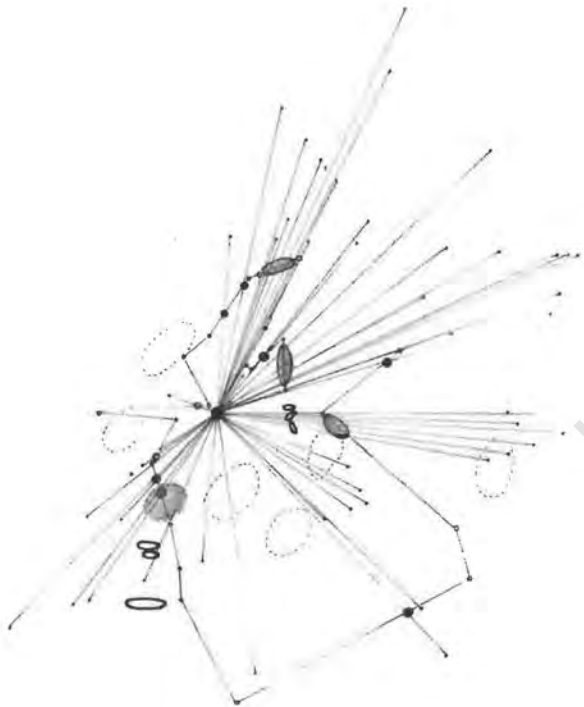
By

Trudie Anna Joubert

October 2012

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University of Cape Town



Ritual Space: Architecture of Connection + Orientation

A Materiality of Mediation, Ritual Space in Architecture

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Historical Map of Cape Town and the Cape Flats Area showing the rivers and other water bodies in black, particularly in the City Bowl area of Cape Town 1895

(base image: National Geo-spatial Information, Mowbray)



Introduction

The exploration of orientation and the search for identity through connection, as the form and programme generator in an architectural project

My interest in ritual started with questioning the importance thereof in my own life. This awareness led me to query the role of the ritualistic in the spatial perception of an individual within the built work, as ritual serves to place an individual in a social framework. The need to place oneself in a context seems to be central to architecture as it determines the relation of the person to the domain, built or un-built, in which they find themselves.

Modern rituals may be repetitions in schedule, and not necessarily rites of passage which occur at set intervals during a person's life. These are almost always spatial in nature as they involve the completion of a sequence of events or actions which play out in a set pattern and occupy space. To this end identity and location within the whole perform the same function as the 'you are here' sign on a map which may be consulted upon arrival at an unfamiliar building. It gives one a sense of security and places one in context, giving one a way of locating oneself in the broader environment.

The inclusion or exclusion of an individual in a group is often based on the group's shared experiences. Identity, when linked to ritual, means finding one's self and reading relationships within the greater whole in much the same way that a building does to

the city or larger suburb. Its position in space is relative to what is around it. The circles of relation are concentric and ever increasing.

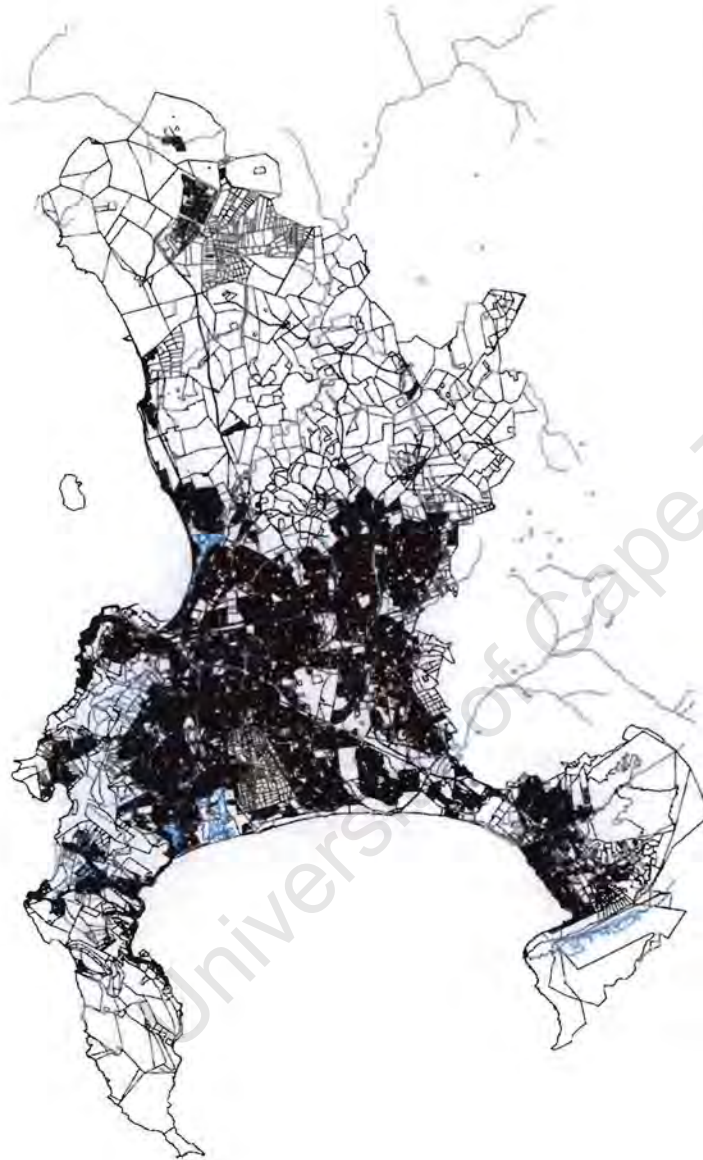
With the beginning point of an interest in ritual and from that the concept of identity, in terms of the relationships between elements in the built fabric, can there be an architectural expression of these relational connections?

Could an abstraction of the idea of ritual lead to the programme of a building? Does ritual in its conceptual sense (not pertaining to a specific set of prescribed actions) contribute to the expression of the built form? What role does the place of mediation, the threshold, between perceptions have in the manifestation of architecture?

This project seeks to explore how identity affects the mind, body, spirituality of an individual, and context in which we find ourselves, in a conceptual sense, and how these four elements can work together to form a built work.

These questions will be addressed through the use of mappings of the city, and more specifically the area in which my site is located. I will also look at

Map of the Peninsula showing surface water and built fabric



the spatial arrangement and form making through the use of the idea of the 'tree of life' or axis mundi. This is a mystic device which has its expression across cultures. What drew me to the exploration thereof was the commonality it made apparent in cultures thought to be vastly different from each other. The axis mundi explores the placement of the sacred artefact as it pertains to the built work; it is related to the church steeple and the minarets of a mosque and the connection between the heavens and the earth which these represent. The idea of the liminal space; the space between spaces, in both a conceptual sense, and in the physical thresholds of a place are tied to the axis.

Theory

Ritual: a definition

Ritual, the performance of ceremonial acts prescribed by tradition or by sacerdotal decree. Ritual is a specific, observable mode of behaviour exhibited by all known societies. It is thus possible to view ritual as a way of defining or describing humans.

- Encyclopaedia Britannica

There seems to be a point, after great technological advancement, when man returns to his roots. The progress appears to drive people towards a loss and subsequent questioning of identity and importance of individuality, which in turn sparks off the trend of a large scale search for the meaning of life and position of the human race in the continuum of existence.

This can be seen happening after the industrial revolution with the Arts and Crafts movement in England, and again in the seventies when there was a return to nature. This return was generated by two world wars, a push towards the suburban ideal and finally an American invasion of Vietnam. The consumerism of the fifties and early sixties gave rise to the desire for freedom which the seventies then embodied. This movement of a return to nature and rediscovery of cultural roots appears to be happening currently. With the awareness of the natural predicament that changing weather patterns have inflicted on the planet, helped along by mans greed a more natural way of doing things has become more popular.

In this generation we have experienced massive advancements in technology and production as a result of the use of computer aided design and production. This has re-awakened the search for identity and brought the question of man's place in the world and responsibility for our environment to the fore. Along with this the importance of ritual, as it pertains to man's identity is being explored with new fervour. However, ritual does not necessarily mean a set of events connected to or specific to a particular culture or religion. In everyday life it has become a term used to describe a set of progressive actions. Even though anthropologists use ritual as one of the methods of identifying cultures, particularly those that have faded into obscurity or been lost to history, the term is used colloquially like the spoken word. Interestingly the other method of cultural identification is through built artefacts, which remain as testaments to the important aspects of the culture deemed necessary to cement in structure by the people who erected them. Ritual and architecture are thus connected as they serve as identifying features of culture and people groups.

Rituals are used as markers in time. They serve as separating devices which suggest a pre-ritual and post-ritual state which differ from each other. The sequence of events may be prescribed by the individual or by a cultural or social construct. There might not be any actual change through the employment of a ritual, however in the individual or societies eyes the state of being of the person subjected to the ritual has changed.

Opposite page:
Map of the City Bowl showing buried rivers, schools, open land and places of worship

(base image: orthophotograph from National Geo-spatial Information, Mowbray)

As a person's life progresses from one state of being to another there are certain celebrations and events which serve to mark the occasion and the passage of time. In rites of passage witnesses to the event, who often play a role in the ceremony; solidify their importance in the initiate's life through their involvement in the ritual. Participation in such a rite consequently serves to draw a community together as much as it can separate the initiate from those who have yet to undergo or be subjected to the ritual.

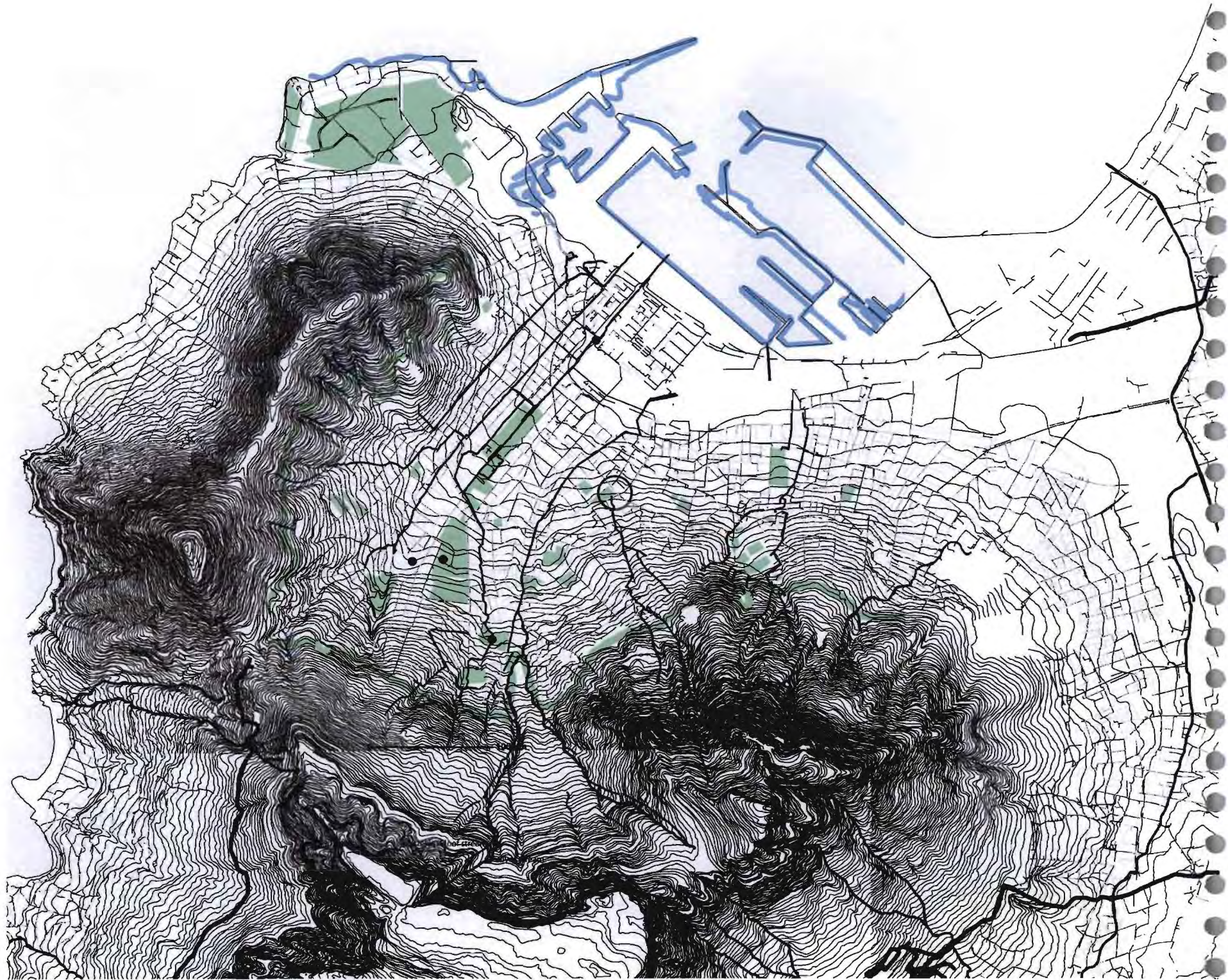
The nature of the ritual performed depends on the context and timing of the event, with the frequency depending on the ritual. A birthday is celebrated annually, whereas an initiation ritual may occur once in a person's life to signify the progression from boyhood to manhood, or from a state of singleness to partnership in the form of a marriage. Rituals, however, may also be performed on a daily basis and may be as commonplace as walking down a street, or meditation.

When defined as repetitious movements through a space, ritual becomes a measured, concentrated approach to the everyday. According to Mircea Eliade (1957:183) even the most habitual act can become a ritual, transforming mundane activity into a ceremony of symbolic or even spiritual significance. Such transformative acts serve to mediate between the sacred and the profane, the world of man and that of spirits, deities or ancestors, between this life and the next.



- places of worship
- recreation places
- schools

platteklip kloof stream
silver stream



Orientation + Identity

The boundaries between body, territory and beyond become culturally dependent cognitive markers for distinguishing between entities on the basis of their value and for establishing rules for their engagement and transformation: 'Human beings have the dispositional property to invest the boundary-points of categories of for instance time, space and the human body with special referential value and inferential potential. This capacity is activated in places set apart as sacred.' (Anttonen 2002, p.31) The 'sacred' as a category boundary not only separates different domains (such as body from territory, male from female, person from animal), but also binds them together. 'it is generated as a boundary in situations when focus of a community or a person shifts from the inside to the outside' and vice versa; and ritual is the principle cultural process for managing it (Anttonen 1996, p.43). (Knott; 2008:1106)

As discussed rituals serve as markers in time, anchoring points from which the individual may measure their lives. They serve to locate the individual in a specific culture and time. Such an act has geographical significance as the individual plays out the steps in space. With a ritual being a set of movements which the body enacts there is a deliberate placement of an individual in space.

For such a placement to be effective the individual relates themselves spatially to elements around them, the act alters the relationships of the person to these elements be they people or things and consequently how they perceive space. Spatial perception has much to do with the emotional state of an individual. We all bring certain preconceptions and ideas into the spaces we visit on a daily basis. How we feel at a particular moment impacts on how we feel about the spaces

we are in. Rituals are constructed to allow a certain perception. In an initiation ritual the individual's perception is altered as they are required to look upon life and subsequently the world around them, which consists of a number of spaces, alongside and within each other from the perspective of a man and no longer a child. The initiate is required to perceive things differently.

Identity, as given by ritual or cultural involvement is related to orientation of the individual within a given context. The ability to orientate and re-orientate oneself with the world around us is something which, arguably, has always been a human necessity. It helps a person feel comfortable and secure in themselves and by extension, their environment. Ritual, by placing the individual in society, gives them identity and a reference point from which to act. This then translates into the way in which the individual may place themselves within a larger geographic whole, serving as a point of orientation.

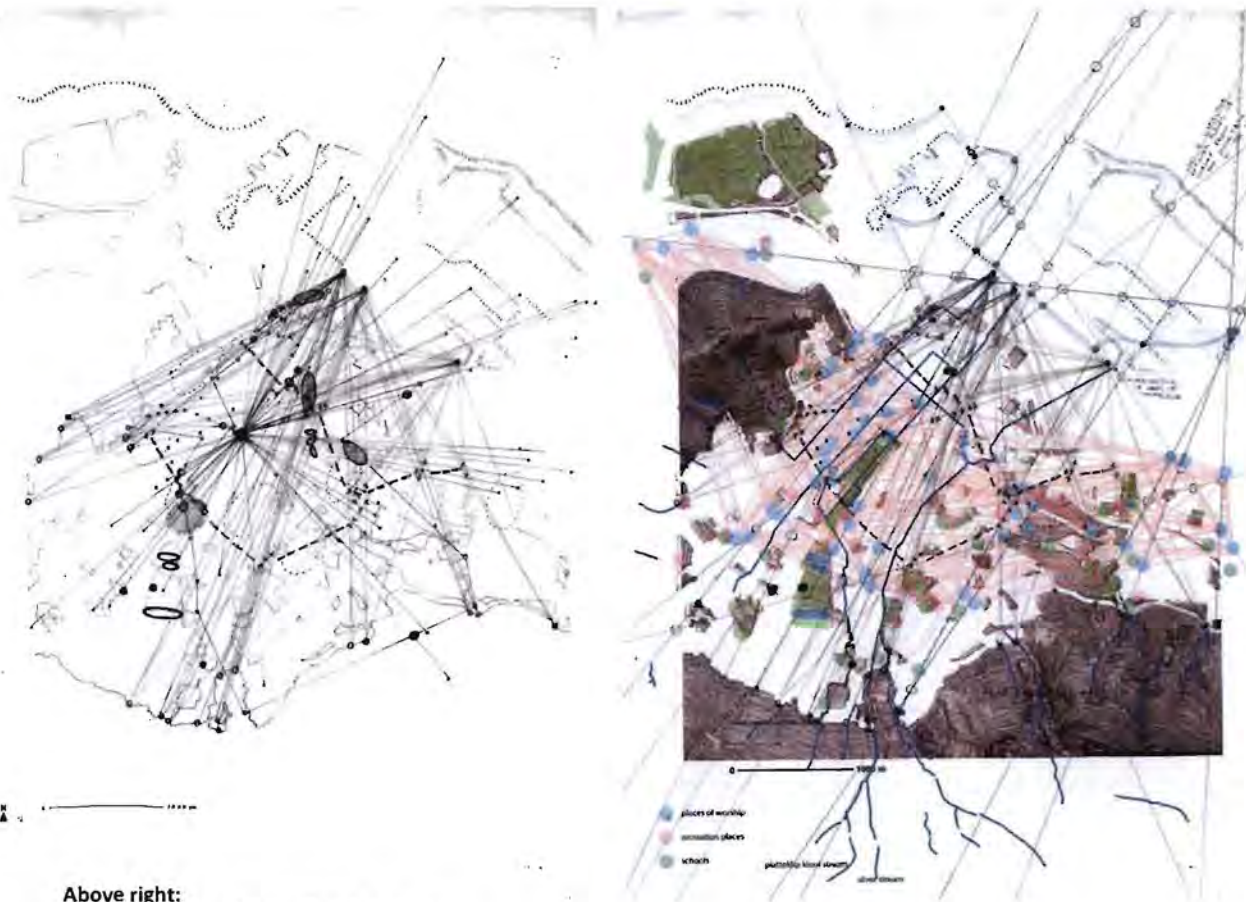
Through ritual the person relates to society in much the same way that a building relates to the city, as a part of a much larger whole. One's identity has to do with relationship to the world, orientation within the context and placement in space. Ritual is a facilitator thereof. In a world of increasing population expansion the need for individuality is increased. There is a great desire to be understood on one's own terms and not judged with or against the seven billion others of the human species currently walking the globe.

Identity is influenced by the relationships between people and oneself and things and oneself. A measurement of all that we find around us. In order to

Opposite page:
Map of the City Bowl and table part of the mountain showing storm water system, green spaces and rivers.

The rivers in the city have been put underground in pipes but water still flows from the mountain to the sea along these routes. The edge of the city on the mountain is indicated by the green line

(base image: GIS)



Above right:
Map of the Cape Town showing places of worship and lines connecting them to each other.

In a creative design exercise I connected the places of worship from mountain to sea in straight lines and points of water entering the area of built fabric and leaving the city to the sea.

Above left:
These lines of intersection were then overlaid with the lines of connection between the spiritual centres. Places of numerous intersection between the lines were highlighted.

place ourselves in space we are constantly measuring our surrounds. How high is that step, large is that opening, how far is that door. All this is measured in relation to our bodies. The one thing that remains constant and with us always are the extents of ourselves – the body; that with which we place ourselves physically.

There is a cognitive component to placement. It is into this aspect that social standing and culture become important. The perceived differences occur in individuality, with the expression thereof and manner of occupying space. People differentiate between others based not only on the physical differences which they see in each other but the mental capability and set of experiences as well. The aesthetic and spatial understanding of an individual is another divide.

Ritual, Architecture + Spatial Theory

The timeless task of Architecture is to create embodied existential metaphors that concretise and structure man's being in the world.

Architecture enables us to perceive and understand the dialectics of performance and change, to settle ourselves in the world, and to place ourselves in the continuum of culture. (Pallasmaa, 1996:50)

... what has taken, ever since the ancient times, the name sanctuary was, then, a clarifying building which endowed the use of place with an image of unity to which it itself belong, with a concentrated expression of the qualities of the surrounding environment. (Norberg-Schulz, 2000:39)

Rituals of a 'rite of passage' or 'transitional' nature find their description in architectural terms. The terms used to describe such rituals are: separation, transition, and reincorporation or preliminal, liminal and post liminal stages (before, at and past the 'limen'- which is the threshold in Latin.) (Alexander & Norbeck, 2012) By this description the very act of ritual evokes images of buildings and temples – large structures which define national or cultural identities.

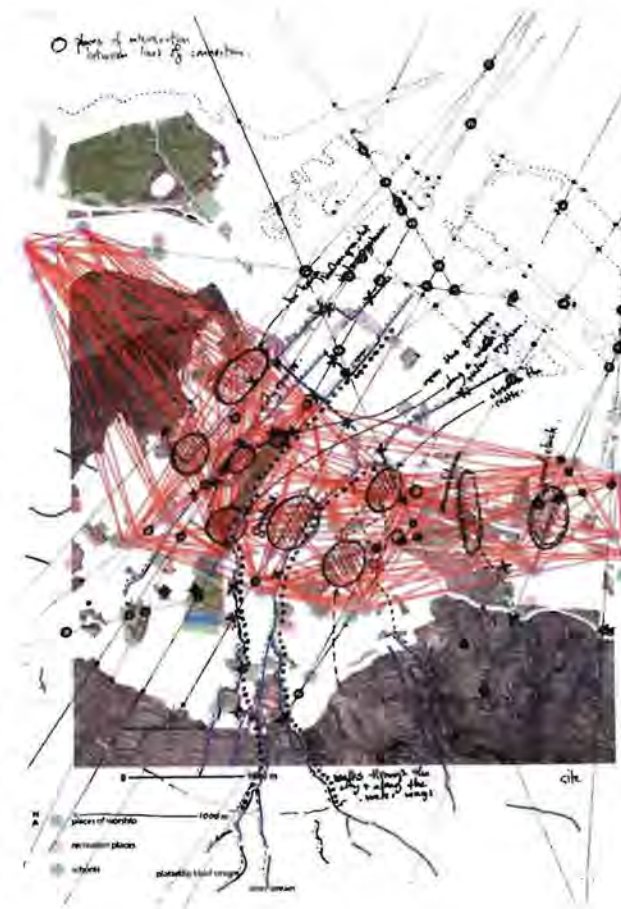
The exploration of spatial theory as it pertains to religion and the ritualistic as a body of theory is currently undergoing a revival. With the separation of church and state there was a divide in the exploration of spatial theory with the chief focus in the last half of the previous century the on politics and geography and the political climate. Spatial theory has recently regained popularity as it pertains to religion and the ritualistic. (Knott; 2008: 1102)

The study of space has been integral to that of architecture, particularly in the last century when ideas of concept driven design gained importance. As architecture has to do with the creation of space and the differentiation between spaces in which life takes place, an understanding of the importance of dedicated spaces allowing for the acting out of specific functions in everyday life is necessary in the creation of the architectural work.

The relationship of an individual to the space and the experience which the built fabric allows may be controlled to a degree. The way in which we experience the world around us is as a direct result of the way in which the built world is set up for experience. Although perception cannot be forced as it relies on individual experience, which every person would understand differently as culture and background alter the individual's perception of a space. The sculpting of the environment plays an important role in the experience thereof.

Identity and orientation are about the way that things relate to each other and convey a story; the narrative of the city. This is a Situationist idea of the personal mapping of a city. The map is drawn according to roads and street traversed; the personal investment in a place and the way in which a place is experienced.

Architecture offers a house for enquiry of society and the individual where the individual may place themselves in a larger whole. If architecture allows this placement, the home may become an extension of



Above:
Areas of high numbers of spiritual centres circled.

(base image: orthophotograph from National Geo-spatial Information, Mowbray)

the self. It is the place where most of our daily rituals take place. Our identity is often evident in likes and dislikes shown by our manner of occupying space. The 'domicile becomes integrated with our identity; it becomes part of our own body and being.' (Pallasmaa, 1996:50)

Water + Liminality

Enlightened' architecture, such as the Alhambra, Sufi architecture, southern Kivas, or some traditional Taoist gardens, has a theme of liberation from the coils of fallen human nature through spiritual rebirth. (Juhasz; 1989:185)

Anttonen stipulates the importance for cognitive categorisation and its cultural applications of the notions of 'inside' and 'outside' and a third space between them, the boundary (p. 42). (Knott; 2008:1106)

In this cognitive theory of the sacred, the mind, working unconsciously with embodied notions of space and consciously with whatever cultural tools are available to it, is seen as giving significance and meaning to natural and social boundaries (Anttonen 2005, p. 189). (Knott; 2008:1106)

In ritual the liminal space is the central threshold period and space, before the initiate has undergone the ritual, but once the ritual has begun. It is that period where in the initiate is not bound by the social structures which they are leaving nor by those which they will soon adopt once the rite of passage is complete.

In Xhosa culture the river is seen as the liminal space between the calm and ordered homestead and the wild and chaotic, dangerous wilderness. It may be perceived as both good and bad depending on the individual interpretation; sometimes good, sometimes bad. (Chidester; 2000:17) Liminality is that in-between condition between the earth and the sky. The horizon, where they meet and where an exchange between the two may take place. The river is a non-space where the individual is not required to act in a certain way, they

have no responsibility. The liminal space is a place of connection between the spiritual and physical realms which occupy much of the imagination, both of ancient primitive man and the highly technologically advanced person of today.

Experientially in terms of the built work, it might be likened to that transitional circulation space, navigated before a main space is entered. The threshold space in effect, the visitor to a structure is neither inside nor outside, they find themselves between spaces.

Conceptually, ritual could be expressed in architecture as a threshold, as the meeting point of two separate realms. The built work could then become a liminal space which allows for the meeting of two worlds just as the horizon does for the earth and the sky.

Multiple threshold conditions in the built work would allow individuals to negotiate through space in the same way that rites of passage might facilitate transition in life. According to Pallasmaa (1996:50) architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses. Mediation has a location in place as it is not only a state of being but also plays out in a geographical landscape and as such it finds a home in the built artefact.

Water, as fluid, transitional element, deals with symbolic orientation and as such has cognitive significance to ritual and architecture. It is often used in the built work as a directional element; the nature of the current and flow serve to entice and guide an individual on his or her journey through a space, or landscape. The

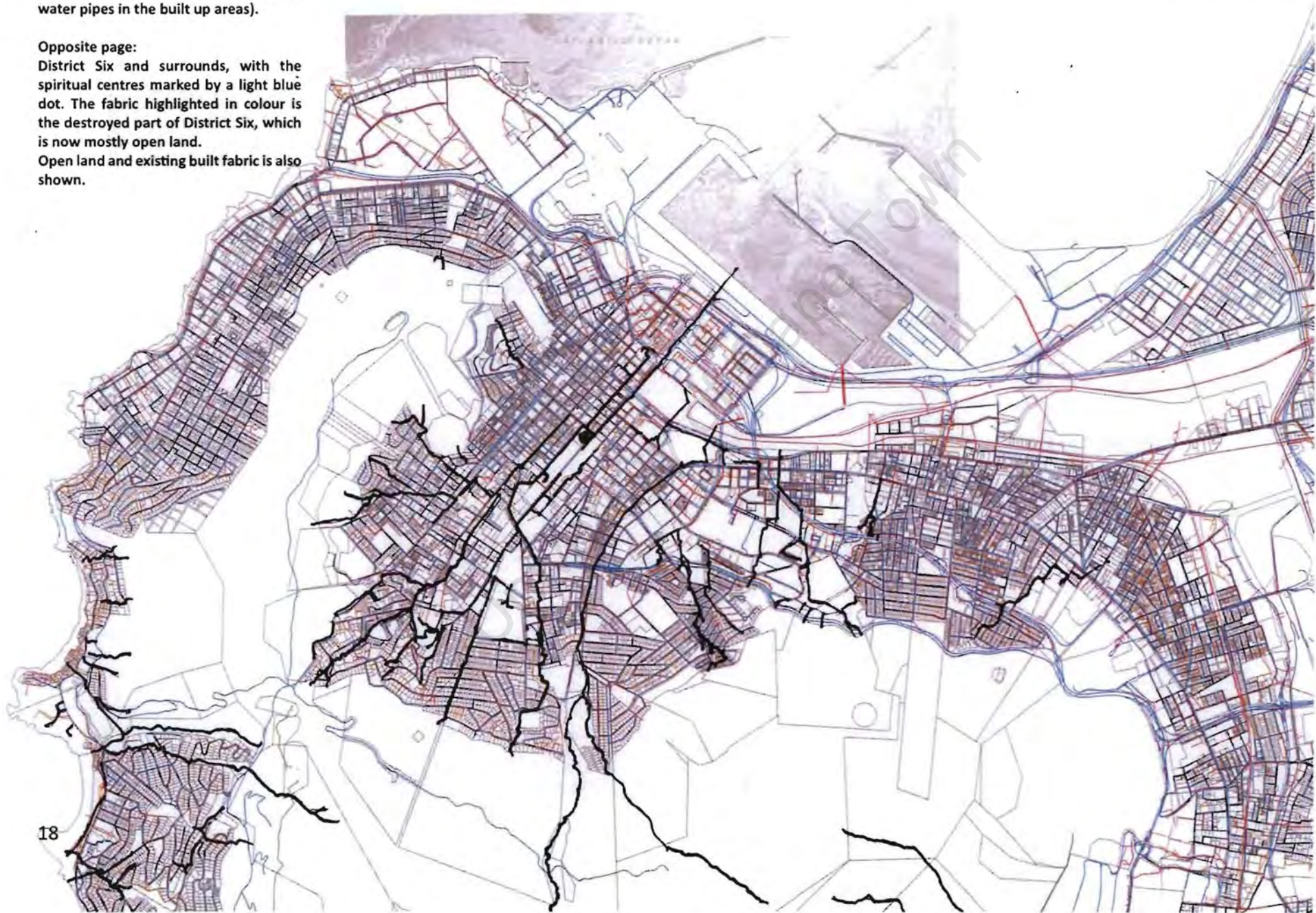
Below:

Map of the Cape Town showing water ways, sewer systems, storm water and river courses (which flow in the storm water pipes in the built up areas).

Opposite page:

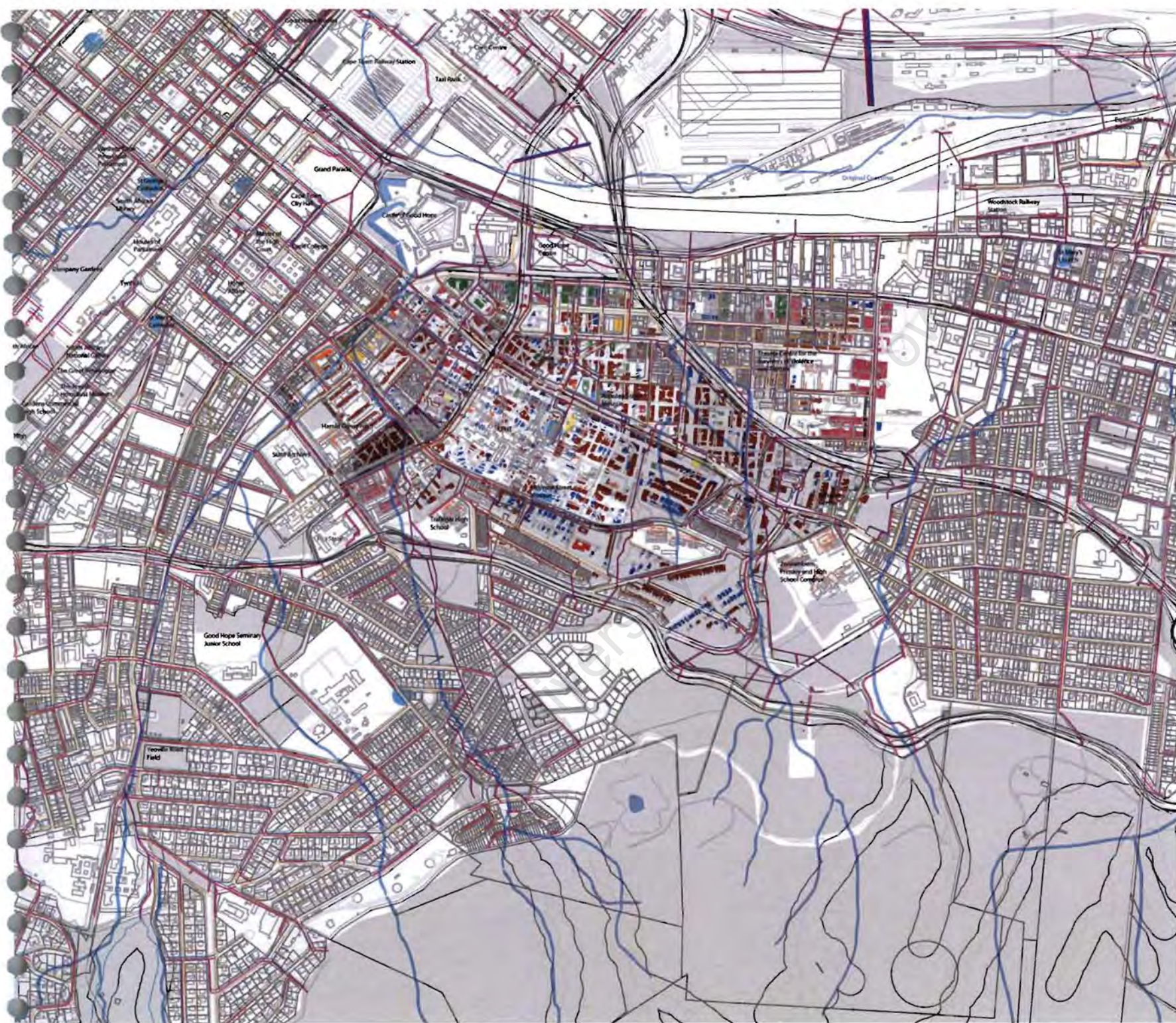
District Six and surrounds, with the spiritual centres marked by a light blue dot. The fabric highlighted in colour is the destroyed part of District Six, which is now mostly open land.

Open land and existing built fabric is also shown.



concrete earthbound counterpart of the mediatory nature of water becomes manifest in the built work.





-  original District Six built fabric 1960
-  places of worship
-  major roads
-  places of worship and assembly in the original District Six
-  cinemas
-  shops
-  hotels and bars
-  commercial - District Six
-  industrial 1964 - District Six
-  schools and educational establishments
-  hospitals + municipal buildings
-  flats + terraced housing
-  semi-detached + detached housing

During my investigation of the water systems of central Cape Town I followed the routes of the now concealed water courses, from their entrance into the built fabric, the point at which they are buried, to the sea.

This was done on foot and formed part of the enquiry of the connection between places of worship or spiritual significance and water.

PLATTEKLIP STREAM



Having followed the flow of both Capelsluit and Platteklip stream my initial intention was to find a site along one of these water courses. The city fabric ranges in density as one moves from the mountain to the sea, however in these areas there is hardly an open site and as such did not feel right for the proposal of an intervention.

As there is much land within the bounds of Cape Town which is still open and available and undeveloped, I chose to further my gaze in search of an appropriate site. This led me to look in the direction of the East City and District Six, the circled area on the map (right)

CAPELSLUIT



Map of the Cape Town showing the storm water system and the areas of Mediation or Contestation in the city (hatched)



Threshold: a Condition

The timeless task of architecture is to create embodied existential metaphors that concretise and structure man's being in the world. (Pallasmaa, 1996:50)

Experience of nearness may be appreciated through the tactile, cognitive and sociological familiarity of things. (Sharr, 2007:35)

The threshold concentrates not only on the boundary between outside and inside but also the possibility of passage from one zone to another (from the profane to the sacred). (Eliade, 1957:181)

The threshold is that part of the building which introduces itself to the user. It is the first aspect of the structure which gives a spatial quality to the understanding of the building from the physical perspective of the user.

The building is first experienced materially through the skin with the threshold being the mediatory point between the inside and outside of the building. It is the point at which the tactile meeting of the body and the building is traditionally required. In contemporary building with automated and electronic doorways the meeting of building and visitor is less personal as the visitor is not required to make physical contact with the structure.

The threshold welcomes the visitor. It is normally marked visually by some structural device to give an indication that it is the entrance. Entrances may have canopies or large overhangs, stairs or a change in floor level, texture or materiality. Main entrances are traditionally larger than those found in the rest of

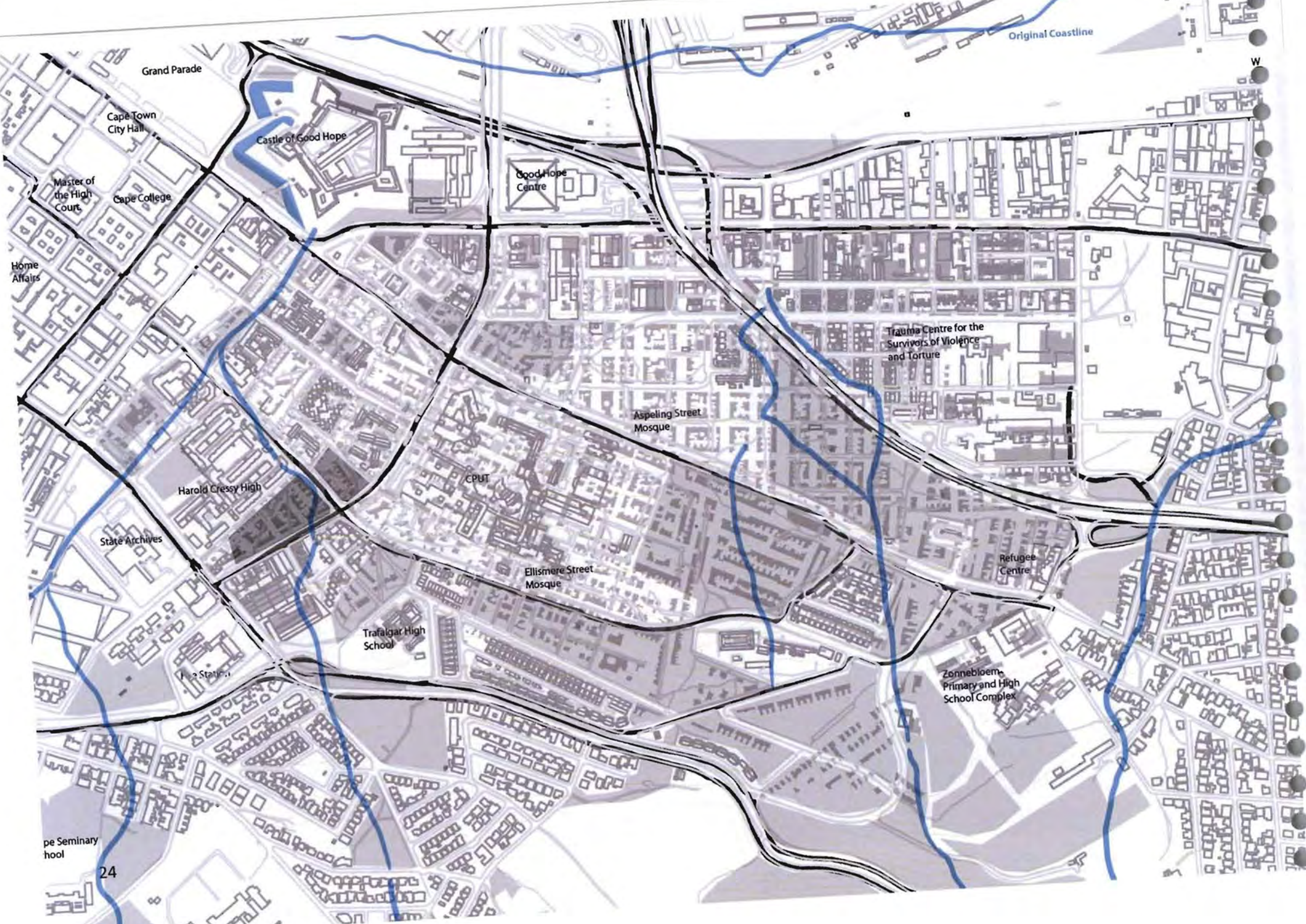
the building, normally leading the visitor towards the main space or indicating the most prominent function housed in the structure. The doorway is the mouth of the building through which the space speaks.

The threshold is the first point in a building that serves to locate the visitor in the space. It is a point of entry from which all of the rest of the spaces and functions of the building are communicated and accessed. It has a direct relationship to the individual and the spaces on the inside. It is the most tangible mediation between the outside and the inside, in allowing access to the private world that is contained by the skin of the building.

The primary threshold might be far removed from the built fabric in a conceptual sense. As the landscaping rises up to meet the building there could be multiple thresholds which must be traversed in order to gain access to the spaces on the inside.

The threshold is a necessary element in any architectural construction. It is the demarcation of where the building stops and starts and the design around it necessitates careful consideration. This boundary may be explicit or implicit depending on what the concept requires.

The mediation of outside and inside is central to all architecture as space is defined through boundary, both imagined and obvious. The door or threshold is where the interaction of the outside and the inside is permitted. Every built work has need for the threshold; it is that point at which the occupant can say that they have arrived at the interior or contained space. As architecture is about the container and the careful inclusion and exclusion of certain conditions and elements for habitation, the place of mediation between these is essential.



Original Coastline

W

Grand Parade

Cape Town City Hall

Castle of Good Hope

Good Hope Centre

Master of the High Court

Cape College

Home Affairs

Trauma Centre for the Survivors of Violence and Torture

Aspeling Street Mosque

Harold Cressy High

CPUT

State Archives

Ellismere Street Mosque

Refugee Centre

Trafalgar High School

Zonnebloem Primary and High School Complex

Post Station

pe Seminary school

24

Process

In addition to the extensive, diachronic nature of a place, there are also its synchronic interconnections with other sites (Knott 2005a, p. 23), both those that are similar in kind, and those co-existing sites, real and imagined, to which a place may be connected by movement of people and capital, the flow of communications and ideas. 'Our epoch is one in which space takes for us the form of relations among sites', wrote Foucault (1986, p. 23); it is an epoch that stresses the spatial property of simultaneity. (Knott; 2008:1110)

Mapping: the beginning

The project commenced with an interest in the waterways which are found in the city centre. These rivers are the reason that the Table Bay area, and more specifically Cape Town, was selected as the place of settlement at the cape when European settlers first came to the shores of South Africa. These ancient water courses still exist at least in origin and are identifiable on historical maps of Cape Town.

Water appears as a strong physical element in the landscape serving as a greater scale spatial partition. Rivers are a convenient and near permanent boundary marker often forming the dividing lines between countries and regions. Water is used in rituals across cultures and as such it was important to see whether there was any connection between the places of spiritual significance or worship and the rivers in the city centre.

Through a series of mappings of the fresh water in the city, the storm-water layout and the sewer systems a greater understanding of the city bowl was garnered. Included in these mappings were the places of spiritual significance and open land. The maps also included recreational areas and places of education.

On foot I followed the historical water course through the city bowl, from mountain to sea. The main river runs snake through highly populated areas with few open sites. Nothing seemed appropriate for an intervention along the lines of a place of mediation, an interest which I took at an early stage of the project. This drove me to look for water courses on the edges of the city bowl. One such was identified in the old District Six area of the city

Opposite page:

Map showing the destroyed fabric of District Six (dark grey built fabric) and the existing fabric of the city with historical rivers and the original shoreline which was in close proximity to the Castle of Good Hope.

Open land is indicated by light grey. The direction of North is up, towards the top of the page.

District Six

The contested ground of the area needed to be understood in the context of the historical and political climate which surrounded the controversy associated with the area. As a part of the city, it still carries much political importance today: an obvious reminder of the destructive force which was the previous regime. Only with an understanding of the area could the decision be taken to directly address the social and cultural connotations within the project or to disregard context completely and look for other motivators for programme.

District six was once the home of a very vibrant colourful community. It was a mixed race area which became a slum due to high population density and poverty in the area. However the cultural significance of the area is still reminisced and dreamed about. It was

a place which accommodated people from a variety of religions and races and in which people were not segregated according to outward skin pigmentation. The inhabitants thereof experienced a mass eviction with the implementation of the Group Areas Act and the slum nature of the area warranted a destruction of the built fabric, or this was what was determined by the powers that be of the day. The land was then intended for new development based on the modernist ideal and town planning. (Bezzoli et al; 2002) The fine grain built fabric was to be replaced by large residential blocks. Most of these plans were scrapped with the exception of the campus for what is now the Cape Peninsula University of South Africa.

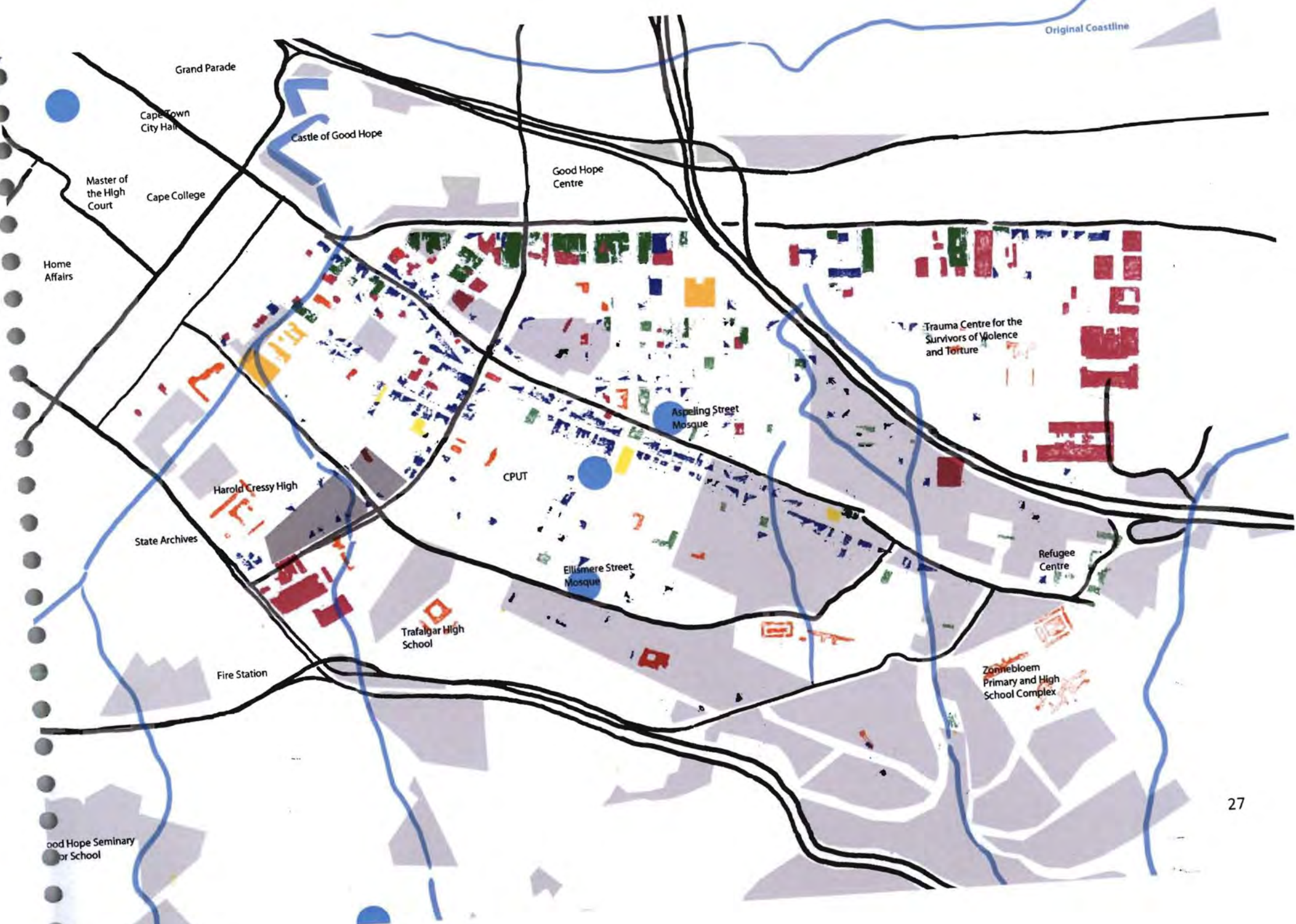
The open land still stands testament to the damaging system which was apartheid and is a visual scar in the city, separating the city bowl from the larger city

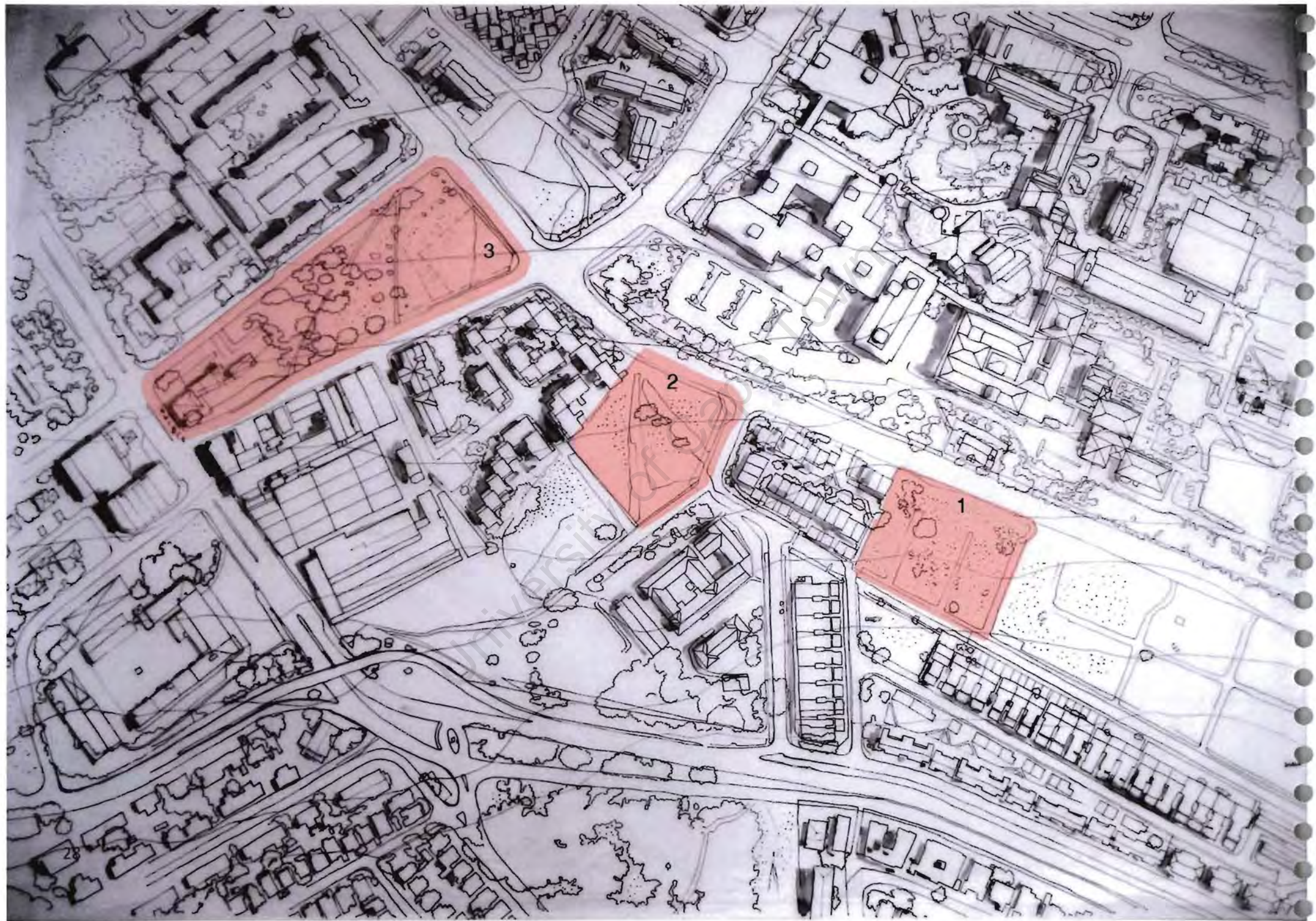
area. It is between this landscape and the city that my site lies. The site functions as one of the points of mediation between the open scar and the built fabric of the Eastern City area.

Opposite page:
Map showing the different functions of buildings in District Six along with land that is currently open in grey.

North is up.

- 
-  original District Six built fabric 1960
 -  places of worship
 -  major roads
 -  places of worship and assembly in the original District Six
 -  cinemas
 -  shops
 -  hotels and bars
 -  commercial - District Six
 -  industrial 1964 - District Six
 -  schools and educational establishments
 -  hospitals + municipal buildings
 -  flats + terraced housing
 -  semi-detached + detached housing





Site + siting

A historic river run is located on the site. This river flowed roughly along where Constitution Street is now, and then connected to the Platteklip Stream which feeds the moat of the Castle of Good Hope. It is for this reason that the site (3) was deemed more suitable than the sites further east, also located on Constitution Street, which were considered as possible sites for the location of the project.

The importance of water across cultures and as one of the starting points in the project dictated the necessity for the site to be connected to water in some way.

Opposite page:

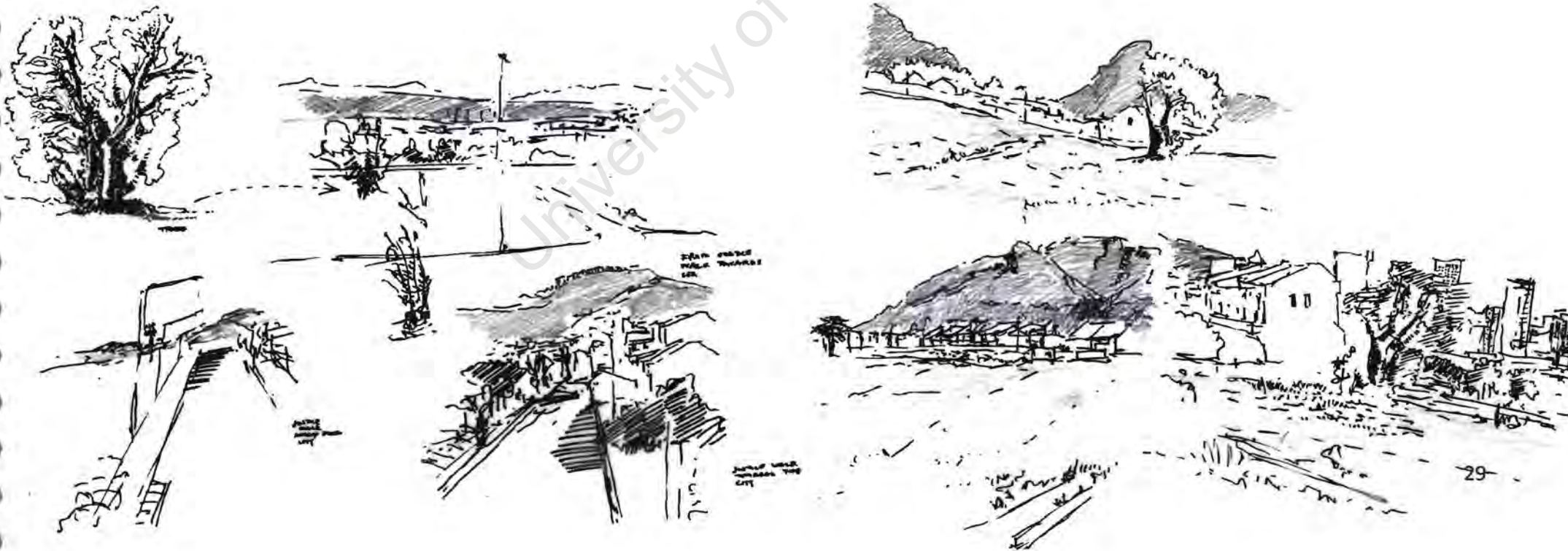
Map showing the three potential sites for the location of an intervention I identified.

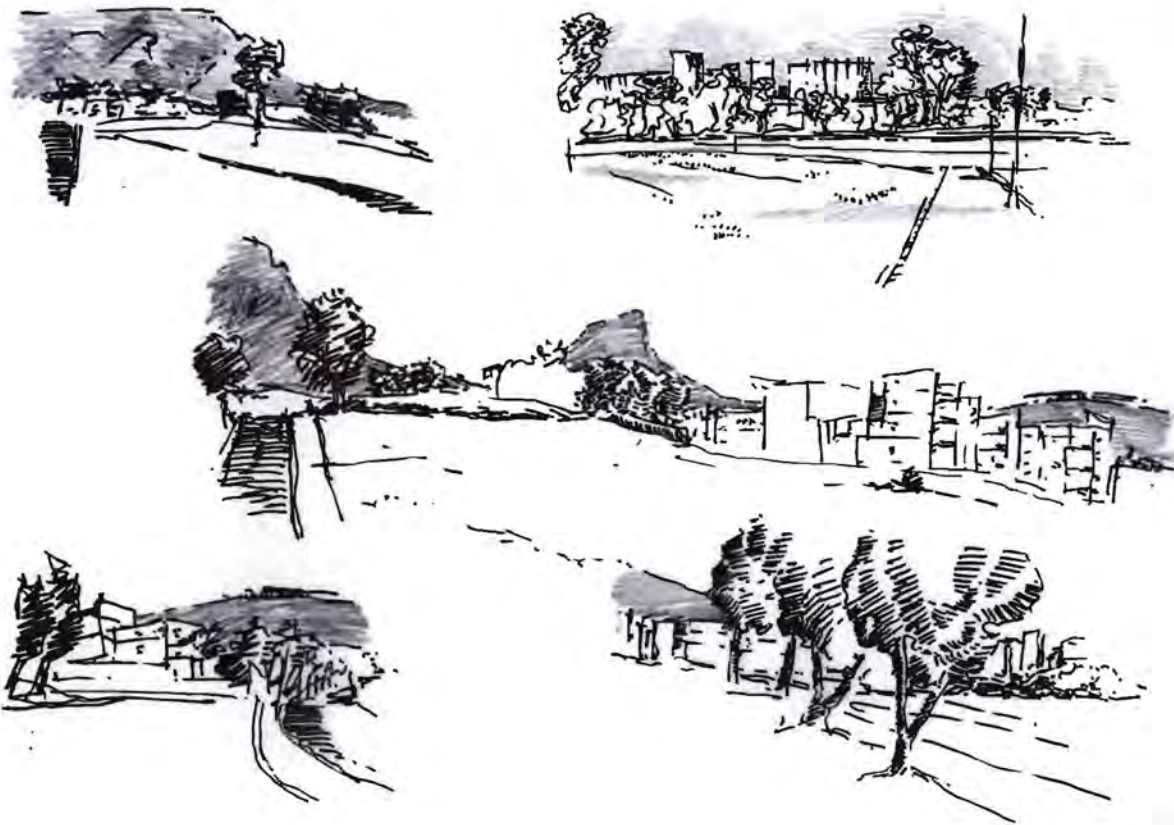
All three of the sites are currently open. The third site is zoned for a community building. The second is zoned as an open site or park, and the first site as residential.

The three sites are all located along Constitution Street and in close proximity to the Cape Peninsula University of Technology

Below:

Perspective drawings of the first site, with the most distinctive element on the site being a large tree, a reminder of the life of the area and what was on the site before its destruction.





Above:
The second site. These perspectives show the trees which grow on the site and the pathway of original District Six built fabric.

Unlike the first site, the trees in this site appear to be much younger.

Signal Hill and Table Mountain are visible above the roof line of the buildings adjacent to the site.



Below:
Perspectives of the third site.

The third site is more suitable as a location of an intervention of a public nature as it is closer to the main vehicular routes entering the area. It is directly opposite the Cape Peninsula University of Technology on the side of Tennant Street.

This site is larger than the other two and has the opportunity to include the landscape in the design of the building.

Map of the Peninsula showing surface water and built fabric



Below:
Map showing the storm water, sewer systems and historical rivers along with the transport routes. The spiritual centres are again indicated, both the existing in blue and the demolished in green

Essentially a map indicating routes of flow.

Connection: the Next Step

The the pursuit of relationships of the selected site to the city places of health, wellbeing, history and worship were identified and connected to each other.

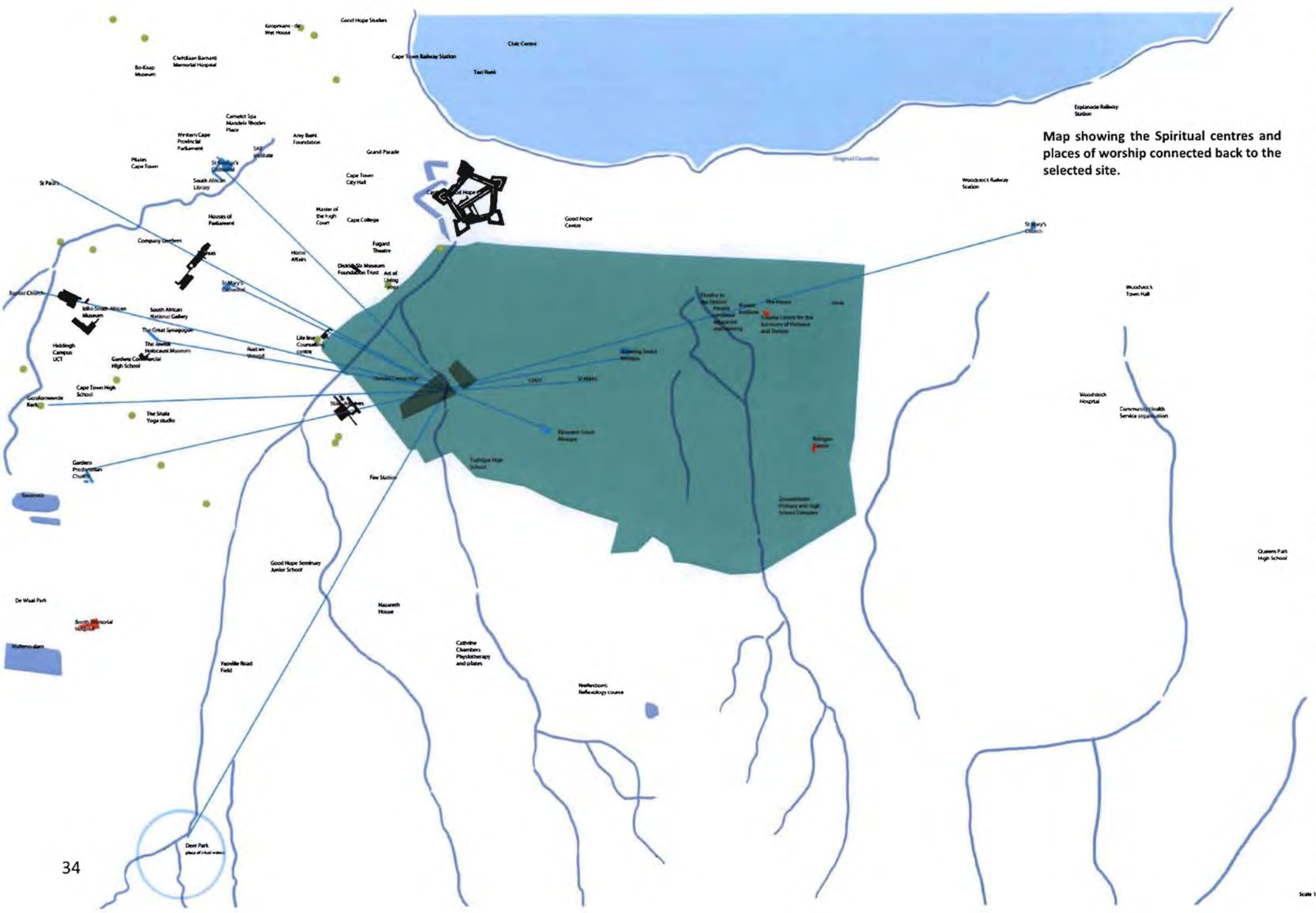
These relationships are abstract ideas and more to do with the perceived idea of the city and the manner in which an individual could become comfortable and at home in this environment, than a visual or directly physical relationship.



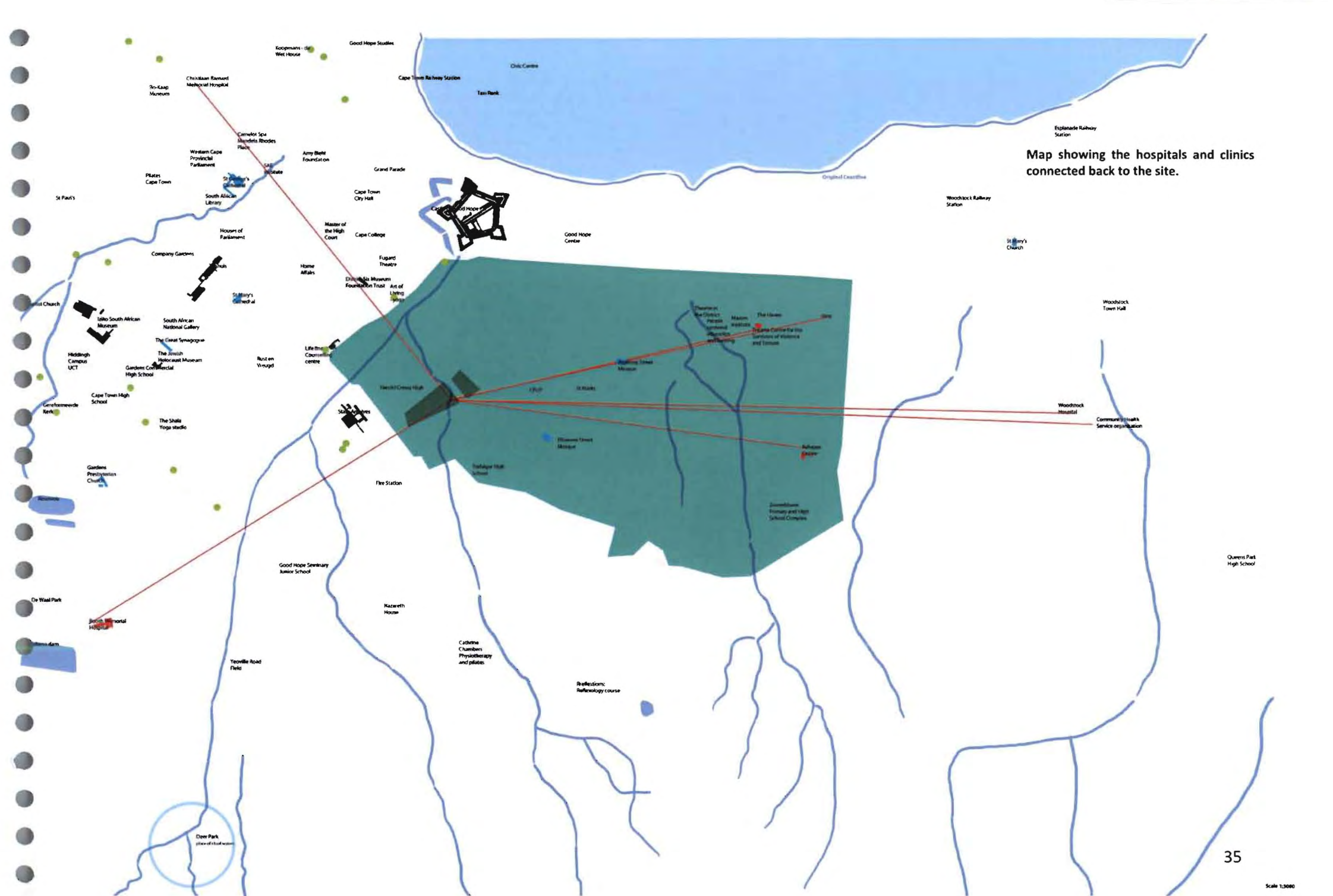
Map showing the Lines of connection between the centres of Historical importance, Spiritual centres, Health centres and places focusing on holistic wellness:

Spiritual places and places of worship are mapped and connections in cyan. Health centres are connections and mapped in red, with historical centres indicated by black when the lines are straight. The major roads are also drawn in black but have a more organic appearance. Wellness centres mapped and connected in green.





Map showing the Spiritual centres and places of worship connected back to the selected site.



Map showing the hospitals and clinics connected back to the site.



Opposite page:
composite map showing all lines of
connection back to the site as well as the
open land indicated in grey.

The next step was to combine these connections to the site with those lines of connection set up previously between the functions mapped.

The lines of connection both to the site and between the buildings of like function were then used as ordering tools in terms of the landscape treatment and the programmatic functions of the building.

The point on the site to which all the lines of connection were drawn was determined by the historical river run which can be found on the site according to the historical maps of the 1900 Thom Survey and the 1862 Snow Survey. As water was the deciding factor in site choice the location of the water on the site was the appropriate location to which connections were drawn.

Opposite page:

Map showing lines of connection between the programmes mapped and the connections of these to the site.





site and context

heart of building in the west

MOUNTAIN W

SW

MOUNTAIN

STREET

S

MOUNTAIN

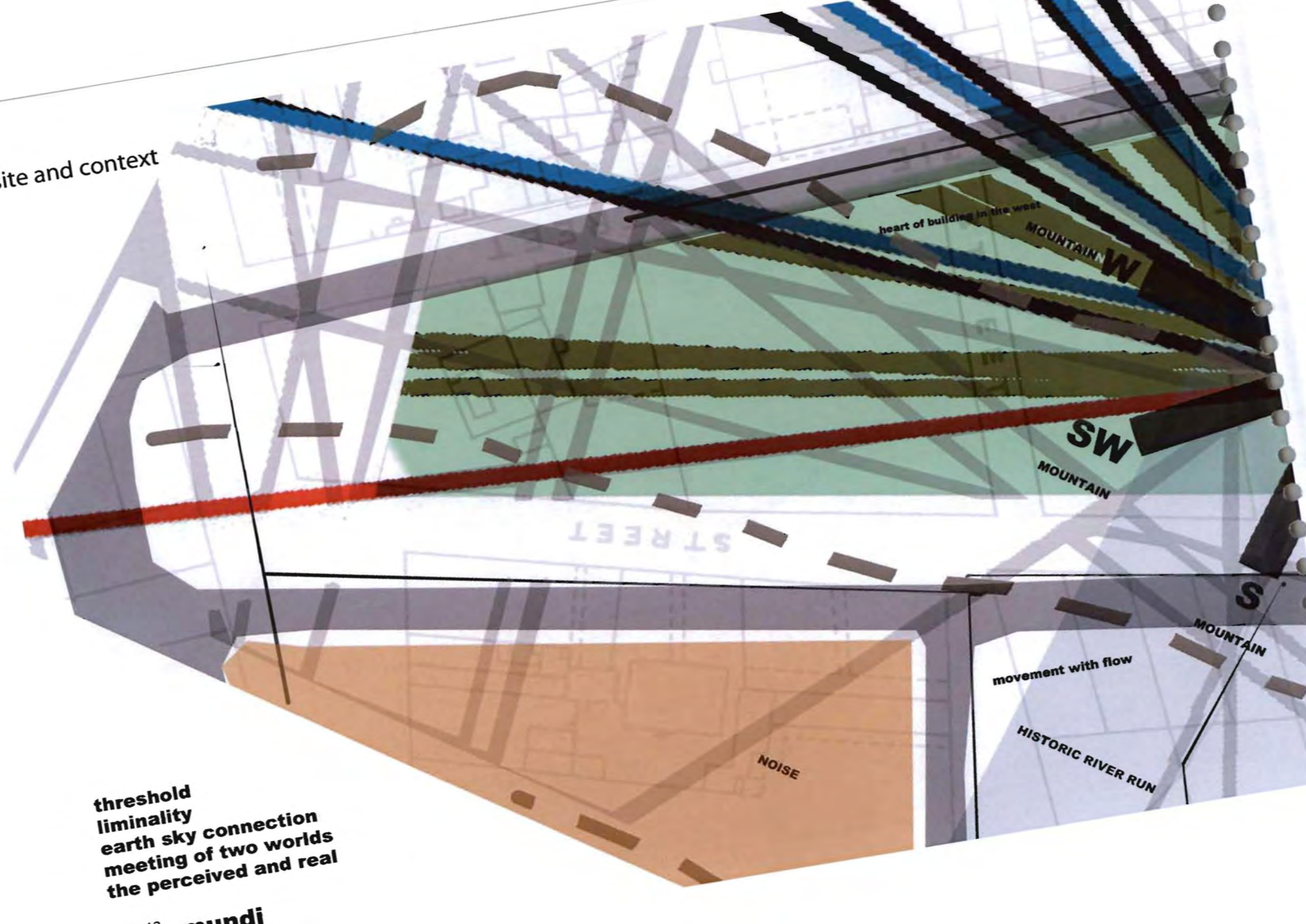
movement with flow

HISTORIC RIVER RUN

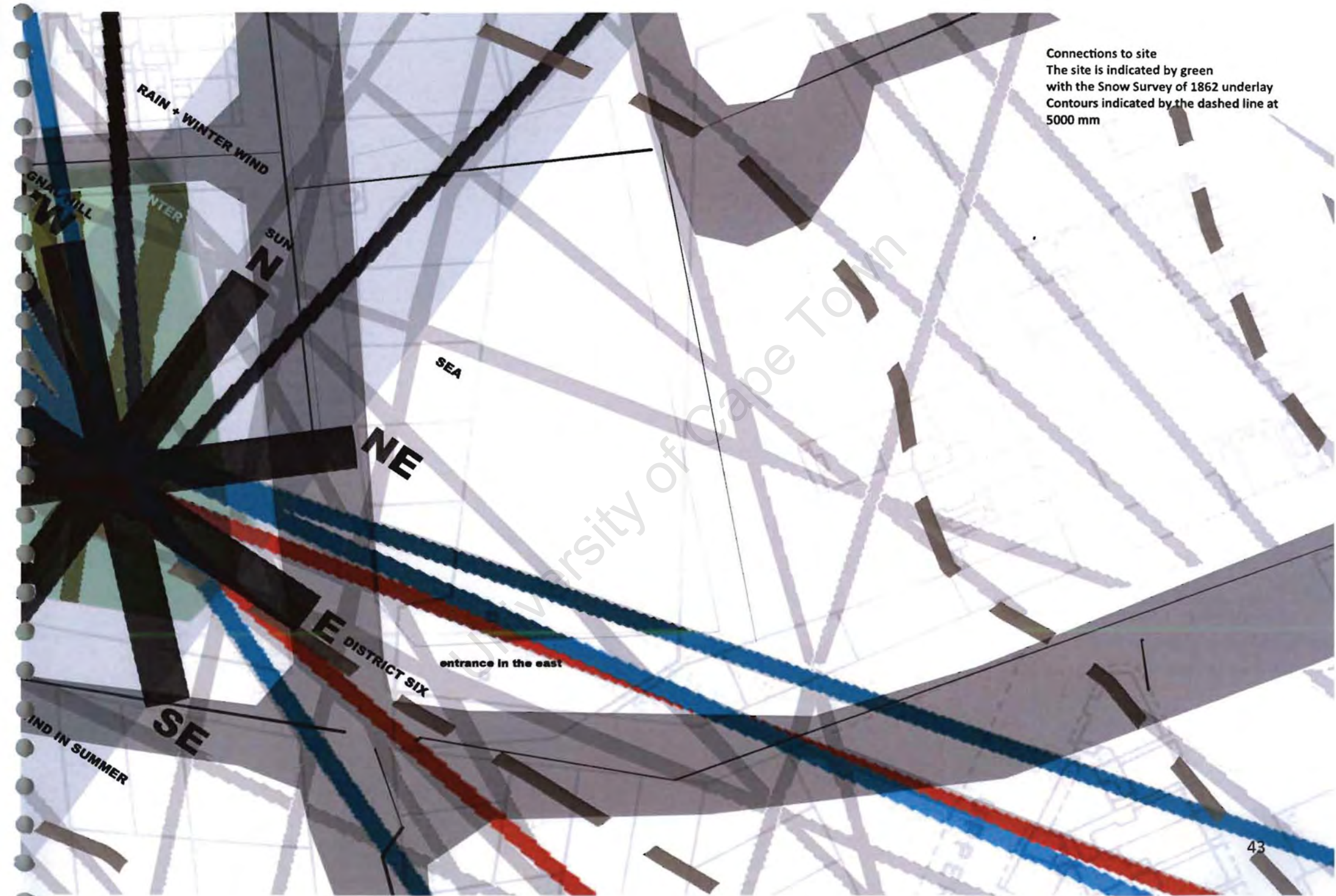
NOISE

threshold
liminality
earth sky connection
meeting of two worlds
the perceived and real

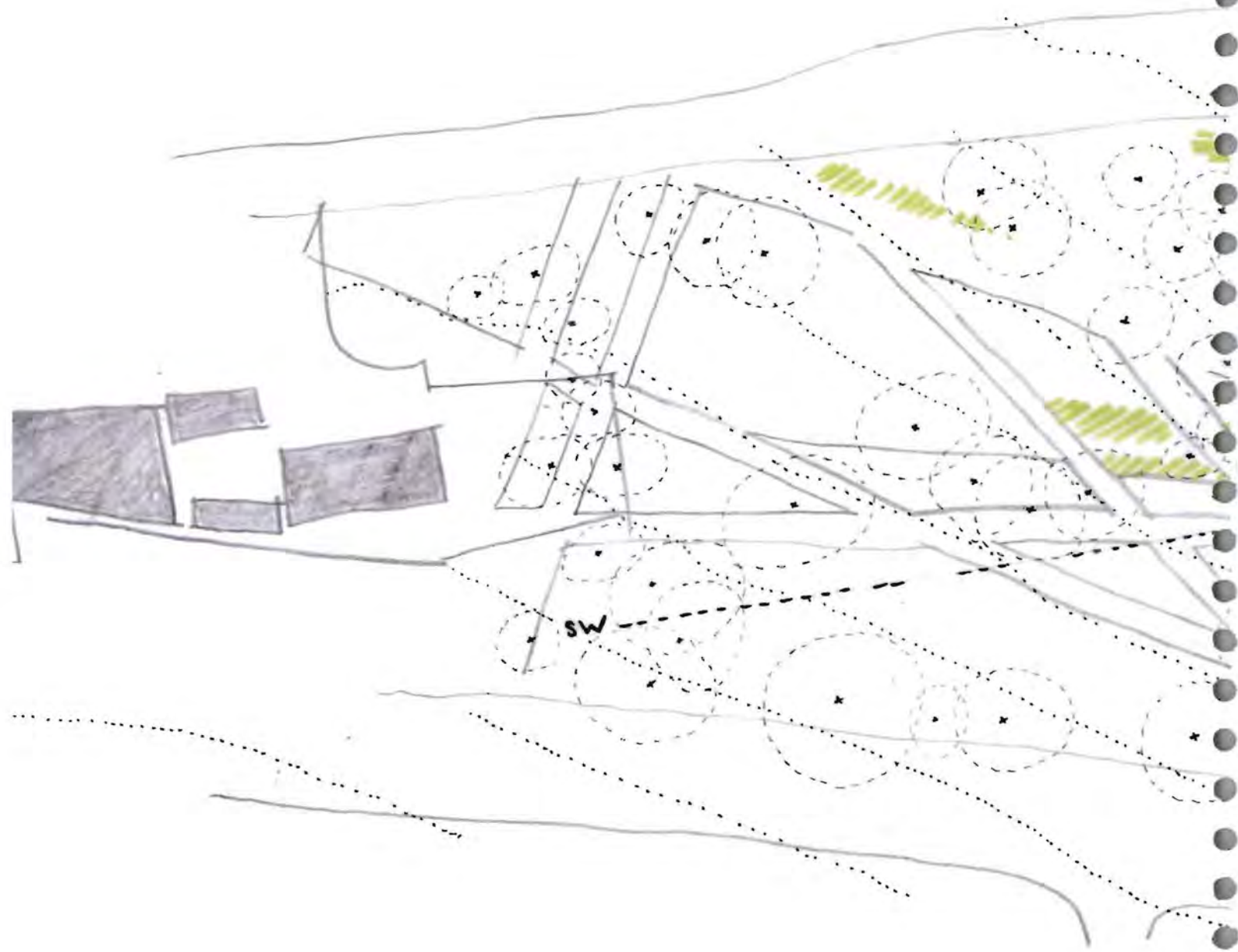
mundi



Connections to site
The site is indicated by green
with the Snow Survey of 1862 underlay
Contours indicated by the dashed line at
5000 mm



Site plan with the lines of connection indicated and the beginnings of the use of these lines as ordering devices.



VIEWS.

SPIRITUAL
LENTRES

MOVEMENT
WELLNESS +
MOVEMENT

17th FLOOR
HISTORICAL
SIGNATURE

W

NW

N

NE

E

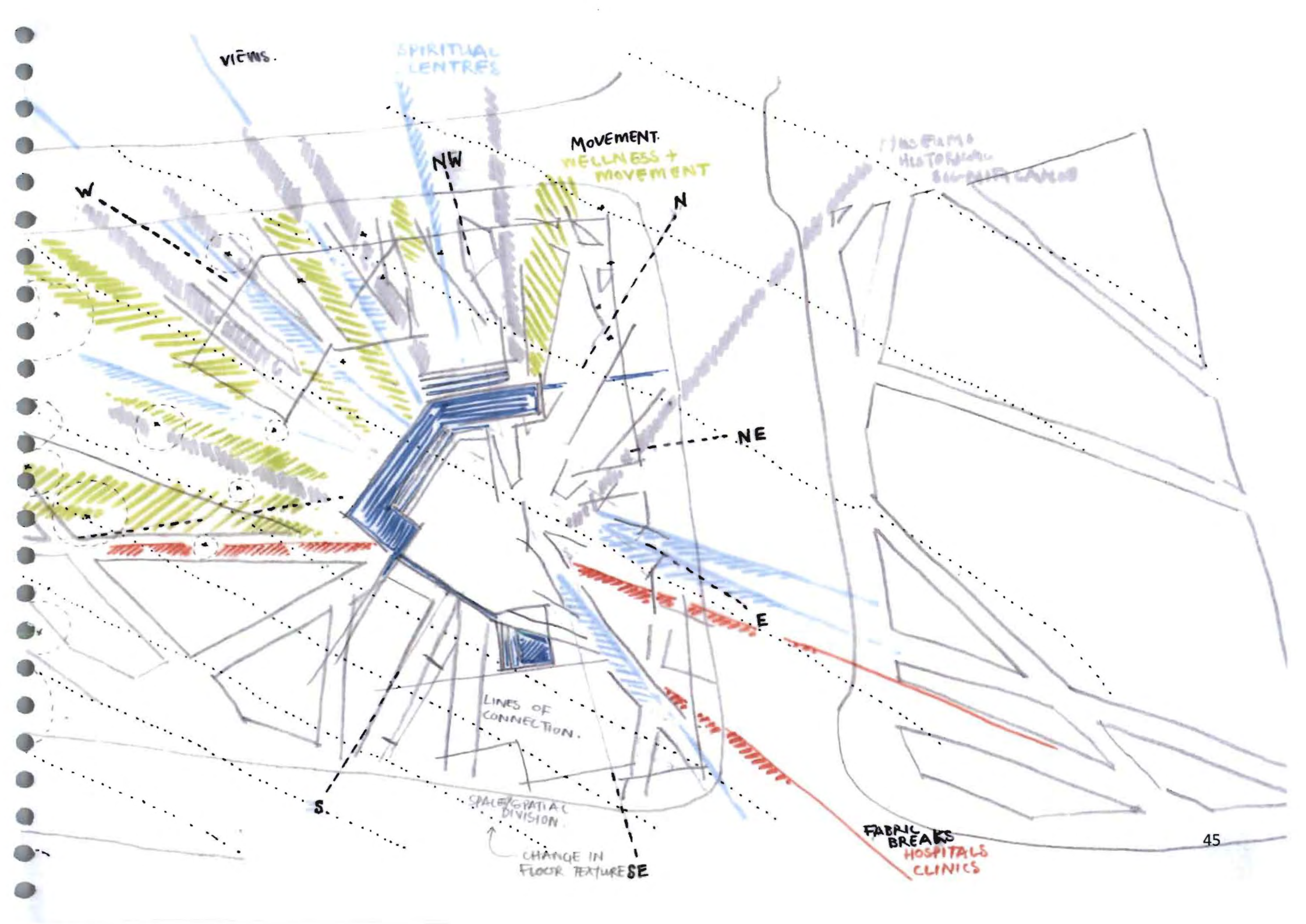
S

LINES OF
CONNECTION.

SPATIAL
DIVISION

CHANGE IN
FLOOR TEXTURE SE

FABRIC
BREAKS
HOSPITALS
CLINICS



University of Cape Town

Site: Connection + Identity

As our perception of space relies heavily on how we feel in the space, which in turn relies on how we perceive ourselves and the world around us. Perception is relative, fickle, changeable, as how we feel on a day, positive or negative, may determine the way we perceive the world around us.

The role of ritual in orientation is a positioning within a culture. The role of identity is the positioning within a whole. People have a need for identification of each other and of the self. It is one of the marks of intelligence of a creature, when it can recognise itself in a mirror and know that when they raise their left appendage the right appendage of the mirrored image will likewise lift.

In the development of a child they start to identify themselves as individual along with the discovery of the word 'no' as this marks the setting of boundaries which allow the child to proclaim their will or wishes as individual and separate from their parents.

So this need to be identified and identifiable is impressed upon us from a young age. The societies have invented a number of ways in which the individual becomes identifiable. One of these is through ritual and the social structures which a particular culture may impose on the adherents thereto. This need for identification drives humanity to classify people by race, religion, gender and often interest.

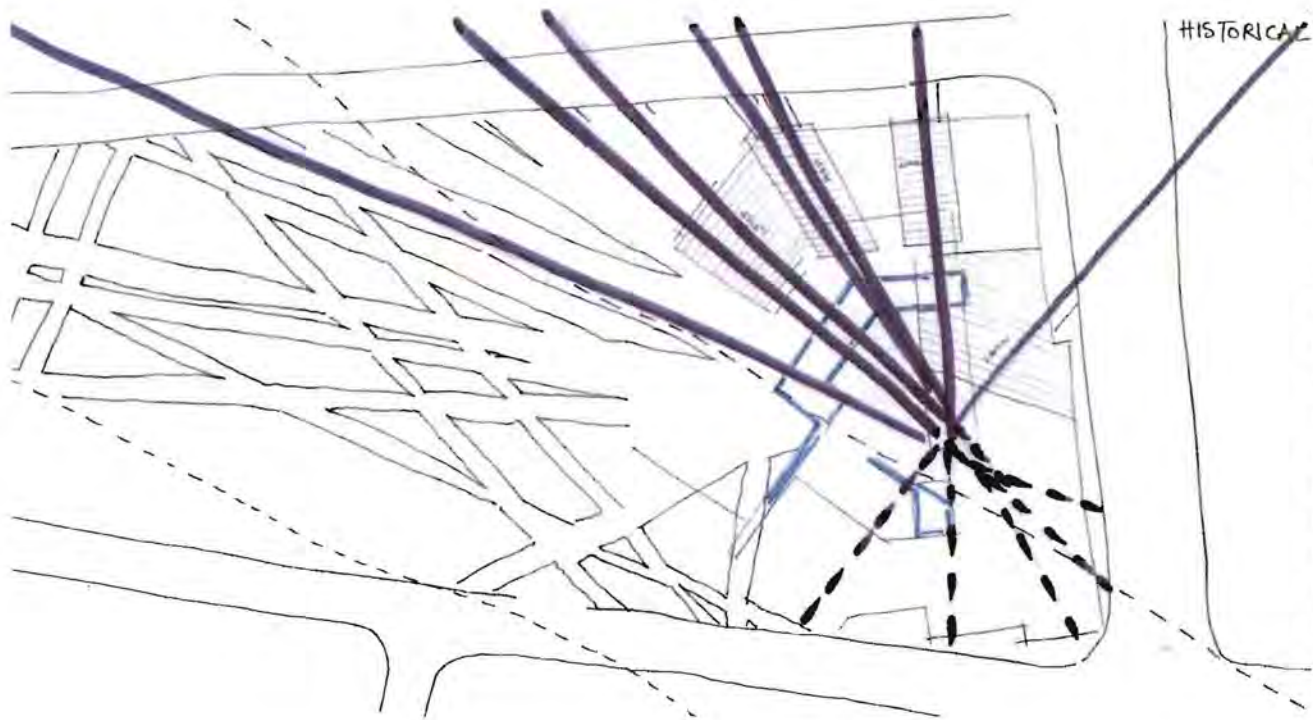
If people dress a certain way or listen to certain music there is the temptation to class them and neatly draw a box around them, prohibition them from expressing themselves of identifying themselves

differently. This isn't reserved only for other people, in the understanding of self, people find it necessary to classify themselves; to read themselves in relation to a larger whole, to belong to something greater than themselves.

The nature of urbanity or the urban environment in which we find ourselves demands that we live alongside others. The family structure or social group often takes precedence over the individual. As such the person understands their place in society, both socially and geographically because of a measurement of themselves in relation to the world around them.

It is with this in mind that I looked at the site and its relationship to significant things within the city. The site was related or connected up to buildings which programmatically fitted into one of the following categories:

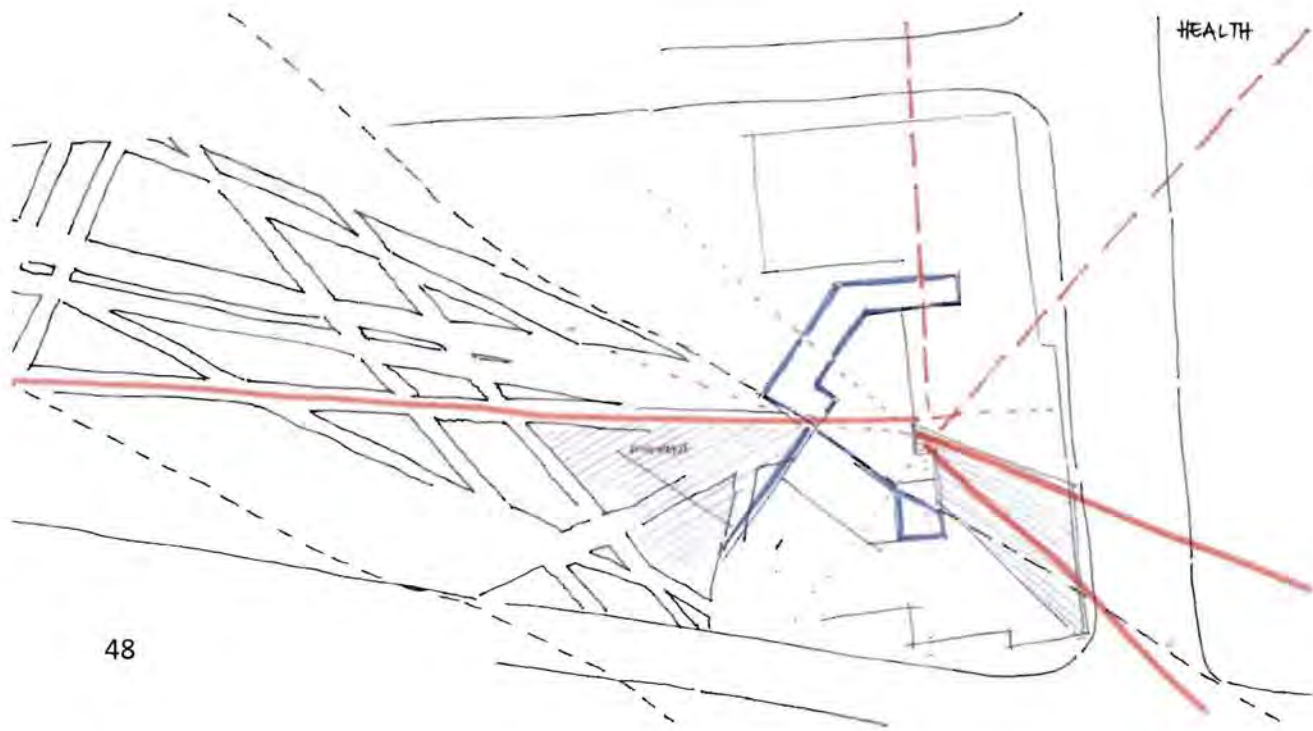
1. Places of worship – places of worship and the places of spiritual significance in the city
2. Places of historical significance – museums and selected monuments
3. Wellness centres – reflexology, spas, Pilates, yoga, wellness centres catering for the holistic treatment of the wellbeing of the individual
4. Health centres – hospitals and clinics
5. And places of education



This mapping was done to facilitate the understanding of the site in the greater whole. The site cannot be read on its own much the same way that the individual cannot be understood without looking at their context.

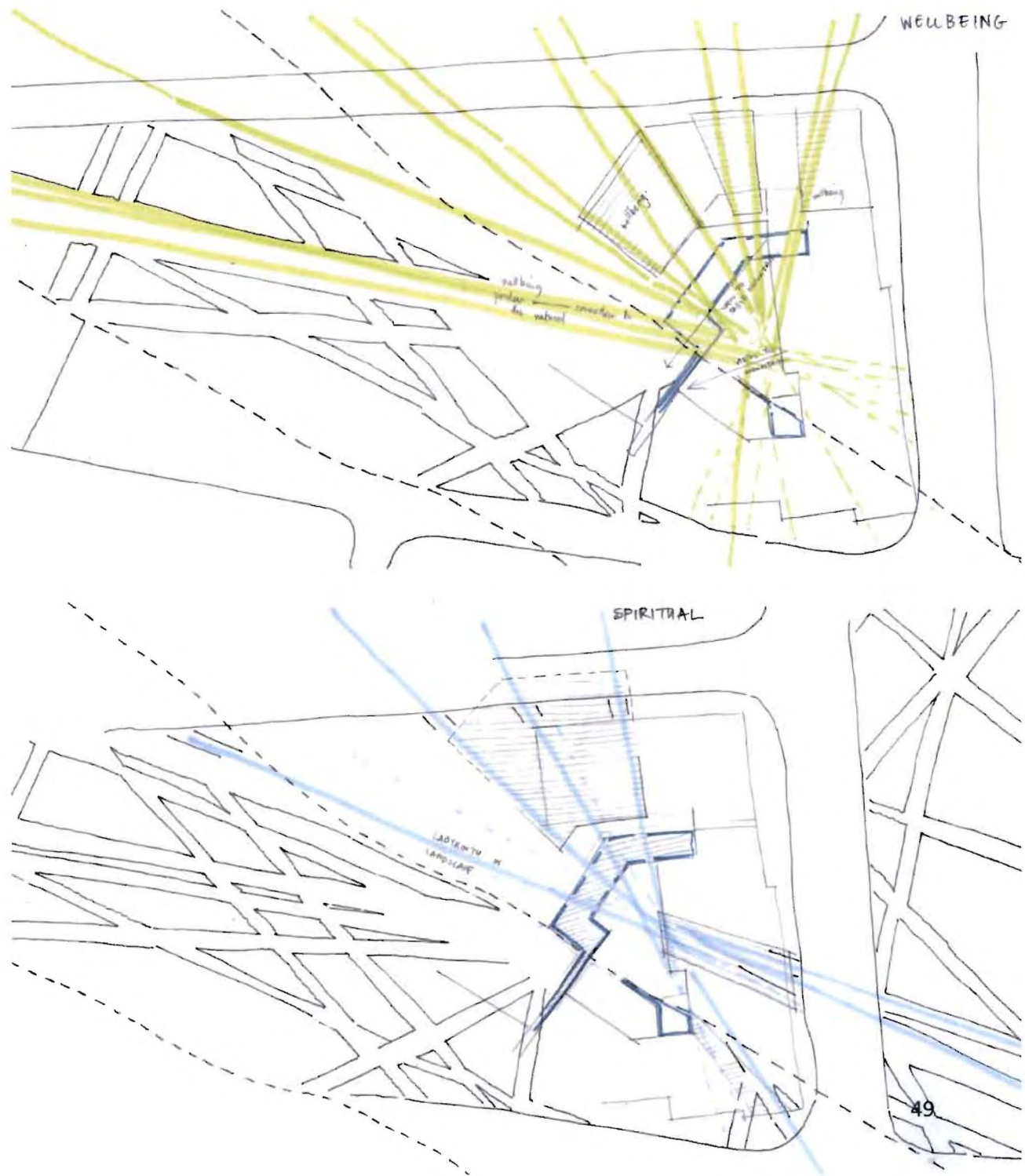
Through the mapping, directional lines of connection were set up. These were then pursued as lines of division, serving to separate the spaces in the building.

The programme was broken up into the categories of 'feeding the body', 'feeding the mind', 'feeding the spirit' and 'context'. The paths mapped determined these divisions in the space allocated as suitable for the placement of a structure within the site. This was determined through studies of the site, taking the contours and other environmental concerns into account, for example the light industry accommodated across the road from the site to the south and the proximity of the Cape Peninsula University of Technology campus to the east. And the programmatic requirements of a Creative Therapy Centre were then divided into these areas and grouped throughout the building to correspond with what was mapped; to form connections in the city.



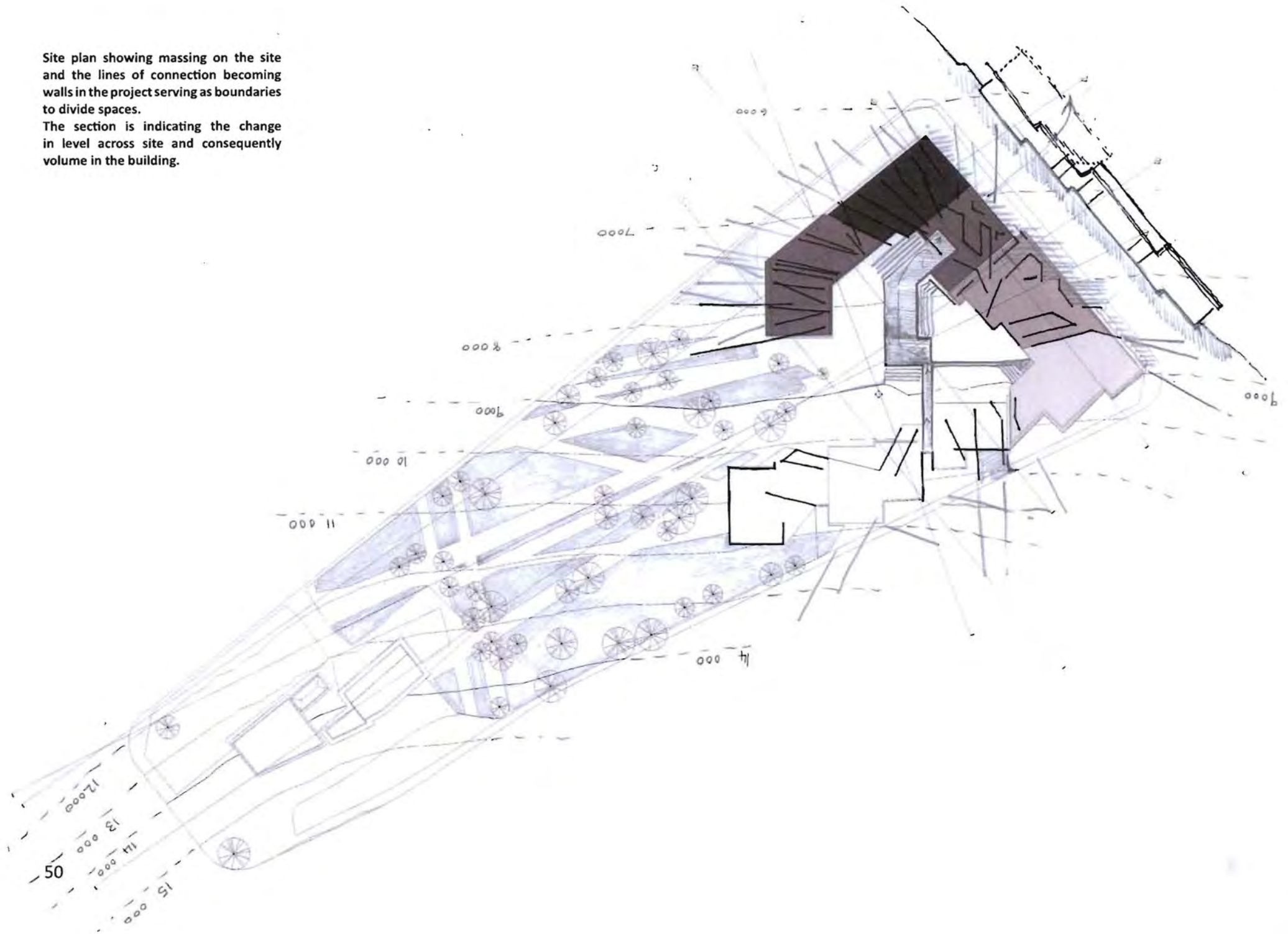
Site plans of the historical connection lines (above left) and the health connections lines (left) and the possible massing relating to these functions within the programme.

Site plans of the wellness connection lines (above right) and the spiritual connections lines (right) and the possible massing relating to these functions within the programme.



Site plan showing massing on the site and the lines of connection becoming walls in the project serving as boundaries to divide spaces.

The section is indicating the change in level across site and consequently volume in the building.



Programming Spaces

What if space were not the recipient but rather the creation of the human project? What if place were an active product of intellection rather than its passive receptacle?' (Smith 1978, p.26) 'Human beings are not placed, they bring place into being' (p. 28) and they do this – at least in the case of sacred places – through ritual. Ritual, that creative process whereby people make a meaningful world that they can inhabit, 'is not ... a response to "sacred"; rather, something or someone is made sacred by ritual'(p. 105) (Knott; 2008:1106)

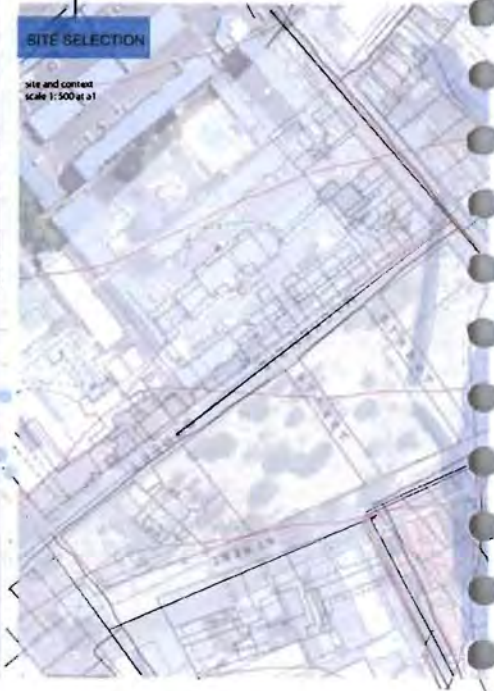
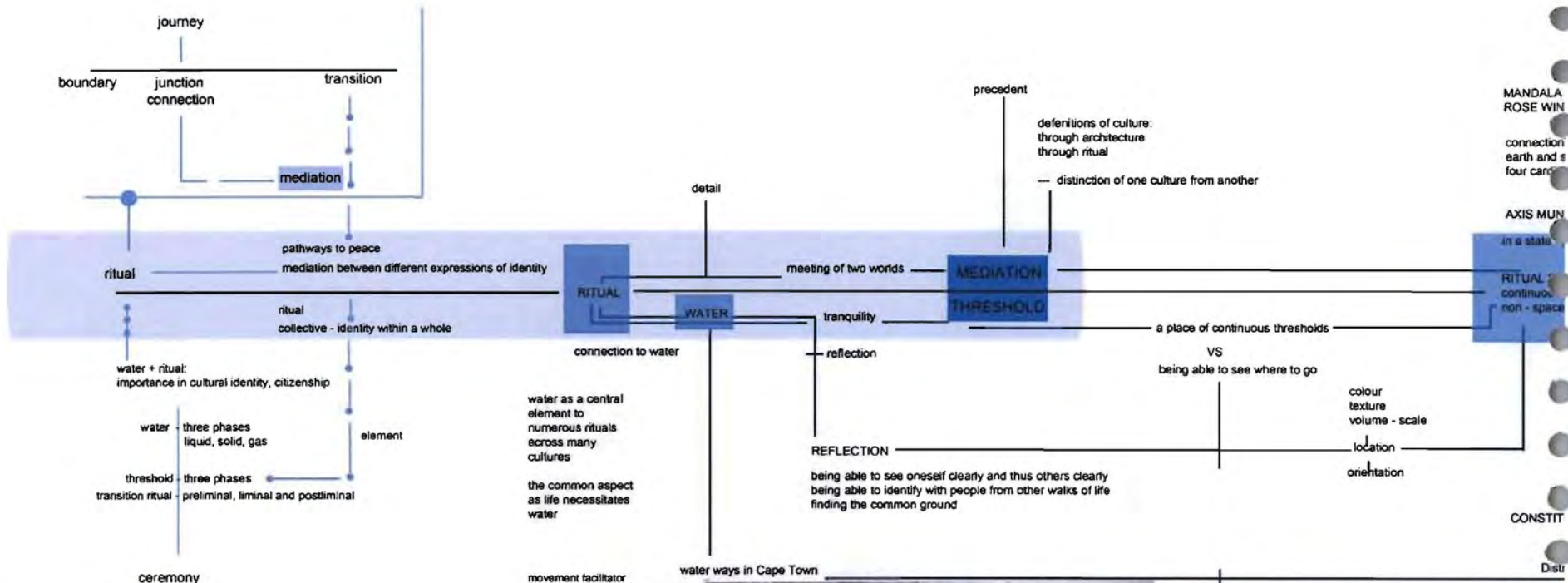
The programme was decided through the exploration of ritual in space. Ritual being the creative manner in which the individual or culture expresses itself the idea of incorporating creativity into the programme seemed fitting. And as the site chosen fell within the historic bounds of district six and in the current edge region of the city in a place of mediation between the city and the tortured landscape of district six it seemed appropriate to explore the ideas of healing and mediation between the past and the present in the programme of the building to be designed. Thus the idea of a creative therapy centre was born.

A creative therapy centre would allow the visitor to the space to gain an understanding of themselves by processing the past and the present through the art forms of movement, music and the visual arts. The process of being able to express oneself in a creative manner, with the product located outside the body, allows the individual a therapeutic release with a positive outcome; it awards the individual with the fruit of their labour.

This form of therapy is often used for people who are not able to express in words what they have had to endure. It however, can also be implemented in self-discovery which takes such prominence in a society which places such importance on individuality. (Although true individuality is seldom achieved as most people choose to conform to a particular social group or hierarchy.)

The elements of the programme were then broken up and placed in the following categories which corresponded to the mapped programmes found throughout the city:

1. Feeding the soul (wellness centres)
 - a. Meeting rooms
 - b. Clinical supervision
 - c. Professional development
2. Feeding the body (health centres)
 - a. Movement studios
 - b. Restaurant
 - c. Physical therapy
3. Feeding the spirit (places of worship)
 - a. Water
 - b. Places of ritual and celebration – hall / auditorium
4. Context (historical centres)
 - a. Service areas of the building
 - b. Offices and places of record keeping: reception



key
 wetlands
 high productivity equifer
 moderate productivity equifer
 existing water systems of the Cape Metropole

plattling blood stream

'human beings are not placed, they bring place into being.'
 done through ritual: 'the creative process through which people make a meaningful world that they can inhabit.'
 not a response to the sacred, rather the individual is made 'sacred' through ritual

DOW

between two realms
 key at the point where the
 points converge

DI

PLACE
 changing

Creative Therapy Centre

UTION ROAD

ct Six



OUTSIDE

garden
 outdoor venue for public gatherings

intimate performance space
 place of reflection

INSIDE

managers office
 kitchen: drinks
 cold dishes
 hot dishes
 cold store
 deliveries
 wash up
 kitchen prep areas
 toilets

restaurant

PUBLIC

open ritual space

meeting + auditorium facilities

large exhibition area

permanent exhibition
 temporary exhibition space

intimate performance space

place of expression

creative / art studio
 movement studio

changing rooms
 ablution facilities

**SEMI-PUBLIC
 (SEMI-PRIVATE)**

PRIVATE

meditation / prayer room
 place of reflection

rooms for individual meetings
 group meetings, couples and families

office space for
 movement facilitator
 art facilitator
 music facilitator
 counsellors
 psychologist
 psychiatrist
 first aid
 occupational therapist
 speech therapist

art
 drama
 music
 poetry
 psychodrama
 dance
 soundplay

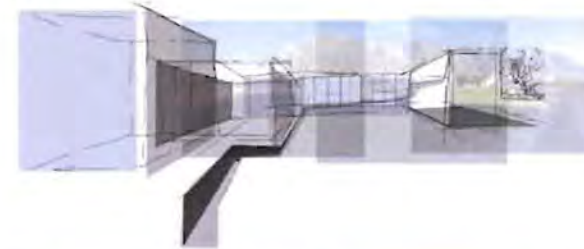
buildings administration
 receptionist
 maintenance
 gallery curator
 manager and managers assistant
 therapy center manager

staff room, kitchen facilities
 ablution facilities

professional development workshops
 training
 clinical supervision: 6 people at a time, early or mid-career
 reflection
 feedback
 creative process
 open discussion

lectures on how the brain works
 talk therapy
 psychotherapy
 creative arts therapy

**Conceptual sections on the site of spaces which lead into spaces;
 permeable space**



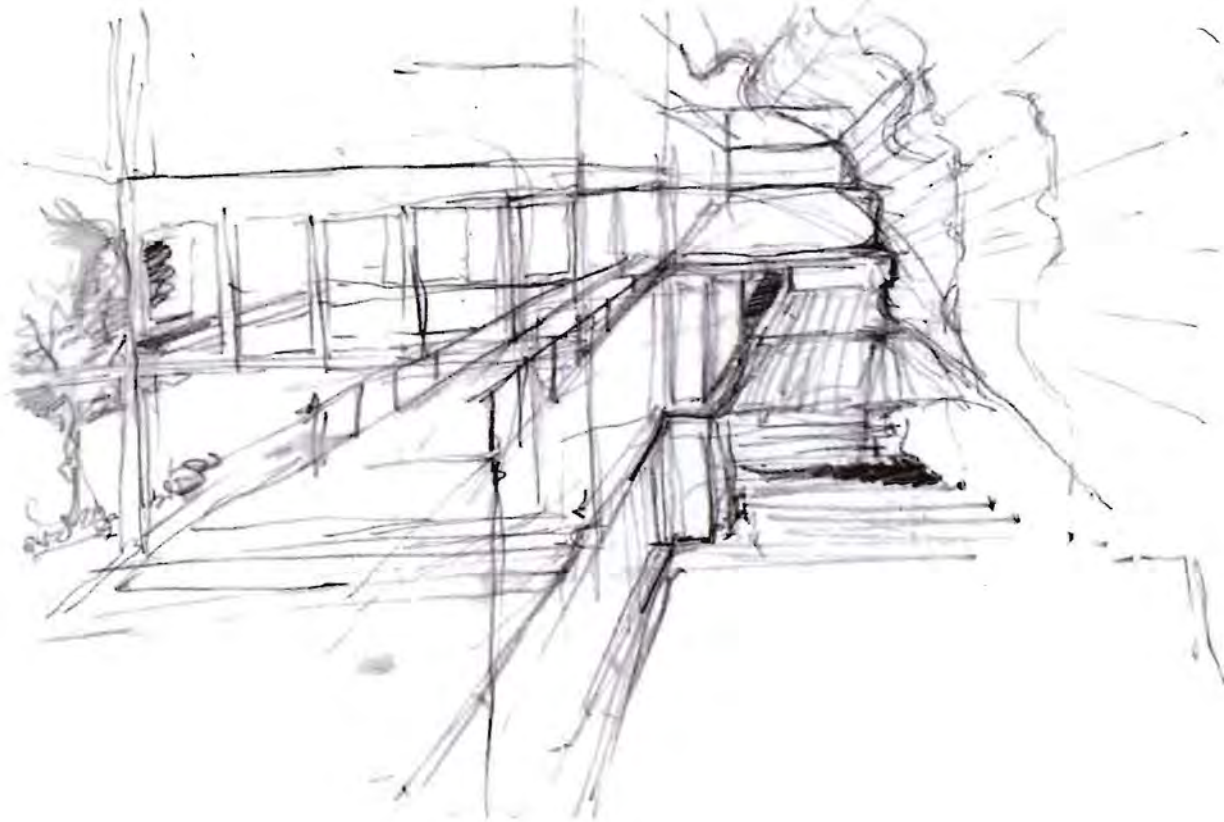
Conceptual perspectives of multiple threshold spaces with water at the centre. The idea of the fold as an internal skin is also evident.



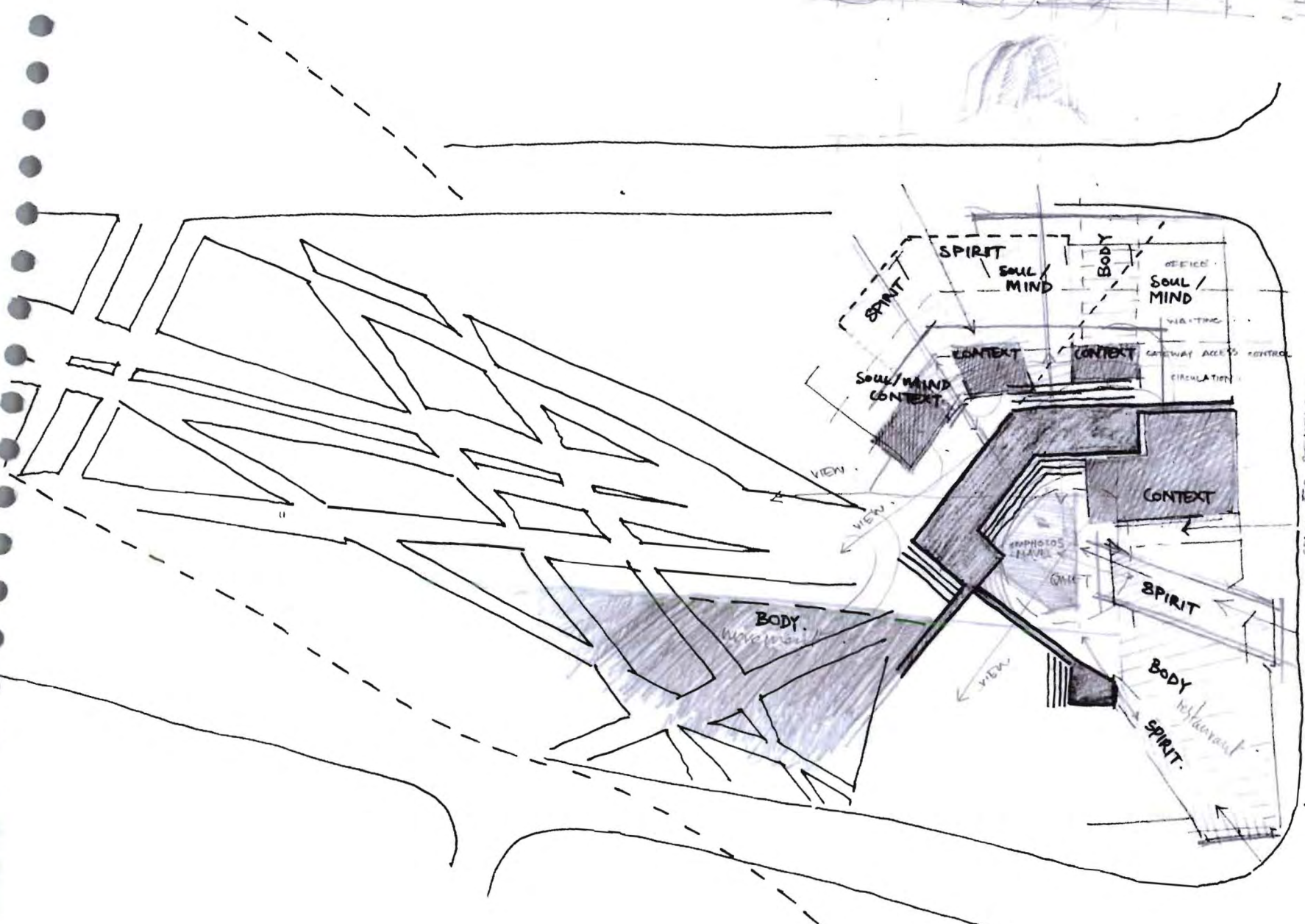
Opposite page:
Diagram of the division of space
according to the categories determined
by the mapping of:

body
mind
spirit
context

and their location in the building



Design explorations



SERVICES

SOUL (MIND)

- MEETING ROOMS
- AUDITORIUM
- PROFESSIONAL DEVELOPMENT
- PSYCHOLOGIST
- PSYCHIATRIST
- SPIRIT**
- RITUAL ← JOURNEY
- MEDITATION
- PSYCHODRAMA

WATER

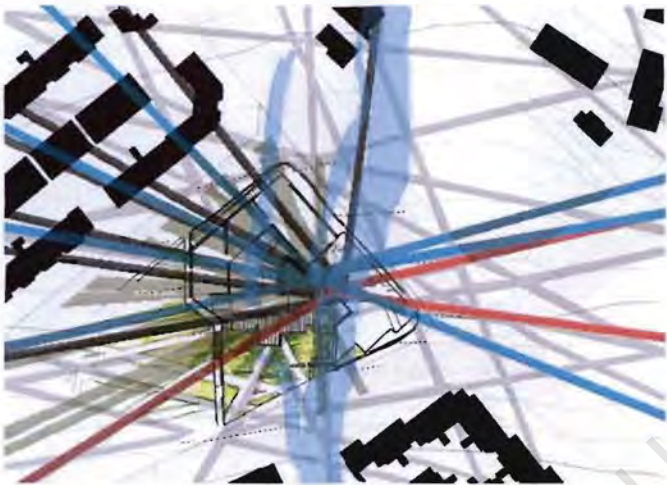
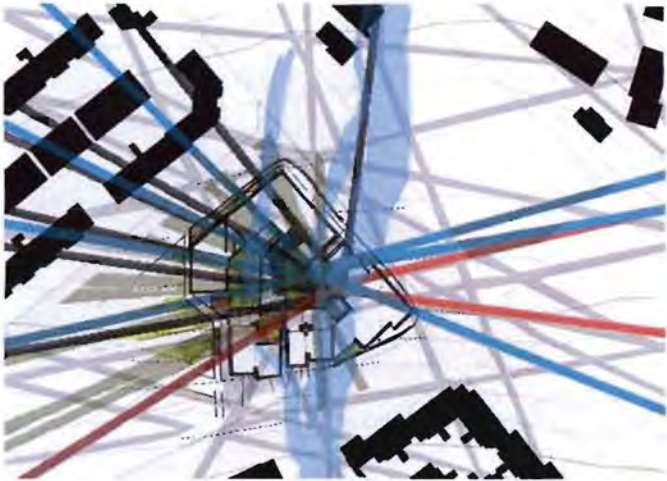
CONTEXT

- OFFICES
- RECEPTION
- RECORDS
- GALLERY

BODY

- MOVEMENT
- PSYCHOTHERAPIST
- RESTAURANT
- OCCUPATIONAL THERAPIST

SPACE FOR BEATING + MEDITATION CONNECTION TO OUTSIDE
 GALLERY SPACE ABOUT ROUTE
 INNER LABYRINTH
 CONTEMPLATIVE SPACE
 QUIET

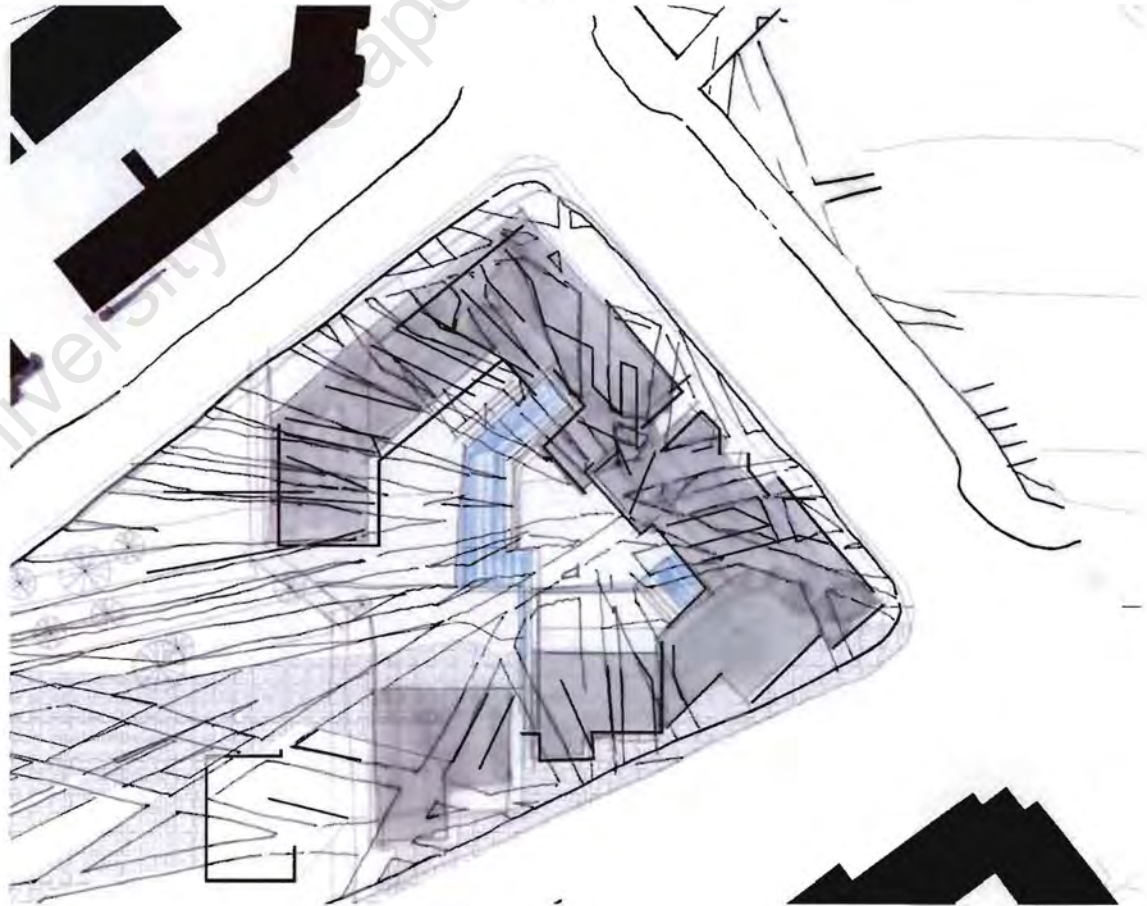


Above:
First diagrammatic plan of the ground floor (top) and first floor. the river and the lines of connection will then play a role in the division of space inside the envelope determined by the site constraints.

Below:

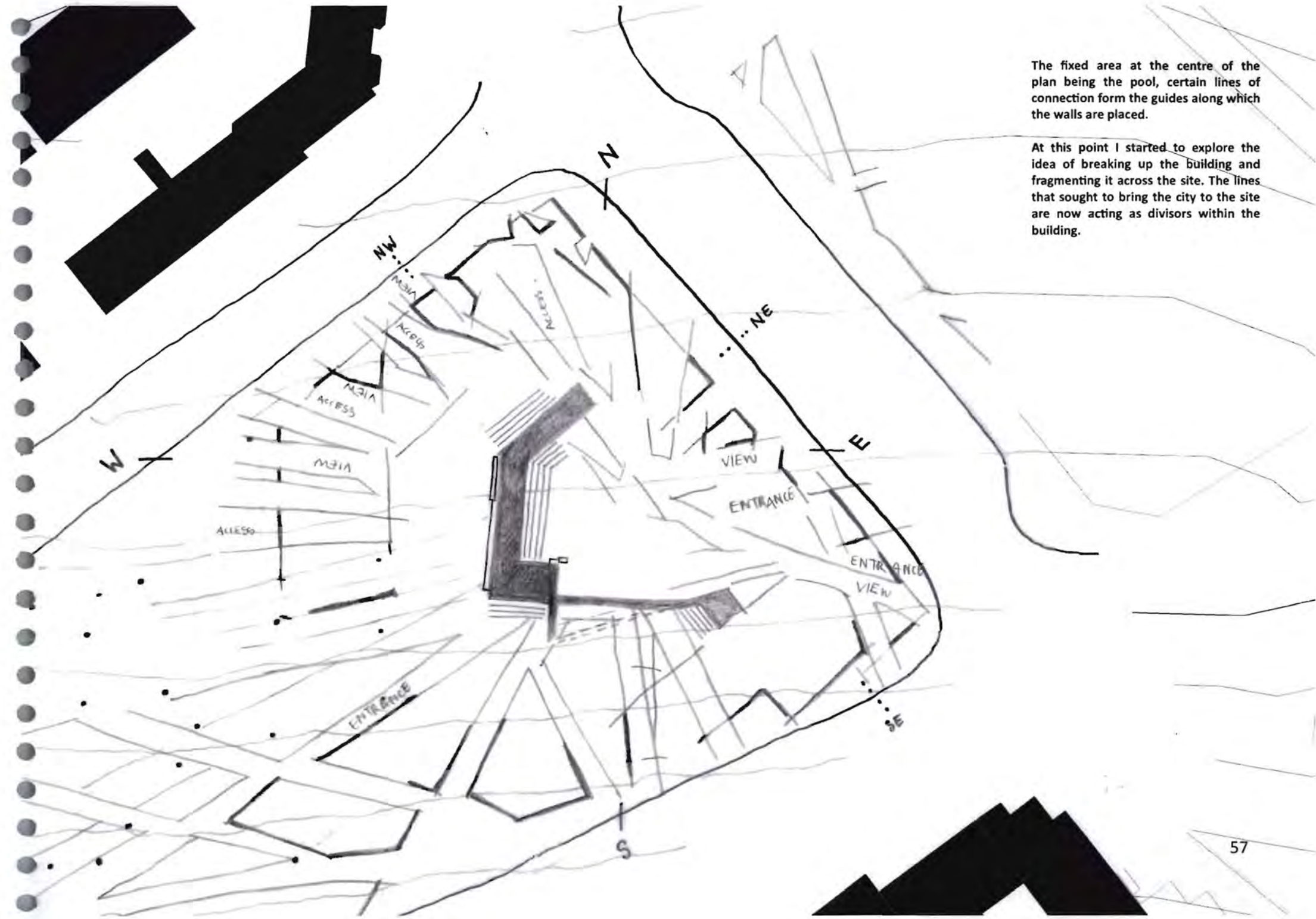
The first translation diagram of the dividing lines across the site. Many of the lines will be retained in the ordering of the landscape which the building opens up to on the South Western side of the built form.

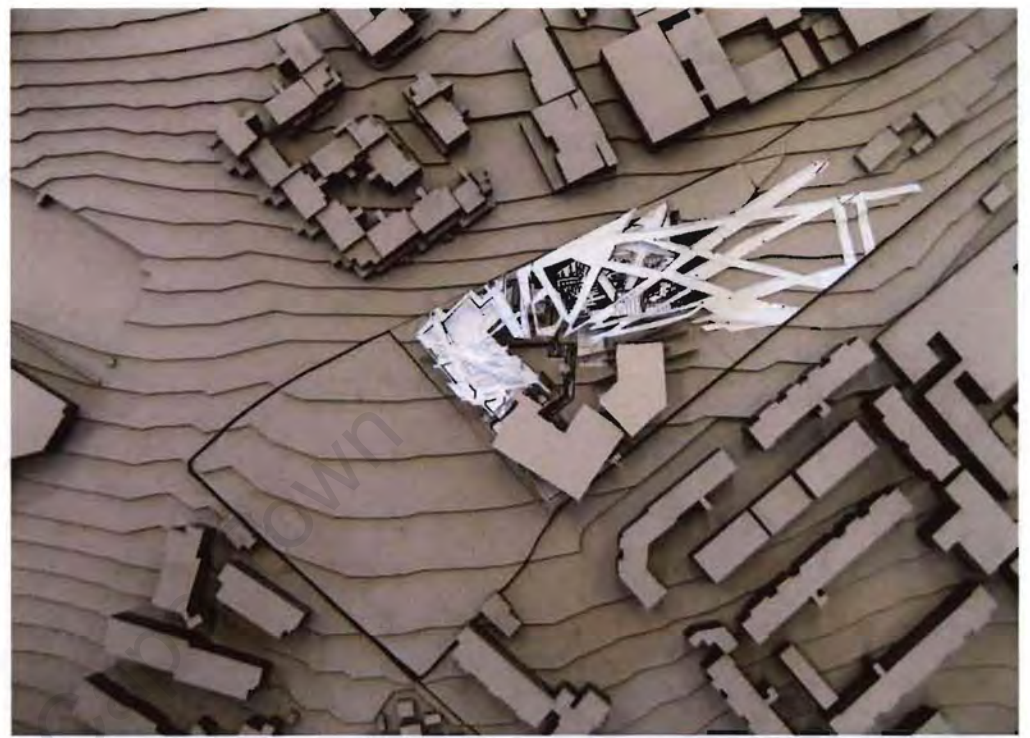
The central aspect of the plan is water, with the geometric form roughly following the original direction of the river towards the sea.



The fixed area at the centre of the plan being the pool, certain lines of connection form the guides along which the walls are placed.

At this point I started to explore the idea of breaking up the building and fragmenting it across the site. The lines that sought to bring the city to the site are now acting as divisors within the building.

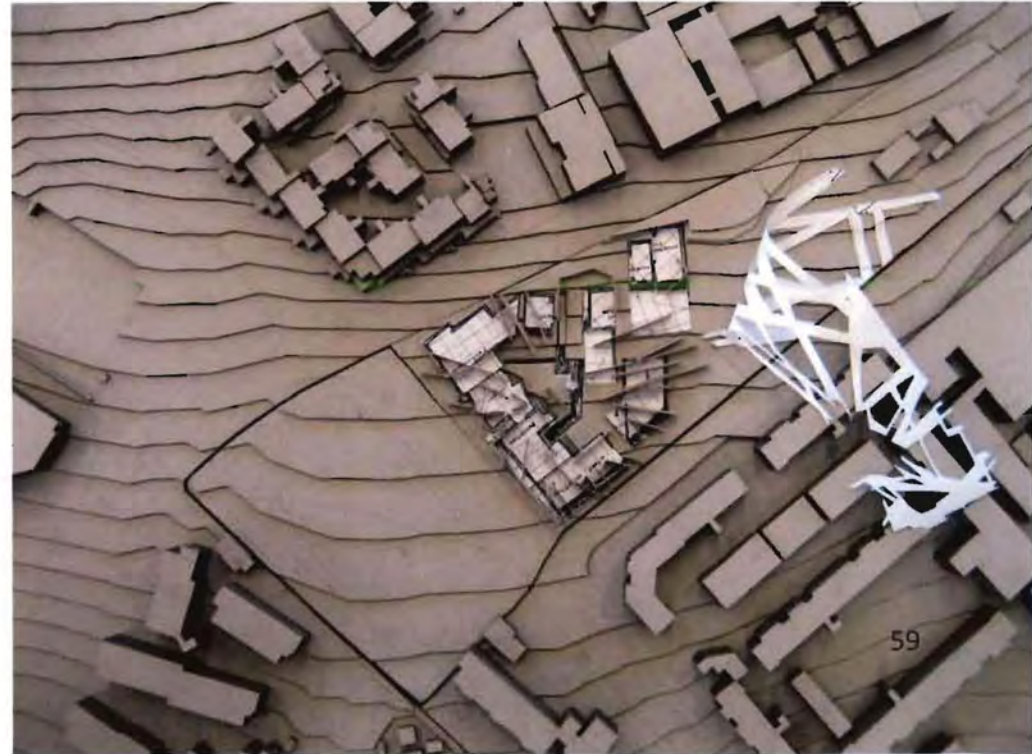
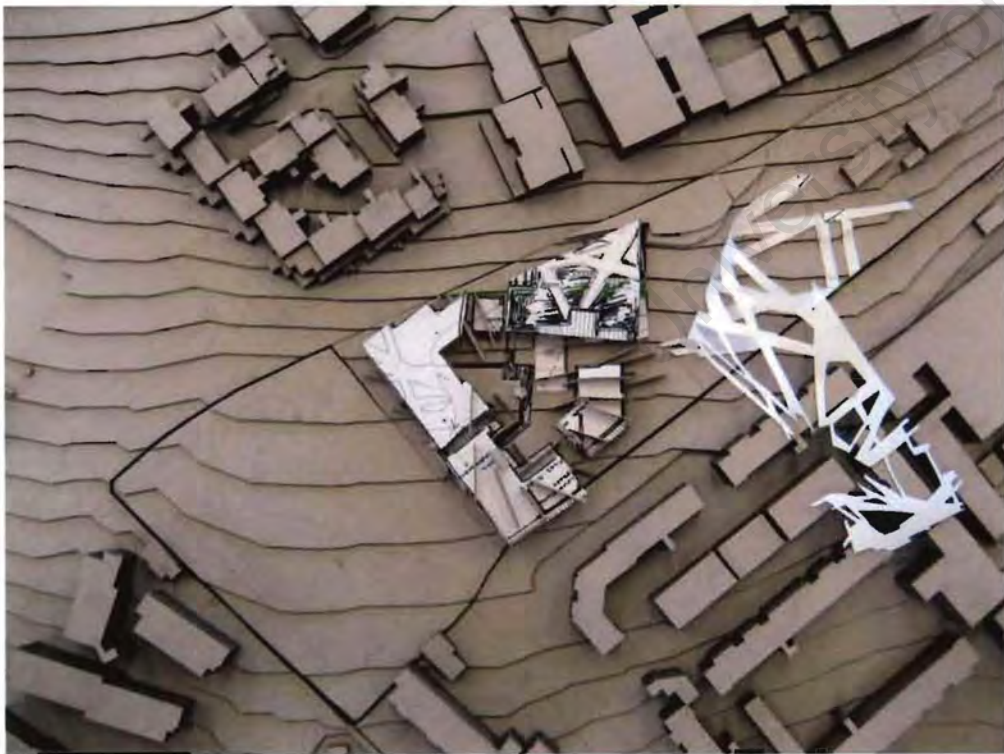


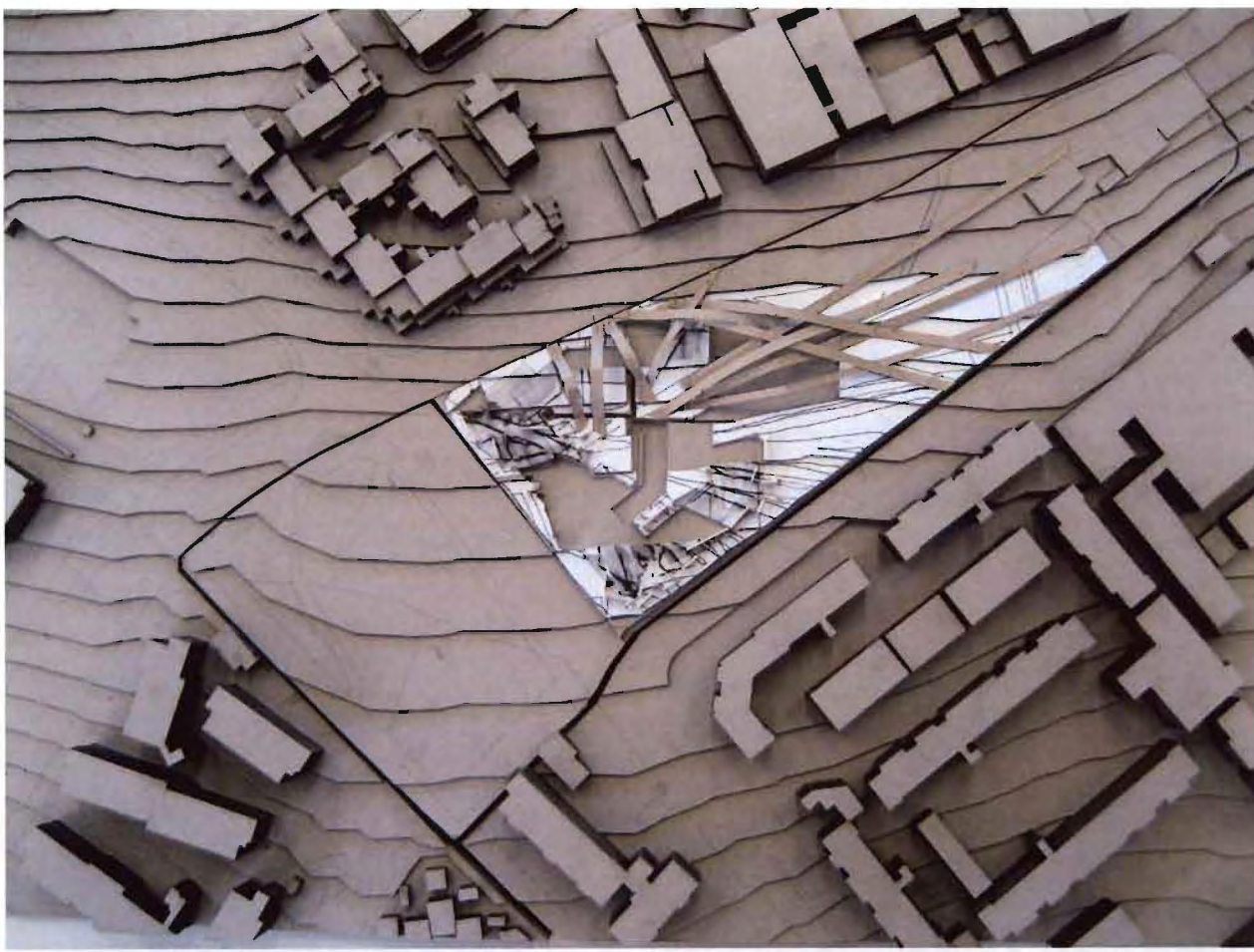


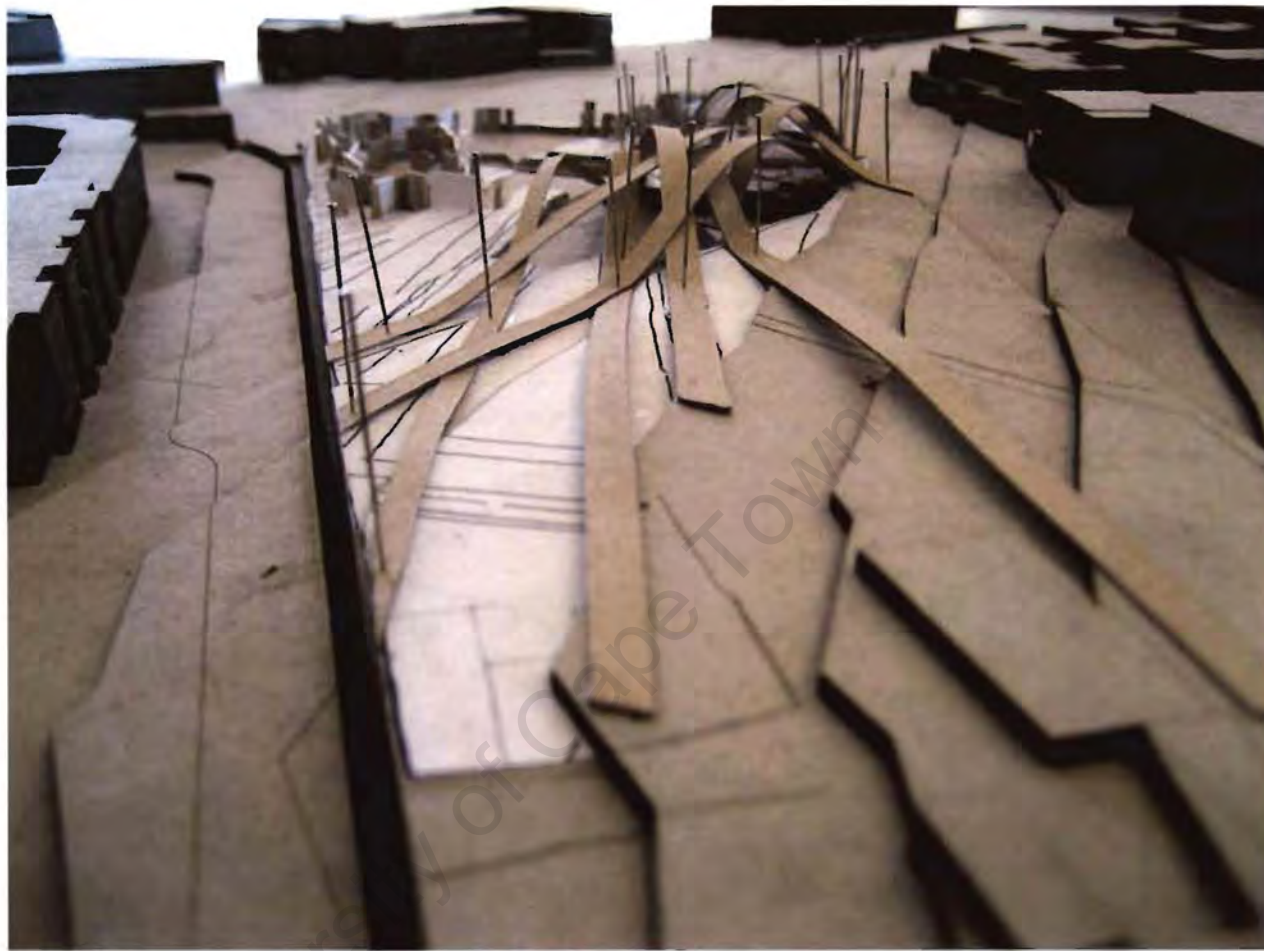
First concept model exploring the idea of burying the movement studios in the hill. This will aid sound insulation.

The landscape slips over the building allowing for a strong connection to the earth.





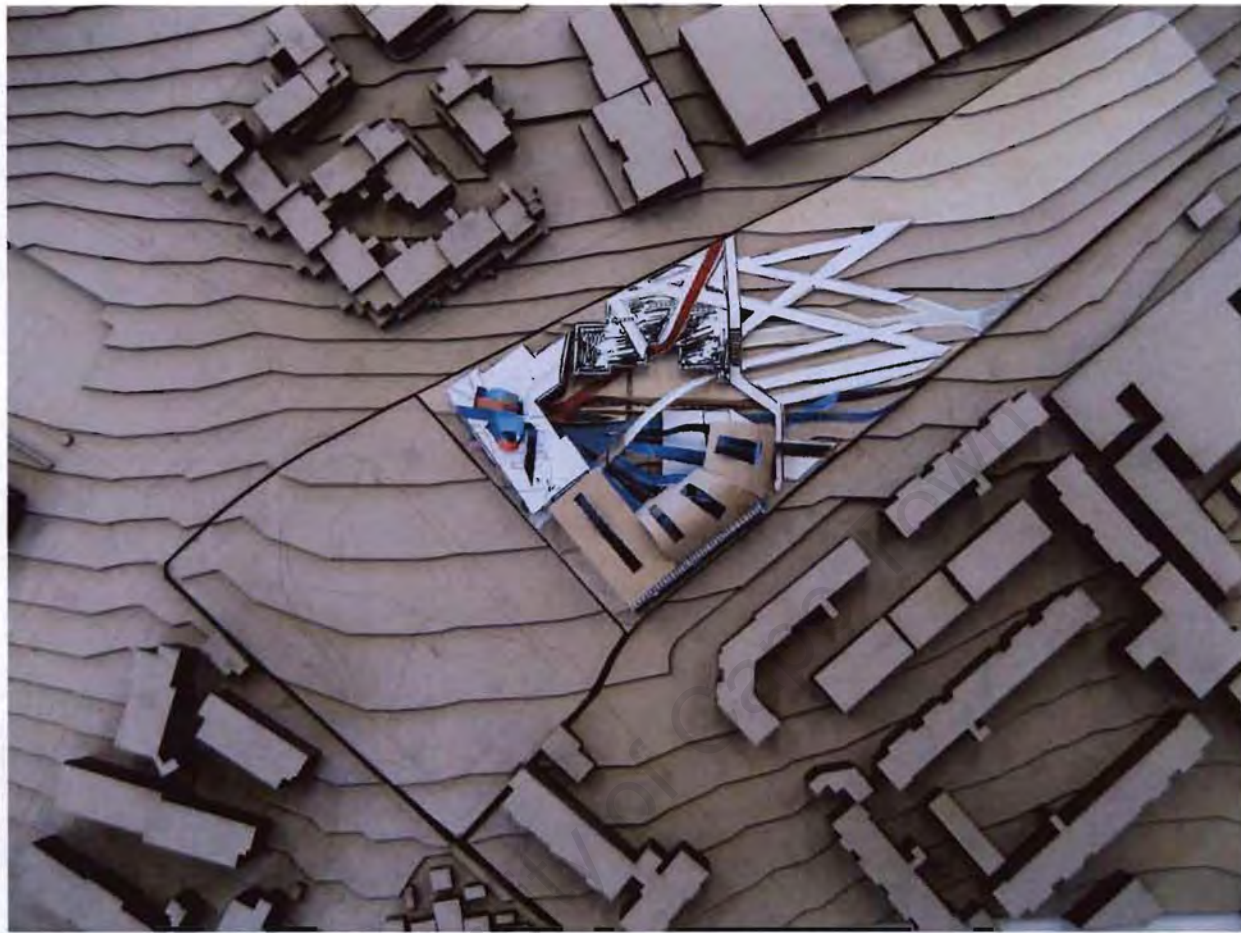




The second concept model explores the ideals of burying the studios at the back of the site.

The walls in this model have shrunk to be little more than columns which show direction in their rectangular form through orientation along the lines of connection.

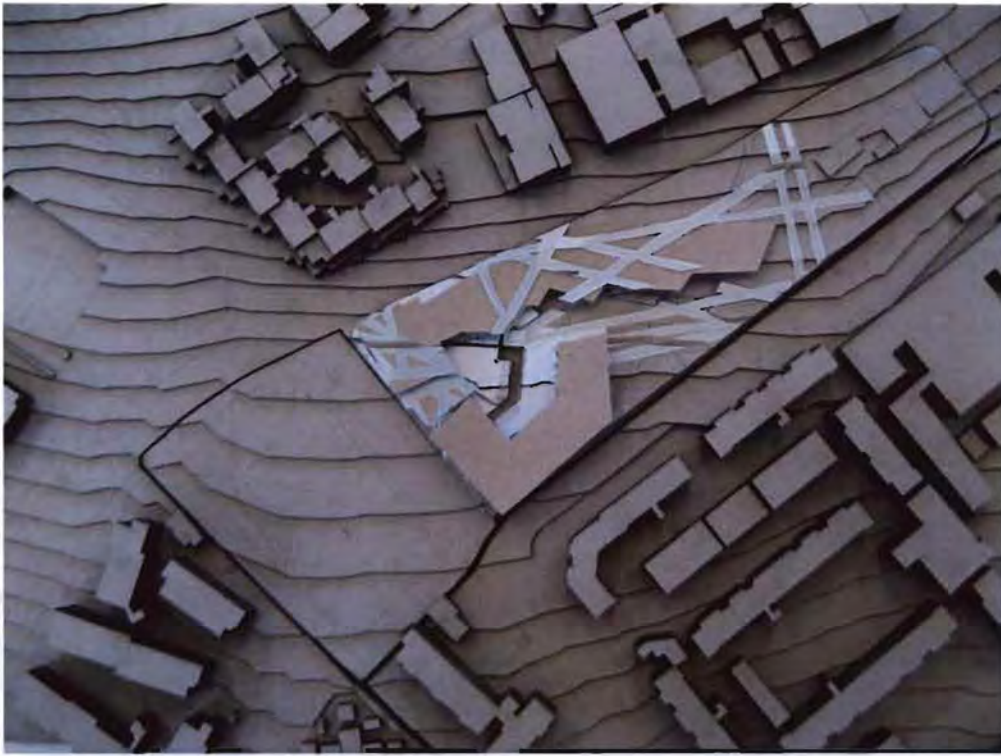
This model was also useful in playing with levels across the site.



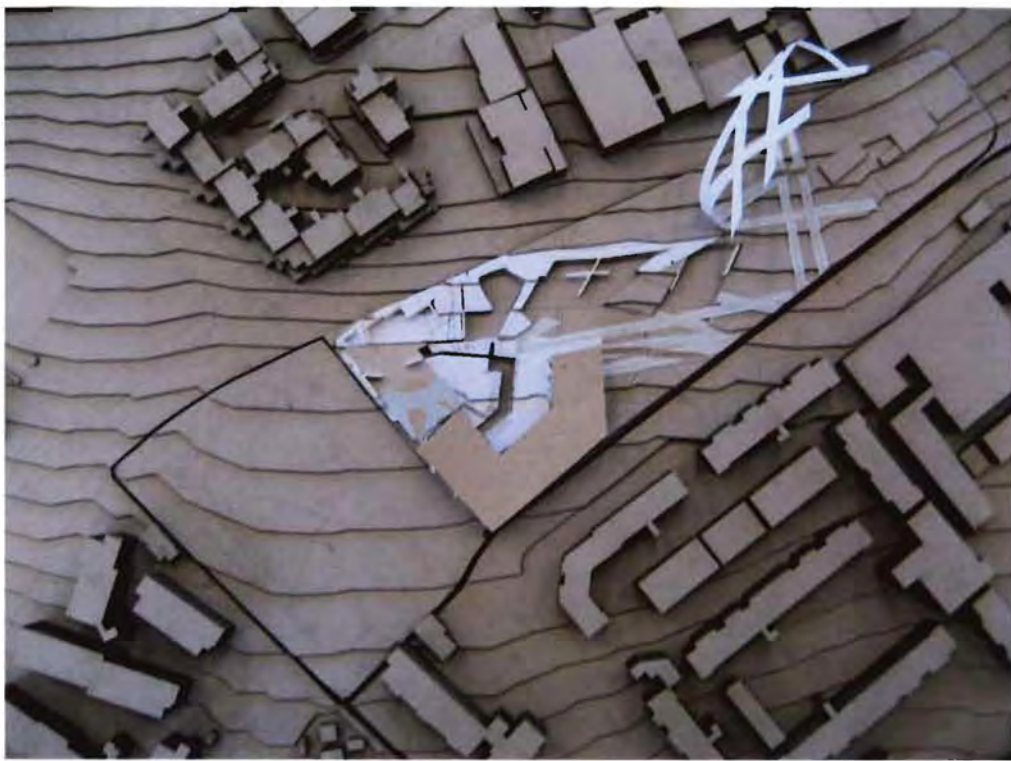
The third concept model explores the idea of the vault and the lines of connection being picked up to form roof and structure. The lines also serve to connect the building to the site.

With this model the expression of the lines of connection was not as evident in the facades of the building, the focus being on the idea of the line as structure.



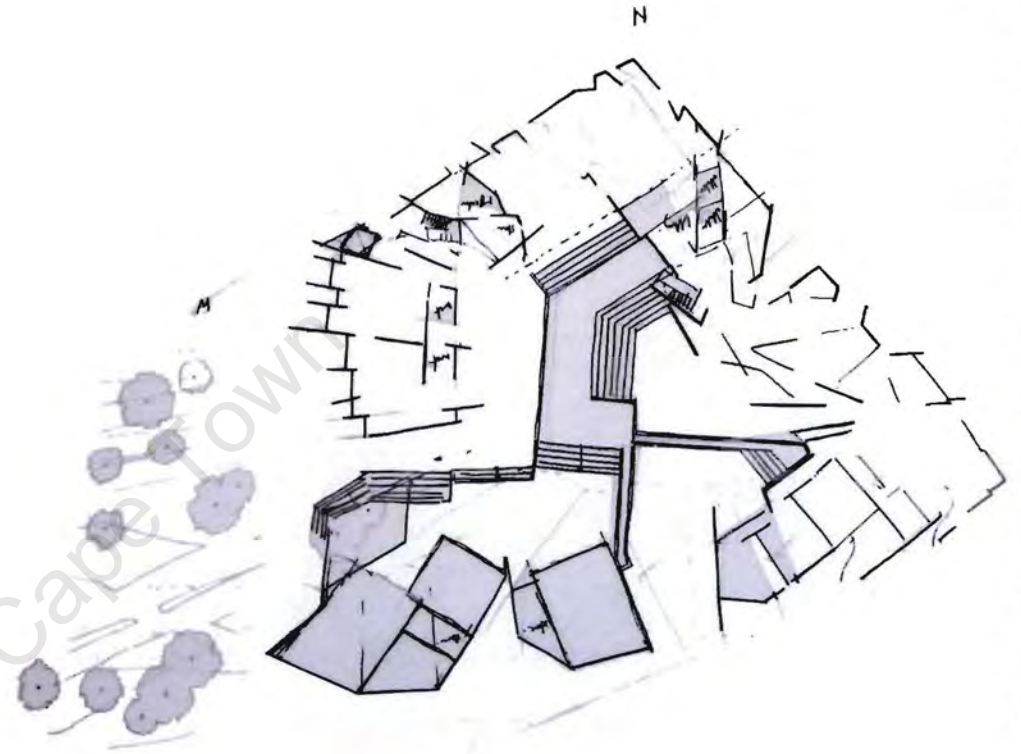


The final concept model at 1: 500 looks at an increasingly seamless integration of the built fabric in the landscape. The connection lines as vertical elements gains momentum and the movement studios to the rear of the site are scattered further away from the centre of the building.



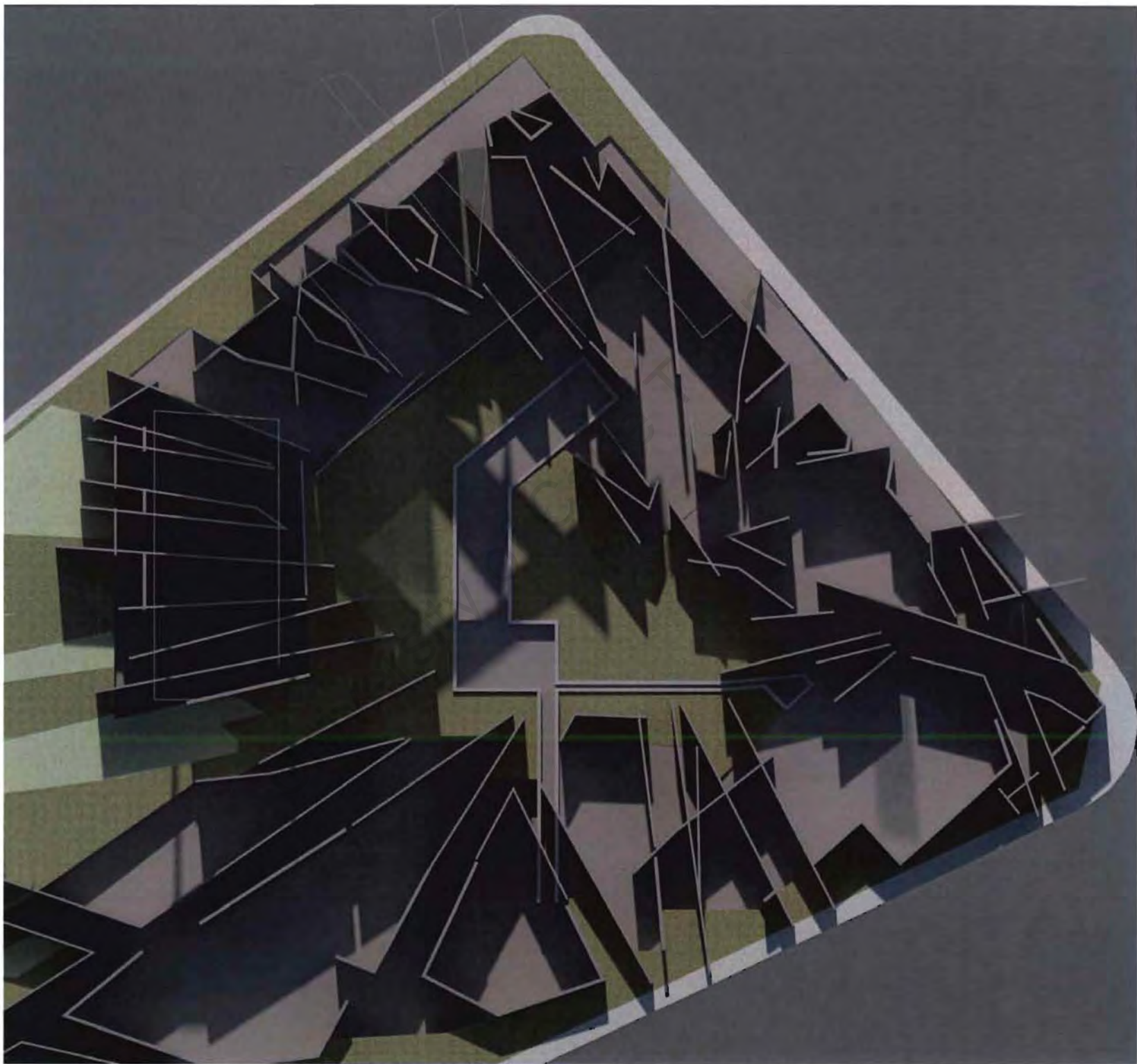
The ideas explored in the physical concept models were also explored digitally.

Opposite page:
A translation of the concept diagram into three dimensions

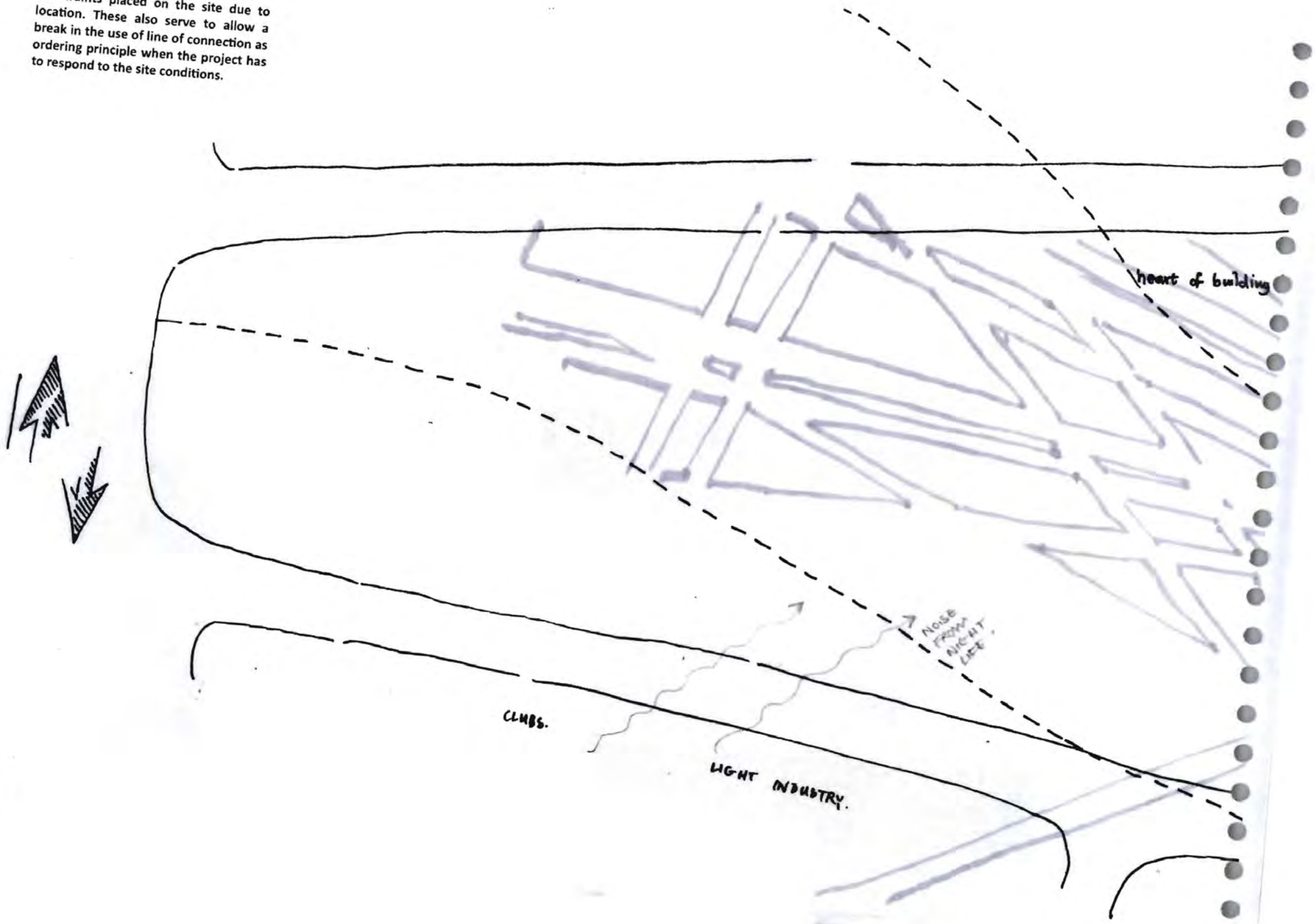


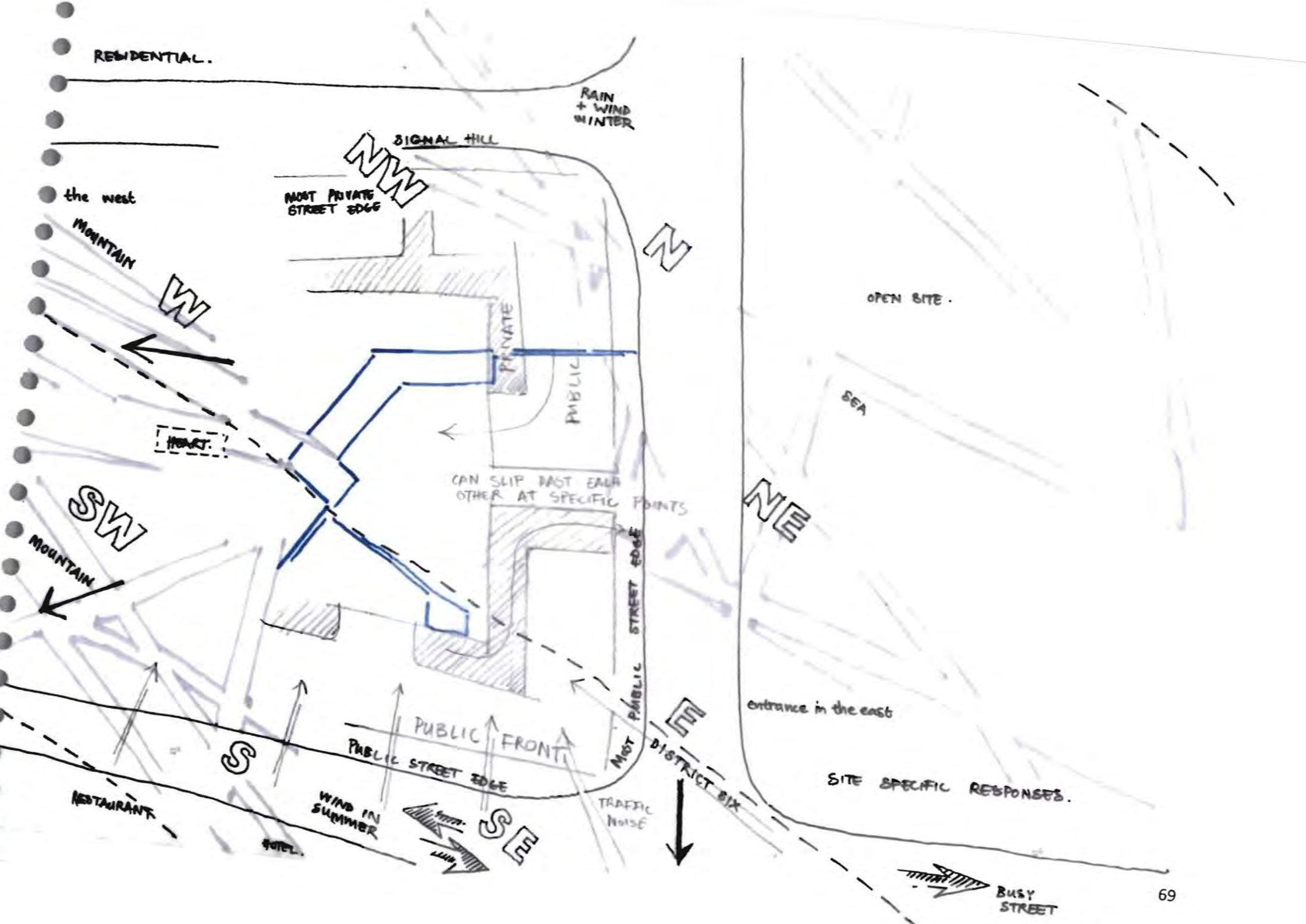
Below:
Progression of concept to first proposal



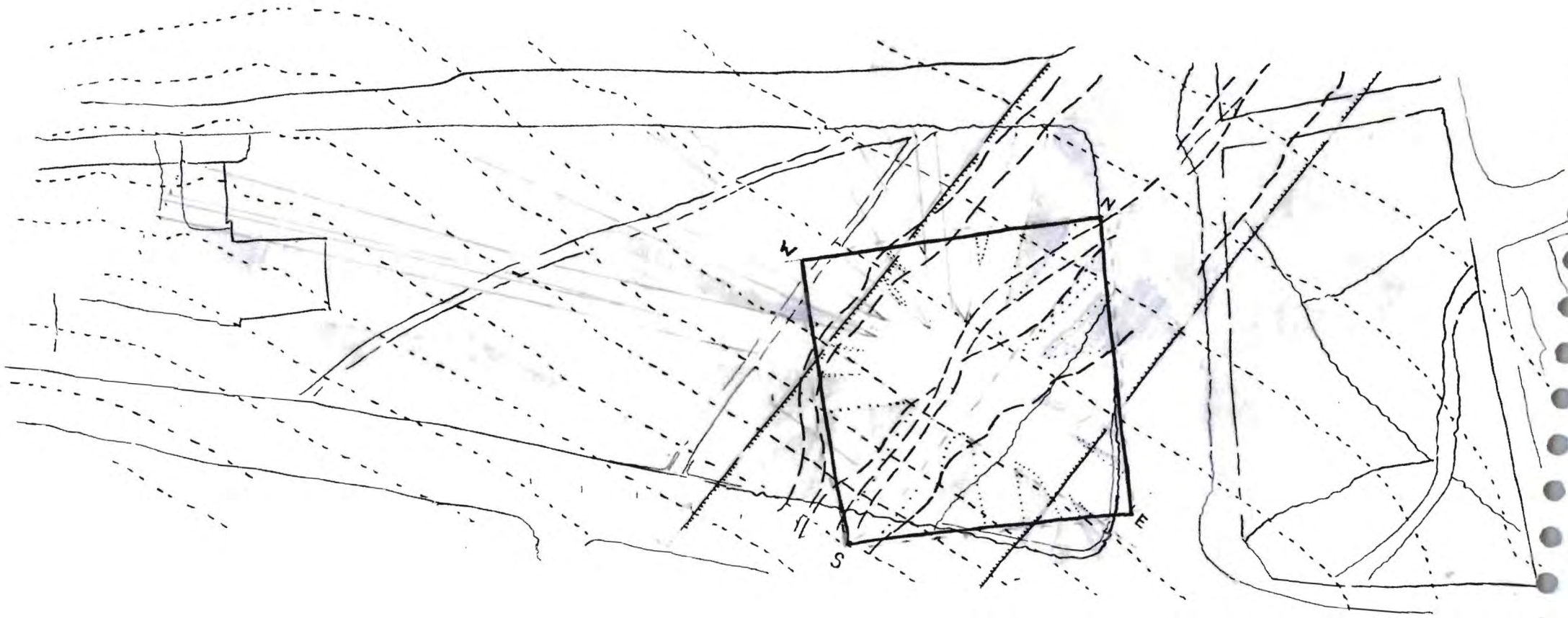


Constraints placed on the site due to location. These also serve to allow a break in the use of line of connection as ordering principle when the project has to respond to the site conditions.





Site diagram showing the Cardinal points and the lines of connection across the site. The historical river is also indicated.



Structuring

Axis Mundi

Eliade's axioms of sacred space as other or set apart from ordinary, profane space, as the 'Centre' or axis mundi through which communication between different domains is possible, and as the manifestation of the 'Real' (or hierophany) – have become foundational for scholarly articulations of the meaning and power of the sacred in space and time (Eliade 1959, p. 26). (Knott; 2008:1104)

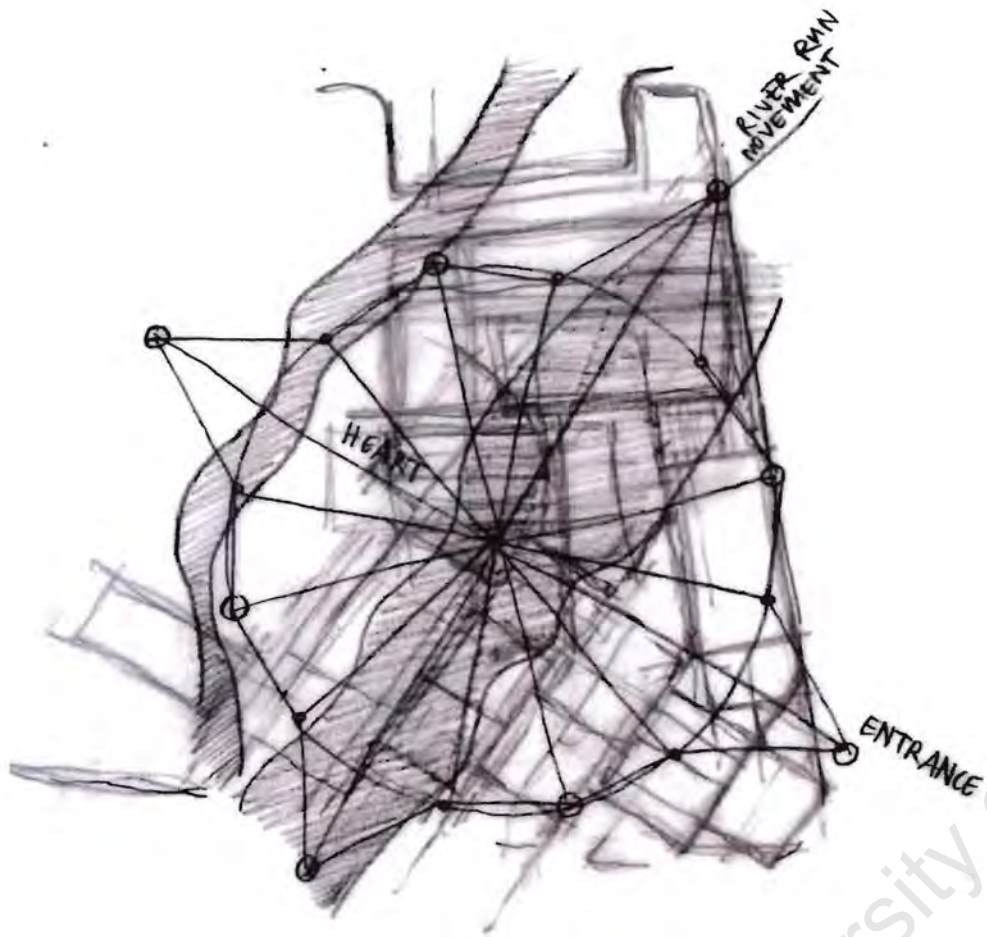
The Axis Mundi is a device, a universal and mythological concept by which many religions structure their view of the world. It makes use of the cardinal points, primarily the first four, but the secondary four also hold positions of import. At the centre point where the lines drawn by the directions meet, there is a connection between the earth and the sky.

In many forms of religious building the earth sky connection is highlighted through the use of a steeple, minarets, column of smoke or tower of some kind. This earth sky connection is often portrayed as a tree, with its roots going down into the ground and its branches going up into the sky. It serves to connect the heavens and the earth and the underworld, with the trunk of the tree corresponding to the position of the earth. It is used as a way of explaining the structure of the cosmos and the importance, spiritually speaking, of the connection between the heavens and the underworld to the earth. The central point, or naval (omphalos), the point of intersection of the direction lines is where this z axis connection takes place. It is symbolised through the tall structures which often accompany religious buildings. In Mircea Eliade's opinion, "Every



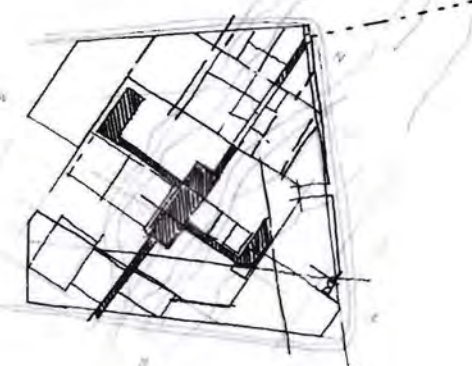
Left:
Diagram of the basic form of the intervention

Below left:
Early site diagram playing with the idea of flow of water across site.



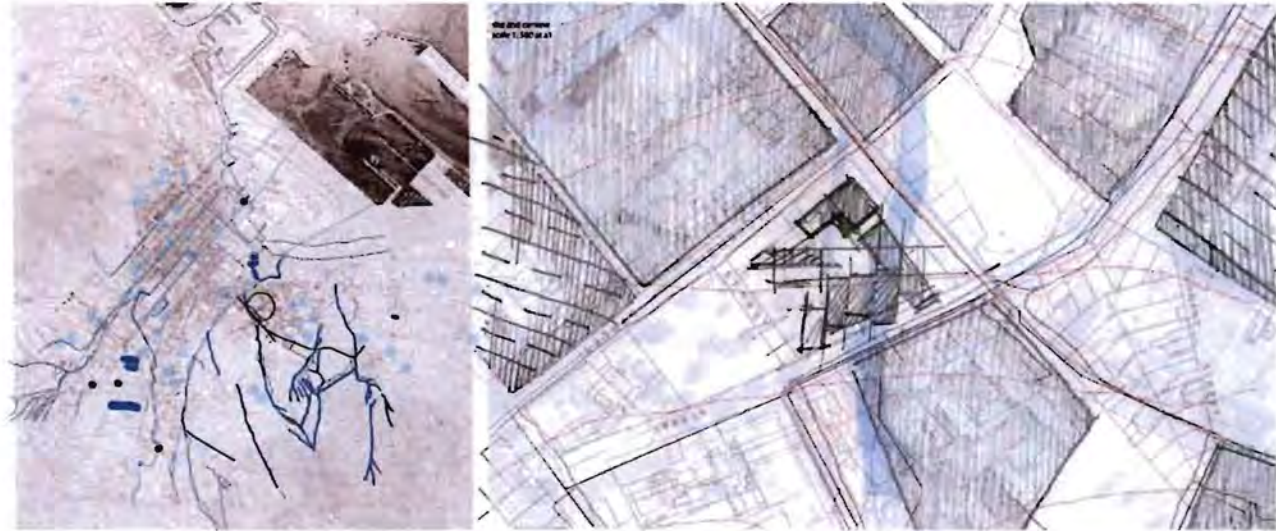
Above:
The Cardinal points, river and form placement in the path of the long buried river.

Right:
Diagrammatic ideas of placing space with the cardinal directions and therefore along with the contours.



Microcosm, every inhabited region, has a Centre; that is to say, a place that is sacred above all." (1991: 39)
The z axis served to be that place where travel between the realms of earth, sky and underworld could occur.

My interest in the use of ritual in identity, made the universality of this concept appealing as a tool for designing a space for everyone, a place with which people across cultures could identify and find commonality. A type of architecture could be explored which would facilitate mediation, even on the most subconscious level.



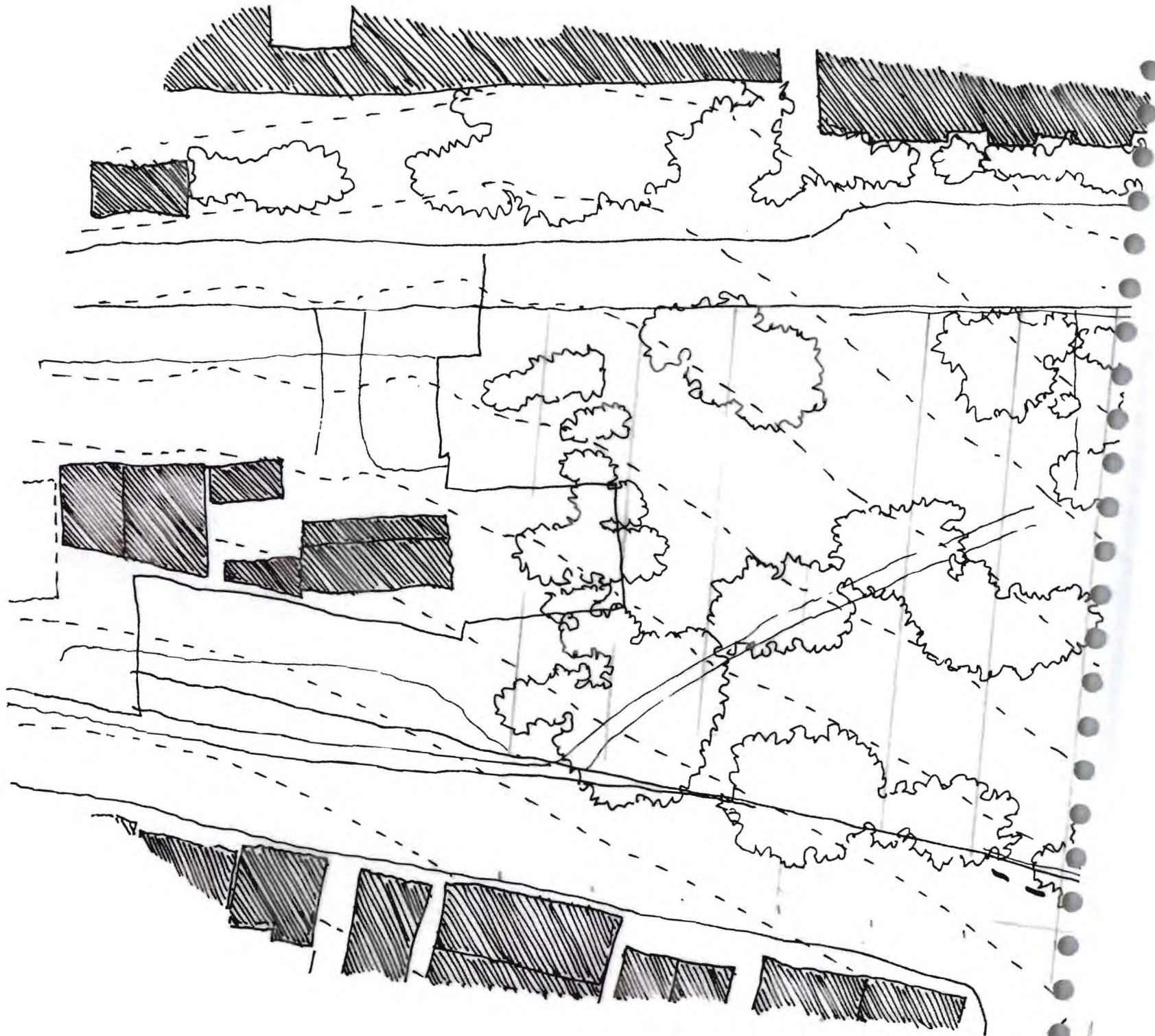
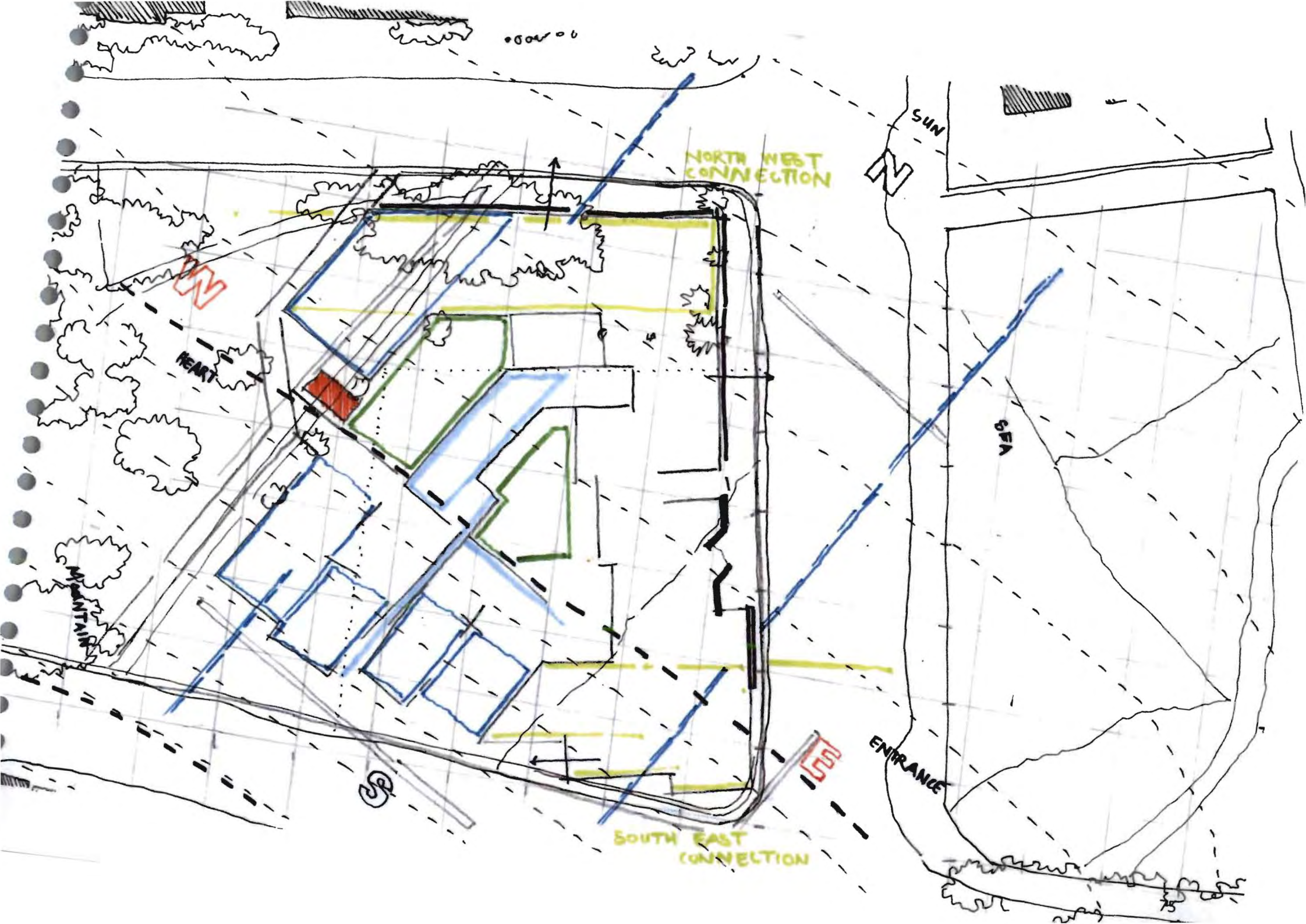
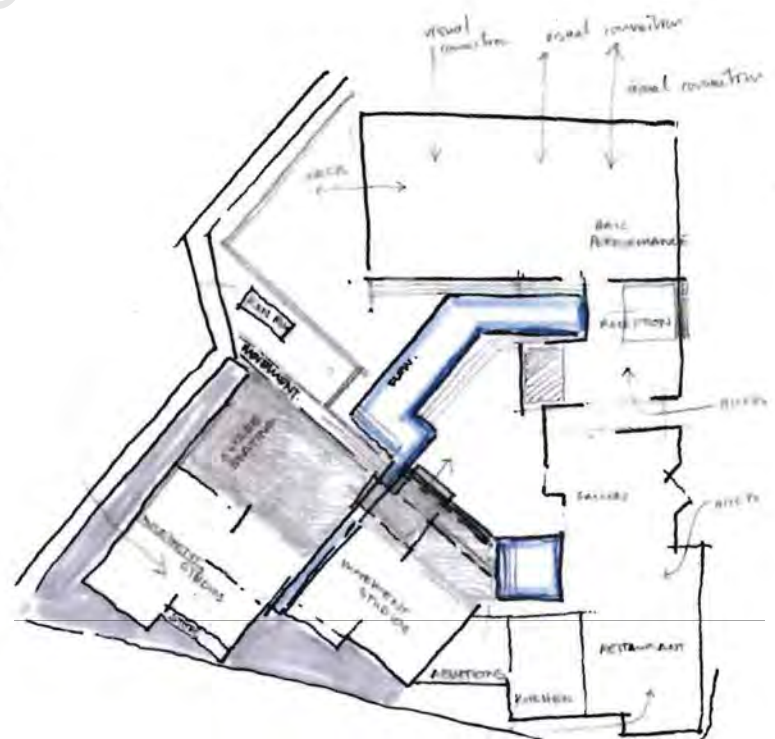
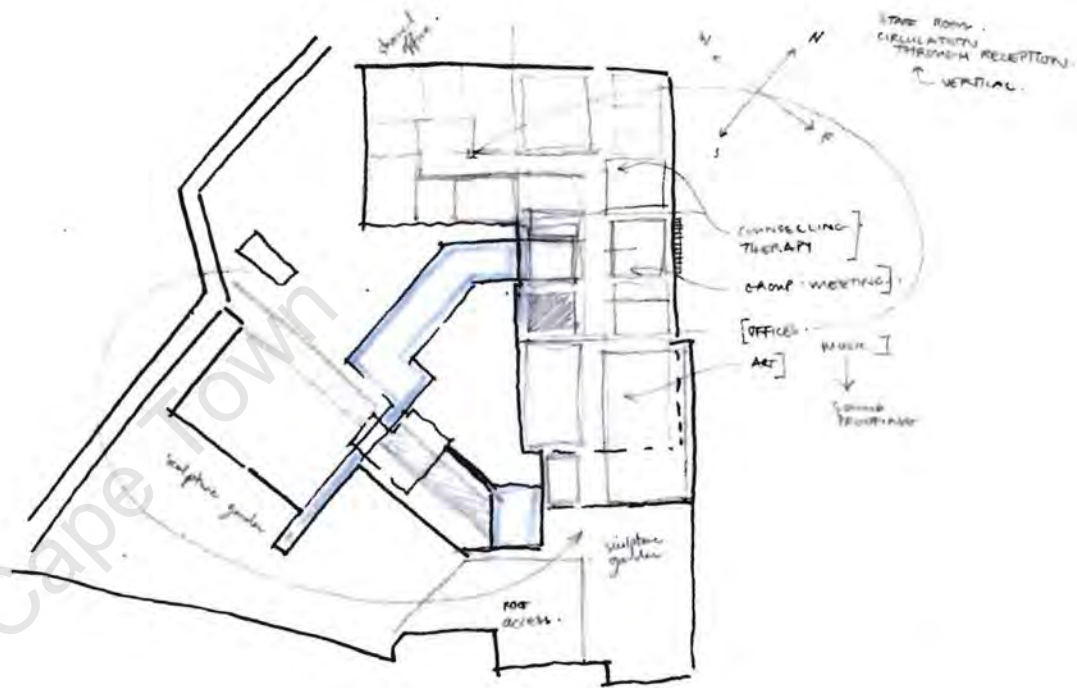


Diagram showing the influence of the Axis Mundi on the placement of space on the site.





Cape Town



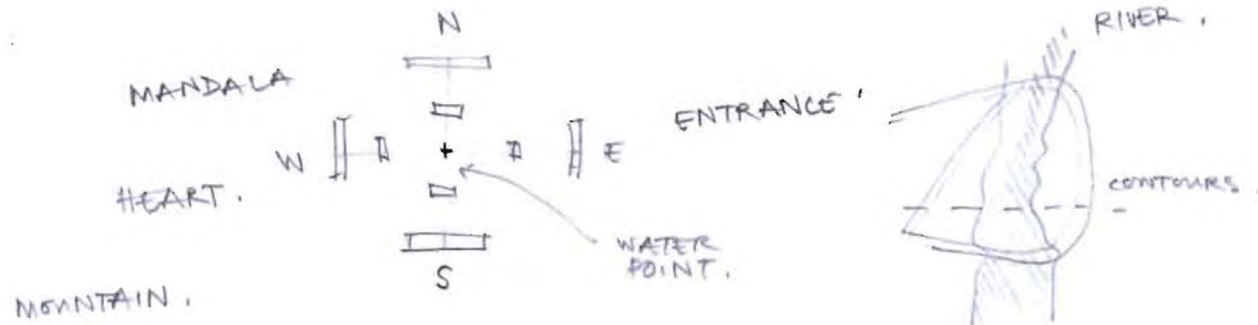
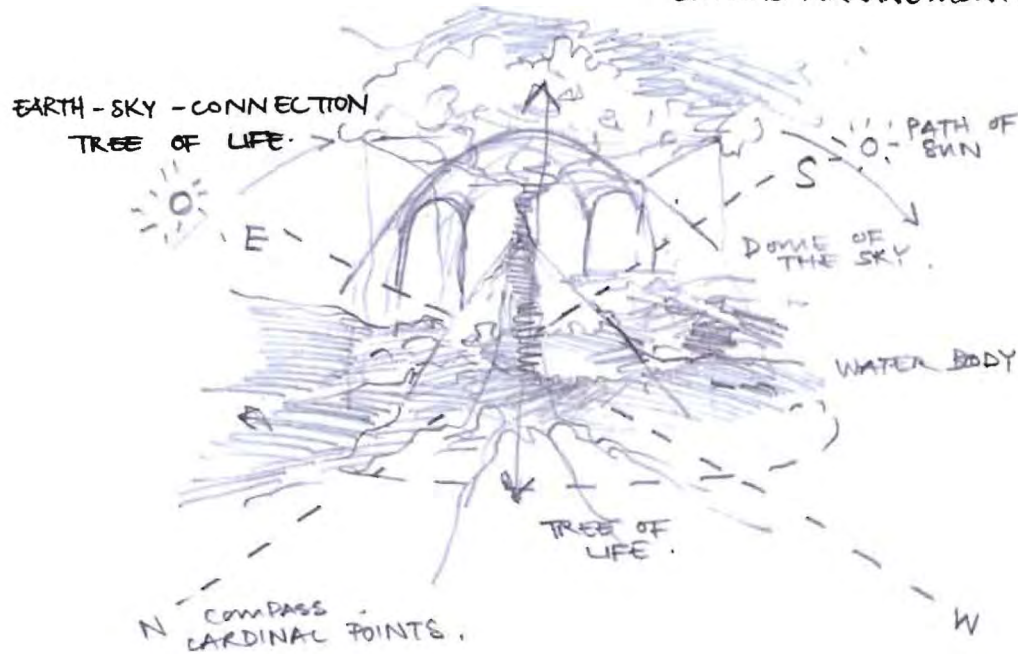
Right:
Ground (bottom) and first floor early diagrams of programmatic placement on the site; designing in response to the axis mundi.

Opposite page;
Early figure ground of the scheme

WORK OUT OCCUPANCY AND CORRECT ABLUTIONS FOR THAT.

SEE WHICH SPACES CAN WORK TOGETHER.
AND DOUBLE UP. — OVERLAP
SHARE SPACE.

DE-COMPLICATE THE
SPATIAL ARRANGEMENT.



ADMIN OPEN PLAN OFFICES

RECEPTION

GALLERY

CAFE / RESTAURANT

MOVEMENT STUDIOS
SPRING FLOOR

DANCE
DRAMA
CONTACT IMPROV

ART STUDIOS

ABLUTIONS

PERFORMANCE SPACE

AUDITORIUM
OUTSIDE

HALL - VENUE FOR
CELEBRATION

SMALLER MEETING
MUSIC ROOMS

THERAPISTS
GROUP THERAPY ROOMS

QUIET SPACE
HEART OF THE PROJECT
WATER
KILN - HEARTH

AXIS MUNDI - TREE OF LIFE

The Ancients: A Worldview

(A brief summary of some ideas found in Architecture, Mysticism and Myth by W.R. Lethaby (1892))

With the exploration of the axis mundi and the ideas of identity and orientation it became apparent that the way in which the human race views the world in which we find our being determines much of our comfort in it.

From very early in history man has been fascinated with the cosmos and dreamed up pictures and stories with which to explain what was seen in the skies and the patterns of the seasons. Like the axis mundi many of these ideas found counterparts across the ancient religions and cultures as the same sky was observed, albeit from different geographical locations.

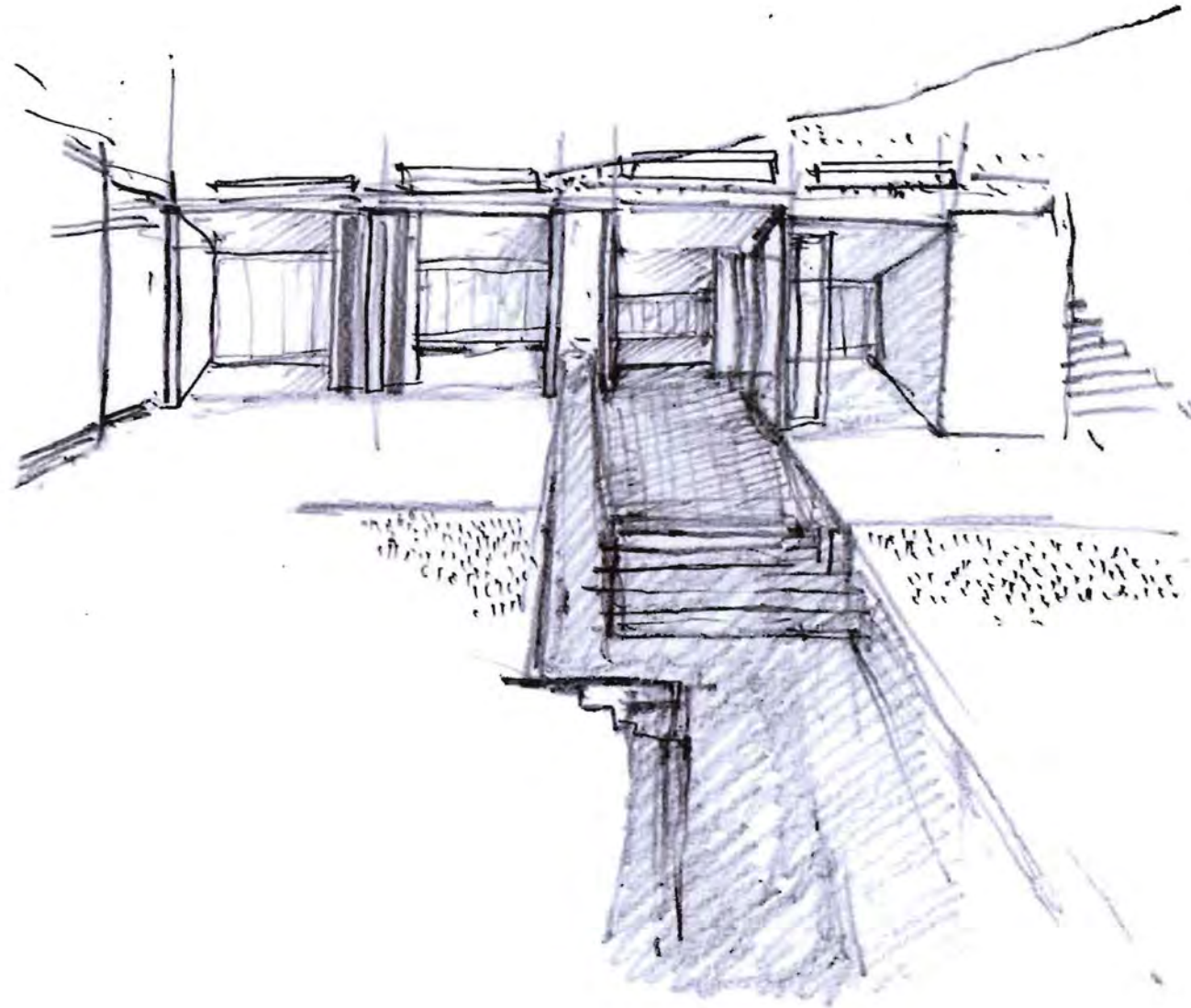
There is a consistency across cultures on how the world was structured. They were greatly influenced by the natural world and derived much of their ideas about the heavens, earth and the underworld by a careful observation of the natural phenomena which came with the changing of seasons and the passage of time.

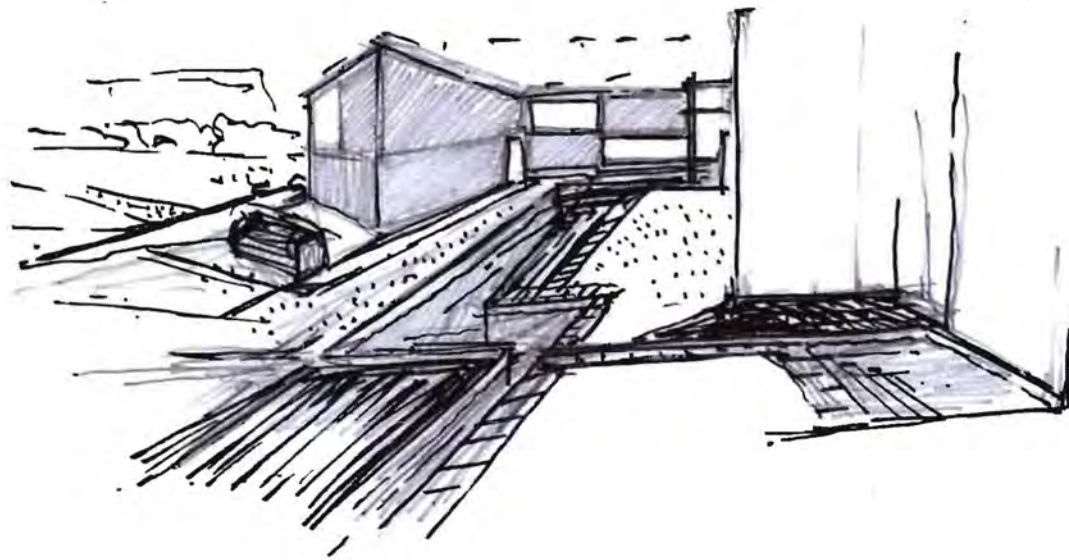
Certain structural elements were used to describe the cosmos. The sky was seen as a dome or vault and the vault often rested on four pillars at the four corners of the globe. Although, perhaps ironically, ancient cultures knew that the earth was round. The heavens were seen as being structured in concentric circles radiating from the earth, with numbers ranging from three (the basic underworld, earth and heavens trio) to nine realms of heaven, each realm corresponding to one of the planets which were observed and used to determine the calendars which governed time.

Numbers which were repeated across cultures are 3, 4, 7, 9 and 12. With 3 and 4 finding their way in combinations into the larger numbers: $3+4=7$; $3 \times 3=9$; $3 \times 4=12$

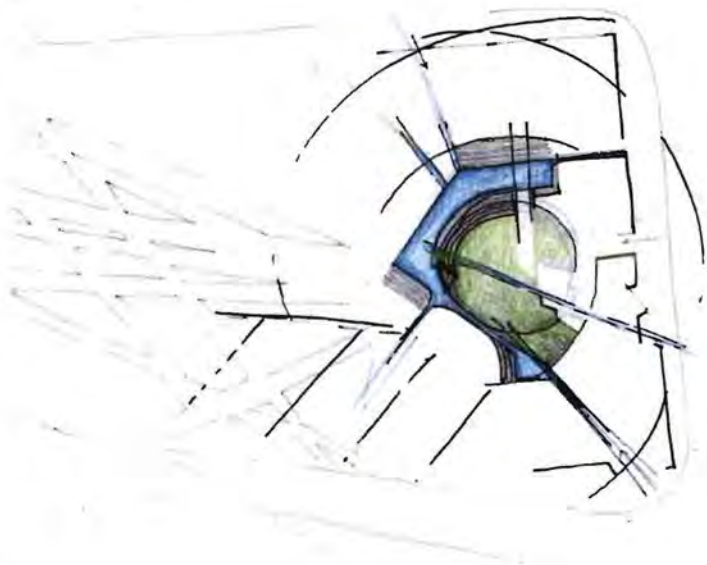
These numbers then line up with the axis mundi in the four cardinal points and the three vertical elements of earth, heaven and the underworld. I have used some of these concepts in the design and structuring of space in the building. There are nine structural ribs which hold up the roof. The roof is curved and makes use of an abstracted vault form. Groupings of three and four are also employed in the number of branches off the central pool and placement alongside each other of other elements (like openings) throughout the building.

Conceptual perspective of the movement studios and the water channel emerging from between them and conducting water to the North of the site.

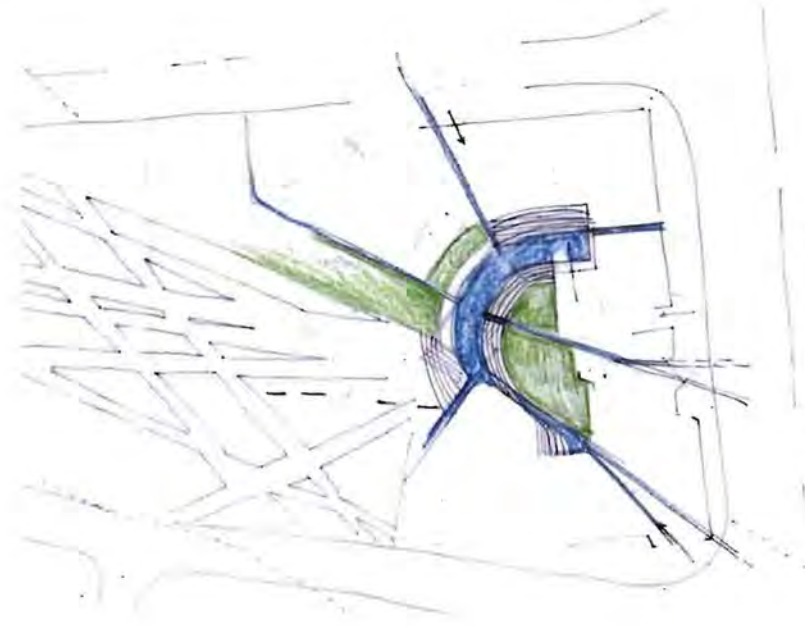


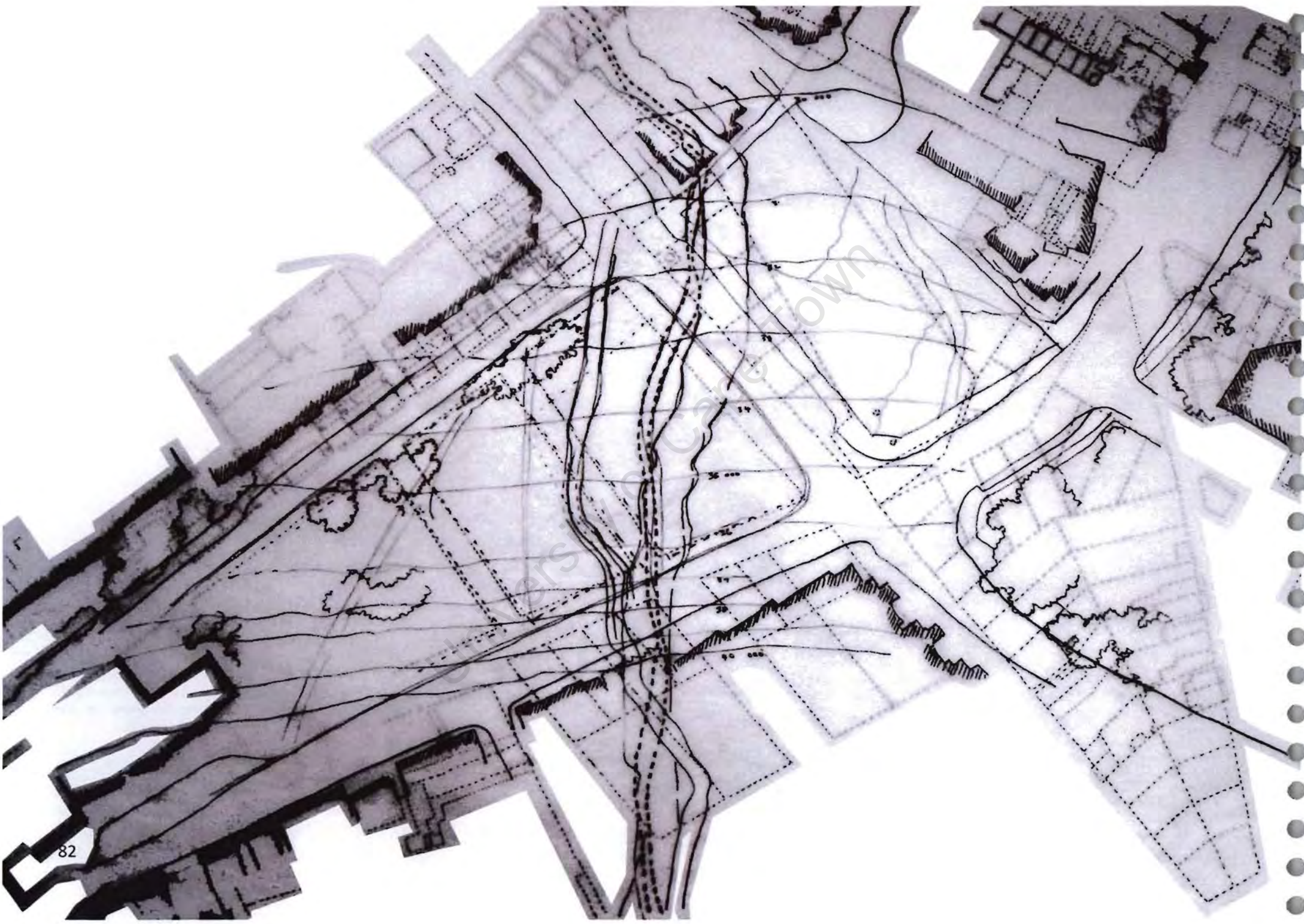


Top:
Perspective looking the other way,
towards the North



Left:
Explorations into form making of the
pool and furrows from it to the building.
The form being influenced by the
omphalos of the axis mundi.





First Proposal: Mid Review



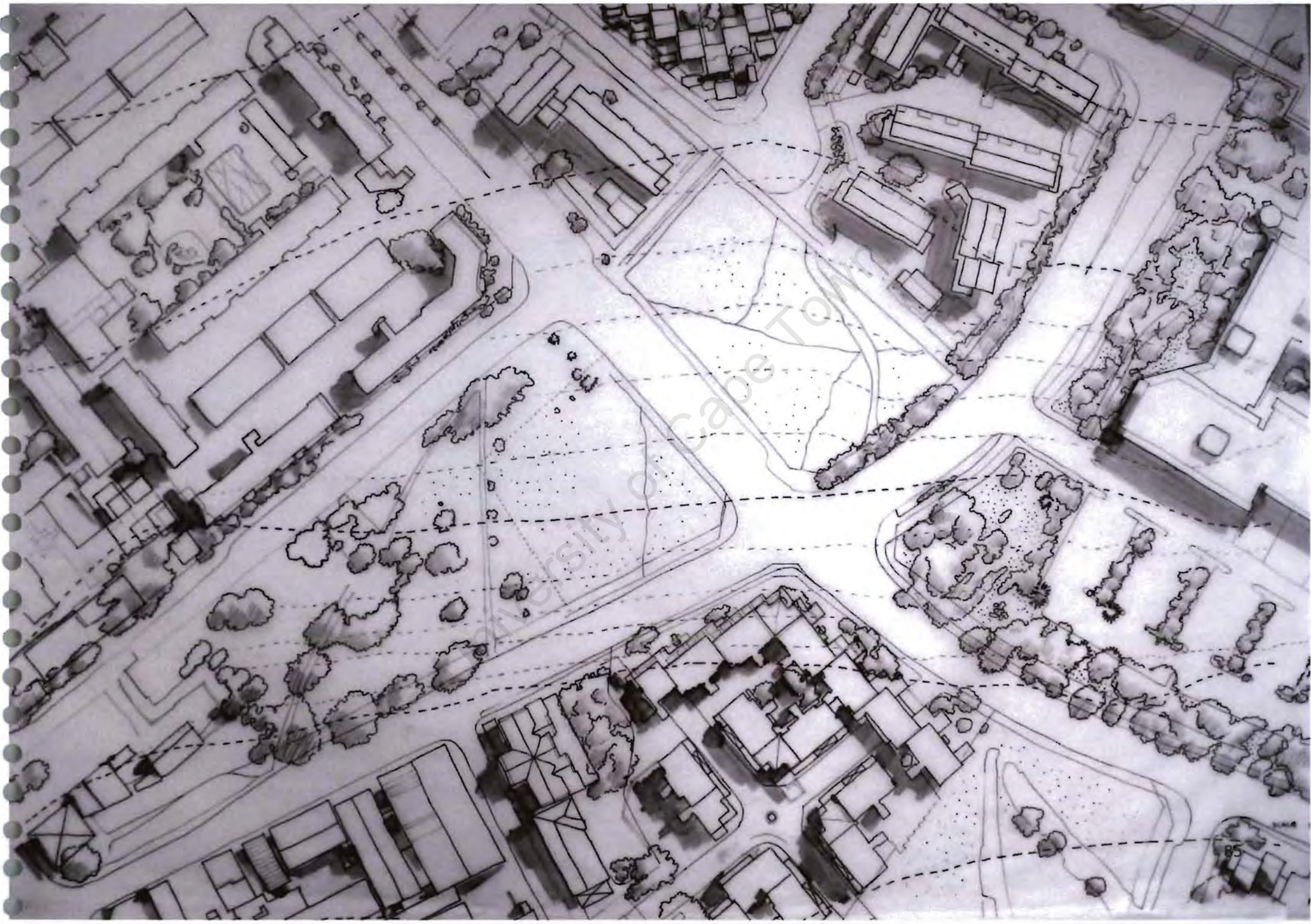
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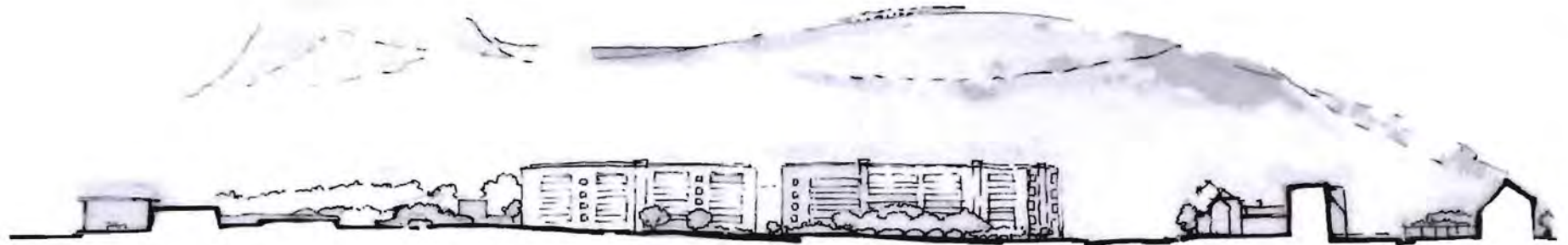
Opposite page:
Site with underlay of the 1862 Snow
Survey of Cape Town

University of Cape Town

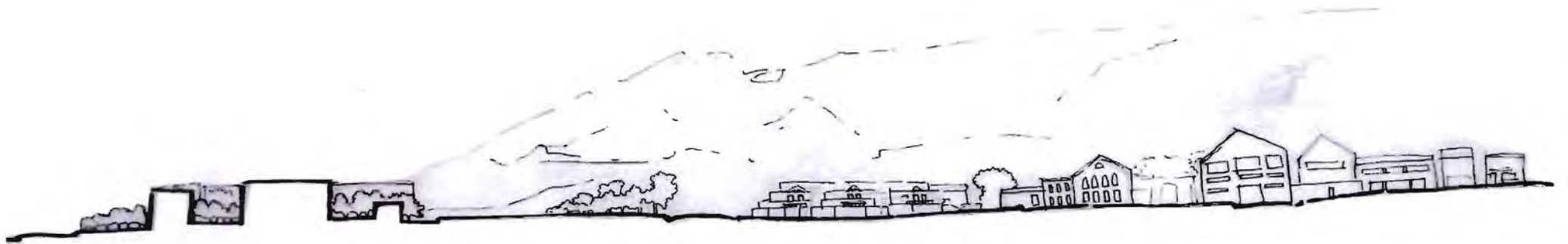
Opposite page:
Site and context







Top:
Long section looking towards Lions Head
and Signal Hill.



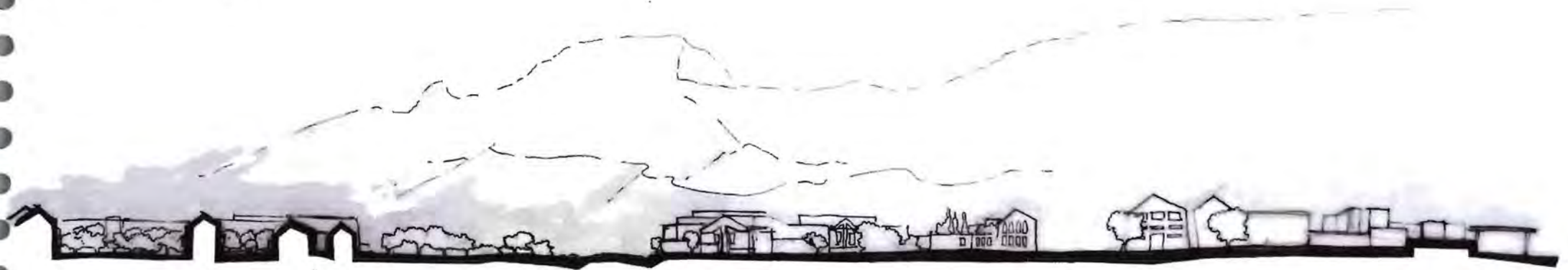
Middle:
Long section looking towards Devil's
Peak

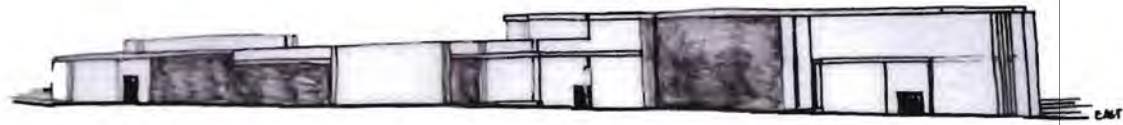
Bottom:
Short section across site, looking
towards Table Mountain



Below:
Site section across site, looking towards
the sea.

Bottom:
Site section along site, with Devil's Peak
in the background.

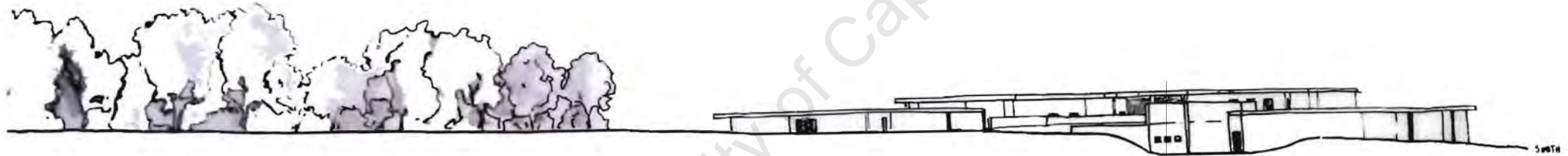




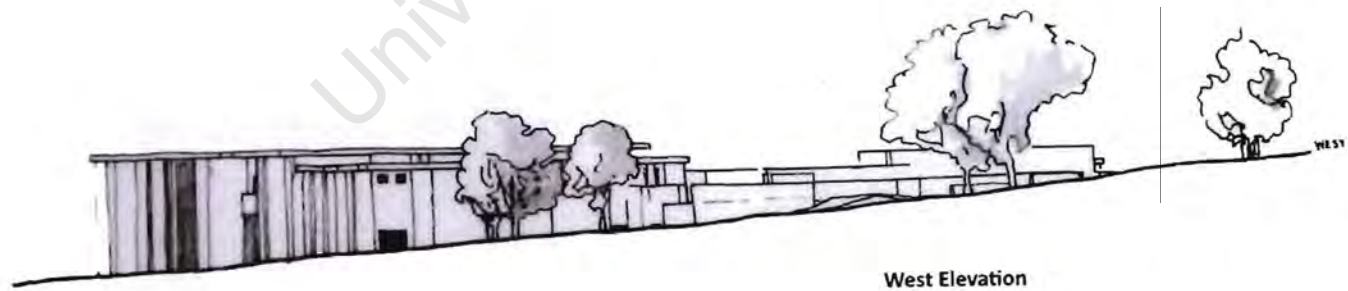
East Elevation



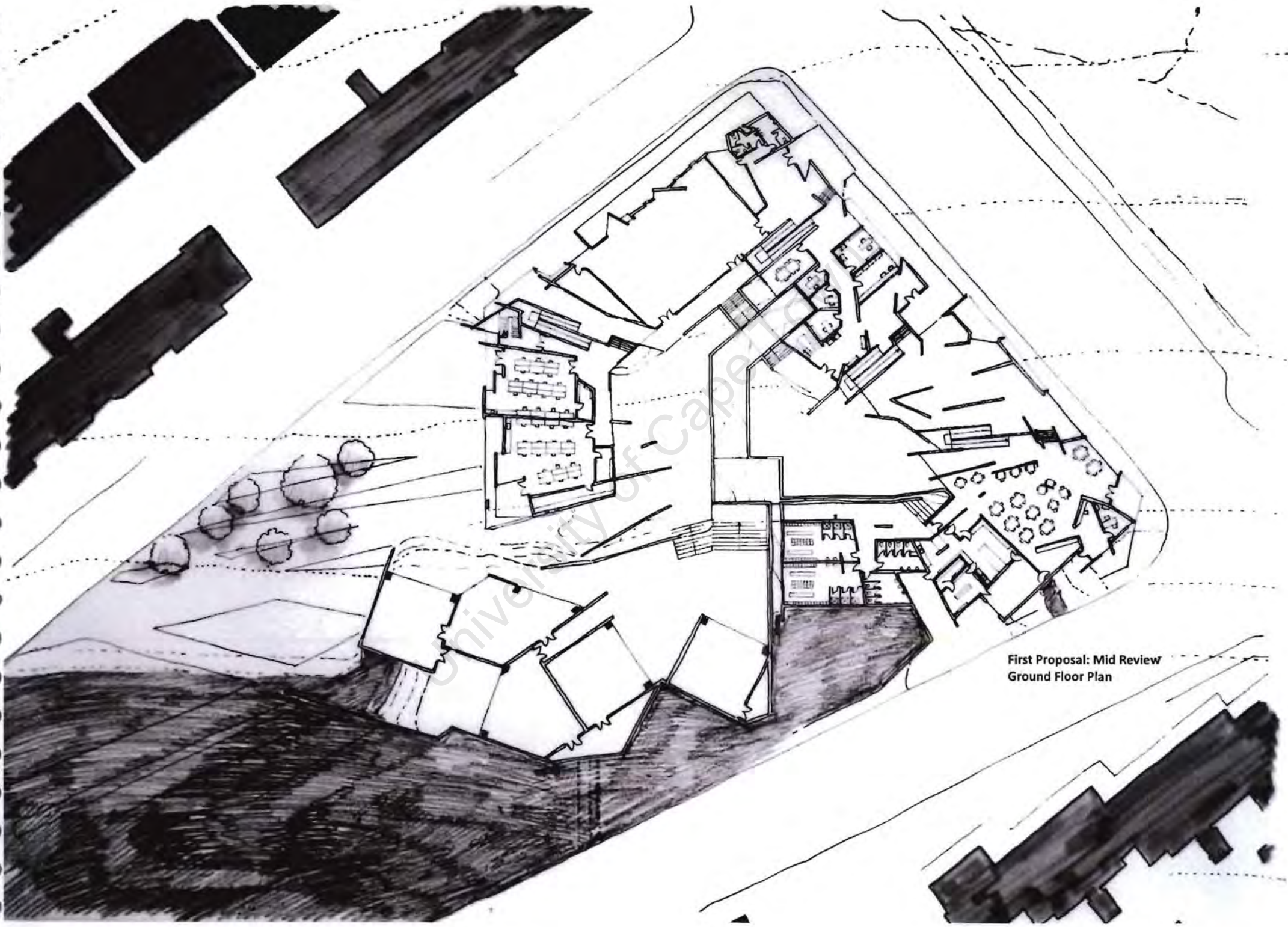
North Elevation



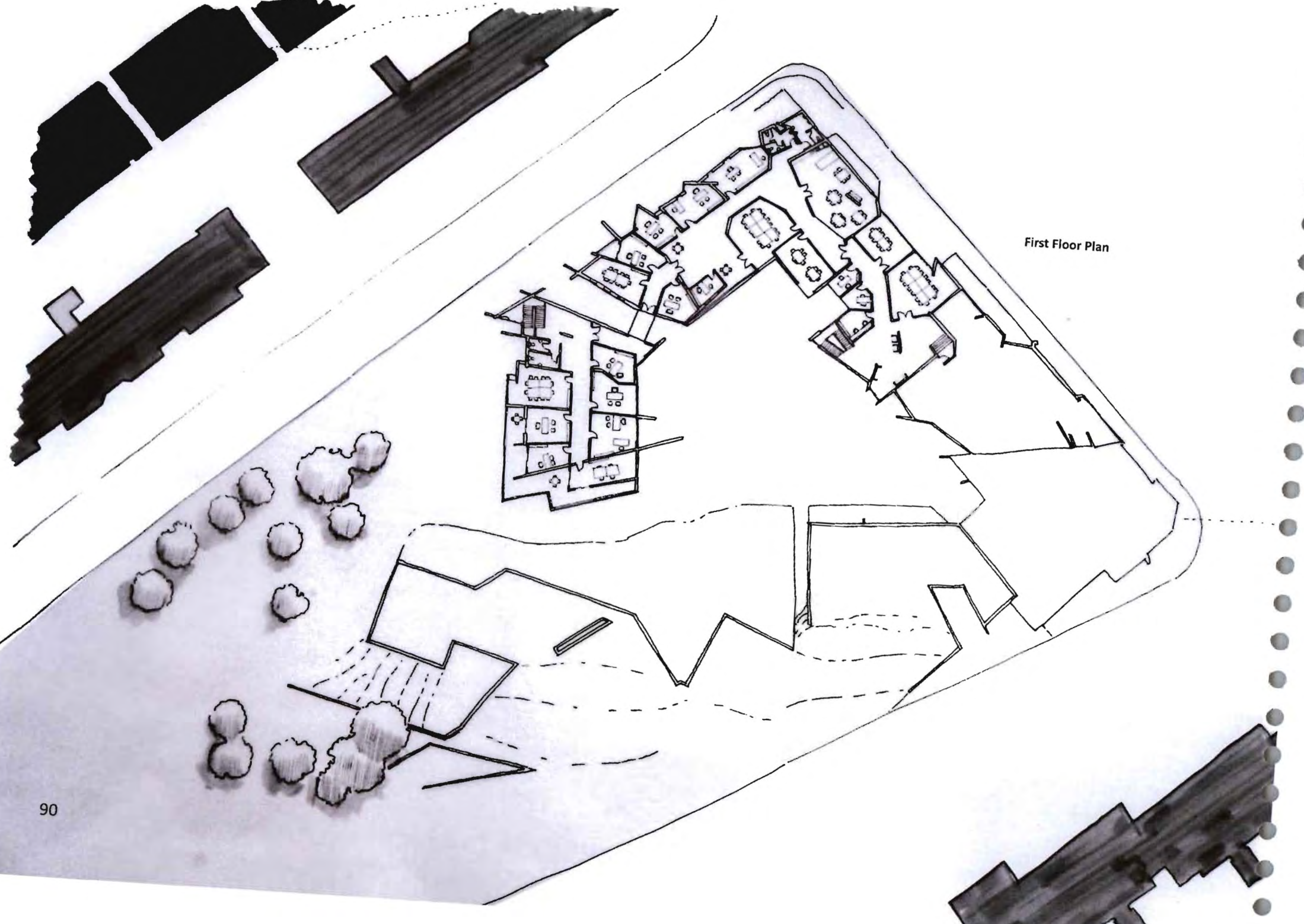
South Elevation



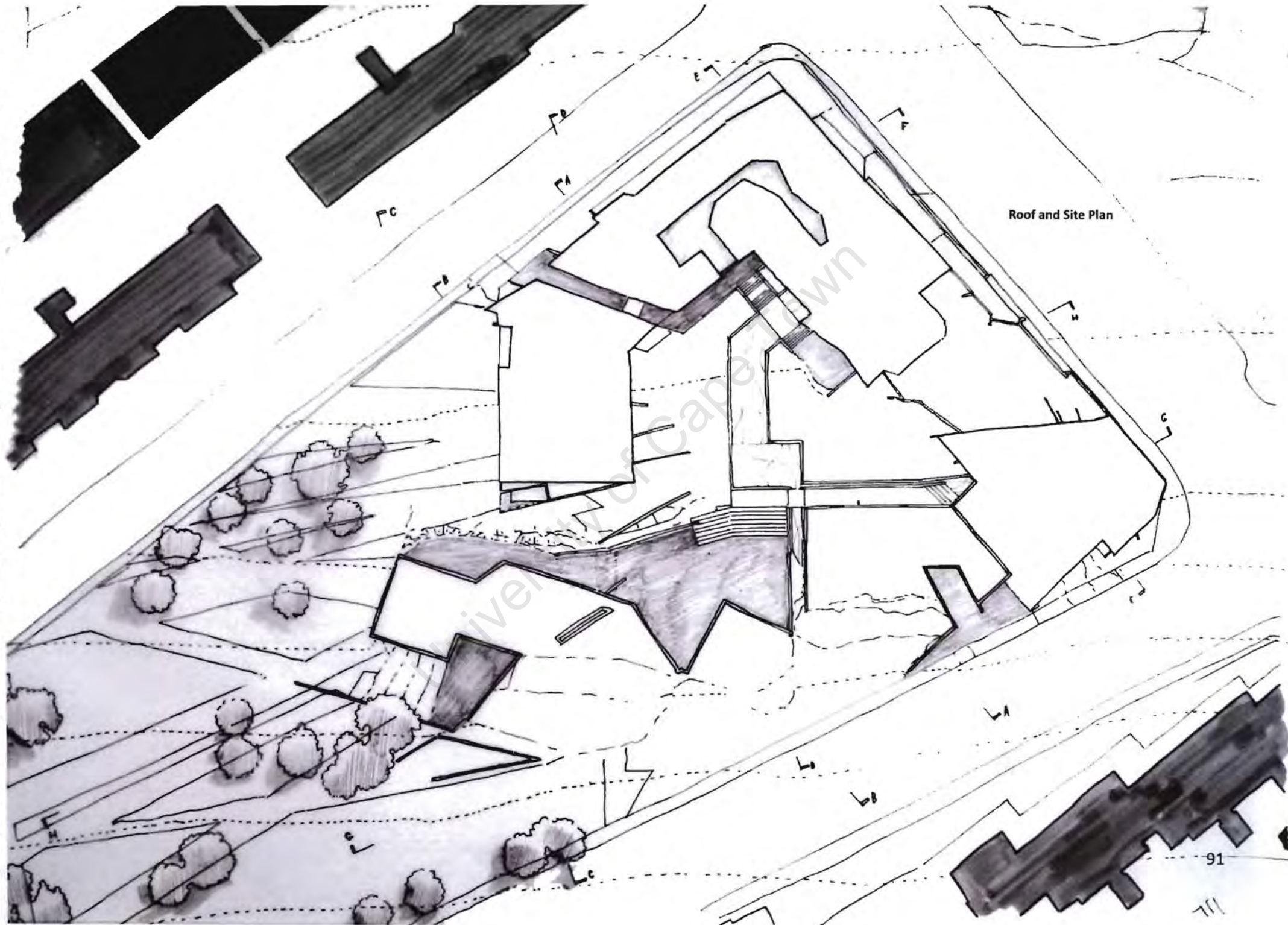
West Elevation



First Proposal: Mid Review
Ground Floor Plan



First Floor Plan

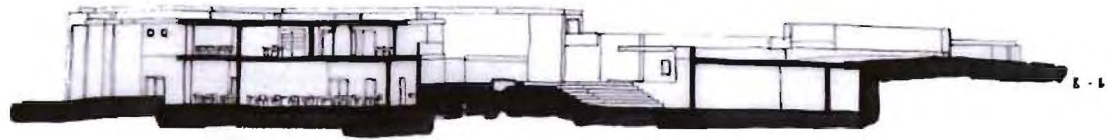


Roof and Site Plan

Section A - A



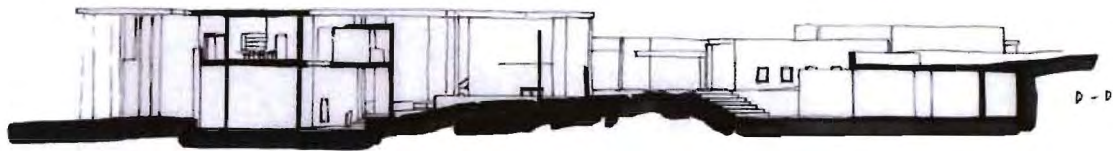
Section B - B



Section C - C

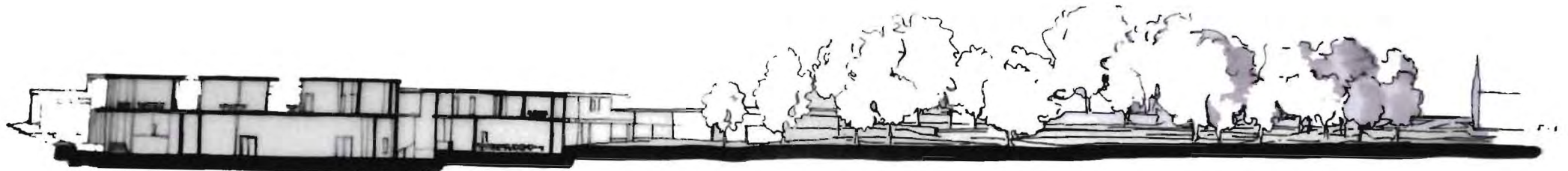


Section D - D

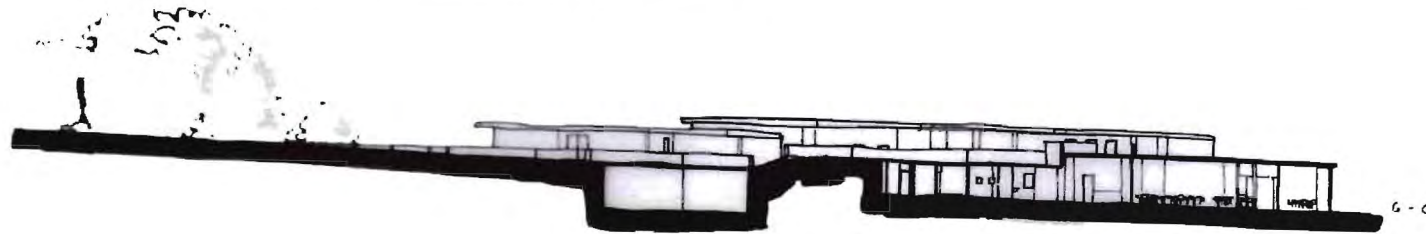


Section E - E





Section F - F



Section G - G



Section H - H

Technology: Concepts into Fabric

Mediation: Tectonics and threshold

The threshold condition, recognised as an important aspect of the project, was explored through a number of case studies. Threshold devices which I chose to employ in the project were inspired by the analysis of projects which approached the meeting of outside and the inside in different ways.

The architecture of Tadao Ando often employs an extended threshold route which takes the visitor from the outside to the inside in a long journey as can be seen at the Children's Museum in Hyogo, Japan and the Chapel on Mount Rokko. (Ishido, T. 1991)

Although the study focused principally on the main entrance and more specifically the doorway, I chose to pursue the integration of threshold space in the design of the Creative Therapy Center. The changes in programme are thus less explicit. The circulation space then becomes the threshold, with the change in direction and level becoming the threshold elements in the internal spaces. With the circulation space as threshold the tectonics of these spaces become an indicator of entrance. For this reason at every main entrance into the building or the central garden the entrances are marked by timber panelling on the walls; a subtle change in colour and texture from the rest of the building.

(For a list of the buildings studied see appendix 1)



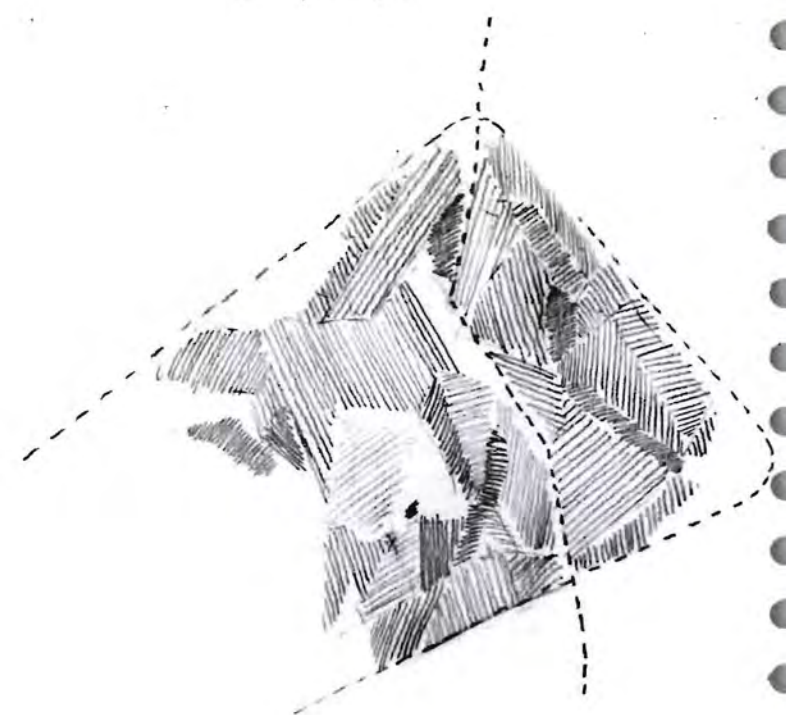
Interior perspective of reception area



Above:
A conceptual model of water across the site.

Right:
Conceptual diagrams of water across the site.

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The Fold

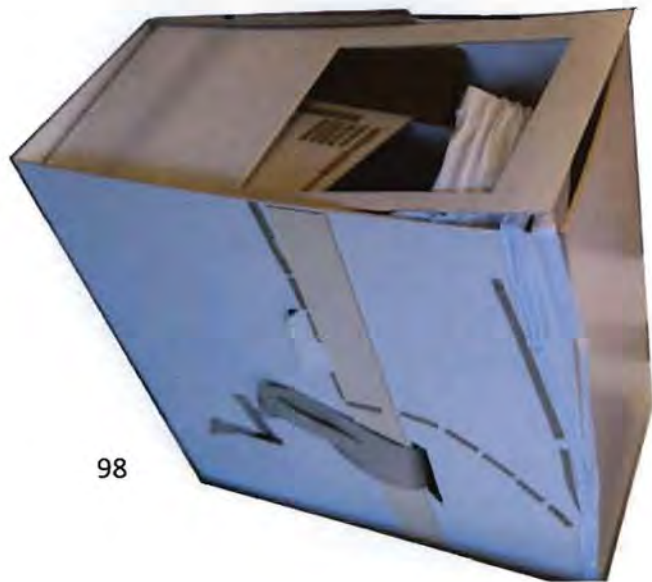


1: 500 Concept model of the folded surface on the site which is sometimes roof, other times floor or wall.



Above and across:
Progression in development of the acoustic panelling in the hall and later the movement studios, inspired by the idea of the fold.

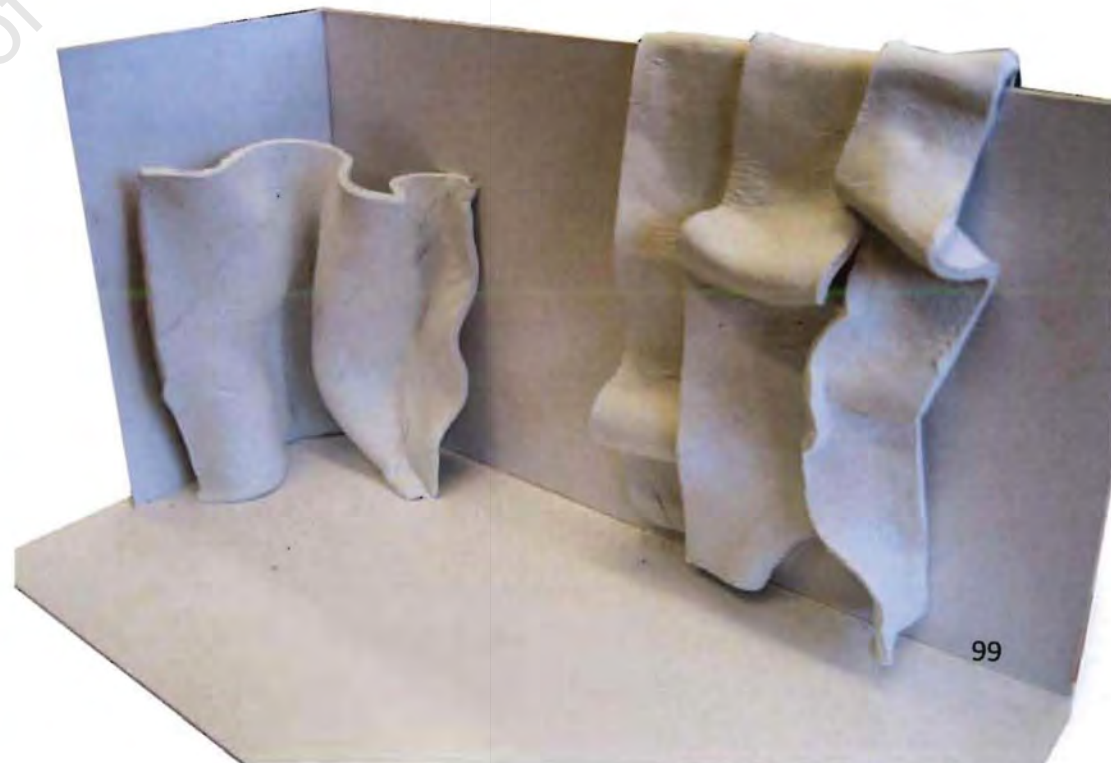
Below:
Concept model of a chaotic interior and calm exterior.



From early on in the project the idea of a fold or flowing surface covering was born. Inspired initially by the water as a central aspect to the project conceptually, it became a device used for acoustic purposes in the areas of the building where noise reduction would be necessary.

Initially used only in the hall, this panelling was moved to the movement studios when the hall became a double volume space. As the roof of the hall is in itself an expressive element of the design I chose to use the panelling in the movement studios at the other end of the building.

The soft forms that the folds make use of contrast well with the rigid box-like container of a traditional dance studio.



Left and Below:
Concept model express the idea of an inside moulded skin which overlaps and is made up of more than one panel.

Development of the roof, the top being more shell like and the bottom softer in appearance, like a piece of cloth or ribbon.



Concrete: Earth-Sky connection

The concept of ribbons in the landscape which connects different aspects of the city was first explored in the concept models in this project. The relationships which were mapped and which contributed to the layout of the programme of the building would then also decide the placement of functions in the building.

The vault as mentioned previously was a precursor to the design of the roof and the numbers 7 and 9 due to the research done and the interest in the uniformity across many cultures of universal perception, both in ancient and current culture. With this in mind the main hall of the building makes use of seven concrete ribs which reach up in quarter circular arches to the buttress walls on the street façade of the building. These ribs splay out and follow the direction of the lines of connection set up by the mapping done at the inception of the building design and site exploration stages of the project.

The seven concrete ribs which function as structure for a part of the enclosure are joined by two more ribs which fall on the outside of the main building and serve to carry the roof which mediates between this structure and the lesser building on the western side of the hall, housing the art rooms.

The roofs which are carried by the concrete ribs are curved in two directions giving them structural integrity; in the direction of the ribs and also in the span from rib to rib. Making use of concrete shell construction the ribs are afforded the opportunity of having a very light appearance in comparison to the massive ribs making up the load bearing elements of the building. This is the structural approach taken in the double volume ceremonial part of the building. In the therapy section

of the building the load bearing elements are the walls which run both perpendicular and parallel to the street in different sections of the building. As there are three roof elements in this section, the outside two sections are carried on the perpendicular walls with the inside section supported by the walls running parallel to Constitution Street. In concrete shell construction the concrete material may be reduced because of the steel reinforcement required of the structure.

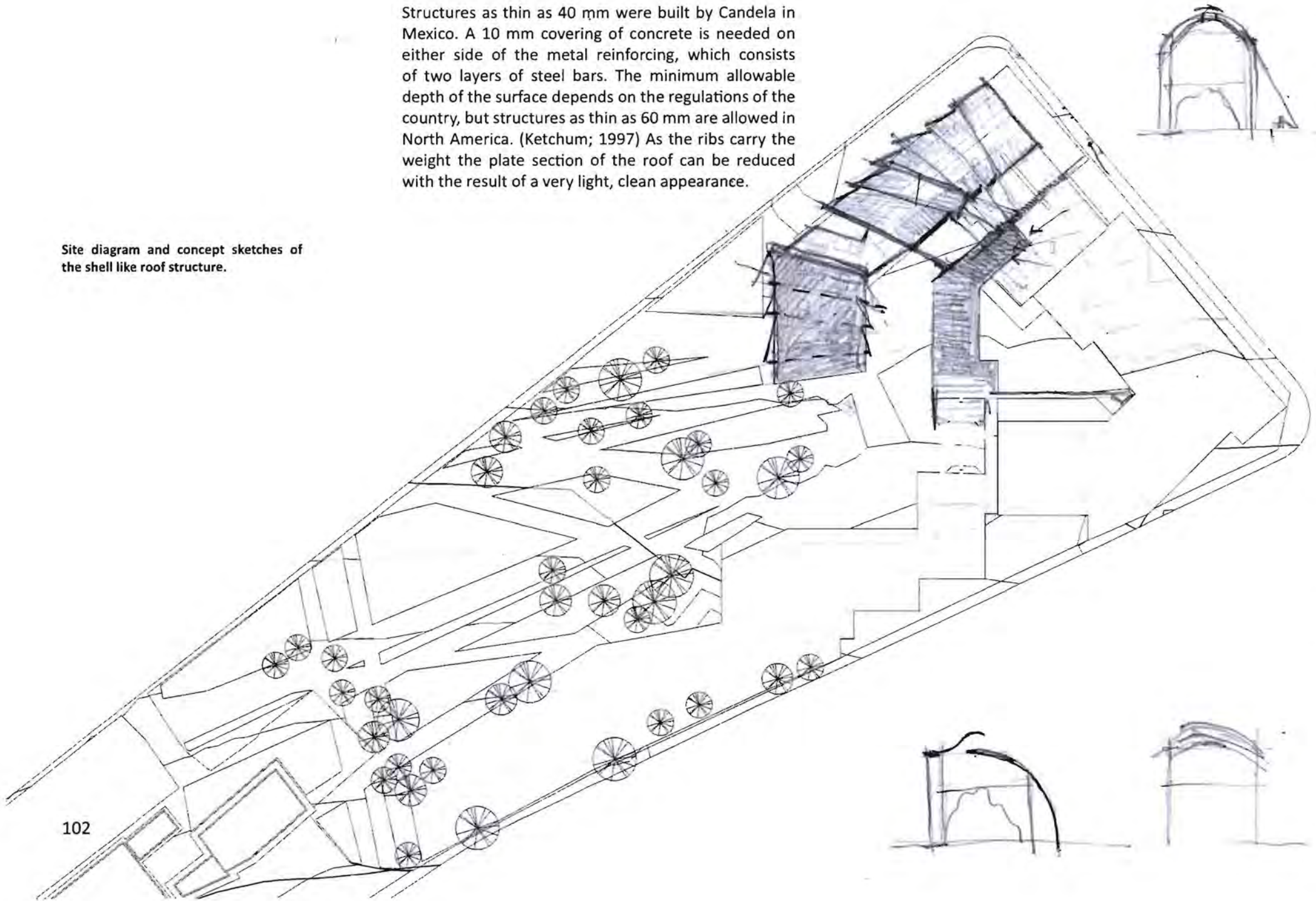
The structural form I have employed in the design is a combination of a number of more regular concrete shell construction shapes. These are namely elements from translation domes (a double curve), ribbed construction, buttress walls and a folded plate system.

Thin concrete shell construction was made popular in the 1970s by a Swiss engineer called Heinz Isler. The system used by Isler is still used today in determining how to construct shell structures. (Fritz; 2012) As a result of computer aided design, and an improved ability to mathematically calculate what is necessary structurally, the construction of thin concrete shells has increased efficiency. This is due to the efficacy of the formwork and the ability to minimise concrete due to an accurate calculation of the stresses which the form would be put under.

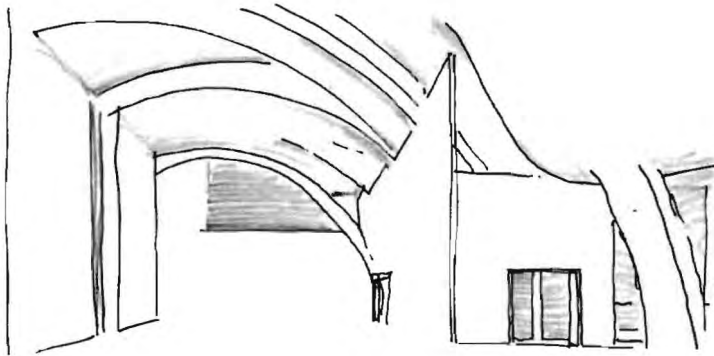
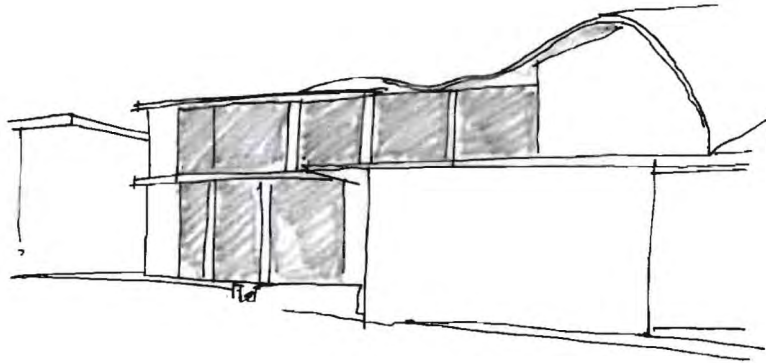
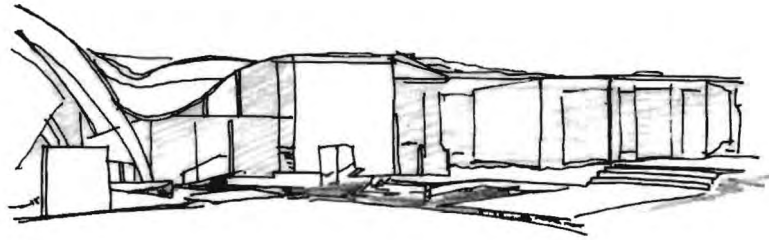
In conoid and hyperbolic paraboloid construction a minimum of reinforcing is needed as the forms themselves provide strengthening and support of structural loads. The forces are direct tension and compression forces which allow the materials of steel and concrete respectively to perform well necessitating a minimum of material. Forces are delivered as shear, parallel to the structural ribs. (Ketchum; 1997)

Structures as thin as 40 mm were built by Candela in Mexico. A 10 mm covering of concrete is needed on either side of the metal reinforcing, which consists of two layers of steel bars. The minimum allowable depth of the surface depends on the regulations of the country, but structures as thin as 60 mm are allowed in North America. (Ketchum; 1997) As the ribs carry the weight the plate section of the roof can be reduced with the result of a very light, clean appearance.

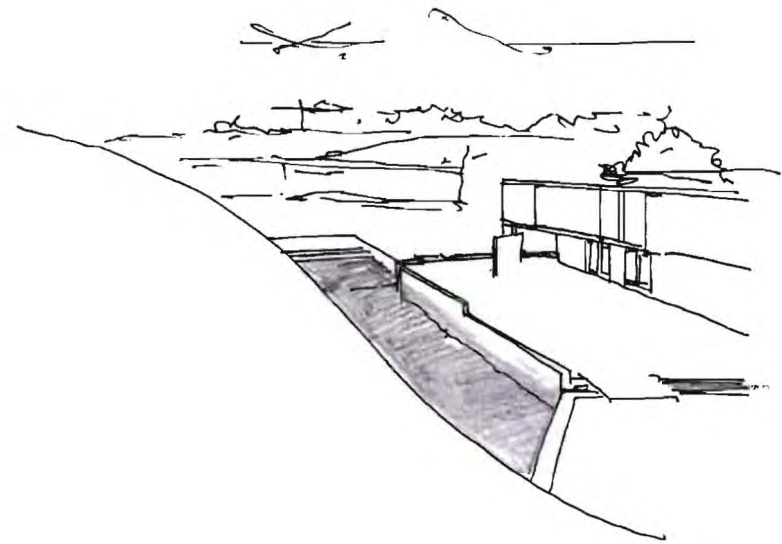
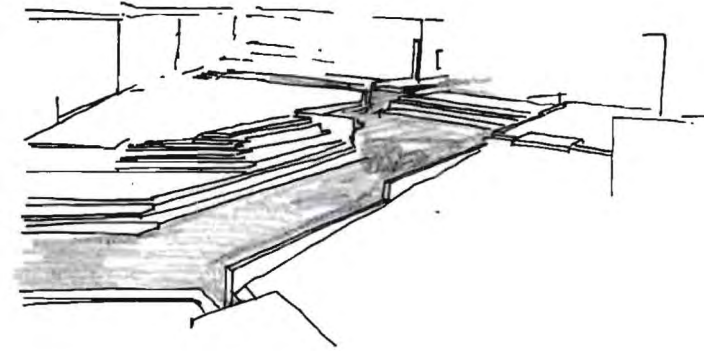
Site diagram and concept sketches of the shell like roof structure.

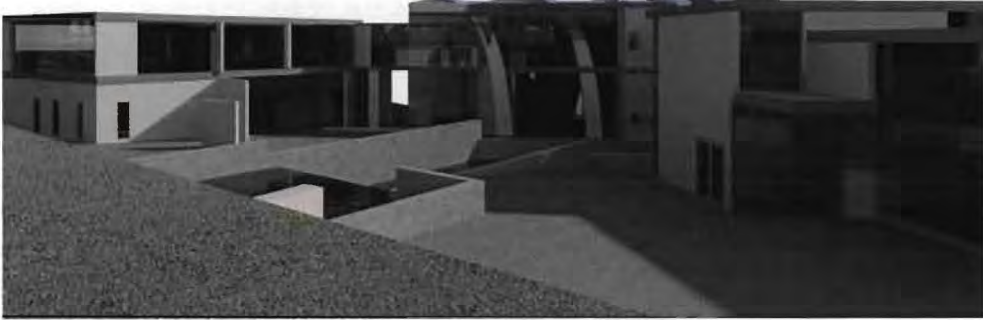


Perspectives of the folded roof

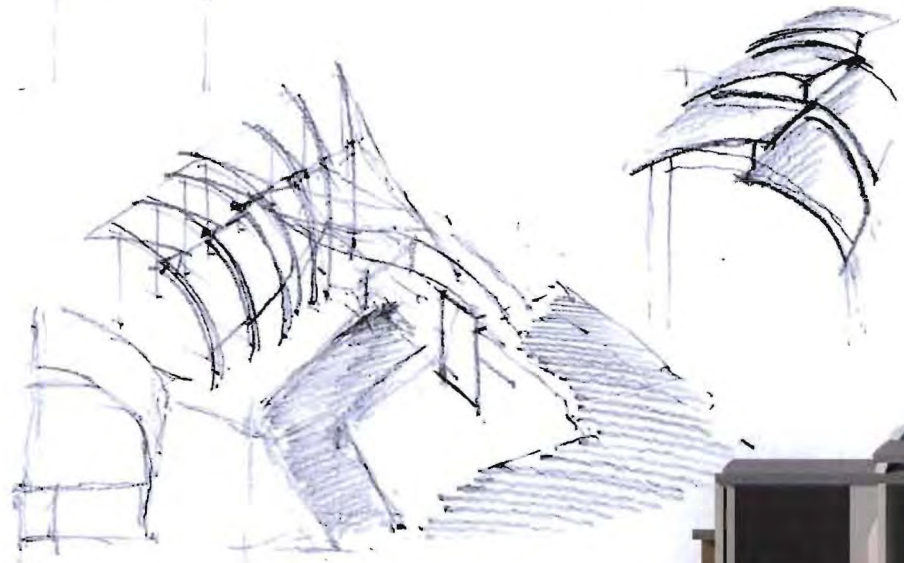
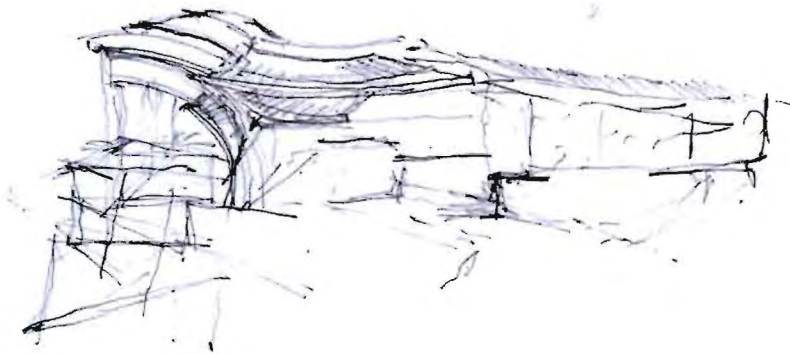
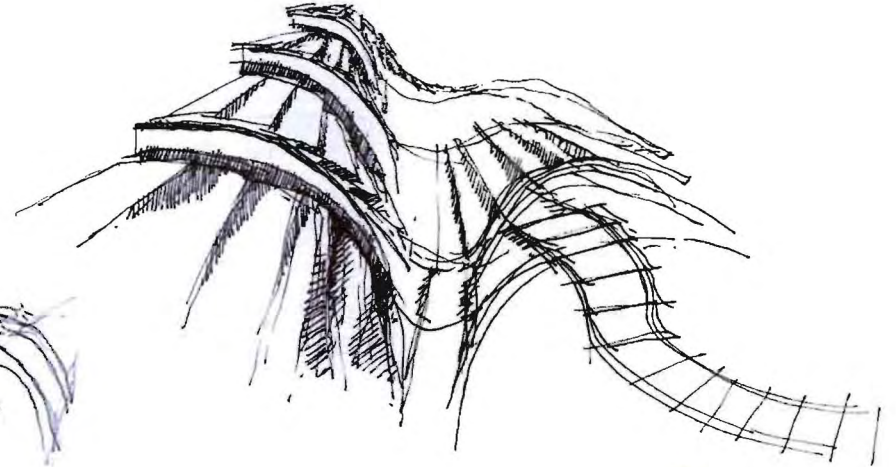
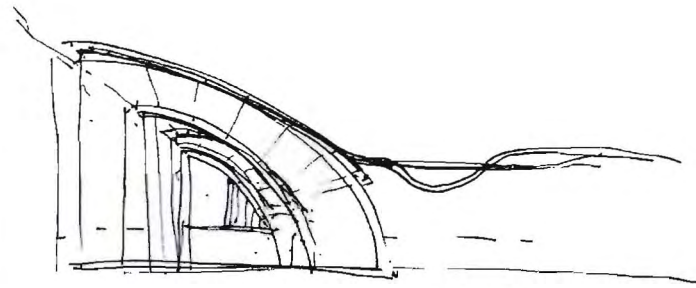


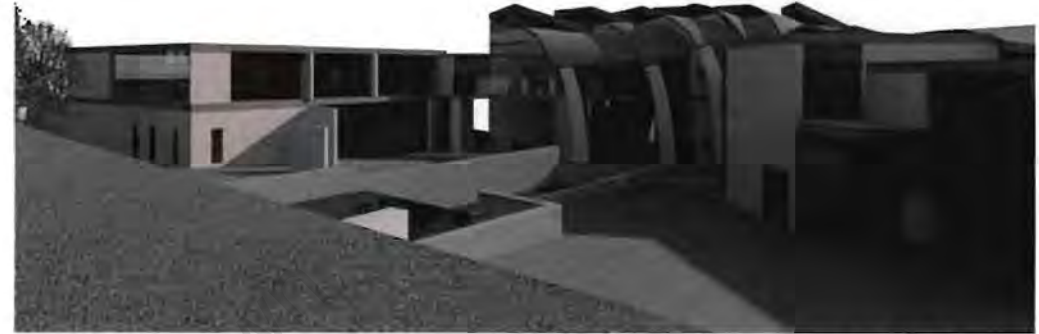
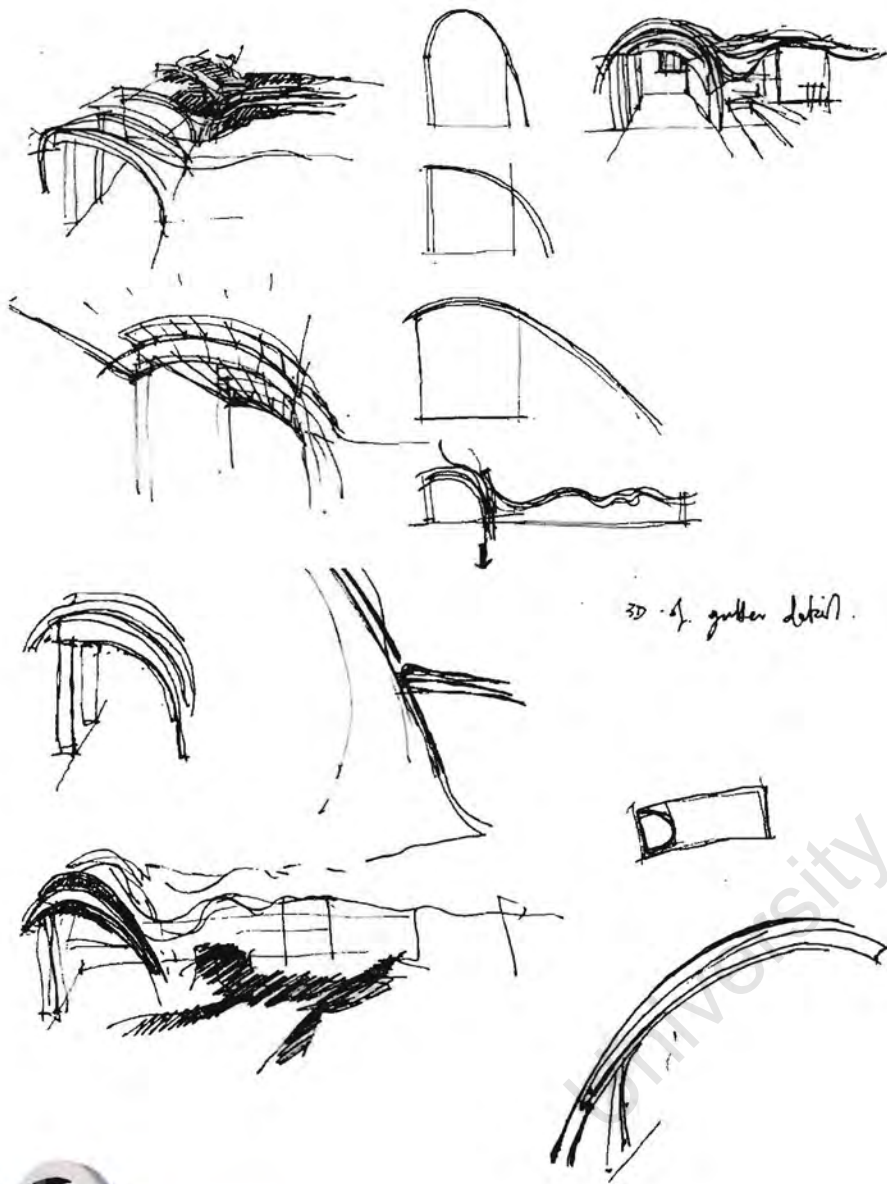
Perspective sketches of the pool and surrounds





Above:
Perspective view of the structural ribs





Perspectives showing the initial folded plate roof construction



Below:
North facade showing the structural ribs
and buttresses



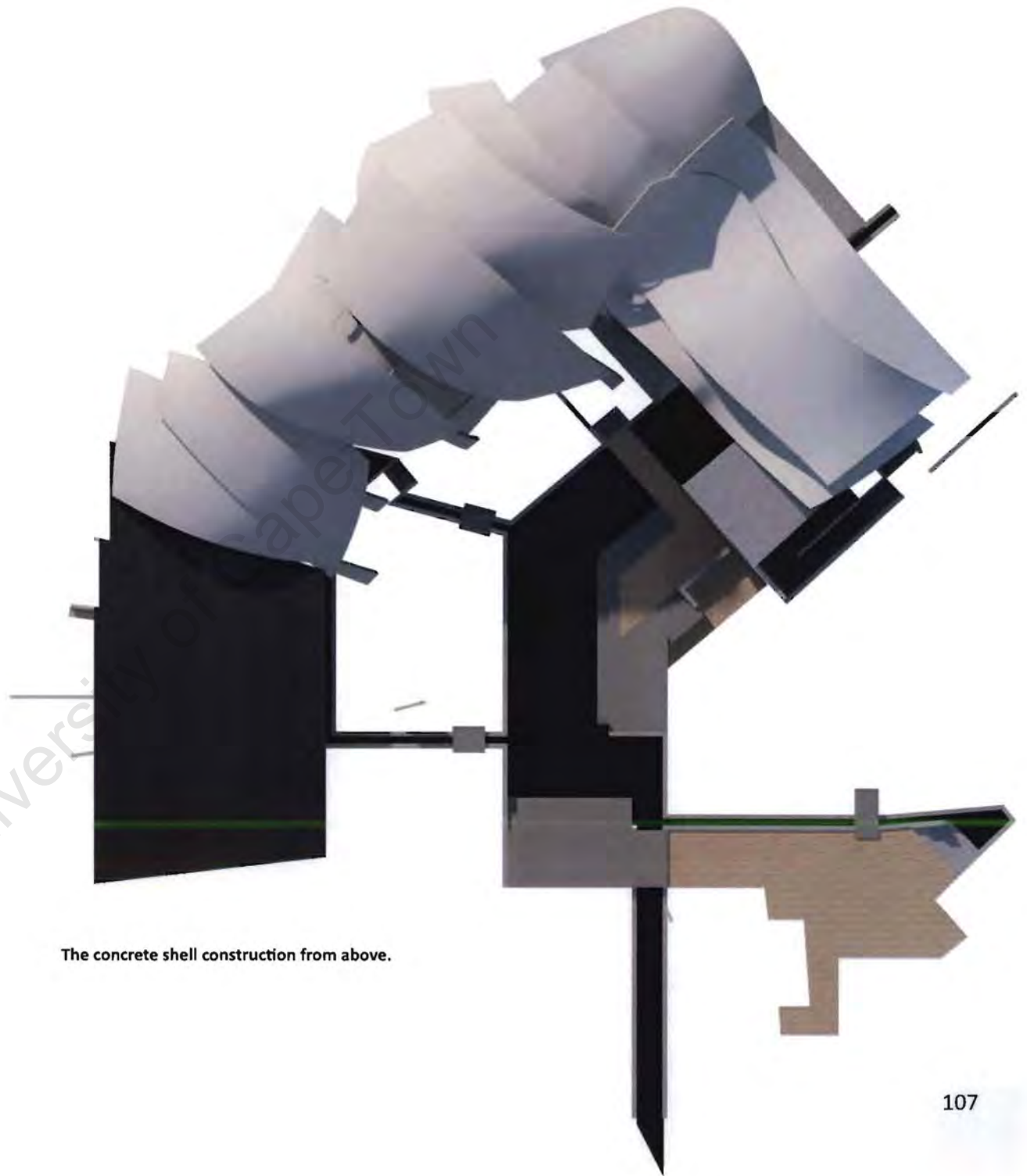
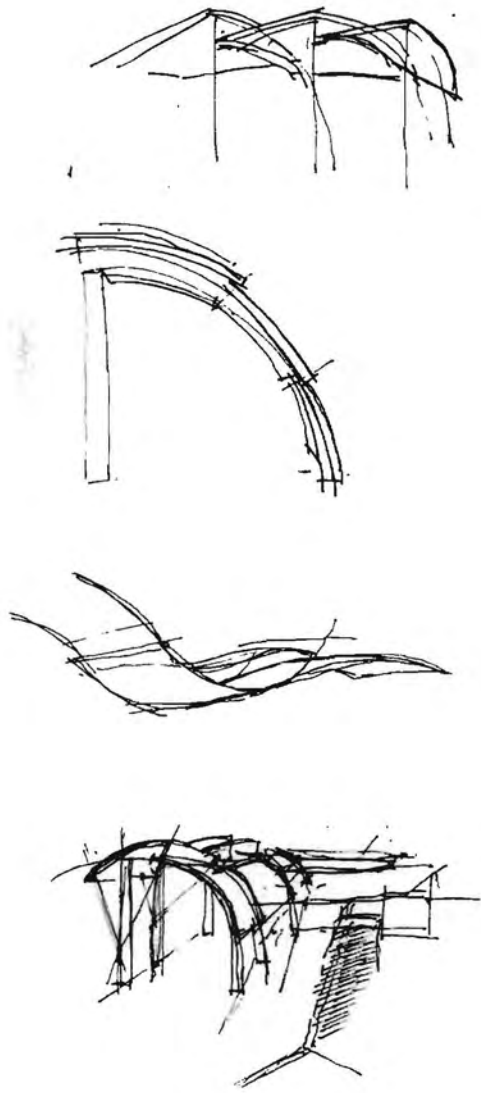


Above:
The nine concrete ribs as they are splayed out along the lines of connection.

Right top:
Concrete ribs and buttresses

Right middle:
Thin concrete shell construction roof

Right bottom:
Some of the shells removed to show the structure at the ribs and also over the therapy section of the building where the load bearing walls serve to carry the roof.



The concrete shell construction from above.

Perspective showing the concrete shell roof construction and supporting concrete ribs.





Perspective looking towards the Therapy Centre section of the building.



Perspective looking towards the inside, heart of the project, where the mediatory shell roof is used.

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Conclusion

The importance of physical references in our lives is apparent by the need for landmarks, beacons within the landscape, and also the consciousness, which allow for placement of the self in space. In the project I have explored ideas of identity and orientation with the beginning point of ritual and repetition. The concept of identity has more to do with the individual experience of space and less so with a search for an architectural identity.

The relationships between a single built entity and many others of differing programmes, within the greater whole of the city, are explored through spatial arrangement of the programmatic functions of the proposal.

This project bridges the gap between the specifics of a particular ritual and the necessities which this place on a building, and the ideas of perception of space as it pertains to a phenomenological response. I looked at the general significance of ritual and used that as a conceptual prompting for queries into threshold importance and the exploration of the connection lines which I set up and that served as spatial dividers and structural informants.

The importance of ritual in its creative sense determined the programme, as ritual is a creative structuring of society and cultural constructs. This I could interpret conceptually with the design for a

Creative Therapy Centre, which both addressed the site of the project as a place of mediation in the city and as mediation between the past and the present. The landscape of District Six is a reminder of the destruction of the past and the idea of a therapy centre in this area addresses not only the past of the inhabitants of the area, but also of those who might have an aspect of their identity that they have yet to be reconciled to.

The project has to do with identity and placement in a physical setting of a building, in the same way that ritual has to do with the social and cultural placement of an individual. Ideas of connection and relation to things in the city drove the distribution and location of spaces on the site.

These ribbons of connection are then pursued in their structure making capability in the building with an expression on the outside of the structure through the roof and structurally through the load carrying responsibility of the structural ribs which follow the direction of these lines of connection.

In this way the concept of ritual, identity and orientation have contributed to programme, siting and form making in the building.

Perspective from the planted roof looking out over the concrete shell constructed roof.



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Appendix 1

Technology case studies

1. Liberal Arts and Sciences College, Doha, Qatar by Coelacanth and Associates (2004) (Pell, B. 2010) (Cover image)
2. Children's Museum, Himeji, Hyogo, Japan by Tadao Ando. (Ishido, T. 1991) (Figures 1 – 5)
3. Curtain Door, Surat, India by Matharoo Associates (Long, K. 2009) (Figures 6)
4. Vestiges Box (Caja de Vestigios), San Diego, by Sebastian Mariscal (Kolb, J. 2009) (Figures 7)
5. Tadao Ando's Chapel on Mount Rokko, Kobe, Hyogo, Japan (Ishido, T. 1991) (Figures 8 – 9)
6. Restaurant Aoba-Teri, Sendai, Japan by Hitoshi Abe and Atelier Hitoshi Abe (2005) (Pell, B. 2010) (Figures 10)
7. The 'I'm lost in Paris' House by R&Sie(n), Paris (2008) (Slessor, C. 2009) (Figures 11)
8. Nelson-Atkins Museum of Art extension, Kansas City, Mo, United States of America by Steven Holl (2007) (Murray, S. 2009) (Figures 12 – 16)
9. Sertus Institute of Jewish Studies, Chicago, Il, United States of America by Krueck and Sexton Architects (2007) (Murray, S. 2009) (Figures 17 – 18)
10. Sfera Building, Kyoto, Japan by Claesson Koivisto Rune from Stockholm Sweden (2003) (Pell, B. 2010) (Figures 19)
11. Utrecht University Library by Wiel Arets Architects, Amsterdam, Netherlands (2004) (Pell, B. 2010) (Figures 20)
12. Springtecture H by Shuhei Endo Architect Institute, Part Keepers Flat and public lavatories in Shungo-Cho, Hyogo, Japan (1998) (Lyll, S. 2002) (Figures 21)
13. Pavillion, Broadfield House Glass Museum, Kingswinford, United Kingdom by Design Antenna (1992) (Lyll, S. 2002) (Figures 22 – 28)
14. Square House by TNA, Tokyo, Japan (2009) (Long, K. 2009) (Figures 29 – 30)
15. Beyeler Foundation Museum by Renzo Piano Building Workshop (Buchanan, P. 2000) (Figures 31 – 32)
16. Sayamaike Historical Museum, Osaka, Japan by Tadao Ando (2003) (Jodidio, P. 2007) (Figures 33 – 36)

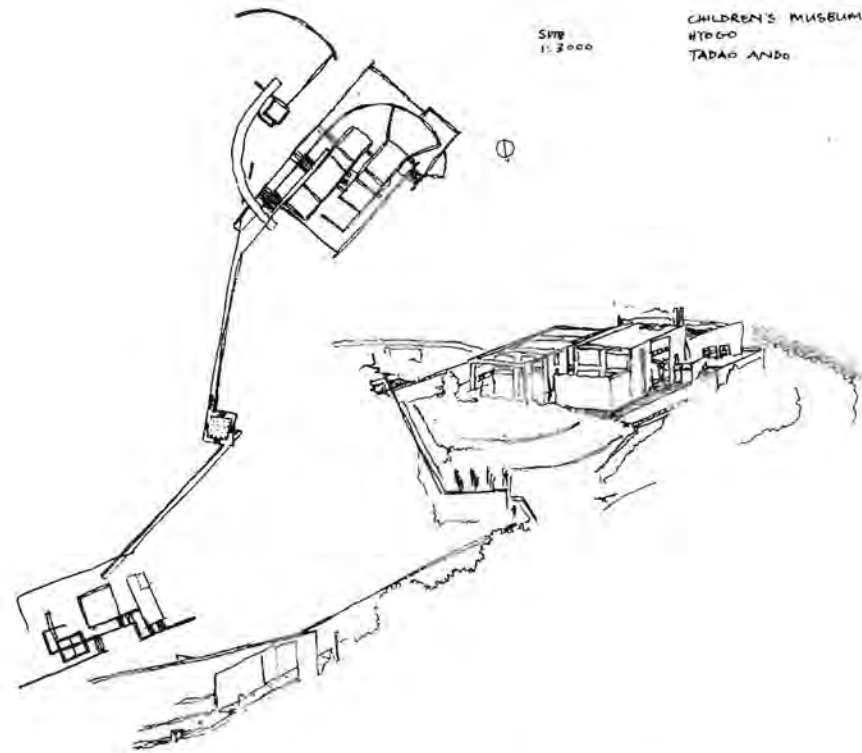


Figure 1: Children's Museum, Himeji, Hyogo, Japan by Tadao Ando. Site plan and perspective showing entrance to the building through the landscape

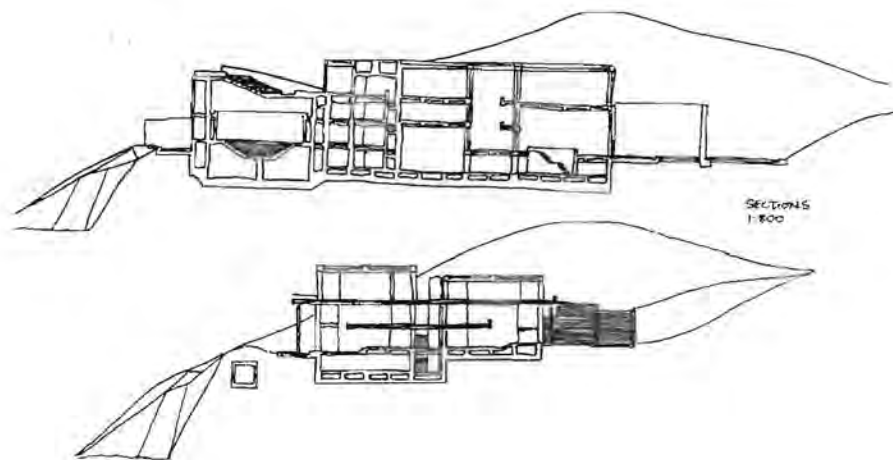


Figure 2: Children's Museum, Hyogo, Japan by Tadao Ando. Sections, bottom section showing stair case with water to the right (Above) The building is made up of three storeys and one basement out of steel framed reinforced concrete.

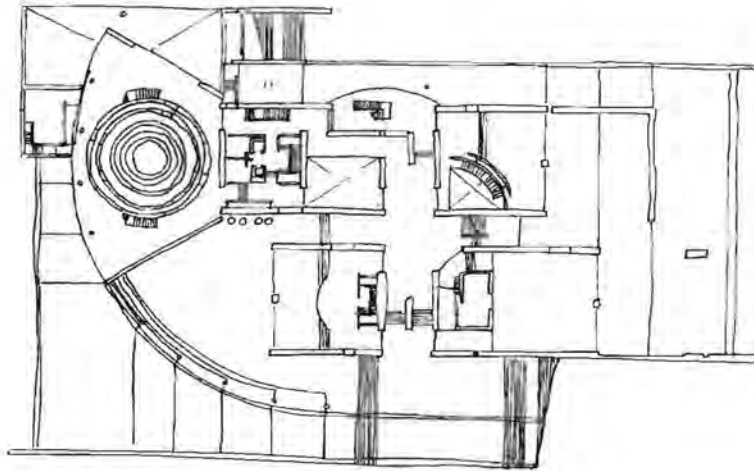


Figure 3: Children's Museum, Hyogo, Japan by Tadao Ando. Ground Floor Plan (Below) The building houses a library, restaurant, indoor arena, multi-purpose hall, exhibition space, studio, seminar room, outdoor theater, central plaza and work shop



Figure 4: Children's Museum, Hyogo, Japan by Tadao Ando. Stairs to the main entrance with the water stairs adjacent to the pedestrian route

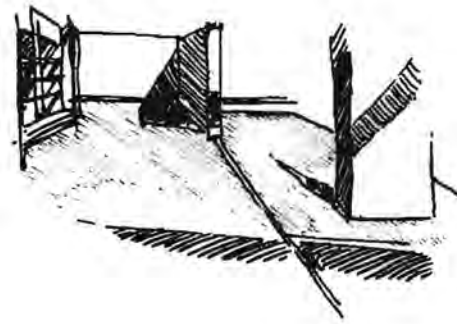


Figure 5: Children's Museum, Hyogo, Japan by Tadao Ando. Pool into which the 'stair stream' flows, circling the building and directing the visitor

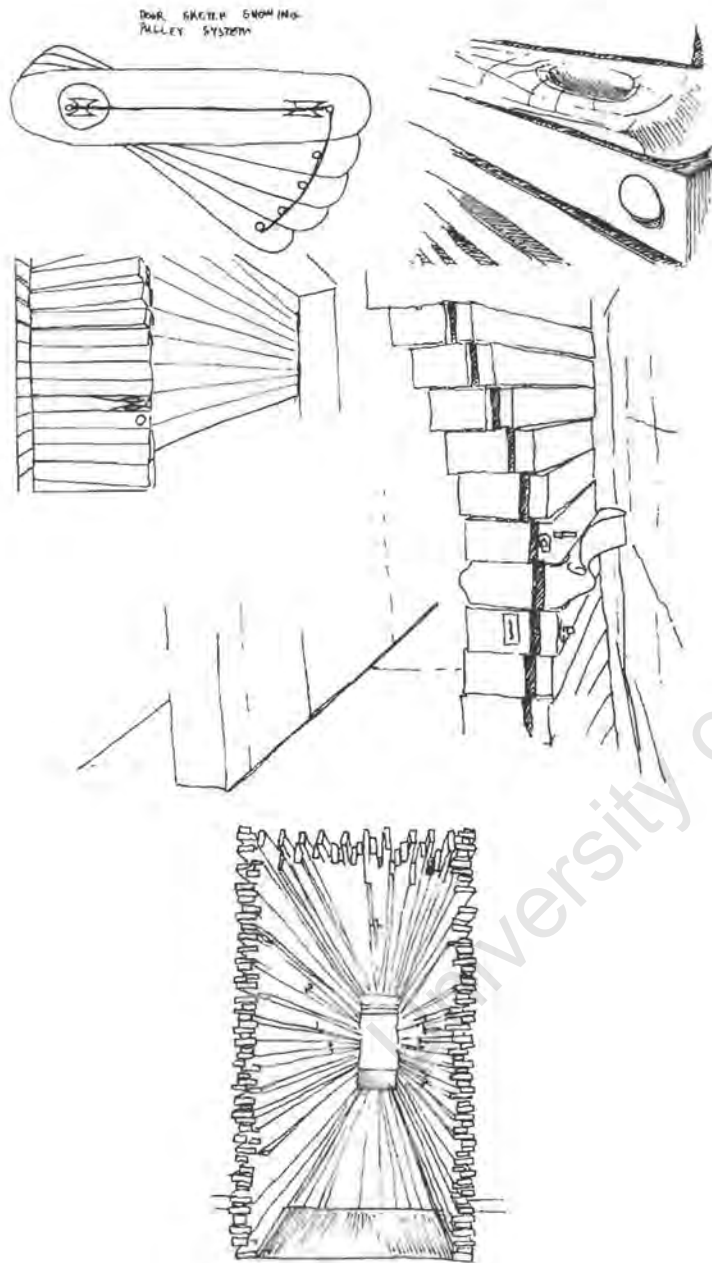


Figure 6: Curtain Door, Surat, India by Matharoo Associates. Showing the door, handle and sketch showing the pulley system within the door

Figure 7: Vestiges Box (Caja de Vestigios), San Diego, by Sebastian Mariscal

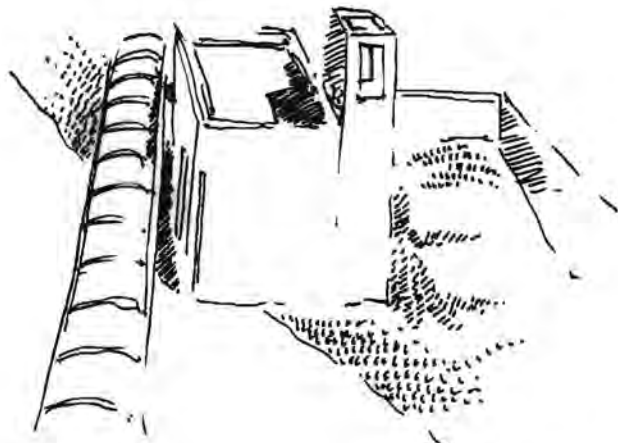


Figure 8: Tadao Ando's Chapel on Mount Rokko. Perspective view showing the courtyard and colonnade; the chapel utilizes a one storey reinforced concrete box frame structurally

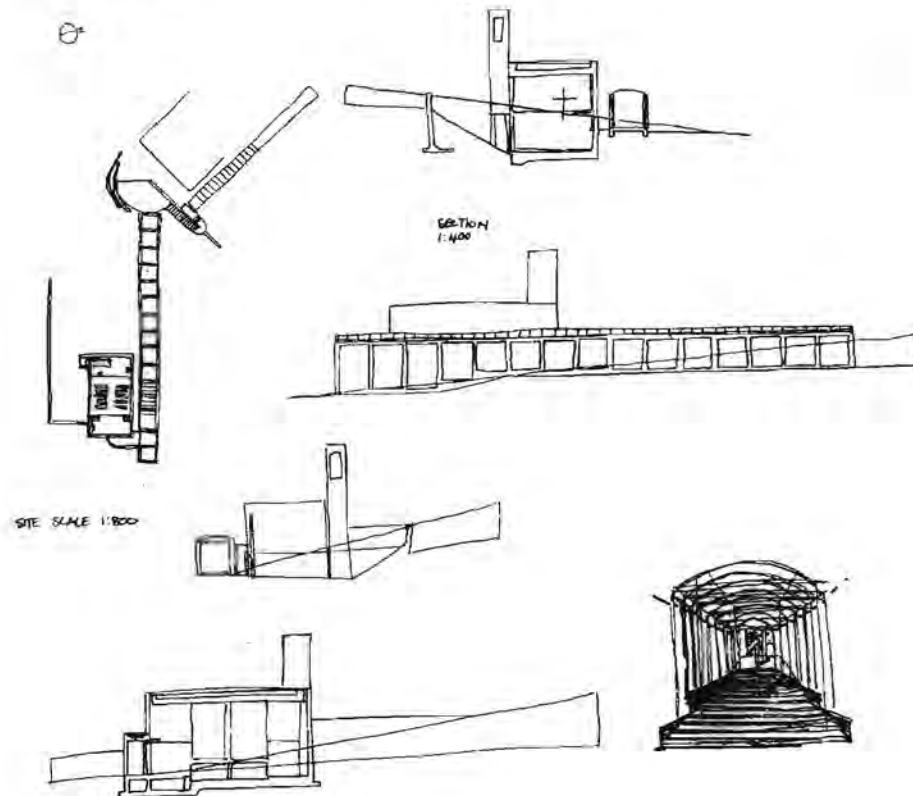


Figure 9: Tadao Ando's Chapel on Mount Rokko. Kobe, Hyogo, Japan Site plan (top left) with a perspective view through colonnade (bottom right) Section through the building showing the colonnade adjacent to the chapel (top right) and elevations of the chapel showing the change in level and the colonnade opening up towards the bottom of the slope.

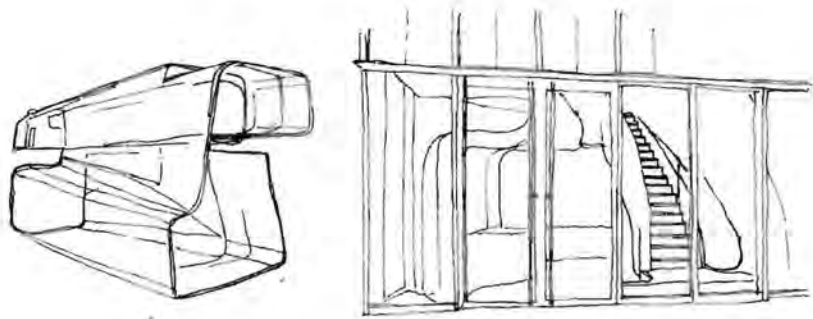


Figure 10: Restaurant Aoba-Teri, Sendai, Japan by Hitoshi Abe and Atelier Hitoshi Abe (2005) Interior membrane: steel perforated surface with the translated image of the canopy of the Zelkova tree (above left) and an exterior view of the restaurant showing the interior skin visible from the outside (above right)

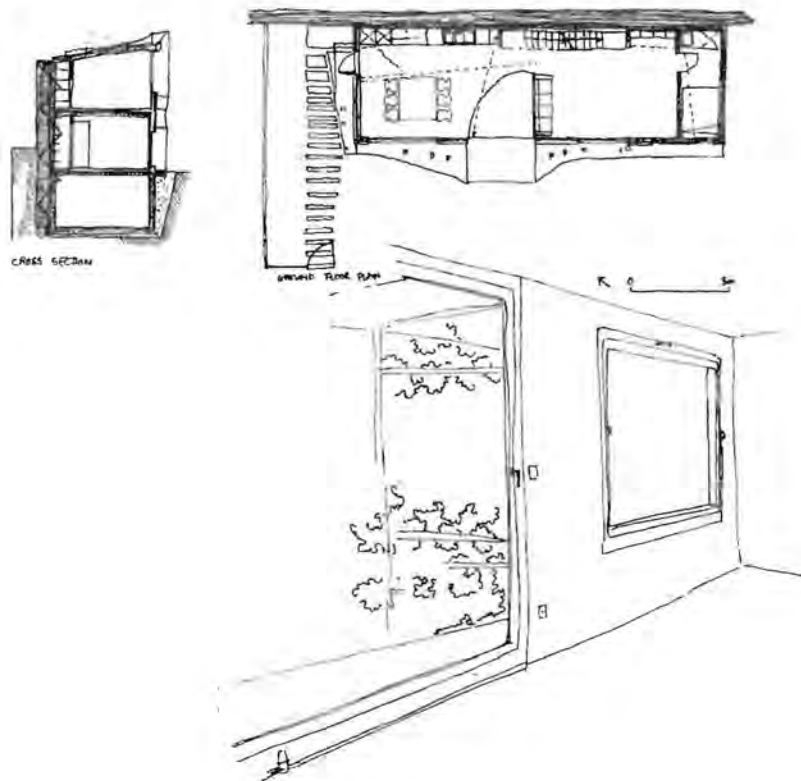


Figure 11: The 'I'm lost in Paris' House by R&Sie(n), Paris (2008). The green wall consists of hydroponically sustained ferns; nutrients for the plants are fermented in hand blown glass beakers.

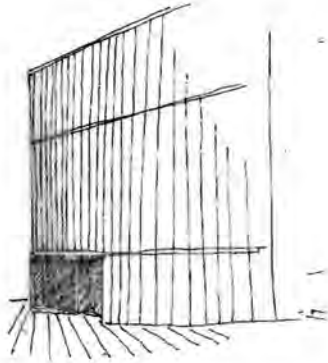


Figure 12: Nelson-Atkins Museum of Art extension, Kansas City, Mo, United States of America by Steven Holl (2007) main entrance of the extension

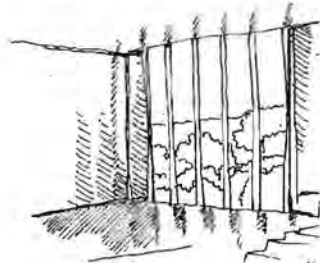


Figure 13: inside perspective, looking through a floor to ceiling window

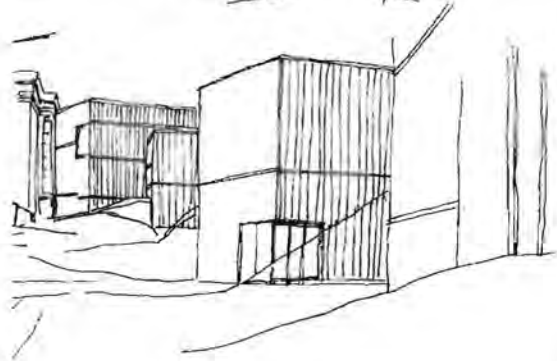


Figure 14: Perspective view of the extension from the outside

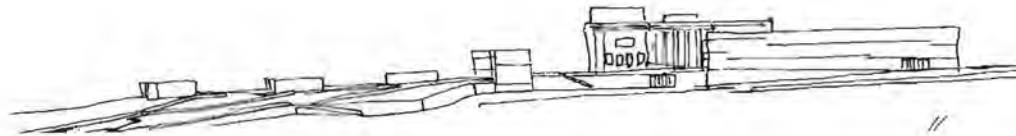
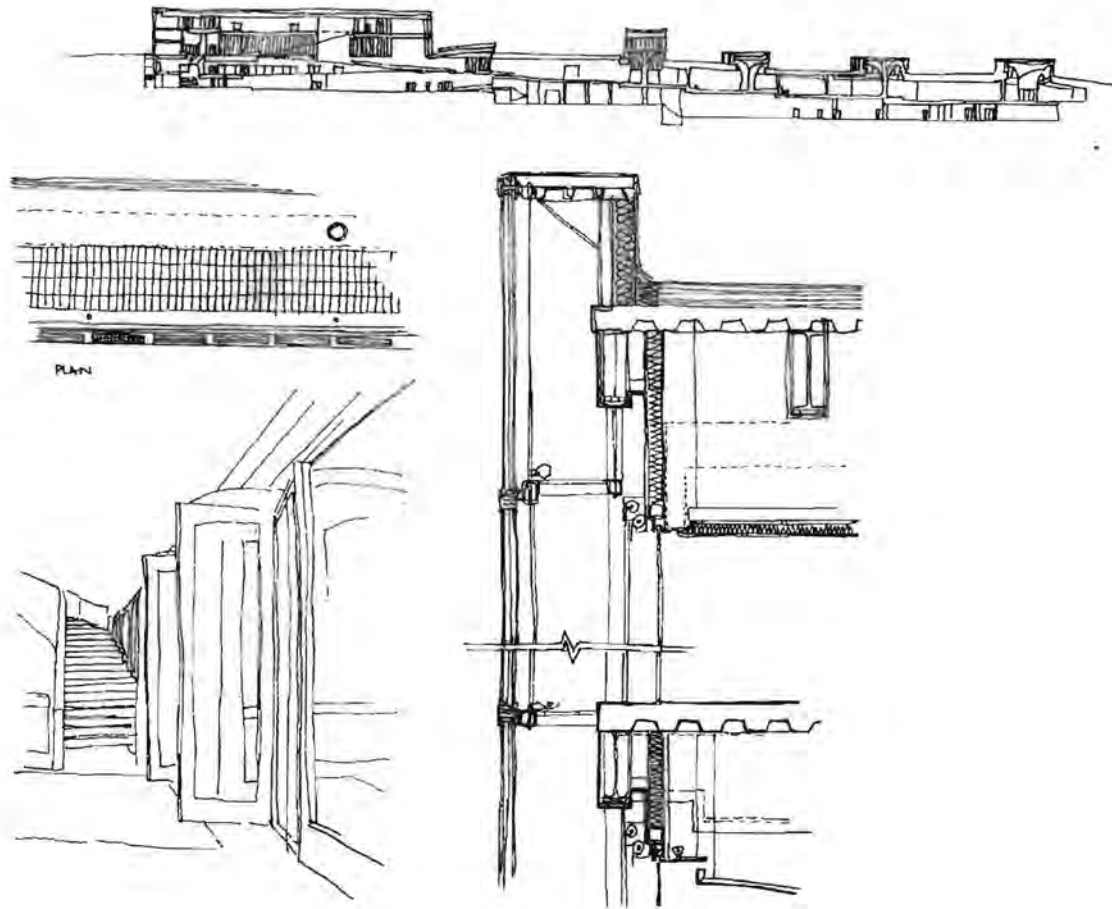


Figure 15: Nelson-Atkins Museum of Art extension elevation

Figure 16: Nelson-Atkins Museum of Art extension, Section through the extension (top)
Plan detail of the curtain wall (middle left) Section detail of curtain wall (right)
Entrance, threshold space with revolving glazed doors with an aluminium frame (bottom left)



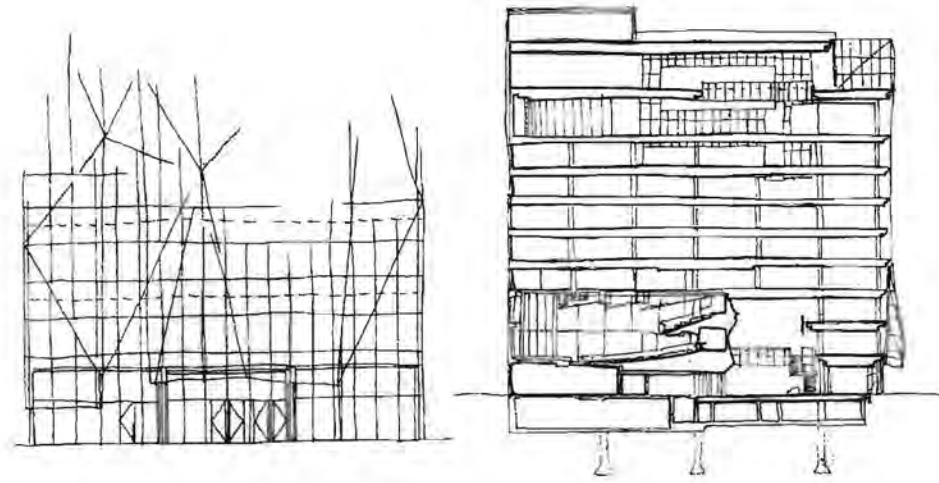


Figure 57: Sertus Institute of Jewish Studies, Chicago, II, United States of America by Krueck and Sexton Architects (2007) with the elevation of the bottom half of the building (left) and section through the Institute (right) the irregular geometry can be seen on the front façade as it peels away from the wall to form the overhang over the entrance threshold.

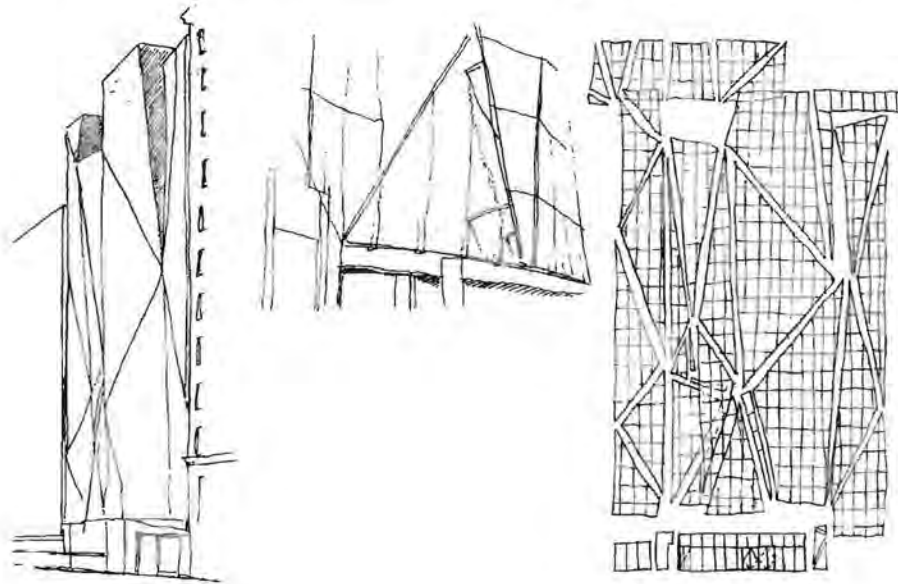


Figure 18: Sertus Institute of Jewish Studies, Chicago, II, United States of America by Krueck and Sexton Architects (2007) Perspective of the façade (left) The entrance overhang (centre) and the façade flattened out and separated into the pieces which combine to form the irregular fractured geometry of the curtain wall (right)

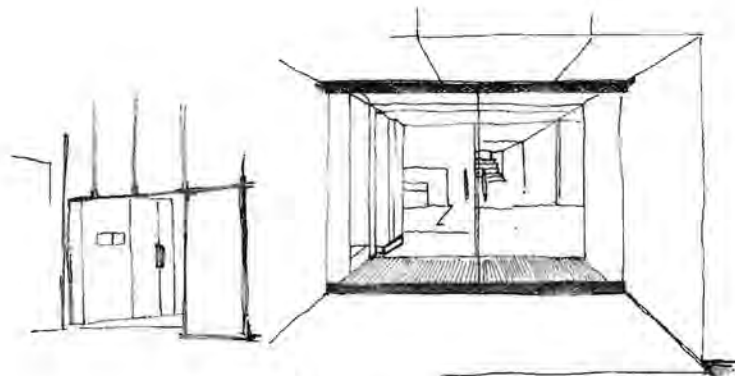


Figure 19: Sfera Building, Kyoto, Japan by Claesson Koivisto Rune from Stockholm Sweden (2003)
Perspectives showing the extended threshold space and the façade which wraps around to meet the door

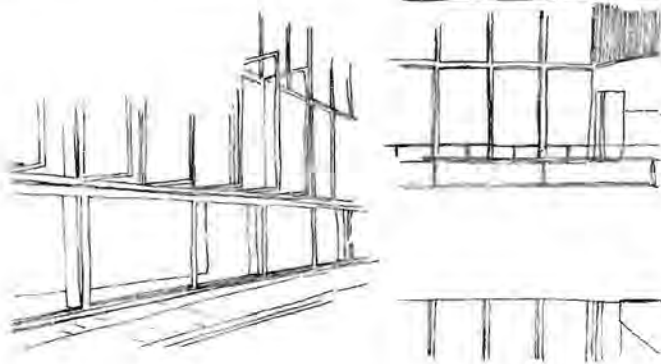


Figure 60: Utrecht University Library by Wiel Arets Architects, Amsterdam, Netherlands (2004)

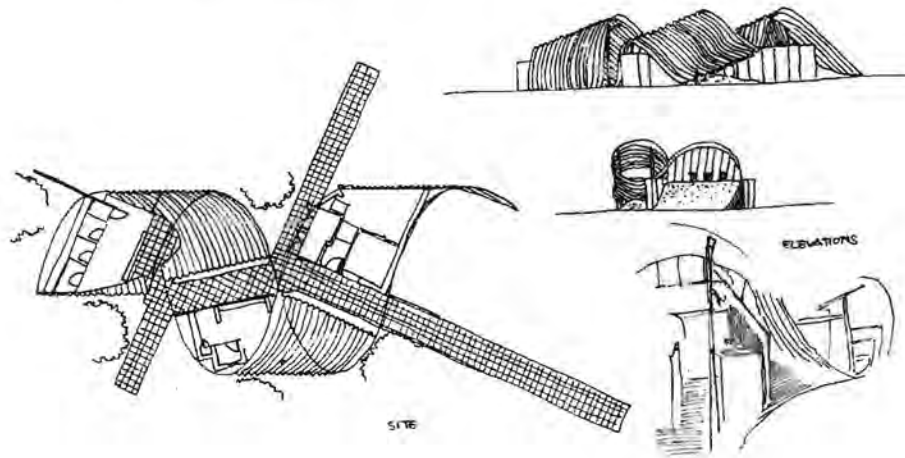


Figure 21: Springecture H by Shuhei Endo Architect Institute, Part Keepers Flat and public lavatories in Shungo-Cho, Hyogo, Japan (1998)
Plan (left) and elevations (top and middle left) with perspective into the ribbon (bottom left)

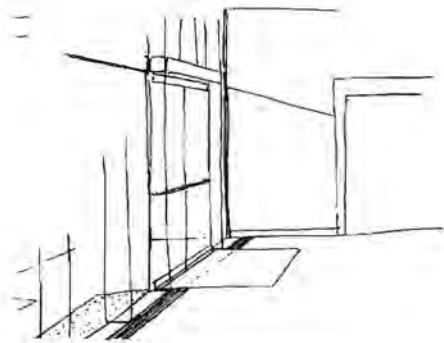


Figure 22: Pavilion, Broadfield House Glass Museum, by Design Antenna (1992) Internal perspective

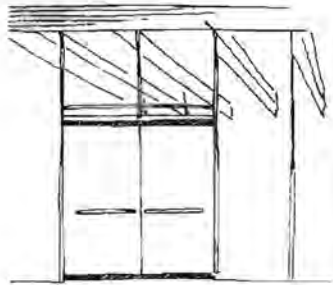


Figure 23: Pavilion, Broadfield House Glass Museum, by Design Antenna (1992) External perspective

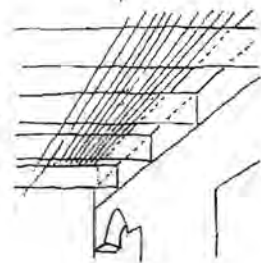


Figure 7: laminated beams at junction to existing building

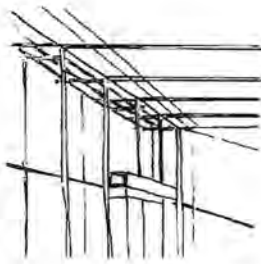


Figure 25: laminated beams at front façade of the pavilion

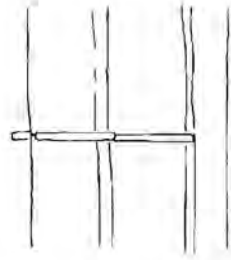


Figure26: doorway from the front with stiffeners alongside

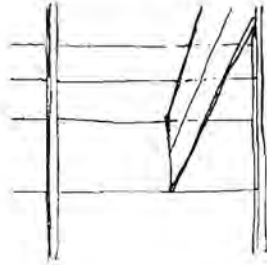


Figure27: laminated beam and stiffeners as seen through the front glazed wall

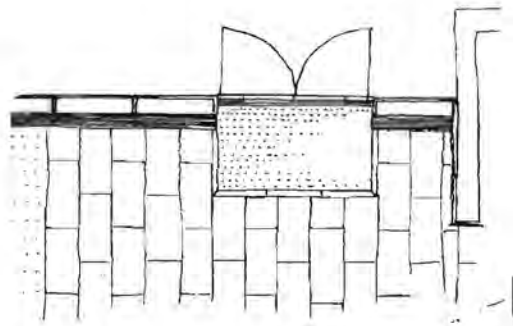


Figure 28: Pavilion, Broadfield House Glass Museum, Kingswinford, United Kingdom by Design Antenna (1992) Threshold plan

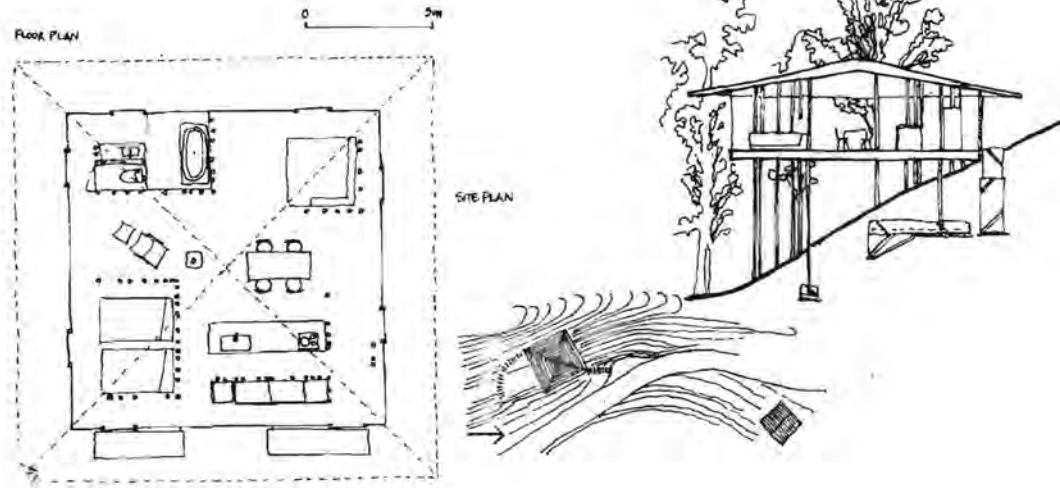


Figure 29: Square House by TNA, Tokyo, Japan (2009) the house is supported by 76 slender columns. Plan, Site Plan and Section



Figure 30: Square House by TNA, Perspective showing the 'door' window and slender columns which support floor and roof.

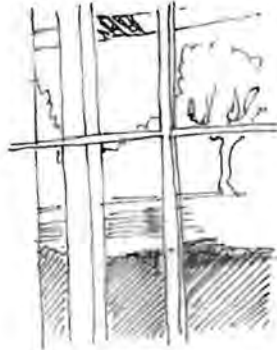
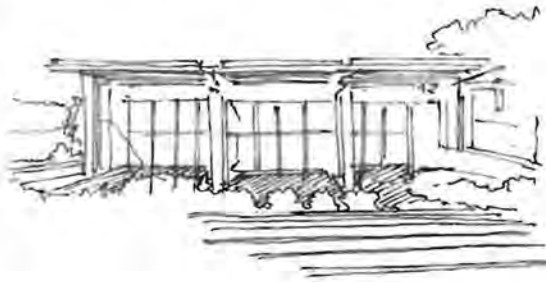
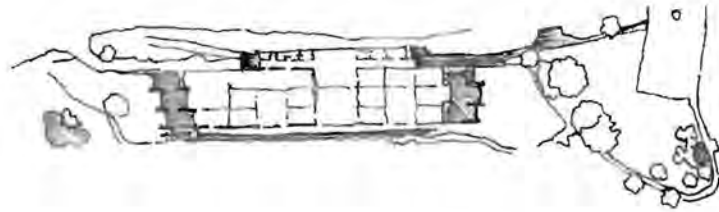
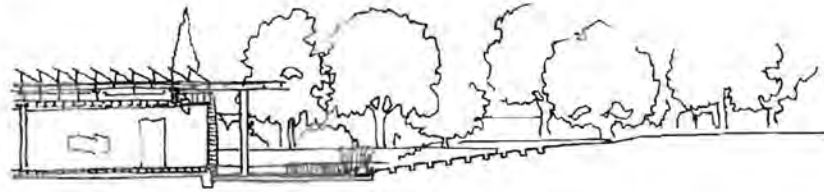


Figure 31: Beyeler Foundation Museum by Renzo Piano Building Workshop.

Site Section through gallery and pool (top left)

Site Plan showing the pool adjacent to the building on the right and landscape (middle left)

outside perspective of the museum looking over the pool towards the gallery (bottom left)

perspective of the paved area at the end of the building not looking out over the pool, showing an extended outside threshold space (top right)

perspective of the entrance and the walkway leading up to it with the pool barely visible left of the sketch (bottom right)

interior perspective looking out over the pool (bottom middle)

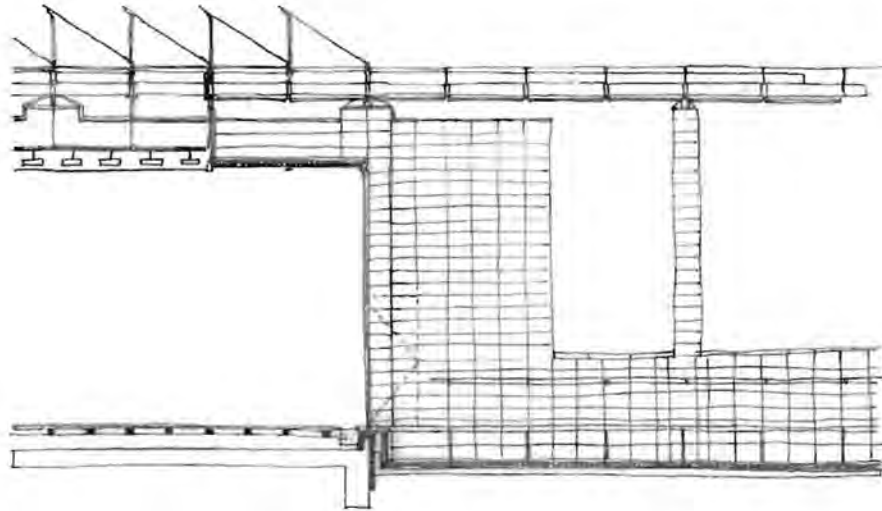


Figure 82: Beyeler Foundation Museum by Renzo Piano Building Workshop. Detail of the pool and gallery that looks out over the pool found adjacent to the entrance to the museum.

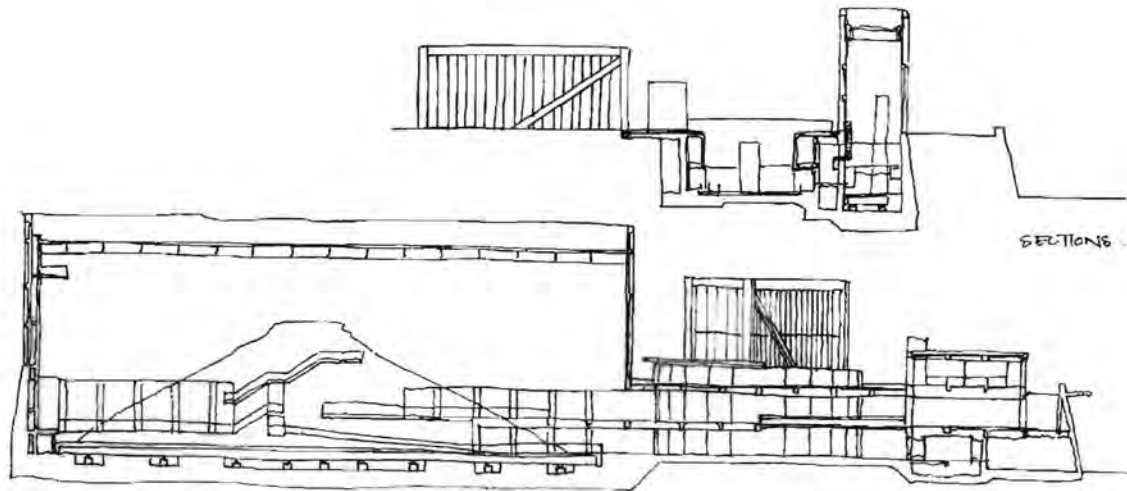


Figure 33: Sayamaike Historical Museum, Osaka, Japan by Tadao Ando (2003) Short section (top) and long section (above)

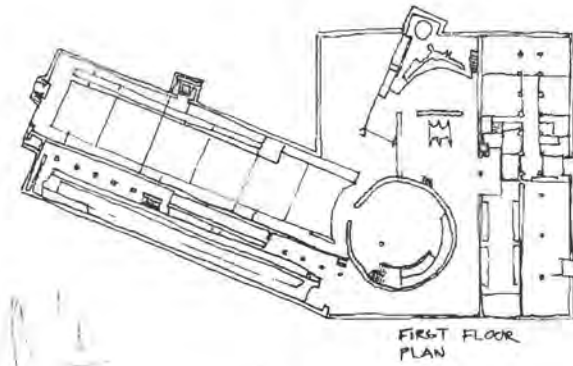


Figure 34: First floor plan showing the intersecting geometries and the pool and ramp to the left of the plan

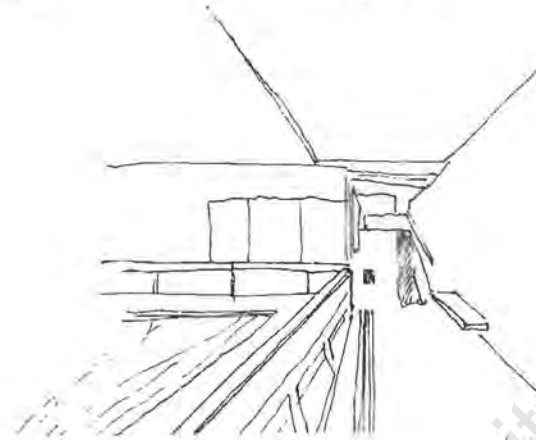


Figure 35: perspective of the ramp, with the courtyard pool to the left in the image, adjacent to the ramp



Figure 36: perspective view over the pool, looking onto the water wall

COURSE CODE... APG 5058S

COVER SHEET

STUDENT NAME: TRUDIE JOMBERT

STUDENT NUMBER: JBRTRU001

SUPERVISOR: Jo NOERO

University of Cape Town

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ESSAY WRITING REQUIREMENTS

This sheet is an overview of the minimum requirements for any essay or written work you submit for all courses in the School. As this is only a brief summary, use the recommended resources for further direction.

Essay Structure

Thesis: No matter the purpose of the essay, you must have a thesis and build your paper so to explicate that thesis.

Outline: Your essay must have a clear and organized structure. Start by developing an outline. Break the essay down into the following categories:

Introduction: At least one paragraph which introduces the essay topic. It includes the thesis statement, usually as the last sentence in the first paragraph.

Body: Develop the themes and points that explicate your thesis in the body of the essay.

Conclusion: A final paragraph(s) that re-states your thesis and contextualizes or summarizes the body of the essay. Never add a new topic or point of explication in your conclusion.

Paragraphs: It is very important that you develop well-structured paragraphs. The rule-of-thumb is that each topic or theme is developed in a single paragraph. However, that rule may be modified if a paragraph becomes too long (which can be tiresome to read) or you have too many brief paragraphs (which are also tiresome). Include transitions at the end and beginning of paragraphs so that they flow together well.

Writing style: Your essay must be clear, concise, and flow smoothly. Academic essays require a certain degree of formality, but do not complicate the writing style or word choice unnecessarily. Utilize punctuation correctly! Check your grammar (pay particular attention that subject and verbs, pronouns and antecedent nouns agree)! Read your essay out loud to yourself to check for flow and clarity! **Proof-read and spell check!**

For further reading or assistance, see:

http://startup.curtin.edu.au/study_skills/writing.html, or <http://www.lib.uct.ac.za/infolit/report.htm>, or The Humanities Library at UCT has a large collection of writing skills reference books, or visit The UCT Writing Centre (<http://www.ched.uct.ac.za/acp/writing/>), which offers writing assistance to all students.

Referencing

All academic writing requires you to cite all the sources that you have read and consulted in the preparation of your work. Not citing all of your sources is an act of plagiarism: essentially the stealing of others' words, thoughts and ideas, and is treated as fraud. Students found guilty could at best fail their course, at worst face expulsion. Every single instance of using phrases and ideas that are not your own must be acknowledged.

Quoting: When you quote someone's words directly, you *have to place these words in quotation marks*.

Longer quotations, which you should use sparingly, should be "blocked" to make them stand out clearly. This means indenting and single-spacing the entire quotation, also possibly using a smaller typeface.

Referencing: You must choose one method of referencing (or citation) and use it consistently throughout your essay: either the Harvard system or the footnote (Chicago or Oxford) system. No matter which system you choose to use, the information you must ascertain and include is:

- **Name** of the originator(s) of the document or the part of a document you are using as a source.
- **Date** of publication (some citation styles give the date immediately after the author; otherwise after the name of the publisher). For an electronic resource, look for the date on which the document was produced or updated.
- **Title** of the publication (and, if it is part of a larger work, e.g. an article in a journal, or one paper in an edited collection, also the **title of the whole** publication).
- For an electronic resource only, the **medium**, which may be given as "Online" or "CD-Rom" in square brackets, or you may use "Electronic" if you are not sure whether the source is online or networked CD-Rom.
- **Publication details:** Place of publication and Publisher if the item is a book; Volume and/or issue number if the item is a journal. For an electronic resource give the **uniform resource locator** (URL) which may sometimes be given between angle brackets (< >). If the URL is very long, it may be written on two lines, but try to break a line only where a punctuation mark occurs and do not *add* a hyphen, as this will alter the URL.
- Inclusive **page numbers** if the reference is to an item smaller than a whole book.
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In the footnote system, a reference in the text to another source is signalled by a numeral giving the number of the citation. This numeral corresponds to a numbered note at the bottom of the page (a footnote), or at the end of the paper. For a complete list and discussion of footnoting, see <http://www.lib.uct.ac.za/infolit/bibchicago.htm> or Turabian, K. 1996. *A manual for writers of research papers, theses and dissertations*. 6th ed. Revised by John Grossman and Alice Bennet. Chicago: University of Chicago Press.

